

Table 16.1
Melanoma of the Skin (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	1975-81	5.9*	1981-05	2.9*	2005-16	1.6*							1.6*	1.6*
White	1975-81	6.2*	1981-05	3.2*	2005-16	1.9*							1.9*	1.9*
Black	1975-16	-0.3											-0.3	-0.3
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-05	3.5*	2005-16	1.3*									1.3*	1.3*
White	2000-05	3.8*	2005-16	1.6*									1.6*	1.6*
White NH ^{ef}	2000-05	4.3*	2005-16	1.9*									1.9*	1.9*
Black	2000-16	0.0											0.0	0.0
Black NH ^{ef}	2000-16	0.1											0.1	0.1
API ^e	2000-16	-0.4											-0.4	-0.4
AI/AN ^{eg}	2000-16	2.7*											2.7*	2.7*
Hispanic ^f	2000-16	0.7											0.7	0.7
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/table1.html .														
All Races	1975-77	4.7	1977-90	1.4*	1990-02	-0.3	2002-09	0.6	2009-14	-1.2*	2014-16	-8.4*	-2.5*	-4.9*
White	1975-77	5.0	1977-90	1.5*	1990-02	-0.1	2002-09	0.8*	2009-14	-1.0	2014-16	-8.1*	-2.2*	-4.6*
Black	1975-14	-0.8*	2014-16	-17.9									-4.9	-9.8
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-09	0.5*	2009-14	-1.2	2014-16	-8.5*							-2.5*	-4.9*
White	2000-13	0.4*	2013-16	-6.5*									-2.0*	-4.8*
White NH ^{ef}	2000-13	0.6*	2013-16	-6.3*									-1.8*	-4.6*
Black	2000-14	-1.2*	2014-16	-16.1									-4.7	-9.0
Black NH ^{ef}	2000-14	-1.2*	2014-16	-16.1									-4.8	-9.0
API ^e	2000-16	-0.9											-0.9	-0.9
AI/AN ^{eg}	2000-16	-2.9											-2.9	-2.9
Hispanic ^f	2000-16	-0.8											-0.8	-0.8

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 16.2
Melanoma of the Skin (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	5.6*	1985-05	3.2*	2005-16	1.7*							1.7*	1.7*
White	1975-85	5.9*	1985-05	3.4*	2005-16	1.9*							1.9*	1.9*
Black	1975-16	-0.6											-0.6	-0.6
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-05	3.8*	2005-16	1.4*									1.4*	1.4*
White	2000-05	4.1*	2005-16	1.6*									1.6*	1.6*
White NH ^{ef}	2000-05	4.3*	2005-16	2.0*									2.0*	2.0*
Black	2000-16	-0.4											-0.4	-0.4
Black NH ^{ef}	2000-16	-0.5											-0.5	-0.5
API ^e	2000-16	-0.4											-0.4	-0.4
AI/AN ^{eg}	2000-16	0.4											0.4	0.4
Hispanic ^f	2000-16	0.5											0.5	0.5
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/table1.html .														
All Races	1975-87	2.4*	1987-97	0.9*	1997-00	-1.7	2000-09	1.0*	2009-14	-1.3*	2014-16	-8.5*	-2.5*	-5.0*
White	1975-87	2.5*	1987-97	1.0*	1997-00	-1.6	2000-09	1.1*	2009-14	-1.0	2014-16	-8.3*	-2.2*	-4.7*
Black	1975-16	-0.9*											-0.9*	-0.9*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-09	1.0*	2009-14	-1.3	2014-16	-8.5*							-2.5*	-5.0*
White	2000-09	1.1*	2009-14	-1.0	2014-16	-8.3*							-2.2*	-4.7*
White NH ^{ef}	2000-09	1.3*	2009-14	-0.9	2014-16	-8.1*							-2.0*	-4.6*
Black	2000-16	-1.2											-1.2	-1.2
Black NH ^{ef}	2000-16	-1.1											-1.1	-1.1
API ^e	2000-16	-2.1											-2.1	-2.1
AI/AN ^{eg}	2000-16	-2.2											-2.2	-2.2
Hispanic ^f	2000-16	-0.5											-0.5	-0.5

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 16.3
Melanoma of the Skin (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	1975-80	5.5*	1980-05	2.5*	2005-16	1.6*							1.6*	1.6*
White	1975-81	6.2*	1981-93	2.1*	1993-05	3.5*	2005-12	0.9	2012-16	3.6*			2.1*	3.6*
Black	1975-16	-0.2											-0.2	-0.2
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-16	1.6*											1.6*	1.6*
White	2000-16	1.9*											1.9*	1.9*
White NH ^{ef}	2000-16	2.3*											2.3*	2.3*
Black	2000-16	0.2											0.2	0.2
Black NH ^{ef}	2000-16	0.4											0.4	0.4
API ^e	2000-16	-0.5											-0.5	-0.5
AI/AN ^{eg}	2000-16	5.5*											5.5*	5.5*
Hispanic ^f	2000-16	0.6											0.6	0.6
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/table1.html .														
All Races	1975-88	0.8*	1988-14	-0.6*	2014-16	-9.3*							-2.6*	-5.1*
White	1975-86	1.1*	1986-13	-0.3*	2013-16	-5.7*							-2.1*	-4.4*
Black	1975-97	0.3	1997-16	-2.6*									-2.6*	-2.6*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-14	-0.6*	2014-16	-9.3*									-2.6*	-5.0*
White	2000-13	-0.2	2013-16	-5.9*									-2.2*	-4.5*
White NH ^{ef}	2000-13	0.0	2013-16	-5.6*									-1.9*	-4.2*
Black	2000-16	-2.7*											-2.7*	-2.7*
Black NH ^{ef}	2000-16	-2.8*											-2.8*	-2.8*
API ^e	2000-16	-0.1											-0.1	-0.1
AI/AN ^{eg}	-	-											-	-
Hispanic ^f	2000-16	-1.1											-1.1	-1.1

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 16.4
Melanoma of the Skin (Invasive)

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

Year of Diagnosis:	All Races			Whites		
	Total	Males	Females	Total	Males	Females
1975-1979	8.70	9.44	8.19	9.75	10.56	9.22
1980	10.51	11.80	9.63	12.03	13.41	11.11
1981	11.08	12.07	10.45	12.59	13.57	12.03
1982	11.19	12.50	10.29	12.84	14.22	11.91
1983	11.08	12.67	10.01	12.64	14.40	11.49
1984	11.41	12.91	10.44	13.11	14.82	12.04
1985	12.78	15.16	11.16	14.58	17.31	12.77
1986	13.32	15.67	11.63	15.27	17.92	13.41
1987	13.67	15.94	12.15	15.67	18.19	14.02
1988	12.89	14.97	11.48	14.99	17.40	13.41
1989	13.75	16.39	11.93	15.97	18.99	13.92
1990	13.87	16.68	11.87	16.20	19.35	13.99
1991	14.63	17.60	12.55	17.15	20.51	14.81
1992	14.77	18.31	12.21	17.31	21.38	14.40
1993	14.64	18.22	12.06	17.13	21.19	14.22
1994	15.67	19.85	12.62	18.47	23.33	14.94
1995	16.51	20.34	13.84	19.46	23.65	16.60
1996	17.39	21.75	14.24	20.63	25.52	17.12
1997	17.77	21.75	14.89	21.08	25.40	18.02
1998	17.95	22.16	15.02	21.53	26.31	18.26
1999	18.36	22.96	15.15	22.05	27.15	18.50
2000	19.01	24.00	15.52	22.97	28.54	19.13
2001	19.74	24.62	16.33	24.02	29.47	20.24
2002	19.37	24.05	16.15	23.49	28.67	20.00
2003	19.59	24.28	16.27	23.95	29.11	20.36
2004	20.71	25.57	17.36	25.40	30.94	21.60
2005	22.50	28.22	18.47	27.85	34.29	23.32
2006	22.16	27.77	18.17	27.34	33.55	22.92
2007	21.87	27.68	17.84	27.01	33.49	22.56
2008	23.28	29.42	18.95	28.88	35.81	24.01
2009	23.23	29.56	18.72	28.73	35.94	23.55
2010	24.02	30.19	19.65	29.75	36.57	24.95
2011	23.08	29.32	18.65	28.72	35.74	23.71
2012	23.18	29.85	18.35	28.90	36.43	23.42
2013	24.38	31.14	19.42	30.36	37.86	24.87
2014	25.63	32.45	20.63	32.28	39.87	26.73
2015	26.16	32.48	21.57	33.17	40.26	27.97
2016	25.83	32.52	20.89	32.52	40.02	26.97

Note: Delay-adjusted melanoma of the skin rates cannot be calculated for the SEER 9 Black population due to low case counts.
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 16.5
Melanoma of the Skin (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	18.01	22.51	14.94	21.43	26.51	18.03	1.00	1.15	0.91
1975-1979	8.70	9.44	8.19	9.75	10.56	9.22	1.12	1.16	1.11
1980	10.51	11.80	9.63	12.03	13.41	11.11	-	-	-
1981	11.08	12.07	10.45	12.59	13.57	12.03	1.35	-	-
1982	11.19	12.50	10.29	12.84	14.22	11.91	-	-	-
1983	11.08	12.67	10.01	12.64	14.40	11.49	-	-	-
1984	11.41	12.91	10.44	13.11	14.82	12.04	-	-	-
1985	12.78	15.16	11.16	14.58	17.31	12.77	-	-	-
1986	13.32	15.67	11.63	15.27	17.92	13.41	-	-	-
1987	13.67	15.94	12.15	15.67	18.19	14.02	1.30	-	-
1988	12.89	14.97	11.48	14.99	17.40	13.41	1.12	-	-
1989	13.75	16.39	11.93	15.97	18.99	13.92	1.13	-	-
1990	13.87	16.68	11.87	16.20	19.35	13.99	1.22	-	-
1991	14.63	17.60	12.55	17.15	20.51	14.81	1.10	-	-
1992	14.77	18.31	12.21	17.31	21.38	14.40	-	-	-
1993	14.64	18.22	12.06	17.13	21.19	14.22	-	-	-
1994	15.67	19.85	12.62	18.47	23.33	14.94	1.03	-	-
1995	16.51	20.34	13.84	19.46	23.65	16.60	1.68	3.19	-
1996	17.39	21.75	14.24	20.63	25.52	17.12	1.11	-	-
1997	17.77	21.75	14.89	21.08	25.40	18.02	1.10	-	-
1998	17.95	22.16	15.02	21.53	26.31	18.26	1.19	-	-
1999	18.36	22.96	15.15	22.05	27.15	18.50	1.14	-	-
2000	19.01	24.00	15.52	22.97	28.54	19.13	0.92	-	-
2001	19.74	24.62	16.33	24.02	29.47	20.24	0.76	-	-
2002	19.37	24.05	16.15	23.49	28.67	20.00	1.11	-	-
2003	19.59	24.28	16.27	23.95	29.11	20.36	0.84	-	-
2004	20.71	25.57	17.36	25.40	30.94	21.60	0.85	-	-
2005	22.50	28.22	18.47	27.85	34.29	23.32	1.07	-	1.03
2006	22.16	27.77	18.17	27.34	33.55	22.92	0.98	-	-
2007	21.87	27.68	17.84	27.01	33.49	22.56	1.22	-	1.20
2008	23.25	29.39	18.93	28.82	35.74	23.96	1.22	1.33	-
2009	23.17	29.49	18.67	28.62	35.80	23.46	1.15	1.11	1.11
2010	23.94	30.09	19.58	29.57	36.35	24.80	1.07	-	0.97
2011	22.98	29.18	18.56	28.50	35.47	23.53	1.07	-	1.13
2012	23.06	29.69	18.24	28.63	36.09	23.20	0.82	-	-
2013	24.21	30.94	19.29	30.02	37.44	24.59	0.87	-	-
2014	25.40	32.16	20.45	31.81	39.28	26.34	1.00	1.16	0.91
2015	25.86	32.10	21.31	32.53	39.48	27.44	0.94	-	0.91
2016	25.38	31.96	20.52	31.59	38.87	26.20	0.80	-	-

