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ARTICLE

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Cancer statistics, 2026

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ABSTRACT

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 using data collected by central cancer registries (incidence, through 2022) and the National Center for Health Statistics (mortality, through 2023). In 2026, approximately 2,114,850 new cancer cases and 626,140 cancer deaths are projected to occur in the United States. The cancer mortality rate continued to decline through 2023, averting 4.8 million deaths since 1991, largely because of smoking reductions, earlier detection, and improved treatment. These interventions are also evident in rising 5-year relative survival, which reached a milestone 70% for diagnoses during 2015–2021 overall, 69% for regional-stage disease, and 35% for distant-stage (metastatic) disease, up from 63%, 54%, and 17%, respectively, in the mid-1990s. People with high-mortality cancers and advanced diagnoses had the largest gains, including increases from 32% to 62% for myeloma, 7% to 22% for liver cancer, 16% to 35% for metastatic melanoma, 8% to 18% for metastatic rectal cancer, 20% to 37% for regional lung cancer, and 2% to 10% for metastatic lung cancer. Nevertheless, lung cancer will cause more deaths in 2026 than second-ranking colorectal cancer and third-ranking pancreatic cancer combined. In summary, decades of scientific investment have translated to longer lives for people with even the most fatal cancers. However, continued progress is threatened by proposed federal cuts to cancer research and health insurance, which provides access to life-saving cancer treatment.

KEYWORDS

cancer cases, cancer mortality, cancer statistics, incidence, survival

INTRODUCTION

Cancer is a global public health problem. In the United States, it is the second-leading cause of death overall and the leading cause among people younger than 85 years. Although cancer mortality has declined in the United States for several decades, there are numerous threats to this progress, such as rising incidence for many common cancers; persistent socioeconomic, racial, and ethnic disparities; and a potential uptick in advanced-stage diagnoses in the wake of pandemic-related delays in detection. For example, disruptions in colorectal cancer (CRC) screening and care are projected to result in 4000–7000 excess deaths by 2040;[1] however, the rebound unique to CRC screening, driven by increased stool testing, may mitigate this impact.[2] Importantly, cancer screening uptake since the pandemic has been slower among communities of color,[3] which may exacerbate existing disparities in survival and mortality.

This article provides the estimated numbers of new cancer cases and deaths in 2026 in the United States nationally and for each state as well as a comprehensive overview of cancer occurrence based on up-to-date, population-based data for cancer incidence and mortality through 2022 and 2023, respectively. We also estimate the total number of cancer deaths averted through 2023 because of the continuous decline in the cancer death rate since the early 1990s.

MATERIALS AND METHODS

Data sources

Population-based cancer incidence data in the United States have been collected by the National Cancer Institute's (NCI) Surveillance, Epidemiology, and End Results (SEER) program since 1973 and by the Centers for Disease Control and Prevention's (CDC) National Program of Cancer Registries (NPCR) since 1995. The SEER program is the only source for historic population-based incidence data from the eight oldest SEER areas (Connecticut, Hawaii, Iowa, New Mexico, Utah, and the metropolitan areas of Atlanta, San Francisco-Oakland, and Seattle-Puget Sound), which represent approximately 8% of the US population.[4] Historical survival data (1975–1977 and 1995–1997) are based on the SEER 8 areas plus the Detroit metropolitan area, as published previously.[5] Contemporary survival statistics are based on data from the SEER 8 registries plus the Alaska Native Tumor Registry, California, Georgia, Idaho, Kentucky, Louisiana, New Jersey, New York, and Texas,[6] representing 42% of the US population, with vital status follow-up through 2022. Twenty-one SEER registries, which additionally include Illinois and cover 46% of the United States population, were the source for the probability of developing cancer.

The North American Association of Central Cancer Registries (NAACCR) compiles and reports incidence data from 1995 onward for registries that participate in the SEER program and/or the NPCR. These data approach 100% coverage of the US population for the most recent years and were the source for the projected new cancer cases in 2026, contemporary incidence trends, cross-sectional incidence rates, and stage distribution.[7,8] The incidence data presented herein differ slightly from those published online in the NAACCR's CiNA (Cancer in North America) Explorer (https://apps.naaccr.org/explorer/; accessed August 27, 2025) because rates are adjusted for delays in case reporting using state-level delay factors. Incidence data for Puerto Rico were abstracted from the CiNA Explorer.

Mortality data from 1930 to 2023 were provided by the National Center for Health Statistics (NCHS).[9,10] Forty-seven states and the District of Columbia met data quality requirements for reporting to the national vital statistics system in 1930, and Texas, Alaska, and Hawaii began reporting in 1933, 1959, and 1960, respectively. The methods for abstraction and age-adjustment of mortality data before 1969 are described elsewhere.[10,11] Contemporary 5-year mortality rates for Puerto Rico were sourced from State Cancer Profiles (https://statecancerprofiles.cancer.gov; accessed July 18, 2025), a collaboration between the CDC and the NCI.

All cancer cases were classified according to the *International Classification of Diseases for Oncology*, third edition, except childhood and adolescent cancers, which were classified according to the *International Classification of Childhood Cancer*.[12–14] CRC case data exclude appendiceal cancers except for estimated new diagnoses in 2026. Causes of death were classified according to the *International Classification of Diseases*.[15]

Statistical analysis

Incidence and mortality

All incidence and mortality rates were age standardized to the 2000 US standard population (19 age groups for incidence, 20 age groups for mortality) and expressed per 100,000 persons (or per million for childhood and adolescent cancer incidence), as calculated by the NCI's SEER*Stat software, version 9.0.41. Population data before 2010 were modified intercensal annual estimates by age, sex, race, and Hispanic origin produced by the US Census Bureau and the NCHS in collaboration with the NCI (https://seer.cancer.gov/popdata/modifications.html; accessed October 13, 2025). Population estimates for 2010–2019 were produced by Woods & Poole Economics, Inc. (https://seer.cancer.gov/popdata/W&P_ICen_Tech_Documentation.pdf; accessed October 13, 2025) and, for 2020–2023, were based on Vintage 2023 estimates (https://seer.cancer.gov/popdata/; accessed August 15, 2025). Population estimates incorporate race-bridging, which combines multiple-race categories in the 2000 and 2010 census into individual race categories. These population estimates differ from those used in the calculation of rates provided in CDC Wonder (https://wonder.cdc.gov/wonder/help/ucd-expanded.html#Population%202022; accessed August 15, 2025), resulting in differences for some years. Official US Census Bureau intercensal population estimates are anticipated to be available for future data releases. (For more information on population estimates issued by the US Census Bureau, see https://census.gov/programs-surveys/popest.html; accessed August 15, 2025).

The probability of developing cancer was calculated using NCI's DevCan software, version 6.9.2, and the annual percent change (APC) in rates was quantified using NCI's Joinpoint Regression Program, version 5.4.0.0. Trends were described as increasing or decreasing when the APC was statistically significant based on a two-sided p value < .05, calculated using the parametric method; otherwise, they were described as stable. Trend and lifetime risk analyses exclude cancer incidence in 2020 because the Joinpoint and DevCan modeling programs were not designed to accommodate such a large single-year data anomaly as occurred because of pandemic-related disruptions in health care.[16]

All statistics presented by race exclude Hispanic ethnicity to minimize racial misclassification. Racial misclassification for the American Indian and Alaska Native (AIAN) population was further mitigated by restricting incidence rates to Purchased/Referred Care Delivery Area counties and adjusting nationally representative mortality rates using classification ratios previously published by the NCHS.[17]

Whenever possible, cancer incidence rates were adjusted for delays in reporting, which occur because of lags in case capture and data corrections. Delay adjustment has the largest effect on most recent data years and for cancers that are frequently diagnosed in outpatient settings (e.g., melanoma, leukemia, and prostate cancer). For example, the leukemia incidence rate for 2022 was 13% higher after adjusting for reporting delays (15.4 vs. 13.6 per 100,000 persons). Delay adjustment is particularly important when quantifying contemporary trends.[18] In addition, rates for uterine corpus and uterine cervix cancers were corrected for hysterectomy prevalence by removing these women from the population at risk (denominator) based on Behavioral Risk Factor Surveillance System data during 2018–2022 by state, age (20–39 years or 20–29, 30–39, 40–49, 50–59, 60–69, 70–79, and 80 years and older), and race and ethnicity.[19] The case count for each cancer was then added back to the at-risk populations because hysterectomy is a common treatment for both cancers. Corrected rates were age adjusted to the 2000 US standard population using the same method described above.

Survival

Relative survival is a measure of survival in the absence of competing causes of death. It is calculated as the ratio of the observed survival among a group of patients with cancer to their expected survival in the general population. Expected survival is calculated using life tables that match each patient with cancer to their respective sex, age, race, geographic area, socioeconomic status, and year of diagnosis, which are updated annually using population and mortality data.[20] Thus, relative survival is a measure of net cancer survival, and is useful for tracking progress in cancer early detection and treatment. In addition, relative survival measures excess mortality and thus does not require detailed cause-of-death information, which is often unavailable or unreliable,[21] despite active follow-up of patients from diagnosis to death or loss to follow-up by SEER registry personnel. For the current analysis, we used the Ederer II method for calculating expected survival[22] and the actuarial method to calculate survival, with life tables that included detailed information by Hispanic ethnicity.[20] Relative survival was calculated by cancer site and race (all races, White, and Black) for three diagnosis periods (1975–1977, 1995–1997, and 2015–2021) and by stage at diagnosis (all stages, localized, regional, and distant).

Projected cancer cases and deaths in 2026

The most recent year for which incidence and mortality data are available lags 2–3 years behind the current year because of the time required for data collection, compilation, quality control, and dissemination. Therefore, we project the numbers of new cancer cases and deaths in the United States in 2026 to estimate the contemporary cancer burden using two-step statistical modeling, as described in detail elsewhere.[23,24] Briefly, complete cancer diagnoses were estimated for every state from 2008 through 2022 based on high-quality, delay-adjusted incidence data from 50 states and the District of Columbia (99.7% population coverage) as well as state-level variations in sociodemographic characteristics, lifestyle factors, medical settings, and cancer screening behaviors.[25] Counts were adjusted for the deficit in cases during March through May 2020 because of the coronavirus disease 2019 pandemic based on the proportion of cases diagnosed in those months in previous years. Modeled state and national counts were then projected 4 years ahead using a novel, data-driven Joinpoint algorithm.[24] Basal cell and squamous cell skin cancers cannot be estimated because these diagnoses are not recorded by most cancer registries. Ductal carcinoma in situ of the female breast and in situ melanoma of the skin were estimated by approximating annual case counts from 2013 through 2022 based on NAACCR age-specific incidence rates, delay factors for invasive disease (delay factors are unavailable for in situ cases), and US population estimates. Counts were then projected 4 years ahead based on the average APC generated by the Joinpoint regression model. The number of cancer deaths expected to occur in 2026 was estimated by applying the data-driven Joinpoint algorithm described above to reported cancer deaths from 2009 through 2023 at the state and national levels.[24]

Other statistics

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 annual difference between the 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-specific 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 age-specific and sex-specific population estimates in subsequent years through 2023.

SELECTED FINDINGS

Expected number of new cancer cases and deaths

Table 1 presents the estimated numbers of new invasive cancer cases in the United States in 2026 by sex and cancer type. In total, there will be approximately 2,114,850 new cancer diagnoses, the equivalent of about 5800 cases each day. In addition, there will be about 122,680 new cases of melanoma in situ of the skin and 60,730 new cases of ductal carcinoma in situ diagnosed in women in 2026. The estimated numbers of new cases for selected cancers by state are shown in Table 2. The lifetime probability of being diagnosed with invasive cancer is one in three for both men (39.2%) and women (38.7%; Table 3). Although most (60%) cancer diagnoses are still in people aged 65 years or older, an increasing portion are in younger adults, including 28% in people aged 50–64 years and 12% in people younger than 50. However, age distribution varies widely by cancer type; for example, the proportion of diagnoses before age 50 years ranges from 1% of prostate cancers and 2% of lung cancers to 17% of breast cancers and 47% of cervical cancers.[7]

Figure 1 depicts the most common cancers diagnosed in men and women in 2026. Prostate cancer, lung and bronchus (hereinafter *lung*) cancer, and CRC account for almost one half (48%) of all incident cases in men, with prostate cancer alone accounting for nearly one third of diagnoses. In women, breast cancer, lung cancer, and CRC account for 50% of all new diagnoses, with breast cancer alone accounting for nearly one third of cases.

An estimated 626,140 people in the United States will die from cancer in 2026, corresponding to about 1720 deaths per day (Table 1). Table 4 provides the estimated number of deaths by state for cancer overall and for the 10 cancer types that cause the most deaths. Lung cancer is the leading cancer death, killing more people than second-ranking CRC and third-ranking pancreatic cancer combined. Approximately 87% of lung cancers in men and 84% in women are attributable to cigarette smoking.[26] Smoking prevalence dropped from 42% in 1964 to 11% in 2023,[27] but it continues to be the leading cause of preventable death in the United States, accounting for approximately 182,830 cancer deaths in 2026 directly or through secondhand smoke exposure.[26]

Trends in cancer incidence

Figure 2 illustrates long-term temporal trends in overall cancer incidence by sex from 1975 through 2022. Observed incidence rates in 2020 are presented as data points separate from the trend line because pandemic-related disruptions in diagnosis resulted in 9%–10% lower rates than expected, mostly for asymptomatic disease.[16,28] Incidence rates since 2020 have been a continuation of prepandemic trends except for a small rebound in breast cancer cases in 2021.[29,30]

Cancer incidence in men spiked during the early 1990s because of a surge in the detection of asymptomatic prostate cancer through rapid, widespread prostate-specific antigen (PSA) testing.[31] Thereafter, the male rate generally fell until 2014 and remained stable through 2022 at approximately 500 per 100,000 men (Figure 2). In contrast, cancer incidence in women gradually increased from 1978 through 2022 (445 per 100,000 women), narrowing the male-to-female incidence rate ratio from a peak of 1.6 in 1992 to 1.1 in 2022 (the rate ratio was 1.4 before the prostate/PSA peak). Higher risk in men for most cancer types reflects greater exposure to carcinogenic environmental and lifestyle factors, such as smoking, as well as other factors, including height,[32,33] endogenous hormone exposure, and immune function and response.[34,35]

Figure 3 shows incidence trends for some common cancers by sex. In men, prostate cancer incidence is more than twice that of second-ranking lung cancer. The prostate cancer incidence rate dropped by almost 40% from 2007 to 2014 because of an 8.4% per year decline in the diagnosis of localized (typically asymptomatic) disease in parallel with recommendations against screening by the US Preventive Services Task Force (USPSTF) for men aged 75 years and older in 2008 and for all men in 2012.[36,37] From 2014 through 2022, the prostate cancer incidence rate rose by 2.9% per year (Table 5), with a longer and steeper slope for regional-stage (4.6% per year since 2013) and distant-stage (5.6% per year since 2011) disease.[38] Advanced-stage diagnoses are increasing in men of all ages, and it is possible that expanded use of high-sensitivity prostate magnetic resonance imaging is itself contributing to the trend, although at least one study found no evidence of an association.[39] In 2018, the USPSTF upgraded their recommendation for prostate cancer screening to informed decision-making in asymptomatic men aged 55–69 years,[40] consistent with long-standing American Cancer Society recommendations.[41] Despite concerning incidence trends, PSA screening remains an area of active debate given the high prevalence and severity of treatment complications. A recent 12-year follow-up study of men treated for prostate cancer found that, compared with same-aged men in the general population, prostatectomy was associated with a seven-fold higher risk of urinary or sexual complications, and radiotherapy was associated with a three-fold higher risk of bladder cancer.[42] Forty years of follow-up from the Swedish Malmo study recently reported that men with a PSA <2 ng/mL at age 60 years continued to be at low risk for lethal prostate cancer,[43] highlighting an opportunity for more investigation of a *one-and-done* approach.

Breast cancer similarly dominates cancer occurrence in women, with a rate well over twice that of second-ranking lung cancer. Breast cancer incidence rates have increased slowly since the mid-2000s (Figure 3, Table 5), largely driven by diagnoses of localized-stage and hormone receptor-positive disease.[44] In the past decade (2013–2022), the rate increased by 1% per year overall, with a steeper slope in women younger than 50 years (1.4% vs. 0.7% per year in those 50 years and older) and those who are Hispanic (1.8% per year) or Asian American, Native Hawaiian, or other Pacific Islander (AANHPI, 2.7% per year). The rise in incidence is largely attributed to the decreasing fertility rate and increasing obesity prevalence,[45] although excess body weight is associated with decreased breast cancer risk in premenopausal women.[46] According

TABLE 1 Estimated number of new cancer cases and deaths by sex, United States, 2026.

	Estimated New Cases			Estimated Deaths		
	Both sexes	Male	Female	Both sexes	Male	Female
All sites	2,114,850	1,094,070	1,020,780	626,140	327,290	298,850
Oral cavity & pharynx	60,480	43,070	17,410	13,150	9420	3730
Tongue	20,420	14,250	6170	3560	2460	1100
Mouth	15,810	9230	6580	3340	2030	1310
Pharynx	21,760	17,880	3880	4760	3780	980
Other oral cavity	2490	1710	780	1490	1150	340
Digestive system	369,970	203,500	166,470	178,700	102,000	76,700
Esophagus	22,530	17,580	4950	16,290	12,940	3350
Stomach	31,510	17,900	13,610	10,740	6360	4380
Small intestine	14,450	7470	6980	2170	1250	920
Colon & rectum[a]	158,850	84,160	74,690	55,230	30,110	25,120
Colon	108,860	55,410	53,450			
Rectum	49,990	28,750	21,240			
Anus, anal canal, & anorectum	11,270	3570	7700	1700	570	1130
Liver & intrahepatic bile duct	42,340	27,790	14,550	30,980	19,650	11,330
Gallbladder & other biliary	12,640	5950	6690	4590	1960	2630
Pancreas	67,530	35,190	32,340	52,740	27,230	25,510
Other digestive organs	8850	3890	4960	4260	1930	2330
Respiratory system	247,820	124,540	123,280	130,550	67,260	63,290
Larynx	12,290	9730	2560	3960	3180	780
Lung & bronchus	229,410	110,910	118,500	124,990	63,040	61,950
Other respiratory organs	6120	3900	2220	1600	1040	560
Bones & joints	4110	2290	1820	2210	1240	970
Soft tissue (including heart)	13,910	7840	6070	5400	2960	2440
Skin (excluding basal & squamous)	119,750	70,590	49,160	14,570	9850	4720
Melanoma of the skin	112,000	65,400	46,600	8510	5500	3010
Other nonepithelial skin	7750	5190	2560	6060	4350	1710
Breast	324,580	2670	321,910	42,670	530	42,140
Genital system	463,560	345,900	117,660	71,970	37,400	34,570
Uterine cervix	13,490		13,490	4200		4200
Uterine corpus	68,270		68,270	14,450		14,450
Ovary	21,010		21,010	12,450		12,450
Vulva	7130		7130	1750		1750
Vagina & other genital, female	7760		7760	1720		1720
Prostate	333,830	333,830		36,320	36,320	
Testis	9810	9810		630	630	
Penis & other genital, male	2260	2260		450	450	

(Continues)

TABLE 1 (Continued)

	Estimated New Cases			Estimated Deaths		
	Both sexes	Male	Female	Both sexes	Male	Female
Urinary system	169,700	118,460	51,240	34,400	23,760	10,640
Urinary bladder	84,530	64,730	19,800	17,870	12,640	5230
Kidney & renal pelvis	80,450	50,770	29,680	15,160	10,200	4960
Ureter & other urinary organs	4720	2960	1760	1370	920	450
Eye & orbit	3200	1720	1480	530	280	250
Brain & other nervous system	24,740	13,830	10,910	18,350	9970	8380
Endocrine system	53,200	16,630	36,570	3500	1700	1800
Thyroid	45,240	13,240	32,000	2320	1100	1220
Other endocrine	7960	3390	4570	1180	600	580
Lymphoma	88,240	48,660	39,580	21,070	12,390	8680
Hodgkin lymphoma	8920	4890	4030	1100	680	420
Non-Hodgkin lymphoma	79,320	43,770	35,550	19,970	11,710	8260
Myeloma	36,000	20,150	15,850	10,850	5780	5070
Leukemia	67,790	39,070	28,720	23,910	13,900	10,010
Acute lymphocytic leukemia	6250	3600	2650	1600	930	670
Chronic lymphocytic leukemia	22,760	13,810	8950	4350	2720	1630
Acute myeloid leukemia	22,720	12,160	10,560	11,500	6520	4980
Chronic myeloid leukemia	9650	5810	3840	1170	630	540
Other leukemia	6410	3690	2720	5290	3100	2190
Other & unspecified primary sites	67,800	35,150	32,650	54,310	28,850	25,460

Note: Estimates are rounded to the nearest 10 and cases exclude basal cell and squamous cell skin cancer and in situ carcinoma except urinary bladder. About 60,730 cases of female breast ductal carcinoma in situ and 122,680 cases of melanoma in situ will be diagnosed in 2026. These are model-based estimates that should be interpreted with caution.

