BACKGROUND AND DATA SOURCES

The primary measures associated with assessing the impact of cancer in the general population are the number of new cases per year per 100,000 persons (incidence rate), the number of deaths per 100,000 persons (mortality rate), and a determination of the proportion of patients alive at some point subsequent to the diagnosis of their cancer (survival rate). All three measures are included in this report using data from the Surveillance, Epidemiology, and End Results (SEER) Program based within the Cancer Control Research Program at the National Cancer Institute (NCI) and cancer mortality data provided by the National Center for Health Statistics (NCHS) for the entire United States (U.S.). All incidence and mortality rates in this report are age-adjusted to the 1970 United States standard million (see Appendix) unless otherwise specified. Age-adjustment minimizes the effect of a difference in age distributions when comparing rates.

The SEER Cancer Statistics Review (CSR) containing the most recent cancer incidence, mortality and survival statistics is made available by NCI annually. Since 1996, the CSR has been available electronically on the SEER Home Page, http://www-seer.ims.nci.nih.gov under "Publications." The WEB page allows for the more timely distribution of the CSR. This CSR includes incidence, mortality and survival data from 1973 through 1994, the most recent year for which complete data are available. Incidence data for 1994 appear to be 98 to 99 percent complete. Therefore, caution must be exercised when comparing rates for 1994 with those for previous years. Data are presented for a wide spectrum of cancers. The scope and purpose of this review are consistent with a report to the Senate Appropriations Committee (Breslow, 1988) which recommended that a broad profile of cancer be presented to the American public on a routine basis.

Incidence and survival data: 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. A continuing project of the NCI, the SEER Program collects cancer data on a routine basis from designated population-based cancer registries in various areas of the country. Trends in cancer incidence, mortality and patient survival in the United States are derived from this database.

A sequel to two earlier NCI programs--the End Results Program and the Third National Cancer Survey--the SEER Program was initiated in several geographic areas of the United States and its territories, with case ascertainment beginning with January 1, 1973 diagnoses. The initial SEER reporting areas were the states of Connecticut, Iowa, New Mexico, Utah, and Hawaii and the metropolitan areas of Detroit, Michigan; San Francisco-Oakland, California; and the Commonwealth of Puerto Rico.

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 black rural counties in 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 only until the end of the 1989 reporting year. Two areas of California, Los Angeles County and the San Jose-Monterey area (Monterey, San Benito, Santa Clara and Santa Cruz Counties) began reporting with 1992 diagnoses. Both population-based cancer registries began data collection earlier than 1992 and they have provided earlier data from 1988 through 1991 for inclusion in the CSR. The incidence trends and survival data for this report are from five States: Connecticut, Hawaii, Iowa, New Mexico, and Utah and four metropolitan areas: Detroit SMSA, Atlanta SMSA, San Francisco-Oakland SMSA, and Seattle-Puget Sound (Fig. I-1). Incidence rates by SEER area including Los Angeles and San Jose-Monterey are shown for the most recent 5-year period along with area-specific mortality in each section.

Data from the nine or eleven SEER geographic areas used in this report represent an estimated 9.5 or 13.9 percent of the United States population, respectively. By the end of 1994, the database contained

information on over 2 million cases diagnosed since 1973; currently over 150,000 new cases are accessioned yearly.

Areas were selected primarily 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 reasonably representative subsets of the United States population.

The goals of the SEER Program are:

1. Assembling and reporting, on a periodic basis, estimates of cancer incidence and mortality in the United States.

2. Monitoring annual cancer incidence trends to identify unusual changes in specific forms of cancer occurring in population subgroups defined by geographic and demographic characteristics.

3. Providing continuing information on changes over time in the extent of disease at diagnosis, trends in therapy, and associated changes in patient survival.

4. Promoting 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.

The SEER Program is conducted under contract with nonprofit, medically oriented organizations having statutory responsibility for registering diagnoses of cancer among residents of their respective geographic coverage areas. Each contractor maintains a cancer information reporting system; abstracts records for resident cancer patients seen in every hospital in and outside the coverage area; abstracts all death certificates on which cancer is listed as a cause of death for residents dying in and outside the coverage area; searches records of private laboratories, radiotherapy units, nursing homes and other health services units which provide diagnostic service to ensure complete ascertainment of cases; registers all in situ and malignant neoplasms with the exception of certain histologies for cancer of the skin; 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; provides active follow-up on all living patients except for those with in situ cancer of the cervix uteri; maintains confidentiality of patient records; submits a computer tape to NCI twice each year containing data on all reportable diagnoses of cancer which were made in residents of the coverage area. In situ cancers of the cervix uteri are not reportable to SEER beginning with 1996 diagnoses. Since 1992, the SEER program has coded 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. The primary site groupings used for incidence are found in the Appendix. Follow-up rates are also in the Appendix.

Mortality data: A public use tape containing information on all deaths occurring in the United States by calendar year is obtained annually from the National Center for Health Statistics (NCHS). Information on each death includes age at death, sex, geographic area of residence, underlying and contributing causes of death. Only the underlying cause of death was used in the calculation of mortality rates. Numbers and the numerators for mortality rates for the SEER geographic areas, for each state and for the total U.S. are obtained from these tapes. A list of the mortality site groupings used in this publication is in the Appendix.

Number of estimated cancers and deaths in 1997: Projections of the number of cancer cases and number of cancer deaths in the United States for 1997 have been obtained from the American Cancer Society (ACS). The ACS projected incidence to 1997 based on incidence rates from SEER for 1979-93 and applied by the ACS to the 1997 estimated total U.S. population (Parker et al, 1997).

Population data: Population estimates are obtained each year from the U.S. Bureau of the Census. This year, revised estimates of the populations of U.S. counties were obtained by five-year age group (0-4, 5-9,..., 85 and over), sex, and race (including white and black) for July 1, 1994. SEER makes county estimates for each state available on the SEER Home Page (http://www-seer.ims.nci.nih.gov) for race (whites, blacks, non-white), 5-year age group, sex, and year of diagnosis (each year 1973 to 1994). Additional estimates can be obtained from the U.S. Census Bureau Home Page.

U.S. Bureau of the Census (BOC) population estimates for Hawaii were altered according to independent estimates developed from sample survey data collected by the Health Surveillance Program (HSP) of the Hawaii Department of Health. For Hawaii, the all races and black populations are the same as those sent by the BOC. Proportions of the population by different racial groups from the HSP were used to generate estimates for whites, etc. Since the HSP survey was for all of Hawaii and not by county, population estimates were not broken down by county. The white population estimates for Hawaii provided by the BOC are generally larger than those generated by the HSP. Since whites in Hawaii account for less than two percent of the total white population represented by the SEER reporting areas, white incidence rates for the entire SEER Program are not noticeably affected. Procedures for calculating rates by race for Hawaii are currently under review.

LONG-TERM TRENDS, 1950-1994

While many cancer trends have inconsistent patterns over time, i.e. at some times increasing and at other times decreasing, the more consistent trends become even more evident when examined over a longer period of time. Trends in cancer mortality from 1950 to 1994 are summarized by age for all cancers combined, excluding and including lung cancer (Table I-2). These mortality figures are based on the experience in the total United States.

Summaries of long-term trends in cancer incidence, mortality and survival are outlined in Table I-3. The table shows the estimated number of cancer cases and the reported number of cancer deaths for 1994; the next four columns show incidence and mortality changes over the 45-year time period from 1950 to 1994. Both the total percent change and the estimated annual percent change for incidence were based on incidence data from the five geographic areas for which data are available for each of three time periods, around 1950, 1969-71 and 1973-74 to 1994. Due to the limited availability of incidence data from the early time periods and the change in the composition of the non-white population over time, the incidence trends are presented for whites only. The estimates for children are for children of all races combined in Connecticut only. Mortality data are for the total United States and are for whites only for comparability to the incidence data. The last two columns display five-year relative survival figures for patients diagnosed during two time periods, 1950-54 and 1986-93 and are based on information from the End Results program for 1950-54 and SEER for 1986-93.

Caution should be exercised when interpreting these statistics. Evaluating trends over such a long period of time may hide recent changes in the trends. In addition, the straight line model fit to the log of the incidence and mortality rates and used to calculate the estimated annual percentage change may be inappropriate if the trend has changed directions or if the rate of change in rates has changed dramatically.

SUMMARY TABLES

While there are detailed tables in separate sections for each of the major cancer sites, information on some of the more 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 mortality rates for the most recent 5-year period, trends (percent change and estimated annual percent change) from 1973 to the most recent year, median age at diagnosis, median age at death, and survival rates. The information is provided by race (all races, whites, blacks) and by sex.

YEARS OF LIFE LOST DUE TO PREMATURE DEATH FROM VARIOUS CAUSES

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

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

CANCER PREVALENCE

There are different ways to define cancer prevalence. It could be the number of people who currently have cancer. It could also be the number of people who have ever had a particular cancer. Long-term incidence and survival rates from the State of Connecticut back to 1940 were used to estimate age-specific prevalence rates for Connecticut for a recent year. The age-specific prevalence rates for Connecticut were applied to the total U.S. population to estimate the number of Americans who were (will be) alive at a specific point in time who were ever diagnosed with invasive cancer (but including in situ bladder cancer). These prevalence estimates are an attempt to quantify the number of persons in the U.S. who have ever had a diagnosis of cancer (i.e., history of cancer). Prevalence estimates in this section were calculated based on Feldman (1986). There are several studies currently underway to evaluate different methods of calculating prevalence and the reliability of using data from 9 SEER areas back to 1973 or data only for the State of Connecticut back to 1940. Caution should be used in interpreting prevalence estimates.

PROBABILITY OF BEING DIAGNOSED WITH OR DYING FROM CANCER

Tables in the Cancer Statistics Review present, for selected cancers, the probability (expressed as a percent) of an individual of specified age being diagnosed with the specified cancer within ten, twenty or thirty years and within their total remaining lifetime. Lifetime risks of being diagnosed with cancer and lifetime risks of dying from cancer also appear (as percents) in the tables.

Lifetime and interval risks of being diagnosed with cancer: The probability of being diagnosed with cancer is computed by applying cross-sectional age-specific 1992-94 incidence and mortality rates from the SEER areas to a hypothetical cohort of individuals. This hypothetical cohort, consisting of an arbitrarily specified number of live births (e.g., 10,000,000), is considered at risk for two mutually exclusive events: 1) developing the specified cancer; and 2) death due to other causes without the specified cancer. Thus a standard multiple decrement life table is derived (with five-year age intervals up to age 94 and a 95+ interval) using these two types of events. In each age interval we start with the number alive and free of the specified cancer at the beginning of the interval, and subtract out the number who develop the specified cancer and the number who die of other causes among the cancer free. The lifetime risk of being diagnosed with the specified cancer is derived by summing all cancer cases from age 0 through 95+ and dividing by 10,000,000. This calculation does not assume 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 each age interval times the probability of developing cancer in that interval. The probability of developing cancer during any time period (e.g., within 10 years of turning 50 years of age) 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.

For more details on this methodology see Feuer et. al (1992) and Feuer et al. (1993). One improvement over past calculations of the risk estimates was made in the population figures for people over age 85. To improve the precision of our calculations, populations for the age groups 85-89, 90-94, and 95+ were obtained by partitioning the 85+ figure from the SEER areas by interpolation using figures from the 1980 and 1990 decennial censuses. The BOC provided populations for these age groups for 1990 to 1994.

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, 1980) where a person is exposed to the risk of dying from the specified cancer and all other causes based on mortality data from the SEER registry areas. Although the lifetime risk of dying from cancer could have been derived for the entire U.S., these estimates were based only on data from SEER areas to allow comparison with the risk of diagnosis estimates.

U.S. CANCER MORTALITY RATES BY STATE

Average annual mortality rates for the most recent 5-year period are presented for all races by sex for selected cancers for all 50 states and the District of Columbia. The rates are per 100,000 and age-adjusted to the United States (U.S.) 1970 standard million population. The five states with the highest rates and the five states with the lowest rates are identified. The states are also ranked from highest rate to lowest rate for each of the cancers for which rates are reported. The percent difference (PD) between the individual state rates and the rate for the total U.S. is given and is based on the following formula:

$$PD = 100(\text{State rate} - \text{Total U.S. rate})/\text{Total U.S. rate}$$

The standard error provided for each age-adjusted rate is calculated based on the assumption that, for each age-specific rate, the number of deaths is a Poisson random variable (Keyfitz, 1966) with the variance of the age-adjusted rate being a linear combination of the variances of the age-specific rates (Snedecor, 1980a). The difference between each age-adjusted state rate and the age-adjusted total U.S. rate is also tested for statistical significance by calculating a Z statistic from the following formula:

$$Z = (\text{State rate} - \text{Total U.S. rate})/SE_d$$

It is recognized that the two rates being compared are not independent because each state is part of the U.S.; however, this should not compromise the statistical test since each state represents a small proportion of the total U.S.

The standard error of the difference between two age-adjusted rates (SE_d) is given by the following formula:

$$SE_d = [(SE_s)^2 + (SE_u)^2]^{1/2}$$

where SE_s and SE_u are the standard errors of an individual state rate and the total U.S. rate respectively. The variance of each rate, i.e, the square of the standard error, is based on the Poisson assumption.

The standard error does not represent the total error which may be present in the age-adjusted rate but is merely the variance associated with the rates. In addition to this variance, there also exist potential biases and errors in the measurement of the rate which are extremely difficult to accurately assess and probably have a differential impact on the error for one state rate versus another.

Errors in the "measurement" of death rates can occur in either the numerator (the number of reported deaths) or the denominator (the population at risk). Sources of numerator error may include the under registration of deaths. Although investigation by the National Center for Health Statistics indicates that over 99% of all deaths in this country are registered, little is known concerning differentials by geographic area, age, sex, or race.

Numerator error also can occur due to misclassifications. These may include misclassification of race or ethnicity and cause of death. Recent research indicates that, for infant mortality, misclassification is highest for races other than white or black (Hahn, 1992). The extent of racial or ethnic misclassifications in death certificate coding, however, remains unknown.

In coding overall cancer mortality, misclassifications of cause of death would occur in those cases where the true cause of death was cancer, but a cause other than cancer was coded (and the reverse). Within the subset of all cancer deaths, there is the additional problem of misclassification of the primary cancer. It is already known, for example, that this is a problem with primary liver cancer (Percy, 1990).

Denominator errors arise through census under- and over-enumeration in the decennial census (which is the base for intercensal population estimates and population projections). To the extent that any over- or under-count is substantial and variable among subgroups or geographic areas, it may have important consequences on death rates. The effect of an under-count is that it decreases the denominator leading to an over-estimation of the true rate. Conversely, an over-count would result in an under-estimation of the true rate.

In 1980, under-enumeration varied by age group with the greatest difference found for those 80 and older, who were under-counted by about five percent (U.S. Bureau of the Census, 1986). All other age groups were either over- or under-counted by less than 3 percent. For age-sex-race groups, the coverage was lowest for black men aged 40-49 where the under-count was 19 percent. It is thought that no improvement was achieved with the 1990 census, and in some instances, under-enumeration may be even worse than 1980.

The impact of any of these errors is that they alter the counts in either the numerator or the denominator which in turn affect the calculated rate. Since the types of error encountered may differ by type of cancer, age group, race, sex, or even state, their impact is difficult to ascertain. Caution is recommended when dealing with those areas where potential problems may be present.

In testing the differences between the total U.S. rate and the rate for each state and the District of Columbia for a given cancer, it was necessary to consider the large number of statistical tests that were performed, because it would be expected that some tests are significant due to chance alone. To account for multiple comparisons, the overall significance level was chosen such that the probability that at least one comparison would be significant is 0.01. Furthermore, based on one of Bonferroni's inequalities (Snedecor, 1980b), the significance level for each individual comparison was set equal to 0.01/51, where 51 is the number of comparisons made for each type of cancer. Thus, any individual comparison with an associated p value less than 0.0002 was considered to be statistically significant.

Caution must be exercised in assessing statistically significant differences. Some states may have rates that are very close to the total U.S. rate, but because of their large population, the difference between their rate and the total U.S. rate is found to be statistically significant. On the other hand, some smaller states may have rates that differ substantially from the total U.S. rate, but because of their relatively small population, the differences are found to be statistically nonsignificant.

If the percent difference between the two rates is small, there may be some question as to the importance of the difference. It is difficult to specify a percent difference below which there would be no concern because the relative difference observed will be a function of the magnitude of the rates involved. It may also be of value to consider the size of the absolute difference between a state rate and the national rate in assessing the importance of a statistically significant difference. To further assist in the interpretation of the data, the tables are footnoted to indicate absolute differences greater than 5, 10 or 15 percent, depending on the magnitude of the cancer rates.

It is important to note that comparing individual state rates with the total U.S. 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 is found to have the highest mortality rates. It can be argued that it is inappropriate to compare cancer rates for the District of Columbia with those from the 50 States because the District of Columbia is a predominantly urban area whereas states are comprised of a combination of urban, suburban, and rural areas. Mortality rates for many cancers are higher in urban areas. Also, the District of Columbia has a higher percentage of blacks (about two-thirds) than any state, and their higher mortality rates for several types of cancer elevate the overall rate for the District of Columbia.

INCIDENCE AND MORTALITY TIME TRENDS

Graphs depicting time trend lines are included for most of the individual cancers. Trend lines were fit using polynomial regression of the form

$$Y_x = B_0 + B_1x + ... + B_nx^n,$$

where Y_x is the rate in year x.

First order polynomials fit a linear trend representing either a constant yearly increase or decrease, or a trend which is basically flat over the years involved. Second order polynomials may fit a trend whose function may increase or decrease to some maximum or minimum point in time before changing direction or whose rate of increase or decrease may not be constant. Polynomials higher than second order fit trend functions which may reach several maximum or minimum points. The correct function is determined by whether the addition of a higher order leads to a significant value for the coefficient, B, associated with that particular order (i.e., a trend is second order if and only if the term B_2 is significantly different from zero). Trend lines were not fit for some cancers when annual rates showed substantial variation due to small numbers of cases in the numerator. Most of the trends were fit with either first or second order polynomial functions.

INTERPRETATION OF CANCER STATISTICS

In reviewing the various cancer incidence, mortality, and survival statistics provided in this report, the reader should be aware that a number of factors may affect the interpretation of many of these statistics.

Survival rates for all cancers combined: The mix of cancers is changing over time as the incidence of some cancers increase and the incidence of others decrease. Thus, the relative contribution of a specific cancer to the survival rate for all cancers combined may not be constant over time. Because survival rates differ by form of cancer, the overall cancer survival rate can fluctuate even when the survival rates for individual cancers remain unchanged. It is possible to adjust the survival rates for all cancers combined for a calendar period based on the relative frequency of each cancer for some specified reference period; however, rates adjusted in this manner have been found to 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: A factor that may lead to an artifactual increase in patient survival as well as incidence for a specific cancer is the detection and diagnosis of cancers earlier than otherwise expected. These changes can occur subsequent to the introduction of a new procedure to screen subgroups of the

population for a specific cancer and need not be related to whether or not 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 will appear to increase. The additional survival associated with the time between a cancer being diagnosed by a screening procedure and the time at which the cancer would have been diagnosed in the absence of screening has been termed "lead-time" (Zelen, 1976) and results in an artifactual increase in patient survival. Screening for breast cancer has been demonstrated to result in increased survival over and above that resulting from "lead-time" alone. Screening for breast cancer has been demonstrated to reduce breast cancer mortality. The benefit of screening is being studied for some other cancers. Screening may also result in a decrease in survival rates for invasive cancer if the screening procedure consistently detects a cancer in a preinvasive phase. In this case, length-biased sampling (Zelen, 1976) may be operating and, if so, will result in those cancers that would have had a relatively good prognosis had they progressed to invasive disease being preferentially detected in a preinvasive phase. There is, therefore, the possibility of a systematic elimination of invasive cancers that would have had a relatively good prognosis. If this occurs, the mix of cancers that are not detected at screening and do progress to invasive becomes less prognostically favorable resulting in a temporal decrease in survival for patients with invasive cancers. This latter effect of screening on patient survival may at least partially explain survival trends for cervical cancer. Other possible cancers affected include breast, colon, rectum and prostate.

Changes in diagnostic criteria: Early detection of cancer resulting from screening and/or earlier response to symptoms may result in the increasing diagnosis of small (early) tumors prior to their becoming life threatening. This may have the effect of raising the incidence and survival rates with little or no change in mortality rates. Breast, colon, prostate, cervix uteri, bladder and skin (melanoma) are some of the cancers most likely to be affected.

Technological advances in diagnostic procedures: Temporal trends in survival for patients with specific cancers by stage at diagnosis as well as temporal trends in distributions of stage at diagnosis are not presented in this report. However, it is possible that the reader might compare survival by stage and stage distributions given here with those for earlier time periods as provided in previous reports. Thus, it is necessary to comment on the effect of technological advances on the diagnosis and staging of cancer. The probability that a patient's cancer will be assigned to a particular stage may change over time due to advances in diagnostic technology. Utilization of new technology can give rise to a temporal phenomenon known as stage migration. Stage migration occurs when diagnostic procedures change over time resulting in an increase in the probability that a patient's cancer will be diagnosed in a more advanced stage. For example, certain distant metastases which would have been undetectable a few years ago can now be diagnosed by a Computer Tomography (CAT) scan or by Magnetic Resonance Imaging (MRI). Therefore, some of the patients who would have been previously diagnosed as having cancer in a localized or regional stage would now be classified as having cancer in a distant stage. Thus, the likely result would be to remove the worst survivors from the localized and regional categories, i.e. those with previously undetected distant metastases, and put them into the advanced stage category. As a result, the stage distribution for a cancer may become less favorable over time, but the survival rates for each stage category may improve. The latter occurs because those patients shifted from early to advanced stage likely have poorer survival than early stage patients, as indicated previously, but better survival than advanced stage patients as identified in past time periods. However, overall survival would not change. This has been referred to as the "Will Rogers phenomenon" (Feinstein, 1985) and is an important concept to understand when examining temporal changes in survival by stage as well as temporal changes in stage distributions. This phenomenon could affect staging for virtually all solid tumors.

Evolution of stage classifications: The American Joint Committee on Cancer has produced a new staging classification for many cancers every few years. The evolution of such classifications reflects the identification of new prognostic factors which may influence choice of treatment. Because the SEER Program collects data on extent of disease rather than some determination of stage specified in the

medical record, changes in stage definitions should not produce stage shifts as long as the detailed data on extent of disease are included in the medical record. For those cancers for which new prognostic variables are introduced into staging, such that previously collected detailed data on extent of disease cannot be collapsed into stage categories, there can be problems in assessing temporal trends in stage of disease. It is only possible to determine what effect changes in staging have had on stage-specific survival and stage distributions by reviewing the evolution of staging for a given cancer. One reason for using the historical categories of localized, regional and distant is that these categories have been fairly comparable over time.

Interpreting relative survival rates: The relative survival rate is the ratio of the observed survival rate to the expected survival rate for a patient cohort. The expected rate is based on mortality rates for the total population taking into account, as appropriate, the age, sex, race, and calendar year of diagnosis of the patients. It is assumed that the presence of cancer is the only factor which distinguishes the cancer patient cohort from the general population, with the relative survival rate indicating the probability that patients will escape death due to causes associated with their diagnosed cancer. In some cases, there is a factor related to the risk of a cancer which is also 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, and therefore, a cohort of lung cancer patients is going to consist of a much higher proportion of smokers than the general population. However, smoking is a risk factor for other diseases resulting in smokers having a shorter life expectancy than non-smokers. Expected survival rates for lung cancer patients based on the general population will be unduly optimistic for this reason and will result in relative rates which are lower than they should be. The problem cannot be easily corrected because life-tables for smokers and non-smokers are not readily available. The possibility that expected rates may not be appropriate for a given patient cohort should also be considered when examining relative survival rates for patients with cancers of the cervix uteri or breast, because the risk of these cancers has been associated with socioeconomic status (Baquet, 1991) which, in turn, may be related to life expectancy.

Comparison with other databases: The SEER data are obtained from population-based cancer registries covering about ten percent of the United States population. It is sometimes of interest to compare cancer statistics for SEER areas with those from other registries both in the United States and worldwide. In making such comparisons, it is essential that the factors considered above be carefully considered for both data sources. In addition, completeness of case ascertainment, rules used to determine multiple primaries, follow-up, and rules used in assigning and coding cause of death should be assessed along with the sources and procedures used in obtaining population estimates. Depending on the rates being compared, there could be other confounding factors which should be adjusted for or otherwise considered.

It is sometimes interesting to compare survival data for cancer patients in SEER areas with that from clinical trials. This must be done with great caution. Survival data from clinical trials may have been obtained from a patient population that is different from patients diagnosed in SEER areas in regard to prognostic factors for the cancer in question. Any survival comparisons would have to adjust for such differences. Also, it is necessary to verify that the methodology used in computing survival rates is the same for both data sources. Patients from clinical trials may differ from patients diagnosed in SEER areas in regard to 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 the type discussed here.

Errors in data collection: In the process of registering cancer patients, errors in abstracting and coding the data including demographic information, cancer site and/or histology, extent of disease, treatment, and patient survival may be made. Quality control studies are periodically carried out to detect and correct this type of error, but no attempt is made here 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 National Cancer Institute

each year. Because of the dynamic nature of the registries' data bases, it is possible that the numbers of cancer cases in a particular race-sex-age-cancer category may change in a calendar year for which data have already been reported in a previous publication. One possible reason for this is that additional cancer cases that were previously overlooked for a given calendar year may be found and reported to the central registry. A second reason relates to 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 in a given year. A third reason relates to possible code changes that 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. A fourth reason is the elimination of duplicate records for the same patient, often due to name changes or misspellings.

This discussion has addressed issues that may result in a recent report having a different number of cases for a given time period than in an earlier report with its resulting effect on incidence and possibly survival rates. Population estimates may also change from one report to another for some calendar years. This occurs because the NCI receives population estimates which are regularly updated by the Bureau of the Census. For example, previous population estimates for the nine years following the 1980 census were recently replaced with improved, new estimates controlled to population counts now available from the 1990 census. Such changes may result in some differences between incidence and mortality rates for a calendar period as published in two different reports.

STANDARD ERRORS OF RATES

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

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

$$SE(CR_t) = (CR_t)*[(q_1/(e_1-d_1)) + (q_2/(e_2-d_2)) + ... + (q_t/(e_t-d_t))]^{1/2}$$

where CR_t is the t year relative survival rate, q_1 is the probability of dying in year 1, e_1 is the effective number of patients at risk in year 1, and d_1 is the number of deaths in year 1. The subscripts 2 through t refer to subsequent years 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 standard error of a particular incidence or mortality rate by the following formula for the standard error of a crude incidence or mortality rate (Keyfitz, 1966):

$$SE(rate) = rate/[events]^{1/2}$$

where events refer to the number of cancer diagnoses associated with an incidence rate or the number of deaths associated with a mortality rate.

Appendix Tables A-1 and A-2 provide numbers of cancer diagnoses within SEER and numbers of deaths in the total U.S., respectively, by race and sex for the most recent five-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 for a rate for a single year the number of events is the number of diagnoses or deaths divided by five.

DEFINITIONS

Several technical terms are used in presenting the data in this report. The following definitions are presented here in an attempt to clarify their use to 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, expressed as the number of cancers per 100,000 people. It should be noted that the numerator of the rate can include multiple primary cancers occurring in one individual. This rate can be computed for each type of cancer as well as for all cancers combined. Except for five-year age-specific rates, all incidence rates are age-adjusted to the 1970 U.S. standard population or to the world standard (see below). Rates are for invasive cancer only, unless otherwise specified.

Mortality rate: The cancer mortality rate is the number of deaths with cancer given as the underlying cause of death occurring in a specified population during a year, expressed as the number of deaths due to cancer per 100,000 people. This rate can be computed for each type of cancer as well as for all cancers combined. Except for age-specific rates, all mortality rates are age-adjusted to the 1970 U.S. standard population or to the world standard (see below).

