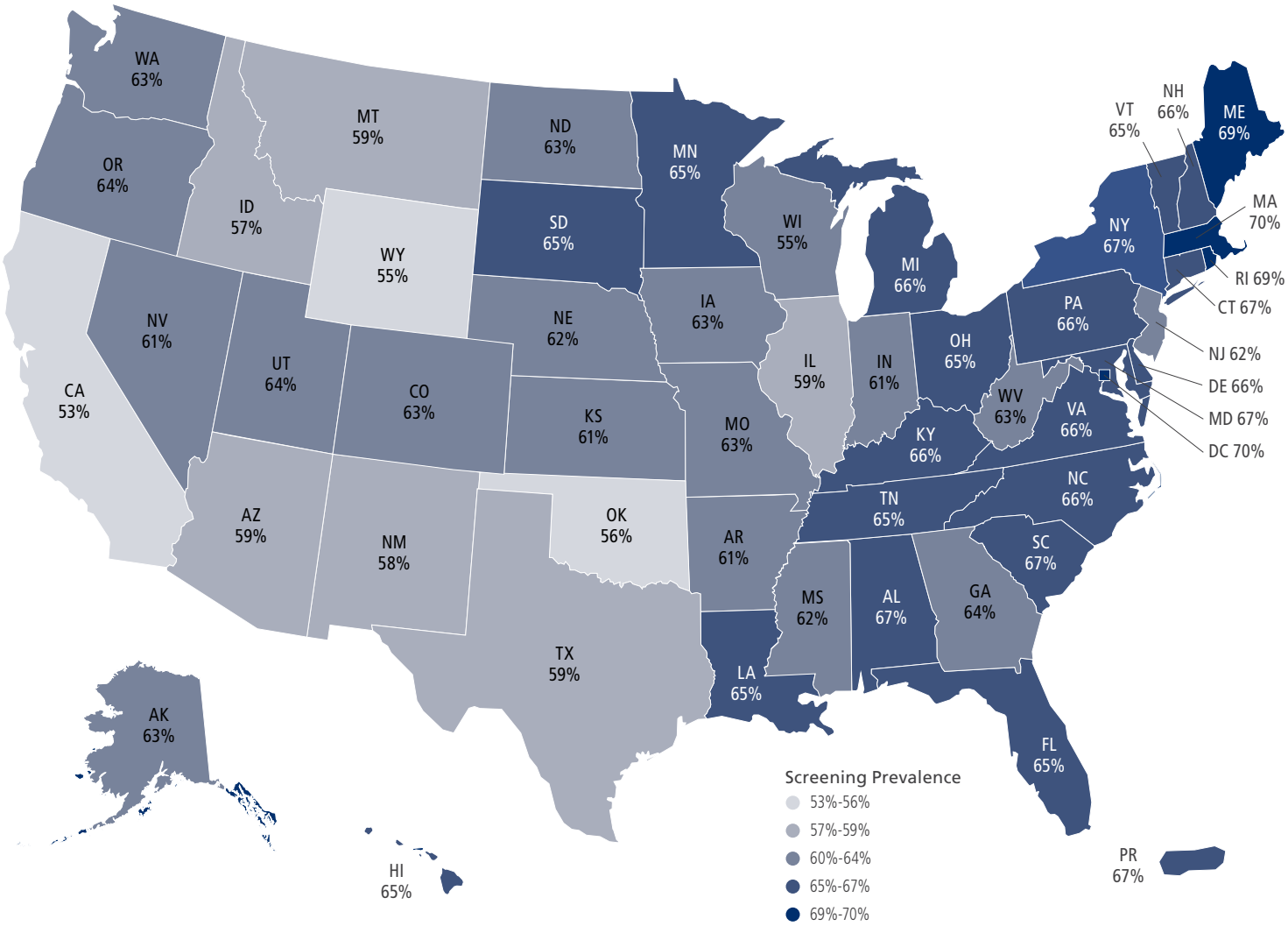
American Cancer Society®

Colorectal Cancer
Facts & Figures 2023–2025

Colorectal Cancer Screening* (%), Adults 45 Years and Older by State, 2020



*Blood/DNA stool test, sigmoidoscopy, or colonoscopy in the past 1/3, 5, or 10 years, respectively. Note: Estimates are age adjusted to the 2000 US standard population and do not distinguish between examinations for screening and diagnosis.

Source: Behavioral Risk Factors Surveillance System, 2020.

Contents

This publication attempts to summarize current scientific information about colorectal cancer. Except when specified, it does not represent the official policy of the American Cancer Society.

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Fast Facts

- In 2023, there will be an estimated 153,020 new cases of colorectal cancer (CRC) diagnosed in the US and 52,550 people will die from the disease, including 19,550 diagnoses and 3,750 deaths in individuals younger than age 50 years of age. (Table 1)
- The CRC incidence rate in the US was 33% higher in men (41.5 per 100,000) than in women (31.2 per 100,000) during 2015-2019 (Figure 4), likely reflecting differences in risk factor prevalence, such as excess body weight and processed meat consumption (Table 2).
- CRC incidence in the US is highest in people who are Alaska Native (88.5 per 100,000), American Indian (46.0), or Black (41.7) versus White (35.7); racial and ethnic disparities are similar for mortality (50.5, 17.5, and 17.6 per 100,000, respectively, versus 13.1; Figure 5).
- Declines in CRC incidence and mortality have slowed from 3%-4% per year during the 2000s to 1% per year and 2% per year, respectively, during the past decade (Figure 6).
- Declining incidence is confined to ages 65 and older (Figure 7); since 2011 rates have been stable in ages 50-64 years and increasing by 2% per year in people younger than 50 years of age, as well as in people ages 50-54 years.
- These incidence trends are rapidly shifting the patient population younger; 20% (1 in 5) of CRCs in 2019 were in people 54 years or younger, up from 11% (1 in 10) in 1995.
- CRC death rates increased by 1% annually in people younger than 50 years of age (Figure 7) and by 0.6% annually in people ages 50-54 since about 2005.
- Incidence rates for advanced disease have increased by about 3% annually in people younger 50 years of age and 0.5%-2% annually in people 50-64 years of age since around 2010 (Figure 8).
- As a result, diagnoses have also shifted to more advanced disease (Figure 8); the proportion of regional- or distant-stage cancer increased from 52% in the mid-2000s to 60% in 2019 (Figure 9).
- Five-year relative survival for CRC ranges from 60% in Black people to 65% in White people and 67% in Asian American and Pacific Islander people (Figure 12).
- CRC death rates declined during 2011-2020 by about 2% annually in White, Hispanic, Asian American and Pacific Islander, and Native American persons and by 3% annually in Black persons (Figure 10).
- The CRC burden is highest in parts of the South, Midwest, and Appalachia and lowest in the West, with incidence rates ranging from 46.5 (per 100,000) in Mississippi to 27 in Utah (Figure 11).
- According to the National Health Interview Survey, up-to-date CRC screening prevalence among adults ages 45 years and older reached 59% in 2021 (Table 5).
- Screening is lowest among ages 45-49 years (20%), Asian Americans (50%), individuals with less than a high school education (48%), the uninsured (21%), and recent immigrants (29%; Table 5).
- According to data from the 2020 Behavioral Risk Factor Surveillance System, up-to-date screening prevalence among adults 45 years and older ranged from 53% in California to 70% in Massachusetts and the District of Columbia (Figure 14 and Table 6).

Introduction

Cancer is a disease characterized by the unchecked division of abnormal cells. When this type of growth occurs in the colon or rectum, it is called colorectal cancer (CRC). The colon and rectum (colorectum), along with the anus, make up the large intestine, the final segment of the gastrointestinal (GI) system. The large intestine is sometimes called the large bowel, which is why CRC is sometimes referred to as bowel cancer. Most CRCs begin as a noncancerous growth in the inner lining (mucosa) of the colon or rectum called a polyp. Polyps are common, and most do not become cancerous. Those that do progress grow slowly, allowing for cancer prevention through their detection and removal during CRC screening.

CRC is the third most commonly diagnosed cancer and the third most common cause of cancer-related death in both men and women in the United States. However, it ranks second in cancer-related deaths overall and is the leading cause of cancer death in men younger than 50 years of age. More than half of all CRCs are attributable to modifiable risk factors, such as smoking, an unhealthy diet, high alcohol consumption, physical inactivity, and excess body weight. In addition, a large proportion of CRC incidence and mortality is preventable through the receipt of regular screening, surveillance, and high-quality treatment.

In this report, we provide a comprehensive overview of current CRC statistics in the United States, including incidence, survival, and mortality rates and trends by age, race, and ethnicity based on incidence data through 2019 and mortality data through 2020. CRC screening prevalence for adults ages 45 years and older is also presented nationally for 2021 and by state for 2020. We hope the new format is easier to navigate and that data highlights and important facts are more accessible. We welcome your feedback to Rebecca Siegel at rebecca.siegel@cancer.org.

