

Table 16.1
Melanoma of the Skin (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2015 With up to Five Joinpoints, 1992-2015 With up to Four 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	2006-15	2011-15
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2015</u>														
All Races	1975-81	5.9*	1981-05	2.9*	2005-15	1.7*							1.7*	1.7*
White	1975-81	6.4*	1981-08	3.2*	2008-12	0.0	2012-15	5.0*					2.4*	3.8*
Black	1975-15	-0.1											-0.1	-0.1
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2015</u>														
All Races	1992-96	4.8*	1996-15	1.8*									1.8*	1.8*
White	1992-08	2.9*	2008-12	-0.3	2012-15	4.7*							2.1	3.5*
Black	1992-94	37.2	1994-15	-0.9									-0.9	-0.9
<u>SEER 9 Observed Incidence^a, 1975-2015</u>														
All Races	1975-81	5.9*	1981-05	2.9*	2005-15	1.5*							1.5*	1.5*
White	1975-81	6.2*	1981-05	3.2*	2005-15	1.7*							1.7*	1.7*
Black	1975-15	-0.2											-0.2	-0.2
<u>SEER 13 Observed Incidence^b, 1992-2015</u>														
All Races	1992-96	5.0*	1996-15	1.7*									1.7*	1.7*
White	1992-08	2.9*	2008-12	-0.6	2012-15	4.0*							1.7	2.8
White NH ^{ef}	1992-05	3.5*	2005-15	1.7*									1.7*	1.7*
Black	1992-94	37.8	1994-15	-1.0									-1.0	-1.0
Black NH ^{ef}	1992-94	36.9	1994-15	-0.9									-0.9	-0.9
API ^e	1992-15	0.6											0.6	0.6
AI/AN ^{eg}	1992-15	2.9*											2.9*	2.9*
Hispanic ^f	1992-15	0.9*											0.9*	0.9*
<u>U.S. Cancer Mortality^c, 1975-2015</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/jump.html .														
All Races	1975-89	1.5*	1989-13	0.0	2013-15	-5.3*							-1.2*	-2.7*
White	1975-88	1.8*	1988-13	0.2*	2013-15	-5.0*							-1.0	-2.5*
Black	1975-15	-0.9*											-0.9*	-0.9*
<u>U.S. Cancer Mortality^c, 1992-2015</u>														
All Races	1992-13	0.0	2013-15	-5.4*									-1.2*	-2.7*
White	1992-13	0.2*	2013-15	-5.1									-1.0	-2.5
White NH ^{ef}	1992-13	0.4*	2013-15	-5.0									-0.8	-2.3
Black	1992-15	-1.2*											-1.2*	-1.2*
Black NH ^{ef}	1992-15	-1.2*											-1.2*	-1.2*
API ^e	1992-15	-1.0											-1.0	-1.0
AI/AN ^{eg}	1992-15	0.0											0.0	0.0
Hispanic ^f	1992-15	-0.4											-0.4	-0.4

Joinpoint Regression Program Version 4.6, February 2018, 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). Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry). Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

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

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.

The Hispanic and Non-Hispanic mortality trends exclude deaths from New Hampshire and Oklahoma.

Data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

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

^a ^b ^c ^d ^e ^f ^g ^{*} -

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,
1975-2015 With up to Five Joinpoints, 1992-2015 With up to Four 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	2006-15	2011-15
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2015</u>														
All Races	1975-86	5.4*	1986-05	3.1*	2005-15	1.8*							1.8*	1.8*
White	1975-85	5.9*	1985-05	3.4*	2005-15	2.0*							2.0*	2.0*
Black	1975-15	-0.5											-0.5	-0.5
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2015</u>														
All Races	1992-96	5.1*	1996-15	1.9*									1.9*	1.9*
White	1992-05	3.1*	2005-15	1.7*									1.7*	1.7*
Black	1992-95	51.9*	1995-15	-2.4*									-2.4*	-2.4*
<u>SEER 9 Observed Incidence^a, 1975-2015</u>														
All Races	1975-86	5.4*	1986-05	3.1*	2005-15	1.6*							1.6*	1.6*
White	1975-85	5.9*	1985-05	3.4*	2005-15	1.7*							1.7*	1.7*
Black	1975-15	-0.5											-0.5	-0.5
<u>SEER 13 Observed Incidence^b, 1992-2015</u>														
All Races	1992-96	5.3*	1996-15	1.8*									1.8*	1.8*
White	1992-05	3.2*	2005-15	1.4*									1.4*	1.4*
White NH ^{ef}	1992-05	3.5*	2005-15	1.7*									1.7*	1.7*
Black	1992-95	52.3*	1995-15	-2.5*									-2.5*	-2.5*
Black NH ^{ef}	1992-95	52.6*	1995-15	-2.4*									-2.4*	-2.4*
API ^e	1992-15	1.1*											1.1*	1.1*
AI/AN ^{eg}	1992-15	2.2											2.2	2.2
Hispanic ^f	1992-15	1.3*											1.3*	1.3*
<u>U.S. Cancer Mortality^c, 1975-2015</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/jump.html .														
All Races	1975-87	2.4*	1987-97	0.9*	1997-00	-1.7	2000-09	0.9*	2009-13	-0.9	2013-15	-5.0*	-1.2*	-3.0*
White	1975-87	2.5*	1987-97	1.0*	1997-00	-1.6	2000-09	1.1*	2009-13	-0.7	2013-15	-4.8*	-1.1	-2.8*
Black	1975-15	-0.8*											-0.8*	-0.8*
<u>U.S. Cancer Mortality^c, 1992-2015</u>														
All Races	1992-13	0.3*	2013-15	-6.2									-1.2	-3.0*
White	1992-13	0.4*	2013-15	-5.9									-1.0	-2.8
White NH ^{ef}	1992-13	0.6*	2013-15	-5.7									-0.8	-2.6
Black	1992-15	-0.2											-0.2	-0.2
Black NH ^{ef}	1992-15	-0.1											-0.1	-0.1
API ^e	1992-15	-1.7*											-1.7*	-1.7*
AI/AN ^{eg}	1992-15	1.5											1.5	1.5
Hispanic ^f	1992-15	-0.3											-0.3	-0.3

Joinpoint Regression Program Version 4.6, February 2018, 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). Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry). Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

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

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The Hispanic and Non-Hispanic mortality trends exclude deaths from New Hampshire and Oklahoma.

Data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) 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,
1975-2015 With up to Five Joinpoints, 1992-2015 With up to Four 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	2006-15	2011-15
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2015</u>														
All Races	1975-80	5.5*	1980-09	2.4*	2009-12	-1.3	2012-15	5.4*					2.1	3.7*
White	1975-81	6.2*	1981-93	2.1*	1993-05	3.5*	2005-12	0.8	2012-15	5.2*			2.3*	4.1*
Black	1975-15	-0.1											-0.1	-0.1
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2015</u>														
All Races	1992-96	4.3*	1996-08	1.9*	2008-12	-0.4	2012-15	5.1*					1.9*	3.7*
White	1992-06	3.0*	2006-12	0.2	2012-15	5.1*							1.8*	3.9*
Black	1992-15	0.1											0.1	0.1
<u>SEER 9 Observed Incidence^a, 1975-2015</u>														
All Races	1975-86	4.0*	1986-93	0.6	1993-96	5.5	1996-09	2.3*	2009-12	-1.4	2012-15	5.0*	1.9	3.4*
White	1975-81	6.2*	1981-93	2.1*	1993-05	3.5*	2005-12	0.7	2012-15	4.5*			1.9*	3.5*
Black	1975-15	-0.1											-0.1	-0.1
<u>SEER 13 Observed Incidence^b, 1992-2015</u>														
All Races	1992-96	4.3*	1996-08	1.9*	2008-12	-0.6	2012-15	4.7*					1.7	3.4*
White	1992-06	3.0*	2006-12	0.0	2012-15	4.4*							1.4	3.3*
White NH ^{ef}	1992-06	3.6*	2006-12	0.4	2012-15	4.6*							1.8*	3.5*
Black	1992-15	0.0											0.0	0.0
Black NH ^{ef}	1992-15	0.2											0.2	0.2
API ^e	1992-15	0.2											0.2	0.2
AI/AN ^{eg}	1992-15	3.3*											3.3*	3.3*
Hispanic ^f	1992-15	0.6											0.6	0.6
<u>U.S. Cancer Mortality^c, 1975-2015</u>														
Note- Alternate mortality trends adjusted for ICD-9/ICD-10 coding change available at: https://surveillance.cancer.gov/joinpoint/jump.html .														
All Races	1975-89	0.8*	1989-15	-0.7*									-0.7*	-0.7*
White	1975-88	1.0*	1988-15	-0.4*									-0.4*	-0.4*
Black	1975-15	-1.0*											-1.0*	-1.0*
<u>U.S. Cancer Mortality^c, 1992-2015</u>														
All Races	1992-12	-0.5*	2012-15	-3.2									-1.4*	-2.5*
White	1992-15	-0.4*											-0.4*	-0.4*
White NH ^{ef}	1992-15	-0.2											-0.2	-0.2
Black	1992-15	-1.9*											-1.9*	-1.9*
Black NH ^{ef}	1992-15	-1.9*											-1.9*	-1.9*
API ^e	1992-15	-0.3											-0.3	-0.3
AI/AN ^{eg}	-	-											-	-
Hispanic ^f	1992-15	-0.6											-0.6	-0.6

Joinpoint Regression Program Version 4.6, February 2018, 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). Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry). Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

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

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

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.

The Hispanic and Non-Hispanic mortality trends exclude deaths from New Hampshire and Oklahoma.

Data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

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

^a ^b ^c ^d ^e ^f

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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	8.20	9.74	10.55	9.21
1980	10.51	11.80	9.63	12.03	13.41	11.11
1981	11.08	12.07	10.45	12.59	13.56	12.03
1982	11.19	12.50	10.29	12.84	14.22	11.91
1983	11.08	12.67	10.01	12.65	14.40	11.50
1984	11.41	12.91	10.44	13.11	14.82	12.04
1985	12.78	15.16	11.16	14.57	17.29	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	14.01
1988	12.89	14.97	11.48	14.96	17.39	13.35
1989	13.75	16.39	11.93	15.97	18.99	13.92
1990	13.87	16.68	11.87	16.20	19.33	14.00
1991	14.63	17.60	12.55	17.15	20.51	14.82
1992	14.77	18.31	12.21	17.30	21.36	14.40
1993	14.64	18.21	12.06	17.13	21.19	14.23
1994	15.67	19.85	12.62	18.46	23.32	14.93
1995	16.50	20.35	13.82	19.45	23.66	16.58
1996	17.39	21.75	14.24	20.62	25.50	17.11
1997	17.77	21.76	14.89	21.07	25.40	18.00
1998	17.95	22.16	15.02	21.53	26.31	18.26
1999	18.36	22.95	15.14	22.03	27.14	18.49
2000	19.00	23.99	15.52	22.97	28.56	19.11
2001	19.73	24.61	16.33	24.00	29.44	20.24
2002	19.36	24.05	16.14	23.48	28.65	19.99
2003	19.58	24.27	16.27	23.93	29.09	20.34
2004	20.70	25.56	17.35	25.38	30.93	21.56
2005	22.50	28.22	18.47	27.85	34.29	23.31
2006	22.17	27.78	18.16	27.33	33.55	22.91
2007	21.89	27.70	17.86	27.05	33.55	22.58
2008	23.29	29.43	18.96	28.90	35.83	24.03
2009	23.25	29.59	18.73	28.77	35.98	23.59
2010	24.04	30.23	19.67	29.79	36.63	24.97
2011	23.12	29.35	18.69	28.77	35.81	23.76
2012	23.24	29.94	18.38	28.94	36.52	23.43
2013	24.47	31.29	19.49	30.48	38.06	24.94
2014	25.78	32.65	20.75	32.49	40.15	26.89
2015	26.28	32.66	21.64	33.46	40.71	28.14

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.