^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 16.6
Melanoma of the Skin (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	2.61	3.77	1.75	2.95	4.24	1.98	0.46	0.52	0.42
1975-1979	2.26	2.92	1.74	2.48	3.19	1.91	0.52	0.65	0.43
1980	2.34	3.10	1.74	2.57	3.41	1.90	0.54	0.55	0.56
1981	2.43	3.13	1.88	2.68	3.45	2.07	0.58	0.56	0.57
1982	2.46	3.31	1.81	2.71	3.64	1.99	0.52	0.56	0.49
1983	2.48	3.29	1.85	2.74	3.63	2.04	0.50	0.63	0.40
1984	2.53	3.42	1.85	2.80	3.79	2.03	0.51	0.45	0.54
1985	2.56	3.46	1.86	2.83	3.82	2.06	0.53	0.58	0.49
1986	2.59	3.55	1.88	2.88	3.92	2.09	0.47	0.70	0.31
1987	2.65	3.73	1.83	2.93	4.13	2.02	0.55	0.57	0.54
1988	2.65	3.67	1.90	2.95	4.07	2.13	0.45	0.53	0.40
1989	2.69	3.74	1.89	2.99	4.15	2.10	0.55	0.57	0.53
1990	2.75	3.80	1.97	3.06	4.21	2.20	0.52	0.65	0.45
1991	2.71	3.89	1.82	3.01	4.31	2.02	0.59	0.65	0.54
1992	2.71	3.85	1.85	3.01	4.27	2.06	0.51	0.57	0.44
1993	2.71	3.86	1.86	3.03	4.31	2.06	0.53	0.42	0.59
1994	2.66	3.82	1.81	2.98	4.26	2.03	0.45	0.44	0.43
1995	2.70	3.89	1.81	3.03	4.35	2.02	0.46	0.51	0.42
1996	2.80	4.04	1.90	3.14	4.50	2.14	0.44	0.51	0.38
1997	2.73	3.94	1.84	3.06	4.41	2.05	0.56	0.49	0.58
1998	2.75	4.09	1.77	3.10	4.59	1.98	0.51	0.45	0.54
1999	2.63	3.81	1.74	2.97	4.27	1.98	0.40	0.52	0.33
2000	2.66	3.82	1.81	3.00	4.28	2.04	0.54	0.59	0.50
2001	2.66	3.89	1.75	3.02	4.38	1.99	0.42	0.35	0.45
2002	2.61	3.79	1.73	2.96	4.25	1.97	0.39	0.50	0.32
2003	2.67	3.90	1.75	3.03	4.40	1.98	0.45	0.43	0.45
2004	2.67	3.97	1.71	3.05	4.48	1.95	0.45	0.56	0.39
2005	2.76	4.03	1.81	3.13	4.54	2.07	0.45	0.49	0.41
2006	2.74	4.10	1.73	3.12	4.63	1.98	0.45	0.62	0.36
2007	2.68	4.01	1.69	3.06	4.54	1.93	0.47	0.53	0.45
2008	2.69	4.05	1.65	3.08	4.61	1.90	0.39	0.44	0.35
2009	2.81	4.20	1.78	3.24	4.77	2.06	0.43	0.54	0.35
2010	2.74	4.10	1.71	3.15	4.67	1.96	0.42	0.49	0.38
2011	2.69	4.04	1.67	3.11	4.61	1.93	0.41	0.42	0.41
2012	2.66	3.95	1.68	3.07	4.52	1.95	0.39	0.44	0.34
2013	2.66	4.01	1.63	3.09	4.60	1.91	0.40	0.51	0.31
2014	2.57	3.85	1.58	2.99	4.43	1.84	0.39	0.43	0.37
2015	2.41	3.56	1.52	2.81	4.10	1.78	0.35	0.51	0.24
2016	2.17	3.25	1.34	2.54	3.76	1.58	0.27	0.31	0.24

^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 16.7
Melanoma of the Skin (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	22.2	28.8	17.5	26.6	33.9	21.3	1.0	1.1	0.9
Under 65	12.4	12.7	12.3	15.2	15.3	15.3	0.5	0.5	0.5
65 and over	90.2	140.4	53.4	105.5	163.0	62.5	4.7	5.5	4.1
All ages (WHO world std) ^c	17.1	21.0	14.2	20.6	24.8	17.4	0.7	0.8	0.7
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	0.1	-	0.2	0.1	-	0.2	-	-	-
5-9	0.2	0.1	0.2	0.2	0.1	0.3	-	-	-
10-14	0.3	0.3	0.3	0.4	0.3	0.4	-	-	-
15-19	0.9	0.7	1.1	1.2	1.0	1.4	-	-	-
20-24	3.0	1.8	4.3	3.8	2.2	5.6	-	-	-
25-29	6.0	3.7	8.4	7.6	4.7	10.7	-	-	-
30-34	9.5	6.8	12.3	12.1	8.6	15.7	0.3	-	-
35-39	11.7	9.5	14.0	14.7	11.8	17.8	0.5	-	0.6
40-44	15.6	13.6	17.6	19.5	16.6	22.4	0.4	-	-
45-49	21.4	20.2	22.5	26.5	24.7	28.2	0.7	0.7	0.7
50-54	29.4	31.2	27.8	35.8	37.4	34.2	1.2	1.1	1.3
55-59	38.8	46.5	31.5	46.5	55.2	38.1	1.5	1.6	1.4
60-64	51.3	66.3	37.5	61.1	78.3	45.0	2.1	2.7	1.6
65-69	68.9	95.8	45.2	81.2	111.6	53.6	3.0	3.6	2.6
70-74	83.7	124.4	49.7	98.4	144.8	58.7	4.2	4.7	3.9
75-79	99.1	153.6	56.8	117.3	180.4	67.2	4.8	5.7	4.3
80-84	111.2	183.3	61.3	128.8	210.7	70.9	6.4	9.5	4.7
85+	110.4	199.7	64.3	125.9	228.6	72.4	7.0	6.4	7.2
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2012-2016									
All ages	2.5	3.7	1.5	2.9	4.3	1.8	0.4	0.4	0.3
Under 65	1.0	1.3	0.7	1.2	1.6	0.9	0.1	0.2	0.1
65 and over	12.8	20.5	7.3	14.5	23.1	8.3	1.9	2.3	1.6
All ages (WHO world std) ^c	1.5	2.2	1.0	1.8	2.5	1.1	0.2	0.3	0.2
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.0	-	-	0.0	-	-	-	-	-
20-24	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
25-29	0.2	0.3	0.2	0.3	0.4	0.3	-	-	-
30-34	0.5	0.5	0.4	0.6	0.7	0.5	-	-	-
35-39	0.7	0.9	0.6	0.9	1.1	0.8	-	-	-
40-44	1.2	1.4	0.9	1.5	1.8	1.2	0.2	-	-
45-49	1.7	2.0	1.3	2.1	2.5	1.7	0.2	0.3	-
50-54	2.5	3.2	1.8	3.1	3.9	2.2	0.3	0.4	0.3
55-59	3.6	5.0	2.4	4.4	6.0	2.8	0.5	0.6	0.4
60-64	5.2	7.4	3.2	6.1	8.7	3.7	0.8	0.9	0.7
65-69	7.0	10.3	4.0	8.1	11.8	4.6	1.0	1.6	0.6
70-74	9.6	14.6	5.3	11.0	16.6	6.0	1.4	1.8	1.1
75-79	13.5	20.8	7.7	15.5	23.7	8.8	1.8	1.9	1.8
80-84	18.7	31.2	10.0	21.1	34.9	11.2	2.8	3.8	2.1
85+	24.3	42.0	15.1	27.0	46.5	16.7	3.8	4.1	3.7

^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 16.8
Melanoma of the Skin (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	-	-	-	60	51	68	-	-	-
1970-1973 ^a	-	-	-	68	62	75	-	-	-
1975-1977 ^b	81.9	77.5	86.3	82.1	77.8	86.3	56.7 ^g	-	-
1978-1980 ^b	82.8	77.7	87.7	82.9	77.9	87.9	59.8 ^h	-	-
1981-1983 ^b	82.8	78.4	87.3	82.8	78.4	87.2	61.9 ^g	-	-
1984-1986 ^b	86.6	82.6	91.0	86.4	82.3	91.0	72.3 ^h	-	-
1987-1989 ^b	88.1	84.9	91.5	88.0	84.9	91.3	78.6 ^g	-	89.5 ^g
1990-1992 ^b	89.3	87.0	91.8	89.3	87.1	91.8	59.6 ^g	-	-
1993-1995 ^b	89.7	87.3	92.6	89.6	87.1	92.6	69.5 ^g	66.6 ^g	-
1996-1998 ^b	91.0	89.5	92.7	90.9	89.4	92.7	73.9 ^g	68.0 ^h	78.6 ^g
1999-2001 ^b	92.2	90.2	94.6	92.2	90.2	94.6	73.9 ^g	70.9 ^g	76.1 ^g
2002-2004 ^b	93.2	91.1	95.4	93.2	91.1	95.6	72.0 ^g	-	70.4 ^g
2005-2008 ^b	93.3	91.7	95.2	93.4	91.8	95.3	72.6 ^g	62.7 ^g	78.7 ^g
2009-2015 ^b	94.2 ^f	92.5 ^f	96.4 ^f	94.1 ^f	92.3 ^f	96.3 ^f	69.8 ^g	63.0 ^g	74.8 ^g
5-Year Period Survival (Percent) ^{cd}									
2015	92.5	90.7	94.8	91.8	89.8	94.4	66.7	57.1	74.2
Stage Distribution (%) 2009-2015 ^{ce}									
All Stages									
Number of cases	104,803	59,231	45,572	97,299	55,300	41,999	499	223	276
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	84	82	86	83	81	86	55	50	59
Regional	9	10	7	9	10	8	23	26	21
Distant	4	5	3	4	5	3	16	17	16
Unstaged/Unknown	4	4	4	3	3	4	5	7	4
5-Year Relative Survival (Percent), 2009-2015 ^c									
Age at Diagnosis:									
Ages <45	94.7	91.5	96.9	94.5	91.1	96.8	82.5 ^g	68.8 ^h	89.2 ^g
Ages 45-54	93.3	90.7	96.0	92.9	90.1	95.9	66.3 ^g	60.5 ^g	72.2 ^g
Ages 55-64	92.4	90.6	95.2	91.9	90.1	94.8	65.7 ^g	52.9 ^g	78.9 ^g
Ages 65-74	93.0	91.8	95.0	92.4	91.2	94.7	70.3 ^g	62.3 ^h	73.3 ^g
Ages 75+	87.0	86.6	87.6	85.6	85.0	86.6	41.8 ^g	34.9 ^h	43.3 ^h
Ages <65	93.3	90.8	96.1	93.0	90.4	95.9	71.7	59.9 ^g	81.4
Ages 65+	90.4	89.7	91.5	89.4	88.6	90.8	57.5 ^g	52.4 ^h	59.3 ^g
Stage ^e :									
All Stages	92.2	90.4	94.6	91.6	89.6	94.2	66.8	58.5	73.0
Localized	98.7	98.2	99.4	98.3	97.6	99.1	87.8	87.3 ^g	87.5
Regional	64.7	62.1	69.3	65.0	62.4	69.6	49.2 ^g	41.5 ^g	56.7 ^g
Distant	24.8	23.4	27.7	24.7	23.7	26.9	27.5 ^g	-	40.1 ^g
Unstaged/Unknown	85.4	83.0	88.4	83.8	81.1	87.0	41.4 ^h	-	-