[a]Deaths for colon and rectal cancers are combined because a large number of deaths from rectal cancer are misclassified as colon.

to the US Census Bureau, the percentage of women aged 15–44 years who did not experience pregnancy hit an all-time high of 54% in 2024, up from 42% in 1998.[47] Physical inactivity and alcohol consumption account for 7% and 16% of breast cancer cases in the US, respectively,[26] and also may contribute. Even one alcoholic drink per day increases breast cancer risk,[48] and binge and heavy drinking (eight or more drinks per week) has increased in women aged 30–49 years,[49] especially among those with higher education and income[50] and without children.[51] There is some evidence that air pollution may be associated with increased risk,[52] although this exposure is very difficult to study. Many of these factors (including obesity and reproductive factors) are also associated with uterine corpus cancer risk and likely contribute to its rise in incidence since the mid-2000s. However, these associations seem less pronounced for nonendometrioid subtypes, which are responsible for the increasing trend.[53] Uterine corpus cancer rates appear to have stabilized in recent years in White women but continue to increase in women of all other racial and ethnic groups by 2% or more per year.

Lung cancer is the third most common cancer diagnosis in men and women combined. Declines in lung cancer incidence continue to be faster in men (3% per year from 2013 to 2022) than in women (1.3% per year; Table 5) because women took up cigarette smoking in large numbers later and were also slower to quit, including upticks in smoking prevalence in some recent generations.[54,55] Trends are also less favorable for AANHPI women, among whom lung cancer incidence is *increasing* by 0.2% per year, and Native American people, among whom rates decreased by only 0.7% per year in men and have yet to decline in women.[56] Native American people have the highest smoking prevalence (15.2% vs. 12.5% in White people in 2023)[27] and the slowest decline, including the only increase in the number of people smoking.[57] Smoking status is not generally captured by population-based cancer registries but is being newly collected by Commission on Cancer-accredited hospital-based registries that submit data to the National Cancer Database, which represents approximately 70% of cancer diagnoses in the United States. A recent analysis indicated that nearly one half of the people diagnosed with any cancer in 2023 were either former (33%) or current (15%)

TABLE 2 Estimated number of new cases for selected cancers by state, United States, 2026.[a]

State	All sites	Female breast	Colon & rectum	Leukemia	Lung & bronchus	Melanoma of the skin	Non-Hodgkin lymphoma	Prostate	Urinary bladder	Uterine cervix	Uterine corpus
Alabama	30,710	4,900	2690	870	3960	1450	960	5400	1210	250	910
Alaska	4040	580	340	110	440	140	140	750	170	—[a]	110
Arizona	44,620	7090	3330	1450	4350	3890	1690	5540	1970	280	1430
Arkansas	20,420	2720	1620	600	2710	1050	670	3150	780	150	520
California	206,500	34,170	16,650	6380	16,670	12,170	8310	32,610	7370	1490	7390
Colorado	30,160	5210	2210	1030	2620	2190	1190	4480	1220	190	890
Connecticut	24,020	3940	1690	830	2670	770	980	4000	1190	120	850
Delaware	8410	1240	520	200	950	450	290	1410	350	—[a]	260
District of Columbia	3190	590	230	80	330	90	100	450	100	—[a]	110
Florida	183,100	24,700	12,850	7060	18,570	10,530	7600	26,970	7630	1200	5490
Georgia	68,440	10,440	5350	1960	6780	3700	2190	11,420	2310	470	2050
Hawaii	9420	1700	840	240	870	550	340	1310	310	60	390
Idaho	12,470	1890	900	490	1090	1080	490	2030	580	70	310
Illinois	78,880	12,340	6160	2360	9430	4390	2890	13,050	3180	490	2740
Indiana	44,950	6530	3510	1410	6230	2330	1630	6440	1890	290	1420
Iowa	22,710	3030	1630	810	2500	1780	860	3320	960	120	700
Kansas	16,680	2620	1410	520	2090	860	670	2650	620	100	540
Kentucky	31,440	4280	2660	990	5060	1610	1150	4290	1310	210	940
Louisiana	29,870	4250	2500	870	3390	1310	1020	5440	1030	200	710
Maine	10,680	1600	730	380	1460	410	440	1820	640	—[a]	390
Maryland	38,160	6290	2740	1060	3920	2030	1350	7230	1400	220	1350
Massachusetts	43,250	7340	2910	1410	5390	1370	1760	7310	1990	180	1520
Michigan	68,730	9900	4830	2110	8460	3330	2490	10,530	3030	370	2170
Minnesota	39,830	5670	2630	1330	3970	3450	1560	6340	1600	160	1210
Mississippi	18,080	2670	1690	550	2660	660	620	3170	650	140	480
Missouri	42,350	6300	3200	1350	5780	2310	1530	5530	1590	250	1230
Montana	8130	1150	550	250	760	620	280	1260	370	—[a]	200
Nebraska	12,680	1770	950	380	1320	840	450	2030	480	60	390
Nevada	18,110	2880	1530	560	1770	1120	630	2970	790	160	520
New Hampshire	10,150	1560	670	350	1330	470	450	1760	540	—[a]	350
New Jersey	60,740	9510	4540	2090	5640	2570	2500	11,480	2650	360	2260
New Mexico	11,840	1910	940	400	920	750	430	2140	450	100	420
New York	125,860	19,010	9140	4120	13,150	4530	5060	22,180	5410	770	4270
North Carolina	74,400	11,820	5050	2260	8880	4180	2500	11,190	2770	420	2220
North Dakota	4650	660	360	160	480	380	170	810	180	—[a]	120
Ohio	78,080	11,400	5830	2170	10,120	4600	2810	11,670	3390	490	2590
Oklahoma	24,570	3550	2010	730	3100	1210	840	3390	920	180	700
Oregon	27,970	4290	1890	840	2970	1660	1120	3630	1270	140	890

(Continues)

TABLE 2 (Continued)

State	All sites	Female breast	Colon & rectum	Leukemia	Lung & bronchus	Melanoma of the skin	Non-Hodgkin lymphoma	Prostate	Urinary bladder	Uterine cervix	Uterine corpus
Pennsylvania	90,250	13,720	6520	2910	10,710	3890	3410	13,470	4160	510	3300
Rhode Island	7260	1160	490	250	910	270	300	1310	380	—[a]	260
South Carolina	36,920	6030	2820	1010	4550	2010	1200	6900	1410	240	1110
South Dakota	6200	860	460	200	690	450	200	910	250	—[a]	170
Tennessee	44,660	6920	3560	1330	6380	1850	1520	7190	1780	310	1340
Texas	161,330	24,270	13,310	5660	14,260	5910	5850	24,090	5050	1470	5260
Utah	15,170	2380	1030	600	790	1900	600	2650	530	100	530
Vermont	4680	710	310	160	590	250	200	850	230	—[a]	170
Virginia	52,160	8470	3770	1320	6060	2560	1790	9120	1910	290	1710
Washington	48,590	7710	3300	1550	5020	2860	1900	6980	1980	280	1400
West Virginia	13,590	1680	1060	400	2110	590	450	1640	580	80	500
Wisconsin	42,140	6030	2680	1550	4220	2340	1620	7050	1790	180	1390
Wyoming	3640	500	270	100	330	270	120	500	170	—[a]	110
United States	2,114,850	321,910	158,850	67,790	229,410	112,000	79,320	333,830	84,530	13,490	68,270

Note: Estimates are rounded to the nearest 10 and exclude basal and squamous cell skin cancers and in situ carcinomas except urinary bladder. State estimates may not sum to US total because of rounding and exclusion of state estimates of fewer than 50 cases. These are model-based estimates that should be interpreted with caution.

[a]Fewer than 50 cases.

smokers,[58] compared with 11% current smoking prevalence in the general population.[27]

CRC ranks third in men and women separately but fourth in the sexes combined (Table 1). Incidence continued to decline over the past decade by about 1% per year in men and women overall (Figure 3, Table 5) despite an increase in incidence among people younger than 50 years (by 2.9% per year) and aged 50–64 years (by 0.4% per year). The pace of increase in people younger than 50 years accelerated from 1.3% per year from the mid-1990s to 2019 to 6.4% per year thereafter because of screening initiation in individuals aged 45–49 years and the diagnosis of prevalent asymptomatic cancers.[59,60] Melanoma is one of the most preventable common cancers, with greater than 90% of cases in the United States attributable to ultraviolet radiation exposure.[26] Stable melanoma incidence in men in recent years (Table 5) is the conflation of decreasing rates in those younger than 50 years (by 1% per year since the early 2000s) and increasing rates in men aged 50 years and older, although it slowed from 2.6% per year during 2005–2016 to 0.8% per year from 2016 to 2022. Similarly, a nearly 2% per year increase in melanoma in women masks stable rates in those younger than 50 years since the early 2000s. Liver cancer is also largely preventable (75% of cases are attributed to modifiable risk factors) and has stabilized in men but continues to increase by almost 2% per year in women, consistent with reported differences in generational risk by sex.[61]

Urinary bladder cancer incidence decreased by about 1% per year over the past decade in both men and women, as did non-Hodgkin lymphoma. Kidney cancer incidence rates may have stabilized after decades of increase, largely through incidental detection, because two in three new cases are diagnosed at a localized stage (Figure 4), and death rates continue to decrease. After years of decline, cervical cancer incidence has stabilized over the past decade, and rates also may have plateaued for ovarian cancer. Incidence continued to increase by about 1% per year over the past decade for cancers of the pancreas and oral cavity and pharynx, largely confined to cancers of the tongue, tonsil, and oropharynx (increasing by 1.9% per year), which are usually associated with human papillomavirus (HPV).

Cancer survival

The 5-year relative survival for all cancers combined has increased from 49% for diagnoses during the mid-1970s to a milestone 70% during 2015–2021 (Table 6). Contemporary survival is highest for cancers of the thyroid (98%), prostate (98%), testis (95%), and melanoma (95%) and lowest for cancers of the lung (28%), liver (22%), esophagus (22%), and pancreas (13%). Improvements in survival reflect not only advances in treatment but also temporal changes in tumor subtype distribution and increased diagnosis of asymptomatic tumors through screening and imaging (i.e., incidental detection).

TABLE 3 Probability (%) of developing invasive cancer during selected age intervals by sex, United States, 2019–2022.[a]

Site	Sex	Birth to 49 years	50–64 years	65–84 years	85 years and older	Birth to death
All sites[b]	Male	3.4 (1 in 29)	11.3 (1 in 9)	31.4 (1 in 3)	18.6 (1 in 5)	39.2 (1 in 3)
	Female	6.0 (1 in 17)	10.8 (1 in 9)	24.3 (1 in 4)	14.1 (1 in 7)	38.7 (1 in 3)
Breast	Female	2.2 (1 in 46)	4.0 (1 in 25)	7.3 (1 in 14)	2.6 (1 in 38)	13.0 (1 in 8)
Colon & rectum	Male	0.4 (1 in 223)	1.2 (1 in 83)	2.5 (1 in 40)	1.6 (1 in 62)	4.0 (1 in 25)
	Female	0.4 (1 in 237)	0.9 (1 in 115)	2.1 (1 in 48)	1.6 (1 in 63)	3.8 (1 in 26)
Kidney & renal pelvis	Male	0.3 (1 in 383)	0.7 (1 in 145)	1.5 (1 in 68)	0.6 (1 in 180)	2.2 (1 in 45)
	Female	0.2 (1 in 595)	0.3 (1 in 287)	0.8 (1 in 128)	0.3 (1 in 310)	1.3 (1 in 75)
Leukemia	Male	0.3 (1 in 376)	0.3 (1 in 300)	1.2 (1 in 84)	0.8 (1 in 120)	1.8 (1 in 56)
	Female	0.2 (1 in 479)	0.2 (1 in 448)	0.7 (1 in 136)	0.5 (1 in 195)	1.3 (1 in 77)
Lung & bronchus	Male	0.1 (1 in 922)	1.0 (1 in 96)	4.5 (1 in 22)	2.4 (1 in 42)	5.4 (1 in 19)
	Female	0.1 (1 in 831)	1.0 (1 in 97)	4.0 (1 in 25)	1.8 (1 in 56)	5.4 (1 in 19)
Melanoma of the skin[c]	Male	0.4 (1 in 248)	0.9 (1 in 116)	2.4 (1 in 41)	1.5 (1 in 68)	3.5 (1 in 28)
	Female	0.6 (1 in 158)	0.7 (1 in 145)	1.2 (1 in 83)	0.6 (1 in 171)	2.6 (1 in 39)
Non-Hodgkin lymphoma	Male	0.2 (1 in 402)	0.5 (1 in 209)	1.5 (1 in 66)	0.9 (1 in 109)	2.2 (1 in 46)
	Female	0.2 (1 in 538)	0.4 (1 in 271)	1.1 (1 in 87)	0.6 (1 in 159)	1.8 (1 in 55)
Prostate	Male	0.2 (1 in 480)	3.8 (1 in 26)	11.0 (1 in 9)	3.3 (1 in 30)	12.9 (1 in 8)
Thyroid	Male	0.2 (1 in 503)	0.2 (1 in 510)	0.3 (1 in 360)	0.1 (1 in 1460)	0.6 (1 in 162)
	Female	0.8 (1 in 128)	0.5 (1 in 210)	0.4 (1 in 226)	0.1 (1 in 1104)	1.7 (1 in 60)
Uterine cervix[d]	Female	0.3 (1 in 343)	0.2 (1 in 553)	0.2 (1 in 592)	0.1 (1 in 1593)	0.6 (1 in 156)
Uterine corpus[d]	Female	0.3 (1 in 289)	1.1 (1 in 90)	1.8 (1 in 57)	0.4 (1 in 246)	3.1 (1 in 32)

Note: Probabilities are for those who are free of cancer at the beginning of each age interval.

[a]Excludes 2020.

[b]Excludes basal and squamous cell skin cancers and in situ cancers except urinary bladder.

[c]Probabilities are for non-Hispanic White individuals only.

[d]Not adjusted for hysterectomy prevalence.

Earlier detection has contributed to gains in survival for several cancers (e.g., breast, prostate, and kidney) both by increasing the likelihood of successful treatment and through lead-time (diagnosis before symptoms) and overdiagnosis (diagnosis of indolent or slow-growing tumors that will never cause harm).[41,62,63] Likewise, the three-fold increase in 5-year relative survival for people diagnosed with pancreatic cancer, from 4% in the mid-1990s to 13% in 2015–2021, is partly an artifact of an increased number of incidentally detected, well differentiated neuroendocrine tumors (from 4% to 10%) that have much higher survival (72%) than more common ductal adenocarcinomas (8%).[64,65]

Survival trends are also influenced by temporal changes in anatomic and/or histologic subtypes as a result of shifting risk factor prevalence. For example, the increase in survival for people diagnosed with oral cavity cancers from 58% in the mid-1990s to 69% in 2015–2021 partly reflects a decreased proportion of smoking-related cancers and an increased proportion of HPV infection-associated cancers, which typically have a better prognosis.[66] The proportion of oral cancers associated with HPV (tongue, tonsil, and oropharynx) has increased by greater than 50% during this time period (from 37% to 58%).[7] Conversely, the decrease in uterine corpus cancer survival from 84% to 81% over the past 2 decades reflects an increased proportion of more aggressive nonendometrioid subtypes, from 9% in the mid-1990s to 21% in 2015–2021, because of rising incidence.[53] The 5-year survival for nonendometrioid carcinoma improved from 50% to 58% during this time period but remained about 90% for the more common endometroid subtype.[67,68]

Improved treatment has led to long appreciated survival gains for hematopoietic and lymphoid malignancies. For example, the 5-year relative survival for chronic myeloid leukemia more than tripled from 22% in the mid-1970s to 70% for those diagnosed during 2015–2021 because of the development of tyrosine kinase inhibitors, allowing most patients near-normal life expectancy.[69] More recently, the development of targeted immunotherapy drugs have boosted survival for myeloma from 32% in the mid-1990s to 62% in 2015–2021 (Table 6). Treatment advances have also accelerated for many of the most fatal cancers. For example, 5-year survival for liver cancer has increased three-fold, from 7% in the

Estimated New Cases

Male			Female		
Prostate	333,830	31%	Breast	321,910	32%
Lung & bronchus	110,910	10%	Lung & bronchus	118,500	12%
Colon & rectum	84,160	8%	Colon & rectum	74,690	7%
Melanoma of the skin	65,400	6%	Uterine corpus	68,270	7%
Urinary bladder	64,730	6%	Melanoma of the skin	46,600	5%
Kidney & renal pelvis	50,770	5%	Non-Hodgkin lymphoma	35,550	3%
Non-Hodgkin lymphoma	43,770	4%	Pancreas	32,340	3%
Oral cavity & pharynx	43,070	4%	Thyroid	32,000	3%
Leukemia	39,070	4%	Kidney & renal pelvis	29,680	3%
Pancreas	35,190	3%	Leukemia	28,720	3%
All sites	**1,094,070**		**All sites**	**1,020,780**	

Estimated Deaths

Male			Female		
Lung & bronchus	63,040	19%	Lung & bronchus	61,950	21%
Prostate	36,320	11%	Breast	42,140	14%
Colon & rectum	30,110	9%	Pancreas	25,510	9%
Pancreas	27,230	8%	Colon & rectum	25,120	8%
Liver & intrahepatic bile duct	19,650	6%	Uterine corpus	14,450	5%
Leukemia	13,900	4%	Ovary	12,450	4%
Esophagus	12,940	4%	Liver & intrahepatic bile duct	11,330	4%
Urinary bladder	12,640	4%	Leukemia	10,010	3%
Non-Hodgkin lymphoma	11,710	4%	Brain & other nervous system	8,380	3%
Kidney & renal pelvis	10,200	3%	Non-Hodgkin lymphoma	8,260	3%
All sites	**327,290**		**All sites**	**298,850**	

FIGURE 1 Leading cancer types of estimated new cancer cases and deaths by sex, United States, 2026. Estimates are rounded to the nearest 10 and cases exclude basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Percentages may not sum to totals because of rounding. Rank is based on modeled projections and may differ from the most recent observed data.

mid-1990s to 22%, with the largest improvement for localized-stage (from 17% to 38%) and regional-stage (from 5% to 13%) disease (Table 7) because of improved disease management across the spectrum of treatment for locoregional hepatocellular carcinoma, including the introduction of immunotherapy.[70–72] For advanced liver cancer, systemic therapies have been primarily palliative in nature, with newer immunotherapy drugs offering only a modest improvement in survival.[73–75]

In contrast, there have been substantial gains in survival for many other advanced cancers because of a stream of game-changing, targeted therapies. For all cancers combined, 5-year relative survival increased from 54% to 69% for regional-stage disease and from 17% to 35% for distant-stage disease between the mid-1990s and 2015–2021. The most notable progress was for both regional-stage (from 20% to 37%) and distant-stage (from 2% to 10%) lung cancer and for distant-stage melanoma (from 16% to 35%), rectal cancer (from 8% to 18%), and stomach cancer (from 3% to 8%; Table 7). Increased longevity not only gives tens of thousands of people more time with family and friends but also benefits the economy by prolonging workforce and consumer participation. The impact is particularly large for high-mortality cancers like lung and liver cancers, which are usually diagnosed at an advanced stage (72% and 58%, respectively; Figure 4). These remarkable strides are the return on investment of decades of basic research that has unraveled the molecular intricacies of how cancer grows and spreads and clinical trials that have informed disease management.[76–80] For people with advanced cancer that does not respond to therapy, a comfort-focused, end-of-life experience is often preferred, yet many patients continue to receive life-extending care against their wishes and/or despite no survival benefit,[81] underscoring the importance of communication across the treatment continuum.

