

Table 6.1
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Both Sexes by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-85	0.8*	1985-95	-1.8*	1995-98	1.5	1998-08	-2.3*	2008-12	-4.0*	2012-16	-0.3	-2.2*	-0.3
White	1975-85	0.8*	1985-95	-2.0*	1995-98	1.6	1998-08	-2.5*	2008-11	-4.9*	2011-16	-0.7	-2.3*	-0.7
Black	1975-80	3.3*	1980-03	-0.1	2003-16	-2.7*							-2.7*	-2.7*
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-08	-2.5*	2008-12	-3.5*	2012-16	-1.0*							-2.3*	-1.0*
White	2000-12	-3.0*	2012-16	-1.3*									-2.2*	-1.3*
White NH ^{ef}	2000-12	-3.0*	2012-16	-1.1									-2.1*	-1.1
Black	2000-03	0.0	2003-09	-2.1*	2009-12	-3.9*	2012-16	-1.8*					-2.6*	-1.8*
Black NH ^{ef}	2000-03	0.5	2003-16	-2.5*									-2.5*	-2.5*
API ^e	2000-16	-2.2*											-2.2*	-2.2*
AI/AN ^{eg}	2000-16	-0.1											-0.1	-0.1
Hispanic ^f	2000-04	-0.1	2004-13	-2.5*	2013-16	-0.1							-1.7*	-0.7
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-78	0.2	1978-85	-0.8*	1985-02	-1.8*	2002-05	-3.8*	2005-12	-2.6*	2012-16	-1.8*	-2.2*	-1.8*
White	1975-78	0.2	1978-85	-1.0*	1985-02	-1.9*	2002-05	-3.8*	2005-12	-2.5*	2012-16	-1.6*	-2.1*	-1.6*
Black	1975-90	0.6*	1990-01	-0.8*	2001-16	-2.9*							-2.9*	-2.9*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-10	-2.9*	2010-16	-2.0*									-2.3*	-2.0*
White	2000-10	-3.0*	2010-16	-1.8*									-2.2*	-1.8*
White NH ^{ef}	2000-10	-3.0*	2010-16	-1.7*									-2.2*	-1.7*
Black	2000-16	-2.9*											-2.9*	-2.9*
Black NH ^{ef}	2000-16	-2.8*											-2.8*	-2.8*
API ^e	2000-16	-2.0*											-2.0*	-2.0*
AI/AN ^{eg}	2000-16	-0.8											-0.8	-0.8
Hispanic ^f	2000-16	-1.8*											-1.8*	-1.8*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (<https://surveillance.cancer.gov/joinpoint/>).

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

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

^g Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 6.2
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Males by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-85	1.1*	1985-91	-1.2*	1991-95	-3.2*	1995-98	2.3	1998-13	-3.0*	2013-16	-0.6	-2.2*	-1.2
White	1975-86	1.1*	1986-95	-2.3*	1995-98	1.4	1998-07	-2.9*	2007-12	-4.1*	2012-16	-0.4	-2.5*	-0.4
Black	1975-80	4.5	1980-02	0.0	2002-16	-2.7*							-2.7*	-2.7*
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-12	-3.1*	2012-16	-1.6*									-2.4*	-1.6*
White	2000-12	-3.3*	2012-16	-1.4*									-2.5*	-1.4*
White NH ^{ef}	2000-12	-3.4*	2012-16	-1.2									-2.4*	-1.2
Black	2000-16	-2.3*											-2.3*	-2.3*
Black NH ^{ef}	2000-16	-2.2*											-2.2*	-2.2*
API ^e	2000-16	-2.2*											-2.2*	-2.2*
AI/AN ^{eg}	2000-16	-0.3											-0.3	-0.3
Hispanic ^f	2000-08	-1.2*	2008-12	-4.2*	2012-16	-0.6							-2.3*	-0.6
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-79	0.6	1979-87	-0.6*	1987-02	-1.9*	2002-05	-4.2*	2005-16	-2.4*			-2.4*	-2.4*
White	1975-79	0.6	1979-87	-0.8*	1987-02	-2.1*	2002-05	-4.1*	2005-12	-2.6*	2012-16	-1.8*	-2.3*	-1.8*
Black	1975-90	1.2*	1990-02	-0.7*	2002-16	-2.8*							-2.8*	-2.8*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-02	-2.1*	2002-05	-4.0*	2005-12	-2.6*	2012-16	-2.0*					-2.3*	-2.0*
White	2000-02	-2.1*	2002-05	-4.2*	2005-12	-2.6*	2012-16	-1.8*					-2.3*	-1.8*
White NH ^{ef}	2000-02	-2.2*	2002-05	-4.1*	2005-12	-2.7*	2012-16	-1.7*					-2.3*	-1.7*
Black	2000-16	-2.7*											-2.7*	-2.7*
Black NH ^{ef}	2000-16	-2.6*											-2.6*	-2.6*
API ^e	2000-16	-2.2*											-2.2*	-2.2*
AI/AN ^{eg}	2000-16	-0.7											-0.7	-0.7
Hispanic ^f	2000-16	-1.7*											-1.7*	-1.7*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (<https://surveillance.cancer.gov/joinpoint/>).

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

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

^g Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 6.3
Cancer of the Colon and Rectum (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Females by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-85	0.3	1985-95	-1.9*	1995-98	1.9	1998-08	-2.1*	2008-13	-3.7*	2013-16	0.8	-2.0*	-0.3
White	1975-85	0.3	1985-95	-2.1*	1995-98	2.0	1998-08	-2.2*	2008-11	-4.6*	2011-16	-0.6	-2.1*	-0.6
Black	1975-05	-0.1	2005-13	-4.3*	2013-16	1.9							-2.3*	0.3
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-08	-2.3*	2008-12	-3.4*	2012-16	-1.0*							-2.2*	-1.0*
White	2000-08	-2.5*	2008-12	-3.3*	2012-16	-0.7							-2.1*	-0.7
White NH ^{ef}	2000-13	-2.7*	2013-16	-0.4									-1.9*	-1.0
Black	2000-03	0.4	2003-16	-2.7*									-2.7*	-2.7*
Black NH ^{ef}	2000-02	2.1	2002-16	-2.6*									-2.6*	-2.6*
API ^e	2000-08	-1.3*	2008-16	-3.3*									-3.1*	-3.3*
AI/AN ^{eg}	2000-02	16.0	2002-09	-2.7	2009-16	2.1							1.0	2.1
Hispanic ^f	2000-04	-0.2	2004-12	-2.4*	2012-16	-0.2							-1.4*	-0.2
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-84	-1.0*	1984-01	-1.8*	2001-12	-2.9*	2012-16	-1.6*					-2.3*	-1.6*
White	1975-84	-1.2*	1984-01	-2.0*	2001-10	-2.9*	2010-16	-1.8*					-2.2*	-1.8*
Black	1975-85	0.8*	1985-01	-0.7*	2001-16	-3.3*							-3.3*	-3.3*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-12	-2.9*	2012-16	-1.5*									-2.3*	-1.5*
White	2000-10	-3.0*	2010-16	-1.8*									-2.2*	-1.8*
White NH ^{ef}	2000-10	-3.0*	2010-16	-1.7*									-2.1*	-1.7*
Black	2000-16	-3.2*											-3.2*	-3.2*
Black NH ^{ef}	2000-16	-3.1*											-3.1*	-3.1*
API ^e	2000-16	-1.8*											-1.8*	-1.8*
AI/AN ^{eg}	2000-16	-1.0											-1.0	-1.0
Hispanic ^f	2000-16	-2.2*											-2.2*	-2.2*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (<https://surveillance.cancer.gov/joinpoint/>).

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

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

^g Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

- Joinpoint regression line analysis could not be performed on data series.

Table 6.4
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)

Trends in SEER 9 Observed Incidence^a Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints,
By Race and Sex

		JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d
		Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2012-16
<u>SEER 9 Observed Incidence^a for Cancer of the Colon, 1975-2016</u>														
All Races	Both Sexes	1975-85	1.1*	1985-95	-1.6*	1995-00	0.0	2000-08	-2.7*	2008-11	-4.9*	2011-16	-1.5*	-1.5*
All Races	Male	1975-85	1.7*	1985-02	-1.4*	2002-12	-3.6*	2012-16	-1.8					-1.8
All Races	Female	1975-85	0.6*	1985-93	-1.8*	1993-01	-0.3	2001-08	-2.5*	2008-11	-4.9	2011-16	-1.2	-1.2
White	Both Sexes	1975-85	1.1*	1985-95	-1.9*	1995-98	1.4	1998-08	-2.5*	2008-11	-5.4*	2011-16	-1.3*	-1.3*
White	Male	1975-86	1.6*	1986-95	-2.2*	1995-98	1.0	1998-08	-3.0*	2008-11	-5.5*	2011-16	-1.6*	-1.6*
White	Female	1975-85	0.6	1985-93	-2.1*	1993-01	-0.2	2001-16	-2.8*					-2.8*
Black	Both Sexes	1975-80	3.5*	1980-02	0.0	2002-16	-3.1*							-3.1*
Black	Male	1975-01	0.5*	2001-16	-3.3*									-3.3*
Black	Female	1975-02	0.0	2002-16	-3.2*									-3.2*
<u>SEER 9 Observed Incidence^a for Cancer of the Rectum, 1975-2016</u>														
All Races	Both Sexes	1975-87	-0.3	1987-95	-2.4*	1995-98	2.6	1998-13	-2.3*	2013-16	1.0			0.2
All Races	Male	1975-89	-0.3	1989-94	-3.7*	1994-98	1.8	1998-12	-2.6*	2012-16	-0.1			-0.1
All Races	Female	1975-84	-0.2	1984-95	-2.2*	1995-98	2.5	1998-13	-2.2*	2013-16	1.2			0.3
White	Both Sexes	1975-85	-0.1	1985-95	-2.3*	1995-98	2.5	1998-13	-2.6*	2013-16	1.6			0.5
White	Male	1975-89	-0.3	1989-94	-3.9*	1994-99	1.1	1999-12	-3.1*	2012-16	0.4			0.4
White	Female	1975-84	-0.2	1984-95	-2.3*	1995-98	2.4	1998-13	-2.4*	2013-16	1.6			0.6
Black	Both Sexes	1975-09	-0.1	2009-14	-5.5*	2014-16	10.0							1.9
Black	Male	1975-04	0.1	2004-16	-1.8*									-1.8*
Black	Female	1975-09	-0.1	2009-14	-6.8*	2014-16	14.3							3.2

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (<https://surveillance.cancer.gov/joinpoint/>).
The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).
The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.
* The APC/AAPC is significantly different from zero (p<.05).
- Joinpoint regression line analysis could not be performed on data series.

Table 6.5
Cancer of the Colon and Rectum (Invasive)

Delay-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-1979	61.57	72.07	54.53	62.29	73.21	55.10	58.74	64.39	54.86
1980	63.75	74.55	56.54	63.95	74.88	56.84	70.83	79.71	64.23
1981	64.24	75.80	56.49	64.86	76.65	57.14	62.83	72.89	55.97
1982	62.78	75.20	54.49	63.45	76.28	55.03	61.25	68.97	55.92
1983	63.66	75.55	55.61	64.24	76.51	56.02	66.79	75.80	61.13
1984	64.80	77.65	56.05	65.81	79.26	56.71	62.54	70.57	58.20
1985	66.30	79.19	57.31	67.19	80.20	58.36	64.13	74.56	56.39
1986	64.18	77.79	54.69	64.57	78.89	54.71	64.68	72.98	58.88
1987	62.74	77.53	52.68	62.92	78.25	52.64	66.28	77.63	59.01
1988	61.38	75.20	51.81	61.56	75.78	51.75	63.00	72.41	56.62
1989	61.70	74.99	52.42	61.95	75.45	52.65	64.52	79.41	54.76
1990	60.70	74.36	51.28	60.66	74.75	51.03	66.87	75.15	61.66
1991	59.48	72.91	50.04	59.28	73.09	49.64	65.71	76.42	58.27
1992	58.00	70.41	49.22	57.82	70.66	48.70	65.66	78.59	57.57
1993	56.79	68.44	48.30	56.32	68.08	47.79	64.44	78.14	55.15
1994	55.64	66.28	47.73	55.39	66.33	47.19	64.51	75.45	57.98
1995	54.06	63.85	46.93	53.71	63.41	46.63	62.04	71.49	55.98
1996	54.79	65.61	46.68	54.74	65.94	46.35	58.67	66.74	53.12
1997	56.40	68.07	47.94	56.34	67.84	48.00	64.73	77.77	56.26
1998	56.80	67.10	49.33	56.69	67.24	49.00	63.36	74.49	56.38
1999	55.48	65.77	47.83	55.32	65.90	47.22	63.52	72.47	58.30
2000	54.15	63.70	46.78	53.83	63.12	46.55	64.55	74.40	58.15
2001	53.62	63.09	46.23	53.04	62.71	45.38	64.69	75.53	57.69
2002	53.17	61.55	46.64	52.34	60.40	45.91	63.31	74.32	56.56
2003	50.82	59.52	43.94	50.25	58.59	43.48	62.77	75.87	54.68
2004	49.91	58.63	43.18	49.05	57.89	42.10	62.58	74.48	54.72
2005	47.82	55.24	41.92	47.40	55.09	41.15	58.71	65.41	55.05
2006	46.89	53.32	41.67	46.16	52.69	40.69	58.40	65.62	53.68
2007	46.41	53.34	40.72	45.52	52.20	39.97	57.93	66.04	52.16
2008	45.31	51.58	40.12	44.52	50.53	39.48	54.92	64.55	47.90
2009	43.38	49.06	38.73	42.11	47.56	37.52	53.95	61.14	49.45
2010	41.05	47.15	36.11	39.76	45.79	34.71	49.93	57.06	45.27
2011	39.75	45.53	35.02	38.66	43.81	34.33	48.46	56.15	43.11
2012	38.90	44.05	34.54	38.06	42.67	34.03	48.26	57.19	41.90
2013	37.65	43.42	32.81	36.50	41.24	32.47	47.31	58.98	39.06
2014	38.76	44.01	34.34	38.01	42.67	33.99	44.98	51.70	40.18
2015	37.42	42.09	33.30	36.73	41.18	32.72	45.67	53.74	39.52
2016	38.02	43.07	33.71	37.12	41.72	33.07	46.88	52.54	42.89

Reference: [Cancer Incidence Rates Adjusted for Reporting Delay](#).

Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).

SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

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

Delay-adjusted rate is not shown for observed rates based on less than 16 cases for the time interval.

