

## ***CANCER STATISTICS REVIEW 1975-2014: 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 30% 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 <https://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.

Changes in methodology to **CSR** include:

- Delay factors are now based on information from the entire US and not just SEER areas. See <https://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 <https://seer.cancer.gov/csr/>. Statistics from SEER may also be obtained via **FastStats** (<https://seer.cancer.gov/faststats/>) or **Cancer Query Systems** (<https://seer.cancer.gov/canques/>), which allow the user to access over 10,000,000 cancer statistics. The SEER Research Data file (<https://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 CSRs 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 (<https://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 (<https://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 (<https://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 (<https://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: <https://seer.cancer.gov/tools/mphrules/>. Beginning with 2010 diagnoses, cases are coded based on ICD-O-3 updated for hematopoietic 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 2015 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 (<https://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 2015 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](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" (<https://seer.cancer.gov/popdata/methods.html>) and the population data files are available for download (see "Download US Population Data" from <https://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 <https://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 2016**

The American Cancer Society (**ACS**) projects the numbers of new cancer cases and cancer deaths in the US in 2017 (Cancer Facts & Figures – 2017, American Cancer Society). The ACS projects incidence in 2017 based on incidence rates for 1995-2013 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).

### **LONG-TERM TRENDS, 1950-2014**

Trends in cancer mortality from 1950 to 2014 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: <https://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 been 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: <https://surveillance.cancer.gov/reports/>. As of 2013, Survival time was calculated using pre-calculated months based on the exact day information. See <https://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 <https://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: <https://seer.cancer.gov/causespecific/>.

## CANCER PREVALENCE

**Methods:** In this report prevalence is calculated at 1/1/2014. 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 2013 from the SEER 9 registries; prevalence estimates for Asian Pacific Islanders and Hispanics use cases diagnosed from 1990 through 2013 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. Table 1.22 in the Overview Chapter compares 5-Year Limited Duration Prevalence using different selection criteria: A) 1<sup>st</sup> Invasive Tumor Ever, B) 1<sup>st</sup> Per Site in Previous 38 Years and C) 1<sup>st</sup> Per Site in Previous 5 years. A female breast cancer to be included in the 5-Year Limited Duration Prevalence needs to be diagnosed in the 5 years prior to the prevalence date and (A) be the first tumor ever of the woman; (B) the first breast cancer of the women in the prior 38 years, the women could not have had other breast cancers between 6 and 38 years prior to the prevalence date, and (C) be the first breast cancer in the prior 5 years, i.e., the women could have had other breast cancer 6 or more years prior to the prevalence date, and if she had 2 breast cancers between 2008 and 2012 only the first can be counted. For more information on tumor selection criteria refer to <https://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 <https://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 1/1/2014 *were estimated* by multiplying the SEER age- and race-specific prevalence proportions by the corresponding US population estimates based on the average of 2013 and 2014 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 38 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 <https://surveillance.cancer.gov/prevalence/>.

## **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 2012-2014 incidence rates from the SEER 18 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 (Probability of DEveloping or dying from CANcer software). More details on the software, various databases, and the methodology can be found at <https://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:

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

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<sub>d</sub>)** between a state rate and the total US rate is given by the formula

$$SE_d = \text{Square Root of } [SE_s^2 + SE_U^2 - 2 * Cov_{s,U}]$$

where SE<sub>s</sub> and SE<sub>U</sub> are the standard errors of a state rate and of the total US rate, respectively, and Cov<sub>s,U</sub> 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:

$$Z = (\text{State rate} - \text{Total US rate}) / SE_d$$

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 <https://surveillance.cancer.gov/cirank/>.

## JOINPOINT REGRESSION ANALYSIS OF CANCER TRENDS

Joinpoint regression is a useful way to characterize trends in cancer rates and other health 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 1975-2014 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 1975-2013 (SEER 9) data and three for 1992-2014 (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 <https://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 <https://surveillance.cancer.gov/help/joinpoint/setting-parameters/advanced-tab/average-annual-percent-change-aapc>.

### ***Jump Model/Comparability Ratio Model***

The Jump Model / Comparability Ratio Model in the Joinpoint software provides a direct estimation of trend data (e.g. cancer rates) where there is a coding, which causes a “jump” in the rates, but is assumed not to affect the underlying trend. To account for ICD-9 to ICD-10 coding change, occurred in 1998, alternative trends estimated from Jump model and Comparability Ratio Model are obtained for Melanoma. Those trends and more information can be found in <https://surveillance.cancer.gov/joinpoint/jump.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, 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 2014 were first reported to the NCI in November 2016 and released to the public in April 2017. However, in each subsequent release of the SEER data, *records from all prior diagnosis years* (e.g., diagnosis years 2014 and earlier in the 2016 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, for the first time, delay adjustment factors is produced based on December 2014 data submitted to the NAACCR. The delay adjusted rates are then estimated from the delay adjustment factors by cancer site, registry, age group, gender, race, and year of diagnosis and 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). Starting from 2017 release, delay adjustment factors for Ethnicity (Hispanic and Non-Hispanic) and Race x Ethnicity combination are also estimated. 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 leukemia, esophagus, larynx, myeloma, oral cavity and pharynx, thyroid, and stomach.

For more information on cancer incidence rates adjusted for reporting delay, see <https://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** ( $\alpha$ ), is chosen; usually,  $\alpha$  is 0.05 or 0.01. (Alpha is called the **significance level** of the hypothesis test.) One can then identify limits for the difference in rates such that, if  $H_0$  is true, the probability of the difference being outside of those limits is  $\alpha$ . If the observed difference is *outside* of these limits, then the observed result is *very unlikely* to happen if  $H_0$  is true, so  $H_0$  is rejected.

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

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

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

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

Comparing individual state rates with the US rate and assessing statistical significance is not an

appropriate procedure for assessing geographic clustering of state rates. Identification of states which may represent regional clusters of high or low rates would require additional statistical and graphical analyses.

For a number of cancers, the District of Columbia has the highest death rates. *Use caution when comparing cancer rates for the District with those from the 50 states.* The District is an entirely urban area, whereas a state includes urban, suburban, and rural areas. Mortality rates for many cancers are higher in urban areas. Also, the District has a higher percentage of blacks—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):

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

where  $CR_t$  is the  $t$ -year relative survival estimate, and for  $i = 1, \dots, t$ ,  
 $q_i$  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,

$$\text{Incidence rate} = (\text{New cancers} / \text{Population}) * 100,000.$$

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,

$$\text{Death Rate} = (\text{Cancer Deaths} / \text{Population}) * 100,000.$$

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

$$\text{Percent change} = (\text{Final value} - \text{Initial value}) / \text{Initial value} * 100.$$

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<sup>m</sup> - 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.  $x = 5, 10, \text{ or } 20$  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 <https://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 2017  
All Races, By Sex

Primary Site	Estimated New Cases			Estimated Deaths		
	Total	Males	Females	Total	Males	Females
All Sites	1,688,780	836,150	852,630	600,920	318,420	282,500
Oral Cavity and Pharynx	49,670	35,720	13,950	9,700	7,000	2,700
Tongue	16,400	11,880	4,520	2,400	1,670	730
Mouth	13,210	7,800	5,410	2,580	1,680	900
Pharynx	17,000	13,780	3,220	3,050	2,340	710
Other Oral Cavity	3,060	2,260	800	1,670	1,310	360
Digestive System	310,440	175,650	134,790	157,700	92,350	65,350
Esophagus	16,940	13,360	3,580	15,690	12,720	2,970
Stomach	28,000	17,750	10,250	10,960	6,720	4,240
Small Intestine	10,190	5,380	4,810	1,390	770	620
Colon <sup>a</sup>	95,520	47,700	47,820	50,260	27,150	23,110
Rectum	39,910	23,720	16,190			
Anus, Anal Canal, and Anorectum	8,200	2,950	5,250	1,100	450	650
Liver and Intrahepatic Bile Duct	40,710	29,200	11,510	28,920	19,610	9,310
Gallbladder and Other Biliary	11,740	5,320	6,420	3,830	1,630	2,200
Pancreas	53,670	27,970	25,700	43,090	22,300	20,790
Other Digestive	5,560	2,300	3,260	2,460	1,000	1,460
Respiratory System	243,170	133,050	110,120	160,420	88,100	72,320
Larynx	13,360	10,570	2,790	3,660	2,940	720
Lung and Bronchus	222,500	116,990	105,510	155,870	84,590	71,280
Other Respiratory	7,310	5,490	1,820	890	570	320
Bones and Joints	3,260	1,820	1,440	1,550	890	660
Soft Tissue	12,390	6,890	5,500	4,990	2,670	2,320
Skin (excl. basal & squamous)	95,360	57,140	38,220	13,590	9,250	4,340
Melanoma of the Skin <sup>b</sup>	87,110	52,170	34,940	9,730	6,380	3,350
Other non-epithelial skin	8,250	4,970	3,280	3,860	2,870	990
Breast <sup>b</sup>	255,180	2,470	252,710	41,070	460	40,610
Genital Organs	279,800	172,330	107,470	59,100	27,500	31,600
Cervix (uterus)	12,820		12,820	4,210		4,210
Endometrium (uterus)	61,380		61,380	10,920		10,920
Ovary	22,440		22,440	14,080		14,080
Vulva	6,020		6,020	1,150		1,150
Vagina and other genital organs, female	4,810		4,810	1,240		1,240
Prostate	161,360	161,360		26,730	26,730	
Testis	8,850	8,850		410	410	
Penis and other genital organs, male	2,120	2,120		360	360	
Urinary System	146,650	103,480	43,170	32,190	22,260	9,930
Urinary Bladder	79,030	60,490	18,540	16,870	12,240	4,630
Kidney and Renal Pelvis	63,990	40,610	23,380	14,400	9,470	4,930
Ureter and other urinary organs	3,630	2,380	1,250	920	550	370
Eye and Orbit	3,130	1,800	1,330	330	180	150
Brain and Other Nervous System	23,800	13,450	10,350	16,700	9,620	7,080
Endocrine System	59,250	15,610	43,640	3,010	1,440	1,570
Thyroid	56,870	14,400	42,470	2,010	920	1,090
Other Endocrine	2,380	1,210	1,170	1,000	520	480
Lymphoma	80,500	44,730	35,770	21,210	12,080	9,130
Hodgkin Lymphoma	8,260	4,650	3,610	1,070	630	440
Non-Hodgkin Lymphoma	72,240	40,080	32,160	20,140	11,450	8,690
Myeloma	30,280	17,490	12,790	12,590	6,660	5,930
Leukemia	62,130	36,290	25,840	24,500	14,300	10,200
Acute lymphocytic leukemia	5,970	3,350	2,620	1,440	800	640
Chronic lymphocytic leukemia	20,110	12,310	7,800	4,660	2,880	1,780
Acute myeloid leukemia	21,380	11,960	9,420	10,590	6,110	4,480
Chronic myeloid leukemia	8,950	5,230	3,720	1,080	610	470
Other leukemia	5,720	3,440	2,280	6,730	3,900	2,830
All Other Sites <sup>c</sup>	33,770	18,230	15,540	42,270	23,660	18,610

Cancer Facts & Figures - 2017, American Cancer Society (ACS), Atlanta, Georgia, 2017.  
Excludes basal and squamous cell skin and *in situ* carcinomas except urinary bladder.

Estimated new cases are based on 1999-2013 incidence rates reported by the North American Association of Central Cancer Registries (NAACCR).

Estimated deaths are based on 2000-2014 US mortality data, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>a</sup> Estimated deaths for colon & rectum cancers are combined.

<sup>b</sup> Carcinoma *in situ* of the breast accounts for about 63,410 new cases annually, and melanoma *in situ* accounts for about 74,680 new cases annually.

<sup>c</sup> More deaths than cases suggests lack of specificity in recording underlying causes of death on death certificate.

Table 1.3

64-Year Trends in U.S. Cancer Death Rates<sup>a</sup>

All Races, Males and Females

## All Primary Cancer Sites Combined

Age Group	1950	1982	2013	Annual Percent Change		Total Percent Change
				1950-1982	1982-2013	1950-2013
Ages 0-4	11.1	4.4	1.9	-3.2*	-2.4*	-83.1
Ages 5-14	6.7	4.2	2.1	-1.6*	-1.9*	-68.9
Ages 15-24	8.6	5.8	3.5	-1.2*	-1.5*	-59.0
Ages 25-34	20.4	13.5	8.4	-1.4*	-1.6*	-58.7
Ages 35-44	63.6	48.2	27.7	-0.8*	-1.9*	-56.4
Ages 45-54	174.2	171.4	99.6	0.0	-1.8*	-42.8
Ages 55-64	391.3	435.5	285.4	0.4*	-1.6*	-27.1
Ages 65-74	710.0	832.7	617.2	0.5*	-1.1*	-13.1
Ages 75-84	1,167.2	1,249.3	1,120.1	0.2*	-0.4*	-4.0
Ages 85+	1,450.7	1,598.7	1,638.6	0.3*	0.0	13.0
All Ages	195.4	208.3	161.3	0.2*	-0.9*	-17.4

Lung and Bronchus Cancer<sup>b</sup>

Age Group	1950	1982	2013	Annual Percent Change		Total Percent Change
				1950-1982	1982-2013	1950-2013
Ages 0-4	-	-	-	-	-	-
Ages 5-14	-	-	-	-	-	-
Ages 15-24	0.2	0.1	0.0	-2.8*	-0.2	-67.7
Ages 25-34	0.8	0.7	0.3	-0.6*	-2.5*	-62.4
Ages 35-44	4.6	8.9	2.7	2.3*	-3.1*	-40.3
Ages 45-54	20.2	52.1	21.3	3.1*	-2.7*	5.4
Ages 55-64	48.9	143.4	77.9	3.2*	-2.3*	59.4
Ages 65-74	59.4	246.3	194.9	4.1*	-0.8*	228.0
Ages 75-84	55.4	255.0	321.2	4.8*	0.6*	480.0
Ages 85+	42.3	187.4	313.8	5.1*	1.6*	641.9
All Ages	14.9	51.7	42.3	3.8*	-0.7*	183.1

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

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

<sup>b</sup> 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, 1950-2014 and  
5-Year Relative Survival (Percent), 1950-2013  
Males and Females, By Primary Cancer Site

Primary Site	Whites			
	U.S. Mortality Percent Change 1950-2014 <sup>a</sup>		5-Year Relative Survival (Percent) <sup>b</sup>	
	Total	APC	1950-1954	2007-2013
Oral cavity and pharynx	-50.3	-1.3*	46	69.2
Esophagus	24.7	0.7*	4	22.3
Stomach	-88.5	-3.3*	12	29.9
Colon and rectum	-57.7	-1.3*	37	67.1
Colon	-51.7	-1.1*	41	66.5
Rectum	-71.2	-2.2*	40	68.5
Liver and intrahepatic bile duct	61.6	0.9*	1	17.7
Pancreas	27.4	0.1*	1	8.9
Larynx	-42.2	-0.8*	52	64.5
Lung and bronchus	183.5	1.1*	6	19.6
Males	109.0	0.4*	5	16.9
Females	507.4	2.5*	9	22.6
Melanoma of the skin	163.1	1.2*	49	93.6
Breast(females)	-38.5	-0.7*	60	92.2
Cervix uteri	-81.9	-3.1*	59	70.8
Corpus and uterus, NOS	-64.5	-1.5*	72	85.3
Ovary	-17.0	-0.4*	30	46.2
Prostate	-38.5	-0.6*	43	99.6
Testis	-70.2	-2.7*	57	96.9
Urinary bladder	-29.8	-0.6*	53	78.6
Kidney and renal pelvis	27.8	0.4*	34	74.8
Brain and nervous system	55.9	0.4*	21	33.4
Thyroid	-41.3	-0.9*	80	98.4
Hodgkin lymphoma	-83.6	-3.3*	30	88.9
Non-Hodgkin lymphoma	70.6	0.7*	33	74.2
Myeloma	209.7	1.0*	6	50.6
Leukemia	-4.4	-0.3*	10	64.8
Childhood (Ages 0-14)	-75.2	-2.6*	20	85.2
All Sites	-17.5	-0.2*	35	70.1

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

Rates used in the calculation of the APC are age-adjusted to the 2000 U.S. standard population (18 age groups - Census P25-1130).

<sup>a</sup> 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.

<sup>b</sup> 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 2007-2013 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 2014.

\* 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 <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	442.7	492.4	408.7	166.1	200.5	141.5	67.0	66.8	67.2
Oral Cavity & Pharynx:	11.2	16.9	6.2	2.5	3.8	1.3	64.5	63.6	66.8
Lip	0.7	1.1	0.3	0.0	0.0	0.0	89.6	89.7	89.2
Tongue	3.3	5.1	1.8	0.6	0.9	0.4	65.5	65.8	64.5
Salivary gland	1.3	1.7	1.0	0.2	0.4	0.1	71.9	63.9	82.7
Floor of mouth	0.5	0.7	0.3	0.0	0.0	0.0	53.2	52.0	56.2
Gum & other oral cavity	1.5	1.8	1.3	0.4	0.5	0.3	59.1	54.8	64.3
Nasopharynx	0.6	0.9	0.4	0.2	0.3	0.1	61.2	59.7	64.8
Tonsil	2.0	3.4	0.7	0.2	0.4	0.1	73.4	73.9	70.8
Oropharynx	0.4	0.7	0.2	0.2	0.4	0.1	43.9	45.2	39.2
Hypopharynx	0.6	1.0	0.2	0.1	0.2	0.0	33.0	33.1	32.1
Other oral cavity & pharynx	0.3	0.4	0.1	0.4	0.8	0.2	42.1	43.9	36.4
Digestive System:	81.5	99.3	66.7	41.6	53.4	31.9	43.9	41.7	46.7
Esophagus	4.2	7.3	1.7	4.1	7.3	1.5	18.8	18.7	19.2
Stomach	7.3	9.9	5.2	3.2	4.4	2.3	30.6	28.4	34.1
Small intestine	2.3	2.6	2.0	0.4	0.5	0.3	67.5	67.0	68.1
Colon & Rectum:	40.1	46.0	35.1	14.8	17.7	12.4	64.9	64.5	65.2
Colon	28.2	31.3	25.8	-	-	-	64.1	64.0	64.1
Rectum	11.8	14.8	9.4	-	-	-	66.7	65.5	68.2
Anus, anal canal & anorectum	1.8	1.5	2.1	0.2	0.2	0.3	66.9	60.3	70.9
Liver & intrahepatic bile duct	8.6	13.3	4.6	6.3	9.2	3.7	17.6	17.2	18.6
Gallbladder	1.2	0.9	1.4	0.6	0.5	0.7	18.2	16.7	18.8
Other biliary	1.9	2.4	1.6	0.4	0.5	0.4	17.0	18.2	15.7
Pancreas	12.5	14.2	11.1	10.9	12.6	9.5	8.2	8.2	8.1
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	54.9	55.1	54.6
Peritoneum, omentum & mesentery	0.5	0.1	0.9	0.3	0.1	0.4	31.7	41.8	30.9
Other digestive system	0.7	0.8	0.6	0.3	0.4	0.3	9.3	8.3	10.1
Respiratory System:	59.8	72.3	50.1	46.0	58.1	36.8	21.1	19.9	22.6
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	57.1	58.6	54.7
Larynx	3.1	5.4	1.1	1.0	1.9	0.4	60.7	61.3	58.1
Lung & bronchus	55.8	65.7	48.4	44.7	55.9	36.3	18.1	15.2	21.3
Pleura <sup>d</sup>	0.0	0.0	0.0	0.1	0.1	0.0	25.8	26.7	24.4
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	52.9	53.7	50.7
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.3	67.7	66.0	70.0
Soft tissue (including heart)	3.4	4.1	2.9	1.3	1.5	1.2	64.4	63.7	65.3
Skin (excl. basal & squamous):	24.4	32.1	18.7	3.6	5.6	2.1	91.1	89.1	93.7
Melanoma of the skin	22.3	29.2	17.3	2.7	4.0	1.7	91.7	89.7	94.2
Other non-epithelial skin	2.0	2.9	1.4	0.9	1.6	0.4	84.7	82.9	87.1
Breast	67.0	1.2	124.9	11.8	0.3	21.2	89.7	83.6	89.7
Breast ( <i>in situ</i> )	16.4	0.1	31.2	-	-	-	100.0	99.9	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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

<sup>d</sup> 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 <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	26.1	-	49.1	8.4	-	15.2	69.3	-	69.3
Cervix uteri	3.8	-	7.4	1.2	-	2.3	67.1	-	67.1
Corpus uteri	13.2	-	24.9	1.1	-	2.0	82.7	-	82.7
Uterus, NOS	0.4	-	0.8	1.4	-	2.6	29.8	-	29.8
Ovary <sup>d</sup>	6.3	-	11.7	4.1	-	7.4	46.5	-	46.5
Vagina	0.4	-	0.7	0.1	-	0.2	46.6	-	46.6
Vulva	1.4	-	2.5	0.3	-	0.5	72.1	-	72.1
Other female genital system	0.6	-	1.2	0.2	-	0.3	54.5	-	54.5
Male Genital System:	58.1	126.7	-	8.3	20.5	-	98.3	98.3	-
Prostate	54.7	119.8	-	8.1	20.1	-	98.6	98.6	-
Testis	2.9	5.7	-	0.1	0.3	-	95.1	95.1	-
Penis	0.4	0.9	-	0.1	0.2	-	68.3	68.3	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	83.5	83.5	-
Urinary System:	36.3	57.6	19.7	8.5	13.6	4.8	75.3	76.1	73.7
Urinary bladder	19.8	34.9	8.4	4.4	7.6	2.2	77.3	78.6	73.3
Kidney & renal pelvis	15.6	21.4	10.7	3.9	5.6	2.4	74.1	73.5	75.2
Ureter	0.5	0.8	0.3	0.1	0.1	0.1	46.5	47.8	44.4
Other urinary system	0.3	0.6	0.2	0.1	0.2	0.1	49.3	54.2	40.2
Eye & Orbit	0.8	1.0	0.7	0.1	0.1	0.1	82.7	82.4	83.1
Brain & Nervous System: <sup>e</sup>	6.4	7.5	5.3	4.3	5.3	3.5	33.6	32.4	35.1
Brain	6.0	7.1	4.9	-	-	-	30.5	29.8	31.4
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	78.6	76.3	80.8
Endocrine System:	14.9	7.9	21.7	0.8	0.8	0.8	96.3	92.2	97.7
Thyroid	14.2	7.1	21.0	0.5	0.5	0.5	98.2	95.8	98.8
Other endocrine & thymus	0.7	0.8	0.7	0.3	0.3	0.3	64.5	65.1	63.8
Lymphoma:	22.0	26.7	18.3	6.2	8.0	4.9	73.1	71.7	74.7
Hodgkin lymphoma	2.6	2.9	2.3	0.3	0.4	0.3	86.4	85.6	87.4
Non-Hodgkin lymphoma	19.5	23.7	16.0	5.9	7.6	4.6	71.0	69.5	72.7
Myeloma	6.6	8.3	5.2	3.3	4.2	2.7	49.6	49.6	49.5
Leukemia:	13.7	17.6	10.7	6.8	9.1	5.1	60.6	61.6	59.2
Lymphocytic:	6.8	9.0	5.1	1.9	2.6	1.3	79.0	79.6	78.1
Acute lymphocytic	1.7	1.9	1.5	0.4	0.5	0.4	68.2	68.1	68.3
Chronic lymphocytic	4.7	6.4	3.3	1.3	1.9	0.9	83.2	83.4	82.9
Other lymphocytic	0.4	0.6	0.2	0.1	0.2	0.1	81.8	85.2	71.4
Myeloid & Monocytic:	6.4	7.9	5.2	3.4	4.4	2.6	39.6	39.2	40.0
Acute myeloid	4.2	5.2	3.6	2.8	3.6	2.2	26.9	25.8	28.2
Chronic myeloid	1.8	2.3	1.4	0.3	0.4	0.2	66.9	65.7	68.6
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	23.5	20.8	27.0
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	33.8	35.3	31.9
Other leukemia:	0.5	0.6	0.4	1.6	2.1	1.2	33.5	33.7	33.2
Other acute leukemia	0.2	0.3	0.2	0.5	0.7	0.4	20.8	21.9	19.4
Aleukemic, subleukemic & NOS	0.3	0.4	0.2	1.0	1.4	0.8	42.4	42.8	41.9
Kaposi Sarcoma <sup>f</sup>	0.5	0.9	0.1	-	-	-	74.1	73.8	75.3
Mesothelioma <sup>f</sup>	0.9	1.7	0.4	-	-	-	9.0	7.0	15.0
Ill-defined & unspecified	8.1	9.5	7.1	12.1	15.4	9.7	18.3	21.9	14.6

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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

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

<sup>e</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>f</sup> 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

Site	Whites								
	Incidence <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	451.8	497.1	421.5	166.2	199.8	141.9	67.5	67.0	67.9
Oral Cavity & Pharynx:	11.7	17.6	6.4	2.4	3.8	1.3	65.9	65.4	67.4
Lip	0.8	1.3	0.4	0.0	0.0	0.0	89.8	89.7	90.1
Tongue	3.6	5.5	1.9	0.6	0.9	0.4	67.1	67.6	65.8
Salivary gland	1.3	1.8	1.0	0.3	0.4	0.1	69.8	61.9	81.5
Floor of mouth	0.5	0.8	0.3	0.0	0.0	0.0	54.5	53.2	57.8
Gum & other oral cavity	1.5	1.8	1.3	0.4	0.5	0.3	58.8	54.9	63.6
Nasopharynx	0.4	0.6	0.2	0.1	0.2	0.1	57.9	57.1	59.7
Tonsil	2.2	3.7	0.8	0.2	0.4	0.1	75.2	75.5	73.2
Oropharynx	0.4	0.7	0.2	0.2	0.4	0.1	46.9	48.6	40.0
Hypopharynx	0.6	1.0	0.2	0.1	0.1	0.0	35.6	36.1	33.3
Other oral cavity & pharynx	0.3	0.4	0.1	0.4	0.7	0.2	45.8	47.5	40.0
Digestive System:	79.2	96.3	64.7	40.4	51.9	30.9	44.4	42.2	47.2
Esophagus	4.5	7.7	1.7	4.3	7.6	1.5	19.7	19.7	19.9
Stomach	6.5	9.0	4.5	2.8	3.8	2.0	29.3	27.2	32.8
Small intestine	2.2	2.6	1.9	0.3	0.4	0.3	68.5	67.7	69.5
Colon & Rectum:	39.3	45.0	34.4	14.4	17.2	12.1	65.5	65.2	65.8
Colon	27.7	30.6	25.3	-	-	-	65.0	65.0	65.1
Rectum	11.6	14.4	9.1	-	-	-	66.5	65.8	67.6
Anus, anal canal & anorectum	1.9	1.5	2.3	0.3	0.2	0.3	68.3	61.7	72.2
Liver & intrahepatic bile duct	7.8	11.9	4.1	5.8	8.5	3.5	16.8	16.5	17.6
Gallbladder	1.1	0.8	1.3	0.6	0.4	0.7	18.3	15.9	19.2
Other biliary	1.9	2.3	1.5	0.4	0.5	0.4	17.2	19.1	15.0
Pancreas	12.5	14.2	11.0	10.8	12.6	9.4	8.1	8.2	7.9
Retroperitoneum	0.4	0.4	0.3	0.1	0.1	0.1	54.0	54.4	53.6
Peritoneum, omentum & mesentery	0.6	0.1	1.0	0.3	0.1	0.4	31.1	39.8	30.5
Other digestive system	0.6	0.7	0.6	0.3	0.4	0.3	9.9	9.3	10.4
Respiratory System:	61.3	72.5	52.6	46.7	58.0	38.0	21.3	20.2	22.6
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	59.3	61.4	56.1
Larynx	3.1	5.4	1.2	1.0	1.8	0.4	62.0	62.6	59.5
Lung & bronchus	57.3	65.9	50.8	45.5	55.9	37.5	18.3	15.4	21.4
Pleura <sup>d</sup>	0.0	0.1	0.0	0.1	0.1	0.0	22.1	28.7	10.7
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	53.2	54.9	48.6
Bones & joints	1.0	1.2	0.9	0.4	0.6	0.4	67.5	65.5	70.3
Soft tissue (including heart)	3.5	4.2	2.9	1.3	1.6	1.1	65.3	64.4	66.5
Skin (excl. basal & squamous):	28.8	37.4	22.4	4.1	6.3	2.4	90.6	88.5	93.4
Melanoma of the skin	26.6	34.4	20.9	3.1	4.6	1.9	91.2	89.1	94.0
Other non-epithelial skin	2.2	3.1	1.5	1.0	1.8	0.5	82.4	80.6	84.9
Breast	67.8	1.2	127.7	11.4	0.3	20.6	90.7	85.9	90.8
Breast ( <i>in situ</i> )	16.1	0.1	31.0	-	-	-	100.0	99.9	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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

<sup>d</sup> 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

Site	Whites								
	Incidence <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	26.6	-	50.6	8.2	-	15.1	70.6	-	70.6
Cervix uteri	3.7	-	7.4	1.1	-	2.1	68.7	-	68.7
Corpus uteri	13.4	-	25.6	1.0	-	1.8	84.9	-	84.9
Uterus, NOS	0.4	-	0.7	1.3	-	2.4	31.7	-	31.7
Ovary <sup>d</sup>	6.5	-	12.2	4.2	-	7.7	46.6	-	46.6
Vagina	0.4	-	0.7	0.1	-	0.2	46.9	-	46.9
Vulva	1.5	-	2.7	0.3	-	0.5	71.4	-	71.4
Other female genital system	0.7	-	1.2	0.2	-	0.3	53.7	-	53.7
Male Genital System:	56.1	120.8	-	7.8	19.2	-	98.5	98.5	-
Prostate	52.1	112.8	-	7.5	18.7	-	98.9	98.9	-
Testis	3.5	6.8	-	0.1	0.3	-	95.3	95.3	-
Penis	0.4	0.9	-	0.1	0.2	-	67.7	67.7	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	84.9	84.9	-
Urinary System:	38.7	61.4	20.7	8.8	14.2	4.9	75.7	76.3	74.2
Urinary bladder	21.7	38.1	9.1	4.6	8.1	2.2	77.8	78.8	74.4
Kidney & renal pelvis	16.1	21.9	11.0	4.0	5.8	2.5	74.1	73.5	75.2
Ureter	0.6	0.8	0.4	0.1	0.2	0.1	47.4	48.6	45.2
Other urinary system	0.3	0.6	0.2	0.1	0.2	0.1	48.7	51.4	42.6
Eye & Orbit	1.0	1.1	0.9	0.1	0.1	0.1	81.9	81.6	82.4
Brain & Nervous System: <sup>e</sup>	7.0	8.3	5.9	4.7	5.7	3.8	32.4	31.2	33.9
Brain	6.6	7.9	5.5	-	-	-	29.4	28.7	30.3
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	79.7	76.6	82.4
Endocrine System:	15.6	8.4	23.0	0.8	0.8	0.7	96.7	92.9	98.0
Thyroid	14.9	7.6	22.4	0.5	0.5	0.5	98.4	96.1	98.9
Other endocrine & thymus	0.7	0.8	0.6	0.3	0.3	0.3	63.9	65.1	62.4
Lymphoma:	23.1	27.8	19.3	6.5	8.3	5.0	73.4	72.2	74.9
Hodgkin lymphoma	2.7	3.1	2.4	0.4	0.4	0.3	86.6	86.1	87.3
Non-Hodgkin lymphoma	20.4	24.8	16.9	6.1	7.9	4.8	71.4	70.0	73.0
Myeloma	6.0	7.8	4.6	3.1	4.0	2.4	49.2	49.6	48.7
Leukemia:	14.5	18.5	11.3	7.1	9.5	5.3	61.0	61.8	59.9
Lymphocytic:	7.4	9.7	5.5	2.0	2.8	1.4	79.4	79.9	78.6
Acute lymphocytic	1.9	2.1	1.7	0.5	0.5	0.4	68.3	68.0	68.7
Chronic lymphocytic	5.1	6.8	3.6	1.4	2.0	0.9	83.4	83.6	83.1
Other lymphocytic	0.4	0.7	0.2	0.1	0.2	0.1	82.7	85.6	74.1
Myeloid & Monocytic:	6.6	8.2	5.3	3.5	4.6	2.7	38.7	38.1	39.4
Acute myeloid	4.4	5.4	3.7	2.9	3.8	2.3	26.3	25.1	27.8
Chronic myeloid	1.8	2.4	1.4	0.3	0.4	0.2	65.7	64.5	67.4
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	24.1	21.3	27.9
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	31.6	31.0	32.6
Other leukemia:	0.5	0.7	0.4	1.6	2.1	1.2	33.0	32.4	33.5
Other acute leukemia	0.2	0.3	0.2	0.6	0.7	0.4	20.2	21.2	18.9
Aleukemic, subleukemic & NOS	0.3	0.4	0.2	1.0	1.4	0.8	42.4	41.3	43.4
Kaposi Sarcoma <sup>f</sup>	0.4	0.8	0.1	-	-	-	77.2	76.4	82.2
Mesothelioma <sup>f</sup>	1.0	1.9	0.4	-	-	-	8.8	6.9	14.4
Ill-defined & unspecified	8.3	9.7	7.1	12.2	15.5	9.7	19.0	23.3	14.5

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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

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

<sup>e</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>f</sup> 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

Site	Blacks								
	Incidence <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	459.3	549.7	397.4	194.2	247.3	161.8	61.3	63.8	58.5
Oral Cavity & Pharynx:	9.1	14.2	5.1	2.9	5.0	1.3	48.0	45.1	54.7
Lip	0.1	0.2	-	-	-	-	72.7	66.7	81.8
Tongue	2.1	3.4	1.1	0.5	0.9	0.3	42.5	43.0	41.3
Salivary gland	1.0	1.1	1.0	0.2	0.3	0.1	78.1	70.9	83.9
Floor of mouth	0.5	0.9	0.2	0.0	0.1	-	39.8	41.0	36.0
Gum & other oral cavity	1.3	1.7	1.0	0.3	0.5	0.2	56.1	48.9	63.8
Nasopharynx	0.6	0.9	0.4	0.2	0.4	0.1	55.7	55.3	56.5
Tonsil	1.7	3.0	0.6	0.3	0.5	0.1	54.5	55.6	50.2
Oropharynx	0.6	1.0	0.3	0.4	0.7	0.2	27.9	27.4	30.8
Hypopharynx	0.9	1.6	0.3	0.2	0.3	0.1	20.1	19.8	22.3
Other oral cavity & pharynx	0.3	0.5	0.2	0.7	1.4	0.3	25.6	28.3	18.4
Digestive System:	99.5	121.8	82.9	53.9	70.9	41.8	39.3	35.8	43.2
Esophagus	4.2	6.9	2.3	3.7	6.3	1.9	11.8	10.6	14.4
Stomach	10.2	13.6	7.8	5.9	8.6	4.1	30.3	25.7	36.1
Small intestine	3.8	4.3	3.4	0.6	0.7	0.5	63.9	64.4	63.4
Colon & Rectum:	48.7	56.4	43.2	20.0	25.3	16.5	57.9	55.7	59.9
Colon	36.3	40.9	33.1	-	-	-	56.4	55.3	57.3
Rectum	12.4	15.5	10.2	-	-	-	62.0	56.7	67.9
Anus, anal canal & anorectum	2.0	2.2	1.8	0.3	0.3	0.2	58.0	53.9	62.4
Liver & intrahepatic bile duct	10.1	16.7	5.0	8.2	13.0	4.5	13.4	12.8	15.1
Gallbladder	1.6	1.2	1.9	0.9	0.7	1.0	15.1	13.5	15.7
Other biliary	1.7	1.9	1.6	0.4	0.4	0.4	12.8	10.7	14.3
Pancreas	15.5	17.0	14.3	13.4	15.0	12.1	7.8	6.9	8.5
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.0	54.3	59.4	51.1
Peritoneum, omentum & mesentery	0.4	0.1	0.6	0.2	0.1	0.2	28.2	36.6	26.4
Other digestive system	0.9	1.0	0.7	0.4	0.5	0.3	5.6	5.3	6.2
Respiratory System:	68.4	93.4	51.2	50.0	71.7	35.4	18.5	17.0	20.4
Nose, nasal cavity & middle ear	0.6	0.8	0.4	0.1	0.2	0.1	46.7	43.7	50.9
Larynx	4.5	8.5	1.6	1.7	3.4	0.6	51.5	52.1	49.1
Lung & bronchus	63.0	83.7	49.0	48.0	68.0	34.6	15.3	12.5	18.8
Pleura <sup>d</sup>	-	-	-	0.0	0.1	0.0	-	-	-
Trachea & other respiratory organs	0.2	0.2	0.1	0.1	0.1	0.0	46.7	43.3	54.4
Bones & joints	0.7	0.8	0.6	0.4	0.5	0.3	67.0	67.3	66.8
Soft tissue (including heart)	3.3	3.4	3.2	1.5	1.5	1.5	59.6	59.8	59.3
Skin (excl. basal & squamous):	2.1	2.3	2.0	0.8	1.2	0.6	80.9	77.3	83.6
Melanoma of the skin	1.1	1.1	1.0	0.4	0.5	0.4	64.6	57.9	68.7
Other non-epithelial skin	1.1	1.1	1.0	0.4	0.7	0.2	93.3	90.4	94.7
Breast	71.1	1.9	125.1	17.1	0.5	29.2	80.5	69.2	80.6
Breast ( <i>in situ</i> )	17.6	0.2	31.4	-	-	-	100.0	77.2	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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

<sup>d</sup> 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

Site	Blacks								
	Incidence <sup>a</sup> (2010-2014)			US Mortality <sup>b</sup> (2010-2014)			Survival <sup>c</sup> (%) (2007-2013)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	26.2	-	46.5	11.3	-	19.2	55.5	-	55.5
Cervix uteri	4.8	-	8.7	2.1	-	3.8	56.2	-	56.2
Corpus uteri	13.2	-	23.3	1.9	-	3.2	63.8	-	63.8
Uterus, NOS	0.8	-	1.5	2.9	-	5.0	23.9	-	23.9
Ovary <sup>d</sup>	5.4	-	9.4	3.8	-	6.4	37.2	-	37.2
Vagina	0.6	-	1.0	0.2	-	0.3	45.6	-	45.6
Vulva	1.0	-	1.8	0.2	-	0.3	73.4	-	73.4
Other female genital system	0.5	-	0.9	0.2	-	0.3	54.3	-	54.3
Male Genital System:	81.9	191.5	-	15.4	42.4	-	96.4	96.4	-
Prostate	80.7	188.7	-	15.2	42.0	-	96.6	96.6	-
Testis	0.7	1.5	-	0.1	0.1	-	91.0	91.0	-
Penis	0.4	1.0	-	0.1	0.3	-	59.4	59.4	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	61.8	61.8	-
Urinary System:	31.2	46.9	19.9	7.4	11.1	5.0	70.1	71.2	68.3
Urinary bladder	12.5	21.0	6.8	3.6	5.4	2.5	64.4	68.6	55.8
Kidney & renal pelvis	18.0	25.0	12.6	3.7	5.5	2.4	74.2	73.3	75.5
Ureter	0.2	0.3	0.2	0.0	0.1	0.0	30.9	23.6	35.7
Other urinary system	0.4	0.7	0.3	0.1	0.1	0.1	40.3	58.2	22.2
Eye & Orbit	0.3	0.3	0.3	0.0	0.0	0.0	90.8	89.5	91.2
Brain & Nervous System: <sup>e</sup>	4.0	4.8	3.5	2.6	3.2	2.1	39.6	37.5	41.8
Brain	3.7	4.4	3.1	-	-	-	36.0	34.3	37.8
Cranial nerves & other nervous system	0.3	0.4	0.3	-	-	-	75.4	74.4	75.8
Endocrine System:	9.6	4.6	13.9	0.9	0.8	0.9	93.9	85.2	96.1
Thyroid	8.7	3.7	13.0	0.5	0.4	0.6	97.2	93.7	97.9
Other endocrine & thymus	0.9	0.9	0.9	0.3	0.4	0.3	65.1	60.6	69.3
Lymphoma:	17.2	20.8	14.4	4.6	5.9	3.7	68.7	65.1	72.8
Hodgkin lymphoma	2.6	3.1	2.2	0.3	0.4	0.2	83.5	80.7	86.7
Non-Hodgkin lymphoma	14.6	17.6	12.2	4.3	5.5	3.5	65.1	61.3	69.4
Myeloma	13.2	15.9	11.4	6.3	7.5	5.5	50.2	49.7	50.7
Leukemia:	10.9	14.0	8.8	5.7	7.5	4.6	54.6	55.9	52.9
Lymphocytic:	4.8	6.6	3.5	1.5	2.2	1.1	69.7	70.8	68.1
Acute lymphocytic	1.0	1.1	0.9	0.3	0.4	0.3	64.2	66.2	61.1
Chronic lymphocytic	3.6	5.1	2.5	1.2	1.7	0.8	72.3	72.1	72.1
Other lymphocytic	0.3	0.4	0.1	0.1	0.1	0.1	66.1	74.6	42.5
Myeloid & Monocytic:	5.6	6.8	4.8	2.7	3.4	2.2	42.8	42.0	43.5
Acute myeloid	3.7	4.5	3.2	2.1	2.7	1.8	28.7	27.7	29.6
Chronic myeloid	1.6	2.0	1.4	0.3	0.4	0.3	68.3	65.2	71.6
Acute monocytic	0.1	0.2	0.1	0.0	0.0	-	23.7	17.7	30.1
Other myeloid & monocytic	0.1	0.2	0.1	0.2	0.2	0.1	42.8	52.0	29.6
Other leukemia:	0.5	0.6	0.5	1.5	2.0	1.2	33.9	37.3	29.6
Other acute leukemia	0.2	0.3	0.2	0.4	0.5	0.3	21.7	23.5	18.7
Aleukemic, subleukemic & NOS	0.3	0.4	0.3	1.1	1.5	0.9	39.8	46.1	33.2
Kaposi Sarcoma <sup>f</sup>	1.1	2.2	0.2	-	-	-	64.5	65.8	48.2
Mesothelioma <sup>f</sup>	0.5	1.0	0.3	-	-	-	13.7	8.9	24.8
Ill-defined & unspecified	9.0	10.0	8.1	13.4	17.5	10.7	13.5	12.4	14.3

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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> SEER 18 areas. Based on follow-up of patients into 2014.