^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 16.9
Melanoma of the Skin (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	94.2	95.6	96.3	96.7	97.3	97.6	96.6	96.7	97.6	97.9	97.4	97.9	97.7	97.7	97.9	97.6	97.8	97.9	98.1	97.8	97.7	98.0	98.6	97.8	98.1
2-year	89.8	91.7	93.3	93.9	94.2	95.7	94.3	94.5	95.5	96.2	95.5	95.5	96.1	96.2	96.3	96.1	96.2	95.9	96.1	96.7	96.3	96.5	97.8	96.5	
3-year	86.1	88.0	90.7	91.9	92.6	93.8	92.3	92.7	94.0	94.5	94.0	94.3	94.9	94.6	95.0	94.7	94.7	94.7	94.8	95.2	94.9	95.9	96.4		
4-year	83.4	85.5	89.1	90.3	91.2	93.2	91.3	91.5	93.2	93.2	92.7	93.2	93.7	93.6	94.3	93.7	94.1	94.1	93.8	94.5	94.1	95.3			
5-year	82.0	83.5	87.7	89.3	90.2	92.3	89.8	90.9	92.4	92.1	92.1	92.9	93.3	93.1	93.3	93.0	93.4	93.5	93.3	93.8	93.7				
6-year	80.3	82.3	86.6	88.5	90.0	91.5	89.3	90.4	91.7	91.7	91.3	92.6	92.4	93.1	93.0	92.3	92.8	92.7	92.9	93.6					
7-year	78.9	81.7	85.9	87.8	90.0	91.2	88.6	90.3	91.6	91.5	91.1	92.0	91.9	92.5	92.9	92.0	92.7	92.2	92.6						
8-year	77.9	80.9	85.3	87.2	89.8	90.9	87.8	89.8	91.2	91.4	90.9	91.2	91.8	92.3	92.8	92.0	92.3	92.1							
9-year	77.1	80.3	85.0	87.0	89.4	90.4	87.6	89.6	90.9	91.4	90.8	90.7	91.8	92.2	92.7	92.0	92.2								
10-year	76.6	79.7	84.9	86.9	89.4	89.9	87.6	89.2	90.9	91.2	90.2	90.6	91.4	92.2	92.7	92.0									
11-year	76.0	79.4	84.4	86.6	89.1	89.7	87.6	89.2	90.9	90.9	90.0	90.5	91.4	92.2	92.7										
12-year	75.6	79.2	84.2	86.5	89.1	89.6	87.1	88.7	90.9	90.8	90.0	90.5	91.4	92.2											
13-year	75.3	78.8	84.1	86.5	88.6	89.6	86.9	88.6	90.9	90.8	89.9	90.5	91.4												
14-year	75.1	78.6	83.9	86.3	88.6	89.4	86.7	88.5	90.9	90.8	89.9	90.5													
15-year	74.7	78.4	83.9	86.3	88.6	89.4	86.5	88.4	90.9	90.8	89.9														
16-year	74.5	78.4	83.8	86.3	88.6	89.4	86.5	87.8	90.9	90.8															
17-year	74.5	78.1	83.8	86.3	88.6	89.2	86.5	87.8	90.9																
18-year	74.5	78.1	83.8	86.3	88.6	89.2	86.5	87.8																	
19-year	74.5	78.1	83.8	86.3	88.6	89.2	86.5																		
20-year	74.5	78.1	83.8	86.3	88.6	89.2																			

^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 16.10
Melanoma of the Skin (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	92.3	94.0	95.2	96.1	96.3	96.6	96.3	96.3	97.1	97.5	96.5	96.8	97.0	97.5	97.6	97.1	97.5	97.1	97.4	97.3	97.1	97.3	98.3	97.2	97.5
2-year	86.6	88.7	91.4	92.6	92.1	94.4	93.3	93.8	94.3	95.5	93.8	94.0	94.8	95.6	95.9	95.4	95.4	94.7	94.6	96.0	95.2	95.4	96.9	95.4	
3-year	82.2	84.3	88.2	90.3	90.0	92.1	90.7	91.9	92.5	93.5	91.5	92.4	93.4	92.8	94.1	93.6	93.3	93.1	93.2	94.1	93.2	94.7	95.4		
4-year	78.9	81.2	86.2	88.4	88.0	91.2	89.8	90.4	91.4	92.1	89.8	90.8	91.8	91.8	92.9	92.7	92.7	92.3	92.0	93.5	92.2	93.6			
5-year	77.5	78.6	84.4	87.3	86.8	90.4	88.0	90.1	90.4	90.9	89.2	90.3	91.7	91.1	91.5	91.8	91.8	91.9	91.3	92.5	91.6				
6-year	75.5	77.2	83.2	86.2	86.4	89.6	87.2	89.5	89.1	90.3	88.2	90.0	90.7	91.1	91.0	91.0	91.0	90.6	90.9	92.1					
7-year	73.8	76.8	82.2	85.4	86.4	89.4	87.0	89.5	89.0	90.3	88.1	89.6	89.7	90.2	90.6	90.7	90.7	90.0	90.9						
8-year	72.6	76.0	81.6	84.7	86.2	89.0	86.1	89.2	88.7	90.1	88.0	88.5	89.4	89.8	90.1	90.7	90.4	89.5							
9-year	71.7	75.2	81.2	84.4	85.8	88.4	86.0	88.7	88.5	90.1	88.0	87.8	89.4	89.5	90.1	90.4	90.1								
10-year	71.2	74.7	81.2	84.2	85.6	87.9	85.6	88.3	88.5	90.0	87.4	87.8	89.3	89.5	89.7	90.4									
11-year	70.4	74.4	81.1	83.8	85.6	87.7	85.6	88.1	88.5	89.4	87.1	87.8	89.3	89.5	89.7										
12-year	69.9	74.3	80.9	83.8	85.6	87.7	84.7	87.5	88.5	89.3	87.1	87.8	89.3	89.5											
13-year	69.5	74.0	80.8	83.8	85.6	87.7	84.7	87.4	88.5	89.3	87.1	87.8	89.3												
14-year	69.5	73.6	80.3	83.6	85.6	87.7	84.2	87.2	88.5	89.3	87.1	87.8													
15-year	69.3	73.6	80.2	83.6	85.6	87.7	84.2	87.2	88.5	89.3	87.1														
16-year	69.1	73.6	79.9	83.6	85.5	87.7	84.2	87.0	88.5	89.3															
17-year	69.1	73.6	79.9	83.6	85.5	87.7	84.2	87.0	88.5																
18-year	69.1	73.6	79.9	83.6	85.5	87.7	84.2	87.0																	
19-year	69.1	73.6	79.9	83.6	85.5	87.7	84.2																		
20-year	69.1	73.6	79.9	83.6	85.5	87.7																			

^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 16.11
Melanoma of the Skin (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	96.1	97.3	97.6	97.4	98.5	98.8	97.1	97.1	98.2	98.4	98.5	99.0	98.6	98.0	98.3	98.1	98.1	98.9	99.1	98.3	98.5	99.0	99.0	98.6	98.8
2-year	92.9	94.7	95.3	95.4	96.7	97.3	95.4	95.3	97.0	97.0	97.6	97.2	97.5	96.9	96.8	97.0	97.3	97.4	97.8	97.3	97.6	97.9	98.9	97.9	
3-year	89.9	91.9	93.5	93.9	95.7	95.9	94.1	93.6	95.7	95.7	97.1	96.4	96.6	96.5	96.2	95.9	96.4	96.7	96.7	96.4	96.8	97.4	97.8		
4-year	87.8	89.9	92.4	92.5	94.9	95.3	92.8	92.6	95.3	94.6	96.1	96.0	95.7	95.6	96.0	95.0	95.7	96.2	96.0	95.6	96.5	97.2			
5-year	86.4	88.6	91.4	91.8	94.1	94.6	91.8	91.7	94.6	93.4	95.6	95.7	95.1	95.4	95.4	94.4	95.4	95.6	95.8	95.2	96.2				
6-year	85.0	87.4	90.3	91.2	94.1	93.9	91.6	91.2	94.5	93.3	95.0	95.3	94.5	95.3	95.1	93.8	95.0	95.3	95.2	95.2					
7-year	84.0	86.6	89.8	90.6	94.0	93.3	90.4	91.0	94.4	92.9	94.7	94.8	94.3	95.0	95.1	93.7	95.0	94.9	94.6						
8-year	83.1	86.0	89.3	90.2	94.0	93.3	89.7	90.5	93.8	92.8	94.3	94.3	94.1	95.0	95.1	93.7	94.6	94.9							
9-year	82.4	85.5	89.1	90.1	93.6	92.9	89.5	90.5	93.7	92.8	93.7	93.9	94.0	94.9	95.1	93.7	94.5								
10-year	81.8	84.7	88.8	90.0	93.6	92.4	89.5	90.2	93.6	92.6	93.4	93.5	93.8	94.9	95.1	93.7									
11-year	81.5	84.5	88.0	89.8	92.8	92.0	89.5	90.1	93.6	92.5	93.4	93.3	93.8	94.9	95.1										
12-year	81.0	84.2	87.8	89.6	92.8	91.5	89.5	90.1	93.6	92.5	93.3	93.3	93.4	94.9											
13-year	80.8	83.7	87.5	89.6	91.9	91.5	89.1	89.9	93.6	92.5	93.3	93.3	93.4												
14-year	80.3	83.6	87.5	89.5	91.8	91.4	89.1	89.9	93.6	92.5	93.3	93.2													
15-year	79.9	83.1	87.5	89.5	91.8	90.7	88.9	89.6	93.6	92.5	93.3														
16-year	79.8	82.8	87.5	89.5	91.8	90.2	88.9	88.7	93.6	92.5															
17-year	79.8	82.6	87.5	89.5	91.8	89.9	88.9	88.7	93.6																
18-year	79.7	82.4	87.5	89.5	91.8	89.8	88.9	88.7																	
19-year	79.6	82.4	87.5	89.5	91.8	89.7	88.9																		
20-year	79.6	82.4	87.5	89.5	91.8	89.6																			