Table 16.5
Melanoma of the Skin (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Diagnosis:									
1975-2015	17.74	22.14	14.75	21.08	26.04	17.76	1.01	1.16	0.92
1975-1979	8.70	9.44	8.20	9.74	10.55	9.21	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	13.56	12.03	1.35	-	-
1982	11.19	12.50	10.29	12.84	14.22	11.91	-	-	-
1983	11.08	12.67	10.01	12.65	14.40	11.50	-	-	-
1984	11.41	12.91	10.44	13.11	14.82	12.04	-	-	-
1985	12.78	15.16	11.16	14.57	17.29	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	14.01	1.30	-	-
1988	12.89	14.97	11.48	14.96	17.39	13.35	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	19.33	14.00	1.22	-	-
1991	14.63	17.60	12.55	17.15	20.51	14.82	1.10	-	-
1992	14.77	18.31	12.21	17.30	21.36	14.40	-	-	-
1993	14.64	18.21	12.06	17.13	21.19	14.23	-	-	-
1994	15.67	19.85	12.62	18.46	23.32	14.93	1.03	-	-
1995	16.50	20.35	13.82	19.45	23.66	16.58	1.68	3.19	-
1996	17.39	21.75	14.24	20.62	25.50	17.11	1.11	-	-
1997	17.77	21.76	14.89	21.07	25.40	18.00	1.10	-	-
1998	17.95	22.16	15.02	21.53	26.31	18.26	1.19	-	-
1999	18.36	22.95	15.14	22.03	27.14	18.49	1.14	-	-
2000	19.00	23.99	15.52	22.97	28.56	19.11	0.92	-	-
2001	19.73	24.61	16.33	24.00	29.44	20.24	0.76	-	-
2002	19.36	24.05	16.14	23.48	28.65	19.99	1.11	-	-
2003	19.58	24.27	16.27	23.93	29.09	20.34	0.84	-	-
2004	20.70	25.56	17.35	25.38	30.93	21.56	0.85	-	-
2005	22.50	28.22	18.47	27.85	34.29	23.31	1.07	-	1.03
2006	22.17	27.78	18.16	27.33	33.55	22.91	0.98	-	-
2007	21.86	27.67	17.84	26.99	33.48	22.53	1.22	-	1.20
2008	23.23	29.36	18.91	28.78	35.68	23.93	1.22	1.33	-
2009	23.16	29.48	18.66	28.59	35.76	23.44	1.15	1.11	1.11
2010	23.92	30.07	19.56	29.54	36.33	24.76	1.07	-	0.97
2011	22.97	29.16	18.57	28.48	35.44	23.52	1.07	-	1.14
2012	23.06	29.72	18.24	28.59	36.07	23.16	0.84	-	-
2013	24.22	30.98	19.29	29.99	37.44	24.54	0.85	-	-
2014	25.42	32.19	20.46	31.76	39.23	26.30	1.00	1.17	0.91
2015	25.77	32.02	21.22	32.33	39.31	27.22	0.97	-	0.95

^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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Year of Death:									
1975-2015	2.63	3.79	1.77	2.96	4.26	2.00	0.47	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	2.98	4.43	1.84	0.40	0.43	0.37
2015	2.41	3.56	1.52	2.80	4.10	1.78	0.35	0.51	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
SEER Incidence									
Age at Diagnosis									
Age-Adjusted Rates, 2011-2015									
All ages	22.8	29.8	17.7	27.3	35.2	21.5	1.1	1.1	1.0
Under 65	12.8	13.1	12.5	15.6	15.8	15.6	0.5	0.4	0.5
65 and over	92.4	145.5	53.3	108.4	169.5	62.5	5.2	6.0	4.6
All ages (WHO world std) ^c	17.6	21.7	14.4	21.1	25.8	17.6	0.8	0.8	0.7
Age-Specific Rates, 2011-2015									
<1	-	-	-	-	-	-	-	-	-
1-4	0.1	-	-	0.1	-	-	-	-	-
5-9	0.2	0.1	0.3	0.2	-	0.3	-	-	-
10-14	0.3	0.3	0.3	0.4	0.4	0.4	-	-	-
15-19	1.0	0.8	1.1	1.2	1.0	1.5	-	-	-
20-24	3.2	1.9	4.7	4.1	2.4	6.0	-	-	-
25-29	6.1	4.1	8.2	7.6	5.1	10.3	-	-	-
30-34	9.6	6.7	12.6	12.0	8.3	15.9	-	-	-
35-39	12.1	10.1	14.1	15.2	12.5	18.0	0.6	-	-
40-44	16.0	13.9	18.2	20.0	16.9	23.1	0.5	-	-
45-49	22.0	20.5	23.4	27.2	25.1	29.4	0.6	-	-
50-54	30.9	33.5	28.4	37.4	40.2	34.7	1.3	1.2	1.4
55-59	39.7	48.1	31.7	47.7	57.3	38.4	1.4	1.3	1.4
60-64	51.9	67.7	37.4	61.8	79.8	44.7	2.0	2.6	1.5
65-69	71.6	100.6	45.8	84.7	117.8	54.6	3.5	4.2	3.0
70-74	85.8	130.0	48.5	100.9	151.8	57.1	4.6	4.9	4.3
75-79	100.8	157.1	56.9	119.7	185.1	67.5	5.3	6.6	4.4
80-84	113.0	186.9	61.7	131.4	215.9	71.6	7.5	11.1	5.4
85+	113.3	208.3	63.9	129.6	239.6	72.0	7.3	-	8.0
U.S. Mortality									
Age at Death									
Age-Adjusted Rates, 2011-2015									
All ages	2.6	3.9	1.6	3.0	4.5	1.9	0.4	0.5	0.3
Under 65	1.1	1.4	0.8	1.3	1.6	0.9	0.1	0.2	0.1
65 and over	13.3	21.2	7.6	15.0	23.9	8.5	2.0	2.5	1.8
All ages (WHO world std) ^c	1.8	2.6	1.2	2.1	3.1	1.4	0.3	0.3	0.2
Age-Specific Rates, 2011-2015									
<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	0.3	0.3	0.2	0.3	0.4	0.3	-	-	-
30-34	0.5	0.6	0.4	0.6	0.7	0.5	-	-	-
35-39	0.8	0.9	0.7	1.0	1.1	0.8	0.1	-	-
40-44	1.3	1.5	1.0	1.6	1.9	1.3	0.2	-	-
45-49	1.8	2.2	1.4	2.2	2.6	1.8	0.2	0.3	-
50-54	2.7	3.4	1.9	3.2	4.1	2.3	0.4	0.4	0.4
55-59	3.8	5.3	2.5	4.6	6.3	3.0	0.5	0.6	0.4
60-64	5.5	7.8	3.4	6.4	9.1	3.9	0.8	0.9	0.7
65-69	7.3	10.8	4.2	8.4	12.3	4.8	1.2	1.8	0.8
70-74	10.1	15.4	5.6	11.6	17.5	6.4	1.4	1.7	1.2
75-79	14.3	22.2	8.1	16.3	25.1	9.2	2.1	2.4	2.0
80-84	19.3	32.2	10.3	21.6	35.8	11.5	3.1	3.6	2.8
85+	24.3	42.1	15.2	26.9	46.6	16.8	3.7	4.3	3.5

^a SEER 18 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.

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

^c 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	82.0	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	92.7	69.5 ^g	66.6 ^g	-
1996-1998 ^b	91.0	89.6	92.7	90.9	89.4	92.7	73.9 ^g	68.0 ^h	78.6 ^g
1999-2001 ^b	92.2	90.1	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
2005-2007 ^b	93.2	91.7	95.0	93.3	91.8	95.0	75.9 ^g	-	82.3 ^g
2008-2014 ^b	93.9 ^f	92.2 ^f	95.9 ^f	93.8 ^f	92.1 ^f	95.9 ^f	66.3 ^g	60.6 ^g	71.1 ^g
5-Year Period Survival (Percent)^{cd}									
2014	91.8	89.9	94.4	91.2	89.0	94.0	63.8	56.9	67.5
Stage Distribution (%) 2008-2014^{ce}									
All Stages									
Number of cases	102,084	57,742	44,342	94,995	54,030	40,965	466	206	260
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	84	82	86	83	81	86	54	48	59
Regional	9	10	7	9	10	8	24	28	22
Distant	4	5	3	4	5	3	16	17	15
Unstaged/Unknown	4	3	4	3	3	4	5	7	4
5-Year Relative Survival (Percent), 2008-2014^c									
Age at Diagnosis:									
Ages <45	94.5	91.2	96.8	94.3	90.9	96.6	81.3	70.0 ^g	87.6 ^g
Ages 45-54	93.0	90.5	95.8	92.7	89.9	95.7	65.6 ^g	62.3 ^g	68.6 ^g
Ages 55-64	91.8	90.0	94.6	91.3	89.5	94.2	66.5 ^g	54.5 ^g	79.6 ^g
Ages 65-74	92.5	91.3	94.5	92.0	90.7	94.4	60.0 ^g	49.6 ^h	64.8 ^g
Ages 75+	85.9	85.7	86.1	84.6	84.4	85.0	47.2 ^g	41.2 ^h	49.2 ^h
Ages <65	93.0	90.4	95.8	92.6	90.0	95.6	71.4	61.6 ^g	79.4
Ages 65+	89.6	89.0	90.5	88.7	88.0	89.9	54.3 ^g	46.6 ^g	58.0 ^g
Stage^e:									
All Stages	91.8	89.9	94.2	91.2	89.2	93.8	65.2	57.1	71.0
Localized	98.4	97.9	99.1	98.0	97.3	98.8	85.8	87.2 ^g	84.3
Regional	63.6	61.0	68.1	63.7	61.3	68.1	46.2 ^g	36.4 ^g	56.0 ^g
Distant	22.5	21.1	25.5	22.2	21.1	24.7	27.2 ^g	13.5 ^g	39.8 ^g
Unstaged/Unknown	83.7	81.9	86.0	82.4	80.3	85.1	41.9 ^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).

^c Based on follow-up of patients into 2015. [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

^d 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.

^e Based on follow-up of patients into 2015.

^f Period survival provides a 2014 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).

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

^h The difference between 1975-1977 and 2008-2014 is statistically significant ($p<.05$).

ⁱ The standard error is between 5 and 10 percentage points.