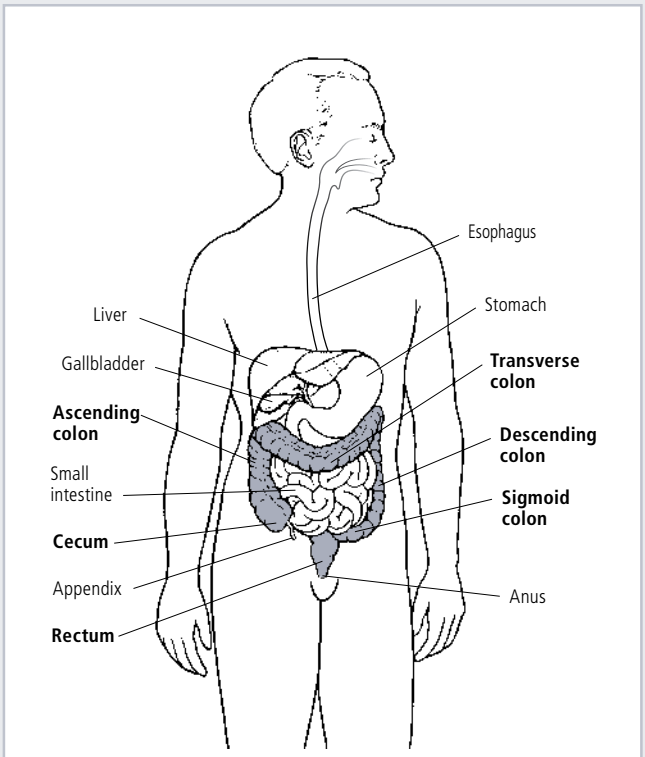
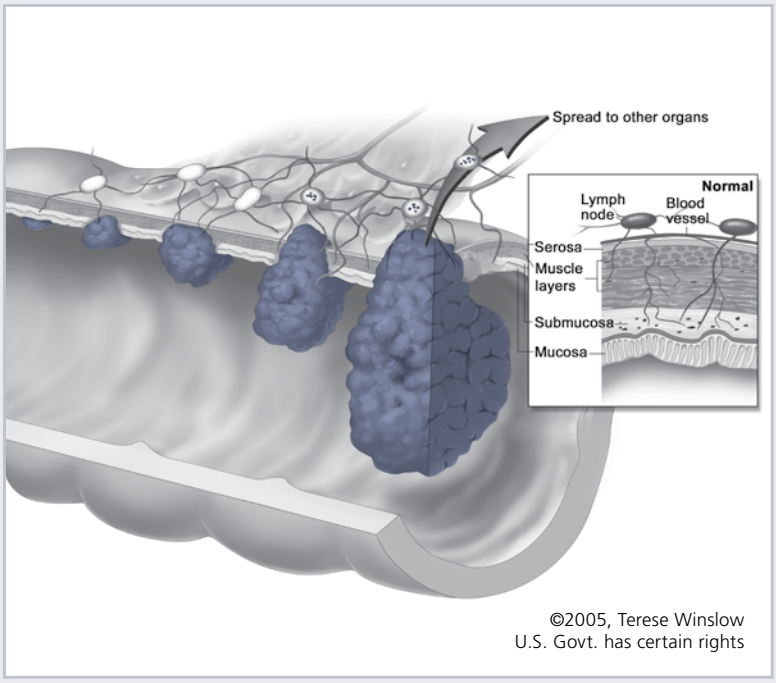


Figure 1. Anatomy of the Gastrointestinal System

- The colon and rectum (shown in blue) are part of the gastrointestinal system, which extends from the mouth to the anus and aids in the digestion of foods and liquids.
- The colon begins at the cecum and is divided into 4 parts: ascending, transverse, descending, and sigmoid.
- Cancer in the ascending or transverse colon is commonly referred to as proximal or right-sided, whereas cancer occurring in the descending or sigmoid colon or rectum is referred to as left-sided.
- Cancers of the appendix and anus are excluded from CRC statistics herein because, despite their proximity, they usually originate from different cell types and/or have different characteristics

Figure 2. Colorectal Cancer Growth

- When a polyp (noncancerous growth in the lining of the colon or rectum) progresses to cancer, it usually grows into the wall of the colon or rectum, where it may invade blood or lymph vessels.
- The extent to which cancer has spread at the time of diagnosis is described as its stage.
- Stages according to the Surveillance, Epidemiology, and End Results (SEER) summary system are:
  - Localized, grown into the wall of the colon or rectum but not into nearby tissues
  - Regional, spread through the wall of the colon or rectum and invading nearby tissues or lymph nodes
  - Distant, spread to other parts of the body (e.g. liver or lung)



	Colon & Rectum				
	Age, years	**Male**	**Female**	**Total**	**Percent**
CASES	0-49	10,560	8,990	19,550	13%
	50-64	28,810	19,400	48,210	32%
	65+	42,490	42,770	85,260	56%
	All ages	81,860	71,160	153,020	100%
	Colon				
	0-49	6,410	5,960	12,370	12%
	50-64	17,500	12,300	29,800	28%
	65+	30,510	34,290	64,800	61%
	All ages	54,420	52,550	106,970	100%
	Rectum				
	0-49	4,150	3,030	7,180	16%
	50-64	11,310	7,100	18,410	40%
	65+	11,980	8,480	20,460	44%
	All ages	27,440	18,610	46,050	100%
DEATHS*	**Colorectum**				
	0-49	2,150	1,600	3,750	7%
	50-64	8,030	5,130	13,160	25%
	65+	18,290	17,350	35,640	68%
	All ages	28,470	24,080	52,550	100%

Estimates are rounded to the nearest 10. *Colon and rectal cancer deaths are not presented separately due to the high rate of misclassification.

Table 1. Estimated Number of New Colorectal Cancer Cases and Deaths by Age and Sex, 2023, US

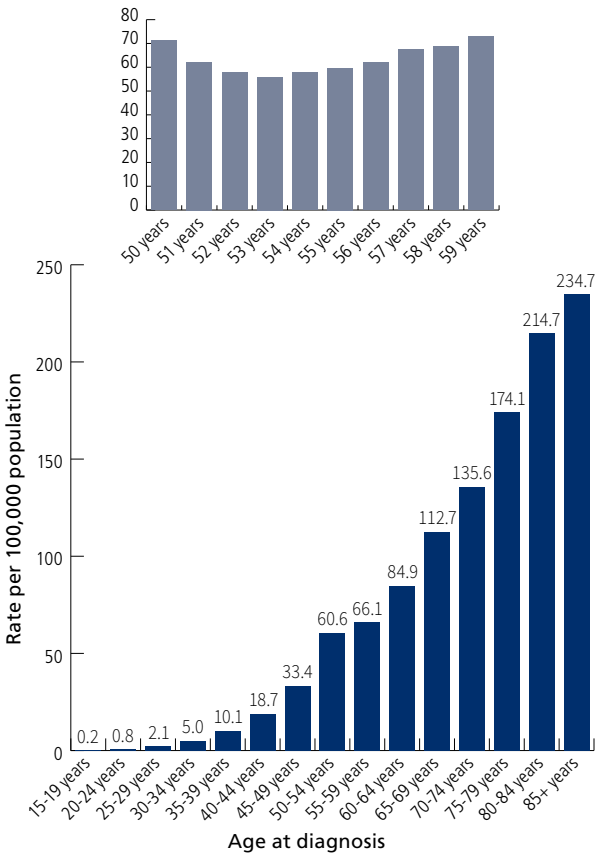
- In 2023, approximately 153,020 individuals will be diagnosed with CRC and 52,550 will die from the disease, including 19,550 cases and 3,750 deaths in individuals younger than 50 years of age.
- There will be 46,050 new cases of rectal cancer, which is more common in younger people; for example, 37% of CRC in people younger than 50 years of age occurs in the rectum versus 24% in people 65 years or older.
- Although the risk of colorectal cancer is higher in men than in women, the number of new cases in people ages 65 years and older is similar because of higher life expectancy in women.

Factors that increase risk:		Relative Risk*
Heredity and medical history		
Family history		
At least 1 first-degree relative		2.2
At least 1 first-degree relative with diagnosis before age 50		3.6
More than 1 first-degree relative relative		4.0
At least 1 second-degree relative		1.7
Inflammatory bowel disease		1.7
Type 2 diabetes		
Male		1.4
Female		1.2†
Behavioral factors		
Heavy alcohol consumption (daily average >3 drinks)		1.3
Obesity (body mass index ≥30 kg/m2)		1.3
Colon	Male	1.5
	Female	1.1
Rectum	Male	1.3
	Female	1.0
Red meat consumption (100 g/day)		1.1
Processed meat consumption (50 g/day)		1.2
Smoking (current vs. never)		
Promixal colon		1.2
Distal colon		1.1
Rectum		1.3
Factors that decrease risk:		
Physical activity (colon)		0.7
Dairy consumption (400 g/day)		0.9

*The risk of disease in people with a particular "exposure" compared to people without the exposure. For dietary factors the highest versus lowest consumption is compared. A value greater than 1 indicates higher risk with exposure, whereas less than 1 is a protective effect. †The association was not statistically significant.

Table 2. Established Colorectal Cancer Risk Factors

- In the US, more than half (55%) of all CRCs are attributable to lifestyle factors, such as an unhealthy diet, insufficient physical activity, high alcohol consumption, and smoking.
- However, the strongest risk factor is a family history of the disease; people with a first-degree relative (parent, sibling, or child) who has been diagnosed with CRC have 2 to 4 times the risk of developing the disease compared to people without this family history, with a higher risk when diagnosis is before age 50 and when multiple relatives are affected.
- Up to 30% of people diagnosed with CRC have a family history of the disease, which is why these individuals should begin screening early; young people with a family history should have a conversation with their health care provider about when to start screening.

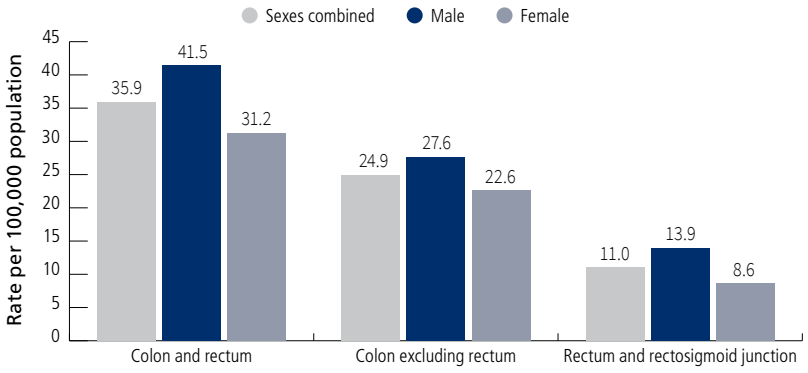


Rates exclude appendix and are age-adjusted to the 2000 US standard population.

Sources: Main figure, North American Association of Central Cancer Registries 2022; Inset: Surveillance, Epidemiology, and End Results Program 2022.

Figure 3. Age-specific Colorectal Cancer Incidence, 2015-2019, US

- The risk of CRC increases rapidly with age; incidence rates increase by about 80% to 100% with each 5-year age group until 50 years of age and then by 20% to 30% from ages 55-59 years upward.
- However, from ages 50-54 to 55-59 years, there is only a 9% increase because the natural age-related pattern of detecting symptomatic cancer is disrupted by the detection of precancers and prevalent cancers in asymptomatic persons through the introduction of screening, which was recommended to begin at age 50 until 2018.
- Because of the initiation of screening, the CRC incidence rate is higher in individuals ages 50 and 51 years than in those ages 52 and 53 years (figure inset).