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

<sup>e</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>f</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-1.1*	-2.0*	-0.2*	-1.5*	-1.8*	-1.4*
Oral Cavity & Pharynx:	0.7*	0.9*	0.0	-0.1	0.2	-1.2*
Lip	-0.5	-0.9*	-0.1	0.6	-0.1	0.4
Tongue	1.7*	2.0*	0.8	-0.1	0.3	-0.9*
Salivary gland	-0.5	-0.8	-0.3	1.4*	1.6*	0.6
Floor of mouth	-3.0*	-3.6*	-1.5	-7.4*	-6.8*	-8.7*
Gum & other oral cavity	-0.1	0.1	-0.4	0.0	0.5	-0.8
Nasopharynx	-1.5*	-1.3	-2.0*	-1.5*	-0.9*	-3.2*
Tonsil	3.0*	3.2*	1.9*	1.7*	2.0*	0.3
Oropharynx	2.3*	2.5*	1.5	2.7*	3.1*	1.5
Hypopharynx	-2.5*	-2.5*	-3.0	-0.4	0.0	-1.9
Other oral cavity & pharynx	3.9*	5.5*	-0.7	-2.2*	-1.9*	-3.7*
Digestive System:	-1.2*	-1.2*	-1.2*	-0.8*	-0.8*	-1.1*
Esophagus	-1.2*	-1.3*	-1.7*	-1.1*	-1.2*	-1.7*
Stomach	-0.9*	-1.3*	-0.6*	-2.3*	-2.5*	-2.2*
Small intestine	1.9*	1.4*	2.3*	0.2	0.5	-0.1
Colon & Rectum:	-2.8*	-3.0*	-2.7*	-2.5*	-2.6*	-2.6*
Colon	-3.1*	-3.3*	-2.9*	-	-	-
Rectum	-2.0*	-2.2*	-1.8*	-	-	-
Anus, anal canal & anorectum	1.1*	0.3	1.8*	3.1*	3.7*	2.8*
Liver & intrahepatic bile duct	2.6*	2.5*	2.8*	2.7*	2.7*	2.5*
Gallbladder	0.0	1.0	-0.4	-0.7*	0.2	-1.0*
Other biliary	0.6	0.8	0.2	-1.1*	-1.4*	-1.0
Pancreas	0.5*	0.6*	0.4*	0.1	0.1	0.0
Retroperitoneum	-0.9	-1.1	-0.8	-1.9	-1.8	-1.8
Peritoneum, omentum & mesentery	-3.5*	-3.3	-3.3*	0.0	2.7*	-0.3
Other digestive system	4.6*	4.4*	4.7*	3.2*	2.9*	3.4*
Respiratory System:	-2.3*	-2.9*	-1.7*	-2.4*	-3.1*	-1.8*
Nose, nasal cavity & middle ear	-0.9	-0.2	-1.8*	-2.4*	-2.1	-3.3*
Larynx	-2.5*	-2.7*	-2.5*	-2.5*	-2.5*	-3.5*
Lung & bronchus	-2.3*	-2.9*	-1.7*	-2.5*	-3.1*	-1.8*
Pleura	0.5	-1.4	-	-0.4	-0.8	0.1
Trachea & other respiratory organs	-2.0	-1.3	-3.0*	-0.5	-0.2	-1.0
Bones & joints	0.2	0.4	0.0	-0.4	-0.3	-0.6
Soft tissue (including heart)	0.6*	0.4*	0.8	0.5*	0.8*	0.1
Skin (excl. basal & squamous):	1.1*	1.3*	0.6	0.1	0.2	-0.6*
Melanoma of the skin	1.1*	1.3*	0.6	-0.5*	-0.4	-1.0*
Other non-epithelial skin	1.3*	1.6*	0.5	1.9*	2.0*	0.9
Breast	0.0	0.2	0.2	-1.9*	-0.3	-1.7*
Breast ( <i>in situ</i> )	0.2	-0.4	0.4	-	-	-

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).

<sup>a</sup> 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).

<sup>b</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
Female Genital System:	0.0	-	0.2	-1.0*	-	-0.7*
Cervix uteri	-1.7*	-	-1.6*	-0.9*	-	-0.8*
Corpus uteri	1.1*	-	1.2*	0.1	-	0.4
Uterus, NOS	4.6*	-	5.1*	2.1*	-	2.4*
Ovary <sup>c</sup>	-2.1*	-	-1.8*	-2.5*	-	-2.3*
Vagina	-0.2	-	0.1	-0.5	-	-0.2
Vulva	1.0*	-	1.3*	0.9*	-	1.2*
Other female genital system	7.1*	-	7.1*	5.8*	-	6.1*
Male Genital System:	-4.5*	-4.9*	-	-2.5*	-3.2*	-
Prostate	-4.8*	-5.2*	-	-2.6*	-3.3*	-
Testis	0.9*	0.9*	-	0.7	0.6	-
Penis	1.7*	1.3	-	0.8	0.3	-
Other male genital system	3.1*	2.7*	-	4.2*	3.5	-
Urinary System:	-0.4*	-0.6*	-0.4	-0.4*	-0.4*	-1.2*
Urinary bladder	-1.2*	-1.4*	-1.4*	-0.1	-0.2*	-0.7*
Kidney & renal pelvis	0.7	0.7	0.5	-0.8*	-0.6*	-1.6*
Ureter	-2.4*	-2.1*	-3.2*	-0.2	0.0	-0.4
Other urinary system	3.1*	3.3*	2.0	-0.3	-0.3	-1.1
Eye & Orbit	0.2	-0.2	0.8	1.2	1.5	0.7
Brain & Nervous System: <sup>d</sup>	-0.5*	-0.5*	-0.6	0.4	0.4	0.3
Brain	-0.5*	-0.5*	-0.5	-	-	-
Cranial nerves & other nervous system	-1.1	-0.4	-1.8	-	-	-
Endocrine System:	3.7*	3.3*	3.9*	0.0	0.5*	-0.4
Thyroid	4.0*	3.8*	4.0*	0.2	0.7	-0.2
Other endocrine & thymus	-0.3	-0.8	0.2	-0.3	0.2	-0.9
Lymphoma:	-0.6*	-0.5*	-0.8*	-2.3*	-2.1*	-2.7*
Hodgkin lymphoma	-1.8*	-1.7*	-1.9*	-3.7*	-3.2*	-4.4*
Non-Hodgkin lymphoma	-0.5*	-0.4*	-0.6*	-2.3*	-2.0*	-2.6*
Myeloma	1.1*	1.2*	0.9	-0.6*	-0.7*	-0.7
Leukemia:	0.5*	0.4	0.4	-0.9*	-1.0*	-1.1*
Lymphocytic:	-0.2	-0.4	-0.2	-1.5*	-1.7*	-1.5*
Acute lymphocytic	0.7	0.3	1.2	-1.2*	-1.2*	-1.2*
Chronic lymphocytic	-0.5	-0.5	-0.7	-1.7*	-1.8*	-1.7*
Other lymphocytic	-1.3	-1.2	-2.1	-1.6*	-2.1*	-0.9
Myeloid & Monocytic:	1.8*	1.9*	1.7*	-0.1	-0.2	-0.2
Acute myeloid	2.7*	2.6*	2.6*	0.1	0.0	0.0
Chronic myeloid	1.2*	1.4*	0.9	-1.6*	-1.5*	-2.0*
Acute monocytic	-4.7*	-3.9*	-5.7*	-2.7*	-3.3*	-2.5
Other myeloid & monocytic	-1.7	-1.6	-2.1	0.7	0.2	0.9
Other leukemia:	-4.4*	-4.1*	-5.0*	-2.0*	-1.9*	-2.3*
Other acute leukemia	-1.9*	-2.5	-1.7	-4.6*	-4.6*	-4.8*
Aleukemic, subleukemic & NOS	-6.1*	-5.3*	-7.0*	-0.5	-0.4	-0.8*
Kaposi Sarcoma <sup>e</sup>	-2.8*	-3.0*	-1.6	-	-	-
Mesothelioma <sup>e</sup>	-2.1*	-2.5*	-1.3	-	-	-
Ill-defined & unspecified	-2.8*	-2.5*	-3.1*	-2.1*	-2.0*	-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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

<sup>d</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>e</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-1.1*	-2.0*	-0.2*	-1.4*	-1.6*	-1.3*
Oral Cavity & Pharynx:	1.0*	1.1*	0.4	0.2	0.7*	-1.0*
Lip	-0.3	-0.8*	0.5	0.5	-0.3	0.5
Tongue	2.1*	2.5*	1.2*	0.3	0.9*	-0.9*
Salivary gland	-0.6	-1.0	-0.2	1.4*	1.6*	0.7
Floor of mouth	-2.7*	-3.5*	-1.2	-7.2*	-6.8*	-7.8*
Gum & other oral cavity	0.0	-0.1	0.0	0.3	0.9	-0.5
Nasopharynx	-2.4*	-1.8	-3.7*	-1.8*	-1.1*	-3.6*
Tonsil	3.3*	3.5*	2.4*	2.7*	3.0*	1.1
Oropharynx	3.2*	3.4*	2.2	3.2*	3.9*	1.3
Hypopharynx	-2.5*	-2.4*	-3.3*	-0.5	0.0	-2.0
Other oral cavity & pharynx	5.1*	6.7*	-0.1	-1.9*	-1.6*	-3.5*
Digestive System:	-1.1*	-1.2*	-1.1*	-0.7*	-0.7*	-0.9*
Esophagus	-0.6*	-0.7	-1.0	-0.6*	-0.7*	-1.2*
Stomach	-0.5*	-0.9*	-0.1	-2.2*	-2.5*	-2.0*
Small intestine	1.8*	1.5*	2.2*	0.1	0.6	-0.4
Colon & Rectum:	-2.8*	-3.1*	-2.6*	-2.4*	-2.5*	-2.5*
Colon	-3.1*	-3.5*	-2.8*	-	-	-
Rectum	-2.1*	-2.4*	-1.9*	-	-	-
Anus, anal canal & anorectum	1.1*	-0.3	2.2*	3.1*	3.2*	3.1*
Liver & intrahepatic bile duct	3.4*	3.1*	3.8*	2.9*	2.8*	2.5*
Gallbladder	-0.4	1.3	-1.1*	-1.1*	-0.2	-1.4*
Other biliary	0.5	0.6	0.1	-1.2*	-1.4*	-1.1
Pancreas	0.6*	0.7*	0.5*	0.2	0.2*	0.1
Retroperitoneum	-1.4*	-1.5	-1.3	-1.9	-2.1	-1.6
Peritoneum, omentum & mesentery	-3.8*	-3.8	-3.7*	0.1	3.1*	-0.3
Other digestive system	4.6*	4.7*	4.5*	3.5*	3.3*	3.4*
Respiratory System:	-2.2*	-2.9*	-1.7*	-2.3*	-3.0*	-1.7*
Nose, nasal cavity & middle ear	-1.0	-0.1	-2.3*	-2.3*	-1.8	-3.5*
Larynx	-2.5*	-2.7*	-2.4*	-2.2*	-2.1*	-3.3*
Lung & bronchus	-2.2*	-2.9*	-1.6*	-2.4*	-3.0*	-1.7*
Pleura	0.6	-0.6	-	-0.4	-0.8	0.4
Trachea & other respiratory organs	-2.0	-1.7	-2.4*	-0.2	0.0	-0.4
Bones & joints	0.3	0.3	0.3	-0.4	-0.3	-0.5
Soft tissue (including heart)	0.7	0.6*	0.7	0.5*	0.8*	0.0
Skin (excl. basal & squamous):	1.1*	1.3*	0.7	0.3	0.5*	-0.4
Melanoma of the skin	1.1*	1.3*	0.7	-0.3	-0.2	-0.8*
Other non-epithelial skin	1.3*	1.3*	0.8	2.3*	2.4*	1.1
Breast	-0.1	-0.2	0.0	-1.9*	-0.5	-1.7*
Breast ( <i>in situ</i> )	-0.2	-0.6	-0.1	-	-	-

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).

<sup>a</sup> 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).

<sup>b</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
Female Genital System:	-0.2	-	0.0	-1.0*	-	-0.8*
Cervix uteri	-1.6*	-	-1.5*	-0.6*	-	-0.4
Corpus uteri	0.8*	-	1.0*	-0.1	-	0.3
Uterus, NOS	4.9*	-	5.5*	1.9*	-	2.3*
Ovary <sup>c</sup>	-2.2*	-	-2.0*	-2.6*	-	-2.3*
Vagina	0.0	-	0.4	0.0	-	0.3
Vulva	1.3*	-	1.6*	1.0*	-	1.4*
Other female genital system	7.2*	-	7.2*	6.5*	-	6.9*
Male Genital System:	-4.8*	-5.2*	-	-2.3*	-3.0*	-
Prostate	-5.2*	-5.6*	-	-2.4*	-3.1*	-
Testis	0.9*	0.8*	-	1.3	1.2	-
Penis	1.7*	1.4	-	0.8	0.3	-
Other male genital system	3.2*	2.8*	-	4.1	3.6	-
Urinary System:	-0.4	-0.6*	-0.4	-0.3*	-0.2*	-1.0*
Urinary bladder	-1.2*	-1.4*	-1.3*	0.1	-0.1	-0.5*
Kidney & renal pelvis	0.7	0.7	0.5	-0.7*	-0.4*	-1.6*
Ureter	-2.0*	-2.0*	-2.6*	-0.2	0.1	-0.4
Other urinary system	3.5*	3.5*	2.8	0.6	0.1	0.4
Eye & Orbit	0.4	0.0	0.7	1.8*	1.8	1.5
Brain & Nervous System: <sup>d</sup>	-0.5*	-0.5*	-0.4	0.4*	0.4*	0.4
Brain	-0.4	-0.5	-0.4	-	-	-
Cranial nerves & other nervous system	-0.9	-0.8	-1.1	-	-	-
Endocrine System:	3.7*	3.3*	3.9*	0.1	0.6*	-0.4
Thyroid	3.9*	3.8*	4.0*	0.2	0.8*	-0.2
Other endocrine & thymus	-0.5	-0.8	-0.3	-0.2	0.2	-0.7
Lymphoma:	-0.7*	-0.6*	-0.9*	-2.3*	-2.1*	-2.8*
Hodgkin lymphoma	-2.0*	-2.0*	-2.1*	-3.6*	-3.1*	-4.3*
Non-Hodgkin lymphoma	-0.6*	-0.4*	-0.7*	-2.2*	-2.0*	-2.7*
Myeloma	1.0*	1.3*	0.6	-0.7*	-0.6*	-0.9*
Leukemia:	0.4	0.2	0.4	-0.9*	-0.9*	-1.0*
Lymphocytic:	-0.5	-0.6*	-0.5	-1.4*	-1.5*	-1.5*
Acute lymphocytic	0.7	0.6*	0.8	-1.3*	-1.1*	-1.5*
Chronic lymphocytic	-0.8*	-0.9*	-0.9	-1.4*	-1.5*	-1.5*
Other lymphocytic	-1.7*	-1.7*	-2.2	-1.2*	-1.5*	-0.7
Myeloid & Monocytic:	1.9*	1.7*	1.9*	0.0	-0.1	-0.1
Acute myeloid	2.8*	2.5*	2.9*	0.1	0.0	0.1
Chronic myeloid	1.2*	1.2*	0.9	-1.2	-1.0	-1.6
Acute monocytic	-4.9*	-4.4*	-5.7*	-3.0*	-3.9*	-2.5
Other myeloid & monocytic	-2.4*	-2.3	-2.9*	0.6	0.1	0.8
Other leukemia:	-4.1*	-4.0*	-4.7*	-1.9*	-1.8*	-2.3*
Other acute leukemia	-1.3	-2.4*	-0.7	-4.5*	-4.4*	-4.8*
Aleukemic, subleukemic & NOS	-6.1*	-5.2*	-7.4*	-0.4	-0.2	-0.7
Kaposi Sarcoma <sup>e</sup>	-4.6*	-4.9*	-2.6	-	-	-
Mesothelioma <sup>e</sup>	-1.9*	-2.4*	-1.1	-	-	-
Ill-defined & unspecified	-2.7*	-2.4*	-3.1*	-1.9*	-1.8*	-2.1*

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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

<sup>d</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>e</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-1.5*	-2.8*	-0.4*	-2.0*	-2.7*	-1.5*
Oral Cavity & Pharynx:	-1.5*	-1.3*	-2.1*	-2.1*	-2.4*	-1.4
Lip	-	-	-	-	-	-
Tongue	-1.5*	-0.8	-2.9*	-2.6*	-3.9*	0.0
Salivary gland	0.1	0.3	-0.2	3.4	4.1*	3.0
Floor of mouth	-3.6	-3.5	-	-	-	-
Gum & other oral cavity	-1.8	0.1	-3.9*	-2.9*	-2.0	-4.4*
Nasopharynx	-3.0*	-4.1	-0.9	-3.0*	-3.7*	-2.0
Tonsil	0.4	0.6	0.2	-3.4*	-2.8*	-4.5*
Oropharynx	-1.2	-1.8	-	0.4	-0.7	3.5
Hypopharynx	-4.7*	-5.4*	-1.3	-0.2	0.0	-
Other oral cavity & pharynx	-1.3	-1.0	-	-3.5*	-3.5*	-4.0
Digestive System:	-1.9*	-2.0*	-1.9*	-1.7*	-1.7*	-1.9*
Esophagus	-4.4*	-4.9*	-3.7*	-4.4*	-4.9*	-3.4*
Stomach	-3.0*	-3.5*	-2.7*	-3.1*	-3.3*	-3.3*
Small intestine	2.8*	2.4	3.2*	0.8	0.4	1.2
Colon & Rectum:	-3.3*	-3.4*	-3.3*	-3.3*	-3.1*	-3.6*
Colon	-3.6*	-3.8*	-3.5*	-	-	-
Rectum	-2.4*	-2.2*	-2.6*	-	-	-
Anus, anal canal & anorectum	1.9*	2.8*	1.0	3.5*	7.0*	0.1
Liver & intrahepatic bile duct	2.5*	2.5*	2.4*	2.5*	2.3*	2.7*
Gallbladder	1.7*	0.9	2.1	1.2	1.4	1.0
Other biliary	-0.3	-0.5	-0.2	-0.2	-1.0	0.7
Pancreas	-0.5	-0.4	-0.7	-0.5*	-0.4	-0.6*
Retroperitoneum	1.3	-	0.3	-2.5	-	-
Peritoneum, omentum & mesentery	1.6	-	2.2	2.4	-	2.3
Other digestive system	4.1*	2.7	5.2*	2.2	1.3	3.2
Respiratory System:	-2.5*	-3.1*	-1.8*	-2.8*	-3.5*	-2.0*
Nose, nasal cavity & middle ear	-1.9	-2.1	-1.6	-2.7	-3.3	-2.2
Larynx	-2.5*	-2.6*	-2.2	-3.7*	-3.7*	-3.9*
Lung & bronchus	-2.5*	-3.1*	-1.7*	-2.8*	-3.5*	-2.0*
Pleura	-	-	-	-	-	-
Trachea & other respiratory organs	-0.4	-	-	-0.4	-	-
Bones & joints	-1.0	-0.8	-0.8	-0.1	0.0	-0.9
Soft tissue (including heart)	0.0	-0.3	0.3	1.3*	1.7	1.2*
Skin (excl. basal & squamous):	-0.4	-0.1	-0.9	-1.6	-1.7*	-1.3
Melanoma of the skin	0.0	-0.9	0.5	-1.7*	-2.2	-1.5
Other non-epithelial skin	-0.7	0.6	-2.3	-1.5	-1.5	-1.1
Breast	0.5	2.5	0.6*	-1.7*	0.9	-1.6*
Breast ( <i>in situ</i> )	1.3*	-	1.5*	-	-	-

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).

<sup>a</sup> 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).

<sup>b</sup> 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, 2005-2014

Site	Incidence <sup>a</sup>			US Mortality <sup>b</sup>		
	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
Female Genital System:	0.4	-	0.6	-0.2	-	0.0
Cervix uteri	-2.5*	-	-2.3*	-2.3*	-	-2.1*
Corpus uteri	2.4*	-	2.5*	0.6	-	0.9
Uterus, NOS	2.1	-	2.7	2.6*	-	2.8*
Ovary <sup>c</sup>	-1.6*	-	-1.3*	-1.5*	-	-1.3*
Vagina	-0.7	-	-0.8	-1.6	-	-1.2
Vulva	-1.1	-	-0.9	0.1	-	0.6
Other female genital system	5.4*	-	5.5*	2.9	-	2.8
Male Genital System:	-4.4*	-4.8*	-	-3.8*	-4.5*	-
Prostate	-4.5*	-4.8*	-	-3.8*	-4.5*	-
Testis	3.4*	3.4*	-	-2.6	-2.1	-
Penis	2.1	1.3	-	0.7	0.5	-
Other male genital system	-	-	-	-	-	-
Urinary System:	0.2	0.1	0.0	-1.1*	-0.9	-1.8*
Urinary bladder	-0.9*	-0.6	-1.6*	-0.8	-0.7	-1.4*
Kidney & renal pelvis	1.0	0.7	1.1	-1.3*	-1.0	-1.9*
Ureter	-6.3*	-	-	-2.8	-	-
Other urinary system	-1.1	0.0	-	-4.9*	-	-7.2*
Eye & Orbit	3.3	-	-	-	-	-
Brain & Nervous System: <sup>d</sup>	-0.3	0.0	-0.9	1.1	1.0	1.2
Brain	-0.1	0.0	-0.5	-	-	-
Cranial nerves & other nervous system	-2.2	0.3	-4.2	-	-	-
Endocrine System:	3.8*	1.5	4.5*	0.1	1.1	-0.5
Thyroid	4.4*	2.6*	4.8*	0.7	1.7	0.2
Other endocrine & thymus	-0.5	-2.3	0.9	-0.8	0.4	-1.8
Lymphoma:	-0.3	-0.4	-0.2	-1.7*	-1.8*	-1.5*
Hodgkin lymphoma	-0.6	-0.2	-1.4	-3.6*	-3.5*	-3.4*
Non-Hodgkin lymphoma	-0.3	-0.4	0.0	-1.6*	-1.7*	-1.4*
Myeloma	0.8	0.8	0.7	-0.3	-1.0*	0.2
Leukemia:	1.2*	1.5*	0.8	-1.3*	-1.7*	-1.1*
Lymphocytic:	1.1	1.0	0.8	-2.6*	-3.8*	-1.1
Acute lymphocytic	0.5	-2.4*	4.4*	-0.8	-2.3	1.7
Chronic lymphocytic	1.2	1.7	-0.3	-2.9*	-3.6*	-2.1*
Other lymphocytic	2.0	-	-	-5.5*	-	-
Myeloid & Monocytic:	2.4*	3.1*	1.7*	-0.2	0.2	-0.8
Acute myeloid	3.4*	4.7*	2.3	0.2	0.8	-0.6
Chronic myeloid	0.9	0.2	1.4	-4.2*	-4.5*	-3.8
Acute monocytic	-4.2*	-	-	-	-	-
Other myeloid & monocytic	-	-	-	2.8	2.2	2.3
Other leukemia:	-6.9*	-7.0	-6.8*	-1.8*	-2.4*	-1.5
Other acute leukemia	-3.7	-	-	-4.8*	-6.3*	-3.5
Aleukemic, subleukemic & NOS	-8.8*	-	-7.6	-0.6	-0.8	-0.8
Kaposi Sarcoma <sup>e</sup>	-1.9	-1.7	-	-	-	-
Mesothelioma <sup>e</sup>	-2.8	-3.4	-	-	-	-
Ill-defined & unspecified	-3.4*	-3.2*	-3.4*	-2.9*	-3.1*	-2.9*

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).

<sup>a</sup> 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).

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

<sup>d</sup> Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

<sup>e</sup> 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, 2010-2014

## All Races, Both Sexes

Site	Age at Diagnosis								All Ages	Cases
	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+		
All Sites	1.0	2.8	5.0	13.5	24.5	26.7	18.6	8.0	100.0%	2,059,139
Oral Cavity & Pharynx:	0.5	2.0	4.8	18.2	30.7	23.7	14.0	6.2	100.0%	53,315
Lip	0.2	1.6	4.3	14.5	20.3	23.7	22.3	13.1	100.0%	3,129
Tongue	0.1	1.6	4.1	17.8	33.4	25.5	12.9	4.6	100.0%	16,030
Salivary gland	2.0	6.0	7.6	13.0	20.1	21.7	18.8	10.9	100.0%	5,826
Floor of mouth	0.1	0.3	2.4	18.5	34.5	25.9	13.6	4.7	100.0%	2,498
Gum & other oral cavity	0.6	1.8	4.1	12.2	23.1	24.8	21.1	12.5	100.0%	6,985
Nasopharynx	2.8	6.6	12.7	22.8	27.6	16.8	8.6	2.1	100.0%	2,883
Tonsil	0.0	0.5	4.7	26.5	39.8	20.3	6.5	1.6	100.0%	9,798
Oropharynx	0.1	0.2	3.1	19.0	34.6	26.8	12.3	3.9	100.0%	2,116
Hypopharynx	0.0	0.2	1.1	15.6	32.9	29.4	16.3	4.6	100.0%	2,809
Other oral cavity & pharynx	0.3	0.9	3.1	17.6	30.9	24.7	14.9	7.7	100.0%	1,241
Digestive System:	0.2	1.2	3.5	13.2	24.3	25.4	21.3	10.9	100.0%	379,732
Esophagus	0.0	0.4	1.9	10.8	27.3	29.7	21.5	8.6	100.0%	19,831
Stomach	0.1	1.7	4.5	12.0	21.4	25.7	22.9	11.6	100.0%	33,575
Small intestine	0.1	1.6	4.9	15.0	25.4	26.5	18.9	7.6	100.0%	10,550
Colon & Rectum:	0.1	1.5	4.3	14.9	22.3	24.2	21.1	11.7	100.0%	185,617
Colon	0.1	1.3	3.6	12.5	20.4	24.9	23.5	13.6	100.0%	129,954
Rectum	0.1	1.8	5.7	20.4	26.6	22.6	15.5	7.3	100.0%	55,663
Colon & Rectum (Male)	0.1	1.4	4.2	15.6	24.7	25.8	19.5	8.6	100.0%	96,505
Colon & Rectum (Female)	0.1	1.5	4.3	14.2	19.7	22.5	22.7	14.9	100.0%	89,112
Anus, anal canal & anorectum	0.0	1.2	5.6	23.1	29.4	21.3	13.3	6.2	100.0%	8,613
Liver & intrahepatic bile duct	0.8	0.7	1.8	13.3	37.0	24.3	16.2	5.8	100.0%	42,005
Gallbladder	0.0	0.4	2.4	9.1	20.2	27.8	26.0	14.0	100.0%	5,406
Other biliary	0.1	0.6	2.4	8.6	20.8	26.9	26.7	14.0	100.0%	8,752
Pancreas	0.1	0.5	1.9	8.8	22.3	27.8	25.1	13.6	100.0%	57,999
Retroperitoneum	7.3	4.3	5.3	17.1	23.7	22.9	14.9	4.5	100.0%	1,762
Peritoneum, omentum & mesentery	0.3	1.1	1.8	10.9	24.9	32.6	21.3	7.1	100.0%	2,562
Other digestive system	0.2	0.8	2.6	9.7	22.0	25.5	25.9	13.4	100.0%	3,060
Respiratory System:	0.1	0.3	1.2	8.2	22.1	32.5	26.4	9.1	100.0%	274,918
Nose, nasal cavity & middle ear	1.8	3.5	7.4	14.8	24.4	21.9	17.6	8.6	100.0%	3,125
Larynx	0.0	0.4	2.2	14.0	31.3	29.4	17.0	5.5	100.0%	14,706
Lung & bronchus	0.0	0.2	1.1	7.8	21.5	32.9	27.1	9.4	100.0%	256,143
Lung & bronchus (Male)	0.0	0.2	1.0	7.4	22.6	33.6	26.7	8.5	100.0%	133,813
Lung & bronchus (Female)	0.0	0.3	1.2	8.2	20.3	32.1	27.5	10.3	100.0%	122,330
Pleura	2.0	2.0	5.4	6.1	16.9	21.6	27.7	18.2	100.0%	148
Trachea & other respiratory organs	16.8	18.3	9.2	11.1	14.6	14.8	10.2	5.0	100.0%	796
Bones & joints	26.4	15.7	9.5	11.8	13.1	11.7	8.0	3.7	100.0%	4,126
Soft tissue (including heart)	8.3	9.0	8.8	14.6	19.2	17.7	14.8	7.5	100.0%	15,454
Skin (excl. basal & squamous):	0.5	5.6	7.8	15.1	21.6	22.6	17.8	8.9	100.0%	111,882
Melanoma of the skin	0.4	5.7	8.0	15.6	22.2	22.7	17.1	8.2	100.0%	102,706
Other non-epithelial skin	1.4	5.1	5.6	9.1	14.7	21.3	25.3	17.4	100.0%	9,176
Breast (Female)	0.0	1.8	8.7	20.8	25.8	23.4	13.8	5.6	100.0%	309,570
Breast (Female -in situ)	0.0	0.7	9.8	26.9	27.7	23.0	9.9	2.0	100.0%	76,784

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, 2010-2014

## All Races, Both Sexes

Site	Age at Diagnosis								All Ages	Cases
	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+		
Female Genital System:	0.4	3.9	8.2	17.8	28.9	22.6	12.6	5.6	100.0%	122,990
Cervix uteri	0.1	13.9	23.8	23.8	18.7	11.2	5.8	2.7	100.0%	16,825
Corpus uteri	0.0	1.7	5.4	16.7	34.8	25.9	11.6	3.8	100.0%	64,011
Uterus, NOS	0.2	1.6	5.8	16.0	25.7	22.0	16.2	12.4	100.0%	2,005
Ovary <sup>a</sup>	1.3	3.8	6.8	18.5	24.3	21.7	15.5	7.9	100.0%	29,074
Vagina	0.9	1.7	5.2	12.7	23.9	23.6	19.8	12.2	100.0%	1,862
Vulva	0.1	1.8	5.5	14.6	20.4	21.3	21.4	15.0	100.0%	6,234
Other female genital system	0.6	4.8	4.3	13.4	25.5	26.0	17.7	7.7	100.0%	2,979
Male Genital System:	0.3	2.2	1.6	9.5	31.6	36.4	14.7	3.8	100.0%	280,690
Prostate	0.0	0.0	0.5	9.3	32.8	38.2	15.3	3.9	100.0%	265,900
Testis	5.8	50.3	22.8	13.1	5.6	1.6	0.5	0.2	100.0%	12,371
Penis	0.1	1.6	5.5	11.7	21.8	26.1	22.5	10.7	100.0%	1,808
Other male genital system	1.8	2.8	4.6	13.3	23.4	25.2	20.3	8.7	100.0%	611
Urinary System:	0.5	1.1	3.3	10.4	22.0	28.2	23.6	10.9	100.0%	167,273
Urinary bladder	0.1	0.4	1.4	6.3	18.5	29.2	29.3	14.9	100.0%	90,382
Kidney & renal pelvis	1.1	1.9	5.9	15.7	26.7	26.8	16.2	5.7	100.0%	72,949
Ureter	0.0	0.1	0.3	3.6	15.7	30.3	34.5	15.5	100.0%	2,360
Other urinary system	0.1	0.4	1.3	6.3	17.0	26.6	30.6	17.7	100.0%	1,582
Eye & Orbit	12.0	4.0	6.2	13.9	21.2	22.2	14.4	6.2	100.0%	3,892
Brain & Nervous System:	12.7	9.1	7.7	14.0	20.4	18.5	12.7	4.9	100.0%	28,892
Brain	11.8	9.0	7.6	13.9	20.7	18.9	13.1	5.0	100.0%	27,141
Cranial nerves & other nervous system	26.6	10.3	10.3	15.0	14.5	12.2	7.3	3.8	100.0%	1,751
Endocrine System:	2.8	14.6	18.4	22.9	20.5	13.7	5.7	1.4	100.0%	67,145
Thyroid	1.8	15.0	18.9	23.4	20.6	13.4	5.4	1.3	100.0%	63,801
Other endocrine & thymus	21.2	7.3	8.4	12.8	19.6	17.9	9.9	2.9	100.0%	3,344
Lymphoma:	2.9	6.8	6.4	12.4	20.2	23.1	19.6	8.6	100.0%	100,575
Hodgkin lymphoma	12.2	31.3	14.0	12.7	11.8	9.0	6.6	2.3	100.0%	11,414
Non-Hodgkin lymphoma	1.7	3.6	5.5	12.4	21.3	24.9	21.3	9.4	100.0%	89,161
Myeloma	0.0	0.6	2.9	10.8	23.3	29.2	24.1	9.2	100.0%	30,340
Leukemia:	9.0	4.5	4.7	9.9	17.8	22.4	20.8	10.9	100.0%	62,137
Lymphocytic:	13.5	2.7	3.1	9.3	18.9	22.7	19.7	10.0	100.0%	31,001
Acute lymphocytic	56.1	10.1	5.8	7.4	8.9	5.9	4.3	1.5	100.0%	7,424
Chronic lymphocytic	0.1	0.3	1.6	9.1	21.9	28.8	25.3	13.0	100.0%	21,747
Other lymphocytic	0.7	1.8	9.6	19.5	23.9	19.3	16.4	8.7	100.0%	1,830
Myeloid & Monocytic:	4.3	6.5	6.5	10.7	17.1	22.7	21.6	10.5	100.0%	28,782
Acute myeloid	5.1	6.0	5.4	9.5	16.9	23.7	22.8	10.6	100.0%	19,084
Chronic myeloid	2.1	7.7	9.0	13.8	18.0	20.7	18.8	9.8	100.0%	8,078
Acute monocytic	8.4	5.1	7.2	9.5	17.4	21.0	20.9	10.5	100.0%	948
Other myeloid & monocytic	4.3	7.4	6.4	10.3	13.4	21.0	21.4	15.8	100.0%	672
Other leukemia:	5.9	4.6	4.0	7.6	11.1	15.1	24.8	26.9	100.0%	2,354
Other acute leukemia	7.9	5.1	4.1	8.0	10.9	15.5	24.4	24.2	100.0%	1,043
Aleukemic, subleukemic & NOS	4.3	4.3	4.0	7.3	11.2	14.7	25.2	29.1	100.0%	1,311
Kaposi Sarcoma	0.3	23.1	20.6	21.8	10.8	8.2	8.6	6.5	100.0%	2,212
Mesothelioma	0.0	0.9	1.5	5.8	14.9	28.1	33.3	15.5	100.0%	4,171
Ill-defined & unspecified	0.4	0.9	2.2	8.3	18.8	23.3	26.2	20.0	100.0%	37,350

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.