Trends in cancer mortality

Mortality rates are a better indicator of progress against cancer than incidence or survival because they are less affected by detection biases, such as screening and incidental diagnosis.[82] Cancer mortality rose during most of the 20th century (Figure 5), largely because of a rapid increase in lung cancer among men as a consequence of the tobacco epidemic. However, reductions in smoking as well as improvements in disease management and earlier diagnosis have resulted in a 34% overall drop in the cancer death rate from 1991 through 2023, translating to an estimated 4.8 million fewer cancer deaths (3,256,800 in men and 1,555,300 in women) than if mortality had remained at its peak (Figure 6). The number of averted deaths is twice as large for men as for women because the death rate in men peaked higher and declined faster (Figure 5). The contribution of treatment advances to declining mortality has accelerated over the past decade; a recent study estimated that improvements in stage-specific survival (described in the section above) accounted for nearly 174,000 fewer cancer deaths from 2010 through 2019.[83]

Despite decades of decline, lung cancer mortality continues to dwarf other cancers, especially among men (Figure 5). The lung cancer death rate has dropped by 62% from the peak in 1990 among men and

TABLE 4 Estimated number of deaths for selected cancers by state, United States, 2026.

State	All sites	Brain & other nervous system	Female breast	Colon & rectum	Leukemia	Liver & intrahepatic bile duct	Lung & bronchus	Non-Hodgkin lymphoma	Pancreas	Prostate	Urinary bladder
Alabama	10,670	320	730	970	360	550	2370	280	760	560	310
Alaska	1140	—[a]	60	90	—[a]	—[a]	210	—[a]	80	70	—[a]
Arizona	13,800	350	1000	1330	570	730	2330	450	1170	900	340
Arkansas	6840	190	390	670	220	360	1640	190	470	360	220
California	61,280	1970	4580	5660	2320	3690	9580	2180	5250	4210	1660
Colorado	8740	310	710	790	390	450	1340	290	750	670	260
Connecticut	6760	230	420	490	270	340	1240	220	600	430	220
Delaware	2430	70	190	190	90	110	510	80	230	150	90
District of Columbia	820	—[a]	80	80	30	40	150	—[a]	70	70	—[a]
Florida	50,010	1470	3360	4240	2000	2200	9990	1560	4280	2970	1630
Georgia	19,400	590	1430	1750	700	990	3500	540	1410	1160	530
Hawaii	2720	50	200	260	90	160	470	100	250	170	60
Idaho	3510	130	250	310	150	190	580	90	300	240	90
Illinois	23,230	680	1350	2080	880	1090	4880	730	2080	1280	620
Indiana	14,230	390	900	1260	520	560	3430	450	1090	740	400
Iowa	6330	180	370	530	270	290	1350	230	510	330	180
Kansas	5700	190	370	510	250	250	1250	220	450	290	150
Kentucky	10,510	270	640	970	370	500	2870	310	760	450	310
Louisiana	9360	250	560	870	330	580	2080	260	750	450	220
Maine	3560	100	200	260	120	130	800	120	280	220	130
Maryland	11,280	300	810	980	420	530	2120	370	960	710	320
Massachusetts	12,470	410	710	840	460	650	2510	410	1200	710	330
Michigan	21,580	630	1320	1630	810	830	4850	630	1900	1120	620
Minnesota	10,660	330	640	800	450	500	2060	390	930	600	270
Mississippi	6740	190	470	670	250	330	1580	180	510	390	170
Missouri	13,470	380	970	1280	490	650	3320	420	1,060	720	380
Montana	2310	90	140	200	80	120	420	70	190	160	70
Nebraska	3680	130	260	340	160	170	810	120	320	200	140
Nevada	5840	150	430	580	170	320	1050	170	490	400	200
New Hampshire	3050	110	180	190	90	140	630	100	270	180	110
New Jersey	15,150	400	1160	1330	570	690	2890	470	1430	770	470
New Mexico	3970	120	280	360	170	170	590	120	290	270	110
New York	31,140	850	1920	2680	1190	1310	5850	980	2930	1,650	810
North Carolina	21,770	570	1460	1900	780	920	5040	630	1840	1,230	590
North Dakota	1320	—[a]	70	110	60	50	270	—[a]	120	70	—[a]
Ohio	24,590	640	1580	2020	950	1050	5550	790	2130	1350	750
Oklahoma	8490	250	580	820	320	360	1920	270	590	450	270
Oregon	8840	270	580	670	350	450	1610	310	710	590	300

(Continues)

TABLE 4 (Continued)

State	All sites	Brain & other nervous system	Female breast	Colon & rectum	Leukemia	Liver & intrahepatic bile duct	Lung & bronchus	Non-Hodgkin lymphoma	Pancreas	Prostate	Urinary bladder
Pennsylvania	27,630	820	1770	2240	1060	1260	5870	900	2420	1440	850
Rhode Island	2120	70	120	150	70	140	410	70	200	110	70
South Carolina	11,700	360	800	970	420	590	2400	360	960	660	430
South Dakota	1810	–[a]	90	150	80	50	380	60	160	100	–[a]
Tennessee	15,270	400	1040	1610	530	720	3690	450	1160	750	350
Texas	46,300	1360	3400	4750	1820	3170	8080	1470	3770	2480	1,220
Utah	3970	170	340	440	190	200	470	140	350	310	100
Vermont	1520	50	90	130	50	50	300	50	130	100	–[a]
Virginia	16,550	500	1150	1490	650	780	3300	500	1320	1020	440
Washington	14,160	390	960	1160	540	730	2570	510	1220	980	400
West Virginia	4710	120	290	420	180	190	1330	150	330	240	130
Wisconsin	11,840	360	670	880	560	550	2310	410	1200	790	320
Wyoming	1160	–[a]	80	130	–[a]	50	210	–[a]	110	70	–[a]
United States	626,140	18,350	42,140	55,230	23,910	30,980	124,990	19,970	52,740	36,320	14,450

Note: Estimates are rounded to the nearest 10. State estimates may not sum to US total because of rounding and exclusion of state estimates of fewer than 50 deaths. These are model-based estimates that should be interpreted with caution.

[a]Fewer than 50 deaths.

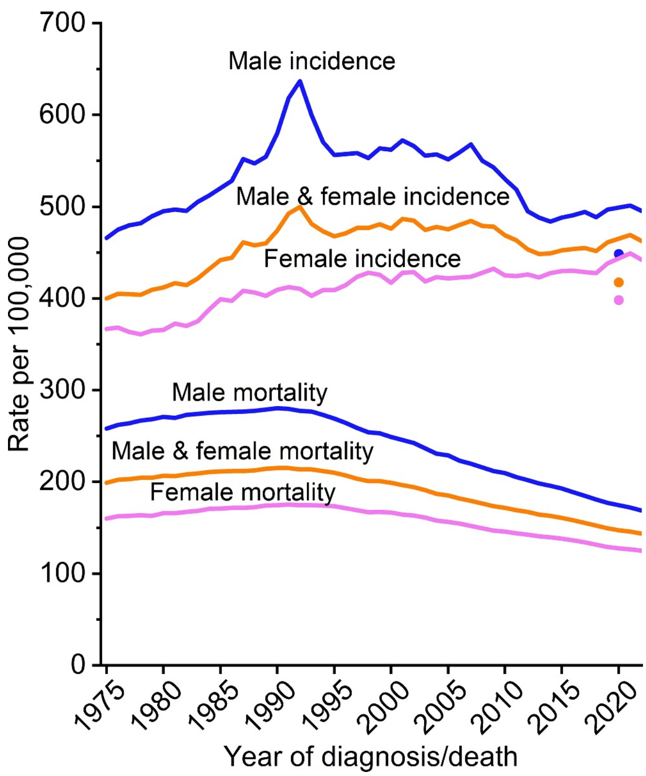

FIGURE 2 Trends in cancer incidence (1975–2022) and mortality (1975–2023) rates by sex, United States. Rates are age adjusted to the 2000 US standard population, and incidence rates are adjusted for delays in case reporting. Incidence data for 2020 are shown separate from trend lines.

by 38% from the peak in 2002 among women, consistent with the later downturn in incidence. Over the past decade (2014–2023), the death rate declined by 4.7% per year in men and by 3.5% per year in women (Table 8), steeper than reductions in incidence (Table 5) because of earlier detection and treatment advances that have extended survival.[56,78] Mortality declines have accelerated for all lung cancers, regardless of whether they are associated with smoking, but are more rapid for smoking-related cancers because of reductions in incidence.[84] Declines in lung cancer mortality are also faster in people who live in urban versus rural areas.[85] Low-dose computed tomography screening reduces the odds of lung cancer mortality by 16%–24% among high-risk individuals[86,87] and is associated with a substantial survival advantage,[88] but it remains underutilized. In 2022, only 18% of people who were eligible for lung cancer screening according to USPSTF guidelines had a test in the past year, with the lowest prevalence in people who were younger than 60 years (<13%) and Native American people (14% vs. 20% of Black people and 18% of White people).[89] Notably, Native American people also have the highest lung cancer mortality at 38.7 per 100,000 compared with 34.5 per 100,000 in White people, who rank second, and 33.1 per 100,000 in Black people, who rank third (Table 9).

Sustained reductions in mortality for CRC, the second-most common cause of cancer death in men and women combined, are the result of changing patterns in risk factors (e.g., declines in smoking), screening uptake, and improved treatment. The CRC death rate has dropped by 55% among males since 1980 and by 60% among females since 1969.[9] (Although the rate in women began declining

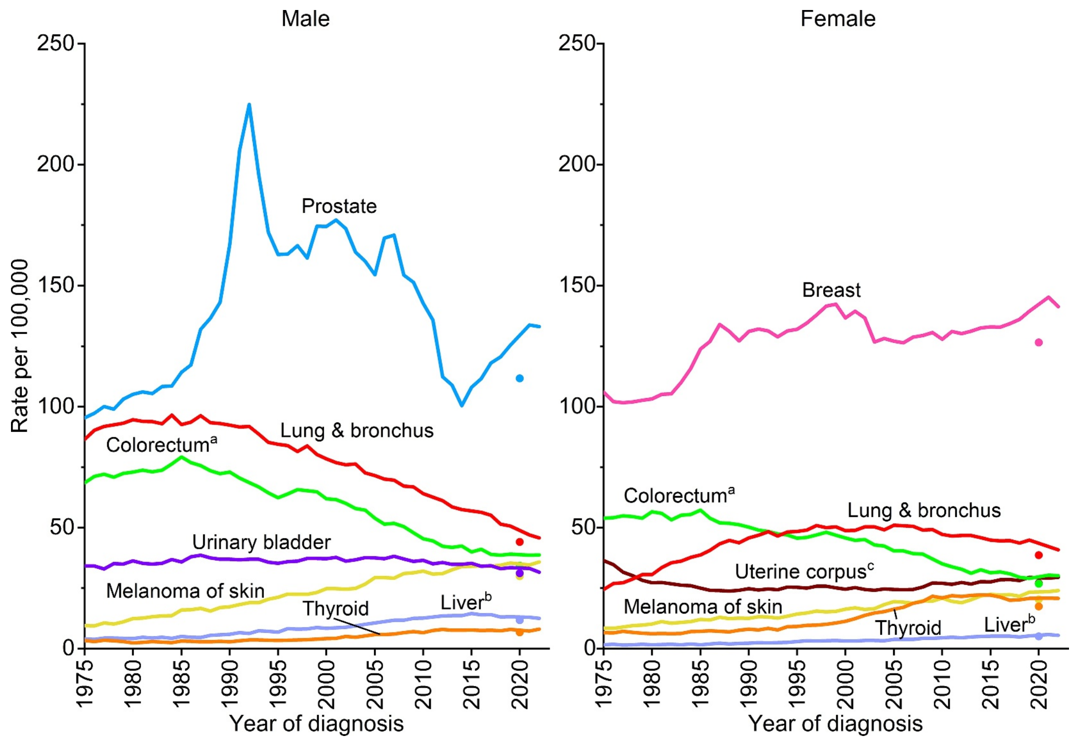

FIGURE 3 Trends in incidence rates for selected cancers by sex, United States, 1975–2022. Rates are age adjusted to the 2000 US standard population and adjusted for delays in reporting. Data for 2020 are shown separate from trend lines. [a]Excludes appendix. [b]Includes intrahepatic bile duct. [c]Not adjusted for hysterectomy prevalence.

prior to 1969, as shown in Figure 5, those historical data include deaths from cancer in the small intestine and thus are not comparable to contemporary rates.) From 2014 to 2023, the CRC death rate decreased by 1.3% per year overall (Table 8) but increased by about 1% per year in adults younger than 55 years. The death rate for pancreatic cancer, the third most common cancer death, increased gradually since the mid-1990s but was stable over the past 5 data years, perhaps reflecting earlier diagnosis, including of some less aggressive neuroendocrine tumors.[90]

Female breast cancer mortality peaked in 1989 and has since decreased by 44% through 2023, translating to the avoidance of an estimated 546,000 deaths. A recent study attributed three fourths of this progress to treatment advances and the remainder to earlier diagnosis through screening.[91] Declines in breast cancer mortality have slowed from 2% per year during the 2000s to 1% per year since 2010 (Table 8), reflecting relatively stable mammography prevalence over the past 2 decades and perhaps increased incidence. Increased incidence also may be contributing to a deceleration in the decline for prostate cancer mortality, from 3.5% per year during the late 1990s and 2000s to 0.6% per year from 2012 through 2023 (Table 8, Figure 5). The prostate cancer death rate in 2023 was 53% lower than the peak in 1993 because of earlier detection through PSA screening and advances in treatment.[92,93]

Melanoma mortality declined by nearly 6% per year during 2013–2017 after 2 decades of stable rates because of breakthrough treatments for metastatic disease, although the pace slowed to 1.2% per year during 2017–2023 (Table 8). Declining mortality trends for melanoma, as well as leukemia (since at least 1975), kidney (since early 1990s), prostate, and breast cancer, are particularly notable given increasing incidence rates and underscore the impact of advances in treatment. Steeper declines in ovarian cancer mortality (2.7% per year) compared with incidence (1% per year; nonsignificant) over the past decade likely also reflect small gains in survival for advanced disease (Table 7) as well as a shift toward earlier diagnosis; 49% of ovarian cancers were diagnosed at a distant stage in 2018–2022 (Figure 4), down from 57% a decade earlier.[7] Liver cancer mortality finally began decreasing in men by 1% per year since 2017 after decades of increase but continued to increase in women, albeit at a slowed pace of 1% per year, over the past decade. Mortality rates also continued to rise for uterine corpus cancer, continuing a 26-year trend with an annual percent increase of 1.6% per year from 2014 through 2023, and for HPV-associated oral cancers (tongue, tonsil, and oropharynx) by 2% per year since 2009 (Table 8).

Recorded number of deaths in 2023

In total, 3,090,964 deaths were recorded in the United States in 2023 (Table 10). This was 188,893 fewer deaths than in 2022, similar to the drop from 2021 to 2022, and reflects 136,620 fewer deaths from coronavirus disease 2019, which fell from the fourth-leading cause of death in 2022 (186,552 deaths) to the tenth in 2023 (49,932 deaths). From 2022 to 2023, the age-adjusted death rate decreased overall

TABLE 5 Trends in incidence rates for selected cancers by sex, United States, 1998–2022.

