Cancer- Incidence and Mortality Rates

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Key Points
➢ Second leading cause of death in the US ➢ Cancer diagnosis and treatment was adversely affected due to Covid pandemic

Cancer is a major public health problem worldwide and the second leading cause of death in the United States. In 2020, the diagnosis and treatment of cancer was adversely affected by the coronavirus disease 2019 (COVID-19) pandemic. Reduced access to care because of health care setting closures and fear of COVID-19 exposure resulted in delays in diagnosis and treatment that may lead to a short-term drop in cancer incidence followed by an uptick in advanced-stage disease and, ultimately, increased mortality. However, quantifying these and other secondary consequences of the pandemic at the population level will take several years because of the lag in dissemination of population-based surveillance data. For example, reported cancer incidence and mortality are only currently available through 2018 and 2019, respectively.[1]

In this article, we provide the estimated numbers of new cancer cases and deaths in 2022 in the United States nationally and for each state, as well as a comprehensive overview of cancer occurrence based on the most currently available population-based data for cancer incidence and mortality .[1] We also estimate the total number of cancer deaths averted through 2019 because of the continuous decline in cancer death rates since the early 1990s.

Each year, the American Cancer Society estimates the numbers of new cancer cases and deaths in the United States and compiles the most recent data on population-based cancer occurrence and outcomes. Incidence data (through 2018) were collected by the Surveillance, Epidemiology, and End Results program; the National Program of Cancer Registries; and the North American Association of Central Cancer Registries. Mortality data (through 2019) were collected by the National Center for Health Statistics. [2] In 2022, 1,918,030 new cancer cases and 609,360 cancer deaths are projected to occur in the United States, including approximately 350 deaths per day from lung cancer, the leading cause of cancer death. Incidence during 2014 through 2018 continued a slow increase for female breast cancer (by 0.5% annually) and remained stable for prostate cancer, despite a 4% to 6% annual increase for advanced disease since 2011. Consequently, the proportion of prostate cancer diagnosed at a distant stage increased from 3.9% to 8.2% over the past decade. In contrast, lung cancer incidence continued to decline steeply for advanced disease while rates for localized-stage increased suddenly by 4.5% annually, contributing to gains both in the proportion of localized-stage diagnoses (from 17% in 2004 to 28% in 2018) and 3-year relative survival (from 21% to 31%). Mortality patterns reflect incidence trends, with declines accelerating for lung cancer, slowing for breast cancer, and stabilizing for prostate cancer. In summary, progress has stagnated for breast and prostate cancers but strengthened for lung cancer, coinciding with changes in medical practice related to cancer screening and/or treatment. More targeted cancer control interventions and investment in improved early detection and treatment would facilitate reductions in cancer mortality.[2]

Cancer is the second most common cause of death among children aged 1 to 14 years in the United States, surpassed only by accidents, and is the fourth most common cause of death among adolescents

(aged 15-19 years). In 2022, approximately 10,470 children (birth to 14 years) and 5,480 adolescents (aged 15-19 years) will be diagnosed with cancer and 1050 and 550, respectively, will die from the disease.[3] Leukemia is the most common childhood cancer, accounting for 28% of cases, followed by brain and other nervous system tumors (26%), nearly one-third of which are benign or borderline malignant. Cancer types and their distribution differ in adolescents; for example, brain and other nervous system tumors, more than one-half of which are benign or borderline malignant, are most common (21%), followed closely by lymphoma (19%). In addition, there are almost twice as many cases of Hodgkin lymphoma as non-Hodgkin lymphoma among adolescents whereas among children the reverse is true. Thyroid carcinoma and melanoma of the skin account for 12% and 3% of cancers, respectfully, in adolescents, but only 2% and 1%, respectively, in children.[4] The risk of death from cancer has decreased continuously since 1991, resulting in an overall drop of 32% and approximately 3.5 million cancer deaths averted as of 2019. This success is largely because of reductions in smoking that resulted in downstream declines in lung and other smoking-related cancers. Adjuvant chemotherapies for colon and breast cancer and combination therapies for many cancers also contributed. Progress against cancer has accelerated in the past decade because of advances in early detection, surgical techniques, and targeted therapies, despite slowing momentum for other leading causes of death. Some recent treatment breakthroughs are particularly notable because they are for historically difficult-to-treat cancers, such as metastatic melanoma and lung cancer. Also promising is a plateau in liver cancer occurrence, which is one of the most fatal cancers and was the fastest increasing malignancy just a few years ago. However, rising incidence for breast and advanced stage prostate cancers, both of which are amenable to early detection, is concerning. Even more alarming is the persistent racial, socioeconomic, and geographic disparities for highly preventable cancers that may be exacerbated by uneven access to interventions such as HPV vaccination and expanded health care. Increased investment in the broad application of existing cancer control interventions and basic and clinical research to further knowledge and advance treatment options would undoubtedly accelerate progress against cancer and mitigate racial and socioeconomic inequalities.

The number of cancer deaths averted in men and women because of the reduction in cancer death rates since the early 1990s was estimated by summing the difference between the annual number of cancer deaths recorded and the number that would have been expected if cancer death rates had remained at their peak. The expected number of deaths was estimated by applying the 5-year age- and sex-specific cancer death rate in the peak year for age-standardized cancer death rates (1990 in men, 1991 in women) to the corresponding populations in subsequent years through 2019.[1]

References.

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