CANCER STATISTICS REVIEW 1975-2013: 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 http://seer.cancer.gov/resources/.

This report presents statistics on 29 primary sites and subsites, organized into site-specific chapters. Detailed statistics on cancer incidence, mortality, survival, and prevalence are reported by sex, race and ethnicity, age, stage at diagnosis, and geographic area. Information on tumor morphology is also presented. In addition, the ***CSR*** features a chapter on adolescent and young adult cancers and a chapter on childhood cancers. Information on some rare cancers can be found in the summary tables of section I. For a detailed list of primary sites, the summary tables provide incidence and death rates for the most recent 5-year period, trends from 1975 to the most recent year, median age at diagnosis, median age at death, and survival rates.

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

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

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

The ***CSR*** files are provided in both PDF and HTML formats. The HTML format is provided as an alternative and accessible version of the *SEER Cancer Statistics Review*. The current edition of the ***CSR*** is available on the web at http://seer.cancer.gov/csr/. Statistics from SEER may also be obtained via ***FastStats*** (http://seer.cancer.gov/faststats/) or ***Cancer Query Systems*** (http://seer.cancer.gov/canques/), which allow the user to access over 10,000,000 cancer statistics. The SEER Research Data file (http://seer.cancer.gov/data/) may be accessed by the public, either through ***SEER*Stat*** software or in an ASCII text format that can be analyzed with standard statistical software.

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

INTERPRETATION OF CANCER STATISTICS

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

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

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

If a new screening procedure consistently detects cancer in a *preinvasive* phase, it may result in a *decrease* in survival rates for *invasive* cancer. In this case, **length-biased sampling** (Zelen, 1976) may be operating. Length-biased sampling would result in the preferential detection—in a preinvasive phase—of those cancers that would have had a relatively good prognosis had they progressed to invasive disease; these potentially invasive cancers would be systematically eliminated. If this occurs, the mix of cancers that are not detected at screening and then progress to invasive behavior may become less prognostically favorable, resulting in a *decrease* in survival rates for patients with invasive cancers. (Length-biased sampling may at least partially explain survival trends for cervical cancer. Other cancers possibly affected include

breast, colon, rectum, and prostate.)

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

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

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

Evolution of stage classifications: Every few years, the American Joint Committee on Cancer produces a new cancer-staging manual; the seventh edition is the most recent (Edge et al., 2010). The evolution of such classifications reflects the identification of new prognostic factors that may influence choice of treatment. Historically, the SEER Program has only collected data on **extent of disease** (**EOD**), rather than stage. EOD is *more specific* than stage and usually determines stage, even when stage definitions change. Thus, SEER easily adapts to changes in stage definitions; moreover, trends in a newly redefined stage can usually be calculated. Recently the SEER Program has begun collecting **Collaborative Stage**. Collaborative Stage has the advantage of being a consolidated data collection system of three main staging systems (TNM, EOD, and Summary Stage) and allows combined pathological and clinical stage to be captured. New prognostic variables are introduced into staging for some cancers and so previously collected EOD data cannot determine new stage categories. There can be problems in assessing trends in stage of disease for these cancers. Only by reviewing the evolution of

staging for a given cancer is it possible to determine what effects changes in stage definitions have had on stage-specific survival and on stage-at-diagnosis distributions. Stage migration (mentioned above) and EOD migration need also be taken into account. For some sites, the historic stage (*localized*, *regional*, or *distant*) is not shown, either because of inconsistencies in its definition over time or because stage is not appropriate (such as for leukemias, which are all considered to be distant at diagnosis).

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

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

Previous to the *CSR* for 1973–1996, the expected survival tables used were for 1970 and 1980; there were separate tables for whites, blacks, American Indians, Chinese, Japanese, Filipinos, white Hispanics, and Hawaiians. In updating the tables for 1990, several problems emerged. The US life tables are based on age, race, and sex information from death certificates. The information on race on the death certificate may not be accurate (Rosenberg et al., 1999). One reason is that funeral directors may inaccurately report race on a death certificate. Also, reported age at death, especially for those older than 85, may not be accurate because birth certificates were not issued with as much regularity in the early 1900s as they are today. Although race misclassification and age-at-death misreporting exist across all races, they may be more problematic for races other than white or black because of those races' smaller population sizes. Therefore, life tables were generated for 1970, 1980, 1990, and 2000 only for white, black, and other; these life tables were used to produce the relative survival estimates in

this review. There may be small variations among survival estimates calculated in this *CSR* and those in *CSR*s prior to 1973–1996.

Comparison with other databases: The SEER data are obtained from population-based cancer registries covering about 28 percent of the US population. It is sometimes of interest to compare cancer statistics for SEER areas with those from other registries both in the US and worldwide. In making such comparisons, one must carefully consider the factors mentioned above for both data sources. In addition, one should assess all of the following: (1) completeness of case ascertainment, (2) rules used to determine multiple primaries, (3) follow-up, (4) rules used in assigning and coding cause of death, and (5) the sources and procedures used in obtaining population estimates. Depending on the rates being compared, there could be other confounding factors which should be considered. The same standard or standard million population should be used for the age-adjustment of each group being compared; most statistics from outside the US are based on the 2000 world standard million population. Examples of other databases are Unites States Cancer Statistics (USCS) (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 (http://seer.cancer.gov/popdata/).

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TECHNICAL NOTES

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

THE SEER PROGRAM

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

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

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

Monterey area south of San Francisco. In 2001, the SEER Program expanded coverage to include **Kentucky, Greater California** (the counties of California that were not already covered by SEER), **New Jersey,** and **Louisiana**. In 2012, **Greater Georgia** (the parts of Georgia not included in Atlanta and Rural Georgia) was added to the SEER Program, with data retroactive to 2000.

The long-term incidence trends and survival data for this report are from five states (Connecticut, Hawaii, Iowa, New Mexico, and Utah) and four metropolitan areas (Detroit, Atlanta, San Francisco-Oakland, and Seattle-Puget Sound) (Fig. I-1); this set of registries is called the **SEER 9**. Additional tables show more recent incidence trends for the **SEER 13** areas (the 9 areas above plus Los Angeles, San Jose-Monterey, Alaska Native Registry, and rural Georgia) since 1992 and additional information on race and ethnicity. Other tables give statistics for the **SEER 18** areas; these are the SEER 13 plus Kentucky, Greater California, New Jersey, Louisiana, and Greater Georgia.

The participating regions were selected principally for their ability to operate and maintain a population-based cancer reporting system and for their epidemiologically significant population subgroups. With respect to selected demographic and epidemiologic factors, they are when combined a reasonably representative subset of the US population. Data from the 9, 13, or 18 SEER geographic areas are used in this report; the given groups contain, respectively, approximately 9, 14, or 28 percent of the US population. By the end of the 2012 diagnosis year, the database of the 18 SEER registries (plus Arizona Indians) contained information on over 7 million cases diagnosed since 1973. New cases added in the most recent data year numbered over 449,000.

The goals of the SEER Program are:

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

DATA SOURCES

INCIDENCE AND SURVIVAL DATA

The SEER Program contracts with nonprofit, medically-oriented organizations having statutory

responsibility for registering diagnoses of cancer among residents of their respective geographic coverage areas. Each SEER contractor:

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

For 1992 to 2000 diagnoses, the SEER program codes site and histology by the *International Classification of Diseases for Oncology*, second edition (**ICD-O-2**) (Percy et al., 1990). All cases before 1992 were machine-converted to ICD-O-2. Cases diagnosed 2001-2009 have been coded according to the third edition (**ICD-O-3**) (Fritz et al., 2000). Starting with patients diagnosed in 2007, the new multiple primary and histology coding rules may impact their incidence data for some cancer sites (e.g., female breast). However, the impact of the new rule on observed incidence is negligible for a majority of the cancer sites. To learn more about the multiple primary rules, visit: http://seer.cancer.gov/tools/mphrules/. Beginning with 2010 diagnoses, cases are coded based on ICD-O-3 updated for hematopoetic codes based on *WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues* (2008). The primary site groupings used for incidence are found in the Appendix. Changes were made to the site recode for ICD-O-2 for comparability with cases coded to ICD-O-3. Follow-up rates are also in the Appendix.

MORTALITY DATA

The SEER Program annually obtains from the National Center for Health Statistics (NCHS) a file containing information on all deaths occurring in the US by calendar year. Information on each death includes age at death, sex, geographic area of residence, and underlying and contributing causes of death. For this publication, only the underlying cause of death is used in the calculation of death rates. Cause of death for 1969-1978 was coded according to ICD-8; for

1979-1998, ICD-9 was used; beginning with deaths in 1999, ICD-10 was used. Mortality rates for the SEER geographic areas, for each state, and for the entire US are obtained from these data. A list of the mortality site groupings used in this publication is in the Appendix and reflects updates made in 2004.

POPULATION DATA

The population estimates used in the SEER*Stat software to calculate cancer incidence and mortality rates for this report are a modified version of the intercensal and Vintage 2013 annual time series of July 1 county population estimates by age, sex, race, and Hispanic origin that are produced by the Population Estimates Program of the US Census Bureau (http://www.census.gov/popest/) with support from the NCI through an interagency agreement. Descriptions of the methodologies employed by the Census Bureau for various sets of estimates may be found on the same website. Vintage 2014 population estimates were used; these estimates were developed from the actual 2010 census results.

County population estimates for 2000 and later years must be bridged from 31 race categories used in Census 2000 to the four race categories specified under the 1997 OMB standards in order to report long-term cancer trends. The bridging methodology was developed by the National Center for Health Statistics and is described in a report (Ingram et al., 2003) and on their website http://www.cdc.gov/nchs/nvss/bridged_race.htm

Modifications made by the NCI to the population estimates are documented in “Population Estimates Used in NCI’s SEER*Stat Software” (http://seer.cancer.gov/popdata/methods.html) and the population data files are available for download (see “Download US Population Data” from http://seer.cancer.gov/popdata/download.html). Several of the modifications pertaining to the grouping of specific counties needed to assure the compatibility of all incidence, mortality and population datasets. Another modification affects only population estimates for the State of Hawaii. The Epidemiology Program of the Hawaii Cancer Research Center has developed its own set of population estimates, based on sample survey data collected by the Hawaii Department of Health. This effort grew out of a concern that the native Hawaiian population has been vastly undercounted in previous censuses. The "Hawaii adjustment" to the Census Bureau’s estimates has the net result of reducing the estimated white population and increasing the estimated Asian and Pacific Islander population for the state. The estimates for the total population, black population, and American Indian and Alaska Native populations in Hawaii are not modified.

The cancer incidence and mortality rates for American Indians and Alaska Natives (AI/AN) are based on the geographic areas (counties) included in the Indian Health Service’s Contract Health Service Delivery Area (CHSDA). This reflects a concern that previously reported AI/AN rates were underestimated due to racial/ethnic misclassification of American Indian cases in geographic areas outside of CHSDA. This change has the net effect of higher, and more accurate, incidence and mortality rates for this population. Beginning in 2013, CSR reporting

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

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

2000 US STANDARD POPULATION

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

STATISTICAL METHODS

ESTIMATED CANCER CASES AND DEATHS IN 2016

The American Cancer Society (**ACS**) projects the numbers of new cancer cases and cancer deaths in the US in 2016 (Cancer Facts & Figures – 2016, American Cancer Society). The ACS projects incidence in 2015 based on incidence rates for 1995-2012 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, 1950-2013

Trends in cancer mortality from 1950 to 2013 are summarized by age both for all cancers combined and for lung cancer (Table 1-2). These cancer mortality trends are based on the mortality experience in the entire US. Summaries of long-term trends back to 1950 in cancer survival are also shown for whites. Use caution when interpreting these statistics. Evaluating trends over a long period of time may hide recent changes in the trends.

YEARS OF LIFE LOST DUE TO PREMATURE DEATH FROM VARIOUS CAUSES

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

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

RELATIVE SURVIVAL

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

Expected survival can be calculated using different methods which vary with respect to the definition of the matching group. The three most common methods are: Ederer I (Ederer, et al., 1961), Ederer II (Ederer and Heise, 1959) and Hakulinen (Hakulinen, 1982). In previous versions of SEER*Stat, relative survival has been calculated using Ederer I and Hakulinen methods, Ederer I being the default for calculations in the Cancer Statistics Review. In the Ederer I and Hakulinen methods, theoretical individuals are matched to each patient and are considered to be at risk for the entire follow-up. Hakulinen adjusts for potential follow-up times. Relative survival using expected rates derived via these two methods are very similar. However, recent research on relative survival has resuscitated the initial method to estimate expected

rate: the Ederer II method. Although none of the three methods can be considered a gold standard, the Ederer II method has be shown to be in better alignment with the concept of net cancer survival. For that reason, as of 2012, we have switched to Ederer II as our default choice for calculating expected rate in SEER*Stat and the CSR. For more detail regarding this topic, read Cho et al., 2012 at: http://surveillance.cancer.gov/reports/. As of 2013, Survival time was calculated using pre-calculated months based on the exact day information. See http://seer.cancer.gov/survivaltime/. As of 2014, the default censoring age for survival calculations has changed from 199 to 99 year when using newly available expected survival tables. Minimal changes may occur in survival for older age groups. See http://seer.cancer.gov/expsurvival/ for more information.

CAUSE-SPECIFIC SURVIVAL

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

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

CANCER PREVALENCE

Methods: In this report prevalence is calculated at 1/1/2013. 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 2012 from the SEER 9 registries; prevalence estimates for Asian Pacific Islanders and Hispanics use cases diagnosed from 1990 through 2012 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) 1st Invasive Tumor Ever, B) 1st Per Site in Previous 38 Years and C) 1st 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 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 http://surveillance.cancer.gov/prevalence/methods.html.

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

approximation to the completeness index was derived from the CTR data. If there was a lack of fit for blacks, no estimate of complete prevalence was reported. Complete prevalence for Asian/Pacific Islanders and Hispanics is not available at this time. Complete prevalence by age for all races combined was validated by comparing estimated 10-year complete prevalence with observed prevalence from the CTR data. Prevalence by age is reported for the sites that validated well.

The US cancer prevalence counts at 1/1/2013 *were estimated* by multiplying the SEER age- and race-specific prevalence proportions by the corresponding US population estimates based on the average of 2012 and 2013 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 http://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 2008-2012 incidence rates from the SEER 17 areas and death rates from those same areas to a hypothetical cohort of 10,000,000 live births. This cohort is considered to be at risk for two mutually exclusive events: (1) developing the specified cancer, and (2) dying of other causes without developing the specified cancer. Using these two types of events, a standard **multiple decrement life table** (with 20 age groups from 0-4 to 90-94 and 95+) is derived. For each age interval, the number alive and free of the specified cancer at the beginning of the interval is decremented by the number who develop the specified cancer and the number who die of other causes. The lifetime risk of being diagnosed with the specified cancer is derived by summing all cancer cases from age 0-4 through age 95+ and dividing by 10,000,000. This calculation does not assume that an individual lives to any particular age; rather, it is the sum over all age intervals of the probability of living to the beginning of that interval without developing the given cancer times the probability of developing the cancer in that interval. The probability of developing cancer during any time period (e.g., between age 50 and age 60) is calculated by adding up all the cancers in the life table over the specified age range and dividing by the number of individuals alive and free of the specified cancer at the beginning of the period. The methodology is described in detail in (Fay et al., 2003) and (Fay, 2004). To improve the precision of the calculations, rates

were calculated beyond the usual last open ended age interval (i.e. 85+) for the age groups 85-89, 90-94, and 95+.

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

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

US CANCER DEATH RATES BY STATE

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

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

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

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

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

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

where SE_S and SE_U are the standard errors of a state rate and of the total US rate, respectively, and $\text{Cov}_{S,U}$ is the covariance between the two rates. The variance of each rate (i.e., the square of the standard error) and the covariance between the two rates are based on the Poisson assumption. The standard error does not represent the total error that may be present in the

age-adjusted rate; it is merely the square root of the variance associated with the rates. In addition to this variance, there also exist potential biases and errors in the measurement of the rate that are difficult to assess accurately and probably impact differently on the error calculations for different states.

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

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

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 http://surveillance.cancer.gov/cirank/.

JOINPOINT REGRESSION ANALYSIS OF CANCER TRENDS

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

Joinpoint analysis first assumes no joinpoints are needed to describe the data accurately, i.e., the trend over the entire interval 1975-2013 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 1992-2013 (SEER 13) data.

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

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

Average Annual Percent Change (AAPC) is a summary measure of a trend over a pre-specified fixed interval based on an underlying joinpoint model. It allows us to use a single number to describe the average trend over a period of multiple years. It can be estimated even if the joinpoint model indicates that there were changes in trends during those years, since it is estimated as a geometric weighted average of the joinpoint APCs, with the weights equal to the lengths of each segment over the pre-specified fixed interval. In this report, we have included AAPCs as an addendum to the underlying joinpoint trends, and as a summary measure to compare fixed interval trends by race/ethnicity. For more information on how the AAPC is calculated and the advantages of reporting an AAPC over APCs, see https://surveillance.cancer.gov/help/joinpoint/setting-parameters/advanced-tab/average-annual-percent-change-aapc.

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 2013 were first reported to the NCI in November 2015 and released to the public in April 2016. However, in each subsequent release of the SEER data, *records from all prior diagnosis years* (e.g., diagnosis years 2013 and earlier in the 2015 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). 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 http://surveillance.cancer.gov/delay/.

STATISTICAL SIGNIFICANCE

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

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

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

When a null hypothesis is rejected, there remains a small chance that a wrong decision has been made. If many statistical comparisons are done, even with α = 0.01, the chance of making

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

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

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

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

For a number of cancers, the District of Columbia has the highest death rates. *Use caution when comparing cancer rates for the District with those from the 50 states.* The District is an entirely urban area, whereas a state includes urban, suburban, and rural areas. Mortality rates for many cancers are higher in urban areas. Also, the District has a higher percentage of blacks —51% of the total population in 2010 (US Census Bureau, 2013)—than any state. In addition, their higher mortality rates for several types of cancer elevate the overall rate for the District.

STANDARD ERRORS OF RATES

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

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

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

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

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

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

DEFINITIONS

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

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

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

The *numerator* of the incidence rate is the number of new cancers; the *denominator* of the

incidence rate is the size of the population. The number of new cancers may include multiple primary cancers occurring in one patient. The primary site reported is the site of origin and not the metastatic site. In general, the incidence rate would not include recurrences. *The population used depends on the rate to be calculated.* For cancer sites that occur in only one sex, the sex-specific population (e.g., females for cervical cancer) is used.

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

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

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

The *numerator* of the death rate is the number of deaths; the *denominator* of the death rate is the size of the population. As with the incidence rate, *the population used depends on the rate to be calculated.* The death rate can be computed for a given cancer site or for all cancers combined. Except for 5-year age-specific rates, all death rates in this report are *age-adjusted* (see below) to the 2000 US standard population (or, where appropriate, to the world standard million population). (In some previous editions of the *CSR*, the 1970 US standard million population was used; therefore, *death rates in this edition cannot be compared to rates published in those editions.*)

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

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

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

Age-adjusted rate: An age-adjusted incidence or mortality rate is a weighted average of the age-specific incidence or mortality rates, where the weights are the counts of persons in the corresponding age groups of a standard population. The potential confounding effect of age is reduced when comparing age-adjusted rates based on the same standard population. For this report, the 2000 US standard population (or, where appropriate, the world standard million population) is used in computing age-adjusted rates, unless otherwise noted.

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

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

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

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

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

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

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

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

Observed survival: The observed survival estimate represents the proportion of cancer patients

surviving for a specified time interval after diagnosis. Note that some of those not surviving died of the given cancer and some died of other causes.

Relative survival: The relative survival estimate is calculated using a procedure (Ederer et al., 1961; Ederer and Heise, 1959) whereby the observed survival estimate is adjusted for expected mortality. The relative survival estimate approximates the likelihood that a patient will not die from causes associated specifically with the given cancer before some specified time after diagnosis. It is always larger than the observed survival estimate for the same group of patients.

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

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

Average years of life lost: The average years of life lost (**AYLL**) associated with a particular cancer for a given year is the PYLL associated with that cancer in the general population divided by the number of deaths from that cancer in the general population in that year.

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

Stage of disease at diagnosis: Extent-of-disease information determines stage of disease at diagnosis. The **SEER summary stage** presented has four levels. An invasive neoplasm confined entirely to the organ of origin is said to be **localized**. A neoplasm that has extended beyond the limits of the organ of origin, either directly into surrounding organs or tissues or into regional lymph nodes, is said to be **regional**. A neoplasm that has spread to parts of the body remote from the primary tumor, either by direct extension or by discontinuous metastasis, is said to be **distant**. When information is not sufficient to assign a stage, a neoplasm is said to be **unstaged**. In situ tumors (except those of the cervix uteri) are also collected by SEER but generally are not published in this series. For some cancers and diagnosis years, the extent of disease information can also be converted to Stages 0-IV as defined by the American Joint Committee on Cancer (Greene et al, 2002; Edge et al., 2010).

SOFTWARE USED TO GENERATE THE SEER CANCER STATISTICS REVIEW

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

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

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

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Table 1.1

Estimated New Cancer Cases and Deaths for 2016
All Races, By Sex

Primary Site	Estimated New Cases			Estimated Deaths		
	Total	Males	Females	Total	Males	Females
All Sites	1,685,210	841,390	843,820	595,690	314,290	281,400
Oral Cavity and Pharynx	48,330	34,780	13,550	9,570	6,910	2,660
Tongue	16,100	11,700	4,400	2,290	1,570	720
Mouth	12,910	7,600	5,310	2,520	1,630	890
Pharynx	16,420	13,350	3,070	3,080	2,400	680
Other Oral Cavity	2,900	2,130	770	1,680	1,310	370
Digestive System	304,930	172,530	132,400	153,030	88,700	64,330
Esophagus	16,910	13,460	3,450	15,690	12,720	2,970
Stomach	26,370	16,480	9,890	10,730	6,540	4,190
Small Intestine	10,090	5,390	4,700	1,330	710	620
Colon[a]	95,270	47,710	47,560	49,190	26,020	23,170
Rectum	39,220	23,110	16,110			
Anus, Anal Canal, and Anorectum	8,080	2,920	5,160	1,080	440	640
Liver and Intrahepatic Bile Duct	39,230	28,410	10,820	27,170	18,280	8,890
Gallbladder and Other Biliary	11,420	5,270	6,150	3,710	1,630	2,080
Pancreas	53,070	27,670	25,400	41,780	21,450	20,330
Other Digestive	5,270	2,110	3,160	2,350	910	1,440
Respiratory System	243,820	132,620	111,200	162,510	89,320	73,190
Larynx	13,430	10,550	2,880	3,620	2,890	730
Lung and Bronchus	224,390	117,920	106,470	158,080	85,920	72,160
Other Respiratory	6,000	4,150	1,850	810	510	300
Bones and Joints	3,300	1,850	1,450	1,490	860	630
Soft Tissue	12,310	6,980	5,330	4,990	2,680	2,310
Skin (excl. basal & squamous)	83,510	51,650	31,860	13,650	9,330	4,320
Melanoma of the Skin[b]	76,380	46,870	29,510	10,130	6,750	3,380
Other non-epithelial skin	7,130	4,780	2,350	3,520	2,580	940
Breast[b]	249,260	2,600	246,660	40,890	440	40,450
Genital Organs	297,530	191,640	105,890	57,730	26,840	30,890
Cervix (uterus)	12,990		12,990	4,120		4,120
Endometrium (uterus)	60,050		60,050	10,470		10,470
Ovary	22,280		22,280	14,240		14,240
Vulva	5,950		5,950	1,110		1,110
Vagina and other genital organs, female	4,620		4,620	950		950
Prostate	180,890	180,890		26,120	26,120	
Testis	8,720	8,720		380	380	
Penis and other genital organs, male	2,030	2,030		340	340	
Urinary System	143,190	100,920	42,270	31,540	21,600	9,940
Urinary Bladder	76,960	58,950	18,010	16,390	11,820	4,570
Kidney and Renal Pelvis	62,700	39,650	23,050	14,240	9,240	5,000
Ureter and other urinary organs	3,530	2,320	1,210	910	540	370
Eye and Orbit	2,810	1,510	1,300	280	150	130
Brain and Other Nervous System	23,770	13,350	10,420	16,050	9,440	6,610
Endocrine System	66,730	16,200	50,530	2,940	1,400	1,540
Thyroid	64,300	14,950	49,350	1,980	910	1,070
Other Endocrine	2,430	1,250	1,180	960	490	470
Lymphoma	81,080	44,960	36,120	21,270	12,160	9,110
Hodgkin Lymphoma	8,500	4,790	3,710	1,120	640	480
Non-Hodgkin Lymphoma	72,580	40,170	32,410	20,150	11,520	8,630
Myeloma	30,330	17,900	12,430	12,650	6,430	6,220
Leukemia	60,140	34,090	26,050	24,400	14,130	10,270
Acute lymphocytic leukemia	6,590	3,590	3,000	1,430	800	630
Chronic lymphocytic leukemia	18,960	10,830	8,130	4,660	2,880	1,780
Acute myeloid leukemia	19,950	11,130	8,820	10,430	5,950	4,480
Chronic myeloid leukemia	8,220	4,610	3,610	1,070	570	500
Other leukemia	6,420	3,930	2,490	6,810	3,930	2,880
All Other Sites[c]	34,170	17,810	16,360	42,700	23,900	18,800

Cancer Facts & Figures – 2016, American Cancer Society (ACS), Atlanta, Georgia, 2016.
Excludes basal and squamous cell skin and *in situ* carcinomas except urinary bladder.

Estimated new cases are based on 1998-2012 incidence rates reported by the North American Association of Central Cancer Registries (NAACCR).
Estimated deaths are based on 1998-2012 US mortality data, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

[b] Carcinoma *in situ* of the breast accounts for about 61,000 new cases annually, and melanoma *in situ* accounts for about 68,480 new cases annually.

[c] 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[a]

All Races, Males and Females

All Primary Cancer Sites Combined

Age Group	1950	1982	2013	Annual Percent Change 1950-1982	Annual Percent Change 1982-2013	Total Percent Change 1950-2013
Ages 0-4	11.1	4.4	2.0	-3.2*	-2.4*	-82.2
Ages 5-14	6.7	4.2	2.2	-1.6*	-1.9*	-67.4
Ages 15-24	8.6	5.8	3.4	-1.2*	-1.5*	-60.8
Ages 25-34	20.4	13.5	8.7	-1.4*	-1.6*	-57.5
Ages 35-44	63.6	48.2	27.8	-0.8*	-1.9*	-56.3
Ages 45-54	174.2	171.4	102.1	0.0	-1.8*	-41.4
Ages 55-64	391.3	435.5	286.0	0.4*	-1.6*	-26.9
Ages 65-74	710.0	832.7	630.4	0.5*	-1.0*	-11.2
Ages 75-84	1,167.2	1,249.3	1,129.0	0.2*	-0.4*	-3.3
Ages 85+	1,450.7	1,598.7	1,637.2	0.3*	0.1	12.9
All Ages	195.4	208.3	163.0	0.2*	-0.9*	-16.6

Lung and Bronchus Cancer[b]

Age Group	1950	1982	2013	Annual Percent Change 1950-1982	Annual Percent Change 1982-2013	Total Percent Change 1950-2013
Ages 0-4	-	-	-	-	-	-
Ages 5-14	-	-	-	-	-	-
Ages 15-24	0.2	0.1	0.1	-2.8*	-0.2	-67.6
Ages 25-34	0.8	0.7	0.3	-0.6*	-2.5*	-63.7
Ages 35-44	4.6	8.9	2.8	2.3*	-3.0*	-38.9
Ages 45-54	20.2	52.1	22.8	3.1*	-2.7*	12.7
Ages 55-64	48.9	143.4	79.4	3.2*	-2.3*	62.6
Ages 65-74	59.4	246.3	201.6	4.1*	-0.7*	239.3
Ages 75-84	55.4	255.0	327.3	4.8*	0.7*	491.0
Ages 85+	42.3	187.4	320.8	5.1*	1.7*	658.6
All Ages	14.9	51.7	43.5	3.8*	-0.7*	190.9

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

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

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

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

\- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

Table 1.4

Summary of Changes in Cancer Mortality, 1950-2013 and
5-Year Relative Survival (Percent), 1950-2012
Males and Females, By Primary Cancer Site

	Whites			
	U.S. Mortality Percent Change 1950-2013[a]		5-Year Relative Survival (Percent)[b]	
Primary Site	Total	APC	1950-1954	2006-2012
Oral cavity and pharynx	-52.5	-1.3*	46	68.7
Esophagus	24.8	0.7*	4	21.7
Stomach	-88.3	-3.4*	12	30.2
Colon and rectum	-56.9	-1.3*	37	67.1
Colon	-50.9	-1.1*	41	66.7
Rectum	-70.5	-2.2*	40	68.0
Liver and intrahepatic bile duct	60.2	0.8*	1	17.5
Pancreas	25.4	0.1*	1	8.5
Larynx	-41.1	-0.8*	52	63.6
Lung and bronchus	190.3	1.2*	6	19.0
Males	115.9	0.5*	5	16.4
Females	517.4	2.7*	9	21.8
Melanoma of the skin	172.1	1.2*	49	93.2
Breast(females)	-37.8	-0.7*	60	92.0
Cervix uteri	-81.7	-3.2*	59	70.6
Corpus and uterus, NOS	-64.9	-1.5*	72	85.6
Ovary	-15.1	-0.3*	30	46.0
Prostate	-38.3	-0.5*	43	99.7
Testis	-71.5	-2.7*	57	97.3
Urinary bladder	-28.4	-0.7*	53	78.9
Kidney and renal pelvis	32.7	0.4*	34	74.5
Brain and nervous system	53.5	0.4*	21	33.4
Thyroid	-40.2	-1.0*	80	98.6
Hodgkin lymphoma	-82.8	-3.3*	30	89.0
Non-Hodgkin lymphoma	72.2	0.8*	33	73.6
Myeloma	208.6	1.1*	6	49.8
Leukemia	-3.0	-0.3*	10	63.5
Childhood (Ages 0-14)	-73.8	-2.6*	20	85.3
All Sites	-16.7	-0.2*	35	70.0

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

a U.S. Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Due to coding changes throughout the years: Colon excludes other digestive tract; Rectum includes anal canal; Liver & intrahepatic bile duct includes gallbladder & biliary tract, NOS; Lung & bronchus includes trachea & pleura; Ovary includes fallopian tube; Urinary bladder includes other urinary organs; Kidney & Renal pelvis includes ureter; NHL and myeloma each include a small number of leukemias;
NHL includes a small number of ill-defined sites.

b Survival estimates for 1950-54 are from NCI Survival Report 5 with the exception of All Sites, Oral cavity & pharynx, Colon & rectum, Non-Hodgkin lymphoma and Childhood cancers which come from historical Connecticut data.
Survival estimates for 2006-2012 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 2013.