Age-adjusted rate: An age-adjusted rate is a weighted average of the age-specific cancer incidence (or mortality) rates, where the weights are the proportions of persons in the corresponding age groups of a standard population. The potential confounding effect of age is reduced when comparing age-adjusted rates computed using the same standard population. For this report, the 1970 United States standard million and world standard million populations are used as the standards in computing all age-adjusted rates.

Percent Change: The percent change in rates over the entire time period covered by this report was obtained by calculating the average of the 1973 and 1974 rates and the average of the rates for the most recent two years, subtracting the former from the latter, dividing the difference by the former, and then multiplying by 100 to convert the number to a percent. Percent changes are also provided for two five-year periods, 1975-79 and the most recent 5-year period.

Estimated Annual Percent Change: The Estimated Annual Percent Change (EAPC) was calculated by fitting a regression line to the natural logarithm of the rates (r) using calendar year as a regressor variable, i.e. $y = mx + b$ where $y = \text{Ln } r$ and x = calendar year. The $EAPC = 100*(e^m - 1)$. Testing the hypothesis that the Annual Percent Change is equal to zero is equivalent to testing the hypothesis that the slope of the line in the above equation is equal to zero. The latter hypothesis is tested using the t distribution of m/SE_m with the number of degrees of freedom equal to the number of calendar years minus two. The standard error of m, i.e. SE_m, is obtained from the fit of the regression (Kleinbaum, 1988). This calculation assumes that the rates increased/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 equal to zero, the linear regression was not calculated. Because the methods used in their calculation are not directly related, it is possible that the signs of the PC and the EAPC may disagree, and this occurs in a few instances in the tables presented. The differences between incidence and mortality trends for the time period 1975-79 versus those for the most recent five-year period are tested for statistical significance using a t statistic with six degrees of freedom defined as the difference in the regression coefficients divided by the standard error of the difference (Kleinbaum, 1988).

Observed survival rate: The observed survival rate is obtained using standard life table procedures and represents the proportion of cancer patients surviving for a specified length of time after diagnosis.

Relative survival rate: The relative survival rate is calculated using a procedure described by Ederer, Axtell, and Cutler (1961) whereby the observed survival rate is adjusted for expected mortality. The relative survival rate represents the likelihood that a patient will not die from causes associated

specifically with their cancer at some specified time after diagnosis. It is always larger than the observed survival rate for the same group of patients.

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

Person Years of Life Lost: The Person Years of Life Lost (PYLL) was calculated as follows. For each of the individuals who died of a particular cancer of interest, it was possible to obtain the number of additional years they were expected to survive conditional on their survival to the age at which they died of their cancer. This conditional expectation was obtained from life tables for the United States population available from the National Center for Health Statistics. The PYLL in the general population associated with a particular cancer is simply the sum of this conditional expectation over all those individuals who died of that cancer.

Average Years of Life Lost: The Average Years of Life Lost (AYLL) associated with a particular cancer is the PYLL associated with that cancer in the general population divided by the number of deaths from that cancer in the general population.

Stage of Disease at Diagnosis: Localized - an invasive neoplasm confined entirely to the organ of origin. Regional - a neoplasm that has extended beyond the limits of the organ of origin directly into surrounding organs or tissues; into regional lymph nodes; or both direct extension and regional lymph node involvement. Distant - a neoplasm that has spread to parts of the body remote from the primary tumor either by direct extension or by discontinuous metastasis. Unstaged - information is not sufficient to assign a stage.

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Table I-1

ESTIMATED NEW CANCER CASES AND DEATHS FOR 1997

All Races, By Sex

Primary Site	Estimated New Cases			Estimated Deaths		
	Total	Males	Females	Total	Males	Females
All Sites¤	1,257,800	661,200	596,600	560,000	294,100	265,900
Oral Cavity and Pharynx	30,750	20,900	9,850	8,440	5,600	2,840
Tongue	6,400	4,200	2,200	1,820	1,200	620
Mouth	11,000	6,700	4,300	2,500	1,400	1,100
Pharynx	8,800	6,400	2,400	2,030	1,500	530
Other Oral Cavity	4,550	3,600	950	2,090	1,500	590
Digestive System	225,900	120,000	105,900	127,070	67,440	59,630
Esophagus	12,500	9,400	3,100	11,500	8,700	2,800
Stomach	22,400	14,000	8,400	14,000	8,300	5,700
Small Intestine	4,900	2,600	2,300	1,140	540	600
Colon	94,100	45,500	48,600	46,600	22,600	24,000
Rectum	37,100	20,900	16,200	8,300	4,400	3,900
Anus, Anal Canal, and Anorectum	3,400	1,400	2,000	410	150	260
Liver and Intrahepatic Bile Duct	13,600	9,100	4,500	12,400	7,500	4,900
Gallbladder and Other Biliary	6,900	2,500	4,400	3,500	1,300	2,200
Pancreas	27,600	13,400	14,200	28,100	13,500	14,600
Other Digestive	3,400	1,200	2,200	1,120	450	670
Respiratory System	194,600	111,400	83,200	165,920	98,490	67,430
Larynx	10,900	8,900	2,000	4,230	3,300	930
Lung and Bronchus	178,100	98,300	79,800	160,400	94,400	66,000
Other Respiratory	5,600	4,200	1,400	1,290	790	500
Bones and Joints	2,500	1,300	1,200	1,410	750	660
Soft Tissues	6,600	3,700	2,900	4,100	1,900	2,200
Melanomas of Skin	40,300	22,900	17,400	7,300	4,600	2,700
Breast	181,600	1,400	180,200	44,190	290	43,900
Genital Organs	424,800	343,000	81,800	68,870	42,370	26,500
Cervix Uteri	14,500		14,500	4,800		4,800
Corpus and Uterus, NOS	34,900		34,900	6,000		6,000
Ovary	26,800		26,800	14,200		14,200
Vulva	3,300		3,300	800		800
Vagina and other genital organs female	2,300		2,300	700		700
Prostate¤	209,900	209,900		41,800	41,800	
Testis	7,200	7,200		350	350	
Other Male Genital	1,300	1,300		220	220	
Urinary System	85,400	58,000	27,400	23,520	15,060	8,460
Urinary Bladder	54,500	39,500	15,000	11,700	7,800	3,900
Kidney and Other Urinary	30,900	18,500	12,400	11,820	7,260	4,560
Eye and Orbit	2,100	1,100	1,000	250	140	110
Brain and Other Nervous System	17,600	10,100	7,500	13,200	7,200	6,000
Endocrine Glands	17,560	5,530	12,030	2,070	870	1,200
Thyroid	16,100	4,700	11,400	1,230	450	780
Other Endocrine	1,460	830	630	840	420	420
Lymphomas and Myelomas	74,900	42,100	32,800	36,180	18,720	17,460
Hodgkin's Disease	7,500	3,900	3,600	1,480	820	660
Non-Hodgkin's Lymphoma	53,600	30,300	23,300	23,800	12,400	11,400
Multiple Myeloma	13,800	7,900	5,900	10,900	5,500	5,400
Leukemias	28,300	15,900	12,400	21,310	11,770	9,540
Lymphocytic Leukemias	10,400	5,900	4,500	6,310	3,570	2,740
Myeloid Leukemias	13,500	7,100	6,400	8,700	4,800	3,900
Other Leukemias	4,400	2,900	1,500	6,300	3,400	2,900
All Other Sites	35,500	16,500	19,000	34,000	17,400	16,600

Source: Cancer Facts & Figures – 1997, American Cancer Society (ACS), Atlanta, Georgia, 1997. Excludes basal and squamous cell skin and in situ carcinomas except urinary bladder. Incidence projections are based on rates from the NCI SEER Program 1979-1993.

¤ Estimates revised 4/97. Original ACS prostate cancer estimate may be too high due to the unavailability of 1994 and preliminary 1995 incidence rates at estimation time. With the additional information, NCI and ACS estimate that there will be less than 210,000 new cases of prostate cancer in 1997.

Table I-2

45-YEAR TRENDS IN U.S. CANCER MORTALITY RATES*

All Races, Males and Females

All Primary Cancer Sites Excluding Lung and Bronchus⊕

Age Group	1950	1975	1994	Estimated Annual Percent Change 1950-75	Estimated Annual Percent Change 1975-94	Total Percent Change 1950-94
0-4	11.0	5.1	2.9	-3.0	-2.9	-73.4
5-14	6.6	4.7	2.8	-0.9	-2.9	-55.7
15-24	8.4	6.5	4.7	-0.6	-1.8	-44.8
25-34	19.0	13.9	11.2	-1.3	-1.1	-41.4
35-44	59.6	43.1	35.3	-1.1	-0.9	-39.9
45-54	154.8	130.1	108.8	-0.6	-1.0	-29.6
55-64	344.8	299.7	274.5	-0.5	-0.4	-19.8
65-74	640.7	574.6	572.4	-0.5	0.0	-9.9
75-84	1105.3	963.2	1002.1	-0.5	0.2	-8.3
85+	1408.4	1302.4	1519.5	-0.6	0.7	8.2
All Ages	145.0	125.3	121.0	-0.6	-0.2	-15.9

All Primary Cancer Sites Combined

Age Group	1950	1975	1994	Estimated Annual Percent Change 1950-75	Estimated Annual Percent Change 1975-94	Total Percent Change 1950-94
0-4	11.1	5.2	2.9	-3.0	-2.9	-73.4
5-14	6.6	4.7	2.8	-1.0	-2.8	-55.8
15-24	8.5	6.6	4.8	-0.6	-1.8	-45.3
25-34	19.8	14.6	11.7	-1.2	-1.1	-40.6
35-44	64.2	53.9	41.6	-0.5	-1.2	-34.2
45-54	175.2	179.2	149.3	0.2	-1.0	-14.4
55-64	394.0	423.2	421.4	0.3	0.1	7.9
65-74	700.0	769.8	867.9	0.4	0.7	24.5
75-84	1160.9	1156.0	1360.1	0.0	0.9	18.0
85+	1450.7	1437.9	1789.1	-0.3	1.1	23.5
All Ages	158.1	162.3	170.8	0.1	0.3	8.7

Source: NCHS public use tape.

* Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Each rate has been age-adjusted by 5-year age groups.

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

Table I-3

SUMMARY OF CHANGES IN CANCER INCIDENCE AND MORTALITY, 1950-94 AND

5-YEAR RELATIVE SURVIVAL RATES, 1950-93

Males and Females, By Primary Cancer Site

	All Races		Whites					
			Percent Change 1950-94☼					
	Estimated Cancer Cases	Actual Cancer Deaths	Incidence§		U.S. MortalityN		5-Year Relative Survival Rates (Percent)8	
Primary Site	in 1994⊕	in 1994*	Total	EAPC	Total	EAPC	1950-54	1986-93
Oral cavity and Pharynx	29,600	7,914	-35.7	-0.6	-34.3	-0.9	46	54.9
Esophagus	11,000	10,817	-8.1	0.1	16.7	0.3	4	11.8
Stomach	24,000	13,570	-76.2	-2.7	-78.8	-3.6	12	19.4
Colon and Rectum	149,000	57,407	2.2	0.1	-32.9	-0.9	37	62.3
Colon	107,000	49,500	18.9	0.4	-17.8	-0.3	41	63.1
Rectum	42,000	7,907	-25.5	-0.6	-67.0	-2.9	40	60.6
Liver and Intrahep	16,100	10,425	115.4	1.6	27.5	0.5	1	6.2
Pancreas	27,000	26,834	10.6	0.1	17.2	0.2	1	3.7
Larynx	12,500	3,947	39.3	0.6	-10.9	-0.2	52	69.1
Lung and Bronchus	172,000	149,354	257.3	2.7	263.7	3.1	6	14.1
Males	100,000	91,819	192.7	1.9	208.4	2.6	5	12.7
Females	72,000	57,535	573.5	4.8	598.0	5.4	9	16.1
Melanomas of skin	32,000	6,680	395.8	4.1	154.7	2.2	49	88.1
Breast(females)	182,000	43,644	53.0	1.3	-3.7	0.0	60	85.5
Cervix uteri	15,000	4,602	-78.0	-3.1	-74.6	-3.7	59	71.4
Corpus and Uterus, NOS	31,000	6,163	-2.9	-0.6	-67.6	-2.4	72	85.9
Ovary	24,000	13,500	2.7	0.2	-0.4	-0.2	30	46.5
Prostate	200,000	34,901	232.9	3.2	17.9	0.4	43	90.2
Testis	6,800	349	114.7	2.1	-69.4	-3.1	57	95.3
Urinary bladder	51,200	11,170	55.4	1.1	-34.1	-1.1	53	82.5
Kidney and Renal pelvis	27,600	10,749	123.9	2.0	34.9	0.6	34	59.9
Brain and Other nervous	17,500	12,313	85.1	1.2	48.0	0.8	21	29.3
Thyroid	13,000	1,062	122.3	1.7	-49.8	-2.0	80	95.5
Hodgkin's disease	7,900	1,440	9.8	0.2	-71.2	-3.4	30	81.8
Non-Hodgkin's lymphomas	45,000	21,808	186.9	2.9	130.3	1.6	33	52.2
Multiple myeloma	12,700	9,979	195.6	2.0	207.3	2.3	6	28.4
Leukemias	28,600	19,833	4.9	0.1	-3.3	-0.3	10	42.8
Childhood(0-14 yrs)	8,200	1,630	31.1	0.8	-64.3	-2.7	20	72.6
All sites excluding Lung and Bronchus	1,036,000	384,940	41.9	0.8	-15.9	-0.4	38	66.8
All Sites	1,208,000	534,294	54.2	1.0	8.7	0.2	35	59.5

The EAPC is the Estimated Annual Percent Change over the time interval.

⊕ Boring CC, Squires TS, Tong T, Montgomery S. Cancer Statistics 1994. CA Cancer J Clin 1994; 44:7-26. Excludes basal and squamous cell skin and in situ carcinomas except Urinary bladder. Incidence estimates based on rates from the NCI SEER Program 1988-90.

* NCHS public use tape.

☼ All Sites, All sites excluding Lung & Bronchus, Liver & Intrahep, Brain & Other nervous and Childhood cancers are for all races as opposed to whites.

§ Data prior to 1973 are from Devesa, Silverman, Young, et al. Cancer Incidence and Mortality Trends Among Whites in the United States, 1947-84. JNCI 1987; 79:701-770 with the exception of All Sites, All sites excluding Lung & Bronchus, Liver & Intrahep, Brain & Other nervous and Childhood cancers which come from historical Connecticut data. Data for 1973-94 are from the same areas used in Devesa or the Connecticut registry of the SEER Program.

N NCHS public use tape. Due to coding changes throughout the years: Colon excludes other digestive tract; Rectum includes anal canal; Liver & Intrahep 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 Multiple myeloma each include a small number of leukemias; NHL includes a small number of ill-defined sites.

8 Rates for 1950-54 are from NCI Survival Report 5 with the exception of All Sites, All sites excluding Lung & Bronchus, Oral cavity & Pharynx, Colon & Rectum, Non-Hodgkin's lymphomas and Childhood cancers which come from historical Connecticut data. Rates for 1986-93 are from the SEER Program with the exception of the sites just listed which come from the Connecticut registry of the SEER Program.

Table I-4

TRENDS IN SEER INCIDENCE§ AND U.S. MORTALITY* FOR SELECTED CANCER SITES, 1973-94

All Races, Males and Females⊕

Mortality EAPC Incidence EAPC

	Decreasing Incidence			Increasing Incidence		
		Mrt	Inc		Mrt	Inc
Decreasing Mortality	Oral cavity & Pharynx	-1.5	-0.4	Ovary⊕	-0.4	0.4
	Stomach	-2.3	-1.5	Testis⊕	-5.6	2.1
	Colon & Rectum	-1.1	-0.2	Urinary Bladder	-1.5	0.6
	Pancreas	-0.1	-0.4	Thyroid	-1.4	1.2
	Larynx	-0.4	-0.4			
	Cervix uteri⊕	-2.8	-2.3			
	Corpus & Uterus, NOS⊕	-1.6	-1.9			
	Hodgkin's disease	-4.3	-0.2			
	Leukemias	-0.3	-0.3			
					Mrt	Inc
Increasing Mortality				All sites	0.3	1.2
				Esophagus	0.8	0.6
				Liver & Intrahep	1.8	2.7
				Lung & Bronchus	1.8	1.4
				Melanomas of skin	1.4	3.7
				Breast⊕	0.0	1.6
				Prostate⊕	1.1	4.7
				Kidney & Renal pelvis	0.9	2.1
				Brain & Other nervous	0.6	0.9
				Non-Hodgkin's lymphomas	1.9	3.2
				Multiple myeloma	1.4	0.9

Note: The EAPC is the Estimated Annual Percent Change over the time interval.

⊕ EAPCs for sex specific sites are only for the proper sex. EAPCs for breast cancer are for females only.

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Table I-5

TRENDS IN SEER INCIDENCE§ AND U.S. MORTALITY* FOR SELECTED CANCER SITES, 1973-94

All Races, Males and Females⊕

Mortality PC Incidence PC

		Decreasing Incidence		Increasing Incidence	
		Mrt	Inc	Mrt	Inc
Decreasing Mortality	Oral cavity & Pharynx	-24.7	-6.5		
	Stomach	-37.9	-28.8		
	Colon & Rectum	-19.6	-5.2		
	Pancreas	-1.6	-10.5		
	Larynx	-6.8	-11.4		
	Cervix uteri⊕	-44.5	-40.6		
	Corpus & Uterus, NOS⊕	-26.3	-27.9		
	Hodgkin's disease	-61.5	-15.5		
	Leukemias	-5.7	-9.3		
	Breast⊕			-4.1	23.0
	Ovary⊕			-9.0	0.5
	Testis⊕			-66.3	50.6
	Urinary Bladder			-22.4	11.6
	Thyroid			-22.9	31.6
Increasing Mortality	All sites			5.4	23.4
	Esophagus			18.6	11.2
	Liver & Intrahep			39.5	61.0
	Lung & Bronchus			40.8	31.4
	Melanomas of skin			33.2	113.0
	Prostate⊕			20.9	141.8
	Kidney & Renal pelvis			16.3	42.9
	Brain & Other nervous			13.5	18.5
	Non-Hodgkin's lymphomas			39.9	80.6
	Multiple myeloma			35.8	14.4

Note: PC is the Percent Change over the time interval.

⊕ PCs for sex specific sites are only for the proper sex. PCs for breast cancer are for females only.

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Table I-6
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

All Races

Site	Incidence§ (1990-94) Total	Males	Females	US Mortality* (1990-94) Total	Males	Females	Survival§ (1986-93) Total	Males	Females
All Sites	409.0	501.2	346.3	172.3	217.9	141.7	57.9	54.6	61.0
Oral Cavity & Pharynx:	10.7	16.2	6.0	2.8	4.4	1.6	52.6	48.9	60.5
Lip	1.1	2.1	0.3	0.0	0.1	0.0	95.4	95.1	97.0
Tongue	2.2	3.2	1.3	0.6	1.0	0.4	47.9	43.9	56.1
Salivary gland	1.0	1.3	0.8	0.2	0.3	0.1	72.2	65.2	80.8
Floor of mouth	1.0	1.6	0.5	0.1	0.2	0.1	52.9	47.3	64.7
Gum & other oral cavity	1.9	2.5	1.4	0.5	0.6	0.3	50.3	39.9	66.9
Nasopharynx	0.6	1.0	0.3	0.2	0.4	0.1	49.8	50.0	49.3
Tonsil	1.1	1.7	0.6	0.2	0.3	0.1	44.6	42.4	49.6
Oropharynx	0.3	0.5	0.1	0.2	0.3	0.1	28.2	24.5	37.4
Hypopharynx	1.0	1.8	0.4	0.2	0.3	0.1	26.6	25.7	30.0
Other oral cavity & pharynx	0.4	0.6	0.2	0.6	1.0	0.3	25.7	24.7	27.6
Digestive System:	75.3	94.6	60.6	39.7	51.6	30.9	43.8	42.3	45.4
Esophagus	4.0	6.6	1.8	3.5	6.2	1.5	10.8	10.9	10.8
Stomach	7.4	10.9	4.7	4.5	6.5	3.0	20.6	17.8	25.4
Small intestine	1.3	1.6	1.0	0.3	0.4	0.3	51.0	48.7	53.7
Colon & Rectum:	46.2	56.0	38.8	18.1	22.4	15.1	61.5	62.0	61.0
Colon	33.3	39.0	29.1	-	-	-	62.2	63.1	61.4
Rectum	12.9	17.0	9.7	-	-	-	59.9	59.7	60.1
Anus, anal canal & anorectum	0.9	0.8	1.0	0.1	0.1	0.1	57.9	53.9	60.7
Liver & Intrahep:	3.5	5.4	2.0	3.1	4.6	2.1	5.6	3.9	8.6
Liver	2.9	4.6	1.5	2.6	3.9	1.6	5.8	4.0	9.5
Intrahep bile duct	0.6	0.7	0.4	0.5	0.7	0.5	4.3	3.3	4.9
Gallbladder	1.0	0.7	1.3	0.7	0.4	0.8	13.8	15.1	13.3
Other biliary	1.1	1.3	1.0	0.5	0.7	0.5	17.3	19.8	14.8
Pancreas	9.0	10.4	7.9	8.5	10.0	7.3	3.9	3.6	4.1
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	48.2	47.2	49.0
Peritoneum, omentum & mesentery	0.3	0.2	0.4	0.1	0.1	0.1	22.8	15.7	27.1
Other digestive system	0.3	0.3	0.2	0.1	0.2	0.1	3.5	1.3	3.1
Respiratory System:	64.1	89.6	44.9	51.7	76.3	33.6	18.0	17.9	18.1
Nose, nasal cavity & middle ear	0.6	0.8	0.5	0.2	0.2	0.1	53.6	52.9	54.5
Larynx	4.2	7.5	1.6	1.4	2.5	0.5	67.1	68.2	62.9
Lung & bronchus	58.2	79.4	42.4	49.9	73.2	32.8	13.8	12.5	15.7
Pleura	0.8	1.6	0.3	0.1	0.3	0.1	5.6	3.9	11.9
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.2	0.1	47.0	48.2	44.2
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.3	64.3	60.8	68.9
Soft tissue (incl heart)	2.2	2.6	1.9	1.2	1.3	1.1	65.0	64.1	66.0
Skin (ex basal & squam):	16.1	21.9	11.2	2.9	4.4	1.8	67.5	54.6	90.8
Melanomas of skin	12.2	14.9	10.1	2.2	3.1	1.5	87.9	85.1	90.9
Other non-epithelial skin	4.0	7.0	1.1	0.7	1.2	0.3	23.2	16.2	89.0
Breast	60.2	1.0	110.2	14.8	0.2	26.4	84.2	86.5	84.2

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-6 - continued
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

All Races

Site	Incidence§ (1990-94) Total	Males	Females	US Mortality* (1990-94) Total	Males	Females	Survival§ (1986-93) Total	Males	Females
Female Genital System:	25.8	-	47.7	8.3	-	14.8	68.7	-	68.7
Cervix uteri	4.4	-	8.3	1.6	-	2.9	68.9	-	68.9
Corpus uteri	11.5	-	21.1	1.0	-	1.8	84.7	-	84.7
Uterus, NOS	0.2	-	0.3	0.9	-	1.6	24.1	-	24.1
Ovary	8.1	-	14.9	4.4	-	7.8	46.4	-	46.4
Vagina	0.3	-	0.6	0.1	-	0.2	47.2	-	47.2
Vulva	1.0	-	1.7	0.2	-	0.3	75.7	-	75.7
Other female genital system	0.4	-	0.7	0.1	-	0.2	55.3	-	55.3
Male Genital System:	71.1	166.3	-	10.2	26.9	-	88.9	88.9	-
Prostate	68.4	160.7	-	10.1	26.5	-	88.5	88.5	-
Testis	2.3	4.6	-	0.1	0.2	-	95.0	95.0	-
Penis	0.3	0.7	-	0.1	0.2	-	66.9	66.9	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	81.5	81.5	-
Urinary System:	26.8	43.2	14.4	6.9	10.9	4.1	73.4	76.6	66.3
Urinary bladder	17.0	29.5	7.7	3.3	5.7	1.7	81.3	84.1	73.6
Kidney & renal pelvis	9.1	12.6	6.3	3.5	5.0	2.3	59.1	59.9	57.9
Ureter	0.5	0.7	0.3	0.1	0.1	0.1	62.1	64.6	58.3
Other urinary system	0.3	0.4	0.1	0.1	0.1	0.1	59.7	68.2	46.9
Eye & Orbit	0.7	0.8	0.6	0.1	0.1	0.1	78.0	78.2	77.8
Brain & Nervous System:	6.2	7.4	5.2	4.2	5.2	3.5	29.9	29.4	30.5
Brain	5.8	7.0	4.8	4.2	5.0	3.4	27.6	27.2	28.1
Cranial nerves & other nervous system	0.4	0.4	0.3	0.1	0.1	0.1	68.7	67.7	69.9
Endocrine System:	5.5	3.5	7.4	0.7	0.7	0.7	91.3	85.5	93.5
Thyroid	4.9	2.8	6.9	0.3	0.3	0.4	95.1	92.4	95.9
Other endocrine & thymus	0.6	0.6	0.5	0.3	0.4	0.3	56.0	56.2	55.9
Lymphomas:	18.3	22.3	14.8	7.1	8.8	5.7	56.9	53.4	61.3
Hodgkin's disease	2.8	3.1	2.5	0.5	0.7	0.4	80.9	78.2	84.2
Non-Hodgkin's lymphomas	15.5	19.2	12.3	6.5	8.1	5.3	51.3	47.7	55.9
Multiple myeloma	4.5	5.6	3.7	3.1	3.8	2.6	28.6	29.6	27.5
Leukemias:	10.1	13.1	7.8	6.3	8.4	4.9	41.6	42.3	40.6
Lymphocytic:	4.5	6.0	3.4	1.9	2.6	1.3	64.9	64.1	66.0
Acute lymphocytic	1.4	1.7	1.2	0.5	0.7	0.4	56.7	55.0	59.2
Chronic lymphocytic	3.0	4.1	2.1	1.2	1.8	0.8	70.2	69.8	70.7
Other lymphocytic	0.1	0.2	0.1	0.1	0.1	0.1	42.7	43.0	42.5
Myeloid:	4.1	5.1	3.4	2.7	3.4	2.2	18.7	17.6	19.9
Acute myeloid	2.6	3.1	2.2	1.8	2.3	1.5	12.3	10.6	14.4
Chronic myeloid	1.4	1.8	1.1	0.8	1.0	0.6	28.8	28.4	29.4
Other myeloid	0.2	0.2	0.2	0.1	0.1	0.1	23.5	21.8	25.5
Monocytic:	0.2	0.3	0.2	0.1	0.1	0.1	15.1	15.0	14.7
Acute monocytic	0.2	0.2	0.2	0.1	0.1	0.1	13.8	15.6	11.8
Chronic monocytic	0.0	0.0	0.0	0.0	0.0	0.0	29.7	-	-
Other monocytic	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Other:	1.2	1.7	0.9	1.7	2.3	1.4	31.4	38.0	21.7
Other acute	0.5	0.7	0.4	1.0	1.2	0.8	10.7	10.6	10.8
Other chronic	0.0	0.0	0.0	0.1	0.1	0.0	62.3	64.8	-
Aleukemic, subleuk & NOS	0.7	1.0	0.5	0.7	1.0	0.5	46.3	56.0	30.2
Ill-defined & unspecified	10.3	12.0	9.0	11.7	14.6	9.6	11.4	11.6	11.1

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-7
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