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

^k 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-	1980-	1985-	1990-	1979	1984	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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	97.7				
2-year	89.8	91.7	93.2	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	96.0	96.7	96.3	96.5	97.7					
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	94.7	95.2	94.8	95.8						
4-year	83.4	85.5	89.1	90.3	91.2	93.2	91.3	91.4	93.2	93.2	92.7	93.2	93.6	93.6	94.3	93.7	94.1	94.1	93.7	94.5	94.1							
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	93.2	93.7								
6-year	80.3	82.3	86.6	88.5	90.0	91.5	89.3	90.3	91.7	91.8	91.3	92.6	92.4	93.1	93.0	92.3	92.8	92.6	92.8									
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	92.4	92.9	92.0	92.7	92.1										
8-year	77.9	80.9	85.3	87.2	89.8	90.9	87.8	89.8	91.1	91.4	90.9	91.2	91.8	92.3	92.8	92.0	92.0	92.2										
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	92.1	92.7	92.0												
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	92.1	92.7													
11-year	76.0	79.4	84.4	86.6	89.1	89.7	87.6	89.1	90.9	90.9	90.0	90.5	91.4	92.1														
12-year	75.6	79.2	84.2	86.4	89.1	89.6	87.1	88.7	90.9	90.8	90.0	90.5	91.4															
13-year	75.3	78.8	84.1	86.4	88.6	89.5	86.8	88.6	90.9	90.8	89.9	90.5																
14-year	75.1	78.6	83.9	86.3	88.6	89.4	86.7	88.5	90.9	90.9	90.8	89.9																
15-year	74.6	78.4	83.9	86.3	88.6	89.4	86.5	88.3	90.9	90.9	90.8	89.9																
16-year	74.5	78.3	83.8	86.3	88.6	89.4	86.5	86.5	87.8	90.9																		
17-year	74.5	78.1	83.8	86.3	88.6	89.1	86.5	87.8	87.8	90.9																		
18-year	74.4	78.1	83.8	86.3	88.6	89.1	86.5	87.8	87.8	90.9																		
19-year	74.4	78.1	83.8	86.3	88.6	89.1	86.5	87.8	87.8	90.9																		
20-year	74.4	78.1	83.8	86.3	88.6																							

^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 16.10
Melanoma of the Skin (Invasive)

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

All Races, Males

Year of Diagnosis

	1975-	1980-	1985-	1990-	1979	1984	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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	97.0	97.4	97.3	97.1	97.3	98.3	97.1				
2-year	86.6	88.7	91.4	92.6	92.1	94.4	93.4	93.8	94.3	95.5	93.8	94.1	94.8	95.6	95.9	95.4	95.4	94.6	94.6	96.0	95.2	95.4	96.8					
3-year	82.2	84.3	88.2	90.3	90.0	92.1	90.8	91.9	92.5	93.5	91.5	92.4	93.4	92.7	94.0	93.6	93.3	93.1	93.2	94.1	93.2	94.6						
4-year	78.9	81.2	86.2	88.3	88.0	91.2	89.9	90.4	91.4	92.1	89.8	90.8	91.8	91.8	92.8	92.7	92.7	92.2	92.0	93.5	92.1							
5-year	77.5	78.6	84.4	87.2	86.7	90.4	88.1	90.1	90.4	90.9	89.2	90.3	91.7	91.1	91.5	91.8	91.8	91.8	91.2	92.5								
6-year	75.5	77.2	83.2	86.2	86.4	89.6	87.3	89.5	89.1	90.3	88.2	90.0	90.7	91.1	91.0	91.0	91.0	91.0	90.4	90.8								
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	90.6	90.6	90.6	89.8									
8-year	72.6	76.0	81.6	84.6	86.1	89.0	86.2	89.2	88.7	90.1	88.0	88.5	89.4	89.8	90.1	90.1	90.6	90.3										
9-year	71.7	75.2	81.2	84.3	85.7	88.4	86.0	88.7	88.5	90.1	88.0	87.8	89.4	89.5	90.1	90.3												
10-year	71.2	74.7	81.2	84.1	85.6	87.9	85.6	88.2	88.5	90.0	87.4	87.8	89.3	89.5	89.7													
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														
12-year	69.9	74.3	80.9	83.8	85.6	87.7	84.8	87.4	88.5	89.3	87.1	87.8	89.3															
13-year	69.5	74.0	80.9	83.7	85.6	87.7	84.7	87.4	88.5	89.3	87.0	87.8																
14-year	69.5	73.6	80.4	83.5	85.6	87.7	84.2	87.2	88.5	89.3	87.0																	
15-year	69.3	73.6	80.2	83.5	85.6	87.7	84.2	87.2	88.5	89.3	87.0																	
16-year	69.1	73.6	80.0	83.5	85.4	87.7	84.2	87.0	88.5																			
17-year	69.0	73.6	80.0	83.5	85.4	87.7	84.2	87.0																				
18-year	69.0	73.6	80.0	83.5	85.4	87.7	84.2																					
19-year	69.0	73.6	80.0	83.5	85.4	87.7																						
20-year	69.0	73.6	80.0	83.5	85.4																							

^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-	1980-	1985-	1990-	1979	1984	1989	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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				
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	98.8					
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	96.1	95.9	96.4	96.7	96.6	96.4	96.9	97.3						
4-year	87.8	89.9	92.4	92.5	95.0	95.3	92.8	92.6	95.3	94.6	96.1	95.9	95.6	95.6	96.0	95.0	95.7	96.2	95.9	95.6	95.6	96.5						
5-year	86.4	88.6	91.3	91.8	94.1	94.6	91.8	91.7	94.6	93.4	95.6	95.7	95.1	95.4	95.4	94.5	95.3	95.5	95.6	95.1								
6-year	85.0	87.4	90.3	91.2	94.1	93.8	91.6	91.2	94.5	93.3	95.0	95.3	94.5	95.3	95.1	93.8	94.9	95.3	95.0									
7-year	84.0	86.6	89.8	90.7	94.1	93.3	90.4	91.0	94.4	92.8	94.7	94.8	94.3	95.0	95.1	93.7	94.9	94.8										
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	95.0	95.1	93.7	94.5										
9-year	82.4	85.5	89.1	90.1	93.6	92.9	89.4	90.5	93.7	92.8	93.7	93.9	94.0	94.8	95.1	93.7												
10-year	81.8	84.7	88.8	90.0	93.6	92.4	89.4	90.2	93.6	92.6	93.4	93.4	93.8	94.8	95.1													
11-year	81.5	84.4	88.0	89.8	92.9	92.0	89.4	90.1	93.6	92.5	93.4	93.2	93.8	94.8														
12-year	81.0	84.2	87.8	89.6	92.8	91.5	89.4	90.1	93.6	92.5	93.3	93.2	93.4															
13-year	80.8	83.7	87.5	89.6	91.9	91.4	89.0	89.9	93.6	92.5	93.3	93.2																
14-year	80.3	83.6	87.5	89.5	91.8	91.3	89.0	89.9	93.6	92.5	93.3	93.2																
15-year	79.9	83.1	87.5	89.5	91.8	90.6	88.8	89.6	93.6	92.5	93.6	92.5																
16-year	79.7	82.8	87.5	89.5	91.8	90.1	88.8	88.7	88.7	93.6																		
17-year	79.7	82.6	87.5	89.5	91.8	89.8	88.8	88.8	88.7	88.7																		
18-year	79.7	82.4	87.5	89.5	91.8	89.6	88.6	88.8	88.7	88.7																		
19-year	79.6	82.4	87.5	89.5	91.8	89.6																						
20-year	79.6	82.4	87.5	89.5	91.8																							

^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, 2013-2015 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer						Risk of Being Diagnosed with Cancer						Risk of Dying from Cancer		Risk of Dying from Cancer		
		+10 yrs			+20 yrs			+30 yrs			Ever							
All Races	0	0.00	0.01	0.05	2.27	0.30		Asian/	0	0.00	0.00	0.00	0.19	0.06				
	10	0.01	0.05	0.16	2.30	0.31		Pacific	10	0.00	0.00	0.01	0.19	0.06				
	20	0.04	0.15	0.33	2.30	0.31		Islander	20	0.00	0.01	0.02	0.19	0.06				
	30	0.11	0.29	0.60	2.27	0.31			30	0.01	0.02	0.04	0.19	0.06				
	40	0.18	0.51	1.01	2.20	0.31			40	0.01	0.03	0.07	0.18	0.06				
	50	0.33	0.85	1.47	2.07	0.30			50	0.02	0.06	0.10	0.17	0.06				
	60	0.55	1.21	1.71	1.84	0.29			60	0.04	0.08	0.12	0.15	0.05				
	70	0.75	1.32	-	1.47	0.26			70	0.05	0.09	-	0.12	0.05				
	80	0.75	-	-	0.96	0.21			80	0.05	-	-	0.09	0.04				
White	0	0.00	0.01	0.07	2.67	0.35		American	0	0.00	0.00	0.01	0.49	0.08				
	10	0.01	0.06	0.19	2.70	0.35		Indian/	10	0.00	0.01	0.04	0.50	0.08				
	20	0.06	0.19	0.41	2.70	0.35		Alaska	20	0.01	0.04	0.06	0.50	0.08				
	30	0.13	0.35	0.74	2.66	0.35		Native ^a	30	0.03	0.05	0.13	0.50	0.08				
	40	0.23	0.61	1.21	2.57	0.35			40	0.03	0.10	0.24	0.48	0.08				
	50	0.40	1.01	1.74	2.41	0.34			50	0.08	0.22	0.37	0.48	0.08				
	60	0.65	1.43	1.99	2.13	0.32			60	0.15	0.31	0.40	0.43	0.08				
	70	0.88	1.52	-	1.68	0.29			70	0.19	0.29	-	0.32	0.08				
	80	0.87	-	-	1.08	0.23			80	0.14	-	-	0.18	0.07				
Black	0	0.00	0.00	0.00	0.11	0.04		Hispanic ^b	0	0.00	0.00	0.01	0.58	0.11				
	10	0.00	0.00	0.01	0.11	0.04			10	0.00	0.01	0.03	0.59	0.11				
	20	0.00	0.01	0.01	0.11	0.04			20	0.01	0.03	0.07	0.59	0.11				
	30	0.00	0.01	0.02	0.11	0.04			30	0.02	0.06	0.13	0.58	0.11				
	40	0.01	0.02	0.04	0.11	0.04			40	0.04	0.11	0.22	0.57	0.11				
	50	0.01	0.04	0.07	0.10	0.04			50	0.08	0.19	0.33	0.54	0.11				
	60	0.02	0.06	0.09	0.10	0.04			60	0.12	0.27	0.40	0.48	0.10				
	70	0.04	0.07	-	0.09	0.04			70	0.16	0.31	-	0.40	0.09				
	80	0.04	-	-	0.07	0.04			80	0.19	-	-	0.30	0.08				

Devcan 6.7.6, April 2018, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the 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). 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 CHSDA(Contract Health Service Delivery Area) 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, 2013-2015 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer						Risk of Being Diagnosed with Cancer						Risk of Dying from Cancer		Risk of Dying from Cancer		
		+10 yrs			+20 yrs			+30 yrs			Ever							
All Races	0	0.00	0.01	0.04	2.82	0.41		Asian/	0	0.00	0.00	0.00	0.20	0.05				
	10	0.01	0.04	0.11	2.85	0.42		Pacific	10	0.00	0.00	0.01	0.20	0.05				
	20	0.03	0.11	0.27	2.86	0.42		Islander	20	0.00	0.01	0.02	0.20	0.05				
	30	0.08	0.24	0.60	2.86	0.43			30	0.01	0.02	0.04	0.20	0.05				
	40	0.17	0.53	1.18	2.83	0.42			40	0.01	0.03	0.07	0.19	0.05				
	50	0.38	1.05	1.92	2.75	0.42			50	0.02	0.06	0.11	0.18	0.05				
	60	0.72	1.67	2.38	2.56	0.41			60	0.04	0.09	0.14	0.16	0.05				
	70	1.11	1.94	-	2.15	0.38			70	0.05	0.10	-	0.13	0.04				
	80	1.19	-	-	1.49	0.32			80	0.06	-	-	0.10	0.03				
White	0	0.00	0.01	0.05	3.28	0.47		American	0	0.00	0.00	0.00	0.50	0.08				
	10	0.01	0.04	0.14	3.31	0.48		Indian/	10	0.00	0.00	0.02	0.50	0.08				
	20	0.04	0.13	0.33	3.32	0.48		Alaska	20	0.00	0.02	0.04	0.51	0.08				
	30	0.10	0.30	0.72	3.32	0.49		Native ^a	30	0.02	0.04	0.12	0.52	0.08				
	40	0.20	0.63	1.39	3.28	0.48			40	0.02	0.10	0.23	0.51	0.08				
	50	0.45	1.23	2.25	3.18	0.48			50	0.08	0.22	0.40	0.52	0.08				
	60	0.85	1.94	2.75	2.95	0.46			60	0.15	0.36	0.42	0.48	0.08				
	70	1.28	2.23	-	2.46	0.42			70	0.24	0.32	-	0.38	0.08				
	80	1.36	-	-	1.69	0.35			80	0.11	-	-	0.21	0.05				
Black	0	0.00	0.00	0.00	0.11	0.04		Hispanic ^b	0	0.00	0.00	0.01	0.61	0.13				
	10	0.00	0.00	0.00	0.11	0.05			10	0.00	0.01	0.02	0.61	0.13				
	20	0.00	0.00	0.01	0.11	0.05			20	0.01	0.02	0.04	0.61	0.13				
	30	0.00	0.01	0.02	0.11	0.05			30	0.01	0.04	0.10	0.61	0.13				
	40	0.01	0.02	0.04	0.11	0.05			40	0.03	0.09	0.22	0.61	0.13				
	50	0.01	0.04	0.08	0.11	0.05			50	0.07	0.19	0.35	0.59	0.13				
	60	0.03	0.07	0.10	0.11	0.05			60	0.13	0.30	0.47	0.56	0.13				
	70	0.05	0.08	-	0.10	0.04			70	0.19	0.38	-	0.48	0.12				
	80	0.05	-	-	0.08	0.04			80	0.24	-	-	0.37	0.10				