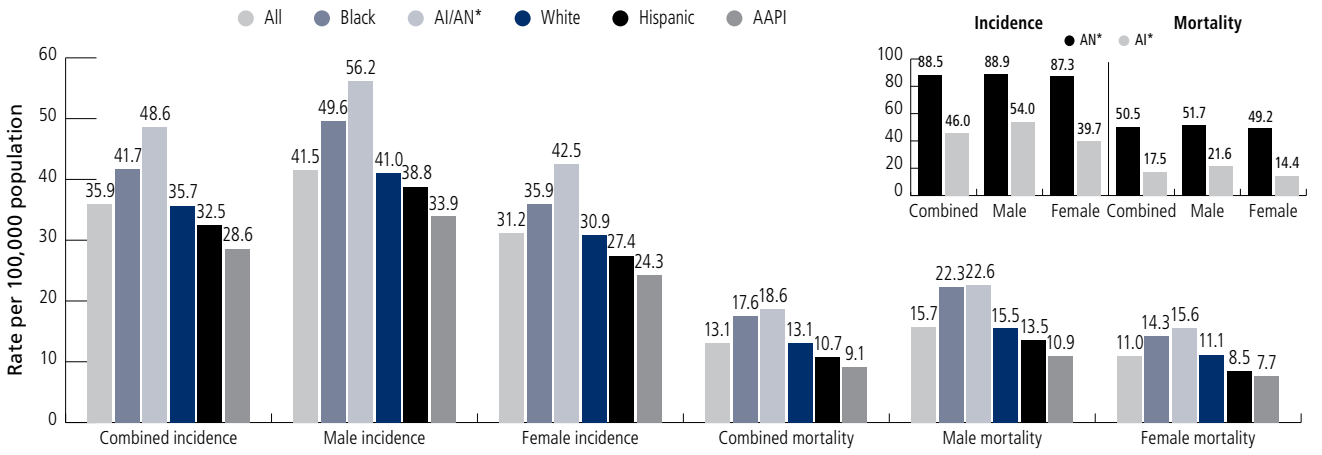


Rates exclude appendix and are age adjusted to the 2000 US standard population.

Source: North American Association of Central Cancer Registries 2022.

Figure 4. Colorectal Cancer Incidence by Subsite and Sex, 2015-2019, US

- During the most recent five years, the annual age-standardized CRC incidence rate was 35.9 overall and 33% higher in men (41.5 per 100,000) than in women (31.2 per 100,000).
- The sex disparity by subsite ranges from 10% for proximal colon cancer to 61% for rectal cancer.

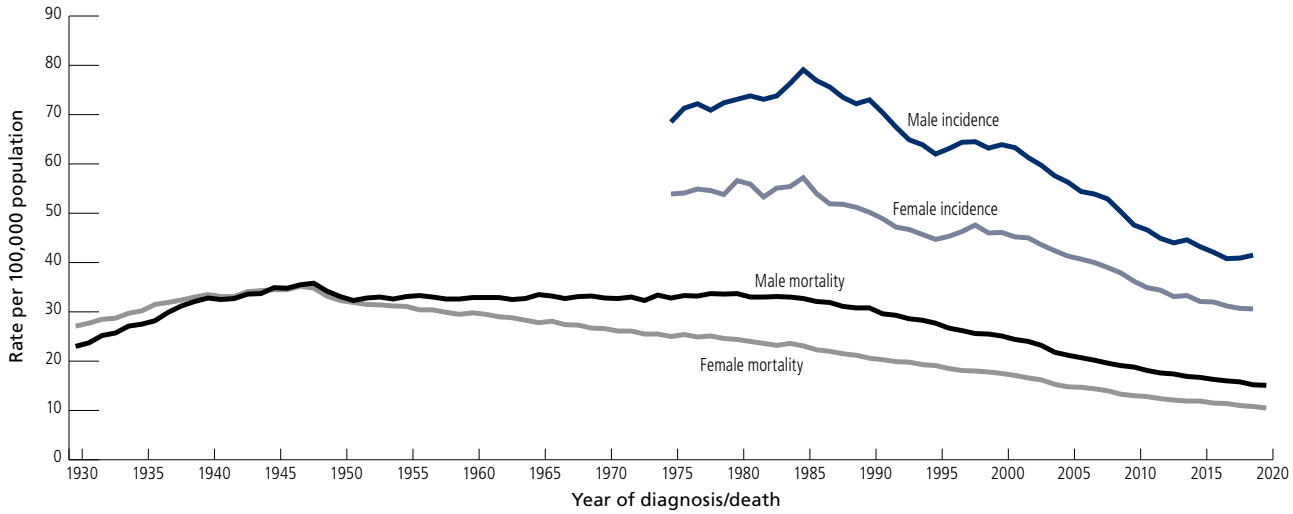


*To reduce racial misclassification, incidence rates are limited to Purchased/Referred Care Delivery Area counties and mortality rates (for the entire United States) are adjusted using factors published by the National Center for Health Statistics. Incidence excludes appendix; all rates are age adjusted to the 2000 US standard population. AI indicates American Indian; AN indicates Alaska Native; AAPI indicates Asian American/Pacific Islander. All racial groups are exclusive of Hispanic ethnicity.

Sources: Incidence: North American Association of Central Cancer Registries, 2022. Mortality: National Center for Health Statistics, Centers for Disease Control and Prevention, 2022.

Figure 5. Colorectal Cancer Incidence (2015-2019) and Mortality (2016-2020) by Race, Ethnicity, and Sex, US

- During the most recent five years, the overall annual age-standardized CRC mortality rate was 13.1 per 100,000 and was 43% higher in men (15.7) than in women (11.0).
- CRC incidence is highest in American Indian and Alaska Native individuals (48.6 per 100,000), followed by non-Hispanic Black individuals (41.7), and lowest in Asian Americans/Pacific Islander people (28.6).
- However, the broad racial and ethnic groups to which cancer statistics are generally limited mask striking differences within these heterogeneous populations; for example, Japanese and Native Hawaiian people have higher CRC incidence than White people (uhcancercenter.org/research/shared-resources/hawaii-tumor-registry), and Alaska Native individuals have two-fold higher incidence (88.5 per 100,000) and mortality (50.5 per 100,000) than American Indian individuals (46 and 17.5, respectively).



Due to changes in International Classification of Diseases (ICD) coding for mortality, numerator information has changed over time. All rates are age adjusted to the 2000 US standard population. Incidence rates are adjusted for reporting delays and exclude appendix.

Sources: Incidence: Surveillance, Epidemiology, and End Results (SEER) Program, SEER 8 registries, National Cancer Institute, 2022. Mortality: US Mortality Volumes 1930 to 1968, US Mortality Data 1969-2020, National Center for Health Statistics, Centers for Disease Control and Prevention, 2022.

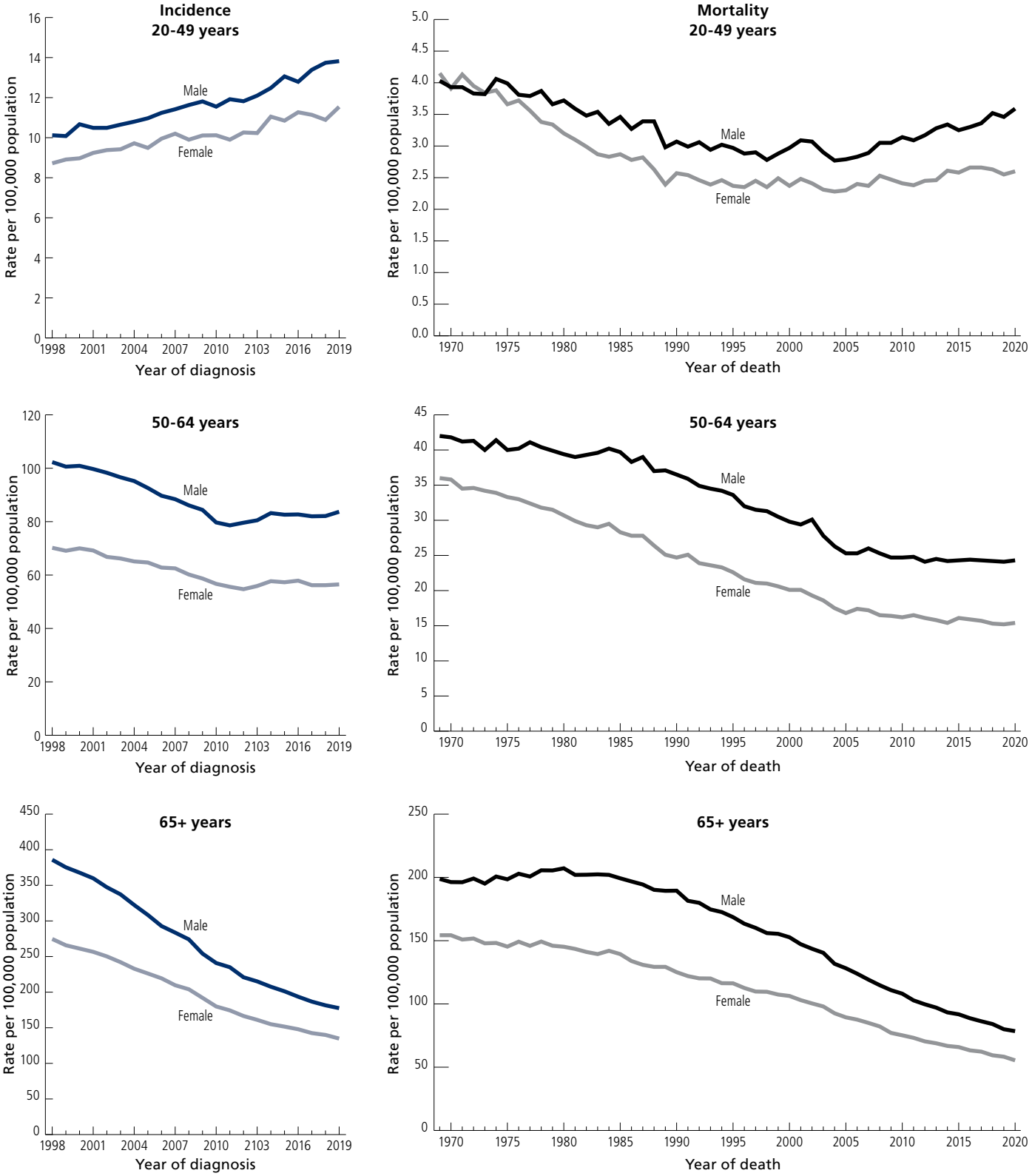
Figure 6. Long-term Trends in Colorectal Cancer Incidence (1975-2019) and Mortality (1930-2020) by Sex, US

- In men and women combined, the age-standardized CRC incidence rate has decreased from 66.2 per 100,000 at its peak in 1985 to 35.5 per 100,000 in 2019, an overall decline of 46%, because of changing patterns in risk factors (e.g., declines in smoking) and the uptake of screening.
- Declines in incidence, earlier detection, and improvements in treatment have resulted in a 57% drop in the overall CRC death rate from 1970 (29.2 per 100,000) to 2020 (12.6 per 100,000).
- The pace of these declines has slowed from 3% to 4% annually during the 2000s to 1% annually for incidence and 2% annually for mortality during the past decade, at least in part because population screening is approaching saturation and rates are increasing or stable in middle-aged and younger individuals.

