

Table 16.1  
Melanoma of the Skin (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<b>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-81	6.1*	1981-08	2.8*									2.8*	2.8*
White	1975-81	6.5*	1981-08	3.2*									3.2*	3.2*
Black	-	-											-	-
<b>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-08	2.3*											2.3*	2.3*
White	1992-08	2.9*											2.9*	2.9*
Black	-	-											-	-
<b>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-85	4.6*	1985-08	2.6*									2.6*	2.6*
White	1975-81	6.6*	1981-08	3.1*									3.1*	3.1*
Black	1975-08	-0.1											-0.1	-0.1
<b>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-96	4.5*	1996-08	1.9*									1.9*	1.9*
White	1992-96	5.2*	1996-08	2.3*									2.3*	2.3*
White NH <sup>ef</sup>	1992-08	3.2*											3.2*	3.2*
Black	1992-95	33.6	1995-04	-5.7*	2004-08	9.9							1.0	9.9
Black NH <sup>ef</sup>	1992-95	34.7	1995-03	-6.6	2003-08	7.7							1.1	7.7
API <sup>e</sup>	1992-08	1.3											1.3	1.3
AI/AN <sup>eg</sup>	1992-08	0.7											0.7	0.7
Hispanic <sup>f</sup>	1992-08	1.1*											1.1*	1.1*
<b>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</b>														
All Races	1975-89	1.6*	1989-08	-0.1									-0.1	-0.1
White	1975-88	1.8*	1988-08	0.1									0.1	0.1
Black	1975-08	-0.7*											-0.7*	-0.7*
<b>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</b>														
All Races	1992-08	-0.1											-0.1	-0.1
White	1992-08	0.1											0.1	0.1
White NH <sup>ef</sup>	1992-08	0.3*											0.3*	0.3*
Black	1992-08	-1.0											-1.0	-1.0
Black NH <sup>ef</sup>	1992-08	-1.1*											-1.1*	-1.1*
API <sup>e</sup>	1992-08	-0.9											-0.9	-0.9
AI/AN <sup>eg</sup>	1992-08	2.5											2.5	2.5
Hispanic <sup>f</sup>	1992-08	-0.6											-0.6	-0.6

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://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 CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

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.

<sup>a</sup>  
<sup>b</sup>  
<sup>c</sup>  
<sup>d</sup>  
<sup>e</sup>  
<sup>f</sup>

<sup>g</sup>  
<sup>\*</sup>  
-

Table 16.2  
Melanoma of the Skin (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<b>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-86	5.5*	1986-08	3.0*									3.0*	3.0*
White	1975-86	5.8*	1986-08	3.3*									3.3*	3.3*
Black	-	-											-	-
<b>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-08	2.5*											2.5*	2.5*
White	1992-08	2.9*											2.9*	2.9*
Black	-	-											-	-
<b>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-86	5.6*	1986-08	2.9*									2.9*	2.9*
White	1975-86	5.9*	1986-08	3.1*									3.1*	3.1*
Black	1975-08	0.3											0.3	0.3
<b>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-08	2.4*											2.4*	2.4*
White	1992-08	2.8*											2.8*	2.8*
White NH <sup>ef</sup>	1992-08	3.2*											3.2*	3.2*
Black	1992-95	75.1*	1995-04	-8.6*	2004-08	9.2							-1.1	9.2
Black NH <sup>ef</sup>	1992-95	75.8*	1995-04	-8.4*	2004-08	9.8							-0.7	9.8
API <sup>e</sup>	1992-08	1.7											1.7	1.7
AI/AN <sup>eg</sup>	1992-08	0.3											0.3	0.3
Hispanic <sup>f</sup>	1992-08	1.5*											1.5*	1.5*
<b>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</b>														
All Races	1975-89	2.3*	1989-08	0.3*									0.3*	0.3*
White	1975-89	2.4*	1989-08	0.4*									0.4*	0.4*
Black	1975-08	-0.8*											-0.8*	-0.8*
<b>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</b>														
All Races	1992-08	0.3*											0.3*	0.3*
White	1992-08	0.4*											0.4*	0.4*
White NH <sup>ef</sup>	1992-08	0.6*											0.6*	0.6*
Black	1992-08	0.4											0.4	0.4
Black NH <sup>ef</sup>	1992-08	0.0											0.0	0.0
API <sup>e</sup>	1992-08	-0.6											-0.6	-0.6
AI/AN <sup>eg</sup>	1992-08	4.9											4.9	4.9
Hispanic <sup>f</sup>	1992-08	-0.3											-0.3	-0.3

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://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 CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

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 ( $p < .05$ ).

<sup>a</sup> <sup>b</sup> <sup>c</sup> <sup>d</sup> <sup>e</sup> <sup>f</sup>

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

Table 16.3  
Melanoma of the Skin (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<b>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-80	5.5*	1980-08	2.4*									2.4*	2.4*
White	1975-81	6.1*	1981-92	2.2*	1992-08	3.2*							3.2*	3.2*
Black	-	-											-	-
<b>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-08	2.2*											2.2*	2.2*
White	1992-08	2.8*											2.8*	2.8*
Black	-	-											-	-
<b>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</b>														
All Races	1975-81	5.0*	1981-08	2.4*									2.4*	2.4*
White	1975-81	6.3*	1981-94	2.0*	1994-97	5.6	1997-08	2.4*					2.4*	2.4*
Black	1975-08	-0.5											-0.5	-0.5
<b>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</b>														
All Races	1992-08	2.1*											2.1*	2.1*
White	1992-97	4.6*	1997-08	2.2*									2.2*	2.2*
White NH <sup>ef</sup>	1992-08	3.2*											3.2*	3.2*
Black	1992-08	0.3											0.3	0.3
Black NH <sup>ef</sup>	1992-08	0.3											0.3	0.3
API <sup>e</sup>	1992-08	1.1											1.1	1.1
AI/AN <sup>eg</sup>	1992-08	1.1											1.1	1.1
Hispanic <sup>f</sup>	1992-08	1.0											1.0	1.0
<b>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</b>														
All Races	1975-88	0.9*	1988-08	-0.6*									-0.6*	-0.6*
White	1975-88	1.0*	1988-08	-0.5*									-0.5*	-0.5*
Black	1975-08	-0.6											-0.6	-0.6
<b>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</b>														
All Races	1992-08	-0.6*											-0.6*	-0.6*
White	1992-08	-0.4*											-0.4*	-0.4*
White NH <sup>ef</sup>	1992-08	-0.2											-0.2	-0.2
Black	1992-08	-1.8*											-1.8*	-1.8*
Black NH <sup>ef</sup>	1992-08	-1.7											-1.7	-1.7
API <sup>e</sup>	1992-08	-1.1											-1.1	-1.1
AI/AN <sup>eg</sup>	-	-											-	-
Hispanic <sup>f</sup>	1992-08	-0.9											-0.9	-0.9

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://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 CT, DC, ME, MD, MN, NH, NY, ND, OK and VT.

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).

<sup>a</sup> <sup>b</sup> <sup>c</sup> <sup>d</sup> <sup>e</sup> <sup>f</sup>

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

Table 16.4  
Melanoma of the Skin (Invasive)

Delay-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites		
	Total	Males	Females	Total	Males	Females
<b>Year of Diagnosis:</b>						
1975	7.89	8.54	7.44	8.69	9.41	8.21
1976	8.16	8.68	7.69	9.00	9.55	8.52
1977	8.87	9.78	8.16	9.87	10.84	9.15
1978	8.95	9.49	8.73	10.11	10.72	9.88
1979	9.55	10.56	8.91	10.76	11.88	10.10
1980	10.51	11.79	9.63	12.03	13.40	11.12
1981	11.09	12.09	10.44	12.58	13.56	12.01
1982	11.18	12.49	10.28	12.79	14.16	11.87
1983	11.10	12.67	10.02	12.63	14.42	11.46
1984	11.40	12.91	10.43	13.09	14.82	11.99
1985	12.79	15.17	11.17	14.52	17.22	12.74
1986	13.32	15.70	11.62	15.22	17.90	13.34
1987	13.68	15.94	12.17	15.65	18.16	14.01
1988	12.87	14.98	11.45	14.93	17.41	13.28
1989	13.76	16.42	11.93	15.97	19.00	13.91
1990	13.87	16.70	11.85	16.22	19.39	13.97
1991	14.64	17.63	12.55	17.16	20.55	14.80
1992	14.81	18.36	12.24	17.29	21.32	14.43
1993	14.64	18.17	12.10	17.12	21.11	14.27
1994	15.65	19.81	12.61	18.45	23.29	14.95
1995	16.47	20.30	13.82	19.41	23.62	16.55
1996	17.34	21.72	14.17	20.59	25.49	17.07
1997	17.78	21.76	14.90	21.07	25.40	18.01
1998	17.96	22.19	15.02	21.57	26.35	18.28
1999	18.34	22.93	15.14	22.08	27.21	18.53
2000	18.97	23.95	15.49	23.00	28.55	19.18
2001	19.71	24.55	16.32	24.08	29.52	20.32
2002	19.30	23.98	16.10	23.49	28.65	20.02
2003	19.56	24.18	16.33	23.91	29.00	20.41
2004	20.64	25.44	17.34	25.33	30.89	21.54
2005	22.38	28.03	18.44	27.69	34.07	23.27
2006	22.04	27.51	18.19	27.12	33.19	22.90
2007	21.67	27.33	17.82	26.77	33.15	22.48
2008	23.13	29.09	19.01	28.70	35.45	24.07

Note: Delay-adjusted melanoma of the skin rates cannot be calculated for the SEER 9 Black population due to low case counts. Additional information on the model used to delay-adjust SEER Incidence rates can be found at (<http://surveillance.cancer.gov/delay/>).