Devcan 6.7.6, April 2018, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the 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). 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 CHSDA(Contract Health Service Delivery Area) 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, 2013-2015 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer						Risk of Being Diagnosed with Cancer						Risk of Dying from Cancer		Risk of Dying from Cancer		
		+10 yrs			+20 yrs			+30 yrs			Ever							
All Races	0	0.00	0.01	0.07	1.78	0.20		Asian/	0	0.00	0.00	0.00	0.18	0.06				
	10	0.01	0.07	0.20	1.80	0.21		Pacific	10	0.00	0.00	0.01	0.18	0.06				
	20	0.06	0.19	0.38	1.79	0.21		Islander	20	0.00	0.01	0.03	0.18	0.06				
	30	0.13	0.33	0.61	1.74	0.20			30	0.01	0.02	0.04	0.18	0.06				
	40	0.20	0.48	0.85	1.63	0.20			40	0.01	0.03	0.07	0.17	0.06				
	50	0.29	0.66	1.06	1.46	0.19			50	0.02	0.05	0.09	0.16	0.06				
	60	0.39	0.80	1.12	1.23	0.18			60	0.03	0.07	0.10	0.14	0.06				
	70	0.46	0.81	-	0.92	0.16			70	0.04	0.08	-	0.11	0.05				
	80	0.45	-	-	0.60	0.13			80	0.04	-	-	0.08	0.05				
White	0	0.00	0.01	0.09	2.12	0.23		American	0	0.00	0.00	0.02	0.49	0.07				
	10	0.01	0.09	0.25	2.14	0.23		Indian/	10	0.00	0.02	0.05	0.50	0.07				
	20	0.08	0.24	0.48	2.13	0.24		Alaska	20	0.02	0.05	0.08	0.50	0.07				
	30	0.17	0.41	0.75	2.07	0.23		Native ^a	30	0.03	0.06	0.14	0.48	0.07				
	40	0.25	0.59	1.03	1.92	0.23			40	0.03	0.11	0.24	0.46	0.07				
	50	0.35	0.80	1.26	1.71	0.22			50	0.08	0.22	0.34	0.44	0.07				
	60	0.46	0.95	1.31	1.42	0.20			60	0.15	0.28	0.38	0.39	0.07				
	70	0.54	0.94	-	1.05	0.18			70	0.14	0.26	-	0.27	0.07				
	80	0.51	-	-	0.67	0.14			80	0.16	-	-	0.16	0.08				
Black	0	0.00	0.00	0.00	0.11	0.04		Hispanic ^b	0	0.00	0.00	0.02	0.58	0.09				
	10	0.00	0.00	0.01	0.11	0.04			10	0.00	0.02	0.05	0.58	0.09				
	20	0.00	0.01	0.02	0.11	0.04			20	0.01	0.05	0.09	0.58	0.09				
	30	0.01	0.01	0.03	0.11	0.04			30	0.03	0.08	0.16	0.57	0.09				
	40	0.01	0.02	0.04	0.10	0.04			40	0.04	0.13	0.23	0.54	0.09				
	50	0.01	0.03	0.06	0.10	0.04			50	0.08	0.19	0.32	0.50	0.09				
	60	0.02	0.05	0.08	0.09	0.04			60	0.11	0.24	0.35	0.43	0.08				
	70	0.04	0.07	-	0.08	0.04			70	0.14	0.26	-	0.34	0.08				
	80	0.04	-	-	0.06	0.03			80	0.15	-	-	0.25	0.07				

Devcan 6.7.6, April 2018, National Cancer Institute (<https://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the 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). 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 CHSDA(Contract Health Service Delivery Area) 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 18 Areas ^b			SEER 13 Areas ^b			SEER 9 Areas ^b		
	Rate 2011-2015			Trend 2006-2015 ^c			Trend 2006-2015 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	22.8	29.8	17.7	1.7*	1.8*	1.7	1.5*	1.6*	1.9
White	27.3	35.2	21.5	1.7	1.4*	1.4	1.7*	1.7*	1.9*
White Hispanic ^e	4.9	5.2	4.9	1.0*	1.2*	0.8	-	-	-
White Non-Hispanic ^e	32.5	41.2	26.1	1.7*	1.7*	1.8*	-	-	-
Black	1.1	1.1	1.0	-1.0	-2.5*	0.0	-0.2	-0.5	-0.1
Asian/Pacific Islander	1.4	1.7	1.3	0.6	1.1*	0.2	-	-	-
Amer Ind/Alaska Nat ^f	5.2	5.0	5.5	2.9*	2.2	3.3*	-	-	-
Hispanic ^e	4.8	5.1	4.8	0.9*	1.3*	0.6	-	-	-
U.S. Mortality ^g	Rate 2011-2015			Trend 2006-2015 ^h			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	2.6	3.9	1.6	-1.2*	-1.2	-1.4*			
White	3.0	4.5	1.9	-1.0	-1.0	-0.4*			
White Hispanic ^e	0.8	1.0	0.6	-0.4	-0.2	-0.6			
White Non-Hispanic ^e	3.3	4.8	2.0	-0.8	-0.8	-0.2			
Black	0.4	0.5	0.3	-1.2*	-0.2	-1.9*			
Asian/Pacific Islander	0.3	0.4	0.3	-1.0	-1.7*	-0.3			
Amer Ind/Alaska Nat									
Total U.S.	0.6	0.7	0.4	-0.5	0.2	-0.8			
CHSDA Counties	0.8	1.1	0.5	0.0	1.5	-			
Non-CHSDA Counties	0.4	-	-	-0.1	-	-			
Hispanic ^e	0.7	1.0	0.6	-0.4	-0.3	-0.6			

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 4.6, February 2018, National Cancer Institute.

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

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

b 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).

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

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

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

f The 2006-2015 AAPC estimates are based on a Joinpoint analysis with up to 4 Joinpoints over diagnosis years 1992-2015.

g The 2006-2015 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2015.

h 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. The 2006-2015 Hispanic and Non-Hispanic mortality trends exclude deaths from New Hampshire and Oklahoma.

i Incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

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

k The 2006-2015 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2015.

* 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
SEER Incidence Rates^a, 2011-2015									
California	22.08	29.51	16.44	25.95	34.58	19.31	1.03	1.33	0.82
Greater Bay Area	24.95	32.98	18.87	35.00	45.54	26.96	0.78	-	-
San Francisco-Oakland	25.16	33.66	18.76	36.46	47.89	27.75	0.84	-	-
San Jose-Monterey	24.61	31.75	19.13	32.50	41.48	25.61	-	-	-
Los Angeles	13.51	18.52	9.79	17.03	23.31	12.30	0.97	1.55	0.58
Greater California	25.03	33.21	18.76	26.96	35.84	20.08	1.20	1.18	1.21
Connecticut	20.73	26.82	16.43	22.53	28.78	18.11	1.24	-	-
Detroit	17.43	22.03	14.50	22.88	27.94	19.79	0.81	-	0.92
Georgia	26.19	35.15	19.92	36.29	46.49	28.94	1.07	1.07	1.07
Atlanta	27.29	37.18	20.70	45.79	58.07	37.42	0.84	1.03	0.72
Rural Georgia	22.05	30.19	16.21	32.05	40.47	25.28	-	-	-
Greater Georgia	25.79	34.43	19.62	32.83	42.55	25.67	1.18	0.99	1.30
Hawaii	20.26	26.63	15.08	62.96	78.44	48.17	-	-	-
Iowa	25.42	29.45	22.92	25.66	29.49	23.33	-	-	-
Kentucky	25.71	31.95	21.54	27.25	33.70	22.91	1.56	-	-
Louisiana	17.00	23.97	11.88	23.58	32.07	17.12	1.05	1.17	0.94
New Jersey	22.06	28.86	17.27	26.02	33.51	20.71	1.02	1.19	0.92
New Mexico	15.10	19.71	11.40	15.93	20.79	11.96	-	-	-
Seattle-Puget Sound	28.62	34.52	24.34	32.98	39.11	28.56	-	-	-
Utah	38.30	48.59	29.88	39.70	50.10	31.18	-	-	-
SEER 9 Areas ^b	24.33	30.87	19.59	30.27	37.55	24.98	0.94	0.95	0.95
SEER 13 Areas ^b	21.84	28.12	17.24	27.46	34.74	22.10	0.96	1.12	0.87
SEER 18 Areas ^b	22.83	29.83	17.70	27.34	35.22	21.49	1.06	1.14	1.01

^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.

- 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
SEER Death Rates^a, 2011-2015									
California	2.40	3.67	1.42	3.01	4.57	1.77	0.33	0.44	0.26
Greater Bay Area	2.06	3.18	1.17	2.92	4.48	1.67	-	-	-
San Francisco-Oakland	2.09	3.24	1.20	3.05	4.69	1.74	-	-	-
San Jose-Monterey	1.98	3.06	1.12	2.69	4.12	1.53	-	-	-
Los Angeles	1.68	2.59	0.99	2.24	3.45	1.29	0.34	-	-
Greater California	2.86	4.32	1.70	3.34	5.02	1.99	0.37	-	-
Connecticut	2.28	3.25	1.56	2.52	3.56	1.73	-	-	-
Detroit	2.11	3.16	1.35	2.68	3.97	1.69	0.38	-	-
Georgia	2.46	3.82	1.46	3.24	4.93	1.93	0.42	0.43	0.40
Atlanta	1.84	2.78	1.22	2.78	4.07	1.83	0.39	-	-
Rural Georgia	2.24	-	-	3.11	-	-	-	-	-
Greater Georgia	2.75	4.31	1.58	3.42	5.25	1.97	0.43	-	-
Hawaii	1.57	2.40	0.91	4.08	6.03	2.18	-	-	-
Iowa	2.82	3.94	1.95	2.88	4.02	2.00	-	-	-
Kentucky	3.25	4.74	2.11	3.49	5.06	2.29	-	-	-
Louisiana	2.10	3.18	1.33	2.67	4.06	1.63	0.58	-	0.62
New Jersey	2.35	3.55	1.50	2.83	4.22	1.80	-	-	-
New Mexico	2.48	3.67	1.57	2.66	3.98	1.63	-	-	-
Seattle-Puget Sound	2.75	4.04	1.70	3.13	4.55	1.96	-	-	-
Utah	3.45	5.37	1.82	3.60	5.59	1.91	-	-	-
SEER 9 Areas ^b	2.38	3.55	1.49	2.92	4.30	1.83	0.39	0.47	0.34
SEER 13 Areas ^b	2.21	3.30	1.36	2.76	4.11	1.70	0.37	0.48	0.31
SEER 18 Areas ^b	2.46	3.71	1.51	3.00	4.48	1.84	0.38	0.45	0.34
Total U.S.	2.60	3.88	1.62	3.01	4.45	1.88	0.39	0.46	0.33

^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.