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

Table 1.12  
 Median Age of Cancer Patients at Diagnosis<sup>a</sup>, 2010-2014  
 By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	66.0	66.0	65.0	66.0	67.0	65.0	63.0	63.0	62.0
Oral Cavity & Pharynx:	63.0	62.0	65.0	63.0	62.0	66.0	59.0	59.0	59.0
Lip	68.0	68.0	71.0	69.0	68.0	71.0	59.5	60.5	-
Tongue	62.0	62.0	64.0	63.0	62.0	65.0	60.0	60.0	58.0
Salivary gland	65.0	67.0	62.0	67.0	69.0	64.0	57.0	58.0	57.0
Floor of mouth	63.0	62.0	65.0	63.0	62.0	66.0	60.0	60.5	59.0
Gum & other oral cavity	68.0	65.0	71.0	69.0	66.0	73.0	62.0	61.0	63.0
Nasopharynx	56.0	57.0	55.0	59.0	59.0	58.0	55.0	55.0	53.5
Tonsil	59.0	58.0	61.0	59.0	58.0	62.0	58.0	58.0	59.0
Oropharynx	62.5	62.0	64.0	63.0	62.0	65.0	61.0	61.0	61.5
Hypopharynx	65.0	64.0	66.0	65.0	65.0	67.0	61.0	60.0	61.0
Other oral cavity & pharynx	64.0	63.0	68.0	64.0	63.0	68.0	61.0	59.0	66.0
Digestive System:	67.0	66.0	69.0	68.0	67.0	70.0	64.0	63.0	65.0
Esophagus	67.0	67.0	71.0	68.0	67.0	72.0	64.0	63.0	65.0
Stomach	68.0	68.0	70.0	69.0	68.0	70.0	66.0	65.0	68.0
Small intestine	66.0	65.0	66.0	66.0	66.0	67.0	64.0	63.0	64.0
Colon & Rectum:	67.0	66.0	69.0	68.0	67.0	70.0	63.0	63.0	64.0
Colon	69.0	68.0	71.0	70.0	69.0	73.0	65.0	64.0	66.0
Rectum	63.0	63.0	63.0	63.0	63.0	64.0	60.0	60.0	60.0
Anus, anal canal & anorectum	61.0	59.0	62.0	62.0	61.0	62.0	55.0	51.0	58.5
Liver & intrahepatic bile duct	63.0	62.0	68.0	64.0	62.0	68.0	61.0	61.0	62.0
Gallbladder	71.0	71.0	71.0	72.0	71.0	72.0	67.0	68.5	66.0
Other biliary	71.0	70.0	72.0	72.0	70.0	73.0	67.0	66.0	68.0
Pancreas	70.0	68.0	73.0	71.0	69.0	73.0	66.0	64.0	69.0
Retroperitoneum	61.0	62.0	60.0	62.0	63.0	62.0	58.0	56.5	59.0
Peritoneum, omentum & mesentery	68.0	66.0	68.0	68.0	66.0	68.0	63.0	60.0	63.0
Other digestive system	70.0	69.0	72.0	71.0	70.0	72.0	66.0	65.5	66.0
Respiratory System:	70.0	70.0	71.0	71.0	70.0	71.0	66.0	66.0	67.0
Nose, nasal cavity & middle ear	64.0	63.0	65.0	65.0	64.0	67.0	57.0	56.0	58.0
Larynx	65.0	65.0	64.0	65.0	66.0	65.0	62.0	63.0	61.0
Lung & bronchus	70.0	70.0	71.0	71.0	71.0	71.0	66.0	66.0	67.0
Pleura	73.0	74.0	71.5	74.5	75.0	74.0	-	-	-
Trachea & other respiratory organs	49.0	46.0	58.0	51.0	46.0	61.0	51.0	51.0	51.0
Bones & joints	43.0	42.0	44.0	45.0	44.0	46.0	33.0	30.0	35.0
Soft tissue (including heart)	60.0	60.0	59.0	61.0	62.0	60.0	53.0	52.0	53.0
Skin (excl. basal & squamous):	64.0	66.0	60.0	65.0	67.0	60.0	58.0	58.0	58.0
Melanoma of the skin	64.0	66.0	59.0	64.0	66.0	60.0	64.0	64.0	64.0
Other non-epithelial skin	71.0	72.0	70.0	73.0	73.0	72.0	52.0	51.0	53.0
Breast	62.0	68.0	62.0	63.0	68.0	63.0	59.0	64.5	59.0
Breast ( <i>in situ</i> )	59.0	61.0	59.0	59.0	61.0	59.0	59.0	61.0	59.0

<sup>a</sup> 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<sup>a</sup>, 2010-2014  
 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	49.0	-	49.0	51.0	-	51.0
Corpus uteri	62.0	-	62.0	62.0	-	62.0	63.0	-	63.0
Uterus, NOS	65.0	-	65.0	65.0	-	65.0	64.0	-	64.0
Ovary <sup>b</sup>	63.0	-	63.0	64.0	-	64.0	61.0	-	61.0
Vagina	67.0	-	67.0	67.0	-	67.0	64.0	-	64.0
Vulva	68.0	-	68.0	69.0	-	69.0	58.0	-	58.0
Other female genital system	65.0	-	65.0	66.0	-	66.0	60.0	-	60.0
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	-	64.0	64.0	-
Other male genital system	66.0	66.0	-	67.0	67.0	-	55.5	55.5	-
Urinary System:	69.0	69.0	69.0	69.0	70.0	69.0	64.0	64.0	65.0
Urinary bladder	73.0	72.0	73.0	73.0	73.0	73.0	70.0	69.0	72.0
Kidney & renal pelvis	64.0	64.0	65.0	65.0	64.0	65.0	61.0	60.0	63.0
Ureter	74.5	74.0	76.0	75.0	74.0	77.0	73.0	73.0	73.0
Other urinary system	74.0	75.0	73.0	74.0	75.0	73.0	67.0	68.0	66.0
Eye & Orbit	61.0	62.0	60.0	62.0	63.0	61.0	22.0	41.0	3.5
Brain & Nervous System:	58.0	57.0	59.0	59.0	58.0	60.0	51.0	51.0	51.0
Brain	58.0	58.0	59.0	59.0	59.0	60.0	51.0	51.0	51.0
Cranial nerves & other nervous system	47.0	44.0	49.0	47.0	45.0	49.0	45.0	43.0	51.0
Endocrine System:	51.0	55.0	50.0	51.0	55.0	50.0	52.0	54.0	51.0
Thyroid	51.0	55.0	50.0	51.0	55.0	50.0	52.0	55.0	51.0
Other endocrine & thymus	55.0	53.0	56.0	55.0	54.0	57.0	51.0	49.0	53.0
Lymphoma:	65.0	64.0	66.0	66.0	65.0	67.0	56.0	55.0	58.0
Hodgkin lymphoma	39.0	41.0	37.0	40.0	42.0	37.0	38.0	39.0	37.0
Non-Hodgkin lymphoma	67.0	66.0	68.0	67.0	67.0	69.0	59.0	57.0	61.0
Myeloma	69.0	68.0	69.0	70.0	69.0	70.0	66.0	65.0	66.0
Leukemia:	66.0	66.0	67.0	67.0	67.0	68.0	62.0	61.0	62.0
Lymphocytic:	65.0	65.0	66.0	66.0	66.0	67.0	63.0	62.0	64.0
Acute lymphocytic	15.0	16.0	14.0	16.0	16.0	14.0	14.0	14.0	15.0
Chronic lymphocytic	70.0	69.0	72.0	71.0	70.0	73.0	68.0	67.0	70.0
Other lymphocytic	62.0	61.0	65.0	62.5	62.0	65.0	61.0	59.0	69.0
Myeloid & Monocytic:	67.0	67.0	67.0	68.0	68.0	68.0	60.0	60.0	60.0
Acute myeloid	68.0	68.0	67.0	68.0	69.0	68.0	62.0	62.0	62.0
Chronic myeloid	64.0	64.0	65.0	66.0	65.0	66.0	56.0	56.0	58.0
Acute monocytic	66.0	67.0	63.0	66.0	67.0	63.0	62.0	65.0	56.5
Other myeloid & monocytic	69.0	68.0	70.0	70.0	69.0	71.0	63.0	62.0	63.0
Other leukemia:	75.0	72.0	78.0	77.0	74.0	80.0	64.0	62.0	66.0
Other acute leukemia	74.0	68.0	78.0	75.0	69.0	78.0	62.0	57.0	73.0
Aleukemic, subleukemic & NOS	77.0	74.0	78.0	79.0	77.0	80.0	64.0	63.0	65.0
Kaposi Sarcoma	47.0	45.0	77.0	51.0	49.0	80.5	37.0	36.0	43.0
Mesothelioma	74.0	75.0	72.0	74.0	75.0	72.0	68.0	70.0	65.0
Ill-defined & unspecified	73.0	71.0	75.0	74.0	71.0	76.0	67.0	65.0	70.0

<sup>a</sup> 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).

<sup>b</sup> 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, 2010-2014

## All Races, Both Sexes

Site	Age at Death								All Ages	Deaths
	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+		
All Sites	0.3	0.8	2.0	8.2	19.4	26.0	26.6	16.8	100.0%	2,910,588
Oral Cavity & Pharynx:	0.1	0.8	2.3	12.7	26.6	25.0	20.0	12.5	100.0%	44,309
Lip	0.6	0.3	1.1	7.8	15.8	20.2	26.6	27.7	100.0%	361
Tongue	0.0	1.1	2.9	13.0	27.6	25.3	19.0	11.0	100.0%	11,028
Salivary gland	0.1	1.1	2.5	8.4	17.1	22.6	25.7	22.4	100.0%	4,355
Floor of mouth	0.0	0.2	1.0	14.3	32.6	22.9	18.8	10.2	100.0%	420
Gum & other oral cavity	0.0	0.4	1.6	8.9	20.2	22.4	24.3	22.2	100.0%	6,348
Nasopharynx	0.7	3.0	5.6	17.7	28.5	21.9	15.8	6.7	100.0%	3,312
Tonsil	0.0	0.2	2.5	17.7	35.0	25.8	13.7	5.1	100.0%	4,277
Oropharynx	0.0	0.3	1.8	14.4	30.1	25.8	18.7	9.0	100.0%	4,501
Hypopharynx	0.0	0.3	1.0	13.9	28.1	28.8	19.7	8.2	100.0%	1,664
Other oral cavity & pharynx	0.0	0.1	1.3	12.1	28.1	27.9	20.5	9.9	100.0%	8,043
Digestive System:	0.0	0.5	2.0	9.0	21.5	25.0	25.1	16.7	100.0%	734,612
Esophagus	0.0	0.3	1.6	9.6	25.4	28.8	23.3	11.1	100.0%	73,209
Stomach	0.0	1.3	3.7	10.3	18.6	23.2	25.3	17.5	100.0%	56,188
Small intestine	0.0	0.9	2.6	8.8	19.9	25.9	25.6	16.4	100.0%	6,386
Colon & Rectum:	0.0	0.7	2.6	9.5	18.4	22.5	25.3	21.0	100.0%	258,808
Colon & Rectum (Male)	0.0	0.8	2.7	10.4	21.0	24.9	24.7	15.5	100.0%	135,107
Colon & Rectum (Female)	0.0	0.7	2.4	8.5	15.6	19.8	26.0	27.1	100.0%	123,701
Anus, anal canal & anorectum	0.0	0.6	4.7	17.1	26.7	22.1	17.6	11.1	100.0%	4,387
Liver & intrahepatic bile duct	0.2	0.5	1.4	10.4	30.8	24.9	21.3	10.4	100.0%	113,614
Gallbladder	0.0	0.2	1.5	6.9	18.0	27.9	28.2	17.3	100.0%	10,746
Other biliary	0.0	0.3	1.3	6.3	16.7	24.6	28.9	21.9	100.0%	7,663
Pancreas	0.0	0.2	1.1	7.2	20.1	27.5	27.4	16.4	100.0%	192,443
Retroperitoneum	0.5	1.2	2.5	9.2	21.7	26.0	25.0	13.9	100.0%	1,065
Peritoneum, omentum & mesentery	0.1	0.5	1.8	6.6	19.4	29.6	29.0	13.0	100.0%	4,419
Other digestive system	0.0	0.5	1.5	6.9	17.5	23.9	27.9	21.8	100.0%	5,684
Respiratory System:	0.0	0.1	0.8	7.1	20.2	31.3	28.6	12.0	100.0%	807,519
Nose, nasal cavity & middle ear	0.3	2.4	4.0	12.6	19.4	24.4	22.4	14.5	100.0%	2,293
Larynx	0.0	0.1	1.0	10.1	26.9	29.7	22.3	9.9	100.0%	18,571
Lung & bronchus	0.0	0.1	0.8	7.0	20.0	31.3	28.7	12.0	100.0%	784,326
Lung & bronchus (Male)	0.0	0.1	0.7	6.8	21.3	32.3	28.1	10.6	100.0%	431,640
Lung & bronchus (Female)	0.0	0.1	0.9	7.2	18.5	30.1	29.5	13.8	100.0%	352,686
Pleura	0.4	0.2	1.3	2.5	14.0	28.3	35.1	18.2	100.0%	1,173
Trachea & other respiratory organs	1.7	4.7	3.2	11.6	20.4	23.7	20.3	14.4	100.0%	1,156
Bones & joints	12.2	14.5	5.6	9.7	13.3	15.5	16.4	12.8	100.0%	7,203
Soft tissue (including heart)	3.5	6.1	6.0	12.8	19.7	20.8	19.2	11.9	100.0%	22,683
Skin (excl. basal & squamous):	0.1	1.6	3.7	9.9	18.9	22.2	24.8	18.8	100.0%	62,827
Melanoma of the skin	0.1	2.0	4.6	11.2	20.1	22.8	24.1	15.1	100.0%	46,251
Other non-epithelial skin	0.0	0.5	1.2	6.4	15.6	20.8	26.5	29.0	100.0%	16,576
Breast (Female)	0.0	0.9	4.8	13.6	22.0	21.9	19.9	16.9	100.0%	205,148

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, 2010-2014

All Races, Both Sexes

Site	Age at Death								All Ages	Deaths
	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+		
Female Genital System:	0.0	1.2	3.7	11.1	21.9	25.6	22.5	13.9	100.0%	147,246
Cervix uteri	0.0	5.2	13.4	23.3	23.9	16.5	11.2	6.4	100.0%	20,437
Corpus uteri	0.0	0.3	1.8	6.9	24.3	30.7	23.0	13.0	100.0%	19,233
Uterus, NOS	0.0	0.5	2.0	8.3	22.7	28.5	22.8	15.3	100.0%	25,773
Ovary	0.1	0.7	2.3	10.1	21.2	26.3	24.9	14.3	100.0%	71,793
Vagina	0.1	0.7	2.2	7.3	15.7	20.9	26.8	26.2	100.0%	2,147
Vulva	0.1	0.5	1.8	7.5	13.2	18.5	27.7	30.7	100.0%	5,086
Other female genital system	0.1	0.9	2.2	8.3	21.6	29.6	23.7	13.7	100.0%	2,777
Male Genital System:	0.0	0.5	0.4	2.0	9.3	21.1	33.9	32.9	100.0%	143,385
Prostate	0.0	0.0	0.1	1.6	9.1	21.3	34.4	33.5	100.0%	139,798
Testis	1.9	35.0	18.6	19.7	10.8	6.3	4.6	3.1	100.0%	1,959
Penis	0.1	1.0	3.5	9.8	19.9	25.6	24.2	15.9	100.0%	1,349
Other male genital system	0.0	0.7	2.5	7.9	13.3	21.9	32.6	21.1	100.0%	279
Urinary System:	0.2	0.3	1.1	5.9	16.0	24.0	29.2	23.4	100.0%	148,666
Urinary bladder	0.0	0.1	0.5	3.6	11.7	21.5	32.6	29.9	100.0%	76,521
Kidney & renal pelvis	0.3	0.6	1.7	8.7	21.1	26.8	25.0	15.9	100.0%	68,119
Ureter	0.1	0.1	0.2	2.6	10.1	23.5	36.8	26.6	100.0%	1,899
Other urinary system	0.0	0.2	1.1	4.8	12.7	22.8	32.8	25.5	100.0%	2,127
Eye & Orbit	1.9	1.7	3.2	9.8	21.6	24.0	22.8	14.9	100.0%	1,485
Brain & Nervous System:	3.6	3.4	5.3	13.2	24.2	24.5	18.2	7.5	100.0%	75,271
Endocrine System:	6.0	2.4	3.5	9.2	18.4	23.2	22.6	14.8	100.0%	13,648
Thyroid	0.2	0.8	1.9	7.4	18.1	25.5	27.2	19.0	100.0%	8,805
Other endocrine & thymus	16.6	5.2	6.4	12.4	18.9	19.1	14.3	7.1	100.0%	4,843
Lymphoma:	0.4	1.8	2.3	6.0	14.3	23.1	30.6	21.5	100.0%	107,195
Hodgkin lymphoma	1.0	11.5	8.4	11.1	15.6	19.6	21.5	11.3	100.0%	5,696
Non-Hodgkin lymphoma	0.3	1.3	2.0	5.7	14.2	23.3	31.2	22.1	100.0%	101,499
Myeloma	0.0	0.1	0.9	5.2	15.9	27.0	32.3	18.6	100.0%	58,167
Leukemia:	2.2	2.7	2.5	5.7	12.8	22.7	30.2	21.2	100.0%	116,289
Lymphocytic:	3.4	3.3	2.2	4.5	11.1	19.6	28.8	27.1	100.0%	32,043
Acute lymphocytic	15.0	14.3	8.6	11.0	14.8	15.8	13.0	7.4	100.0%	7,175
Chronic lymphocytic	0.0	0.1	0.3	2.5	9.9	20.7	33.5	33.1	100.0%	22,862
Other lymphocytic	0.8	1.3	1.0	4.5	11.1	20.0	32.0	29.3	100.0%	2,006
Myeloid & Monocytic:	1.7	2.6	3.0	6.8	14.8	25.5	30.1	15.6	100.0%	57,436
Acute myeloid	1.9	2.7	3.0	6.9	15.5	26.4	29.8	13.9	100.0%	47,878
Chronic myeloid	0.6	3.2	4.2	7.6	11.2	18.4	29.4	25.4	100.0%	5,221
Acute monocytic	2.4	0.4	1.5	4.7	12.6	24.0	32.1	22.3	100.0%	467
Other myeloid & monocytic	0.7	1.0	1.9	4.6	11.9	24.2	34.4	21.3	100.0%	3,870
Other leukemia:	1.9	2.1	1.9	4.8	10.6	20.4	32.0	26.4	100.0%	26,810
Other acute leukemia	1.2	2.2	1.9	4.7	10.4	21.0	33.1	25.4	100.0%	9,193
Aleukemic, subleukemic & NOS	2.3	2.1	1.9	4.8	10.7	20.1	31.3	26.9	100.0%	17,617
Ill-defined & unspecified	0.2	0.7	1.6	7.3	18.0	24.2	27.4	20.6	100.0%	212,719

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<sup>a</sup>, 2010-2014  
 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	73.0	67.0	67.0	68.0
Oral Cavity & Pharynx:	67.0	65.0	73.0	68.0	66.0	74.0	63.0	62.0	63.0
Lip	76.0	73.0	84.0	76.0	73.0	84.0	-	-	-
Tongue	66.0	65.0	71.0	67.0	65.0	72.0	63.0	62.0	63.0
Salivary gland	74.0	73.0	75.0	75.0	74.0	76.0	64.5	64.0	65.0
Floor of mouth	65.0	64.0	73.0	66.0	63.0	73.0	64.5	65.5	-
Gum & other oral cavity	73.0	68.0	80.0	74.0	69.0	81.0	64.0	63.0	69.0
Nasopharynx	63.0	62.0	65.0	65.0	63.0	69.0	58.0	58.5	58.0
Tonsil	63.0	62.0	66.0	63.0	62.0	68.0	62.0	62.0	62.0
Oropharynx	65.0	64.0	71.0	67.0	65.0	72.0	62.0	62.0	61.0
Hypopharynx	66.0	66.0	67.0	67.0	67.0	69.0	62.0	63.0	58.0
Other oral cavity & pharynx	67.0	66.0	71.0	68.0	67.0	72.0	64.0	64.0	66.0
Digestive System:	71.0	69.0	75.0	72.0	70.0	75.0	67.0	65.0	70.0
Esophagus	69.0	68.0	74.0	69.0	68.0	74.0	65.0	64.0	67.0
Stomach	72.0	70.0	74.0	72.0	71.0	75.0	69.0	67.0	72.0
Small intestine	72.0	71.0	73.0	73.0	72.0	74.0	65.0	65.0	66.0
Colon & Rectum	73.0	71.0	76.0	74.0	71.0	77.0	67.0	66.0	69.0
Anus, anal canal & anorectum	65.0	62.0	66.0	66.0	64.0	67.0	59.0	55.0	61.0
Liver & intrahepatic bile duct	67.0	65.0	72.0	68.0	66.0	73.0	62.0	62.0	66.0
Gallbladder	73.0	72.0	74.0	74.0	73.0	75.0	69.0	70.0	69.0
Other biliary	75.0	73.0	77.0	75.0	74.0	77.0	70.0	69.5	71.0
Pancreas	72.0	70.0	75.0	73.0	71.0	75.0	69.0	66.0	72.0
Retroperitoneum	70.0	70.0	70.5	71.0	71.0	73.0	67.0	69.0	64.0
Peritoneum, omentum & mesentery	72.0	68.0	72.0	72.0	68.0	73.0	69.0	64.5	71.0
Other digestive system	74.0	72.0	78.0	75.0	72.0	78.0	70.0	68.0	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	67.0	75.0	65.0	63.0	69.5
Larynx	68.0	68.0	69.0	69.0	69.0	70.0	65.0	65.0	64.5
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	75.0	76.0	76.0	75.0	72.0	70.0	75.0
Trachea & other respiratory organs	68.0	66.0	72.0	69.0	67.0	73.0	61.0	61.5	60.0
Bones & joints	61.0	58.0	64.0	62.0	60.0	65.0	53.0	51.0	56.0
Soft tissue (including heart)	65.0	66.0	65.0	67.0	67.0	66.0	59.0	57.0	60.0
Skin (excl. basal & squamous):	72.0	71.0	73.0	72.0	72.0	73.0	64.0	63.0	67.0
Melanoma of the skin	70.0	70.0	70.0	70.0	70.0	70.0	67.0	65.0	69.0
Other non-epithelial skin	77.0	75.0	82.0	78.0	76.0	82.0	62.0	62.0	64.0
Breast	68.0	70.0	68.0	70.0	72.0	70.0	62.0	66.0	62.0

<sup>a</sup> 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<sup>a</sup>, 2010-2014  
 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	58.0	-	58.0	58.0	-	58.0	58.0	-	58.0
Corpus uteri	70.0	-	70.0	70.0	-	70.0	68.0	-	68.0
Uterus, NOS	70.0	-	70.0	71.0	-	71.0	68.0	-	68.0
Ovary	70.0	-	70.0	71.0	-	71.0	67.0	-	67.0
Vagina	76.0	-	76.0	77.0	-	77.0	71.0	-	71.0
Vulva	78.0	-	78.0	79.0	-	79.0	67.0	-	67.0
Other female genital system	70.0	-	70.0	70.0	-	70.0	67.0	-	67.0
Male Genital System:	80.0	80.0	-	81.0	81.0	-	76.0	76.0	-
Prostate	80.0	80.0	-	81.0	81.0	-	76.0	76.0	-
Testis	41.0	41.0	-	41.0	41.0	-	44.0	44.0	-
Penis	71.0	71.0	-	72.0	72.0	-	68.0	68.0	-
Other male genital system	76.0	76.0	-	78.0	78.0	-	63.5	63.5	-
Urinary System:	75.0	74.0	78.0	76.0	75.0	78.0	71.0	69.0	74.0
Urinary bladder	79.0	78.0	81.0	79.0	79.0	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	66.0	70.0
Ureter	79.0	78.0	80.0	79.0	78.0	80.0	74.0	71.0	75.0
Other urinary system	77.0	77.0	78.0	78.0	77.0	79.0	67.0	68.0	67.0
Eye & Orbit	69.0	68.0	71.0	69.0	68.0	71.0	56.0	55.0	57.0
Brain & Nervous System	65.0	64.0	66.0	65.0	64.0	66.0	60.0	59.0	61.0
Endocrine System:	69.0	66.0	71.0	70.0	67.0	72.0	64.0	61.0	66.0
Thyroid	73.0	70.0	75.0	74.0	71.0	76.0	69.0	67.0	70.0
Other endocrine & thymus	60.0	58.0	61.0	60.0	59.0	62.0	55.0	55.0	57.0
Lymphoma:	75.0	73.0	78.0	76.0	74.0	78.0	66.0	63.0	69.0
Hodgkin lymphoma	66.0	64.0	68.0	67.0	66.0	70.0	53.0	53.0	52.5
Non-Hodgkin lymphoma	76.0	74.0	78.0	76.0	75.0	79.0	66.0	64.0	69.0
Myeloma	75.0	74.0	76.0	76.0	75.0	77.0	71.0	70.0	73.0
Leukemia:	75.0	74.0	76.0	76.0	75.0	77.0	68.0	67.0	70.0
Lymphocytic:	77.0	75.0	80.0	78.0	76.0	80.0	70.0	68.0	73.0
Acute lymphocytic	55.0	53.0	58.0	56.0	54.0	59.0	49.0	43.0	55.0
Chronic lymphocytic	80.0	78.0	83.0	80.0	78.0	83.0	74.0	71.0	77.0
Other lymphocytic	78.0	77.0	81.0	79.0	77.0	81.0	73.0	67.0	77.0
Myeloid & Monocytic:	73.0	73.0	73.0	74.0	73.0	74.0	66.0	65.0	67.0
Acute myeloid	72.0	72.0	73.0	73.0	73.0	73.0	66.0	65.0	66.0
Chronic myeloid	76.0	74.0	79.0	78.0	76.0	80.0	62.0	58.0	67.0
Acute monocytic	76.0	75.0	77.0	77.0	76.0	77.0	70.0	70.5	-
Other myeloid & monocytic	76.0	75.0	78.0	77.0	76.0	79.0	70.0	67.0	73.0
Other leukemia:	77.0	76.0	79.0	78.0	77.0	80.0	71.0	69.0	73.0
Other acute leukemia	77.0	76.0	79.0	78.0	77.0	79.0	71.0	68.0	74.0
Aleukemic, subleukemic & NOS	77.0	76.0	79.0	78.0	77.0	80.0	71.0	69.0	73.0
Ill-defined & unspecified	74.0	72.0	76.0	75.0	73.0	77.0	68.0	66.0	70.0

<sup>a</sup> 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, 2012-2014

Site	All Races		Whites		Blacks	
	Percent	( 95% C.I. )	Percent	( 95% C.I. )	Percent	( 95% C.I. )
All Sites	38.53	( 38.45, 38.61 )	38.71	( 38.62, 38.81 )	35.69	( 35.45, 35.93 )
Invasive and In Situ	40.91	( 40.83, 41.00 )	41.10	( 41.00, 41.19 )	37.00	( 36.75, 37.25 )
Oral Cavity and Pharynx	1.13	( 1.12, 1.15 )	1.19	( 1.17, 1.20 )	0.80	( 0.77, 0.84 )
Esophagus	0.48	( 0.48, 0.49 )	0.51	( 0.50, 0.53 )	0.41	( 0.38, 0.43 )
Stomach	0.84	( 0.83, 0.85 )	0.74	( 0.73, 0.75 )	1.00	( 0.96, 1.05 )
Colon and Rectum	4.32	( 4.29, 4.35 )	4.23	( 4.20, 4.26 )	4.46	( 4.38, 4.55 )
Invasive and In Situ	4.45	( 4.42, 4.48 )	4.36	( 4.33, 4.39 )	4.64	( 4.55, 4.72 )
Liver and Intrahepatic Bile Duct	0.99	( 0.97, 1.00 )	0.89	( 0.88, 0.91 )	1.02	( 0.98, 1.06 )
Pancreas	1.56	( 1.55, 1.58 )	1.55	( 1.53, 1.57 )	1.64	( 1.58, 1.69 )
Larynx	0.33	( 0.32, 0.34 )	0.33	( 0.32, 0.34 )	0.43	( 0.41, 0.46 )
Invasive and In Situ	0.35	( 0.34, 0.36 )	0.36	( 0.35, 0.37 )	0.45	( 0.43, 0.48 )
Lung and Bronchus	6.37	( 6.33, 6.40 )	6.50	( 6.46, 6.54 )	6.11	( 6.00, 6.21 )
Melanoma of the Skin	2.21	( 2.19, 2.23 )	2.60	( 2.58, 2.62 )	0.10	( 0.09, 0.12 )
Invasive and In Situ	3.81	( 3.79, 3.84 )	4.36	( 4.33, 4.39 )	0.14	( 0.12, 0.16 )
Breast	6.39	( 6.36, 6.42 )	6.45	( 6.41, 6.49 )	6.09	( 5.99, 6.19 )
Invasive and In Situ	7.57	( 7.53, 7.60 )	7.59	( 7.55, 7.63 )	7.28	( 7.18, 7.39 )
Urinary Bladder (Invasive and In Situ)	2.37	( 2.35, 2.39 )	2.57	( 2.54, 2.59 )	1.27	( 1.22, 1.32 )
Kidney and Renal Pelvis	1.63	( 1.62, 1.65 )	1.69	( 1.67, 1.71 )	1.59	( 1.54, 1.64 )
Brain and Other Nervous System	0.62	( 0.61, 0.63 )	0.68	( 0.67, 0.69 )	0.34	( 0.32, 0.37 )
Thyroid	1.21	( 1.20, 1.22 )	1.27	( 1.25, 1.28 )	0.73	( 0.70, 0.76 )
Hodgkin Lymphoma	0.21	( 0.20, 0.21 )	0.22	( 0.21, 0.23 )	0.19	( 0.18, 0.21 )
Non-Hodgkin Lymphoma	2.11	( 2.09, 2.13 )	2.21	( 2.19, 2.23 )	1.31	( 1.26, 1.35 )
Myeloma	0.76	( 0.75, 0.77 )	0.70	( 0.69, 0.71 )	1.31	( 1.26, 1.36 )
Leukemia	1.51	( 1.49, 1.52 )	1.58	( 1.56, 1.60 )	1.05	( 1.01, 1.09 )
Acute Lymphocytic Leukemia	0.13	( 0.13, 0.13 )	0.14	( 0.14, 0.15 )	0.08	( 0.07, 0.09 )
Chronic Lymphocytic Leukemia	0.57	( 0.56, 0.58 )	0.61	( 0.59, 0.62 )	0.38	( 0.35, 0.40 )
Acute Myeloid Leukemia	0.49	( 0.48, 0.50 )	0.50	( 0.49, 0.52 )	0.37	( 0.34, 0.39 )
Chronic Myeloid Leukemia	0.19	( 0.19, 0.20 )	0.20	( 0.19, 0.20 )	0.15	( 0.14, 0.17 )
Kaposi Sarcoma	0.12	( 0.11, 0.12 )	0.13	( 0.12, 0.14 )	0.05	( 0.04, 0.06 )
Mesothelioma	0.04	( 0.04, 0.05 )	0.04	( 0.03, 0.04 )	0.08	( 0.07, 0.09 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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, 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	33.57 ( 33.26, 33.89 )	27.74 ( 26.66, 28.93 )	35.29 ( 35.01, 35.58 )
Invasive and In Situ	34.97 ( 34.65, 35.29 )	28.69 ( 27.59, 29.88 )	36.54 ( 36.26, 36.84 )
Oral Cavity and Pharynx	0.90 ( 0.85, 0.95 )	0.80 ( 0.65, 1.08 )	0.75 ( 0.71, 0.80 )
Esophagus	0.27 ( 0.24, 0.30 )	0.35 ( 0.25, 0.60 )	0.36 ( 0.33, 0.39 )
Stomach	1.67 ( 1.60, 1.75 )	1.23 ( 1.00, 1.60 )	1.35 ( 1.29, 1.41 )
Colon and Rectum	4.49 ( 4.38, 4.62 )	4.33 ( 3.90, 4.86 )	4.19 ( 4.09, 4.30 )
Invasive and In Situ	4.63 ( 4.51, 4.75 )	4.38 ( 3.95, 4.92 )	4.32 ( 4.22, 4.43 )
Liver and Intrahepatic Bile Duct	1.81 ( 1.74, 1.88 )	1.40 ( 1.20, 1.72 )	1.69 ( 1.63, 1.76 )
Pancreas	1.66 ( 1.58, 1.74 )	1.12 ( 0.87, 1.51 )	1.61 ( 1.54, 1.69 )
Larynx	0.13 ( 0.11, 0.16 )	0.18 ( 0.12, 0.42 )	0.25 ( 0.23, 0.28 )
Invasive and In Situ	0.16 ( 0.14, 0.18 )	0.21 ( 0.13, 0.45 )	0.27 ( 0.24, 0.29 )
Lung and Bronchus	5.45 ( 5.32, 5.59 )	4.19 ( 3.76, 4.73 )	3.98 ( 3.88, 4.09 )
Melanoma of the Skin	0.17 ( 0.15, 0.20 )	0.47 ( 0.35, 0.74 )	0.58 ( 0.54, 0.62 )
Invasive and In Situ	0.23 ( 0.21, 0.27 )	0.75 ( 0.59, 1.04 )	0.90 ( 0.86, 0.96 )
Breast	5.70 ( 5.59, 5.82 )	3.92 ( 3.57, 4.36 )	5.19 ( 5.10, 5.29 )
Invasive and In Situ	7.06 ( 6.94, 7.18 )	4.61 ( 4.24, 5.08 )	6.13 ( 6.03, 6.24 )
Urinary Bladder (Invasive and In Situ)	1.48 ( 1.40, 1.56 )	1.07 ( 0.84, 1.43 )	1.58 ( 1.51, 1.65 )
Kidney and Renal Pelvis	1.10 ( 1.04, 1.16 )	1.58 ( 1.35, 1.94 )	1.80 ( 1.74, 1.86 )
Brain and Other Nervous System	0.40 ( 0.37, 0.44 )	0.28 ( 0.21, 0.52 )	0.52 ( 0.49, 0.56 )
Thyroid	1.26 ( 1.22, 1.31 )	0.86 ( 0.71, 1.13 )	1.14 ( 1.11, 1.18 )
Hodgkin Lymphoma	0.11 ( 0.10, 0.13 )	0.15 ( 0.09, 0.39 )	0.21 ( 0.19, 0.23 )
Non-Hodgkin Lymphoma	1.85 ( 1.77, 1.93 )	1.26 ( 1.02, 1.63 )	2.16 ( 2.09, 2.23 )
Myeloma	0.54 ( 0.50, 0.59 )	0.65 ( 0.49, 0.93 )	0.79 ( 0.75, 0.83 )
Leukemia	1.01 ( 0.95, 1.07 )	0.82 ( 0.66, 1.11 )	1.23 ( 1.17, 1.28 )
Acute Lymphocytic Leukemia	0.11 ( 0.10, 0.13 )	0.13 ( 0.08, 0.35 )	0.19 ( 0.18, 0.21 )
Chronic Lymphocytic Leukemia	0.15 ( 0.13, 0.18 )	0.15 ( 0.08, 0.39 )	0.29 ( 0.26, 0.32 )
Acute Myeloid Leukemia	0.48 ( 0.44, 0.52 )	0.30 ( 0.20, 0.55 )	0.44 ( 0.41, 0.48 )
Chronic Myeloid Leukemia	0.16 ( 0.14, 0.18 )	0.15 ( 0.09, 0.38 )	0.16 ( 0.15, 0.19 )
Kaposi Sarcoma	0.06 ( 0.05, 0.09 )	0.07 ( 0.02, 0.30 )	0.13 ( 0.11, 0.15 )
Mesothelioma	0.02 ( 0.02, 0.04 )	0.03 ( 0.01, 0.27 )	0.07 ( 0.06, 0.10 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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.