^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 16.12
Melanoma of the Skin (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	0.05	2.25	0.29	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.18	0.06
	10	0.01	0.05	0.15	2.27	0.29		10	0.00	0.00	0.01	0.18	0.06
	20	0.04	0.15	0.32	2.27	0.29		20	0.00	0.01	0.02	0.18	0.06
	30	0.10	0.28	0.59	2.25	0.29		30	0.01	0.02	0.04	0.17	0.06
	40	0.18	0.49	0.98	2.18	0.29		40	0.01	0.03	0.06	0.17	0.06
	50	0.32	0.83	1.44	2.05	0.28		50	0.02	0.05	0.10	0.16	0.06
	60	0.54	1.18	1.68	1.83	0.27		60	0.03	0.08	0.11	0.14	0.06
	70	0.73	1.30	-	1.46	0.25		70	0.05	0.09	-	0.12	0.05
80	0.75	-	-	0.97	0.20	80	0.04	-	-	0.08	0.05		
White	0	0.00	0.01	0.06	2.64	0.33	American Indian/ Alaska Native ^a	0	0.00	0.00	0.02	0.57	0.07
	10	0.01	0.06	0.19	2.67	0.33		10	0.00	0.02	0.04	0.57	0.07
	20	0.05	0.18	0.40	2.67	0.33		20	0.02	0.04	0.07	0.57	0.07
	30	0.13	0.35	0.72	2.63	0.34		30	0.03	0.06	0.13	0.57	0.08
	40	0.22	0.60	1.18	2.54	0.33		40	0.03	0.11	0.25	0.56	0.08
	50	0.39	0.98	1.70	2.38	0.32		50	0.08	0.22	0.36	0.54	0.08
	60	0.63	1.39	1.96	2.11	0.31		60	0.16	0.31	0.46	0.50	0.08
	70	0.86	1.50	-	1.67	0.28		70	0.17	0.34	-	0.39	0.08
80	0.86	-	-	1.09	0.22	80	0.23	-	-	0.29	0.06		
Black	0	0.00	0.00	0.00	0.10	0.04	Hispanic ^b	0	0.00	0.00	0.01	0.57	0.11
	10	0.00	0.00	0.01	0.10	0.04		10	0.00	0.01	0.03	0.57	0.11
	20	0.00	0.01	0.01	0.10	0.04		20	0.01	0.03	0.07	0.57	0.11
	30	0.00	0.01	0.02	0.10	0.04		30	0.02	0.06	0.13	0.57	0.11
	40	0.01	0.02	0.04	0.10	0.04		40	0.04	0.11	0.22	0.55	0.11
	50	0.01	0.03	0.06	0.09	0.04		50	0.07	0.19	0.32	0.52	0.10
	60	0.02	0.05	0.08	0.09	0.04		60	0.12	0.26	0.40	0.47	0.10
	70	0.04	0.06	-	0.08	0.04		70	0.16	0.31	-	0.39	0.09
80	0.04	-	-	0.06	0.03	80	0.19	-	-	0.28	0.08		

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 16.13
Melanoma of the Skin (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	2.77	0.39	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.19	0.06
	10	0.01	0.03	0.11	2.80	0.39		10	0.00	0.00	0.01	0.19	0.06
	20	0.03	0.11	0.26	2.81	0.40		20	0.00	0.01	0.02	0.19	0.06
	30	0.08	0.24	0.58	2.82	0.40		30	0.01	0.02	0.03	0.19	0.06
	40	0.16	0.51	1.14	2.78	0.40		40	0.01	0.03	0.06	0.19	0.06
	50	0.36	1.01	1.86	2.71	0.40		50	0.02	0.06	0.11	0.18	0.06
	60	0.70	1.62	2.33	2.52	0.39		60	0.04	0.10	0.14	0.17	0.05
	70	1.07	1.89	-	2.12	0.36		70	0.07	0.12	-	0.14	0.05
80	1.16	-	-	1.49	0.31	80	0.06	-	-	0.09	0.04		
White	0	0.00	0.01	0.04	3.22	0.45	American Indian/ Alaska Native ^a	0	0.00	0.00	0.01	0.62	0.10
	10	0.01	0.04	0.14	3.25	0.45		10	0.00	0.01	0.03	0.63	0.10
	20	0.04	0.13	0.32	3.25	0.45		20	0.01	0.03	0.04	0.63	0.10
	30	0.10	0.29	0.70	3.26	0.46		30	0.02	0.04	0.12	0.64	0.10
	40	0.20	0.61	1.34	3.21	0.46		40	0.02	0.10	0.25	0.64	0.10
	50	0.43	1.18	2.18	3.11	0.45		50	0.09	0.25	0.38	0.66	0.10
	60	0.81	1.88	2.68	2.89	0.44		60	0.17	0.32	0.52	0.62	0.11
	70	1.24	2.17	-	2.41	0.40		70	0.17	0.41	-	0.52	0.12
80	1.32	-	-	1.67	0.34	80	0.33	-	-	0.49	0.11		
Black	0	0.00	0.00	0.00	0.10	0.04	Hispanic ^b	0	0.00	0.00	0.01	0.59	0.13
	10	0.00	0.00	0.00	0.10	0.04		10	0.00	0.01	0.02	0.59	0.13
	20	0.00	0.00	0.01	0.10	0.04		20	0.01	0.02	0.05	0.59	0.13
	30	0.00	0.01	0.02	0.10	0.04		30	0.01	0.04	0.10	0.59	0.13
	40	0.01	0.02	0.04	0.10	0.04		40	0.03	0.09	0.21	0.59	0.13
	50	0.01	0.04	0.07	0.10	0.04		50	0.06	0.18	0.33	0.57	0.13
	60	0.03	0.06	0.08	0.09	0.04		60	0.13	0.29	0.46	0.54	0.13
	70	0.04	0.07	-	0.08	0.04		70	0.18	0.37	-	0.47	0.12
80	0.04	-	-	0.06	0.04	80	0.25	-	-	0.38	0.11		

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 16.14
Melanoma of the Skin (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	0.07	1.79	0.19	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.16	0.07
	10	0.01	0.07	0.19	1.81	0.19		10	0.00	0.00	0.01	0.16	0.07
	20	0.06	0.19	0.38	1.80	0.19		20	0.00	0.01	0.02	0.16	0.07
	30	0.13	0.32	0.60	1.75	0.19		30	0.01	0.02	0.04	0.16	0.07
	40	0.19	0.47	0.84	1.64	0.19		40	0.01	0.04	0.07	0.15	0.07
	50	0.29	0.66	1.05	1.47	0.19		50	0.02	0.05	0.09	0.14	0.07
	60	0.39	0.80	1.13	1.24	0.17		60	0.03	0.07	0.09	0.12	0.06
	70	0.45	0.82	-	0.94	0.16		70	0.04	0.06	-	0.09	0.06
80	0.46	-	-	0.62	0.13	80	0.03	-	-	0.07	0.05		
White	0	0.00	0.01	0.09	2.13	0.22	American Indian/ Alaska Native ^a	0	0.00	0.01	0.03	0.53	0.05
	10	0.01	0.08	0.25	2.15	0.22		10	0.01	0.03	0.06	0.54	0.05
	20	0.07	0.24	0.48	2.14	0.22		20	0.03	0.06	0.10	0.53	0.05
	30	0.16	0.41	0.74	2.08	0.22		30	0.03	0.08	0.14	0.51	0.05
	40	0.25	0.59	1.02	1.93	0.22		40	0.05	0.11	0.24	0.49	0.05
	50	0.35	0.79	1.25	1.72	0.21		50	0.06	0.20	0.34	0.45	0.05
	60	0.46	0.94	1.32	1.44	0.20		60	0.14	0.30	0.41	0.41	0.05
	70	0.53	0.94	-	1.07	0.17		70	0.17	0.29	-	0.30	0.05
80	0.52	-	-	0.69	0.14	80	0.16	-	-	0.16	0.03		
Black	0	0.00	0.00	0.00	0.10	0.04	Hispanic ^b	0	0.00	0.00	0.02	0.57	0.08
	10	0.00	0.00	0.01	0.10	0.04		10	0.00	0.01	0.04	0.57	0.09
	20	0.00	0.01	0.01	0.10	0.04		20	0.01	0.04	0.09	0.57	0.09
	30	0.00	0.01	0.02	0.10	0.04		30	0.03	0.07	0.15	0.56	0.09
	40	0.01	0.02	0.03	0.09	0.04		40	0.05	0.13	0.23	0.53	0.08
	50	0.01	0.03	0.06	0.09	0.04		50	0.08	0.19	0.32	0.49	0.08
	60	0.02	0.05	0.07	0.08	0.04		60	0.11	0.25	0.37	0.42	0.08
	70	0.03	0.06	-	0.07	0.04		70	0.14	0.27	-	0.33	0.07
80	0.04	-	-	0.05	0.03	80	0.15	-	-	0.23	0.06		

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 16.15
Melanoma of the Skin (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	22.2	28.8	17.5	1.1*	1.2*	0.9*	1.5*	1.5*	1.5*
White	26.6	33.9	21.3	1.2*	1.2*	1.0*	1.7*	1.6*	1.7*
White Hispanic ^e	4.9	5.2	4.9	0.4	0.2	0.4	-	-	-
White Non-Hispanic ^e	31.2	39.1	25.4	1.5*	1.5*	1.4*	-	-	-
Black	1.0	1.1	0.9	-0.3	-0.7	0.0	-0.3	-0.6	-0.2
Asian/Pacific Islander	1.4	1.6	1.2	-0.7	-0.7	-0.8	-	-	-
Amer Ind/Alaska Nat ^f	5.5	5.8	5.3	1.5	-0.7	4.3*	-	-	-
Hispanic ^e	4.7	5.0	4.7	0.5	0.3	0.4	-	-	-
<u>U.S. Mortality^g</u>									
Race/Ethnicity	Rate 2012-2016			Trend 2007-2016 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	2.5	3.7	1.5	-2.5*	-2.5*	-2.6*			
White	2.9	4.3	1.8	-2.0*	-2.2*	-2.2*			
White Hispanic ^e	0.8	1.0	0.6	-0.7	-0.4	-1.0			
White Non-Hispanic ^e	3.2	4.7	2.0	-1.8*	-2.0*	-1.9*			
Black	0.4	0.4	0.3	-4.7	-1.2	-2.7*			
Asian/Pacific Islander	0.3	0.4	0.3	-0.9	-2.1	-0.1			
Amer Ind/Alaska Nat									
Total U.S.	0.5	0.7	0.4	-3.4*	-2.8	-4.1			
PRCDA Counties	0.7	1.0	0.5	-2.9	-2.2	-			
Non-PRCDA Counties	0.3	-	-	-1.9	-	-			
Hispanic ^e	0.7	0.9	0.5	-0.8	-0.5	-1.1			