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

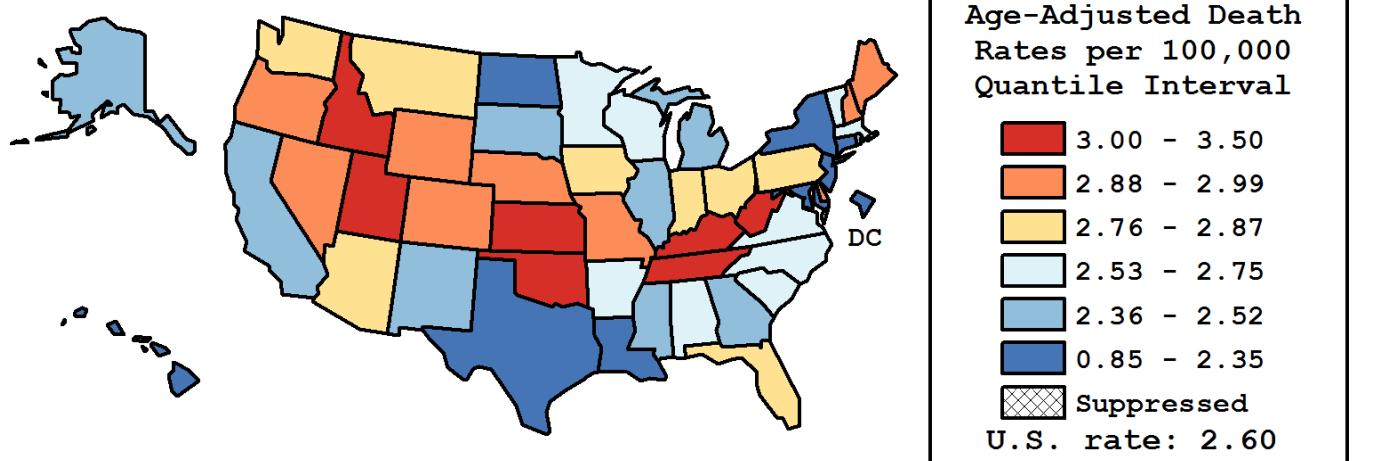
Table 16.18
Melanoma of the Skin (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2011-2015

Males and Females

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	2.60	0.01							
High Five States									
Idaho	3.50	0.20	01(01,18)	34.95 ^c					
Utah	3.45	0.17	02(01,10)	32.74 ^c					
West Virginia	3.29	0.17	03(01,24)	26.87 ^c					
Kentucky	3.25	0.12	04(01,18)	25.03 ^c					
Kansas	3.11	0.14	05(02,33)	19.73 ^c					
Low Five States									
Texas	2.17	0.04	47(38,49)	-16.48 ^c					
Louisiana	2.10	0.09	48(35,49)	-19.04 ^c					
New York	2.09	0.04	49(43,49)	-19.55 ^c					
Hawaii	1.57	0.14	50(49,51)	-39.51 ^c					
D.C.	0.85	0.17	51(50,51)	-67.15 ^c					

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	2.69	0.10	28(11,42)	3.63	Montana	2.86	0.22	20(01,45)	10.31
Alaska	2.52	0.33	34(01,50)	-2.88	Nebraska	2.99	0.17	09(02,41)	15.03 ^c
Arizona	2.87	0.09	18(05,32)	10.64	Nevada	2.92	0.14	13(03,40)	12.58
Arkansas	2.71	0.13	26(06,43)	4.39	New Hampshire	2.91	0.20	14(03,48)	11.91
California	2.40	0.04	41(32,45)	-7.47	New Jersey	2.35	0.07	43(31,48)	-9.33
Colorado	2.99	0.11	08(02,27)	15.13 ^c	New Mexico	2.48	0.15	36(14,49)	-4.49
Connecticut	2.28	0.10	46(27,49)	-12.30	New York	2.09	0.04	49(43,49)	-19.55 ^c
Delaware	2.89	0.23	16(02,48)	11.39	North Carolina	2.68	0.07	29(12,36)	3.29
D.C.	0.85	0.17	51(50,51)	-67.15 ^c	North Dakota	2.34	0.25	45(10,50)	-9.85
Florida	2.87	0.05	17(09,28)	10.65	Ohio	2.81	0.07	23(06,30)	8.03
Georgia	2.46	0.07	37(27,47)	-5.33	Oklahoma	3.01	0.12	07(02,29)	15.81 ^c
Hawaii	1.57	0.14	50(49,51)	-39.51 ^c	Oregon	2.98	0.12	10(02,29)	14.60
Idaho	3.50	0.20	01(01,18)	34.95 ^c	Pennsylvania	2.76	0.06	24(09,31)	6.12
Illinois	2.45	0.06	38(29,46)	-5.69	Rhode Island	2.45	0.19	39(05,49)	-5.77
Indiana	2.87	0.09	19(04,31)	10.54	South Carolina	2.68	0.10	30(10,41)	3.15
Iowa	2.82	0.13	22(04,37)	8.51	South Dakota	2.49	0.23	35(06,49)	-4.27
Kansas	3.11	0.14	05(02,33)	19.73 ^c	Tennessee	3.09	0.09	06(02,24)	19.09 ^c
Kentucky	3.25	0.12	04(01,18)	25.03 ^c	Texas	2.17	0.04	47(38,49)	-16.48 ^c
Louisiana	2.10	0.09	48(35,49)	-19.04 ^c	Utah	3.45	0.17	02(01,10)	32.74 ^c
Maine	2.90	0.18	15(01,38)	11.82	Vermont	2.56	0.26	32(02,49)	-1.36
Maryland	2.35	0.09	44(26,48)	-9.63	Virginia	2.70	0.08	27(11,35)	3.91
Massachusetts	2.75	0.08	25(07,34)	5.71	Washington	2.85	0.09	21(06,34)	9.73
Michigan	2.45	0.07	40(29,47)	-5.81	West Virginia	3.29	0.17	03(01,24)	26.87 ^c
Minnesota	2.55	0.09	33(19,46)	-1.75	Wisconsin	2.59	0.09	31(18,44)	-0.19
Mississippi	2.36	0.12	42(28,49)	-9.00	Wyoming	2.95	0.32	11(01,49)	13.54
Missouri	2.93	0.09	12(03,29)	12.76					



^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 ($p \leq .0002$).

^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.

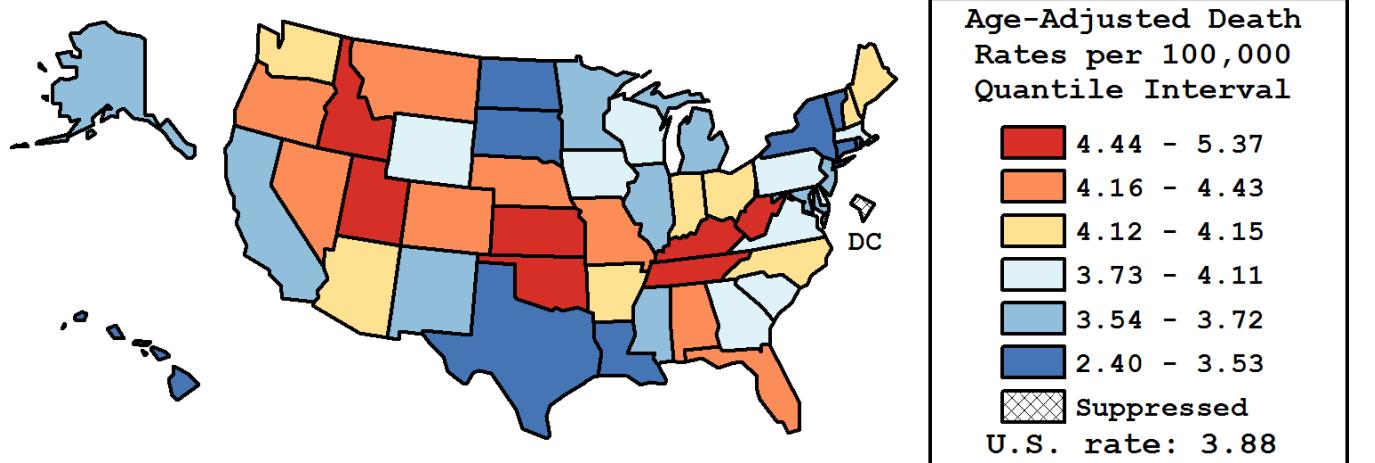
PD Percent difference between state rate and total U.S. rate.

- 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, 2011-2015

Males									
State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	3.88	0.02							
High Five States									
Utah	5.37	0.32	01(01,09)	38.56 ^c					
West Virginia	5.07	0.32	02(01,25)	30.68 ^c					
Tennessee	4.92	0.18	03(01,12)	26.77 ^c					
Idaho	4.87	0.35	04(01,34)	25.68 ^c					
Kentucky	4.74	0.22	05(01,26)	22.30 ^c					
Low Five States									
Connecticut	3.25	0.19	46(28,49)	-16.09 ^c					
Louisiana	3.18	0.18	47(28,49)	-18.04 ^c					
South Dakota	3.18	0.39	48(14,50)	-18.11 ^c					
New York	3.10	0.08	49(41,49)	-19.99 ^c					
Hawaii	2.40	0.25	50(46,51)	-38.13 ^c					
State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	4.16	0.19	15(05,41)	7.13	Montana	4.22	0.39	12(01,49)	8.79
Alaska	3.72	0.63	33(01,50)	-4.02	Nebraska	4.30	0.31	11(03,47)	10.76
Arizona	4.12	0.15	23(06,36)	6.10	Nevada	4.42	0.26	09(02,42)	13.97
Arkansas	4.15	0.24	16(02,38)	7.09	New Hampshire	4.15	0.36	18(03,48)	6.94
California	3.67	0.07	37(27,42)	-5.44	New Jersey	3.55	0.13	41(27,47)	-8.45
Colorado	4.17	0.19	14(03,36)	7.45	New Mexico	3.67	0.27	36(11,49)	-5.31
Connecticut	3.25	0.19	46(28,49)	-16.09 ^c	New York	3.10	0.08	49(41,49)	-19.99 ^c
Delaware	4.11	0.41	25(02,49)	5.93	North Carolina	4.13	0.14	21(05,33)	6.58
D.C.	-	-	-(50,51)	-	North Dakota	3.53	0.44	42(09,50)	-9.08
Florida	4.31	0.09	10(07,29)	11.20	Ohio	4.13	0.12	22(06,31)	6.50
Georgia	3.82	0.14	32(11,43)	-1.40	Oklahoma	4.50	0.22	06(01,28)	16.03 ^c
Hawaii	2.40	0.25	50(46,51)	-38.13 ^c	Oregon	4.19	0.20	13(03,34)	8.10
Idaho	4.87	0.35	04(01,34)	25.68 ^c	Pennsylvania	4.00	0.11	27(10,34)	3.25
Illinois	3.61	0.11	39(27,46)	-6.96	Rhode Island	3.43	0.36	44(07,50)	-11.69
Indiana	4.14	0.16	20(05,37)	6.62	South Carolina	3.96	0.19	28(06,42)	2.08
Iowa	3.94	0.22	31(04,43)	1.52	South Dakota	3.18	0.39	48(14,50)	-18.11 ^c
Kansas	4.47	0.25	07(01,33)	15.28 ^c	Tennessee	4.92	0.18	03(01,12)	26.77 ^c
Kentucky	4.74	0.22	05(01,26)	22.30 ^c	Texas	3.32	0.08	45(31,46)	-14.34
Louisiana	3.18	0.18	47(28,49)	-18.04 ^c	Utah	5.37	0.32	01(01,09)	38.56 ^c
Maine	4.15	0.33	19(01,40)	6.94	Vermont	3.43	0.45	43(05,50)	-11.46
Maryland	3.63	0.17	38(11,45)	-6.48	Virginia	4.11	0.15	24(06,36)	5.98
Massachusetts	3.96	0.16	29(07,37)	2.01	Washington	4.15	0.16	17(06,36)	6.95
Michigan	3.59	0.12	40(28,47)	-7.36	West Virginia	5.07	0.32	02(01,25)	30.68 ^c
Minnesota	3.69	0.17	35(16,46)	-4.89	Wisconsin	3.95	0.16	30(11,43)	1.87
Mississippi	3.69	0.24	34(16,49)	-4.77	Wyoming	4.03	0.54	26(01,49)	3.94
Missouri	4.43	0.17	08(02,26)	14.18					



^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 ($p \leq .0002$).

^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.