Figure 7. Trends in Colorectal Cancer Incidence (1998-2019) and Mortality (1970-2020) by Age and Sex, US (page 7)

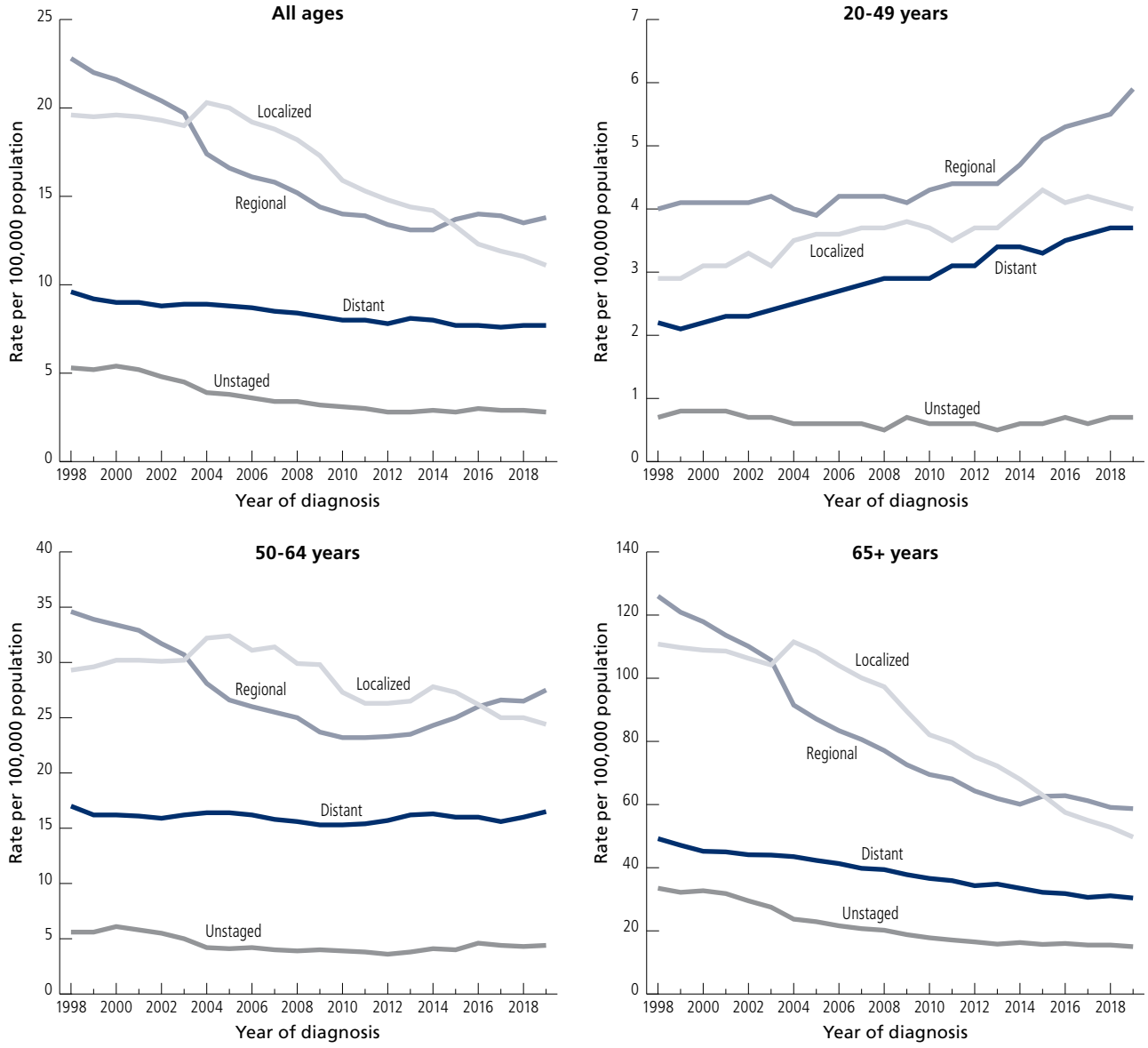
- Overall CRC trends are driven by older individuals who have the highest rates, masking trends in younger age groups.
- For example, despite overall declines during the past decade, incidence rates increased by about 2% per year in individuals younger than 50 years of age and were stable in those 50-64 years of age.
- These incidence trends are rapidly shifting the patient population younger; in 2019, 20% (1 in 5) of CRCs were in people ages 54 years or younger, up from 11% in 1995, despite this age group shrinking in the overall population from 80% to 71%.
- Reflecting incidence trends, CRC death rates from 2011 to 2020 increased by about 1% annually in individuals younger than 50 years of age in contrast with decreases of 0.5% annually in individuals ages 50-64 years and 3% annually among individuals 65 years and older.

Figure 7. Trends in Colorectal Cancer Incidence (1998-2019) and Mortality (1970-2020) by Age and Sex, US



Rates are age adjusted to the 2000 US standard population. Incidence rates are adjusted for reporting delays and exclude appendix.

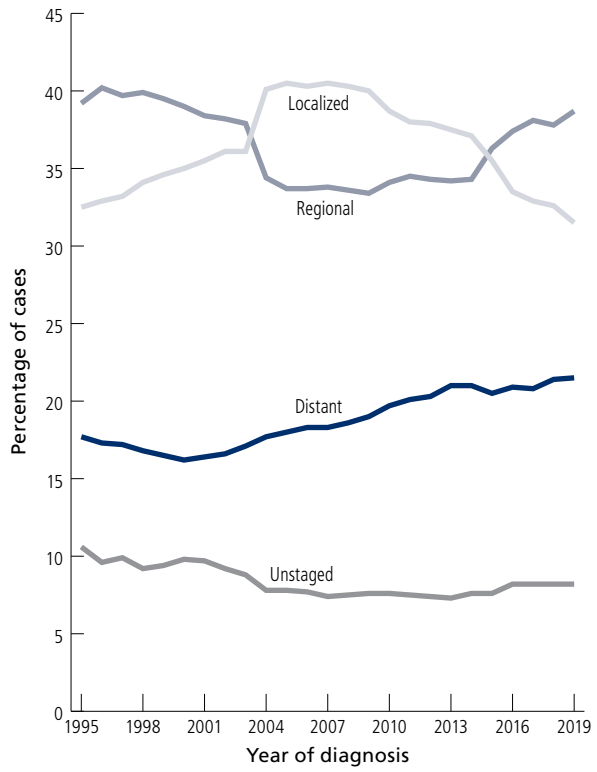
Sources: Incidence: North American Association of Central Cancer Registries, 2022. Mortality: National Center for Health Statistics, Centers for Disease Control and Prevention, 2022.



Incidence rates exclude appendiceal cancer, are age adjusted to the 2000 US standard population, and adjusted for reporting delays.
Source: North American Association of Central Cancer Registries, 2022.

Figure 8. Trends in Colorectal Cancer Incidence by Age and Stage at Diagnosis, 1998-2019, US

- Over the past decade, incidence has declined steeply for localized-stage disease (by about 4% annually from 2006 to 2019 overall) but ticked up for advanced disease, especially in people younger than 65 years of age.
- Since circa 2010, rates increased for regional- and distant-stage disease by about 3% per year in people younger than 50 years of age and by 2% and 0.5% per year, respectively, in people ages 50-64 years while stabilizing in people 65 years of age and older since about 2015.
- As a result, a crossover in the incidence of localized- and regional-stage disease has occurred such that regional stage is now the most common diagnosis in people older than 50 years of age, as well as in younger adults.

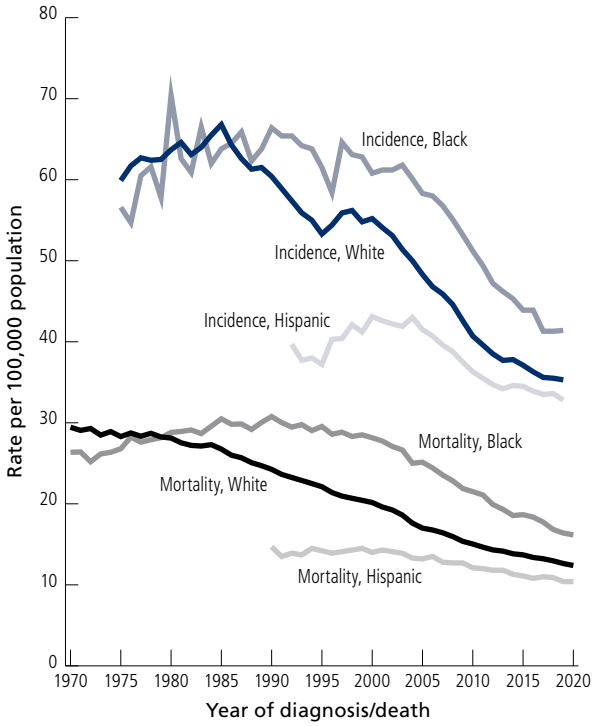


Excludes appendiceal cancer.

Source: North American Association of Central Cancer Registries, 2022.

Figure 9. Trends in Colorectal Cancer Stage Distribution (%), 1995-2019, US

- The proportion of localized-stage disease increased from 33% in 1995 to 41% in 2005, with a parallel decline in regional-stage disease from 39% to 34%, because of widespread uptake of colonoscopy and the detection of asymptomatic cancer.
- However, these trends subsequently reversed, and the proportion of distant-stage disease increased; consequently, the proportion of advanced-stage diagnoses increased from a low of 52% during 2005-2008 to 60% in 2019.
- Although some of the shift to advanced disease may be due to improved staging, the proportion of unstaged tumors increased from about 7% during 2012-2013 to >8% during 2016-2019.