- <sup>a</sup> 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<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<b>Year of Diagnosis:</b>									
1975	7.89	8.54	7.44	8.69	9.41	8.21	-	-	-
1976	8.16	8.68	7.69	9.00	9.55	8.52	1.75	-	-
1977	8.87	9.78	8.16	9.87	10.84	9.15	-	-	-
1978	8.95	9.49	8.73	10.11	10.72	9.88	-	-	-
1979	9.55	10.56	8.91	10.76	11.88	10.10	-	-	-
1980	10.51	11.79	9.63	12.03	13.40	11.12	-	-	-
1981	11.09	12.09	10.44	12.58	13.56	12.01	1.35	-	-
1982	11.18	12.49	10.28	12.78	14.16	11.86	-	-	-
1983	11.09	12.67	10.02	12.62	14.40	11.44	-	-	-
1984	11.40	12.90	10.42	13.07	14.80	11.97	-	-	-
1985	12.78	15.16	11.16	14.49	17.19	12.71	-	-	-
1986	13.31	15.69	11.61	15.19	17.86	13.31	-	-	-
1987	13.67	15.92	12.16	15.61	18.11	13.97	1.30	-	-
1988	12.86	14.96	11.44	14.89	17.37	13.24	1.07	-	-
1989	13.74	16.40	11.92	15.91	18.92	13.86	1.19	-	-
1990	13.85	16.68	11.83	16.14	19.31	13.91	1.16	-	-
1991	14.62	17.61	12.53	17.08	20.46	14.73	1.17	-	-
1992	14.78	18.33	12.22	17.21	21.21	14.36	-	-	-
1993	14.61	18.14	12.08	17.02	20.99	14.19	-	-	-
1994	15.62	19.78	12.58	18.34	23.16	14.86	1.03	-	-
1995	16.44	20.25	13.79	19.29	23.48	16.45	1.65	2.97	-
1996	17.30	21.67	14.14	20.45	25.32	16.95	1.06	-	-
1997	17.73	21.70	14.86	20.92	25.22	17.88	1.10	-	-
1998	17.91	22.12	14.97	21.42	26.17	18.15	1.19	-	-
1999	18.28	22.85	15.09	21.88	26.96	18.36	1.14	-	-
2000	18.89	23.85	15.43	22.77	28.26	18.98	0.80	-	-
2001	19.61	24.44	16.24	23.81	29.19	20.09	0.81	-	-
2002	19.20	23.85	16.01	23.20	28.30	19.77	1.06	-	-
2003	19.44	24.03	16.22	23.58	28.60	20.12	0.83	-	-
2004	20.48	25.25	17.21	24.93	30.39	21.19	0.87	-	-
2005	22.17	27.77	18.27	27.19	33.45	22.84	1.07	-	1.02
2006	21.80	27.20	17.99	26.55	32.50	22.42	0.91	-	-
2007	21.37	26.95	17.57	26.11	32.33	21.92	1.21	-	1.19
2008	22.52	28.32	18.50	27.58	34.07	23.13	1.22	1.42	-
1975-2008	15.76	19.31	13.36	18.46	22.44	15.82	1.01	1.20	0.90

<sup>a</sup> 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<sup>a</sup> Rates by Year, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<b>Year of Death:</b>									
1975	2.07	2.64	1.60	2.25	2.88	1.74	0.50	0.56	0.44
1976	2.24	2.86	1.76	2.45	3.10	1.94	0.55	0.74	0.39
1977	2.27	2.91	1.76	2.48	3.17	1.93	0.53	0.69	0.41
1978	2.31	3.04	1.74	2.53	3.32	1.90	0.52	0.61	0.46
1979	2.42	3.16	1.84	2.66	3.46	2.02	0.53	0.64	0.47
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	2.03	0.55	0.60	0.50
2001	2.66	3.88	1.75	3.02	4.38	1.99	0.42	0.35	0.45
2002	2.61	3.78	1.72	2.95	4.25	1.96	0.39	0.50	0.32
2003	2.66	3.90	1.74	3.02	4.39	1.97	0.45	0.44	0.45
2004	2.67	3.97	1.70	3.04	4.48	1.94	0.45	0.57	0.39
2005	2.75	4.03	1.81	3.12	4.54	2.06	0.45	0.49	0.41
2006	2.73	4.10	1.72	3.11	4.63	1.97	0.45	0.63	0.35
2007	2.68	4.01	1.69	3.05	4.53	1.92	0.47	0.54	0.45
2008	2.68	4.06	1.65	3.07	4.61	1.89	0.39	0.46	0.35
1975-2008	2.61	3.71	1.80	2.92	4.14	2.01	0.49	0.54	0.45

<sup>a</sup> 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<sup>a</sup> and U.S. Death<sup>b</sup> Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<b>SEER Incidence</b>									
<b>Age at Diagnosis</b>									
Age-Adjusted Rates, 2004-2008									
All ages	20.8	26.7	16.7	24.3	30.9	19.7	1.0	1.2	0.9
Under 65	13.1	13.7	12.7	15.6	16.1	15.3	0.5	0.4	0.5
65 and over	73.9	116.8	44.1	84.8	133.7	50.5	4.8	6.1	4.0
All ages (IARC world std) <sup>c</sup>	14.8	17.8	12.6	17.4	20.7	15.0	0.7	0.7	0.6
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	0.1	-	-	0.1	-	-	-	-	-
5-9	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-
10-14	0.4	0.3	0.4	0.5	0.4	0.5	-	-	-
15-19	1.5	1.2	1.9	1.8	1.4	2.3	-	-	-
20-24	4.1	2.5	5.9	4.9	3.0	7.0	-	-	-
25-29	7.1	4.6	9.7	8.7	5.6	12.0	-	-	-
30-34	9.6	7.3	12.1	11.7	8.7	15.1	-	-	-
35-39	13.3	10.5	16.2	16.3	12.8	19.9	0.5	-	-
40-44	17.7	16.0	19.5	21.2	18.9	23.6	0.5	-	-
45-49	24.0	24.1	23.9	28.6	28.3	28.8	0.8	-	-
50-54	29.8	33.0	26.7	35.3	38.9	31.8	0.9	-	-
55-59	38.0	47.6	28.9	44.5	55.1	34.2	1.6	1.8	1.4
60-64	49.4	66.6	33.7	57.4	76.8	39.3	1.7	-	-
65-69	58.7	83.3	37.2	68.6	96.5	43.8	3.4	5.3	-
70-74	69.0	102.0	42.0	80.7	118.9	49.0	4.6	5.1	4.2
75-79	83.1	131.9	47.1	95.5	151.1	53.9	4.6	-	4.3
80-84	89.3	147.6	52.3	100.5	167.1	58.1	6.3	-	5.9
85+	83.8	159.5	48.9	92.3	177.9	53.4	7.1	-	-
<b>U.S. Mortality</b>									
<b>Age at Death</b>									
Age-Adjusted Rates, 2004-2008									
All ages	2.7	4.0	1.7	3.1	4.6	2.0	0.4	0.5	0.4
Under 65	1.2	1.6	0.9	1.5	1.9	1.0	0.2	0.2	0.1
65 and over	12.8	20.6	7.6	14.3	22.8	8.4	2.4	2.9	2.2
All ages (IARC world std) <sup>c</sup>	1.7	2.5	1.1	2.0	2.8	1.3	0.3	0.3	0.2
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
20-24	0.1	0.2	0.1	0.2	0.2	0.1	-	-	-
25-29	0.4	0.4	0.3	0.4	0.5	0.4	-	-	-
30-34	0.6	0.7	0.5	0.8	0.9	0.6	-	-	-
35-39	0.8	1.0	0.7	1.0	1.2	0.9	-	-	-
40-44	1.4	1.7	1.1	1.7	2.0	1.3	0.2	0.3	-
45-49	2.2	2.8	1.7	2.6	3.3	2.0	0.2	0.3	-
50-54	3.2	4.3	2.2	3.8	5.1	2.6	0.3	0.3	0.3
55-59	4.6	6.4	2.9	5.4	7.4	3.4	0.6	0.8	0.4
60-64	6.1	8.7	3.6	6.9	9.9	4.1	1.0	1.2	0.8
65-69	8.1	11.9	4.9	9.3	13.5	5.5	1.1	1.3	1.1
70-74	10.7	16.1	6.2	12.1	18.3	7.0	1.4	1.1	1.6
75-79	14.1	22.3	8.1	15.7	24.7	9.0	2.5	3.3	2.0
80-84	17.1	27.9	10.2	18.7	30.6	11.1	3.6	4.1	3.3
85+	20.3	37.7	12.6	21.9	40.7	13.5	5.7	7.9	4.9

<sup>a</sup> SEER 17 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

<sup>b</sup> 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.