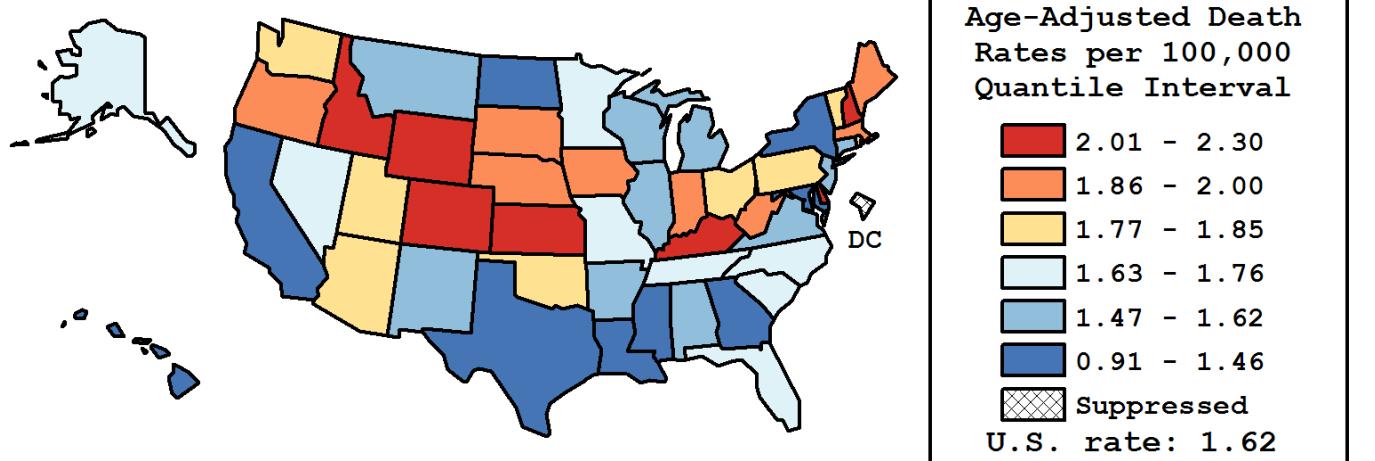
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 16.20
Melanoma of the Skin (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2011-2015

Females									
State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	1.62	0.01							
High Five States									
Idaho	2.30	0.23	01(01,30)	42.55 ^c					
Kentucky	2.11	0.13	02(01,21)	30.72 ^c					
Colorado	2.09	0.12	03(01,24)	29.05 ^c					
Kansas	2.06	0.16	04(02,46)	27.37 ^c					
Wyoming	2.04	0.37	05(01,50)	26.02 ^c					
Low Five States									
North Dakota	1.35	0.26	46(01,51)	-16.43 ^c					
New York	1.35	0.05	47(34,49)	-16.52 ^c					
Louisiana	1.33	0.10	48(28,51)	-17.45 ^c					
Texas	1.28	0.04	49(42,50)	-20.87 ^c					
Hawaii	0.91	0.14	50(43,51)	-43.46 ^c					

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	1.62	0.11	33(10,48)	-0.01	Montana	1.61	0.23	34(01,50)	-0.12
Alaska	1.65	0.35	29(01,51)	2.31	Nebraska	1.94	0.19	10(01,45)	20.21 ^c
Arizona	1.85	0.10	16(03,38)	14.49	Nevada	1.63	0.15	31(05,49)	0.67
Arkansas	1.57	0.13	37(11,50)	-3.13	New Hampshire	2.02	0.23	07(01,49)	24.87 ^c
California	1.42	0.04	44(34,48)	-12.31	New Jersey	1.50	0.07	41(23,49)	-7.22
Colorado	2.09	0.12	03(01,24)	29.05 ^c	New Mexico	1.57	0.16	36(04,50)	-3.12
Connecticut	1.56	0.11	38(05,46)	-3.54	New York	1.35	0.05	47(34,49)	-16.52 ^c
Delaware	2.02	0.27	06(01,49)	25.08 ^c	North Carolina	1.65	0.07	30(13,45)	2.05
D.C.	-	-	(-13,51)	-	North Dakota	1.35	0.26	46(01,51)	-16.43 ^c
Florida	1.72	0.05	25(11,36)	6.73	Ohio	1.80	0.07	21(04,31)	11.31
Georgia	1.46	0.07	42(27,50)	-9.72	Oklahoma	1.80	0.13	22(03,45)	11.27
Hawaii	0.91	0.14	50(43,51)	-43.46 ^c	Oregon	2.00	0.13	08(01,32)	24.07 ^c
Idaho	2.30	0.23	01(01,30)	42.55 ^c	Pennsylvania	1.83	0.07	17(05,31)	12.97
Illinois	1.59	0.07	35(19,46)	-1.39	Rhode Island	1.81	0.22	20(01,48)	12.20
Indiana	1.89	0.10	13(02,31)	16.92 ^c	South Carolina	1.71	0.11	27(07,46)	5.93
Iowa	1.95	0.15	09(01,43)	20.53 ^c	South Dakota	1.90	0.29	12(01,50)	17.85 ^c
Kansas	2.06	0.16	04(02,46)	27.37 ^c	Tennessee	1.71	0.09	26(08,45)	6.12
Kentucky	2.11	0.13	02(01,21)	30.72 ^c	Texas	1.28	0.04	49(42,50)	-20.87 ^c
Louisiana	1.33	0.10	48(28,51)	-17.45 ^c	Utah	1.82	0.17	19(01,43)	12.38
Maine	1.94	0.21	11(01,48)	20.21 ^c	Vermont	1.82	0.29	18(01,50)	12.44
Maryland	1.45	0.09	43(20,50)	-10.42	Virginia	1.62	0.08	32(11,45)	0.00
Massachusetts	1.87	0.09	15(02,32)	16.03 ^c	Washington	1.77	0.10	23(06,42)	9.41
Michigan	1.55	0.07	39(21,48)	-4.18	West Virginia	1.89	0.18	14(01,46)	16.67 ^c
Minnesota	1.68	0.10	28(10,48)	3.78	Wisconsin	1.50	0.09	40(17,49)	-6.91
Mississippi	1.41	0.13	45(18,51)	-12.43	Wyoming	2.04	0.37	05(01,50)	26.02 ^c
Missouri	1.76	0.10	24(05,42)	8.91					



^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 ($p \leq .0002$).

^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, 2015
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 <25	25 to <30	0 to <23 ^e	0 to <40 ^e	>=40 ^g	Complete ^h
Race	Sex										
All Races ^b	Both Sexes	357,483	267,581	191,216	139,370	93,899	68,819	1,049,547	1,188,494	33,529	1,222,023
	Males	198,951	140,411	95,112	67,660	44,211	29,095	546,347	602,574	10,719	613,293
	Females	158,532	127,170	96,104	71,710	49,688	39,724	503,200	585,920	22,810	608,730
White ^b	Both Sexes	342,043	259,359	185,574	134,369	90,321	65,713	1,011,664	1,145,142	31,579	1,176,721
	Males	190,911	136,692	92,470	65,166	42,771	27,928	528,008	582,141	10,211	592,352
	Females	151,132	122,667	93,104	69,203	47,550	37,785	483,656	563,001	21,368	584,369
Black ^b	Both Sexes	1,203	851	575	523	297	215	3,451	3,878	88	3,966
	Males	512	316	282	263	133	46	1,507	1,618	34	1,652
	Females	691	535	293	260	164	169	1,944	2,260	54	2,314
Asian/ Pacific	Both Sexes	925	660	552	+	+	+	2,568	+	+	+
	Males	481	299	215	+	+	+	1,169	+	+	+
Islander ^c	Females	444	361	337	+	+	+	1,399	+	+	+
Hispanic ^d	Both Sexes	6,582	4,431	3,301	+	+	+	17,696	+	+	+
	Males	2,872	1,916	1,134	+	+	+	7,131	+	+	+
	Females	3,710	2,515	2,167	+	+	+	10,565	+	+	+

Estimated prevalence percent^a on January 1, 2015, of the SEER^c population diagnosed in the previous 23 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence	All Ages	Age Specific (Crude)								Age-Adjusted ^f		
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79			
Race	Sex											
All Races ^c	Both Sexes	0.2595%	0.0004%	0.0028%	0.0263%	0.1010%	0.2191%	0.3987%	0.6488%	0.9564%	1.1488%	0.2391%
	Males	0.2769%	0.0002%	0.0025%	0.0178%	0.0690%	0.1731%	0.3831%	0.7700%	1.3224%	1.8127%	0.2772%
	Females	0.2426%	0.0005%	0.0031%	0.0352%	0.1334%	0.2647%	0.4138%	0.5392%	0.6556%	0.7456%	0.2145%
White ^c	Both Sexes	0.3418%	0.0004%	0.0034%	0.0348%	0.1349%	0.2884%	0.5088%	0.8171%	1.1923%	1.4102%	0.3032%
	Males	0.3616%	0.0003%	0.0030%	0.0235%	0.0899%	0.2220%	0.4794%	0.9535%	1.6259%	2.2167%	0.3441%
	Females	0.3220%	0.0005%	0.0039%	0.0470%	0.1824%	0.3572%	0.5381%	0.6893%	0.8261%	0.9132%	0.2781%
Black ^c	Both Sexes	0.0074%	-	-	-	0.0034%	0.0069%	0.0114%	0.0187%	0.0419%	0.0572%	0.0087%
	Males	0.0070%	-	-	-	0.0020%	0.0048%	0.0108%	0.0232%	0.0479%	0.0858%	0.0098%
	Females	0.0078%	-	-	-	0.0045%	0.0088%	0.0119%	0.0152%	0.0377%	0.0429%	0.0083%
Asian/ Pacific	Both Sexes	0.0145%	-	0.0012%	0.0025%	0.0062%	0.0148%	0.0232%	0.0338%	0.0474%	0.0647%	0.0138%
	Males	0.0139%	-	-	0.0025%	0.0058%	0.0102%	0.0212%	0.0392%	0.0579%	0.0774%	0.0142%
Islander ^c	Females	0.0151%	-	-	0.0026%	0.0066%	0.0188%	0.0249%	0.0293%	0.0391%	0.0569%	0.0136%
Hispanic ^d	Both Sexes	0.0329%	-	0.0011%	0.0046%	0.0179%	0.0413%	0.0783%	0.1279%	0.1753%	0.2368%	0.0463%
	Males	0.0262%	-	0.0010%	0.0029%	0.0100%	0.0260%	0.0589%	0.1176%	0.1944%	0.3311%	0.0441%
	Females	0.0397%	-	0.0012%	0.0063%	0.0262%	0.0571%	0.0971%	0.1368%	0.1610%	0.1797%	0.0502%

^a US 2015 cancer prevalence counts are based on 2015 cancer prevalence proportions from the SEER registries and 1/1/2015 US population estimates based on the average of 2014 and 2015 population estimates from the US Bureau of the Census.

^{b c d} Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 40/23 years. Statistics based on (b) SEER 9 Areas (c) SEER 13 Areas excluding the Alaska Native Registry

(d) NHIA for Hispanic for SEER 13 Areas excluding the Alaska Native Registry.

^e Maximum limited-duration prevalence: 40 years for 1975-2015 SEER 9 data; 23 years for 1992-2015 SEER 13 data (excluding the Alaska Native Registry) used to calculate prevalence for Hispanics and Asian Pacific Islanders.

^{f g h i} Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.