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

<sup>b</sup> 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, 2012-2014

Site	All Races		Whites		Blacks	
	Percent	( 95% C.I. )	Percent	( 95% C.I. )	Percent	( 95% C.I. )
All Sites	39.66	( 39.54, 39.78 )	39.42	( 39.28, 39.55 )	37.67	( 37.31, 38.05 )
Invasive and In Situ	41.23	( 41.10, 41.35 )	41.00	( 40.86, 41.14 )	37.99	( 37.62, 38.36 )
Oral Cavity and Pharynx	1.61	( 1.58, 1.63 )	1.69	( 1.66, 1.71 )	1.15	( 1.09, 1.22 )
Esophagus	0.76	( 0.75, 0.78 )	0.82	( 0.80, 0.84 )	0.59	( 0.55, 0.64 )
Stomach	1.05	( 1.03, 1.07 )	0.94	( 0.92, 0.96 )	1.21	( 1.14, 1.28 )
Colon and Rectum	4.49	( 4.45, 4.53 )	4.39	( 4.35, 4.44 )	4.55	( 4.43, 4.69 )
Invasive and In Situ	4.64	( 4.60, 4.68 )	4.53	( 4.49, 4.58 )	4.74	( 4.61, 4.88 )
Liver and Intrahepatic Bile Duct	1.39	( 1.37, 1.41 )	1.25	( 1.23, 1.28 )	1.53	( 1.47, 1.60 )
Pancreas	1.58	( 1.56, 1.61 )	1.58	( 1.56, 1.61 )	1.55	( 1.48, 1.64 )
Larynx	0.55	( 0.53, 0.56 )	0.54	( 0.53, 0.56 )	0.75	( 0.70, 0.80 )
Invasive and In Situ	0.58	( 0.57, 0.60 )	0.58	( 0.57, 0.60 )	0.78	( 0.73, 0.83 )
Lung and Bronchus	6.85	( 6.80, 6.91 )	6.84	( 6.79, 6.90 )	7.15	( 6.98, 7.32 )
Melanoma of the Skin	2.77	( 2.73, 2.80 )	3.22	( 3.18, 3.25 )	0.10	( 0.08, 0.13 )
Invasive and In Situ	4.69	( 4.65, 4.73 )	5.32	( 5.27, 5.37 )	0.14	( 0.12, 0.17 )
Breast	0.12	( 0.12, 0.13 )	0.12	( 0.11, 0.13 )	0.17	( 0.15, 0.20 )
Invasive and In Situ	0.14	( 0.13, 0.14 )	0.13	( 0.13, 0.14 )	0.19	( 0.16, 0.22 )
Prostate	11.55	( 11.49, 11.61 )	10.82	( 10.75, 10.89 )	15.40	( 15.17, 15.63 )
Testis	0.40	( 0.39, 0.41 )	0.47	( 0.46, 0.48 )	0.11	( 0.10, 0.13 )
Urinary Bladder (Invasive and In Situ)	3.76	( 3.72, 3.80 )	4.06	( 4.02, 4.11 )	1.84	( 1.75, 1.93 )
Kidney and Renal Pelvis	2.09	( 2.06, 2.12 )	2.15	( 2.13, 2.19 )	1.98	( 1.90, 2.06 )
Brain and Other Nervous System	0.70	( 0.68, 0.71 )	0.77	( 0.75, 0.78 )	0.39	( 0.35, 0.43 )
Thyroid	0.63	( 0.61, 0.64 )	0.66	( 0.65, 0.68 )	0.31	( 0.28, 0.34 )
Hodgkin Lymphoma	0.23	( 0.22, 0.24 )	0.24	( 0.23, 0.25 )	0.22	( 0.20, 0.25 )
Non-Hodgkin Lymphoma	2.38	( 2.35, 2.41 )	2.48	( 2.45, 2.52 )	1.42	( 1.35, 1.49 )
Myeloma	0.89	( 0.87, 0.90 )	0.84	( 0.82, 0.86 )	1.39	( 1.32, 1.47 )
Leukemia	1.79	( 1.76, 1.81 )	1.87	( 1.84, 1.90 )	1.21	( 1.15, 1.28 )
Acute Lymphocytic Leukemia	0.14	( 0.14, 0.15 )	0.16	( 0.15, 0.16 )	0.08	( 0.06, 0.10 )
Chronic Lymphocytic Leukemia	0.71	( 0.69, 0.73 )	0.75	( 0.73, 0.77 )	0.49	( 0.44, 0.53 )
Acute Myeloid Leukemia	0.55	( 0.54, 0.57 )	0.57	( 0.55, 0.59 )	0.40	( 0.37, 0.45 )
Chronic Myeloid Leukemia	0.23	( 0.22, 0.24 )	0.24	( 0.23, 0.25 )	0.17	( 0.15, 0.20 )
Kaposi Sarcoma	0.19	( 0.18, 0.20 )	0.21	( 0.20, 0.22 )	0.08	( 0.06, 0.11 )
Mesothelioma	0.08	( 0.07, 0.08 )	0.06	( 0.06, 0.07 )	0.14	( 0.13, 0.17 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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, 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	33.94 ( 33.46, 34.43 )	26.63 ( 25.09, 28.42 )	36.60 ( 36.15, 37.07 )
Invasive and In Situ	34.26 ( 33.78, 34.76 )	27.11 ( 25.55, 28.92 )	37.06 ( 36.61, 37.53 )
Oral Cavity and Pharynx	1.19 ( 1.12, 1.28 )	1.00 ( 0.76, 1.61 )	1.04 ( 0.98, 1.12 )
Esophagus	0.42 ( 0.37, 0.48 )	0.55 ( 0.36, 1.16 )	0.57 ( 0.53, 0.64 )
Stomach	2.00 ( 1.88, 2.13 )	1.27 ( 0.99, 1.91 )	1.55 ( 1.45, 1.66 )
Colon and Rectum	4.96 ( 4.78, 5.15 )	4.04 ( 3.50, 4.86 )	4.52 ( 4.37, 4.69 )
Invasive and In Situ	5.12 ( 4.94, 5.32 )	4.10 ( 3.56, 4.93 )	4.67 ( 4.52, 4.84 )
Liver and Intrahepatic Bile Duct	2.48 ( 2.36, 2.61 )	1.67 ( 1.40, 2.29 )	2.32 ( 2.22, 2.44 )
Pancreas	1.62 ( 1.51, 1.74 )	1.16 ( 0.76, 1.93 )	1.55 ( 1.45, 1.67 )
Larynx	0.25 ( 0.21, 0.30 )	0.33 ( 0.20, 0.90 )	0.46 ( 0.41, 0.53 )
Invasive and In Situ	0.29 ( 0.24, 0.34 )	0.38 ( 0.23, 0.96 )	0.49 ( 0.44, 0.55 )
Lung and Bronchus	6.61 ( 6.39, 6.84 )	4.90 ( 4.21, 5.87 )	4.51 ( 4.35, 4.69 )
Melanoma of the Skin	0.19 ( 0.16, 0.24 )	0.46 ( 0.29, 1.06 )	0.62 ( 0.55, 0.70 )
Invasive and In Situ	0.27 ( 0.23, 0.33 )	0.82 ( 0.57, 1.46 )	0.93 ( 0.85, 1.02 )
Breast	0.07 ( 0.05, 0.11 )	0.02 ( 0.00, 0.62 )	0.10 ( 0.07, 0.14 )
Invasive and In Situ	0.08 ( 0.06, 0.12 )	0.03 ( 0.01, 0.63 )	0.10 ( 0.08, 0.15 )
Prostate	7.58 ( 7.37, 7.80 )	5.83 ( 5.13, 6.82 )	10.89 ( 10.67, 11.13 )
Testis	0.16 ( 0.14, 0.19 )	0.37 ( 0.28, 0.91 )	0.37 ( 0.35, 0.41 )
Urinary Bladder (Invasive and In Situ)	2.41 ( 2.26, 2.57 )	1.51 ( 1.15, 2.21 )	2.53 ( 2.40, 2.67 )
Kidney and Renal Pelvis	1.44 ( 1.35, 1.55 )	1.95 ( 1.61, 2.63 )	2.24 ( 2.14, 2.36 )
Brain and Other Nervous System	0.45 ( 0.41, 0.51 )	0.34 ( 0.21, 0.90 )	0.58 ( 0.53, 0.65 )
Thyroid	0.66 ( 0.61, 0.72 )	0.37 ( 0.24, 0.94 )	0.50 ( 0.47, 0.56 )
Hodgkin Lymphoma	0.13 ( 0.11, 0.17 )	0.14 ( 0.06, 0.72 )	0.23 ( 0.21, 0.28 )
Non-Hodgkin Lymphoma	2.13 ( 2.02, 2.26 )	1.33 ( 0.92, 2.10 )	2.34 ( 2.23, 2.46 )
Myeloma	0.63 ( 0.57, 0.71 )	0.51 ( 0.33, 1.10 )	0.94 ( 0.87, 1.02 )
Leukemia	1.20 ( 1.11, 1.30 )	0.98 ( 0.72, 1.60 )	1.41 ( 1.32, 1.51 )
Acute Lymphocytic Leukemia	0.12 ( 0.10, 0.15 )	0.12 ( 0.07, 0.69 )	0.21 ( 0.19, 0.25 )
Chronic Lymphocytic Leukemia	0.21 ( 0.17, 0.27 )	0.18 ( 0.06, 0.78 )	0.34 ( 0.29, 0.40 )
Acute Myeloid Leukemia	0.53 ( 0.47, 0.60 )	0.36 ( 0.22, 0.94 )	0.50 ( 0.44, 0.57 )
Chronic Myeloid Leukemia	0.20 ( 0.17, 0.25 )	0.21 ( 0.11, 0.78 )	0.21 ( 0.18, 0.25 )
Kaposi Sarcoma	0.09 ( 0.06, 0.13 )	0.14 ( 0.05, 0.73 )	0.21 ( 0.17, 0.26 )
Mesothelioma	0.04 ( 0.03, 0.07 )	0.03 ( 0.00, 0.63 )	0.12 ( 0.09, 0.17 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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.

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

<sup>b</sup> 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, 2012-2014

Site	All Races		Whites		Blacks	
	Percent	( 95% C.I. )	Percent	( 95% C.I. )	Percent	( 95% C.I. )
All Sites	37.65	( 37.53, 37.76 )	38.25	( 38.13, 38.38 )	34.01	( 33.69, 34.34 )
Invasive and In Situ	40.85	( 40.74, 40.97 )	41.46	( 41.33, 41.60 )	36.24	( 35.91, 36.58 )
Oral Cavity and Pharynx	0.68	( 0.67, 0.70 )	0.70	( 0.69, 0.72 )	0.49	( 0.45, 0.53 )
Esophagus	0.22	( 0.21, 0.23 )	0.22	( 0.21, 0.23 )	0.24	( 0.22, 0.27 )
Stomach	0.65	( 0.64, 0.67 )	0.55	( 0.54, 0.57 )	0.82	( 0.77, 0.88 )
Colon and Rectum	4.15	( 4.12, 4.19 )	4.08	( 4.04, 4.12 )	4.39	( 4.27, 4.51 )
Invasive and In Situ	4.28	( 4.24, 4.31 )	4.20	( 4.15, 4.24 )	4.55	( 4.43, 4.67 )
Liver and Intrahepatic Bile Duct	0.60	( 0.59, 0.62 )	0.54	( 0.52, 0.55 )	0.56	( 0.52, 0.60 )
Pancreas	1.54	( 1.52, 1.57 )	1.51	( 1.48, 1.54 )	1.71	( 1.63, 1.79 )
Larynx	0.12	( 0.12, 0.13 )	0.13	( 0.12, 0.14 )	0.16	( 0.14, 0.19 )
Invasive and In Situ	0.13	( 0.13, 0.14 )	0.14	( 0.13, 0.15 )	0.17	( 0.15, 0.20 )
Lung and Bronchus	5.95	( 5.90, 6.00 )	6.21	( 6.16, 6.26 )	5.24	( 5.11, 5.37 )
Melanoma of the Skin	1.72	( 1.69, 1.74 )	2.04	( 2.01, 2.07 )	0.10	( 0.09, 0.13 )
Invasive and In Situ	3.03	( 3.00, 3.06 )	3.50	( 3.46, 3.54 )	0.14	( 0.12, 0.17 )
Breast	12.41	( 12.35, 12.48 )	12.68	( 12.61, 12.75 )	11.39	( 11.22, 11.57 )
Invasive and In Situ	14.73	( 14.66, 14.80 )	14.95	( 14.87, 15.02 )	13.66	( 13.47, 13.86 )
Cervix Uteri	0.62	( 0.61, 0.63 )	0.60	( 0.58, 0.61 )	0.75	( 0.70, 0.79 )
Corpus and Uterus, NOS	2.85	( 2.82, 2.88 )	2.92	( 2.88, 2.95 )	2.64	( 2.55, 2.73 )
Invasive and In Situ	2.87	( 2.84, 2.90 )	2.94	( 2.90, 2.97 )	2.66	( 2.58, 2.75 )
Ovary <sup>a</sup>	1.27	( 1.25, 1.29 )	1.33	( 1.31, 1.35 )	0.95	( 0.90, 1.01 )
Urinary Bladder (Invasive and In Situ)	1.12	( 1.10, 1.14 )	1.19	( 1.17, 1.21 )	0.80	( 0.74, 0.85 )
Kidney and Renal Pelvis	1.20	( 1.18, 1.22 )	1.24	( 1.21, 1.26 )	1.25	( 1.19, 1.31 )
Brain and Other Nervous System	0.54	( 0.53, 0.56 )	0.60	( 0.58, 0.61 )	0.31	( 0.28, 0.34 )
Thyroid	1.79	( 1.77, 1.81 )	1.89	( 1.87, 1.92 )	1.11	( 1.06, 1.16 )
Hodgkin Lymphoma	0.19	( 0.18, 0.19 )	0.20	( 0.19, 0.21 )	0.17	( 0.15, 0.19 )
Non-Hodgkin Lymphoma	1.87	( 1.84, 1.89 )	1.96	( 1.93, 1.99 )	1.21	( 1.15, 1.27 )
Myeloma	0.65	( 0.63, 0.66 )	0.57	( 0.56, 0.59 )	1.24	( 1.18, 1.31 )
Leukemia	1.26	( 1.23, 1.28 )	1.32	( 1.29, 1.34 )	0.91	( 0.86, 0.97 )
Acute Lymphocytic Leukemia	0.12	( 0.11, 0.12 )	0.13	( 0.12, 0.13 )	0.07	( 0.06, 0.09 )
Chronic Lymphocytic Leukemia	0.44	( 0.43, 0.46 )	0.48	( 0.46, 0.49 )	0.28	( 0.25, 0.32 )
Acute Myeloid Leukemia	0.43	( 0.42, 0.45 )	0.45	( 0.43, 0.46 )	0.34	( 0.31, 0.38 )
Chronic Myeloid Leukemia	0.16	( 0.15, 0.16 )	0.16	( 0.15, 0.17 )	0.14	( 0.12, 0.16 )
Kaposi Sarcoma	0.05	( 0.05, 0.06 )	0.06	( 0.05, 0.06 )	0.03	( 0.02, 0.04 )
Mesothelioma	0.01	( 0.01, 0.01 )	0.01	( 0.01, 0.01 )	0.01	( 0.01, 0.02 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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.

<sup>a</sup> 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, 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	33.43 ( 33.01, 33.86 )	28.97 ( 27.44, 30.67 )	34.62 ( 34.25, 35.01 )
Invasive and In Situ	35.76 ( 35.33, 36.20 )	30.38 ( 28.84, 32.11 )	36.64 ( 36.26, 37.03 )
Oral Cavity and Pharynx	0.64 ( 0.58, 0.71 )	0.62 ( 0.45, 1.07 )	0.49 ( 0.44, 0.55 )
Esophagus	0.14 ( 0.11, 0.18 )	0.17 ( 0.08, 0.58 )	0.17 ( 0.14, 0.21 )
Stomach	1.40 ( 1.30, 1.51 )	1.18 ( 0.83, 1.77 )	1.19 ( 1.12, 1.28 )
Colon and Rectum	4.10 ( 3.94, 4.27 )	4.59 ( 3.95, 5.43 )	3.91 ( 3.78, 4.06 )
Invasive and In Situ	4.21 ( 4.05, 4.38 )	4.62 ( 3.98, 5.47 )	4.02 ( 3.88, 4.17 )
Liver and Intrahepatic Bile Duct	1.24 ( 1.15, 1.33 )	1.12 ( 0.85, 1.62 )	1.13 ( 1.06, 1.20 )
Pancreas	1.69 ( 1.58, 1.81 )	1.11 ( 0.79, 1.69 )	1.68 ( 1.59, 1.78 )
Larynx	0.04 ( 0.02, 0.07 )	0.05 ( 0.01, 0.47 )	0.06 ( 0.05, 0.09 )
Invasive and In Situ	0.05 ( 0.03, 0.08 )	0.05 ( 0.01, 0.47 )	0.07 ( 0.05, 0.10 )
Lung and Bronchus	4.51 ( 4.34, 4.69 )	3.56 ( 3.03, 4.31 )	3.57 ( 3.44, 3.71 )
Melanoma of the Skin	0.16 ( 0.13, 0.21 )	0.49 ( 0.33, 0.93 )	0.56 ( 0.51, 0.62 )
Invasive and In Situ	0.20 ( 0.17, 0.25 )	0.69 ( 0.50, 1.15 )	0.90 ( 0.84, 0.98 )
Breast	10.54 ( 10.34, 10.75 )	7.68 ( 7.02, 8.53 )	9.93 ( 9.75, 10.11 )
Invasive and In Situ	13.07 ( 12.85, 13.30 )	9.05 ( 8.34, 9.94 )	11.76 ( 11.57, 11.95 )
Cervix Uteri	0.62 ( 0.57, 0.68 )	0.68 ( 0.49, 1.12 )	0.85 ( 0.81, 0.91 )
Corpus and Uterus, NOS	2.31 ( 2.22, 2.41 )	1.98 ( 1.67, 2.52 )	2.53 ( 2.45, 2.63 )
Invasive and In Situ	2.32 ( 2.23, 2.42 )	1.99 ( 1.68, 2.52 )	2.55 ( 2.46, 2.64 )
Ovary <sup>c</sup>	1.13 ( 1.05, 1.21 )	1.10 ( 0.85, 1.59 )	1.25 ( 1.18, 1.32 )
Urinary Bladder (Invasive and In Situ)	0.72 ( 0.65, 0.81 )	0.67 ( 0.40, 1.22 )	0.79 ( 0.72, 0.87 )
Kidney and Renal Pelvis	0.81 ( 0.74, 0.89 )	1.23 ( 0.92, 1.77 )	1.42 ( 1.35, 1.49 )
Brain and Other Nervous System	0.36 ( 0.32, 0.41 )	0.24 ( 0.14, 0.65 )	0.47 ( 0.43, 0.52 )
Thyroid	1.80 ( 1.73, 1.88 )	1.34 ( 1.10, 1.82 )	1.79 ( 1.73, 1.85 )
Hodgkin Lymphoma	0.09 ( 0.07, 0.12 )	0.17 ( 0.08, 0.59 )	0.18 ( 0.16, 0.21 )
Non-Hodgkin Lymphoma	1.61 ( 1.51, 1.72 )	1.22 ( 0.93, 1.75 )	2.01 ( 1.92, 2.11 )
Myeloma	0.47 ( 0.42, 0.53 )	0.77 ( 0.54, 1.26 )	0.66 ( 0.61, 0.72 )
Leukemia	0.85 ( 0.78, 0.93 )	0.68 ( 0.49, 1.14 )	1.07 ( 1.01, 1.15 )
Acute Lymphocytic Leukemia	0.10 ( 0.09, 0.13 )	0.13 ( 0.07, 0.54 )	0.18 ( 0.16, 0.20 )
Chronic Lymphocytic Leukemia	0.10 ( 0.08, 0.13 )	0.13 ( 0.06, 0.55 )	0.25 ( 0.22, 0.30 )
Acute Myeloid Leukemia	0.44 ( 0.39, 0.50 )	0.24 ( 0.13, 0.67 )	0.40 ( 0.36, 0.45 )
Chronic Myeloid Leukemia	0.12 ( 0.10, 0.16 )	0.09 ( 0.05, 0.50 )	0.13 ( 0.11, 0.16 )
Kaposi Sarcoma	0.04 ( 0.02, 0.08 )	0.00 ( 0.00, 0.43 )	0.06 ( 0.04, 0.08 )
Mesothelioma	0.01 ( 0.00, 0.03 )	0.02 ( 0.00, 0.45 )	0.04 ( 0.02, 0.06 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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.

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

<sup>b</sup> 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.

<sup>c</sup> 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., 2012-2014

Site	All Races	Whites	Blacks
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	20.23 ( 20.20, 20.26 )	20.35 ( 20.32, 20.38 )	20.47 ( 20.38, 20.56 )
Oral Cavity and Pharynx	0.29 ( 0.29, 0.29 )	0.29 ( 0.29, 0.29 )	0.28 ( 0.27, 0.29 )
Esophagus	0.48 ( 0.47, 0.48 )	0.50 ( 0.50, 0.51 )	0.36 ( 0.35, 0.37 )
Stomach	0.38 ( 0.38, 0.39 )	0.34 ( 0.33, 0.34 )	0.62 ( 0.60, 0.64 )
Colon and Rectum	1.82 ( 1.81, 1.83 )	1.78 ( 1.77, 1.79 )	2.10 ( 2.07, 2.13 )
Liver and Intrahepatic Bile Duct	0.75 ( 0.74, 0.75 )	0.70 ( 0.70, 0.71 )	0.86 ( 0.84, 0.87 )
Pancreas	1.36 ( 1.35, 1.37 )	1.36 ( 1.35, 1.37 )	1.46 ( 1.43, 1.49 )
Larynx	0.12 ( 0.12, 0.12 )	0.11 ( 0.11, 0.12 )	0.17 ( 0.16, 0.18 )
Lung and Bronchus	5.31 ( 5.29, 5.32 )	5.42 ( 5.41, 5.44 )	4.95 ( 4.90, 5.00 )
Melanoma of the Skin	0.31 ( 0.31, 0.32 )	0.36 ( 0.35, 0.36 )	0.04 ( 0.04, 0.05 )
Breast	1.38 ( 1.37, 1.38 )	1.35 ( 1.34, 1.36 )	1.72 ( 1.70, 1.75 )
Urinary Bladder	0.61 ( 0.61, 0.62 )	0.64 ( 0.64, 0.65 )	0.43 ( 0.41, 0.45 )
Kidney and Renal Pelvis	0.47 ( 0.46, 0.47 )	0.48 ( 0.48, 0.49 )	0.39 ( 0.38, 0.41 )
Brain and Other Nervous System	0.47 ( 0.46, 0.47 )	0.51 ( 0.50, 0.51 )	0.25 ( 0.24, 0.26 )
Thyroid	0.06 ( 0.06, 0.06 )	0.06 ( 0.06, 0.06 )	0.06 ( 0.05, 0.06 )
Hodgkin Lymphoma	0.03 ( 0.03, 0.04 )	0.04 ( 0.03, 0.04 )	0.03 ( 0.02, 0.03 )
Non-Hodgkin Lymphoma	0.75 ( 0.74, 0.75 )	0.78 ( 0.78, 0.79 )	0.44 ( 0.43, 0.46 )
Myeloma	0.43 ( 0.43, 0.44 )	0.40 ( 0.40, 0.41 )	0.71 ( 0.69, 0.73 )
Leukemia	0.85 ( 0.85, 0.86 )	0.89 ( 0.88, 0.90 )	0.60 ( 0.59, 0.62 )
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 ( 0.18, 0.19 )	0.20 ( 0.19, 0.20 )	0.13 ( 0.12, 0.14 )
Acute Myeloid Leukemia	0.33 ( 0.33, 0.34 )	0.35 ( 0.35, 0.35 )	0.22 ( 0.21, 0.23 )
Chronic Myeloid Leukemia	0.04 ( 0.04, 0.04 )	0.04 ( 0.04, 0.04 )	0.03 ( 0.03, 0.03 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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 1.18 - continued

Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity  
Both Sexes, Total U.S., 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	18.11 ( 17.90, 18.33 )	16.69 ( 16.24, 17.17 )	17.50 ( 17.37, 17.64 )
Oral Cavity and Pharynx	0.31 ( 0.28, 0.34 )	0.21 ( 0.17, 0.30 )	0.22 ( 0.21, 0.24 )
Esophagus	0.28 ( 0.25, 0.31 )	0.38 ( 0.31, 0.48 )	0.30 ( 0.29, 0.32 )
Stomach	1.00 ( 0.94, 1.06 )	0.64 ( 0.54, 0.77 )	0.75 ( 0.73, 0.79 )
Colon and Rectum	1.89 ( 1.81, 1.97 )	1.82 ( 1.65, 2.01 )	1.82 ( 1.77, 1.86 )
Liver and Intrahepatic Bile Duct	1.57 ( 1.51, 1.63 )	1.12 ( 1.02, 1.26 )	1.29 ( 1.25, 1.32 )
Pancreas	1.43 ( 1.37, 1.50 )	0.98 ( 0.87, 1.12 )	1.31 ( 1.27, 1.35 )
Larynx	0.06 ( 0.05, 0.08 )	0.08 ( 0.06, 0.15 )	0.11 ( 0.10, 0.12 )
Lung and Bronchus	4.18 ( 4.08, 4.29 )	4.04 ( 3.81, 4.28 )	2.90 ( 2.85, 2.96 )
Melanoma of the Skin	0.06 ( 0.05, 0.08 )	0.09 ( 0.05, 0.17 )	0.11 ( 0.10, 0.12 )
Breast	0.97 ( 0.92, 1.02 )	0.84 ( 0.73, 0.98 )	1.16 ( 1.12, 1.20 )
Urinary Bladder	0.44 ( 0.39, 0.48 )	0.26 ( 0.19, 0.36 )	0.43 ( 0.41, 0.46 )
Kidney and Renal Pelvis	0.33 ( 0.30, 0.36 )	0.64 ( 0.55, 0.76 )	0.51 ( 0.48, 0.53 )
Brain and Other Nervous System	0.28 ( 0.25, 0.30 )	0.22 ( 0.18, 0.30 )	0.37 ( 0.35, 0.39 )
Thyroid	0.10 ( 0.09, 0.12 )	0.07 ( 0.03, 0.15 )	0.09 ( 0.08, 0.10 )
Hodgkin Lymphoma	0.02 ( 0.02, 0.04 )	0.01 ( 0.00, 0.07 )	0.05 ( 0.05, 0.06 )
Non-Hodgkin Lymphoma	0.74 ( 0.69, 0.79 )	0.50 ( 0.41, 0.63 )	0.77 ( 0.74, 0.80 )
Myeloma	0.28 ( 0.26, 0.32 )	0.37 ( 0.30, 0.47 )	0.42 ( 0.40, 0.44 )
Leukemia	0.63 ( 0.59, 0.67 )	0.49 ( 0.40, 0.61 )	0.71 ( 0.68, 0.73 )
Acute Lymphocytic Leukemia	0.03 ( 0.03, 0.05 )	0.05 ( 0.03, 0.11 )	0.07 ( 0.06, 0.08 )
Chronic Lymphocytic Leukemia	0.05 ( 0.04, 0.07 )	0.07 ( 0.03, 0.15 )	0.09 ( 0.08, 0.11 )
Acute Myeloid Leukemia	0.32 ( 0.29, 0.35 )	0.20 ( 0.15, 0.29 )	0.27 ( 0.25, 0.28 )
Chronic Myeloid Leukemia	0.02 ( 0.02, 0.04 )	0.01 ( 0.01, 0.07 )	0.03 ( 0.03, 0.04 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: NCHS public use data file for the total US.

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

<sup>b</sup> 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., 2012-2014

Site	All Races		Whites		Blacks	
	Percent	( 95% C.I. )	Percent	( 95% C.I. )	Percent	( 95% C.I. )
All Sites	22.03	( 21.98, 22.07 )	22.11	( 22.06, 22.15 )	22.55	( 22.40, 22.69 )
Oral Cavity and Pharynx	0.40	( 0.40, 0.41 )	0.40	( 0.39, 0.41 )	0.44	( 0.42, 0.46 )
Esophagus	0.77	( 0.76, 0.78 )	0.81	( 0.80, 0.82 )	0.53	( 0.51, 0.55 )
Stomach	0.47	( 0.46, 0.47 )	0.41	( 0.40, 0.42 )	0.76	( 0.73, 0.79 )
Colon and Rectum	1.91	( 1.89, 1.92 )	1.87	( 1.85, 1.88 )	2.25	( 2.20, 2.30 )
Liver and Intrahepatic Bile Duct	0.99	( 0.98, 1.00 )	0.93	( 0.92, 0.94 )	1.20	( 1.17, 1.24 )
Pancreas	1.38	( 1.37, 1.39 )	1.39	( 1.38, 1.40 )	1.36	( 1.33, 1.40 )
Larynx	0.20	( 0.19, 0.20 )	0.19	( 0.18, 0.19 )	0.30	( 0.29, 0.32 )
Lung and Bronchus	5.96	( 5.94, 5.99 )	6.01	( 5.99, 6.04 )	6.06	( 5.98, 6.14 )
Melanoma of the Skin	0.43	( 0.42, 0.43 )	0.49	( 0.48, 0.50 )	0.04	( 0.04, 0.05 )
Breast	0.03	( 0.03, 0.03 )	0.03	( 0.03, 0.03 )	0.05	( 0.04, 0.05 )
Prostate	2.45	( 2.43, 2.47 )	2.29	( 2.28, 2.31 )	4.07	( 3.99, 4.15 )
Testis	0.02	( 0.02, 0.02 )	0.02	( 0.02, 0.02 )	0.01	( 0.01, 0.02 )
Urinary Bladder	0.94	( 0.93, 0.95 )	0.99	( 0.98, 1.00 )	0.55	( 0.52, 0.58 )
Kidney and Renal Pelvis	0.62	( 0.61, 0.62 )	0.63	( 0.63, 0.64 )	0.52	( 0.49, 0.54 )
Brain and Other Nervous System	0.53	( 0.52, 0.53 )	0.57	( 0.56, 0.58 )	0.28	( 0.27, 0.30 )
Thyroid	0.06	( 0.05, 0.06 )	0.06	( 0.06, 0.06 )	0.03	( 0.03, 0.04 )
Hodgkin Lymphoma	0.04	( 0.04, 0.04 )	0.04	( 0.04, 0.04 )	0.03	( 0.03, 0.04 )
Non-Hodgkin Lymphoma	0.84	( 0.83, 0.85 )	0.88	( 0.87, 0.89 )	0.48	( 0.46, 0.50 )
Myeloma	0.48	( 0.47, 0.49 )	0.46	( 0.45, 0.47 )	0.70	( 0.67, 0.73 )
Leukemia	1.02	( 1.01, 1.03 )	1.07	( 1.05, 1.08 )	0.68	( 0.66, 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	0.23	( 0.23, 0.24 )	0.24	( 0.24, 0.25 )	0.16	( 0.15, 0.18 )
Acute Myeloid Leukemia	0.40	( 0.39, 0.40 )	0.41	( 0.41, 0.42 )	0.24	( 0.23, 0.26 )
Chronic Myeloid Leukemia	0.04	( 0.04, 0.05 )	0.05	( 0.04, 0.05 )	0.03	( 0.03, 0.04 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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., 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	20.35 ( 20.01, 20.70 )	17.65 ( 16.98, 18.40 )	19.72 ( 19.51, 19.94 )
Oral Cavity and Pharynx	0.41 ( 0.37, 0.47 )	0.35 ( 0.26, 0.54 )	0.30 ( 0.27, 0.33 )
Esophagus	0.42 ( 0.38, 0.48 )	0.58 ( 0.46, 0.80 )	0.50 ( 0.47, 0.54 )
Stomach	1.17 ( 1.08, 1.27 )	0.78 ( 0.62, 1.04 )	0.91 ( 0.86, 0.96 )
Colon and Rectum	2.04 ( 1.92, 2.16 )	1.83 ( 1.61, 2.14 )	2.05 ( 1.97, 2.13 )
Liver and Intrahepatic Bile Duct	2.04 ( 1.94, 2.14 )	1.35 ( 1.19, 1.60 )	1.65 ( 1.60, 1.72 )
Pancreas	1.38 ( 1.29, 1.48 )	0.95 ( 0.80, 1.19 )	1.27 ( 1.21, 1.33 )
Larynx	0.12 ( 0.09, 0.16 )	0.15 ( 0.10, 0.33 )	0.20 ( 0.18, 0.23 )
Lung and Bronchus	5.15 ( 4.98, 5.33 )	4.37 ( 4.03, 4.79 )	3.65 ( 3.56, 3.75 )
Melanoma of the Skin	0.06 ( 0.04, 0.09 )	0.11 ( 0.06, 0.29 )	0.14 ( 0.12, 0.16 )
Breast	0.01 ( 0.01, 0.04 )	0.00 ( 0.00, 0.18 )	0.02 ( 0.01, 0.04 )
Prostate	2.05 ( 1.91, 2.21 )	2.01 ( 1.72, 2.38 )	2.82 ( 2.72, 2.94 )
Testis	0.01 ( 0.00, 0.03 )	0.04 ( 0.02, 0.21 )	0.02 ( 0.02, 0.04 )
Urinary Bladder	0.66 ( 0.58, 0.76 )	0.35 ( 0.23, 0.58 )	0.66 ( 0.61, 0.72 )
Kidney and Renal Pelvis	0.47 ( 0.41, 0.54 )	0.76 ( 0.63, 0.98 )	0.64 ( 0.60, 0.68 )
Brain and Other Nervous System	0.30 ( 0.27, 0.34 )	0.24 ( 0.18, 0.41 )	0.40 ( 0.37, 0.43 )
Thyroid	0.08 ( 0.06, 0.11 )	0.05 ( 0.02, 0.23 )	0.06 ( 0.05, 0.08 )
Hodgkin Lymphoma	0.03 ( 0.02, 0.05 )	0.01 ( 0.00, 0.19 )	0.06 ( 0.05, 0.08 )
Non-Hodgkin Lymphoma	0.85 ( 0.78, 0.93 )	0.62 ( 0.45, 0.90 )	0.87 ( 0.83, 0.93 )
Myeloma	0.32 ( 0.28, 0.37 )	0.35 ( 0.26, 0.55 )	0.45 ( 0.42, 0.49 )
Leukemia	0.77 ( 0.71, 0.85 )	0.53 ( 0.40, 0.77 )	0.85 ( 0.80, 0.90 )
Acute Lymphocytic Leukemia	0.04 ( 0.03, 0.06 )	0.05 ( 0.03, 0.22 )	0.08 ( 0.07, 0.10 )
Chronic Lymphocytic Leukemia	0.08 ( 0.06, 0.11 )	0.12 ( 0.04, 0.35 )	0.13 ( 0.10, 0.16 )
Acute Myeloid Leukemia	0.39 ( 0.35, 0.45 )	0.19 ( 0.14, 0.37 )	0.31 ( 0.29, 0.35 )
Chronic Myeloid Leukemia	0.02 ( 0.01, 0.05 )	0.02 ( 0.01, 0.20 )	0.04 ( 0.03, 0.05 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: NCHS public use data file for the total US.

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

<sup>b</sup> 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., 2012-2014

Site	All Races	Whites	Blacks
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	18.76 ( 18.72, 18.80 )	18.90 ( 18.86, 18.94 )	19.00 ( 18.88, 19.12 )
Oral Cavity and Pharynx	0.18 ( 0.17, 0.18 )	0.18 ( 0.18, 0.19 )	0.15 ( 0.14, 0.16 )
Esophagus	0.20 ( 0.20, 0.21 )	0.20 ( 0.20, 0.21 )	0.22 ( 0.20, 0.23 )
Stomach	0.31 ( 0.30, 0.32 )	0.27 ( 0.26, 0.27 )	0.50 ( 0.48, 0.53 )
Colon and Rectum	1.74 ( 1.72, 1.75 )	1.71 ( 1.69, 1.72 )	1.98 ( 1.93, 2.02 )
Liver and Intrahepatic Bile Duct	0.52 ( 0.51, 0.52 )	0.49 ( 0.48, 0.49 )	0.55 ( 0.53, 0.57 )
Pancreas	1.35 ( 1.33, 1.36 )	1.32 ( 1.31, 1.34 )	1.54 ( 1.50, 1.58 )
Larynx	0.05 ( 0.04, 0.05 )	0.05 ( 0.04, 0.05 )	0.06 ( 0.05, 0.07 )
Lung and Bronchus	4.73 ( 4.71, 4.75 )	4.90 ( 4.88, 4.92 )	4.03 ( 3.97, 4.09 )
Melanoma of the Skin	0.21 ( 0.20, 0.21 )	0.24 ( 0.23, 0.24 )	0.04 ( 0.04, 0.05 )
Breast	2.62 ( 2.61, 2.64 )	2.59 ( 2.58, 2.61 )	3.16 ( 3.11, 3.22 )
Cervix Uteri	0.22 ( 0.22, 0.23 )	0.21 ( 0.20, 0.21 )	0.37 ( 0.35, 0.39 )
Corpus and Uterus, NOS	0.60 ( 0.59, 0.61 )	0.56 ( 0.55, 0.57 )	0.98 ( 0.96, 1.01 )
Ovary	0.93 ( 0.92, 0.93 )	0.96 ( 0.95, 0.97 )	0.74 ( 0.72, 0.77 )
Urinary Bladder	0.34 ( 0.34, 0.35 )	0.34 ( 0.34, 0.35 )	0.35 ( 0.33, 0.37 )
Kidney and Renal Pelvis	0.33 ( 0.33, 0.34 )	0.34 ( 0.34, 0.35 )	0.29 ( 0.27, 0.31 )
Brain and Other Nervous System	0.41 ( 0.41, 0.42 )	0.45 ( 0.44, 0.46 )	0.23 ( 0.22, 0.24 )
Thyroid	0.07 ( 0.07, 0.07 )	0.07 ( 0.06, 0.07 )	0.08 ( 0.07, 0.09 )
Hodgkin Lymphoma	0.03 ( 0.03, 0.03 )	0.03 ( 0.03, 0.03 )	0.02 ( 0.02, 0.03 )
Non-Hodgkin Lymphoma	0.66 ( 0.65, 0.67 )	0.69 ( 0.68, 0.70 )	0.41 ( 0.40, 0.43 )
Myeloma	0.39 ( 0.38, 0.40 )	0.35 ( 0.35, 0.36 )	0.72 ( 0.69, 0.75 )
Leukemia	0.71 ( 0.70, 0.72 )	0.74 ( 0.73, 0.75 )	0.54 ( 0.52, 0.57 )
Acute Lymphocytic Leukemia	0.04 ( 0.03, 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 )	0.11 ( 0.10, 0.12 )
Acute Myeloid Leukemia	0.28 ( 0.28, 0.29 )	0.29 ( 0.29, 0.30 )	0.21 ( 0.19, 0.22 )
Chronic Myeloid Leukemia	0.03 ( 0.03, 0.04 )	0.03 ( 0.03, 0.04 )	0.03 ( 0.02, 0.03 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://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., 2012-2014

Site	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	16.40 ( 16.13, 16.68 )	15.89 ( 15.27, 16.56 )	15.89 ( 15.71, 16.06 )
Oral Cavity and Pharynx	0.22 ( 0.18, 0.26 )	0.09 ( 0.05, 0.21 )	0.15 ( 0.13, 0.18 )
Esophagus	0.16 ( 0.13, 0.20 )	0.19 ( 0.13, 0.32 )	0.13 ( 0.12, 0.15 )
Stomach	0.86 ( 0.79, 0.94 )	0.51 ( 0.39, 0.69 )	0.63 ( 0.60, 0.67 )
Colon and Rectum	1.77 ( 1.67, 1.88 )	1.78 ( 1.55, 2.07 )	1.62 ( 1.56, 1.69 )
Liver and Intrahepatic Bile Duct	1.17 ( 1.10, 1.26 )	0.90 ( 0.75, 1.09 )	0.96 ( 0.92, 1.01 )
Pancreas	1.48 ( 1.39, 1.57 )	1.02 ( 0.85, 1.23 )	1.35 ( 1.29, 1.40 )
Larynx	0.02 ( 0.01, 0.04 )	0.02 ( 0.01, 0.12 )	0.02 ( 0.02, 0.04 )
Lung and Bronchus	3.41 ( 3.29, 3.54 )	3.75 ( 3.45, 4.10 )	2.29 ( 2.23, 2.36 )
Melanoma of the Skin	0.06 ( 0.05, 0.09 )	0.07 ( 0.02, 0.20 )	0.09 ( 0.08, 0.11 )
Breast	1.75 ( 1.66, 1.85 )	1.63 ( 1.43, 1.89 )	2.14 ( 2.08, 2.21 )
Cervix Uteri	0.23 ( 0.20, 0.27 )	0.26 ( 0.20, 0.38 )	0.30 ( 0.28, 0.33 )
Corpus and Uterus, NOS	0.44 ( 0.40, 0.49 )	0.42 ( 0.32, 0.57 )	0.55 ( 0.52, 0.58 )
Ovary	0.66 ( 0.61, 0.72 )	0.72 ( 0.59, 0.90 )	0.80 ( 0.76, 0.84 )
Urinary Bladder	0.26 ( 0.22, 0.31 )	0.18 ( 0.11, 0.33 )	0.26 ( 0.23, 0.29 )
Kidney and Renal Pelvis	0.21 ( 0.18, 0.26 )	0.53 ( 0.41, 0.70 )	0.40 ( 0.37, 0.43 )
Brain and Other Nervous System	0.26 ( 0.23, 0.30 )	0.21 ( 0.15, 0.33 )	0.34 ( 0.32, 0.37 )
Thyroid	0.12 ( 0.10, 0.15 )	0.09 ( 0.03, 0.22 )	0.11 ( 0.09, 0.13 )
Hodgkin Lymphoma	0.02 ( 0.01, 0.04 )	0.01 ( 0.00, 0.11 )	0.04 ( 0.04, 0.06 )
Non-Hodgkin Lymphoma	0.65 ( 0.59, 0.72 )	0.42 ( 0.32, 0.58 )	0.68 ( 0.64, 0.72 )
Myeloma	0.25 ( 0.21, 0.30 )	0.38 ( 0.29, 0.54 )	0.39 ( 0.36, 0.42 )
Leukemia	0.51 ( 0.46, 0.57 )	0.45 ( 0.33, 0.62 )	0.60 ( 0.57, 0.64 )
Acute Lymphocytic Leukemia	0.03 ( 0.02, 0.05 )	0.05 ( 0.03, 0.15 )	0.06 ( 0.05, 0.07 )
Chronic Lymphocytic Leukemia	0.03 ( 0.02, 0.05 )	0.03 ( 0.01, 0.14 )	0.07 ( 0.06, 0.09 )
Acute Myeloid Leukemia	0.26 ( 0.23, 0.30 )	0.21 ( 0.13, 0.35 )	0.23 ( 0.21, 0.25 )
Chronic Myeloid Leukemia	0.02 ( 0.01, 0.05 )	0.00 ( 0.00, 0.11 )	0.03 ( 0.02, 0.04 )

Devcan Version 6.7.5, April 2017, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: NCHS public use data file for the total US.