	Trend 1		Trend 2		Trend 3		Trend 4		Trend 5		AAPC	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2018–2022	2013–2022
All sites	1998–2001	1.0[a]	2001–2004	−1.0	2004–2008	0.4	2008–2012	−1.4[a]	2012–2022	0.2[a]	0.2[a]	0.2[a]
Male	1998–2001	1.3	2001–2004	−1.5	2004–2007	0.6	2007–2013	−2.1[a]	2013–2022	−0.0	−0.0	−0.0
Female	1998–2011	0.1	2011–2022	0.4[a]							0.4[a]	0.4[a]
Female breast	1998–2001	−0.6	2001–2004	−3.0	2004–2016	0.5[a]	2016–2022	1.2[a]			1.2[a]	1.0[a]
Colon & rectum[b]	1998–2001	−1.3[a]	2001–2008	−2.7[a]	2008–2011	−4.1[a]	2011–2017	−1.3[a]	2017–2022	−0.6[a]	−0.6[a]	−0.9[a]
Male	1998–2003	−2.0[a]	2003–2012	−3.5[a]	2012–2022	−1.0[a]					−1.0[a]	−1.0[a]
Female	1998–2001	−1.3[a]	2001–2007	−2.4[a]	2007–2011	−3.8[a]	2011–2018	−1.3[a]	2018–2022	−0.4	−0.4	−0.9[a]
Kidney & renal pelvis	1998–2007	3.5[a]	2007–2011	−0.2	2011–2019	1.6[a]	2019–2022	−0.5			0.0	0.9[a]
Male	1998–2007	3.3[a]	2007–2011	−0.2	2011–2019	1.6[a]	2019–2022	−0.6			−0.0	0.9[a]
Female	1998–2005	3.8[a]	2005–2008	2.4	2008–2011	−1.0	2011–2019	1.6[a]	2019–2022	−0.5	0.0	0.9[a]
Liver & intrahepatic bile duct	1998–2002	2.3[a]	2002–2009	4.6[a]	2009–2015	3.2[a]	2015–2019	0.8	2019–2022	−0.8	−0.4	0.8[a]
Male	1998–2002	3.0[a]	2002–2009	4.6[a]	2009–2015	2.8[a]	2015–2019	0.4	2019–2022	−1.7	−1.2	0.2
Female	1998–2003	0.9	2003–2015	4.0[a]	2015–2022	1.8[a]					1.8[a]	2.3[a]
Lung & bronchus	1998–2006	−0.4[a]	2006–2019	−1.6[a]	2019–2022	−3.3[a]					−2.9[a]	−2.2[a]
Male	1998–2006	−1.3[a]	2006–2019	−2.4[a]	2019–2022	−4.2[a]					−3.7[a]	−3.0[a]
Female	1998–2007	0.6[a]	2007–2011	−1.5[a]	2011–2019	−0.6[a]	2019–2022	−2.7[a]			−2.2[a]	−1.3[a]
Melanoma of skin	1998–2005	3.6[a]	2005–2022	1.6[a]							1.6[a]	1.6[a]
Male	1998–2001	5.7[a]	2001–2016	2.1[a]	2016–2022	0.6					0.6	1.1[a]
Female	1998–2001	7.0[a]	2001–2022	1.8[a]							1.8[a]	1.8[a]
Ovary	1998–2019	−1.6[a]	2019–2022	−0.1							−0.5	−1.1
Oral cavity & pharynx	1998–2004	−0.4	2004–2016	1.1[a]	2016–2022	0.5[a]					0.5[a]	0.7[a]
Male	1998–2005	−0.2	2005–2016	1.1[a]	2016–2022	0.3					0.3	0.6[a]
Female	1998–2003	−1.2[a]	2003–2022	0.7[a]							0.7[a]	0.7[a]
Tongue, tonsil, oropharynx	1998–2019	2.5[a]	2019–2022	0.8							1.2	1.9[a]
Other oral cavity	1998–2004	−2.6[a]	2004–2015	−0.5[a]	2015–2022	−1.0[a]					−1.0[a]	−0.9[a]
Pancreas	1998–2022	1.1[a]									1.1[a]	1.1[a]
Male	1998–2002	0.4	2002–2019	1.2[a]	2019–2022	0.4					0.6	0.9[a]
Female	1998–2022	1.2[a]									1.2[a]	1.2[a]
Prostate	1998–2001	3.2	2001–2004	−5.4	2004–2007	3.1	2007–2014	−6.3[a]	2014–2022	2.9[a]	2.9[a]	1.9[a]
Thyroid	1998–2009	7.2[a]	2009–2013	2.2[a]	2013–2022	−1.4[a]					−1.4[a]	−1.4[a]
Male	1998–2009	6.6[a]	2009–2013	2.5	2013–2022	−0.5[a]					−0.5[a]	−0.5[a]
Female	1998–2009	7.4[a]	2009–2013	2.2[a]	2013–2022	−1.7[a]					−1.7[a]	−1.7[a]
Uterine cervix[c]	1998–2003	−3.7[a]	2003–2013	−1.1[a]	2013–2016	1.7	2016–2022	−0.7[a]			−0.7[a]	0.1
Uterine corpus[c]	1998–2004	−0.5	2004–2019	1.4[a]	2019–2022	−0.3					0.2	0.8[a]

Note: Trends were analyzed using the Joinpoint Regression Program, version 5.4.0.0 allowing up to four joinpoints.

Abbreviations: AAPC, average annual percent change; APC, annual percent change (based on incidence rates age adjusted to the 2000 US standard population and adjusted for delays in reporting).

[a]The APC or AAPC is significantly different from zero ($p < .05$).

[b]Excludes appendix.

[c]Not adjusted for hysterectomy prevalence.

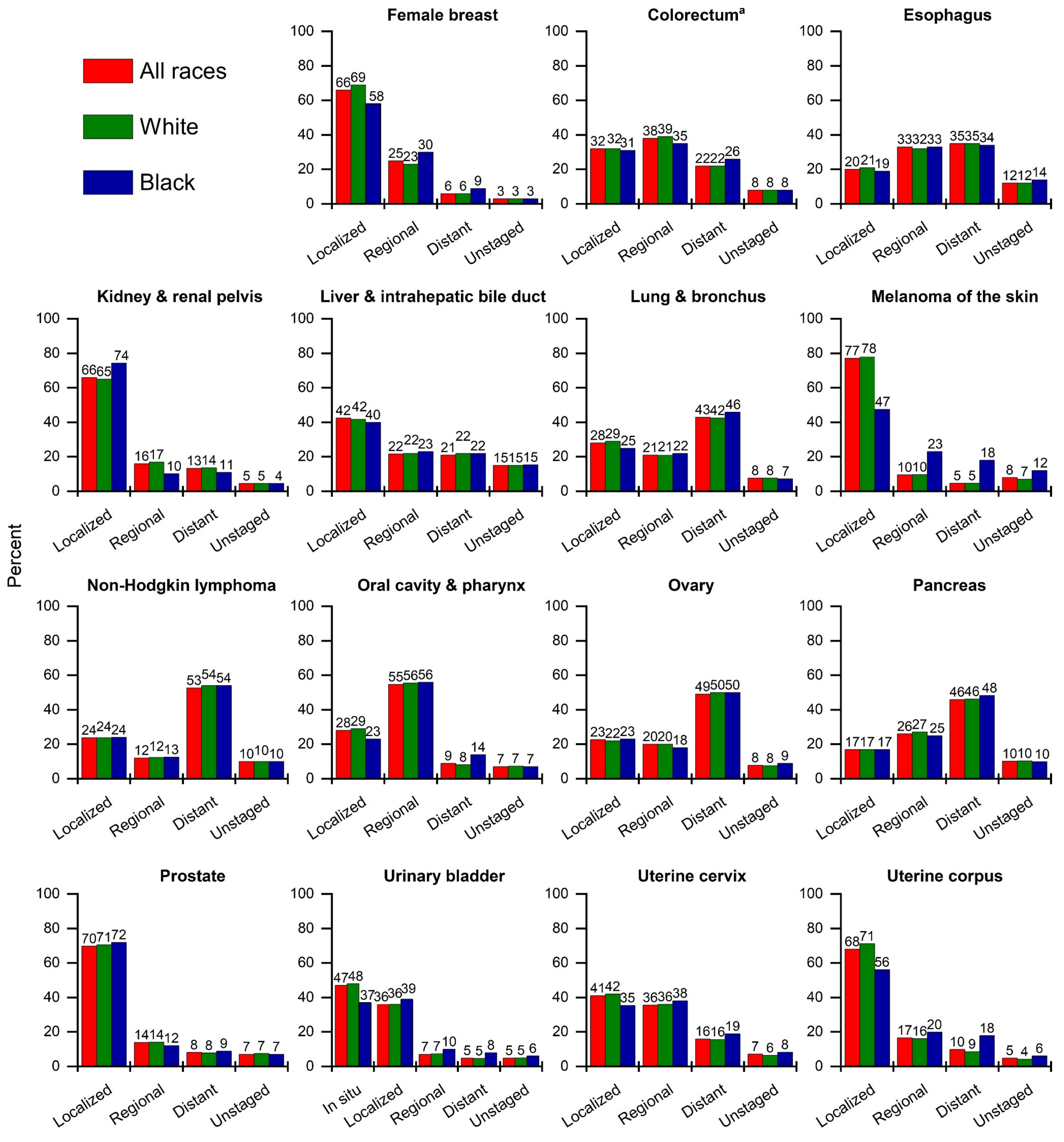

FIGURE 4 Stage distribution for selected cancers by race, United States, 2018–2022. White and Black races are exclusive of Hispanic ethnicity. Stage categories may not sum to 100% because of rounding. [a]Excludes appendix.

(by 8%) and for every leading cause of death including cancer, which decreased by 1.5%, despite 4981 more cancer deaths in 2023 because of the aging and growth of the population.

Although cancer remained the second-leading cause of death after heart disease in both men and women overall, it is the leading cause of death among men aged 60–79 years and women aged 40–79 years (Table 11). Table 12 presents the number of deaths in 2023 for the five leading cancer types by age and sex. Brain and other nervous system (hereafter brain) tumors are the leading cause of cancer death among children and adolescents younger than 20 years (533 deaths), followed by leukemia (453 deaths). Brain is also the leading cancer death in men aged 20–39 years but ranks fourth among women in this age group. Breast cancer is the leading cancer death among women younger than 50

TABLE 6 Trends in 5-year relative survival (%) by race, United States, 1975–2021.

	All races & ethnicities			White			Black		
	1975–1977	1995–1997	2015–2021	1975–1977	1995–1997	2015–2021	1975–1977	1995–1997	2015–2021
All sites	49	63	70	50	64	71	39	54	66
Brain & other nervous system	23	32	33	22	31	30	25	39	37
Breast (female)	75	87	92	76	89	94	62	75	84
Colon & rectum[a]	50	61	65	50	62	65	45	54	59
Colon[a]	51	61	63	51	62	65	45	54	57
Rectum	48	62	67	48	62	67	44	55	65
Esophagus	5	13	22	6	14	23	4	9	16
Hodgkin lymphoma	72	84	89	72	85	90	70	82	88
Kidney & renal pelvis	50	62	79	50	62	79	49	62	77
Larynx	66	66	62	67	68	63	58	52	56
Leukemia	34	48	68	35	50	69	33	42	62
Liver & intrahepatic bile duct	3	7	22	3	7	21	2	4	21
Lung & bronchus	12	15	28	12	15	28	11	13	25
Melanoma of the skin	82	91	95	82	91	95	57[b]	76[b]	70
Myeloma	25	32	62	24	32	62	29	32	63
Non-Hodgkin lymphoma	47	56	74	47	57	76	49	49	70
Oral cavity & pharynx	53	58	69	54	60	71	36	38	57
Ovary	36	43	52	35	43	51	42	36	44
Pancreas	3	4	13	3	4	13	2	4	12
Prostate	68	97	98	69	97	99	61	94	97
Stomach	15	22	38	14	20	38	16	22	40
Testis	83	96	95	83	96	96	73[b,c]	86[b]	88
Thyroid	92	95	98	92	96	99	90	95	97
Urinary bladder	72	80	79	73	81	80	50	63	68
Uterine cervix	69	73	68	70	74	68	65	66	59
Uterine corpus	87	84	81	88	86	85	60	62	63

Note: Relative survival is age adjusted for normal life expectancy and based on cases diagnosed in the Surveillance, Epidemiology, and End Results (SEER) 9 areas (1975—1977 and 1995—1997) followed through 2018, and in the SEER 21 areas (2015—2021), followed through 2022. Survival for White and Black people diagnosed during 2015—2021 is exclusive of Hispanic ethnicity.

[a]Excludes appendix.

[b]The standard error is between 5 and 10 percentage points.

[c]For cases diagnosed from 1978 to 1980.

years, and lung cancer leads among both men and women aged 50 years and older.

Cancer disparities by race and ethnicity

This section highlights the most striking cancer disparities among the five broadly defined racial and ethnic groups shown in Table 9. Although race and ethnicity are social constructs that aggregate heterogeneous populations, they are useful for examining the influence of discrimination and inequality in health disparities. Cancer incidence and mortality are highest among AIAN people overall and in women, whereas Black men have the highest sex-specific rates. The incidence rate in Black men during 2018–2022 was 78% higher than in AANHPI men (541 vs. 304 per 100,000), who have the lowest rate of any sex–race group. AANHPI people are the only

TABLE 7 Trends in 5-year relative survival (%) by race and stage at diagnosis, United States, 1975–2021.

		Relative survival			Survival ratio
	Stage at diagnosis	**1975–1977**	**1995–1997**	**2015–2021**	**2015–2021:1995–1997**
All sites	Localized	84	88	92	1.0
	Regional	51	54	69	1.3
	Distant	16	17	35	2.0
Breast (female)	Localized	90	98	>99	1.0
	Regional	67	80	87	1.1
	Distant	19	24	33	1.3
Colon & rectum	Localized	82	89	91	1.0
	Regional	52	66	74	1.1
	Distant	5	8	15	1.8
Colon	Localized	85	90	91	1.0
	Regional	55	67	74	1.1
	Distant	6	9	14	1.6
Rectum	Localized	77	86	90	1.1
	Regional	45	60	74	1.2
	Distant	4	8	18	2.3
Liver & intrahepatic bile duct	Localized	8	17	38	2.2
	Regional	<1	5	13	2.6
	Distant	1	3	3	1.3
Lung & bronchus	Localized	—[a]	48	65	1.4
	Regional	—[a]	20	37	1.9
	Distant	—[a]	2	10	4.4
Melanoma of the skin	Localized	92	97	>99	1.0
	Regional	58	62	76	1.2
	Distant	15	16	35	2.2
Ovary	Localized	83	92	92	1.0
	Regional	49	68	71	1.0
	Distant	15	27	32	1.2
Prostate	Localized	—[a]	>99[b]	>99	1.0
	Regional	—[a]		>99	1.0
	Distant	—[a]	32	38	1.2
Stomach	Localized	53	58	77	1.3
	Regional	14	22	37	1.7
	Distant	2	3	8	2.8

Note: Relative survival is age adjusted for normal life expectancy and based on cases diagnosed in the Surveillance, Epidemiology, and End Results (SEER) 9 areas (1975–1977 and 1995–1997), followed through 2018, and the SEER 21 areas (2015–2021), followed through 2022. Survival for White and Black people diagnosed during 2015–2021 is exclusive of Hispanic ethnicity.

[a]Data are unavailable because of changes in stage classification.

[b]Localized and regional stage are combined.

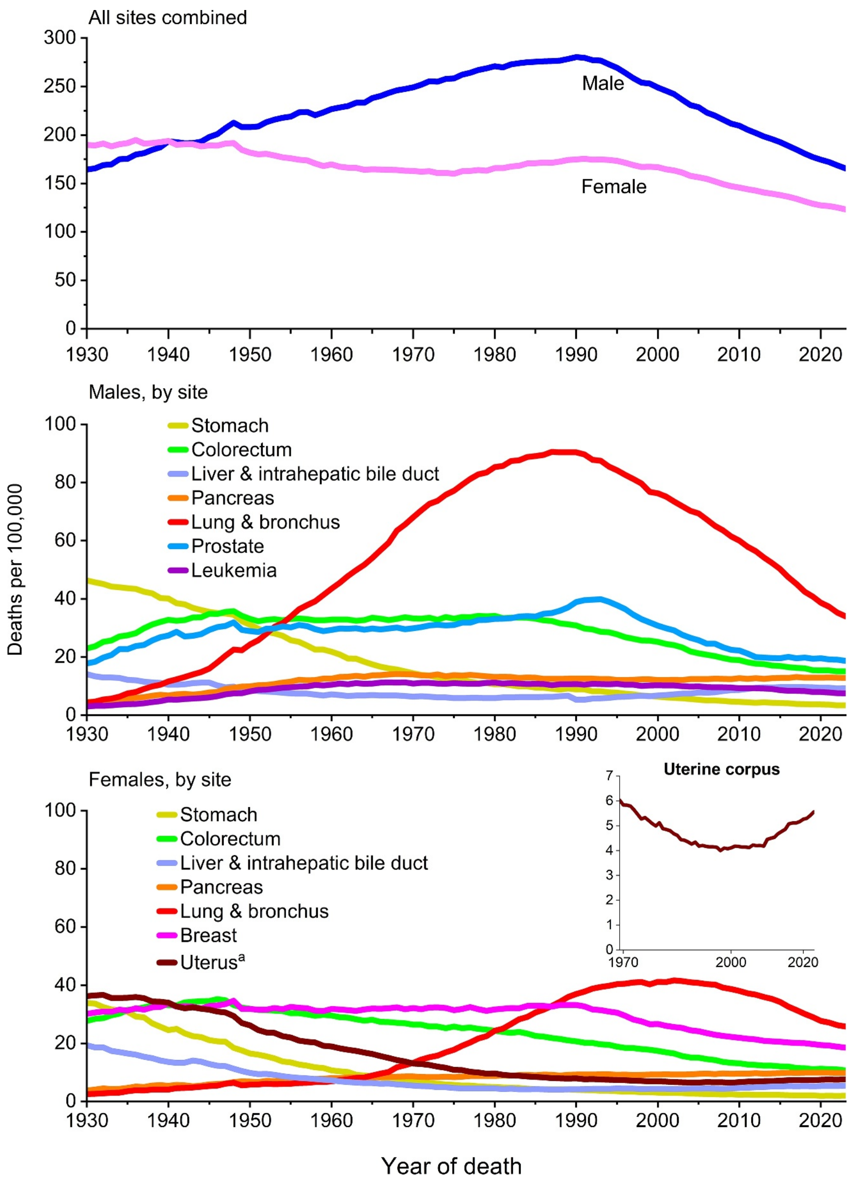

FIGURE 5 Trends in cancer mortality rates by sex overall and for selected cancers by sex, United States, 1930–2023. Rates are age adjusted to the 2000 US standard population. Because of historical improvements in International Classification of Diseases coding over time, numerator data for lung and bronchus includes pleura, trachea, mediastinum, and other respiratory organs; colon and rectum includes small intestine; and liver includes intrahepatic bile duct, gallbladder, and other biliary sites. [a]Includes uterine corpus and uterine cervix and is not adjusted for hysterectomy prevalence.

group for which incidence in men is lower than in women (322 per 100,000).