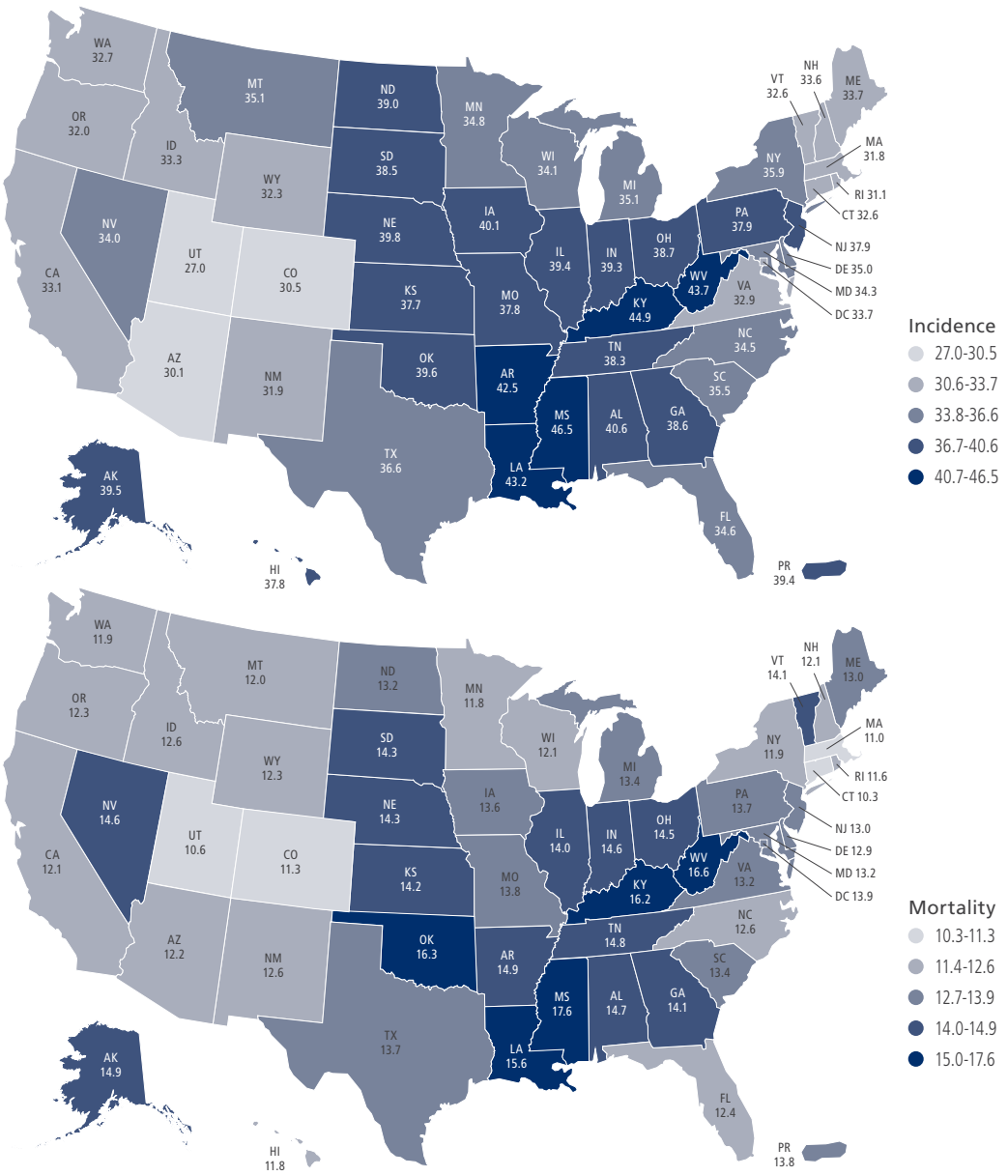


Rates are age adjusted to the 2000 US standard population. Incidence rates are adjusted for reporting delays and exclude appendix. White and Black race are not exclusive of Hispanic ethnicity.

Sources: Incidence – Surveillance, Epidemiology, and End Results Program, 2022; Mortality - National Center for Health Statistics, Centers for Disease Control and Prevention, 2022.

Figure 10. Trends in Colorectal Cancer Incidence (1975-2019) and Mortality (1970-2020) by Race and Ethnicity, US

- Incidence rates in Black individuals were similar to those in White individuals before the late 1980s, but were 25% higher by 2010, partly due to less access to high-quality CRC screening and follow-up; the disparity has leveled at 15% since 2017.
- The racial gap narrowed because of steeper declines among Black individuals; since 2011, incidence rates have declined by about 2% annually among Black individuals versus 1% annually among White individuals.
- Colorectal cancer death rates declined during 2011-2020 by 3% annually in Black persons and about 2% annually in all other racial and ethnic groups.



Nevada incidence data did not meet North American Association of Central Cancer Registries (NAACCR) high-quality standards for one or more years during 2015-2019 and are based on data published in NAACCR's *Cancer in North America, Volume II*, which include appendiceal cancer; all other incidence rates exclude appendix. Mortality Rates for Puerto Rico were obtained from State Cancer Profiles (statecancerprofiles.cancer.gov/). Rates are age adjusted to the 2000 US standard population and presented per 100,000 persons.

Sources: Incidence: North American Association of Central Cancer Registries, 2022; Mortality: National Center for Health Statistics, Centers for Disease Control and Prevention, 2022.

Figure 11 and Table 3 (page 11). Colorectal Cancer Incidence (2015-2019) and Mortality (2016-2020) by State, US

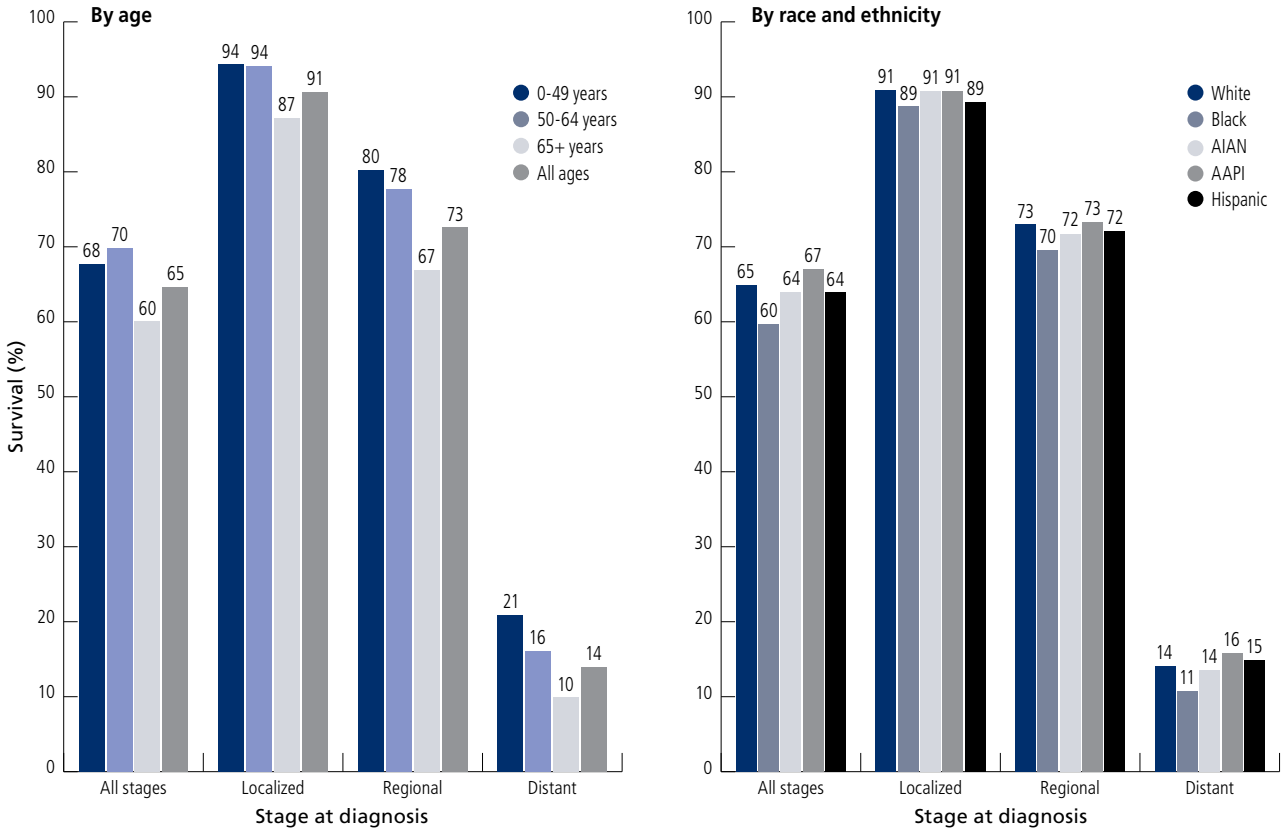
- The CRC burden is highest in parts of the South, Midwest, and Appalachia and lowest in the West, with incidence ranging from 46.5 per 100,000 persons in Mississippi to 27 in Utah.
- Geographic variation reflects differences in the prevalence of both CRC risk factors, such as smoking and excess body weight, and access to high-quality health care, including screening, and is similar across race and ethnicity.

Table 3. Colorectal Cancer Incidence (2015-2019) and Mortality (2016-2020) by Sex, Race, Ethnicity, and State, US