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Table 6.6
Cancer of the Colon and Rectum (Invasive)

Age-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	52.15	60.87	45.51	52.20	60.90	45.54	58.02	67.09	51.95
1975-1979	61.57	72.07	54.53	62.29	73.21	55.10	58.74	64.39	54.86
1980	63.75	74.55	56.54	63.95	74.88	56.84	70.83	79.71	64.23
1981	64.24	75.80	56.49	64.86	76.65	57.14	62.83	72.89	55.97
1982	62.78	75.20	54.49	63.45	76.28	55.03	61.25	68.97	55.92
1983	63.66	75.55	55.61	64.24	76.51	56.02	66.79	75.80	61.13
1984	64.80	77.65	56.05	65.81	79.26	56.71	62.54	70.57	58.20
1985	66.30	79.19	57.31	67.19	80.20	58.36	64.13	74.56	56.39
1986	64.18	77.79	54.69	64.57	78.89	54.71	64.68	72.98	58.88
1987	62.74	77.53	52.68	62.92	78.25	52.64	66.28	72.63	59.01
1988	61.38	75.20	51.81	61.56	75.78	51.75	63.00	72.41	56.62
1989	61.70	74.99	52.42	61.95	75.45	52.65	64.52	79.41	54.76
1990	60.70	74.36	51.28	60.66	74.75	51.03	66.87	75.15	61.66
1991	59.48	72.91	50.04	59.28	73.09	49.64	65.71	76.42	58.27
1992	58.00	70.41	49.22	57.82	70.66	48.70	65.66	78.59	57.57
1993	56.79	68.44	48.30	56.32	68.08	47.79	64.44	78.14	55.15
1994	55.64	66.28	47.73	55.39	66.33	47.19	64.51	75.45	57.98
1995	54.06	63.85	46.93	53.71	63.41	46.63	62.04	71.49	55.98
1996	54.79	65.61	46.68	54.74	65.94	46.35	58.67	66.74	53.12
1997	56.40	68.07	47.94	56.34	67.84	48.00	64.73	77.77	56.26
1998	56.80	67.10	49.33	56.69	67.24	49.00	63.36	74.49	56.38
1999	55.48	65.77	47.83	55.32	65.90	47.22	63.52	72.47	58.30
2000	54.15	63.70	46.78	53.83	63.12	46.55	64.55	74.40	58.15
2001	53.62	63.09	46.23	53.04	62.71	45.38	64.69	75.53	57.69
2002	53.17	61.55	46.64	52.34	60.40	45.91	63.31	74.32	56.56
2003	50.82	59.52	43.94	50.25	58.59	43.48	62.77	75.87	54.68
2004	49.91	58.63	43.18	49.05	57.89	42.10	62.58	74.48	54.72
2005	47.82	55.24	41.92	47.40	55.09	41.15	58.71	65.41	55.05
2006	46.89	53.32	41.67	46.16	52.69	40.69	58.40	65.62	53.68
2007	46.41	53.34	40.72	45.52	52.20	39.97	57.93	66.04	52.16
2008	45.29	51.55	40.09	44.50	50.50	39.46	54.81	64.42	47.80
2009	43.33	49.01	38.68	42.06	47.50	37.47	53.72	60.87	49.25
2010	40.98	47.07	36.04	39.68	45.70	34.64	49.62	56.72	44.99
2011	39.66	45.42	34.94	38.56	43.69	34.24	48.06	55.68	42.76
2012	38.79	43.92	34.45	37.94	42.53	33.92	47.76	56.60	41.47
2013	37.52	43.26	32.69	36.35	41.07	32.34	46.73	58.27	38.57
2014	38.57	43.79	34.17	37.80	42.43	33.81	44.30	50.90	39.59
2015	37.15	41.80	33.06	36.42	40.83	32.45	44.80	52.77	38.73
2016	37.51	42.48	33.25	36.54	41.06	32.56	45.52	51.04	41.64

^a Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).
SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.7
Cancer of the Colon (Invasive)

Age-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	37.49	42.15	34.00	37.53	42.20	34.01	44.19	50.01	40.42
1975-1979	43.22	48.45	39.89	43.64	49.10	40.23	44.79	48.25	42.59
1980	45.57	50.67	42.34	45.59	50.88	42.34	55.19	58.35	52.85
1981	45.47	51.32	41.73	45.88	51.91	42.13	46.85	50.60	44.36
1982	45.76	53.46	40.66	46.08	54.12	40.84	48.27	52.48	45.19
1983	46.10	53.00	41.63	46.39	53.44	41.85	50.26	58.65	45.25
1984	46.50	54.57	41.30	47.02	55.55	41.57	48.83	54.33	46.05
1985	47.87	55.06	42.93	48.39	55.61	43.62	50.08	57.66	44.33
1986	46.79	54.38	41.56	47.05	55.18	41.48	49.31	55.30	45.46
1987	45.26	54.44	39.18	45.16	54.52	39.10	51.42	59.99	45.73
1988	44.31	52.61	38.67	44.30	52.88	38.44	48.79	54.02	45.32
1989	44.38	52.46	38.96	44.47	52.52	39.17	49.00	60.41	41.70
1990	44.19	51.99	38.92	44.06	52.01	38.75	52.14	57.98	48.56
1991	43.59	51.84	37.90	43.28	51.84	37.38	51.79	57.75	47.77
1992	42.30	49.65	37.25	42.04	49.75	36.71	51.04	60.45	45.43
1993	41.60	48.95	36.32	41.07	48.62	35.67	51.11	60.58	44.93
1994	40.86	46.95	36.36	40.64	47.04	35.84	50.19	57.24	46.30
1995	39.67	45.09	35.86	39.32	44.68	35.50	48.88	55.18	45.36
1996	39.39	45.42	34.88	39.32	45.85	34.42	44.71	48.62	42.13
1997	41.10	48.36	35.99	41.09	48.22	36.13	49.41	59.35	42.73
1998	41.08	46.87	37.08	40.96	47.11	36.61	48.01	54.98	44.25
1999	39.82	45.50	35.67	39.61	45.50	35.13	48.76	55.23	45.12
2000	39.38	44.48	35.48	39.03	43.96	35.22	51.18	57.80	47.05
2001	39.27	44.17	35.52	38.89	43.95	34.94	49.42	56.65	44.83
2002	38.72	43.34	35.14	37.98	42.30	34.55	49.78	57.51	45.00
2003	36.99	41.50	33.40	36.60	40.73	33.20	48.02	57.43	42.33
2004	36.36	41.45	32.54	35.77	40.98	31.79	47.69	55.47	42.66
2005	34.48	38.01	31.71	34.23	38.03	31.15	44.91	49.46	42.77
2006	34.00	37.40	31.23	33.52	36.97	30.62	45.20	49.95	42.00
2007	33.11	36.23	30.61	32.73	35.82	30.26	42.61	46.68	39.56
2008	32.78	36.00	30.10	32.46	35.65	29.77	40.47	45.95	36.53
2009	30.99	33.47	28.98	30.26	32.72	28.17	39.55	44.26	36.98
2010	28.99	32.29	26.33	28.26	31.52	25.52	36.18	40.40	33.61
2011	28.12	31.02	25.74	27.44	29.99	25.27	36.06	41.44	32.43
2012	27.63	29.98	25.67	27.22	29.18	25.50	35.68	41.37	31.76
2013	26.57	29.20	24.37	25.91	27.93	24.20	34.83	42.07	29.80
2014	27.04	29.40	25.09	26.62	28.64	24.96	33.66	37.12	30.99
2015	26.23	28.34	24.37	25.83	27.77	24.11	33.09	38.39	29.10
2016	25.94	28.14	24.07	25.39	27.30	23.72	32.47	35.28	30.62

^a Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).
SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.8
Cancer of the Rectum (Invasive)

Age-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	14.67	18.72	11.51	14.67	18.70	11.53	13.83	17.08	11.53
1975-1979	18.34	23.62	14.64	18.65	24.11	14.87	13.95	16.14	12.28
1980	18.18	23.88	14.20	18.37	23.99	14.50	15.65	21.36	11.38
1981	18.76	24.48	14.76	18.99	24.73	15.01	15.99	22.30	11.61
1982	17.02	21.73	13.83	17.37	22.17	14.19	12.98	16.49	10.73
1983	17.56	22.54	13.98	17.85	23.07	14.18	16.54	17.15	15.89
1984	18.30	23.08	14.74	18.79	23.72	15.14	13.71	16.24	12.15
1985	18.43	24.13	14.38	18.80	24.59	14.73	14.05	16.90	12.06
1986	17.39	23.41	13.13	17.52	23.72	13.23	15.37	17.68	13.41
1987	17.49	23.09	13.50	17.76	23.73	13.54	14.87	17.64	13.29
1988	17.07	22.59	13.14	17.26	22.90	13.30	14.21	18.38	11.30
1989	17.32	22.52	13.46	17.48	22.93	13.48	15.52	19.00	13.05
1990	16.51	22.37	12.36	16.60	22.74	12.28	14.73	17.16	13.10
1991	15.88	21.07	12.14	16.00	21.25	12.26	13.91	18.68	10.50
1992	15.70	20.75	11.97	15.78	20.91	11.99	14.62	18.14	12.14
1993	15.19	19.48	11.98	15.26	19.46	12.12	13.33	17.56	10.22
1994	14.78	19.33	11.37	14.75	19.29	11.35	14.32	18.21	11.68
1995	14.38	18.76	11.07	14.39	18.73	11.12	13.16	16.31	10.63
1996	15.40	20.19	11.79	15.42	20.10	11.93	13.95	18.12	10.99
1997	15.30	19.71	11.95	15.26	19.61	11.87	15.31	18.42	13.52
1998	15.72	20.23	12.25	15.74	20.13	12.38	15.35	19.52	12.13
1999	15.66	20.28	12.16	15.71	20.40	12.08	14.76	17.24	13.18
2000	14.77	19.23	11.30	14.79	19.16	11.33	13.37	16.60	11.10
2001	14.36	18.93	10.71	14.15	18.76	10.44	15.27	18.88	12.86
2002	14.45	18.21	11.50	14.36	18.10	11.36	13.53	16.82	11.55
2003	13.83	18.02	10.54	13.65	17.86	10.29	14.75	18.44	12.35
2004	13.55	17.18	10.64	13.28	16.91	10.31	14.89	19.01	12.06
2005	13.34	17.23	10.21	13.17	17.05	10.00	13.80	15.96	12.28
2006	12.88	15.91	10.44	12.63	15.72	10.07	13.20	15.67	11.68
2007	13.30	17.11	10.11	12.78	16.38	9.71	15.32	19.36	12.60
2008	12.51	15.55	9.99	12.04	14.84	9.69	14.34	18.47	11.27
2009	12.34	15.53	9.70	11.80	14.78	9.30	14.17	16.61	12.27
2010	11.99	14.78	9.71	11.42	14.19	9.12	13.44	16.32	11.38
2011	11.54	14.40	9.20	11.12	13.70	8.97	12.00	14.24	10.33
2012	11.15	13.94	8.77	10.72	13.36	8.41	12.08	15.23	9.71
2013	10.95	14.07	8.32	10.44	13.14	8.14	11.90	16.20	8.77
2014	11.53	14.39	9.08	11.18	13.79	8.85	10.64	13.78	8.61
2015	10.91	13.45	8.69	10.59	13.07	8.34	11.71	14.38	9.63
2016	11.57	14.34	9.18	11.14	13.76	8.84	13.05	15.75	11.02

^a Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).
SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.9
Cancer of the Colon and Rectum (Invasive)

Age-adjusted U.S. Death^a Rates by Year, Race and Sex

Year of Death:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	20.80	24.89	17.84	20.57	24.65	17.59	25.70	31.02	22.26
1975-1979	28.31	33.35	25.00	28.47	33.72	25.04	27.75	31.10	25.49
1980	28.05	33.74	24.35	28.12	33.99	24.32	28.81	33.18	25.89
1981	27.52	32.95	23.97	27.53	33.16	23.85	28.93	32.83	26.32
1982	27.24	32.96	23.55	27.21	33.11	23.42	29.11	33.71	26.12
1983	27.12	33.08	23.23	27.13	33.32	23.11	28.67	32.90	25.82
1984	27.35	33.02	23.61	27.30	33.12	23.49	29.58	34.65	26.22
1985	26.93	32.66	23.11	26.75	32.74	22.77	30.49	34.10	28.04
1986	26.16	32.05	22.31	26.00	32.01	22.07	29.82	35.36	26.35
1987	25.89	31.91	21.95	25.68	31.85	21.63	29.85	35.10	26.48
1988	25.28	31.08	21.46	25.08	31.04	21.16	29.18	34.29	25.88
1989	25.01	30.80	21.16	24.70	30.52	20.82	30.05	36.37	26.07
1990	24.65	30.77	20.64	24.25	30.43	20.18	30.77	37.64	26.59
1991	24.01	29.64	20.30	23.63	29.35	19.85	30.02	35.80	26.50
1992	23.62	29.32	19.85	23.25	28.99	19.42	29.47	36.23	25.43
1993	23.31	28.56	19.77	22.88	28.18	19.28	29.77	35.84	26.04
1994	22.92	28.28	19.28	22.50	27.89	18.84	29.04	35.66	24.88
1995	22.59	27.65	19.14	22.11	27.16	18.64	29.54	36.30	25.47
1996	21.86	26.71	18.51	21.39	26.29	17.98	28.59	34.52	24.86
1997	21.47	26.23	18.11	20.95	25.68	17.59	28.84	35.07	24.80
1998	21.19	25.62	18.03	20.68	25.13	17.48	28.31	33.90	24.78
1999	20.93	25.48	17.75	20.43	24.99	17.20	28.51	34.50	24.70
2000	20.67	25.08	17.50	20.16	24.46	17.02	28.15	34.98	23.88
2001	20.16	24.37	17.12	19.61	23.83	16.52	27.75	33.39	24.26
2002	19.76	24.01	16.63	19.24	23.39	16.13	27.08	33.73	22.96
2003	19.15	23.18	16.19	18.61	22.62	15.62	26.64	32.49	22.92
2004	18.10	21.81	15.34	17.61	21.28	14.85	25.01	30.64	21.41
2005	17.56	21.22	14.83	17.00	20.60	14.27	25.13	30.87	21.45
2006	17.28	20.70	14.73	16.77	20.04	14.27	24.43	31.28	20.30
2007	16.91	20.23	14.36	16.43	19.66	13.90	23.56	29.29	19.87
2008	16.46	19.64	13.98	15.96	18.99	13.54	22.84	28.73	18.95
2009	15.81	19.06	13.28	15.37	18.57	12.84	21.89	26.98	18.54
2010	15.51	18.75	12.99	15.04	18.15	12.57	21.50	27.45	17.62
2011	15.11	18.07	12.77	14.64	17.51	12.33	21.09	26.16	17.71
2012	14.69	17.59	12.37	14.30	17.05	12.05	19.89	25.43	16.18
2013	14.47	17.36	12.13	14.14	16.89	11.88	19.29	24.63	15.69
2014	14.11	16.86	11.88	13.82	16.43	11.67	18.52	23.13	15.29
2015	14.00	16.65	11.84	13.68	16.24	11.55	18.62	23.12	15.52
2016	13.68	16.30	11.53	13.37	15.89	11.25	18.33	22.96	15.09

^a Individual rates for years of death 1975-1979 available in web browser version of [Cancer Statistics Review](#).
US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.10
Cancer of the Colon and Rectum (Invasive)