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

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

All Races

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
All Sites	448.7	504.5	409.9	168.5	204.0	143.4	66.9	67.0	66.9
Oral Cavity & Pharynx:	11.1	16.7	6.2	2.4	3.8	1.3	64.0	63.0	66.3
Lip	0.7	1.1	0.3	0.0	0.0	0.0	89.2	89.6	88.0
Tongue	3.3	5.0	1.8	0.6	0.9	0.4	64.8	65.2	63.9
Salivary gland	1.3	1.7	1.0	0.2	0.4	0.1	72.5	64.5	83.3
Floor of mouth	0.5	0.8	0.3	0.0	0.0	0.0	52.4	50.9	55.7
Gum & other oral cavity	1.5	1.8	1.3	0.3	0.4	0.3	59.2	55.6	63.5
Nasopharynx	0.6	0.9	0.4	0.2	0.3	0.1	60.7	58.9	65.0
Tonsil	1.9	3.3	0.7	0.2	0.4	0.1	72.6	73.1	69.7
Oropharynx	0.4	0.7	0.2	0.2	0.4	0.1	42.4	44.0	36.6
Hypopharynx	0.6	1.1	0.2	0.1	0.2	0.0	32.6	32.5	33.2
Other oral cavity & pharynx	0.2	0.4	0.1	0.5	0.8	0.2	41.5	43.3	36.3
Digestive System:	82.2	100.2	67.4	41.8	53.8	32.2	44.3	42.2	46.9
Esophagus	4.3	7.4	1.7	4.1	7.4	1.5	18.4	18.3	18.5
Stomach	7.4	10.0	5.3	3.3	4.5	2.4	30.4	28.5	33.2
Small intestine	2.2	2.6	1.9	0.4	0.4	0.3	66.9	66.3	67.7
Colon & Rectum:	41.0	47.1	36.0	15.1	18.1	12.7	65.1	64.9	65.2
Colon	29.0	32.1	26.5	-	-	-	64.4	64.5	64.3
Rectum	12.0	15.0	9.5	-	-	-	66.6	65.8	67.8
Anus, anal canal & anorectum	1.8	1.5	2.1	0.2	0.2	0.3	66.4	60.4	70.1
Liver & intrahepatic bile duct	8.4	13.0	4.4	6.1	9.1	3.6	17.5	17.1	18.5
Gallbladder	1.2	0.9	1.4	0.6	0.5	0.7	18.5	17.3	19.0
Other biliary	1.9	2.4	1.6	0.4	0.5	0.4	16.9	17.6	16.1
Pancreas	12.4	14.1	11.0	10.9	12.5	9.5	7.7	7.6	7.8
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.0	56.1	55.7	56.5
Peritoneum, omentum & mesentery	0.6	0.1	1.0	0.3	0.1	0.4	32.9	41.5	32.2
Other digestive system	0.6	0.7	0.5	0.3	0.4	0.2	10.2	9.4	10.8
Respiratory System:	61.4	74.8	51.2	47.3	60.1	37.6	20.7	19.5	22.1
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	55.9	57.2	53.9
Larynx	3.2	5.6	1.1	1.1	1.9	0.4	60.7	61.5	57.4
Lung & bronchus	57.3	67.9	49.4	46.0	57.8	37.0	17.7	14.9	20.8
Pleura[d]	0.0	0.0	0.0	0.1	0.1	0.0	23.4	21.2	26.5
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	51.4	53.3	46.3
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.3	67.4	65.4	70.1
Soft tissue (including heart)	3.4	4.0	2.9	1.3	1.5	1.2	64.9	64.2	65.7
Skin (excl. basal & squamous):	23.8	31.4	18.3	3.6	5.6	2.1	90.9	88.9	93.5
Melanoma of the skin	21.8	28.5	16.9	2.7	4.1	1.7	91.5	89.5	94.0
Other non-epithelial skin	2.0	2.8	1.4	0.9	1.6	0.4	84.1	81.5	87.5
Breast	67.2	1.2	125.0	12.0	0.3	21.5	89.7	83.6	89.7
Breast (*in situ*)	16.6	0.1	31.5	-	-	-	100.0	98.6	100.0

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

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

All Races

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
Female Genital System:	26.1	-	49.0	8.4	-	15.3	69.3	-	69.3
Cervix uteri	3.9	-	7.5	1.2	-	2.3	67.5	-	67.5
Corpus uteri	13.1	-	24.6	1.1	-	1.9	83.0	-	83.0
Uterus, NOS	0.4	-	0.8	1.4	-	2.5	29.9	-	29.9
Ovary[d]	6.4	-	11.9	4.2	-	7.5	46.2	-	46.2
Vagina	0.4	-	0.7	0.1	-	0.2	47.8	-	47.8
Vulva	1.3	-	2.4	0.3	-	0.5	71.9	-	71.9
Other female genital system	0.6	-	1.1	0.1	-	0.3	57.4	-	57.4
Male Genital System:	62.3	136.2	-	8.5	21.1	-	98.6	98.6	-
Prostate	59.0	129.4	-	8.2	20.7	-	98.9	98.9	-
Testis	2.8	5.7	-	0.1	0.3	-	95.4	95.4	-
Penis	0.4	0.9	-	0.1	0.2	-	69.1	69.1	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	84.7	84.7	-
Urinary System:	36.5	58.0	19.8	8.5	13.7	4.8	75.3	76.1	73.4
Urinary bladder	20.1	35.3	8.6	4.4	7.7	2.2	77.5	78.9	73.0
Kidney & renal pelvis	15.6	21.4	10.7	3.9	5.7	2.5	73.7	73.0	75.0
Ureter	0.5	0.8	0.4	0.1	0.1	0.1	47.3	47.5	46.7
Other urinary system	0.3	0.5	0.2	0.1	0.2	0.1	50.4	54.4	42.6
Eye & Orbit	0.8	1.0	0.7	0.1	0.1	0.1	81.8	81.2	82.3
Brain & Nervous System:[e]	6.4	7.6	5.4	4.3	5.3	3.5	33.8	32.8	35.1
Brain	6.0	7.2	5.0	-	-	-	30.8	30.3	31.5
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	78.1	75.9	80.2
Endocrine System:	14.6	7.7	21.3	0.8	0.8	0.8	96.2	92.0	97.6
Thyroid	13.9	6.9	20.6	0.5	0.5	0.5	98.1	95.7	98.7
Other endocrine & thymus	0.7	0.8	0.7	0.3	0.3	0.3	65.1	65.8	64.2
Lymphoma:	22.1	26.7	18.4	6.4	8.2	5.0	72.8	71.5	74.4
Hodgkin lymphoma	2.6	3.0	2.3	0.4	0.5	0.3	86.2	85.4	87.3
Non-Hodgkin lymphoma	19.5	23.7	16.1	6.0	7.7	4.7	70.7	69.2	72.4
Myeloma	6.5	8.2	5.2	3.3	4.2	2.7	48.5	49.4	47.4
Leukemia:	13.5	17.3	10.5	6.9	9.3	5.2	59.7	60.7	58.3
Lymphocytic:	6.7	8.9	5.0	1.9	2.7	1.3	78.4	79.0	77.6
Acute lymphocytic	1.7	1.9	1.5	0.4	0.5	0.4	68.1	68.2	67.8
Chronic lymphocytic	4.6	6.3	3.3	1.3	2.0	0.9	82.6	82.7	82.6
Other lymphocytic	0.4	0.6	0.2	0.1	0.2	0.1	80.4	84.2	68.7
Myeloid & Monocytic:	6.2	7.7	5.1	3.4	4.4	2.6	38.6	38.5	38.7
Acute myeloid	4.1	5.0	3.4	2.8	3.7	2.2	26.6	25.7	27.6
Chronic myeloid	1.8	2.3	1.3	0.3	0.4	0.2	65.1	64.3	66.3
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	23.7	22.1	25.5
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	32.4	33.1	31.6
Other leukemia:	0.6	0.7	0.5	1.6	2.1	1.2	33.0	31.8	34.2
Other acute leukemia	0.2	0.3	0.2	0.6	0.7	0.4	20.3	19.7	20.9
Aleukemic, subleukemic & NOS	0.3	0.4	0.3	1.0	1.4	0.8	41.8	41.2	42.2
Kaposi Sarcoma[f]	0.5	1.0	0.1	-	-	-	73.1	72.8	75.5
Mesothelioma[f]	1.0	1.8	0.4	-	-	-	9.6	7.6	15.4
Ill-defined & unspecified	8.4	9.7	7.3	12.4	15.7	9.9	18.2	22.0	14.4

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

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

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

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

Whites

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
All Sites	457.4	508.2	422.5	168.4	202.9	143.6	67.5	67.4	67.6
Oral Cavity & Pharynx:	11.6	17.4	6.4	2.4	3.7	1.3	65.5	65.0	67.0
Lip	0.8	1.3	0.4	0.0	0.0	0.0	89.4	89.6	88.8
Tongue	3.6	5.4	1.9	0.6	0.9	0.4	66.5	67.1	65.0
Salivary gland	1.3	1.8	1.0	0.3	0.4	0.1	70.8	62.7	82.6
Floor of mouth	0.6	0.8	0.4	0.0	0.0	0.0	53.7	52.7	56.1
Gum & other oral cavity	1.5	1.8	1.3	0.4	0.4	0.3	59.2	55.7	63.4
Nasopharynx	0.4	0.6	0.2	0.1	0.2	0.1	58.1	56.6	61.7
Tonsil	2.1	3.6	0.7	0.2	0.4	0.1	74.4	74.9	71.6
Oropharynx	0.4	0.7	0.2	0.2	0.4	0.1	45.4	47.7	37.0
Hypopharynx	0.6	1.0	0.2	0.1	0.1	0.0	35.2	35.4	34.2
Other oral cavity & pharynx	0.2	0.4	0.1	0.4	0.7	0.2	45.4	47.3	39.9
Digestive System:	79.8	97.0	65.2	40.6	52.2	31.0	44.9	42.8	47.5
Esophagus	4.5	7.9	1.7	4.3	7.7	1.5	19.2	19.3	18.8
Stomach	6.6	9.1	4.5	2.9	3.9	2.1	29.2	27.4	32.1
Small intestine	2.2	2.5	1.9	0.3	0.4	0.3	67.9	67.0	69.0
Colon & Rectum:	40.1	46.0	35.2	14.7	17.6	12.3	65.8	65.7	65.8
Colon	28.4	31.4	26.0	-	-	-	65.4	65.6	65.3
Rectum	11.7	14.6	9.3	-	-	-	66.5	65.9	67.4
Anus, anal canal & anorectum	1.9	1.5	2.3	0.3	0.2	0.3	68.0	62.0	71.5
Liver & intrahepatic bile duct	7.5	11.6	3.9	5.7	8.3	3.4	16.9	16.6	17.5
Gallbladder	1.1	0.8	1.4	0.6	0.4	0.7	18.8	16.9	19.5
Other biliary	1.9	2.3	1.5	0.4	0.5	0.4	16.9	18.2	15.3
Pancreas	12.4	14.1	10.9	10.8	12.5	9.4	7.7	7.6	7.7
Retroperitoneum	0.4	0.4	0.3	0.1	0.1	0.0	55.8	55.8	55.9
Peritoneum, omentum & mesentery	0.6	0.1	1.0	0.3	0.1	0.4	32.3	41.0	31.6
Other digestive system	0.6	0.7	0.5	0.3	0.4	0.2	10.5	10.2	10.7
Respiratory System:	62.9	74.9	53.7	48.0	59.9	38.8	20.9	19.9	22.2
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	58.3	60.3	55.2
Larynx	3.2	5.6	1.2	1.0	1.8	0.4	61.8	62.5	58.5
Lung & bronchus	58.8	68.1	51.8	46.7	57.7	38.3	17.9	15.1	20.9
Pleura[d]	0.0	0.1	0.0	0.1	0.1	0.0	19.2	21.6	15.1
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	50.7	53.9	42.1
Bones & joints	1.0	1.1	0.8	0.4	0.6	0.3	67.1	64.7	70.4
Soft tissue (including heart)	3.5	4.2	2.9	1.3	1.6	1.1	65.9	65.0	67.1
Skin (excl. basal & squamous):	28.1	36.5	21.9	4.1	6.3	2.4	90.5	88.4	93.3
Melanoma of the skin	25.9	33.5	20.4	3.1	4.6	2.0	91.1	89.1	93.8
Other non-epithelial skin	2.1	3.0	1.5	1.0	1.7	0.5	82.1	79.4	85.9
Breast	68.0	1.2	128.0	11.6	0.3	21.0	90.8	85.7	90.8
Breast (*in situ*)	16.4	0.1	31.5	-	-	-	100.0	100.0	100.0

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

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

Whites

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
Female Genital System:	26.6	-	50.5	8.3	-	15.1	70.6	-	70.6
Cervix uteri	3.8	-	7.5	1.1	-	2.1	68.9	-	68.9
Corpus uteri	13.3	-	25.4	1.0	-	1.8	85.2	-	85.2
Uterus, NOS	0.4	-	0.7	1.3	-	2.3	32.2	-	32.2
Ovary[d]	6.6	-	12.5	4.3	-	7.8	46.2	-	46.2
Vagina	0.4	-	0.7	0.1	-	0.2	48.1	-	48.1
Vulva	1.4	-	2.7	0.3	-	0.5	71.1	-	71.1
Other female genital system	0.6	-	1.2	0.1	-	0.3	56.4	-	56.4
Male Genital System:	60.2	129.8	-	7.9	19.6	-	98.8	98.8	-
Prostate	56.3	121.9	-	7.7	19.1	-	99.2	99.2	-
Testis	3.4	6.7	-	0.1	0.3	-	95.5	95.5	-
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	-	86.8	86.8	-
Urinary System:	39.0	61.8	20.9	8.9	14.2	4.9	75.7	76.5	74.0
Urinary bladder	22.0	38.5	9.2	4.6	8.1	2.2	78.0	79.2	74.1
Kidney & renal pelvis	16.1	21.9	11.1	4.0	5.8	2.5	73.8	73.2	74.9
Ureter	0.6	0.8	0.4	0.1	0.2	0.1	47.6	48.1	46.7
Other urinary system	0.3	0.5	0.2	0.1	0.2	0.1	50.7	52.5	46.4
Eye & Orbit	1.0	1.1	0.8	0.1	0.1	0.1	80.9	80.6	81.2
Brain & Nervous System:[e]	7.1	8.3	6.0	4.7	5.7	3.8	32.6	31.8	33.7
Brain	6.7	7.9	5.5	-	-	-	29.7	29.4	30.1
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	79.3	76.5	82.0
Endocrine System:	15.4	8.2	22.6	0.8	0.8	0.7	96.7	92.8	97.9
Thyroid	14.7	7.4	21.9	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	64.7	66.0	63.2
Lymphoma:	23.2	27.9	19.4	6.6	8.5	5.2	73.3	72.1	74.8
Hodgkin lymphoma	2.8	3.1	2.5	0.4	0.5	0.3	86.5	86.0	87.0
Non-Hodgkin lymphoma	20.4	24.8	16.9	6.3	8.1	4.9	71.3	69.9	72.9
Myeloma	5.9	7.7	4.5	3.1	4.0	2.4	48.4	49.8	46.5
Leukemia:	14.3	18.2	11.1	7.1	9.6	5.3	60.1	60.8	59.0
Lymphocytic:	7.3	9.5	5.4	2.0	2.8	1.4	78.7	79.1	78.0
Acute lymphocytic	1.9	2.1	1.7	0.5	0.6	0.4	68.3	68.2	68.4
Chronic lymphocytic	5.0	6.7	3.5	1.4	2.1	0.9	82.6	82.6	82.6
Other lymphocytic	0.4	0.7	0.2	0.1	0.2	0.1	81.1	84.4	71.1
Myeloid & Monocytic:	6.4	8.0	5.2	3.5	4.6	2.7	37.7	37.4	38.0
Acute myeloid	4.2	5.2	3.5	2.9	3.8	2.3	25.9	24.9	27.0
Chronic myeloid	1.8	2.3	1.4	0.3	0.4	0.2	64.2	63.5	65.2
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	24.4	23.2	25.8
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	31.3	30.9	32.1
Other leukemia:	0.6	0.7	0.5	1.6	2.2	1.2	32.9	31.0	34.7
Other acute leukemia	0.2	0.3	0.2	0.6	0.8	0.5	19.1	19.1	19.1
Aleukemic, subleukemic & NOS	0.3	0.4	0.3	1.1	1.4	0.8	42.8	40.7	44.3
Kaposi Sarcoma[f]	0.4	0.8	0.1	-	-	-	77.2	76.1	85.8
Mesothelioma[f]	1.1	2.0	0.5	-	-	-	9.5	7.5	15.4
Ill-defined & unspecified	8.5	10.0	7.3	12.4	15.8	9.9	18.9	23.4	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).

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

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

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

Blacks

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
All Sites	470.2	571.8	400.5	197.9	254.2	163.8	61.0	63.8	57.9
Oral Cavity & Pharynx:	9.2	14.4	5.2	2.9	5.0	1.3	46.5	42.9	54.3
Lip	0.1	0.1	-	-	-	-	73.0	63.6	84.2
Tongue	2.1	3.5	1.1	0.5	0.9	0.3	41.5	40.6	43.4
Salivary gland	1.0	1.0	1.0	0.2	0.3	0.1	76.0	67.5	82.7
Floor of mouth	0.6	0.9	0.3	0.0	0.0	-	36.5	34.7	41.9
Gum & other oral cavity	1.3	1.7	1.1	0.3	0.5	0.2	53.9	48.6	59.3
Nasopharynx	0.6	1.0	0.4	0.2	0.4	0.1	52.4	51.7	54.5
Tonsil	1.6	2.9	0.6	0.3	0.5	0.1	53.3	53.6	51.7
Oropharynx	0.6	1.0	0.3	0.4	0.6	0.2	26.2	25.9	27.1
Hypopharynx	0.9	1.7	0.3	0.2	0.3	0.1	19.2	18.6	22.5
Other oral cavity & pharynx	0.3	0.5	0.2	0.7	1.4	0.2	24.0	27.8	16.1
Digestive System:	101.8	125.1	84.7	54.9	72.1	42.6	39.5	36.0	43.2
Esophagus	4.4	7.2	2.5	3.8	6.6	1.9	11.7	10.1	15.0
Stomach	10.6	14.0	8.1	6.1	8.8	4.2	29.5	25.6	34.4
Small intestine	3.7	4.3	3.3	0.6	0.7	0.5	63.4	62.9	63.7
Colon & Rectum:	50.7	59.2	44.8	20.7	26.1	17.1	58.1	56.5	59.6
Colon	37.9	43.1	34.3	-	-	-	56.6	55.7	57.4
Rectum	12.9	16.1	10.5	-	-	-	62.2	58.4	66.4
Anus, anal canal & anorectum	1.9	2.1	1.7	0.3	0.3	0.2	56.8	52.4	61.2
Liver & intrahepatic bile duct	10.0	16.4	4.9	8.1	12.8	4.4	13.0	12.0	15.7
Gallbladder	1.5	1.3	1.8	0.9	0.8	1.0	14.4	12.3	15.2
Other biliary	1.7	2.0	1.6	0.4	0.4	0.4	12.8	10.0	15.3
Pancreas	15.5	17.2	14.2	13.5	15.0	12.2	7.3	6.6	8.0
Retroperitoneum	0.4	0.3	0.4	0.0	0.1	0.0	50.5	52.4	49.4
Peritoneum, omentum & mesentery	0.4	0.1	0.6	0.2	0.1	0.2	31.0	30.8	31.2
Other digestive system	0.8	1.0	0.7	0.4	0.5	0.3	8.1	7.9	8.1
Respiratory System:	70.5	97.0	52.2	51.4	74.4	36.0	18.1	16.9	19.6
Nose, nasal cavity & middle ear	0.6	0.8	0.4	0.2	0.2	0.1	43.1	40.9	46.0
Larynx	4.6	8.7	1.6	1.8	3.5	0.6	53.3	54.1	50.3
Lung & bronchus	65.0	87.3	50.0	49.4	70.6	35.3	14.7	12.0	18.1
Pleura[d]	-	-	-	0.0	0.1	0.0	-	-	-
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	50.6	52.8	47.3
Bones & joints	0.8	0.9	0.7	0.4	0.5	0.3	67.3	67.9	66.3
Soft tissue (including heart)	3.3	3.4	3.1	1.4	1.4	1.4	60.9	60.2	61.5
Skin (excl. basal & squamous):	2.1	2.3	2.0	0.8	1.2	0.6	81.6	79.2	83.4
Melanoma of the skin	1.1	1.1	1.0	0.4	0.5	0.4	67.3	59.9	71.7
Other non-epithelial skin	1.0	1.1	1.0	0.4	0.7	0.2	92.8	92.5	92.9
Breast	71.2	1.8	125.2	17.4	0.5	29.6	80.2	71.6	80.3
Breast (*in situ*)	17.4	0.3	31.0	-	-	-	100.0	80.3	100.0

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

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

Blacks

Site	Incidence[a] (2009-2013) Total	Males	Females	US Mortality[b] (2009-2013) Total	Males	Females	Survival[c] (%) (2006-2012) Total	Males	Females
Female Genital System:	26.4	-	46.7	11.2	-	19.2	55.6	-	55.6
Cervix uteri	4.9	-	8.9	2.2	-	3.9	57.0	-	57.0
Corpus uteri	13.1	-	23.1	1.8	-	3.1	64.0	-	64.0
Uterus, NOS	0.9	-	1.5	2.8	-	4.8	24.5	-	24.5
Ovary[d]	5.5	-	9.6	3.8	-	6.5	36.0	-	36.0
Vagina	0.6	-	0.9	0.2	-	0.3	48.8	-	48.8
Vulva	1.0	-	1.8	0.2	-	0.3	75.0	-	75.0
Other female genital system	0.5	-	0.9	0.2	-	0.3	58.0	-	58.0
Male Genital System:	87.9	206.3	-	16.1	44.6	-	96.7	96.7	-
Prostate	86.7	203.5	-	15.9	44.2	-	96.9	96.9	-
Testis	0.7	1.5	-	0.0	0.1	-	90.6	90.6	-
Penis	0.4	1.0	-	0.1	0.2	-	67.1	67.1	-
Other male genital system	0.1	0.3	-	0.0	0.1	-	62.2	62.2	-
Urinary System:	31.3	47.1	20.2	7.4	11.1	5.1	69.4	70.6	67.6
Urinary bladder	12.6	21.2	6.9	3.6	5.4	2.5	63.9	68.8	53.9
Kidney & renal pelvis	18.1	25.0	12.8	3.7	5.5	2.5	73.4	72.1	75.3
Ureter	0.2	0.4	0.2	0.1	0.1	0.0	35.5	28.0	40.1
Other urinary system	0.4	0.6	0.3	0.1	0.1	0.1	41.1	58.5	25.8
Eye & Orbit	0.3	0.3	0.2	0.0	0.0	0.0	86.2	81.1	91.5
Brain & Nervous System:[e]	4.1	4.9	3.6	2.5	3.1	2.1	39.8	36.8	43.0
Brain	3.8	4.5	3.2	-	-	-	36.4	34.0	39.1
Cranial nerves & other nervous system	0.4	0.3	0.4	-	-	-	73.4	70.3	75.4
Endocrine System:	9.2	4.6	13.3	0.9	0.8	0.9	93.2	84.3	95.6
Thyroid	8.3	3.6	12.4	0.5	0.4	0.6	96.9	93.3	97.5
Other endocrine & thymus	0.9	1.0	0.9	0.4	0.4	0.3	63.3	59.0	67.5
Lymphoma:	17.2	20.7	14.4	4.7	6.1	3.7	67.5	64.0	71.4
Hodgkin lymphoma	2.6	3.0	2.2	0.3	0.4	0.3	83.3	79.8	87.3
Non-Hodgkin lymphoma	14.6	17.6	12.2	4.4	5.7	3.5	63.6	60.0	67.5
Myeloma	13.2	15.7	11.5	6.2	7.5	5.4	48.8	48.3	49.2
Leukemia:	10.8	13.8	8.7	5.8	7.7	4.6	53.7	55.7	51.3
Lymphocytic:	4.7	6.5	3.4	1.6	2.3	1.1	69.6	70.7	68.0
Acute lymphocytic	1.0	1.2	0.9	0.3	0.4	0.3	63.6	66.4	59.2
Chronic lymphocytic	3.4	4.9	2.4	1.2	1.8	0.8	72.7	72.2	73.4
Other lymphocytic	0.2	0.4	0.1	0.1	0.1	0.1	63.6	71.2	33.0
Myeloid & Monocytic:	5.4	6.6	4.7	2.6	3.4	2.2	41.9	42.2	41.6
Acute myeloid	3.6	4.3	3.1	2.2	2.7	1.8	29.2	29.5	28.8
Chronic myeloid	1.6	1.9	1.4	0.3	0.4	0.3	65.4	64.1	66.6
Acute monocytic	0.1	0.2	0.1	0.0	0.0	-	25.3	13.6	37.0
Other myeloid & monocytic	0.1	0.2	0.1	0.2	0.2	0.1	40.3	46.7	34.0
Other leukemia:	0.6	0.8	0.5	1.6	2.0	1.3	30.9	33.5	27.4
Other acute leukemia	0.2	0.3	0.2	0.5	0.6	0.4	23.9	21.7	26.0
Aleukemic, subleukemic & NOS	0.4	0.5	0.4	1.1	1.5	0.9	34.1	40.2	27.2
Kaposi Sarcoma[f]	1.1	2.2	0.1	-	-	-	61.2	62.8	44.1
Mesothelioma[f]	0.5	1.0	0.3	-	-	-	12.7	9.5	22.5
Ill-defined & unspecified	9.3	10.4	8.4	13.8	18.1	11.0	13.1	12.3	13.7

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

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

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

[c] SEER 18 areas. Based on follow-up of patients into 2013.

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

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

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

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

Table 1.8
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
All Races, 2004-2013

	Incidence[a]			US Mortality[b]		
Site	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-0.9*	-1.7*	-0.2	-1.5*	-1.8*	-1.4*
Oral Cavity & Pharynx:	0.6*	0.7*	0.0	-0.6*	-0.4	-1.2*
Lip	-1.4*	-1.7*	-0.8	-1.2	-1.5	-1.5
Tongue	1.5*	1.8*	0.8	-0.4	-0.2	-1.0*
Salivary gland	0.1	0.3	-0.3	0.9*	0.8*	0.6
Floor of mouth	-2.7*	-3.2*	-1.6	-7.8*	-8.6*	-6.1
Gum & other oral cavity	-0.2	-0.3	-0.1	-0.9	-0.6	-1.3*
Nasopharynx	-0.4	-0.2	-1.0	-1.5*	-1.2*	-2.5*
Tonsil	2.7*	2.8*	1.9*	1.9*	2.2*	0.5
Oropharynx	1.9*	2.0*	1.4	1.9*	2.1*	1.1
Hypopharynx	-2.3*	-2.1*	-3.7*	-1.9	-2.1	-1.0
Other oral cavity & pharynx	2.7*	3.8*	-0.8	-2.2*	-1.9*	-3.8*
Digestive System:	-1.2*	-1.3*	-1.3*	-0.9*	-0.8*	-1.1*
Esophagus	-1.5*	-1.4*	-2.3*	-1.0*	-1.0*	-1.7*
Stomach	-1.1*	-1.5*	-0.7*	-2.5*	-2.8*	-2.4*
Small intestine	2.0*	1.4*	2.8*	-0.1	0.0	-0.2
Colon & Rectum:	-2.9*	-3.1*	-2.7*	-2.5*	-2.6*	-2.7*
Colon	-3.2*	-3.5*	-2.9*	-	-	-
Rectum	-2.1*	-2.2*	-2.0*	-	-	-
Anus, anal canal & anorectum	1.4*	0.3	2.2*	3.5*	4.1*	3.1*
Liver & intrahepatic bile duct	2.8*	2.8*	2.6*	2.8*	2.9*	2.2*
Gallbladder	0.0	0.7	-0.2	-0.9*	0.2	-1.4*
Other biliary	1.0*	1.1*	0.7	-1.5*	-2.0*	-1.3*
Pancreas	0.6*	0.6*	0.5*	0.1	0.1	0.1
Retroperitoneum	-0.2	-0.5	-0.1	-3.1*	-2.7*	-3.4*
Peritoneum, omentum & mesentery	-3.0*	0.1	-3.1*	-0.3	1.1	-0.5
Other digestive system	3.7*	3.5*	3.8*	3.6*	3.7*	3.3*
Respiratory System:	-2.1*	-2.7*	-1.5*	-2.3*	-2.9*	-1.6*
Nose, nasal cavity & middle ear	-0.4	0.4	-1.6*	-2.3*	-2.0	-3.2*
Larynx	-2.2*	-2.3*	-2.6*	-2.4*	-2.6*	-2.7*
Lung & bronchus	-2.1*	-2.7*	-1.5*	-2.3*	-2.9*	-1.6*
Pleura	-0.2	-1.1	-	-3.2*	-4.1*	-0.7
Trachea & other respiratory organs	-2.3*	-2.1	-2.8*	-0.4	-0.3	-0.9
Bones & joints	0.1	0.5	-0.5	-0.6*	-0.2	-1.3*
Soft tissue (including heart)	0.5	0.2	0.8	0.5*	0.7*	0.2
Skin (excl. basal & squamous):	0.9*	1.2*	0.4	0.2	0.4*	-0.4
Melanoma of the skin	0.9*	1.2*	0.4	-0.2	0.0	-0.6
Other non-epithelial skin	1.4*	1.8*	0.6	1.5*	1.6*	0.5
Breast	0.0	0.4	0.2	-2.0*	-0.2	-1.8*
Breast (*in situ*)	0.5	0.7	0.7	-	-	-

The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

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

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

Table 1.8 - continued
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
All Races, 2004-2013

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	0.0	-	0.2	-1.0*	-	-0.8*
Cervix uteri	-1.8*	-	-1.7*	-0.9*	-	-0.7*
Corpus uteri	1.1*	-	1.3*	-0.4	-	0.0
Uterus, NOS	3.9*	-	4.4*	2.0*	-	2.4*
Ovary[c]	-1.9*	-	-1.7*	-2.5*	-	-2.2*
Vagina	-0.3	-	0.0	-0.9	-	-0.6
Vulva	1.0*	-	1.2*	0.9*	-	1.2*
Other female genital system	6.8*	-	6.9*	6.0*	-	6.2*
Male Genital System:	-3.4*	-3.8*	-	-2.6*	-3.3*	-
Prostate	-3.6*	-4.0*	-	-2.7*	-3.4*	-
Testis	0.5*	0.5*	-	0.3	0.2	-
Penis	1.6	1.2	-	-0.1	-0.6	-
Other male genital system	3.0*	2.8*	-	2.5	2.1	-
Urinary System:	-0.2	-0.5*	-0.3	-0.4*	-0.3*	-1.0*
Urinary bladder	-1.3*	-1.4*	-1.6*	0.0	-0.1*	-0.6*
Kidney & renal pelvis	1.1*	1.1*	0.9	-0.8*	-0.6*	-1.4*
Ureter	-2.1*	-1.9*	-2.8*	-0.2	0.2	-0.8
Other urinary system	2.9*	2.8*	2.6*	1.6	1.8	0.7
Eye & Orbit	0.4	0.4	0.4	1.6	1.3	1.9
Brain & Nervous System:[d]	-0.5*	-0.5*	-0.5	0.2	0.2	0.1
Brain	-0.4*	-0.5	-0.4	-	-	-
Cranial nerves & other nervous system	-1.5*	-1.1	-1.8	-	-	-
Endocrine System:	4.4*	3.8*	4.7*	0.1	0.6*	-0.3
Thyroid	4.7*	4.5*	4.8*	0.5	1.2*	0.0
Other endocrine & thymus	-0.2	-1.1	0.8	-0.5*	-0.2	-0.9
Lymphoma:	-0.6*	-0.5*	-0.9*	-2.4*	-2.1*	-2.9*
Hodgkin lymphoma	-1.5*	-1.3*	-1.8*	-3.3*	-3.0*	-3.7*
Non-Hodgkin lymphoma	-0.5*	-0.4*	-0.7*	-2.3*	-2.0*	-2.8*
Myeloma	1.1*	1.3*	0.8	-0.8*	-0.8*	-1.1*
Leukemia:	0.4	0.3	0.4	-0.9*	-0.9*	-1.0*
Lymphocytic:	-0.4	-0.6*	-0.4	-1.4*	-1.5*	-1.4*
Acute lymphocytic	0.4	0.0	1.0	-1.2*	-1.1*	-1.2*
Chronic lymphocytic	-0.6*	-0.7*	-0.9*	-1.4*	-1.6*	-1.5*
Other lymphocytic	-1.2*	-1.0	-2.3	-1.4*	-2.2*	-0.5
Myeloid & Monocytic:	1.9*	1.9*	1.8*	-0.2	-0.1	-0.4*
Acute myeloid	2.8*	2.6*	2.8*	0.1	0.2	-0.2
Chronic myeloid	1.0*	1.1*	0.8	-2.8*	-2.7*	-3.0*
Acute monocytic	-3.8*	-1.8	-6.0*	-2.5*	-4.4*	-0.9
Other myeloid & monocytic	-1.6*	-1.5	-2.3*	0.4	0.2	0.2
Other leukemia:	-4.4*	-4.6*	-4.4*	-1.6*	-1.6*	-1.7*
Other acute leukemia	-2.5*	-3.3*	-2.2	-4.3*	-4.6*	-4.1*
Aleukemic, subleukemic & NOS	-5.6*	-5.6*	-5.7*	0.1	0.3	-0.2
Kaposi Sarcoma[e]	-3.1*	-3.4*	-2.1*	-	-	-
Mesothelioma[e]	-1.9*	-2.3*	-1.2	-	-	-
Ill-defined & unspecified	-2.8*	-2.5*	-3.1*	-2.1*	-2.0*	-2.4*

The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

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

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

[e] Trend not shown for mortality. Category did not exist in mortality coding until 1999.