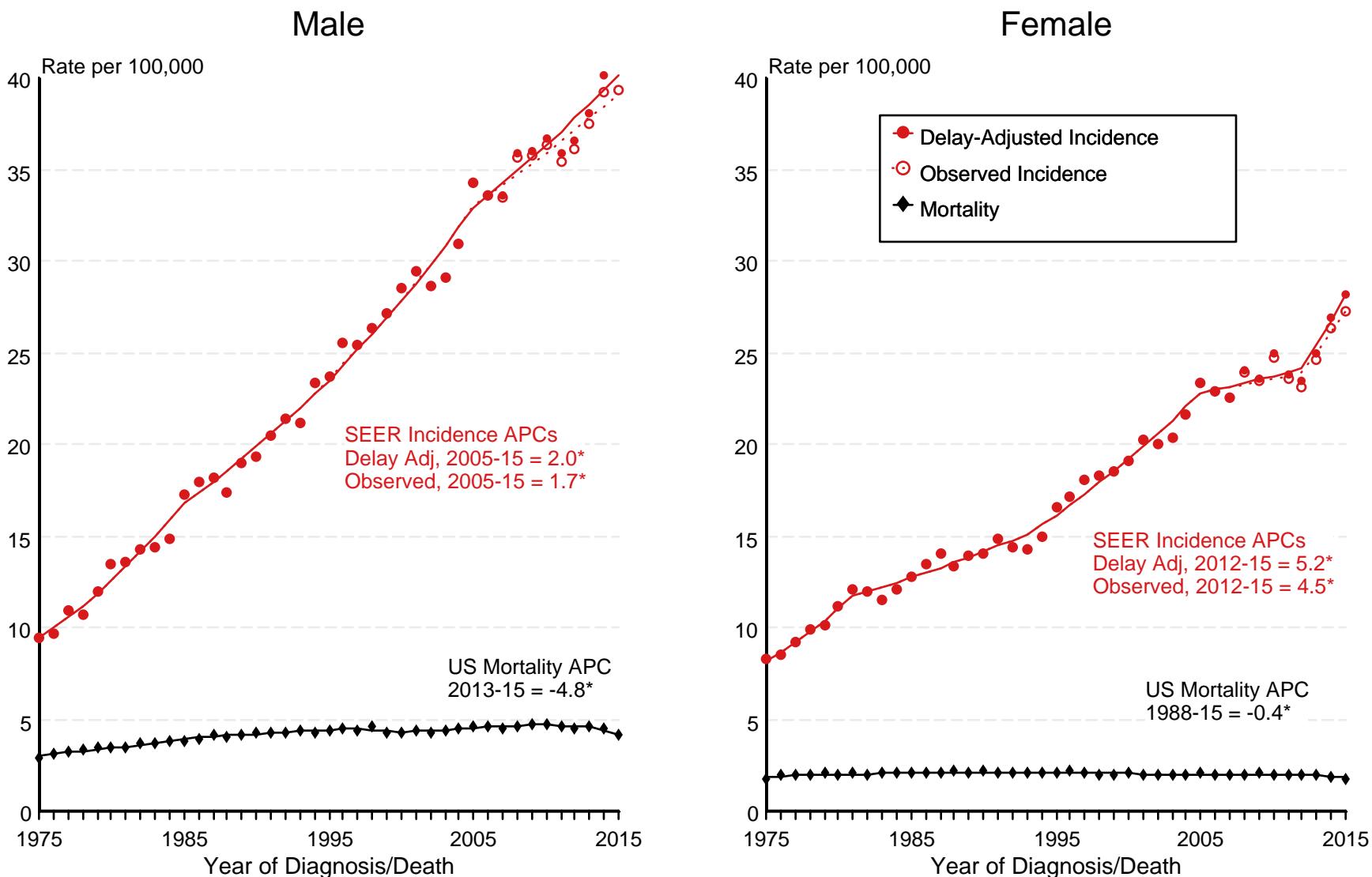
(g) Cases diagnosed more than 40 years ago were estimated using the completeness index method (Capocaccia et al. 1997, Merrill et al. 2000). (h) Complete prevalence is obtained by summing 0 to <40 and >=40. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.

- 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



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

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 4.6, February 2018, 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.

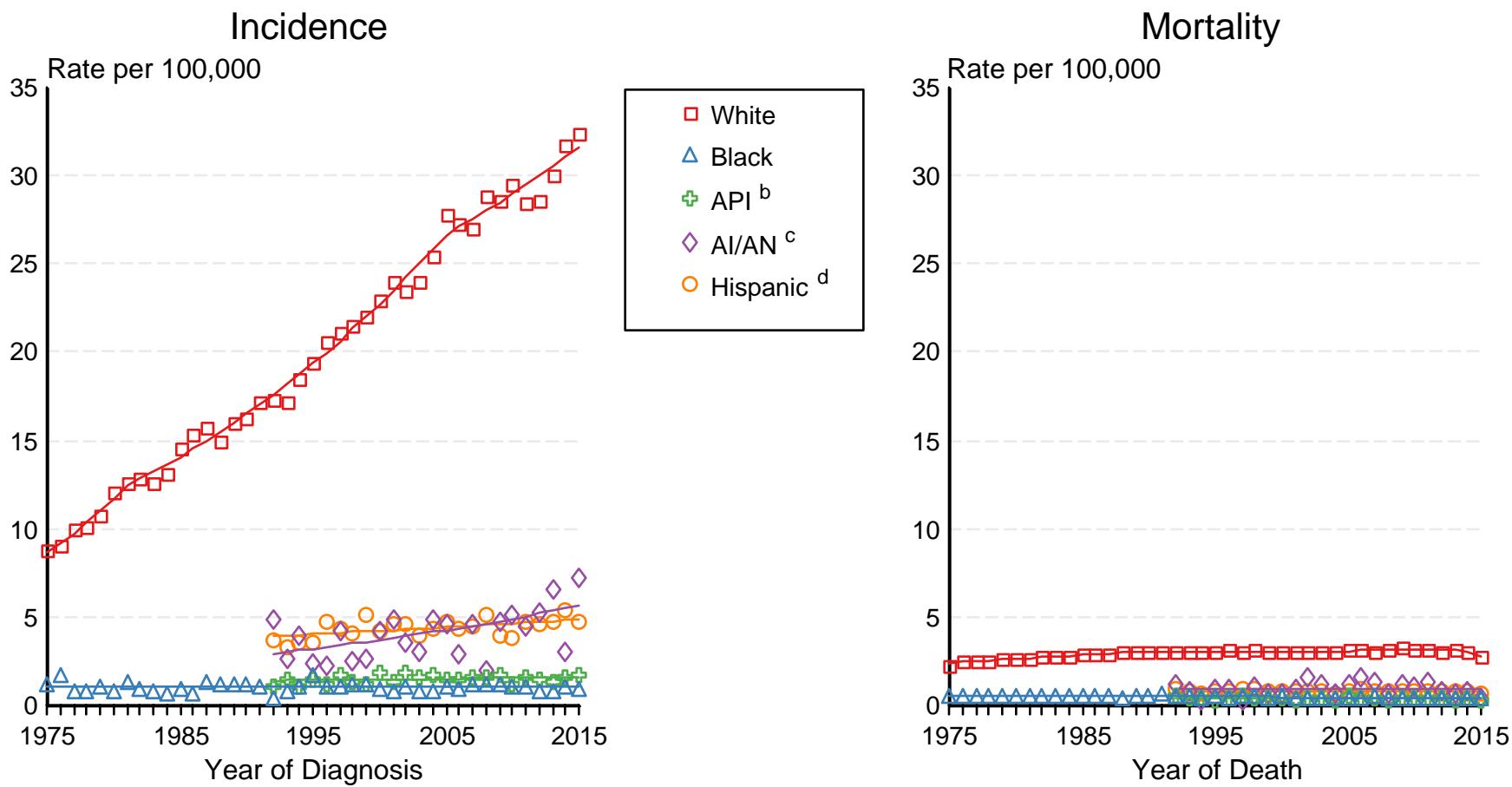
* The APC is significantly different from zero ($p < 0.05$).

Figure 16.2

SEER Incidence and US Death Rates^a

Melanoma of the Skin, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2015
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2015



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 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). 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 4.6, February 2018, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2015 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2015 allow a maximum of 4 joinpoints.

^b API = Asian/Pacific Islander.

^c AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

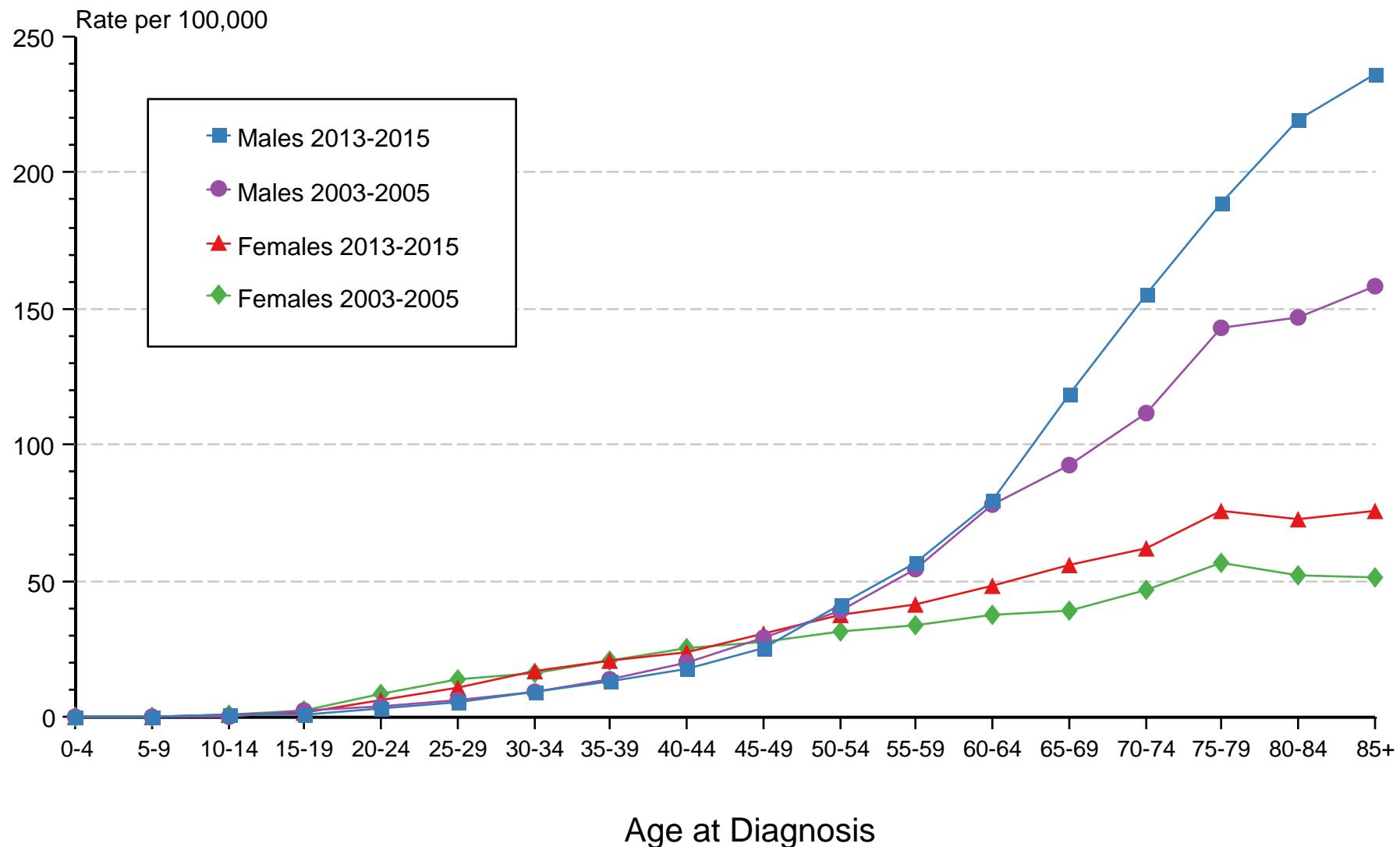
^d Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from New Hampshire and Oklahoma.