Whites

Site	Incidence§ (1990-94) Total	Males	Females	US Mortality* (1990-94) Total	Males	Females	Survival§ (1986-93) Total	Males	Females
All Sites	409.6	496.1	352.0	168.6	211.2	140.2	59.5	56.5	62.3
Oral Cavity & Pharynx:	10.4	15.6	6.0	2.6	3.9	1.5	54.9	51.8	61.7
Lip	1.2	2.4	0.3	0.0	0.1	0.0	95.4	95.2	96.5
Tongue	2.2	3.2	1.4	0.6	0.9	0.4	50.2	46.1	58.2
Salivary gland	1.0	1.3	0.8	0.2	0.3	0.1	72.2	64.9	81.6
Floor of mouth	1.0	1.5	0.6	0.1	0.1	0.1	55.1	50.1	65.3
Gum & other oral cavity	1.9	2.4	1.4	0.4	0.6	0.3	52.0	41.6	68.1
Nasopharynx	0.4	0.6	0.2	0.2	0.3	0.1	44.7	47.1	39.5
Tonsil	1.1	1.6	0.6	0.2	0.3	0.1	46.8	45.6	49.5
Oropharynx	0.3	0.4	0.1	0.2	0.3	0.1	31.2	26.7	42.6
Hypopharynx	0.9	1.6	0.4	0.2	0.3	0.1	27.9	26.8	31.2
Other oral cavity & pharynx	0.4	0.6	0.2	0.5	0.8	0.3	26.1	25.4	27.4
Digestive System:	72.2	90.3	58.3	37.9	49.1	29.5	45.3	44.1	46.6
Esophagus	3.6	6.0	1.6	3.1	5.5	1.2	11.8	12.1	11.1
Stomach	6.3	9.4	3.9	4.0	5.8	2.6	19.4	16.6	24.5
Small intestine	1.2	1.5	1.0	0.3	0.4	0.3	52.3	49.2	55.9
Colon & Rectum:	45.7	55.7	38.2	17.8	22.0	14.7	62.3	62.9	61.8
Colon	32.9	38.7	28.5	-	-	-	63.1	64.2	62.1
Rectum	12.9	17.0	9.7	-	-	-	60.6	60.4	60.8
Anus, anal canal & anorectum	1.0	0.8	1.1	0.1	0.1	0.1	59.9	57.7	61.4
Liver & Intrahep:	2.8	4.2	1.6	2.9	4.1	1.9	6.2	4.4	9.1
Liver	2.2	3.5	1.2	2.3	3.4	1.4	6.5	4.4	10.4
Intrahep bile duct	0.5	0.7	0.4	0.5	0.6	0.5	4.6	4.0	4.8
Gallbladder	1.0	0.6	1.3	0.6	0.4	0.8	13.5	13.6	13.5
Other biliary	1.1	1.3	0.9	0.6	0.7	0.5	17.0	19.4	14.6
Pancreas	8.6	9.9	7.6	8.2	9.7	7.0	3.7	3.6	3.9
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	50.4	47.6	53.6
Peritoneum, omentum & mesentery	0.3	0.2	0.4	0.1	0.1	0.1	22.0	16.4	25.0
Other digestive system	0.3	0.3	0.2	0.1	0.2	0.1	3.3	1.3	2.8
Respiratory System:	63.8	87.9	45.9	51.1	74.2	34.1	18.4	18.4	18.4
Nose, nasal cavity & middle ear	0.6	0.8	0.4	0.2	0.2	0.1	55.6	54.0	57.6
Larynx	4.2	7.4	1.5	1.2	2.3	0.5	69.1	70.5	63.6
Lung & bronchus	58.0	77.8	43.5	49.4	71.3	33.3	14.1	12.7	16.1
Pleura	0.9	1.7	0.3	0.2	0.3	0.1	5.7	4.0	12.0
Trachea & other respiratory organs	0.2	0.3	0.2	0.1	0.2	0.1	47.3	49.9	40.4
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.3	63.4	59.4	68.6
Soft tissue (incl heart)	2.2	2.6	1.9	1.2	1.3	1.1	66.5	65.6	67.5
Skin (ex basal & squam):	17.9	24.0	12.6	3.2	4.7	2.0	69.0	56.4	90.9
Melanomas of skin	13.8	16.8	11.6	2.5	3.5	1.7	88.1	85.4	91.1
Other non-epithelial skin	4.0	7.2	1.0	0.7	1.2	0.3	22.2	15.7	88.3
Breast	61.6	0.9	113.5	14.6	0.2	26.2	85.5	89.8	85.5

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-7 - continued
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

Whites

Site	Incidence§ (1990-94) Total	Males	Females	US Mortality* (1990-94) Total	Males	Females	Survival§ (1986-93) Total	Males	Females
Female Genital System:	26.3	-	48.9	8.0	-	14.4	70.1	-	70.1
Cervix uteri	4.0	-	7.7	1.3	-	2.5	71.4	-	71.4
Corpus uteri	12.1	-	22.3	1.0	-	1.7	86.5	-	86.5
Uterus, NOS	0.2	-	0.3	0.9	-	1.5	26.1	-	26.1
Ovary	8.4	-	15.6	4.5	-	8.0	46.5	-	46.5
Vagina	0.3	-	0.5	0.1	-	0.2	49.0	-	49.0
Vulva	1.0	-	1.8	0.2	-	0.3	75.4	-	75.4
Other female genital system	0.4	-	0.7	0.1	-	0.2	55.7	-	55.7
Male Genital System:	69.5	162.1	-	9.4	24.8	-	90.6	90.6	-
Prostate	66.4	155.8	-	9.2	24.3	-	90.2	90.2	-
Testis	2.7	5.3	-	0.1	0.3	-	95.3	95.3	-
Penis	0.3	0.7	-	0.1	0.1	-	68.2	68.2	-
Other male genital system	0.1	0.2	-	0.0	0.0	-	79.4	79.4	-
Urinary System:	28.2	45.6	15.0	7.0	11.1	4.1	74.8	78.0	67.6
Urinary bladder	18.2	31.8	8.1	3.3	5.8	1.7	82.5	85.1	75.1
Kidney & renal pelvis	9.3	12.8	6.5	3.5	5.1	2.3	59.9	60.8	58.4
Ureter	0.5	0.7	0.3	0.1	0.1	0.1	62.7	65.4	58.6
Other urinary system	0.2	0.4	0.1	0.0	0.1	0.0	63.1	72.8	45.1
Eye & Orbit	0.8	0.9	0.6	0.1	0.1	0.1	78.4	79.6	77.1
Brain & Nervous System:	6.7	8.0	5.6	4.5	5.5	3.7	29.3	28.6	30.2
Brain	6.3	7.6	5.2	4.4	5.4	3.6	27.0	26.4	27.8
Cranial nerves & other nervous system	0.4	0.4	0.3	0.1	0.1	0.1	71.5	70.6	72.4
Endocrine System:	5.5	3.5	7.5	0.7	0.7	0.6	92.0	86.8	94.0
Thyroid	5.0	2.9	7.0	0.3	0.3	0.4	95.5	92.9	96.2
Other endocrine & thymus	0.5	0.6	0.5	0.3	0.4	0.3	55.1	56.5	53.6
Lymphomas:	19.0	23.1	15.5	7.3	9.1	6.0	57.9	54.5	62.1
Hodgkin's disease	3.0	3.3	2.7	0.5	0.7	0.4	81.8	79.1	85.2
Non-Hodgkin's lymphomas	16.0	19.8	12.8	6.8	8.4	5.5	52.2	48.7	56.6
Multiple myeloma	4.1	5.2	3.3	2.8	3.5	2.3	28.4	29.4	27.3
Leukemias:	10.3	13.5	7.9	6.4	8.5	5.0	42.8	43.8	41.4
Lymphocytic:	4.7	6.3	3.5	1.9	2.7	1.3	66.1	65.3	67.2
Acute lymphocytic	1.5	1.8	1.2	0.6	0.7	0.5	57.2	55.5	59.6
Chronic lymphocytic	3.1	4.3	2.1	1.2	1.8	0.8	71.4	71.1	71.8
Other lymphocytic	0.1	0.2	0.1	0.1	0.2	0.1	43.0	41.8	44.0
Myeloid:	4.2	5.2	3.4	2.7	3.5	2.2	18.7	18.1	19.4
Acute myeloid	2.6	3.2	2.2	1.9	2.3	1.5	12.3	10.8	14.0
Chronic myeloid	1.4	1.8	1.1	0.8	1.0	0.6	28.8	29.2	28.3
Other myeloid	0.2	0.2	0.2	0.1	0.1	0.1	24.7	23.8	25.9
Monocytic:	0.2	0.3	0.2	0.1	0.1	0.1	15.6	14.8	16.0
Acute monocytic	0.2	0.2	0.2	0.1	0.1	0.1	13.7	14.6	12.6
Chronic monocytic	0.0	0.0	0.0	0.0	0.0	0.0	35.8	-	-
Other monocytic	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Other:	1.2	1.7	0.8	1.7	2.3	1.4	33.2	40.3	22.8
Other acute	0.5	0.7	0.4	1.0	1.2	0.8	10.5	10.4	10.6
Other chronic	0.0	0.0	0.0	0.1	0.1	0.0	68.5	-	-
Aleukemic, subleuk & NOS	0.7	1.0	0.5	0.7	1.0	0.5	49.2	59.0	32.7
Ill-defined & unspecified	10.1	11.7	8.8	11.3	14.1	9.3	11.8	12.4	11.1

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-8
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

Blacks

Site	Incidence§ (1990-94)			US Mortality* (1990-94)			Survival§ (1986-93)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	456.0	624.7	340.6	226.0	314.4	168.9	44.4	41.1	47.9
Oral Cavity & Pharynx:	13.9	23.3	6.5	5.0	8.9	2.1	33.5	28.4	47.3
Lip	0.1	0.1	0.1	0.0	0.0	0.0	-	-	-
Tongue	2.8	5.1	1.1	1.1	2.0	0.5	26.3	25.7	28.0
Salivary gland	0.9	1.2	0.7	0.2	0.3	0.1	69.6	62.3	75.1
Floor of mouth	1.5	2.7	0.6	0.2	0.4	0.1	38.0	30.0	61.5
Gum & other oral cavity	2.5	3.7	1.4	0.7	1.2	0.4	38.8	31.0	56.7
Nasopharynx	0.6	1.0	0.3	0.3	0.5	0.2	48.5	44.5	-
Tonsil	2.0	3.2	1.0	0.5	0.8	0.2	30.3	26.7	42.0
Oropharynx	0.6	1.1	0.2	0.4	0.8	0.2	8.1	0.0	-
Hypopharynx	2.1	3.9	0.7	0.3	0.7	0.1	22.2	21.7	24.4
Other oral cavity & pharynx	0.7	1.3	0.3	1.2	2.3	0.5	22.3	21.5	24.2
Digestive System:	98.3	126.3	78.1	58.5	78.2	44.8	33.4	30.0	37.1
Esophagus	9.4	15.8	4.6	7.9	13.9	3.6	7.9	7.5	8.8
Stomach	11.9	18.6	7.2	8.5	12.9	5.6	20.1	16.9	25.2
Small intestine	2.0	2.7	1.6	0.5	0.7	0.4	43.5	45.8	40.1
Colon & Rectum:	52.4	61.2	46.4	23.3	28.1	20.2	52.4	51.5	53.2
Colon	40.7	46.2	37.1	-	-	-	52.6	51.6	53.3
Rectum	11.7	15.0	9.3	-	-	-	52.1	51.0	53.0
Anus, anal canal & anorectum	1.3	1.4	1.1	0.2	0.2	0.2	44.5	36.6	52.5
Liver & Intrahep:	5.0	8.1	2.5	4.5	6.8	2.8	3.9	3.0	6.6
Liver	4.6	7.6	2.2	4.0	6.2	2.4	4.0	3.1	6.8
Intrahep bile duct	0.4	0.5	0.3	0.5	0.6	0.4	2.2	0.0	-
Gallbladder	0.9	0.8	1.0	0.7	0.5	0.8	14.8	23.1	10.8
Other biliary	0.9	0.9	0.9	0.4	0.5	0.4	16.9	18.5	13.8
Pancreas	13.6	15.9	11.9	12.1	14.3	10.5	5.1	4.5	5.7
Retroperitoneum	0.5	0.4	0.5	0.1	0.1	0.1	35.1	43.3	29.2
Peritoneum, omentum & mesentery	0.2	0.2	0.3	0.1	0.1	0.1	-	-	-
Other digestive system	0.3	0.5	0.2	0.2	0.3	0.2	4.7	0.0	-
Respiratory System:	86.6	135.1	51.4	64.7	109.4	33.8	15.0	15.0	15.2
Nose, nasal cavity & middle ear	0.7	0.8	0.5	0.3	0.4	0.1	38.3	42.2	35.4
Larynx	7.2	13.4	2.6	2.8	5.4	1.0	54.2	53.0	58.7
Lung & bronchus	78.0	119.6	48.0	61.3	103.2	32.6	11.1	10.5	12.2
Pleura	0.6	1.1	0.2	0.1	0.1	0.0	4.5	6.1	-
Trachea & other respiratory organs	0.1	0.2	0.1	0.2	0.2	0.1	42.5	27.7	-
Bones & joints	0.7	0.8	0.7	0.5	0.6	0.4	67.5	65.8	69.6
Soft tissue (incl heart)	2.5	2.9	2.2	1.6	1.4	1.7	55.6	55.6	55.6
Skin (ex basal & squam):	4.4	7.5	1.8	1.2	1.9	0.7	32.5	20.2	86.3
Melanomas of skin	0.7	0.9	0.6	0.4	0.4	0.4	66.8	50.0	78.7
Other non-epithelial skin	3.7	6.6	1.2	0.8	1.5	0.4	28.6	18.3	89.0
Breast	56.8	1.2	99.5	18.4	0.4	31.4	69.9	63.0	70.0

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-8 - continued
AGE-ADJUSTED SEER INCIDENCE AND U.S. MORTALITY RATES AND 5-YEAR RELATIVE SURVIVAL RATES
By Primary Cancer Site, Sex and Time Period

Blacks

Site	Incidence§ (1990-94) Total	Males	Females	US Mortality* (1990-94) Total	Males	Females	Survival§ (1986-93) Total	Males	Females
Female Genital System:	23.4	-	41.1	11.6	-	19.7	53.4	-	53.4
Cervix uteri	6.8	-	12.2	3.6	-	6.3	57.1	-	57.1
Corpus uteri	8.0	-	14.0	1.7	-	2.8	57.2	-	57.2
Uterus, NOS	0.5	-	0.9	1.9	-	3.1	12.8	-	12.8
Ovary	6.2	-	10.9	3.9	-	6.6	41.9	-	41.9
Vagina	0.6	-	1.0	0.2	-	0.4	43.7	-	43.7
Vulva	0.8	-	1.5	0.2	-	0.3	79.8	-	79.8
Other female genital system	0.4	-	0.8	0.1	-	0.2	54.8	-	54.8
Male Genital System:	94.4	231.1	-	20.7	56.0	-	75.4	75.4	-
Prostate	93.6	229.3	-	20.6	55.5	-	75.3	75.3	-
Testis	0.3	0.7	-	0.1	0.1	-	86.4	86.4	-
Penis	0.4	0.9	-	0.1	0.3	-	63.7	63.7	-
Other male genital system	0.1	0.2	-	0.0	0.0	-	-	-	-
Urinary System:	21.1	31.9	13.4	6.9	10.1	4.8	57.5	59.1	55.0
Urinary bladder	10.2	16.2	6.0	3.2	4.7	2.3	60.9	65.0	53.6
Kidney & renal pelvis	10.2	14.7	6.8	3.5	5.2	2.3	55.3	54.0	57.2
Ureter	0.2	0.3	0.2	0.1	0.1	0.1	-	-	-
Other urinary system	0.6	0.8	0.5	0.2	0.1	0.2	47.6	48.6	45.6
Eye & Orbit	0.2	0.2	0.2	0.0	0.0	0.0	70.8	63.1	-
Brain & Nervous System:	3.7	4.1	3.4	2.5	3.1	2.1	34.5	37.6	30.9
Brain	3.3	3.7	3.1	2.4	3.0	2.0	32.4	35.8	28.8
Cranial nerves & other nervous system	0.4	0.5	0.3	0.1	0.1	0.1	55.8	54.6	-
Endocrine System:	3.7	2.6	4.6	0.7	0.6	0.7	83.2	75.8	85.9
Thyroid	3.1	1.9	4.1	0.3	0.3	0.4	89.2	87.9	88.9
Other endocrine & thymus	0.6	0.7	0.6	0.4	0.4	0.3	60.2	54.6	66.1
Lymphomas:	14.0	18.4	10.5	5.1	6.6	4.0	50.4	46.8	55.2
Hodgkin's disease	2.4	2.7	2.2	0.5	0.7	0.4	73.5	71.7	75.3
Non-Hodgkin's lymphomas	11.6	15.7	8.3	4.6	5.9	3.6	43.7	40.0	49.0
Multiple myeloma	9.5	11.3	8.3	6.1	7.5	5.2	30.1	29.9	30.3
Leukemias:	8.6	10.8	7.0	6.0	7.9	4.7	33.4	31.4	35.7
Lymphocytic:	3.6	4.6	2.8	1.8	2.7	1.3	52.6	51.3	54.2
Acute lymphocytic	0.9	0.9	0.9	0.4	0.5	0.4	49.6	50.0	49.1
Chronic lymphocytic	2.6	3.5	1.9	1.3	2.1	0.8	56.0	52.9	60.0
Other lymphocytic	0.2	0.2	0.1	0.1	0.1	0.1	-	-	-
Myeloid:	3.8	4.6	3.3	2.4	3.0	2.1	19.0	14.5	24.0
Acute myeloid	2.2	2.4	2.1	1.5	1.8	1.3	9.0	5.4	12.2
Chronic myeloid	1.5	2.0	1.1	0.9	1.1	0.7	31.1	24.2	40.7
Other myeloid	0.2	0.2	0.2	0.1	0.1	0.0	19.2	-	-
Monocytic:	0.1	0.2	0.1	0.1	0.1	0.1	10.5	-	-
Acute monocytic	0.1	0.2	0.1	0.0	0.1	0.0	-	-	-
Chronic monocytic	0.0	0.1	0.0	0.0	0.0	0.0	-	-	-
Other monocytic	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Other:	1.0	1.3	0.7	1.6	2.1	1.3	14.9	17.5	11.8
Other acute	0.4	0.7	0.3	0.7	0.9	0.6	12.3	14.1	-
Other chronic	0.0	0.0	0.0	0.0	0.1	0.0	-	-	-
Aleukemic, subleuk & NOS	0.5	0.6	0.4	0.8	1.1	0.6	17.3	21.5	13.4
Ill-defined & unspecified	14.2	17.0	12.1	16.4	21.7	12.7	9.8	7.2	12.3

Note: Incidence and mortality rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population. Survival rates are expressed as percents.

§ SEER Program.
* NCHS public use tape.
- Statistic could not be calculated.

Table I-9

MESOTHELIOMAS (Invasive)

AGE-ADJUSTED CANCER SEER INCIDENCE RATES§, 1974-94

By Race, Sex and Year of Diagnosis

	Year of Diagnosis																				
Race/Sex	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
All Races																					
Males & Females	0.6	0.5	0.6	0.5	0.6	0.7	0.8	0.6	0.7	0.9	0.9	0.8	0.8	0.8	0.8	1.0	1.0	0.9	1.0	0.9	0.9
Males	0.9	0.9	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.5	1.7	1.4	1.3	1.4	1.5	1.8	1.7	1.7	1.9	1.6	1.6
0-54	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.3
55-64	2.6	2.7	2.8	1.7	3.9	2.6	4.1	3.5	3.6	3.6	4.2	4.8	3.9	3.1	2.9	3.4	4.4	4.4	4.7	2.7	3.5
65-74	5.1	3.7	4.2	4.8	6.0	7.9	9.5	6.5	5.7	8.6	8.6	8.4	7.2	8.9	9.3	14.2	8.6	10.1	9.6	11.7	8.1
75-84	4.6	4.9	6.1	5.5	7.1	9.4	10.4	9.8	7.6	15.6	15.0	9.2	13.5	11.4	14.4	10.9	17.4	16.9	17.6	14.2	18.3
85+	0.0	0.0	7.2	1.7	5.0	9.7	6.3	3.1	6.1	6.0	11.8	5.8	7.1	8.3	9.5	13.2	11.6	11.2	25.3	16.2	6.7
Females	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3
0-54	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1
55-64	0.9	0.9	1.2	0.8	0.6	0.9	1.3	0.6	0.8	1.1	0.7	0.8	1.5	0.6	0.4	1.1	1.2	0.8	1.0	0.9	1.5
65-74	1.0	0.8	0.9	0.9	0.8	1.9	1.3	0.5	2.3	1.9	1.2	1.7	2.0	0.7	1.5	1.9	1.6	1.2	1.4	1.2	1.3
75-84	1.6	1.5	1.3	0.8	1.8	0.9	1.0	2.5	1.3	2.6	3.1	2.7	1.8	2.7	2.0	1.5	2.8	3.4	2.3	3.5	2.2
85+	1.0	1.7	0.0	0.0	0.0	0.0	2.0	0.0	1.3	1.2	1.2	0.6	0.6	3.2	2.1	1.5	1.0	1.9	2.3	1.8	1.3
Whites																					
Males & Females	0.6	0.5	0.6	0.6	0.7	0.7	0.9	0.7	0.8	0.9	1.0	0.8	0.8	0.8	0.9	1.0	1.0	1.0	1.1	0.9	1.0
Males	1.0	0.9	1.0	0.9	1.3	1.3	1.7	1.3	1.3	1.6	1.8	1.5	1.5	1.5	1.6	1.9	1.9	1.8	2.1	1.8	1.7
Females	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.2	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.4
Blacks																					
Males & Females	0.3	0.4	0.3	0.2	0.2	0.6	0.3	0.2	0.2	0.8	0.3	0.7	0.4	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.8
Males	0.3	0.7	0.3	0.3	0.2	0.8	0.7	0.5	0.6	1.3	0.7	1.4	0.7	0.9	0.9	0.9	1.1	1.1	1.2	1.0	1.3
Females	0.3	0.2	0.4	0.1	0.3	0.4	0.0	0.0	0.0	0.4	0.0	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.1	0.3	0.4

§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.

Table I-10
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
All Races, 1973-94

	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
Site	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
All Sites	23.4	1.2★	32.8	1.6★	13.0	0.8★	5.4	0.3★	4.4	0.3★	7.6	0.4★
Oral Cavity & Pharynx:	-6.5	-0.4★	-9.1	-0.6★	-4.3	-0.3	-24.7	-1.5★	-28.3	-1.8★	-18.5	-1.1★
Lip	-54.4	-3.6★	-57.4	-4.0★	-21.5	-0.5	-64.7	-5.4★	-67.8	-6.1★	-35.0	-2.1★
Tongue	9.0	0.6★	7.7	0.5★	7.0	0.4	-28.4	-1.6★	-32.8	-2.0★	-20.3	-1.1★
Salivary gland	19.4	0.5	36.6	1.1★	1.0	-0.3	-26.3	-1.5★	-18.9	-1.2★	-36.4	-1.9★
Floor of mouth	-21.7	-1.5★	-19.5	-1.5★	-28.4	-1.8★	-59.3	-4.7★	-64.8	-5.3★	-42.8	-3.2★
Gum & other oral cavity	-0.9	0.2	-5.4	0.2	1.9	0.0	-19.5	-1.5★	-25.5	-1.9★	-12.4	-1.0★
Nasopharynx	4.1	0.1	5.8	0.2	-4.4	-0.3	-16.1	-0.9★	-20.0	-1.1★	-8.2	-0.5★
Tonsil	4.6	0.0	18.6	0.4	-26.0	-1.1★	-38.5	-2.7★	-38.7	-2.8★	-40.5	-2.7★
Oropharynx	18.6	0.4	12.7	0.3	26.2	1.0	44.0	1.8★	38.4	1.6★	56.7	2.1★
Hypopharynx	21.5	0.3	21.8	0.3	14.7	-0.1	-38.3	-2.6★	-40.9	-2.8★	-30.6	-2.0★
Other oral cavity & pharynx	59.7	1.3★	80.5	1.4	21.8	1.1	-10.5	-0.4★	-13.8	-0.6★	-5.9	-0.3
Digestive System:	-5.7	-0.2★	-3.4	0.0	-9.0	-0.4★	-14.3	-0.8★	-11.6	-0.6★	-18.0	-1.0★
Esophagus	11.2	0.6★	14.7	0.8★	0.7	0.0	18.6	0.8★	23.1	0.9★	3.6	0.1
Stomach	-28.8	-1.5★	-27.0	-1.4★	-31.7	-1.7★	-37.9	-2.3★	-37.4	-2.2★	-39.2	-2.4★
Small intestine	49.7	2.5★	67.7	3.0★	33.3	1.9★	11.7	0.6★	13.3	0.9★	9.6	0.4★
Colon & Rectum:	-5.2	-0.2	-1.9	0.1	-9.4	-0.5★	-19.6	-1.1★	-14.2	-0.8★	-25.0	-1.5★
Colon	-0.3	0.0	5.6	0.4★	-6.6	-0.4★	-	-	-	-	-	-
Rectum	-16.1	-0.8★	-15.9	-0.6★	-16.9	-1.0★	-	-	-	-	-	-
Anus, anal canal & anorectum	60.1	2.2★	95.7	2.6★	39.1	1.8★	440.1	9.7★	385.3	9.4★	465.1	9.9★
Liver & Intrahep:	61.0	2.7★	75.3	2.9★	34.0	2.1★	39.5	1.8★	47.3	2.1★	27.8	1.3★
Liver	40.5	2.0★	56.4	2.3★	10.3	1.1★	17.5	1.0★	28.3	1.4★	0.7	0.1
Intrahep bile duct	365.6	9.1★	393.6	9.8★	316.2	8.6★	643.4	10.1★	662.4	10.1★	629.3	10.2★
Gallbladder	-35.7	-2.0★	-34.1	-2.2★	-36.1	-1.9★	-43.4	-2.8★	-39.7	-2.5★	-44.6	-2.9★
Other biliary	-16.5	-0.7★	-11.4	-0.7★	-19.6	-0.6	-37.0	-2.4★	-36.5	-2.2★	-37.1	-2.4★
Pancreas	-10.5	-0.4★	-16.4	-0.9★	-4.5	0.2	-1.6	-0.1★	-10.4	-0.6★	8.6	0.4★
Retroperitoneum	-10.7	-0.5	-23.6	-0.7	1.4	-0.4	-61.5	-4.9★	-64.0	-5.1★	-58.9	-4.6★
Peritoneum, omentum & mesentery	117.4	4.2★	20.6	1.6	214.0	6.0★	-18.2	-1.2	-39.9	-2.3★	-3.6	-0.6
Other digestive system	11.6	-0.7	16.2	-0.1	10.7	-1.3★	-58.4	-4.5★	-52.9	-4.3★	-64.0	-4.9★
Respiratory System:	27.2	1.3★	2.2	0.1	109.5	3.8★	37.5	1.7★	11.4	0.6★	135.9	4.4★
Nose, nasal cavity & middle ear	-7.9	-0.1	-8.6	-0.3	-5.8	0.3	-40.2	-2.7★	-43.9	-3.1★	-33.8	-2.1★
Larynx	-11.4	-0.4★	-14.1	-0.7★	5.5	1.0★	-6.8	-0.4★	-14.1	-0.8★	42.2	1.6★
Lung & bronchus	31.4	1.4★	3.0	0.2	121.8	4.1★	40.8	1.8★	13.4	0.7★	143.7	4.6★
Pleura	88.5	3.3★	116.9	3.9★	33.3	1.9★	6.2	0.5★	21.1	1.4★	-19.8	-1.4★
Trachea & other respiratory organs	-9.4	-0.7	-2.3	-0.8	-28.6	-0.7	-63.7	-4.8★	-67.4	-5.3★	-56.9	-4.0★
Bones & joints	13.3	0.5★	11.6	0.3	16.3	0.7	-48.9	-3.6★	-51.2	-3.9★	-46.0	-3.3★
Soft tissue (incl heart)	9.5	0.6★	6.1	0.4★	13.7	0.6★	40.3	1.7★	27.5	1.4★	54.2	2.0★
Skin (ex basal & squam):	151.5	5.1★	219.0	6.7★	84.3	3.1★	26.0	1.3★	39.0	1.9★	7.7	0.3★
Melanomas of skin	113.0	3.7★	149.0	4.6★	81.9	2.9★	33.2	1.4★	46.1	2.0★	17.7	0.7★
Other non-epithelial skin	568.8	13.1★	920.7	15.9★	111.3	4.6★	7.4	0.9★	23.0	1.7★	-22.6	-1.2★
Breast	23.1	1.6★	9.5	0.9★	23.0	1.6★	-3.6	0.0	-12.1	-0.9★	-4.1	0.0

The PC is the Percent Change over the time interval.
The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero ($p<.05$).
- Statistic could not be calculated.