SEER Incidence^a and U.S. Death^b Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2012-2016									
All ages	38.6	44.2	33.9	38.1	43.4	33.6	44.6	52.4	39.1
Under 65	18.3	20.6	16.2	17.8	19.9	15.7	22.2	25.0	20.0
65 and over	178.5	207.3	156.5	178.6	206.2	157.0	199.1	242.3	171.3
All ages (WHO world std) ^c	28.2	32.3	24.7	27.7	31.6	24.3	33.3	38.9	29.1
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	-	-	0.1	-	-	-	-	-
10-14	0.4	0.3	0.5	0.5	0.4	0.6	-	-	-
15-19	1.0	0.8	1.2	1.1	0.9	1.4	0.5	0.5	-
20-24	1.6	1.4	1.8	1.7	1.5	2.0	1.1	0.9	1.2
25-29	2.9	2.9	2.9	3.1	3.1	3.1	2.4	2.3	2.5
30-34	5.8	5.7	5.8	5.9	5.9	5.9	6.0	5.8	6.3
35-39	10.4	10.4	10.4	10.4	10.4	10.5	10.7	10.5	10.9
40-44	18.7	19.4	18.0	18.9	19.5	18.2	20.0	20.3	19.7
45-49	32.3	34.9	29.8	31.6	34.2	29.0	37.3	40.5	34.5
50-54	60.5	67.9	53.5	57.4	64.5	50.4	76.2	82.5	70.7
55-59	67.2	79.7	55.5	64.2	75.7	53.0	86.6	102.5	73.0
60-64	89.0	107.4	72.1	84.7	101.7	68.8	117.6	143.6	96.6
65-69	119.9	143.7	98.8	115.6	137.9	95.3	155.9	192.9	127.9
70-74	151.7	179.9	128.1	149.4	176.3	126.4	183.5	223.2	155.6
75-79	195.8	226.6	171.9	197.8	227.1	174.5	214.6	262.6	183.7
80-84	240.8	273.3	218.3	245.0	275.7	223.4	250.8	311.8	217.0
85+	261.2	294.0	244.2	267.6	301.9	249.7	240.0	275.3	225.3
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2012-2016									
All ages	14.2	16.9	11.9	13.8	16.5	11.7	18.9	23.8	15.5
Under 65	4.9	5.8	4.0	4.6	5.5	3.8	7.1	8.6	5.8
65 and over	78.5	93.9	66.9	77.4	92.2	66.1	100.6	128.6	83.2
All ages (WHO world std) ^c	8.2	9.9	6.8	7.9	9.5	6.5	11.4	14.3	9.3
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.0	0.0	-	0.0	-	-	-	-	-
20-24	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
25-29	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.5
30-34	1.2	1.3	1.0	1.1	1.3	1.0	1.5	1.5	1.6
35-39	2.3	2.5	2.0	2.2	2.5	2.0	3.0	3.5	2.5
40-44	4.4	4.8	3.9	4.3	4.7	3.8	5.8	6.6	5.2
45-49	8.3	9.5	7.2	8.1	9.1	7.0	11.2	13.5	9.1
50-54	13.9	16.4	11.5	13.2	15.6	10.8	20.5	24.2	17.2
55-59	20.4	24.8	16.2	19.3	23.5	15.2	30.5	37.7	24.3
60-64	29.0	36.3	22.3	27.5	34.3	21.0	44.8	57.8	34.2
65-69	39.6	49.2	30.9	38.0	47.1	29.7	60.6	78.2	46.9
70-74	54.5	67.5	43.4	53.1	65.5	42.2	77.5	100.7	60.8
75-79	78.3	95.3	64.9	77.3	93.6	64.1	101.5	129.9	83.0
80-84	111.0	131.2	96.7	109.9	129.1	96.1	137.6	180.8	113.5
85+	176.6	201.1	163.8	177.4	201.5	164.7	192.2	234.6	174.5

^a SEER 21 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

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

^c Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

- Rates are per 100,000 and are age-adjusted to the world (WHO 2000-2025) standard million.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.11
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)
SEER Incidence^a Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>Cancer of the Colon</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2012-2016									
All ages	27.1	29.9	24.8	26.8	29.4	24.6	32.8	37.5	29.5
Under 65	11.3	12.3	10.4	10.9	11.8	10.1	15.0	16.3	13.9
65 and over	136.3	151.7	124.4	136.7	151.2	125.4	155.9	183.8	137.8
All ages (WHO world std) ^b	19.3	21.3	17.6	19.0	20.8	17.4	24.1	27.4	21.6
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	-	-	0.1	-	-	-	-	-
10-14	0.4	0.3	0.5	0.5	0.4	0.6	-	-	-
15-19	0.9	0.7	1.1	1.1	0.8	1.3	0.4	-	-
20-24	1.2	1.0	1.4	1.4	1.2	1.6	0.7	0.6	0.9
25-29	2.0	2.0	2.1	2.2	2.1	2.3	1.5	1.5	1.5
30-34	3.6	3.5	3.7	3.8	3.8	3.8	3.8	3.5	4.1
35-39	6.3	6.0	6.7	6.4	6.1	6.6	7.0	6.4	7.5
40-44	11.3	11.2	11.3	11.2	11.0	11.3	13.6	13.6	13.7
45-49	19.2	19.9	18.5	18.5	19.3	17.7	25.2	26.5	24.1
50-54	35.5	38.6	32.5	33.6	36.7	30.6	48.0	50.6	45.7
55-59	41.5	47.6	35.9	39.4	45.0	34.0	58.3	66.3	51.5
60-64	58.4	67.7	49.9	54.9	63.3	47.0	85.2	101.1	72.4
65-69	83.6	97.0	71.8	80.3	92.3	69.4	116.4	142.2	96.8
70-74	112.7	128.0	99.8	110.9	125.2	98.6	141.9	167.0	124.2
75-79	150.6	167.0	137.9	152.2	167.4	140.2	170.8	200.6	151.6
80-84	190.7	206.9	179.5	195.1	209.7	184.8	200.3	241.5	177.4
85+	213.7	231.6	204.5	219.7	238.9	209.7	195.0	214.8	186.7
<u>Cancer of the Rectum</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2012-2016									
All ages	11.5	14.3	9.1	11.3	14.0	8.9	11.8	14.9	9.5
Under 65	7.0	8.3	5.8	6.9	8.1	5.7	7.2	8.6	6.1
65 and over	42.2	55.5	32.1	41.9	55.0	31.7	43.2	58.5	33.5
All ages (WHO world std) ^b	8.9	11.0	7.0	8.7	10.7	6.9	9.2	11.5	7.5
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.1	0.1	-	0.1	-	-	-	-	-
20-24	0.4	0.4	0.4	0.4	0.4	0.4	0.3	-	-
25-29	0.9	1.0	0.9	0.9	1.0	0.8	0.9	0.8	1.0
30-34	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2
35-39	4.0	4.3	3.7	4.1	4.3	3.8	3.8	4.2	3.4
40-44	7.5	8.2	6.7	7.7	8.5	6.9	6.3	6.6	6.0
45-49	13.1	15.0	11.3	13.2	14.9	11.4	12.1	14.0	10.4
50-54	25.1	29.3	21.0	23.8	27.8	19.8	28.2	31.8	25.0
55-59	25.7	32.2	19.6	24.8	30.7	19.0	28.2	36.2	21.5
60-64	30.5	39.7	22.2	29.8	38.3	21.7	32.4	42.5	24.2
65-69	36.3	46.8	27.0	35.3	45.6	25.9	39.5	50.7	31.1
70-74	39.1	51.9	28.3	38.5	51.0	27.8	41.6	56.3	31.3
75-79	45.2	59.7	34.0	45.5	59.7	34.3	43.8	62.0	32.2
80-84	50.1	66.4	38.9	49.9	66.0	38.6	50.5	70.3	39.6
85+	47.5	62.5	39.7	47.9	63.0	40.0	45.0	60.5	38.6

^a SEER 21 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

^b Rates are per 100,000 and are age-adjusted to the world (WHO 2000-2025) standard million.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.12
Cancer of the Colon and Rectum (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	-	-	-	-	-	-
1970-1973 ^a	-	-	-	-	-	-	-	-	-
1975-1977 ^b	49.8	49.0	50.7	50.1	49.4	50.8	44.7	43.4	45.9
1978-1980 ^b	51.2	50.2	52.2	51.6	50.6	52.5	45.4	43.4	46.9
1981-1983 ^b	54.0	53.8	54.2	54.4	54.4	54.3	46.5	42.9	49.5
1984-1986 ^b	57.7	57.7	57.6	58.4	58.5	58.3	48.4	47.5	49.1
1987-1989 ^b	59.6	59.8	59.3	60.1	60.6	59.5	52.3	49.9	54.5
1990-1992 ^b	61.2	61.0	61.3	61.9	61.7	62.1	52.9	54.4	51.5
1993-1995 ^b	59.9	59.8	60.0	60.5	60.3	60.7	51.7	51.3	52.0
1996-1998 ^b	62.4	62.4	62.5	63.0	62.9	63.2	54.0	55.2	53.0
1999-2001 ^b	65.2	66.1	64.1	66.6	67.4	65.7	54.4	56.0	53.0
2002-2004 ^b	65.8	65.8	65.9	66.8	67.1	66.4	56.6	55.6	57.5
2005-2008 ^b	66.7	66.7	66.6	67.6	68.0	67.2	58.8	56.4	60.9
2009-2015 ^b	66.2 ^f	66.1 ^f	66.2 ^f	66.9 ^f	67.0 ^f	66.8 ^f	59.5 ^f	58.4 ^f	60.6 ^f
5-Year Period Survival (Percent) ^{cd}									
2015	64.4	63.7	65.1	64.9	64.3	65.5	58.1	55.7	60.3
Stage Distribution (%) 2009-2015 ^{ce}									
All Stages									
Number of cases	207,609	108,098	99,511	159,611	83,695	75,916	25,894	12,670	13,224
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	39	39	39	39	39	39	38	37	39
Regional	35	35	35	36	36	36	32	32	32
Distant	22	22	21	21	22	21	26	26	25
Unstaged/Unknown	4	4	5	4	4	5	5	4	5
5-Year Relative Survival (Percent), 2009-2015 ^c									
Age at Diagnosis:									
Ages <45	68.7	66.3	71.2	70.0	67.5	72.8	62.0	57.7	65.7
Ages 45-54	70.8	69.1	72.9	71.3	69.6	73.5	64.2	61.3	67.4
Ages 55-64	66.9	65.8	68.5	67.6	66.6	69.0	60.4	58.3	63.0
Ages 65-74	66.9	65.8	68.2	67.2	66.4	68.3	60.0	55.9	64.0
Ages 75+	55.2	54.9	55.5	56.5	55.9	56.8	45.5	43.0	46.5
Ages <65	68.6	67.0	70.5	69.2	67.8	71.2	62.0	59.3	65.0
Ages 65+	60.6	60.7	60.5	61.2	61.3	61.2	53.4	51.3	55.0
Stage ^e :									
All Stages	64.4	64.0	64.9	64.9	64.5	65.3	58.4	56.2	60.4
Localized	89.9	89.3	90.6	90.1	89.3	91.1	86.9	85.7	87.9
Regional	71.3	71.0	71.6	71.9	71.8	72.0	66.1	64.0	68.2
Distant	14.2	13.1	15.3	14.6	13.7	15.6	11.0	9.5	12.4
Unstaged/Unknown	35.4	38.7	32.4	31.8	35.4	28.5	38.8	39.1	38.5

^a Based on End Results data from a series of hospital registries and one population-based registry.

^b SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2016. [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

^c SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG). Expected survival rates are derived from life tables by socio-economic status, geography and race developed by the SEER program.

Based on follow-up of patients into 2016.

^d Period survival provides a 2015 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2010-2012: 0-1 year survival), (2009-2011: 1-2 year survival), (2008-2010: 2-3 year survival), (2007-2009: 3-4 year survival), (2006-2008: 4-5 years survival).

^e Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.

^f The difference between 1975-1977 and 2009-2015 is statistically significant (p<.05).

^g The standard error is between 5 and 10 percentage points.

^h The standard error is greater than 10 percentage points.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.13
Cancer of the Colon (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	43	42	44	34	32	35
1970-1973 ^a	-	-	-	49	47	50	37	36	38
1975-1977 ^b	50.6	50.1	51.1	50.9	50.5	51.3	44.8	44.1	45.3
1978-1980 ^b	52.3	51.3	53.2	52.5	51.3	53.4	48.9	47.5	49.8
1981-1983 ^b	55.2	55.6	54.8	55.4	56.2	54.8	48.5	44.7	51.5
1984-1986 ^b	58.3	58.8	57.8	59.0	59.6	58.5	49.2	49.0	49.3
1987-1989 ^b	60.2	60.8	59.7	60.7	61.4	59.9	52.4	50.7	53.8
1990-1992 ^b	62.0	62.3	61.7	62.8	63.1	62.5	53.4	54.6	52.4
1993-1995 ^b	59.8	60.2	59.5	60.5	60.7	60.3	51.1	51.2	50.9
1996-1998 ^b	62.1	62.4	61.9	62.9	62.9	62.8	53.7	55.9	51.9
1999-2001 ^b	64.9	66.2	63.7	66.6	67.9	65.5	52.7	54.2	51.6
2002-2004 ^b	64.8	64.7	64.9	65.7	65.8	65.7	55.6	55.1	56.0
2005-2008 ^b	66.1	66.5	65.7	67.3	68.0	66.7	56.9	55.5	58.0
2009-2015 ^b	64.9 ^f	65.1 ^f	64.7 ^f	66.1 ^f	66.4 ^f	65.9 ^f	56.2 ^f	56.4 ^f	56.0 ^f
5-Year Period Survival (Percent) ^{cd}									
2015	63.1	62.7	63.5	64.0	63.5	64.4	56.0	55.1	56.8
Stage Distribution (%) 2009-2015 ^{ce}									
All Stages									
Number of cases	143,445	71,200	72,245	110,564	55,268	55,296	18,868	8,886	9,982
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	38	38	37	38	38	38	35	35	35
Regional	35	35	36	36	35	36	34	33	34
Distant	23	23	22	22	23	22	28	28	27
Unstaged/Unknown	4	4	4	4	3	4	4	4	4
5-Year Relative Survival (Percent), 2009-2015 ^c									
Age at Diagnosis:									
Ages <45	67.6	65.1	70.0	69.8	67.0	72.8	58.7	55.2	61.5
Ages 45-54	68.1	67.4	68.9	69.2	68.4	70.2	60.1	59.1	61.1
Ages 55-64	65.6	65.1	66.3	66.6	66.1	67.3	58.6	58.0	59.3
Ages 65-74	66.9	65.9	68.0	67.4	66.5	68.5	60.2	57.3	62.8
Ages 75+	56.4	56.0	56.6	57.9	57.3	58.2	45.8	43.6	46.8
Ages <65	66.8	65.9	67.8	68.0	67.0	69.2	59.1	58.0	60.3
Ages 65+	60.9	60.9	60.9	61.8	61.7	61.8	53.5	52.2	54.5
Stage ^e :									
All Stages	63.4	63.2	63.5	64.3	64.1	64.4	56.5	55.6	57.3
Localized	90.4	89.8	91.1	91.0	90.0	92.0	86.4	86.2	86.6
Regional	71.3	71.4	71.3	71.9	72.1	71.8	67.3	66.3	68.1
Distant	13.8	12.8	14.7	14.3	13.5	15.0	10.6	9.4	11.8
Unstaged/Unknown	26.2	31.3	22.1	24.2	29.5	19.9	28.5	31.8	25.6

^a Based on End Results data from a series of hospital registries and one population-based registry.
^b SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).
Based on follow-up of patients into 2016. [Expected survival rates](#) are derived from the U.S. Annual Life Tables.
^c SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG). Expected survival rates are derived from life tables by socio-economic status, geography and race developed by the SEER program.
Based on follow-up of patients into 2016.
^d Period survival provides a 2015 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2010-2012: 0-1 year survival), (2009-2011: 1-2 year survival), (2008-2010: 2-3 year survival), (2007-2009: 3-4 year survival), (2006-2008: 4-5 years survival).
^e Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.
^f The difference between 1975-1977 and 2009-2015 is statistically significant (p<.05).
^g The standard error is between 5 and 10 percentage points.
^h The standard error is greater than 10 percentage points.
- Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.14
Cancer of the Rectum (Invasive)