The disproportionate mortality burden in AIAN people is driven by the highest death rates for five of the nine cancer types shown in Table 9, including approximately two-fold the mortality in White people for cancers of the kidney, liver, stomach, and cervix. High mortality in Black men is largely because of the remarkable burden of prostate cancer, with death rates approximately two to four times those in all other men. Black women have the highest breast and uterine corpus cancer mortality, with the latter approximately two-fold that of all other women. Although Hispanic and AANHPI people have relatively low risk for most common cancers, liver cancer mortality in these populations is approximately 30%–50% higher and stomach cancer mortality is two-fold higher than that in White people. However, these aggregated data mask larger and additional disparities for population subgroups. For example, Pacific Islander people have three-fold higher stomach cancer mortality and two and one half-fold to three-fold higher rates of uterine corpus and cervical cancer mortality compared with White women;[94] overall cancer mortality in Pacific Islander people is twice that in Asian Americans among women and 50% higher among men. These cancer disparities are largely attributed to a higher

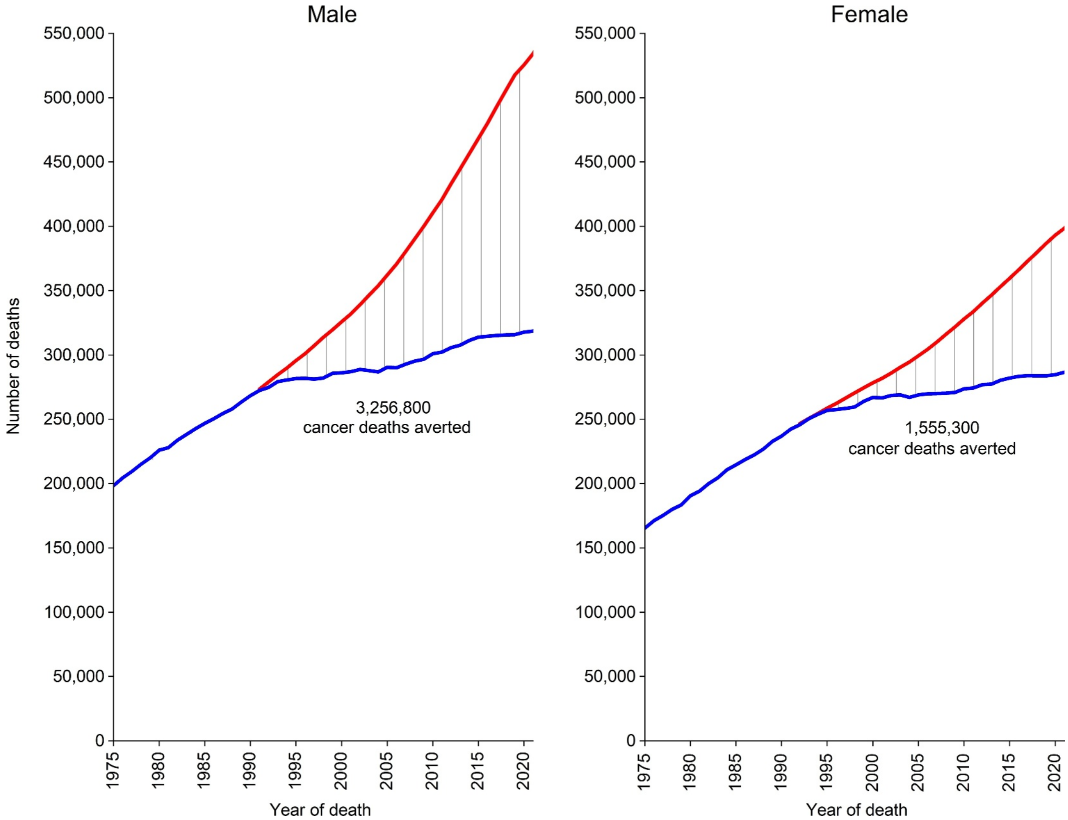

FIGURE 6 Total number of cancer deaths averted during 1991–2023 in men and 1992–2023 in women, United States. The blue line represents the actual number of cancer deaths recorded in each year; the red line represents the number of cancer deaths that would have been expected if cancer death rates had remained at their peak.

prevalence of risk factors, medical mistrust, and lack of insurance, which hinders access to high-quality health care.[95]

Unconscious bias and treatment inequality also contribute to disparities. Cancer survival is lower among Black people than White people for nearly every cancer type, even after controlling for stage at diagnosis (Figure 7) and socioeconomic status.[96] A higher likelihood of more aggressive disease (e.g., triple-negative breast cancer, nonendometrioid uterine corpus cancer) explains a small portion of this gap, but the largest contributor is less access to high-quality care across the cancer continuum, from prevention to diagnosis and treatment.[97] For example, Black women have up to twice the risk of White women of not receiving guideline-concordant diagnostic evaluation for uterine corpus and breast cancer.[98–100] These inequalities translate to later stage diagnosis; only 56% of uterine corpus cancers and 58% of breast cancers are diagnosed at a localized stage in Black women versus 71% and 69%, respectively, in White women (Figure 4). A recent study estimated that CRC mortality rates in Black people would be reduced by 19%, eliminating two thirds of the Black–White disparity, merely by ensuring the same quality screening as White people.[101] Asian, Black, and Hispanic people are less likely to receive both a physician recommendation for cancer screening[102] and recommended germline genetic testing, a necessary step for receipt of targeted therapies that have improved survival for numerous cancers.[103] Lack of diversity in clinical trials also contributes to racial and ethnic disparities in treatment and is an area of increasing focus.[104]

Disparities in cancer occurrence and outcomes in large part are rooted in socioeconomic deprivation stemming from inequities that limit opportunities for education and other mechanisms of upward mobility that facilitate economic security.[105] For example, although the practice of mortgage lending discrimination known as redlining ended decades ago, people who live in these areas continue to have later stage cancer diagnoses, lower likelihood of receiving recommended treatment, and higher cancer mortality compared with those who do not.[106–111] Inequalities in socioeconomic status lead to differences in the prevalence of risk factor exposures as well as access to high-quality cancer prevention, early detection, and treatment.[112,113] For example, smoking prevalence in 2023 was 27% in men without a high school diploma versus 5% in men who graduated from college,[27] partly because of targeted advertising in lower income neighborhoods.[114] Similarly, minoritized groups are disproportionately exposed to environmental toxins, such as hazardous soil, water, and air pollutants, that are associated with higher cancer incidence,[115] although exposure to carcinogenic air emissions is reported to be up to 50% higher among people experiencing poverty,

TABLE 8 Trends in mortality rates for selected cancers by sex, United States, 1975 to 2023.

	Trend 1		Trend 2		Trend 3		Trend 4		Trend 5		Trend 6		AAPC	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2019–2023	2014–2023
All sites	1975–1991	0.5[a]	1991–2001	−1.0[a]	2001–2023	−1.5[a]							−1.5[a]	−1.5[a]
Male	1975–1980	0.9[a]	1980–1990	0.3[a]	1990–1993	−0.4	1993–2001	−1.5[a]	2001–2023	-1.8[a]			−1.8[a]	−1.8[a]
Female	1975–1991	0.6[a]	1991–2001	−0.7[a]	2001–2023	−1.3[a]							−1.3[a]	−1.3[a]
Female breast	1975–1990	0.4[a]	1990–1995	−1.8[a]	1995–1998	−3.3[a]	1998–2010	−1.9[a]	2010–2023	−1.2[a]			−1.2[a]	−1.2[a]
Colon & rectum	1975–1984	−0.5[a]	1984–2002	−1.8[a]	2002–2005	−3.8[a]	2005–2012	−2.4[a]	2012–2020	−1.7[a]	2020–2023	−0.6	−0.9[a]	−1.3[a]
Male	1975–1979	0.6	1979–1987	−0.6[a]	1987–2002	−1.9[a]	2002–2005	−4.1[a]	2005–2014	−2.5[a]	2014–2023	−1.4[a]	−1.4[a]	−1.4[a]
Female	1975–1984	−1.0[a]	1984–2001	−1.8[a]	2001–2011	−2.9[a]	2011–2023	−1.5[a]					−1.5[a]	−1.5[a]
Liver & intrahepatic bile duct	1975–1980	0.2	1980–1987	2.0[a]	1987–1996	3.8[a]	1996–2000	0.7	2000–2015	2.6[a]	2015–2023	−0.3[a]	−0.3[a]	0.0
Male	1975–1985	1.5[a]	1985–1996	3.8[a]	1996–1999	0.3	1999–2013	2.7[a]	2013–2017	0.7	2017–2023	−1.0[a]	−1.0[a]	−0.4
Female	1975–1984	0.2	1984–1995	3.1[a]	1995–2008	1.2[a]	2008–2014	3.3[a]	2014–2023	0.9[a]			0.9[a]	0.9[a]
Lung & bronchus	1975–1980	3.0[a]	1980–1990	1.8[a]	1990–1995	−0.2	1995–2005	−1.0[a]	2005–2013	−2.2[a]	2013–2023	−4.1[a]	−4.1[a]	−4.1[a]
Male	1975–1982	1.8[a]	1982–1991	0.4[a]	1991–2005	−1.9[a]	2005–2013	−2.9[a]	2013–2023	−4.7[a]			−4.7[a]	−4.7[a]
Female	1975–1983	5.9[a]	1983–1992	3.8[a]	1992–2004	0.5[a]	2004–2014	−1.6[a]	2014–2020	−4.0[a]	2020–2023	−2.6[a]	−2.9[a]	−3.5[a]
Melanoma of skin	1975–1988	1.6[a]	1988–2013	0.0	2013–2017	−5.9[a]	2017–2023	−1.2[a]					−1.2[a]	−2.8[a]
Male	1975–1989	2.3[a]	1989–2013	0.3[a]	2013–2017	−6.4[a]	2017–2023	−1.5[a]					−1.5[a]	−3.2[a]
Female	1975–1988	0.8[a]	1988–2013	−0.5[a]	2013–2017	−5.3[a]	2017–2023	−0.7					−0.7	−2.3[a]
Oral cavity & pharynx	1975–1991	−1.5[a]	1991–2000	−2.6[a]	2000–2009	−1.4[a]	2009–2023	0.8[a]					0.8[a]	0.8[a]
Male	1975–2007	−2.1[a]	2007–2023	0.7[a]									0.7[a]	0.7[a]
Female	1975–1989	−0.9[a]	1989–2009	−2.2[a]	2009–2023	0.6[a]							0.6[a]	0.6[a]
Tongue, tonsil, oropharynx	1975–2000	−1.6[a]	2000–2009	−0.2	2009–2023	2.1[a]							2.1[a]	2.1[a]
Other oral cavity	1975–1993	−1.6[a]	1993–2006	−3.0[a]	2006–2023	−0.6[a]							−0.6[a]	−0.6[a]
Ovary	1975–1982	−1.2[a]	1982–1992	0.3[a]	1992–1998	−1.2[a]	1998–2003	0.5	2003–2017	−2.1[a]	2014–2023	−3.0[a]	−3.0[a]	−2.7[a]
Pancreas	1975–1993	−0.0	1993–1996	−0.7	1996–2021	0.3[a]	2021–2023	−0.9					−0.3	0.1
Male	1975–1986	−0.8[a]	1986–2000	−0.3[a]	2000–2021	0.3[a]	2021–2023	−1.0					−0.3	0.0
Female	1975–1983	0.8[a]	1983–1993	0.3[a]	1993–1997	−0.4	1997–2020	0.4[a]	2020–2023	−0.4			−0.2	0.1
Prostate	1975–1987	1.0[a]	1987–1990	3.4	1990–1993	1.0	1993–2012	−3.5[a]	2012–2023	−0.6[a]			−0.6[a]	−0.6[a]
Uterine cervix[b]	1975–1985	−4.3[a]	1982–1996	−1.6[a]	1996–2003	−3.9[a]	2003–2023	−0.7[a]					−0.7[a]	−0.7[a]
Uterine corpus[b]	1975–1989	−1.6[a]	1989–1997	−0.7[a]	1997–2009	0.4[a]	2009–2016	2.4[a]	2016–2023	1.3[a]			1.3[a]	1.6[a]

Note: Trends were analyzed using the Joinpoint Regression Program, version 5.4.0.0, allowing up to five joinpoints.

Abbreviations: AAPC, average annual percent change; APC, annual percent change (based on mortality rates age adjusted to the 2000 US standard population).

[a]The APC or AAPC is significantly different from zero ($p < .05$).

[b]Not adjusted for hysterectomy prevalence.

TABLE 9 Incidence and mortality rates for selected cancers by race and ethnicity, United States.

	All races & ethnicities	White	Black	American Indian/ Alaskan Native[a]	Asian American/ Pacific Islander	Hispanic/Latino
Incidence, 2018–2022						
All sites	460.6	482.2	467.7	497.8	311.2	369.8
Male	497.9	518.0	541.1	518.7	304.4	383.5
Female	436.0	458.4	418.2	488.8	321.5	368.3
Breast (female)	133.5	139.5	133.2	125.2	112.5	106.6
Colon & rectum[b]	35.3	35.2	40.4	51.1	28.5	32.7
Male	40.5	40.2	48.1	58.5	33.5	38.4
Female	30.7	30.7	34.7	44.9	24.3	27.9
Kidney & renal pelvis	18.0	18.2	19.5	34.1	8.4	18.6
Male	24.3	24.7	26.7	45.1	11.8	24.1
Female	12.4	12.3	13.9	24.8	5.6	13.9
Liver & intrahepatic bile duct	8.9	7.7	10.1	18.7	11.4	14.1
Male	13.1	11.3	16.0	25.2	17.2	20.1
Female	5.2	4.4	5.5	13.2	6.7	8.9
Lung & bronchus	53.2	57.8	54.8	63.0	33.2	28.3
Male	59.0	62.6	68.6	66.8	39.7	33.0
Female	48.8	54.3	45.2	60.5	28.2	24.9
Prostate	122.3	118.4	198.9	100.6	66.6	95.5
Stomach	6.6	5.3	10.1	10.5	9.0	9.6
Male	8.5	7.2	12.9	13.6	11.6	11.4
Female	5.0	3.7	8.2	8.0	7.0	8.2
Uterine cervix[c]	9.7	9.0	12.1	16.1	6.7	12.2
Uterine corpus[c]	42.3	42.2	52.6	49.5	26.6	37.8
Mortality, 2019–2023						
All sites	145.4	151.2	166.5	176.0	93.1	106.0
Male	171.5	178.0	203.6	200.6	107.1	124.4
Female	126.3	131.2	143.7	159.9	83.1	93.2
Breast (female)	19.2	19.3	26.5	20.9	11.8	13.6
Colon & rectum	12.9	12.9	16.6	18.6	9.2	10.6
Male	15.3	15.2	21.0	21.9	10.9	13.2
Female	10.8	10.9	13.4	16.0	7.8	8.6
Kidney & renal pelvis	3.4	3.6	3.3	6.4	1.6	3.2
Male	5.1	5.3	4.9	9.3	2.4	4.7
Female	2.1	2.2	2.1	4.1	1.0	2.1
Liver & intrahepatic bile duct	6.6	6.0	7.7	12.5	8.0	8.9
Male	9.4	8.5	12.0	17.1	11.4	12.2
Female	4.3	3.9	4.6	8.8	5.2	6.1
Lung & bronchus	31.5	34.5	33.1	38.7	18.6	14.2
Male	37.2	39.6	44.5	43.2	23.4	18.7
Female	27.1	30.5	25.3	35.6	15.0	10.9

(Continues)

TABLE 9 (Continued)

	All races & ethnicities	White	Black	American Indian/ Alaskan Native[a]	Asian American/ Pacific Islander	Hispanic/Latino
Prostate	19.2	18.4	36.9	20.5	8.8	15.4
Stomach	2.7	2.0	4.5	5.0	4.1	4.5
Male	3.5	2.8	6.4	6.6	5.2	5.4
Female	2.0	1.4	3.2	3.9	3.3	3.7
Uterine cervix[c]	3.0	2.9	5.0	5.1	1.9	3.2
Uterine corpus[c]	8.8	8.1	18.4	9.7	4.7	6.7

Note: Rates are per 100,000 persons and age adjusted to the 2000 US standard population. Incidence is adjusted for delays in case reporting. All racial groups are exclusive of Hispanic ethnicity.

[a]To reduce racial misclassification, incidence rates are limited to Purchased/Referred Care Delivery Area counties, and mortality rates (for the entire United States) are adjusted using factors from the National Center for Health Statistics.

[b]Excludes appendix.

[c]Adjusted for hysterectomy prevalence.

TABLE 10 Leading causes of death in the United States in 2023 versus 2022.

	2023				2022			
Cause of death	Rank	No.	Rate	Percent	Rank	No.	Rate	Percent
All causes		3,090,964	748.8			3,279,857	812.5	
Heart diseases	1	680,981	161.4	22%	1	702,880	170.6	21%
Cancer	2	613,352	141.4	20%	2	608,371	143.6	19%
Accidents (unintentional injuries)	3	222,698	62.3	7%	3	227,039	64.4	7%
Cerebrovascular diseases	4	162,639	38.9	5%	5	165,393	40.6	5%
Chronic lower respiratory diseases	5	145,357	33.4	5%	6	147,382	34.9	4%
Alzheimer disease	6	114,034	27.7	4%	7	120,122	30.1	4%
Diabetes mellitus	7	95,190	22.4	3%	8	101,209	24.3	3%
Nephritis, nephrotic syndrome and nephrosis	8	55,253	13.1	2%	9	57,937	14.1	2%
Chronic liver disease and cirrhosis	9	52,222	13.0	2%	10	54,803	13.8	2%
COVID-19	10	49,932	11.9	2%	4	186,552	44.5	6%

Note: Counts include unknown age. Rates are per 100,000 persons, exclude people with unknown age, and are age adjusted to the 2000 US standard population (5-year age groups: <1 years, ages 1–4 years through 90 years and older). Death rates presented herein use the vintage 2023 population estimates release on July 1, 2023. Those population estimates differ from prior estimates; therefore, some data are published elsewhere (for more information, see https://seer.cancer.gov/popdata/).

Abbreviation: COVID-19, coronavirus disease 2019.

regardless of race or ethnicity.[116] Persistent poverty ranks among the leading causes of death alongside smoking[117] and is consistently associated with higher cancer incidence, later stage diagnosis, and worse outcomes.[96,118,119] The effects of poverty are both compounded by and independent of racial status. One study found that living in a disadvantaged neighborhood increased the likelihood of aggressive prostate cancer by 30% among Black men, but had no impact in White men, suggesting the contribution of race-specific factors, such as minority stress.[120] The pathway through which social processes, such as those that develop from living in an unsafe neighborhood, may influence cancer development and progression is an evolving area of research.[121]

Geographic variation in cancer occurrence

Table 13 shows 5-year average annual cancer incidence and mortality rates for selected cancers by state. Geographic variation reflects population demographic characteristics and differences in the prevalence of cancer risk factors, early detection practices, and access to care, including state and local public health policies. States have a large influence on the health of their residents by controlling accessibility and affordability of health insurance through the Marketplace and Medicaid.[122,123] Cancer death rates range from 122 to 128 per 100,000 in Utah, Hawaii, New York, and Colorado to 178–180 per 100,000 in West Virginia, Mississippi, and

TABLE 11 Five leading causes of death in the United States by age and sex, 2023.

Ranking	All ages	1–19 years	20–39 years	40–59 years	60–79 years	80 years and older
Male						
All causes	1,617,085	15,117	95,043	234,712	707,005	554,046
1	Heart diseases	Accidents (unintentional injuries)	Accidents (unintentional injuries)	Heart diseases	Cancer	Heart diseases
	376,011	5351	42,501	48,059	185,881	152,015
2	Cancer	Assault (homicide)	Intentional self-harm (suicide)	Accidents (unintentional injuries)	Heart diseases	Cancer
	322,092	2810	13,362	47,738	169,846	93,081
3	Accidents (unintentional injuries)	Intentional self-harm (suicide)	Assault (homicide)	Cancer	Chronic lower respiratory diseases	Cerebrovascular diseases
	148,651	1917	9457	38,170	37,454	33,113
4	Cerebrovascular diseases	Cancer	Heart diseases	Intentional self-harm (suicide)	Accidents (unintentional injuries)	Alzheimer disease
	70,920	963	5602	12,248	34,647	26,900
5	Chronic lower respiratory diseases	Congenital anomalies	Cancer	Chronic liver disease & cirrhosis	Cerebrovascular diseases	Chronic lower respiratory diseases
	67,494	589	3966	11,922	29,969	25,819
Female						
All causes	1,473,879	7724	40,323	139,014	538,400	739,355
1	Heart diseases	Accidents (unintentional injuries)	Accidents (unintentional injuries)	Cancer	Cancer	Heart diseases
	304,970	2,459	14,977	39,231	155,478	183,459
2	Cancer	Cancer	Cancer	Heart diseases	Heart diseases	Cancer
	291,260	819	4350	20,508	98,026	91,363
3	Cerebrovascular diseases	Intentional self-harm (suicide)	Intentional self-harm (suicide)	Accidents (unintentional injuries)	Chronic lower respiratory diseases	Alzheimer disease
	91,719	726	3200	17,913	37,688	63,434
4	Alzheimer disease	Assault (homicide)	Heart diseases	Chronic liver disease & cirrhosis	Cerebrovascular diseases	Cerebrovascular diseases
	77,974	638	2606	6482	27,191	58,913
5	Chronic lower respiratory diseases	Congenital anomalies	Assault (homicide)	Diabetes mellitus	Diabetes mellitus	Chronic lower respiratory diseases
	77,863	462	1869	5150	19,478	35,738

Note: Deaths within each age group do not sum to all ages combined because of the inclusion of unknown ages and deaths occurring in individuals younger than 1 year. In accordance with the National Center for Health Statistics' cause-of-death ranking, symptoms, signs, and abnormal clinical or laboratory findings and categories that begin with other and all other were not ranked, and assault excludes legal intervention.

Kentucky. This gap is driven largely by lung cancer and mirrors patterns in smoking prevalence, which have remained consistent geographically despite temporal declines. In 2023, the highest smoking prevalence was in West Virginia (22%), Tennessee (18%), and Mississippi (17%), compared with 6% in Utah and 9% in California, Connecticut, Hawaii, Maryland, New Jersey, and

TABLE 12 Five leading causes of cancer death in the United States by age and sex, 2023.