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

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

Table 1.9
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Whites, 2004-2013

	Incidence[a]			US Mortality[b]		
Site	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-0.9*	-1.7*	-0.2	-1.4*	-1.6*	-1.3*
Oral Cavity & Pharynx:	0.9*	1.0*	0.4	-0.1	0.2	-1.2*
Lip	-1.3*	-1.7*	-0.5	-1.0	-1.3	-1.5
Tongue	2.0*	2.1*	1.4*	0.0	0.4	-1.0*
Salivary gland	0.1	0.3	-0.5	1.0*	1.0*	0.6
Floor of mouth	-2.4*	-3.1*	-1.1	-6.8*	-7.6*	-5.0
Gum & other oral cavity	-0.1	-0.5	0.3	-0.5	0.0	-1.2
Nasopharynx	-1.0	-0.5	-2.3	-2.0*	-1.4*	-3.5*
Tonsil	3.3*	3.4*	2.4*	2.9*	3.2*	1.1
Oropharynx	2.4*	2.6*	1.8	2.3*	2.6*	1.4
Hypopharynx	-2.3*	-2.0*	-3.6*	-1.7	-1.9	-0.9
Other oral cavity & pharynx	3.9*	4.9*	0.3	-1.7*	-1.3*	-3.6*
Digestive System:	-1.2*	-1.3*	-1.2*	-0.8*	-0.7*	-1.0*
Esophagus	-0.9*	-0.8*	-1.9*	-0.4*	-0.5*	-1.2*
Stomach	-0.7*	-1.1*	-0.5	-2.5*	-2.8*	-2.4*
Small intestine	1.9*	1.5*	2.4*	-0.1	0.0	-0.3
Colon & Rectum:	-3.0*	-3.3*	-2.7*	-2.5*	-2.6*	-2.6*
Colon	-3.3*	-3.7*	-2.9*	-	-	-
Rectum	-2.2*	-2.5*	-2.1*	-	-	-
Anus, anal canal & anorectum	1.4*	-0.2	2.4*	3.5*	3.7*	3.5*
Liver & intrahepatic bile duct	3.6*	3.5*	3.7*	2.9*	3.1*	2.3*
Gallbladder	0.1	1.3	-0.4	-1.3*	-0.1	-1.8*
Other biliary	1.1*	1.0	0.9	-1.6*	-2.0*	-1.5*
Pancreas	0.7*	0.7*	0.7*	0.2*	0.2*	0.2
Retroperitoneum	-0.6	-0.8	-0.6	-2.9*	-2.7*	-3.0*
Peritoneum, omentum & mesentery	-3.4*	-0.2	-3.6*	-0.2	1.7	-0.5
Other digestive system	3.5*	3.4*	3.6*	3.8*	4.0*	3.5*
Respiratory System:	-2.0*	-2.6*	-1.4*	-2.2*	-2.8*	-1.5*
Nose, nasal cavity & middle ear	-0.4	0.8	-2.3*	-2.2	-1.5	-3.7*
Larynx	-2.1*	-2.1*	-2.7*	-2.1*	-2.3*	-2.7*
Lung & bronchus	-2.0*	-2.7*	-1.4*	-2.2*	-2.9*	-1.5*
Pleura	-0.1	-0.1	-	-3.3*	-4.2*	-0.4
Trachea & other respiratory organs	-2.2*	-2.3	-2.0*	-0.5	-0.5	-0.8
Bones & joints	0.3	0.5	-0.1	-0.5	-0.1	-1.0*
Soft tissue (including heart)	0.7*	0.5*	0.9	0.6*	0.8*	0.2
Skin (excl. basal & squamous):	0.9*	1.2*	0.4	0.5*	0.6*	-0.2
Melanoma of the skin	0.9*	1.1*	0.4	0.0	0.2	-0.4
Other non-epithelial skin	1.6*	1.7*	1.0	1.9*	2.0*	0.8
Breast	-0.1	0.1	0.1	-2.0*	-0.3	-1.8*
Breast (*in situ*)	0.1	0.3	0.3	-	-	-

The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

* 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, 2004-2013

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	-0.1	-	0.1	-1.1*	-	-0.8*
Cervix uteri	-1.6*	-	-1.5*	-0.6*	-	-0.4
Corpus uteri	0.8*	-	1.1*	-0.5	-	-0.2
Uterus, NOS	3.8*	-	4.4*	1.8*	-	2.2*
Ovary[c]	-2.0*	-	-1.8*	-2.5*	-	-2.2*
Vagina	0.2	-	0.6	-0.5	-	-0.1
Vulva	1.2*	-	1.4*	1.1*	-	1.5*
Other female genital system	6.9*	-	6.9*	6.5*	-	6.8*
Male Genital System:	-3.7*	-4.1*	-	-2.4*	-3.2*	-
Prostate	-3.9*	-4.3*	-	-2.5*	-3.3*	-
Testis	0.5*	0.5*	-	1.0	0.9	-
Penis	1.9*	1.4	-	-0.2	-0.7	-
Other male genital system	2.8*	2.4*	-	2.2	2.0	-
Urinary System:	-0.2	-0.5*	-0.2	-0.2*	-0.2*	-0.9*
Urinary bladder	-1.2*	-1.3*	-1.5*	0.1*	0.0	-0.4*
Kidney & renal pelvis	1.1*	1.1*	0.9	-0.7*	-0.5*	-1.3*
Ureter	-1.7*	-1.5*	-2.7*	-0.3	0.0	-0.6
Other urinary system	3.2*	2.6*	4.1*	2.3	2.1	2.0
Eye & Orbit	0.6	0.4	0.8	1.7*	1.2	2.3
Brain & Nervous System:[d]	-0.5*	-0.6*	-0.4	0.3	0.3	0.3
Brain	-0.5*	-0.6*	-0.3	-	-	-
Cranial nerves & other nervous system	-1.2	-1.4	-0.9	-	-	-
Endocrine System:	4.4*	3.9*	4.6*	0.1	0.5*	-0.3
Thyroid	4.7*	4.5*	4.8*	0.5	1.1*	-0.1
Other endocrine & thymus	-0.6	-1.3	0.2	-0.6	-0.5	-0.6
Lymphoma:	-0.7*	-0.5*	-0.9*	-2.3*	-2.0*	-2.9*
Hodgkin lymphoma	-1.6*	-1.5*	-1.9*	-3.1*	-2.9*	-3.4*
Non-Hodgkin lymphoma	-0.6*	-0.4*	-0.8*	-2.3*	-2.0*	-2.8*
Myeloma	1.1*	1.4*	0.5	-0.8*	-0.7*	-1.2*
Leukemia:	0.4	0.2	0.4	-0.7*	-0.8*	-0.9*
Lymphocytic:	-0.6*	-0.8*	-0.5	-1.2*	-1.3*	-1.3*
Acute lymphocytic	0.5	0.0	1.2	-1.2*	-1.1*	-1.2*
Chronic lymphocytic	-0.9*	-1.0*	-1.1*	-1.2*	-1.3*	-1.3*
Other lymphocytic	-1.4*	-1.2	-2.7*	-1.0	-1.7*	-0.2
Myeloid & Monocytic:	2.0*	1.9*	2.0*	-0.1	-0.1	-0.4
Acute myeloid	2.9*	2.6*	3.1*	0.1	0.2	-0.2
Chronic myeloid	1.3*	1.4*	1.1	-2.5*	-2.4*	-2.9*
Acute monocytic	-3.7*	-1.7	-6.2*	-2.4	-4.5*	-0.7
Other myeloid & monocytic	-1.6	-1.4	-2.4	0.5	0.1	0.5
Other leukemia:	-4.1*	-4.4*	-4.1*	-1.5*	-1.5*	-1.7*
Other acute leukemia	-1.9*	-3.4*	-0.7	-4.3*	-4.5*	-4.1*
Aleukemic, subleukemic & NOS	-5.6*	-5.2*	-6.1*	0.3	0.4	0.0
Kaposi Sarcoma[e]	-4.6*	-4.9*	-2.2	-	-	-
Mesothelioma[e]	-1.6*	-2.0*	-0.8	-	-	-
Ill-defined & unspecified	-2.7*	-2.3*	-3.1*	-1.9*	-1.8*	-2.3*

The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

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

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

[e] Trend not shown for mortality. Category did not exist in mortality coding until 1999.

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

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

Table 1.10
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Blacks, 2004-2013

	Incidence[a]			US Mortality[b]		
Site	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC
All Sites	-1.3*	-2.4*	-0.3	-2.1*	-2.7*	-1.6*
Oral Cavity & Pharynx:	-2.0*	-2.0*	-2.1*	-2.9*	-3.4*	-1.8
Lip	-	-	-	-	-	-
Tongue	-1.9*	-1.3	-3.7*	-3.1*	-4.2*	-0.7
Salivary gland	-1.2	-2.1	-0.4	2.7	2.7	3.1
Floor of mouth	-2.9	-3.1	-2.0	-	-	-
Gum & other oral cavity	-2.3*	-2.2	-2.6*	-3.9*	-4.3*	-3.8*
Nasopharynx	-1.9	-2.6	-0.5	-4.1*	-5.3*	-2.2
Tonsil	-0.5	-0.5	0.1	-2.5*	-2.3*	-2.7
Oropharynx	-1.4	-2.3	-	-0.1	-0.5	0.7
Hypopharynx	-4.2*	-4.1*	-5.5	-2.5	-3.2	-
Other oral cavity & pharynx	-3.5	-2.6	-	-4.4*	-4.3*	-4.7*
Digestive System:	-1.6*	-1.7*	-1.7*	-1.6*	-1.5*	-1.8*
Esophagus	-4.0*	-4.5*	-3.4*	-4.4*	-4.6*	-4.4*
Stomach	-2.5*	-3.4*	-1.7	-3.1*	-3.4*	-3.0*
Small intestine	3.7*	3.3*	4.2*	0.5	0.5	0.5
Colon & Rectum:	-2.9*	-3.0*	-3.0*	-3.0*	-2.7*	-3.5*
Colon	-3.2*	-3.5*	-3.2*	-	-	-
Rectum	-2.0*	-1.7*	-2.5*	-	-	-
Anus, anal canal & anorectum	1.9*	2.1	1.5	3.8*	7.0*	0.3
Liver & intrahepatic bile duct	2.6*	2.6*	2.3*	2.5*	2.7*	2.0*
Gallbladder	0.6	1.4	0.5	1.1	2.0	0.8
Other biliary	0.4	-0.2	0.7	0.2	-1.2	1.2
Pancreas	-0.6	-0.3	-0.8	-0.4*	-0.5	-0.3
Retroperitoneum	1.9	-	2.8	-5.9	-	-
Peritoneum, omentum & mesentery	1.9	-	2.4	-0.1	-	0.5
Other digestive system	3.7*	3.4	3.9	2.7	2.9	2.3
Respiratory System:	-2.4*	-3.1*	-1.6*	-2.7*	-3.4*	-1.9*
Nose, nasal cavity & middle ear	-0.9	-1.6	0.2	-3.0	-5.2	-0.7
Larynx	-3.1*	-3.4*	-2.0	-3.7*	-4.0*	-2.7*
Lung & bronchus	-2.4*	-3.1*	-1.5*	-2.7*	-3.4*	-1.9*
Pleura	-	-	-	-	-	-
Trachea & other respiratory organs	-3.9	-	-	0.6	-	-
Bones & joints	-0.6	1.5	-2.1	-1.4	-1.2	-2.2
Soft tissue (including heart)	-0.6	-1.3	0.2	0.9	0.7	0.9
Skin (excl. basal & squamous):	-1.4	-1.6	-1.5	-2.1*	-2.1*	-2.0
Melanoma of the skin	-1.1	-2.8	-0.2	-1.7*	-2.1	-1.8
Other non-epithelial skin	-1.6	-0.4	-2.8	-2.4*	-2.1*	-2.6
Breast	0.5	3.6	0.6*	-1.5*	-0.1	-1.4*
Breast (*in situ*)	1.6*	-	1.7*	-	-	-

The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

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

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

Table 1.10 - continued
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Blacks, 2004-2013

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	0.5	-	0.7	-0.5*	-	-0.3
Cervix uteri	-2.6*	-	-2.5*	-2.2*	-	-1.9*
Corpus uteri	2.7*	-	2.9*	0.2	-	0.5
Uterus, NOS	2.2	-	2.6	2.6*	-	2.8*
Ovary[c]	-1.4*	-	-1.1*	-2.0*	-	-1.8*
Vagina	-2.2	-	-2.5	-2.4*	-	-2.2*
Vulva	-0.7	-	-0.7	0.0	-	0.4
Other female genital system	5.2*	-	5.3*	4.0	-	3.8
Male Genital System:	-3.3*	-3.7*	-	-3.7*	-4.3*	-
Prostate	-3.4*	-3.8*	-	-3.7*	-4.3*	-
Testis	3.6*	3.6*	-	-4.4	-4.0	-
Penis	-0.2	-0.9	-	0.0	-0.3	-
Other male genital system	-	-	-	-	-	-
Urinary System:	0.4	0.2	0.4	-1.2*	-1.0*	-1.7*
Urinary bladder	-1.0*	-0.8	-1.9*	-0.9*	-0.6	-1.7*
Kidney & renal pelvis	1.6*	1.1	2.0*	-1.4*	-1.4*	-1.5*
Ureter	-4.9*	-	-	-0.2	-	-
Other urinary system	-1.1	-	-	-2.9	-	-5.0*
Eye & Orbit	2.0	-	-	-	-	-
Brain & Nervous System:[d]	0.2	1.4*	-1.0	0.4	0.7	0.1
Brain	0.7	1.9*	-0.5	-	-	-
Cranial nerves & other nervous system	-4.5	-3.9	-4.9*	-	-	-
Endocrine System:	4.0*	1.9	4.6*	0.2	2.0	-0.8
Thyroid	4.5*	2.5*	5.0*	0.5	1.4	0.0
Other endocrine & thymus	0.3	-0.2	0.7	0.0	2.5	-2.2
Lymphoma:	-0.7*	-1.0*	-0.5	-2.0*	-1.8*	-2.1*
Hodgkin lymphoma	-0.8*	-0.2	-1.6	-3.6*	-3.4	-3.7*
Non-Hodgkin lymphoma	-0.7	-1.1	-0.3	-1.9*	-1.6*	-2.0*
Myeloma	1.0*	0.7	1.2	-0.8*	-1.3*	-0.5
Leukemia:	0.4	0.2	0.4	-1.5*	-1.7*	-1.4*
Lymphocytic:	0.0	-0.4	0.0	-2.4*	-3.4*	-1.2
Acute lymphocytic	0.7	0.5	0.7	-0.8	-1.6	0.8
Chronic lymphocytic	-0.1	-0.6	-0.2	-2.7*	-3.3*	-1.9*
Other lymphocytic	-1.1	-	-	-5.2*	-9.7*	-
Myeloid & Monocytic:	1.6*	1.8*	1.3	-0.7	-0.1	-1.3
Acute myeloid	3.1*	3.8*	2.5	-0.1	0.4	-0.7
Chronic myeloid	-0.3	-1.4	0.4	-4.3*	-4.2*	-4.0
Acute monocytic	-	-	-	-	-	-
Other myeloid & monocytic	-	-	-	-0.9	1.9	-5.0
Other leukemia:	-5.4*	-5.9	-4.7	-1.8*	-2.1*	-1.6
Other acute leukemia	-3.7	-	-	-4.5*	-5.4*	-3.6*
Aleukemic, subleukemic & NOS	-6.4	-	-4.3	-0.7	-0.6	-0.8
Kaposi Sarcoma[e]	-1.4	-1.2	-	-	-	-
Mesothelioma[e]	-4.3*	-5.2*	-	-	-	-
Ill-defined & unspecified	-3.4*	-3.7*	-3.0*	-3.0*	-3.2*	-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).

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

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

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

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

[e] Trend not shown for mortality. Category did not exist in mortality coding until 1999.

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

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

Table 1.11

Age Distribution (%) of Incidence Cases by Site, 2009-2013

All Races, Both Sexes

Site	Age at Diagnosis <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
All Sites	1.0	2.7	5.1	13.8	24.4	26.2	18.8	7.9	100.0%	2,040,923
Oral Cavity & Pharynx:	0.5	2.0	5.1	18.8	30.5	22.9	14.0	6.1	100.0%	51,827
Lip	0.2	1.3	4.6	15.1	20.7	23.3	21.7	13.1	100.0%	3,044
Tongue	0.1	1.7	4.5	18.4	33.3	24.5	12.8	4.6	100.0%	15,450
Salivary gland	2.2	5.8	7.7	13.3	19.9	20.9	19.4	10.9	100.0%	5,764
Floor of mouth	0.1	0.3	2.6	18.9	34.3	25.3	14.0	4.5	100.0%	2,562
Gum & other oral cavity	0.6	1.9	4.3	12.2	23.2	24.6	21.0	12.2	100.0%	6,838
Nasopharynx	3.1	6.0	13.0	24.1	26.6	16.3	8.7	2.3	100.0%	2,871
Tonsil	0.0	0.5	5.4	28.0	39.5	18.9	6.2	1.4	100.0%	9,379
Oropharynx	0.2	0.4	4.1	18.8	33.2	26.8	12.6	3.9	100.0%	1,963
Hypopharynx	0.0	0.2	1.1	16.0	33.0	28.5	16.7	4.6	100.0%	2,854
Other oral cavity & pharynx	0.3	0.8	3.1	17.7	30.2	26.0	15.0	7.0	100.0%	1,102
Digestive System:	0.2	1.1	3.5	13.4	23.8	25.0	21.8	11.1	100.0%	374,096
Esophagus	0.0	0.3	1.9	11.1	27.7	28.9	21.4	8.7	100.0%	19,680
Stomach	0.1	1.6	4.4	12.1	21.0	25.7	23.3	11.8	100.0%	33,174
Small intestine	0.1	1.6	4.7	15.7	25.5	25.9	19.0	7.5	100.0%	10,137
Colon & Rectum:	0.1	1.4	4.2	14.8	21.8	24.0	21.8	11.9	100.0%	185,758
Colon	0.1	1.2	3.6	12.5	20.1	24.6	24.2	13.8	100.0%	130,497
Rectum	0.0	1.8	5.6	20.3	26.0	22.6	16.2	7.4	100.0%	55,261
Colon & Rectum (Male)	0.1	1.4	4.1	15.6	24.2	25.7	20.1	8.8	100.0%	96,153
Colon & Rectum (Female)	0.1	1.4	4.2	14.0	19.3	22.2	23.6	15.2	100.0%	89,605
Anus, anal canal & anorectum	0.0	1.1	5.9	23.9	28.4	20.7	13.8	6.2	100.0%	8,396
Liver & intrahepatic bile duct	0.8	0.7	2.0	14.6	36.2	23.5	16.2	6.0	100.0%	39,909
Gallbladder	0.0	0.5	2.5	8.9	20.0	27.0	26.5	14.5	100.0%	5,245
Other biliary	0.1	0.6	2.4	8.3	20.2	26.6	27.3	14.4	100.0%	8,552
Pancreas	0.1	0.5	2.0	9.1	22.0	27.3	25.6	13.5	100.0%	56,166
Retroperitoneum	8.1	4.3	5.1	15.9	23.9	22.8	15.6	4.3	100.0%	1,735
Peritoneum, omentum & mesentery	0.4	1.1	1.9	10.8	24.4	32.6	22.1	6.6	100.0%	2,571
Other digestive system	0.2	0.7	2.7	10.2	21.1	24.4	27.0	13.7	100.0%	2,773
Respiratory System:	0.1	0.4	1.3	8.5	22.0	32.0	26.6	9.1	100.0%	275,140
Nose, nasal cavity & middle ear	1.6	3.7	7.3	15.3	24.3	21.4	17.8	8.7	100.0%	3,093
Larynx	0.0	0.4	2.4	14.6	30.9	29.4	17.1	5.2	100.0%	14,741
Lung & bronchus	0.0	0.2	1.1	8.1	21.5	32.4	27.4	9.3	100.0%	256,350
Lung & bronchus (Male)	0.0	0.2	1.0	7.8	22.6	33.0	26.9	8.4	100.0%	134,424
Lung & bronchus (Female)	0.0	0.3	1.3	8.5	20.2	31.7	27.8	10.2	100.0%	121,926
Pleura	2.8	2.1	4.1	8.3	17.2	21.4	26.2	17.9	100.0%	145
Trachea & other respiratory organs	17.8	18.7	8.9	10.1	15.0	14.8	9.6	5.1	100.0%	811
Bones & joints	27.0	15.4	9.2	12.2	13.1	11.8	7.8	3.7	100.0%	4,050
Soft tissue (including heart)	8.6	9.0	9.0	14.8	18.9	17.3	15.2	7.4	100.0%	15,022
Skin (excl. basal & squamous):	0.5	5.8	8.2	15.7	21.5	21.9	17.8	8.7	100.0%	107,163
Melanoma of the skin	0.5	5.9	8.4	16.2	22.1	22.0	17.1	7.9	100.0%	98,302
Other non-epithelial skin	1.3	5.3	5.9	9.4	14.7	20.4	25.7	17.3	100.0%	8,861
Breast (Female)	0.0	1.8	8.9	21.3	25.7	22.6	14.0	5.7	100.0%	304,298
Breast (Female -*in situ*)	0.0	0.7	10.0	27.5	27.5	22.1	10.2	2.1	100.0%	76,258

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, 2009-2013

All Races, Both Sexes

Site	Age at Diagnosis <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
Female Genital System:	0.4	4.0	8.4	18.2	28.7	21.9	12.7	5.7	100.0%	120,411
Cervix uteri	0.1	13.9	24.3	23.7	18.4	11.2	5.7	2.7	100.0%	16,833
Corpus uteri	0.0	1.6	5.4	17.2	34.7	25.1	11.8	4.1	100.0%	62,026
Uterus, NOS	0.2	1.6	5.6	15.7	26.4	21.2	16.2	13.1	100.0%	1,905
Ovary[a]	1.3	3.8	6.9	18.6	24.2	21.3	15.9	8.0	100.0%	29,012
Vagina	0.9	1.9	4.7	13.4	23.9	23.1	20.6	11.6	100.0%	1,849
Vulva	0.1	1.8	6.0	15.1	20.4	20.0	21.4	15.2	100.0%	6,035
Other female genital system	0.7	5.1	4.9	14.2	25.7	25.2	17.2	7.1	100.0%	2,751
Male Genital System:	0.3	2.1	1.5	9.7	31.7	36.0	15.0	3.7	100.0%	292,787
Prostate	0.0	0.0	0.6	9.5	32.9	37.6	15.5	3.8	100.0%	278,322
Testis	6.2	50.0	22.9	13.2	5.5	1.4	0.6	0.2	100.0%	12,146
Penis	0.1	1.7	5.1	11.7	22.9	26.3	22.6	9.6	100.0%	1,739
Other male genital system	2.1	2.6	5.0	13.6	22.4	23.4	20.0	10.9	100.0%	580
Urinary System:	0.5	1.0	3.4	10.6	21.8	27.7	24.0	10.8	100.0%	164,318
Urinary bladder	0.1	0.4	1.4	6.5	18.4	28.8	29.7	14.7	100.0%	89,136
Kidney & renal pelvis	1.1	1.8	6.0	16.1	26.4	26.4	16.5	5.6	100.0%	71,374
Ureter	0.0	0.1	0.5	4.2	15.1	29.8	35.1	15.2	100.0%	2,344
Other urinary system	0.1	0.5	1.5	7.2	17.1	26.4	29.8	17.3	100.0%	1,464
Eye & Orbit	12.6	3.4	6.3	14.1	20.8	21.0	15.1	6.5	100.0%	3,758
Brain & Nervous System:	12.8	8.9	7.8	14.1	20.3	18.0	13.1	5.0	100.0%	28,642
Brain	11.9	8.8	7.6	14.0	20.6	18.4	13.6	5.1	100.0%	26,874
Cranial nerves & other nervous system	25.6	10.6	10.9	15.9	14.9	11.8	6.8	3.5	100.0%	1,768
Endocrine System:	2.8	14.5	18.7	23.3	20.3	13.3	5.7	1.4	100.0%	65,075
Thyroid	1.8	14.9	19.2	23.9	20.4	13.1	5.4	1.3	100.0%	61,797
Other endocrine & thymus	21.3	6.9	8.5	13.5	19.3	17.6	10.0	3.0	100.0%	3,278
Lymphoma:	2.9	6.9	6.7	12.7	19.9	22.5	19.7	8.6	100.0%	98,850
Hodgkin lymphoma	12.6	31.5	14.0	12.8	11.4	9.0	6.4	2.4	100.0%	11,439
Non-Hodgkin lymphoma	1.6	3.7	5.7	12.7	21.0	24.3	21.5	9.4	100.0%	87,411
Myeloma	0.0	0.6	2.9	11.0	23.2	28.6	24.3	9.3	100.0%	29,198
Leukemia:	9.3	4.5	4.9	10.1	17.6	21.8	21.0	10.9	100.0%	59,935
Lymphocytic:	14.0	2.8	3.2	9.3	18.5	22.0	20.2	10.1	100.0%	29,961
Acute lymphocytic	57.2	10.2	5.8	7.2	8.2	5.8	4.1	1.5	100.0%	7,284
Chronic lymphocytic	0.1	0.3	1.7	9.2	21.6	28.0	26.0	13.2	100.0%	20,852
Other lymphocytic	0.5	2.0	10.0	19.2	24.3	18.7	17.2	8.2	100.0%	1,825
Myeloid & Monocytic:	4.6	6.4	6.8	11.2	17.1	22.1	21.5	10.3	100.0%	27,512
Acute myeloid	5.3	6.0	5.7	10.1	16.9	23.0	22.6	10.4	100.0%	18,096
Chronic myeloid	2.2	7.4	9.3	14.1	18.0	20.2	19.1	9.7	100.0%	7,765
Acute monocytic	9.5	5.1	7.0	10.3	17.5	20.4	20.3	9.8	100.0%	975
Other myeloid & monocytic	4.3	6.7	6.5	10.5	12.9	21.4	21.7	16.0	100.0%	676
Other leukemia:	5.4	3.6	3.7	7.3	12.1	15.8	24.9	27.3	100.0%	2,462
Other acute leukemia	7.9	4.1	3.6	7.8	11.8	15.4	24.1	25.4	100.0%	1,027
Aleukemic, subleukemic & NOS	3.6	3.3	3.8	6.9	12.4	16.0	25.4	28.6	100.0%	1,435
Kaposi Sarcoma	0.4	22.9	21.5	22.0	10.4	7.9	8.3	6.5	100.0%	2,233
Mesothelioma	0.1	0.7	1.5	6.1	15.2	27.7	33.5	15.1	100.0%	4,238
Ill-defined & unspecified	0.4	0.9	2.2	8.8	18.6	22.8	26.2	20.0	100.0%	37,515

Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Percents may not sum to 100 due to rounding.

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

Table 1.12
Median Age of Cancer Patients at Diagnosis[a], 2009-2013
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	65.0	66.0	65.0	66.0	67.0	65.0	62.0	63.0	62.0
Oral Cavity & Pharynx:	62.0	62.0	64.0	63.0	62.0	65.0	59.0	59.0	59.0
Lip	68.0	67.0	71.0	68.0	68.0	71.0	57.0	60.0	-
Tongue	62.0	62.0	64.0	62.0	62.0	64.0	59.0	60.0	58.0
Salivary gland	65.0	67.0	61.0	67.0	69.0	63.0	57.0	58.0	55.0
Floor of mouth	63.0	62.0	66.0	63.0	62.0	66.0	60.0	60.0	60.0
Gum & other oral cavity	67.0	65.0	71.0	69.0	66.0	73.0	61.0	60.0	62.0
Nasopharynx	56.0	56.0	55.0	58.5	58.0	59.0	54.0	54.0	53.0
Tonsil	58.0	58.0	60.0	58.0	58.0	61.0	58.0	58.0	58.0
Oropharynx	63.0	62.0	64.0	63.0	63.0	65.0	60.0	60.0	61.5
Hypopharynx	64.0	64.0	66.0	65.0	65.0	67.0	60.0	60.0	63.0
Other oral cavity & pharynx	64.0	62.0	67.0	64.0	63.0	67.0	61.0	60.5	67.0
Digestive System:	68.0	66.0	70.0	68.0	67.0	71.0	64.0	62.0	65.0
Esophagus	67.0	66.0	71.0	68.0	67.0	72.0	64.0	63.0	64.0
Stomach	69.0	68.0	70.0	69.0	68.0	71.0	67.0	66.0	68.0
Small intestine	65.0	65.0	66.0	66.0	66.0	66.0	63.0	63.0	64.0
Colon & Rectum:	68.0	66.0	70.0	69.0	67.0	71.0	64.0	63.0	65.0
Colon	70.0	68.0	72.0	71.0	69.0	73.0	65.0	64.0	66.0
Rectum	63.0	63.0	63.0	64.0	63.0	64.0	60.0	60.0	61.0
Anus, anal canal & anorectum	61.0	59.0	62.0	62.0	61.0	62.0	55.0	51.0	58.0
Liver & intrahepatic bile duct	63.0	62.0	68.0	63.0	62.0	68.0	61.0	60.0	62.0
Gallbladder	71.0	71.0	71.0	72.0	71.0	72.0	67.0	69.0	66.0
Other biliary	71.0	70.0	73.0	72.0	70.0	74.0	68.0	67.0	69.0
Pancreas	70.0	68.0	73.0	71.0	69.0	73.0	66.0	64.0	69.0
Retroperitoneum	62.0	62.0	61.0	62.0	62.0	62.0	59.0	58.0	59.0
Peritoneum, omentum & mesentery	68.0	65.0	68.0	68.0	66.0	69.0	63.0	59.0	63.5
Other digestive system	71.0	70.0	72.0	71.0	71.0	72.0	66.0	65.0	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	57.0	58.0
Larynx	65.0	65.0	64.0	65.0	66.0	64.0	62.0	62.0	61.0
Lung & bronchus	70.0	70.0	71.0	71.0	71.0	71.0	66.0	66.0	67.0
Pleura	72.0	73.0	69.0	74.0	74.5	72.0	-	-	-
Trachea & other respiratory organs	49.0	45.0	57.0	50.0	45.0	57.0	53.0	48.5	58.0
Bones & joints	43.0	42.0	44.0	45.0	44.0	46.0	32.0	29.0	36.5
Soft tissue (including heart)	59.0	60.0	58.0	61.0	61.0	60.0	52.0	51.0	53.0
Skin (excl. basal & squamous):	64.0	66.0	60.0	64.0	66.0	60.0	58.0	58.0	58.0
Melanoma of the skin	63.0	66.0	59.0	64.0	66.0	59.0	63.0	63.0	64.0
Other non-epithelial skin	71.0	72.0	70.0	73.0	73.0	71.0	52.0	51.0	52.0
Breast	62.0	68.0	62.0	63.0	68.0	63.0	59.0	65.0	59.0
Breast (*in situ*)	59.0	62.0	59.0	59.0	62.5	59.0	59.0	62.5	59.0