5-Year Relative and Period Survival (Percent) by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	38	36	41	27	28	27
1970-1973 ^a	-	-	-	45	43	48	30	20	40
1975-1977 ^b	48.1	47.0	49.5	48.3	47.4	49.5	44.4	41.4	46.8
1978-1980 ^b	48.9	48.4	49.5	49.7	49.3	50.2	34.8	33.5	35.8
1981-1983 ^b	51.4	50.2	52.8	52.0	51.0	53.2	40.3	38.1	42.5
1984-1986 ^b	56.3	55.6	57.1	57.0	56.4	57.7	46.0	43.4	48.5
1987-1989 ^b	58.1	57.9	58.4	58.7	58.9	58.4	52.3	47.7	56.9
1990-1992 ^b	59.2	58.4	60.2	59.9	59.0	61.1	51.2	53.7	48.5
1993-1995 ^b	60.1	59.0	61.6	60.6	59.5	61.9	53.8	51.5	56.4
1996-1998 ^b	63.2	62.5	64.2	63.5	62.9	64.4	55.1	53.6	56.4
1999-2001 ^b	65.9	66.2	65.5	66.5	66.6	66.4	59.6	60.9	58.2
2002-2004 ^b	68.3	68.1	68.6	69.4	70.0	68.6	59.7	56.8	62.5
2005-2008 ^b	68.1	67.3	69.2	68.3	68.0	68.8	64.1	58.4	69.7
2009-2015 ^b	69.1 ^f	68.1 ^f	70.4 ^f	68.6 ^f	68.2 ^f	69.2 ^f	68.0 ^f	62.8 ^f	73.9 ^f
5-Year Period Survival (Percent) ^{cd}									
2015	67.2	65.6	69.3	66.9	65.8	68.3	63.6	57.3	71.0
Stage Distribution (%) 2009-2015 ^{ce}									
All Stages									
Number of cases	64,164	36,898	27,266	49,047	28,427	20,620	7,026	3,784	3,242
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	41	40	43	40	39	41	45	42	50
Regional	34	36	33	36	37	34	28	30	25
Distant	19	19	18	19	20	19	20	23	18
Unstaged/Unknown	5	5	6	5	4	5	7	6	7
5-Year Relative Survival (Percent), 2009-2015 ^c									
Age at Diagnosis:									
Ages <45	70.5	68.1	73.3	70.4	68.3	72.9	68.7	62.1	75.3
Ages 45-54	74.6	71.3	79.2	74.2	71.1	78.5	72.2	65.2	80.4
Ages 55-64	69.2	66.9	73.0	69.2	67.3	72.4	64.7	58.9	73.1
Ages 65-74	66.9	65.7	68.7	66.8	66.1	67.7	59.3	51.6	68.4
Ages 75+	50.9	51.4	50.5	51.1	51.6	50.6	43.6	40.3	44.9
Ages <65	71.5	68.7	75.5	71.3	68.8	74.9	68.2	61.7	76.5
Ages 65+	59.7	60.1	59.2	59.5	60.2	58.7	53.0	48.3	57.4
Stage ^e :									
All Stages	66.7	65.4	68.5	66.4	65.4	67.7	63.3	57.9	69.6
Localized	88.9	88.4	89.6	88.5	88.0	89.1	87.8	85.0	90.5
Regional	71.1	70.3	72.4	71.8	71.2	72.8	62.4	57.7	68.7
Distant	15.1	13.7	17.2	15.6	14.2	17.6	12.2	10.0	15.5
Unstaged/Unknown	50.4	48.8	52.1	45.6	44.4	46.9	54.1	48.6	59.2

^a Based on End Results data from a series of hospital registries and one population-based registry.^b SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).^c Based on follow-up of patients into 2016. [Expected survival rates](#) are derived from the U.S. Annual Life Tables.^c SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG). Expected survival rates are derived from life tables by socio-economic status, geography and race developed by the SEER program.^d Based on follow-up of patients into 2016.^d Period survival provides a 2015 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2010-2012: 0-1 year survival), (2009-2011: 1-2 year survival), (2008-2010: 2-3 year survival), (2007-2009: 3-4 year survival), (2006-2008: 4-5 years survival).^e Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.^f The difference between 1975-1977 and 2009-2015 is statistically significant (p<.05).^g The standard error is between 5 and 10 percentage points.^h The standard error is greater than 10 percentage points.⁻ Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 6.15
Cancer of the Colon and Rectum (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males and Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	74.0	77.1	80.0	80.9	79.5	81.3	80.3	82.0	82.3	81.9	83.1	83.3	82.4	83.5	84.0	83.6	84.0	84.7	84.3	84.3	83.8	84.2	84.1	84.5	84.8
2-year	63.0	66.8	71.1	72.4	71.3	73.3	72.4	74.5	74.6	74.5	75.6	76.8	75.8	76.6	77.0	77.1	77.2	78.3	77.4	77.3	76.8	76.5	77.5	77.8	
3-year	56.8	60.5	65.7	67.2	65.8	68.6	67.2	69.4	70.0	70.3	71.1	72.2	70.8	71.6	72.5	72.1	72.4	73.4	72.5	72.2	71.8	71.5	72.0		
4-year	53.0	56.4	61.9	63.3	62.0	65.0	64.2	66.3	66.9	67.0	68.2	69.0	67.7	68.3	68.9	68.4	69.1	70.1	69.0	68.8	68.3	68.1			
5-year	50.4	53.7	59.3	60.7	59.7	62.6	61.5	63.3	64.5	64.9	66.1	66.3	65.4	65.8	66.3	66.2	66.7	67.5	66.6	66.3	65.7				
6-year	48.6	51.8	57.6	59.0	57.3	61.3	59.8	61.4	63.1	63.1	64.1	64.5	63.5	63.9	64.6	64.6	64.7	65.6	64.7	64.0					
7-year	47.4	50.3	56.0	57.4	55.6	60.2	58.8	60.1	61.9	61.7	62.2	63.0	62.1	62.8	62.9	62.9	63.3	63.8	62.9						
8-year	46.4	49.3	55.0	56.2	54.9	59.4	58.0	59.3	60.7	60.3	61.3	62.0	61.4	61.8	61.9	61.7	62.1	62.6							
9-year	45.8	48.4	54.1	55.4	54.6	58.7	57.2	58.0	59.8	59.6	60.4	60.8	60.2	60.9	61.3	60.7	61.4								
10-year	45.1	47.8	53.3	54.6	53.9	58.1	56.4	57.3	59.2	59.0	59.7	60.4	59.0	60.1	60.4	60.2									
11-year	44.5	47.2	52.8	54.1	53.1	57.5	55.6	56.4	58.5	58.1	59.2	59.7	58.2	58.8	59.8										
12-year	44.1	46.7	52.4	53.5	52.3	57.4	55.3	56.2	57.9	57.6	58.3	58.7	57.9	58.8											
13-year	43.7	46.4	51.7	53.0	51.7	56.9	55.0	55.7	57.6	57.2	57.7	58.3	56.9												
14-year	43.2	45.9	51.4	52.6	51.2	55.9	54.1	55.5	56.9	56.7	57.1	57.3													
15-year	42.8	45.6	50.9	52.2	50.6	55.4	53.5	55.5	56.5	56.6	56.5														
16-year	42.4	45.2	50.6	52.2	50.0	54.9	52.7	55.1	55.5	55.8															
17-year	42.0	44.7	50.1	51.6	49.5	53.9	52.3	54.6	54.7																
18-year	41.5	44.4	49.7	51.1	48.9	53.8	51.6	54.3																	
19-year	41.5	43.9	49.5	50.5	48.1	53.2	51.4																		
20-year	41.3	43.7	49.0	49.8	47.1	52.4																			
21-year	40.9	42.9	49.0	49.3	46.4																				
22-year	40.6	42.4	48.9	48.7																					
23-year	40.1	42.2	48.4																						
24-year	39.8	41.9	47.7																						
25-year	39.5	41.4	47.5																						
26-year	39.0	40.9	46.8																						
27-year	38.5	40.6	46.3																						
28-year	38.4	40.0																							
29-year	38.0	40.0																							
30-year	37.5	39.6																							

^a Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

Table 6.16
Cancer of the Colon and Rectum (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	74.0	78.0	81.0	81.7	81.0	82.6	81.3	82.1	83.4	83.6	85.1	83.2	83.2	84.5	84.6	84.7	85.4	86.3	85.6	85.5	84.1	84.8	84.5	85.5	86.2
2-year	63.0	67.2	72.4	73.3	72.7	75.0	73.6	74.4	75.2	76.4	77.4	76.6	76.3	77.9	77.9	78.2	78.4	79.3	78.6	78.4	77.1	77.1	77.6	78.8	
3-year	56.3	60.6	66.7	67.9	66.9	69.7	68.3	68.8	70.5	72.0	72.8	72.0	71.1	72.5	73.1	72.9	73.4	74.1	73.4	73.0	71.4	71.7	71.5		
4-year	52.1	56.2	62.4	63.5	63.1	65.3	65.2	65.4	67.5	69.0	69.9	68.7	67.9	69.1	68.8	68.8	69.6	70.4	69.5	68.9	68.1	68.1			
5-year	49.4	53.3	59.7	60.5	60.0	62.4	62.3	62.4	64.9	66.1	67.3	65.7	65.4	66.2	65.8	66.5	66.8	67.7	66.8	66.2	65.3				
6-year	47.2	51.2	57.8	58.6	57.3	61.0	60.3	60.1	63.7	63.8	65.0	63.5	62.9	64.2	63.7	64.7	64.4	65.6	64.9	63.4					
7-year	45.9	49.5	56.3	56.8	55.7	59.8	59.6	58.7	62.5	62.0	63.1	61.7	61.6	62.6	61.6	63.1	62.9	63.8	63.3						
8-year	44.8	48.4	55.3	55.4	55.1	59.4	58.3	57.4	61.2	60.2	62.4	60.4	60.3	61.5	60.5	61.7	61.6	62.6							
9-year	44.1	47.5	54.3	54.5	54.7	58.9	57.4	56.2	60.1	59.8	61.5	59.4	59.0	60.8	59.8	60.5	60.9								
10-year	43.3	46.7	53.6	53.6	54.0	58.0	56.7	55.5	59.2	58.8	60.6	59.3	57.7	59.8	59.1	59.8									
11-year	42.8	46.0	53.1	53.1	53.1	57.3	55.8	54.5	58.6	57.9	59.7	58.4	56.7	58.7	58.3										
12-year	42.1	45.6	52.6	52.7	52.2	57.0	55.6	54.0	57.9	57.3	59.1	57.2	56.2	58.5											
13-year	41.7	45.4	51.9	51.9	51.7	56.7	55.3	53.5	57.3	57.0	58.3	56.9	55.2												
14-year	41.0	44.7	51.8	51.4	50.7	55.8	54.5	53.2	56.4	56.5	57.9	55.9													
15-year	40.8	44.5	51.2	50.9	49.8	55.5	54.3	53.0	56.1	56.1	57.3														
16-year	40.3	44.3	51.1	50.9	49.3	55.2	53.1	52.8	54.9	55.9															
17-year	39.7	43.7	50.6	50.5	48.9	54.3	52.0	52.1	54.0																
18-year	39.4	43.4	50.2	49.9	47.9	54.3	51.2	52.1																	
19-year	39.3	42.8	49.9	49.6	47.2	54.2	51.0																		
20-year	39.2	42.6	49.5	49.1	45.7	54.2																			
21-year	39.0	41.7	49.4	48.6	45.1																				
22-year	38.5	41.1	49.4	48.0																					
23-year	38.1	40.9	48.8																						
24-year	37.7	40.4	48.0																						
25-year	37.3	40.1	47.6																						
26-year	36.4	39.4	46.9																						
27-year	35.9	38.9	46.3																						
28-year	35.8	38.5																							
29-year	35.4	38.3																							
30-year	34.4	37.6																							

^a Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

Table 6.17
Cancer of the Colon and Rectum (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	73.9	76.3	78.9	80.0	78.0	79.9	79.3	82.0	81.2	80.2	81.0	83.4	81.7	82.5	83.4	82.5	82.5	83.1	83.0	83.0	83.4	83.5	83.7	83.4	83.3
2-year	63.0	66.4	69.8	71.6	70.0	71.6	71.1	74.6	73.9	72.5	73.8	77.1	75.3	75.3	76.0	76.0	75.9	77.3	76.2	76.1	76.4	75.8	77.4	76.7	
3-year	57.4	60.3	64.6	66.5	64.7	67.4	66.2	70.0	69.5	68.5	69.3	72.4	70.5	70.6	71.9	71.3	71.3	72.6	71.5	71.3	72.3	71.3	72.6		
4-year	53.8	56.6	61.2	63.0	60.9	64.7	63.1	67.2	66.2	64.9	66.5	69.3	67.6	67.5	69.0	68.1	68.6	69.8	68.5	68.6	68.5	68.0			
5-year	51.4	54.1	58.9	60.9	59.5	62.7	60.6	64.1	64.1	63.5	64.8	66.9	65.3	65.3	66.7	65.9	66.7	67.2	66.4	66.4	66.1				
6-year	49.8	52.3	57.3	59.5	57.3	61.5	59.2	62.7	62.4	62.4	63.2	65.5	64.2	63.5	65.5	64.6	65.0	65.6	64.5	64.6					
7-year	48.7	51.0	55.7	58.1	55.4	60.6	57.9	61.4	61.3	61.4	61.3	64.3	62.8	63.0	64.4	62.8	63.8	63.8	62.5						
8-year	47.9	50.1	54.6	57.1	54.7	59.4	57.6	61.1	60.1	60.4	60.1	63.7	62.4	62.1	63.3	61.7	62.6	62.7							
9-year	47.3	49.3	53.9	56.4	54.5	58.5	57.0	59.9	59.5	59.4	59.3	62.2	61.4	61.1	62.9	61.0	62.0								
10-year	46.7	48.7	53.1	55.6	53.8	58.0	56.1	59.1	59.2	59.3	58.8	61.6	60.4	60.3	61.7	60.6									
11-year	46.1	48.2	52.5	55.0	53.0	57.7	55.4	58.4	58.4	58.3	58.7	61.0	59.9	59.0	61.3										
12-year	45.9	47.7	52.3	54.4	52.4	57.6	54.7	58.3	57.9	57.8	57.4	60.2	59.6	59.0											
13-year	45.5	47.4	51.4	54.1	51.6	56.9	54.5	57.9	57.9	57.2	56.9	59.7	58.6												
14-year	45.1	47.0	51.0	53.8	51.5	56.1	53.7	57.7	57.6	57.0	56.3	58.8													
15-year	44.7	46.6	50.5	53.5	51.3	55.3	52.5	57.7	56.9	57.0	55.5														
16-year	44.2	45.9	50.1	53.5	50.7	54.6	52.1	57.3	56.2	55.6															
17-year	44.0	45.6	49.5	52.7	50.1	53.6	52.1	57.1	55.4																
18-year	43.4	45.3	49.2	52.3	49.6	53.3	52.1	56.1																	
19-year	43.4	44.8	48.9	51.4	48.8	52.0	51.6																		
20-year	43.2	44.6	48.5	50.6	48.4	50.4																			
21-year	42.7	44.0	48.5	50.1	47.6																				
22-year	42.5	43.5	48.2	49.3																					
23-year	42.0	43.4	47.9																						
24-year	41.6	43.2	47.4																						
25-year	41.5	42.5	47.3																						
26-year	41.2	42.3	46.7																						
27-year	40.8	42.0	46.3																						
28-year	40.7	41.4																							
29-year	40.1	41.4																							
30-year	40.1	41.2																							