	Incidence						Mortality					
	Men			Women			Men			Women		
State	NHW	NHB	Hispanic	NHW	NHB	Hispanic	NHW	NHB	Hispanic	NHW	NHB	Hispanic
Alabama	45.7	54.5	25.3	33.9	39.3	21.3	17.1	24.3	6.4	11.4	15.5	4.0
Alaska	37.4	†	†	29.1	†	†	14.0	†	†	11.2	†	†
Arizona	34.8	32.3	36.5	26.3	29.2	26.0	14.5	17.1	15.4	10.1	13.4	9.2
Arkansas	48.1	63.1	21.8	34.6	47.7	26.7	17.6	26.1	5.6	11.8	19.3	3.9
California	37.8	42.8	37.3	29.4	34.0	26.8	14.3	20.8	13.6	11.0	14.2	8.8
Colorado	32.8	39.8	41.6	26.1	33.7	29.1	12.5	20.9	15.9	9.5	13.6	11.3
Connecticut	37.2	43.6	44.5	27.2	33.6	27.3	12.7	14.8	11.7	8.5	10.6	5.8
Delaware	40.5	47.5	34.4	30.1	32.0	36.8	15.2	19.4	12.5	11.5	11.8	†
Dist. of Columbia	22.1	49.1	26.3	20.9	35.7	22.7	8.4	22.6	12.6	6.2	17.5	†
Florida	39.3	44.8	40.6	29.9	32.5	28.9	14.7	20.1	14.3	10.4	13.2	9.1
Georgia	44.6	52.5	35.7	30.9	37.7	35.4	16.3	22.4	9.2	11.1	13.8	6.5
Hawaii	40.0	43.0	65.5	32.4	†	48.5	13.9	13.6	19.4	11.1	†	13.7
Idaho	38.3	†	31.9	28.6	†	26.2	14.7	†	12.8	10.9	†	8.6
Illinois	45.6	57.6	38.5	33.4	42.4	28.0	16.2	27.3	12.3	11.6	16.5	7.1
Indiana	45.8	50.9	31.5	34.4	34.9	28.2	17.3	24.3	9.8	12.4	14.5	8.2
Iowa	45.7	63.7	35.2	35.0	42.0	27.0	16.3	28.5	7.4	11.6	14.4	6.7
Kansas	43.3	42.9	35.6	32.2	36.1	29.2	16.9	17.6	14.7	12.0	14.7	6.6
Kentucky	52.8	55.5	29.2	38.3	40.7	25.2	19.4	23.1	†	13.7	14.9	6.0
Louisiana	48.4	62.7	27.8	34.7	43.6	20.0	17.3	26.7	7.5	11.5	16.7	6.6
Maine	37.5	†	†	30.5	†	†	14.7	†	†	11.5	†	†
Maryland	38.1	45.5	21.1	31.0	33.1	21.8	14.7	21.2	6.9	11.2	13.3	5.3
Massachusetts	36.4	42.2	30.8	27.9	29.4	20.8	13.3	16.1	8.5	9.5	9.6	6.0
Michigan	38.4	52.7	31.5	30.2	37.0	24.0	15.1	23.1	12.1	11.2	15.0	7.0
Minnesota	39.4	48.7	32.8	29.8	29.1	33.2	13.9	16.8	6.5	9.8	9.6	10.1
Mississippi	50.1	68.3	29.5	36.9	45.2	^	20.0	28.1	7.9	13.0	16.7	†
Missouri	43.2	50.0	31.8	32.4	38.3	21.8	16.7	21.4	7.3	11.2	14.7	5.1
Montana	41.0	†	†	28.6	†	†	13.9	†	†	9.7	†	†
Nebraska	44.2	49.6	38.6	35.7	36.1	32.3	17.0	20.8	10.8	12.4	15.2	7.0
Nevada‡	38.2	43.1	32.2	31.1	30.6	23.8	17.5	24.4	12.5	13.3	17.0	6.6
New Hampshire	38.9	†	†	29.4	†	†	14.8	†	18.1	10.3	†	†
New Jersey	44.4	51.9	41.8	33.3	37.1	28.2	15.8	22.8	11.5	11.5	14.3	8.5
New Mexico	33.6	25.5	40.4	25.3	†	30.6	13.5	16.9	17.9	9.4	12.7	11.5
New York	41.3	46.3	40.2	31.2	33.4	27.6	14.0	17.7	11.7	10.4	12.7	7.4
North Carolina	38.9	46.1	27.9	29.0	32.8	26.9	14.3	20.5	8.1	10.3	13.3	7.1
North Dakota	43.3	†	†	32.6	†	†	15.7	†	†	10.3	†	†
Ohio	44.1	44.2	29.4	33.4	33.1	20.6	17.3	22.0	9.3	12.1	14.4	7.6
Oklahoma	43.5	47.2	38.2	32.3	38.5	27.5	19.3	25.1	12.4	13.3	18.7	5.9
Oregon	36.1	32.2	31.7	28.0	27.2	25.5	14.5	14.8	9.9	10.8	7.2	8.6
Pennsylvania	43.7	46.1	36.9	32.7	33.4	27.9	16.4	20.6	12.7	11.4	14.2	9.0
Rhode Island	35.9	28.0	28.3	26.8	21.2	20.9	13.2	10.0	6.9	11.4	7.1	5.0
South Carolina	39.7	50.6	23.8	29.3	33.6	21.9	15.4	23.9	10.8	10.1	13.6	4.6
South Dakota	44.1	†	†	32.5	†	†	16.7	†	†	11.7	†	†
Tennessee	44.1	53.2	23.3	32.2	37.6	18.9	17.2	25.9	8.4	11.9	15.4	3.9
Texas	43.4	54.2	44.8	30.4	38.1	27.8	16.9	25.6	16.3	11.2	15.3	9.0
Utah	29.6	†	36.7	23.3	†	31.2	11.9	†	10.7	9.4	†	9.1
Vermont	38.0	†	†	27.7	†	†	15.9	†	†	13.0	†	†
Virginia	36.7	45.3	22.8	28.8	32.0	20.1	15.3	23.2	7.6	10.8	13.7	5.6
Washington	36.1	40.5	33.2	28.6	36.1	24.3	14.2	15.6	11.0	10.4	13.9	5.5
West Virginia	50.3	44.5	†	38.2	38.4	†	20.2	23.8	†	13.8	13.8	†
Wisconsin	37.7	59.6	35.6	29.1	40.8	24.2	13.9	25.8	13.0	10.1	15.6	7.2
Wyoming	34.8	†	39.4	28.4	†	32.9	13.4	†	20.9	11.1	†	†
United States	**41.0**	**49.6**	**38.8**	**30.9**	**35.9**	**27.4**	**15.5**	**22.3**	**13.5**	**11.1**	**14.3**	**8.5**

*Rates are per 100,000 and age adjusted to the 2000 US standard population. †Statistics not displayed due to fewer than 25 cases or 10 deaths. ‡Incidence data for Nevada are not included in US combined incidence rates because it did not meet high-quality standards for all years during 2015-2019 according to the North American Association of Central Cancer Registries (NAACCR). Incidence rates for Nevada are based on data published in NAACCR's *Cancer in North America, Volume II*. NHB indicates Non-Hispanic Black; NHW indicates Non-Hispanic White.

Sources: Incidence: North American Association of Central Cancer Registries, 2022. Mortality: National Center for Health Statistics,Centers for Disease Control and Prevention, 2022.

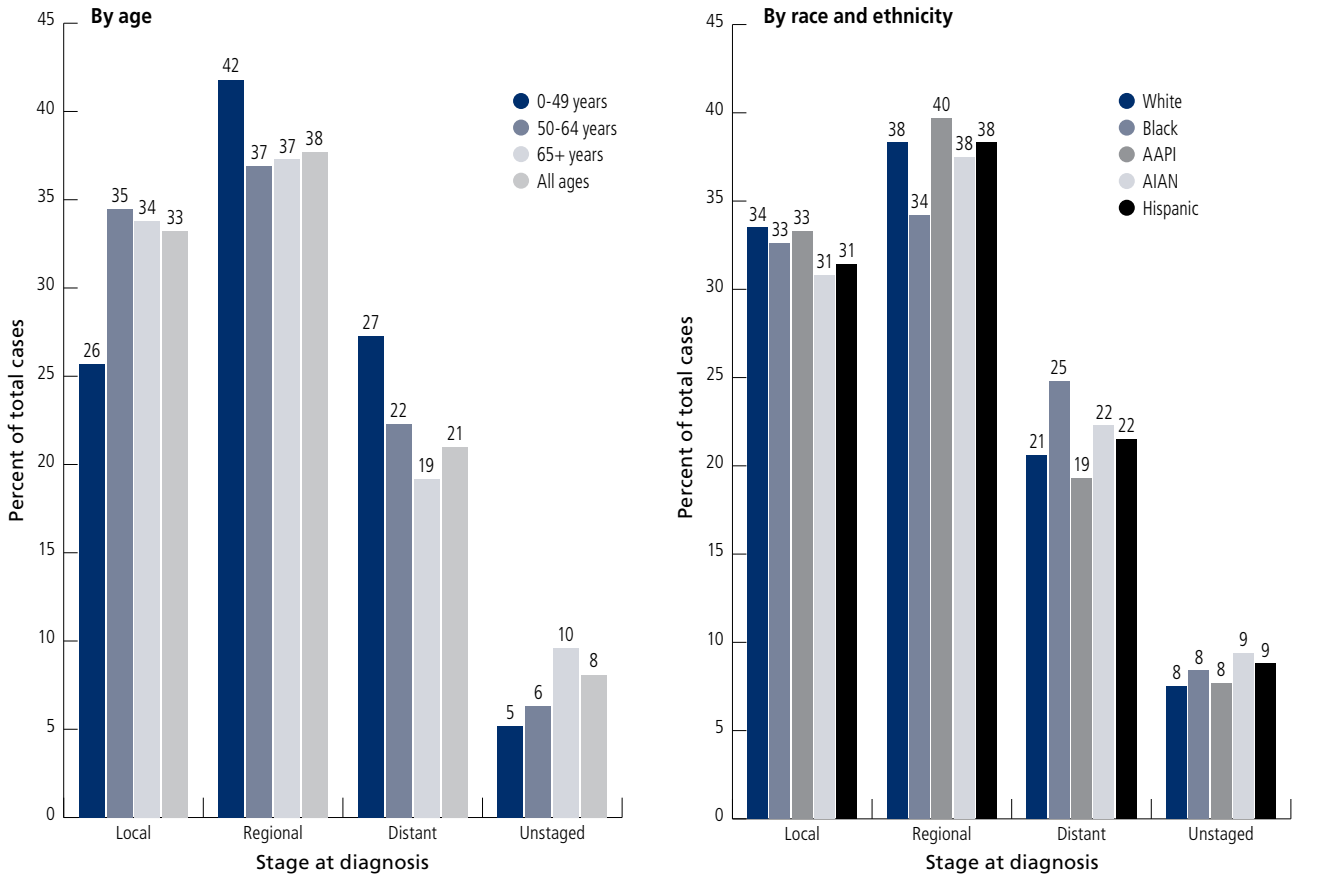


Rates are based on cases diagnosed from 2012 to 2018, all followed through 2019. Rates for the American Indian/Alaska Native (AI/AN) population are based on small case numbers, particularly for distant-stage disease. AAPI indicates Asian American/Pacific Islander. All racial groups are exclusive of Hispanic ethnicity.

Source: Surveillance, Epidemiology, and End Results Program, 2022.

Figure 12. Colorectal Cancer 5-year Relative Survival (%) by Stage at Diagnosis, Race, Ethnicity, and Age, 2012-2018, US

- The 5-year relative survival rate for CRC has increased from 50% in the mid-1970s to 65% during 2012-2018.
- However, there are large differences by age and race and ethnicity that reflect access to care, stage at diagnosis, and the prevalence of other health issues; for example, survival ranges from 60% in ages 65 and older to 70% in individuals ages 50-64 years and from 60% in Black individuals to 67% in Asian American and Pacific Islander individuals.



Data for the American Indian/Alaska Native (AI/AN) population are based on small case numbers, particularly for distant-stage disease. AAPI indicates Asian American/Pacific Islander. All racial groups are exclusive of Hispanic ethnicity.