<sup>c</sup> Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- 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
<b>5-Year Relative Survival (Percent)</b>									
<b>Year of Diagnosis:</b>									
1960-1963 <sup>a</sup>	-	-	-	60	51	68	-	-	-
1970-1973 <sup>a</sup>	-	-	-	68	62	75	-	-	-
1975-1977 <sup>b</sup>	82.0	77.6	86.3	82.0	77.8	86.2	58.0 <sup>f</sup>	-	-
1978-1980 <sup>b</sup>	82.8	77.8	87.7	82.9	77.9	87.8	59.8 <sup>g</sup>	-	-
1981-1983 <sup>b</sup>	82.8	78.4	87.3	82.7	78.4	87.2	61.9 <sup>f</sup>	-	-
1984-1986 <sup>b</sup>	86.7	82.6	91.1	86.4	82.2	91.0	70.3 <sup>g</sup>	-	-
1987-1989 <sup>b</sup>	88.1	85.0	91.5	88.0	85.0	91.3	79.4 <sup>e</sup>	-	90.3 <sup>f</sup>
1990-1992 <sup>b</sup>	89.3	87.0	91.8	89.3	87.1	91.8	61.8 <sup>g</sup>	-	-
1993-1995 <sup>b</sup>	89.7	87.3	92.6	89.5	87.0	92.6	68.2 <sup>e</sup>	64.0 <sup>g</sup>	-
1996-2000 <sup>b</sup>	91.6	90.1	93.3	91.5	89.9	93.4	72.7 <sup>e</sup>	68.7 <sup>g</sup>	76.0 <sup>f</sup>
2001-2007 <sup>b</sup>	93.0 <sup>e</sup>	91.1 <sup>e</sup>	95.2 <sup>e</sup>	93.0 <sup>e</sup>	91.0 <sup>e</sup>	95.3 <sup>e</sup>	73.4 <sup>e</sup>	72.3 <sup>g</sup>	73.7 <sup>e</sup>
<b>5-Year Period Survival (Percent)<sup>cd</sup></b>									
2007	91.3	89.5	93.4	91.0	89.2	93.1	72.4	61.9	78.4
<b>Stage Distribution (%) 2001-2007<sup>c</sup></b>									
<b>All Stages</b>									
Number of cases	81,421	45,027	36,394	76,613	42,600	34,013	367	153	214
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	84	82	87	84	82	86	58	50	64
Regional	8	9	7	9	10	7	22	24	21
Distant	4	5	3	4	5	3	13	18	9
Unstaged	4	4	4	4	4	3	8	9	7
<b>5-Year Relative Survival (Percent), 2001-2007<sup>c</sup></b>									
<b>Age at Diagnosis:</b>									
Ages <45	94.3	91.3	96.5	94.2	91.0	96.4	78.9	64.5 <sup>f</sup>	86.4
Ages 45-54	92.0	89.7	94.8	91.7	89.3	94.6	85.0 <sup>e</sup>	-	84.2 <sup>g</sup>
Ages 55-64	91.7	89.9	94.6	91.3	89.6	94.3	71.5 <sup>g</sup>	59.7 <sup>g</sup>	82.7 <sup>g</sup>
Ages 65-74	90.1	88.6	92.4	89.9	88.4	92.3	63.7 <sup>e</sup>	55.4 <sup>g</sup>	72.2 <sup>g</sup>
Ages 75+	84.9	84.8	85.1	84.7	84.6	84.8	62.2 <sup>e</sup>	62.2 <sup>g</sup>	60.1 <sup>g</sup>
Ages <65	92.8	90.3	95.5	92.5	89.9	95.4	77.8	68.5 <sup>e</sup>	84.3
Ages 65+	87.7	87.0	88.7	87.5	86.9	88.5	63.8 <sup>e</sup>	60.2 <sup>g</sup>	65.4 <sup>e</sup>
<b>Stage:</b>									
All Stages	91.2	89.2	93.7	90.9	88.9	93.5	72.4	65.2 <sup>f</sup>	77.4
Localized	98.2	97.6	98.8	98.0	97.4	98.7	94.8	90.3 <sup>g</sup>	96.3
Regional	61.7	58.4	66.9	62.1	58.7	67.5	41.4 <sup>e</sup>	44.3 <sup>g</sup>	37.9 <sup>g</sup>
Distant	15.2	14.3	16.9	15.0	14.3	16.4	25.2 <sup>e</sup>	19.6 <sup>g</sup>	-
Unstaged	74.6	71.1	78.9	73.5	70.1	77.5	53.3 <sup>g</sup>	-	-

<sup>a</sup> Based on End Results data from a series of hospital registries and one population-based registry.

<sup>b</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

<sup>c</sup> Based on follow-up of patients into 2008.

<sup>d</sup> SEER 17 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 and New Jersey).

<sup>e</sup> Based on follow-up of patients into 2008.

<sup>f</sup> Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).

<sup>g</sup> The difference between 1975-1977 and 2001-2007 is statistically significant ( $p<.05$ ).

<sup>h</sup> The standard error is between 5 and 10 percentage points.

<sup>i</sup> The standard error is greater than 10 percentage points.

<sup>j</sup> Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 16.9  
Melanoma of the Skin (Invasive)  
SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis  
All Races, Males and Females

	Year of Diagnosis																				
1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
<b>Survival Time</b>																					
1-year	94.6	95.9	96.5	96.6	97.2	96.3	96.9	97.1	97.5	97.7	96.9	96.8	97.7	98.0	97.5	98.0	97.9	97.8	98.1	97.7	98.0
2-year	90.0	91.8	93.4	93.7	94.2	93.8	94.5	93.9	94.5	95.7	94.5	94.6	95.7	96.2	95.6	95.6	96.2	96.3	96.3	96.3	96.3
3-year	86.2	88.1	90.8	91.8	92.0	91.7	92.6	91.7	92.7	94.0	92.3	92.7	94.1	94.7	94.1	94.3	94.9	94.7	95.0		
4-year	83.5	85.5	89.2	89.9	90.8	89.7	90.9	89.9	91.3	93.1	91.3	91.5	93.2	93.2	92.8	93.2	93.6	93.5			
5-year	82.0	83.5	87.8	89.3	89.7	88.7	90.2	88.8	90.1	92.2	90.0	91.0	92.4	92.2	92.1	92.9	93.3				
6-year	80.3	82.4	86.7	88.1	88.6	88.2	89.6	87.8	90.0	91.4	89.4	90.4	91.6	91.7	91.3	92.5					
7-year	79.0	81.6	85.9	87.6	87.7	87.9	88.6	87.3	90.0	91.1	88.8	90.4	91.6	91.5	91.1						
8-year	77.9	80.9	85.3	86.9	87.0	87.4	88.2	86.4	90.0	90.8	87.9	90.0	91.1	91.1	91.5						
9-year	77.2	80.2	85.0	86.7	86.7	87.0	87.9	86.1	89.5	90.3	87.7	89.9	91.0								
10-year	76.6	79.6	84.9	86.6	86.7	86.7	87.5	85.9	89.4	89.9	87.7	89.4									
11-year	76.1	79.2	84.4	86.3	86.4	86.4	87.3	85.9	89.1	89.5	87.7										
12-year	75.6	79.0	84.2	86.2	86.0	86.3	87.3	85.5	89.1	89.3											
13-year	75.3	78.6	84.0	86.2	85.8	86.2	87.3	85.3	88.7												
14-year	75.0	78.4	83.8	86.2	85.2	86.2	87.2	85.3													
15-year	74.8	78.1	83.8	85.7	84.8	86.2	87.2														
16-year	74.6	78.0	83.8	85.7	84.5	86.2															
17-year	74.6	77.7	83.8	85.7	84.5																
18-year	74.5	77.7	83.8	85.7																	
19-year	74.5	77.7	83.8																		
20-year	74.5	77.7																			

<sup>a</sup> Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 16.10  
Melanoma of the Skin (Invasive)

SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Survival Time</b>																					
1-year	92.8	94.4	95.4	95.9	96.2	96.0	96.3	96.9	96.5	96.8	96.4	96.4	97.3	97.5	96.6	97.1	97.1	97.7	97.9	97.4	97.8
2-year	86.8	88.9	91.5	91.9	93.2	92.9	93.5	92.5	92.3	94.3	93.5	94.0	94.4	95.5	93.9	94.3	94.9	95.8	96.0	95.7	
3-year	82.4	84.4	88.4	89.6	90.8	90.4	91.0	89.6	90.0	92.2	90.8	92.0	92.6	93.7	91.5	92.6	93.4	93.1	94.2		
4-year	79.1	81.3	86.3	87.4	89.4	87.7	89.4	87.8	88.1	91.2	89.8	90.4	91.4	92.1	89.9	91.0	91.7	91.9			
5-year	77.7	78.6	84.5	86.3	88.3	86.4	88.6	86.7	86.6	90.4	88.2	90.1	90.5	91.2	89.1	90.4	91.7				
6-year	75.6	77.4	83.2	84.8	87.2	85.4	87.7	85.9	86.3	89.5	87.2	89.6	89.1	90.3	88.1	90.1					
7-year	73.9	76.8	82.2	84.6	86.3	85.1	85.7	84.9	86.3	89.4	87.2	89.6	89.0	90.3	88.0						
8-year	72.7	76.0	81.6	83.9	85.4	84.9	85.3	83.4	86.0	88.9	86.3	89.4	88.7	90.2							
9-year	71.9	75.1	81.2	83.9	84.8	84.0	84.9	83.0	85.6	88.4	86.0	88.8	88.5								
10-year	71.3	74.6	81.2	83.8	84.8	83.8	84.1	82.9	85.5	87.9	85.7	88.4									
11-year	70.4	74.2	81.0	83.5	84.8	83.4	83.4	82.7	85.5	87.7	85.7										
12-year	69.9	74.1	80.9	83.5	84.8	83.1	83.2	82.2	85.5	87.7											
13-year	69.6	73.7	80.8	83.5	84.8	83.0	83.2	82.0	85.5												
14-year	69.6	73.4	80.3	82.8	84.8	82.8	82.8	82.0													
15-year	69.4	73.4	80.3	82.2	84.8	82.8	82.8														
16-year	69.1	73.4	80.0	82.2	84.8	82.8															
17-year	69.1	73.3	80.0	82.1	84.8																
18-year	69.0	73.3	80.0	82.1																	
19-year	69.0	73.3	80.0																		
20-year	69.0	73.3																			