	All ages	Birth to 19 years	20–39 years	40–49 years	50–64 years	65–79 years	80 years and older
Sexes combined							
All sites	613,352	1829	8316	18,850	123,009	276,901	184,444
1	Lung & bronchus	Brain & ONS	Breast	Breast	Lung & bronchus	Lung & bronchus	Lung & bronchus
	131,584	533	1045	2764	26,276	67,958	35,228
2	Colon & rectum	Leukemia	Colon & rectum	Colon & rectum	Colon & rectum	Pancreas	Prostate
	53,779	453	964	2941	13,258	24,398	16,598
3	Pancreas	Bones & joints	Brain & ONS	Lung & bronchus	Pancreas	Colon & rectum	Colon & rectum
	49,451	231	874	1774	10,271	20,562	16,044
4	Breast	Soft tissue[a]	Leukemia	Brain & ONS	Breast	Breast	Pancreas
	42,724	159	684	1212	10,214	16,196	13,559
5	Prostate	Non-Hodgkin lymphoma	Uterine cervix	Pancreas	Liver[b]	Liver[b]	Breast
	33,881	52	396	1051	6868	15,671	12,505
Male							
All sites	322,092	992	3966	8524	64,426	151,101	93,081
1	Lung & bronchus	Leukemia	Brain & ONS	Colon & rectum	Lung & bronchus	Lung & bronchus	Lung & bronchus
	68,697	269	559	1681	14,045	36,437	17,037
2	Prostate	Brain & ONS	Colon & rectum	Lung & bronchus	Colon & rectum	Prostate	Prostate
	33,881	267	554	977	8067	14,215	16,598
3	Colon & rectum	Bones & joints	Leukemia	Brain & ONS	Pancreas	Pancreas	Colon & rectum
	29,132	139	421	727	5850	13,070	7112
4	Pancreas	Soft tissue[a]	Testis	Pancreas	Liver[b]	Colon & rectum	Urinary bladder
	25,590	78	247	630	4822	11,710	5972
5	Liver[b]	Non-Hodgkin lymphoma	Non-Hodgkin lymphoma	Esophagus	Esophagus	Liver[b]	Pancreas
	19,401	33	237	396	3250	10,615	5935
Female							
All sites	291,260	837	4350	10,326	58,583	125,800	91,363
1	Lung & bronchus	Brain & ONS	Breast	Breast	Lung & bronchus	Lung & bronchus	Lung & bronchus
	62,887	266	1040	2742	12,231	31,521	18,191
2	Breast	Leukemia	Colon & rectum	Colon & rectum	Breast	Breast	Breast
	42,213	184	410	1260	10,102	15,959	12,370
3	Colon & rectum	Bones & joints	Uterine cervix	Lung & bronchus	Colon & rectum	Pancreas	Colon & rectum
	24,647	92	396	797	5191	11,328	8932
4	Pancreas	Soft tissue[a]	Brain & ONS	Uterine cervix	Pancreas	Colon & rectum	Pancreas
	23,861	81	315	710	4421	8852	7624
5	Uterine corpus	Kidney[c]	Leukemia	Ovary	Ovary	Uterine corpus	Leukemia
	13,342	25	263	530	3140	6702	4031

Abbreviation: ONS, other nervous system.

[a]Includes heart.

[b]Includes intrahepatic bile duct.

[c]Includes renal pelvis.

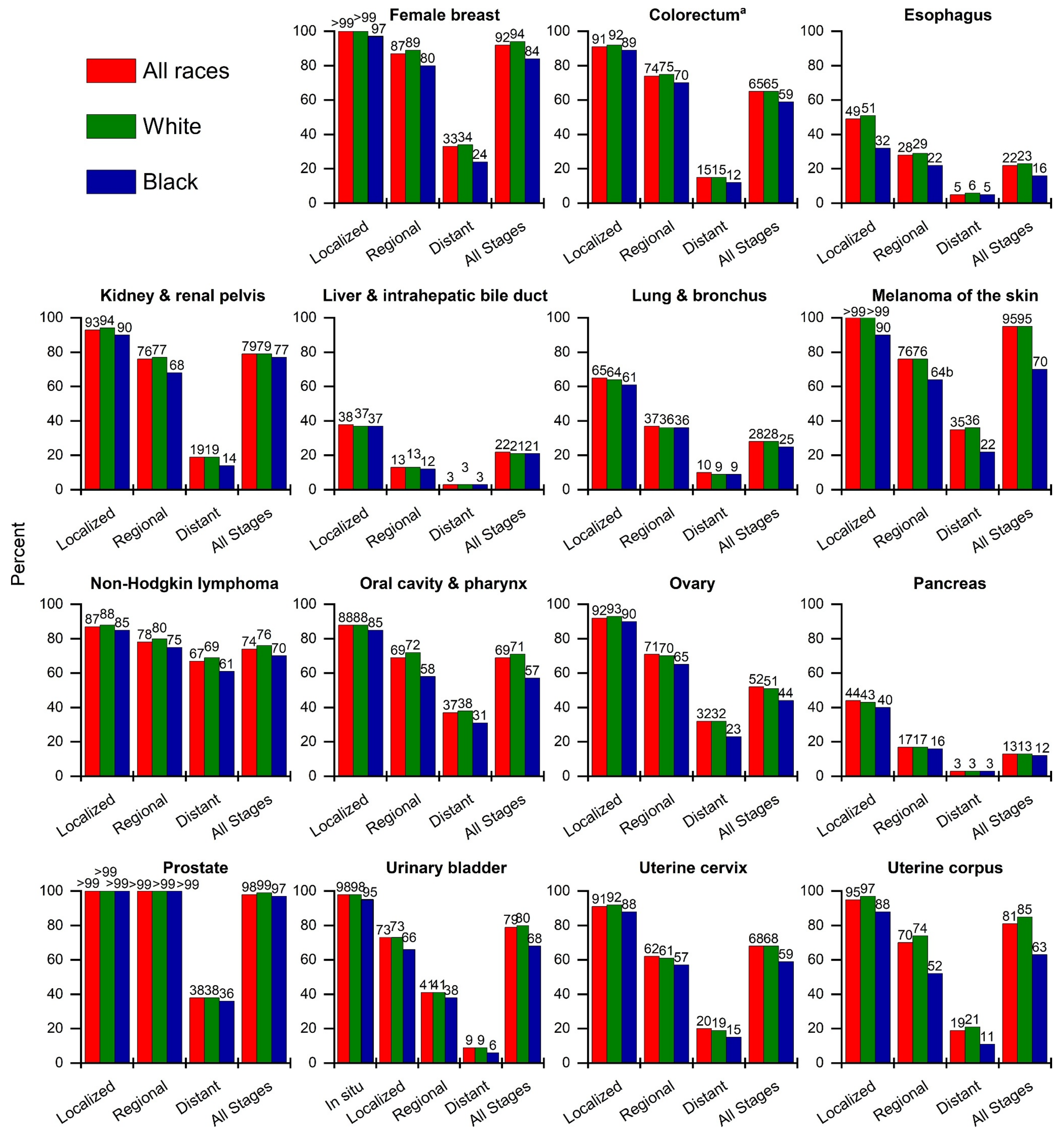

FIGURE 7 Five-year relative survival for selected cancers by race and stage at diagnosis, United States, 2015–2021. All cases were followed through 2022. White and Black races are exclusive of Hispanic ethnicity. [a]Excludes appendix. [b]Standard error is between 5 and 10 percentage points.

Washington.[124] Kentucky smoking prevalence was unavailable in 2023, but it was 18% in 2022.[125]

Although cervical cancer is mostly preventable, state-level incidence rates (corrected for hysterectomy prevalence) vary by more than two-fold, from six per 100,000 women in Massachusetts and New Hampshire to 14–15 per 100,000 women in Mississippi, Oklahoma, Arkansas, and Louisiana (Table 13). Advances in cancer control create and/or exacerbate disparities because of unequal dissemination of interventions. Although HPV vaccination can virtually eliminate cervical cancer[126] and prevent numerous other cancers, large state differences in coverage will likely widen existing disparities. Notably, states with the highest cervical cancer incidence

TABLE 13 Incidence (2018–2022) and mortality (2019–2023) rates for selected cancers by state, United States.

	All sites		Female breast		Colon & rectum[a]		Lung & bronchus		Prostate		Uterine cervix[b]	
State	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
Alabama	435.7	159.1	128.6	20.4	38.5	14.5	57.8	39.1	115.0	19.9	14.5	5.8
Alaska	450.6	148.9	135.4	17.3	40.2	14.4	53.4	31.3	113.7	21.7	8.6	3.0
Arizona	409.9	132.3	122.7	18.7	31.5	12.3	41.7	25.0	88.2	17.7	8.7	3.0
Arkansas[c]	487.0	168.5	124.8	20.1	41.6	15.5	74.4	44.6	118.5	20.0	14.0	5.3
California	415.8	131.9	127.3	18.7	33.1	12.0	36.7	22.6	107.0	20.3	8.9	2.7
Colorado	402.9	127.6	135.0	18.8	29.6	11.4	37.2	21.8	105.5	22.0	7.5	2.2
Connecticut	491.2	133.3	148.6	16.6	33.0	10.3	54.7	27.4	144.3	19.1	6.7	1.8
Delaware	482.7	156.0	146.7	22.0	32.1	12.3	56.9	34.9	141.5	20.0	9.1	2.5
District of Columbia	426.5	144.7	139.7	23.2	34.9	13.5	45.1	26.0	139.4	27.5	9.4	2.6
Florida	496.1	138.3	133.9	18.7	35.7	12.0	54.4	30.7	124.8	16.7	12.2	3.7
Georgia	478.6	150.7	135.2	21.0	38.2	13.7	55.9	32.7	144.2	21.7	11.0	3.8
Hawaii	410.8	121.6	139.2	16.8	36.6	12.1	38.2	23.3	105.4	14.8	7.9	2.1
Idaho	458.5	138.6	134.5	19.0	33.8	12.4	44.7	25.3	124.2	21.7	9.1	2.7
Illinois	474.8	149.7	136.4	19.7	37.5	13.3	58.5	33.7	129.1	19.0	8.9	2.8
Indiana[d]	487.0	165.4	130.9	20.3	39.2	14.9	69.6	41.6	121.9	20.6	11.6	3.9
Iowa	506.7	149.2	137.7	17.4	38.1	13.3	60.6	34.3	133.5	19.6	9.0	2.0
Kansas[e]	461.2	152.6	136.5	19.7	37.3	13.9	52.2	35.6	125.5	18.0	11.3	3.5
Kentucky	528.3	180.4	131.4	21.7	44.5	16.5	84.8	50.2	119.9	18.4	12.9	4.2
Louisiana	497.0	165.1	132.4	21.8	42.7	15.4	61.4	39.7	150.2	19.4	13.9	4.7
Maine	495.1	159.1	136.6	17.2	33.4	12.5	67.3	38.4	114.4	21.4	7.6	2.1
Maryland	459.0	141.2	140.0	19.7	33.7	12.5	49.5	29.2	145.4	20.4	7.6	2.6
Massachusetts	453.5	136.1	141.0	15.2	30.3	10.1	57.5	29.6	121.7	18.3	5.7	1.5
Michigan	457.8	157.4	132.4	19.7	34.3	13.5	59.6	37.4	122.6	19.1	8.4	2.8
Minnesota	495.7	141.4	143.0	17.2	34.3	11.4	54.8	29.4	123.8	19.7	6.7	1.8
Mississippi	485.3	179.0	127.0	23.6	45.0	17.7	69.5	45.9	145.5	24.8	14.6	6.4
Missouri	483.5	162.2	139.8	20.2	38.9	14.1	69.3	41.5	109.0	19.2	11.2	3.5
Montana	465.4	141.8	140.5	18.1	35.1	12.4	45.8	26.9	135.6	22.0	9.2	1.9
Nebraska	456.8	148.7	130.4	20.1	36.7	14.5	51.9	31.5	121.0	19.2	8.6	2.5
Nevada	398.4	144.8	113.3	21.4	34.2	13.9	44.1	30.1	101.3	20.7	10.9	3.6
New Hampshire	485.9	145.2	142.3	17.9	31.9	10.9	59.3	31.8	123.0	19.8	6.4	1.6
New Jersey	487.0	130.1	139.7	18.9	36.7	11.7	49.2	25.8	148.6	16.1	8.3	2.2
New Mexico	388.0	131.4	118.7	19.3	32.6	12.2	32.8	20.9	96.1	19.7	10.2	3.0
New York	473.7	125.6	136.5	16.6	34.1	10.9	52.8	25.7	138.5	15.4	8.2	2.1
North Carolina	493.0	154.1	147.8	19.8	34.4	12.8	62.7	36.9	138.7	20.6	9.5	3.0
North Dakota	464.3	136.4	132.4	16.1	38.3	12.5	54.6	29.7	125.9	17.7	6.8	1.9
Ohio	484.0	160.3	134.9	20.1	36.8	13.7	64.8	38.7	125.5	19.5	10.2	3.3
Oklahoma	463.1	174.3	128.0	22.2	39.2	16.4	63.3	43.9	111.7	20.7	14.6	5.4
Oregon	431.1	149.1	133.6	19.3	31.1	12.1	48.1	30.2	107.8	21.4	8.1	2.7
Pennsylvania	464.8	151.6	134.2	19.2	35.5	13.0	57.1	33.3	115.2	18.5	8.6	2.6
Rhode Island	467.2	142.0	142.3	16.2	30.3	10.8	60.2	32.1	127.0	18.3	7.8	1.6
South Carolina	446.9	156.8	137.3	21.0	34.5	13.7	57.9	36.5	119.5	21.3	10.8	4.0

TABLE 13 (Continued)

	All sites		Female breast		Colon & rectum[a]		Lung & bronchus		Prostate		Uterine cervix[b]	
State	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality	Incidence	Mortality
South Dakota	477.8	151.1	134.8	17.3	38.2	13.7	54.5	33.1	136.7	20.8	7.1	3.2
Tennessee	465.2	167.7	128.1	21.5	37.2	15.2	67.2	43.6	120.4	19.9	10.7	4.3
Texas	446.5	142.9	127.6	19.6	37.3	13.9	46.1	28.2	118.6	18.4	13.0	4.2
Utah	427.9	121.5	123.5	20.3	27.7	11.0	25.1	15.5	129.8	22.5	8.0	2.6
Vermont	462.7	150.6	132.5	16.7	30.6	12.9	54.7	31.7	117.3	21.7	7.2	2.2
Virginia	423.1	147.9	132.7	19.9	32.3	13.1	51.5	32.5	116.6	20.6	7.8	2.6
Washington	448.3	144.8	139.7	18.8	32.4	12.1	48.8	29.1	108.2	21.2	8.3	2.3
West Virginia	511.5	177.9	130.0	20.8	42.9	16.6	77.1	48.2	108.4	18.8	13.4	4.6
Wisconsin	480.7	148.5	138.8	17.4	33.0	11.6	55.6	31.8	130.8	21.7	7.7	2.0
Wyoming	408.8	144.0	126.6	19.6	34.2	14.5	38.2	27.9	111.5	19.3	13.0	3.5
Puerto Rico[f]	369.5	100.7	102.7	15.4	38.0	12.8	15.7	10.4	155.8	19.3	15.2	2.2
United States[g]	460.6	145.4	133.5	19.2	35.3	12.9	53.2	31.5	122.3	19.2	9.7	3.0

Note: Rates are per 100,000 persons, age adjusted to the 2000 US standard population using 19 age groups, and incidence rates are adjusted for delays in case reporting.

[a]Incidence rates exclude appendix.

[b]Adjusted for hysterectomy prevalence.

[c]Incidence rates based on cases diagnosed during 2016–2020.

[d]Incidence rates based on cases diagnosed during 2017–2021.

[e]Incidence rates are not adjusted for delays in case reporting.

[f]Incidence rates are not adjusted for delays in case reporting. Mortality rates are for 2018–2022 and were obtained from statecancerprofiles.cancer.gov. Uterine cervix mortality is not adjusted for hysterectomy prevalence.

[g]Rates exclude Kansas and Puerto Rico.

rates have the lowest vaccination coverage. In 2023, up-to-date HPV vaccination among boys and girls aged 13–17 years ranged from 38% in Mississippi and 40% in Georgia to 78% in North Dakota, 82% in Massachusetts, and 84% in Rhode Island.[124]

Cancer in children and adolescents

Cancer is the second most common cause of death among children aged 1–14 years (after accidents) and the fourth most common cause of death among adolescents (aged 15–19 years). In 2026, an estimated 9680 children (aged birth to 14 years) and 5660 adolescents (aged 15–19 years) will be diagnosed with cancer, and 1090 and 730, respectively, will die from the disease. Before age 20 years, an estimated one in 266 children and adolescents will be diagnosed with cancer and one in 2359 will die from the disease.

Leukemia is the most common childhood cancer, accounting for 28% of cases, followed closely by central nervous system tumors (27%), one third of which are benign or borderline malignant brain tumors (Table 14). Cancer types and their distribution differ in adolescents, among whom the most common cancer is central nervous system tumors (22%), two thirds of which are benign or borderline malignant brain tumors, followed by lymphoma (19%) and leukemia (13%). Hodgkin lymphoma is much more common than non-Hodgkin lymphoma among adolescents, whereas the reverse is true among children. Thyroid carcinoma accounts for 12% of cancers in adolescents but only 2% in children.

The overall invasive cancer incidence rate in children declined by 0.6% per year from 2015 through 2022, despite a 0.6% annual increase in both major leukemia types and stable lymphoma incidence. The decrease was driven by a decline of greater than 1% per year in malignant brain tumors, which account for about one in five invasive cancers in children (Table 14). Overall cancer incidence in adolescents continued a 0.9% per year increase because of a steeper increase in lymphoid leukemia compared with children, as well as an increase of about 1% per year for both Hodgkin and non-Hodgkin lymphoma. Malignant brain cancer also decreased in adolescents but was not statistically significant and only accounts for about one in 10 invasive cancers in this age group (Table 14). Thyroid cancer incidence rates in adolescents appear to have stabilized since 2018, after an increasing trend of greater than 4% per year since at least 1998.

In contrast to incidence, cancer mortality has declined by more than two thirds in children, from six per 100,000 in 1970 to two per 100,000 in 2023, and by more than one half in adolescents, from seven to three per 100,000, although rates appear to have stabilized in recent years. Much of this progress reflects reductions in death because of improved survival for leukemia through the optimization of established chemotherapeutic regimens.[127] In the mid-1970s, only 50% of children were alive 5 years after a leukemia diagnosis compared with 89% during 2015–2021, with even greater strides for

TABLE 14 Incidence rates, case distribution, and 5-year relative survival by age and international classification of childhood cancer type, ages birth to 19 years, United States.