Source: North American Association of Central Cancer Registries, 2022.

Figure 13. Colorectal Cancer Stage Distribution (%) by Race and Ethnicity, 2015-2019, US

- Stage at diagnosis is the most important factor in survival; overall survival is highest in individuals ages 50-64 years because they are most likely to be diagnosed at a localized stage – 35% versus 26% of individuals younger than 50 years of age.
- Stage also plays a prominent role in racial and ethnic survival disparities; Black individuals are most likely to be diagnosed with distant-stage CRC (25% versus 21% of White individuals and 19% of AAPI individuals).

Table 4. Characteristics of Recommended Colorectal Cancer Screening Tests

	Benefits	Performance & complexity*	Limitations	Test time interval
Visual examinations				
Colonoscopy	• Examines entire colon • Can biopsy and remove polyps • Can diagnose other diseases • Required for abnormal results from all other tests	Performance: Highest Complexity: Highest	• Full bowel cleansing • Can be expensive • Sedation usually needed, necessitating a chaperone to return home • Patient may miss a day of work • Highest risk of bowel tears or infections compared with other tests	10 years
Computed tomographic colonography (CTC)	• Examines entire colon • Fairly quick • Few complications • No sedation needed • Noninvasive	Performance: High (for large polyps) Complexity: Intermediate	• Full bowel cleansing • Cannot remove polyps or perform biopsies • Exposure to low-dose radiation • Colonoscopy necessary if positive • Not covered by all insurance plans	5 years
Flexible sigmoidoscopy	• Fairly quick • Few complications • Minimal bowel preparation • Does not require sedation or a specialist	Performance: High for rectum and lower one-third of the colon Complexity: Intermediate	• Partial bowel cleansing • Views only one-third of colon • Cannot remove large polyps • Small risk of infection or bowel tear • Slightly more effective when combined with annual fecal occult blood testing • Colonoscopy necessary if positive • Limited availability	5 years
Stool tests (Low-sensitivity stool tests, such as single-sample FOBT done in the doctor's office or toilet bowl tests are not recommended)				
Fecal immunochemical test (FIT)	• No bowel cleansing or sedation • Performed at home • Low cost • Noninvasive	Performance: Intermediate for cancer Complexity: Low	• Requires multiple stool samples • Will miss most polyps • May produce false-positive test results • Slightly more effective when combined with a flexible sigmoidoscopy every 5 years • Colonoscopy necessary if positive	Annual
High-sensitivity guaiac-based fecal occult blood test (gFOBT)	• No bowel cleansing • Performed at home • Low cost • Noninvasive	Performance: Intermediate for cancer Complexity: Low	• Requires multiple stool samples • Will miss most polyps • May produce false-positive test results • Pre-test dietary limitations • Slightly more effective when combined with a flexible sigmoidoscopy every 5 years • Colonoscopy necessary if positive	Annual
FIT-DNA test (Cologuard®)	• No bowel cleansing • Can be performed at home • Requires only a single stool sample • Noninvasive	Performance: Intermediate for cancer Complexity: Low	• Will miss most polyps • More false-positive results than other tests • Higher cost than gFOBT and FIT • Colonoscopy necessary if positive	3 years, per manufacturer's recommendation

*Complexity involves patient preparation, inconvenience, facilities and equipment needed, and patient discomfort.

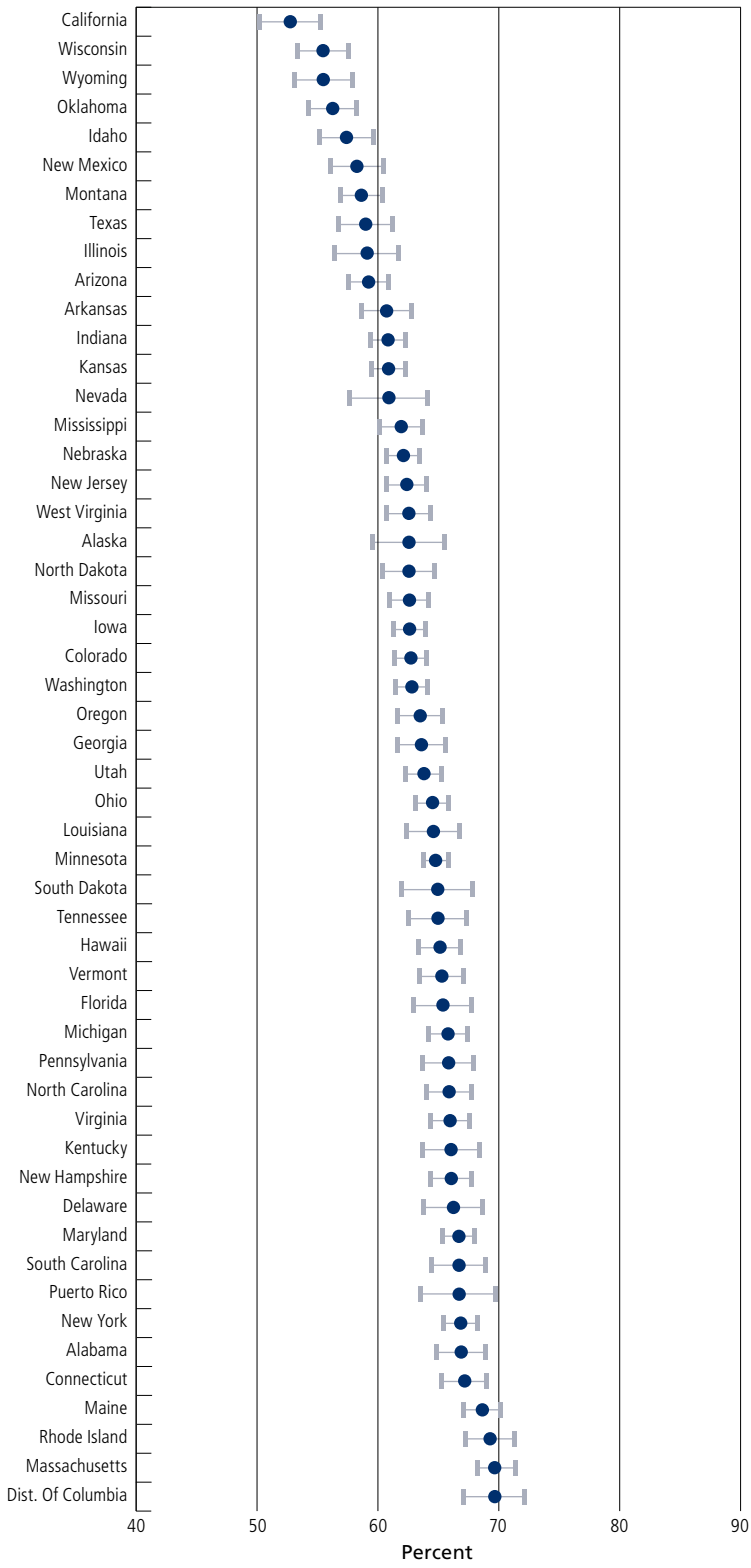
	Stool test*	Colonoscopy†	Up to date‡	
	≥45 years	≥45 years	≥45 years	45-75
Overall	10	54	59	58
Sex				
Males	9	54	58	56
Females	10	55	60	60
Age (years)				
45-49	3	18	20	20
50-54	9	43	50	51
55-64	11	65	70	72
65-75	§	§	§	83
65-74	15	74	80	§
75+	10	67	70	§
Race/Ethnicity				
Hispanic	14	46	52	51
White only	9	57	61	60
Black only	11	57	61	59
Asian only	10	45	50	48
AIAN only or multiple	10	48	52	52
Sexual orientation				
Gay/Lesbian	12	57	64	61
Straight	10	55	59	58
Bisexual	§	48	51	57
Immigration status				
Born in US/US Territory	9	57	61	60
In US fewer than 10 years	9	25	29	30
In US 10+ years	12	48	53	52
Education				
Less than high school	11	43	48	47
High school diploma	9	51	55	54
Some college	11	56	61	59
College graduate	9	60	64	63
Income level				
<100% FPL	11	42	47	46
100 to <200% FPL	12	47	52	51
≥200% FPL	9	58	62	61
Insurance status				
Uninsured	4	18	21	22
Private	9	59	63	64
Medicaid/Public/Dual eligible	11	48	52	53
Medicare (ages ≥65 years)	15	69	75	82
Other	15	68	73	74

FPL: federal poverty level; AIAN: American Indian and Alaska Native. *Fecal occult blood test (FOBT) OR fecal immuno-chemical test (FIT) within the past 1 year OR sDNA test within the past 3 years. †Within the past 10 years. ‡Up to date indicates testing with any recommended test within the appropriate time interval (see Table 4). §Data were unavailable or unstable.

Source: National Health Interview Survey, 2021.

Table 5. Colorectal Cancer Screening (%) in Adults 45 Years and Older, 2021, US

- The American Cancer Society has recommended that CRC screening begin at age 45 years since 2018 (cancer.org/cancer/colon-rectal-cancer/detection-diagnosis-staging/acs-recommendations.html), and the US Preventive Services Task Force concurred in their 2021 update.
- According to the National Health Interview Survey, up-to-date CRC screening prevalence among adults ages 45 years and older reached 59% in 2021.
- Screening is lowest among ages 45-49 years (20%), Asian Americans (50%), individuals with less than a high school education (48%), the uninsured (21%), and recent immigrants (29%).
- Colonoscopy is the most common test in the US, with the highest prevalence in ages 65-74 years (74% versus 18% in ages 45-49 years and 43% in ages 50-54 years).



Up to date indicates testing with any recommended test within the appropriate time interval (see Table 4). Prevalence is age adjusted to the 2000 US standard population and does not distinguish between examinations for screening and diagnosis.

Source: Behavioral Risk Factors Surveillance System, 2020.

Figure 14. Up-to-date Colorectal Cancer Screening (%) by State in Adults 45 Years and Older, 2020, US

- According to data from the 2020 Behavioral Risk Factor Surveillance System, screening prevalence ranged from 53% in California to 70% in Massachusetts and the District of Columbia.
- Screening is generally highest in the Northeast and lowest in the West.

Table 6. Colorectal Cancer Screening (%) by State, Adults 45 Years and Older, 2020, US

- According to data from the 2020 Behavioral Risk Factor Surveillance System, screening prevalence ranged from 55% in California to 71% in Massachusetts and Rhode Island among White people; from 57% in Colorado and Washington to 72% in Maryland and Florida among Black people; and from 34% in Oklahoma to 72% in Michigan among Hispanic people.
- In all states, screening is substantially lower in people ages 45-54 years than in older individuals, with the lowest prevalence in Idaho and New Mexico (30%) and the highest in the District of Columbia (47%) and Puerto Rico (50%).