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

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

Table 1.12 - continued
Median Age of Cancer Patients at Diagnosis[a], 2009-2013
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	65.5	-	65.5	64.0	-	64.0
Ovary[b]	63.0	-	63.0	63.0	-	63.0	61.0	-	61.0
Vagina	67.0	-	67.0	67.0	-	67.0	64.5	-	64.5
Vulva	68.0	-	68.0	69.0	-	69.0	57.0	-	57.0
Other female genital system	64.0	-	64.0	65.0	-	65.0	61.0	-	61.0
Male Genital System:	66.0	66.0	-	66.0	66.0	-	63.0	63.0	-
Prostate	66.0	66.0	-	66.0	66.0	-	63.0	63.0	-
Testis	33.0	33.0	-	33.0	33.0	-	36.0	36.0	-
Penis	68.0	68.0	-	68.0	68.0	-	65.0	65.0	-
Other male genital system	66.0	66.0	-	67.0	67.0	-	56.0	56.0	-
Urinary System:	69.0	69.0	69.0	69.0	69.0	69.0	65.0	64.0	66.0
Urinary bladder	73.0	72.0	73.0	73.0	73.0	73.0	70.0	68.0	72.0
Kidney & renal pelvis	64.0	63.0	65.0	65.0	64.0	65.0	61.0	60.0	63.0
Ureter	75.0	74.0	76.0	75.0	74.0	76.0	73.0	75.0	72.0
Other urinary system	74.0	75.0	72.0	74.0	75.0	73.0	67.0	71.0	64.0
Eye & Orbit	61.0	62.0	60.0	62.0	63.0	61.0	14.0	22.0	2.0
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	46.0	45.0	49.0	48.0	46.0	49.0	45.0	41.0	49.0
Endocrine System:	51.0	54.0	49.0	51.0	55.0	50.0	51.0	53.0	51.0
Thyroid	51.0	55.0	49.0	51.0	55.0	50.0	52.0	55.0	51.0
Other endocrine & thymus	54.0	53.0	56.0	55.0	54.0	57.0	49.0	46.5	51.0
Lymphoma:	65.0	64.0	66.0	66.0	65.0	67.0	56.0	54.0	58.0
Hodgkin lymphoma	39.0	40.0	36.0	40.0	41.0	37.0	37.0	39.0	36.0
Non-Hodgkin lymphoma	66.0	66.0	68.0	67.0	66.0	69.0	58.0	56.0	61.0
Myeloma	69.0	68.0	69.0	70.0	69.0	70.0	65.0	65.0	66.0
Leukemia:	66.0	66.0	67.0	67.0	66.0	68.0	62.0	61.0	62.0
Lymphocytic:	65.0	65.0	67.0	66.0	65.0	67.0	63.0	62.0	65.0
Acute lymphocytic	15.0	15.0	13.0	15.0	16.0	13.5	14.0	14.0	14.0
Chronic lymphocytic	71.0	69.0	72.0	71.0	70.0	73.0	69.0	68.0	70.0
Other lymphocytic	62.0	61.0	66.0	62.0	61.0	66.5	62.0	59.0	69.0
Myeloid & Monocytic:	66.0	66.0	66.0	67.0	68.0	67.0	60.0	60.0	60.0
Acute myeloid	67.0	68.0	67.0	68.0	68.0	68.0	61.0	62.0	61.0
Chronic myeloid	64.0	64.0	64.0	66.0	65.0	66.0	56.0	56.0	58.0
Acute monocytic	65.0	66.0	62.0	65.0	66.0	62.0	56.0	64.5	52.5
Other myeloid & monocytic	69.0	68.5	70.0	70.0	70.0	71.0	63.0	63.0	63.0
Other leukemia:	76.0	72.0	78.0	77.0	74.0	80.0	66.0	62.0	70.0
Other acute leukemia	74.0	68.0	78.0	75.0	71.0	79.0	66.0	58.0	77.5
Aleukemic, subleukemic & NOS	76.0	74.0	78.0	78.0	76.0	80.0	66.0	64.0	69.0
Kaposi Sarcoma	46.0	45.0	77.0	50.5	48.0	80.0	38.0	37.0	43.0
Mesothelioma	74.0	75.0	72.0	74.0	75.0	72.0	69.0	70.0	64.0
Ill-defined & unspecified	73.0	71.0	76.0	74.0	71.0	76.0	67.0	65.0	70.0

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

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

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

Table 1.13

Age Distribution (%) of Deaths by Site, 2009-2013

All Races, Both Sexes

Site	Age at Death <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Deaths
All Sites	0.3	0.8	2.0	8.5	19.2	25.6	26.9	16.6	100.0%	2,886,516
Oral Cavity & Pharynx:	0.1	0.8	2.4	13.1	26.4	24.6	20.3	12.3	100.0%	42,827
Lip	0.3	0.6	1.5	7.4	14.7	18.3	27.1	30.1	100.0%	339
Tongue	0.1	1.1	3.1	13.6	27.3	24.7	19.3	10.8	100.0%	10,617
Salivary gland	0.1	1.0	2.5	9.0	17.0	21.8	26.3	22.3	100.0%	4,197
Floor of mouth	0.0	0.2	1.3	12.8	33.9	26.1	16.9	8.8	100.0%	445
Gum & other oral cavity	0.0	0.4	1.7	8.7	19.7	21.8	24.9	22.7	100.0%	6,071
Nasopharynx	0.8	3.3	5.8	18.3	28.0	21.2	16.0	6.7	100.0%	3,302
Tonsil	0.0	0.2	2.6	18.2	34.8	25.2	14.0	4.9	100.0%	4,091
Oropharynx	0.0	0.4	1.9	14.6	29.2	26.1	19.0	8.9	100.0%	4,184
Hypopharynx	0.0	0.2	1.1	14.0	28.3	28.3	20.1	8.0	100.0%	1,605
Other oral cavity & pharynx	0.0	0.1	1.3	12.3	28.4	27.9	20.5	9.5	100.0%	7,976
Digestive System:	0.0	0.5	2.0	9.3	21.2	24.6	25.6	16.7	100.0%	722,266
Esophagus	0.0	0.2	1.6	10.0	25.3	28.2	23.6	11.1	100.0%	72,182
Stomach	0.0	1.3	3.8	10.3	18.3	23.0	25.8	17.5	100.0%	56,061
Small intestine	0.0	0.9	2.6	8.9	20.2	25.2	26.0	16.2	100.0%	6,232
Colon & Rectum:	0.0	0.7	2.5	9.4	18.2	22.3	25.9	21.0	100.0%	259,005
Colon & Rectum (Male)	0.0	0.8	2.7	10.3	20.7	24.9	25.2	15.4	100.0%	134,779
Colon & Rectum (Female)	0.0	0.6	2.4	8.5	15.4	19.5	26.6	27.1	100.0%	124,226
Anus, anal canal & anorectum	0.0	0.6	5.1	18.5	25.7	21.4	17.4	11.2	100.0%	4,283
Liver & intrahepatic bile duct	0.2	0.5	1.5	11.4	30.0	24.2	21.8	10.3	100.0%	108,268
Gallbladder	0.0	0.2	1.4	6.9	18.0	27.5	28.4	17.6	100.0%	10,516
Other biliary	0.0	0.3	1.2	6.6	16.1	23.8	29.7	22.4	100.0%	7,450
Pancreas	0.0	0.2	1.2	7.5	20.1	27.0	27.8	16.3	100.0%	187,653
Retroperitoneum	0.3	1.3	2.5	9.8	21.1	25.2	25.8	14.0	100.0%	1,007
Peritoneum, omentum & mesentery	0.1	0.5	1.7	6.7	18.9	29.6	29.3	13.2	100.0%	4,284
Other digestive system	0.0	0.5	1.8	7.0	17.2	23.3	28.7	21.4	100.0%	5,325
Respiratory System:	0.0	0.1	0.8	7.4	20.1	31.0	28.8	11.8	100.0%	809,848
Nose, nasal cavity & middle ear	0.2	2.2	4.4	13.0	19.2	23.1	23.3	14.5	100.0%	2,342
Larynx	0.0	0.1	1.1	10.5	26.5	29.2	22.9	9.7	100.0%	18,444
Lung & bronchus	0.0	0.1	0.8	7.3	19.9	31.0	29.0	11.8	100.0%	786,881
Lung & bronchus (Male)	0.0	0.1	0.7	7.2	21.2	31.9	28.5	10.3	100.0%	434,475
Lung & bronchus (Female)	0.0	0.1	0.9	7.5	18.3	30.0	29.7	13.6	100.0%	352,406
Pleura	0.4	0.2	1.0	3.0	15.8	27.8	34.3	17.6	100.0%	1,073
Trachea & other respiratory organs	1.4	4.6	3.9	11.4	20.5	21.8	21.8	14.7	100.0%	1,108
Bones & joints	12.5	14.9	5.7	10.0	12.8	15.0	16.4	12.7	100.0%	7,037
Soft tissue (including heart)	3.7	6.1	6.2	13.1	19.6	20.1	19.4	11.8	100.0%	22,146
Skin (excl. basal & squamous):	0.1	1.7	3.9	10.4	19.0	21.7	24.8	18.3	100.0%	61,883
Melanoma of the skin	0.1	2.2	4.9	11.7	20.2	22.2	24.1	14.7	100.0%	46,126
Other non-epithelial skin	0.0	0.4	1.2	6.8	15.5	20.3	27.1	28.7	100.0%	15,757
Breast (Female)	0.0	0.9	5.0	14.0	22.0	21.4	20.1	16.6	100.0%	204,613

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, 2009-2013

All Races, Both Sexes

Site	Age at Death <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Deaths
Female Genital System:	0.0	1.2	3.8	11.4	21.9	24.9	22.7	14.0	100.0%	144,847
Cervix uteri	0.0	5.2	13.5	23.9	23.7	16.1	11.3	6.3	100.0%	20,231
Corpus uteri	0.0	0.3	1.8	7.1	24.2	29.7	23.5	13.4	100.0%	18,406
Uterus, NOS	0.0	0.5	2.0	8.6	22.3	27.7	23.2	15.6	100.0%	24,586
Ovary	0.1	0.7	2.3	10.4	21.4	25.8	25.0	14.3	100.0%	72,034
Vagina	0.1	0.9	2.2	7.2	15.6	20.7	27.6	25.8	100.0%	2,115
Vulva	0.1	0.6	1.9	7.6	13.5	17.5	28.7	30.1	100.0%	4,947
Other female genital system	0.1	0.9	2.3	8.3	22.1	28.6	23.7	14.0	100.0%	2,528
Male Genital System:	0.0	0.5	0.4	2.0	9.1	20.6	34.6	32.9	100.0%	142,995
Prostate	0.0	0.0	0.1	1.6	9.0	20.8	35.1	33.5	100.0%	139,543
Testis	1.8	34.7	18.3	20.6	11.3	5.5	4.8	3.0	100.0%	1,924
Penis	0.1	1.0	3.8	10.7	21.0	25.2	23.1	15.2	100.0%	1,274
Other male genital system	0.4	0.8	2.4	9.1	13.0	22.4	29.1	22.8	100.0%	254
Urinary System:	0.2	0.3	1.1	6.2	16.1	23.6	29.6	23.0	100.0%	146,090
Urinary bladder	0.0	0.1	0.5	3.7	11.8	21.3	33.2	29.5	100.0%	74,947
Kidney & renal pelvis	0.3	0.5	1.7	9.1	21.2	26.2	25.4	15.5	100.0%	67,197
Ureter	0.1	0.3	0.4	3.1	10.0	24.2	35.9	26.1	100.0%	1,871
Other urinary system	0.0	0.1	1.3	5.6	12.9	22.5	32.0	25.5	100.0%	2,075
Eye & Orbit	2.0	1.9	4.1	10.1	20.5	22.7	22.8	15.8	100.0%	1,439
Brain & Nervous System:	3.7	3.6	5.5	13.5	23.9	23.9	18.5	7.5	100.0%	73,450
Endocrine System:	6.1	2.4	3.6	9.5	18.0	23.1	22.7	14.5	100.0%	13,403
Thyroid	0.1	0.9	1.9	7.8	17.8	25.2	27.5	18.8	100.0%	8,680
Other endocrine & thymus	17.1	5.2	6.8	12.7	18.5	19.2	13.8	6.6	100.0%	4,723
Lymphoma:	0.4	1.9	2.4	6.3	14.4	22.6	30.9	21.2	100.0%	107,370
Hodgkin lymphoma	1.3	11.8	9.2	10.9	15.2	19.0	21.3	11.3	100.0%	5,869
Non-Hodgkin lymphoma	0.3	1.3	2.0	6.0	14.3	22.8	31.5	21.7	100.0%	101,501
Myeloma	0.0	0.1	0.9	5.4	16.2	26.8	32.4	18.3	100.0%	56,745
Leukemia:	2.3	2.7	2.6	5.9	13.0	22.4	30.2	20.8	100.0%	115,413
Lymphocytic:	3.5	3.4	2.2	4.6	11.4	19.8	28.9	26.1	100.0%	32,035
Acute lymphocytic	15.6	14.8	8.5	11.2	14.3	15.7	12.8	7.1	100.0%	7,124
Chronic lymphocytic	0.0	0.1	0.4	2.6	10.5	21.1	33.7	31.8	100.0%	22,906
Other lymphocytic	1.3	1.4	1.1	4.9	11.3	19.7	31.6	28.7	100.0%	2,005
Myeloid & Monocytic:	1.8	2.7	3.2	7.1	14.9	24.9	30.1	15.3	100.0%	56,401
Acute myeloid	2.0	2.8	3.2	7.2	15.5	25.7	29.9	13.7	100.0%	47,059
Chronic myeloid	0.5	3.2	4.3	8.0	11.3	18.5	29.0	25.1	100.0%	5,119
Acute monocytic	2.5	1.0	1.7	6.4	11.8	25.1	31.1	20.5	100.0%	483
Other myeloid & monocytic	1.1	0.9	1.8	4.6	12.6	24.0	34.0	20.9	100.0%	3,740
Other leukemia:	2.0	2.1	2.0	4.8	10.9	20.4	32.0	25.9	100.0%	26,977
Other acute leukemia	1.3	2.2	2.0	4.5	11.0	21.2	33.0	25.0	100.0%	9,429
Aleukemic, subleukemic & NOS	2.3	2.0	2.0	4.9	10.8	20.0	31.5	26.4	100.0%	17,548
Ill-defined & unspecified	0.2	0.7	1.7	7.6	17.9	23.9	27.8	20.2	100.0%	211,993

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

Table 1.14
Median Age of Cancer Patients at Death[a], 2009-2013
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	62.0	62.0	63.0
Lip	78.0	75.0	84.5	77.5	75.0	85.0	-	-	-
Tongue	66.0	65.0	71.0	67.0	65.0	72.0	62.0	62.0	61.0
Salivary gland	74.0	73.0	75.0	75.0	74.0	76.0	64.0	64.0	67.0
Floor of mouth	65.0	64.0	70.0	66.0	64.0	71.0	63.0	63.0	-
Gum & other oral cavity	74.0	68.0	81.0	75.0	69.0	81.0	65.0	63.0	68.0
Nasopharynx	62.0	61.0	66.0	65.0	63.0	70.0	58.0	57.0	59.0
Tonsil	63.0	62.0	67.0	63.0	62.0	68.0	62.0	62.0	62.0
Oropharynx	66.0	64.0	71.0	67.0	65.0	72.0	62.0	62.0	62.0
Hypopharynx	66.0	66.0	68.0	67.0	67.0	69.0	62.5	63.0	62.0
Other oral cavity & pharynx	67.0	66.0	71.0	68.0	67.0	71.0	64.0	63.0	65.0
Digestive System:	71.0	69.0	75.0	72.0	70.0	76.0	67.0	64.0	70.0
Esophagus	69.0	68.0	74.0	69.0	68.0	75.0	64.0	64.0	66.0
Stomach	72.0	70.0	74.0	72.0	71.0	75.0	69.0	67.0	73.0
Small intestine	72.0	70.0	73.0	73.0	71.0	74.0	66.0	64.0	67.0
Colon & Rectum	73.0	71.0	76.0	74.0	72.0	77.0	68.0	66.0	70.0
Anus, anal canal & anorectum	65.0	62.0	66.0	65.0	64.0	66.0	58.0	55.0	61.0
Liver & intrahepatic bile duct	67.0	64.0	73.0	68.0	66.0	74.0	62.0	61.0	67.0
Gallbladder	73.0	72.0	74.0	74.0	73.0	75.0	69.0	71.0	68.0
Other biliary	75.0	74.0	77.0	76.0	74.0	78.0	71.0	70.0	72.0
Pancreas	72.0	70.0	75.0	73.0	71.0	75.0	69.0	66.0	72.0
Retroperitoneum	71.0	70.0	71.0	71.0	71.0	73.0	68.5	69.0	67.5
Peritoneum, omentum & mesentery	72.0	68.0	73.0	72.0	68.0	73.0	69.0	64.5	70.0
Other digestive system	75.0	72.0	78.0	75.0	73.0	78.0	70.0	67.0	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	64.0	63.0	67.0
Larynx	68.0	68.0	69.0	69.0	69.0	70.0	65.0	65.0	65.0
Lung & bronchus	72.0	71.0	72.0	72.0	72.0	73.0	68.0	67.0	69.0
Pleura	75.0	76.0	72.0	75.0	76.0	72.0	72.0	70.0	72.0
Trachea & other respiratory organs	68.0	65.0	73.0	70.0	66.0	74.0	62.5	61.5	63.5
Bones & joints	60.0	58.0	64.0	62.0	60.0	65.0	53.0	51.0	59.0
Soft tissue (including heart)	65.0	65.0	65.0	66.0	67.0	66.0	58.0	56.0	60.0
Skin (excl. basal & squamous):	71.0	71.0	72.0	72.0	71.0	72.0	64.0	62.0	67.0
Melanoma of the skin	69.0	69.0	69.0	69.0	70.0	69.0	67.0	65.0	69.0
Other non-epithelial skin	77.0	75.0	81.0	78.0	76.0	82.0	61.0	61.0	64.0
Breast	68.0	70.0	68.0	69.0	71.0	69.0	62.0	64.0	62.0

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

Table 1.14 - continued
Median Age of Cancer Patients at Death[a], 2009-2013
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	69.0	-	69.0	70.0	-	70.0	66.0	-	66.0
Cervix uteri	57.0	-	57.0	58.0	-	58.0	57.0	-	57.0
Corpus uteri	70.0	-	70.0	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	68.0	-	68.0
Other female genital system	70.0	-	70.0	71.0	-	71.0	66.0	-	66.0
Male Genital System:	80.0	80.0	-	81.0	81.0	-	76.0	76.0	-
Prostate	80.0	80.0	-	81.0	81.0	-	76.0	76.0	-
Testis	42.0	42.0	-	42.0	42.0	-	42.0	42.0	-
Penis	70.0	70.0	-	71.0	71.0	-	68.0	68.0	-
Other male genital system	75.0	75.0	-	78.0	78.0	-	65.0	65.0	-
Urinary System:	75.0	74.0	78.0	76.0	75.0	78.0	70.0	68.0	74.0
Urinary bladder	79.0	78.0	81.0	79.0	78.0	81.0	75.0	73.0	77.0
Kidney & renal pelvis	71.0	69.0	74.0	71.0	70.0	75.0	67.0	65.0	70.0
Ureter	78.0	77.0	80.0	79.0	78.0	80.0	71.0	71.0	72.0
Other urinary system	77.0	77.0	78.0	78.0	77.0	79.0	67.0	70.0	65.0
Eye & Orbit	69.0	68.0	71.0	70.0	68.0	71.5	54.0	50.0	58.0
Brain & Nervous System	64.0	63.0	66.0	65.0	64.0	66.0	60.0	59.0	61.0
Endocrine System:	69.0	66.0	72.0	70.0	67.0	73.0	63.0	60.0	65.0
Thyroid	73.0	70.0	75.0	74.0	71.0	76.0	69.0	67.0	70.0
Other endocrine & thymus	59.0	58.0	60.0	60.0	58.0	61.0	54.0	54.0	54.0
Lymphoma:	75.0	73.0	78.0	76.0	74.0	78.0	65.0	63.0	68.0
Hodgkin lymphoma	65.0	64.0	68.0	67.0	65.0	70.0	51.0	51.0	52.0
Non-Hodgkin lymphoma	76.0	74.0	78.0	76.0	74.0	79.0	66.0	64.0	69.0
Myeloma	75.0	74.0	76.0	76.0	74.0	77.0	71.0	69.0	72.0
Leukemia:	75.0	74.0	76.0	76.0	75.0	77.0	68.0	67.0	70.0
Lymphocytic:	77.0	75.0	79.0	77.0	75.0	80.0	70.0	68.0	73.5
Acute lymphocytic	54.0	52.0	57.0	56.0	54.0	58.0	47.0	43.0	53.0
Chronic lymphocytic	80.0	78.0	83.0	80.0	78.0	83.0	74.0	71.0	77.0
Other lymphocytic	78.0	76.0	81.0	79.0	77.0	81.0	74.0	67.5	77.0
Myeloid & Monocytic:	73.0	72.0	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	67.0
Chronic myeloid	76.0	74.0	79.0	78.0	75.0	80.0	63.0	58.0	67.0
Acute monocytic	75.0	74.0	76.0	76.0	75.0	77.0	67.0	67.0	-
Other myeloid & monocytic	76.0	75.0	78.0	77.0	76.0	78.0	69.0	66.0	74.0
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	69.0	73.0
Aleukemic, subleukemic & NOS	77.0	76.0	79.0	78.0	77.0	80.0	70.0	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

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

Table 1.21
U.S. and SEER Death Rates by Primary Cancer Site and Race/Ethnicity, 2009-2013

		Total United States[a]							SEER 18 Areas[ab]						
Site		Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]	Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]
All Sites	Both Sexes	168.5	168.4	197.9	153.6	104.4	117.6	172.4	162.7	165.0	197.7	133.3	110.0	118.0	170.9
	Male	204.0	202.9	254.2	183.0	125.6	145.0	207.2	195.5	197.2	251.0	159.9	133.1	143.3	203.6
	Female	143.4	143.6	163.8	132.3	89.6	98.5	147.3	139.7	142.2	165.2	114.3	93.8	100.3	147.7
Oral Cavity & Pharynx	Both Sexes	2.4	2.4	2.9	2.1	1.9	1.5	2.5	2.4	2.4	2.9	1.9	2.1	1.5	2.5
	Male	3.8	3.7	5.0	3.3	2.9	2.4	3.8	3.7	3.6	4.9	3.0	3.1	2.3	3.8
	Female	1.3	1.3	1.3	1.1	1.2	0.8	1.4	1.4	1.4	1.5	-	1.3	0.9	1.4
Esophagus	Both Sexes	4.1	4.3	3.8	3.3	1.7	2.2	4.5	3.8	4.0	3.7	2.4	1.7	2.2	4.3
	Male	7.4	7.7	6.6	5.2	2.9	4.1	8.0	6.7	7.2	6.3	3.7	3.0	4.1	7.6
	Female	1.5	1.5	1.9	1.8	0.8	0.8	1.6	1.4	1.5	1.9	1.5	0.7	0.8	1.6
Stomach	Both Sexes	3.3	2.9	6.1	5.3	5.7	5.4	2.6	3.8	3.3	6.2	6.9	5.9	5.9	2.7
	Male	4.5	3.9	8.8	7.4	7.5	7.1	3.5	5.1	4.4	8.6	9.3	7.6	7.6	3.8
	Female	2.4	2.1	4.2	3.8	4.4	4.1	1.8	2.8	2.4	4.5	5.0	4.7	4.6	1.9
Colon & Rectum	Both Sexes	15.1	14.7	20.7	16.8	10.5	12.0	14.9	14.7	14.4	20.9	15.5	11.1	11.6	14.8
	Male	18.1	17.6	26.1	18.9	12.6	15.4	17.7	17.6	17.2	26.0	18.4	13.4	15.1	17.4
	Female	12.7	12.3	17.1	15.1	9.0	9.4	12.5	12.5	12.2	17.4	13.2	9.4	9.0	12.6
Liver & Intrahepatic Bile Duct	Both Sexes	6.1	5.7	8.1	10.2	9.7	9.0	5.3	6.6	6.0	8.1	9.0	9.9	9.3	5.4
	Male	9.1	8.3	12.8	14.3	14.4	13.0	7.8	9.8	8.8	12.8	12.5	14.8	13.5	8.0
	Female	3.6	3.4	4.4	6.8	6.0	5.7	3.2	3.9	3.6	4.5	6.0	6.0	5.9	3.3
Pancreas	Both Sexes	10.9	10.8	13.5	8.7	7.7	8.6	11.0	10.9	10.9	13.4	9.0	8.4	9.0	11.2
	Male	12.5	12.5	15.0	9.6	8.3	9.6	12.7	12.4	12.6	14.8	10.1	9.2	9.8	12.9
	Female	9.5	9.4	12.2	8.0	7.3	7.8	9.5	9.6	9.5	12.2	7.9	7.8	8.3	9.7
Larynx	Both Sexes	1.1	1.0	1.8	0.8	0.4	0.8	1.0	1.0	0.9	1.6	-	0.4	0.7	1.0
	Male	1.9	1.8	3.5	1.5	0.8	1.6	1.8	1.7	1.7	3.1	-	0.8	1.4	1.7
	Female	0.4	0.4	0.6	-	0.1	0.2	0.4	0.4	0.4	0.6	-	0.1	0.2	0.4
Lung & Bronchus	Both Sexes	46.0	46.7	49.4	37.8	24.2	19.7	49.1	41.7	42.9	48.5	27.5	25.4	18.5	46.4
	Male	57.8	57.7	70.6	46.6	32.7	28.3	60.2	51.8	52.0	68.5	35.9	34.9	25.4	55.7
	Female	37.0	38.3	35.3	31.3	18.1	13.5	40.6	34.1	35.9	35.1	21.3	18.6	13.4	39.3
Melanoma of the Skin	Both Sexes	2.7	3.1	0.4	1.0	0.3	0.8	3.4	2.5	3.1	0.4	0.9	0.4	0.8	3.5
	Male	4.1	4.6	0.5	1.5	0.4	1.0	5.0	3.8	4.6	0.5	-	0.5	1.0	5.2
	Female	1.7	2.0	0.4	0.6	0.3	0.6	2.1	1.6	1.9	0.3	-	0.3	0.6	2.2
Breast	Female	21.5	21.0	29.6	14.7	11.2	14.5	21.5	21.6	21.5	30.4	13.2	12.4	14.6	22.5

[a] US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

[d] Asian/Pacific Islander.

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

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

Table 1.21 - continued
U.S. and SEER Death Rates by Primary Cancer Site and Race/Ethnicity, 2009-2013

		Total United States[a]							SEER 18 Areas[ab]						
Site		Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]	Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]
Cervix	Female	2.3	2.1	3.9	3.2	1.8	2.6	2.0	2.3	2.2	3.6	2.9	1.9	2.6	2.1
Corpus & Uterus, NOS	Female	4.5	4.1	7.9	3.6	2.9	3.6	4.1	4.5	4.2	7.7	3.6	3.2	3.6	4.3
Ovary	Female	7.5	7.8	6.5	6.7	4.5	5.5	8.0	7.5	8.0	6.6	6.0	4.6	5.8	8.3
Prostate	Male	20.7	19.1	44.2	19.1	9.1	17.1	19.2	20.8	19.9	43.8	15.8	9.8	17.4	20.1
Testis	Male	0.3	0.3	0.1	0.3	0.1	0.3	0.3	0.3	0.3	0.1	-	0.1	0.3	0.3
Urinary Bladder	Both Sexes	4.4	4.6	3.6	2.1	1.7	2.3	4.8	4.3	4.7	3.8	1.9	1.8	2.4	4.9
	Male	7.7	8.1	5.4	3.8	2.9	4.0	8.4	7.5	8.1	5.6	3.4	3.1	3.9	8.6
	Female	2.2	2.2	2.5	1.1	0.9	1.2	2.3	2.1	2.2	2.6	-	0.9	1.3	2.4
Kidney & Renal Pelvis	Both Sexes	3.9	4.0	3.7	6.5	1.9	3.5	4.0	3.7	3.9	3.8	6.0	2.0	3.5	3.9
	Male	5.7	5.8	5.5	9.0	2.8	4.9	5.9	5.4	5.6	5.6	8.7	3.1	4.9	5.7
	Female	2.5	2.5	2.5	4.5	1.2	2.3	2.5	2.4	2.5	2.4	3.8	1.2	2.4	2.4
Brain & Nervous System	Both Sexes	4.3	4.7	2.5	2.4	2.0	2.9	4.9	4.2	4.7	2.6	2.2	2.1	2.9	5.1
	Male	5.3	5.7	3.1	3.0	2.4	3.4	6.0	5.2	5.8	3.2	2.8	2.5	3.4	6.2
	Female	3.5	3.8	2.1	1.8	1.7	2.4	4.0	3.4	3.9	2.2	1.7	1.8	2.5	4.1
Thyroid	Both Sexes	0.5	0.5	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.4	-	0.8	0.6	0.5
	Male	0.5	0.5	0.4	-	0.6	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	0.8	0.6	0.5	0.5	0.5	0.5	-	0.9	0.7	0.5
Hodgkin Lymphoma	Both Sexes	0.4	0.4	0.3	-	0.1	0.4	0.4	0.4	0.4	0.3	-	0.2	0.4	0.4
	Male	0.5	0.5	0.4	-	0.2	0.6	0.5	0.4	0.5	0.4	-	0.2	0.6	0.4
	Female	0.3	0.3	0.3	-	0.1	0.3	0.3	0.3	0.3	0.2	-	0.1	0.3	0.3
Non-Hodgkin Lymphoma	Both Sexes	6.0	6.3	4.4	4.5	4.0	5.1	6.3	5.9	6.2	4.3	4.1	4.1	5.3	6.3
	Male	7.7	8.1	5.7	5.7	4.9	6.3	8.1	7.6	8.0	5.8	4.8	5.1	6.6	8.2
	Female	4.7	4.9	3.5	3.5	3.3	4.2	4.9	4.6	4.9	3.3	3.5	3.5	4.3	4.9
Myeloma	Both Sexes	3.3	3.1	6.2	2.9	1.6	2.8	3.1	3.3	3.1	6.3	2.4	1.8	2.8	3.1
	Male	4.2	4.0	7.5	3.4	2.2	3.5	4.0	4.2	4.1	7.5	3.0	2.3	3.5	4.1
	Female	2.7	2.4	5.4	2.6	1.3	2.3	2.4	2.6	2.4	5.6	2.1	1.4	2.4	2.4
Leukemia	Both Sexes	6.9	7.1	5.8	4.5	4.0	4.9	7.2	6.6	7.0	5.9	3.7	4.2	4.8	7.1
	Male	9.3	9.6	7.7	6.2	5.1	6.2	9.8	8.8	9.3	7.5	5.7	5.4	6.0	9.6
	Female	5.2	5.3	4.6	3.3	3.1	4.0	5.3	5.0	5.2	4.8	2.4	3.3	3.9	5.3

[a] US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

[d] Asian/Pacific Islander.

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

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

Table 1.22
U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2013[a]
Using Different Tumor Inclusion Criteria[b]

		5-Year Limited Duration			38-year Limited Duration	
Site	Sex	1st Invasive Tumor Ever[c]	1st Per Site in Previous 38 Years[d]	1st Per Site in Previous 5 Years[e]	1st Invasive Tumor Ever[c]	1st Per Site in Previous 38 Years[d]
All Sites	Both Sexes	4,683,633	4,777,436	5,281,162	13,793,147	14,017,809
	Male	2,371,817	2,408,477	2,654,461	6,558,326	6,635,084
	Female	2,311,816	2,368,959	2,626,701	7,234,821	7,382,725
Oral Cavity & Pharynx	Both Sexes	111,858	129,718	134,909	292,631	324,216
	Male	78,943	90,724	93,801	195,801	215,214
	Female	32,915	38,994	41,108	96,830	109,002
Esophagus	Both Sexes	21,605	26,812	26,884	36,756	43,489
	Male	17,134	21,074	21,110	28,826	33,848
	Female	4,471	5,738	5,774	7,930	9,641
Stomach	Both Sexes	38,885	46,951	47,520	78,761	91,003
	Male	22,739	27,768	28,102	44,833	52,171
	Female	16,146	19,183	19,418	33,928	38,832
Colon & Rectum	Both Sexes	393,064	452,807	462,351	1,160,780	1,291,277
	Male	201,444	232,173	236,571	579,395	642,194
	Female	191,620	220,634	225,780	581,385	649,083
Liver & Intrahepatic Bile Duct	Both Sexes	38,940	44,690	44,772	54,464	61,346
	Male	28,968	32,749	32,797	39,263	43,716
	Female	9,972	11,941	11,975	15,201	17,630
Pancreas	Both Sexes	36,831	44,775	44,811	49,363	58,920
	Male	18,821	22,954	22,966	24,251	29,201
	Female	18,010	21,821	21,845	25,112	29,719
Larynx	Both Sexes	32,033	37,848	38,327	87,910	98,553
	Male	25,889	30,586	30,982	70,533	78,905
	Female	6,144	7,262	7,345	17,377	19,648
Lung & Bronchus	Both Sexes	235,891	305,893	316,680	409,799	509,857
	Male	107,952	142,292	146,705	182,649	228,690
	Female	127,939	163,601	169,975	227,150	281,167
Melanoma of the Skin	Both Sexes	293,419	335,454	352,673	1,001,852	1,085,564
	Male	158,125	185,809	196,879	498,832	548,924
	Female	135,294	149,645	155,794	503,020	536,640
Breast	Female	888,374	963,711	1,026,553	3,011,973	3,194,990
Cervix	Female	39,026	41,272	41,346	216,287	222,528
Corpus & Uterus, NOS	Female	190,409	213,555	213,718	615,772	673,630
Ovary[f]	Female	61,283	70,222	70,275	181,920	204,129

[a] U.S. 2013 cancer prevalence counts are based on 2013 cancer prevalence proportions from the SEER 9 registries and 1/1/2013 U.S. population estimates based on the average of 2012 and 2013 population estimates from the U.S. Bureau of the Census.