Figure 16.3

Melanoma of the Skin

SEER Incidence 2003-2005 vs 2013-2015

White, by Age and Sex



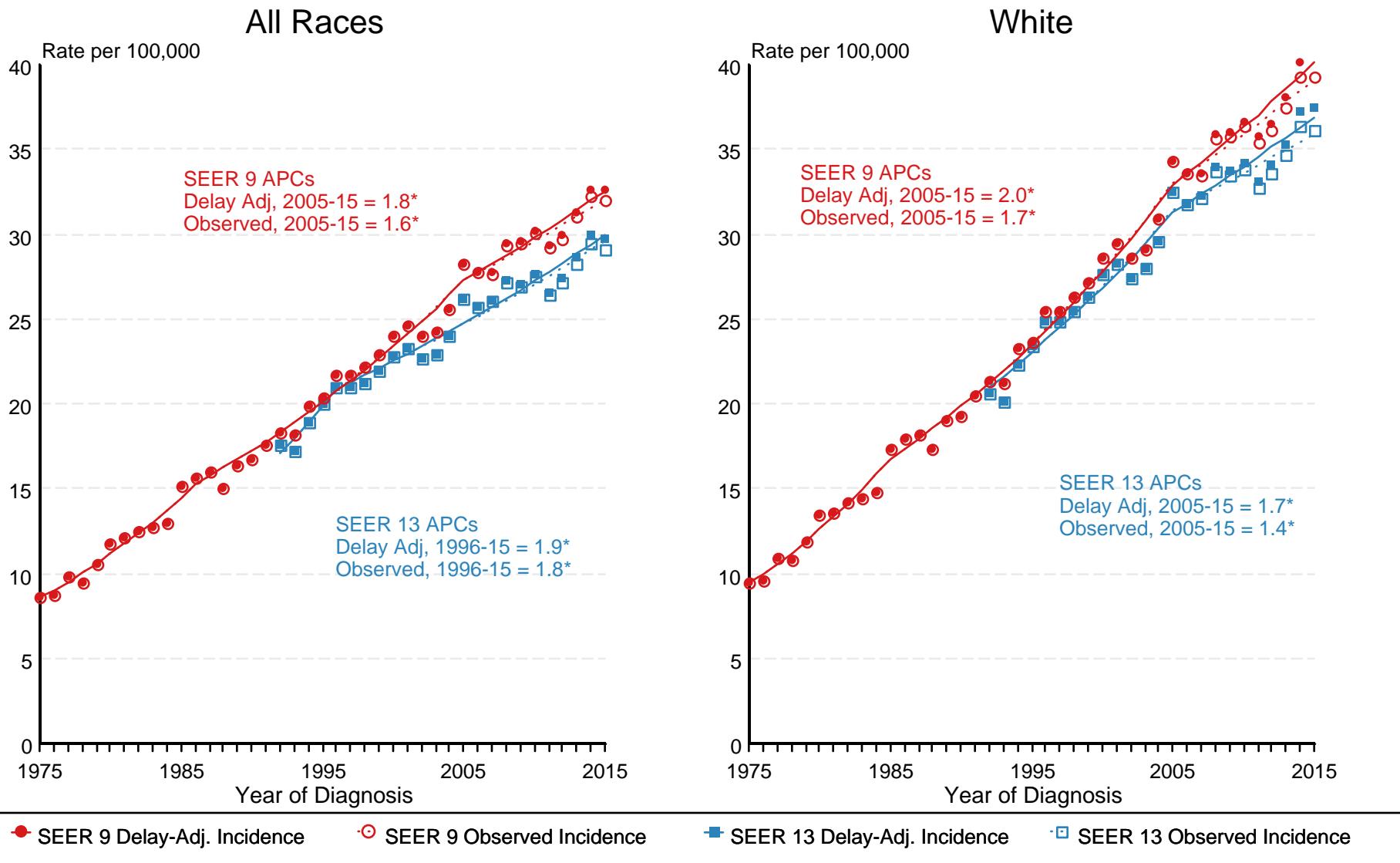
Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are age-adjusted as appropriate to the 2000 US Std Population (19 age groups - Census P25-1103).

Figure 16.4

SEER Observed Incidence and SEER Delay Adjusted Incidence Rates^a

SEER 9 Areas Compared to SEER 13 Areas

Melanoma of the Skin, Male, by Race



Source: SEER 9 areas and SEER 13 areas.

^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 4.6, February 2018, 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.

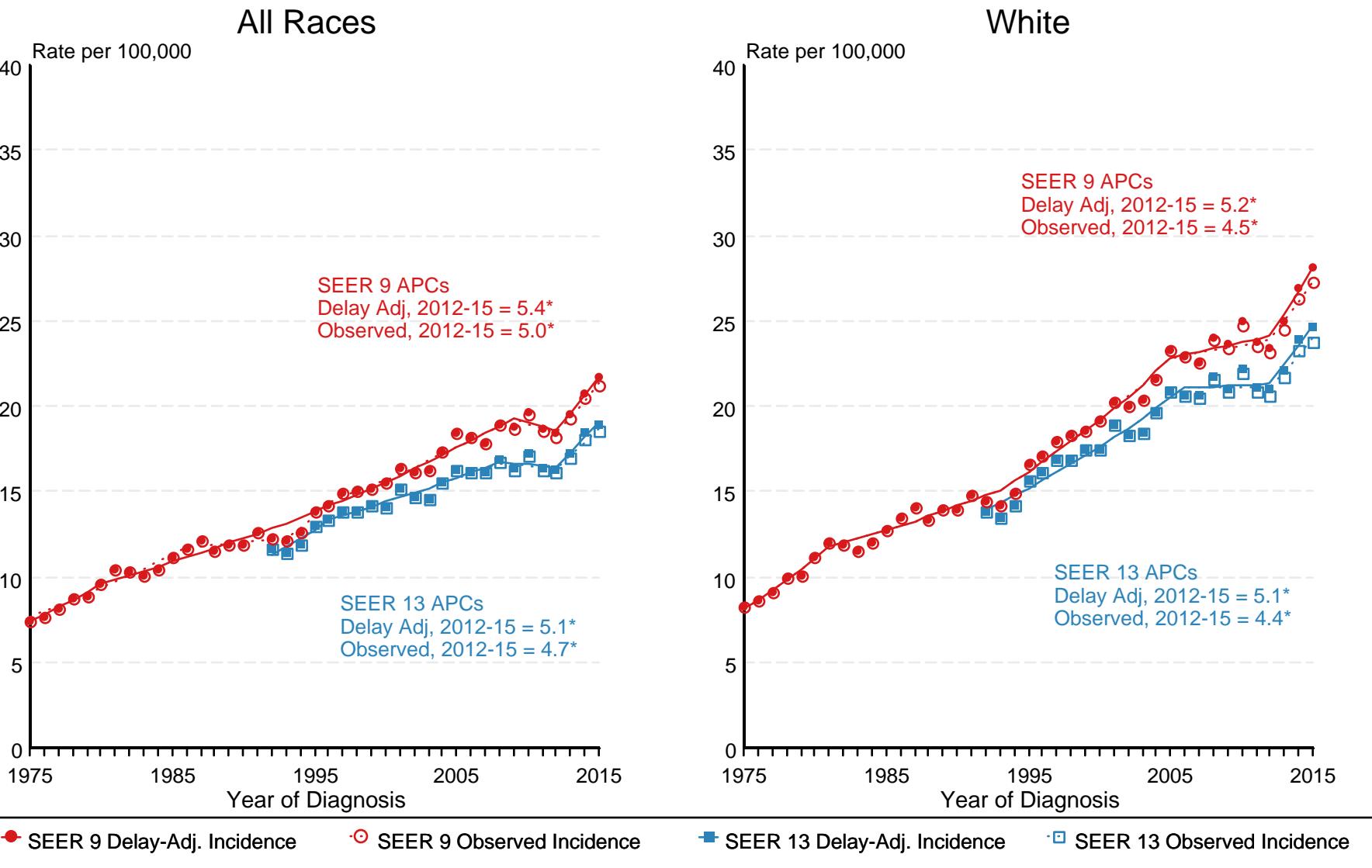
* The APC is significantly different from zero ($p < 0.05$).

Figure 16.5

SEER Observed Incidence and SEER Delay Adjusted Incidence Rates^a

SEER 9 Areas Compared to SEER 13 Areas

Melanoma of the Skin, Female, by Race



^a Source: SEER 9 areas and SEER 13 areas.

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

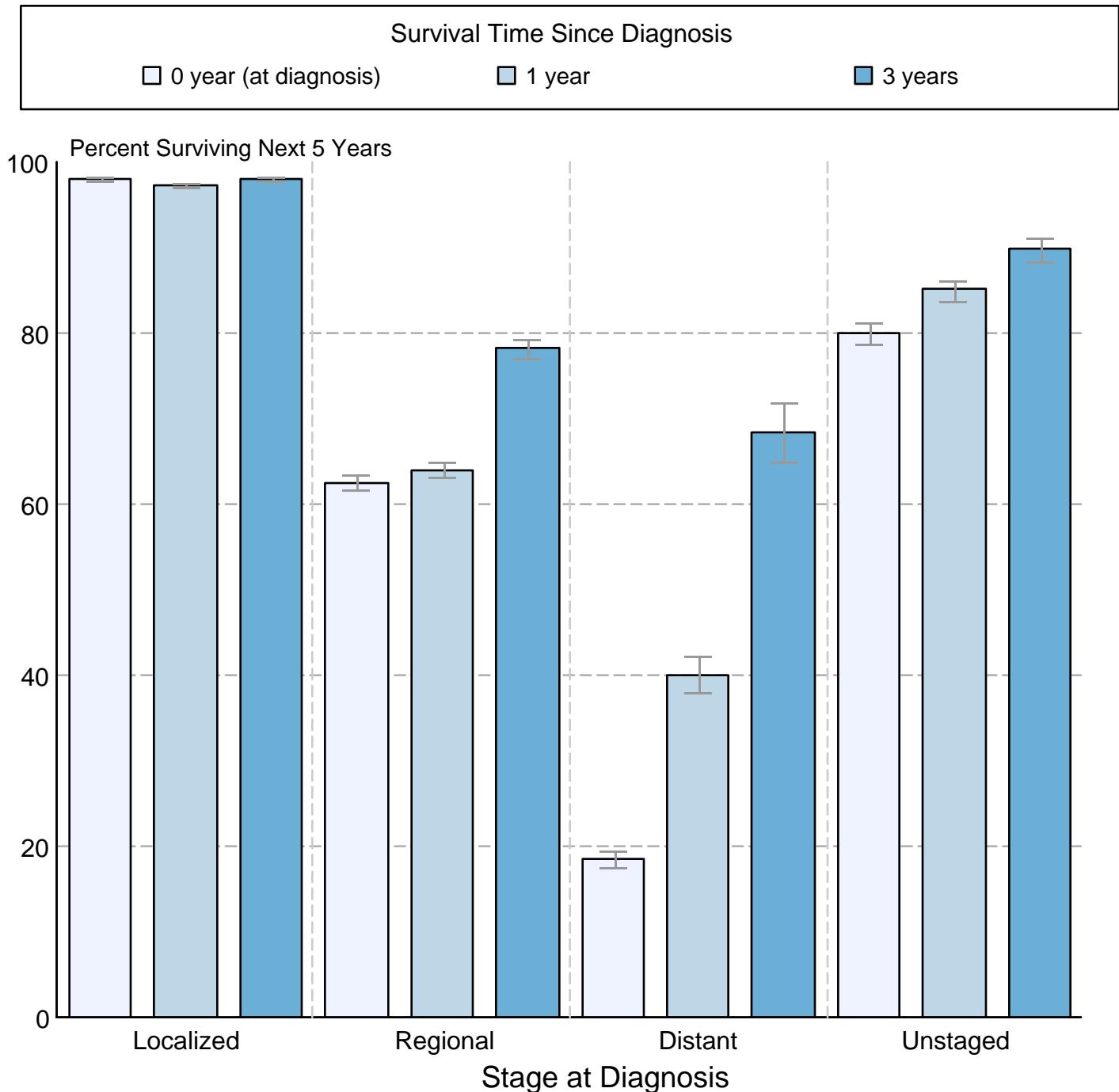
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.6, February 2018, National Cancer Institute.

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 16.6

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
 1998-2014 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). California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG contribute cases for diagnosis years 2000 and later.

The remaining 13 SEER Areas contribute cases for the entire time period.

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.