<sup>a</sup> Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 16.11  
Melanoma of the Skin (Invasive)  
SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis  
All Races, Females

	Year of Diagnosis																				
	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Survival Time</b>																					
1-year	96.4	97.5	97.7	97.6	98.4	96.7	97.7	97.4	98.6	98.8	97.4	97.3	98.2	98.5	98.5	99.1	98.9	97.9	98.3	98.2	98.2
2-year	93.2	94.8	95.4	95.9	95.4	94.8	95.6	95.8	97.0	97.4	95.5	95.4	97.0	97.0	97.7	97.1	97.8	96.9	96.7	97.0	
3-year	89.9	92.0	93.5	94.2	93.5	93.2	94.4	94.2	95.9	96.1	94.1	93.6	95.8	95.8	97.2	96.3	96.6	96.6	96.0		
4-year	87.9	89.8	92.4	92.7	92.3	92.0	92.5	92.6	95.0	95.3	93.0	92.7	95.3	94.6	96.2	95.7	95.7	95.4			
5-year	86.4	88.6	91.4	92.5	91.3	91.4	92.0	91.4	94.2	94.5	92.1	92.0	94.7	93.4	95.7	95.4	95.1				
6-year	84.9	87.5	90.4	91.9	90.1	91.3	91.7	90.3	94.2	93.7	91.8	91.4	94.5	93.4	95.2	94.9					
7-year	84.0	86.5	89.9	91.1	89.4	90.9	91.7	90.1	94.2	93.3	90.6	91.1	94.3	92.8	94.7						
8-year	83.1	85.9	89.2	90.2	88.7	90.2	91.5	90.1	94.2	93.1	89.8	90.7	93.8	92.7							
9-year	82.4	85.4	89.0	89.8	88.6	90.2	91.3	89.8	93.9	92.7	89.6	90.7	93.7								
10-year	81.8	84.6	88.8	89.6	88.6	89.9	91.3	89.6	93.8	92.2	89.6	90.4									
11-year	81.6	84.3	88.0	89.1	87.5	89.8	91.3	89.6	92.9	91.8	89.6										
12-year	81.0	84.0	87.7	89.1	86.7	89.8	91.3	89.6	92.9	91.0											
13-year	80.8	83.5	87.5	89.1	86.4	89.5	91.3	89.1	92.0												
14-year	80.3	83.4	87.5	89.1	84.6	89.5	91.3	89.1													
15-year	80.0	82.9	87.5	89.1	84.4	89.5	91.3														
16-year	79.8	82.5	87.5	89.1	84.3	89.5															
17-year	79.8	82.3	87.5	89.1	84.3																
18-year	79.8	82.1	87.5	89.1																	
19-year	79.7	82.1	87.5																		
20-year	79.7	82.1																			

<sup>a</sup> Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

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, 2006-2008 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being						Risk of Being						Risk of Dying from Cancer		
		Diagnosed with Cancer			Risk of Dying			Race/ Ethnicity	Current Age	Diagnosed with Cancer			Risk of Dying			
		+10 yrs	+20 yrs	+30 yrs	Ever	from Cancer	+10 yrs			+20 yrs	+30 yrs	Ever	from Cancer			
All Races	0	0.00	0.01	0.06	1.97	0.30	Asian/ Pacific Islander	0	0.00	0.00	0.01	0.15	0.06			
	10	0.01	0.06	0.17	1.99	0.30		10	0.00	0.00	0.01	0.15	0.06			
	20	0.05	0.16	0.35	1.99	0.30		20	0.00	0.01	0.02	0.15	0.06			
	30	0.11	0.30	0.61	1.95	0.30		30	0.01	0.02	0.04	0.15	0.06			
	40	0.20	0.50	0.95	1.87	0.30		40	0.01	0.03	0.06	0.14	0.06			
	50	0.32	0.77	1.28	1.72	0.29		50	0.02	0.05	0.08	0.13	0.05			
	60	0.49	1.02	1.40	1.49	0.27		60	0.03	0.06	0.10	0.12	0.05			
	70	0.61	1.05	-	1.15	0.23		70	0.04	0.08	-	0.09	0.05			
	80	0.60	-	-	0.75	0.18		80	0.05	-	-	0.07	0.04			
White	0	0.00	0.01	0.08	2.28	0.34	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.01	0.30	0.11			
	10	0.01	0.08	0.20	2.30	0.35		10	0.00	0.01	0.04	0.31	0.12			
	20	0.06	0.19	0.42	2.30	0.35		20	0.01	0.04	0.07	0.31	0.12			
	30	0.13	0.36	0.72	2.26	0.35		30	0.02	0.06	0.11	0.30	0.12			
	40	0.23	0.59	1.11	2.15	0.34		40	0.03	0.09	0.15	0.29	0.12			
	50	0.37	0.90	1.48	1.97	0.33		50	0.06	0.12	0.19	0.26	0.12			
	60	0.56	1.18	1.60	1.70	0.30		60	0.07	0.15	0.22	0.22	0.12			
	70	0.71	1.19	-	1.30	0.26		70	0.09	0.17	-	0.18	0.11			
	80	0.67	-	-	0.82	0.19		80	0.11	-	-	0.12	0.12			
Black	0	0.00	0.00	0.00	0.09	0.04	Hispanic <sup>b</sup>	0	0.00	0.00	0.01	0.50	0.11			
	10	0.00	0.00	0.00	0.09	0.04		10	0.00	0.01	0.04	0.50	0.11			
	20	0.00	0.00	0.01	0.09	0.05		20	0.01	0.03	0.08	0.50	0.11			
	30	0.00	0.01	0.02	0.09	0.05		30	0.02	0.07	0.13	0.50	0.11			
	40	0.01	0.02	0.04	0.09	0.05		40	0.04	0.11	0.20	0.48	0.11			
	50	0.01	0.03	0.06	0.08	0.05		50	0.06	0.16	0.29	0.44	0.11			
	60	0.02	0.05	0.07	0.08	0.05		60	0.10	0.23	0.35	0.40	0.10			
	70	0.04	0.06	-	0.07	0.04		70	0.15	0.27	-	0.33	0.09			
	80	0.04	-	-	0.05	0.04		80	0.16	-	-	0.24	0.07			

Devcan Version 6.6.0, October 2011, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 17 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 and New Jersey). Mortality data are from the NCHS public use data file for the total US.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>b</sup> 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.

- Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota. 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, 2006-2008 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	2.43	0.41		Asian/	0	0.00	0.00	0.00	0.18	0.07				
	10	0.01	0.04	0.12	2.46	0.42		Pacific	10	0.00	0.00	0.01	0.18	0.07				
	20	0.03	0.12	0.30	2.47	0.42		Islander	20	0.00	0.01	0.02	0.18	0.07				
	30	0.08	0.27	0.62	2.47	0.42			30	0.01	0.02	0.04	0.18	0.07				
	40	0.19	0.54	1.12	2.42	0.42			40	0.01	0.03	0.07	0.17	0.07				
	50	0.37	0.97	1.68	2.31	0.41			50	0.02	0.06	0.10	0.16	0.06				
	60	0.65	1.42	1.97	2.11	0.39			60	0.04	0.09	0.13	0.15	0.06				
	70	0.90	1.56	-	1.72	0.35			70	0.05	0.10	-	0.12	0.06				
	80	0.97	-	-	1.20	0.28			80	0.06	-	-	0.09	0.04				
White	0	0.00	0.01	0.05	2.80	0.47		American	0	0.00	0.00	0.00	0.27	0.13				
	10	0.01	0.05	0.15	2.83	0.47		Indian/	10	0.00	0.00	0.03	0.27	0.14				
	20	0.04	0.14	0.35	2.84	0.47		Alaska	20	0.00	0.03	0.05	0.27	0.14				
	30	0.10	0.32	0.72	2.83	0.48		Native <sup>a</sup>	30	0.03	0.05	0.09	0.28	0.14				
	40	0.22	0.63	1.30	2.78	0.47			40	0.02	0.06	0.11	0.26	0.14				
	50	0.43	1.12	1.94	2.65	0.46			50	0.04	0.09	0.19	0.25	0.15				
	60	0.75	1.63	2.25	2.39	0.44			60	0.05	0.16	0.23	0.23	0.15				
	70	1.04	1.77	-	1.94	0.38			70	0.13	0.21	-	0.21	0.15				
	80	1.09	-	-	1.33	0.30			80	0.12	-	-	0.12	0.18				
Black	0	0.00	0.00	0.00	0.08	0.04		Hispanic <sup>b</sup>	0	0.00	0.00	0.01	0.53	0.13				
	10	0.00	0.00	0.00	0.08	0.05			10	0.00	0.01	0.02	0.53	0.14				
	20	0.00	0.00	0.01	0.08	0.05			20	0.00	0.02	0.05	0.54	0.14				
	30	0.00	0.01	0.02	0.08	0.05			30	0.02	0.05	0.10	0.54	0.14				
	40	0.01	0.02	0.04	0.08	0.05			40	0.03	0.08	0.17	0.53	0.14				
	50	0.01	0.04	0.06	0.08	0.05			50	0.05	0.15	0.31	0.51	0.14				
	60	0.03	0.06	0.07	0.08	0.05			60	0.10	0.27	0.41	0.49	0.13				
	70	0.03	0.05	-	0.06	0.05			70	0.19	0.35	-	0.44	0.12				
	80	0.03	-	-	0.05	0.05			80	0.21	-	-	0.34	0.11				

Devcan Version 6.6.0, October 2011, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 17 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 and New Jersey). Mortality data are from the NCHS public use data file for the total US.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>b</sup> 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.

Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

- 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, 2006-2008 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	0.09	1.57	0.20		Asian/	0	0.00	0.00	0.01	0.13	0.05				
	10	0.01	0.09	0.22	1.58	0.20		Pacific	10	0.00	0.00	0.01	0.13	0.05				
	20	0.07	0.21	0.41	1.58	0.20		Islander	20	0.00	0.01	0.02	0.13	0.05				
	30	0.13	0.33	0.60	1.51	0.20			30	0.01	0.02	0.04	0.13	0.05				
	40	0.20	0.47	0.78	1.39	0.20			40	0.01	0.03	0.05	0.12	0.05				
	50	0.27	0.59	0.91	1.21	0.19			50	0.02	0.04	0.06	0.11	0.04				
	60	0.33	0.67	0.92	0.99	0.17			60	0.02	0.05	0.08	0.09	0.04				
	70	0.38	0.65	-	0.73	0.15			70	0.03	0.06	-	0.08	0.04				
	80	0.36	-	-	0.46	0.11			80	0.04	-	-	0.06	0.03				
White	0	0.00	0.02	0.10	1.83	0.23		American	0	0.00	0.00	0.02	0.34	0.10				
	10	0.02	0.10	0.27	1.85	0.23		Indian/	10	0.00	0.02	0.04	0.34	0.10				
	20	0.09	0.25	0.49	1.84	0.23		Alaska	20	0.02	0.04	0.09	0.34	0.10				
	30	0.16	0.41	0.72	1.76	0.23		Native <sup>a</sup>	30	0.02	0.06	0.13	0.32	0.10				
	40	0.25	0.56	0.92	1.61	0.23			40	0.05	0.12	0.19	0.31	0.10				
	50	0.32	0.69	1.06	1.39	0.21			50	0.07	0.15	0.20	0.27	0.10				
	60	0.39	0.78	1.05	1.12	0.19			60	0.08	0.14	0.21	0.21	0.09				
	70	0.43	0.73	-	0.82	0.16			70	0.06	0.14	-	0.15	0.08				
	80	0.39	-	-	0.50	0.12			80	0.11	-	-	0.11	0.08				
Black	0	0.00	0.00	0.00	0.09	0.04		Hispanic <sup>b</sup>	0	0.00	0.00	0.02	0.50	0.09				
	10	0.00	0.00	0.01	0.09	0.05			10	0.00	0.02	0.05	0.50	0.09				
	20	0.00	0.01	0.01	0.09	0.05			20	0.01	0.05	0.10	0.50	0.09				
	30	0.00	0.01	0.02	0.09	0.05			30	0.04	0.09	0.17	0.48	0.09				
	40	0.01	0.02	0.03	0.09	0.05			40	0.06	0.13	0.22	0.45	0.09				
	50	0.01	0.03	0.06	0.09	0.05			50	0.08	0.17	0.27	0.40	0.09				
	60	0.02	0.05	0.07	0.08	0.04			60	0.10	0.20	0.29	0.34	0.08				
	70	0.04	0.06	-	0.07	0.04			70	0.12	0.21	-	0.26	0.07				
	80	0.04	-	-	0.05	0.04			80	0.12	-	-	0.18	0.05				

Devcan Version 6.6.0, October 2011, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 17 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 and New Jersey). Mortality data are from the NCHS public use data file for the total US.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

<sup>b</sup> 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.

Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

- 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<sup>a</sup>  
By Race/Ethnicity and Sex

<u>SEER Incidence</u>	SEER 17 Areas <sup>b</sup> Rate 2004-2008			SEER 13 Areas <sup>b</sup> Trend 1999-2008 <sup>c</sup>			SEER 9 Areas <sup>b</sup> Trend 1999-2008 <sup>d</sup>		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<b>RACE/ETHNICITY</b>									
All Races	20.8	26.7	16.7	1.9*	2.4*	2.1*	2.6*	2.9*	2.4*
White	24.3	30.9	19.7	2.3*	2.8*	2.2*	3.1*	3.1*	2.4*
White Hispanic <sup>e</sup>	4.7	4.8	4.9	1.2*	1.7*	1.1	-	-	-
White Non-Hispanic <sup>e</sup>	28.5	35.8	23.3	3.2*	3.2*	3.2*	-	-	-
Black	1.0	1.2	0.9	1.0	-	-	-0.1	0.3	-0.5
Asian/Pacific Islander	1.4	1.6	1.3	1.3	1.7	1.1	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	3.7	3.9	3.7	-	-	-	-	-	-
Hispanic <sup>e</sup>	4.7	4.8	4.8	1.1*	1.5*	1.0	-	-	-
<u>U.S. Mortality<sup>g</sup></u>									
	Rate 2004-2008 Rate per 100,000 persons			Trend 1999-2008 <sup>h</sup> AAPC (%)					
<b>RACE/ETHNICITY</b>									
All Races	2.7	4.0	1.7	-0.1	0.3*	-0.6*			
White	3.1	4.6	2.0	0.1	0.4*	-0.4*			
White Hispanic <sup>e</sup>	0.8	1.0	0.6	-0.6	-0.3	-1.1			
White Non-Hispanic <sup>e</sup>	3.3	4.9	2.1	0.3*	0.6*	-0.2			
Black	0.4	0.5	0.4	-1.0	0.4	-1.8*			
Asian/Pacific Islander	0.4	0.4	0.3	-0.9	-	-			
Amer Ind/Alaska Nat									
Total U.S.	0.8	1.0	0.6	-	-	-			
CHSDA Counties	1.1	1.4	0.8	-	-	-			
Non-CHSDA Counties	0.5	-	-	-	-	-			
Hispanic <sup>e</sup>	0.7	1.0	0.6	-0.6	-0.3	-0.9			

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.5, April 2011, 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.

<sup>a</sup> 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).

<sup>b</sup> 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 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

<sup>c</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2008.

<sup>d</sup> The 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2008.

<sup>e</sup> 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 2004-2008 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia and North Dakota.

The 1999-2008 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.

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

<sup>g</sup> US Mortality Files, National Center for Health Statistics, CDC.

<sup>h</sup> The 1999-2008 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2008.

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

Table 16.16  
Melanoma of the Skin (Invasive)

Age-Adjusted SEER Incidence Rates<sup>a</sup>  
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<b>SEER Incidence Rates<sup>a</sup>, 2004-2008</b>									
Atlanta & Rural Georgia	22.98	31.04	17.44	34.68	44.31	27.92	1.23	1.36	1.16
Atlanta	23.26	31.39	17.69	35.03	44.72	28.28	1.23	1.42	1.13
Rural Georgia	17.91	24.53	13.00	27.75	35.56	21.43	-	-	-
California	20.48	27.00	15.78	23.70	31.17	18.25	0.94	0.99	0.90
Greater Bay Area	19.43	24.74	15.77	26.26	33.13	21.55	1.01	-	-
San Francisco-Oakland	19.46	24.91	15.71	27.19	34.51	22.12	0.94	-	-
San Jose-Monterey	19.39	24.44	15.87	24.62	30.71	20.49	-	-	-
Los Angeles	14.35	19.85	10.43	18.79	25.75	13.78	0.69	0.89	-
Greater California	23.82	31.12	18.45	25.00	32.76	19.24	1.19	1.09	1.23
Connecticut	24.13	29.83	20.38	25.92	31.68	22.19	1.46	-	-
Detroit	15.81	19.73	13.32	20.50	24.72	17.95	0.96	0.98	0.92
Hawaii	20.50	27.11	15.08	68.09	87.53	51.29	-	-	-
Iowa	19.66	23.37	17.44	19.32	23.06	17.06	-	-	-
Kentucky	22.31	27.69	18.77	23.04	28.75	19.22	-	-	-
Louisiana	13.47	18.41	10.12	18.31	24.11	14.29	0.94	1.26	0.82
New Jersey	21.49	27.11	17.78	24.78	30.72	20.89	1.09	1.27	1.06
New Mexico	17.80	22.66	13.97	19.04	24.15	14.98	-	-	-
Seattle-Puget Sound	27.31	31.84	24.33	31.34	35.97	28.37	-	-	-
Utah	27.83	36.56	21.00	28.97	37.93	21.95	-	-	-
9 SEER Areas <sup>b</sup>	21.68	27.12	17.92	26.49	32.57	22.32	1.06	1.12	1.02
11 SEER Areas <sup>b</sup>	19.84	25.32	16.03	24.63	30.96	20.23	0.97	1.06	0.91
13 SEER Areas <sup>b</sup>	19.80	25.27	15.99	24.64	30.98	20.23	0.98	1.06	0.92
17 SEER Areas <sup>b</sup>	20.80	26.74	16.65	24.34	30.95	19.70	1.01	1.15	0.95

<sup>a</sup> Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).  
<sup>b</sup> The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.