^a Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

Table 6.18
Cancer of the Colon and Rectum (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and
Lifetime Risk of Dying from Cancer Given Alive at Current Age
Both Sexes, 2014-2016 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.01	0.04	4.24	1.75	Asian/ Pacific Islander	0	0.00	0.00	0.02	4.33	1.81
	10	0.01	0.04	0.12	4.28	1.77		10	0.00	0.02	0.08	4.36	1.83
	20	0.03	0.11	0.37	4.28	1.78		20	0.01	0.08	0.30	4.37	1.83
	30	0.08	0.35	0.93	4.29	1.79		30	0.06	0.28	0.82	4.37	1.83
	40	0.26	0.86	1.73	4.27	1.80		40	0.22	0.76	1.59	4.33	1.83
	50	0.61	1.50	2.69	4.11	1.78		50	0.55	1.38	2.45	4.16	1.81
	60	0.95	2.20	3.35	3.71	1.72		60	0.86	1.96	3.10	3.73	1.73
	70	1.42	2.72	-	3.13	1.59		70	1.18	2.40	-	3.08	1.61
80	1.72	-	-	2.27	1.38	80	1.44	-	-	2.25	1.43		
White	0	0.00	0.01	0.04	4.18	1.72	American Indian/ Alaska Native ^a	0	0.00	0.00	0.02	4.27	1.65
	10	0.01	0.04	0.12	4.21	1.74		10	0.00	0.02	0.10	4.31	1.68
	20	0.03	0.11	0.37	4.21	1.74		20	0.02	0.10	0.33	4.33	1.69
	30	0.09	0.34	0.90	4.22	1.76		30	0.08	0.32	0.92	4.38	1.71
	40	0.26	0.83	1.66	4.19	1.76		40	0.24	0.86	1.71	4.41	1.74
	50	0.58	1.44	2.62	4.03	1.75		50	0.64	1.53	2.88	4.35	1.75
	60	0.91	2.16	3.31	3.66	1.68		60	0.95	2.41	3.57	3.99	1.69
	70	1.42	2.72	-	3.11	1.56		70	1.66	2.99	-	3.46	1.58
80	1.74	-	-	2.27	1.36	80	1.78	-	-	2.43	1.39		
Black	0	0.00	0.00	0.02	4.26	2.03	Hispanic ^b	0	0.00	0.01	0.03	4.21	1.73
	10	0.00	0.02	0.11	4.34	2.07		10	0.01	0.03	0.10	4.24	1.75
	20	0.02	0.11	0.39	4.36	2.08		20	0.02	0.09	0.29	4.25	1.75
	30	0.09	0.37	1.08	4.39	2.10		30	0.07	0.27	0.81	4.26	1.76
	40	0.29	1.02	2.06	4.38	2.12		40	0.21	0.75	1.62	4.23	1.76
	50	0.75	1.83	3.02	4.25	2.11		50	0.55	1.44	2.56	4.10	1.75
	60	1.18	2.47	3.49	3.82	2.04		60	0.93	2.10	3.22	3.72	1.69
	70	1.54	2.76	-	3.15	1.87		70	1.30	2.53	-	3.08	1.56
80	1.72	-	-	2.27	1.62	80	1.55	-	-	2.23	1.37		

Devcan 6.7.7, April 2019, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts). Mortality data are from the NCHS public use data file for the total US.

^a Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCA (Purchased/Referred Care Delivery Areas) counties.

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 6.19
Cancer of the Colon and Rectum (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and
Lifetime Risk of Dying from Cancer Given Alive at Current Age
Males, 2014-2016 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.01	0.03	4.41	1.83	Asian/ Pacific Islander	0	0.00	0.00	0.02	4.73	1.89
	10	0.01	0.03	0.11	4.46	1.86		10	0.00	0.02	0.08	4.77	1.90
	20	0.02	0.11	0.38	4.47	1.87		20	0.02	0.08	0.32	4.77	1.91
	30	0.08	0.36	1.02	4.50	1.89		30	0.07	0.31	0.97	4.79	1.91
	40	0.28	0.96	1.95	4.49	1.90		40	0.24	0.91	1.92	4.75	1.91
	50	0.70	1.73	3.02	4.35	1.89		50	0.68	1.70	2.94	4.59	1.89
	60	1.11	2.50	3.63	3.94	1.83		60	1.07	2.35	3.50	4.07	1.81
	70	1.62	2.93	-	3.29	1.68		70	1.41	2.67	-	3.29	1.66
80	1.85	-	-	2.36	1.44	80	1.56	-	-	2.32	1.41		
White	0	0.00	0.01	0.04	4.33	1.80	American Indian/ Alaska Native ^a	0	0.00	0.00	0.02	4.09	1.83
	10	0.01	0.03	0.12	4.37	1.82		10	0.00	0.02	0.10	4.14	1.86
	20	0.03	0.11	0.38	4.38	1.83		20	0.02	0.10	0.31	4.16	1.87
	30	0.08	0.36	0.99	4.41	1.85		30	0.08	0.30	0.87	4.24	1.91
	40	0.28	0.92	1.88	4.40	1.86		40	0.23	0.81	1.68	4.30	1.96
	50	0.66	1.65	2.93	4.25	1.85		50	0.62	1.52	2.85	4.28	1.99
	60	1.06	2.44	3.57	3.87	1.79		60	1.00	2.45	3.67	4.02	1.98
	70	1.60	2.92	-	3.26	1.65		70	1.70	3.14	-	3.55	1.88
80	1.86	-	-	2.35	1.42	80	2.03	-	-	2.61	1.65		
Black	0	0.00	0.00	0.02	4.40	2.14	Hispanic ^b	0	0.00	0.01	0.02	4.59	1.95
	10	0.00	0.02	0.10	4.49	2.19		10	0.01	0.02	0.09	4.63	1.97
	20	0.02	0.10	0.39	4.51	2.20		20	0.02	0.08	0.29	4.64	1.98
	30	0.08	0.38	1.17	4.57	2.24		30	0.07	0.28	0.87	4.67	2.00
	40	0.30	1.11	2.31	4.60	2.28		40	0.21	0.82	1.85	4.67	2.01
	50	0.84	2.09	3.39	4.50	2.28		50	0.62	1.68	2.98	4.57	2.00
	60	1.39	2.84	3.81	4.07	2.21		60	1.13	2.50	3.75	4.19	1.95
	70	1.82	3.04	-	3.37	2.04		70	1.56	2.97	-	3.47	1.80
80	1.89	-	-	2.40	1.79	80	1.86	-	-	2.53	1.56		

Devcan 6.7.7, April 2019, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts). Mortality data are from the NCHS public use data file for the total US.

^a Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCDA (Purchased/Referred Care Delivery Areas) counties.

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 6.20
Cancer of the Colon and Rectum (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and
Lifetime Risk of Dying from Cancer Given Alive at Current Age
Females, 2014-2016 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.01	0.04	4.08	1.68	Asian/ Pacific Islander	0	0.00	0.00	0.02	3.99	1.75
	10	0.01	0.04	0.12	4.11	1.70		10	0.00	0.02	0.08	4.02	1.76
	20	0.03	0.11	0.36	4.11	1.70		20	0.01	0.08	0.28	4.02	1.76
	30	0.09	0.33	0.84	4.10	1.71		30	0.06	0.26	0.69	4.01	1.76
	40	0.25	0.76	1.51	4.06	1.71		40	0.20	0.63	1.30	3.96	1.76
	50	0.53	1.29	2.37	3.88	1.69		50	0.44	1.11	2.03	3.80	1.73
	60	0.80	1.94	3.10	3.52	1.62		60	0.69	1.63	2.76	3.45	1.66
	70	1.25	2.54	-	3.00	1.51		70	0.99	2.18	-	2.91	1.57
80	1.64	-	-	2.21	1.33	80	1.36	-	-	2.20	1.43		
White	0	0.00	0.01	0.04	4.03	1.65	American Indian/ Alaska Native ^a	0	0.00	0.00	0.03	4.46	1.49
	10	0.01	0.04	0.13	4.06	1.66		10	0.00	0.03	0.11	4.50	1.50
	20	0.03	0.12	0.36	4.06	1.67		20	0.03	0.11	0.36	4.51	1.51
	30	0.09	0.33	0.82	4.05	1.67		30	0.08	0.33	0.96	4.54	1.52
	40	0.24	0.74	1.45	4.00	1.67		40	0.26	0.90	1.74	4.54	1.53
	50	0.50	1.23	2.33	3.83	1.65		50	0.66	1.53	2.91	4.42	1.53
	60	0.77	1.91	3.08	3.48	1.59		60	0.91	2.38	3.49	3.97	1.43
	70	1.26	2.55	-	2.99	1.49		70	1.63	2.87	-	3.40	1.33
80	1.65	-	-	2.21	1.32	80	1.61	-	-	2.30	1.21		
Black	0	0.00	0.00	0.02	4.15	1.94	Hispanic ^b	0	0.00	0.01	0.03	3.90	1.55
	10	0.00	0.02	0.11	4.23	1.98		10	0.01	0.03	0.10	3.92	1.56
	20	0.02	0.11	0.39	4.23	1.98		20	0.02	0.09	0.29	3.92	1.56
	30	0.09	0.37	1.01	4.24	1.99		30	0.07	0.27	0.75	3.91	1.57
	40	0.28	0.93	1.85	4.20	1.99		40	0.20	0.68	1.40	3.87	1.56
	50	0.67	1.61	2.70	4.04	1.98		50	0.49	1.22	2.20	3.72	1.54
	60	1.01	2.18	3.24	3.62	1.90		60	0.76	1.77	2.80	3.34	1.49
	70	1.35	2.55	-	2.99	1.76		70	1.09	2.21	-	2.78	1.38
80	1.61	-	-	2.19	1.53	80	1.34	-	-	2.03	1.25		

Devcan 6.7.7, April 2019, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts). Mortality data are from the NCHS public use data file for the total US.

^a Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCD (Purchased/Referred Care Delivery Areas) counties.

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 6.21
Cancer of the Colon and Rectum (Invasive)

SEER Incidence and U.S. Mortality
Age-Adjusted Rates and Trends^a
By Race/Ethnicity and Sex

SEER Incidence	SEER 21 Areas ^b			SEER 21 Areas ^b			SEER 9 Areas ^b		
	Rate 2012-2016			Trend 2007-2016 ^c			Trend 2007-2016 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
Race/Ethnicity	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	38.6	44.2	33.9	-2.5*	-2.6*	-2.4*	-2.4*	-2.3*	-2.4*
White	38.1	43.4	33.6	-2.5*	-2.7*	-2.2*	-2.4*	-2.6*	-2.3*
White Hispanic ^e	34.6	41.2	29.4	-2.4*	-2.7*	-1.8*	-	-	-
White Non-Hispanic ^e	38.8	44.1	34.3	-2.3*	-2.6*	-2.2*	-	-	-
Black	44.6	52.4	39.1	-3.1*	-2.8*	-3.2*	-2.9*	-2.8*	-2.6*
Asian/Pacific Islander	31.8	37.9	26.9	-2.4*	-2.4*	-3.4*	-	-	-
Amer Ind/Alaska Nat ^f	39.3	41.2	37.9	-0.7	-0.9	-0.4	-	-	-
Hispanic ^e	33.7	40.0	28.8	-2.0*	-2.5*	-1.8*	-	-	-
<u>U.S. Mortality^g</u>									
U.S. Mortality ^g	Rate 2012-2016			Trend 2007-2016 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	14.2	16.9	11.9	-2.3*	-2.3*	-2.3*			
White	13.8	16.5	11.7	-2.2*	-2.3*	-2.2*			
White Hispanic ^e	11.9	15.3	9.3	-1.6*	-1.5*	-2.0*			
White Non-Hispanic ^e	14.0	16.6	11.9	-2.2*	-2.3*	-2.1*			
Black	18.9	23.8	15.5	-2.9*	-2.7*	-3.2*			
Asian/Pacific Islander	9.8	11.6	8.4	-2.0*	-2.2*	-1.8*			
Amer Ind/Alaska Nat									
Total U.S.	11.1	13.3	9.4	-1.6*	-1.7*	-1.6*			
PRCDA Counties	15.6	19.1	13.0	-0.8	-0.7	-1.0			
Non-PRCDA Counties	6.0	7.1	5.2	-2.6*	-2.8*	-2.2*			
Hispanic ^e	11.2	14.4	8.8	-1.8*	-1.7*	-2.2*			

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute.

Statistic not shown. Rate based on less than 16 cases for the time interval.

Trend based on less than 10 cases for at least one year within the time interval.

Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta.

The SEER 21 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts.

The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 2000-2016.

The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2016.

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

Incidence data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

US Mortality Files, National Center for Health Statistics, CDC.

The 2007-2016 mortality AAPCs are based on a Joinpoint analysis using years of death 2000-2016.

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

Table 6.22
Cancer of the Colon (Invasive) and Cancer of the Rectum (Invasive)

SEER Incidence
Age-Adjusted Rates and Trends^a
By Race/Ethnicity and Sex

Cancer of the Colon <u>SEER Incidence</u>	SEER 21 Areas ^b Rate 2012-2016			SEER 21 Areas ^b Trend 2007-2016 ^c			SEER 9 Areas ^b Trend 2007-2016 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Race/Ethnicity									
All Races	27.1	29.9	24.8	-2.9*	-3.1*	-2.7*	-2.7*	-2.8*	-2.6*
White	26.8	29.4	24.6	-2.8*	-3.1*	-2.5*	-2.8*	-3.1*	-2.8*
White Hispanic ^e	23.8	27.2	21.3	-2.6*	-3.2*	-1.9*	-	-	-
White Non-Hispanic ^e	27.3	29.9	25.2	-2.7*	-3.0*	-2.3*	-	-	-
Black	32.8	37.5	29.5	-3.4*	-3.4*	-3.1*	-3.1*	-3.3*	-3.2*
Asian/Pacific Islander	20.8	23.5	18.6	-2.7*	-2.8*	-3.7*	-	-	-
Amer Ind/Alaska Nat ^f	27.4	27.6	27.4	-1.0	-0.9	-1.1	-	-	-
Hispanic ^e	23.2	26.4	20.8	-2.5*	-3.0*	-1.9*	-	-	-
Cancer of the Rectum <u>SEER Incidence</u>	SEER 21 Areas ^b Rate 2012-2016			SEER 21 Areas ^b Trend 2007-2016 ^c			SEER 9 Areas ^b Trend 2007-2016 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Race/Ethnicity									
All Races	11.5	14.3	9.1	-1.7*	-1.8*	-1.9*	-1.2*	-1.5*	-1.1
White	11.3	14.0	8.9	-1.8*	-2.0*	-1.7*	-1.2*	-1.6*	-1.1
White Hispanic ^e	10.8	14.0	8.1	-1.5*	-1.8*	-1.5*	-	-	-
White Non-Hispanic ^e	11.5	14.2	9.1	-1.8*	-1.9*	-1.6*	-	-	-
Black	11.8	14.9	9.5	-2.1*	-1.1*	-2.4*	-1.1	-1.8*	-0.9
Asian/Pacific Islander	11.0	14.3	8.3	-1.9*	-1.8*	-2.2*	-	-	-
Amer Ind/Alaska Nat ^f	11.9	13.7	10.5	0.0	-1.0	1.1	-	-	-
Hispanic ^e	10.5	13.6	8.0	-1.2*	-1.4*	-1.4*	-	-	-

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute.

Statistic not shown. Rate based on less than 16 cases for the time interval.

Trend based on less than 10 cases for at least one year within the time interval.

Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta.

The SEER 21 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts.

The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 2000-2016.

The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2016.