Table I-10 - continued
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
All Races, 1973-94

Site	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
Female Genital System:	-22.1	-1.2★	-	-	-22.8	-1.3★	-22.5	-1.2★	-	-	-23.4	-1.3★
Cervix uteri	-41.3	-2.3★	-	-	-40.6	-2.3★	-45.2	-2.8★	-	-	-44.5	-2.8★
Corpus uteri	-26.6	-1.8★	-	-	-27.9	-1.9★	-1.1	-0.5★	-	-	-1.9	-0.5★
Uterus, NOS	-28.9	-2.9★	-	-	-27.2	-2.8★	-41.7	-2.5★	-	-	-42.4	-2.5★
Ovary	1.1	0.4★	-	-	0.5	0.4★	-7.3	-0.3★	-	-	-9.0	-0.4★
Vagina	-7.4	-0.9★	-	-	-7.5	-0.9★	-28.1	-1.7★	-	-	-29.2	-1.8★
Vulva	4.4	0.3	-	-	4.5	0.3	-16.6	-1.1★	-	-	-17.8	-1.1★
Other female genital system	-18.7	-0.6	-	-	-21.0	-0.7	-22.4	-0.7★	-	-	-24.0	-0.9★
Male Genital System:	146.2	4.8★	135.4	4.5★	-	-	12.4	0.7★	17.4	0.9★	-	-
Prostate	154.3	4.9★	141.8	4.7★	-	-	16.3	0.9★	20.9	1.1★	-	-
Testis	52.5	2.2★	50.6	2.1★	-	-	-66.0	-5.5★	-66.3	-5.6★	-	-
Penis	-11.0	-1.2★	-9.6	-1.2★	-	-	-37.2	-2.4★	-37.5	-2.4★	-	-
Other male genital system	16.8	1.2★	21.0	1.2★	-	-	-45.0	-3.5★	-44.8	-3.6★	-	-
Urinary System:	19.7	1.0★	16.9	0.9★	27.2	1.2★	-6.5	-0.4★	-7.4	-0.5★	-2.6	-0.1
Urinary bladder	11.6	0.6★	11.3	0.6★	14.7	0.5★	-22.4	-1.5★	-21.4	-1.5★	-20.5	-1.3★
Kidney & renal pelvis	42.9	2.1★	36.2	1.9★	53.2	2.4★	16.3	0.9★	16.1	0.9★	17.9	1.0★
Ureter	-21.6	-1.1★	-19.6	-1.1★	-25.9	-1.0	-1.1	-0.4	-1.6	-0.3	-0.3	-0.5
Other urinary system	-0.1	-0.5	17.2	0.0	-25.1	-1.3	-28.2	-2.1★	-29.0	-2.3★	-25.9	-1.8★
Eye & Orbit	-18.0	-1.1★	-20.5	-0.8★	-13.8	-1.3★	-40.7	-3.0★	-38.6	-2.8★	-43.8	-3.3★
Brain & Nervous System:	18.5	0.9★	19.0	0.9★	18.2	1.0★	13.5	0.6★	13.7	0.6★	13.5	0.6★
Brain	18.6	0.9★	18.8	0.9★	18.9	1.0★	39.0	1.8★	40.0	1.8★	38.1	1.8★
Cranial nerves & other nervous system	17.2	0.9	21.4	0.7	10.5	1.2	-88.2	-11.0★	-88.8	-11.3★	-87.8	-10.7★
Endocrine System:	31.9	1.2★	26.5	0.8★	35.5	1.4★	1.5	0.1	15.8	0.8★	-7.3	-0.3★
Thyroid	31.6	1.2★	27.8	0.8★	34.6	1.4★	-22.9	-1.4★	-7.7	-0.6★	-30.6	-1.9★
Other endocrine & thymus	34.9	1.5★	21.3	1.0★	50.6	2.0★	54.9	2.5★	48.5	2.4★	62.5	2.7★
Lymphomas:	54.9	2.5★	58.5	2.8★	49.5	2.2★	18.5	1.1★	17.7	1.2★	20.6	1.1★
Hodgkin's disease	-15.5	-0.2	-24.4	-0.8★	-2.5	0.4★	-61.5	-4.3★	-63.1	-4.4★	-58.9	-4.2★
Non-Hodgkin's lymphomas	80.6	3.2★	90.5	3.6★	66.7	2.6★	39.9	1.9★	40.5	2.0★	40.0	1.8★
Multiple myeloma	14.4	0.9★	19.1	1.0★	9.8	0.7★	35.8	1.4★	36.6	1.4★	35.9	1.4★
Leukemias:	-9.3	-0.3★	-10.9	-0.3★	-7.8	-0.3★	-5.7	-0.3★	-4.6	-0.3★	-6.6	-0.3★
Lymphocytic:	-16.6	-0.3	-20.8	-0.3	-12.1	-0.3	-14.1	-0.6★	-12.0	-0.5★	-16.6	-0.7★
Acute lymphocytic	7.2	1.4★	-3.6	1.2★	22.9	1.6★	-31.7	-1.5★	-33.7	-1.6★	-28.6	-1.3★
Chronic lymphocytic	-22.3	-0.8★	-23.8	-0.7★	-21.7	-0.9★	14.1	0.7★	17.7	0.7★	8.1	0.6★
Other lymphocytic	-60.2	-3.9★	-55.3	-3.1★	-73.7	-5.6★	-67.6	-5.5★	-68.4	-5.5★	-67.5	-5.6★
Myeloid:	-3.3	-0.4★	-2.5	-0.4★	-4.2	-0.5★	-9.3	-0.8★	-9.0	-0.8★	-9.3	-0.8★
Acute myeloid	7.2	-0.1	8.0	0.0	7.9	-0.1	-3.4	-0.7★	-2.3	-0.6★	-4.1	-0.7★
Chronic myeloid	-9.8	-0.4	-5.5	-0.3	-16.2	-0.5	-5.7	-0.3★	-7.4	-0.3★	-4.1	-0.2
Other myeloid	-46.9	-4.1★	-54.2	-4.5★	-40.0	-3.8★	-67.8	-5.6★	-67.3	-5.5★	-67.9	-5.7★
Monocytic:	-29.0	-1.2★	-26.0	-1.5★	-32.4	-1.0	-68.1	-5.4★	-70.4	-5.6★	-64.4	-5.0★
Acute monocytic	-2.5	0.4	-2.1	0.1	-6.1	0.6	-63.2	-4.5★	-66.5	-4.6★	-59.2	-4.5★
Chronic monocytic	-66.8	-2.7	-47.6	-	-92.0	-	-38.5	-1.7★	-32.4	-1.7	-40.6	-1.4
Other monocytic	-87.8	-11.8★	-78.9	-	-95.7	-	-87.1	-10.2★	-86.9	-11.0★	-86.8	-8.7★
Other:	4.0	0.4	6.1	0.4	2.2	0.4	24.6	1.3★	27.3	1.2★	22.2	1.5★
Other acute	-7.1	0.7	-6.3	1.0	-0.6	0.7	18.7	1.2★	19.5	1.1★	19.2	1.4★
Other chronic	-29.7	-2.1	-23.6	-2.0	-21.4	-2.8	-31.7	-0.8★	-20.6	-0.4	-40.2	-1.2★
Aleukemic, subleuk & NOS	14.9	0.3	17.4	0.1	5.8	0.3	40.7	1.6★	44.4	1.6★	35.2	1.8★
Ill-defined & unspecified	-2.6	-0.2★	-3.2	-0.2	-2.0	-0.3	19.1	0.9★	27.2	1.2★	11.0	0.5★

PC The PC is the Percent Change over the time interval.
EAPC The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero ($p<.05$).
- Statistic could not be calculated.

Table I-11
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
Whites, 1973-94

	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
Site	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
All Sites	22.6	1.2★	29.8	1.5★	13.8	0.9★	5.0	0.3★	3.2	0.2★	7.7	0.4★
Oral Cavity & Pharynx:	-9.7	-0.5★	-14.3	-0.8★	-4.4	-0.2	-28.7	-1.8★	-33.5	-2.1★	-20.1	-1.2★
Lip	-52.7	-3.5★	-56.2	-3.9★	-17.9	-0.7	-63.4	-5.2★	-66.9	-6.0★	-26.5	-1.6★
Tongue	10.1	0.6★	5.5	0.5	12.6	0.6	-31.2	-1.8★	-36.6	-2.3★	-21.3	-1.2★
Salivary gland	24.7	0.6	41.6	1.2★	6.3	-0.2	-25.3	-1.4★	-17.3	-1.1★	-37.0	-1.8★
Floor of mouth	-23.5	-1.6★	-22.3	-1.6★	-29.2	-1.7★	-59.7	-4.7★	-65.9	-5.4★	-42.4	-3.1★
Gum & other oral cavity	0.6	0.3	-6.7	0.2	6.2	0.2	-21.8	-1.6★	-29.1	-2.1★	-12.7	-1.0★
Nasopharynx	-23.2	-1.2★	-24.0	-1.2★	-25.6	-1.4★	-26.2	-1.5★	-33.4	-1.9★	-9.9	-0.8★
Tonsil	-0.5	-0.1	10.3	0.1	-28.0	-1.1★	-41.3	-3.0★	-43.1	-3.3★	-40.3	-2.8★
Oropharynx	10.1	0.2	6.3	0.2	5.4	0.4	27.2	1.3★	18.9	1.0★	48.1	2.0★
Hypopharynx	5.5	-0.1	5.3	-0.2	-2.7	-0.3	-41.6	-2.8★	-45.7	-3.1★	-27.5	-2.0★
Other oral cavity & pharynx	53.6	1.0	71.0	0.9	23.1	1.1	-17.7	-0.8★	-21.4	-1.1★	-12.7	-0.5★
Digestive System:	-8.4	-0.3★	-6.9	-0.2	-11.3	-0.6★	-16.2	-0.9★	-13.4	-0.7★	-20.3	-1.2★
Esophagus	17.7	1.0★	21.1	1.2★	3.0	0.1	26.7	1.1★	32.1	1.4★	6.1	0.2★
Stomach	-34.6	-1.9★	-32.6	-1.8★	-39.1	-2.2★	-40.4	-2.5★	-39.7	-2.4★	-42.5	-2.7★
Small intestine	45.1	2.4★	63.6	2.8★	28.1	1.8★	11.8	0.5★	12.8	0.7★	10.2	0.2
Colon & Rectum:	-7.6	-0.3	-5.0	0.0	-11.5	-0.7★	-21.8	-1.3★	-16.6	-0.9★	-27.2	-1.7★
Colon	-2.9	-0.1	2.7	0.3	-9.2	-0.5★	-	-	-	-	-	-
Rectum	-18.0	-0.9★	-19.1	-0.8★	-17.5	-1.1★	-	-	-	-	-	-
Anus, anal canal & anorectum	56.0	2.2★	82.7	2.4★	41.0	2.0★	440.1	9.7★	338.2	9.2★	503.5	10.0★
Liver & Intrahep:	46.0	2.2★	63.1	2.5★	18.0	1.5★	37.0	1.7★	45.4	2.1★	24.7	1.2★
Liver	21.6	1.3★	39.7	1.7★	-7.9	0.3	13.3	0.8★	24.7	1.3★	-3.7	-0.2
Intrahep bile duct	385.3	9.1★	405.0	9.8★	337.3	8.7★	658.0	10.2★	689.8	10.2★	627.0	10.2★
Gallbladder	-37.0	-2.2★	-40.8	-2.6★	-35.0	-2.0★	-45.0	-3.0★	-41.6	-2.6★	-45.9	-3.1★
Other biliary	-20.3	-0.8★	-14.5	-0.9★	-23.5	-0.7	-37.9	-2.4★	-36.3	-2.3★	-38.8	-2.5★
Pancreas	-12.2	-0.5★	-20.0	-1.0★	-4.5	0.1	-3.3	-0.2★	-12.2	-0.7★	6.6	0.3★
Retroperitoneum	-8.6	-0.4	-17.9	-0.5	-0.9	-0.4	-61.6	-4.9★	-63.4	-5.2★	-59.6	-4.7★
Peritoneum, omentum & mesentery	126.4	4.2★	30.6	1.6	218.2	6.1★	-16.3	-1.0	-38.1	-2.0★	-1.0	-0.3
Other digestive system	8.1	-0.7	6.6	-0.3	13.7	-1.2	-57.4	-4.5★	-50.7	-4.2★	-64.0	-4.9★
Respiratory System:	28.8	1.3★	0.9	0.1	117.8	4.0★	38.1	1.7★	10.0	0.5★	139.9	4.5★
Nose, nasal cavity & middle ear	-5.0	-0.2	-3.3	-0.4	-4.6	0.1	-40.9	-2.8★	-45.6	-3.3★	-33.2	-2.1★
Larynx	-12.8	-0.5★	-17.1	-0.8★	9.0	1.0★	-11.5	-0.7★	-19.1	-1.2★	37.5	1.4★
Lung & bronchus	33.2	1.5★	1.8	0.1	130.5	4.3★	41.6	1.8★	12.2	0.6★	147.8	4.7★
Pleura	95.3	3.5★	118.2	4.0★	46.5	2.1★	11.0	0.7★	23.9	1.5★	-13.3	-1.2★
Trachea & other respiratory organs	-8.0	-0.8★	2.7	-1.0	-32.1	-0.7	-64.1	-5.0★	-67.8	-5.5★	-57.2	-4.1★
Bones & joints	14.1	0.5★	11.2	0.3	18.3	0.7	-48.7	-3.6★	-50.7	-3.8★	-46.8	-3.3★
Soft tissue (incl heart)	6.1	0.5★	2.6	0.3	10.2	0.6★	35.8	1.6★	26.9	1.4★	45.3	1.8★
Skin (ex basal & squam):	155.2	5.2★	218.7	6.7★	91.0	3.3★	28.5	1.3★	40.9	1.9★	10.2	0.4★
Melanomas of skin	119.7	3.9★	154.2	4.7★	89.5	3.2★	37.0	1.6★	50.0	2.1★	20.9	0.8★
Other non-epithelial skin	591.1	13.8★	936.3	16.5★	109.8	4.8★	4.6	0.6★	19.1	1.4★	-24.4	-1.3★
Breast	22.6	1.6★	7.8	0.9★	23.7	1.7★	-5.6	-0.1	-12.8	-1.0★	-5.7	-0.1

The PC is the Percent Change over the time interval.
The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero ($p<.05$).
- Statistic could not be calculated.

Table I-11 - continued
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
Whites, 1973-94

	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
Site	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
Female Genital System:	-22.2	-1.2★	-	-	-22.2	-1.2★	-21.3	-1.2★	-	-	-21.6	-1.2★
Cervix uteri	-40.9	-2.2★	-	-	-39.5	-2.1★	-44.4	-2.8★	-	-	-43.1	-2.7★
Corpus uteri	-27.3	-1.9★	-	-	-27.8	-1.9★	-3.2	-0.6★	-	-	-3.4	-0.6★
Uterus, NOS	-41.1	-3.8★	-	-	-39.4	-3.7★	-42.8	-2.6★	-	-	-43.2	-2.6★
Ovary	-0.4	0.5★	-	-	-0.1	0.5★	-7.1	-0.3★	-	-	-8.3	-0.4★
Vagina	-8.8	-1.1★	-	-	-8.4	-1.1★	-28.3	-1.8★	-	-	-28.9	-1.8★
Vulva	4.4	0.4	-	-	5.5	0.4	-13.1	-1.0★	-	-	-13.5	-1.0★
Other female genital system	-7.6	-0.1	-	-	-9.1	-0.1	-17.7	-0.3	-	-	-18.8	-0.5
Male Genital System:	141.4	4.8★	126.5	4.5★	-	-	10.8	0.7★	14.8	0.8★	-	-
Prostate	149.0	5.0★	132.1	4.6★	-	-	15.0	0.9★	18.6	1.0★	-	-
Testis	64.7	2.5★	61.8	2.4★	-	-	-65.5	-5.5★	-65.9	-5.5★	-	-
Penis	-6.6	-1.0★	-7.2	-1.1★	-	-	-30.6	-1.8★	-31.8	-1.9★	-	-
Other male genital system	7.1	0.8	10.1	0.9	-	-	-35.8	-3.1★	-36.0	-3.2★	-	-
Urinary System:	20.9	1.1★	16.9	0.9★	29.3	1.3★	-6.3	-0.4★	-7.7	-0.5★	-2.3	-0.1
Urinary bladder	13.7	0.7★	11.8	0.7★	18.3	0.7★	-21.3	-1.4★	-20.8	-1.4★	-19.3	-1.2★
Kidney & renal pelvis	43.3	2.1★	35.4	1.8★	54.2	2.5★	14.8	0.8★	14.3	0.8★	16.4	0.9★
Ureter	-20.4	-1.1★	-16.9	-1.0★	-27.7	-1.1	-2.3	-0.5★	-4.1	-0.4	-0.3	-0.5
Other urinary system	-9.9	-0.9	5.0	-0.5	-35.1	-1.8	-31.6	-2.3★	-22.7	-2.0★	-37.5	-2.5★
Eye & Orbit	-17.4	-1.0★	-18.1	-0.8★	-15.7	-1.3★	-38.2	-2.9★	-34.6	-2.6★	-43.0	-3.2★
Brain & Nervous System:	20.0	1.0★	20.0	1.0★	20.4	1.1★	15.5	0.7★	15.1	0.7★	16.0	0.7★
Brain	20.4	1.1★	19.5	1.0★	22.0	1.1★	41.2	1.9★	41.3	1.9★	41.1	1.8★
Cranial nerves & other nervous system	14.6	0.6	27.9	0.4	-0.6	1.0	-88.3	-11.1★	-88.9	-11.5★	-87.7	-10.8★
Endocrine System:	37.3	1.4★	34.3	1.2★	39.9	1.6★	1.7	0.1	18.0	0.8★	-8.3	-0.5★
Thyroid	38.8	1.5★	39.0	1.3★	40.5	1.6★	-22.6	-1.5★	-4.7	-0.5★	-31.6	-2.1★
Other endocrine & thymus	24.1	1.2★	15.4	0.8	30.0	1.6★	53.2	2.5★	49.1	2.4★	57.8	2.5★
Lymphomas:	54.6	2.5★	56.9	2.8★	49.7	2.2★	18.8	1.1★	18.1	1.2★	20.5	1.1★
Hodgkin's disease	-13.1	-0.1	-22.3	-0.6★	-0.1	0.5★	-62.3	-4.4★	-64.1	-4.5★	-59.4	-4.2★
Non-Hodgkin's lymphomas	79.9	3.2★	88.1	3.6★	66.7	2.6★	40.7	2.0★	41.4	2.1★	40.2	1.9★
Multiple myeloma	12.0	0.8★	19.4	1.0★	3.8	0.5★	34.8	1.3★	36.8	1.4★	33.5	1.3★
Leukemias:	-9.4	-0.3★	-11.6	-0.3★	-7.7	-0.3★	-6.3	-0.4★	-5.3	-0.4★	-7.4	-0.3★
Lymphocytic:	-16.0	-0.3	-20.7	-0.3	-11.2	-0.3	-14.2	-0.6★	-12.7	-0.6★	-16.5	-0.7★
Acute lymphocytic	10.7	1.4★	0.6	1.3★	24.4	1.5★	-31.7	-1.5★	-33.6	-1.6★	-28.8	-1.4★
Chronic lymphocytic	-22.9	-0.8★	-25.2	-0.8★	-21.2	-1.0★	14.5	0.7★	17.1	0.7★	9.4	0.6★
Other lymphocytic	-57.8	-3.9★	-53.7	-3.3★	-72.9	-5.4★	-67.3	-5.5★	-68.2	-5.5★	-67.4	-5.6★
Myeloid:	-4.5	-0.5★	-4.3	-0.5★	-5.1	-0.5★	-10.1	-0.9★	-9.8	-0.8★	-10.4	-0.9★
Acute myeloid	6.4	-0.1	8.2	-0.1	5.4	-0.1	-4.0	-0.7★	-2.4	-0.6★	-5.4	-0.8★
Chronic myeloid	-11.6	-0.4	-10.5	-0.4	-14.0	-0.5	-7.5	-0.4★	-9.6	-0.5★	-5.4	-0.2
Other myeloid	-49.3	-4.3★	-57.1	-4.9★	-41.2	-3.9★	-67.5	-5.6★	-67.7	-5.6★	-66.9	-5.7★
Monocytic:	-25.5	-1.1★	-26.6	-1.7★	-23.3	-0.6	-67.3	-5.2★	-69.7	-5.5★	-64.0	-4.9★
Acute monocytic	4.5	0.7	-3.7	0.2	11.5	1.1	-62.1	-4.4★	-65.9	-4.5★	-57.6	-4.3★
Chronic monocytic	-61.4	-3.0	-44.7	-	-89.6	-	-33.7	-1.5	-24.3	-1.3	-38.7	-1.5
Other monocytic	-86.8	-	-76.2	-	-95.5	-	-87.0	-10.1★	-86.2	-11.0★	-88.0	-8.9★
Other:	4.3	0.3	7.0	0.3	1.0	0.3	24.2	1.3★	27.2	1.2★	21.0	1.5★
Other acute	-5.4	0.7	-4.3	0.9	1.7	0.7	18.4	1.2★	18.7	1.1★	19.3	1.5★
Other chronic	-34.9	-2.5	-21.0	-2.0	-40.3	-3.4	-30.8	-0.8	-19.5	-0.4	-39.7	-1.0
Aleukemic, subleuk & NOS	14.6	0.1	17.7	0.0	2.9	0.1	40.6	1.7★	45.9	1.6★	32.2	1.7★
Ill-defined & unspecified	-3.4	-0.3★	-3.4	-0.3	-4.0	-0.4★	21.0	1.0★	28.6	1.3★	13.2	0.6★

The PC is the Percent Change over the time interval.
The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero ($p<.05$).
- Statistic could not be calculated.

Table I-12
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
Blacks, 1973-94

	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
Site	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
All Sites	31.2	1.4★	46.7	1.8★	17.9	1.0★	13.9	0.7★	19.9	1.0★	12.3	0.7★
Oral Cavity & Pharynx:	31.4	0.8★	44.0	1.4★	11.2	-0.3	0.3	-0.2	6.3	0.0	-8.4	-0.4
Lip	-50.2	-	-55.5	-	-37.7	-	-83.4	-	-	-	-67.8	-
Tongue	15.5	0.8	23.5	1.4★	0.8	-0.9	-6.0	-0.3	-1.3	-0.2	-11.2	-0.1
Salivary gland	-19.2	0.2	-17.6	1.1	-21.9	0.0	-32.9	-2.1★	-30.8	-2.0★	-31.2	-1.8★
Floor of mouth	32.3	0.1	34.0	0.5	51.4	-0.2	-54.4	-4.2★	-55.6	-4.2★	-43.3	-3.5★
Gum & other oral cavity	-12.5	-0.2	-1.7	0.6	-24.8	-1.0	-0.8	-0.6	2.4	-0.5	-4.6	-0.3
Nasopharynx	75.2	0.5	58.2	1.8	109.5	-1.8	-9.9	-0.3	6.6	0.2	-36.7	-1.1
Tonsil	50.7	1.0	87.3	2.0★	2.0	-1.3	-24.2	-1.4★	-15.0	-1.0★	-43.2	-2.3★
Oropharynx	193.0	3.6★	153.0	2.3	-	-	173.1	4.2★	199.2	4.5★	126.6	3.9★
Hypopharynx	156.5	2.4★	163.0	3.1★	160.2	-0.2	-14.9	-1.4★	-0.7	-1.0	-47.3	-2.1★
Other oral cavity & pharynx	125.4	3.9★	183.9	4.3★	37.1	-	39.5	1.7★	40.2	1.9★	55.1	1.3★
Digestive System:	6.5	0.4★	10.9	0.6★	4.5	0.4★	-0.7	0.0	2.0	0.1	-1.1	0.0
Esophagus	-15.3	-0.6	-11.9	-0.5	-12.3	0.0	-5.8	-0.5★	-1.9	-0.3	-6.0	-0.2
Stomach	-26.2	-1.2★	-19.5	-0.9★	-32.3	-1.3★	-31.3	-1.6★	-28.7	-1.5★	-31.1	-1.6★
Small intestine	80.8	4.8★	69.6	5.6★	93.1	4.0★	20.4	1.9★	30.1	2.5★	12.7	1.6★
Colon & Rectum:	22.5	0.9★	34.6	1.4★	14.1	0.6★	9.3	0.5★	22.3	1.0★	-0.1	0.0
Colon	31.5	1.2★	37.4	1.6★	28.3	0.9★	-	-	-	-	-	-
Rectum	-1.3	0.1	26.5	0.9★	-21.8	-0.5	-	-	-	-	-	-
Anus, anal canal & anorectum	116.4	3.4★	197.0	4.7★	66.0	2.5	481.0	11.0★	1421.7	-	293.5	-
Liver & Intrahep:	36.0	1.9★	43.9	2.3★	19.2	1.2	20.6	0.9★	25.0	1.0★	18.6	1.2★
Liver	30.7	1.7★	40.8	2.2★	8.6	0.7	8.9	0.5★	15.5	0.6★	2.2	0.5
Intrahep bile duct	135.3	-	100.4	-	256.1	-	459.2	8.5★	393.0	7.8★	611.9	10.3★
Gallbladder	-35.7	-1.1	-23.1	-1.3	-38.2	-0.7	-20.4	-0.7★	-18.1	-0.8	-23.9	-0.8★
Other biliary	53.1	1.4	9.7	0.3	203.8	-	-41.0	-1.9★	-54.3	-2.4★	-29.3	-1.6★
Pancreas	-2.7	-0.1	-4.8	-0.4	-0.3	0.4	17.5	0.8★	9.5	0.4★	28.5	1.3★
Retroperitoneum	-38.9	-1.4	-66.1	-1.1	-2.4	-1.2	-60.5	-4.2★	-70.1	-5.0★	-49.5	-3.7★
Peritoneum, omentum & mesentery	132.2	-	43.1	-	245.3	-	-22.3	-2.8★	-53.4	-4.5★	-7.6	-2.4
Other digestive system	-13.1	-1.1	46.2	-	-77.9	-	-64.5	-4.8★	-62.4	-4.5★	-66.4	-5.2★
Respiratory System:	24.9	1.4★	9.7	0.7★	106.4	4.1★	42.6	1.9★	30.0	1.4★	127.7	4.4★
Nose, nasal cavity & middle ear	-25.1	-0.6	-35.3	-2.0	1.3	-	-32.4	-1.8★	-32.4	-1.6★	-25.9	-1.7★
Larynx	15.0	0.8★	21.0	0.8★	12.4	1.8	25.6	1.2★	24.0	1.2★	78.7	2.6★
Lung & bronchus	27.1	1.5★	9.2	0.7★	120.9	4.3★	45.2	2.0★	31.4	1.5★	135.7	4.6★
Pleura	41.4	3.3	115.7	5.4★	-18.9	-	-24.8	-1.6★	9.2	0.1	-60.6	-3.8★
Trachea & other respiratory organs	-66.9	-2.4	-79.8	-3.1	3.6	-	-58.2	-3.4★	-58.2	-3.5★	-57.8	-3.2★
Bones & joints	19.4	0.6	41.9	0.9	0.4	0.3	-46.2	-3.5★	-51.0	-3.6★	-36.0	-3.1★
Soft tissue (incl heart)	50.4	1.4★	68.6	1.9★	38.1	1.1	75.9	2.7★	27.4	1.8★	119.4	3.4★
Skin (ex basal & squam):	263.9	7.1★	576.7	10.6★	41.1	1.2	31.9	2.3★	50.4	3.5★	8.6	0.3
Melanomas of skin	25.5	-0.5	95.7	0.7	-1.8	-1.3	-2.9	-0.2	-25.6	-0.9	18.1	0.4
Other non-epithelial skin	518.8	10.7★	862.5	14.2★	97.7	3.0★	59.8	3.9★	106.3	5.8★	0.0	0.1
Breast	39.4	2.1★	-40.3	0.3	35.5	1.9★	23.3	1.4★	4.0	-0.1	18.7	1.2★

The PC is the Percent Change over the time interval.
The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero ($p<.05$).
- Statistic could not be calculated.