[b] Prevalence estimates are ambiguous for those with multiple cancers, unless the tumor inclusion criteria are understood. Depending on the application, different inclusion criteria may be appropriate. This table provides three different methods of tumor inclusion:
[c] (c) First invasive tumor ever
[d] (d) First invasive tumor for each cancer site diagnosed during the previous 38 years (1975-2012)
[e] (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2008-2012)
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 2008; Melanoma in 2009.
In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 38-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 1/1/2013.
In method (d) the 1981 melanoma is counted for the melanoma and all sites 38-year limited duration prevalence. The 2008 breast cancer is counted for the breast 5-year and 38-year limited duration prevalence.
In method (e) the 2008 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2009 melanoma is counted for 5-year limited duration prevalence for melanoma.

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

Table 1.22 - continued
U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2013[a]
Using Different Tumor Inclusion Criteria[b]

		5-Year Limited Duration			38-year Limited Duration	
Site	Sex	1st Invasive Tumor Ever[c]	1st Per Site in Previous 38 Years[d]	1st Per Site in Previous 5 Years[e]	1st Invasive Tumor Ever[c]	1st Per Site in Previous 38 Years[d]
Prostate	Male	996,735	1,077,771	1,077,866	2,849,303	3,033,987
Testis	Male	42,726	43,748	44,378	226,015	229,281
Urinary Bladder	Both Sexes	203,937	256,726	262,276	578,563	677,871
	Male	154,968	196,098	200,600	432,356	507,228
	Female	48,969	60,628	61,676	146,207	170,643
Kidney & Renal Pelvis	Both Sexes	158,086	192,740	195,379	384,082	448,864
	Male	97,484	120,269	122,119	228,920	270,059
	Female	60,602	72,471	73,260	155,162	178,805
Brain & Nervous System	Both Sexes	46,359	49,525	49,948	140,209	144,923
	Male	24,907	26,640	26,879	74,171	76,649
	Female	21,452	22,885	23,069	66,038	68,274
Thyroid	Both Sexes	194,792	218,107	218,918	600,285	645,059
	Male	43,408	51,452	51,619	130,022	143,922
	Female	151,384	166,655	167,299	470,263	501,137
Hodgkin Lymphoma	Both Sexes	37,358	39,844	39,912	181,370	186,607
	Male	20,235	21,627	21,671	94,047	96,687
	Female	17,123	18,217	18,241	87,323	89,920
Non-Hodgkin Lymphoma	Both Sexes	208,024	245,167	249,216	561,810	630,027
	Male	112,213	133,122	135,245	296,343	333,061
	Female	95,811	112,045	113,971	265,467	296,966
Myeloma	Both Sexes	60,408	71,647	71,915	95,457	110,345
	Male	32,121	39,215	39,380	51,385	60,395
	Female	28,287	32,432	32,535	44,072	49,950
Leukemia	Both Sexes	124,326	145,980	146,454	328,477	363,794
	Male	72,087	85,110	85,378	186,605	207,382
	Female	52,239	60,870	61,076	141,872	156,412
Acute Lymphocytic Leukemia	Both Sexes	17,063	17,597	17,597	74,508	75,300
	Male	9,316	9,590	9,590	40,643	41,001
	Female	7,747	8,007	8,007	33,865	34,299
Childhood (Ages 0-19)	Both Sexes	66,771	66,880	67,473	337,686	338,228
	Male	34,885	34,966	35,300	173,483	173,747
	Female	31,886	31,914	32,173	164,203	164,481
Kaposi Sarcoma	Both Sexes	7,288	7,954	7,954	26,999	28,478
	Male	6,806	7,404	7,404	25,587	26,891
	Female	482	550	550	1,412	1,587
Mesothelioma	Both Sexes	3,073	4,014	4,014	4,738	5,803
	Male	2,172	2,842	2,842	2,854	3,587
	Female	901	1,172	1,172	1,884	2,216

[a] U.S. 2013 cancer prevalence counts are based on 2013 cancer prevalence proportions from the SEER 9 registries and 1/1/2013 U.S. population estimates based on the average of 2012 and 2013 population estimates from the U.S. Bureau of the Census.

[b] Prevalence estimates are ambiguous for those with multiple cancers, unless the tumor inclusion criteria are understood. Depending on the application, different inclusion criteria may be appropriate. This table provides three different methods of tumor inclusion:
[c] (c) First invasive tumor ever
[d] (d) First invasive tumor for each cancer site diagnosed during the previous 38 years (1975-2012)
[e] (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2008-2012)
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 2008; Melanoma in 2009.
In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 38-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 1/1/2013.
In method (d) the 1981 melanoma is counted for the melanoma and all sites 38-year limited duration prevalence. The 2008 breast cancer is counted for the breast 5-year and 38-year limited duration prevalence.
In method (e) the 2008 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2009 melanoma is counted for 5-year limited duration prevalence for melanoma.

Table 1.23
U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2013[a]
By Age at Prevalence

Site/Sex	Age at Prevalence								
	All Ages[c]	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
All Sites									
Males	6,630,144	18,977	42,515	89,810	160,506	352,035	920,363	1,777,405	3,268,534
Females	7,510,110	17,057	36,959	90,895	235,457	635,354	1,378,596	1,900,156	3,215,637
Oral Cavity & Pharynx									
Males	200,280	28	471	1,653	3,431	13,626	48,036	65,705	67,330
Females	100,402	96	546	1,517	3,868	8,513	19,303	25,928	40,633
Esophagus									
Males	28,878	0	0	6	138	1,080	4,812	10,234	12,607
Females	7,979	0	0	22	34	189	1,353	2,058	4,324
Stomach									
Males	45,442	0	40	177	555	2,588	7,433	12,737	21,912
Females	34,401	0	27	231	757	2,445	4,965	7,644	18,332
Colon & Rectum									
Males	585,136	11	94	1,316	6,064	26,227	85,943	144,658	320,823
Females	592,420	0	230	1,444	6,369	23,982	73,478	117,870	369,046
Liver & Intrahep									
Males	39,334	612	484	604	641	1,590	11,144	15,911	8,350
Females	15,620	413	570	434	455	1,044	3,383	4,681	4,640
Pancreas									
Males	24,363	34	23	153	365	1,584	5,088	7,791	9,324
Females	25,257	0	12	288	536	1,593	4,671	7,156	11,001
Larynx									
Males	71,488	0	0	89	292	1,713	10,143	21,196	38,055
Females	17,593	0	0	28	144	847	3,543	5,051	7,979
Lung & Bronchus									
Males	186,030	34	75	517	1,120	4,955	23,975	55,413	99,941
Females	229,677	34	104	399	1,489	6,572	31,088	61,774	128,218
Melanoma of the Skin									
Males	509,094	56	696	4,938	17,619	45,039	99,914	144,398	196,432
Females	525,366	113	834	10,310	34,836	72,511	121,614	127,402	157,747

[a] U.S. 2013 cancer prevalence counts are based on 2013 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2013 U.S. population estimates based on the average of 2012 and 2013 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

[b] Cases diagnosed more than 38 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

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

Table 1.23 - continued
U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2013[a]
By Age at Prevalence

Site/Sex	Age at Prevalence								
	All Ages[c]	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Breast									
Males	15,781	0	0	11	115	703	1,911	4,527	8,514
Females	3,053,450	11	47	2,984	36,611	211,630	567,039	845,870	1,389,258
Cervix									
Females	248,920	0	68	1,821	14,820	40,574	59,368	60,139	72,130
Corpus & Uterus, NOS									
Females	635,437	11	23	629	6,040	25,247	93,125	182,278	328,082
Ovary[d]									
Females	195,767	105	1,012	3,796	6,939	18,071	41,987	52,895	70,961
Prostate									
Males	2,850,139	34	46	104	343	18,486	237,236	815,954	1,777,936
Urinary Bladder									
Males	438,068	68	105	551	2,315	9,819	42,325	105,894	276,992
Females	149,358	68	34	241	968	3,908	13,820	31,806	98,514
Kidney & Renal Pelvis									
Males	234,706	1,375	2,285	2,963	5,082	19,921	46,181	68,291	88,610
Females	159,630	1,455	2,581	3,065	5,082	12,617	28,144	40,702	65,983
Hodgkin Lymphoma									
Males	100,096	203	2,405	9,526	16,482	23,489	23,526	16,032	8,431
Females	93,449	34	2,104	9,344	16,640	22,518	21,509	13,067	8,232
Non-Hodgkin Lymphoma									
Males	300,417	927	3,738	8,182	14,080	29,312	57,496	77,491	109,191
Females	269,119	452	1,681	4,846	9,401	21,417	43,880	66,307	121,135
Myeloma									
Males	51,465	0	6	110	539	3,457	9,101	16,940	21,313
Females	44,223	0	0	45	377	2,237	7,664	12,935	20,965
Leukemia									
Males	189,019	6,519	13,341	13,964	12,067	15,409	26,626	39,493	61,600
Females	144,956	6,039	10,458	12,073	11,027	11,191	17,766	26,051	50,352
Acute Lymphocytic Leuk									
Males	42,395	5,394	11,202	10,799	6,965	4,601	1,951	925	559
Females	35,460	5,139	8,796	8,782	6,216	3,365	1,545	1,069	549

[a] U.S. 2013 cancer prevalence counts are based on 2013 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2013 U.S. population estimates based on the average of 2012 and 2013 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

[b] Cases diagnosed more than 38 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

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

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

Both Sexes

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	448.7	-0.9*
Breast	67.2	0.0
Prostate[f]	59.0	-3.6*
Lung and Bronchus	57.3	-2.1*
Colon and Rectum	41.0	-2.9*
Melanoma of the Skin	21.8	0.9*
Urinary Bladder	20.1	-1.3*
Non-Hodgkin Lymphoma	19.5	-0.5*
Kidney and Renal Pelvis	15.6	1.1*
Thyroid	13.9	4.7*
Corpus and Uterus, NOS[f]	13.5	1.2*
Leukemia	13.5	0.4
Pancreas	12.4	0.6*
Oral Cavity and Pharynx	11.1	0.6*
Liver & IBD[g]	8.4	2.8*
Stomach	7.4	-1.1*

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	457.4	-0.9*
Breast	68.0	-0.1
Lung and Bronchus	58.8	-2.0*
Prostate[f]	56.3	-3.9*
Colon and Rectum	40.1	-3.0*
Melanoma of the Skin	25.9	0.9*
Urinary Bladder	22.0	-1.2*
Non-Hodgkin Lymphoma	20.4	-0.6*
Kidney and Renal Pelvis	16.1	1.1*
Thyroid	14.7	4.7*
Leukemia	14.3	0.4
Corpus and Uterus, NOS[f]	13.7	0.9*
Pancreas	12.4	0.7*
Oral Cavity and Pharynx	11.6	0.9*
Liver & IBD[g]	7.5	3.6*
Brain and ONS[g]	7.1	-0.5*

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	470.2	-1.3*
Prostate[f]	86.7	-3.4*
Breast	71.2	0.5
Lung and Bronchus	65.0	-2.4*
Colon and Rectum	50.7	-2.9*
Kidney and Renal Pelvis	18.1	1.6*
Pancreas	15.5	-0.6
Non-Hodgkin Lymphoma	14.6	-0.7
Corpus and Uterus, NOS[f]	14.0	2.7*
Myeloma	13.2	1.0*
Urinary Bladder	12.6	-1.0*
Leukemia	10.8	0.4
Stomach	10.6	-2.5*
Liver & IBD[g]	10.0	2.6*
Oral Cavity and Pharynx	9.2	-2.0*
Thyroid	8.3	4.5*

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	302.8	-1.1*
Breast	53.5	0.9*
Lung and Bronchus	36.7	-1.5*
Colon and Rectum	34.8	-2.6*
Prostate[f]	30.1	-5.5*
Thyroid	13.6	4.6*
Liver & IBD[g]	13.5	-2.0*
Non-Hodgkin Lymphoma	13.5	-0.1
Corpus and Uterus, NOS[f]	11.1	2.3*
Stomach	11.0	-3.6*
Pancreas	10.0	0.5*
Urinary Bladder	8.8	-1.8*
Kidney and Renal Pelvis	8.1	1.4
Leukemia	7.7	-0.1
Oral Cavity and Pharynx	7.7	-0.4
Ovary[fh]	5.1	-0.8

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	320.0	-1.3*
Breast	43.7	-0.6
Colon and Rectum	40.9	-1.3*
Lung and Bronchus	38.9	-3.6*
Prostate[f]	28.4	-5.1*
Kidney and Renal Pelvis	18.6	-0.7
Liver & IBD[g]	12.9	0.0
Non-Hodgkin Lymphoma	12.9	-0.2
Corpus and Uterus, NOS[f]	11.3	3.2
Stomach	10.4	-1.0
Pancreas	9.7	-3.0
Oral Cavity and Pharynx	9.1	3.4*
Thyroid	8.8	5.0*
Leukemia	8.2	0.2
Urinary Bladder	8.1	-1.8
Ovary[fh]	5.6	-1.9

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	344.6	-1.3*
Breast	49.5	0.2
Prostate[f]	47.3	-4.7*
Colon and Rectum	34.7	-2.6*
Lung and Bronchus	29.7	-2.4*
Non-Hodgkin Lymphoma	17.7	-0.4
Kidney and Renal Pelvis	15.4	0.8
Liver & IBD[g]	12.9	2.0*
Thyroid	11.9	4.5*
Corpus and Uterus, NOS[f]	11.4	2.3*
Pancreas	11.1	-0.3
Urinary Bladder	11.1	-1.9*
Stomach	10.6	-2.2*
Leukemia	10.6	0.3
Oral Cavity and Pharynx	6.7	0.3
Myeloma	6.0	0.3

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

[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[d] Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
[e] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
[f] The rates for sex-specific cancer sites are calculated using the population for both sexes combined.
[g] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
[h] Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
* The APC is significantly different from zero (p<.05).
\- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

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

Males

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	504.5	-1.7*
Prostate	129.4	-4.0*
Lung and Bronchus	67.9	-2.7*
Colon and Rectum	47.1	-3.1*
Urinary Bladder	35.3	-1.4*
Melanoma of the Skin	28.5	1.2*
Non-Hodgkin Lymphoma	23.7	-0.4*
Kidney and Renal Pelvis	21.4	1.1*
Leukemia	17.3	0.3
Oral Cavity and Pharynx	16.7	0.7*
Pancreas	14.1	0.6*
Liver & IBD[f]	13.0	2.8*
Stomach	10.0	-1.5*
Myeloma	8.2	1.3*
Brain and ONS[f]	7.6	-0.5*
Esophagus	7.4	-1.4*

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	508.2	-1.7*
Prostate	121.9	-4.3*
Lung and Bronchus	68.1	-2.7*
Colon and Rectum	46.0	-3.3*
Urinary Bladder	38.5	-1.3*
Melanoma of the Skin	33.5	1.1*
Non-Hodgkin Lymphoma	24.8	-0.4*
Kidney and Renal Pelvis	21.9	1.1*
Leukemia	18.2	0.2
Oral Cavity and Pharynx	17.4	1.0*
Pancreas	14.1	0.7*
Liver & IBD[f]	11.6	3.5*
Stomach	9.1	-1.1*
Brain and ONS[f]	8.3	-0.6*
Esophagus	7.9	-0.8*
Myeloma	7.7	1.4*

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	571.8	-2.4*
Prostate	203.5	-3.8*
Lung and Bronchus	87.3	-3.1*
Colon and Rectum	59.2	-3.0*
Kidney and Renal Pelvis	25.0	1.1
Urinary Bladder	21.2	-0.8
Non-Hodgkin Lymphoma	17.6	-1.1
Pancreas	17.2	-0.3
Liver & IBD[f]	16.4	2.6*
Myeloma	15.7	0.7
Oral Cavity and Pharynx	14.4	-2.0*
Stomach	14.0	-3.4*
Leukemia	13.8	0.2
Larynx	8.7	-3.4*
Esophagus	7.2	-4.5*
Brain and ONS[f]	4.9	1.4*

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	317.3	-2.3*
Prostate	68.9	-5.7*
Lung and Bronchus	47.9	-2.1*
Colon and Rectum	41.2	-2.1*
Liver & IBD[f]	20.8	-1.7*
Non-Hodgkin Lymphoma	16.5	-0.1
Urinary Bladder	15.5	-1.8*
Stomach	14.3	-4.0*
Kidney and Renal Pelvis	11.7	2.0*
Oral Cavity and Pharynx	11.1	0.5
Pancreas	11.0	0.3
Leukemia	9.6	0.0
Thyroid	6.5	5.8*
Myeloma	4.7	0.7
Brain and ONS[f]	4.3	0.8
Esophagus	3.4	-4.8*

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	338.5	-1.6*
Prostate	63.9	-5.4*
Lung and Bronchus	48.6	-2.1
Colon and Rectum	46.2	-0.1
Kidney and Renal Pelvis	25.1	1.3
Liver & IBD[f]	18.5	-0.4
Non-Hodgkin Lymphoma	14.6	-0.6
Urinary Bladder	14.4	-2.0
Stomach	13.5	-2.0
Oral Cavity and Pharynx	13.2	4.6
Pancreas	10.9	-
Leukemia	9.7	0.1
Myeloma	5.2	-
Esophagus	5.0	-
Testis	4.9	-
Melanoma of the Skin	4.2	-

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	382.9	-2.4*
Prostate	106.9	-5.0*
Colon and Rectum	41.3	-3.0*
Lung and Bronchus	36.6	-3.4*
Non-Hodgkin Lymphoma	20.7	0.0
Kidney and Renal Pelvis	20.1	0.1
Liver & IBD[f]	19.5	1.9*
Urinary Bladder	19.4	-2.2*
Stomach	13.5	-3.2*
Leukemia	12.8	0.2
Pancreas	11.8	-0.6
Oral Cavity and Pharynx	10.0	0.2
Myeloma	7.5	0.9
Brain and ONS[f]	5.7	-1.7*
Thyroid	5.0	3.9*
Testis	5.0	2.3*

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

[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.

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

[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

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

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

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

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

\- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

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

Females

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	409.9	-0.2
Breast	125.0	0.2
Lung and Bronchus	49.4	-1.5*
Colon and Rectum	36.0	-2.7*
Corpus and Uterus, NOS	25.4	1.4*
Thyroid	20.6	4.8*
Melanoma of the Skin	16.9	0.4
Non-Hodgkin Lymphoma	16.1	-0.7*
Ovary[g]	11.9	-1.7*
Pancreas	11.0	0.5*
Kidney and Renal Pelvis	10.7	0.9
Leukemia	10.5	0.4
Urinary Bladder	8.6	-1.6*
Cervix Uteri	7.5	-1.7*
Oral Cavity and Pharynx	6.2	0.0
Brain and ONS[f]	5.4	-0.5

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	422.5	-0.2
Breast	128.0	0.1
Lung and Bronchus	51.8	-1.4*
Colon and Rectum	35.2	-2.7*
Corpus and Uterus, NOS	26.0	1.1*
Thyroid	21.9	4.8*
Melanoma of the Skin	20.4	0.4
Non-Hodgkin Lymphoma	16.9	-0.8*
Ovary[g]	12.5	-1.8*
Leukemia	11.1	0.4
Kidney and Renal Pelvis	11.1	0.9
Pancreas	10.9	0.7*
Urinary Bladder	9.2	-1.5*
Cervix Uteri	7.5	-1.5*
Oral Cavity and Pharynx	6.4	0.4
Brain and ONS[f]	6.0	-0.4

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	400.5	-0.3
Breast	125.2	0.6*
Lung and Bronchus	50.0	-1.5*
Colon and Rectum	44.8	-3.0*
Corpus and Uterus, NOS	24.6	2.9*
Pancreas	14.2	-0.8
Kidney and Renal Pelvis	12.8	2.0*
Thyroid	12.4	5.0*
Non-Hodgkin Lymphoma	12.2	-0.3
Myeloma	11.5	1.2
Ovary[g]	9.6	-1.1*
Cervix Uteri	8.9	-2.5*
Leukemia	8.7	0.4
Stomach	8.1	-1.7
Urinary Bladder	6.9	-1.9*
Oral Cavity and Pharynx	5.2	-2.1*

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	296.7	-0.1
Breast	97.3	0.9*
Colon and Rectum	29.8	-3.1*
Lung and Bronchus	28.5	-0.6
Corpus and Uterus, NOS	20.3	2.3*
Thyroid	19.9	4.2*
Non-Hodgkin Lymphoma	11.1	-0.2
Ovary[g]	9.3	-0.7
Pancreas	9.3	0.8
Stomach	8.5	-3.2*
Liver & IBD[f]	7.6	-2.5*
Leukemia	6.2	-0.2
Cervix Uteri	6.2	-3.1*
Kidney and Renal Pelvis	5.4	0.4
Oral Cavity and Pharynx	4.9	-1.7
Urinary Bladder	3.9	-1.3

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	310.7	-0.9*
Breast	81.2	-0.5
Colon and Rectum	36.8	-2.3*
Lung and Bronchus	32.0	-5.1*
Corpus and Uterus, NOS	21.3	3.4
Thyroid	13.6	7.0*
Kidney and Renal Pelvis	13.3	-3.3
Non-Hodgkin Lymphoma	11.6	-0.3
Ovary[g]	10.4	-1.9
Pancreas	8.6	-4.0
Liver & IBD[f]	8.1	0.1
Stomach	8.0	0.5
Cervix Uteri	7.7	-0.8
Leukemia	7.2	0.9
Oral Cavity and Pharynx	5.7	-
Myeloma	4.8	-

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	321.9	-0.2
Breast	92.4	0.3
Colon and Rectum	29.4	-2.2*
Lung and Bronchus	24.8	-1.3*
Corpus and Uterus, NOS	21.4	2.5*
Thyroid	18.6	4.6*
Non-Hodgkin Lymphoma	15.3	-0.7
Kidney and Renal Pelvis	11.5	1.6*
Ovary[g]	10.6	-1.7*
Pancreas	10.4	0.0
Cervix Uteri	9.4	-4.5*
Leukemia	8.8	0.2
Stomach	8.5	-1.0
Liver & IBD[f]	7.4	2.3*
Urinary Bladder	5.0	-1.6*
Myeloma	4.9	-0.5

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

[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[d] Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
[e] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
[f] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
[g] Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
* The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

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

Both Sexes

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	168.5	-1.5*
Lung and Bronchus	46.0	-2.3*
Colon and Rectum	15.1	-2.5*
Breast	12.0	-2.0*
Pancreas	10.9	0.1
Prostate[f]	8.2	-2.7*
Leukemia	6.9	-0.9*
Liver & IBD[g]	6.1	2.8*
Non-Hodgkin Lymphoma	6.0	-2.3*
Urinary Bladder	4.4	0.0
Brain and ONS[g]	4.3	0.2
Ovary[f]	4.2	-2.5*
Esophagus	4.1	-1.0*
Kidney and Renal Pelvis	3.9	-0.8*
Myeloma	3.3	-0.8*
Stomach	3.3	-2.5*

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	168.4	-1.4*
Lung and Bronchus	46.7	-2.2*
Colon and Rectum	14.7	-2.5*
Breast	11.6	-2.0*
Pancreas	10.8	0.2*
Prostate[f]	7.7	-2.5*
Leukemia	7.1	-0.7*
Non-Hodgkin Lymphoma	6.3	-2.3*
Liver & IBD[g]	5.7	2.9*
Brain and ONS[g]	4.7	0.3
Urinary Bladder	4.6	0.1*
Ovary[f]	4.3	-2.5*
Esophagus	4.3	-0.4*
Kidney and Renal Pelvis	4.0	-0.7*
Melanoma of the Skin	3.1	0.0
Myeloma	3.1	-0.8*

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	197.9	-2.1*
Lung and Bronchus	49.4	-2.7*
Colon and Rectum	20.7	-3.0*
Breast	17.4	-1.5*
Prostate[f]	15.9	-3.7*
Pancreas	13.5	-0.4*
Liver & IBD[g]	8.1	2.5*
Myeloma	6.2	-0.8*
Stomach	6.1	-3.1*
Leukemia	5.8	-1.5*
Corpus and Uterus, NOS[f]	4.7	1.6*
Non-Hodgkin Lymphoma	4.4	-1.9*
Ovary[f]	3.8	-2.0*
Esophagus	3.8	-4.4*
Kidney and Renal Pelvis	3.7	-1.4*
Urinary Bladder	3.6	-0.9*

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	104.4	-1.3*
Lung and Bronchus	24.2	-1.6*
Colon and Rectum	10.5	-1.5*
Liver & IBD[g]	9.7	-0.6
Pancreas	7.7	0.0
Breast	6.3	-1.2*
Stomach	5.7	-4.0*
Non-Hodgkin Lymphoma	4.0	-1.4*
Leukemia	4.0	0.2
Prostate[f]	3.6	-3.7*
Ovary[f]	2.5	-1.4*
Brain and ONS[g]	2.0	0.8
Oral Cavity and Pharynx	1.9	-0.9
Kidney and Renal Pelvis	1.9	-0.3
Urinary Bladder	1.7	0.1
Esophagus	1.7	-2.2*

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	153.6	-1.2*
Lung and Bronchus	37.8	-1.7*
Colon and Rectum	16.8	0.1
Liver & IBD[g]	10.2	1.7
Pancreas	8.7	-0.9
Breast	8.2	-3.9*
Prostate[f]	7.7	-2.6*
Kidney and Renal Pelvis	6.5	1.0
Stomach	5.3	-2.5
Non-Hodgkin Lymphoma	4.5	-2.5*
Leukemia	4.5	-2.1
Ovary[f]	3.7	-1.5
Esophagus	3.3	-2.8*
Myeloma	2.9	-2.2
Brain and ONS[g]	2.4	2.5
Urinary Bladder	2.1	1.3

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	117.6	-1.2*
Lung and Bronchus	19.7	-2.5*
Colon and Rectum	12.0	-1.7*
Liver & IBD[g]	9.0	1.6*
Pancreas	8.6	-0.2
Breast	8.0	-1.2*
Prostate[f]	6.8	-2.8*
Stomach	5.4	-2.7*
Non-Hodgkin Lymphoma	5.1	-1.2*
Leukemia	4.9	0.0
Kidney and Renal Pelvis	3.5	-1.1*
Ovary[f]	3.1	-1.8*
Brain and ONS[g]	2.9	0.3
Myeloma	2.8	-0.7
Urinary Bladder	2.3	-0.6
Esophagus	2.2	-1.5

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[d] Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
[e] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
[f] The rates for sex-specific cancer sites are calculated using the population for both sexes combined.
[g] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
* The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

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

Males

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	204.0	-1.8*
Lung and Bronchus	57.8	-2.9*
Prostate	20.7	-3.4*
Colon and Rectum	18.1	-2.6*
Pancreas	12.5	0.1
Leukemia	9.3	-0.9*
Liver & IBD[f]	9.1	2.9*
Non-Hodgkin Lymphoma	7.7	-2.0*
Urinary Bladder	7.7	-0.1*
Esophagus	7.4	-1.0*
Kidney and Renal Pelvis	5.7	-0.6*
Brain and ONS[f]	5.3	0.2
Stomach	4.5	-2.8*
Myeloma	4.2	-0.8*
Melanoma of the Skin	4.1	0.0
Oral Cavity and Pharynx	3.8	-0.4

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	202.9	-1.6*
Lung and Bronchus	57.7	-2.9*
Prostate	19.1	-3.3*
Colon and Rectum	17.6	-2.6*
Pancreas	12.5	0.2*
Leukemia	9.6	-0.8*
Liver & IBD[f]	8.3	3.1*
Urinary Bladder	8.1	0.0
Non-Hodgkin Lymphoma	8.1	-2.0*
Esophagus	7.7	-0.5*
Kidney and Renal Pelvis	5.8	-0.5*
Brain and ONS[f]	5.7	0.3
Melanoma of the Skin	4.6	0.2
Myeloma	4.0	-0.7*
Stomach	3.9	-2.8*
Oral Cavity and Pharynx	3.7	0.2

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	254.2	-2.7*
Lung and Bronchus	70.6	-3.4*
Prostate	44.2	-4.3*
Colon and Rectum	26.1	-2.7*
Pancreas	15.0	-0.5
Liver & IBD[f]	12.8	2.7*
Stomach	8.8	-3.4*
Leukemia	7.7	-1.7*
Myeloma	7.5	-1.3*
Esophagus	6.6	-4.6*
Non-Hodgkin Lymphoma	5.7	-1.6*
Kidney and Renal Pelvis	5.5	-1.4*
Urinary Bladder	5.4	-0.6
Oral Cavity and Pharynx	5.0	-3.4*
Larynx	3.5	-4.0*
Brain and ONS[f]	3.1	0.7

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	125.6	-1.6*
Lung and Bronchus	32.7	-2.4*
Liver & IBD[f]	14.4	-0.4
Colon and Rectum	12.6	-1.4*
Prostate	9.1	-3.6*
Pancreas	8.3	-0.4
Stomach	7.5	-4.3*
Leukemia	5.1	-0.4
Non-Hodgkin Lymphoma	4.9	-1.5*
Urinary Bladder	2.9	0.7
Esophagus	2.9	-2.0
Oral Cavity and Pharynx	2.9	-0.9
Kidney and Renal Pelvis	2.8	0.5
Brain and ONS[f]	2.4	0.5
Myeloma	2.2	-0.1
Soft Tissue including Heart	1.1	0.6

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	183.0	-1.3*
Lung and Bronchus	46.6	-1.7
Prostate	19.1	-3.3*
Colon and Rectum	18.9	-1.1
Liver & IBD[f]	14.3	3.7*
Pancreas	9.6	-1.9
Kidney and Renal Pelvis	9.0	-0.5
Stomach	7.4	-4.2
Leukemia	6.2	-1.7
Non-Hodgkin Lymphoma	5.7	0.1
Esophagus	5.2	-4.2
Urinary Bladder	3.8	1.2
Myeloma	3.4	-3.0
Oral Cavity and Pharynx	3.3	-2.2
Brain and ONS[f]	3.0	1.9
Soft Tissue including Heart	1.7	-

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	145.0	-1.6*
Lung and Bronchus	28.3	-3.3*
Prostate	17.1	-3.3*
Colon and Rectum	15.4	-1.3*
Liver & IBD[f]	13.0	1.5*
Pancreas	9.6	-0.4
Stomach	7.1	-3.0*
Non-Hodgkin Lymphoma	6.3	-1.0*
Leukemia	6.2	-0.2
Kidney and Renal Pelvis	4.9	-1.9*
Esophagus	4.1	-1.4
Urinary Bladder	4.0	-0.6
Myeloma	3.5	-0.4
Brain and ONS[f]	3.4	0.1
Oral Cavity and Pharynx	2.4	-1.3*
Larynx	1.6	-3.0*

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[d] Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
[e] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
[f] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
* The APC is significantly different from zero (p<.05).
\- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

Table 1.29
Age-Adjusted U.S. Death Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Females

All Races

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	143.4	-1.4*
Lung and Bronchus	37.0	-1.6*
Breast	21.5	-1.8*
Colon and Rectum	12.7	-2.7*
Pancreas	9.5	0.1
Ovary	7.5	-2.2*
Leukemia	5.2	-1.0*
Non-Hodgkin Lymphoma	4.7	-2.8*
Corpus and Uterus, NOS	4.5	1.3*
Liver & IBD[f]	3.6	2.2*
Brain and ONS[f]	3.5	0.1
Myeloma	2.7	-1.1*
Kidney and Renal Pelvis	2.5	-1.4*
Stomach	2.4	-2.4*
Cervix Uteri	2.3	-0.7*
Urinary Bladder	2.2	-0.6*

White

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	143.6	-1.3*
Lung and Bronchus	38.3	-1.5*
Breast	21.0	-1.8*
Colon and Rectum	12.3	-2.6*
Pancreas	9.4	0.2
Ovary	7.8	-2.2*
Leukemia	5.3	-0.9*
Non-Hodgkin Lymphoma	4.9	-2.8*
Corpus and Uterus, NOS	4.1	1.1*
Brain and ONS[f]	3.8	0.3
Liver & IBD[f]	3.4	2.3*
Kidney and Renal Pelvis	2.5	-1.3*
Myeloma	2.4	-1.2*
Urinary Bladder	2.2	-0.4*
Cervix Uteri	2.1	-0.4
Stomach	2.1	-2.4*