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

<sup>b</sup> 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, 2010-2014

Site		Total United States <sup>a</sup>							SEER 18 Areas <sup>ab</sup>						
		Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>	Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>
All Sites	Both Sexes	166.1	166.2	194.2	152.4	102.8	116.2	170.2	160.3	162.8	193.7	133.1	108.4	116.4	168.8
	Male	200.5	199.8	247.3	184.0	122.7	142.6	204.1	192.4	194.5	244.3	163.0	130.2	140.8	201.0
	Female	141.5	141.9	161.8	129.3	88.8	97.7	145.5	137.7	140.2	162.6	111.7	93.2	99.4	145.6
Oral Cavity & Pharynx	Both Sexes	2.5	2.4	2.9	2.2	1.9	1.5	2.5	2.5	2.4	2.9	2.0	2.1	1.5	2.6
	Male	3.8	3.8	5.0	3.7	2.9	2.4	3.9	3.8	3.8	4.9	3.3	3.2	2.4	4.0
	Female	1.3	1.3	1.3	1.1	1.1	0.8	1.4	1.3	1.3	1.5	-	1.2	0.8	1.4
Esophagus	Both Sexes	4.1	4.3	3.7	3.4	1.7	2.2	4.5	3.7	4.0	3.6	2.6	1.7	2.2	4.3
	Male	7.3	7.6	6.3	5.6	2.9	4.0	8.0	6.6	7.1	6.1	4.1	3.0	4.1	7.6
	Female	1.5	1.5	1.9	1.7	0.7	0.8	1.6	1.4	1.4	1.8	1.5	0.7	0.8	1.5
Stomach	Both Sexes	3.2	2.8	5.9	5.4	5.5	5.3	2.5	3.7	3.2	5.9	6.8	5.7	5.8	2.7
	Male	4.4	3.8	8.6	7.5	7.1	6.9	3.4	4.9	4.3	8.5	9.3	7.3	7.4	3.7
	Female	2.3	2.0	4.1	3.8	4.3	4.1	1.7	2.7	2.3	4.2	4.8	4.6	4.6	1.8
Colon & Rectum	Both Sexes	14.8	14.4	20.0	16.4	10.3	11.7	14.6	14.4	14.1	20.2	15.5	11.0	11.3	14.5
	Male	17.7	17.2	25.3	19.5	12.4	15.0	17.3	17.2	16.8	25.4	19.2	13.3	14.7	17.0
	Female	12.4	12.1	16.5	14.0	8.8	9.2	12.3	12.2	12.0	16.7	12.7	9.2	8.8	12.4
Liver & Intrahepatic Bile Duct	Both Sexes	6.3	5.8	8.2	10.5	9.7	9.1	5.5	6.8	6.2	8.3	8.8	9.9	9.4	5.6
	Male	9.2	8.5	13.0	14.9	14.3	13.1	8.0	10.0	9.0	13.1	12.2	14.6	13.6	8.2
	Female	3.7	3.5	4.5	6.9	6.1	5.8	3.3	4.0	3.7	4.6	5.7	6.2	5.9	3.3
Pancreas	Both Sexes	10.9	10.8	13.4	9.0	7.7	8.5	11.0	10.9	10.9	13.3	8.6	8.4	8.9	11.2
	Male	12.6	12.6	15.0	9.8	8.2	9.5	12.8	12.4	12.6	14.8	10.0	9.1	9.6	13.0
	Female	9.5	9.4	12.1	8.1	7.3	7.7	9.5	9.6	9.5	12.1	7.4	7.8	8.2	9.6
Larynx	Both Sexes	1.0	1.0	1.7	0.9	0.4	0.8	1.0	0.9	0.9	1.6	0.6	0.4	0.7	1.0
	Male	1.9	1.8	3.4	1.7	0.7	1.6	1.8	1.7	1.6	3.1	-	0.8	1.3	1.7
	Female	0.4	0.4	0.6	-	0.1	0.2	0.4	0.3	0.4	0.6	-	-	0.2	0.4
Lung & Bronchus	Both Sexes	44.7	45.5	48.0	37.5	23.7	19.3	47.9	40.4	41.6	46.9	26.8	24.8	18.1	45.1
	Male	55.9	55.9	68.0	46.3	31.7	27.3	58.4	49.9	50.2	65.7	36.2	33.7	24.5	53.9
	Female	36.3	37.5	34.6	30.8	18.0	13.4	39.9	33.3	35.1	34.3	19.7	18.3	13.4	38.4
Melanoma of the Skin	Both Sexes	2.7	3.1	0.4	0.9	0.4	0.8	3.3	2.5	3.1	0.4	0.9	0.4	0.7	3.5
	Male	4.0	4.6	0.5	1.4	0.4	1.0	4.9	3.8	4.6	0.4	-	0.5	1.0	5.2
	Female	1.7	1.9	0.4	0.5	0.3	0.6	2.1	1.6	1.9	0.3	-	0.3	0.5	2.2
Breast	Female	21.2	20.6	29.2	14.1	11.3	14.4	21.2	21.2	21.1	30.1	13.1	12.3	14.3	22.0

<sup>a</sup> 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).

<sup>b</sup> 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.

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

<sup>d</sup> Asian/Pacific Islander.

<sup>e</sup> 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, 2010-2014

Site		Total United States <sup>a</sup>							SEER 18 Areas <sup>ab</sup>						
		Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>	Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>
Cervix	Female	2.3	2.1	3.8	2.8	1.7	2.6	2.1	2.2	2.1	3.4	2.8	1.9	2.5	2.0
Corpus & Uterus, NOS	Female	4.6	4.2	8.1	3.8	2.9	3.6	4.2	4.6	4.3	7.9	3.7	3.2	3.6	4.4
Ovary	Female	7.4	7.7	6.4	6.2	4.4	5.4	7.9	7.4	7.9	6.5	6.1	4.5	5.7	8.1
Prostate	Male	20.1	18.7	42.0	19.4	8.8	16.5	18.7	20.3	19.5	42.2	16.7	9.5	17.0	19.7
Testis	Male	0.3	0.3	0.1	0.4	0.1	0.3	0.3	0.3	0.3	0.2	-	0.1	0.3	0.3
Urinary Bladder	Both Sexes	4.4	4.6	3.6	2.3	1.7	2.3	4.8	4.3	4.6	3.8	2.1	1.8	2.3	4.9
	Male	7.6	8.1	5.4	3.6	2.9	3.9	8.4	7.4	8.1	5.7	3.5	3.0	3.8	8.6
	Female	2.2	2.2	2.5	1.4	0.9	1.2	2.3	2.1	2.2	2.6	1.3	0.9	1.3	2.3
Kidney & Renal Pelvis	Both Sexes	3.9	4.0	3.7	6.3	1.8	3.5	4.0	3.7	3.9	3.7	5.8	2.0	3.5	3.9
	Male	5.6	5.8	5.5	8.9	2.7	4.9	5.8	5.4	5.7	5.6	8.7	3.0	5.0	5.7
	Female	2.4	2.5	2.4	4.2	1.1	2.3	2.5	2.3	2.4	2.4	3.6	1.3	2.3	2.4
Brain & Nervous System	Both Sexes	4.3	4.7	2.6	2.5	2.1	2.9	4.9	4.3	4.8	2.7	2.3	2.2	2.9	5.1
	Male	5.3	5.7	3.2	3.0	2.4	3.4	6.0	5.2	5.8	3.3	2.9	2.6	3.5	6.2
	Female	3.5	3.8	2.1	2.0	1.8	2.4	4.0	3.4	3.8	2.3	1.8	1.8	2.5	4.1
Thyroid	Both Sexes	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	-	0.7	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	0.5	0.5
	Female	0.5	0.5	0.6	0.5	0.7	0.7	0.5	0.6	0.5	0.5	-	0.8	0.7	0.5
Hodgkin Lymphoma	Both Sexes	0.3	0.4	0.3	-	0.2	0.4	0.3	0.3	0.4	0.3	-	0.2	0.4	0.4
	Male	0.4	0.4	0.4	-	0.2	0.5	0.4	0.4	0.5	0.5	-	0.3	0.6	0.4
	Female	0.3	0.3	0.2	-	0.1	0.3	0.3	0.3	0.3	0.2	-	0.1	0.3	0.3
Non-Hodgkin Lymphoma	Both Sexes	5.9	6.1	4.3	4.2	4.0	5.0	6.2	5.8	6.1	4.3	3.7	4.1	5.1	6.2
	Male	7.6	7.9	5.5	5.6	4.9	6.2	8.0	7.4	7.9	5.6	4.6	5.1	6.3	8.0
	Female	4.6	4.8	3.5	3.2	3.2	4.1	4.8	4.5	4.8	3.3	2.9	3.4	4.2	4.8
Myeloma	Both Sexes	3.3	3.1	6.3	3.0	1.6	2.8	3.1	3.3	3.1	6.4	2.9	1.7	2.9	3.1
	Male	4.2	4.0	7.5	3.3	2.1	3.4	4.0	4.2	4.1	7.4	3.1	2.2	3.5	4.1
	Female	2.7	2.4	5.5	2.7	1.3	2.3	2.4	2.6	2.4	5.7	2.8	1.3	2.4	2.4
Leukemia	Both Sexes	6.8	7.1	5.7	4.4	3.9	4.9	7.2	6.6	7.0	5.7	3.6	4.1	4.9	7.1
	Male	9.1	9.5	7.5	5.8	5.0	6.1	9.6	8.7	9.3	7.4	5.2	5.3	6.1	9.5
	Female	5.1	5.3	4.6	3.4	3.0	4.0	5.3	5.0	5.2	4.6	2.4	3.2	4.0	5.3

<sup>a</sup> 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).

<sup>b</sup> 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.

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

<sup>d</sup> Asian/Pacific Islander.

<sup>e</sup> 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, 2014<sup>a</sup>  
Using Different Tumor Inclusion Criteria<sup>b</sup>

Site	Sex	5-Year Limited Duration			39-year Limited Duration	
		1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 39 Years <sup>d</sup>	1st Per Site in Previous 5 Years <sup>e</sup>	1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 39 Years <sup>d</sup>
All Sites	Both Sexes	4,707,603	4,804,644	5,327,036	14,176,073	14,407,725
	Male	2,358,463	2,396,232	2,650,453	6,724,873	6,805,012
	Female	2,349,140	2,408,412	2,676,583	7,451,200	7,602,713
Oral Cavity & Pharynx	Both Sexes	115,978	135,161	140,597	304,660	338,216
	Male	81,880	94,793	97,971	204,620	225,419
	Female	34,098	40,368	42,626	100,040	112,797
Esophagus	Both Sexes	22,547	27,932	28,052	38,340	45,433
	Male	17,820	21,866	21,937	30,067	35,402
	Female	4,727	6,066	6,115	8,273	10,031
Stomach	Both Sexes	40,042	48,260	48,945	81,801	94,587
	Male	23,682	28,847	29,232	46,828	54,495
	Female	16,360	19,413	19,713	34,973	40,092
Colon & Rectum	Both Sexes	387,571	446,369	455,675	1,169,200	1,300,518
	Male	199,704	229,611	234,110	585,071	648,151
	Female	187,867	216,758	221,565	584,129	652,367
Liver & Intrahepatic Bile Duct	Both Sexes	40,871	47,284	47,447	58,508	66,223
	Male	30,107	34,345	34,461	41,859	46,823
	Female	10,764	12,939	12,986	16,649	19,400
Pancreas	Both Sexes	39,896	48,921	48,944	53,505	64,361
	Male	20,062	24,740	24,763	26,229	31,846
	Female	19,834	24,181	24,181	27,276	32,515
Larynx	Both Sexes	31,963	37,495	38,022	87,985	98,733
	Male	25,808	30,349	30,784	70,747	79,284
	Female	6,155	7,146	7,238	17,238	19,449
Lung & Bronchus	Both Sexes	238,175	309,108	320,324	417,234	520,195
	Male	107,162	141,514	145,870	183,435	230,476
	Female	131,013	167,594	174,454	233,799	289,719
Melanoma of the Skin	Both Sexes	299,475	343,659	362,526	1,045,262	1,134,384
	Male	162,271	191,131	203,296	521,277	574,367
	Female	137,204	152,528	159,230	523,985	560,017
Breast	Female	906,033	984,111	1,048,649	3,097,860	3,287,692
Cervix	Female	38,533	40,724	40,793	218,501	224,665
Corpus & Uterus, NOS	Female	195,484	219,407	219,611	631,801	691,628
Ovary <sup>f</sup>	Female	61,143	70,057	70,127	184,919	207,305

<sup>a</sup> U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census.

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

<sup>c</sup> (c) First invasive tumor ever

<sup>d</sup> (d) First invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013)

<sup>e</sup> (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2009-2013)

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 2009; Melanoma in 2010.

In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 39-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 1/1/2014.

In method (d) the 1981 melanoma is counted for the melanoma and all sites 39-year limited duration prevalence. The 2009 breast cancer is counted for the breast 5-year and 39-year limited duration prevalence.

In method (e) the 2009 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2010 melanoma is counted for 5-year limited duration prevalence for melanoma.

<sup>f</sup> 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, 2014<sup>a</sup>  
 Using Different Tumor Inclusion Criteria<sup>b</sup>

Site	Sex	5-Year Limited Duration			39-year Limited Duration	
		1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 39 Years <sup>d</sup>	1st Per Site in Previous 5 Years <sup>e</sup>	1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 39 Years <sup>d</sup>
Prostate	Male	958,284	1,038,106	1,038,153	2,896,908	3,084,494
Testis	Male	43,188	44,173	44,790	233,387	236,737
Urinary Bladder	Both Sexes	204,650	258,837	264,918	584,564	686,874
	Male	156,415	198,781	203,732	437,376	514,987
	Female	48,235	60,056	61,186	147,188	171,887
Kidney & Renal Pelvis	Both Sexes	161,395	197,797	200,804	403,200	471,919
	Male	101,224	125,184	127,262	241,820	285,673
	Female	60,171	72,613	73,542	161,380	186,246
Brain & Nervous System	Both Sexes	46,934	50,188	50,674	144,554	149,412
	Male	25,809	27,507	27,751	76,849	79,285
	Female	21,125	22,681	22,923	67,705	70,127
Thyroid	Both Sexes	202,213	226,966	227,711	637,312	686,320
	Male	45,343	53,812	53,948	137,898	152,992
	Female	156,870	173,154	173,763	499,414	533,328
Hodgkin Lymphoma	Both Sexes	36,864	39,181	39,262	185,935	191,423
	Male	20,013	21,282	21,338	96,384	99,217
	Female	16,851	17,899	17,924	89,551	92,206
Non-Hodgkin Lymphoma	Both Sexes	209,107	247,513	252,349	581,742	653,653
	Male	112,529	134,140	136,678	307,368	346,181
	Female	96,578	113,373	115,671	274,374	307,472
Myeloma	Both Sexes	64,023	75,648	76,097	102,617	118,273
	Male	34,735	42,231	42,518	55,465	65,186
	Female	29,288	33,417	33,579	47,152	53,087
Leukemia	Both Sexes	128,087	151,081	151,699	343,991	381,774
	Male	74,309	88,049	88,376	195,093	217,430
	Female	53,778	63,032	63,323	148,898	164,344
Acute Lymphocytic Leukemia	Both Sexes	17,262	17,937	17,937	77,350	78,272
	Male	9,297	9,674	9,674	42,200	42,660
	Female	7,965	8,263	8,263	35,150	35,612
Childhood (Ages 0-19)	Both Sexes	66,888	67,020	67,615	348,190	348,772
	Male	34,669	34,757	35,067	178,759	179,034
	Female	32,219	32,263	32,548	169,431	169,738
Kaposi Sarcoma	Both Sexes	7,115	7,712	7,712	27,719	29,174
	Male	6,562	7,119	7,119	26,210	27,519
	Female	553	593	593	1,509	1,655
Mesothelioma	Both Sexes	3,155	4,083	4,083	4,860	5,905
	Male	2,157	2,873	2,873	2,855	3,628
	Female	998	1,210	1,210	2,005	2,277

<sup>a</sup> U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census.

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

<sup>c</sup> (c) First invasive tumor ever  
<sup>d</sup> (d) First invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013)  
<sup>e</sup> (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2009-2013)  
 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 2009; Melanoma in 2010.

In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 39-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 1/1/2014. In method (d) the 1981 melanoma is counted for the melanoma and all sites 39-year limited duration prevalence. The 2009 breast cancer is counted for the breast 5-year and 39-year limited duration prevalence. In method (e) the 2009 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2010 melanoma is counted for 5-year limited duration prevalence for melanoma.

Table 1.23  
U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2014<sup>a</sup>  
By Age at Prevalence

WARNING: The Prevalence Estimates presented on this page utilize a different tumor selection criteria from previous CSR releases and are NOT directly comparable to estimates from previous CSR releases.  
Please see the Prevalence Comparison Chapter of this CSR for more information.

Site/Sex	Age at Prevalence								
	All Ages <sup>c</sup>	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
All Sites									
Males	6,872,623	18,786	43,295	91,310	166,204	350,387	937,944	1,835,673	3,429,024
Females	7,866,096	17,222	37,437	93,801	242,346	639,430	1,424,917	1,995,951	3,414,992
Oral Cavity & Pharynx									
Males	230,233	45	454	1,771	3,759	13,831	51,146	76,136	83,090
Females	116,669	107	542	1,594	4,163	8,877	21,084	30,278	50,024
Esophagus									
Males	35,460	0	0	29	181	1,003	5,067	12,194	16,986
Females	10,087	0	0	0	44	190	1,441	2,846	5,566
Stomach									
Males	55,180	0	11	168	589	2,749	8,310	14,682	28,670
Females	40,584	0	44	210	842	2,454	5,947	9,160	21,926
Colon & Rectum									
Males	653,863	22	146	1,263	6,349	26,922	91,558	156,306	371,297
Females	663,384	0	261	1,482	6,650	24,542	80,676	130,589	419,183
Liver & Intrahep									
Males	46,895	611	536	603	632	1,608	11,275	19,864	11,766
Females	19,876	418	591	486	471	1,059	3,816	6,321	6,715
Pancreas									
Males	31,986	23	35	117	493	1,812	5,719	9,976	13,812
Females	32,682	0	23	347	628	1,721	5,972	8,601	15,389
Larynx									
Males	80,249	0	0	80	285	1,810	10,178	23,304	44,592
Females	19,665	0	0	17	142	859	3,485	5,914	9,247
Lung & Bronchus									
Males	234,540	34	98	470	1,266	5,330	26,088	64,649	136,605
Females	292,688	56	92	401	1,684	6,863	35,794	75,197	172,603
Melanoma of the Skin									
Males	585,672	67	706	4,931	18,016	45,764	104,327	160,068	251,795
Females	583,679	107	813	10,439	36,175	74,208	129,434	142,681	189,821

<sup>a</sup> U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013).

<sup>b</sup> Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

<sup>c</sup> 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, 2014<sup>a</sup>  
 By Age at Prevalence

WARNING: The Prevalence Estimates presented on this page utilize a different tumor selection criteria from previous CSR releases and are NOT directly comparable to estimates from previous CSR releases.  
 Please see the Prevalence Comparison Chapter of this CSR for more information.

Site/Sex	Age at Prevalence								
	All Ages <sup>c</sup>	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Breast									
Males	18,835	0	0	11	76	672	2,123	5,001	10,951
Females	3,327,552	11	47	3,031	38,197	215,565	597,561	910,098	1,563,042
Cervix									
Females	256,078	0	81	2,075	14,495	40,908	60,284	61,931	76,305
Corpus & Uterus, NOS									
Females	710,228	11	35	727	6,574	27,036	100,667	205,938	369,240
Ovary <sup>d</sup>									
Females	222,060	81	1,038	3,954	7,233	18,751	46,165	61,136	83,701
Prostate									
Males	3,085,209	45	47	79	338	17,434	240,617	859,940	1,966,708
Urinary Bladder									
Males	521,201	68	117	524	2,521	9,466	44,105	118,578	345,823
Females	175,239	79	34	246	972	3,819	14,892	36,157	119,040
Kidney & Renal Pelvis									
Males	292,058	1,399	2,329	3,006	5,751	20,940	52,404	82,949	123,279
Females	191,167	1,616	2,455	3,238	5,310	13,603	33,033	47,535	84,377
Hodgkin Lymphoma									
Males	105,489	209	2,301	9,666	16,550	23,334	24,766	18,035	10,629
Females	98,576	45	2,147	9,466	16,634	22,567	23,051	14,306	10,361
Non-Hodgkin Lymphoma									
Males	350,647	831	4,019	8,336	14,494	30,378	61,177	88,332	143,081
Females	311,349	547	1,536	4,919	9,944	21,497	48,615	75,964	148,327
Myeloma									
Males	65,283	0	18	87	605	3,537	10,446	19,742	30,849
Females	53,256	0	0	69	480	2,374	8,379	15,856	26,099
Leukemia									
Males	219,989	6,599	13,513	14,405	12,981	16,403	29,092	46,712	80,285
Females	167,739	5,984	10,654	12,441	11,619	12,517	20,169	30,950	63,404
Acute Lymphocytic Leuk									
Males	44,485	5,568	11,217	11,145	7,420	5,011	2,295	1,096	732
Females	37,352	5,088	9,067	8,947	6,522	3,972	1,798	1,285	672

<sup>a</sup> U.S. 2014 cancer prevalence counts are based on 2014 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2014 U.S. population estimates based on the average of 2013 and 2014 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 39 years (1975-2013).

<sup>b</sup> Cases diagnosed more than 39 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

<sup>c</sup> 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<sup>a</sup> by Race/Ethnicity  
Both Sexes

	All Races		White		Black		
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	
All Sites	442.7	-1.1*	451.8	-1.1*	459.3	-1.5*	
Breast	67.0	0.0	67.8	-0.1	Prostate <sup>f</sup>	80.7	-4.5*
Lung and Bronchus	55.8	-2.3*	57.3	-2.2*	Breast	71.1	0.5
Prostate <sup>f</sup>	54.7	-4.8*	52.1	-5.2*	Lung and Bronchus	63.0	-2.5*
Colon and Rectum	40.1	-2.8*	39.3	-2.8*	Colon and Rectum	48.7	-3.3*
Melanoma of the Skin	22.3	1.1*	26.6	1.1*	Kidney and Renal Pelvis	18.0	1.0
Urinary Bladder	19.8	-1.2*	21.7	-1.2*	Pancreas	15.5	-0.5
Non-Hodgkin Lymphoma	19.5	-0.5*	20.4	-0.6*	Non-Hodgkin Lymphoma	14.6	-0.3
Kidney and Renal Pelvis	15.6	0.7	16.1	0.7	Corpus and Uterus, NOS <sup>f</sup>	14.0	2.3*
Thyroid	14.2	4.0*	14.9	3.9*	Myeloma	13.2	0.8
Leukemia	13.7	0.5*	14.5	0.4	Urinary Bladder	12.5	-0.9*
Corpus and Uterus, NOS <sup>f</sup>	13.6	1.2*	13.8	0.9*	Leukemia	10.9	1.2*
Pancreas	12.5	0.5*	12.5	0.6*	Stomach	10.2	-3.0*
Oral Cavity and Pharynx	11.2	0.7*	11.7	1.0*	Liver & IBD <sup>g</sup>	10.1	2.5*
Liver & IBD <sup>g</sup>	8.6	2.6*	7.8	3.4*	Oral Cavity and Pharynx	9.1	-1.5*
Stomach	7.3	-0.9*	7.0	-0.5*	Thyroid	8.7	4.4*
	Asian/Pacific Islander		American Indian/Alaska Native <sup>d</sup>		Hispanic <sup>e</sup>		
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	
All Sites	298.8	-1.2*	316.0	-1.4*	All Sites	340.6	-1.3*
Breast	54.1	0.9*	44.1	0.0	Breast	49.8	0.1
Lung and Bronchus	35.7	-1.8*	41.1	-0.6	Prostate <sup>f</sup>	43.7	-5.6*
Colon and Rectum	33.8	-2.8*	37.4	-3.8*	Colon and Rectum	33.9	-2.5*
Prostate <sup>f</sup>	27.5	-6.4*	26.5	-6.3*	Lung and Bronchus	28.8	-2.5*
Thyroid	13.7	3.3*	17.2	-3.2*	Non-Hodgkin Lymphoma	17.8	-0.2
Non-Hodgkin Lymphoma	13.5	0.2	13.3	2.2	Kidney and Renal Pelvis	15.4	0.6
Liver & IBD <sup>g</sup>	13.2	-2.2*	12.1	-2.0	Liver & IBD <sup>g</sup>	13.2	1.9*
Corpus and Uterus, NOS <sup>f</sup>	11.2	2.1*	10.6	0.5	Thyroid	12.3	4.2*
Stomach	10.6	-3.2*	10.5	0.8	Corpus and Uterus, NOS <sup>f</sup>	11.6	2.5*
Pancreas	10.0	0.5	9.6	-2.9	Pancreas	11.1	-0.2
Urinary Bladder	8.7	-1.9*	9.3	5.0*	Urinary Bladder	11.0	-1.7*
Kidney and Renal Pelvis	8.2	0.5	8.9	1.4	Leukemia	10.6	0.2
Leukemia	7.8	0.5	8.5	-0.4	Stomach	10.5	-1.7*
Oral Cavity and Pharynx	7.7	-0.5	8.1	0.7	Oral Cavity and Pharynx	6.6	0.1
Ovary <sup>fh</sup>	5.2	-0.7	5.1	-3.6	Myeloma	6.1	0.9

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).

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> 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.

<sup>f</sup> The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

<sup>g</sup> IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.

<sup>h</sup> 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<sup>a</sup> by Race/Ethnicity

			Males					
All Races			White			Black		
	Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>
	2010-2014	2005-2014		2010-2014	2005-2014		2010-2014	2005-2014
All Sites	492.4	-2.0*	All Sites	497.1	-2.0*	All Sites	549.7	-2.8*
Prostate	119.8	-5.2*	Prostate	112.8	-5.6*	Prostate	188.7	-4.8*
Lung and Bronchus	65.7	-2.9*	Lung and Bronchus	65.9	-2.9*	Lung and Bronchus	83.7	-3.1*
Colon and Rectum	46.0	-3.0*	Colon and Rectum	45.0	-3.1*	Colon and Rectum	56.4	-3.4*
Urinary Bladder	34.9	-1.4*	Urinary Bladder	38.1	-1.4*	Kidney and Renal Pelvis	25.0	0.7
Melanoma of the Skin	29.2	1.3*	Melanoma of the Skin	34.4	1.3*	Urinary Bladder	21.0	-0.6
Non-Hodgkin Lymphoma	23.7	-0.4*	Non-Hodgkin Lymphoma	24.8	-0.4*	Non-Hodgkin Lymphoma	17.6	-0.4
Kidney and Renal Pelvis	21.4	0.7	Kidney and Renal Pelvis	21.9	0.7	Pancreas	17.0	-0.4
Leukemia	17.6	0.4	Leukemia	18.5	0.2	Liver & IBD <sup>f</sup>	16.7	2.5*
Oral Cavity and Pharynx	16.9	0.9*	Oral Cavity and Pharynx	17.6	1.1*	Myeloma	15.9	0.8
Pancreas	14.2	0.6*	Pancreas	14.2	0.7*	Oral Cavity and Pharynx	14.2	-1.3*
Liver & IBD <sup>f</sup>	13.3	2.5*	Liver & IBD <sup>f</sup>	11.9	3.1*	Leukemia	14.0	1.5*
Stomach	9.9	-1.3*	Stomach	9.0	-0.9*	Stomach	13.6	-3.5*
Myeloma	8.3	1.2*	Brain and ONS <sup>f</sup>	8.3	-0.5*	Larynx	8.5	-2.6*
Brain and ONS <sup>f</sup>	7.5	-0.5*	Myeloma	7.8	1.3*	Esophagus	6.9	-4.9*
Esophagus	7.3	-1.3*	Esophagus	7.7	-0.7	Brain and ONS <sup>f</sup>	4.8	0.0
<b>Asian/Pacific Islander</b>			<b>American Indian/Alaska Native<sup>d</sup></b>			<b>Hispanic<sup>e</sup></b>		
	Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>
	2010-2014	2005-2014		2010-2014	2005-2014		2010-2014	2005-2014
All Sites	308.6	-2.5*	All Sites	331.4	-2.0*	All Sites	372.2	-2.6*
Prostate	62.9	-6.6*	Prostate	59.9	-6.5*	Prostate	98.3	-5.9*
Lung and Bronchus	46.4	-2.5*	Lung and Bronchus	46.9	-2.9*	Colon and Rectum	40.0	-3.1*
Colon and Rectum	40.2	-2.2*	Colon and Rectum	45.5	-0.5	Lung and Bronchus	35.3	-3.6*
Liver & IBD <sup>f</sup>	20.2	-2.0*	Kidney and Renal Pelvis	22.9	-1.8	Non-Hodgkin Lymphoma	20.7	-0.2
Non-Hodgkin Lymphoma	16.7	0.1	Liver & IBD <sup>f</sup>	18.7	2.3	Kidney and Renal Pelvis	20.2	0.1
Urinary Bladder	15.2	-2.1*	Urinary Bladder	14.9	-0.7	Liver & IBD <sup>f</sup>	19.7	1.5*
Stomach	14.0	-3.3*	Stomach	13.7	-0.7	Urinary Bladder	19.3	-1.7*
Kidney and Renal Pelvis	11.7	0.9	Non-Hodgkin Lymphoma	13.2	-3.8	Stomach	13.0	-2.9*
Oral Cavity and Pharynx	11.1	0.0	Oral Cavity and Pharynx	13.0	2.0	Leukemia	12.9	0.0
Pancreas	11.0	0.3	Pancreas	11.1	-	Pancreas	11.8	-0.4
Leukemia	9.7	0.7	Leukemia	9.8	1.4	Oral Cavity and Pharynx	9.8	0.3
Thyroid	6.6	5.1*	Testis	5.4	4.9	Myeloma	7.7	1.5
Myeloma	4.7	0.1	Esophagus	5.1	-	Brain and ONS <sup>f</sup>	5.7	-1.4*
Brain and ONS <sup>f</sup>	4.4	0.4	Myeloma	5.0	-	Thyroid	5.2	3.6*
Esophagus	3.5	-3.0	Melanoma of the Skin	4.3	-	Testis	5.1	2.6*

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).

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> 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.

<sup>f</sup> 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<sup>a</sup> by Race/Ethnicity

## Females

	All Races		White		Black	
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014
All Sites	408.7	-0.2*	421.5	-0.2*	397.4	-0.4*
Breast	124.9	0.2	127.7	0.0	125.1	0.6*
Lung and Bronchus	48.4	-1.7*	50.8	-1.6*	49.0	-1.7*
Colon and Rectum	35.1	-2.7*	34.4	-2.6*	43.2	-3.3*
Corpus and Uterus, NOS	25.7	1.4*	26.3	1.1*	24.8	2.5*
Thyroid	21.0	4.0*	22.4	4.0*	14.3	-0.7
Melanoma of the Skin	17.3	0.6	20.9	0.7	13.0	4.8*
Non-Hodgkin Lymphoma	16.0	-0.6*	16.9	-0.7*	12.6	1.1
Ovary <sup>g</sup>	11.7	-1.8*	12.2	-2.0*	12.2	0.0
Pancreas	11.1	0.4*	11.3	0.4	11.4	0.7
Kidney and Renal Pelvis	10.7	0.5	11.0	0.5	9.4	-1.3*
Leukemia	10.7	0.4	11.0	0.5*	8.8	0.8
Urinary Bladder	8.4	-1.4*	9.1	-1.3*	8.7	-2.3*
Cervix Uteri	7.4	-1.6*	7.4	-1.5*	7.8	-2.7*
Oral Cavity and Pharynx	6.2	0.0	6.4	0.4	6.8	-1.6*
Brain and ONS <sup>f</sup>	5.3	-0.6	5.9	-0.4	5.1	-2.1*

	Asian/Pacific Islander		American Indian/Alaska Native <sup>d</sup>		Hispanic <sup>e</sup>	
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014
All Sites	296.1	-0.2	308.9	-0.8	323.3	-0.1
Breast	98.5	1.0*	82.2	0.2	93.1	0.2
Colon and Rectum	28.8	-3.4*	37.5	-0.4	29.1	-2.0*
Lung and Bronchus	27.9	-0.8	30.4	-5.0*	24.2	-1.4*
Corpus and Uterus, NOS	20.5	2.2*	19.9	0.9	21.9	2.7*
Thyroid	19.9	2.8*	14.1	4.9*	19.3	4.4*
Non-Hodgkin Lymphoma	11.1	0.2	12.7	-4.5*	15.4	-0.1
Ovary <sup>g</sup>	9.5	-0.7	11.1	-0.5	11.5	1.0
Pancreas	9.2	0.7	9.5	-3.3	10.6	-1.6*
Stomach	8.0	-3.3*	8.6	1.4	10.5	-0.1
Liver & IBD <sup>f</sup>	7.6	-2.5*	8.3	-4.4*	9.1	-4.4*
Leukemia	6.3	0.2	8.1	2.0	8.8	0.3
Cervix Uteri	6.1	-2.9*	7.7	-0.5	8.5	-0.3
Kidney and Renal Pelvis	5.5	0.0	6.8	0.2	7.6	2.8*
Oral Cavity and Pharynx	5.0	-1.3	5.5	-	4.9	0.2
Urinary Bladder	3.9	-1.5	5.2	-	4.9	-1.9*

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).

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> 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.

<sup>f</sup> IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.