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 16.16
Melanoma of the Skin (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	22.47	29.96	16.75	26.40	35.11	19.68	1.05	1.45	0.77
Greater Bay Area	25.66	33.73	19.52	35.79	46.39	27.64	0.80	-	-
San Francisco-Oakland	25.70	34.03	19.40	37.01	48.20	28.43	0.80	-	-
San Jose-Monterey	25.68	33.24	19.85	33.70	43.25	26.32	-	-	-
Los Angeles	13.65	18.87	9.73	17.17	23.77	12.14	1.06	1.78	0.60
Greater California	25.41	33.59	19.12	27.44	36.29	20.57	1.15	1.20	1.13
Connecticut	20.54	26.49	16.24	22.28	28.35	17.86	0.98	-	-
Detroit	17.93	22.87	14.72	23.50	28.89	20.11	0.80	-	0.87
Georgia	26.64	35.66	20.27	37.12	47.37	29.68	1.05	1.05	1.05
Atlanta	27.65	37.81	20.83	46.81	59.55	38.07	0.83	0.90	0.76
Rural Georgia	22.89	29.73	17.93	33.32	39.36	28.34	-	-	-
Greater Georgia	26.25	34.87	20.02	33.55	43.20	26.38	1.18	1.03	1.28
Hawaii	21.40	28.09	15.90	66.09	81.67	50.68	-	-	-
Idaho	27.91	32.99	23.86	28.81	33.95	24.71	-	-	-
Iowa	26.32	30.43	23.78	26.57	30.48	24.23	-	-	-
Kentucky	26.87	33.39	22.50	28.47	35.13	23.98	1.47	-	-
Louisiana	17.28	23.99	12.42	24.13	32.27	18.05	0.99	1.05	0.94
Massachusetts	21.16	26.22	17.68	22.06	27.12	18.62	0.67	-	-
New Jersey	21.86	28.31	17.38	26.03	33.14	21.08	0.94	1.09	0.86
New Mexico	15.33	19.61	11.86	16.25	20.73	12.57	-	-	-
New York	18.10	23.23	14.55	22.87	28.66	18.80	0.97	1.07	0.90
Seattle-Puget Sound	28.64	34.78	24.17	33.34	39.72	28.69	-	-	-
Utah	39.76	49.80	31.49	41.32	51.50	32.93	-	-	-
SEER 9 Areas ^b	24.81	31.40	19.99	30.94	38.27	25.58	0.88	0.92	0.86
SEER 13 Areas ^b	22.28	28.68	17.56	28.05	35.46	22.54	0.94	1.15	0.80
SEER 18 Areas ^b	23.22	30.24	18.05	27.88	35.77	22.02	1.02	1.14	0.95
SEER 21 Areas ^b	22.25	28.80	17.49	26.63	33.93	21.28	1.00	1.10	0.93

^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 16.17
Melanoma of the Skin (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	2.29	3.49	1.35	2.88	4.36	1.70	0.29	0.41	-
Greater Bay Area	1.95	3.06	1.10	2.78	4.33	1.57	-	-	-
San Francisco-Oakland	2.03	3.21	1.13	2.97	4.67	1.64	-	-	-
San Jose-Monterey	1.79	2.76	1.03	2.45	3.74	1.43	-	-	-
Los Angeles	1.60	2.43	0.96	2.14	3.24	1.28	-	-	-
Greater California	2.73	4.12	1.63	3.19	4.80	1.91	0.31	-	-
Connecticut	2.17	3.20	1.42	2.40	3.48	1.59	-	-	-
Detroit	1.96	2.97	1.23	2.48	3.72	1.56	0.35	-	-
Georgia	2.44	3.82	1.41	3.25	4.98	1.89	0.38	0.35	0.38
Atlanta	1.81	2.65	1.22	2.79	3.96	1.89	0.36	-	-
Rural Georgia	1.97	-	-	2.77	-	-	-	-	-
Greater Georgia	2.75	4.37	1.52	3.44	5.36	1.91	0.38	-	-
Hawaii	1.62	2.51	0.92	4.36	6.67	2.18	-	-	-
Idaho	3.38	4.62	2.29	3.45	4.68	2.36	-	-	-
Iowa	2.75	3.81	1.92	2.82	3.90	1.96	-	-	-
Kentucky	3.08	4.66	1.89	3.31	4.97	2.04	-	-	-
Louisiana	2.03	3.06	1.31	2.62	3.95	1.64	0.49	-	0.52
Massachusetts	2.62	3.81	1.77	2.88	4.14	1.96	-	-	-
New Jersey	2.28	3.44	1.45	2.76	4.11	1.77	-	-	-
New Mexico	2.47	3.63	1.58	2.65	3.91	1.67	-	-	-
New York	1.99	2.95	1.29	2.48	3.64	1.60	0.28	0.30	0.26
Seattle-Puget Sound	2.72	4.02	1.67	3.12	4.56	1.93	-	-	-
Utah	3.28	5.04	1.82	3.43	5.25	1.92	-	-	-
SEER 9 Areas ^b	2.31	3.46	1.44	2.84	4.21	1.78	0.38	0.49	0.31
SEER 13 Areas ^b	2.12	3.19	1.31	2.68	3.98	1.66	0.35	0.48	0.27
SEER 18 Areas ^b	2.37	3.58	1.44	2.90	4.35	1.77	0.35	0.41	0.30
SEER 21 Areas ^b	2.33	3.50	1.45	2.84	4.22	1.77	0.33	0.39	0.28
Total U.S.	2.49	3.72	1.55	2.90	4.28	1.81	0.36	0.44	0.30

^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.

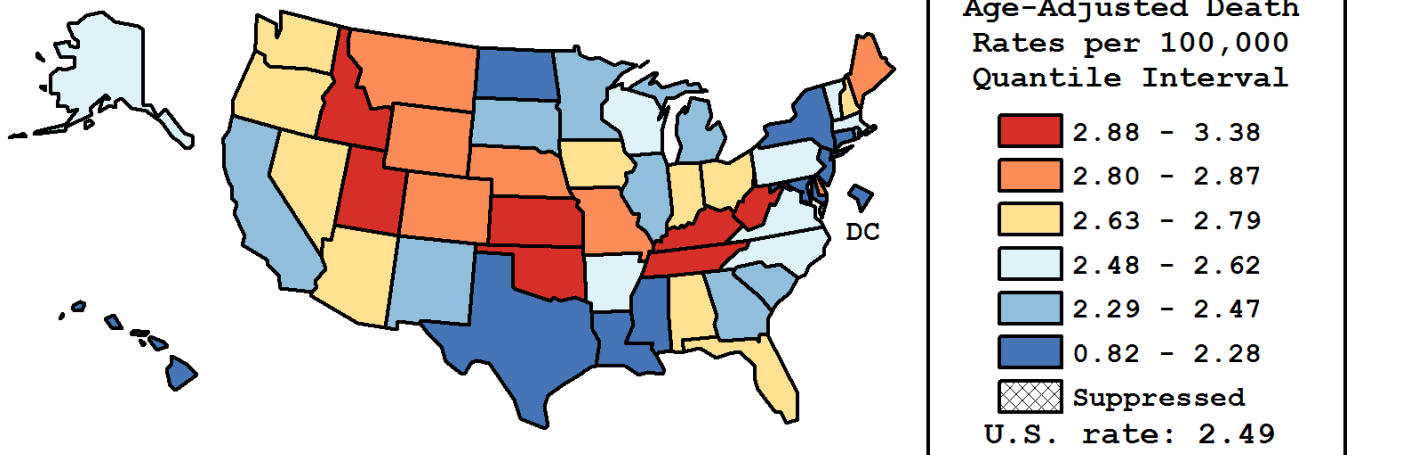
Table 16.18
Melanoma of the Skin (Invasive)

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.	2.49	0.01		
High Five States				
Idaho	3.38	0.20	01(01,16)	35.94 ^c
Utah	3.28	0.17	02(01,17)	31.92 ^c
West Virginia	3.18	0.17	03(01,24)	27.68 ^c
Kentucky	3.08	0.11	04(01,18)	23.77 ^c
Kansas	3.00	0.14	05(01,28)	20.49 ^c
Low Five States				
Texas	2.08	0.04	47(42,49)	-16.51 ^c
Louisiana	2.03	0.09	48(40,50)	-18.47 ^c
New York	1.99	0.04	49(44,50)	-20.17 ^c
Hawaii	1.62	0.14	50(47,50)	-34.89 ^c
D.C.	0.82	0.17	51(51,51)	-66.97 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	2.63	0.10	24(08,39)	5.73	Montana	2.81	0.22	13(01,45)	12.72
Alaska	2.60	0.33	28(01,50)	4.30	Nebraska	2.83	0.17	11(01,38)	13.71
Arizona	2.79	0.09	17(05,30)	12.01	Nevada	2.70	0.14	22(04,40)	8.48
Arkansas	2.49	0.12	32(10,45)	0.12	New Hampshire	2.67	0.19	23(02,45)	7.41
California	2.29	0.03	41(34,46)	-8.12	New Jersey	2.28	0.07	42(31,47)	-8.31
Colorado	2.87	0.11	09(03,29)	15.31 ^c	New Mexico	2.47	0.15	33(09,47)	-0.93
Connecticut	2.17	0.10	45(32,49)	-12.86	New York	1.99	0.04	49(44,50)	-20.17 ^c
Delaware	2.84	0.23	10(01,45)	13.87	North Carolina	2.58	0.07	29(14,37)	3.77
D.C.	0.82	0.17	51(51,51)	-66.97 ^c	North Dakota	2.15	0.23	46(11,50)	-13.81
Florida	2.71	0.05	21(11,29)	8.92	Ohio	2.79	0.06	16(06,28)	12.07
Georgia	2.44	0.07	34(21,44)	-1.95	Oklahoma	2.93	0.12	07(02,27)	17.77 ^c
Hawaii	1.62	0.14	50(47,50)	-34.89 ^c	Oregon	2.77	0.11	18(03,34)	11.33
Idaho	3.38	0.20	01(01,16)	35.94 ^c	Pennsylvania	2.60	0.06	27(15,36)	4.32
Illinois	2.37	0.06	38(28,45)	-4.71	Rhode Island	2.40	0.19	36(06,49)	-3.63
Indiana	2.75	0.09	20(06,32)	10.44	South Carolina	2.39	0.09	37(21,46)	-3.86
Iowa	2.75	0.12	19(03,37)	10.55	South Dakota	2.30	0.22	40(07,50)	-7.51
Kansas	3.00	0.14	05(01,28)	20.49 ^c	Tennessee	2.99	0.09	06(01,21)	19.93 ^c
Kentucky	3.08	0.11	04(01,18)	23.77 ^c	Texas	2.08	0.04	47(42,49)	-16.51 ^c
Louisiana	2.03	0.09	48(40,50)	-18.47 ^c	Utah	3.28	0.17	02(01,17)	31.92 ^c
Maine	2.80	0.18	14(01,42)	12.45	Vermont	2.62	0.26	26(01,49)	5.18
Maryland	2.23	0.08	44(31,49)	-10.37	Virginia	2.56	0.08	30(14,40)	2.79
Massachusetts	2.62	0.08	25(10,37)	5.26	Washington	2.79	0.09	15(04,30)	12.09
Michigan	2.33	0.06	39(28,46)	-6.40	West Virginia	3.18	0.17	03(01,24)	27.68 ^c
Minnesota	2.42	0.09	35(21,45)	-2.74	Wisconsin	2.55	0.09	31(13,41)	2.24
Mississippi	2.28	0.12	43(22,49)	-8.38	Wyoming	2.81	0.30	12(01,49)	12.75
Missouri	2.87	0.09	08(03,27)	15.44 ^c					



^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 15% 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.