Black

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	163.8	-1.6*
Lung and Bronchus	35.3	-1.9*
Breast	29.6	-1.4*
Colon and Rectum	17.1	-3.5*
Pancreas	12.2	-0.3
Corpus and Uterus, NOS	7.9	1.9*
Ovary	6.5	-1.8*
Myeloma	5.4	-0.5
Leukemia	4.6	-1.4*
Liver & IBD[f]	4.4	2.0*
Stomach	4.2	-3.0*
Cervix Uteri	3.9	-1.9*
Non-Hodgkin Lymphoma	3.5	-2.0*
Urinary Bladder	2.5	-1.7*
Kidney and Renal Pelvis	2.5	-1.5*
Brain and ONS[f]	2.1	0.1

Asian/Pacific Islander

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	89.6	-1.0*
Lung and Bronchus	18.1	-0.4
Breast	11.2	-1.3*
Colon and Rectum	9.0	-1.7*
Pancreas	7.3	0.4
Liver & IBD[f]	6.0	-0.9
Ovary	4.5	-1.3*
Stomach	4.4	-3.7*
Non-Hodgkin Lymphoma	3.3	-1.2*
Leukemia	3.1	0.9
Corpus and Uterus, NOS	2.9	2.8*
Cervix Uteri	1.8	-1.7
Brain and ONS[f]	1.7	1.1
Myeloma	1.3	-2.0
Oral Cavity and Pharynx	1.2	-1.2
Kidney and Renal Pelvis	1.2	-1.5

American Indian/Alaska Native[d]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	132.3	-1.4*
Lung and Bronchus	31.3	-1.6*
Colon and Rectum	15.1	1.0
Breast	14.7	-3.7*
Pancreas	8.0	-0.9
Liver & IBD[f]	6.8	-1.6
Ovary	6.7	-1.3
Kidney and Renal Pelvis	4.5	2.6
Stomach	3.8	-0.8
Corpus and Uterus, NOS	3.6	3.7
Non-Hodgkin Lymphoma	3.5	-5.4*
Leukemia	3.3	-2.0
Cervix Uteri	3.2	-1.3
Myeloma	2.6	-1.1
Esophagus	1.8	-
Brain and ONS[f]	1.8	-

Hispanic[e]

	Rate[b] 2009-2013	APC[c] 2004-2013
All Sites	98.5	-0.9*
Breast	14.5	-1.0*
Lung and Bronchus	13.5	-1.4*
Colon and Rectum	9.4	-2.4*
Pancreas	7.8	-0.1
Liver & IBD[f]	5.7	1.4*
Ovary	5.5	-1.7*
Non-Hodgkin Lymphoma	4.2	-1.4*
Stomach	4.1	-2.5*
Leukemia	4.0	0.4
Corpus and Uterus, NOS	3.6	2.6*
Cervix Uteri	2.6	-2.8*
Brain and ONS[f]	2.4	0.6
Kidney and Renal Pelvis	2.3	-0.4
Myeloma	2.3	-1.2
Urinary Bladder	1.2	-1.4

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2009-2013 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] The APC is the Annual Percent Change over the time interval.
Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[d] Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
[e] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
[f] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
* The APC is significantly different from zero (p<.05).
\- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

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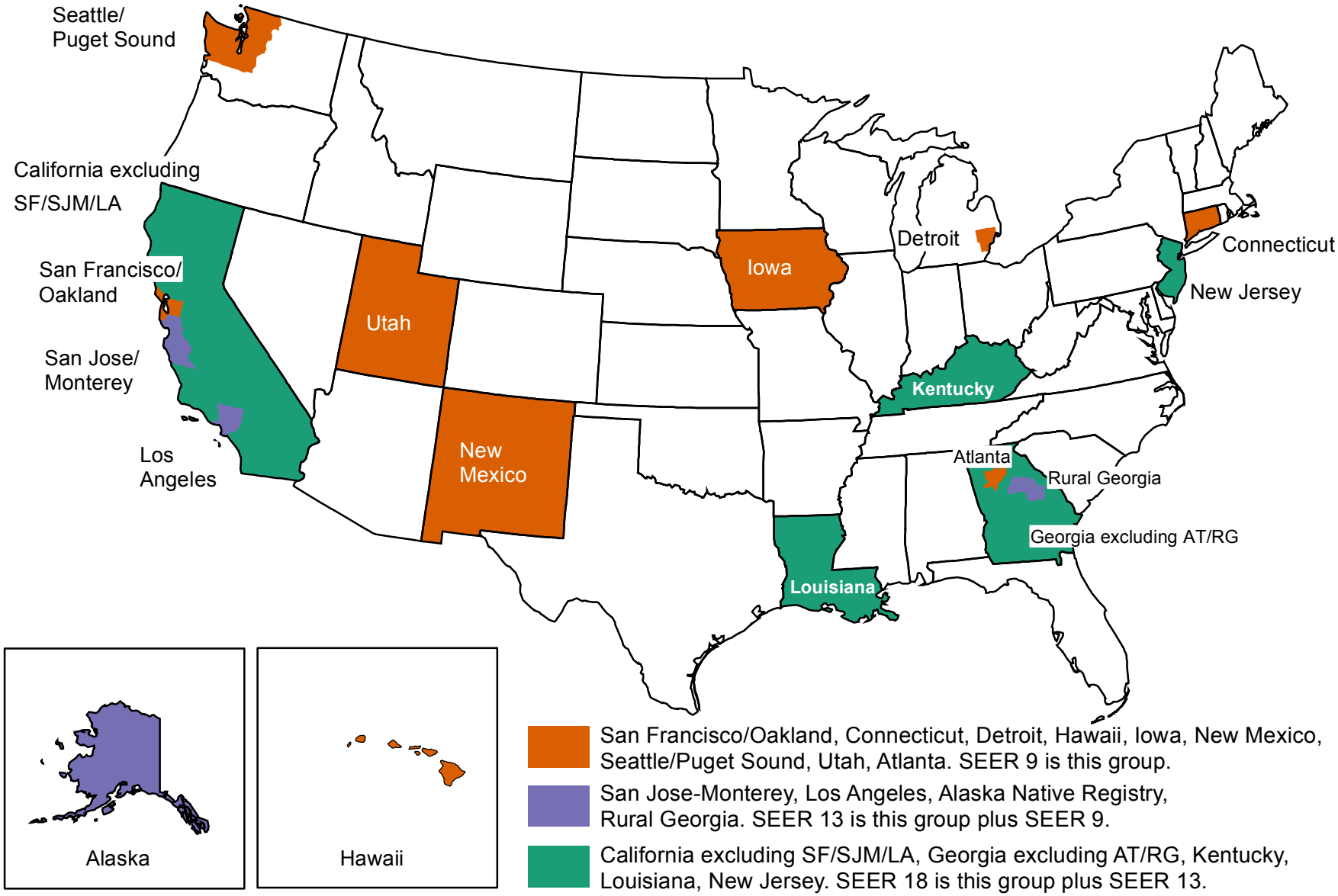
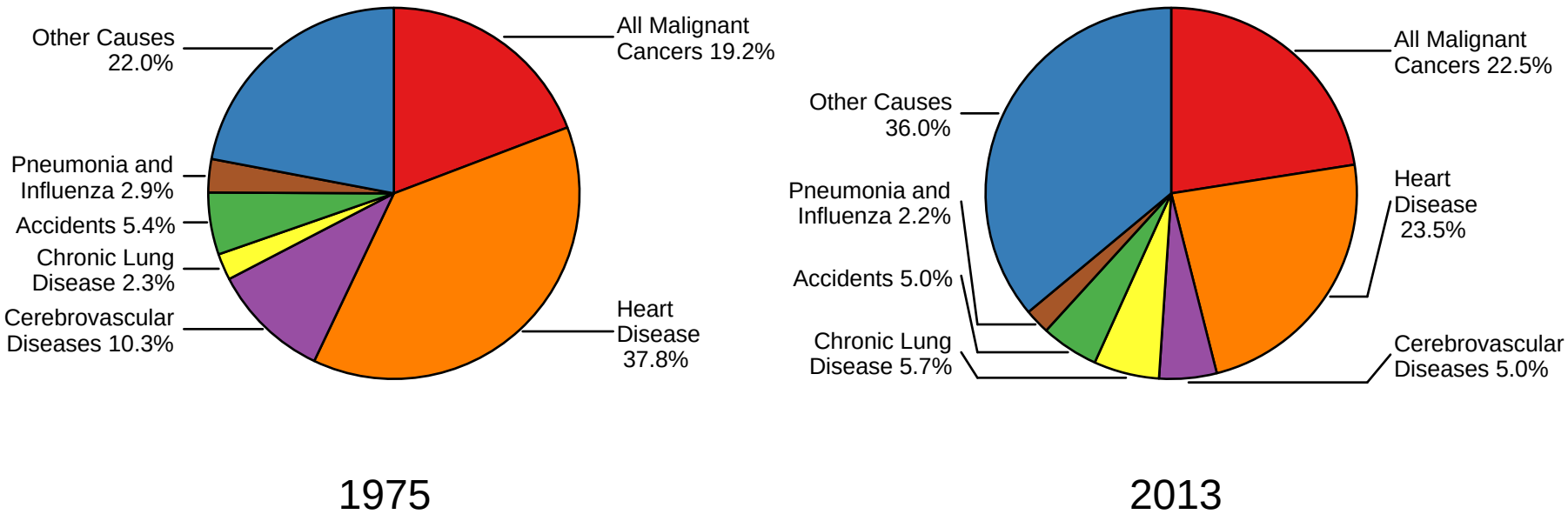


Figure 1.1

http://seer.cancer.gov

Figure 1.2

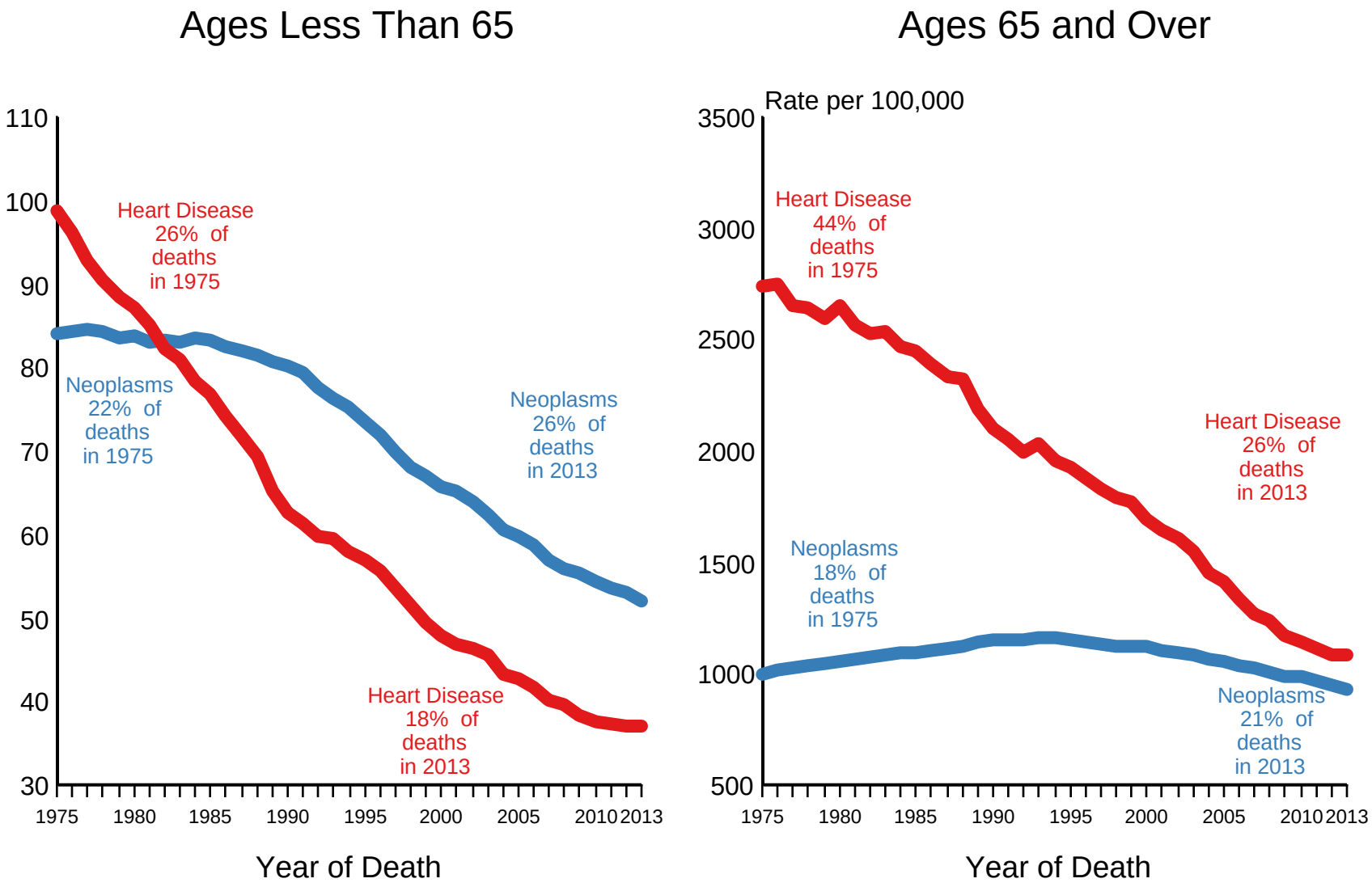
Leading Causes of Death in US, 1975 vs 2013
Percent of All Causes of Death



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

Figure 1.3

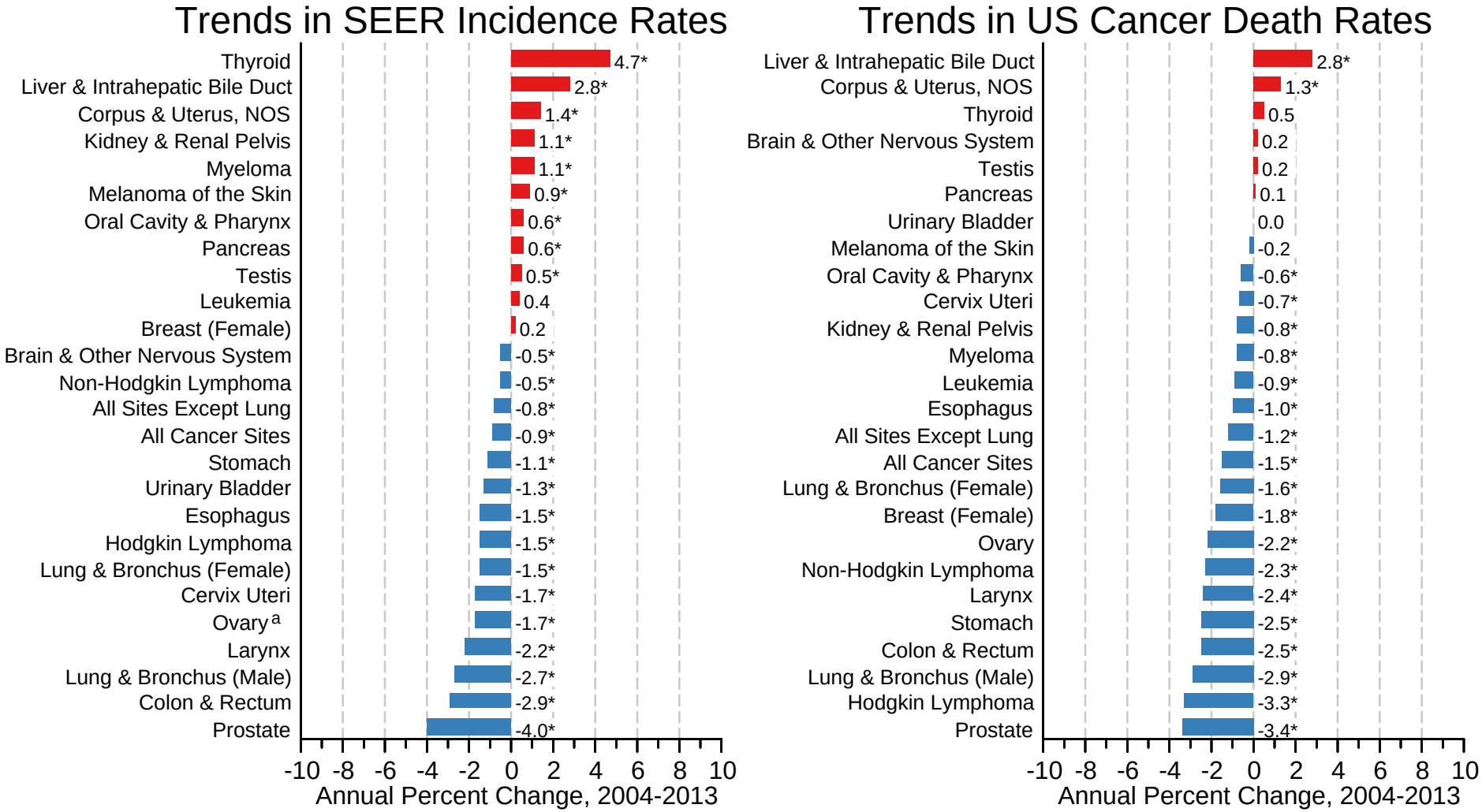
Us Death Rates, 1975-2013
Heart Disease compared to Neoplasms, by age at death



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 2004-2013



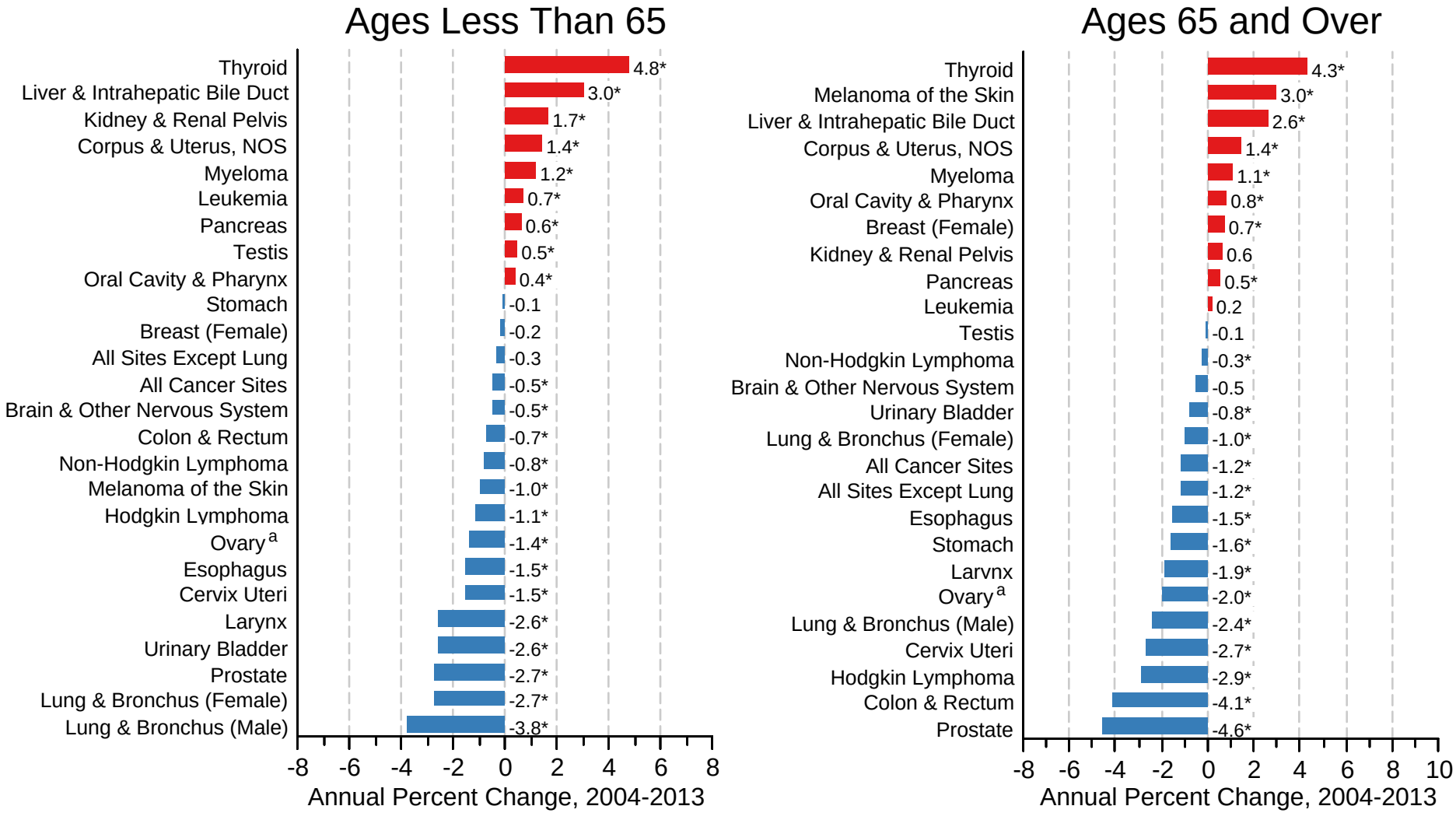
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG) and US Mortality Files, National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

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

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

Figure 1.5

Trends in SEER Incidence Rates by Age Group and Primary Cancer Site 2004-2013



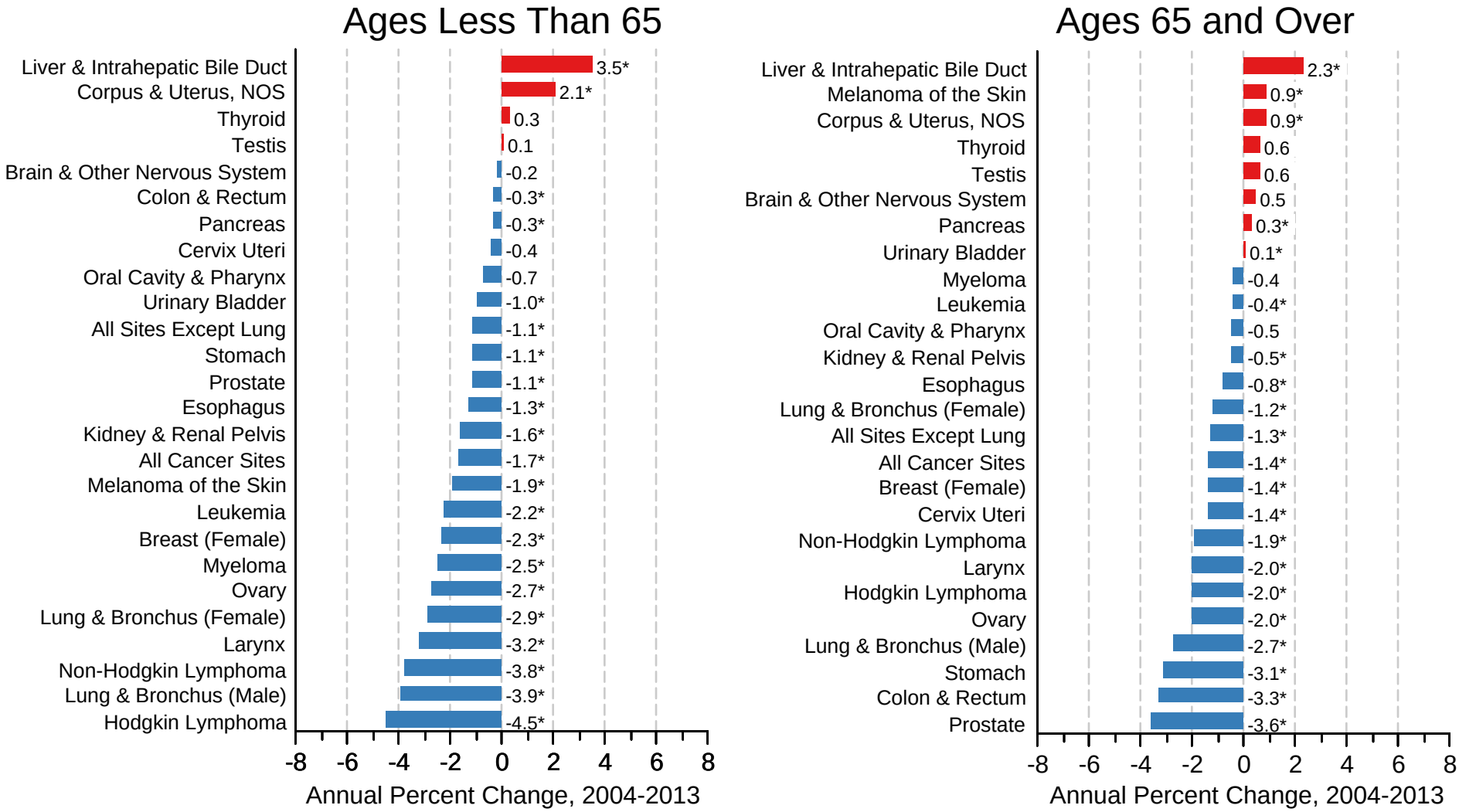
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Underlying rates are per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

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

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

Figure 1.6

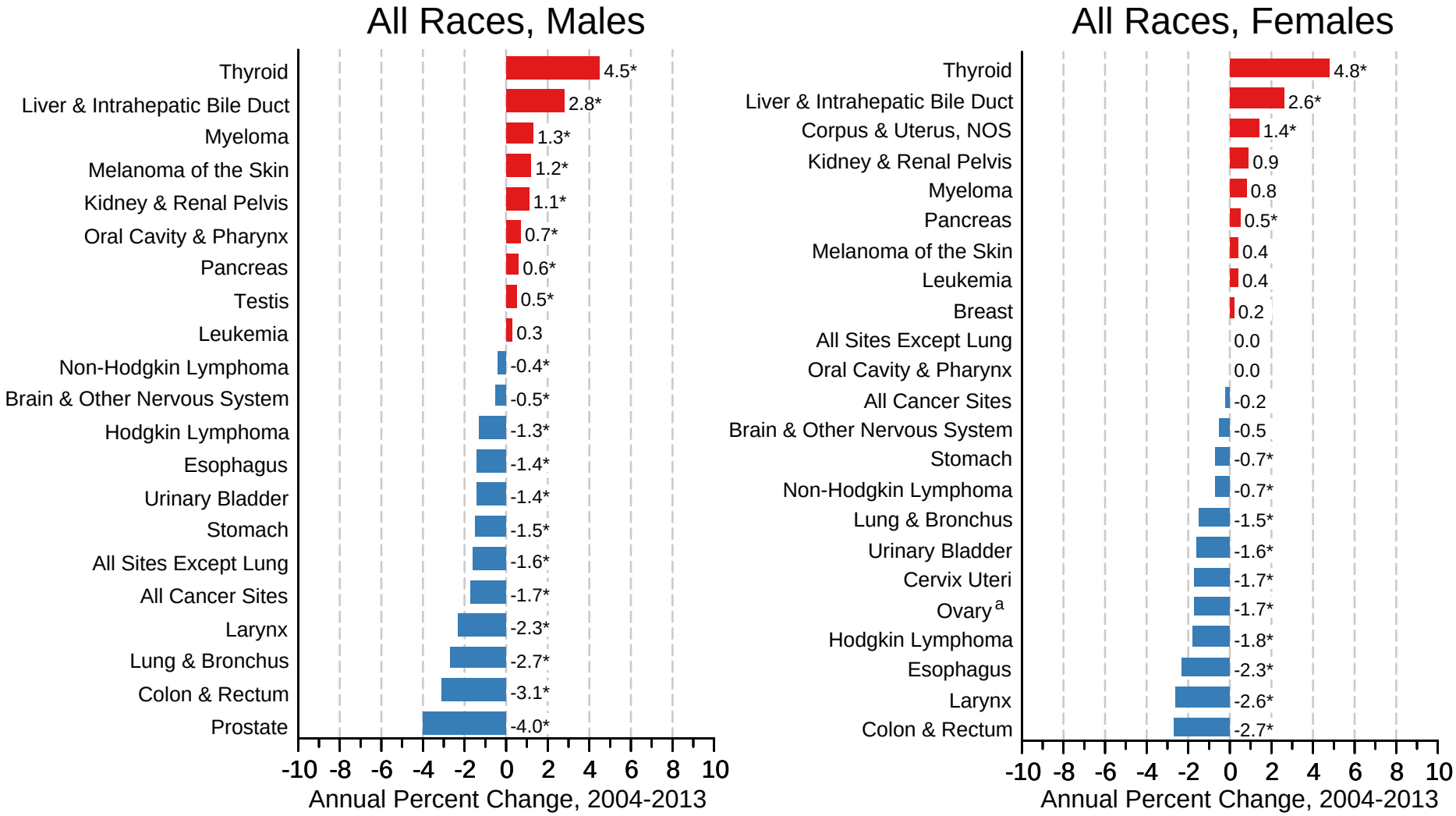
Trends in US Death Rates by Age Group and Primary Cancer Site 2004-2013



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 2004-2013



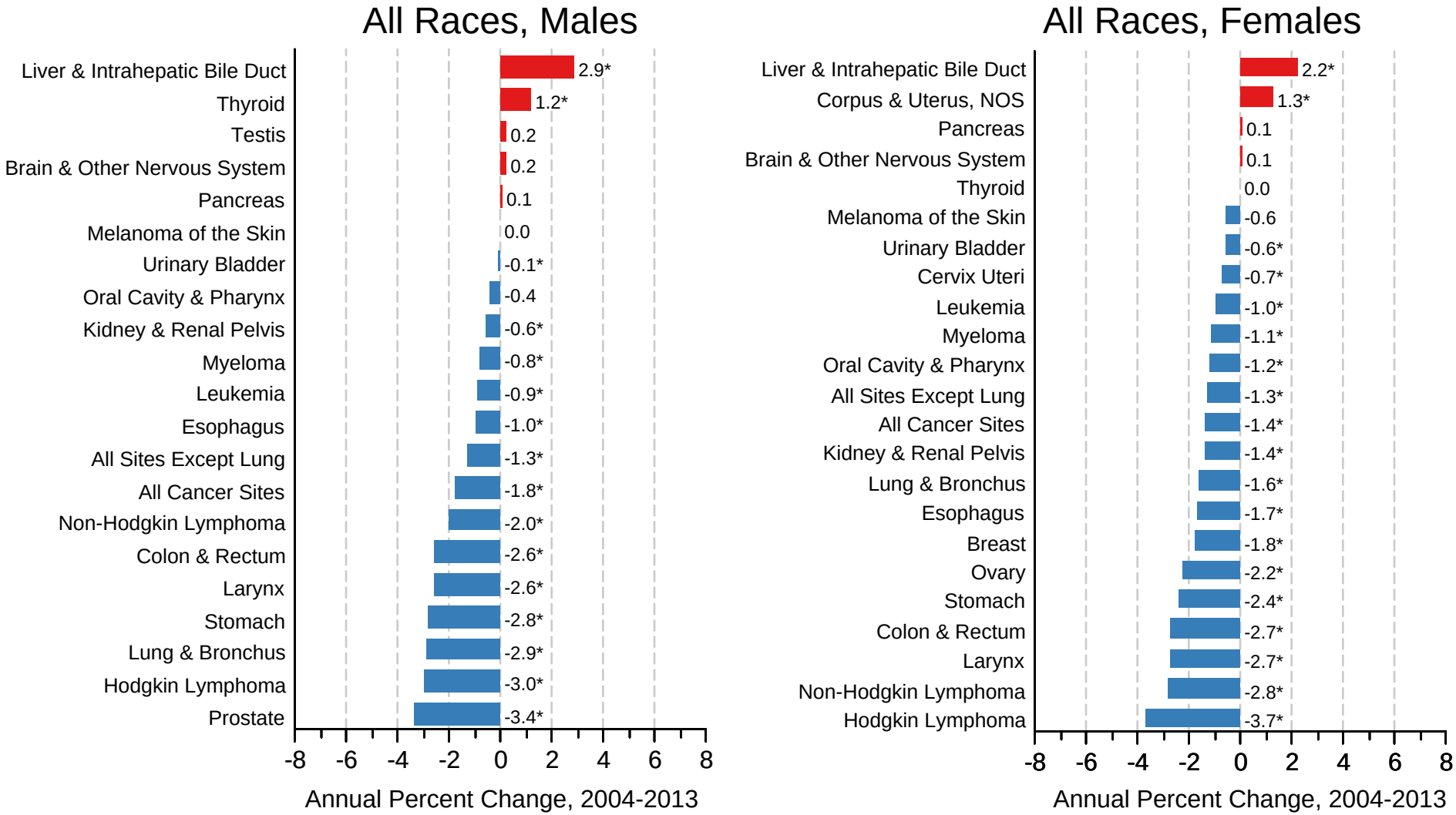
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Underlying rates are per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

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

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

Figure 1.8

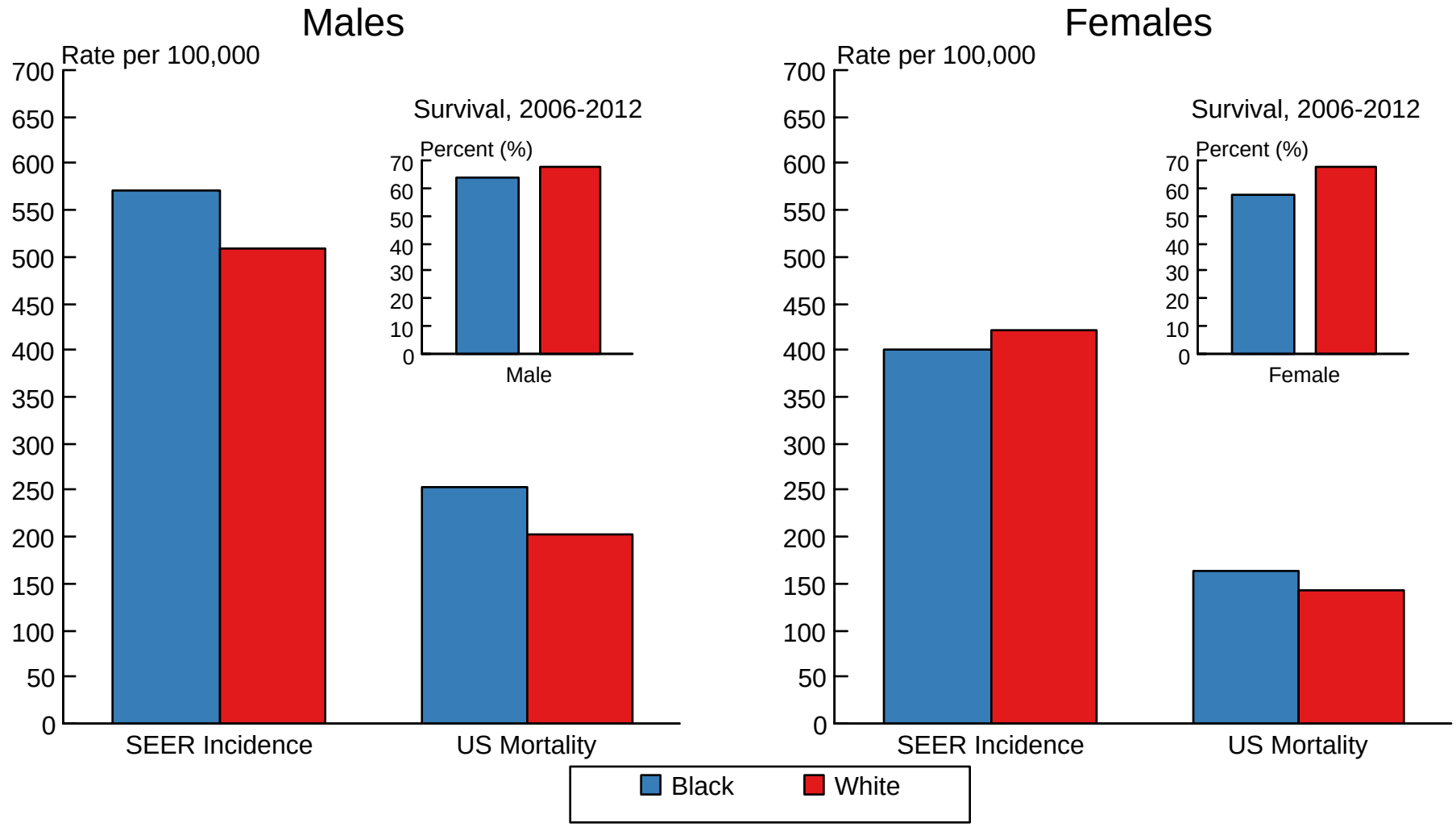
Trends in US Death Rates by Sex and Primary Cancer Site 2004-2013



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.
* The APC is significantly different from zero (p<.05).