The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

- 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<sup>a</sup>  
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Death Rates<sup>a</sup>, 2004-2008</u>									
Atlanta & Rural Georgia	2.01	3.04	1.32	2.83	4.14	1.90	-	-	-
Atlanta	1.98	3.02	1.31	2.80	4.09	1.89	-	-	-
Rural Georgia	-	-	-	-	-	-	-	-	-
California	2.58	3.90	1.57	3.12	4.70	1.90	0.34	0.47	-
Greater Bay Area	2.51	3.84	1.54	3.40	5.18	2.06	-	-	-
San Francisco-Oakland	2.41	3.74	1.46	3.38	5.23	2.00	-	-	-
San Jose-Monterey	2.69	4.01	1.68	3.43	5.06	2.17	-	-	-
Los Angeles	1.88	2.82	1.19	2.42	3.59	1.54	-	-	-
Greater California	2.94	4.43	1.77	3.33	5.01	2.01	-	-	-
Connecticut	2.81	4.33	1.76	3.02	4.60	1.92	-	-	-
Detroit	1.84	2.88	1.13	2.30	3.56	1.41	-	-	-
Hawaii	1.53	2.23	0.92	4.11	6.00	2.37	-	-	-
Iowa	2.59	3.61	1.81	2.66	3.70	1.87	-	-	-
Kentucky	3.32	4.99	2.09	3.52	5.28	2.20	-	-	-
Louisiana	2.12	3.26	1.29	2.69	4.05	1.67	0.54	0.81	-
New Jersey	2.75	4.07	1.82	3.19	4.66	2.12	0.57	1.02	-
New Mexico	2.65	3.60	1.92	2.91	3.92	2.11	-	-	-
Seattle-Puget Sound	3.10	4.58	1.95	3.44	5.03	2.20	-	-	-
Utah	3.22	4.89	1.86	3.34	5.05	1.94	-	-	-
9 SEER Areas <sup>b</sup>	2.48	3.72	1.58	2.99	4.44	1.91	0.39	0.59	0.29
11 SEER Areas <sup>b</sup>	2.36	3.53	1.49	2.89	4.29	1.84	0.36	0.55	0.26
13 SEER Areas <sup>b</sup>	2.36	3.53	1.49	2.89	4.29	1.84	0.37	0.54	0.27
17 SEER Areas <sup>b</sup>	2.59	3.89	1.62	3.07	4.57	1.94	0.43	0.63	0.31
Total U.S.	2.70	4.04	1.71	3.08	4.56	1.96	0.44	0.53	0.39

<sup>a</sup> 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).

<sup>b</sup> The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.  
The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.

The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

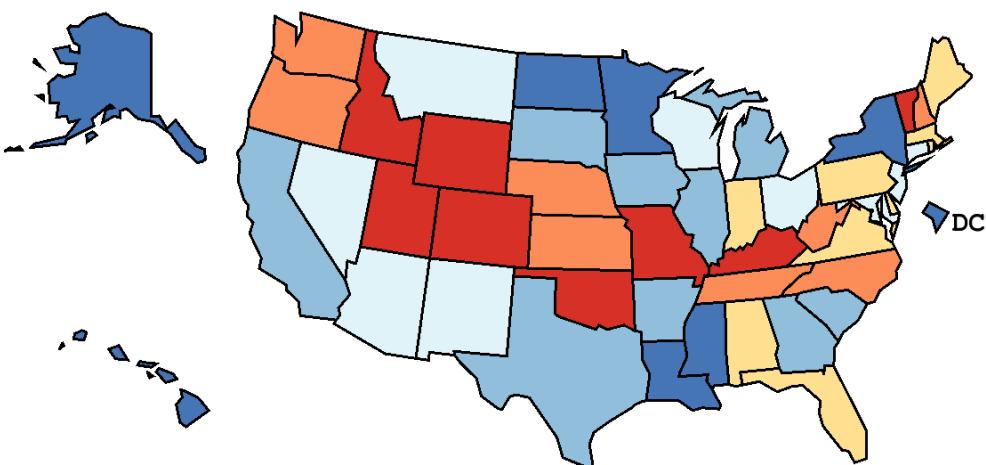
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 16.18  
Melanoma of the Skin (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2004-2008

Males and Females

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
TOTAL U.S.	2.70	0.01							
High Five States									
Oklahoma	3.45 <sup>b</sup>	0.14	(01)	27.66 <sup>c</sup>					
Wyoming	3.39	0.36	(02)	25.33 <sup>c</sup>					
Kentucky	3.32 <sup>b</sup>	0.12	(03)	23.01 <sup>c</sup>					
Utah	3.22	0.18	(04)	19.21 <sup>c</sup>					
Colorado	3.21 <sup>b</sup>	0.12	(05)	18.73 <sup>c</sup>					
Low Five States									
Alaska	2.15	0.31	(47)	-20.47 <sup>c</sup>					
Louisiana	2.12 <sup>b</sup>	0.10	(48)	-21.58 <sup>c</sup>					
North Dakota	1.93	0.23	(49)	-28.72 <sup>c</sup>					
Hawaii	1.53 <sup>b</sup>	0.15	(50)	-43.22 <sup>c</sup>					
D.C.	1.38 <sup>b</sup>	0.21	(51)	-48.95 <sup>c</sup>					



Age-Adjusted Death  
Rates per 100,000  
Quantile Interval

- 3.14 - 3.45
- 2.97 - 3.13
- 2.84 - 2.96
- 2.60 - 2.83
- 2.33 - 2.59
- 1.38 - 2.32

U.S. Rate: 2.70

<sup>a</sup> 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).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

SE Standard error of the rate.

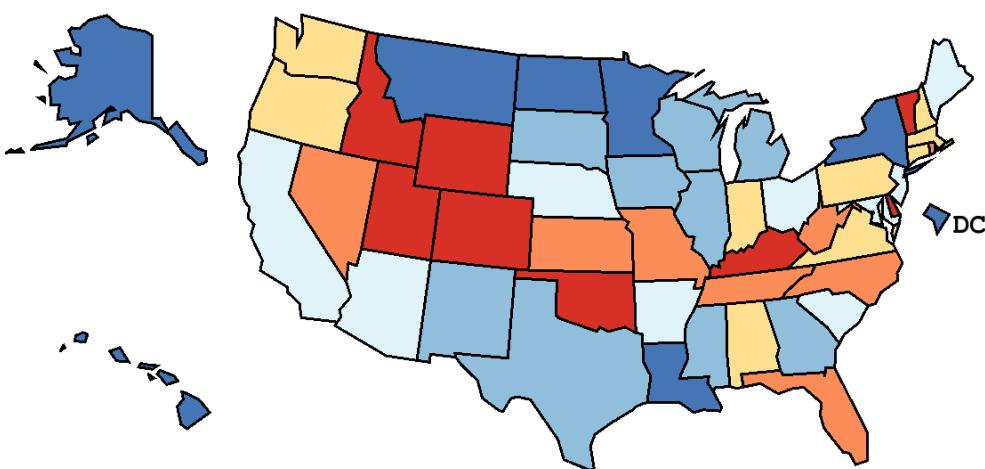
PD Percent difference between state rate and total U.S. rate.

- 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<sup>a</sup> Rates By State, All Races, 2004-2008