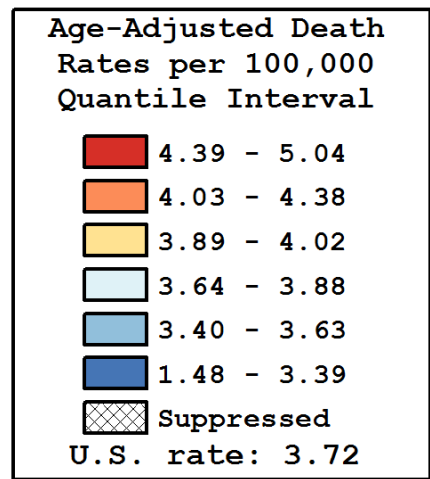
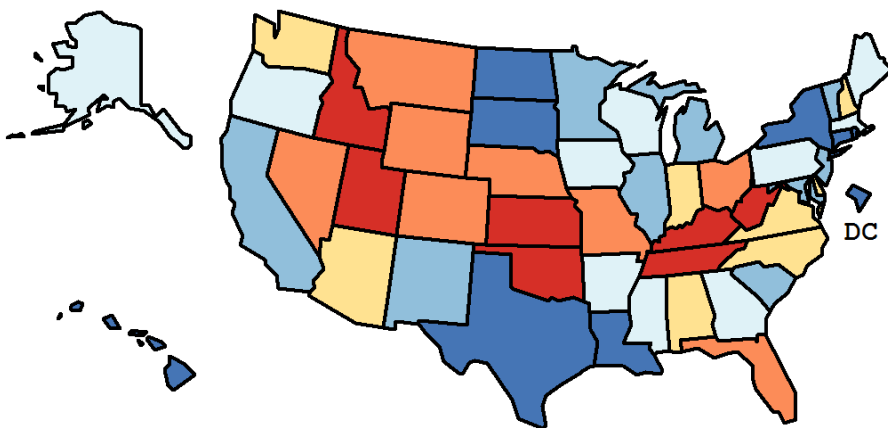
Table 16.19
Melanoma of the Skin (Invasive)

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

Males

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	3.72	0.02		
High Five States				
Utah	5.04	0.31	01(01,13)	35.67 ^c
Tennessee	4.78	0.18	02(01,11)	28.45 ^c
West Virginia	4.70	0.31	03(01,30)	26.49 ^c
Kentucky	4.66	0.21	04(01,17)	25.26 ^c
Idaho	4.62	0.34	05(01,34)	24.33 ^c
Low Five States				
Texas	3.17	0.08	47(39,49)	-14.68
Louisiana	3.06	0.18	48(33,50)	-17.65 ^c
New York	2.95	0.08	49(43,50)	-20.62 ^c
Hawaii	2.51	0.25	50(41,51)	-32.44 ^c
D.C.	1.48	0.35	51(50,51)	-60.08 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	4.01	0.19	17(04,39)	7.83	Montana	4.14	0.38	10(01,47)	11.46
Alaska	3.79	0.62	30(01,50)	1.97	Nebraska	4.14	0.30	11(01,43)	11.32
Arizona	3.99	0.15	18(06,36)	7.30	Nevada	4.06	0.24	14(03,42)	9.19
Arkansas	3.80	0.22	29(06,46)	2.20	New Hampshire	3.99	0.35	19(01,48)	7.27
California	3.49	0.06	38(30,44)	-6.22	New Jersey	3.44	0.13	41(25,47)	-7.60
Colorado	4.05	0.19	15(04,38)	8.88	New Mexico	3.63	0.26	34(07,49)	-2.47
Connecticut	3.20	0.19	46(27,50)	-13.96	New York	2.95	0.08	49(43,50)	-20.62 ^c
Delaware	3.94	0.40	21(01,49)	5.87	North Carolina	3.91	0.13	22(08,37)	5.17
D.C.	1.48	0.35	51(50,51)	-60.08 ^c	North Dakota	3.39	0.43	43(03,50)	-8.89
Florida	4.09	0.08	13(07,27)	10.03	Ohio	4.09	0.12	12(06,31)	10.05
Georgia	3.82	0.14	26(09,41)	2.82	Oklahoma	4.43	0.22	06(01,28)	19.25 ^c
Hawaii	2.51	0.25	50(41,51)	-32.44 ^c	Oregon	3.88	0.19	25(06,44)	4.23
Idaho	4.62	0.34	05(01,34)	24.33 ^c	Pennsylvania	3.74	0.10	32(15,41)	0.69
Illinois	3.50	0.11	37(24,46)	-6.00	Rhode Island	3.22	0.35	45(09,50)	-13.29
Indiana	3.96	0.16	20(07,38)	6.50	South Carolina	3.48	0.18	39(16,48)	-6.37
Iowa	3.81	0.22	27(06,45)	2.58	South Dakota	3.30	0.39	44(05,50)	-11.31
Kansas	4.39	0.25	07(01,32)	18.07 ^c	Tennessee	4.78	0.18	02(01,11)	28.45 ^c
Kentucky	4.66	0.21	04(01,17)	25.26 ^c	Texas	3.17	0.08	47(39,49)	-14.68
Louisiana	3.06	0.18	48(33,50)	-17.65 ^c	Utah	5.04	0.31	01(01,13)	35.67 ^c
Maine	3.88	0.31	24(02,48)	4.24	Vermont	3.56	0.45	35(01,50)	-4.26
Maryland	3.55	0.16	36(15,47)	-4.58	Virginia	3.89	0.14	23(07,39)	4.69
Massachusetts	3.81	0.15	28(10,42)	2.35	Washington	4.02	0.16	16(05,35)	8.06
Michigan	3.43	0.12	42(26,47)	-7.83	West Virginia	4.70	0.31	03(01,30)	26.49 ^c
Minnesota	3.45	0.16	40(21,48)	-7.20	Wisconsin	3.78	0.16	31(09,43)	1.75
Mississippi	3.65	0.24	33(08,48)	-1.77	Wyoming	4.24	0.55	09(01,49)	14.13
Missouri	4.38	0.17	08(02,24)	17.85 ^c					



^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 15% 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.

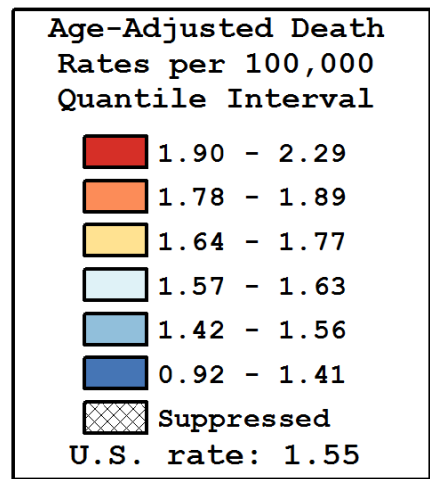
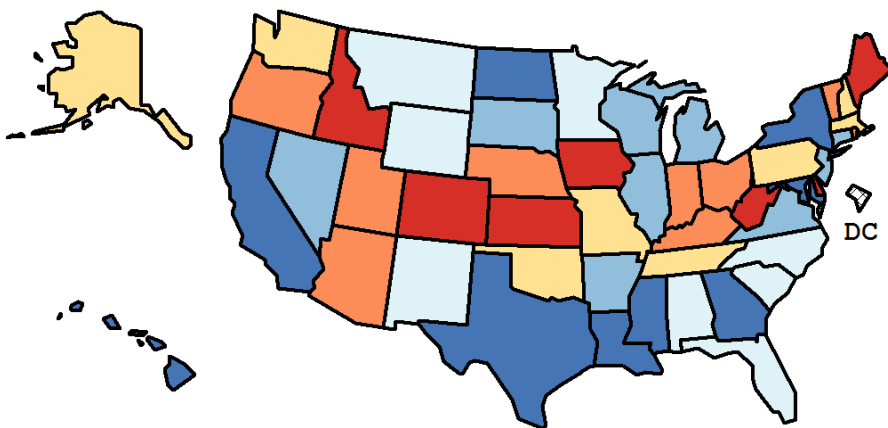
Table 16.20
Melanoma of the Skin (Invasive)