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

Incidence data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

Table 6.23
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted SEER Incidence Rates^a
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates^a, 2012-2016</u>									
California	35.47	40.35	31.32	35.42	40.02	31.44	41.28	46.09	37.42
Greater Bay Area	33.99	38.56	29.99	34.18	38.04	30.71	43.15	45.99	40.70
San Francisco-Oakland	34.71	39.13	30.85	34.42	37.89	31.26	44.25	47.70	41.34
San Jose-Monterey	32.57	37.46	28.28	33.75	38.31	29.72	35.84	35.74	35.98
Los Angeles	36.17	41.76	31.63	35.57	40.89	31.15	41.73	46.94	37.98
Greater California	35.71	40.38	31.68	35.76	40.29	31.81	39.88	45.45	35.08
Connecticut	36.59	41.69	32.34	36.12	41.27	31.75	38.21	43.84	34.58
Detroit	42.25	48.02	37.65	40.10	44.87	36.19	51.34	61.77	44.08
Georgia	41.80	49.16	35.91	40.03	47.00	34.15	47.65	56.96	41.30
Atlanta	40.23	47.70	34.50	37.57	44.11	32.18	45.57	55.68	38.97
Rural Georgia	49.56	60.19	40.63	41.55	49.44	33.94	65.78	84.33	53.06
Greater Georgia	42.53	49.76	36.66	40.98	48.11	34.95	48.84	57.09	43.01
Hawaii	41.55	48.09	35.52	40.35	42.39	37.94	37.11	42.77	-
Idaho	35.55	39.25	32.22	35.25	38.97	31.93	-	-	-
Iowa	44.41	50.19	39.30	44.39	50.12	39.31	45.30	56.50	36.57
Kentucky	49.24	57.61	42.35	49.07	57.39	42.17	50.40	58.82	44.71
Louisiana	45.84	54.24	39.19	42.80	50.69	36.36	55.01	65.41	47.55
Massachusetts	35.23	39.79	31.63	35.02	39.53	31.45	36.31	43.40	31.34
New Jersey	41.12	47.16	36.28	41.47	47.71	36.40	44.09	50.56	39.71
New Mexico	33.00	37.67	29.00	32.52	37.04	28.62	28.40	27.99	29.13
New York	38.87	45.02	34.02	38.72	44.55	33.98	40.51	48.96	35.11
Seattle-Puget Sound	36.77	41.44	32.69	36.34	40.56	32.59	41.29	47.62	35.06
Utah	29.68	33.41	26.46	29.38	33.17	26.09	41.26	50.26	-
SEER 9 Areas ^b	37.87	43.00	33.49	36.98	41.54	32.99	45.72	53.73	39.96
SEER 13 Areas ^b	37.29	42.50	32.89	36.48	41.19	32.39	44.90	52.17	39.63
SEER 18 Areas ^b	38.83	44.45	34.12	38.29	43.64	33.71	46.45	54.00	40.96
SEER 21 Areas ^b	38.58	44.20	33.93	38.09	43.45	33.58	44.59	52.42	39.08

^a Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130)

^b The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 13 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry and Rural Georgia.

The SEER 18 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia

excluding ATL/RG.

The SEER 21 areas comprise the SEER 18 areas plus Idaho, New York and Massachusetts.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.24
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted SEER Death Rates^a
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Death Rates^a, 2012-2016</u>									
California	12.94	15.14	11.13	13.03	15.21	11.22	18.30	21.16	16.11
Greater Bay Area	11.42	13.08	10.03	11.57	13.31	10.12	17.14	17.31	16.79
San Francisco-Oakland	11.96	13.39	10.73	12.07	13.56	10.77	17.56	17.32	17.48
San Jose-Monterey	10.38	12.51	8.66	10.70	12.89	8.96	15.02	17.70	12.57
Los Angeles	13.48	16.07	11.41	13.18	15.46	11.31	19.25	23.47	16.36
Greater California	13.24	15.46	11.39	13.39	15.64	11.49	17.99	20.91	15.55
Connecticut	11.36	13.35	9.84	11.33	13.33	9.76	13.37	17.00	11.24
Detroit	14.57	17.23	12.56	13.38	15.68	11.59	19.77	24.67	16.43
Georgia	15.12	19.13	12.11	14.00	17.52	11.17	19.17	25.87	15.07
Atlanta	14.61	19.10	11.46	12.89	16.29	10.39	18.30	25.45	13.92
Rural Georgia	19.71	23.39	16.73	15.92	17.73	13.87	28.11	39.25	22.06
Greater Georgia	15.37	19.21	12.41	14.42	18.04	11.45	19.67	25.77	15.95
Hawaii	12.81	15.52	10.51	13.48	14.40	12.74	-	-	-
Idaho	13.11	15.47	11.02	13.22	15.55	11.16	-	-	-
Iowa	15.07	17.45	13.10	15.05	17.42	13.11	18.41	19.24	17.71
Kentucky	16.68	20.24	13.89	16.60	20.17	13.78	19.54	23.08	17.06
Louisiana	17.09	20.94	14.11	15.43	18.77	12.76	22.02	28.04	17.88
Massachusetts	12.29	14.33	10.82	12.48	14.62	10.95	11.87	13.14	10.97
New Jersey	14.44	17.44	12.13	14.58	17.50	12.30	17.66	23.18	14.00
New Mexico	13.52	16.56	10.99	13.53	16.46	11.06	15.73	19.68	-
New York	13.24	15.70	11.36	13.31	15.80	11.37	14.98	17.72	13.12
Seattle-Puget Sound	12.12	14.49	10.12	12.27	14.58	10.30	14.12	17.22	11.36
Utah	11.23	13.08	9.65	11.01	12.74	9.51	22.11	-	-
SEER 9 Areas ^b	12.97	15.34	11.05	12.72	14.91	10.92	17.70	21.95	14.75
SEER 13 Areas ^b	12.98	15.37	11.05	12.71	14.89	10.91	18.12	22.44	15.13
SEER 18 Areas ^b	13.80	16.44	11.67	13.59	16.10	11.53	18.87	23.63	15.59
SEER 21 Areas ^b	13.60	16.17	11.56	13.46	15.95	11.46	17.63	21.78	14.79
Total U.S.	14.17	16.93	11.94	13.85	16.48	11.67	18.90	23.80	15.54

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

^b The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta. The SEER 13 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry and Rural Georgia. The SEER 18 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG.

The SEER 21 areas comprise the SEER 18 areas plus Idaho, New York and Massachusetts.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

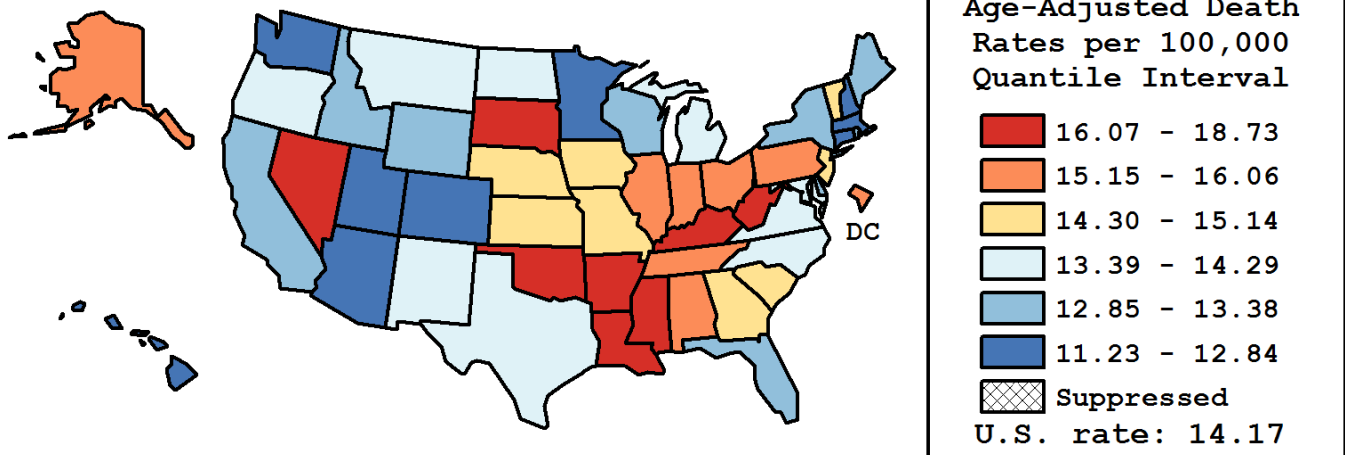
Table 6.25
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2012-2016

Males and Females

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	14.17	0.03		
High Five States				
Mississippi	18.73	0.34	01(01,02)	32.15 ^c
West Virginia	18.22	0.39	02(01,04)	28.50 ^c
Oklahoma	17.24	0.29	03(02,09)	21.61 ^c
Louisiana	17.09	0.26	04(02,09)	20.54 ^c
Arkansas	16.82	0.31	05(02,10)	18.63 ^c
Low Five States				
Washington	12.50	0.18	47(39,49)	-11.80 ^c
Massachusetts	12.29	0.18	48(42,49)	-13.30 ^c
Colorado	12.14	0.22	49(42,50)	-14.34 ^c
Connecticut	11.36	0.23	50(49,51)	-19.84 ^c
Utah	11.23	0.31	51(48,51)	-20.76 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	16.06	0.24	09(05,15)	13.29 ^c	Montana	13.66	0.47	31(18,48)	-3.64
Alaska	15.50	0.79	12(03,36)	9.33	Nebraska	15.14	0.38	17(08,27)	6.82
Arizona	12.84	0.18	43(33,48)	-9.43	Nevada	16.64	0.34	07(03,12)	17.42 ^c
Arkansas	16.82	0.31	05(02,10)	18.63 ^c	New Hampshire	12.78	0.40	45(28,50)	-9.84
California	12.94	0.08	41(36,46)	-8.72	New Jersey	14.44	0.17	23(19,29)	1.89
Colorado	12.14	0.22	49(42,50)	-14.34 ^c	New Mexico	13.52	0.34	32(22,46)	-4.60
Connecticut	11.36	0.23	50(49,51)	-19.84 ^c	New York	13.24	0.11	36(31,43)	-6.61
Delaware	13.35	0.49	35(20,49)	-5.84	North Carolina	13.80	0.16	30(24,37)	-2.61
D.C.	15.29	0.70	14(03,37)	7.85	North Dakota	13.95	0.59	28(11,48)	-1.56
Florida	13.19	0.10	38(32,43)	-6.94	Ohio	15.68	0.15	11(08,17)	10.61 ^c
Georgia	15.12	0.18	18(11,23)	6.70	Oklahoma	17.24	0.29	03(02,09)	21.61 ^c
Hawaii	12.81	0.39	44(27,49)	-9.60	Oregon	13.45	0.24	33(26,44)	-5.14
Idaho	13.11	0.39	40(25,49)	-7.51	Pennsylvania	15.27	0.14	15(11,21)	7.73
Illinois	15.26	0.15	16(11,21)	7.63	Rhode Island	13.22	0.45	37(22,49)	-6.77
Indiana	15.42	0.21	13(09,21)	8.79	South Carolina	14.65	0.23	22(14,29)	3.36
Iowa	15.07	0.28	20(10,26)	6.28	South Dakota	16.45	0.58	08(02,21)	16.03 ^c
Kansas	14.76	0.30	21(11,30)	4.14	Tennessee	15.79	0.21	10(07,18)	11.39 ^c
Kentucky	16.68	0.26	06(03,11)	17.68 ^c	Texas	14.29	0.11	25(21,29)	0.82
Louisiana	17.09	0.26	04(02,09)	20.54 ^c	Utah	11.23	0.31	51(48,51)	-20.76 ^c
Maine	13.15	0.39	39(25,49)	-7.22	Vermont	14.41	0.61	24(08,46)	1.63
Maryland	14.06	0.21	27(21,35)	-0.83	Virginia	13.90	0.18	29(23,36)	-1.93
Massachusetts	12.29	0.18	48(42,49)	-13.30 ^c	Washington	12.50	0.18	47(39,49)	-11.80 ^c
Michigan	14.17	0.16	26(21,32)	-0.04	West Virginia	18.22	0.39	02(01,04)	28.50 ^c
Minnesota	12.65	0.20	46(36,49)	-10.79 ^c	Wisconsin	13.38	0.20	34(27,44)	-5.58
Mississippi	18.73	0.34	01(01,02)	32.15 ^c	Wyoming	12.85	0.65	42(21,51)	-9.33
Missouri	15.09	0.21	19(11,24)	6.44					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 10% or more.

^d Rank of state level death rate and the 95% confidence intervals (low, high) for the rank.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

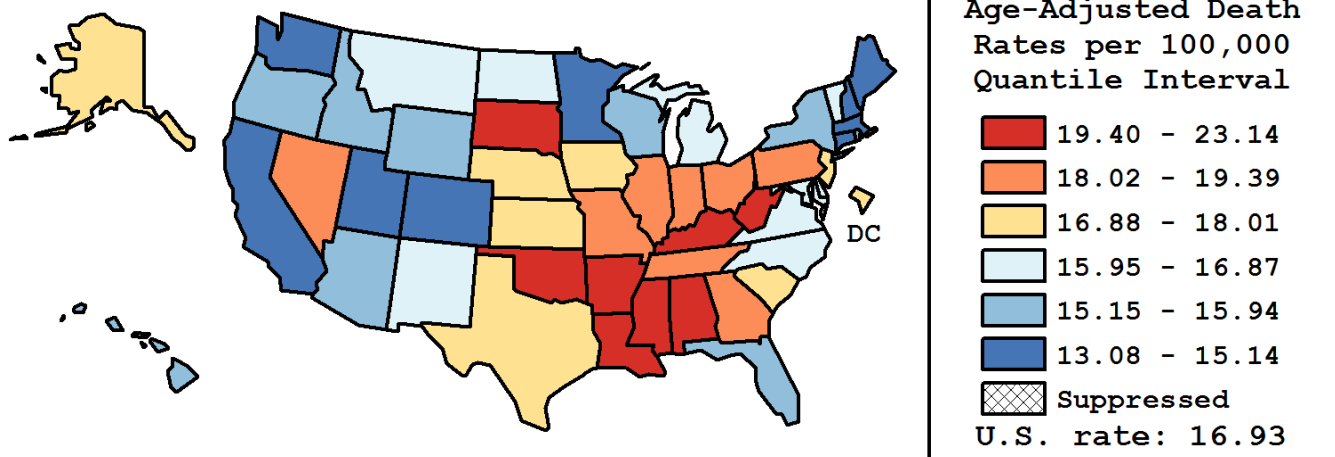
Table 6.26
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2012-2016