Males				
State	Rate	SE	Rank	PD
TOTAL U.S.	4.04	0.02		
High Five States				
Oklahoma	5.16 <sup>b</sup>	0.25	(01)	27.84 <sup>c</sup>
Kentucky	4.99 <sup>b</sup>	0.23	(02)	23.71 <sup>c</sup>
Utah	4.89	0.34	(03)	21.07 <sup>c</sup>
Wyoming	4.86	0.66	(04)	20.33 <sup>c</sup>
Delaware	4.83	0.49	(05)	19.64 <sup>c</sup>
Low Five States				
Minnesota	3.21 <sup>b</sup>	0.17	(47)	-20.56 <sup>c</sup>
Alaska	2.90	0.53	(48)	-28.12 <sup>c</sup>
North Dakota	2.80	0.42	(49)	-30.63 <sup>c</sup>
D.C.	2.24 <sup>b</sup>	0.46	(50)	-44.40 <sup>c</sup>
Hawaii	2.23 <sup>b</sup>	0.26	(51)	-44.78 <sup>c</sup>
State	Rate	SE	Rank	PD
Alabama	4.36	0.21	(20)	8.08
Alaska	2.90	0.53	(48)	-28.12 <sup>c</sup>
Arizona	4.20	0.17	(27)	4.12
Arkansas	3.91	0.24	(33)	-3.14
California	3.90	0.07	(34)	-3.25
Colorado	4.75	0.23	(07)	17.70 <sup>c</sup>
Connecticut	4.33	0.23	(21)	7.19
Delaware	4.83	0.49	(05)	19.64 <sup>c</sup>
D.C.	2.24 <sup>b</sup>	0.46	(50)	-44.40 <sup>c</sup>
Florida	4.41 <sup>b</sup>	0.09	(15)	9.18
Georgia	3.77	0.16	(37)	-6.67
Hawaii	2.23 <sup>b</sup>	0.26	(51)	-44.78 <sup>c</sup>
Idaho	4.75	0.39	(06)	17.79 <sup>c</sup>
Illinois	3.75	0.12	(38)	-7.06
Indiana	4.37	0.18	(19)	8.22
Iowa	3.61	0.22	(41)	-10.54
Kansas	4.52	0.27	(12)	11.97
Kentucky	4.99 <sup>b</sup>	0.23	(02)	23.71 <sup>c</sup>
Louisiana	3.26 <sup>b</sup>	0.19	(45)	-19.29 <sup>c</sup>
Maine	4.06	0.35	(30)	0.51
Maryland	4.23	0.20	(26)	4.93
Massachusetts	4.24	0.17	(25)	5.06
Michigan	3.64	0.13	(40)	-9.87
Minnesota	3.21 <sup>b</sup>	0.17	(47)	-20.56 <sup>c</sup>
Mississippi	3.74	0.26	(39)	-7.22
Missouri	4.58	0.18	(10)	13.44
Montana	3.34	0.37	(44)	-17.25 <sup>c</sup>
Nebraska	4.16	0.32	(28)	3.06
Nevada	4.41	0.29	(14)	9.26
New Hampshire	4.39	0.38	(17)	8.86
New Jersey	4.07	0.15	(29)	0.94
New Mexico	3.60	0.29	(42)	-10.81
New York	3.24 <sup>b</sup>	0.09	(46)	-19.66 <sup>c</sup>
North Carolina	4.41	0.16	(16)	9.17
North Dakota	2.80	0.42	(49)	-30.63 <sup>c</sup>
Ohio	3.98	0.12	(31)	-1.29
Oklahoma	5.16 <sup>b</sup>	0.25	(01)	27.84 <sup>c</sup>
Oregon	4.28	0.22	(22)	6.14
Pennsylvania	4.28	0.12	(23)	5.99
Rhode Island	4.45	0.42	(13)	10.25
South Carolina	3.96	0.21	(32)	-1.83
South Dakota	3.53	0.43	(43)	-12.61
Tennessee	4.61	0.19	(09)	14.10
Texas	3.85	0.10	(35)	-4.69
Utah	4.89	0.34	(03)	21.07 <sup>c</sup>
Vermont	4.73	0.57	(08)	17.19 <sup>c</sup>
Virginia	4.25	0.17	(24)	5.32
Washington	4.38	0.18	(18)	8.43
West Virginia	4.53	0.31	(11)	12.22
Wisconsin	3.77	0.17	(36)	-6.52
Wyoming	4.86	0.66	(04)	20.33 <sup>c</sup>



**Age-Adjusted Death Rates per 100,000 Quantile Interval**

- 4.62 - 5.16
- 4.40 - 4.61
- 4.24 - 4.39
- 3.86 - 4.23
- 3.35 - 3.85
- 2.23 - 3.34

U.S. Rate: 4.04

<sup>a</sup> 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).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

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.

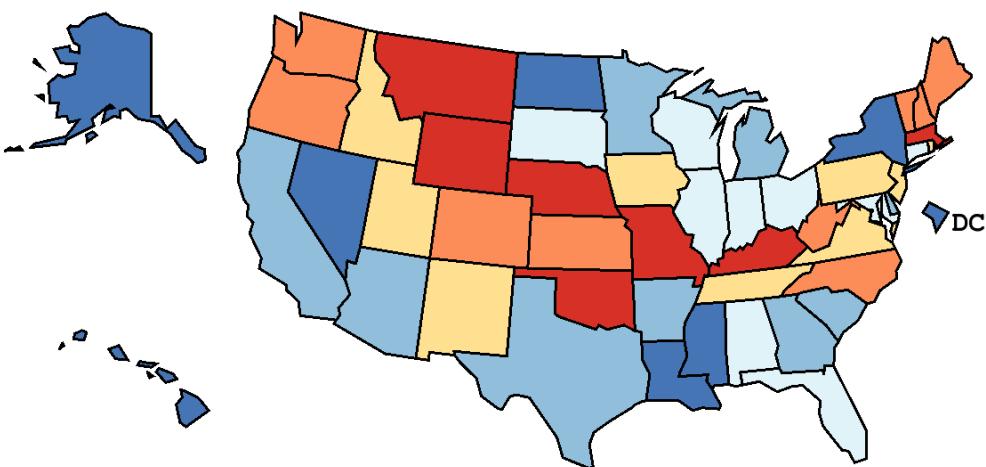
Table 16.20  
Melanoma of the Skin (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2004-2008

Females				
State	Rate	SE	Rank	PD
TOTAL U.S.	1.71	0.01		
High Five States				
Wyoming	2.28	0.41	(01)	33.03 <sup>c</sup>
Oklahoma	2.14	0.15	(02)	25.14 <sup>c</sup>
Montana	2.14	0.28	(03)	25.06 <sup>c</sup>
Nebraska	2.11	0.21	(04)	22.98 <sup>c</sup>
Missouri	2.09	0.11	(05)	21.97 <sup>c</sup>
Low Five States				
Mississippi	1.36	0.13	(47)	-20.63 <sup>c</sup>
Louisiana	1.29 <sup>b</sup>	0.10	(48)	-24.44 <sup>c</sup>
North Dakota	1.15	0.24	(49)	-32.77 <sup>c</sup>
Hawaii	0.92 <sup>b</sup>	0.16	(50)	-46.07 <sup>c</sup>
D.C.	0.87 <sup>b</sup>	0.22	(51)	-49.11 <sup>c</sup>

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	1.80	0.11	(26)	5.20	Montana	2.14	0.28	(03)	25.06 <sup>c</sup>
Alaska	1.38	0.34	(46)	-19.48 <sup>c</sup>	Nebraska	2.11	0.21	(04)	22.98 <sup>c</sup>
Arizona	1.52	0.09	(39)	-11.37	Nevada	1.45	0.15	(44)	-15.50 <sup>c</sup>
Arkansas	1.52	0.13	(40)	-11.46	New Hampshire	1.97	0.23	(16)	15.01 <sup>c</sup>
California	1.57 <sup>b</sup>	0.04	(36)	-8.35	New Jersey	1.82	0.08	(21)	6.33
Colorado	2.03	0.13	(12)	18.36 <sup>c</sup>	New Mexico	1.92	0.19	(18)	12.01
Connecticut	1.76	0.13	(28)	2.64	New York	1.43 <sup>b</sup>	0.05	(45)	-16.28 <sup>c</sup>
Delaware	1.48	0.24	(42)	-13.63	North Carolina	1.97	0.09	(14)	15.26 <sup>c</sup>
D.C.	0.87 <sup>b</sup>	0.22	(51)	-49.11 <sup>c</sup>	North Dakota	1.15	0.24	(49)	-32.77 <sup>c</sup>
Florida	1.72	0.05	(30)	0.54	Ohio	1.71	0.07	(31)	-0.21
Georgia	1.57	0.08	(37)	-8.61	Oklahoma	2.14	0.15	(02)	25.14 <sup>c</sup>
Hawaii	0.92 <sup>b</sup>	0.16	(50)	-46.07 <sup>c</sup>	Oregon	2.03	0.14	(11)	18.51 <sup>c</sup>
Idaho	1.81	0.22	(25)	5.92	Pennsylvania	1.85	0.07	(20)	8.06
Illinois	1.69	0.07	(34)	-1.25	Rhode Island	1.82	0.23	(23)	6.04
Indiana	1.80	0.10	(27)	4.89	South Carolina	1.46	0.11	(43)	-15.04 <sup>c</sup>
Iowa	1.81	0.14	(24)	5.95	South Dakota	1.76	0.28	(29)	2.56
Kansas	2.06	0.16	(08)	20.40 <sup>c</sup>	Tennessee	1.82	0.10	(22)	6.22
Kentucky	2.09	0.13	(06)	21.81 <sup>c</sup>	Texas	1.56	0.05	(38)	-8.98
Louisiana	1.29 <sup>b</sup>	0.10	(48)	-24.44 <sup>c</sup>	Utah	1.86	0.19	(19)	8.68
Maine	2.06	0.22	(09)	20.26 <sup>c</sup>	Vermont	1.97	0.32	(15)	15.04 <sup>c</sup>
Maryland	1.71	0.10	(32)	-0.24	Virginia	1.95	0.10	(17)	14.04
Massachusetts	2.08 <sup>b</sup>	0.10	(07)	21.57 <sup>c</sup>	Washington	1.98	0.11	(13)	15.41 <sup>c</sup>
Michigan	1.52	0.07	(41)	-11.46	West Virginia	2.06	0.19	(10)	20.26 <sup>c</sup>
Minnesota	1.65	0.11	(35)	-3.96	Wisconsin	1.70	0.10	(33)	-0.63
Mississippi	1.36	0.13	(47)	-20.63 <sup>c</sup>	Wyoming	2.28	0.41	(01)	33.03 <sup>c</sup>
Missouri	2.09	0.11	(05)	21.97 <sup>c</sup>					