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

Females

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	1.55	0.01		
High Five States				
Idaho	2.29	0.23	01(01,27)	47.74 ^c
Delaware	2.02	0.27	02(01,44)	30.43 ^c
West Virginia	1.96	0.18	03(01,38)	26.95 ^c
Maine	1.95	0.21	04(01,43)	25.82 ^c
Colorado	1.94	0.12	05(01,28)	25.63 ^c
Low Five States				
New York	1.29	0.05	46(37,49)	-16.91 ^c
Maryland	1.29	0.09	47(30,50)	-16.95 ^c
Texas	1.24	0.04	48(40,50)	-19.96 ^c
North Dakota	1.05	0.23	49(14,50)	-31.86 ^c
Hawaii	0.92	0.14	50(40,50)	-40.37 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	1.62	0.11	27(06,44)	4.39	Montana	1.57	0.23	32(01,50)	1.56
Alaska	1.71	0.35	22(01,50)	10.44	Nebraska	1.79	0.18	15(01,45)	15.76 ^c
Arizona	1.78	0.10	16(03,35)	15.24 ^c	Nevada	1.46	0.14	39(08,49)	-5.37
Arkansas	1.47	0.13	37(08,49)	-5.08	New Hampshire	1.71	0.20	23(01,48)	10.20
California	1.35	0.04	43(35,47)	-12.46	New Jersey	1.45	0.07	40(23,47)	-6.11
Colorado	1.94	0.12	05(01,28)	25.63 ^c	New Mexico	1.58	0.16	30(03,49)	2.34
Connecticut	1.42	0.11	41(16,49)	-8.33	New York	1.29	0.05	46(37,49)	-16.91 ^c
Delaware	2.02	0.27	02(01,44)	30.43 ^c	North Carolina	1.63	0.07	25(09,39)	5.54
D.C.	-	-	-(-,-)	-	North Dakota	1.05	0.23	49(14,50)	-31.86 ^c
Florida	1.60	0.05	28(16,38)	3.49	Ohio	1.80	0.07	14(03,29)	16.07 ^c
Georgia	1.41	0.07	42(25,49)	-8.68	Oklahoma	1.73	0.13	20(02,41)	11.79
Hawaii	0.92	0.14	50(40,50)	-40.37 ^c	Oregon	1.89	0.13	08(01,34)	22.14 ^c
Idaho	2.29	0.23	01(01,27)	47.74 ^c	Pennsylvania	1.75	0.07	19(05,32)	13.31
Illinois	1.53	0.06	35(18,43)	-1.06	Rhode Island	1.84	0.22	10(01,48)	18.88 ^c
Indiana	1.80	0.10	13(02,34)	16.12 ^c	South Carolina	1.59	0.10	29(08,45)	3.00
Iowa	1.92	0.14	07(01,34)	24.27 ^c	South Dakota	1.49	0.25	36(01,50)	-3.95
Kansas	1.93	0.15	06(01,35)	24.96 ^c	Tennessee	1.64	0.09	24(06,41)	5.94
Kentucky	1.89	0.12	09(01,33)	21.94 ^c	Texas	1.24	0.04	48(40,50)	-19.96 ^c
Louisiana	1.31	0.10	45(26,50)	-15.43 ^c	Utah	1.82	0.17	11(01,43)	17.90 ^c
Maine	1.95	0.21	04(01,43)	25.82 ^c	Vermont	1.80	0.29	12(01,49)	16.12 ^c
Maryland	1.29	0.09	47(30,50)	-16.95 ^c	Virginia	1.55	0.08	34(13,45)	0.46
Massachusetts	1.77	0.09	18(03,36)	14.14	Washington	1.77	0.09	17(03,35)	14.41
Michigan	1.47	0.07	38(21,46)	-5.14	West Virginia	1.96	0.18	03(01,38)	26.95 ^c
Minnesota	1.62	0.10	26(06,44)	4.72	Wisconsin	1.56	0.09	33(11,46)	0.60
Mississippi	1.31	0.12	44(20,50)	-15.41 ^c	Wyoming	1.58	0.30	31(01,50)	1.98
Missouri	1.71	0.10	21(04,39)	10.56					



^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 15% 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 16.21
Melanoma of the Skin (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	340,956	252,815	188,823	141,530	79,525	1,003,650	191,958	1,195,608
	Males	191,955	135,055	95,771	69,992	37,823	530,596	80,562	611,158
	Females	149,001	117,760	93,052	71,538	41,703	473,054	111,397	584,451
White	Both Sexes	322,955	243,898	182,478	134,944	75,013	959,288	187,178	1,183,599
	Males	182,373	130,757	92,628	66,932	35,701	508,391	79,164	606,511
	Females	140,583	113,140	89,850	68,011	39,313	450,897	108,015	577,088
Black	Both Sexes	1,210	817	583	521	306	3,437	518	3,955
	Males	543	357	246	204	181	1,531	238	1,769
	Females	667	459	337	317	126	1,906	281	2,186
Asian/ Pacific Islander	Both Sexes	1,037	645	549	390	151	2,772	+	+
	Males	503	286	214	153	67	1,223	+	+
	Females	534	359	335	238	84	1,549	+	+
Hispanic	Both Sexes	7,370	4,706	3,769	2,800	1,400	20,045	+	+
	Males	3,099	1,935	1,178	980	464	7,655	+	+
	Females	4,271	2,772	2,591	1,820	936	12,390	+	+

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	0.3115	0.0004	0.0028	0.0272	0.1112	0.2434	0.4490	0.7350	1.1135	1.3328	0.2713
	Males	0.3345	0.0003	0.0025	0.0185	0.0749	0.1879	0.4233	0.8607	1.5266	2.0883	0.3122
	Females	0.2892	0.0006	0.0032	0.0363	0.1477	0.2980	0.4736	0.6212	0.7693	0.8681	0.2449
White	Both Sexes	0.3804	0.0005	0.0034	0.0337	0.1372	0.2949	0.5285	0.8476	1.2565	1.4827	0.3142
	Males	0.4069	0.0004	0.0030	0.0229	0.0916	0.2232	0.4920	0.9822	1.7036	2.3064	0.3547
	Females	0.3544	0.0006	0.0039	0.0451	0.1843	0.3673	0.5640	0.7228	0.8759	0.9669	0.2892
Black	Both Sexes	0.0076	-	0.0005	0.0006	0.0044	0.0068	0.0113	0.0205	0.0395	0.0556	0.0088
	Males	0.0071	-	0.0003	0.0005	0.0026	0.0047	0.0098	0.0236	0.0477	0.0851	0.0097
	Females	0.0081	-	0.0008	0.0007	0.0060	0.0086	0.0126	0.0180	0.0338	0.0410	0.0085
Asian/ Pacific Islander	Both Sexes	0.0136	0.0006	0.0011	0.0025	0.0068	0.0143	0.0244	0.0345	0.0489	0.0657	0.0141
	Males	0.0125	-	0.0008	0.0024	0.0060	0.0114	0.0209	0.0364	0.0582	0.0775	0.0142
	Females	0.0146	0.0011	0.0013	0.0027	0.0075	0.0170	0.0274	0.0329	0.0415	0.0582	0.0142
Hispanic	Both Sexes	0.0351	0.0002	0.0012	0.0048	0.0188	0.0438	0.0841	0.1385	0.1969	0.2490	0.0500
	Males	0.0265	0.0002	0.0008	0.0033	0.0100	0.0251	0.0587	0.1211	0.2071	0.3352	0.0450
	Females	0.0439	0.0002	0.0017	0.0064	0.0282	0.0631	0.1092	0.1539	0.1891	0.1958	0.0562

^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).

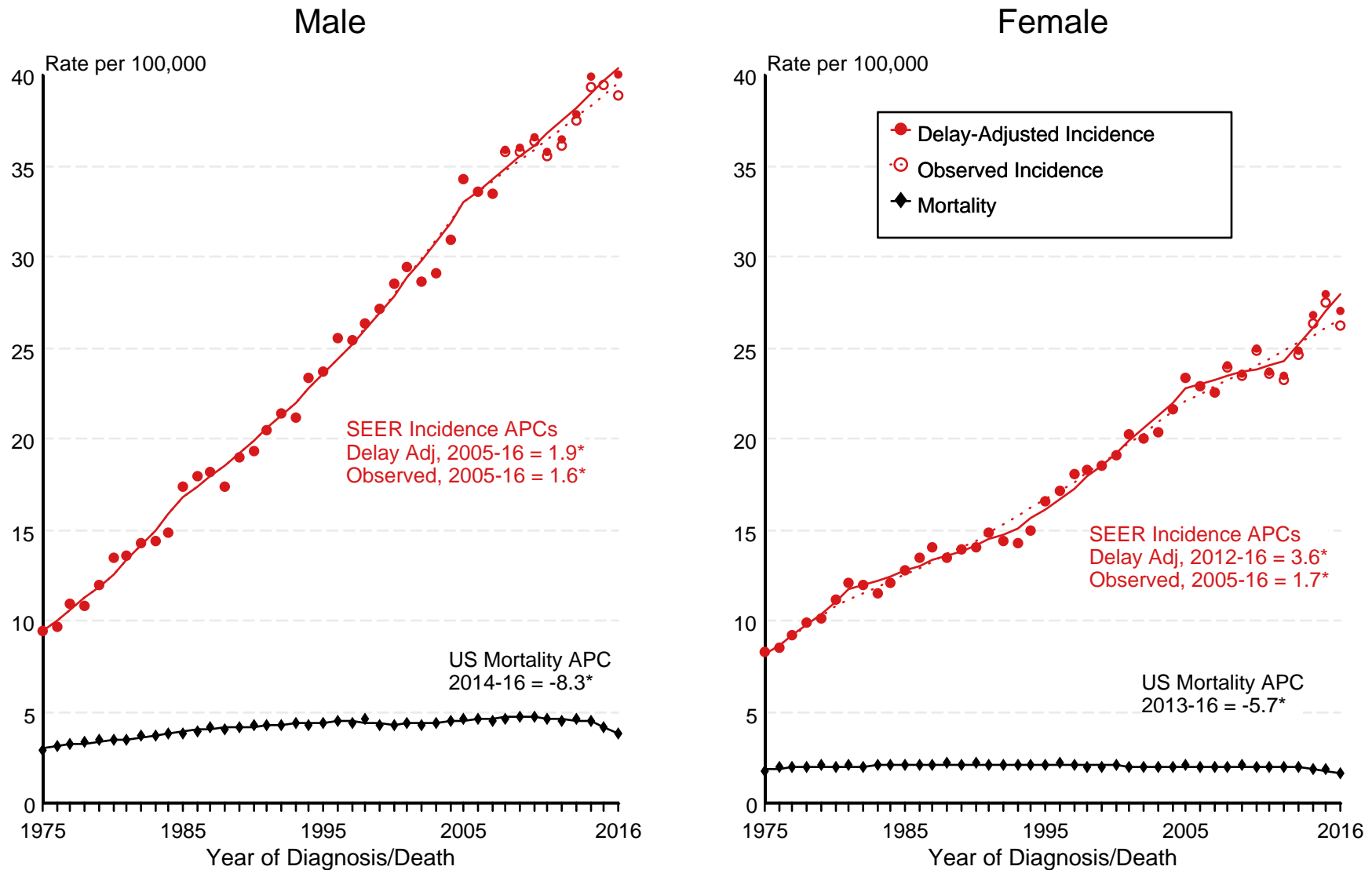
^e Complete prevalence is obtained by summing 0 to <24 and >=24.

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

+ Not available.

Figure 16.1

SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates^a Melanoma of the Skin, White, by 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.