<sup>g</sup> 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<sup>a</sup> by Race/Ethnicity  
Both Sexes

	All Races		White		Black			
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014		
All Sites	166.1	-1.5*	166.2	-1.4*	194.2	-2.0*		
Lung and Bronchus	44.7	-2.5*	45.5	-2.4*	48.0	-2.8*		
Colon and Rectum	14.8	-2.5*	14.4	-2.4*	20.0	-3.3*		
Breast	11.8	-1.9*	11.4	-1.9*	17.1	-1.7*		
Pancreas	10.9	0.1	10.8	0.2	Prostate <sup>f</sup>	15.2	-3.8*	
Prostate <sup>f</sup>	8.1	-2.6*	7.5	-2.4*	Pancreas	13.4	-0.5*	
Leukemia	6.8	-0.9*	7.1	-0.9*	Liver & IBD <sup>g</sup>	8.2	2.5*	
Liver & IBD <sup>g</sup>	6.3	2.7*	6.1	-2.2*	Myeloma	6.3	-0.3	
Non-Hodgkin Lymphoma	5.9	-2.3*	Non-Hodgkin Lymphoma	6.1	-2.2*	Stomach	5.9	-3.1*
Urinary Bladder	4.4	-0.1	Liver & IBD <sup>g</sup>	5.8	2.9*	Leukemia	5.7	-1.3*
Brain and ONS <sup>g</sup>	4.3	0.4	Brain and ONS <sup>g</sup>	4.7	0.4*	Corpus and Uterus, NOS <sup>f</sup>	4.8	1.8*
Esophagus	4.1	-1.1*	Urinary Bladder	4.6	0.1	Non-Hodgkin Lymphoma	4.3	-1.6*
Ovary <sup>f</sup>	4.1	-2.5*	Esophagus	4.3	-0.6*	Ovary <sup>f</sup>	3.8	-1.5*
Kidney and Renal Pelvis	3.9	-0.8*	Ovary <sup>f</sup>	4.2	-2.6*	Esophagus	3.7	-4.4*
Myeloma	3.3	-0.6*	Kidney and Renal Pelvis	4.0	-0.7*	Kidney and Renal Pelvis	3.7	-1.3*
Stomach	3.2	-2.3*	Myeloma	3.1	-0.7*	Urinary Bladder	3.6	-0.8
			Melanoma of the Skin	3.1	-0.3			
	Asian/Pacific Islander		American Indian/Alaska Native <sup>d</sup>		Hispanic <sup>e</sup>			
	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014	Rate <sup>b</sup> 2010-2014	APC <sup>c</sup> 2005-2014		
All Sites	102.8	-1.4*	All Sites	152.4	-1.2*	All Sites	116.2	-1.3*
Lung and Bronchus	23.7	-1.7*	Lung and Bronchus	37.5	-1.5*	Lung and Bronchus	19.3	-2.5*
Colon and Rectum	10.3	-2.0*	Colon and Rectum	16.4	-0.3	Colon and Rectum	11.7	-2.0*
Liver & IBD <sup>g</sup>	9.7	-0.5	Liver & IBD <sup>g</sup>	10.5	3.0*	Liver & IBD <sup>g</sup>	9.1	1.2*
Pancreas	7.7	0.0	Pancreas	9.0	-1.2	Pancreas	8.5	-0.4
Breast	6.4	-0.7	Breast	7.9	-3.9*	Breast	8.0	-0.7*
Stomach	5.5	-4.2*	Prostate <sup>f</sup>	7.9	-2.0	Prostate <sup>f</sup>	6.6	-3.0*
Non-Hodgkin Lymphoma	4.0	-1.1*	Kidney and Renal Pelvis	6.3	-0.3	Stomach	5.3	-2.0*
Leukemia	3.9	-0.4	Stomach	5.4	-1.2	Non-Hodgkin Lymphoma	5.0	-1.5*
Prostate <sup>f</sup>	3.5	-3.3*	Leukemia	4.4	-1.9	Leukemia	4.9	-0.2
Ovary <sup>f</sup>	2.5	-2.2*	Non-Hodgkin Lymphoma	4.2	-2.7*	Kidney and Renal Pelvis	3.5	-0.9
Brain and ONS <sup>g</sup>	2.1	1.5	Ovary <sup>f</sup>	3.5	-2.5*	Ovary <sup>f</sup>	3.0	-2.0*
Oral Cavity and Pharynx	1.9	-1.2*	Esophagus	3.4	-1.7	Brain and ONS <sup>g</sup>	2.9	0.4
Kidney and Renal Pelvis	1.8	-1.1	Myeloma	3.0	0.3	Myeloma	2.8	-0.8
Urinary Bladder	1.7	0.1	Brain and ONS <sup>g</sup>	2.5	0.9	Urinary Bladder	2.3	-0.9
Esophagus	1.7	-1.7*	Urinary Bladder	2.3	0.4	Esophagus	2.2	-1.5

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

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

<sup>f</sup> The rates for sex-specific cancer sites are calculated using the population for both sexes combined.

<sup>g</sup> 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<sup>a</sup> by Race/Ethnicity

## Males

All Races	Rate <sup>b</sup>		APC <sup>c</sup>	All Sites	Rate <sup>b</sup>		APC <sup>c</sup>	All Sites	Rate <sup>b</sup>		APC <sup>c</sup>
	2010-2014	2005-2014			2010-2014	2005-2014			2010-2014	2005-2014	
All Sites	200.5	-1.8*		All Sites	199.8	-1.6*		All Sites	247.3	-2.7*	
Lung and Bronchus	55.9	-3.1*		Lung and Bronchus	55.9	-3.0*		Lung and Bronchus	68.0	-3.5*	
Prostate	20.1	-3.3*		Prostate	18.7	-3.1*		Prostate	42.0	-4.5*	
Colon and Rectum	17.7	-2.6*		Colon and Rectum	17.2	-2.5*		Colon and Rectum	25.3	-3.1*	
Pancreas	12.6	0.1		Pancreas	12.6	0.2*		Pancreas	15.0	-0.4	
Liver & IBD <sup>f</sup>	9.2	2.7*		Leukemia	9.5	-0.9*		Liver & IBD <sup>f</sup>	13.0	2.3*	
Leukemia	9.1	-1.0*		Liver & IBD <sup>f</sup>	8.5	2.8*		Stomach	8.6	-3.3*	
Urinary Bladder	7.6	-0.2*		Urinary Bladder	8.1	-0.1		Myeloma	7.5	-1.0*	
Non-Hodgkin Lymphoma	7.6	-2.0*		Non-Hodgkin Lymphoma	7.9	-2.0*		Leukemia	7.5	-1.7*	
Esophagus	7.3	-1.2*		Esophagus	7.6	-0.7*		Esophagus	6.3	-4.9*	
Kidney and Renal Pelvis	5.6	-0.6*		Kidney and Renal Pelvis	5.8	-0.4*		Non-Hodgkin Lymphoma	5.5	-1.7*	
Brain and ONS <sup>f</sup>	5.3	0.4		Brain and ONS <sup>f</sup>	5.7	0.4*		Kidney and Renal Pelvis	5.5	-1.0	
Stomach	4.4	-2.5*		Melanoma of the Skin	4.6	-0.2		Urinary Bladder	5.4	-0.7	
Myeloma	4.2	-0.7*		Myeloma	4.0	-0.6*		Oral Cavity and Pharynx	5.0	-2.4*	
Melanoma of the Skin	4.0	-0.4		Stomach	3.8	-2.5*		Larynx	3.4	-3.7*	
Oral Cavity and Pharynx	3.8	0.2		Oral Cavity and Pharynx	3.8	0.7*		Brain and ONS <sup>f</sup>	3.2	1.0	
Asian/Pacific Islander				American Indian/Alaska Native <sup>d</sup>				Hispanic <sup>e</sup>			
	Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>			
	2010-2014	2005-2014		2010-2014	2005-2014		2010-2014	2005-2014			
All Sites	122.7	-1.8*		All Sites	184.0	-1.0		All Sites	142.6	-1.7*	
Lung and Bronchus	31.7	-2.6*		Lung and Bronchus	46.3	-1.4		Lung and Bronchus	27.3	-3.4*	
Liver & IBD <sup>f</sup>	14.3	-0.4		Colon and Rectum	19.5	-0.3		Prostate	16.5	-3.5*	
Colon and Rectum	12.4	-1.5*		Prostate	19.4	-2.7*		Colon and Rectum	15.0	-1.5*	
Prostate	8.8	-3.3*		Liver & IBD <sup>f</sup>	14.9	3.6*		Liver & IBD <sup>f</sup>	13.1	1.2*	
Pancreas	8.2	-0.6		Pancreas	9.8	-1.7		Pancreas	9.5	-0.5	
Stomach	7.1	-4.6*		Kidney and Renal Pelvis	8.9	-1.1		Stomach	6.9	-2.4*	
Leukemia	5.0	-0.6		Stomach	7.5	-2.4		Non-Hodgkin Lymphoma	6.2	-1.0*	
Non-Hodgkin Lymphoma	4.9	-1.0		Leukemia	5.8	-2.7		Leukemia	6.1	-0.4	
Oral Cavity and Pharynx	2.9	-0.2		Non-Hodgkin Lymphoma	5.6	0.1		Kidney and Renal Pelvis	4.9	-1.3	
Urinary Bladder	2.9	0.6		Esophagus	5.6	-1.4		Esophagus	4.0	-1.7	
Esophagus	2.9	-1.0		Oral Cavity and Pharynx	3.7	0.0		Urinary Bladder	3.9	-1.4	
Kidney and Renal Pelvis	2.7	-0.5		Urinary Bladder	3.6	-2.1		Myeloma	3.4	-0.6	
Brain and ONS <sup>f</sup>	2.4	0.5		Myeloma	3.3	-2.4		Brain and ONS <sup>f</sup>	3.4	0.3	
Myeloma	2.1	-0.9		Brain and ONS <sup>f</sup>	3.0	0.1		Oral Cavity and Pharynx	2.4	-0.9*	
Soft Tissue including Heart	1.0	-1.5		Larynx	1.7	-		Larynx	1.6	-2.5*	

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

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

<sup>f</sup> 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<sup>a</sup> by Race/Ethnicity

## Females

All Races	Rate <sup>b</sup>		APC <sup>c</sup>	All Sites	Rate <sup>b</sup>		APC <sup>c</sup>	All Sites	Rate <sup>b</sup>		APC <sup>c</sup>
	2010-2014	2005-2014			2010-2014	2005-2014			2010-2014	2005-2014	
All Sites	141.5	-1.4*		All Sites	141.9	-1.3*		All Sites	161.8	-1.5*	
Lung and Bronchus	36.3	-1.8*		Lung and Bronchus	37.5	-1.7*		Lung and Bronchus	34.6	-2.0*	
Breast	21.2	-1.7*		Breast	20.6	-1.7*		Breast	29.2	-1.6*	
Colon and Rectum	12.4	-2.6*		Colon and Rectum	12.1	-2.5*		Colon and Rectum	16.5	-3.6*	
Pancreas	9.5	0.0		Pancreas	9.4	0.1		Pancreas	12.1	-0.6*	
Ovary	7.4	-2.3*		Ovary	7.7	-2.3*		Corpus and Uterus, NOS	8.1	2.1*	
Leukemia	5.1	-1.1*		Leukemia	5.3	-1.0*		Ovary	6.4	-1.3*	
Non-Hodgkin Lymphoma	4.6	-2.6*		Non-Hodgkin Lymphoma	4.8	-2.7*		Myeloma	5.5	0.2	
Corpus and Uterus, NOS	4.6	1.5*		Corpus and Uterus, NOS	4.2	1.4*		Leukemia	4.6	-1.1*	
Liver & IBD <sup>f</sup>	3.7	2.5*		Brain and ONS <sup>f</sup>	3.8	0.4		Liver & IBD <sup>f</sup>	4.5	2.7*	
Brain and ONS <sup>f</sup>	3.5	0.3		Liver & IBD <sup>f</sup>	3.5	2.5*		Stomach	4.1	-3.3*	
Myeloma	2.7	-0.7		Kidney and Renal Pelvis	2.5	-1.6*		Cervix Uteri	3.8	-2.1*	
Kidney and Renal Pelvis	2.4	-1.6*		Myeloma	2.4	-0.9*		Non-Hodgkin Lymphoma	3.5	-1.4*	
Stomach	2.3	-2.2*		Urinary Bladder	2.2	-0.5*		Urinary Bladder	2.5	-1.4*	
Cervix Uteri	2.3	-0.8*		Cervix Uteri	2.1	-0.4		Kidney and Renal Pelvis	2.4	-1.9*	
Urinary Bladder	2.2	-0.7*		Stomach	2.0	-2.0*		Brain and ONS <sup>f</sup>	2.1	1.2	
Asian/Pacific Islander				American Indian/Alaska Native <sup>d</sup>				Hispanic <sup>e</sup>			
	Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>			
	2010-2014	2005-2014		2010-2014	2005-2014		2010-2014	2005-2014			
All Sites	88.8	-1.1*		All Sites	129.3	-1.5*		All Sites	97.7	-1.0*	
Lung and Bronchus	18.0	-0.6*		Lung and Bronchus	30.8	-1.7*		Breast	14.4	-0.6*	
Breast	11.3	-0.7		Breast	14.1	-3.6*		Lung and Bronchus	13.4	-1.3*	
Colon and Rectum	8.8	-2.6*		Colon and Rectum	14.0	-0.7		Colon and Rectum	9.2	-2.7*	
Pancreas	7.3	0.4		Pancreas	8.1	-1.4		Pancreas	7.7	-0.4	
Liver & IBD <sup>f</sup>	6.1	-0.6		Liver & IBD <sup>f</sup>	6.9	1.7		Liver & IBD <sup>f</sup>	5.8	1.1*	
Ovary	4.4	-2.0*		Ovary	6.2	-2.3*		Ovary	5.4	-1.8*	
Stomach	4.3	-3.9*		Kidney and Renal Pelvis	4.2	0.7		Non-Hodgkin Lymphoma	4.1	-2.1*	
Non-Hodgkin Lymphoma	3.2	-1.3*		Stomach	3.8	0.0		Stomach	4.1	-1.7*	
Leukemia	3.0	-0.3		Corpus and Uterus, NOS	3.8	1.4		Leukemia	4.0	0.1	
Corpus and Uterus, NOS	2.9	2.2*		Leukemia	3.4	-1.3		Corpus and Uterus, NOS	3.6	2.0*	
Brain and ONS <sup>f</sup>	1.8	2.4		Non-Hodgkin Lymphoma	3.2	-5.7*		Cervix Uteri	2.6	-2.5*	
Cervix Uteri	1.7	-1.9		Cervix Uteri	2.8	-1.9		Brain and ONS <sup>f</sup>	2.4	0.5	
Myeloma	1.3	-2.5		Myeloma	2.7	2.5		Myeloma	2.3	-1.1	
Kidney and Renal Pelvis	1.1	-2.1		Brain and ONS <sup>f</sup>	2.0	-		Kidney and Renal Pelvis	2.3	-0.7	
Oral Cavity and Pharynx	1.1	-3.0*		Gallbladder	1.7	-5.1		Urinary Bladder	1.2	-0.5	

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

<sup>a</sup> Top 15 cancer sites selected based on 2010-2014 age-adjusted rates for the race/ethnic group.

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

<sup>c</sup> 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).

<sup>d</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>e</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

<sup>f</sup> 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

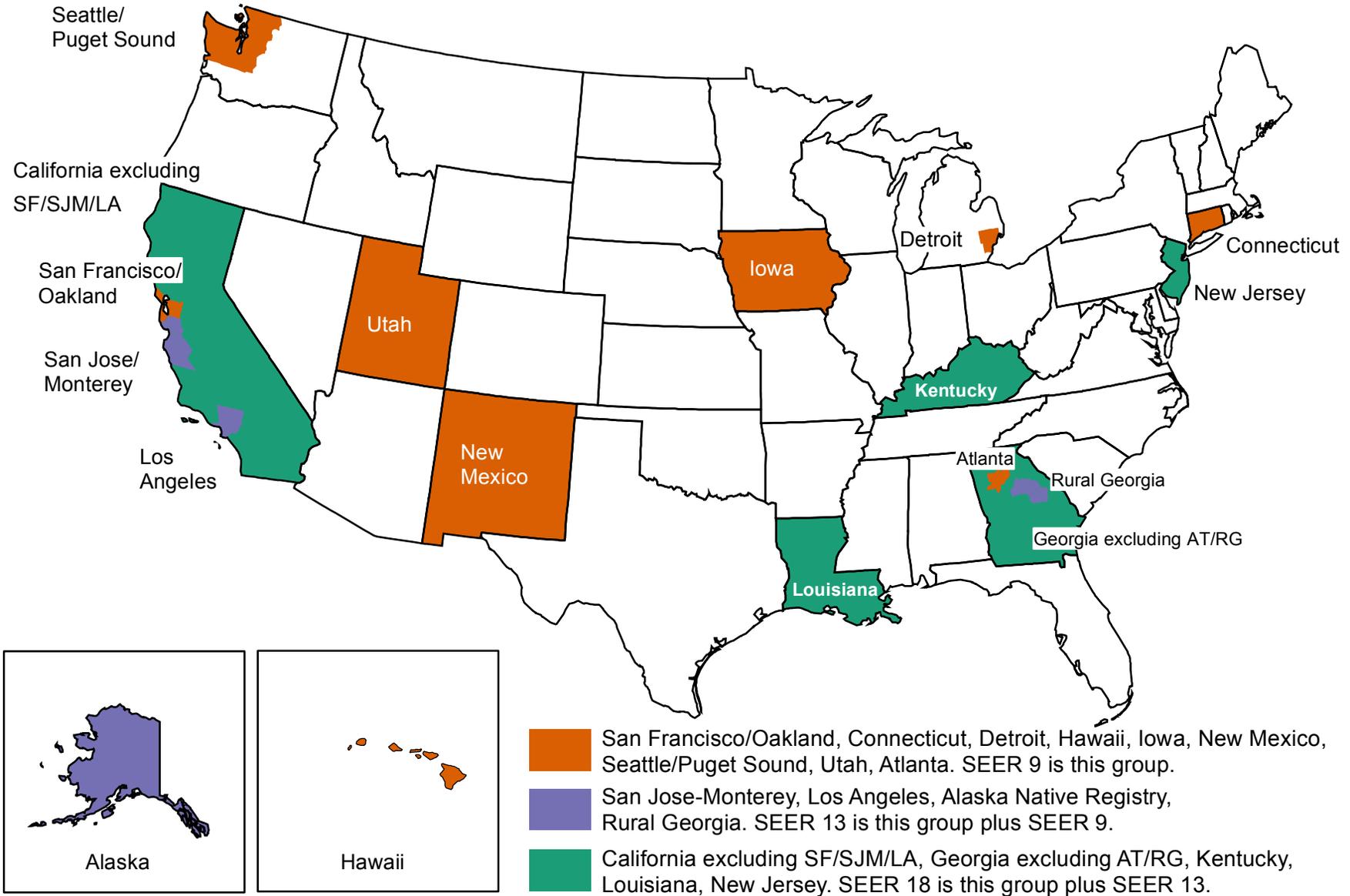
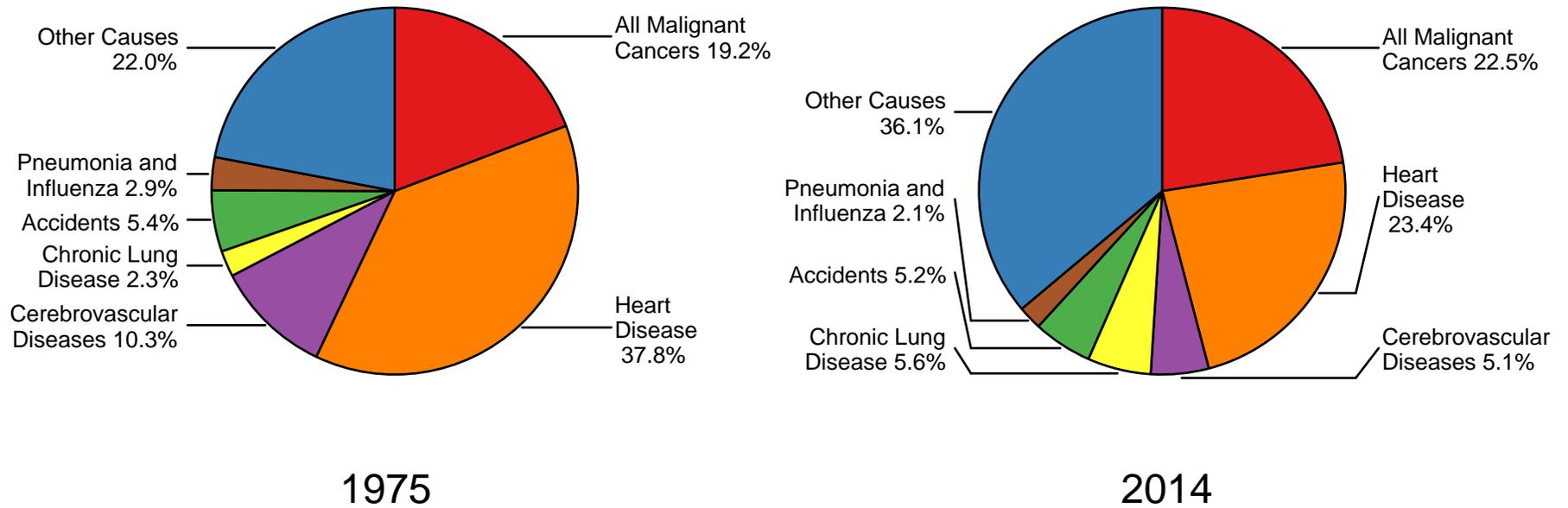


Figure 1.1

Figure 1.2

# Leading Causes of Death in US, 1975 vs 2014 Percent of All Causes of Death

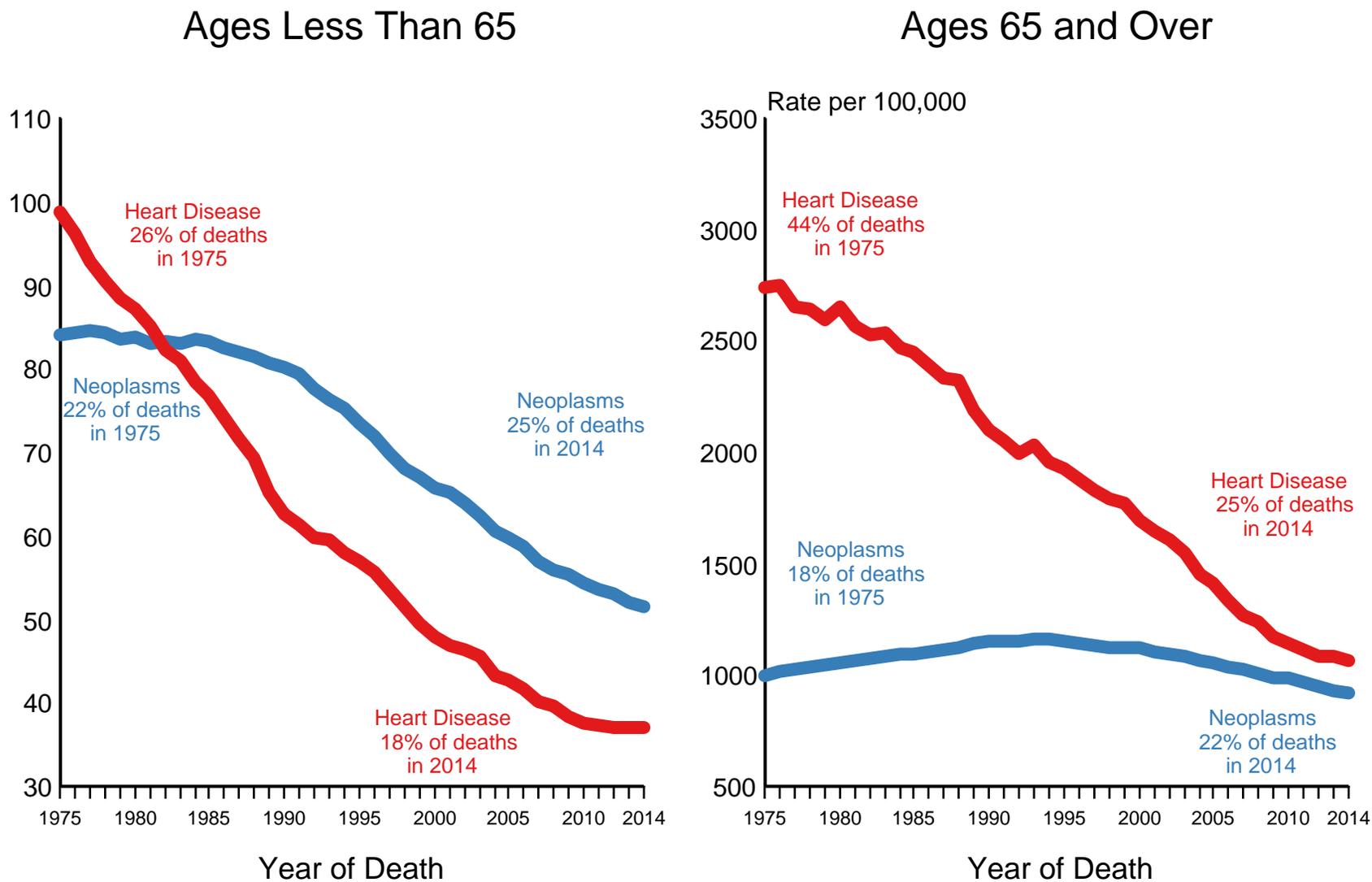


Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Figure 1.3

# Us Death Rates, 1975-2014

## Heart Disease compared to Neoplasms, by age at death

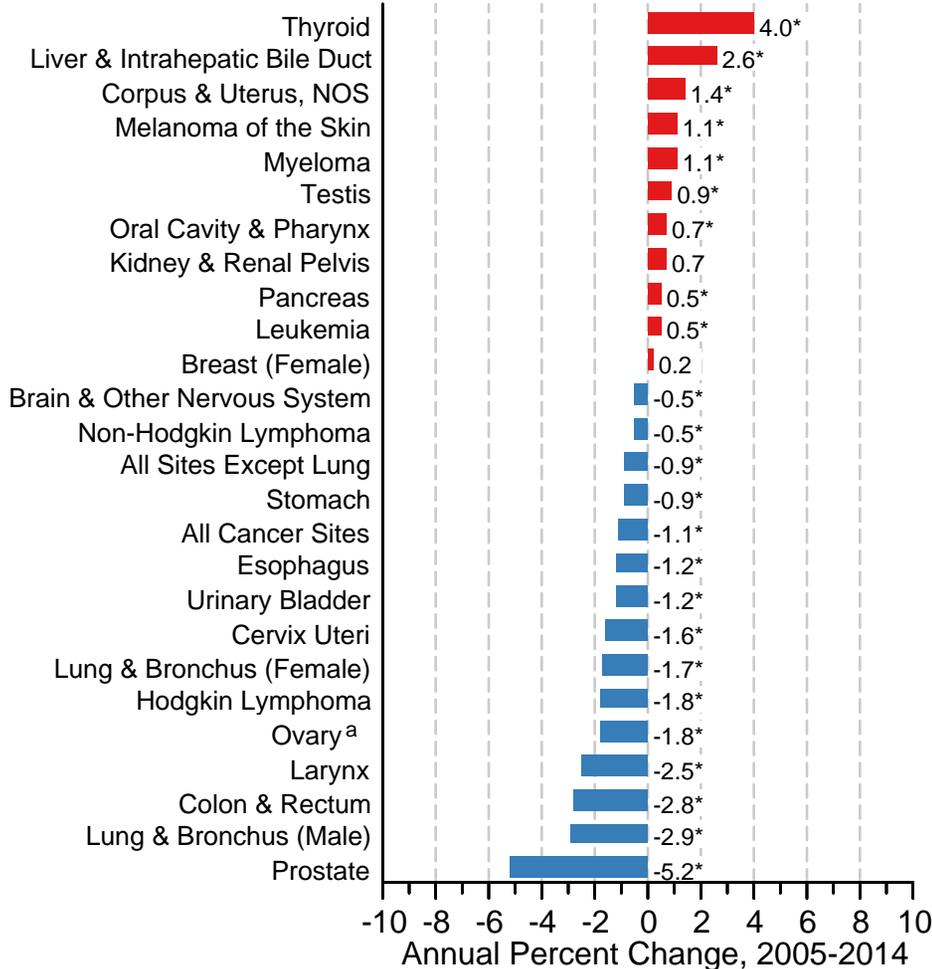


Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

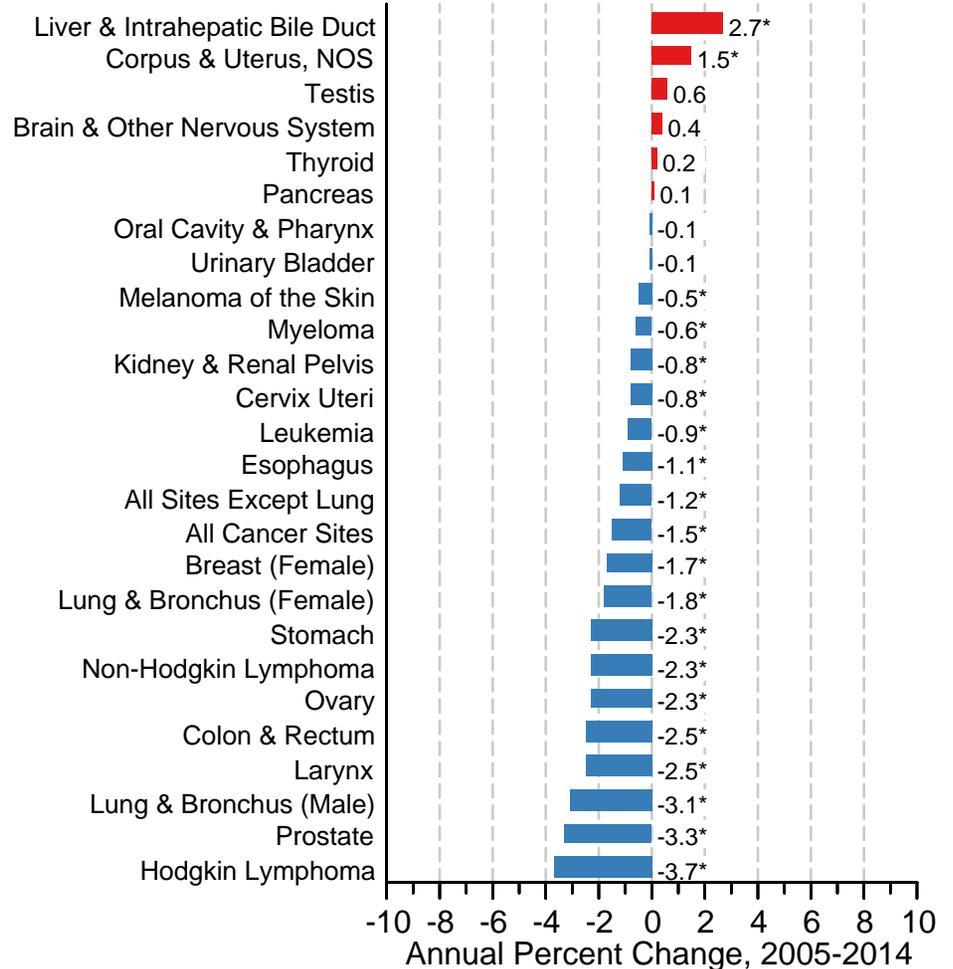
Figure 1.4

# Trends in SEER Incidence and US Death Rates by Primary Cancer Site 2005-2014

## Trends in SEER Incidence Rates



## Trends in US Cancer Death Rates



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).

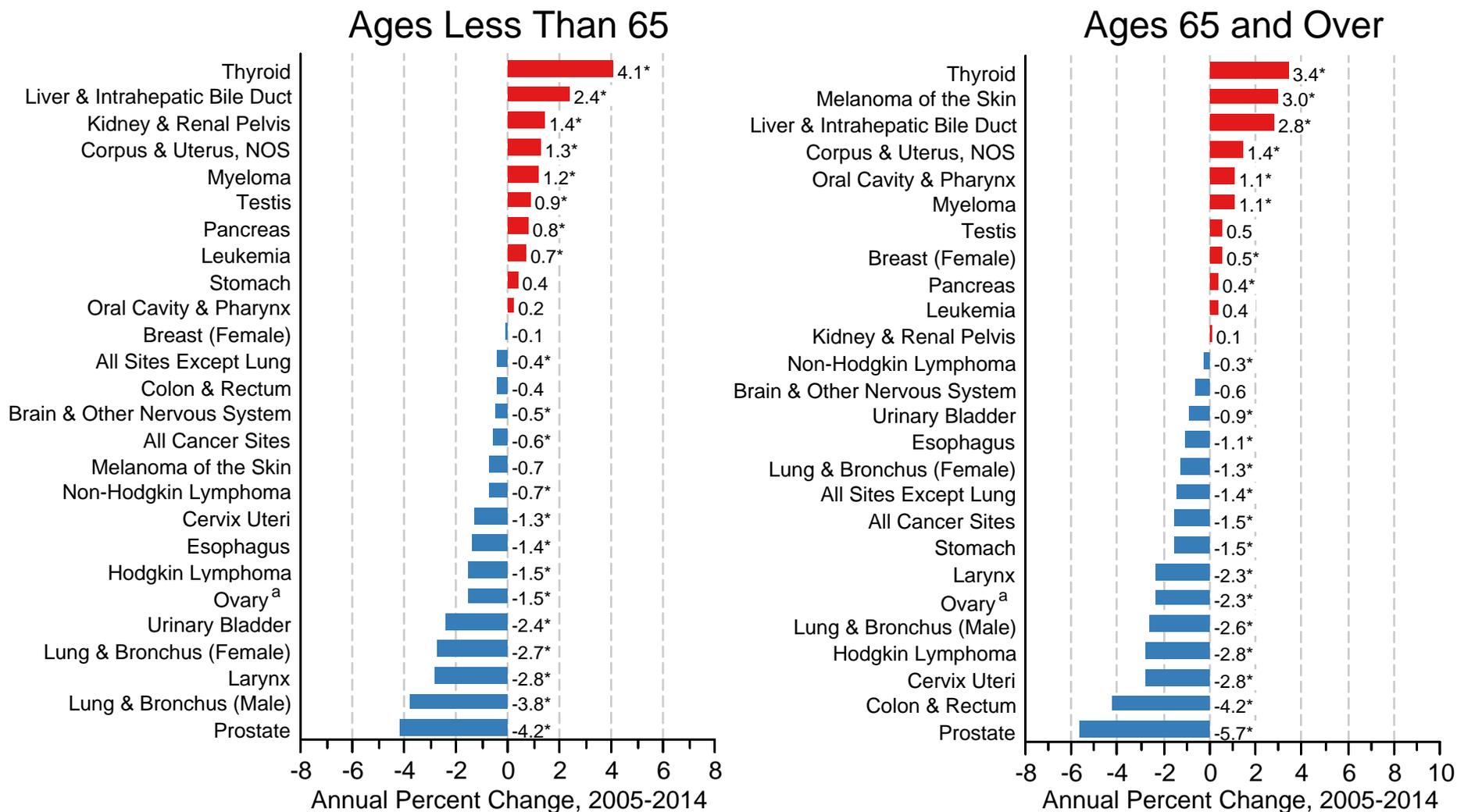
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

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

<sup>a</sup> 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 2005-2014



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).