Table I-12 - continued
SEER INCIDENCE AND U.S. MORTALITY TRENDS BY PRIMARY CANCER SITE AND SEX
Blacks, 1973-94

	Incidence§						US Mortality*					
	Total		Males		Females		Total		Males		Females	
Site	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC	PC	EAPC
Female Genital System:	-23.9	-1.5★	-	-	-27.0	-1.7★	-28.6	-1.4★	-	-	-32.2	-1.7★
Cervix uteri	-57.5	-4.2★	-	-	-58.9	-4.3★	-50.3	-3.2★	-	-	-51.9	-3.3★
Corpus uteri	12.0	0.2	-	-	7.0	0.0	16.3	0.5★	-	-	9.7	0.2
Uterus, NOS	23.8	-1.1	-	-	20.6	-1.2	-34.6	-1.7★	-	-	-38.2	-2.0★
Ovary	15.6	0.7★	-	-	12.0	0.5★	-2.0	0.2	-	-	-7.9	-0.1
Vagina	-19.2	-1.5	-	-	-21.7	-1.6	-24.1	-1.2★	-	-	-28.4	-1.5★
Vulva	-7.7	-0.9	-	-	-10.1	-1.2	-41.3	-1.1★	-	-	-44.8	-1.4★
Other female genital system	-61.1	-1.4	-	-	-64.9	-1.8	-37.1	-2.4★	-	-	-40.7	-2.7★
Male Genital System:	126.3	3.7★	138.3	3.9★	-	-	23.5	1.1★	39.1	1.7★	-	-
Prostate	129.3	3.7★	141.2	4.0★	-	-	25.5	1.2★	41.4	1.8★	-	-
Testis	-0.1	-0.2	-2.7	-0.2	-	-	-42.4	-3.5★	-43.6	-3.5★	-	-
Penis	-25.1	-1.6	-16.3	-1.0	-	-	-62.7	-4.9★	-59.7	-4.4★	-	-
Other male genital system	60.3	-	96.5	-	-	-	-74.3	-6.3★	-74.2	-6.1★	-	-
Urinary System:	46.5	1.7★	63.8	2.1★	31.0	1.4★	3.5	0.2	9.2	0.4★	2.5	0.2★
Urinary bladder	31.5	0.8★	51.4	1.1★	13.6	0.5	-23.9	-1.4★	-18.8	-1.2★	-24.5	-1.3★
Kidney & renal pelvis	66.0	2.9★	73.2	3.2★	60.6	2.8★	54.4	2.2★	61.9	2.5★	52.4	2.2★
Ureter	-3.5	-	-	-	-53.2	-	63.7	1.5	70.1	1.5	56.2	1.9
Other urinary system	40.9	1.8	796.9	-	-18.9	-0.6	-10.6	-1.3★	-40.4	-3.3★	28.7	0.3
Eye & Orbit	37.4	0.6	3.7	-	178.0	-	-65.9	-4.0★	-73.7	-5.3★	-51.7	-2.3
Brain & Nervous System:	21.7	0.9	12.1	0.5	32.7	1.7★	8.8	0.5★	11.0	0.4	7.4	0.7★
Brain	21.2	0.9	11.7	0.3	33.4	1.8★	37.0	1.7★	42.6	1.7★	32.2	1.9★
Cranial nerves & other nervous system	27.4	2.0	16.2	-	26.8	-	-87.7	-9.3★	-86.0	-9.8★	-89.5	-9.5★
Endocrine System:	22.0	0.6	38.8	0.9	16.3	0.5	7.7	0.7★	7.9	0.8	5.3	0.7
Thyroid	11.4	0.4	30.1	1.0	5.8	0.1	-30.3	-1.4★	-36.2	-1.5★	-29.4	-1.5★
Other endocrine & thymus	96.4	1.9	61.5	-0.1	169.5	-	115.4	4.3★	80.4	3.2★	162.5	5.8★
Lymphomas:	57.2	3.1★	68.3	3.1★	44.8	3.3★	23.8	1.4★	15.7	1.3★	39.0	1.8★
Hodgkin's disease	-2.9	0.5	-16.0	-0.9	25.6	2.8★	-45.3	-2.8★	-49.3	-3.2★	-35.6	-2.1★
Non-Hodgkin's lymphomas	80.0	3.9★	102.7	4.2★	51.1	3.4★	42.5	2.2★	35.0	2.1★	56.3	2.4★
Multiple myeloma	4.1	0.6	-1.4	0.5	14.3	0.9★	46.9	1.9★	43.8	1.9★	53.2	2.0★
Leukemias:	-20.1	-0.4	-18.7	-0.4	-20.9	-0.4	5.2	0.3★	7.3	0.5★	6.0	0.2
Lymphocytic:	-27.8	-0.7	-27.4	-1.0	-29.2	-0.4	-1.4	0.3	8.5	0.8★	-10.1	-0.1
Acute lymphocytic	15.3	3.1★	28.5	3.4★	4.6	3.4	-26.6	-0.7	-28.9	-0.8★	-21.2	-0.6
Chronic lymphocytic	-31.4	-1.2★	-30.8	-1.4	-33.8	-1.1	25.5	1.4★	41.8	1.9★	8.1	0.8★
Other lymphocytic	-65.9	-	-60.5	-	-69.6	-	-63.6	-5.1★	-65.6	-5.0★	-62.1	-5.1★
Myeloid:	-4.2	-0.1	0.5	0.2	-5.3	-0.2	3.4	-0.1	2.4	0.0	6.8	-0.1
Acute myeloid	6.0	0.7	-9.8	0.7	21.9	0.5	7.8	-0.1	3.5	-0.2	16.6	0.0
Chronic myeloid	-6.7	-0.4	36.0	0.2	-39.1	-1.0	14.0	0.7	15.5	1.0★	12.1	0.4
Other myeloid	-46.4	-4.0★	-65.6	-4.1	-1.8	-	-70.3	-5.4★	-60.0	-4.4★	-78.3	-6.4★
Monocytic:	-71.4	-2.9	-76.8	-3.7	-69.5	-	-69.9	-5.8★	-74.0	-6.7★	-56.6	-4.4★
Acute monocytic	-58.0	-	-65.2	-	-56.6	-	-68.0	-5.7★	-70.5	-	-60.5	-4.9★
Chronic monocytic	-	-	-	-	-	-	-45.9	-	-45.9	-	-36.3	-
Other monocytic	-	-	-	-	-	-	-88.4	-	-92.2	-	-28.0	-
Other:	-30.4	0.0	-27.6	0.8	-33.3	-1.2	27.5	1.3★	27.1	1.4★	32.0	1.5★
Other acute	-25.4	0.8	-21.4	-	-26.8	-1.6	25.5	1.3★	30.8	1.4★	22.1	1.3★
Other chronic	-	-	-	-	-	-	-34.5	-0.5	-22.9	0.9	-42.0	-2.2★
Aleukemic, subleuk & NOS	-33.4	-0.4	-31.0	-1.5	-37.5	-0.2	36.7	1.6★	29.4	1.5★	53.9	2.1★
Ill-defined & unspecified	6.1	0.3	0.9	0.2	16.7	0.6	9.9	0.4	22.7	1.0★	-1.2	-0.1

The PC is the Percent Change over the time interval.
The EAPC is the Estimated Annual Percent Change over the time interval.
§ SEER Program. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
* NCHS public use tape. Rates are per 100,000 and are age-adjusted to the 1970 U.S. standard population.
★ The EAPC is significantly different from zero (p<.05).
- Statistic could not be calculated.

Table I-13

AGE DISTRIBUTION (%) OF INCIDENCE CASES BY SITE, 1990-94

All Races, Both Sexes

Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
All Sites	1.0	3.5	6.3	10.5	18.7	31.0	22.3	6.8	100.0%	545,642
Oral cavity & Pharynx	0.6	3.7	7.9	15.7	24.0	28.0	15.3	4.8	100.0%	13,731
Esophagus	0.0	0.4	2.9	10.2	24.7	34.7	21.0	6.1	100.0%	5,120
Stomach	0.1	1.3	4.1	7.9	16.8	30.7	27.5	11.6	100.0%	10,143
Colon & Rectum	0.0	0.9	3.0	7.4	17.2	31.1	29.3	11.1	100.0%	63,311
Males	0.0	1.0	3.0	8.1	19.4	33.8	27.4	7.4	100.0%	32,091
Females	0.0	0.8	2.9	6.7	14.9	28.3	31.4	15.0	100.0%	31,220
Colon	0.0	0.8	2.7	6.6	16.1	30.6	30.9	12.3	100.0%	46,113
Rectum	0.0	1.2	3.7	9.5	20.1	32.4	25.2	7.8	100.0%	17,198
Liver & Intrahep	1.5	1.8	5.3	10.8	19.3	30.3	23.9	7.3	100.0%	4,628
Pancreas	0.0	0.5	2.5	7.4	16.7	32.7	29.2	11.0	100.0%	12,272
Larynx	0.0	0.7	3.5	13.9	28.1	34.5	16.6	2.5	100.0%	5,302
Lung & Bronchus	0.0	0.4	2.3	9.3	23.1	37.4	22.8	4.6	100.0%	75,617
Males	0.0	0.4	2.2	8.9	23.2	38.2	22.8	4.3	100.0%	45,114
Females	0.0	0.4	2.5	9.9	22.9	36.3	22.9	5.0	100.0%	30,503
Melanomas of skin	1.0	12.8	18.1	17.2	17.2	18.4	11.4	3.9	100.0%	16,402
Breast(females)	0.0	2.2	11.5	18.6	19.9	24.8	17.1	5.8	100.0%	78,836
Cervix uteri	0.2	18.7	25.2	18.5	14.2	12.7	7.9	2.7	100.0%	6,075
Corpus & Uterus, NOS	0.0	1.1	6.0	13.9	23.9	31.4	18.9	4.7	100.0%	15,138
Ovary	1.2	6.8	10.8	15.7	19.2	23.5	16.7	6.1	100.0%	10,671
Prostate	0.0	0.0	0.2	3.2	18.2	44.1	28.2	6.1	100.0%	91,860
Testis	4.5	53.1	28.6	9.0	2.8	1.3	0.6	0.1	100.0%	3,367
Urinary bladder	0.1	0.8	2.7	7.6	17.8	34.0	27.9	8.9	100.0%	22,997
Kidney & Renal pelvis	2.3	1.4	5.7	13.8	21.9	30.0	19.8	5.0	100.0%	11,770
Brain & Other nervous	13.6	11.2	11.6	12.5	15.2	20.5	12.5	2.8	100.0%	7,805
Thyroid	2.4	24.0	23.3	17.6	12.8	12.0	6.1	1.8	100.0%	6,688
Hodgkin's disease	11.8	40.1	16.0	9.3	7.0	8.3	6.0	1.5	100.0%	3,605
Non-Hodgkin's lymphomas	1.7	7.3	10.9	12.9	16.2	24.7	20.1	6.3	100.0%	20,954
Multiple myeloma	0.0	0.5	3.2	8.8	18.5	33.5	26.4	9.1	100.0%	6,096
Leukemias	9.9	5.0	5.9	8.5	14.0	25.1	21.8	9.9	100.0%	13,326
Acute lymphocytic	60.8	10.1	6.0	4.9	5.0	5.7	4.8	2.7	100.0%	1,580
Chronic lymphocytic	0.0	0.4	2.2	8.1	17.8	31.5	27.7	12.3	100.0%	4,031
Acute myeloid	5.9	6.6	6.7	9.1	14.3	26.9	22.3	8.2	100.0%	3,415
Chronic myeloid	2.5	7.4	10.9	11.0	13.8	23.5	21.0	9.8	100.0%	1,907
All other leukemias	4.7	5.0	6.9	8.7	13.2	25.7	22.8	13.0	100.0%	2,393

Source: SEER Program.

Table I-14
MEDIAN AGE OF CANCER PATIENTS AT DIAGNOSIS§, 1990-94
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	68.0	69.0	67.0	68.0	69.0	68.0	65.0	66.0	63.0
Oral Cavity & Pharynx:	64.0	63.0	66.0	65.0	64.0	68.0	57.0	56.0	58.0
Lip	69.0	68.0	73.0	69.0	68.0	73.0	68.0	69.0	65.0
Tongue	63.0	62.0	66.0	64.0	63.0	66.0	57.0	57.0	58.0
Salivary gland	65.0	66.0	64.0	66.0	66.0	66.0	59.0	61.0	55.0
Floor of mouth	64.0	62.0	67.0	64.0	63.0	68.0	55.0	55.0	57.0
Gum & other oral cavity	64.0	60.0	70.0	65.0	61.0	71.0	56.0	56.0	62.0
Nasopharynx	56.0	55.0	58.0	61.0	59.0	65.0	48.5	49.5	45.5
Tonsil	60.0	59.0	64.0	62.0	60.0	65.0	54.0	53.0	57.0
Oropharynx	63.5	63.0	64.0	64.0	64.0	64.0	59.0	60.0	58.0
Hypopharynx	65.0	65.0	65.0	66.0	66.0	67.0	58.0	58.0	58.0
Other oral cavity & pharynx	66.0	64.0	68.0	66.0	66.0	70.0	60.5	59.0	65.0
Digestive System:	71.0	70.0	73.0	72.0	70.0	74.0	67.0	66.0	69.0
Esophagus	68.0	67.0	70.0	69.0	68.0	72.0	63.0	63.0	64.0
Stomach	71.0	70.0	74.0	72.0	70.0	75.0	69.0	67.0	71.0
Small intestine	67.0	66.0	69.0	68.0	66.0	70.0	64.0	64.0	66.0
Colon & Rectum:	72.0	70.0	73.0	72.0	71.0	74.0	68.0	67.0	69.0
Colon	72.0	71.0	74.0	73.0	71.0	75.0	69.0	68.0	70.0
Rectum	69.0	68.0	71.0	70.0	69.0	72.0	65.0	65.0	66.0
Anus, anal canal & anorectum	65.0	60.0	67.0	66.0	62.0	68.0	58.0	51.0	63.0
Liver & Intrahep:	68.0	67.0	72.0	70.0	69.0	73.0	63.0	62.0	68.0
Liver	67.0	66.0	71.0	69.0	68.0	72.0	63.0	61.0	67.5
Intrahep bile duct	73.0	71.0	75.0	73.0	71.0	76.0	69.0	68.5	71.0
Gallbladder	73.0	73.0	74.0	74.0	74.0	74.0	67.0	68.5	67.0
Other biliary	73.0	72.0	74.0	73.0	72.0	74.0	70.0	67.0	72.0
Pancreas	72.0	70.0	74.0	72.0	70.0	74.0	68.0	67.0	70.0
Retroperitoneum	59.0	57.0	60.0	60.0	57.0	63.0	56.5	46.0	57.0
Peritoneum, omentum & mesentery	66.0	62.5	67.5	67.0	64.0	68.0	62.0	58.0	66.0
Other digestive system	76.0	70.0	78.0	76.0	71.0	78.0	67.0	65.0	76.5
Respiratory System:	68.0	68.0	68.0	69.0	69.0	69.0	65.0	65.0	65.0
Nose, nasal cavity & middle ear	65.0	64.0	65.5	66.0	65.0	67.0	57.0	55.0	57.0
Larynx	65.0	66.0	65.0	66.0	66.0	65.0	62.0	62.0	62.0
Lung & bronchus	68.0	68.0	68.0	69.0	69.0	69.0	65.0	65.0	65.0
Pleura	71.0	71.0	69.0	71.0	72.0	69.0	66.0	65.0	70.5
Trachea & other respiratory organs	46.5	37.5	61.0	49.0	39.0	62.0	32.5	27.5	63.5
Bones & joints	36.0	36.0	36.0	37.0	37.0	38.5	29.5	29.5	29.5
Soft tissue (incl heart)	57.0	55.0	59.0	59.0	57.0	62.0	46.0	44.0	48.0
Skin (ex basal & squam):	49.0	49.0	51.0	50.0	50.0	52.0	38.0	36.0	45.0
Melanomas of skin	55.0	58.0	50.0	55.0	58.0	51.0	63.0	58.5	72.0
Other non-epithelial skin	40.0	39.0	61.0	40.0	39.0	65.0	36.0	36.0	41.0
Breast	64.0	67.0	64.0	64.0	68.0	64.0	58.0	62.0	57.0

§ SEER Program.
- Statistic could not be calculated.

Table I-14 - continued
MEDIAN AGE OF CANCER PATIENTS AT DIAGNOSIS§, 1990-94
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	63.0	-	63.0	64.0	-	64.0	60.0	-	60.0
Cervix uteri	47.0	-	47.0	46.0	-	46.0	48.0	-	48.0
Corpus uteri	66.0	-	66.0	67.0	-	67.0	65.0	-	65.0
Uterus, NOS	69.0	-	69.0	73.0	-	73.0	66.0	-	66.0
Ovary	63.0	-	63.0	64.0	-	64.0	60.0	-	60.0
Vagina	69.0	-	69.0	70.0	-	70.0	63.0	-	63.0
Vulva	72.0	-	72.0	72.0	-	72.0	59.0	-	59.0
Other female genital system	65.0	-	65.0	65.0	-	65.0	67.0	-	67.0
Male Genital System:	71.0	71.0	-	71.0	71.0	-	69.0	69.0	-
Prostate	71.0	71.0	-	71.0	71.0	-	69.0	69.0	-
Testis	33.0	33.0	-	33.0	33.0	-	30.0	30.0	-
Penis	67.0	67.0	-	67.0	67.0	-	63.5	63.5	-
Other male genital system	66.0	66.0	-	66.0	66.0	-	64.5	64.5	-
Urinary System:	69.0	69.0	71.0	70.0	69.0	71.0	66.0	66.0	67.0
Urinary bladder	71.0	70.0	72.0	71.0	71.0	72.0	70.0	69.0	72.0
Kidney & renal pelvis	66.0	65.0	68.0	67.0	66.0	68.0	61.0	61.0	63.0
Ureter	73.0	72.0	74.0	73.0	72.0	74.5	73.0	72.0	77.0
Other urinary system	71.0	71.0	72.5	72.0	71.0	74.0	67.5	69.0	66.0
Eye & Orbit	60.0	59.0	62.0	62.0	60.0	65.0	1.0	1.5	1.0
Brain & Nervous System:	55.0	53.0	58.0	57.0	55.0	59.0	41.0	38.0	43.0
Brain	56.0	54.0	59.0	57.0	55.0	60.0	41.0	38.0	43.0
Cranial nerves & other nervous system	44.0	40.0	52.0	44.0	41.0	52.0	45.0	35.0	51.0
Endocrine System:	45.0	49.0	43.0	44.0	49.0	43.0	47.0	52.0	46.0
Thyroid	45.0	50.0	43.0	44.0	50.0	42.0	47.0	56.0	46.0
Other endocrine & thymus	47.0	43.0	50.0	48.0	44.0	51.0	46.0	46.0	45.0
Lymphomas:	62.0	57.0	67.0	63.0	59.0	68.0	46.0	44.0	52.5
Hodgkin's disease	34.0	35.0	33.0	34.0	35.0	33.0	32.0	33.0	31.0
Non-Hodgkin's lymphomas	65.0	61.0	69.0	66.0	62.0	70.0	50.0	46.0	60.0
Multiple myeloma	70.0	69.0	71.0	71.0	70.0	72.0	68.0	67.0	68.0
Leukemias:	67.5	66.0	69.0	69.0	67.0	70.0	63.0	61.0	64.0
Lymphocytic:	67.0	65.0	69.0	68.0	66.0	70.0	65.0	64.0	67.0
Acute lymphocytic	11.0	14.0	9.0	12.0	15.0	10.0	12.0	12.5	11.0
Chronic lymphocytic	71.0	70.0	74.0	72.0	70.0	74.0	70.0	67.0	74.0
Other lymphocytic	70.0	69.0	73.0	71.0	70.0	74.0	64.5	59.5	71.5
Myeloid:	67.0	67.0	68.0	68.0	68.0	70.0	58.0	57.0	59.0
Acute myeloid	67.0	67.0	68.0	69.0	68.0	69.0	60.0	60.5	60.0
Chronic myeloid	67.0	65.0	69.0	68.0	67.0	71.0	57.0	53.0	58.0
Other myeloid	61.0	61.0	61.0	64.0	66.0	63.0	39.0	36.5	45.0
Monocytic:	68.0	69.0	67.0	69.0	70.0	69.0	67.0	63.5	67.0
Acute monocytic	67.0	68.0	66.0	68.0	68.0	67.5	65.0	51.0	67.0
Chronic monocytic	74.5	74.0	75.0	75.0	75.0	75.0	78.0	75.5	80.0
Other monocytic	72.0	74.0	69.0	76.0	76.0	74.5	-	-	-
Other:	70.0	69.0	73.0	71.0	69.0	74.0	68.0	68.5	68.0
Other acute	73.0	72.0	74.0	73.0	72.0	75.0	70.5	71.0	65.0
Other chronic	80.0	78.0	84.0	80.0	79.5	84.0	79.5	69.0	90.0
Aleukemic, subleuk & NOS	68.0	65.0	72.0	68.0	66.0	73.0	67.0	66.0	69.0
Ill-defined & unspecified	72.0	70.0	75.0	73.0	71.0	75.0	67.0	65.0	70.0

§ SEER Program.
- Statistic could not be calculated.

Table I-15

AGE DISTRIBUTION (%) OF DEATHS BY SITE, 1990-94

All Races, Both Sexes

Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
All Sites	0.5	1.2	3.2	7.9	17.7	30.9	27.4	11.2	100.0%	2,604,650
Oral cavity & Pharynx	0.2	0.9	3.9	12.2	24.0	29.8	20.7	8.5	100.0%	40,944
Esophagus	0.0	0.3	2.4	9.8	23.6	34.1	22.4	7.4	100.0%	51,190
Stomach	0.0	1.0	3.4	7.4	15.6	28.5	29.3	14.8	100.0%	69,346
Colon & Rectum	0.0	0.6	2.1	5.8	14.5	28.6	31.3	17.1	100.0%	285,724
Males	0.0	0.7	2.2	6.5	16.8	31.9	30.1	11.7	100.0%	141,448
Females	0.0	0.5	1.9	5.1	12.3	25.3	32.5	22.3	100.0%	144,276
Colon	0.0	0.6	2.0	5.6	14.2	28.4	31.8	17.3	100.0%	247,096
Rectum	0.0	0.8	2.7	7.1	16.5	29.5	28.0	15.4	100.0%	38,628
Liver & Intrahep	0.6	1.1	3.6	8.0	18.1	31.1	27.4	10.2	100.0%	47,399
Pancreas	0.0	0.3	1.9	6.5	16.5	31.8	30.5	12.4	100.0%	129,962
Larynx	0.0	0.2	2.2	10.3	24.9	35.4	21.3	5.8	100.0%	19,589
Lung & Bronchus	0.0	0.2	1.8	8.0	22.3	37.0	24.9	5.8	100.0%	728,641
Males	0.0	0.2	1.7	7.9	22.8	37.6	24.6	5.2	100.0%	458,238
Females	0.0	0.2	1.9	8.2	21.3	36.0	25.5	6.8	100.0%	270,403
Melanomas of skin	0.2	5.0	11.3	14.0	18.2	24.1	19.3	7.8	100.0%	32,828
Breast(females)	0.0	1.4	7.5	13.9	19.0	25.7	21.7	10.8	100.0%	217,232
Cervix uteri	0.0	7.0	16.7	18.4	17.4	19.0	14.8	6.5	100.0%	22,966
Corpus & Uterus, NOS	0.0	0.4	2.0	5.5	15.2	32.9	30.1	13.9	100.0%	30,276
Ovary	0.1	0.9	3.7	10.1	18.9	30.6	25.8	9.9	100.0%	65,145
Prostate	0.0	0.0	0.1	1.0	7.4	28.4	41.7	21.4	100.0%	169,943
Testis	3.0	44.0	26.3	9.8	5.8	5.5	4.0	1.6	100.0%	1,786
Urinary bladder	0.0	0.2	0.9	3.2	10.8	27.3	36.4	21.3	100.0%	53,583
Kidney & Renal pelvis	0.6	0.8	3.1	9.8	19.9	31.0	25.7	9.3	100.0%	51,611
Brain & Other nervous	4.7	5.4	8.5	13.0	19.8	27.2	17.5	4.0	100.0%	59,829
Thyroid	0.1	1.1	2.7	7.1	16.5	27.5	30.1	14.8	100.0%	5,355
Hodgkin's disease	2.4	22.0	14.1	10.8	11.7	18.0	15.9	5.1	100.0%	7,910
Non-Hodgkin's lymphomas	0.7	3.2	4.9	7.9	14.7	28.2	29.0	11.5	100.0%	100,385
Multiple myeloma	0.0	0.2	1.6	5.9	15.7	32.3	32.5	11.8	100.0%	47,230
Leukemias	4.3	4.6	4.5	6.6	12.8	25.5	27.9	13.9	100.0%	96,784
Acute lymphocytic	26.1	15.4	7.9	7.7	9.6	13.7	13.1	6.4	100.0%	7,153
Chronic lymphocytic	0.0	0.1	0.7	3.6	11.6	27.7	34.4	21.8	100.0%	19,763
Acute myeloid	3.5	5.6	5.6	7.9	14.5	27.6	26.0	9.3	100.0%	27,188
Chronic myeloid	1.8	6.2	8.3	10.9	15.8	23.6	23.3	10.0	100.0%	11,594
All other leukemias	3.7	3.4	3.6	5.5	11.5	25.6	30.6	16.0	100.0%	31,086

Source: NCHS public use tape.