Males

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	16.93	0.05		
High Five States				
Mississippi	23.14	0.58	01(01,02)	36.69 ^c
Louisiana	20.94	0.45	02(01,09)	23.71 ^c
Oklahoma	20.92	0.47	03(01,09)	23.57 ^c
West Virginia	20.87	0.63	04(01,11)	23.24 ^c
Arkansas	20.56	0.52	05(02,12)	21.41 ^c
Low Five States				
Massachusetts	14.33	0.29	47(40,50)	-15.38 ^c
Colorado	14.08	0.35	48(40,51)	-16.86 ^c
New Hampshire	13.89	0.63	49(34,51)	-17.98 ^c
Connecticut	13.35	0.38	50(45,51)	-21.17 ^c
Utah	13.08	0.50	51(44,51)	-22.75 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	19.83	0.41	08(02,14)	17.13 ^c	Montana	16.34	0.75	31(13,48)	-3.50
Alaska	17.13	1.25	24(04,49)	1.16	Nebraska	17.63	0.62	20(08,35)	4.14
Arizona	15.21	0.29	42(32,47)	-10.17 ^c	Nevada	19.39	0.54	09(02,20)	14.55 ^c
Arkansas	20.56	0.52	05(02,12)	21.41 ^c	New Hampshire	13.89	0.63	49(34,51)	-17.98 ^c
California	15.14	0.13	43(36,45)	-10.55 ^c	New Jersey	17.44	0.28	23(15,30)	2.99
Colorado	14.08	0.35	48(40,51)	-16.86 ^c	New Mexico	16.56	0.56	30(15,43)	-2.19
Connecticut	13.35	0.38	50(45,51)	-21.17 ^c	New York	15.70	0.18	37(30,43)	-7.25
Delaware	16.59	0.82	29(10,47)	-2.04	North Carolina	16.74	0.27	28(20,35)	-1.11
D.C.	18.01	1.19	17(02,46)	6.37	North Dakota	16.25	0.95	33(10,50)	-4.04
Florida	15.75	0.16	35(30,42)	-7.00	Ohio	18.86	0.25	12(08,17)	11.40 ^c
Georgia	19.13	0.31	10(06,16)	12.99 ^c	Oklahoma	20.92	0.47	03(01,09)	23.57 ^c
Hawaii	15.52	0.63	40(22,49)	-8.35	Oregon	15.73	0.39	36(26,46)	-7.12
Idaho	15.47	0.63	41(21,49)	-8.64	Pennsylvania	18.15	0.23	16(11,23)	7.22
Illinois	18.56	0.25	13(09,20)	9.63	Rhode Island	15.94	0.77	34(15,49)	-5.87
Indiana	18.23	0.34	14(09,25)	7.66	South Carolina	17.67	0.39	19(11,31)	4.34
Iowa	17.45	0.46	22(12,34)	3.05	South Dakota	20.12	0.96	07(01,24)	18.85 ^c
Kansas	17.52	0.50	21(10,34)	3.46	Tennessee	19.11	0.35	11(06,17)	12.90 ^c
Kentucky	20.24	0.44	06(02,12)	19.56 ^c	Texas	17.80	0.18	18(14,25)	5.16
Louisiana	20.94	0.45	02(01,09)	23.71 ^c	Utah	13.08	0.50	51(44,51)	-22.75 ^c
Maine	15.01	0.63	44(26,51)	-11.32 ^c	Vermont	16.27	0.98	32(10,50)	-3.89
Maryland	16.87	0.35	25(17,36)	-0.34	Virginia	16.77	0.30	27(20,36)	-0.98
Massachusetts	14.33	0.29	47(40,50)	-15.38 ^c	Washington	14.62	0.30	45(37,49)	-13.63 ^c
Michigan	16.82	0.26	26(20,34)	-0.67	West Virginia	20.87	0.63	04(01,11)	23.24 ^c
Minnesota	14.42	0.33	46(39,50)	-14.83 ^c	Wisconsin	15.58	0.33	38(28,46)	-8.00
Mississippi	23.14	0.58	01(01,02)	36.69 ^c	Wyoming	15.54	1.04	39(12,51)	-8.21
Missouri	18.15	0.34	15(10,25)	7.23					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 10% or more.

^d Rank of state level death rate and the 95% confidence intervals (low, high) for the rank.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

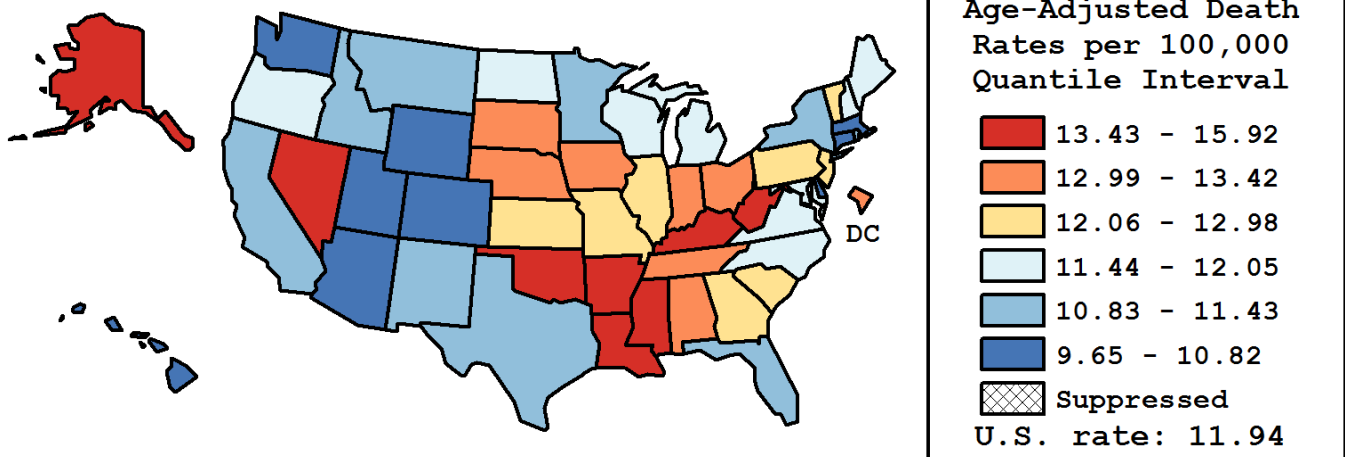
Table 6.27
Cancer of the Colon and Rectum (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2012-2016

Females

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	11.94	0.03		
High Five States				
West Virginia	15.92	0.49	01(01,04)	33.34 ^c
Mississippi	15.34	0.41	02(01,06)	28.47 ^c
Oklahoma	14.18	0.35	03(02,13)	18.76 ^c
Louisiana	14.11	0.32	04(02,13)	18.19 ^c
Alaska	14.11	1.02	05(01,39)	18.13 ^c
Low Five States				
Colorado	10.58	0.27	47(34,51)	-11.41
Hawaii	10.51	0.49	48(25,51)	-11.98
Wyoming	10.30	0.79	49(15,51)	-13.71
Connecticut	9.84	0.28	50(44,51)	-17.57 ^c
Utah	9.65	0.40	51(42,51)	-19.18 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	13.04	0.29	16(06,24)	9.24	Montana	11.23	0.58	37(13,51)	-5.92
Alaska	14.11	1.02	05(01,39)	18.13 ^c	Nebraska	13.09	0.48	15(03,30)	9.61
Arizona	10.75	0.23	44(32,50)	-9.97	Nevada	14.07	0.43	06(02,18)	17.86 ^c
Arkansas	13.73	0.38	08(02,19)	14.96	New Hampshire	11.85	0.53	28(10,48)	-0.76
California	11.13	0.10	39(32,45)	-6.83	New Jersey	12.13	0.20	23(17,33)	1.60
Colorado	10.58	0.27	47(34,51)	-11.41	New Mexico	10.99	0.42	42(22,50)	-7.97
Connecticut	9.84	0.28	50(44,51)	-17.57 ^c	New York	11.36	0.13	35(27,42)	-4.86
Delaware	10.73	0.59	45(19,51)	-10.16	North Carolina	11.51	0.19	33(24,42)	-3.60
D.C.	13.25	0.86	10(01,44)	10.94	North Dakota	11.92	0.73	26(04,50)	-0.15
Florida	11.02	0.12	41(33,47)	-7.75	Ohio	13.22	0.19	11(06,20)	10.68
Georgia	12.11	0.21	24(17,33)	1.44	Oklahoma	14.18	0.35	03(02,13)	18.76 ^c
Hawaii	10.51	0.49	48(25,51)	-11.98	Oregon	11.54	0.30	31(20,46)	-3.33
Idaho	11.02	0.49	40(20,51)	-7.69	Pennsylvania	12.98	0.17	17(08,22)	8.73
Illinois	12.69	0.18	19(11,25)	6.23	Rhode Island	11.31	0.55	36(15,51)	-5.32
Indiana	13.11	0.25	13(06,22)	9.78	South Carolina	12.23	0.28	22(13,35)	2.38
Iowa	13.10	0.36	14(04,26)	9.74	South Dakota	13.42	0.71	09(01,34)	12.41
Kansas	12.46	0.38	21(08,36)	4.31	Tennessee	13.18	0.25	12(06,21)	10.38
Kentucky	13.89	0.32	07(02,16)	16.34 ^c	Texas	11.43	0.13	34(26,42)	-4.26
Louisiana	14.11	0.32	04(02,13)	18.19 ^c	Utah	9.65	0.40	51(42,51)	-19.18 ^c
Maine	11.66	0.49	29(12,48)	-2.33	Vermont	12.72	0.77	18(03,47)	6.48
Maryland	11.85	0.26	27(18,40)	-0.72	Virginia	11.53	0.22	32(23,44)	-3.45
Massachusetts	10.82	0.22	43(31,49)	-9.36	Washington	10.64	0.23	46(35,50)	-10.87
Michigan	12.05	0.19	25(18,34)	0.93	West Virginia	15.92	0.49	01(01,04)	33.34 ^c
Minnesota	11.18	0.26	38(26,48)	-6.40	Wisconsin	11.56	0.25	30(21,44)	-3.20
Mississippi	15.34	0.41	02(01,06)	28.47 ^c	Wyoming	10.30	0.79	49(15,51)	-13.71
Missouri	12.67	0.25	20(09,27)	6.15					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 10% or more.

^d Rank of state level death rate and the 95% confidence intervals (low, high) for the rank.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6.28
Cancer of the Colon and Rectum (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2016
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <24	0 to <24 ^b	>=24 ^d	Complete ^e
<u>Race</u>	<u>Sex</u>								
All Races	Both Sexes	444,429	317,632	229,064	150,394	70,455	1,211,974	112,948	1,324,922
	Males	230,124	160,170	114,529	75,117	33,972	613,912	47,494	661,406
	Females	214,305	157,462	114,534	75,278	36,483	598,062	65,454	663,516
White	Both Sexes	360,394	260,557	192,176	128,096	59,919	1,001,141	97,331	1,113,103
	Males	187,381	132,866	97,733	64,653	29,146	511,778	41,357	561,266
	Females	173,013	127,691	94,443	63,443	30,773	489,363	55,974	551,837
Black	Both Sexes	53,043	36,471	23,891	14,824	7,043	135,272	10,020	145,292
	Males	26,142	16,561	10,260	6,622	3,106	62,692	4,004	66,696
	Females	26,901	19,910	13,631	8,202	3,937	72,580	6,016	78,596
Asian/ Pacific Islander	Both Sexes	21,293	14,221	9,467	5,573	2,655	53,209	+	+
	Males	11,306	7,247	4,636	2,774	1,269	27,231	+	+
	Females	9,988	6,974	4,831	2,799	1,387	25,978	+	+
Hispanic	Both Sexes	38,986	23,945	14,554	8,336	3,491	89,312	+	+
	Males	20,435	12,487	7,373	4,349	1,668	46,312	+	+
	Females	18,551	11,457	7,181	3,987	1,823	43,000	+	+

Estimated prevalence percent^a on January 1, 2016, of the SEER population diagnosed in the previous 24 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence		Age Specific (Crude)									Age-Adjusted ^c	
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races	Both Sexes	0.3761	0.0001	0.0016	0.0074	0.0323	0.1242	0.3988	0.8329	1.6388	2.8341	0.3204
	Males	0.3870	0.0001	0.0015	0.0066	0.0323	0.1284	0.4329	0.9550	1.9166	3.2563	0.3656
	Females	0.3656	0.0002	0.0018	0.0083	0.0323	0.1200	0.3663	0.7223	1.4074	2.5744	0.2849
White	Both Sexes	0.3970	0.0002	0.0018	0.0080	0.0334	0.1237	0.3838	0.7948	1.6121	2.8527	0.3148
	Males	0.4096	0.0001	0.0017	0.0067	0.0333	0.1282	0.4173	0.9164	1.8930	3.2560	0.3595
	Females	0.3847	0.0002	0.0019	0.0093	0.0335	0.1191	0.3512	0.6820	1.3730	2.6003	0.2789
Black	Both Sexes	0.3000	-	0.0005	0.0043	0.0288	0.1255	0.4444	1.0353	1.8322	2.7160	0.3491
	Males	0.2898	-	0.0003	0.0042	0.0310	0.1235	0.4636	1.1528	2.0460	3.2824	0.3925
	Females	0.3093	-	0.0008	0.0045	0.0268	0.1272	0.4276	0.9414	1.6833	2.4364	0.3213
Asian/ Pacific Islander	Both Sexes	0.2613	-	0.0008	0.0051	0.0218	0.1050	0.3875	0.8164	1.4531	2.3489	0.2870
	Males	0.2792	-	0.0011	0.0051	0.0205	0.1118	0.4444	0.9562	1.7523	2.7523	0.3363
	Females	0.2449	-	0.0006	0.0051	0.0230	0.0991	0.3383	0.7036	1.2127	2.0892	0.2488
Hispanic	Both Sexes	0.1564	0.0002	0.0010	0.0050	0.0242	0.0879	0.3194	0.7058	1.3264	2.0502	0.2530
	Males	0.1605	0.0001	0.0007	0.0043	0.0246	0.0907	0.3398	0.7983	1.6371	2.5467	0.2989
	Females	0.1522	0.0003	0.0013	0.0058	0.0239	0.0851	0.2994	0.6241	1.0883	1.7437	0.2190

^a US 2016 cancer prevalence counts are based on 2016 cancer prevalence proportions from the SEER 13 Areas (excluding the Alaska Native Registry) and 1/1/2016 US population estimates based on the average of 2015 and 2016 population estimates from the US Bureau of the Census.

^b Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 24 years. Maximum limited-duration prevalence is 24 years for 1992-2016 data.

^c Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.

^d Cases diagnosed more than 24 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

^e Complete prevalence is obtained by summing 0 to <24 and >=24.

- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.

+ Not available.

Table 6.29

Cancer of the Colon And Rectum (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2012-2016
Both Sexes by Race

Histology ^a	All Races		White		Black		Asian/Pacific Islander		American Indian/ Alaska Native ^b		Hispanic ^c	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Carcinoma	240,422	99.4%	187,663	99.5%	29,963	99.3%	18,403	99.4%	1,270	99.0%	27,121	99.3%
Epidermoid carcinoma ^d (8051-8131)	1,604	0.7%	1,362	0.7%	178	0.6%	22	0.1%	-	-	173	0.6%
Squamous cell carcinoma (8070-8078,8083-8084)	1,564	0.6%	1,334	0.7%	173	0.6%	21	0.1%	-	-	167	0.6%
Adenocarcinoma (8050,8140-8147, 8160-8162,8180-8221, 8250-8507,8520-8551,8560, 8570-8574,8576,8940-8941)	221,368	91.5%	174,331	92.4%	26,639	88.3%	16,885	91.2%	1,168	91.0%	24,629	90.2%
Adenocarcinoma, NOS (8140)	152,017	62.9%	119,467	63.3%	18,314	60.7%	12,094	65.3%	837	65.2%	17,145	62.8%
Adenocarcinoma in adenomatous polyp (8210)	21,785	9.0%	17,054	9.0%	2,493	8.3%	1,699	9.2%	129	10.1%	2,008	7.4%
Adenocarcinoma in villous adenoma (8261)	4,010	1.7%	3,269	1.7%	430	1.4%	263	1.4%	-	-	498	1.8%
Mucinous adenocarcinoma (8470-8473,8480,8482)	15,202	6.3%	12,383	6.6%	1,668	5.5%	982	5.3%	47	3.7%	1,891	6.9%
Mucin-producing adenocarcinoma (8481)	1,415	0.6%	1,109	0.6%	215	0.7%	77	0.4%	-	-	177	0.6%
Signet ring adenocarcinoma (8490)	2,770	1.1%	2,262	1.2%	304	1.0%	174	0.9%	-	-	339	1.2%
Other adenocarcinomas ^e	24,169	10.0%	18,787	10.0%	3,215	10.7%	1,596	8.6%	126	9.8%	2,571	9.4%
Other specific carcinomas (8012-8015,8030-8046, 8150-8155,8170-8175, 8230-8249,8508,8510-8513, 8561-8562,8575,8580-8671)	15,618	6.5%	10,564	5.6%	2,878	9.5%	1,378	7.4%	79	6.2%	2,095	7.7%
Neuroendocrine carcinoid (8240-8245)	11,866	4.9%	7,771	4.1%	2,304	7.6%	1,101	5.9%	69	5.4%	1,695	6.2%
Other ^f	3,752	1.6%	2,793	1.5%	574	1.9%	277	1.5%	-	-	400	1.5%
Unspecified, Carcinoma, NOS (8010-8011, 8020-8022)	1,832	0.8%	1,406	0.7%	268	0.9%	118	0.6%	-	-	224	0.8%

Source: SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
Percents may not sum to 100 due to rounding.