	Up-to-date screening*						
State	45-54 years	All races	White	Black	Hispanic	Colonoscopy†	Stool test‡
Alabama	45	67	68	65	§	62	8
Alaska	39	63	61	§	71	56	6
Arizona	33	59	62	62	56	51	11
Arkansas	37	61	60	67	§	53	10
California	33	53	55	61	53	37	17
Colorado	36	63	65	57	55	56	8
Connecticut	41	67	68	63	64	62	7
Delaware	40	66	67	64	44	61	5
Dist. of Columbia	47	70	69	71	68	61	11
Florida	37	65	64	72	64	55	16
Georgia	38	64	62	69	50	58	10
Hawaii	38	65	65	§	64	54	17
Idaho	30	57	58	§	51	52	6
Illinois	36	59	61	59	52	55	5
Indiana	36	61	62	59	50	54	7
Iowa	36	63	64	62	36	58	6
Kansas	38	61	62	64	53	56	6
Kentucky	44	66	66	67	§	59	8
Louisiana	41	65	64	68	62	58	8
Maine	44	69	69	§	64	63	8
Maryland	42	67	65	72	59	60	9
Massachusetts	43	70	71	65	68	66	7
Michigan	38	66	66	66	72	60	9
Minnesota	38	65	65	67	52	59	7
Mississippi	39	62	61	64	§	57	7
Missouri	39	63	62	67	69	58	7
Montana	33	59	59	§	62	53	8
Nebraska	38	62	63	62	43	57	5
Nevada	35	61	61	62	56	54	11
New Hampshire	39	66	67	§	§	61	5
New Jersey	37	62	63	69	58	56	8
New Mexico	30	58	59	§	58	52	8
New York	44	67	68	68	67	61	8
North Carolina	40	66	66	70	49	59	9
North Dakota	41	63	63	§	§	57	7
Ohio	41	65	64	68	65	58	8
Oklahoma	31	56	58	61	34	50	9
Oregon	40	64	64	§	55	54	12
Pennsylvania	43	66	66	70	57	60	7
Rhode Island	45	69	71	68	66	63	7
South Carolina	42	67	66	71	§	60	9
South Dakota	39	65	66	§	47	60	5
Tennessee	38	65	66	68	§	58	8
Texas	32	59	64	61	53	50	11
Utah	37	64	66	§	58	60	5
Vermont	43	65	65	§	§	61	5
Virginia	41	66	66	70	63	60	9
Washington	36	63	64	57	59	55	10
West Virginia	42	63	63	58	§	57	8
Wisconsin	37	55	56	66	58	47	6
Wyoming	35	55	57	§	47	51	4
Puerto Rico	50	67	§	§	67	43	40

†Within the past 10 years. ‡Fecal occult blood test or fecal immunochemical test in the past year or stool DNA test in the past 3 years. §Data were unavailable or unstable.

Source: Behavioral Risk Factor Surveillance System, 2020.

Sources of Statistics

New cancer cases. The estimated number of CRC cases in the US in 2023 was projected using a spatiotemporal model based on incidence data from 50 states and the District of Columbia for the years 2005 to 2019 that met the North American Association of Central Cancer Registries' (NAACCR's) high-quality data standards. For a more detailed description of this method, please see Liu et al (ncbi.nlm.nih.gov/pmc/articles/PMC8419141/) and Miller et al (aacrjournals.org/cebp/article/30/11/1993/670678/Updated-Methodology-for-Projecting-U-S-and-State).

Incidence rates. Incidence rates are defined as the number of people newly diagnosed with cancer during a given time period per 100,000 population at risk. CRC incidence rates for the US were calculated using case data from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute, the National Program of Cancer Registries of the Centers for Disease Control and Prevention, and NAACCR, as well as population data collected by the US Census Bureau. All incidence rates are exclusive of appendiceal cancer, and annual rates used to quantify temporal trends were adjusted for delays in case reporting. Incidence rates for Alaska Natives are based on cases reported by the Alaska Native Tumor Registry (ANTR) of the SEER Program; rates for American Indians, excluding Alaska Natives, are based on NAACCR Purchased/Referred Care Delivery Area (PRCDA) county regions, excluding the ANTR. Rate for the state of Nevada are based on data published in NAACCR's *Cancer in North America, Volume II*. Incidence rates are age adjusted to the 2000 US standard population.

Estimated cancer deaths. The estimated number of CRC deaths in the US in 2023 was calculated by fitting the actual number of CRC deaths from 2006 through 2020 to a statistical model that forecasts the number of deaths three years ahead. The actual number of deaths was obtained from the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention. For a more detailed description of this method, please see Chen et al. (ncbi.nlm.nih.gov/pmc/articles/PMC8419141/) and Miller et al. (aacrjournals.org/cebp/article/30/11/1993/670678/Updated-Methodology-for-Projecting-U-S-and-State).

Important note about estimated cases and deaths. The projected number of new cancer cases and deaths for the current year is model based and should not be used to track cancer trends. Age-standardized incidence and mortality rates are used to examine temporal changes in cancer occurrence.

Mortality rates. Mortality rates, or death rates, are defined as the number of people who die from cancer during a given time period per 100,000 population. Mortality rates are based on counts of cancer deaths compiled by NCHS and population data from the US Census Bureau. Death rates for American Indian and Alaska Native persons are based on deaths occurring in the entire US and Alaska, respectively, and were adjusted for racial misclassification using factors published by Arias et al. (cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-12.pdf). Due to data limitations, there may be a small degree of cross contamination between rates for American Indians and Alaska Natives where they are presented separately. Mortality rates for Puerto Rico were obtained from State Cancer Profiles (statecancerprofiles.cancer.gov/). Death rates are age adjusted to the 2000 US standard population.

Survival. Relative survival rates were calculated using data from the SEER registries. Relative survival rates account for normal life expectancy by comparing overall survival among a group of cancer patients to that of people not diagnosed with cancer who are of the same age, race, and sex. The 5-year relative survival presented in this report includes patients diagnosed from 2012 through 2018 and followed through 2019 and was calculated using SEER*Stat. See surveillance.cancer.gov/survival/ for more information.

Screening. The prevalence of CRC screening nationally among US adults was obtained from the National Health Interview Survey (NHIS) 2021 data file (cdc.gov/nchs/nhis.htm). The NHIS is a centralized survey conducted by the US Census Bureau and designed to provide national prevalence estimates on health characteristics such as cancer screening behaviors. The methodology was redesigned in 2019 so information presented herein is not comparable with that prior to 2019. Data are collected through in-person interviews except during the first four months of 2021 and for some localities in following months.

Prevalence data for CRC screening by state were from the 2020 Behavioral Risk Factor Surveillance System (BRFSS) public use data tapes, obtained from the National Center for Chronic Disease Prevention and Health Promotion at the Centers for Disease Control and Prevention. The BRFSS was designed to provide state prevalence estimates of health behaviors and was conducted by state health departments. The BRFSS is a telephone survey, so prevalence estimates are limited to those adults who have a cell phone or who live in a household with a residential telephone line. Prevalence rates are age adjusted to the 2000 US standard population.

American Cancer Society Recommendations for the Early Detection of Cancer in Average-risk Asymptomatic People*

Cancer Site	Population	Test or Procedure	Recommendation
Breast	Women, ages 40-54	Mammography	Women should have the opportunity to begin annual screening between the ages of 40 and 44. Women should undergo regular screening mammography starting at age 45. Women ages 45 to 54 should be screened annually.
	Women, ages 55+		Transition to biennial screening, or have the opportunity to continue annual screening. Continue screening as long as overall health is good and life expectancy is 10+ years.
Cervix	Women, ages 25-65	HPV DNA test, **OR** Pap test & HPV DNA test	**Preferred:** Primary HPV test alone every 5 years with an FDA-approved test for primary HPV screening. **Acceptable:** Co-testing (HPV test and Pap test) every 5 years or Pap test alone every 3 years.
	Women, ages >65		Discontinue screening if results from regular screening in the past 10 years were negative, with the most recent test within the past 5 years.
	Women who have been vaccinated against HPV		Follow age-specific screening recommendations (same as unvaccinated individuals).
	Women who have had a total hysterectomy		Individuals without a cervix and without a history of cervical cancer or a history of CIN2 or a more severe diagnosis in the past 25 years should not be screened.
Colorectal†	Men and women, ages 45+	Guaiac-based fecal occult blood test (gFOBT) with at least 50% sensitivity or fecal immunochemical test (FIT) with at least 50% sensitivity, **OR**	Annual testing of spontaneously passed stool specimens. Single stool testing during a clinician office visit is not recommended, nor are "throw in the toilet bowl" tests. In comparison with guaiac-based tests for the detection of occult blood, immunochemical tests are more patient-friendly and are likely to be equal or better in sensitivity and specificity. There is no justification for repeating FOBT in response to an initial positive finding.
		Multi-target stool DNA test, **OR**	Every 3 years
		Flexible sigmoidoscopy (FSIG), **OR**	Every 5 years alone, or consideration can be given to combining FSIG performed every 5 years with a highly sensitive gFOBT or FIT performed annually
		Colonoscopy, **OR**	Every 10 years
		CT Colonography	Every 5 years
Endometrial	Women at menopause		Women should be informed about risks and symptoms of endometrial cancer and encouraged to report unexpected bleeding to a physician.
Lung	Current or former smokers ages 50-80 in fairly good health with 20+ pack-year history	Low-dose helical CT (LDCT)	The American Cancer Society is currently reviewing the new scientific evidence for lung cancer screening. In the interim we recommend following the updated guidelines from the US Preventive Services Task Force (uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening), which recommends annual LDCT screening in adults ages 50-80 who have a 20-pack year smoking history and currently smoke or have quit within the past 15 years.
Prostate	Men, ages 50+	Prostate-specific antigen test with or without digital rectal examination	Men who have at least a 10-year life expectancy should have an opportunity to make an informed decision with their health care provider about whether to be screened for prostate cancer, after receiving information about the potential benefits, risks, and uncertainties associated with prostate cancer screening. Prostate cancer screening should not occur without an informed decision-making process. African American men should have this conversation with their provider beginning at age 45.

CT-Computed tomography. *All individuals should become familiar with the potential benefits, limitations, and harms associated with cancer screening.
†All positive tests (other than colonoscopy) should be followed up with colonoscopy.

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