Table I-16
MEDIAN AGE OF CANCER PATIENTS AT DEATH*, 1990-94
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	71.0	71.0	71.0	71.0	71.0	72.0	68.0	68.0	68.0
Oral Cavity & Pharynx:	67.0	66.0	71.0	69.0	67.0	72.0	60.0	59.0	63.0
Lip	76.0	74.0	82.0	76.0	74.0	82.0	76.0	69.0	76.0
Tongue	67.0	65.0	71.0	68.0	66.0	72.0	59.0	58.0	63.0
Salivary gland	72.0	71.0	74.0	72.0	71.0	75.0	66.0	65.0	66.0
Floor of mouth	66.0	64.0	69.0	67.0	65.0	70.0	60.0	58.0	63.0
Gum & other oral cavity	71.0	67.0	76.0	72.0	68.0	77.0	62.0	60.0	67.5
Nasopharynx	63.0	62.0	67.0	66.0	64.0	69.0	57.0	56.0	60.0
Tonsil	64.0	63.0	67.0	66.0	65.0	69.0	58.0	58.0	59.0
Oropharynx	67.0	65.0	71.0	69.0	67.0	72.0	59.0	58.0	62.0
Hypopharynx	66.0	66.0	68.0	68.0	67.0	69.0	61.0	60.0	63.0
Other oral cavity & pharynx	67.0	66.0	70.0	69.0	68.0	71.0	61.0	60.0	63.0
Digestive System:	73.0	71.0	75.0	73.0	71.0	76.0	69.0	67.0	72.0
Esophagus	69.0	68.0	72.0	70.0	68.0	74.0	64.0	63.0	65.0
Stomach	73.0	71.0	76.0	73.0	71.0	76.0	70.0	69.0	73.0
Small intestine	70.0	69.0	72.0	71.0	70.0	72.0	68.0	66.5	68.0
Colon & Rectum	74.0	72.0	76.0	74.0	72.0	77.0	71.0	69.0	72.0
Anus, anal canal & anorectum	68.0	65.0	70.0	69.0	65.0	71.0	62.0	64.0	61.0
Liver & Intrahep:	71.0	69.0	73.0	72.0	70.0	74.0	67.0	64.0	71.0
Liver	70.0	69.0	73.0	71.0	70.0	74.0	66.0	64.0	71.0
Intrahep bile duct	72.0	70.0	73.0	72.0	71.0	74.0	69.0	68.0	71.0
Gallbladder	74.0	73.0	75.0	75.0	74.0	75.0	71.0	70.0	71.0
Other biliary	76.0	73.0	78.0	76.0	74.0	78.0	73.0	71.0	75.0
Pancreas	72.0	70.0	75.0	73.0	71.0	75.0	70.0	68.0	72.0
Retroperitoneum	70.0	68.0	73.0	71.0	69.0	73.0	67.0	65.5	68.0
Peritoneum, omentum & mesentery	70.0	67.0	71.0	70.0	67.0	71.0	68.0	63.0	70.0
Other digestive system	79.0	75.0	82.0	79.0	76.0	83.0	75.0	72.0	79.0
Respiratory System:	69.0	69.0	70.0	70.0	70.0	70.0	66.0	66.0	66.0
Nose, nasal cavity & middle ear	69.0	67.0	72.0	70.0	68.0	72.0	65.0	65.0	68.0
Larynx	68.0	68.0	68.0	69.0	69.0	69.0	63.0	63.0	62.0
Lung & bronchus	69.0	69.0	70.0	70.0	70.0	70.0	66.0	66.0	66.0
Pleura	71.0	71.0	72.0	72.0	72.0	72.0	67.0	65.5	70.0
Trachea & other respiratory organs	67.0	66.0	70.0	68.0	66.0	71.0	61.0	59.0	64.0
Bones & joints	62.0	59.0	66.0	64.0	59.0	67.0	57.0	58.0	56.0
Soft tissue (incl heart)	65.0	64.0	67.0	66.0	65.0	68.0	58.0	52.0	61.0
Skin (ex basal & squam):	67.0	66.0	69.0	67.0	66.0	69.0	63.0	60.0	70.0
Melanomas of skin	65.0	64.0	67.0	65.0	64.0	67.0	70.0	66.0	73.0
Other non-epithelial skin	71.0	69.0	77.0	73.0	70.0	78.0	60.0	58.0	68.0
Breast	68.0	70.0	68.0	69.0	70.0	69.0	62.0	68.0	62.0

* U.S. Mortality, NCHS public use tape.
\- Statistic could not be calculated.

Table I-16 - continued
MEDIAN AGE OF CANCER PATIENTS AT DEATH*, 1990-94
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	70.0	-	70.0	70.0	-	70.0	67.0	-	67.0
Cervix uteri	59.0	-	59.0	60.0	-	60.0	58.0	-	58.0
Corpus uteri	72.0	-	72.0	73.0	-	73.0	70.0	-	70.0
Uterus, NOS	73.0	-	73.0	74.0	-	74.0	70.0	-	70.0
Ovary	70.0	-	70.0	70.0	-	70.0	69.0	-	69.0
Vagina	76.0	-	76.0	77.0	-	77.0	71.0	-	71.0
Vulva	79.0	-	79.0	79.0	-	79.0	70.0	-	70.0
Other female genital system	69.0	-	69.0	70.0	-	70.0	66.0	-	66.0
Male Genital System:	78.0	78.0	-	78.0	78.0	-	76.0	76.0	-
Prostate	78.0	78.0	-	78.0	78.0	-	76.0	76.0	-
Testis	35.0	35.0	-	35.0	35.0	-	36.0	36.0	-
Penis	71.0	71.0	-	71.0	71.0	-	73.0	73.0	-
Other male genital system	73.0	73.0	-	74.0	74.0	-	62.0	62.0	-
Urinary System:	73.0	72.0	75.0	74.0	73.0	76.0	71.0	70.0	72.0
Urinary bladder	77.0	76.0	79.0	77.0	76.0	79.0	75.0	74.0	76.0
Kidney & renal pelvis	70.0	68.0	72.0	70.0	69.0	72.0	66.0	65.0	69.0
Ureter	75.0	74.0	77.0	75.0	74.0	77.0	69.5	64.0	71.0
Other urinary system	74.0	74.0	73.0	76.0	75.0	77.0	67.0	69.0	67.0
Eye & Orbit	70.0	68.0	73.0	71.0	69.0	73.0	42.0	55.0	38.0
Brain & Nervous System:	64.0	62.0	66.0	64.0	63.0	66.0	58.0	55.0	60.0
Brain	64.0	62.0	66.0	64.0	63.0	66.0	58.0	55.0	60.0
Cranial nerves & other nervous system	65.0	61.0	69.0	66.0	62.0	69.0	61.0	55.0	65.0
Endocrine System:	67.0	63.0	71.0	68.0	64.0	71.0	63.0	55.0	66.0
Thyroid	73.0	69.0	75.0	73.0	69.0	76.0	71.0	68.0	72.0
Other endocrine & thymus	55.0	53.0	57.0	56.0	55.0	58.0	48.0	37.0	53.0
Lymphomas:	71.0	68.0	73.0	71.0	69.0	74.0	62.0	58.0	66.0
Hodgkin's disease	55.0	52.0	61.0	57.0	54.0	63.0	41.0	41.0	42.0
Non-Hodgkin's lymphomas	72.0	69.0	74.0	72.0	70.0	74.0	63.0	60.0	67.0
Multiple myeloma	73.0	72.0	74.0	73.0	72.0	75.0	70.0	69.0	71.0
Leukemias:	72.0	70.0	74.0	72.0	71.0	74.0	66.0	65.0	67.0
Lymphocytic:	73.0	71.0	77.0	74.0	72.0	77.0	69.0	66.0	72.0
Acute lymphocytic	45.0	39.0	54.0	48.0	41.0	56.0	33.5	30.0	39.5
Chronic lymphocytic	76.0	74.0	79.0	77.0	74.0	80.0	72.0	70.0	75.0
Other lymphocytic	76.0	73.0	79.0	76.0	73.0	80.0	73.0	71.0	77.0
Myeloid:	69.0	69.0	70.0	70.0	69.0	71.0	62.0	62.0	63.0
Acute myeloid	70.0	69.0	70.0	70.0	70.0	71.0	63.0	63.0	63.0
Chronic myeloid	68.0	67.0	69.0	69.0	68.0	70.0	60.0	58.0	61.0
Other myeloid	76.0	75.0	78.0	76.0	75.0	78.0	71.5	70.0	75.0
Monocytic:	73.0	72.0	75.0	74.0	72.5	76.0	65.0	70.0	62.0
Acute monocytic	72.0	72.0	73.5	72.0	72.0	74.0	62.0	64.5	62.0
Chronic monocytic	76.0	76.0	77.0	76.0	76.0	78.0	73.0	78.5	72.5
Other monocytic	77.0	77.0	79.0	77.5	77.0	79.0	70.0	78.0	44.0
Other:	73.0	72.0	75.0	74.0	72.0	75.0	68.0	67.0	69.0
Other acute	72.0	71.0	73.0	72.0	71.0	74.0	68.0	67.0	69.0
Other chronic	78.0	76.0	79.0	78.0	76.0	80.0	72.5	71.0	76.0
Aleukemic, subleuk & NOS	74.0	72.0	76.0	75.0	73.0	77.0	67.0	66.0	69.0
Ill-defined & unspecified	72.0	70.0	74.0	72.0	71.0	75.0	68.0	66.0	70.0

* U.S. Mortality, NCHS public use tape.
\- Statistic could not be calculated.

Table I-17

Lifetime Risk (Percent) of Being Diagnosed With Cancer By Site, Race and Sex

SEER Areas, 1992-94

Site	All Races		Whites		Blacks	
	Males	Females	Males	Females	Males	Females
All Sites	46.64	38.00	46.65	38.70	41.84	32.07
Invasive and In Situ	47.75	44.13	47.80	44.93	42.41	36.19
Oral cavity and Pharynx	1.52	0.74	1.50	0.74	1.59	0.63
Esophagus	0.71	0.26	0.67	0.24	1.10	0.46
Stomach	1.24	0.74	1.09	0.64	1.44	0.89
Colon and Rectum	5.88	5.72	5.99	5.74	4.42	5.19
Invasive and In Situ	6.21	6.01	6.32	6.03	4.62	5.42
Liver and Intrahepatic bile duct	0.58	0.30	0.48	0.25	0.59	0.28
Pancreas	1.18	1.25	1.14	1.23	1.26	1.58
Larynx	0.77	0.18	0.77	0.18	0.99	0.27
Invasive and In Situ	0.84	0.19	0.84	0.19	1.05	0.27
Lung and Bronchus	8.43	5.55	8.48	5.74	8.74	5.03
Melanomas of skin	1.46	1.07	1.67	1.22	0.04	0.07
Invasive and In Situ	2.04	1.50	2.31	1.70	0.06	0.09
Breast	0.11	12.52	0.11	12.99	0.09	9.68
Invasive and In Situ	0.12	14.16	0.12	14.65	0.10	10.98
Cervix uteri	-	0.83	-	0.77	-	1.12
Invasive and In Situ	-	4.74	-	4.74	-	3.92
Corpus and Uterus, NOS	-	2.66	-	2.82	-	1.63
Invasive and In Situ	-	2.74	-	2.91	-	1.66
Ovary	-	1.76	-	1.86	-	1.15
Prostate	18.85	-	18.48	-	18.83	-
Testis	0.35	-	0.41	-	0.05	-
Urinary bladder(Invasive and In Situ)	3.38	1.18	3.70	1.26	1.32	0.70
Kidney and Renal pelvis	1.29	0.83	1.34	0.86	1.07	0.76
Brain and Other nervous system	0.66	0.53	0.73	0.58	0.27	0.31
Thyroid	0.27	0.66	0.28	0.66	0.15	0.36
Hodgkin's disease	0.24	0.21	0.26	0.23	0.19	0.16
Non-Hodgkin's lymphomas	1.96	1.68	2.05	1.77	1.17	0.80
Multiple myeloma	0.62	0.55	0.59	0.50	0.85	0.96
Leukemias	1.35	1.03	1.43	1.05	0.80	0.72

Note: Invasive cancer only unless specified otherwise.

Table I-18

Lifetime Risk (Percent) of Dying From Cancer By Site, Race and Sex

SEER Areas, 1992-94

Site	All Races		Whites		Blacks	
	Males	Females	Males	Females	Males	Females
All Sites	23.85	20.63	24.11	21.01	23.28	19.87
Oral cavity and Pharynx	0.43	0.25	0.41	0.26	0.55	0.17
Esophagus	0.68	0.23	0.67	0.22	0.92	0.40
Stomach	0.80	0.52	0.69	0.46	1.00	0.63
Colon and Rectum	2.57	2.53	2.63	2.53	2.14	2.68
Liver and Intrahepatic bile duct	0.56	0.33	0.47	0.29	0.60	0.29
Pancreas	1.11	1.21	1.11	1.20	1.11	1.49
Larynx	0.25	0.06	0.25	0.06	0.34	0.12
Lung and Bronchus	7.06	4.41	7.14	4.60	7.48	3.79
Melanomas of skin	0.30	0.19	0.35	0.22	0.03	0.04
Breast	0.03	3.46	0.03	3.55	0.06	3.54
Cervix uteri	-	0.27	-	0.25	-	0.49
Corpus and Uterus, NOS	-	0.51	-	0.50	-	0.70
Ovary	-	1.14	-	1.21	-	0.74
Prostate	3.64	-	3.59	-	4.53	-
Testis	0.02	-	0.02	-	0.01	-
Urinary bladder	0.70	0.35	0.75	0.36	0.34	0.33
Kidney and Renal pelvis	0.51	0.33	0.55	0.35	0.32	0.26
Brain and Other nervous system	0.51	0.39	0.57	0.43	0.22	0.19
Thyroid	0.04	0.07	0.04	0.06	0.02	0.04
Hodgkin's disease	0.06	0.05	0.07	0.05	0.05	0.03
Non-Hodgkin's lymphomas	0.93	0.87	0.99	0.94	0.37	0.44
Multiple myeloma	0.48	0.42	0.48	0.40	0.59	0.70
Leukemias	0.94	0.74	1.01	0.77	0.56	0.55

Table I-19

ESTIMATED UNITED STATES CANCER PREVALENCE,1997

All Races, By Sex

Primary Site	Estimated Prevalence		
	Total	Males	Females
All Sites	8,114,000	3,352,000	4,762,000
Brain and Other Nervous System	89,000	48,000	41,000
Breast	1,993,000	12,000	1,981,000
Cervix Uteri	205,000	0	205,000
Colon	848,000	393,000	455,000
Corpus Uteri	516,000	0	516,000
Hodgkin's Disease	156,000	83,000	73,000
Kidney and Renal Pelvis	198,000	119,000	79,000
Larynx	128,000	103,000	25,000
Leukemias	140,000	78,000	62,000
Lung and Bronchus	386,000	206,000	180,000
Melanomas of Skin	467,000	225,000	242,000
Non-Hodgkin's Lymphoma	291,000	145,000	146,000
Oral Cavity and Pharynx	207,000	129,000	78,000
Ovary	186,000	0	186,000
Pancreas	23,000	11,000	12,000
Prostate	984,000	984,000	0
Rectum	367,000	195,000	172,000
Stomach	74,000	40,000	34,000
Testis	127,000	127,000	0
Thyroid	207,000	51,000	156,000
Urinary Bladder	582,000	428,000	154,000
Childhood (0-14 yrs)	152,000	77,000	75,000

Source: U.S. 1997 cancer prevalence rates are based on 1994 cancer prevalence rates from the Connecticut registry of the SEER program and 1997 population estimates from the U.S. Bureau of the Census. Connecticut prevalence rates are based on 1940-1993 cancer incidence and survival rates.

Surveillance, Epidemiology, and End Results Program, 1997
National Cancer Institute
U.S.A.

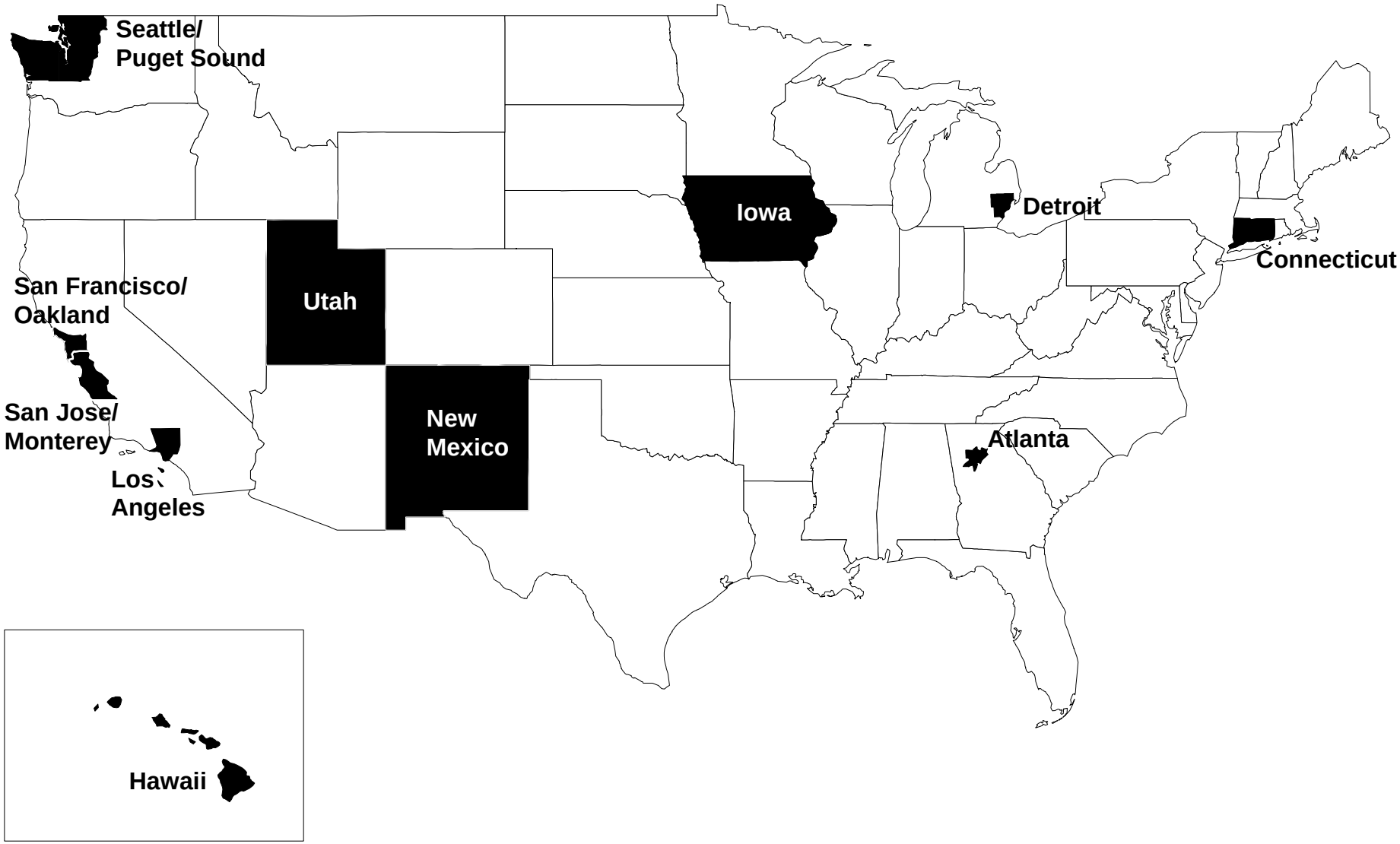
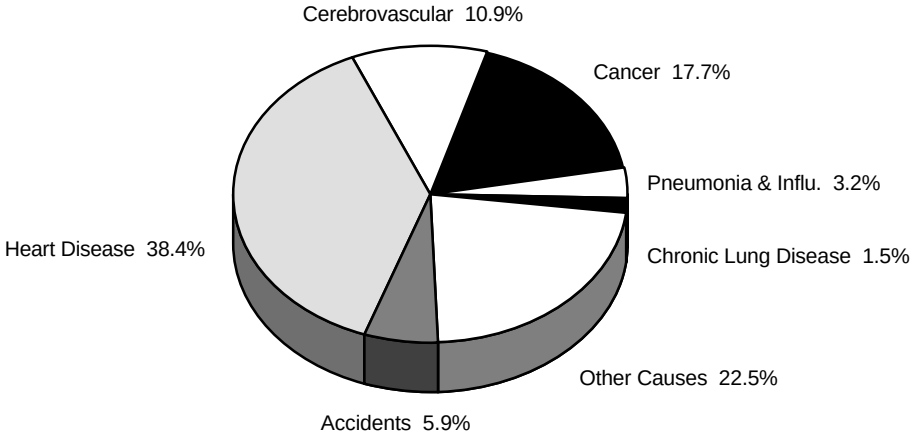
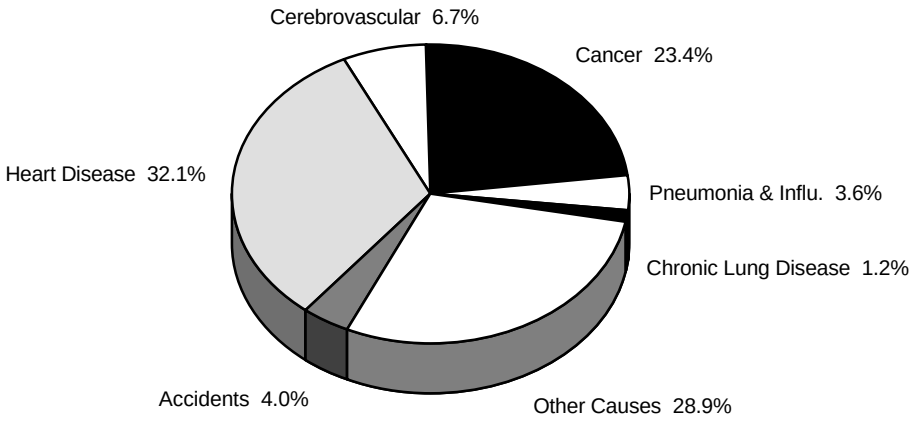


Figure I-1

Leading Causes of Death in U.S.
Percent of All Causes of Death
1973 vs. 1994



1973

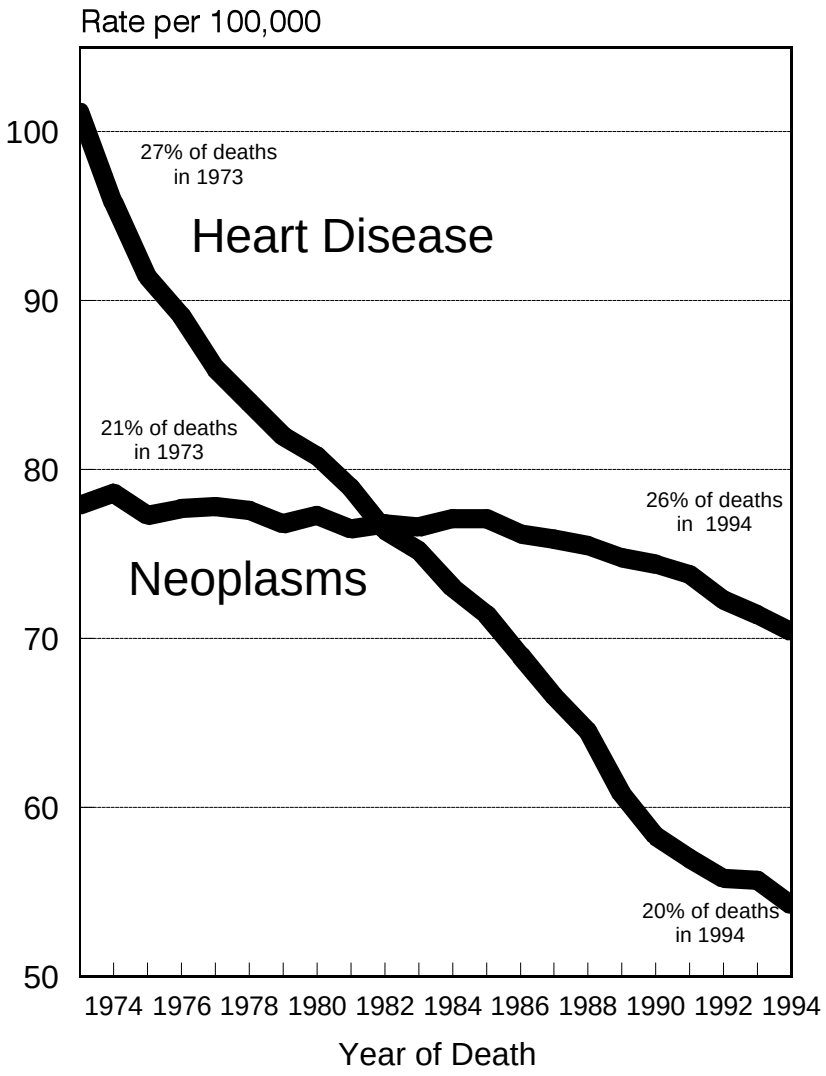


1994

Figure I-2

U.S. Mortality Rates
1973 - 1994

Ages Less Than 65



Ages 65 and Over

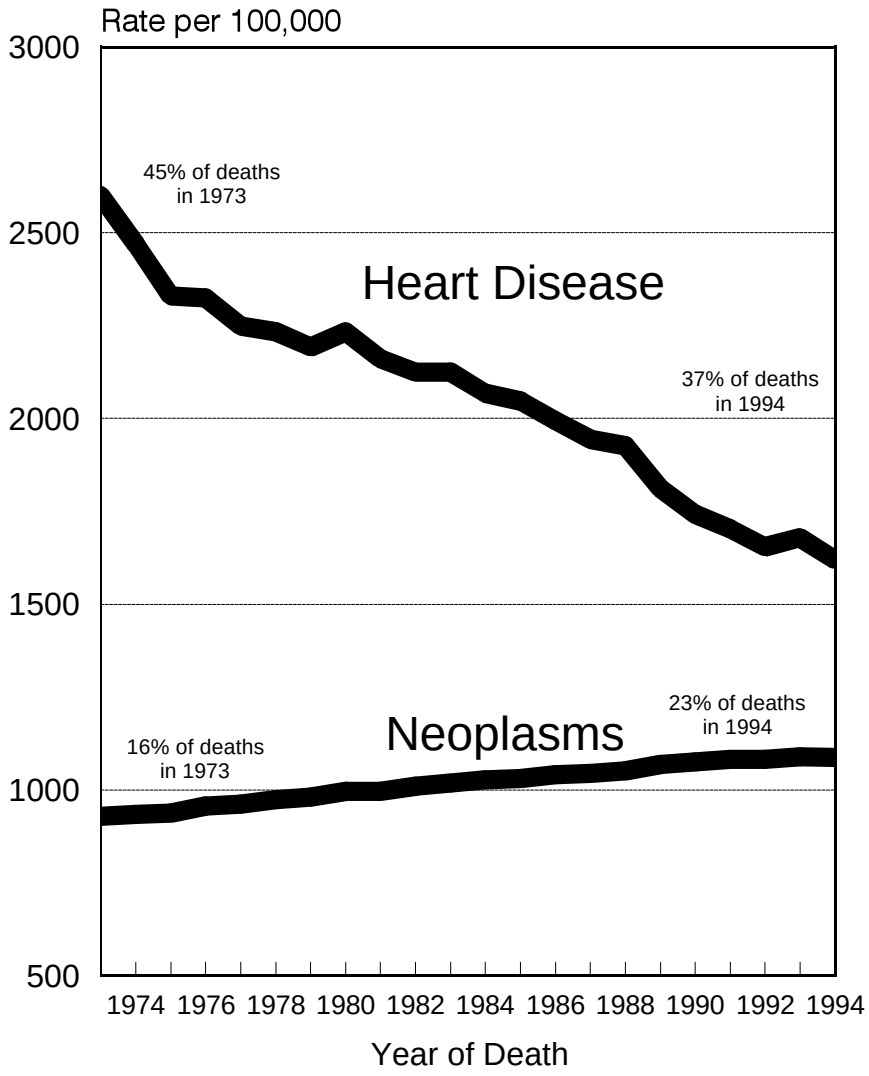
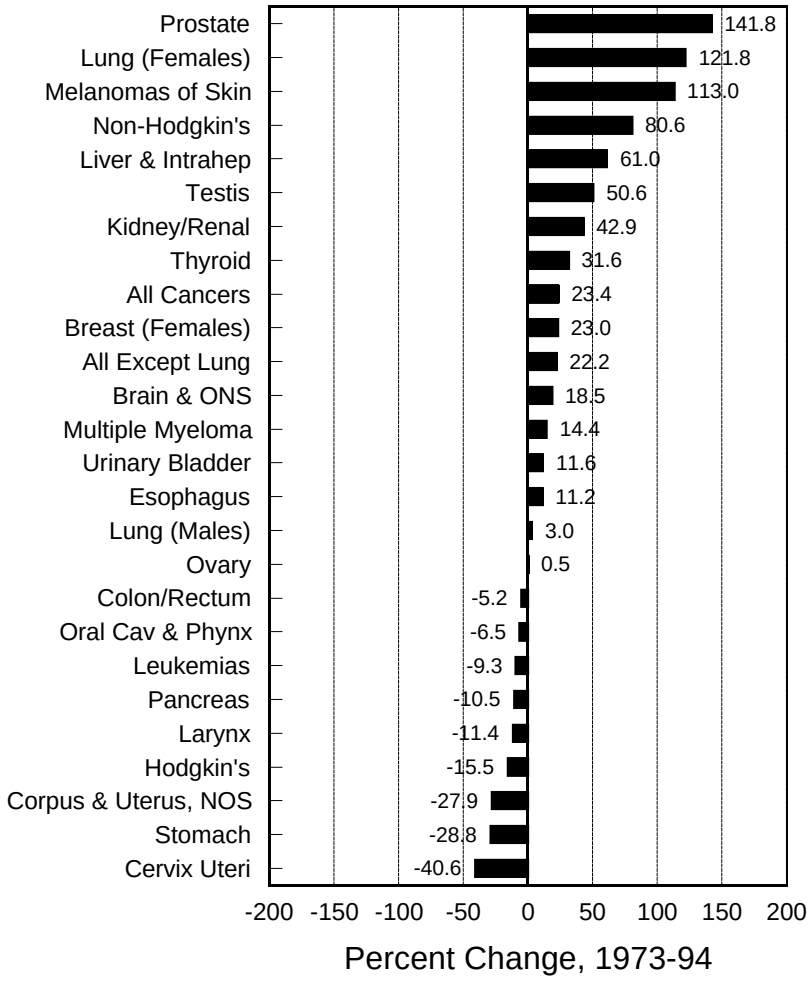