^a Excludes Kaposi Sarcoma, mesothelioma, lymphomas, leukemias, myelomas, lymphoreticular, and immunoproliferative diseases.

^b Estimates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

^d Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

^e Epidermoid carcinoma includes squamous, basal, and transitional cell carcinomas.

^f Includes histologies 8050, 8141-8147, 8160-8162, 8180-8204, 8211-8221, 8250-8260, 8262-8264, 8270-8463, 8500-8507, 8514, 8520-8551, 8560, 8570-8574, 8576, 8940-8941.

^f Includes histologies 8012-8015, 8030-8046, 8150-8155, 8170-8175, 8230-8231, 8246-8249, 8508, 8510-8513, 8561-8562, 8575, 8580-8671.

- Statistic not shown due to fewer than 16 cases during the time period.

Table 6.29 - continued

Cancer of the Colon And Rectum (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2012-2016
Both Sexes by Race

Histology ^a	All Races		White		Black		Asian/Pacific Islander		American Indian/ Alaska Native ^b		Hispanic ^c	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Sarcoma and other soft tissue tumors (8680-8713,8800-8921, 8990-8991,9040-9044, 9120-9136,9150-9252, 9370-9373,9540-9582)	163	0.1%	125	0.1%	23	0.1%	-	-	-	-	21	0.1%
Other specific types (8720-8790,8930-8936, 8950-8983,9000-9030, 9060-9110,9260-9365, 9380-9539)	431	0.2%	301	0.2%	68	0.2%	55	0.3%	-	-	48	0.2%
Unspecified (8000-8005)	785	0.3%	596	0.3%	112	0.4%	52	0.3%	-	-	111	0.4%
Total ^d	241,801	100.0%	188,685	100.0%	30,166	100.0%	18,521	100.0%	1,283	100.0%	27,301	100.0%

Source: SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

Percents may not sum to 100 due to rounding.

^a Excludes Kaposi Sarcoma, mesothelioma, lymphomas, leukemias, myelomas, lymphoreticular, and immunoproliferative diseases.

^b Estimates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

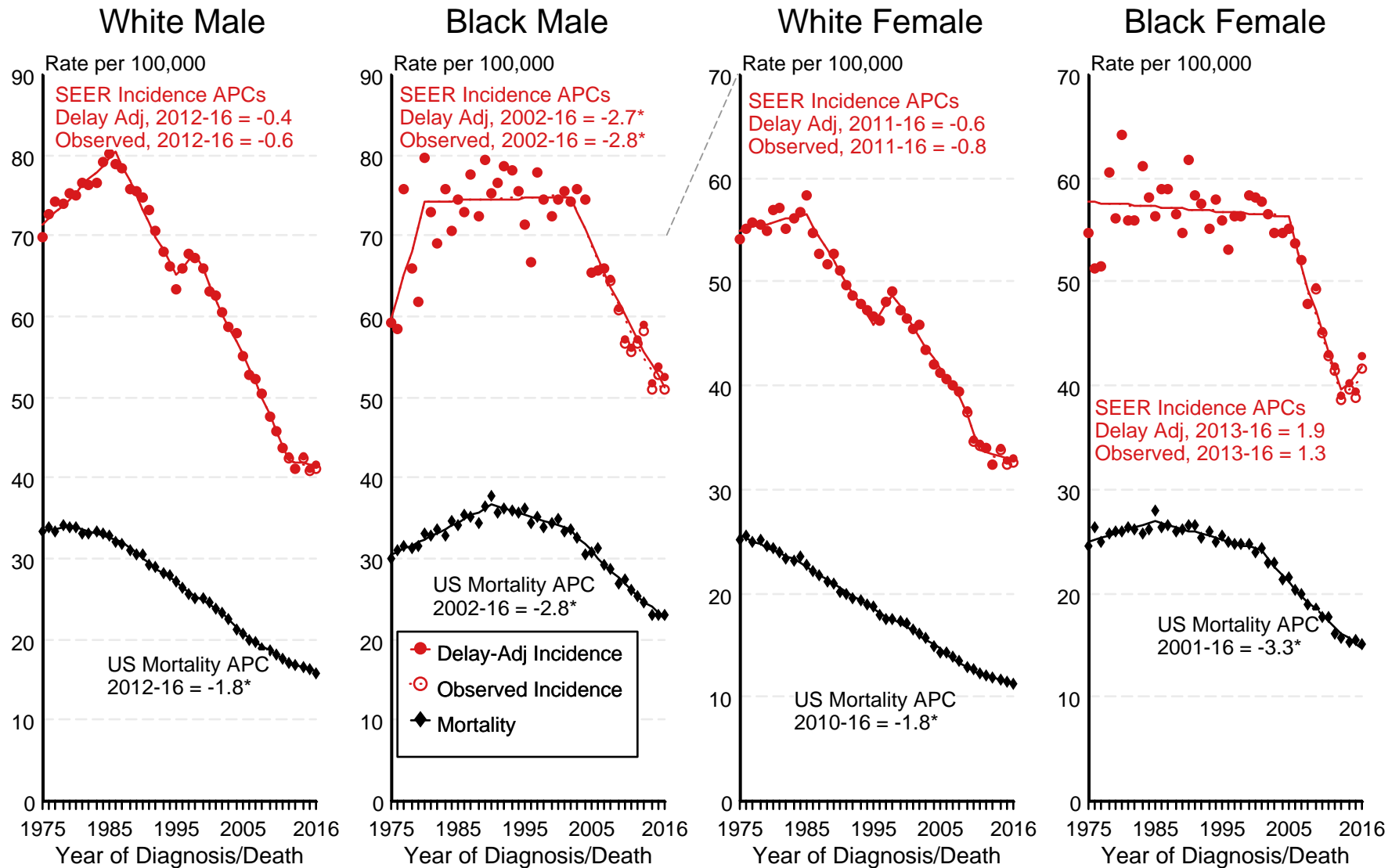
Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

^d Total includes carcinoma cases from the previous page.

- Statistic not shown due to fewer than 16 cases during the time period.

Figure 6.1

SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates^a Cancer of the Colon and Rectum, by Race and Sex



Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC).

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute.

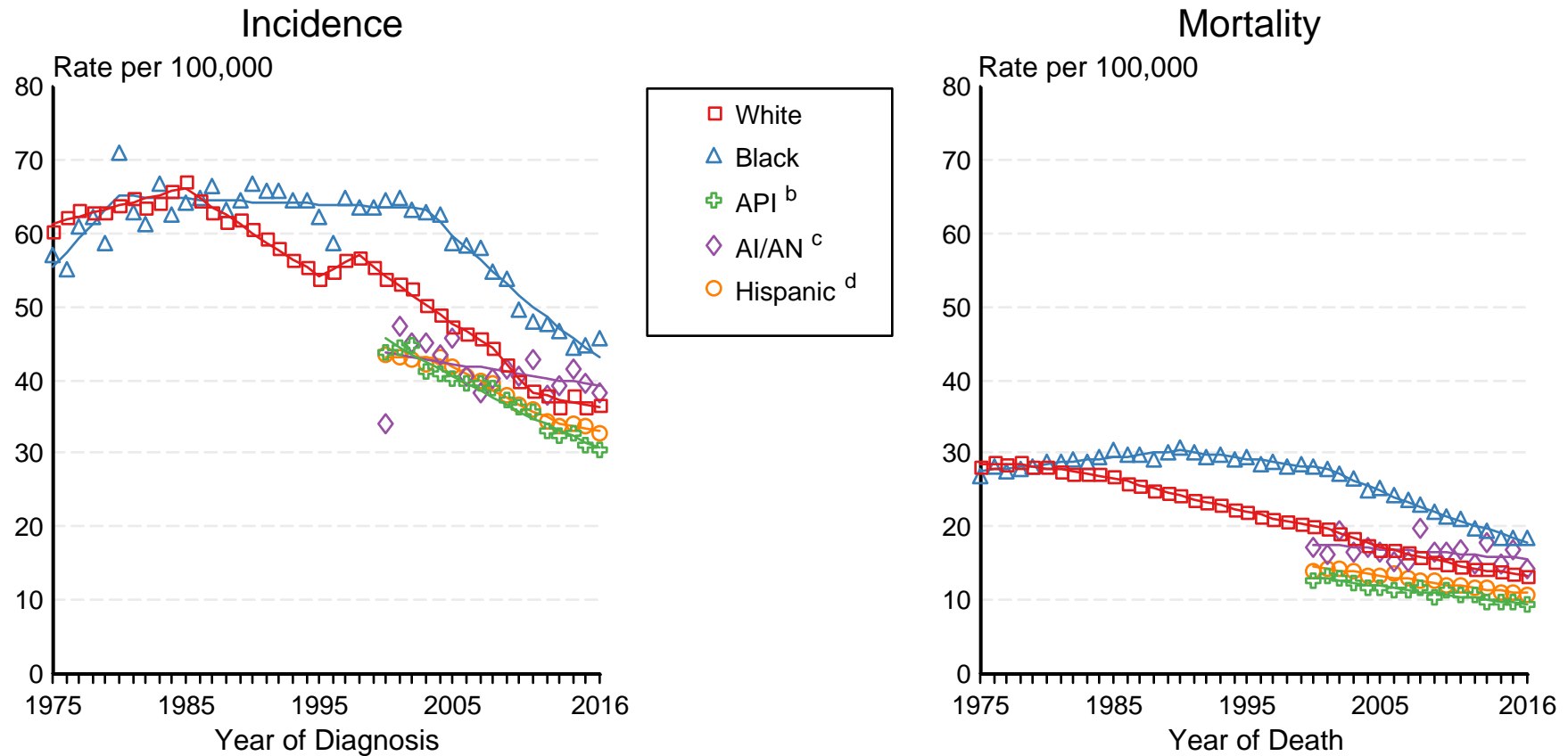
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

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

Figure 6.2

SEER Incidence and US Death Rates^a Cancer of the Colon and Rectum, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2016
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 2000-2016



Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 21 areas (SEER 9 areas, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Regression lines are calculated using the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2016 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 2000-2016 allow a maximum of 3 joinpoints.

^b API = Asian/Pacific Islander.

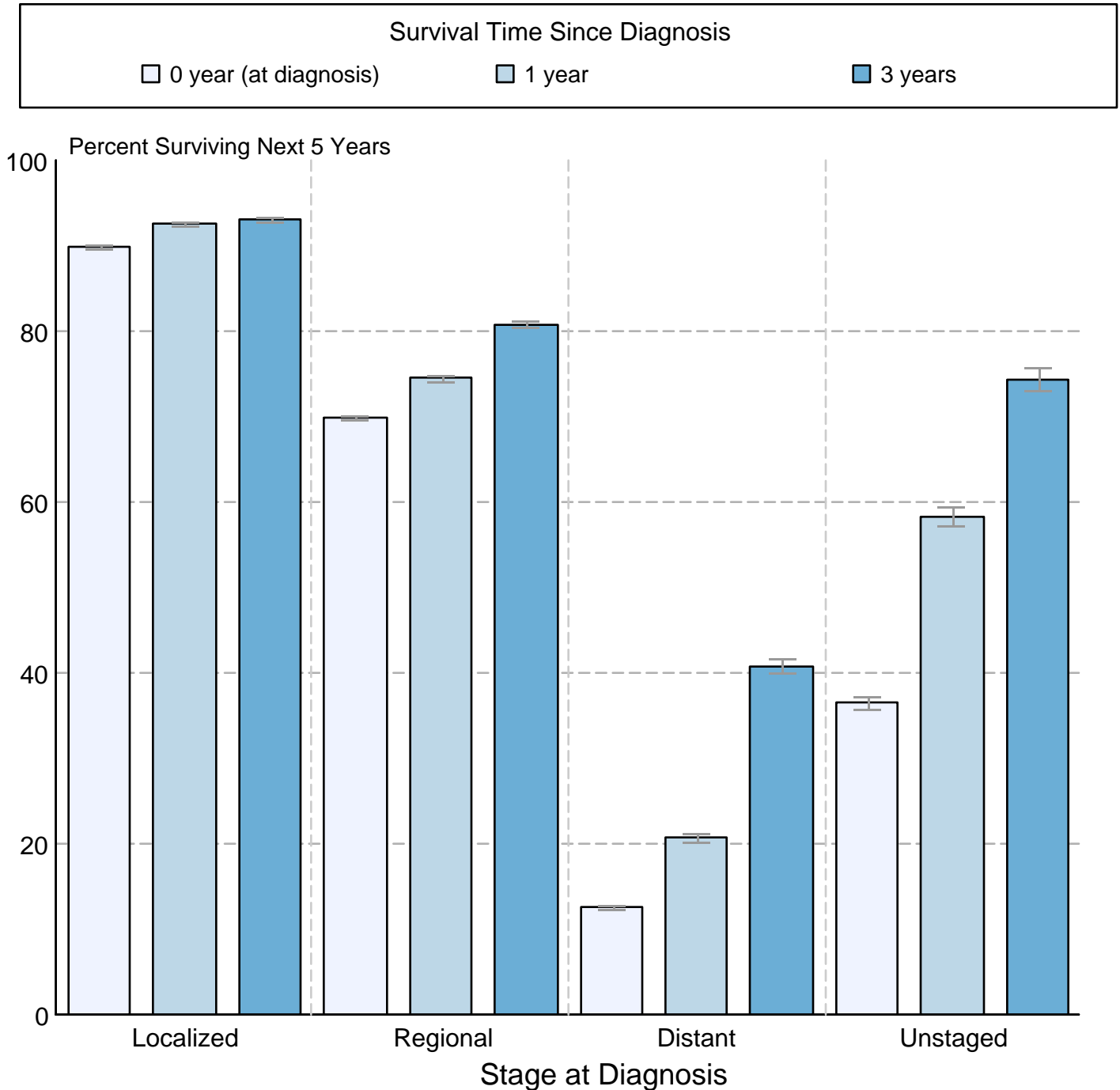
^c AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

Figure 6.3

Cancer of the Colon and Rectum 5-Year SEER Conditional Relative Survival and 95% Confidence Intervals

Probability of surviving the next 5 years given the cohort
has already survived 0, 1, or 3 years
2000-2015 by stage at diagnosis



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

Percent surviving is not shown if based on less than 25 cases.

Confidence intervals are not shown if length of the confidence interval is greater than 5 times the standard error.