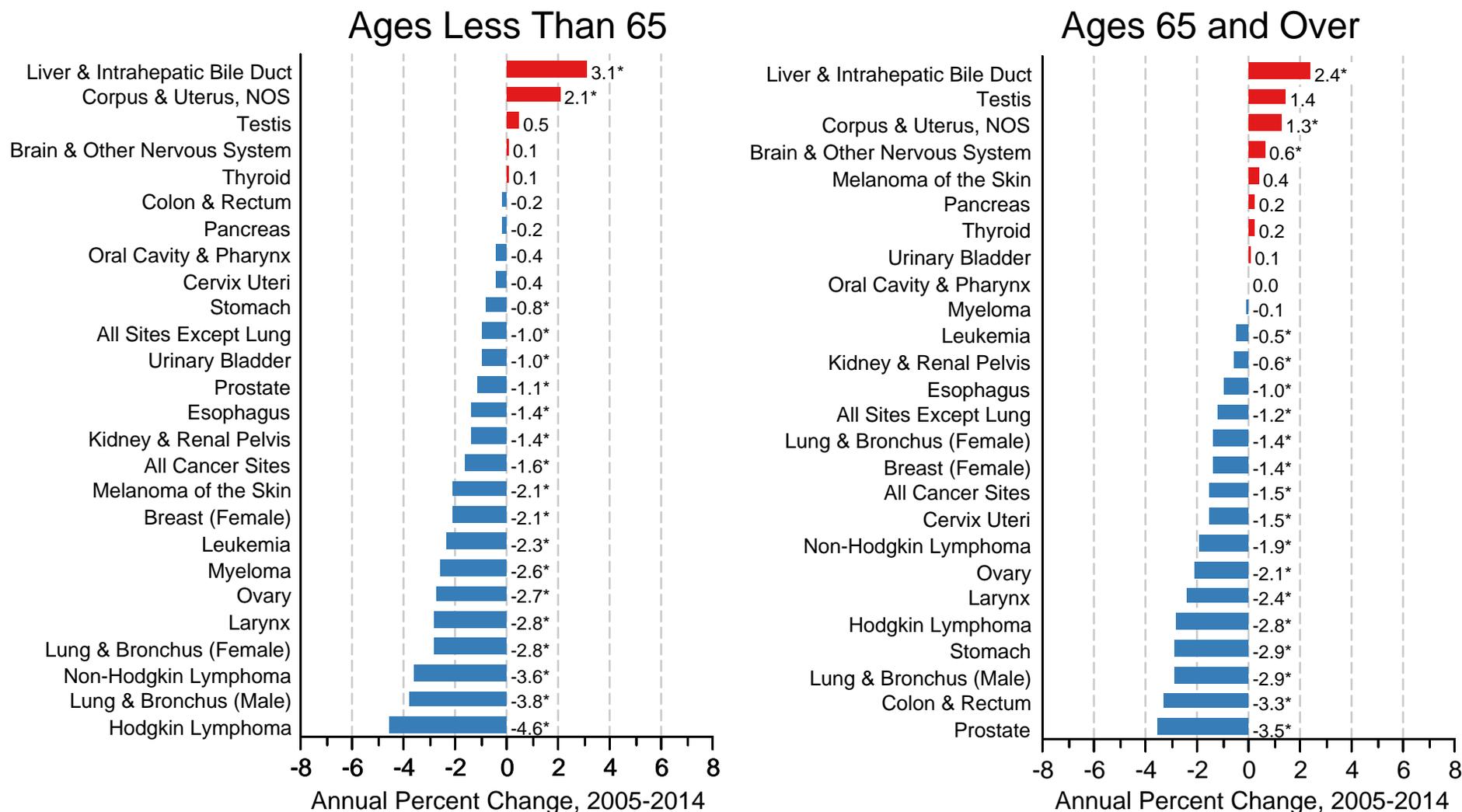
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

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

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

Figure 1.6

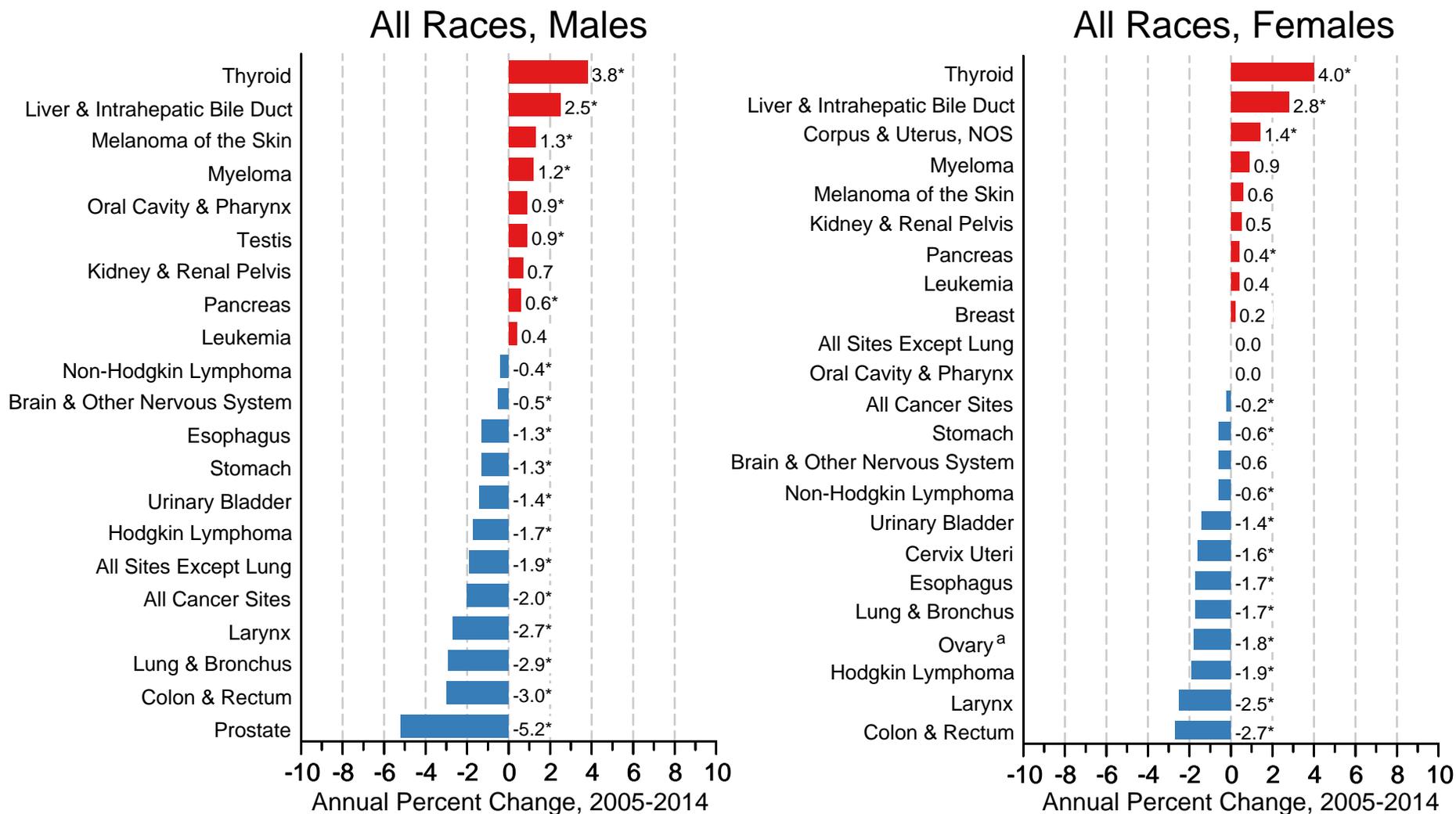
# Trends in US Death Rates by Age Group and Primary Cancer Site 2005-2014



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 2005-2014



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).

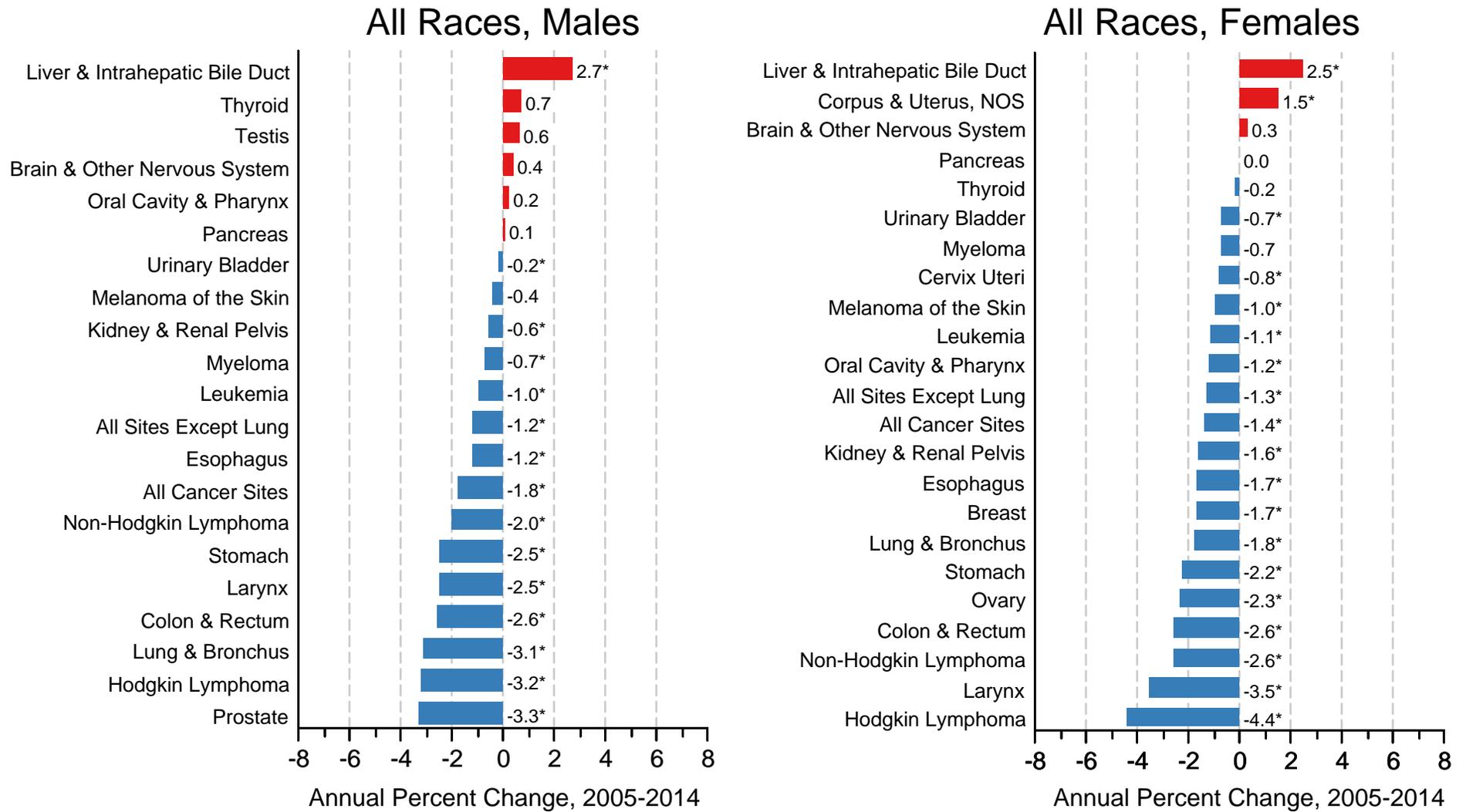
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

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

<sup>a</sup> 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 2005-2014



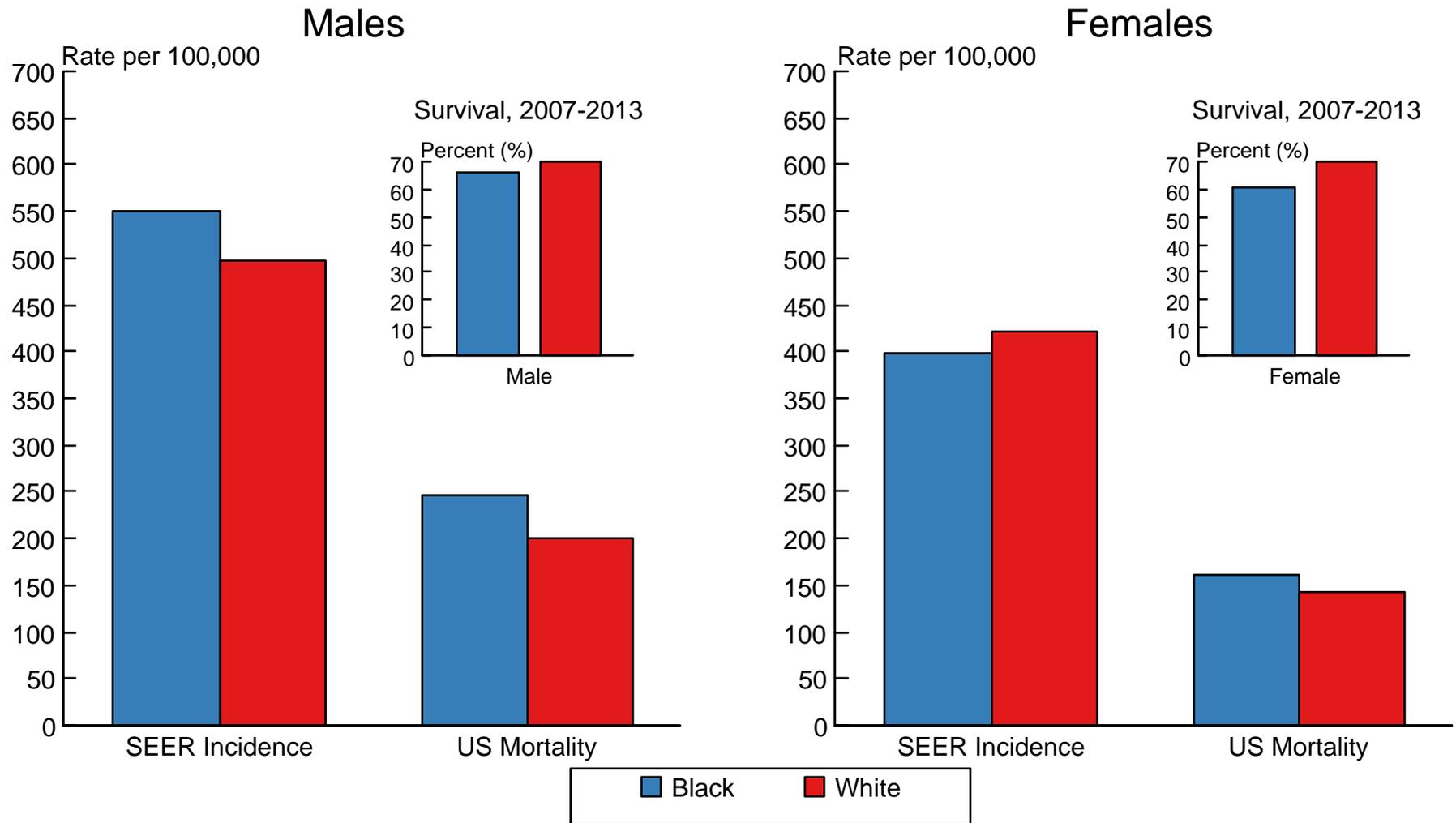
Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.  
Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

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

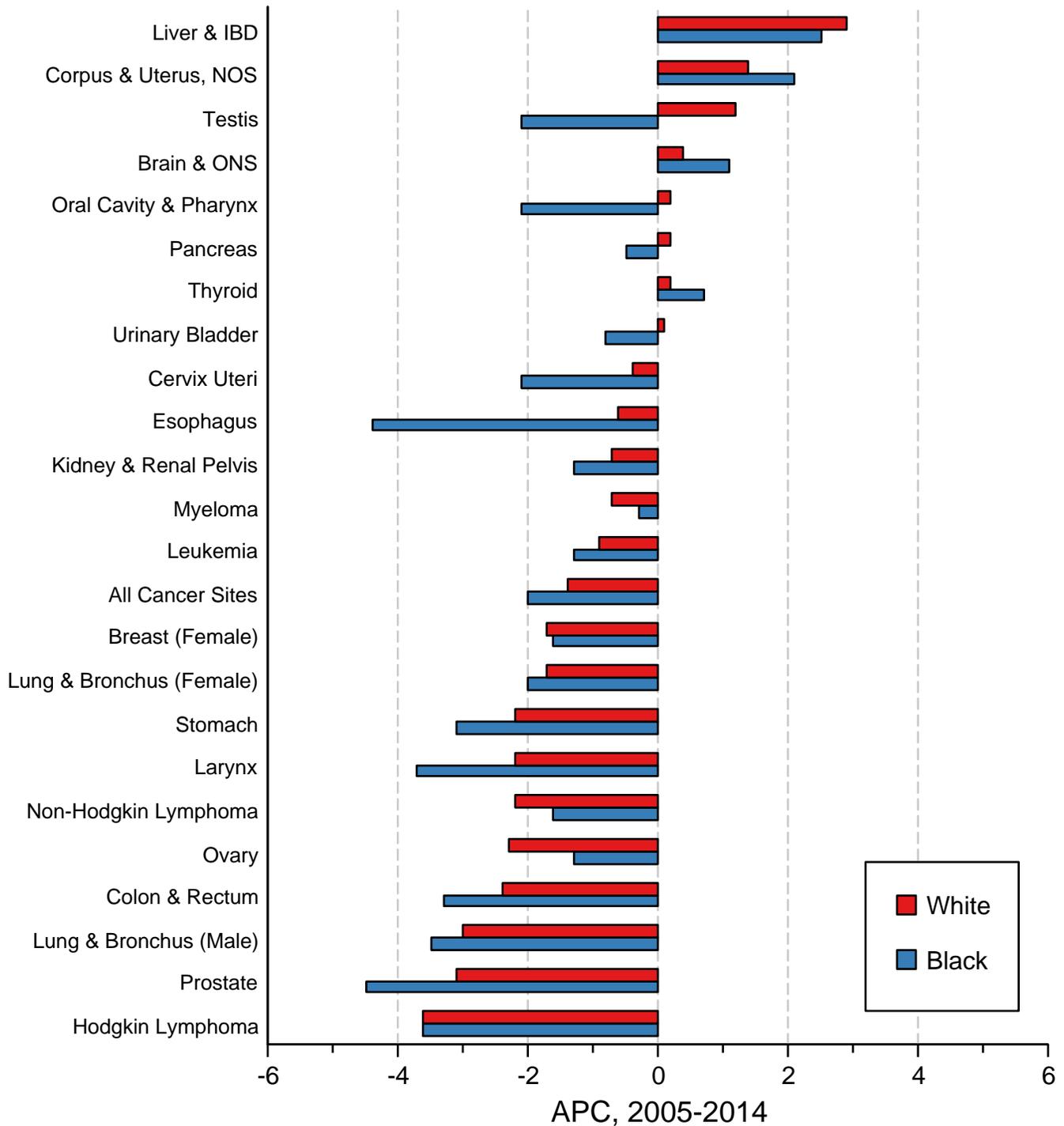
# SEER Incidence<sup>a</sup> and US Death Rates,<sup>b</sup> 2010-2014 5-Year Relative Survival,<sup>c</sup> 2007-2013 All Cancer Combined, by Race and Sex



<sup>a</sup> 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).  
<sup>b</sup> 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).  
<sup>c</sup> 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).

Figure 1.10

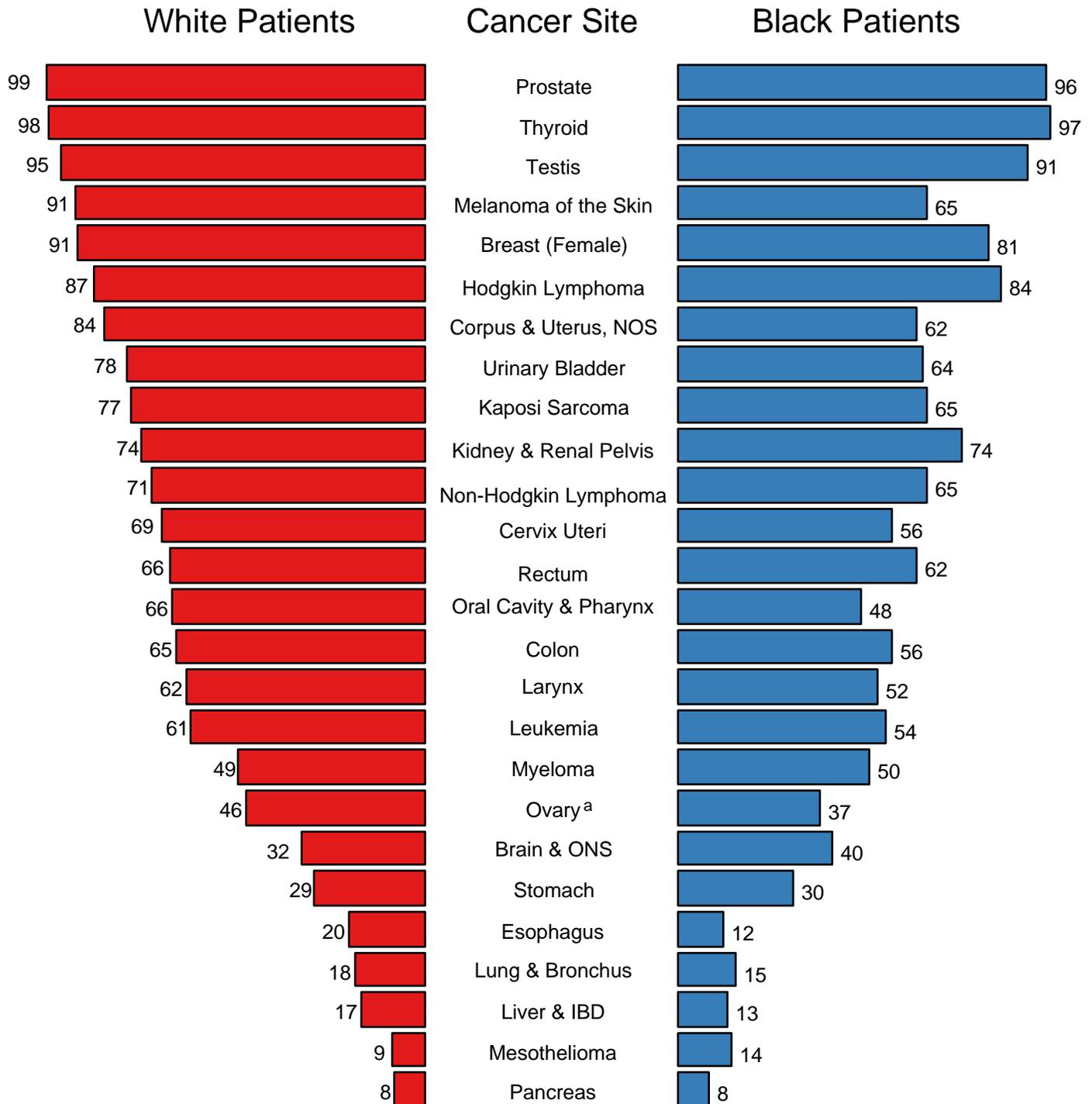
# Trends in US Death Rates, 2005-2014 All Ages, by Race and Primary Cancer Site



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).

Figure 1.11

## 5-Year Relative Survival (%) SEER Program, 2007-2013 Both Sexes, by Race and Cancer Site

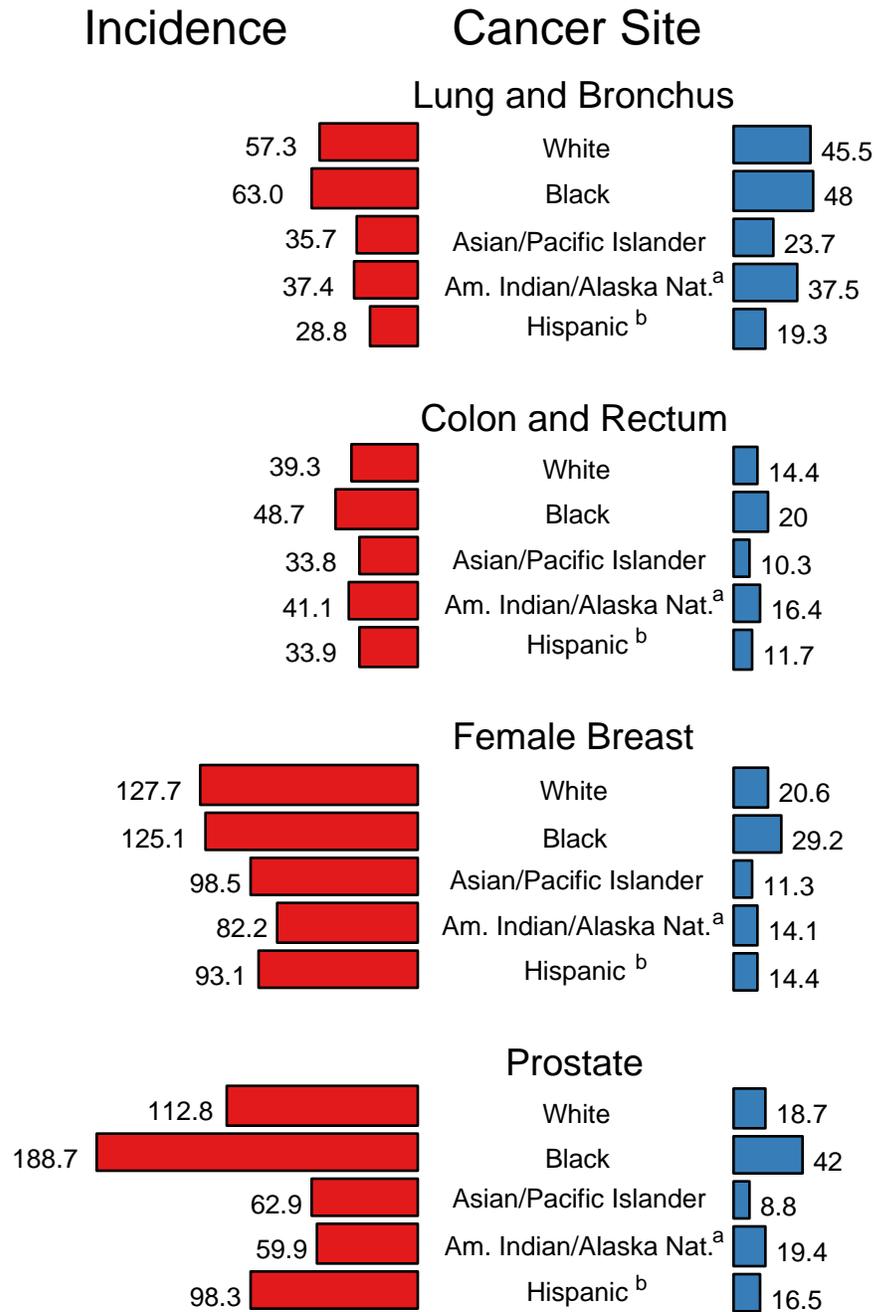


Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).

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

Figure 1.12

# SEER Cancer Incidence and US Death Rates, 2010-2014 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.

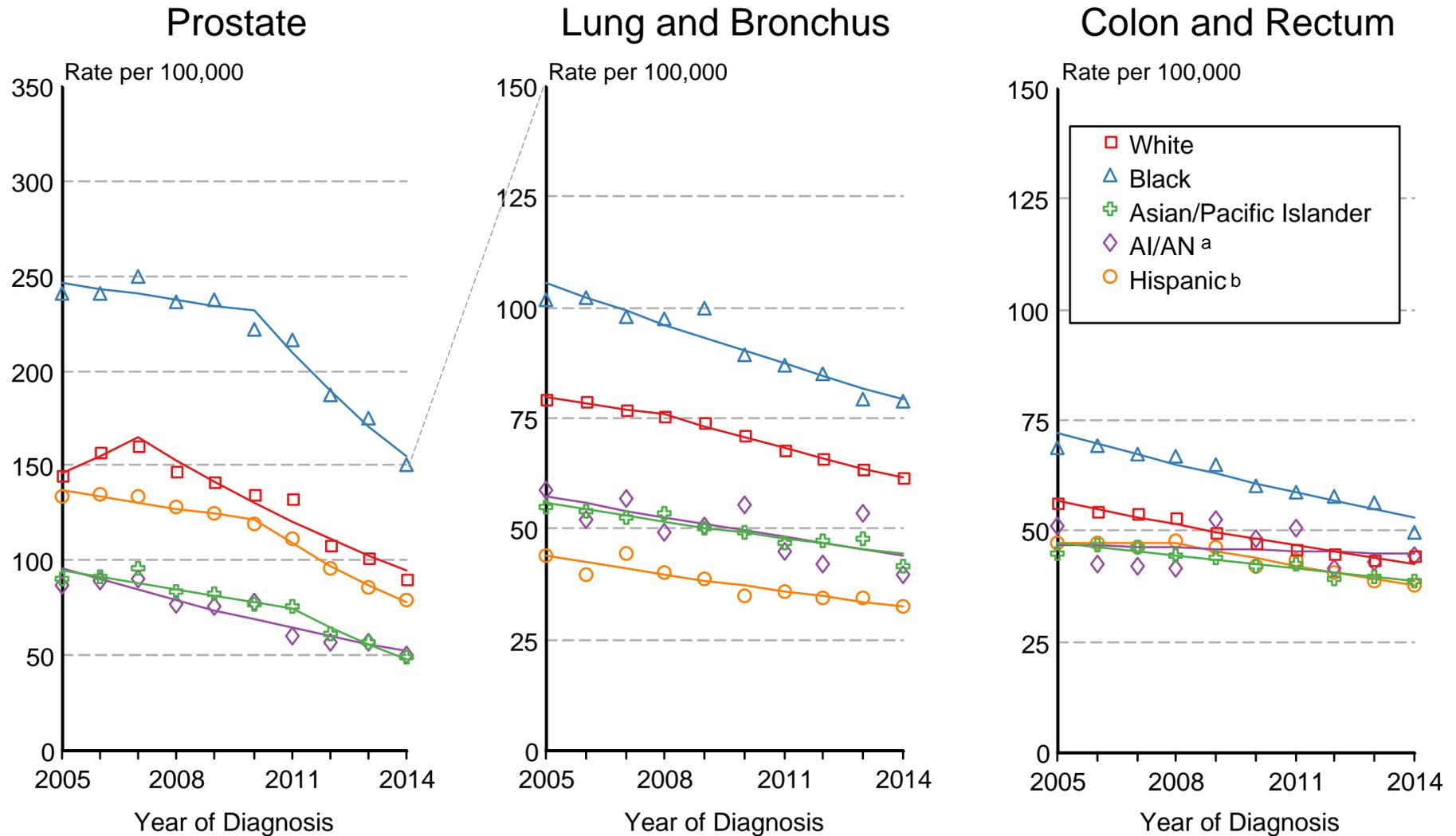
<sup>a</sup> Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>b</sup> 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 2005-2014 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 4.4, January 2017, National Cancer Institute.

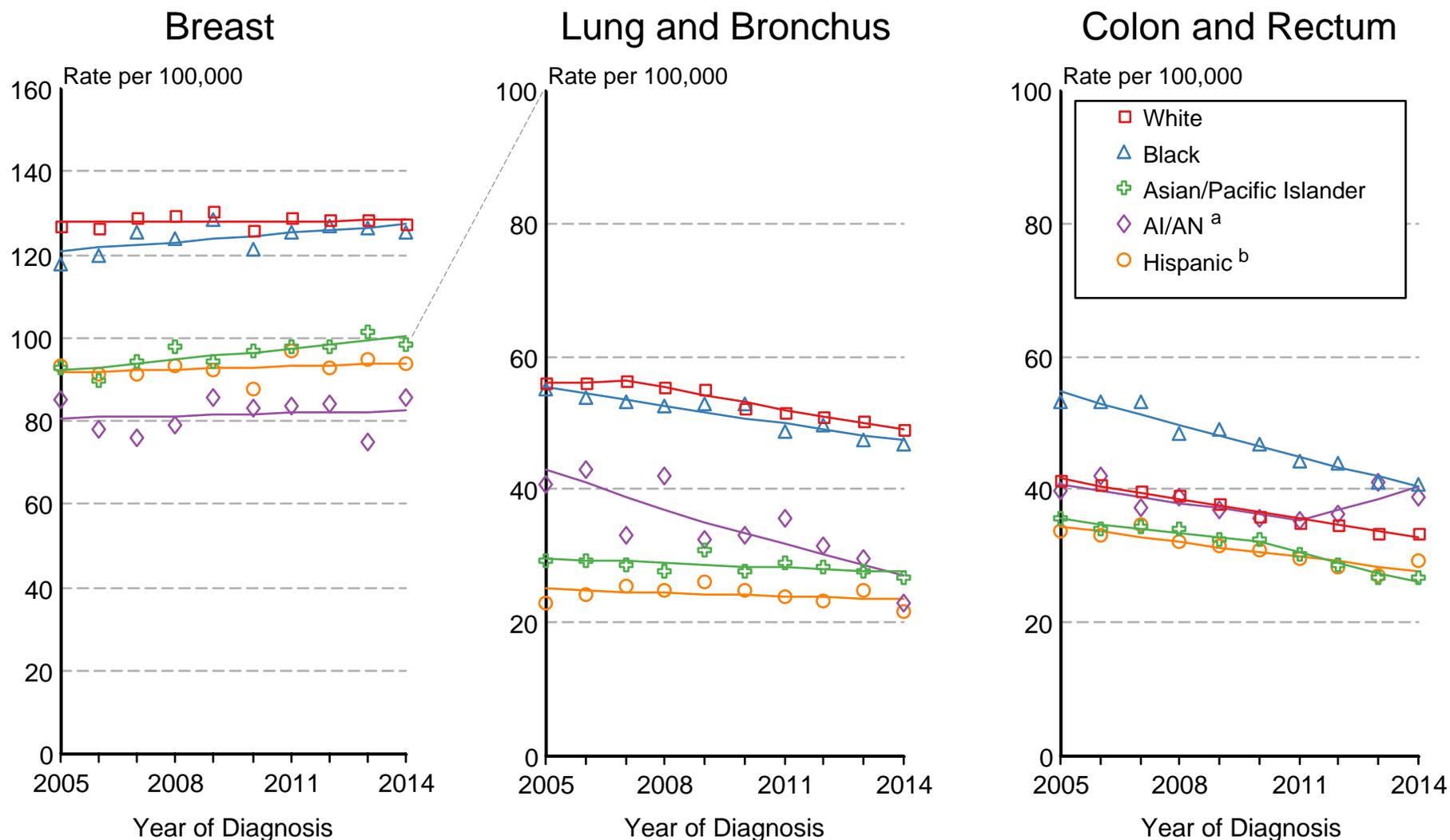
<sup>a</sup> Incidence rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>b</sup> 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 2005-2014 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 4.4, January 2017, National Cancer Institute.

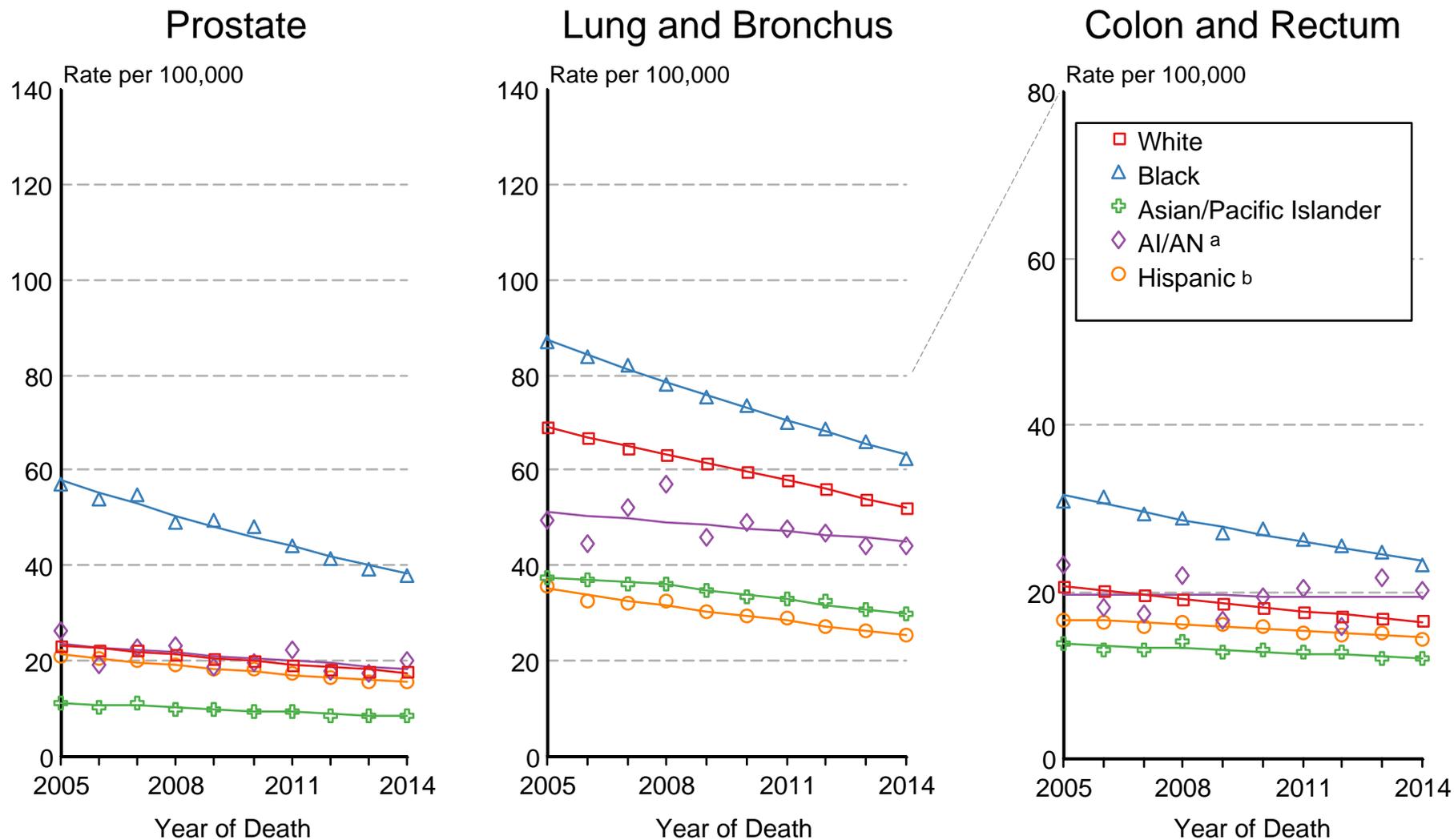
<sup>a</sup> Incidence rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>b</sup> 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 2005-2014 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).

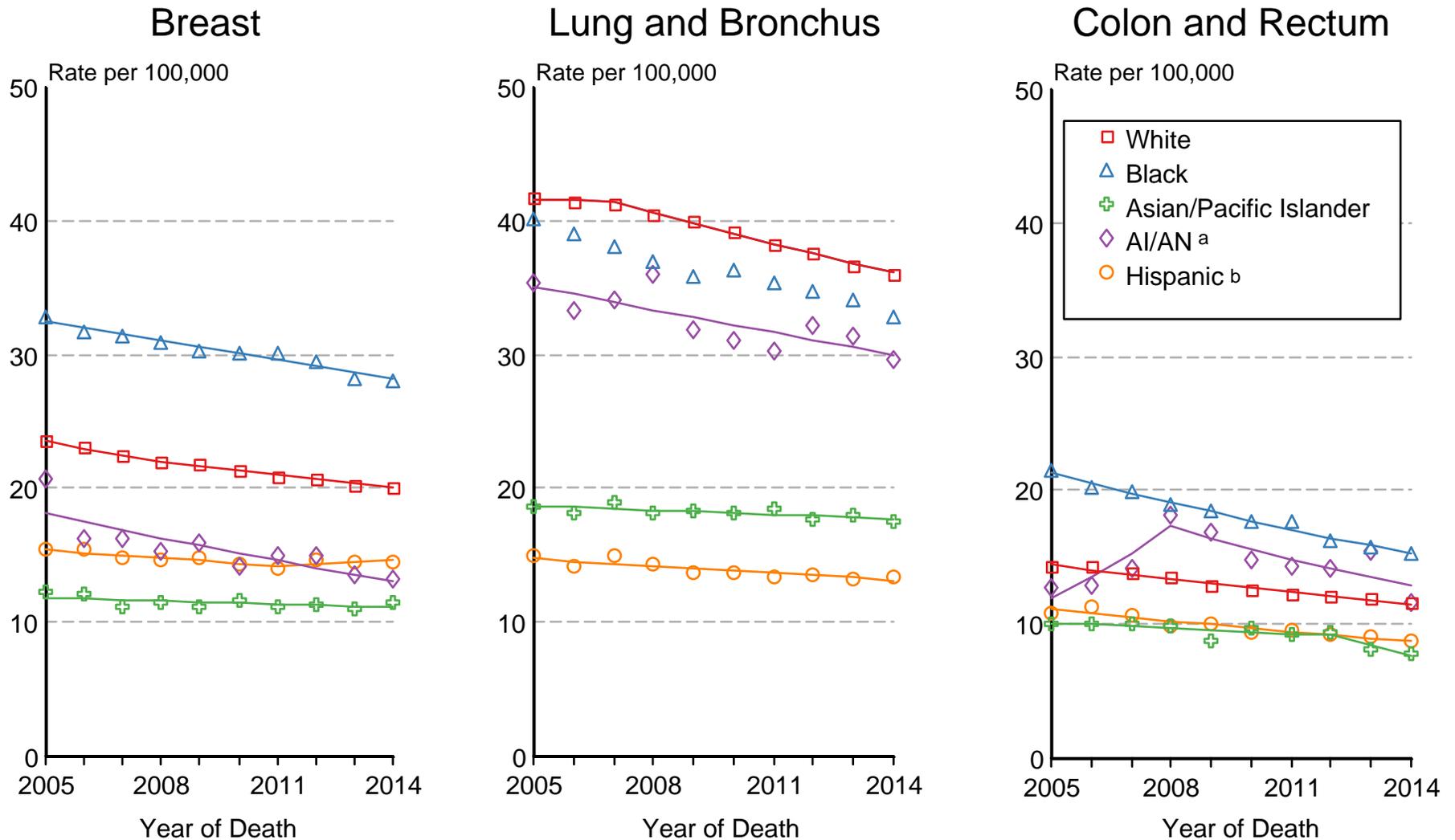
Regression lines are calculated using the Joinpoint Regression Program Version 4.4, January 2017, National Cancer Institute.