Figure 1.9

SEER Incidence[a] and US Death Rates,[b] 2009-2013
5-Year Relative Survival,[c] 2006-2012
All Cancer Combined, by Race and Sex



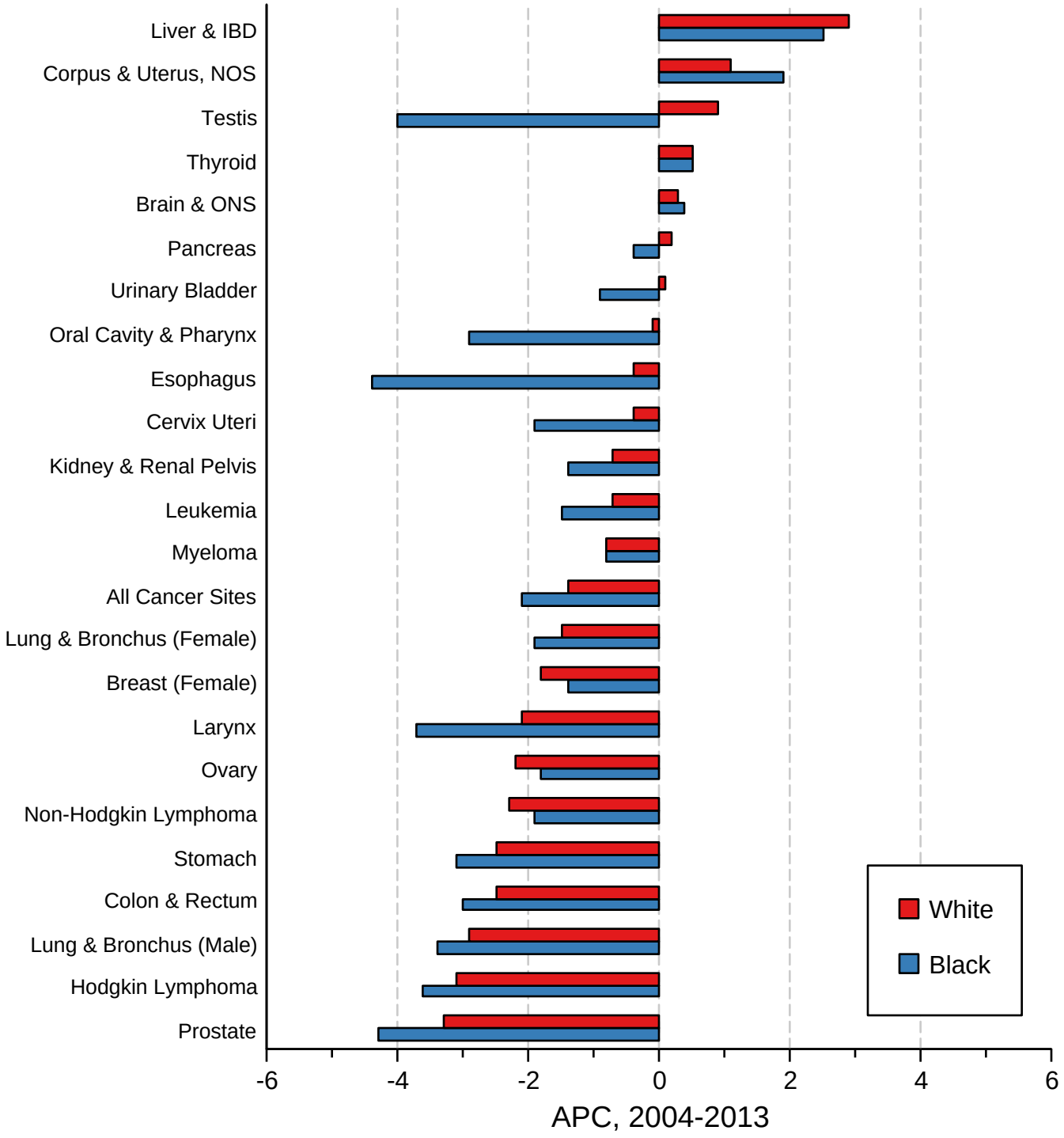
[a] Incidence rates are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry,Rural Georgia,California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG) and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

[b] Death rates are from the US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

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

Figure 1.10

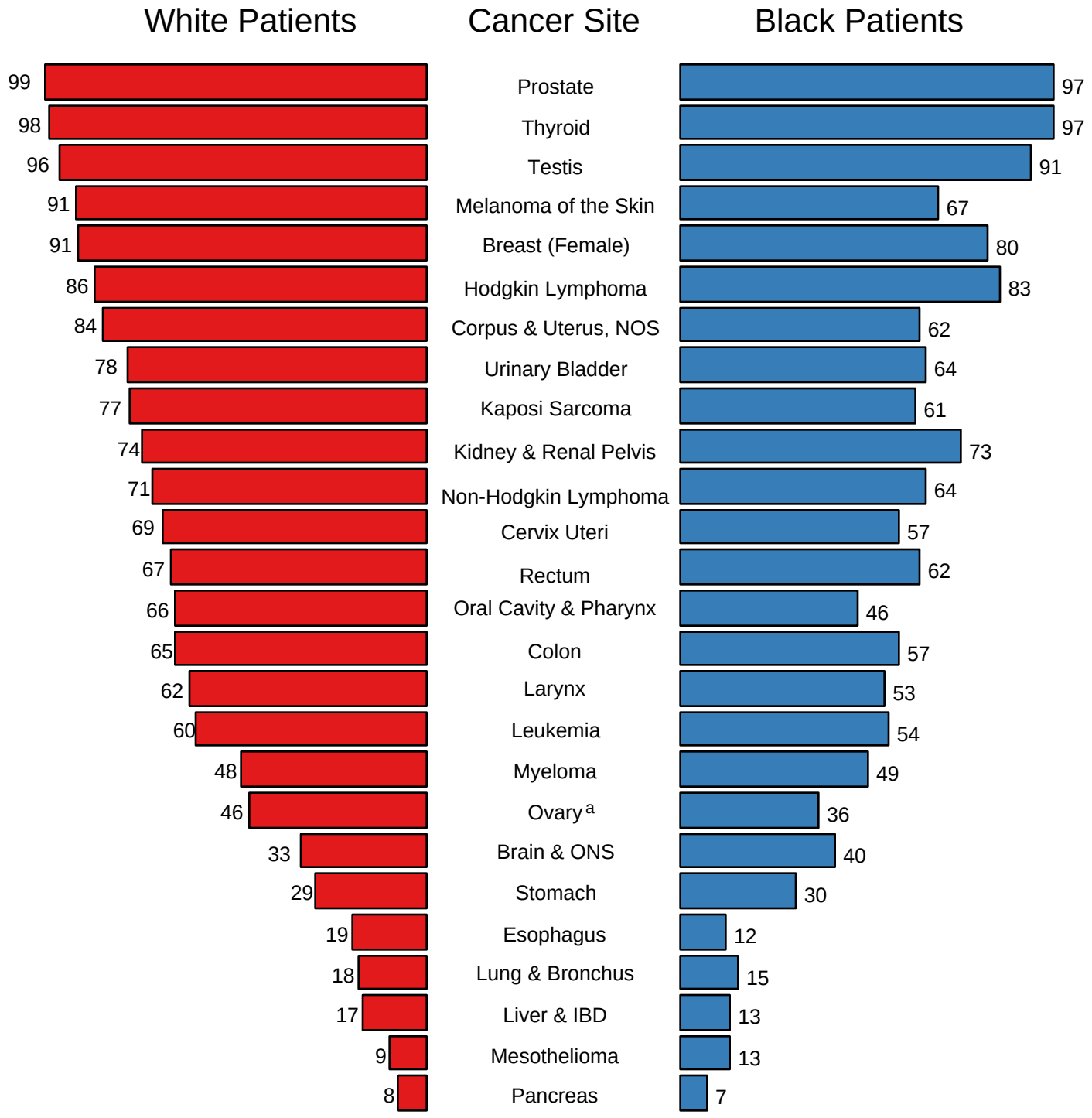
Trends in US Death Rates, 2004-2013
All Ages, by Race and Primary Cancer Site



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, 2006-2012
Both Sexes, by Race and Cancer Site

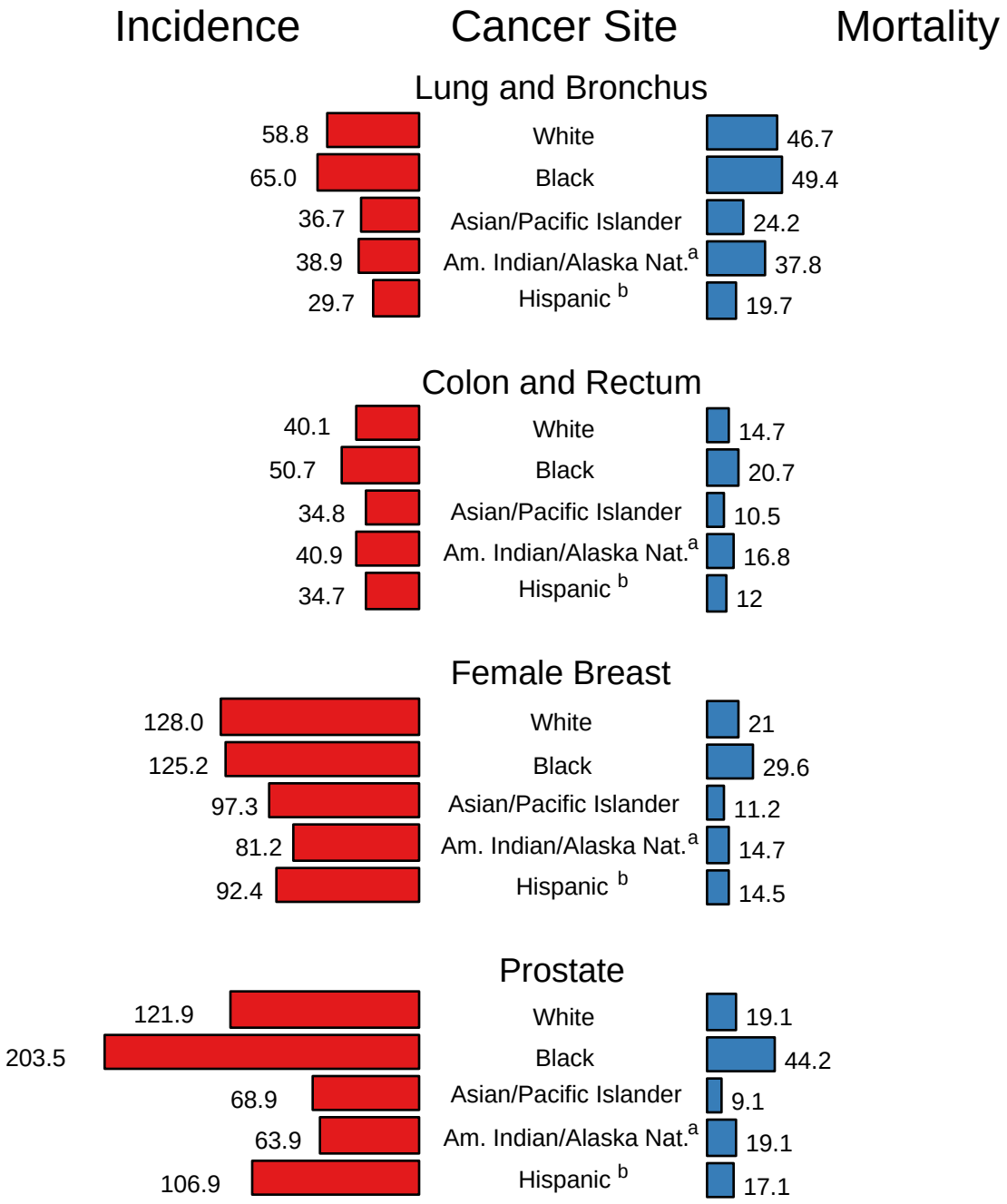


Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).

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

Figure 1.12

SEER Cancer Incidence and US Death Rates, 2009-2013 By Cancer Site and Race/Ethnicity



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

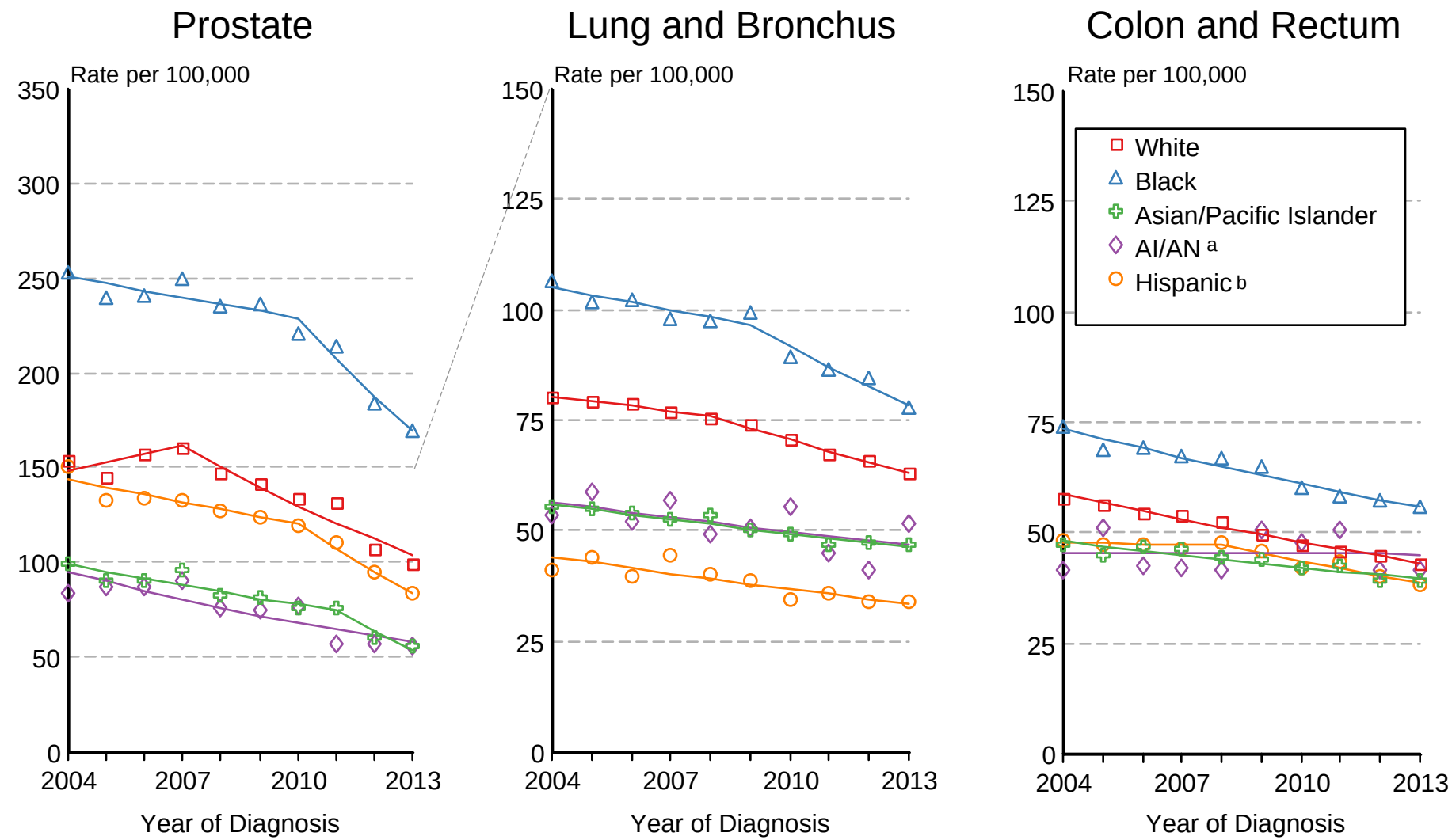
a Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

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

Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

Figure 1.13

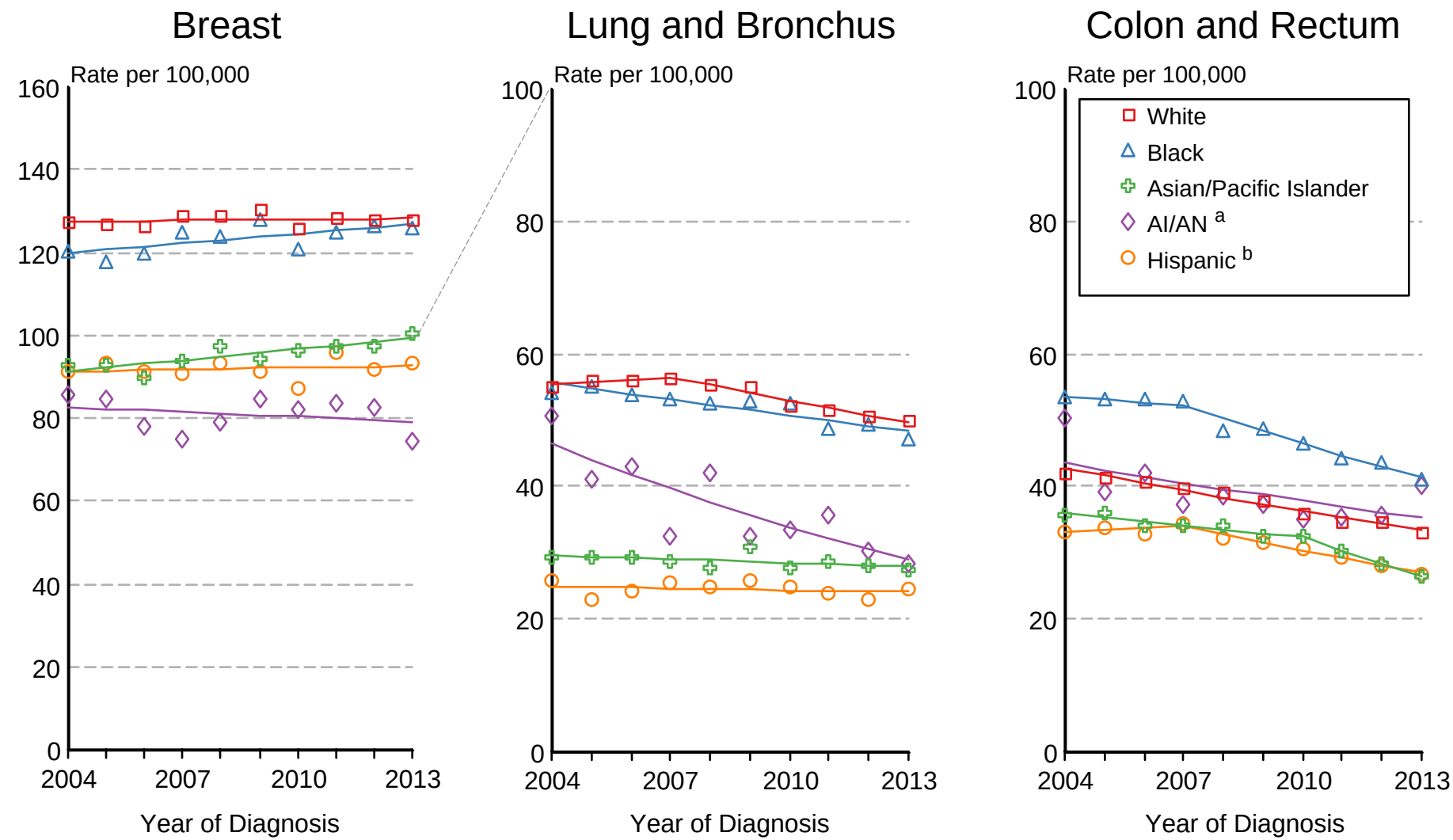
SEER Incidence 2004-2013
Males by Race/Ethnicity



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 4.3.0.0, April 2016, National Cancer Institute.
[a] Incidence rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.
[b] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

Figure 1.14

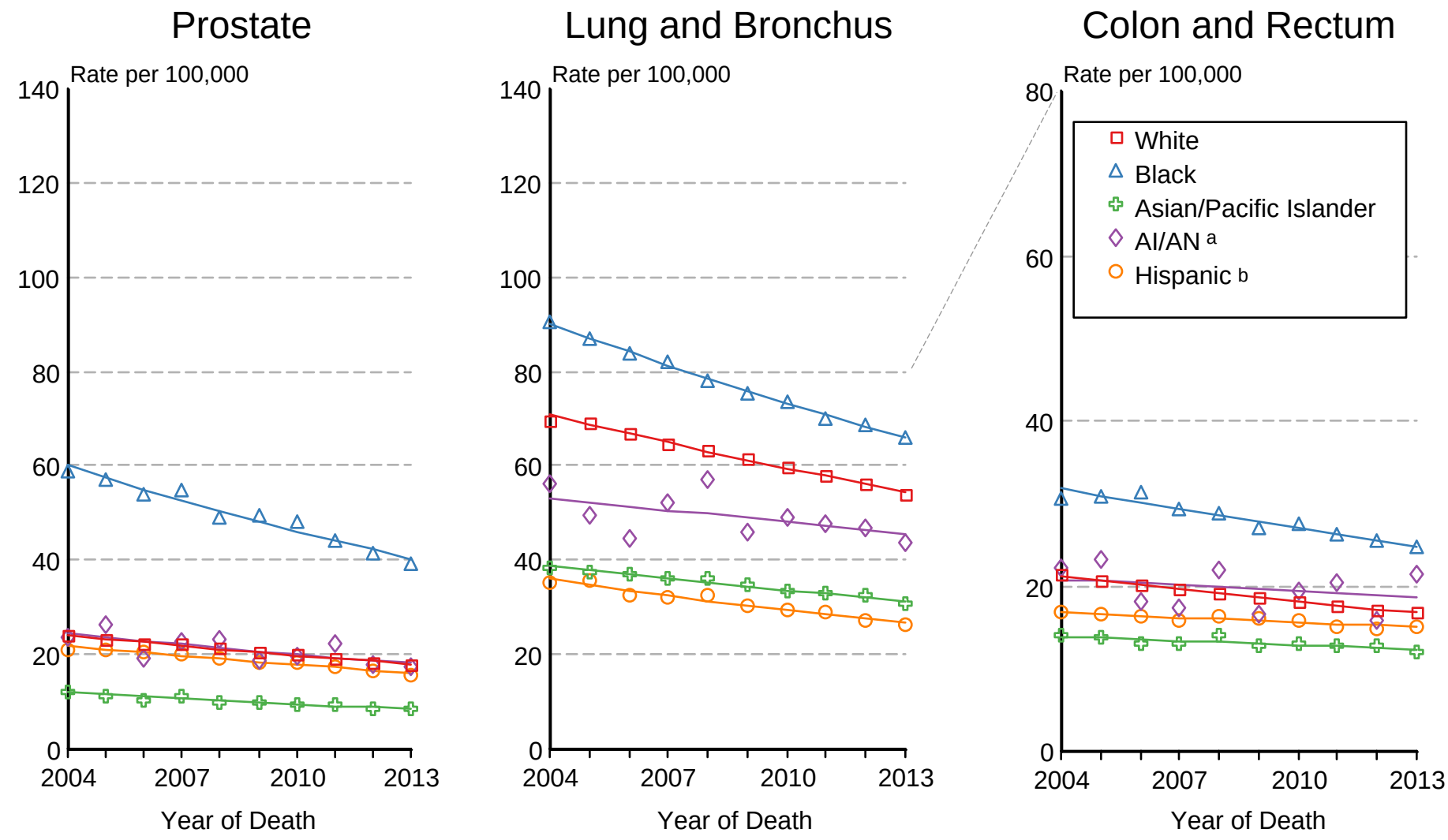
SEER Incidence 2004-2013
Females by Race/Ethnicity



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 4.3.0.0, April 2016, National Cancer Institute.
[a] Incidence rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.
[b] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

Figure 1.15

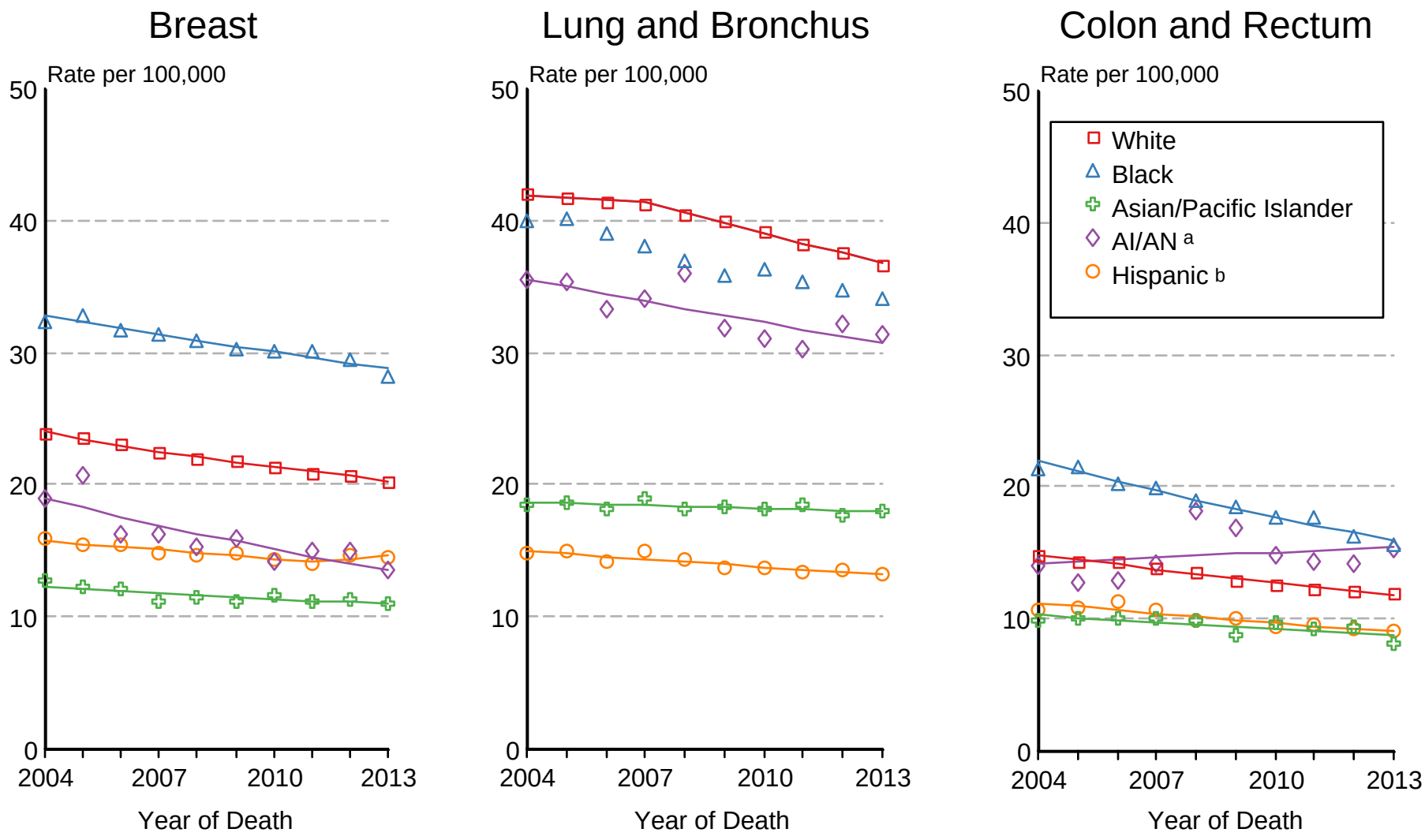
US Mortality 2004-2013
Males by Race/Ethnicity



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 4.3.0.0, April 2016, National Cancer Institute.
[a] Mortality rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.
[b] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