Figure I-3

Trends in SEER Incidence & U.S. Mortality Rates by Primary Cancer Site 1973-1994

Trends in SEER Incidence Rates



Trends in U.S. Cancer Mortality Rates

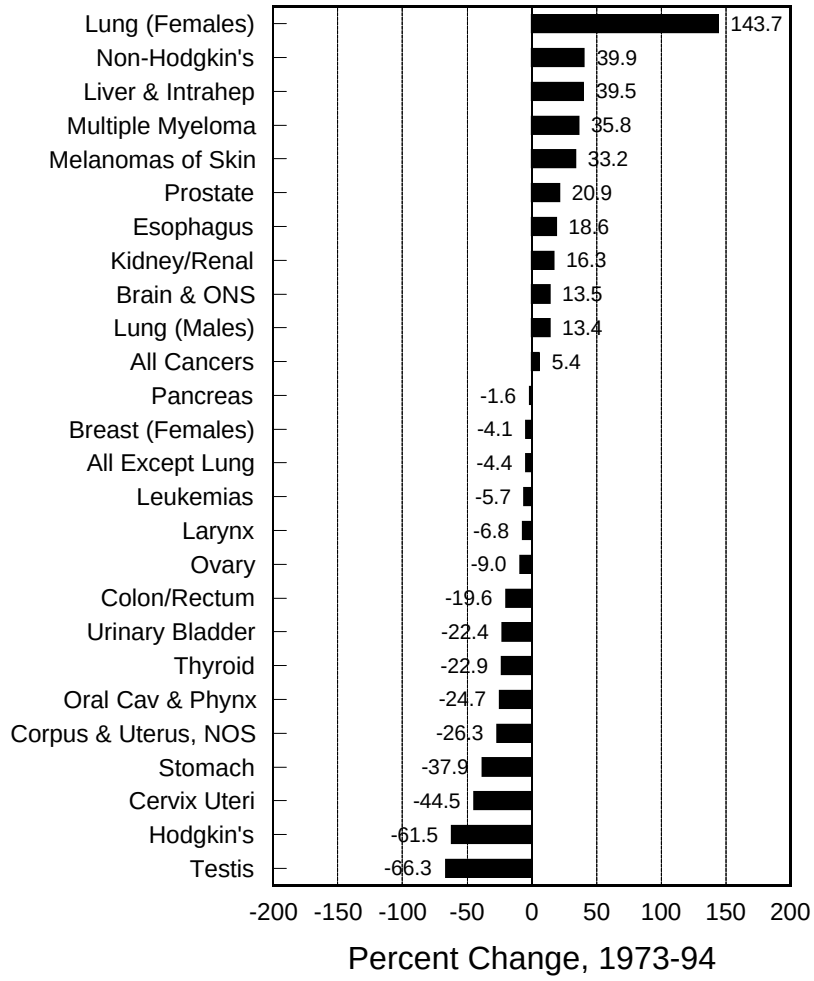
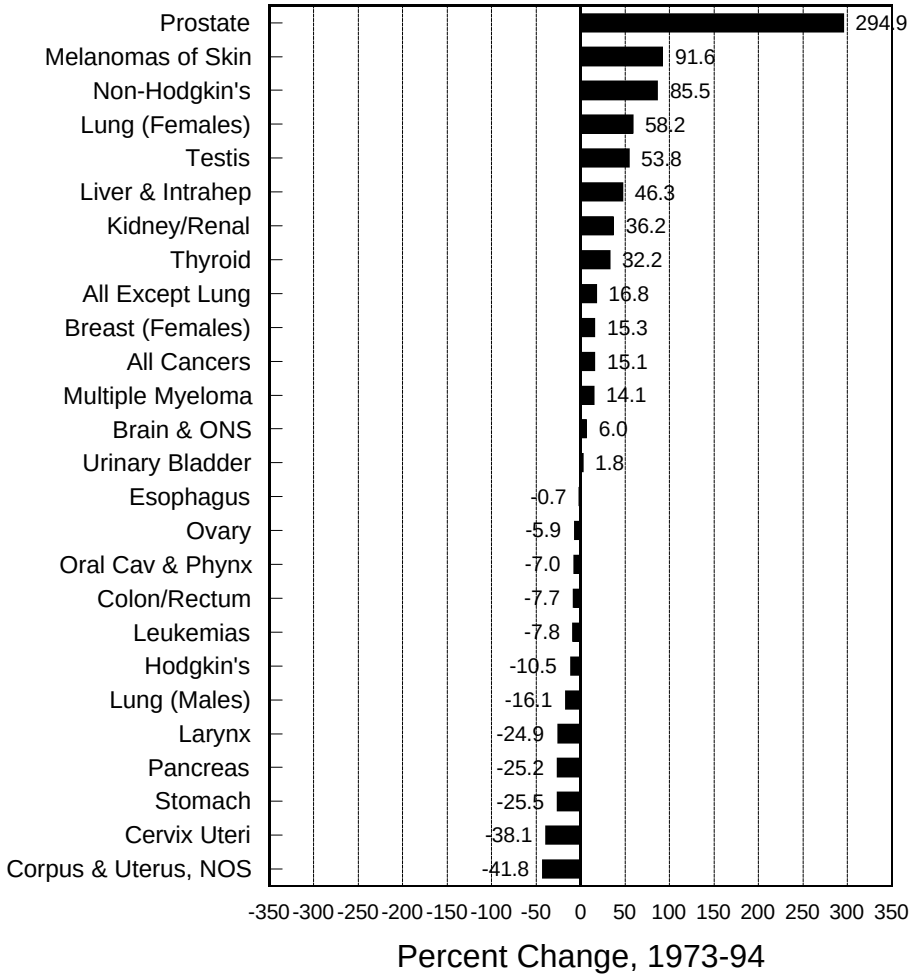


Figure I-4

Trends in SEER Incidence Rates by Primary Cancer Site 1973-1994

Ages Less Than 65



Ages 65 and Over

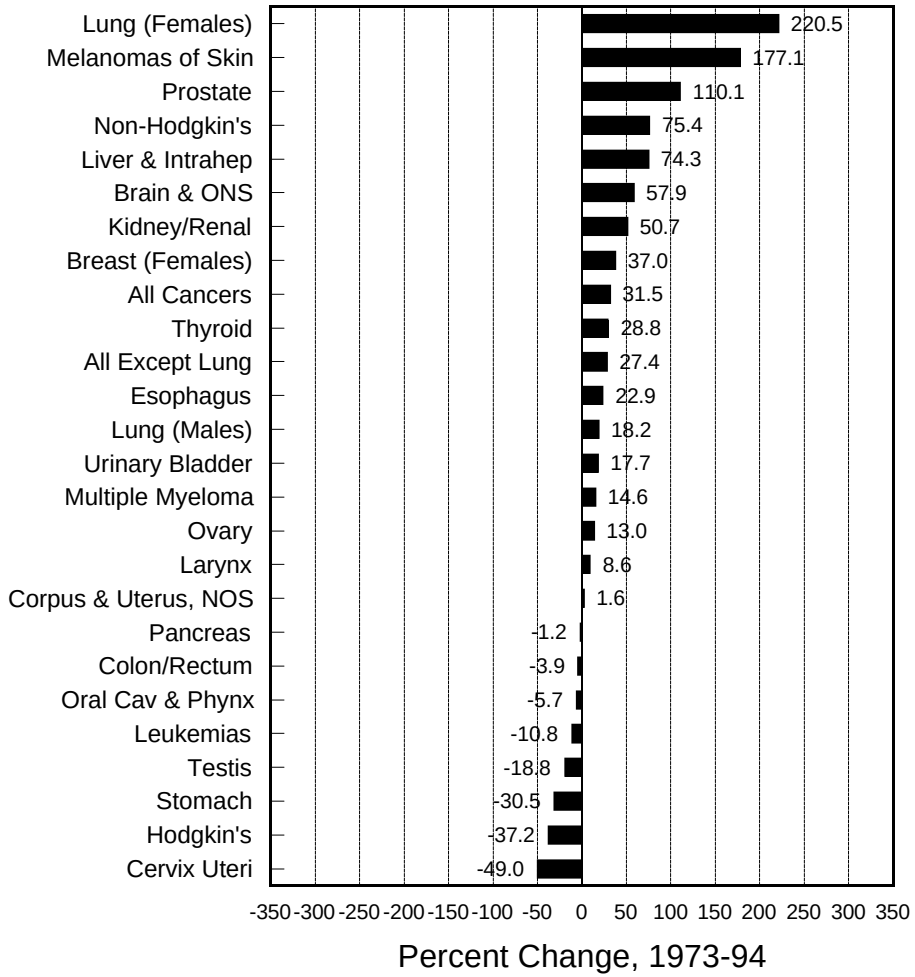
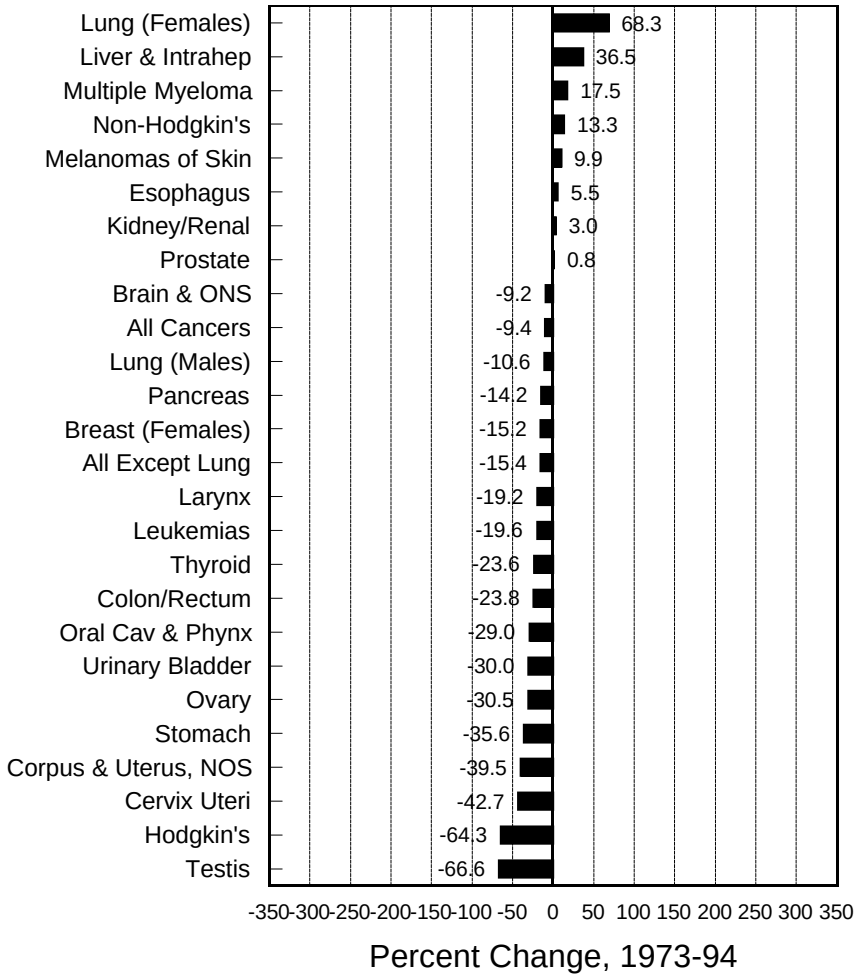


Figure I-5

Trends in U.S. Mortality Rates by Primary Cancer Site 1973-1994

Ages Less Than 65



Ages 65 and Over

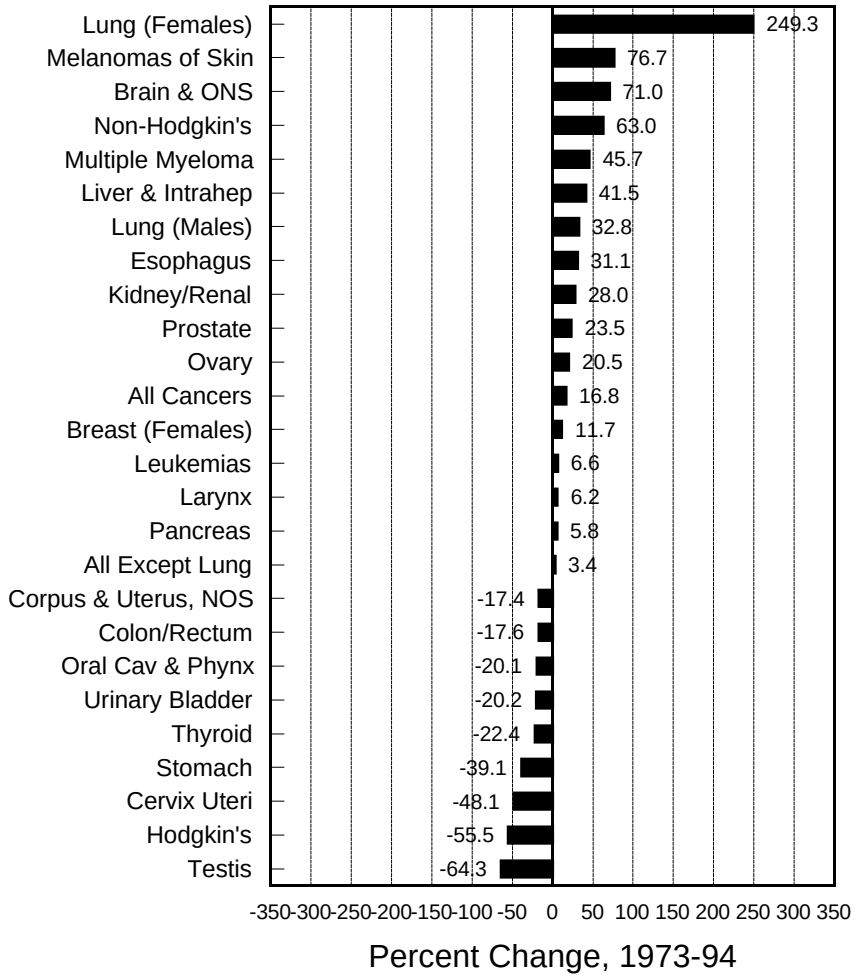
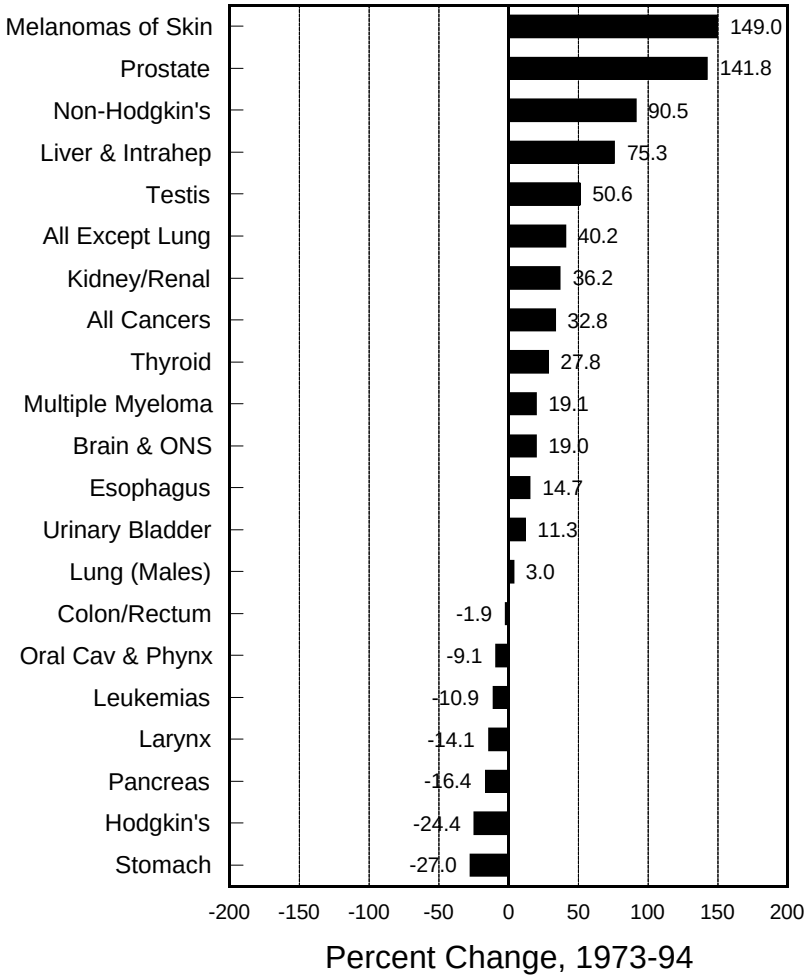


Figure I-6

Trends in SEER Incidence Rates by Primary Cancer Site 1973-1994

All Races, Males



All Races, Females

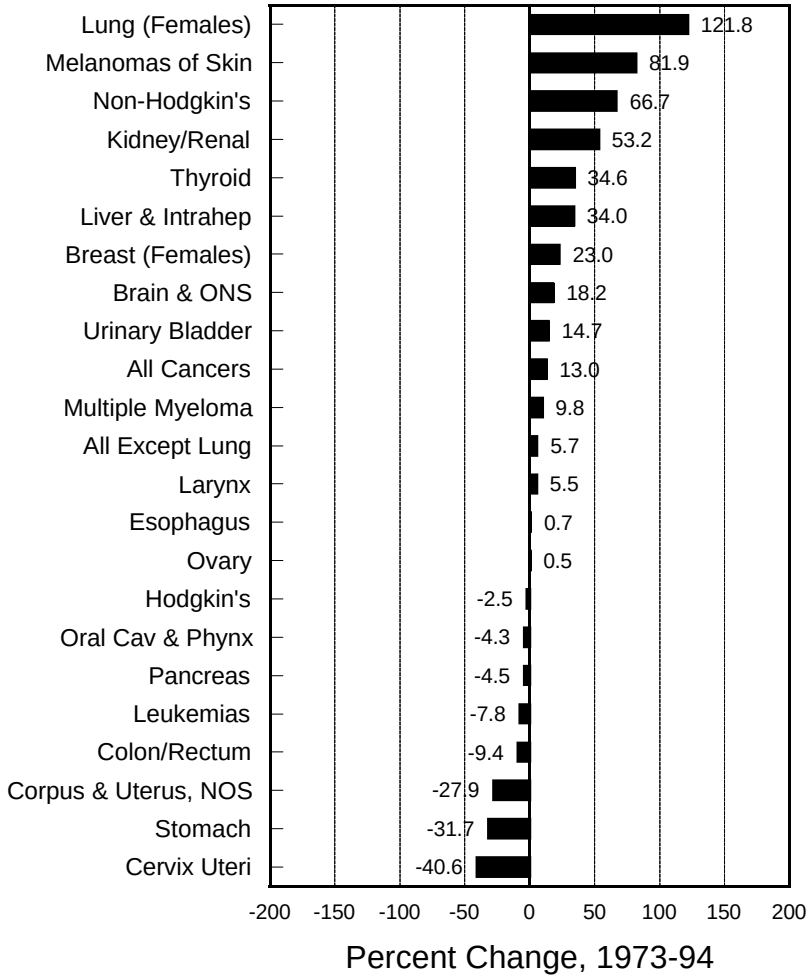
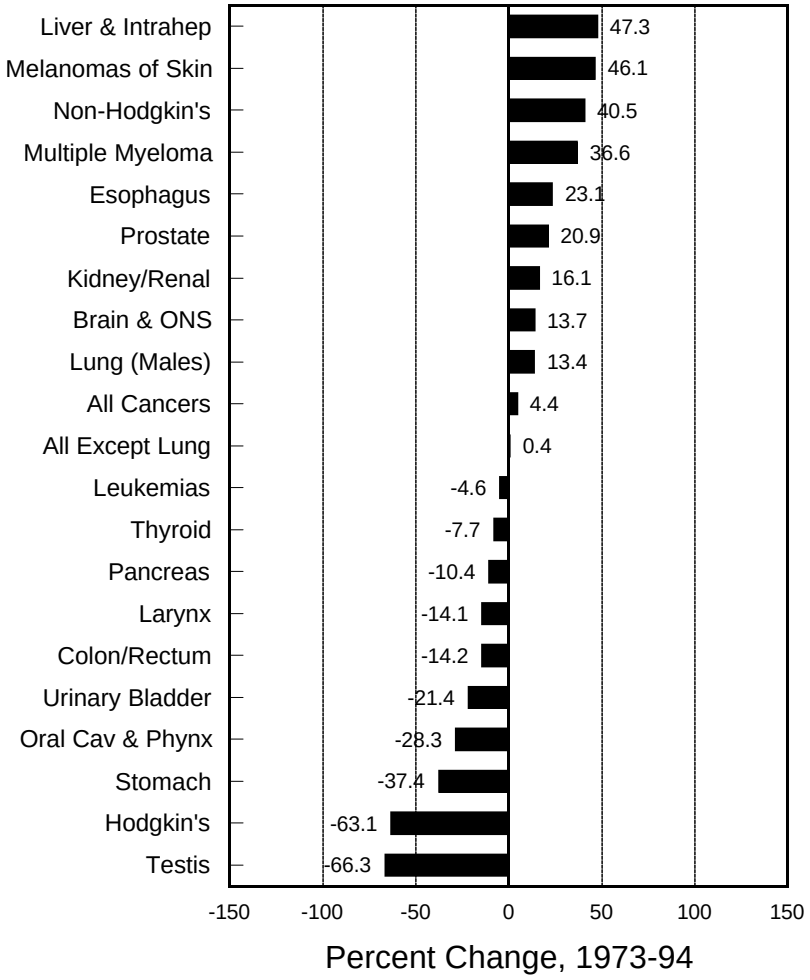


Figure I-7

Trends in U.S. Mortality Rates by Primary Cancer Site 1973-1994

All Races, Males



All Races, Females

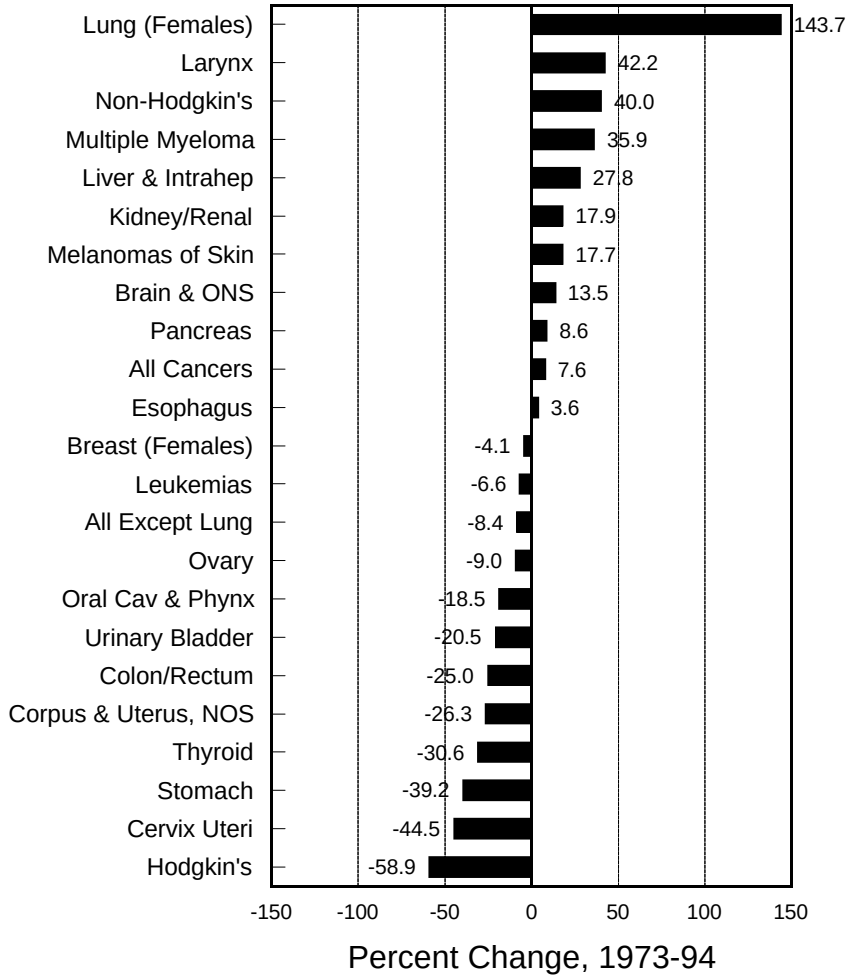
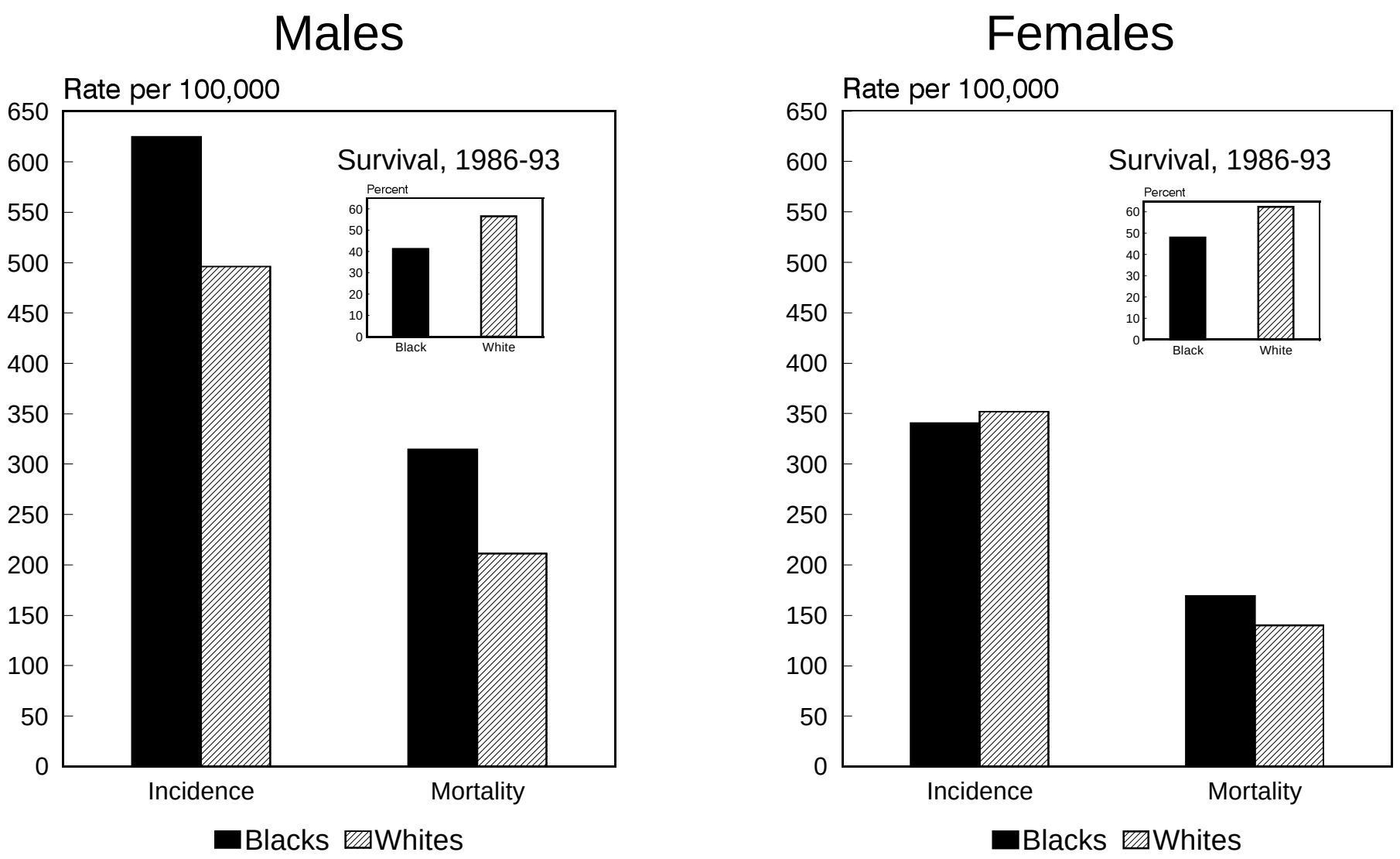