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

<sup>b</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

Figure 1.16

# US Mortality 2005-2014 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).

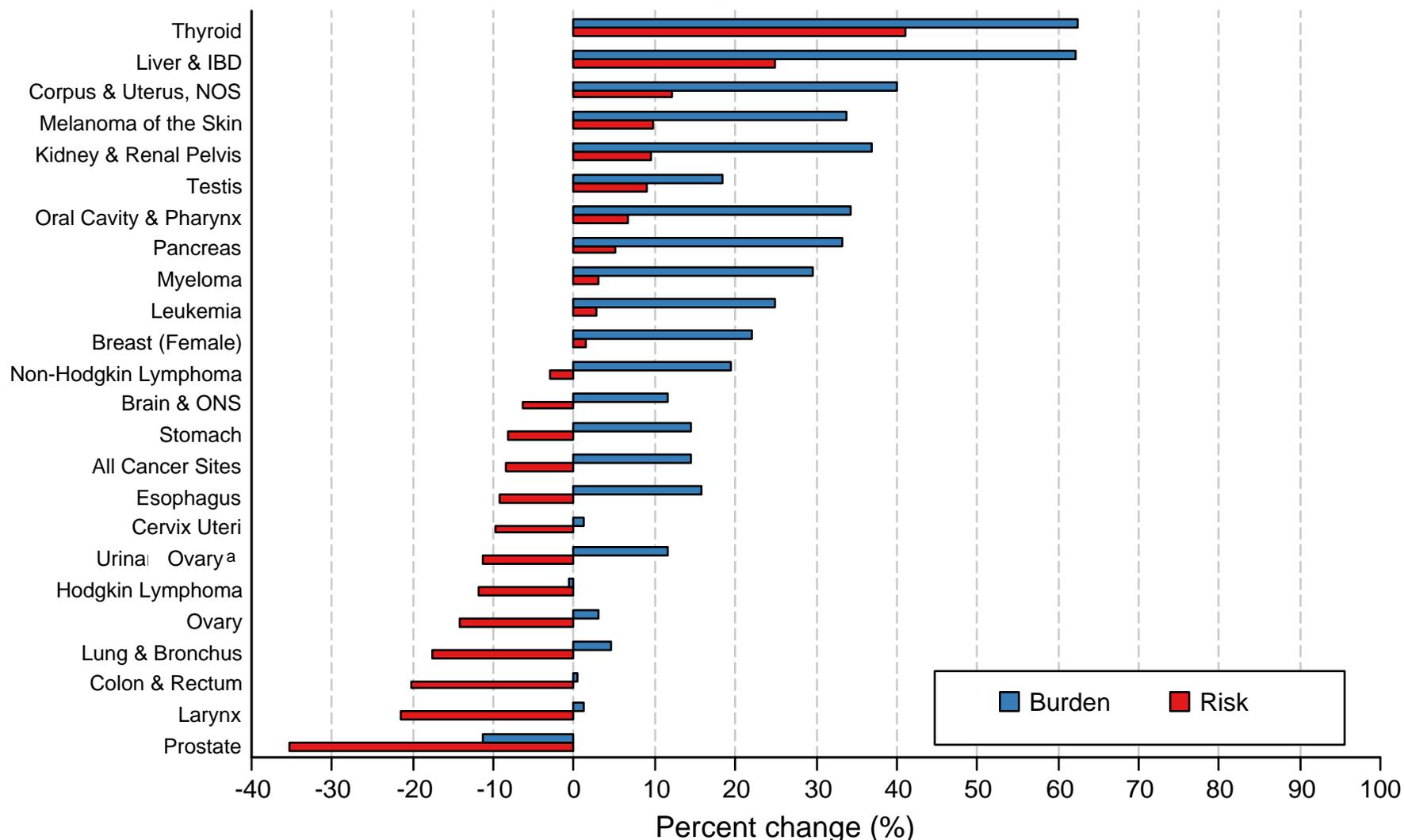
Regression lines are calculated using the Joinpoint Regression Program Version 4.4, January 2017, National Cancer Institute.

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

<sup>b</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

Figure 1.17

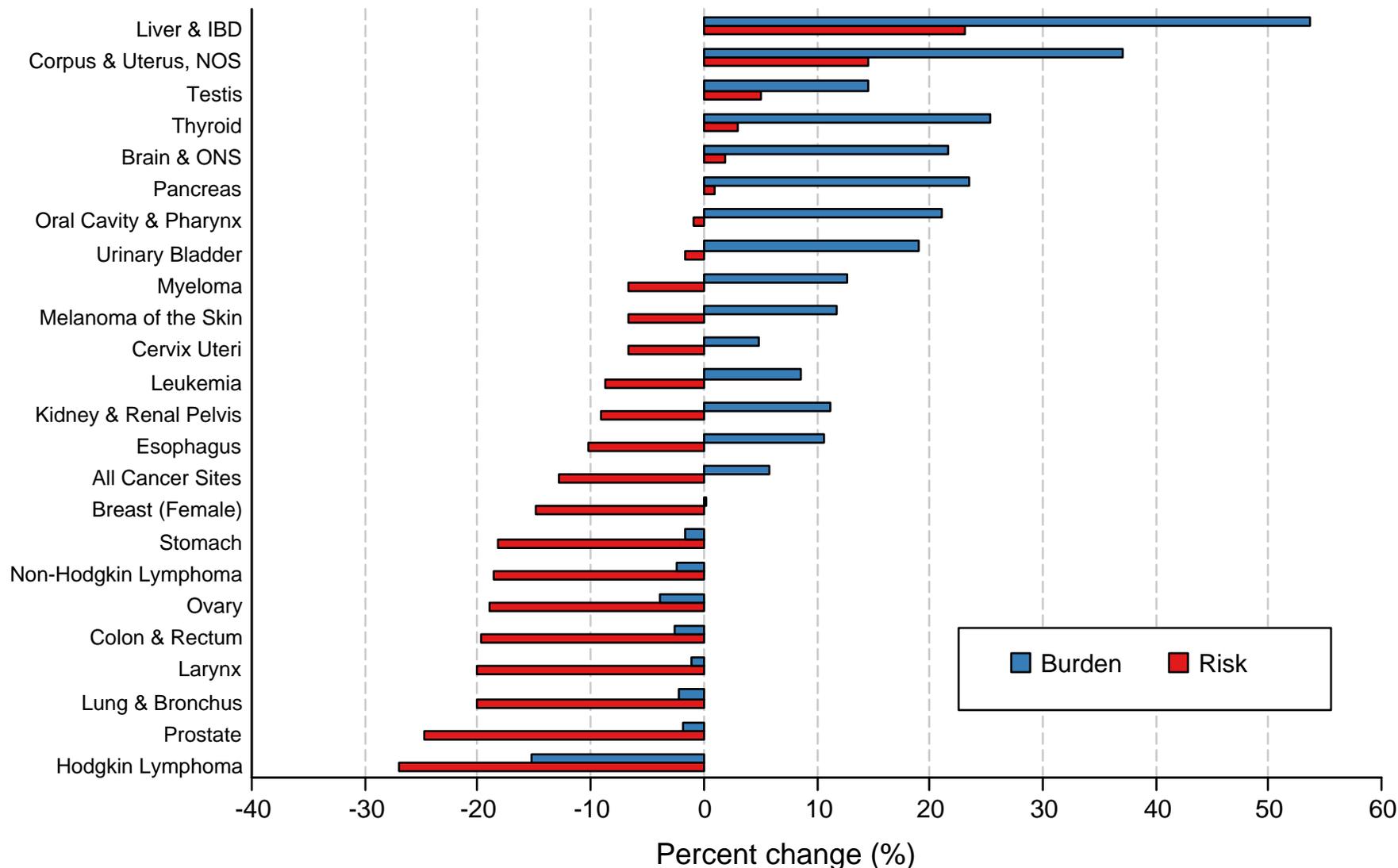
# Incidence Percent Change between 2005 and 2014 Numbers (burden) vs Rates (risk) All Races, All Ages, Both Sexes



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 2005 and 2014.  
 Risk is the change in the cancer incidence rates between 2005 and 2014.  
<sup>a</sup> Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Figure 1.18

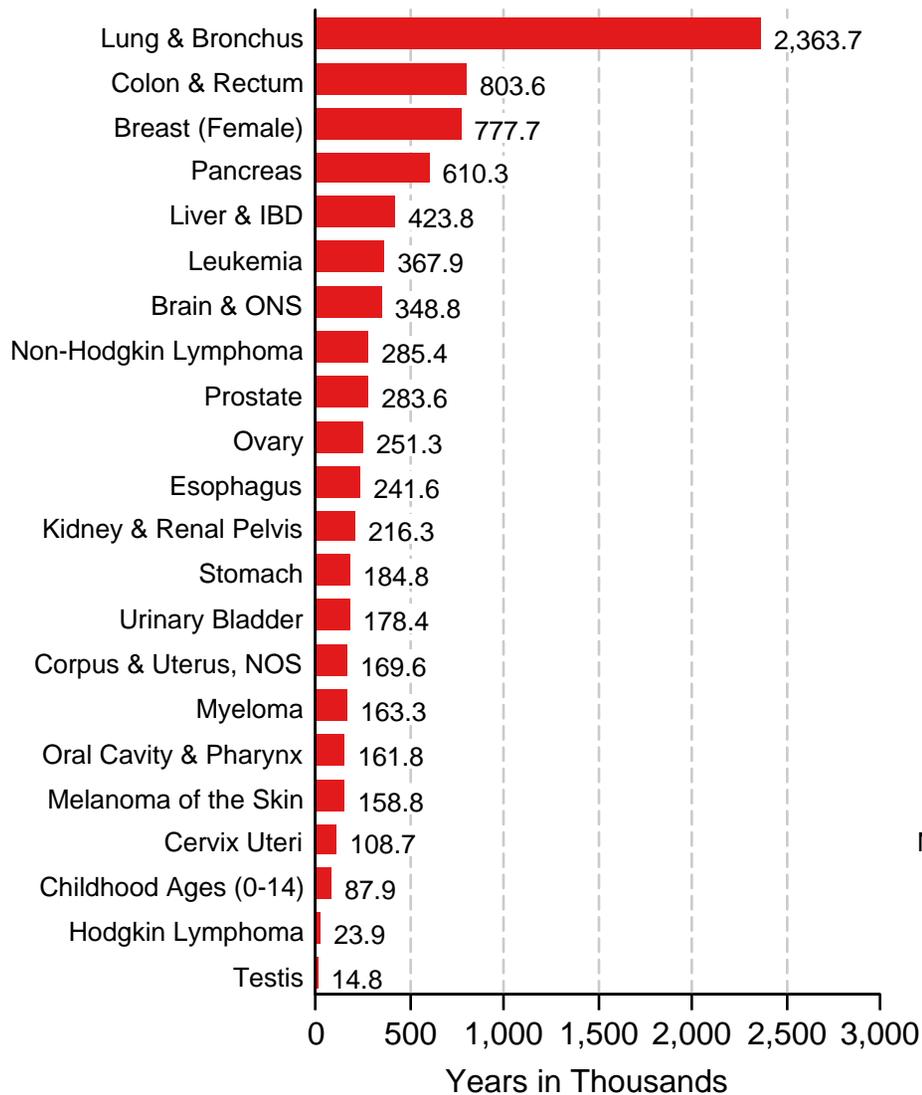
# Mortality Percent Change between 2005 and 2014 Numbers (burden) vs Rates (risk) All Races, All Ages, Both Sexes



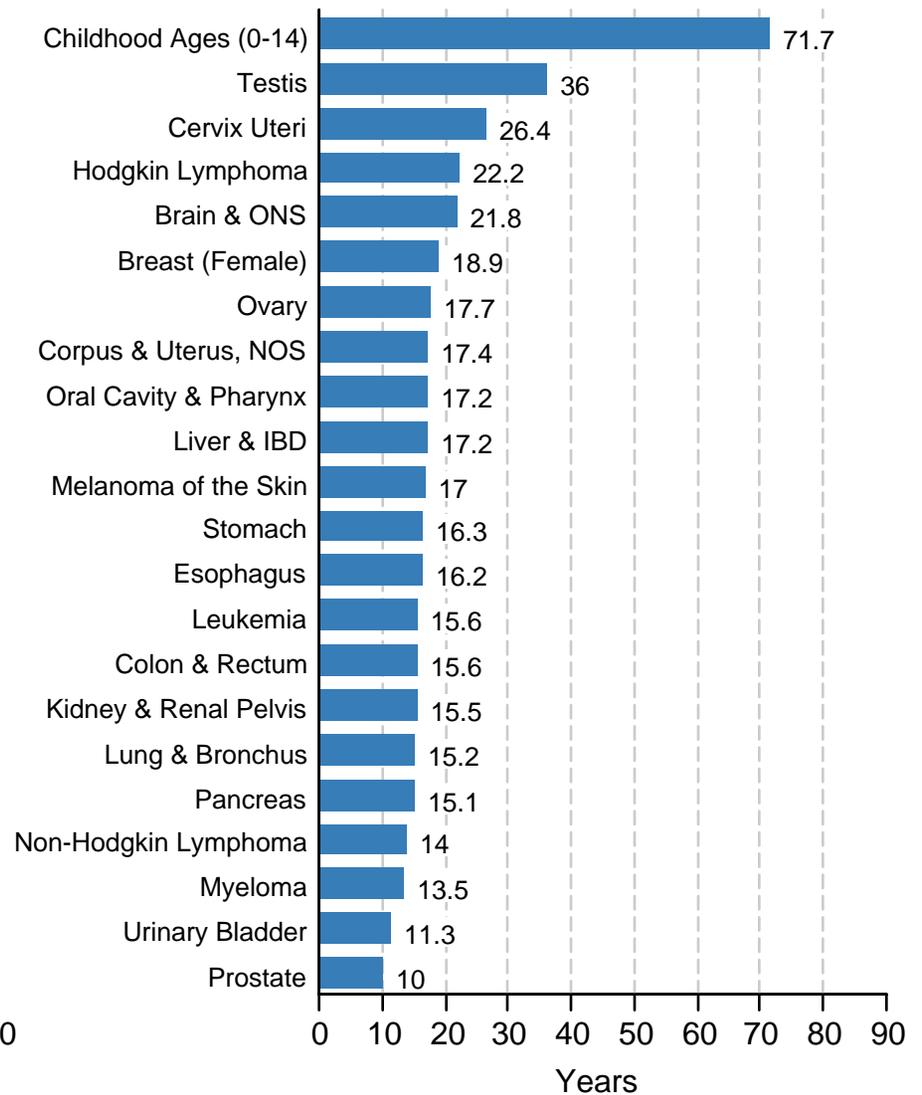
US Mortality estimates based on US age-specific rates applied to US population.  
 Burden is the change in the number of deaths between 2005 and 2014.  
 Risk is the change in the cancer death rates between 2005 and 2014.

Figure 1.19

### Person-Years of Life Lost Due to Cancer All Races, Both Sexes, 2014



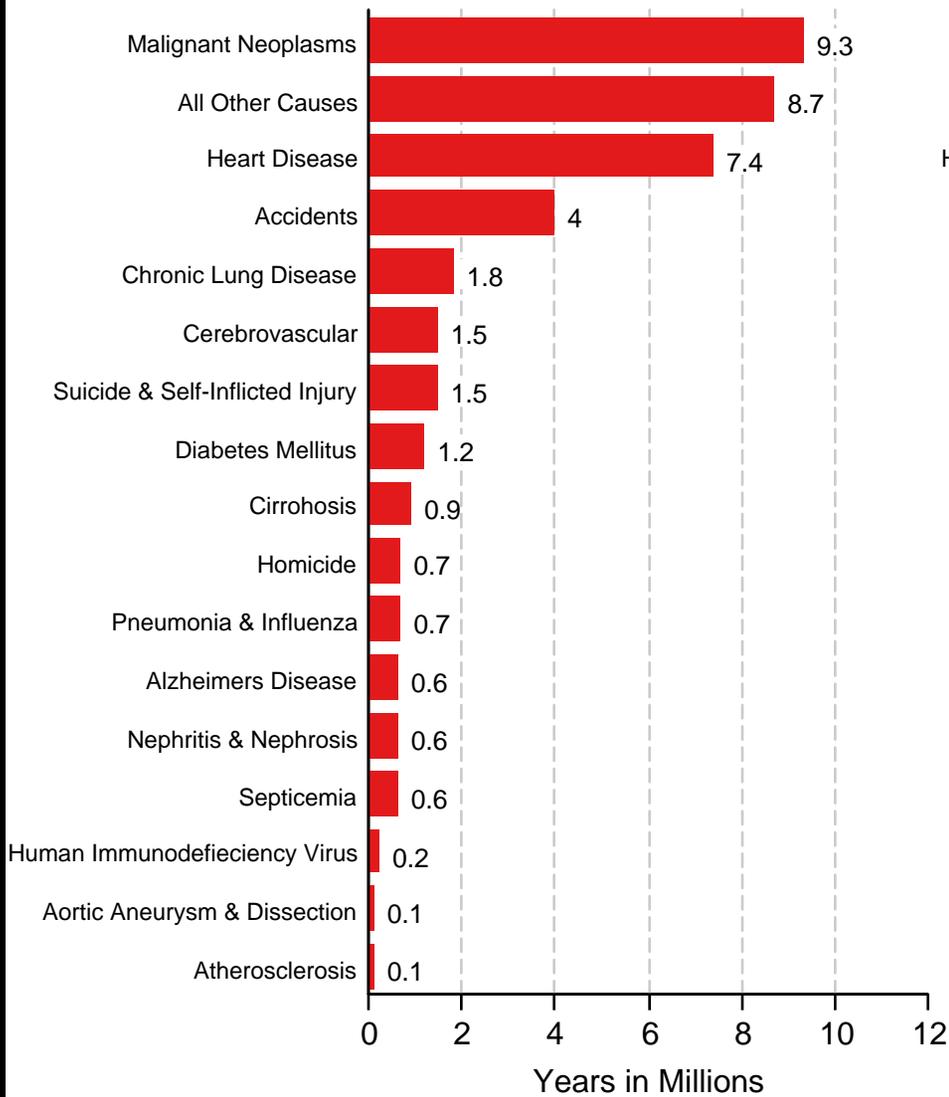
### Average Years of Life Lost Per Person Dying of Cancer All Races, Both Sexes, 2014



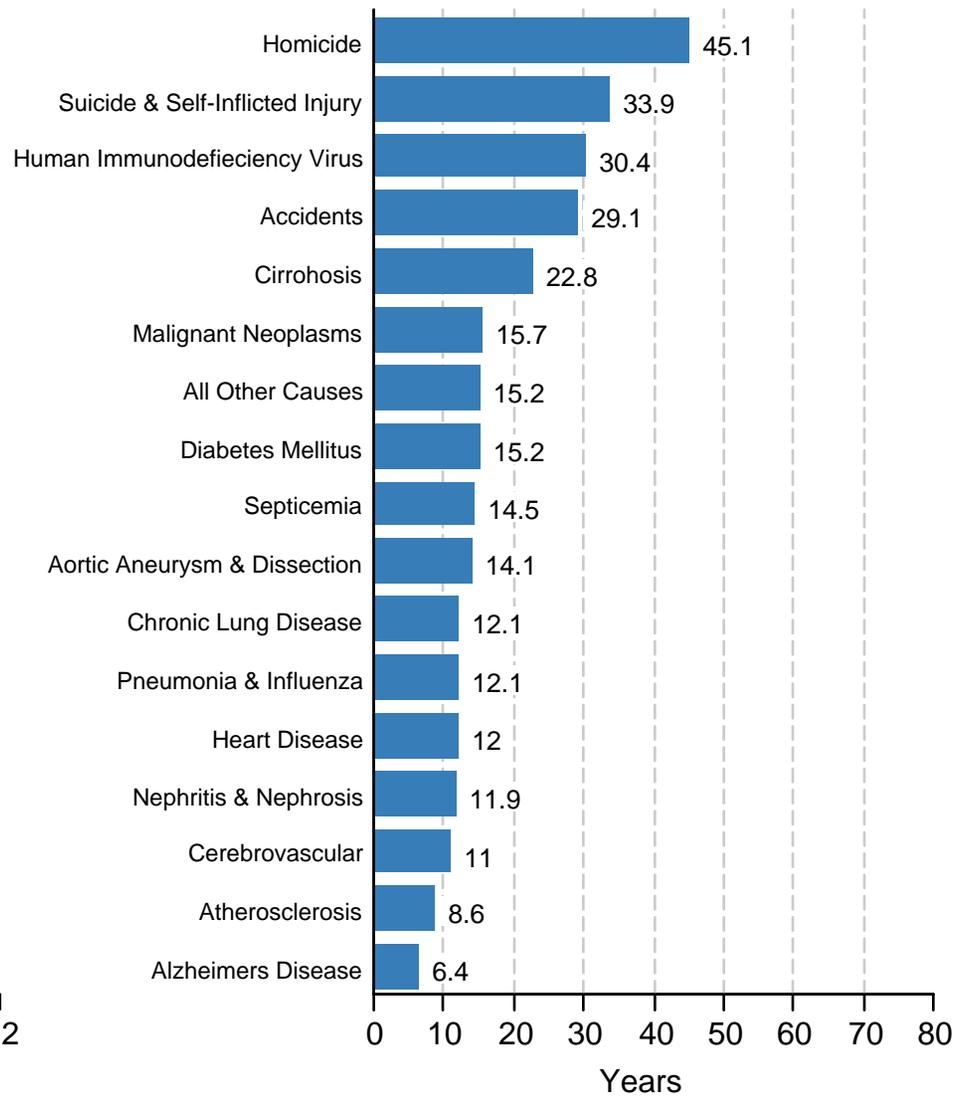
Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2012 Life Tables.

Figure 1.20

### Person-Years of Life Lost Due to Major Causes of Death in US All Races, Both Sexes, 2014



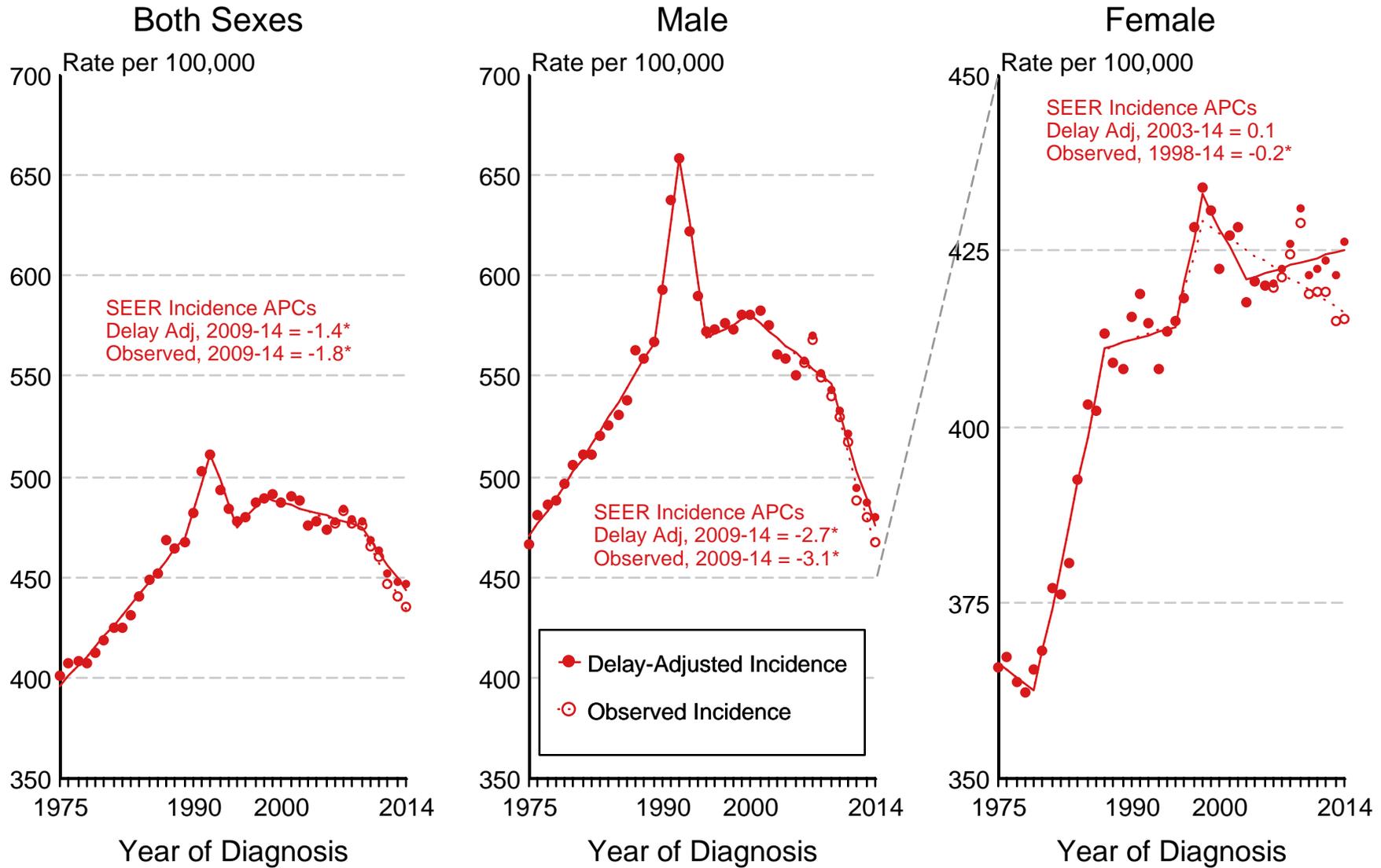
### Average Years of Life Lost Per Person Due to Major Causes of Death in US All Races, Both Sexes, 2014



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2012 Life Tables.

Figure 1.21

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



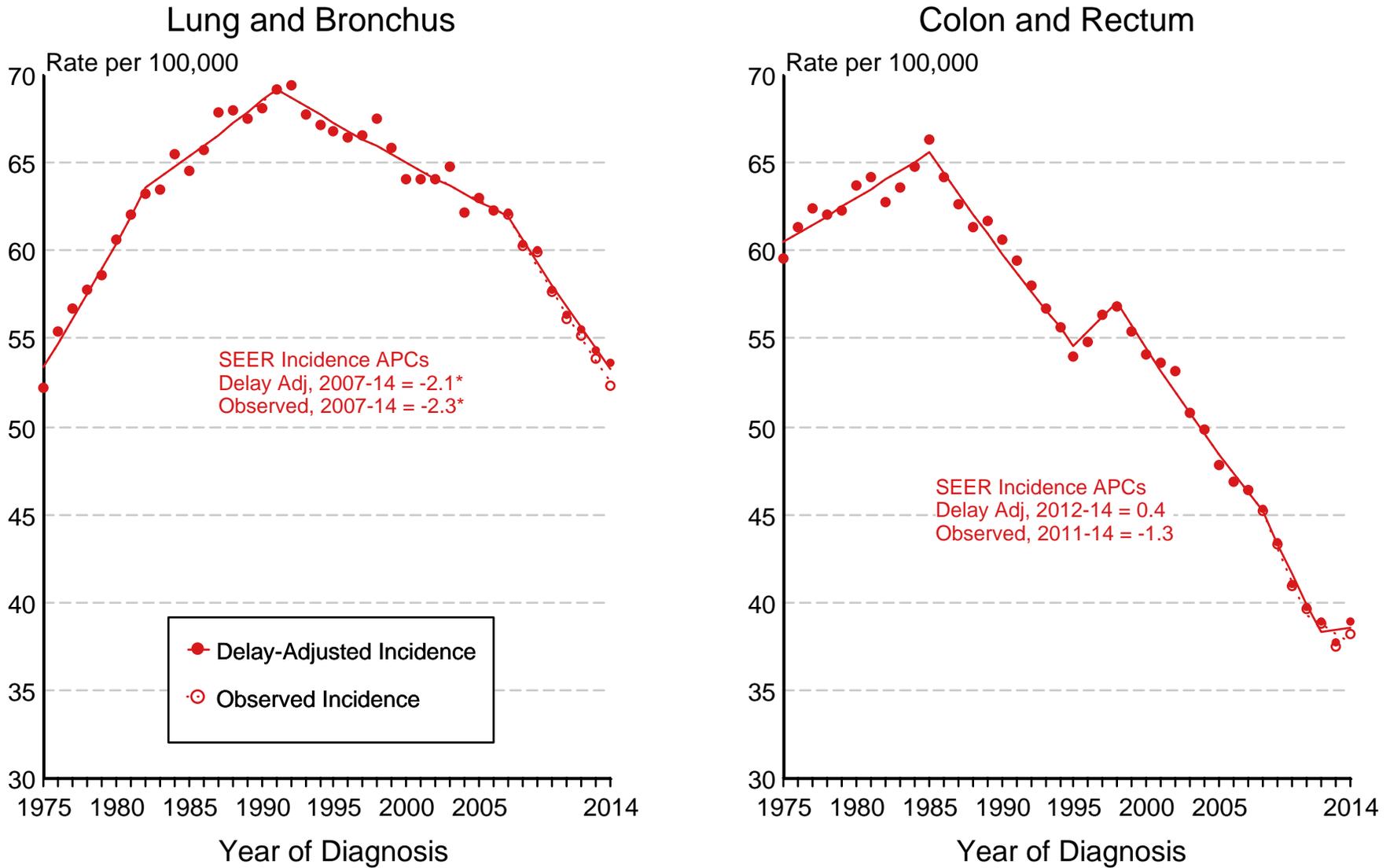
Source: SEER 9 areas.

<sup>a</sup> 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 4.4, January 2017, 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<sup>a</sup> Both Sexes



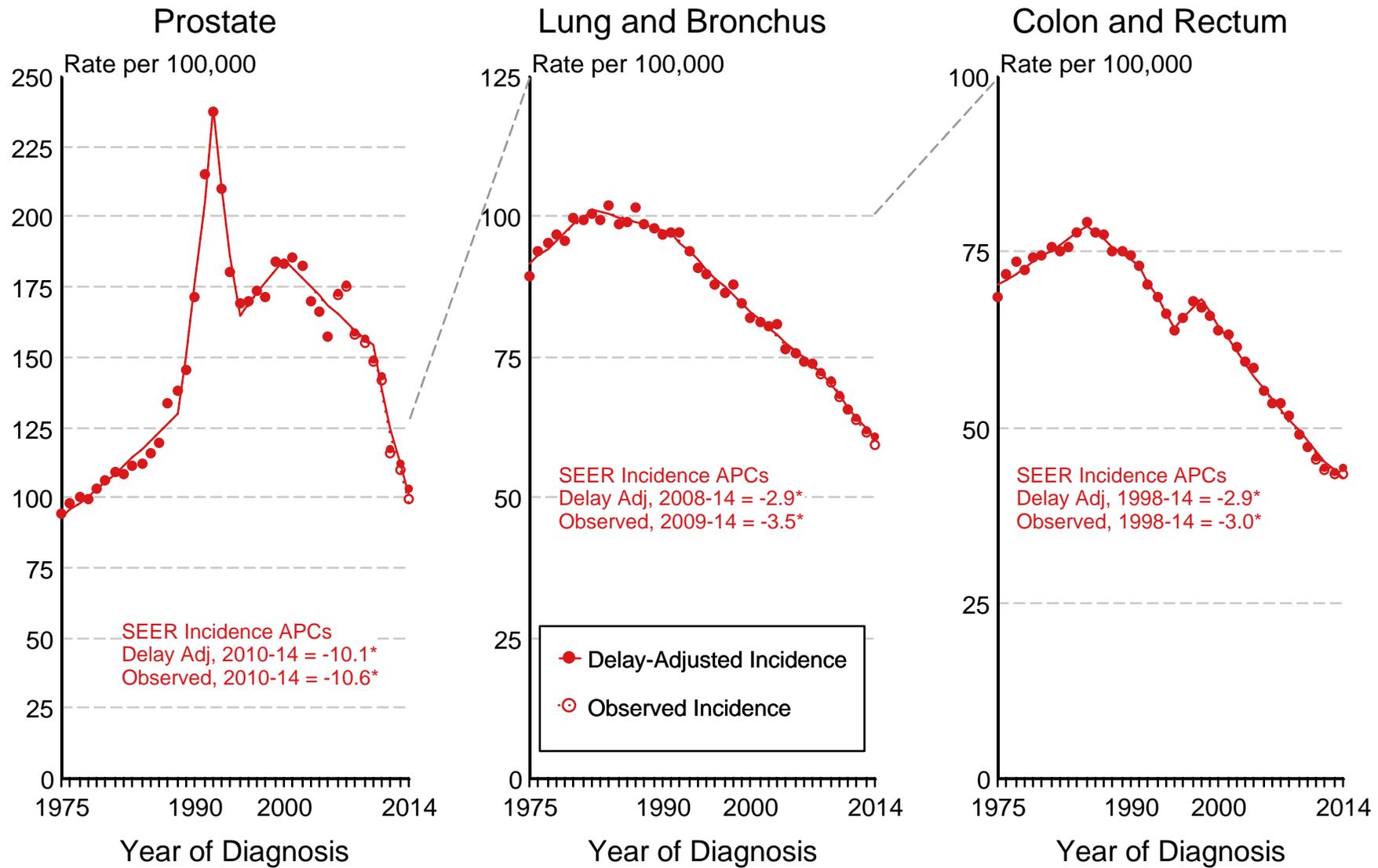
Source: SEER 9 areas.

<sup>a</sup> 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 4.4, January 2017, 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<sup>a</sup> Males



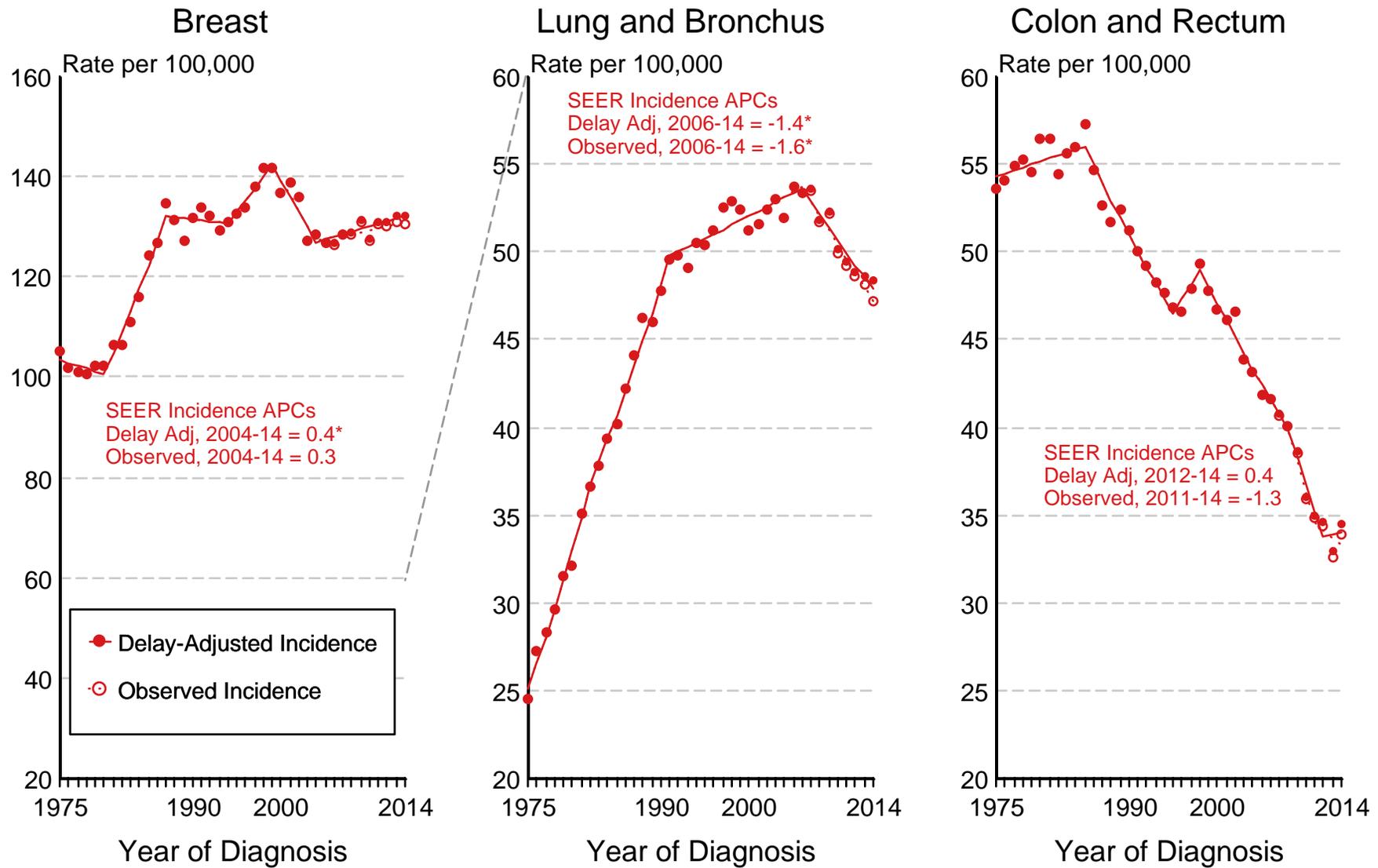
Source: SEER 9 areas.

<sup>a</sup> 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 4.4, January 2017, 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<sup>a</sup> Females



Source: SEER 9 areas.

<sup>a</sup> 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 4.4, January 2017, 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 ( $p < 0.05$ ).