	Birth to 14 years				15-19 years			
	Rate per million	Distribution % (including benign brain)	Distribution % (malignant only)	Survival, %	Rate per million	Distribution % (including benign brain)	Distribution % (malignant only)	Survival, %
All ICCC groups combined	184.1	100	–	–	279.3	100	–	–
Malignant only	166.4	91	100	85	238.0	85	100	88
Leukemias, myeloproliferative & myelodysplastic diseases	51.7	28	31	89	35.4	13	15	78
Lymphoid leukemia	40.7	22	24	92	19.0	7	8	77
Acute myeloid leukemia	7.4	4	4	70	9.1	3	4	70
Lymphomas and reticuloendothelial neoplasms	20.6	11	13	95	51.9	19	22	95
Hodgkin lymphoma	5.5	3	3	99	31.5	11	13	98
Non-Hodgkin lymphoma[a]	11.0	6	7	91	18.7	7	8	90
Central nervous system neoplasms	49.1	27	–	–	62.4	22	–	–
Malignant tumors	31.9	17	19	74	21.4	8	9	78
Benign/borderline malignant tumors	17.2	9	–	98	41.0	14	–	98
Neuroblastoma & other peripheral nervous cell tumors	11.7	6	7	83	1.3	<1	1	89
Retinoblasoma	4.0	2	2	96	–[b]	–[b]	–[b]	–[c]
Nephroblastoma & other nonepithelial renal tumors	8.1	4	5	93	0.3	<1	<1	–[c]
Hepatic tumors	3.6	2	2	79	1.5	1	1	53[d]
Hepatoblastoma	3.1	2	2	82	0.1	<1	<1	–[c]
Malignant bone tumors	7.4	4	4	73	15.0	5	6	68
Osteosarcoma	4.2	2	3	66	8.4	3	3	62
Ewing tumor & related bone sarcomas	2.5	1	1	80	4.4	2	2	68
Rhabdomyosarcoma	5.0	3	3	67	3.7	1	2	52
Germ cell & gonadal tumors	5.5	3	3	94	27.3	10	11	95
Thyroid carcinoma	3.3	2	2	>99	32.1	12	14	>99
Malignant melanoma	1.5	1	1	94	7.5	3	3	98

Note: Incidence rates are per 1,000,000 persons, based on diagnoses during 2018–2022, and age-adjusted to the US standard population. Survival is based on cases diagnosed during 2015–2021, followed through 2022. Benign and borderline brain tumors were included in central nervous system tumor incidence rates.

Abbreviation: ICCC, International Classification of Childhood Cancer.

[a]Includes Burkitt lymphoma.

[b]Statistic could not be calculated because of fewer than six cases during 2018–2022.

[c]Statistic could not be calculated because of fewer than 25 cases during 2015–2021.

[d]The standard error is between 5 and 10 percentage points.

adolescents, from 24% to 78%. Nevertheless, progress among adolescents has lagged behind that in children for some cancers, in part because of differences in tumor biology, clinical trial enrollment, treatment protocols, and tolerance and adherence to treatment.[128] For example, survival is higher in children than in adolescents for lymphoid leukemia (92% vs. 77%), Ewing sarcoma (80% vs. 68%), hepatic tumors (79% vs. 53%), and rhabdomyosarcoma (67% vs. 52%; Table 14). Survival rates are lowest in both children and adolescents for osteosarcoma, rhabdomyosarcoma, and some rare cancers, such as diffuse intrinsic pontine glioma.

Long-term survivors of childhood cancer are at substantially elevated risk of treatment-related adverse health effects as they age. One longitudinal cohort study found that nearly one in six childhood cancer survivors experienced a major cardiovascular event by age 50 years compared with fewer than 1% of community controls.[129] A recent analysis indicated a three-fold excess overall mortality risk among 7500 childhood cancer survivors aged 50 years or older compared with the general population, predominantly because of subsequent cancer among those originally treated with radiation therapy.[130] Radiation exposure appears to exacerbate, but not fully explain, excess risk of an earlier onset for age-related diseases among childhood cancer survivors.[131] These studies underscore the need for survivorship care plans for children and adolescents and attention to medical history for older adults to facilitate cancer surveillance and inform prevention and early detection strategies.

Limitations

The projected numbers of new cancer cases and deaths in 2026 are rigorously calculated based on high-quality, population-based cancer registry data and the underlying cause of death reported on death certificates and provide a valid estimate of the contemporary cancer burden. However, these are model-based estimates that should not be used to track temporal cancer trends for several reasons. First, the methodology changes over time, most recently in 2021,[23,24] to take advantage of improved modeling techniques and cancer surveillance coverage. Second, although the models are robust, they can only account for trends through the most recent data year (currently, 2022 for incidence and 2023 for mortality) and cannot accommodate abrupt fluctuations caused by changes in detection practices, such as those that occur for prostate cancer because of changes in PSA testing. Third, the model can be oversensitive to sudden or steep changes in observed data. The most informative metrics for tracking cancer trends are age-standardized or age-specific cancer incidence rates from SEER, the NPCR, and/or the NAACCR and cancer death rates from the NCHS.

Errors in reporting race and ethnicity in medical records and on death certificates result in underestimated cancer incidence and mortality in persons who are not White, particularly Native American populations. Although racial misclassification for cancer incidence is reduced by confining cases to those diagnosed in residents of Purchased/Referred Care Delivery Area counties, which are associated with the Indian Health Service, these data exclude one third of the Native American population who reside in urban areas. Although mortality data cover the complete Native American population, racial misclassification is mitigated using factors developed by the NCHS for all cancers combined and may overestimate or underestimate rates for individual cancer types.[17] Cancer data for other groups that have been historically marginalized in the United States are mostly limited to the broadly defined racial and ethnic categories developed by the Office of Management and Budget and mask important heterogeneity within these populations. Finally, the lack of sexual orientation and gender identity data collection precludes analysis of cancer occurrence in the LGBTQ+ (lesbian, gay, transgender, and queer or questioning) population, which undoubtedly would inform targeted cancer control efforts given the high prevalence of smoking in this group.[132]

CONCLUSION

Cancer mortality continued to decline in the United States through 2023, resulting in 4.8 million deaths averted since 1991 because of reductions in smoking, earlier detection for some cancers, and improved treatment. These interventions have also contributed to a milestone 70% 5-year survival rate for all cancers combined, including remarkable gains over the past 2 decades for many high-mortality and advanced cancers. Lung cancer has had among the most notable improvements in survival yet remains the leading cancer-related death, causing more than twice as many deaths as any other cancer. Among AIAN people, who have the highest lung cancer rates, incidence has yet to decline in women, underscoring the need to redouble culturally sensitive, targeted tobacco-control efforts. Although decades of scientific investment have translated into longer lives for most people diagnosed with cancer, pending federal cuts to health insurance and cancer research will inevitably reduce access to life-saving drugs and halt progress at a time when incidence is rising for many common cancers.

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REFERENCES

1. van den Puttelaar R, Lansdorp-Vogelaar I, Hahn AI, et al. Impact and recovery from COVID-19–related disruptions in colorectal cancer screening and care in the US: a scenario analysis. *Cancer Epidemiol Biomarkers Prev*. 2023;32(1):22-29. doi:10.1158/1055-9965.Epi-22-0544
2. Star J, Bandi P, Nargis N, et al. Updated review of major cancer risk factors and screening test use in the United States, with a focus on changes during the COVID-19 pandemic. *Cancer Epidemiol Biomarkers Prev*. 2023;32(7):879-888. doi:10.1158/1055-9965.EPI-23-0114
3. Richman I, Tessier-Sherman B, Galusha D, Oladele CR, Wang K. Breast cancer screening during the COVID-19 pandemic: moving from disparities to health equity. *J Natl Cancer Inst*. 2022;115(2):139-145. doi:10.1093/jnci/djac172
4. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: Incidence-SEER Research Data, 8 Registries, November 2023 Submission (1975–2022)-Linked To County Attributes-Time Dependent (1990–2023) Income/Rurality, 1969–2023 Counties, released April 2025, based on the November 2024 submission*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2025.
5. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: Incidence-SEER Research Data, 9 Registries (1975–2018), released April 2021, based on the November 2020 submission*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2021.
6. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: Incidence-SEER Research Limited-Field Data, 21 Registries, November 2024 Submission (2000–2022)-Linked To County Attributes-Time Dependent (1990–2023) Income/Rurality, 1969–2023 Counties, released April 2025, based on the November 2024 submission*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2025.
7. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: North American Association of Central Cancer Registries (NAACCR) Incidence Data-Cancer in North America Research Data, 1998–2022, Delay Adjusted Factors-American Cancer Society Facts and Figures (which includes data from the Centers for Disease Control and Prevention's National Program of Cancer Registries, the Canadian Cancer Registry's Provincial and Territorial Registries, and the National Cancer Institute's SEER Registries), certified by the NAACCR as meeting high-quality incidence data standards for the specified time periods, submitted December 2024*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program, Surveillance Systems Branch; 2025.
8. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: North American Association of Central Cancer Registries (NAACCR) Incidence Data-Cancer in North America Research Data, 1995–2022, Standard File, American Cancer Society Facts and Figures (which includes data from the Centers for Disease Control and Prevention's National Program of Cancer Registries, the Canadian Cancer Registry's Provincial and Territorial Registries, and the National Cancer Institute's SEER Registries), certified by the NAACCR as meeting high-quality incidence data standards for the specified time periods, submitted December 2024*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program, Surveillance Systems Branch; 2025.
9. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: Mortality-All Causes of Death. Total U.S. (1969–2023) <Katrina/Rita Population Adjustment>, Linked To County Attributes-Total U.S., 1969–2023 Counties (underlying mortality data provided by the National Center for Health Statistics), released February 2025*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2025.
10. Wingo PA, Cardinez CJ, Landis SH, et al. Long-term trends in cancer mortality in the United States, 1930–1998. *Cancer*. 2003;97(12 suppl):3133-3275. doi:10.1002/cncr.11380
11. Murphy SL, Kochanek KD, Xu J, Heron M. Deaths: final data for 2012. *Natl Vital Stat Rep*. 2015;63(9):1-117.
12. Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, third edition. *Cancer*. 2005;103(7):1457-1467. doi:10.1002/cncr.20910
13. Fritz A, Percy C, Jack A, et al., eds. *International Classification of Diseases for Oncology*. 3rd ed. World Health Organization; 2000.
14. Steliarova-Foucher E, Colombet M, Ries LAG, et al. International incidence of childhood cancer, 2001–10: a population-based registry study. *Lancet Oncol*. 2017;18(6):719-731. doi:10.1016/S1470-2045(17)30186-9
15. World Health Organization. *International Statistical Classification of Diseases and Related Health Problems, 10th revision. Volumes I–III*. World Health Organization; 2011.
16. Mariotto AB, Feuer EJ, Howlader N, Chen H-S, Negoita S, Cronin KA. Interpreting cancer incidence trends: challenges due to the COVID-19 pandemic. *J Natl Cancer Inst*. 2023;115(9):1109-1111. doi:10.1093/jnci/djad086
17. Arias E, Xu J, Curtin S, Bastian B, Tejada-Vera B. Mortality profile of the non-Hispanic American Indian or Alaska Native population, 2019. *Natl Vital Stat Rep*. 2021;70(12):1-27.
18. Clegg LX, Feuer EJ, Midthune DN, Fay MP, Hankey BF. Impact of reporting delay and reporting error on cancer incidence rates and trends. *J Natl Cancer Inst*. 2002;94(20):1537-1545. doi:10.1093/jnci/94.20.1537
19. Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. CDC; 2018. Accessed September 27, 2019. https://www.cdc.gov/brfss/data_tools.htm
20. Mariotto AB, Zou Z, Johnson CJ, Scoppa S, Weir HK, Huang B. Geographical, racial and socio-economic variation in life expectancy in the US and their impact on cancer relative survival. *PLoS One*. 2018;13(7):e0201034. doi:10.1371/journal.pone.0201034
21. Mariotto AB, Noone AM, Howlader N, et al. Cancer survival: an overview of measures, uses, and interpretation. *J Natl Cancer Inst Monogr*. 2014;2014(49):145-186. doi:10.1093/jncimonographs/lgu024
22. Cho H, Howlader N, Mariotto AB, Cronin KA. Estimating relative survival for cancer patients from the SEER program using expected rates based on Ederer I versus Ederer II method. *Surveillance Research Program, NCI, Technical Report #2011-01*. 2021; Accessed September 24, 2025. https://surveillance.cancer.gov/reports/tech2011.01.pdf
23. Liu B, Zhu L, Zou J, et al. Updated methodology for projecting U.S.- and state-level cancer counts for the current calendar year: part I: spatio-temporal modeling for cancer incidence. *Cancer Epidemiol Biomarkers Prev*. 2021;30(9):1620-1626. doi:10.1158/1055-9965.EPI-20-1727
24. Miller KD, Siegel RL, Liu B, et al. Updated methodology for projecting U.S.- and state-level cancer counts for the current calendar year: part II: evaluation of incidence and mortality projection

methods. *Cancer Epidemiol Biomarkers Prev*. 2021;30(11):1993-2000. doi:10.1158/1055-9965.EPI-20-1780
25. Pickle LW, Hao Y, Jemal A, et al. A new method of estimating United States and state-level cancer incidence counts for the current calendar year. *CA Cancer J Clin*. 2007;57(1):30-42. doi:10.3322/canjclin.57.1.30
26. Islami F, Marlow EC, Thomson B, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States, 2019. *CA Cancer J Clin*. 2024;74(5):405-432. doi:10.3322/caac.21858
27. Bandi P, Star J, Mazzitelli N, et al. Prevalence and review of major modifiable cancer risk factors, HPV vaccination, and cancer screenings in the United States: 2025 Update. *Cancer Epidemiol Biomarkers Prev*. 2025;34(6):836-849. doi:10.1158/1055-9965.EPI-24-1835
28. Negoita S, Chen HS, Sanchez PV, et al. Annual Report to the Nation on the Status of Cancer, part 2: early assessment of the COVID-19 pandemic's impact on cancer diagnosis. *Cancer*. 2024;130(1):117-127. doi:10.1002/cncr.35026
29. Burus T, Lei F, Huang B, et al. COVID-19 and rates of cancer diagnosis in the US. *JAMA Netw Open*. 2024;7(9):e2432288. doi:10.1001/jamanetworkopen.2024.32288
30. Howlader N, Chen HS, Noone AM, et al. Impact of COVID-19 on 2021 cancer incidence rates and potential rebound from 2020 decline. *J Natl Cancer Inst*. 2024;117(3):507-510. doi:10.1093/jnci/djae180
31. Potosky AL, Miller BA, Albertsen PC, Kramer BS. The role of increasing detection in the rising incidence of prostate cancer. *JAMA*. 1995;273(7):548-552. doi:10.1001/jama.1995.03520310046028
32. Choi YJ, Lee DH, Han KD, et al. Adult height in relation to risk of cancer in a cohort of 22,809,722 Korean adults. *Br J Cancer*. 2019;120(6):668-674. doi:10.1038/s41416-018-0371-8
33. Green J, Cairns BJ, Casabonne D, Wright FL, Reeves G, Beral V. Height and cancer incidence in the Million Women Study: prospective cohort, and meta-analysis of prospective studies of height and total cancer risk. *Lancet Oncol*. 2011;12(8):785-794. doi:10.1016/S1470-2045(11)70154-1
34. Klein SL, Flanagan KL. Sex differences in immune responses. *Nat Rev Immunol*. 2016;16(10):626-638. doi:10.1038/nri.2016.90
35. Jackson SS, Marks MA, Katki HA, et al. Sex disparities in the incidence of 21 cancer types: quantification of the contribution of risk factors. *Cancer*. 2022;128(19):3531-3540. doi:10.1002/cncr.34390
36. Jemal A, Fedewa SA, Ma J, et al. Prostate cancer incidence and PSA testing patterns in relation to USPSTF screening recommendations. *JAMA*. 2015;314(19):2054-2061. doi:10.1001/jama.2015.14905
37. Moyer VA; U.S. Preventive Services Task Force. Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2012;157(2):120-134. doi:10.7326/0003-4819-157-2-201207170-00459
38. Kratzer TB, Mazzitelli N, Star J, Dahut WL, Jemal A, Siegel RL. Prostate cancer statistics, 2025. *CA Cancer J Clin*. Published online September 2, 2025. doi:10.3322/caac.70028
39. Qian Z, Chen YJ, Feldman J, et al. Prostate magnetic resonance imaging utilization and its relationship with advanced prostate cancer detection. *Urol Oncol*. 2024;42(11):370.e1-370.e7. doi:10.1016/j.urolonc.2024.05.009
40. US Preventive Services Task Force; Curry SJ, Owens DK, et al. Screening for prostate cancer: US Preventive Services Task Force recommendation statement. *JAMA*. 2018;319(18):1901-1913. doi:10.1001/jama.2018.3710
41. Wolf AMD, Wender RC, Etzioni RB, et al. American Cancer Society guideline for the early detection of prostate cancer: update 2010. *CA Cancer J Clin*. 2010;60(2):70-98. doi:10.3322/caac.20066
42. Unger JM, Till C, Tangen CM, et al. Long-Term adverse effects and complications after prostate cancer treatment. *JAMA Oncol*. 2024;10(12):1654-1662. doi:10.1001/jamaoncol.2024.4397
43. Vertosick EA, Vickers A, Dahlin A, et al. Prostate-specific antigen levels at age 60 and lifetime risk of lethal prostate cancer. *J Natl Cancer Inst*. Published online September 19, 2025. doi:10.1093/jnci/djaf271
44. Giaquinto AN, Sung H, Newman LA, et al. Breast cancer statistics 2024. *CA Cancer J Clin*, 2024;74(6):477-495. doi:10.3322/caac.21863
45. Pfeiffer RM, Webb-Vargas Y, Wheeler W, Gail MH. Proportion of U.S. trends in breast cancer incidence attributable to long-term changes in risk factor distributions. *Cancer Epidemiol Biomarkers Prev*. 2018;27(10):1214-1222. doi:10.1158/1055-9965.EPI-18-0098
46. Premenopausal Breast Cancer Collaborative Group; Schoemaker MJ, Nichols HB, et al. Association of body mass index and age with subsequent breast cancer risk in premenopausal women. *JAMA Oncol*. 2018;4(11):e181771. doi:10.1001/jamaoncol.2018.1771
47. U.S. Census Bureau. Current Population Survey, June 1976–2024. Technical Documentation: Methodology (for information on confidentiality protection, sampling error, nonsampling error, and definitions). Accessed September 24, 2025. http://www.census.gov/programs-surveys/cps/technical-documentation/methodology.html
48. Allen NE, Beral V, Casabonne D, et al. Moderate alcohol intake and cancer incidence in women. *J Natl Cancer Inst*. 2009;101(5):296-305. doi:10.1093/jnci/djn514
49. Keyes KM, Jager J, Mal-Sarkar T, Patrick ME, Rutherford C, Hasin D. Is there a recent epidemic of women's drinking? A critical review of national studies. *Alcohol Clin Exp Res*. 2019;43(7):1344-1359. doi:10.1111/acer.14082
50. McKetta SC, Keyes KM. Trends in U.S. women's binge drinking in middle adulthood by socioeconomic status, 2006–2018. *Drug Alcohol Depend*. 2020;212:108026. doi:10.1016/j.drugalcdep.2020.108026
51. Adams RS, McKetta SC, Jager J, Stewart MT, Keyes KM. Cohort effects of women's mid-life binge drinking and alcohol use disorder symptoms in the United States: impacts of changes in timing of parenthood. *Addiction*. 2023;118(10):1932-1941. doi:10.1111/add.16262
52. Wu AH, Wu J, Tseng C, et al. Air pollution and breast cancer incidence in the Multiethnic Cohort Study. *J Clin Oncol*. 2025;43(3):273-284. doi:10.1200/jco.24.00418
53. Clarke MA, Devesa SS, Harvey SV, Wentzensen N. Hysterectomy-corrected uterine corpus cancer incidence trends and differences in relative survival reveal racial disparities and rising rates of nonendometrioid cancers. *J Clin Oncol*. 2019;37(22):1895-1908. doi:10.1200/JCO.19.00151
54. Harris JE. Cigarette smoking among successive birth cohorts of men and women in the United States during 1900–80. *J Natl Cancer Inst*. 1983;71(3):473-479.
55. Jemal A, Miller KD, Ma J, et al. Higher lung cancer incidence in young women than young men in the United States. *N Engl J Med*. 2018;378(21):1999-2009. doi:10.1056/NEJMoa1715907
56. Kratzer TB, Bandi P, Freedman ND, et al. Lung cancer statistics, 2023. *Cancer*. 2024;130(8):1330-1348. 10.1002/cncr.35128
57. Arrazola RA, Griffin T, Lunsford NB, et al. US cigarette smoking disparities by race and ethnicity—keep going and going! *Prev Chronic Dis*. 2023;20:E45. doi:10.5888/pcd20.220375
58. Caturegli G, Zhu X, Palis B, Mullett TW, Resio BJ, Boffa DJ. Smoking status of the US cancer population and a new perspective from the National Cancer Database. *JAMA Oncol*. 2025;11(5):564-566. doi:10.1001/jamaoncol.2025.0247
59. Star J, Han X, Smith RA, Schafer EJ, Jemal A, Bandi P. Cancer screening 3 years after the onset of the COVID-19 pandemic. *JAMA*. 2025;333(17):1543-1546. doi:10.1001/jama.2025.0902