Figure 1.16

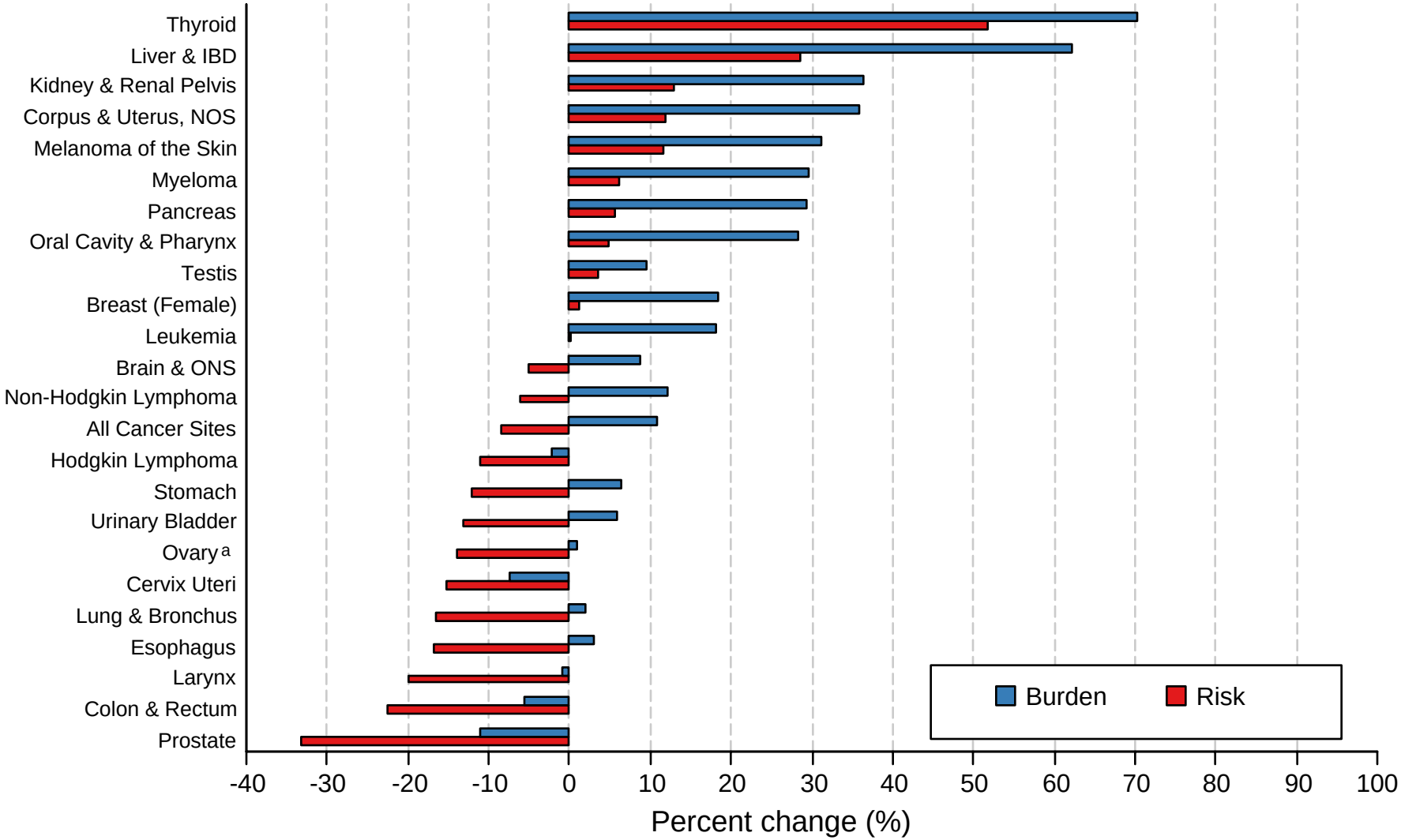
US Mortality 2004-2013
Females by Race/Ethnicity



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 4.3.0.0, April 2016, National Cancer Institute.
[a] Mortality rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.
[b] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

Figure 1.17

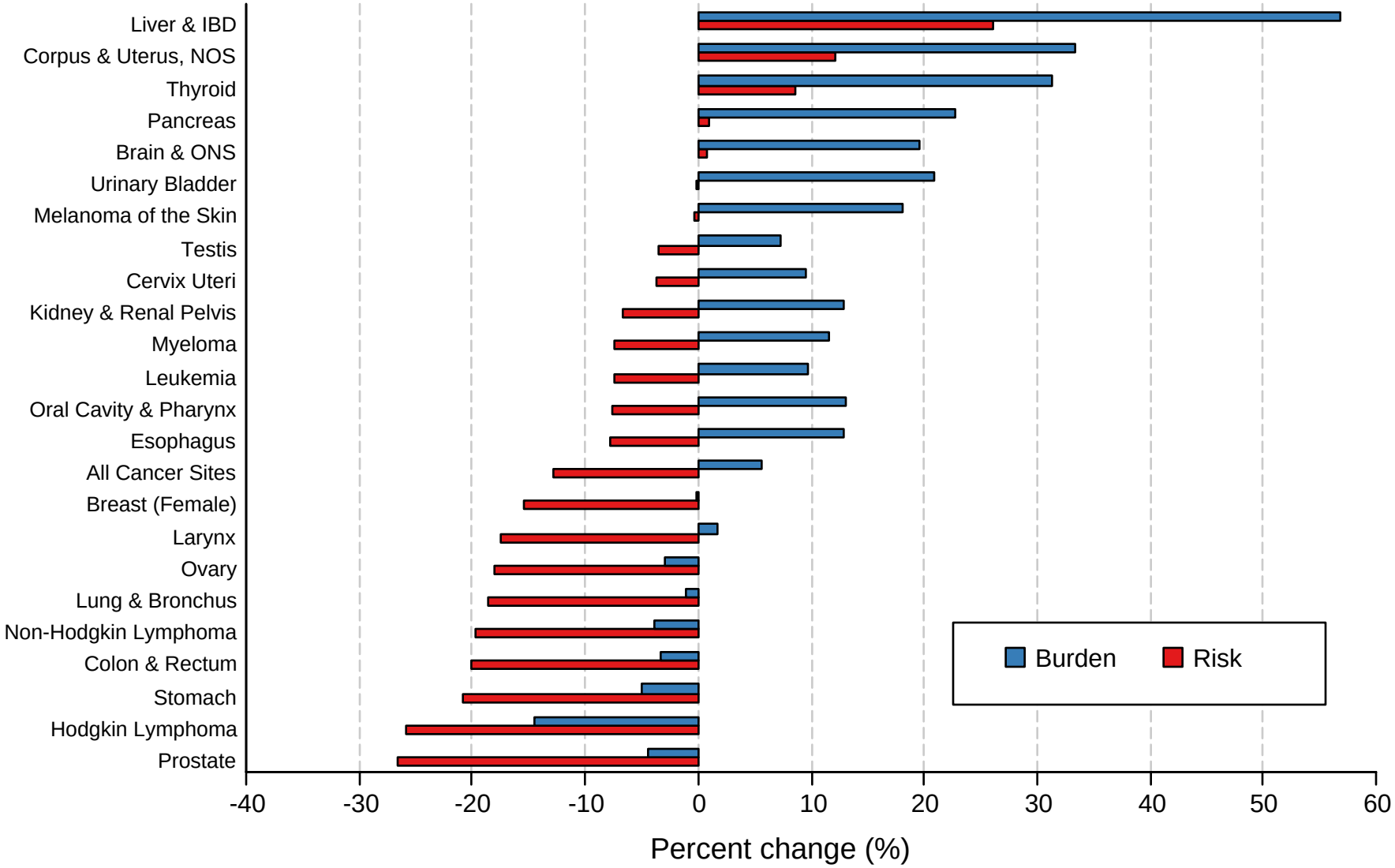
Incidence Percent Change between 2004 and 2013
Numbers (burden) vs Rates (risk)
All Races, All Ages, Both Sexes



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 2004 and 2013.
Risk is the change in the cancer incidence rates between 2004 and 2013.
[a] Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Figure 1.18

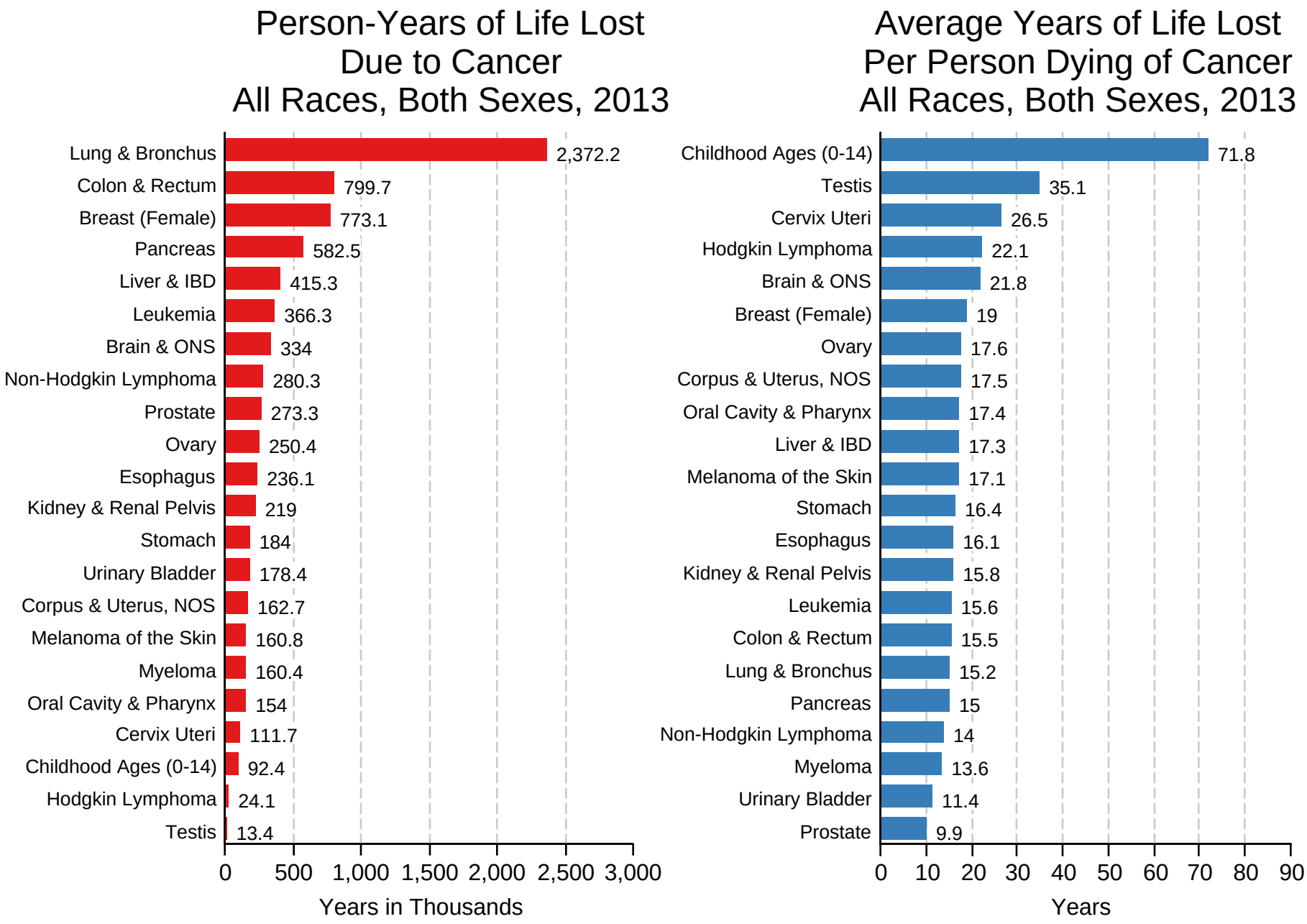
Mortality Percent Change between 2004 and 2013
Numbers (burden) vs Rates (risk)
All Races, All Ages, Both Sexes



US Mortality estimates based on US age-specific rates applied to US population.
Burden is the change in the number of deaths between 2004 and 2013.
Risk is the change in the cancer death rates between 2004 and 2013.

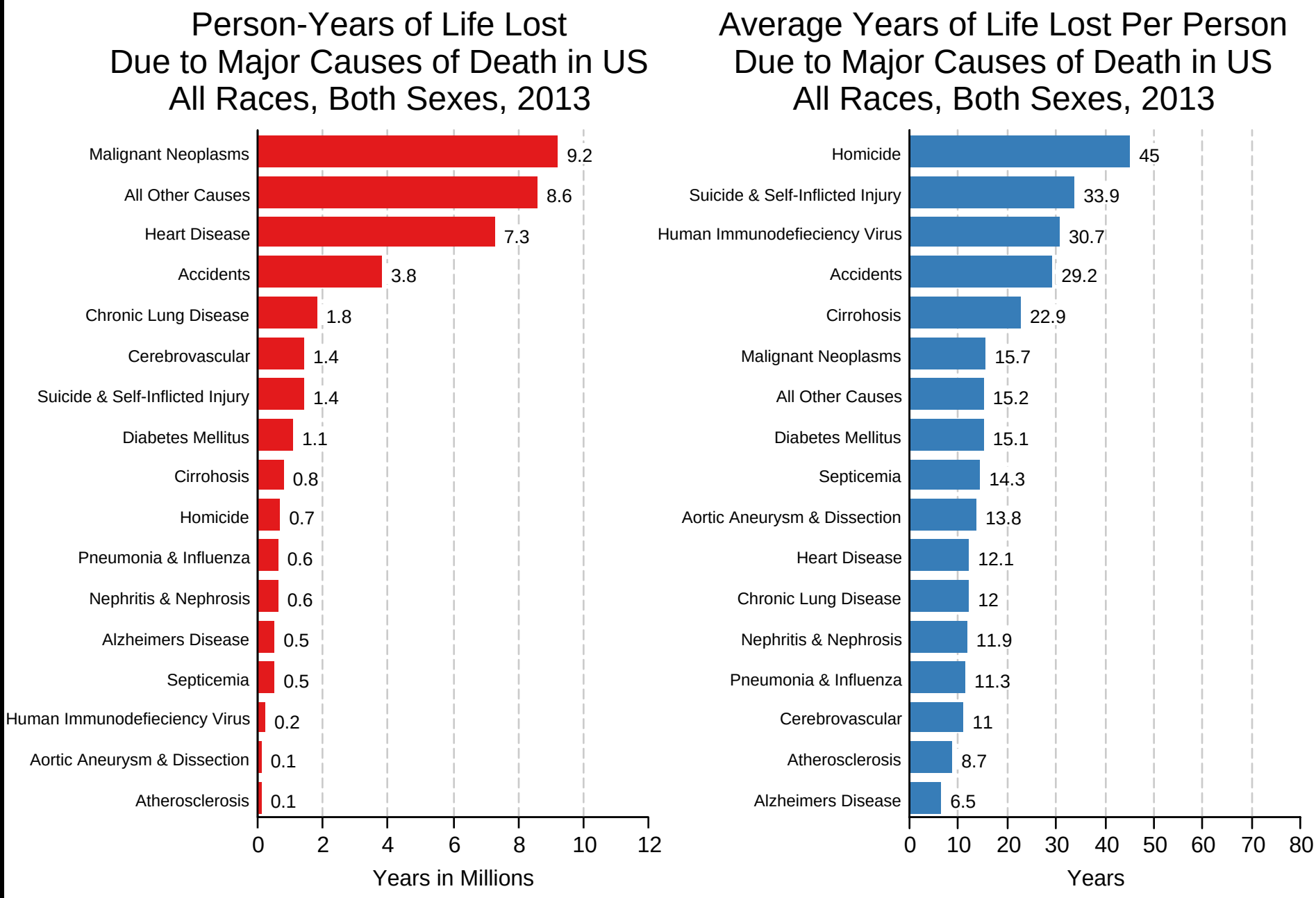
SEER Cancer Statistics Review 1975-2013
National Cancer Institute

Figure 1.19



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2011 Life Tables.

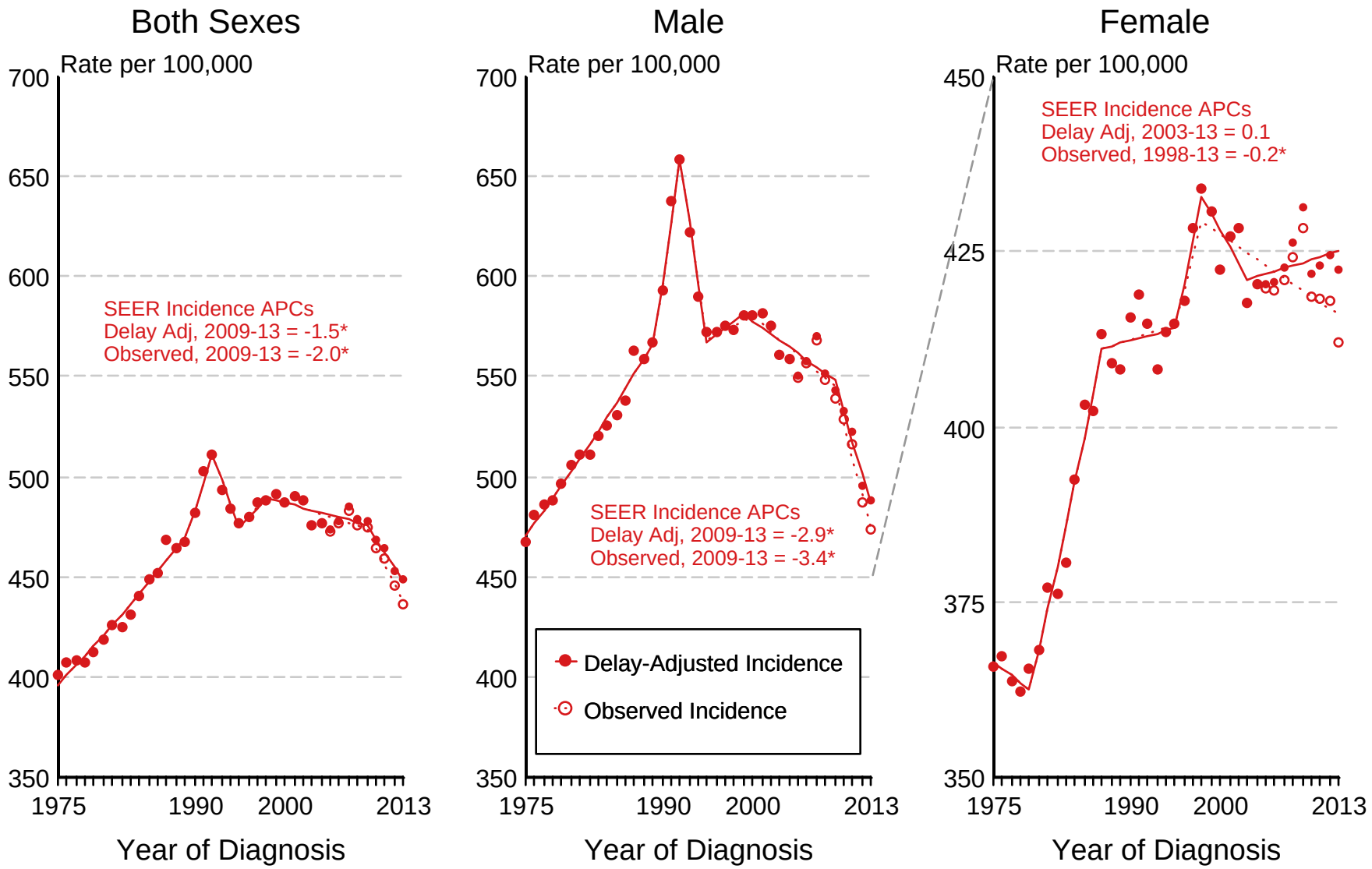
Figure 1.20



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2011 Life Tables.

Figure 1.21

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



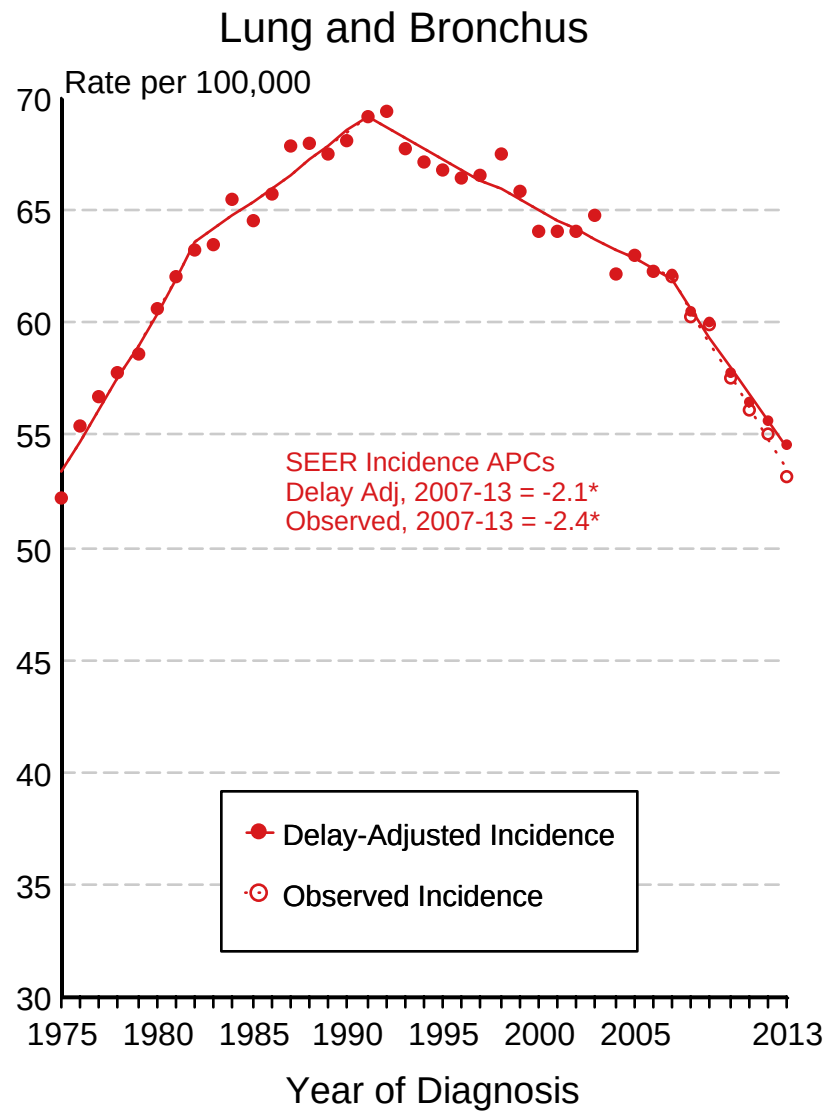
Source: SEER 9 areas.

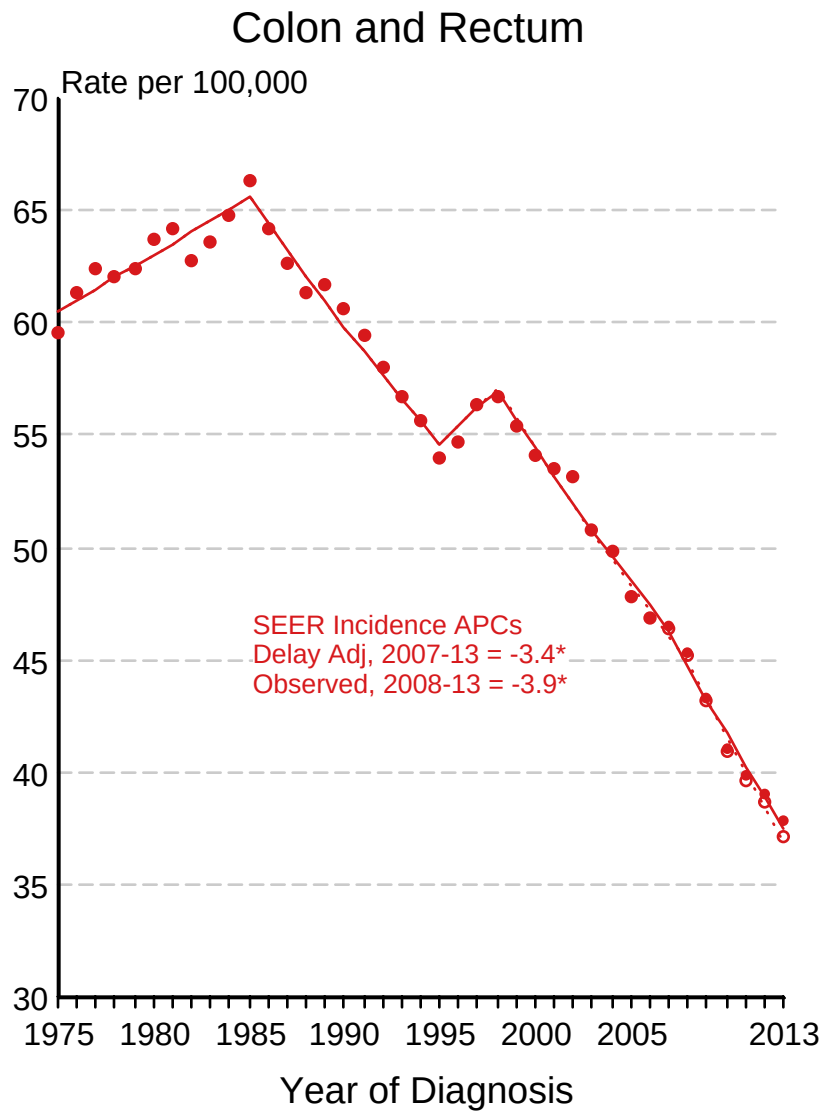
[a] Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.3.0.0, April 2016, National Cancer Institute.
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

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

Figure 1.22

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





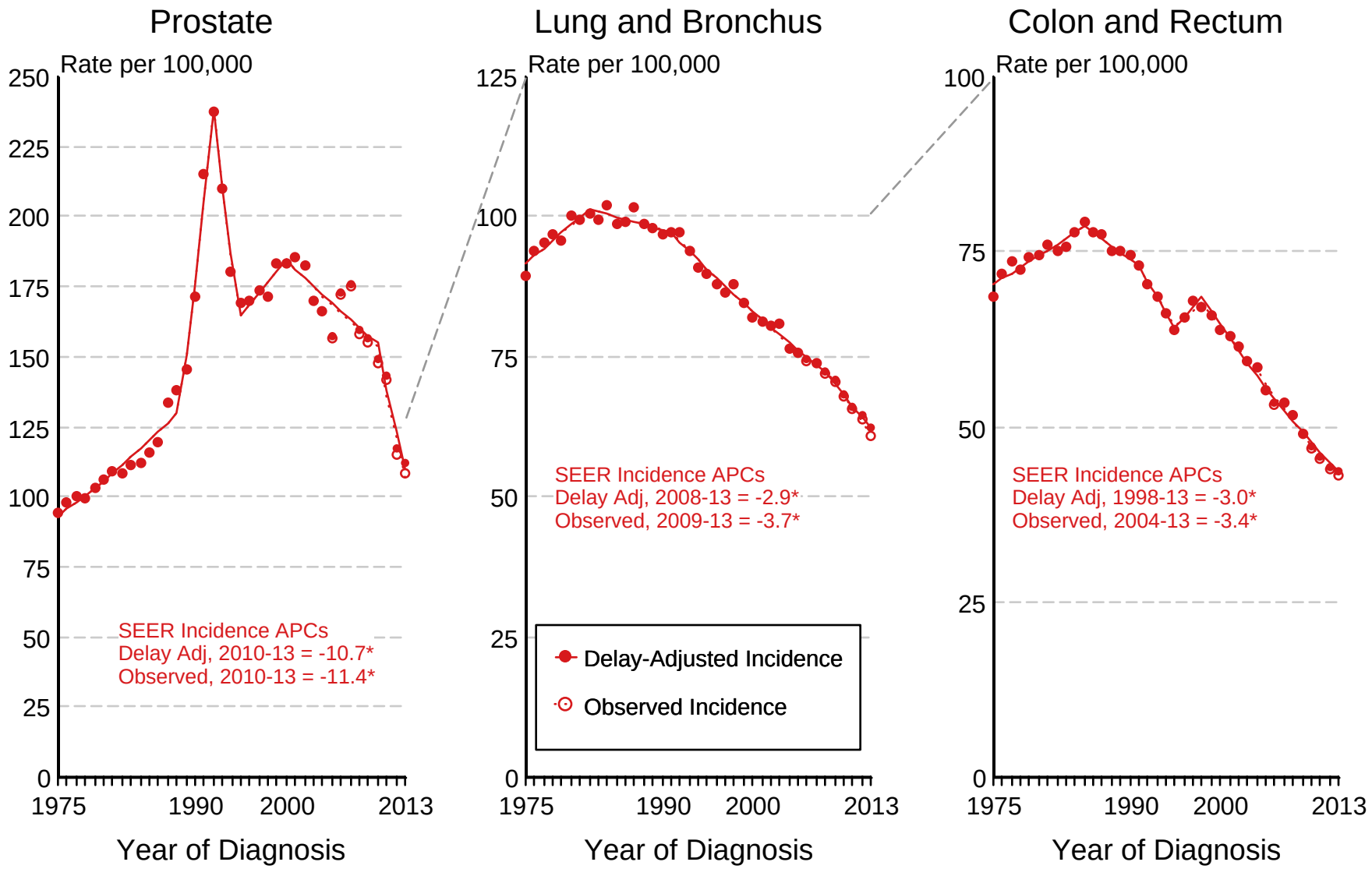
Source: SEER 9 areas.

[a] Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.3.0.0, April 2016, National Cancer Institute.
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

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

Figure 1.23

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



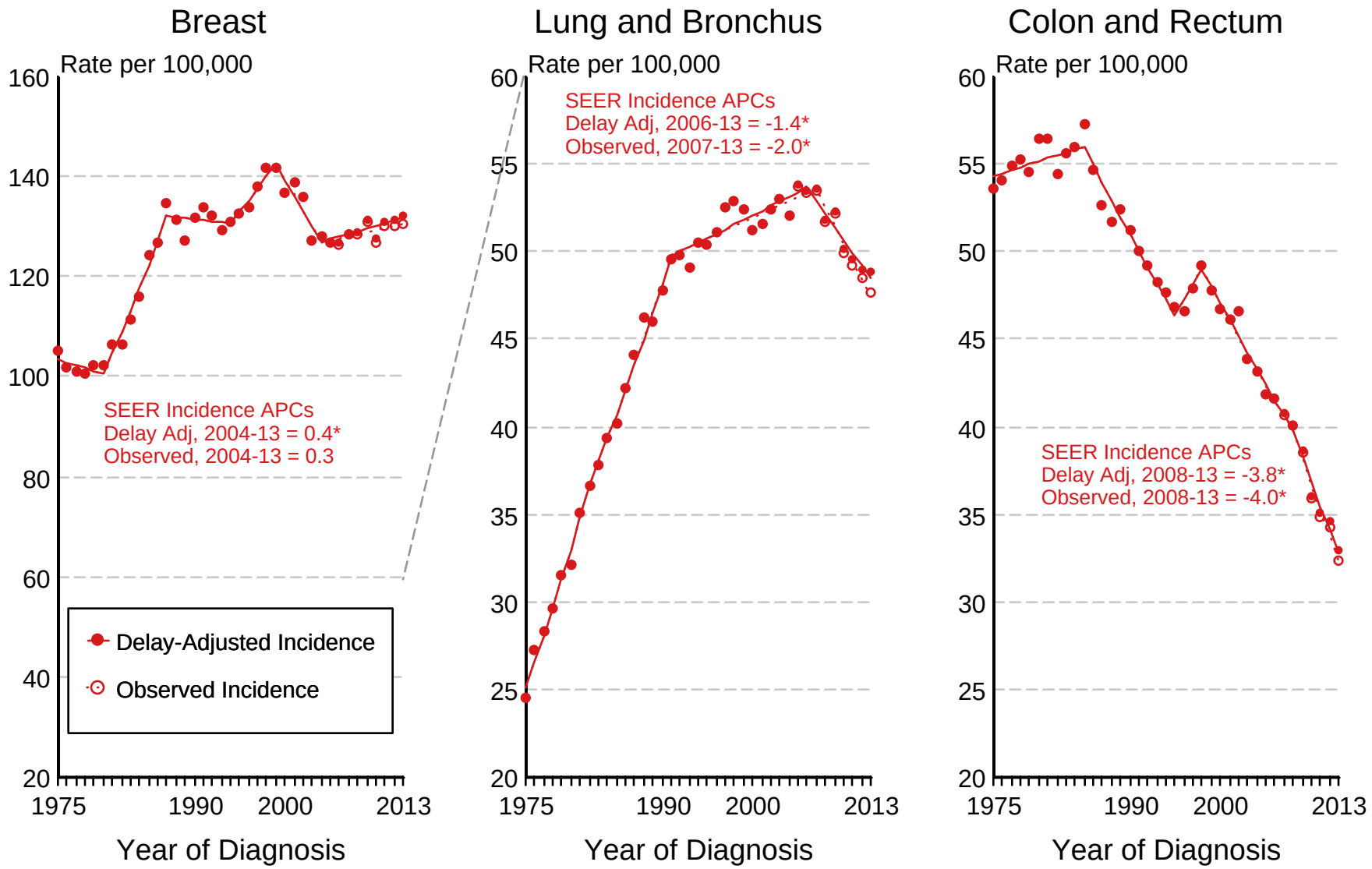
Source: SEER 9 areas.

[a] Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.3.0.0, April 2016, National Cancer Institute.
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

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

Figure 1.24

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



Source: SEER 9 areas.

[a] Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.3.0.0, April 2016, 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 ($p < 0.05$).