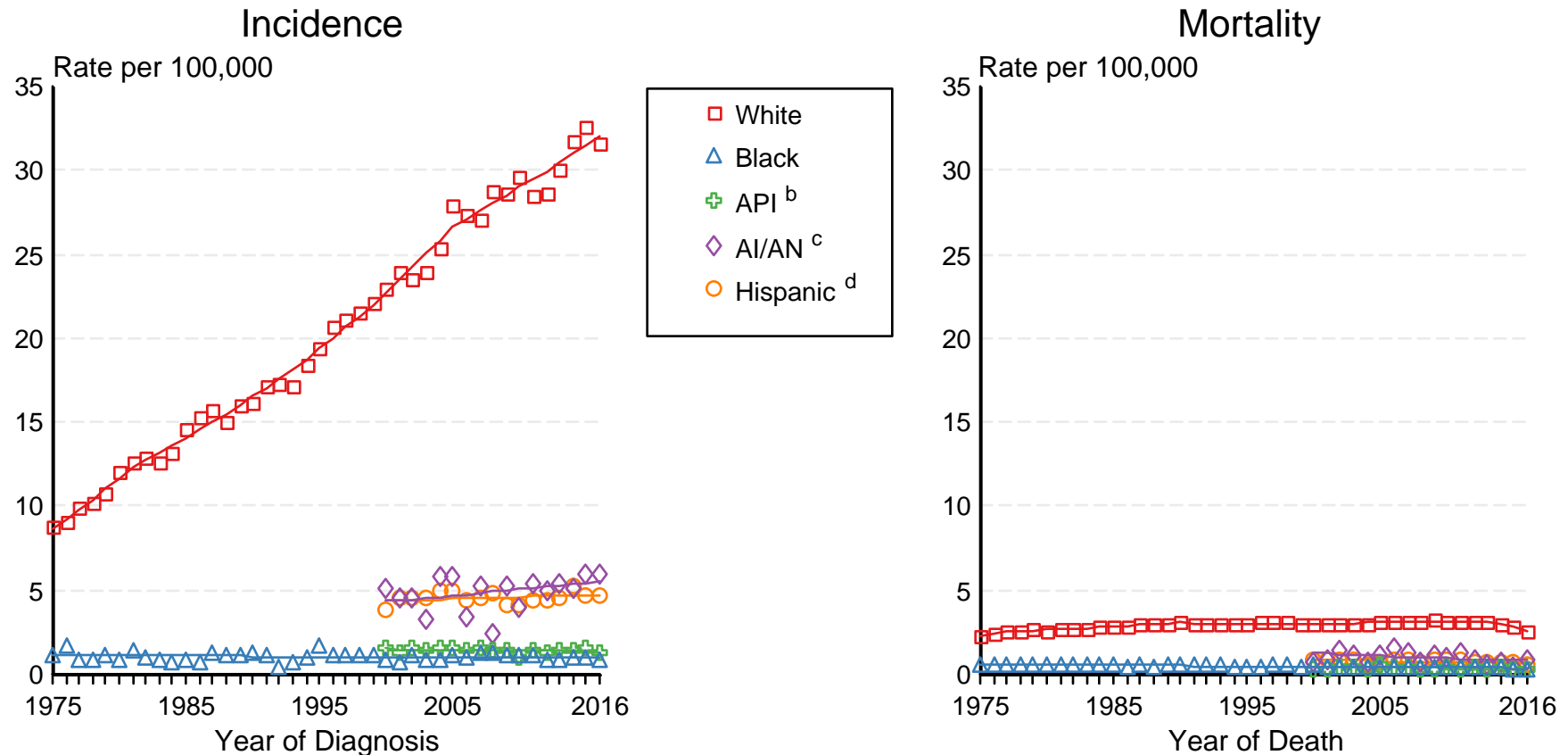
* The APC is significantly different from zero ($p < 0.05$).

Figure 16.2

SEER Incidence and US Death Rates^a Melanoma of the Skin, 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.

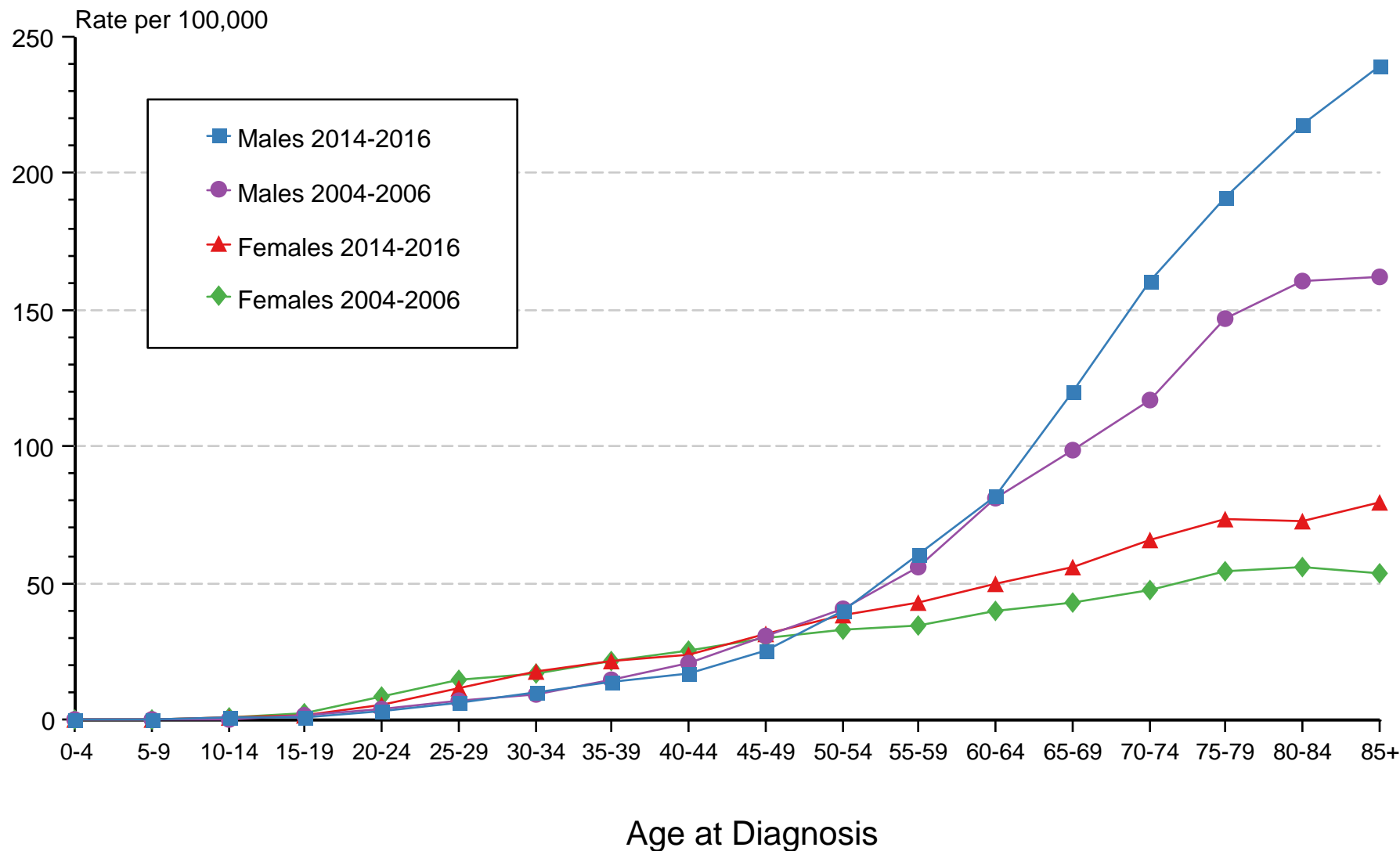
^d Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

Figure 16.3

Melanoma of the Skin

SEER Incidence 2004-2006 vs 2014-2016

White, by Age and Sex



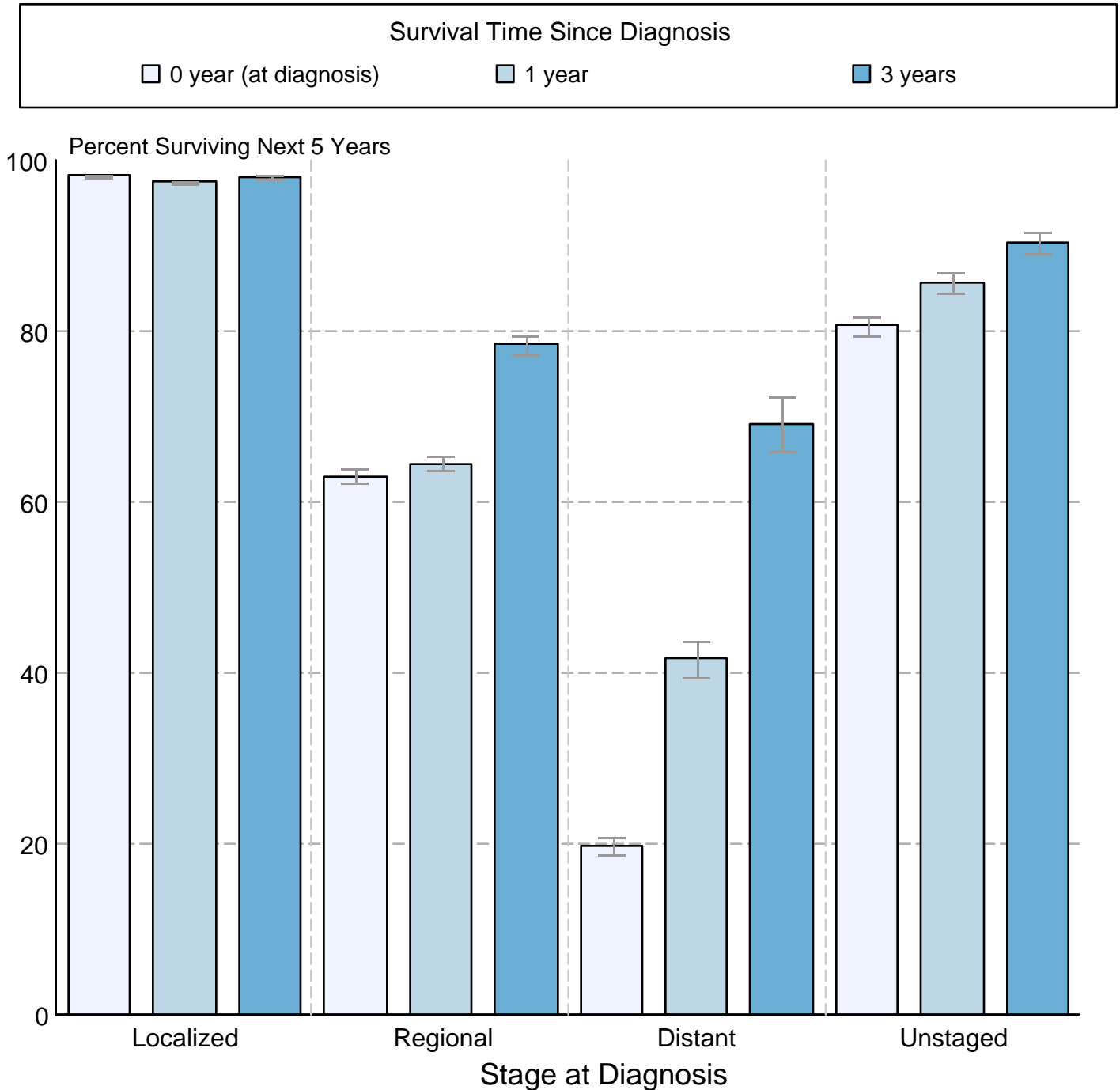
Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are age-adjusted as appropriate to the 2000 US Std Population (19 age groups - Census P25-1103).

Figure 16.4

Melanoma of the Skin

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.