60. Schafer EJ, Sung H, Star J, Bandi P, Smith RA, Siegel RL. Colorectal cancer incidence in US adults after recommendations for earlier screening. *JAMA*. 2025;334(9):824-826. doi:10.1001/jama.2025.9147
61. Zhang X, El-Serag HB, Thrift AP. Sex and race disparities in the incidence of hepatocellular carcinoma in the United States examined through age–period–cohort analysis. *Cancer Epidemiol Biomarkers Prev*. 2020;29(1):88-94. doi:10.1158/1055-9965.Epi-19-1052
62. Croswell JM, Ransohoff DF, Kramer BS. Principles of cancer screening: lessons from history and study design issues. *Semin Oncol*. 2010;37(3):202-215. doi:10.1053/j.seminoncol.2010.05.006
63. O'Grady TJ, Gates MA, Boscoe FP. Thyroid cancer incidence attributable to overdiagnosis in the United States 1981–2011. *Int J Cancer*. 2015;137(11):2664-2673. doi:10.1002/ijc.29634
64. Dasari A, Shen C, Halperin D, et al. Trends in the incidence, prevalence, and survival outcomes in patients with neuroendocrine tumors in the United States. *JAMA Oncol*. 2017;3(10):1335-1342. doi:10.1001/jamaoncol.2017.0589
65. Pasaoglu E, Dursun N, Ozyalvacli G, Hacihasanoglu E, Behzatoglu K, Calay O. Comparison of World Health Organization 2000/2004 and World Health Organization 2010 classifications for gastrointestinal and pancreatic neuroendocrine tumors. *Ann Diagn Pathol*. 2015;19(2):81-87. doi:10.1016/j.anndiagpath.2015.01.001
66. Ang KK, Harris J, Wheeler R, et al. Human papillomavirus and survival of patients with oropharyngeal cancer. *N Engl J Med*. 2010;363(1):24-35. doi:10.1056/NEJMoa0912217
67. Surveillance, Epidemiology, and End Results (SEER) Program (https://seer.cancer.gov/). *SEER*Stat Database: Incidence-SEER Research Limited-Field Data with Delay-Adjustment, 21 Registries, Malignant Only, released April 2025, based on the November 2024 Submission (2000–2022)*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2025.
68. Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov). *SEER*Stat Database: Incidence-SEER Research Data, 9 Registries, released April 2025, based on the November 2020 submission (1975–2018)*. National Cancer Institute, Division of Cancer Control and Population Sciences, Surveillance Research Program; 2025.
69. Sasaki K, Strom SS, O'Brien S, et al. Relative survival in patients with chronic-phase chronic myeloid leukaemia in the tyrosine-kinase inhibitor era: analysis of patient data from six prospective clinical trials. *Lancet Haematol*. 2015;2(5):e186-e193. doi:10.1016/S2352-3026(15)00048-4
70. Moris D, Martinino A, Schiltz S, et al. Advances in the treatment of hepatocellular carcinoma: an overview of the current and evolving therapeutic landscape for clinicians. *CA Cancer J Clin*. Published online May 20, 2025. doi:10.3322/caac.70018
71. Singal AG, Salem R, Pinato DJ, Pillai A. Advances in locoregional and systemic treatments for hepatocellular carcinoma. *Gastroenterology*. 2025;169(4):585-599. doi:10.1053/j.gastro.2025.03.047
72. Brown ZJ, Tsilimigras DI, Ruff SM, et al. Management of hepatocellular carcinoma: a review. *JAMA Surg*. 2023;158(4):410-420. doi:10.1001/jamasurg.2022.7989
73. Abou-Alfa GK, Lau G, Kudo M, et al. Tremelimumab plus durvalumab in unresectable hepatocellular carcinoma. *NEJM Evid*. 2022;1(8):EVIDoa2100070. doi:10.1056/EVIDoa2100070
74. Finn RS, Qin S, Ikeda M, et al. Atezolizumab plus bevacizumab in unresectable hepatocellular carcinoma. *N Engl J Med*. 2020;382(20):1894-1905. doi:10.1056/NEJMoa1915745
75. Kudo M, Finn RS, Qin S, et al. Lenvatinib versus sorafenib in first-line treatment of patients with unresectable hepatocellular carcinoma: a randomised phase 3 non-inferiority trial. *Lancet*. 2018;391(10126):1163-1173. doi:10.1016/s0140-6736(18)30207-1
76. Calvo V. Redefining lung cancer therapy—a long-awaited shift in strategy. *N Engl J Med*. 2025;393(8):809-810. doi:10.1056/NEJMe2507130
77. Leal TA, Ramalingam SS. Commemorating the 20th anniversary of the discovery of epidermal growth factor receptor mutation in lung cancer: translational research at its best. *Cancer*. 2024;130(11):1910-1912. doi:10.1002/cncr.35353
78. Howlader N, Forjaz G, Mooradian MJ, et al. The effect of advances in lung-cancer treatment on population mortality. *N Engl J Med*. 2020;383(7):640-649. doi:10.1056/NEJMoa1916623
79. Curti BD, Faries MB. Recent advances in the treatment of melanoma. *N Engl J Med*. 2021;384(23):2229-2240. doi:10.1056/NEJMra2034861
80. Loree JM, Kopetz S. Recent developments in the treatment of metastatic colorectal cancer. *Ther Adv Med Oncol*. 2017;9(8):551-564. doi:10.1177/1758834017714997
81. Shah MP, Wenger NS, Glaspy J, et al. Patient-reported discordance between care goals and treatment intent in advanced cancer. *Cancer*. 2025;131(17):e35976. doi:10.1002/cncr.35976
82. Welch HG, Schwartz LM, Woloshin S. Are increasing 5-year survival rates evidence of success against cancer? *JAMA*. 2000;283(22):2975-2978. doi:10.1001/jama.283.22.2975
83. Shiels MS, Freedman ND, Haque AT, et al. US cancer deaths prevented due to survival improvements stratified by extent of disease, 2010–2019. *J Natl Cancer Inst*. 2025;117(10):2089-2095. doi:10.1093/jnci/djaf192
84. Shiels MS, Graubard BI, McNeel TS, Kahle L, Freedman ND. Trends in smoking-attributable and smoking-unrelated lung cancer death rates in the United States, 1991–2018. *J Natl Cancer Inst*. 2024;116(5):711-716. doi:10.1093/jnci/djad256
85. Howlader N, Cronin KA, Yu M, Miller D, Lowy DR. Urban-rural disparities in lung cancer incidence and mortality patterns in Black and White populations. *Cancer*. 2025;131(15):e70004. doi:10.1002/cncr.70004
86. de Koning HJ, van der Aalst CM, de Jong PA, et al. Reduced lung-cancer mortality with volume CT screening in a randomized trial. *N Engl J Med*. 2020;382(6):503-513. doi:10.1056/NEJMoa1911793
87. Pinsky PF, Church TR, Izmirlian G, Kramer BS. The National Lung Screening Trial: results stratified by demographics, smoking history, and lung cancer histology. *Cancer*. 2013;119(22):3976-3983. doi:10.1002/cncr.28326
88. Henschke CI, Yip R, Shaham D, et al. A 20-year follow-up of the International Early Lung Cancer Action Program (I-ELCAP). *Radiology*. 2023;309(2):e231988. doi:10.1148/radiol.231988
89. Bandi P, Star J, Ashad-Bishop K, Kratzer T, Smith R, Jemal A. Lung cancer screening in the US, 2022. *JAMA Intern Med*. 2024;184(8):882-891. doi:10.1001/jamainternmed.2024.1655
90. Dasari A, Wallace K, Halperin DM, et al. Epidemiology of neuroendocrine neoplasms in the US. *JAMA Netw Open*. 2025;8(6):e2515798. doi:10.1001/jamanetworkopen.2025.15798
91. Caswell-Jin JL, Sun LP, Munoz D, et al. Analysis of breast cancer mortality in the US—1975 to 2019. *JAMA*. 2024;331(3):233-241. doi:10.1001/jama.2023.25881
92. Etzioni R, Tsodikov A, Mariotto A, et al. Quantifying the role of PSA screening in the US prostate cancer mortality decline. *Cancer Causes Control*. 2008;19(2):175-181. doi:10.1007/s10552-007-9083-8
93. Tsodikov A, Gulati R, Heijnsdijk EAM, et al. Reconciling the effects of screening on prostate cancer mortality in the ERSPC and PLCO trials. *Ann Intern Med*. 2017;167(7):449-455. doi:10.7326/M16-2586
94. American Cancer Society. Cancer Facts & Figures for Asian American, Native Hawaiian, & other Pacific Islander People 2024. American Cancer Society; 2024. Accessed September 24, 2025. https://www.cancer.org/research/cancer-facts-statistics/acs-aanhpi-cancer-facts-figures-2024.html

95. Vo JB, Bess JL, Taparra K, et al. Leading causes of death among Asian American compared with Pacific Islander individuals. *JAMA Intern Med*. 2025;185(3):335-338. doi:10.1001/jamainternmed.2024.6487
96. Moss JL, Pinto CN, Srinivasan S, Cronin KA, Croyle RT. Enduring cancer disparities by persistent poverty, rurality, and race: 1990–1992 to 2014–2018. *J Natl Cancer Inst*. 2022;114(6):829-836. doi:10.1093/jnci/djac038
97. Jemal A, Robbins AS, Lin CC, et al. Factors that contributed to Black–White disparities in survival among nonelderly women with breast cancer between 2004 and 2013. *J Clin Oncol*. 2018;36(1):14-24. doi:10.1200/jco.2017.73.7932
98. Xu X, Chen L, Nunez-Smith M, Clark M, Wright JD. Racial disparities in diagnostic evaluation of uterine cancer among Medicaid beneficiaries. *J Natl Cancer Inst*. 2023;115(6):636-643. doi:10.1093/jnci/djad027
99. Ganguly AP, Baker KK, Redman MW, McClintock AH, Yung RL. Racial disparities in the screening mammography continuum within a heterogeneous health care system. *Cancer*. 2023;129(S19):3171-3181. doi:10.1002/cncr.34632
100. Lawson MB, Bissell MCS, Miglioretti DL, et al. Multilevel factors associated with time to biopsy after abnormal screening mammography results by race and ethnicity. *JAMA Oncol*. 2022;8(8):1115-1126. doi:10.1001/jamaoncol.2022.1990
101. Alagoz O, May FP, Doubeni CA, et al. Impact of racial disparities in follow-up and quality of colonoscopy on colorectal cancer outcomes. *J Natl Cancer Inst*. 2024;116(11):1807-1816. doi:10.1093/jnci/djae140
102. Baeker Bispo J, Bandi P, Jemal A, Islami F. Receipt of clinician recommendation for colorectal cancer screening among underscreened U.S. adults. *Ann Intern Med*. 2023;176(9):1985-1987. doi:10.7326/m23-1341
103. Kurian AW, Abrahamse P, Furgal A, et al. Germline genetic testing after cancer diagnosis. *JAMA*. 2023;330(1):43-51. doi:10.1001/jama.2023.9526
104. Oyer RA, Hurley P, Boehmer L, et al. Increasing racial and ethnic diversity in cancer clinical trials: an American Society of Clinical Oncology and Association of Community Cancer Centers joint research statement. *J Clin Oncol*. 2022;40(19):2163-2171. doi:10.1200/JCO.22.00754
105. Bailey ZD, Krieger N, Agenor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet*. 2017;389(10077):1453-1463. doi:10.1016/S0140-6736(17)30569-X
106. Karvonen KA, Vu A, Lin K, et al. Historical redlining and mortality in children, adolescents, and young adults with cancer in California, 2000–2019. *J Natl Cancer Inst*. 2025;117(8):1646-1654. doi:10.1093/jnci/djaf105
107. Beyer KMM, Zhou Y, Laud PW, et al. Mortgage lending bias and breast cancer survival among older women in the United States. *J Clin Oncol*. 2021;39(25):2749-2757. doi:10.1200/JCO.21.00112
108. Bikomeye JC, Zhou Y, McGinley EL, et al. Historical redlining and breast cancer treatment and survival among older women in the United States. *J Natl Cancer Inst*. 2023;115(6):652-661. doi:10.1093/jnci/djad034
109. Collin LJ, Gaglioti AH, Beyer KMM, et al. Neighborhood-level redlining and lending bias are associated with breast cancer mortality in a large and diverse metropolitan area. *Cancer Epidemiol Biomarkers Prev*. 2020;30(1):53-60. doi:10.1158/1055-9965.EPI-20-1038
110. Krieger N, Wright E, Chen JT, Waterman PD, Huntley ER, Arcaya M. Cancer stage at diagnosis, historical redlining, and current neighborhood characteristics: breast, cervical, lung, and colorectal cancers, Massachusetts, 2001–2015. *Am J Epidemiol*. 2020;189(10):1065-1075. doi:10.1093/aje/kwaa045
111. Lynch EE, Malcoe LH, Laurent SE, Richardson J, Mitchell BC, Meier HCS. The legacy of structural racism: associations between historic redlining, current mortgage lending, and health. *SSM Popul Health*. 2021;14:100793. doi:10.1016/j.ssmph.2021.100793
112. Ward E, Jemal A, Cokkinides V, et al. Cancer disparities by race/-ethnicity and socioeconomic status. *CA Cancer J Clin*. 2004;54(2):78-93. doi:10.3322/canjclin.54.2.78
113. Bach PB, Schrag D, Brawley OW, Galaznik A, Yakren S, Begg CB. Survival of Blacks and Whites after a cancer diagnosis. *JAMA*. 2002;287(16):2106-2113. doi:10.1001/jama.287.16.2106
114. Lee JG, Henriksen L, Rose SW, Moreland-Russell S, Ribisl KM. A systematic review of neighborhood disparities in point-of-sale tobacco marketing. *Am J Public Health*. 2015;105(9):e8-e18. doi:10.2105/ajph.2015.302777
115. Bobbitt JR, Liu F, Keri RA, Cullen J. Cancer burden in neighborhoods with greater racial diversity and environmental burden. *JAMA Netw Open*. 2025;8(6):e2516740. doi:10.1001/jamanetworkopen.2025.16740
116. Madrigal JM, Flory A, Fisher JA, et al. Sociodemographic inequities in the burden of carcinogenic industrial air emissions in the United States. *J Natl Cancer Inst*. 2024;116(5):737-744. doi:10.1093/jnci/djae001
117. Brady D, Kohler U, Zheng H. Novel estimates of mortality associated with poverty in the US. *JAMA Intern Med*. 2023;183(6):618-619. doi:10.1001/jamainternmed.2023.0276
118. Singh GK, Jemal A. Socioeconomic and racial/ethnic disparities in cancer mortality, incidence, and survival in the United States, 1950–2014: over six decades of changing patterns and widening inequalities. *J Environ Public Health*. 2017;2017:2819372. doi:10.1155/2017/2819372
119. Islami F, Guerra CE, Minihan A, et al. American Cancer Society's report on the status of cancer disparities in the United States, 2021. *CA Cancer J Clin*. 2022;72(2):112-143. doi:10.3322/caac.21703
120. Boyle J, Yau J, Slade JL, et al. Neighborhood disadvantage and prostate tumor aggressiveness among African American and European American men. *Cancer Epidemiol Biomarkers Prev*. 2024;33(10):1318-1326. doi:10.1158/1055-9965.EPI-24-0450
121. Goel N, Hernandez A, Cole SW. Social genomic determinants of health: understanding the molecular pathways by which neighborhood disadvantage affects cancer outcomes. *J Clin Oncol*. 2024;42(30):3618-3627. doi:10.1200/JCO.23.02780
122. Nguyen BT, Han X, Jemal A, Drope J. Diet quality, risk factors and access to care among low-income uninsured American adults in states expanding Medicaid vs. states not expanding under the affordable care act. *Prev Med*. 2016;91:169-171. doi:10.1016/j.ypmed.2016.08.015
123. Sommers BD, Gawande AA, Baicker K. Health insurance coverage and health—what the recent evidence tells us. *N Engl J Med*. 2017;377(6):586-593. doi:10.1056/NEJMsb1706645
124. American Cancer Society. *Cancer Prevention & Early Detection Facts & Figures 2025–2026*. American Cancer Society; 2025. Accessed September 24, 2025. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-prevention-and-early-detection-facts-and-figures/2025-cped-files/cped-cff-2025-2026.pdf
125. American Cancer Society. *Cancer Prevention & Early Detection Facts & Figures, Tables & Figures 2024*. American Cancer Society; 2024. Accessed September 24, 2025. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-prevention-and-early-detection-facts-and-figures/2024-cped-files/cped-2024-cff-tables-and-figures.pdf
126. Falcaro M, Castañon A, Ndlela B, et al. The effects of the national HPV vaccination programme in England, UK, on cervical cancer and grade 3 cervical intraepithelial neoplasia incidence: a register-

based observational study. *Lancet*. 2021;398(10316):2084-2092. doi:10.1016/S0140-6736(21)02178-4
127. Kantarjian HM, Keating MJ, Freireich EJ. Toward the potential cure of leukemias in the next decade. *Cancer*. 2018;124(22):4301-4313. doi:10.1002/cncr.31669
128. Barr RD, Ferrari A, Ries L, Whelan J, Bleyer WA. Cancer in adolescents and young adults: a narrative review of the current status and a view of the future. *JAMA Pediatr*. 2016;170(5):495-501. doi:10.1001/jamapediatrics.2015.4689
129. Hammoud RA, Liu Q, Dixon SB, et al. The burden of cardiovascular disease and risk for subsequent major adverse cardiovascular events in survivors of childhood cancer: a prospective, longitudinal analysis from the St Jude Lifetime Cohort Study. *Lancet Oncol*. 2024;25(6):811-822. doi:10.1016/S1470-2045(24)00157-8
130. Bhandari R, Chen Y, Chow EJ, et al. Health outcomes beyond age 50 years in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. *J Clin Oncol*. 2025;43(27):2998-3010. doi:10.1200/jco-25-00385
131. Yeh JM, Ward ZJ, Stratton KL, et al. Accelerated aging in survivors of childhood cancer—early onset and excess risk of chronic conditions. *JAMA Oncol*. 2025;11(5):535-543. doi:10.1001/jamaoncol.2025.0236
132. Kratzer TB, Star J, Minihan AK, et al. Cancer in people who identify as lesbian, gay, bisexual, transgender, queer, or gender-nonconforming. *Cancer*. 2024;130(17):2948-2967. doi:10.1002/cncr.35355

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