Figure I-8

SEER Incidence and U.S. Mortality Rates (1990-94)
Relative Survival Rates (1986-93)
All Cancers Combined, by Race and Sex



Rates are per 100,000 persons and age-adjusted to 1970
Relative survival rates are expressed as percents

Figure I-9

Figure I-10

Trends in U.S. Mortality Rates, 1973-94 by Primary Cancer Site Whites and Blacks, All Ages

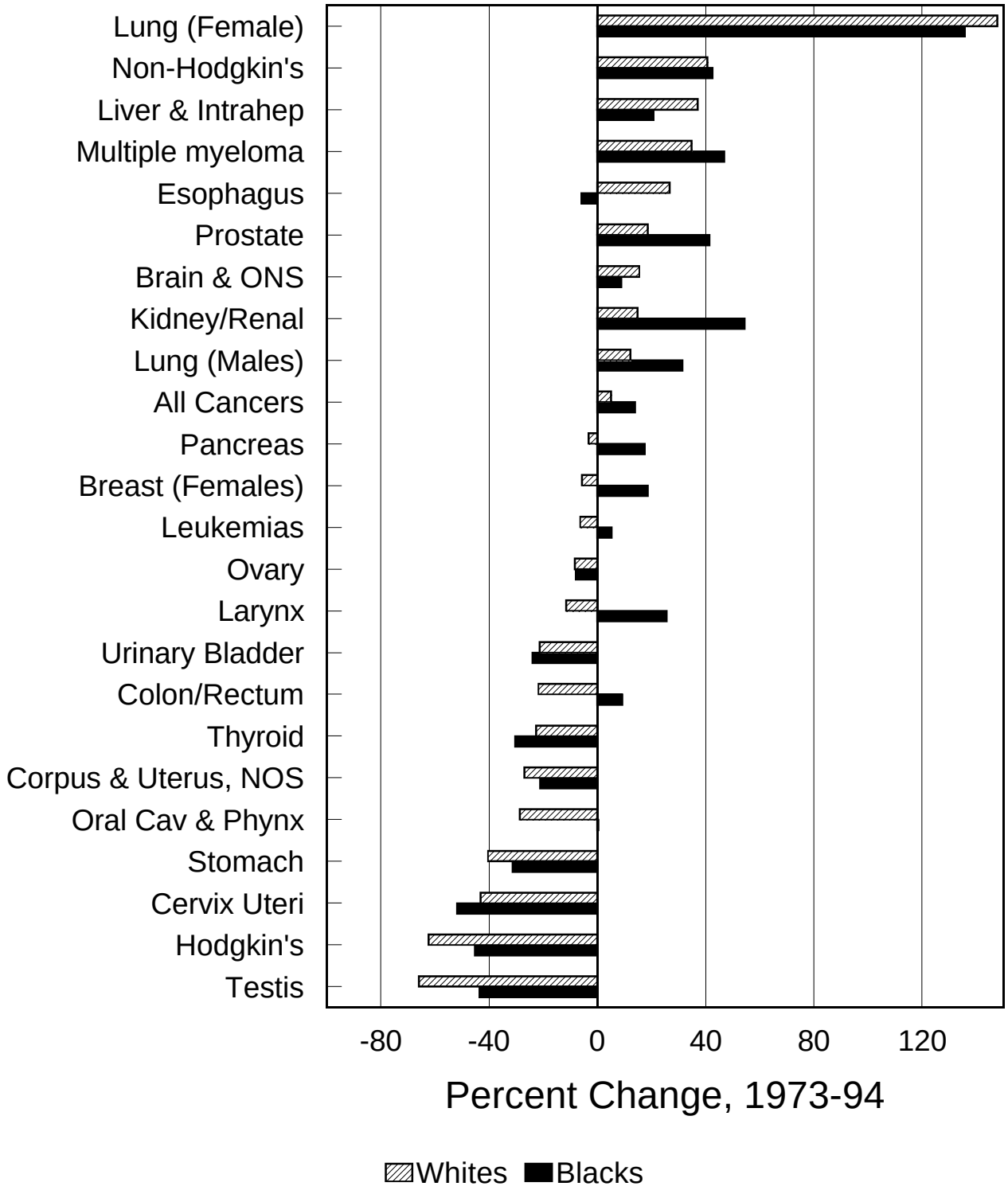
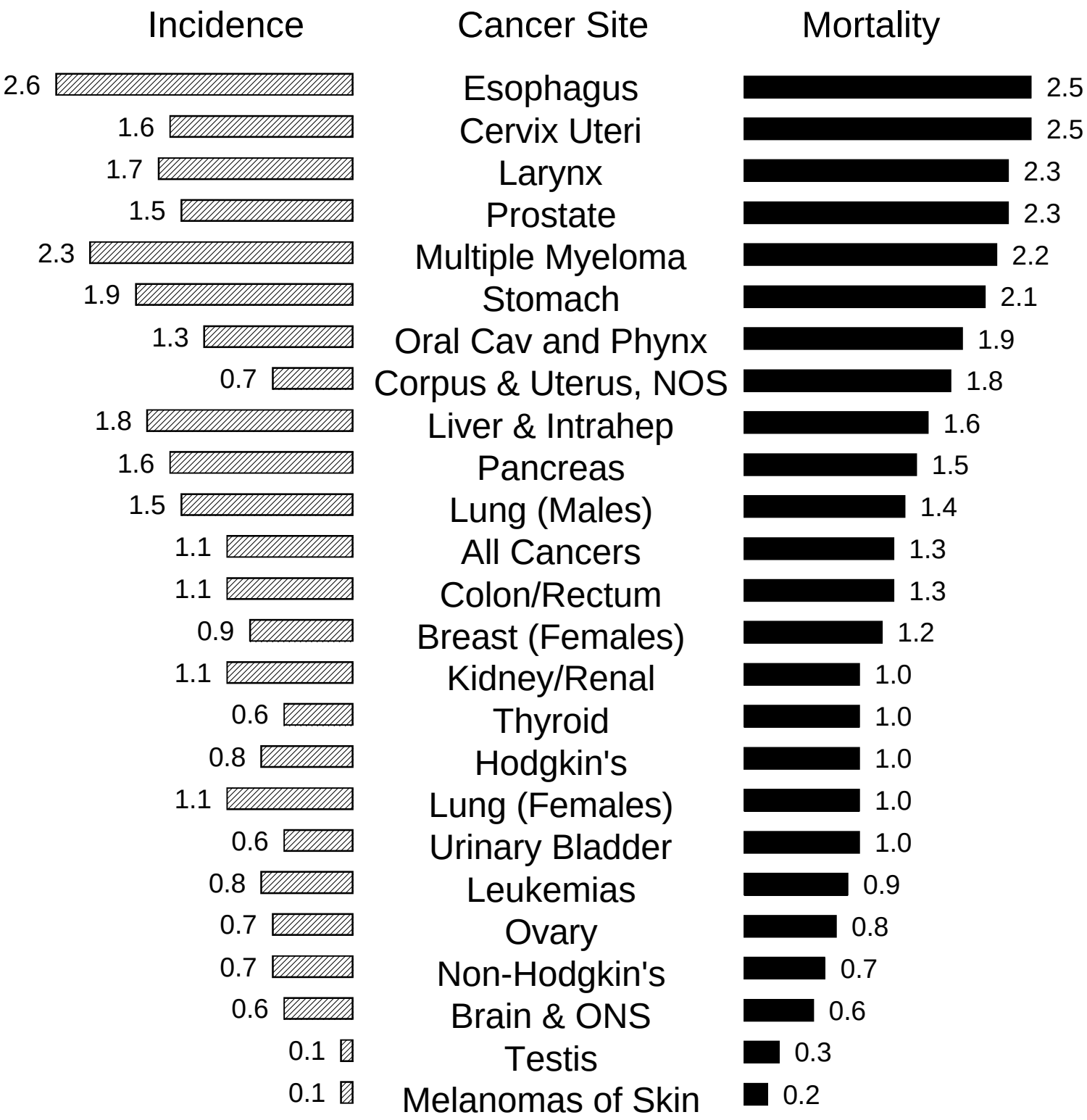


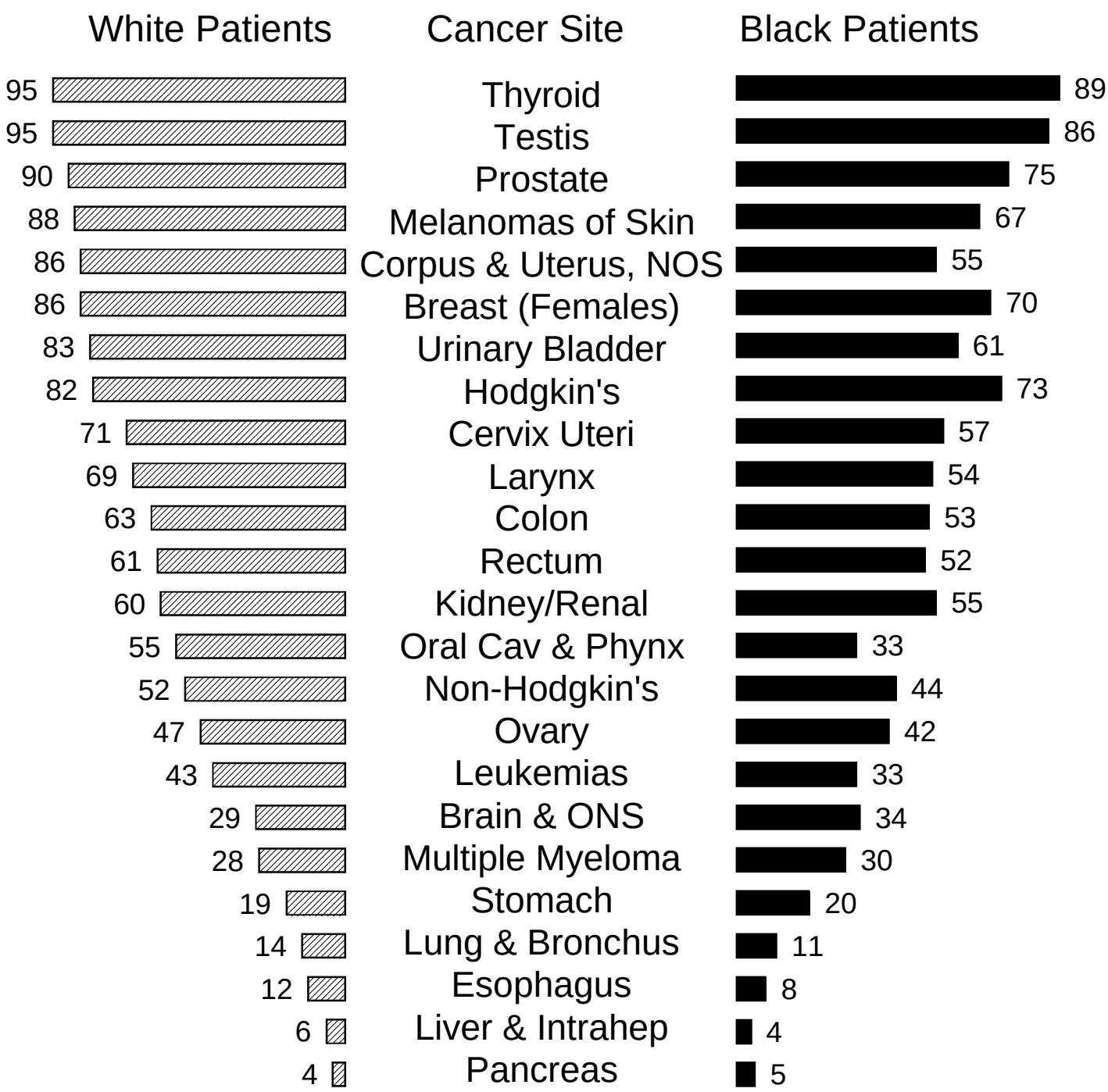
Figure I-11

SEER Cancer Incidence and U.S. Mortality Rates, 1990-94
Ratio of Black Rate to White Rate
All Ages

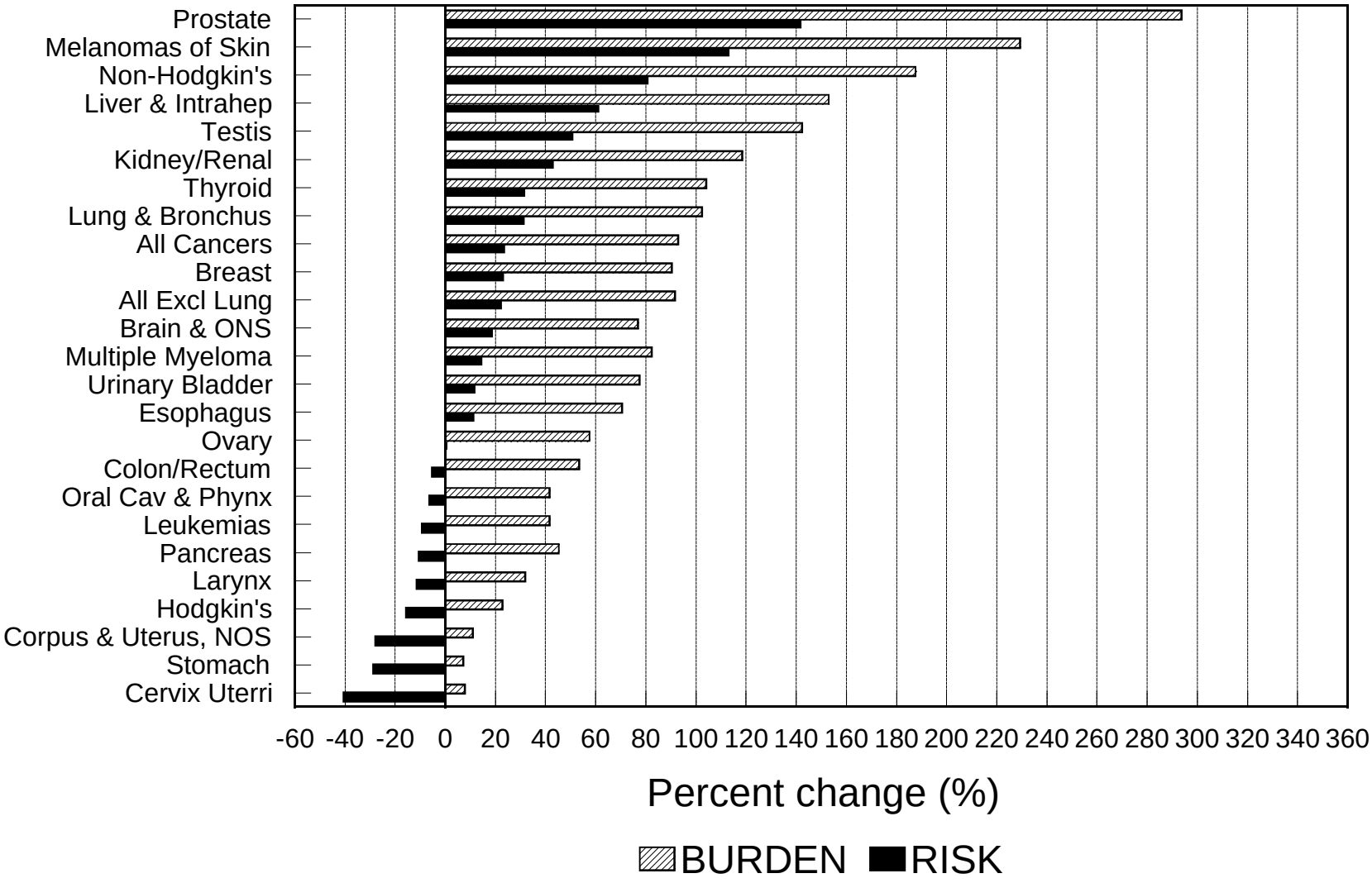


Ratio: (Black Rate)/(White Rate)
Rates are Age-Adjusted to 1970 Standard.

5-Year Relative Survival Rates
SEER Program, 1986-93
Males and Females



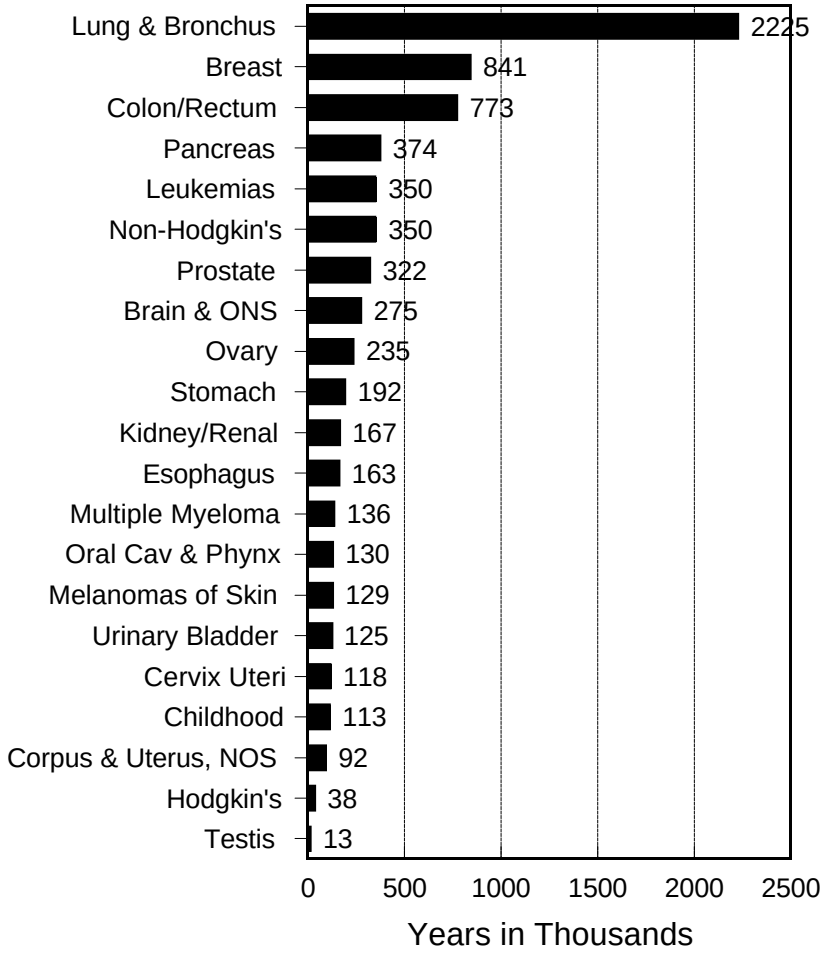
Incidence Percent Change, 1973 to 1994
Numbers (burden) vs. Rates (risk)
All Ages



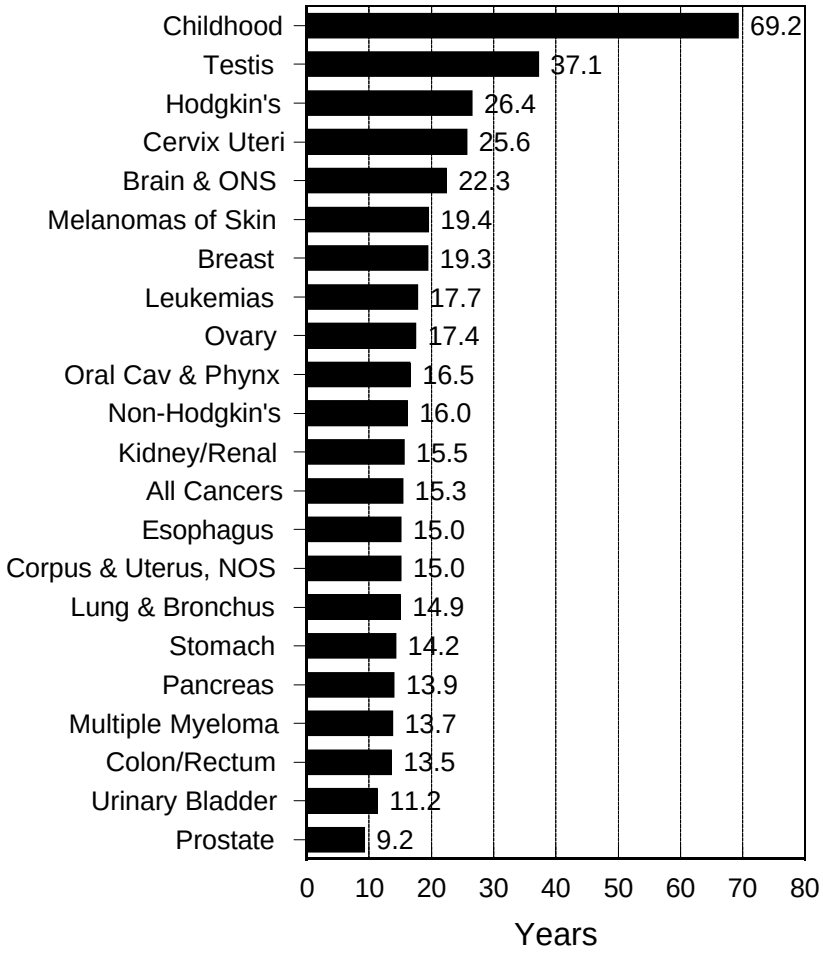
U.S. Incidence estimates based on SEER age-specific rates applied to U.S. population

Figure I-13

Person-Years of Life Lost Due to Cancer, All Races Both Sexes, 1994



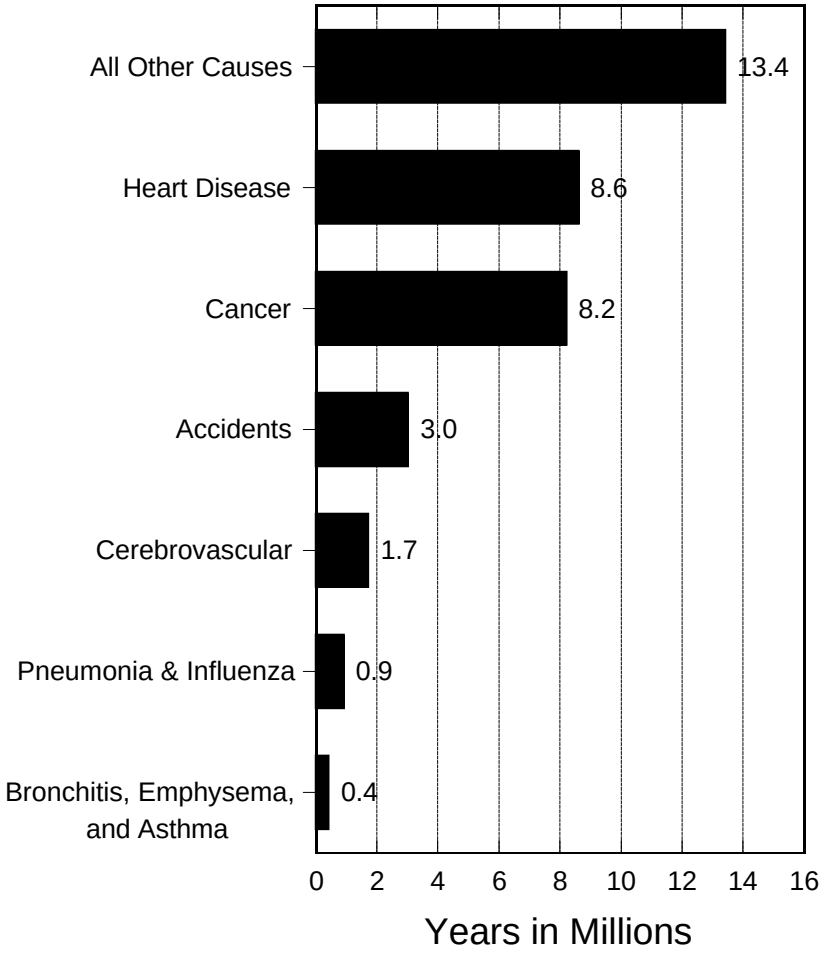
Average Years of Life Lost Per Person Dying of Cancer All Races, Both Sexes, 1994



Estimates produced using 1992 Life Tables

Figure I-14

Person-Years of Life Lost Due to Major Causes of Death in U.S. All Races, Both Sexes, 1994



Average Years of Life Lost Per Person Due to Major Causes of Death in U.S. All Races, Both Sexes, 1994

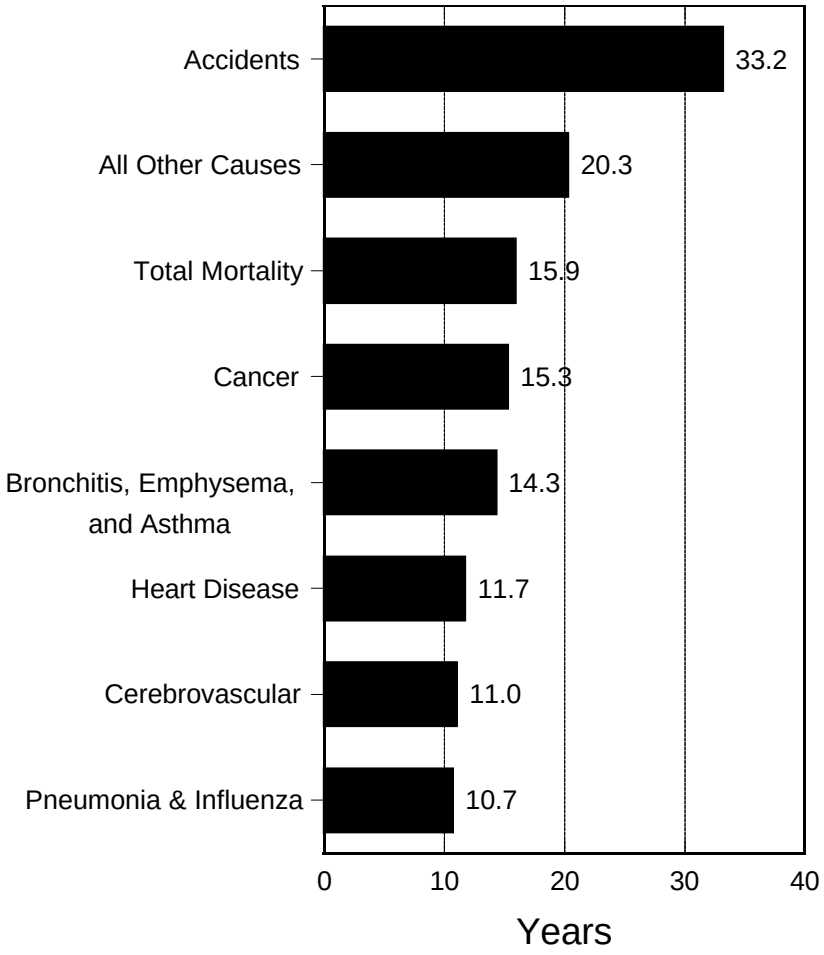


Figure I-15

Estimates produced using 1992 Life Tables