**Age-Adjusted Death Rates per 100,000 Quantile Interval**

- 2.07 - 2.28
- 1.96 - 2.06
- 1.81 - 1.95
- 1.66 - 1.80
- 1.46 - 1.65
- 0.87 - 1.45

U.S. Rate: 1.71

<sup>a</sup> 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).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

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<sup>a</sup> on January 1, 2008  
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 <18 <sup>e</sup>	0 to <33 <sup>e</sup>	>=33 <sup>g</sup>	Complete <sup>h</sup>
<u>Race</u>	<u>Sex</u>										
All Races <sup>b</sup>	Both Sexes	241,058	176,666	124,103	90,687	64,051	42,149	619,976	782,730	40,040	822,770
	Males	127,277	90,838	62,241	42,150	27,810	17,035	318,521	387,474	13,232	400,706
	Females	113,781	85,828	61,862	48,537	36,241	25,114	301,455	395,256	26,808	422,064
White <sup>b</sup>	Both Sexes	232,442	170,770	118,922	87,204	61,002	40,794	597,809	753,604	37,829	791,433
	Males	123,037	87,875	59,671	40,934	26,485	16,399	307,819	374,049	12,628	386,677
	Females	109,405	82,895	59,251	46,270	34,517	24,395	289,990	379,555	25,201	404,756
Black <sup>b</sup>	Both Sexes	830	677	390	350	138	57	2,165	2,657	108	2,765
	Males	306	321	212	122	32	10	942	1,054	40	1,094
	Females	524	356	178	228	106	47	1,223	1,603	68	1,671
Asian/ Pacific Islander <sup>c</sup>	Both Sexes	630	442	264	+	+	+	1,425	+	+	+
	Males	304	171	132	+	+	+	627	+	+	+
	Females	326	271	132	+	+	+	798	+	+	+
Hispanic <sup>d</sup>	Both Sexes	4,441	3,288	2,240	+	+	+	10,994	+	+	+
	Males	1,783	1,147	814	+	+	+	4,091	+	+	+
	Females	2,658	2,141	1,426	+	+	+	6,903	+	+	+

Estimated prevalence percent<sup>a</sup> on January 1, 2008, of the SEER 11 population diagnosed in the previous 18 years  
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence	Age Specific (Crude)									Age-Adjusted <sup>f</sup> All Ages		
	All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79			
<u>Race</u>	<u>Sex</u>											
All Races <sup>c</sup>	Both Sexes	0.1567%	0.0004%	0.0037%	0.0292%	0.0901%	0.1802%	0.2836%	0.4293%	0.5107%	0.5303%	0.1562%
	Males	0.1653%	0.0004%	0.0031%	0.0184%	0.0630%	0.1537%	0.3001%	0.5399%	0.7293%	0.8385%	0.1798%
	Females	0.1482%	0.0004%	0.0043%	0.0407%	0.1181%	0.2069%	0.2678%	0.3291%	0.3383%	0.3597%	0.1412%
White <sup>c</sup>	Both Sexes	0.1989%	0.0004%	0.0046%	0.0374%	0.1161%	0.2266%	0.3525%	0.5215%	0.6238%	0.6201%	0.1924%
	Males	0.2084%	0.0005%	0.0039%	0.0231%	0.0791%	0.1894%	0.3676%	0.6481%	0.8803%	0.9874%	0.2176%
	Females	0.1895%	0.0004%	0.0053%	0.0530%	0.1559%	0.2654%	0.3376%	0.4036%	0.4166%	0.4177%	0.1774%
Black <sup>c</sup>	Both Sexes	0.0050%	-	-	0.0015%	0.0037%	0.0050%	0.0067%	0.0198%	0.0278%	0.0270%	0.0063%
	Males	0.0045%	-	-	-	0.0021%	0.0046%	0.0065%	0.0207%	0.0400%	0.0353%	0.0069%
	Females	0.0054%	-	-	0.0024%	0.0051%	0.0053%	0.0068%	0.0190%	0.0194%	0.0231%	0.0061%
Asian/ Pacific Islander <sup>c</sup>	Both Sexes	0.0098%	-	0.0011%	0.0021%	0.0067%	0.0120%	0.0144%	0.0278%	0.0244%	0.0440%	0.0099%
	Males	0.0093%	-	-	0.0025%	0.0043%	0.0091%	0.0133%	0.0305%	0.0335%	0.0566%	0.0102%
	Females	0.0103%	-	-	0.0016%	0.0089%	0.0147%	0.0153%	0.0255%	0.0176%	0.0361%	0.0098%
Hispanic <sup>d</sup>	Both Sexes	-	-	-	-	-	-	-	-	-	-	
	Males	-	-	-	-	-	-	-	-	-	-	
	Females	-	-	-	-	-	-	-	-	-	-	

<sup>a</sup> US 2008 cancer prevalence counts are based on 2008 cancer prevalence proportions from the SEER registries and 1/1/2008 US population estimates based on the average of 2007 and 2008 population estimates from the US Bureau of the Census.

<sup>b c d</sup> Prevalence was calculated using the First Malignant Primary Only for a person.

Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.

<sup>e</sup> Maximum limited-duration prevalence: 33 years for 1975-2008 SEER 9 data; 18 years for 1990-2008 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

<sup>f</sup> Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.

<sup>g h i</sup> (g) Cases diagnosed more than 33 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 <33 and >=33. (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.

# SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates<sup>a</sup> Melanoma of the Skin, White, by Sex

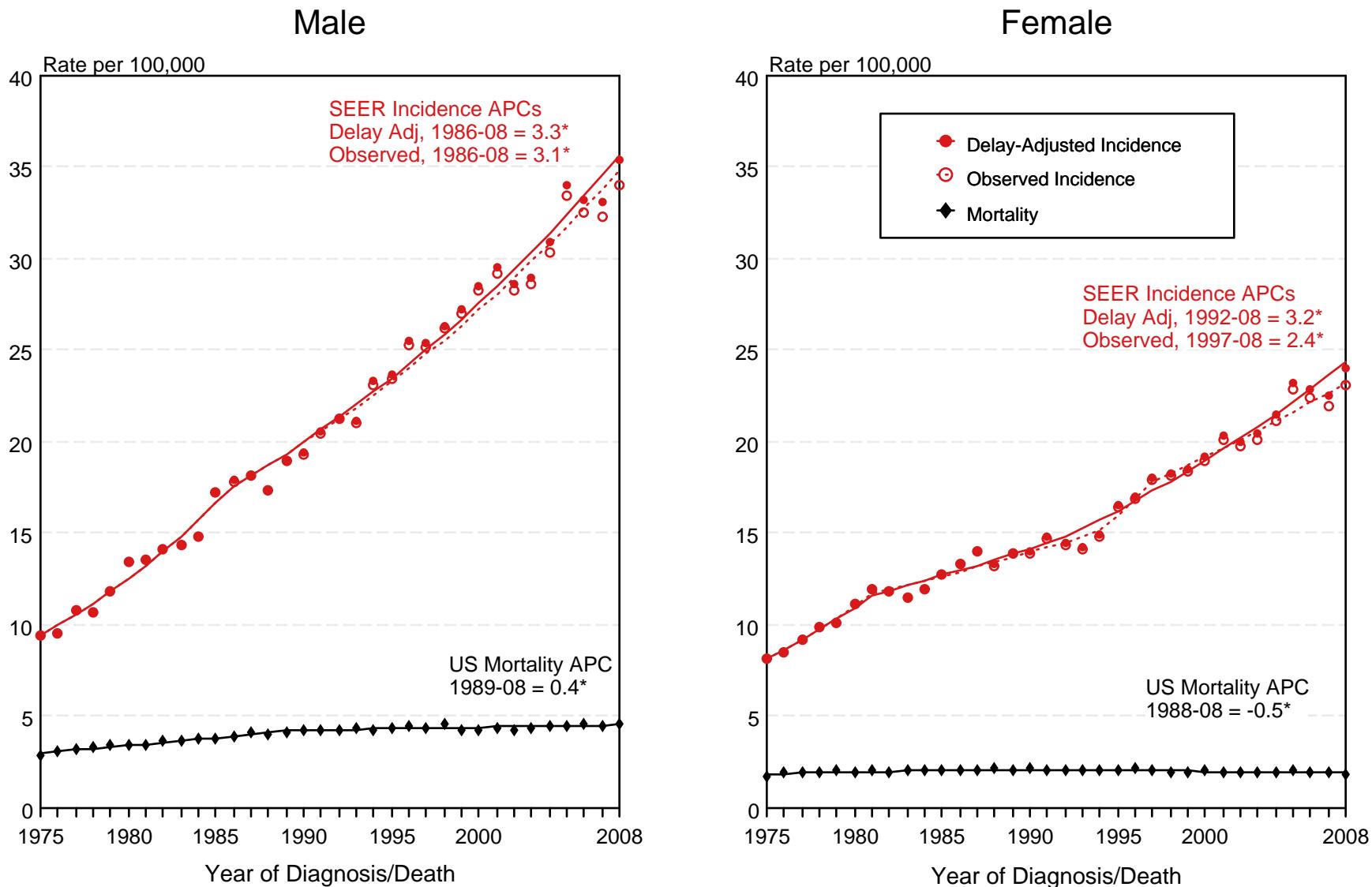


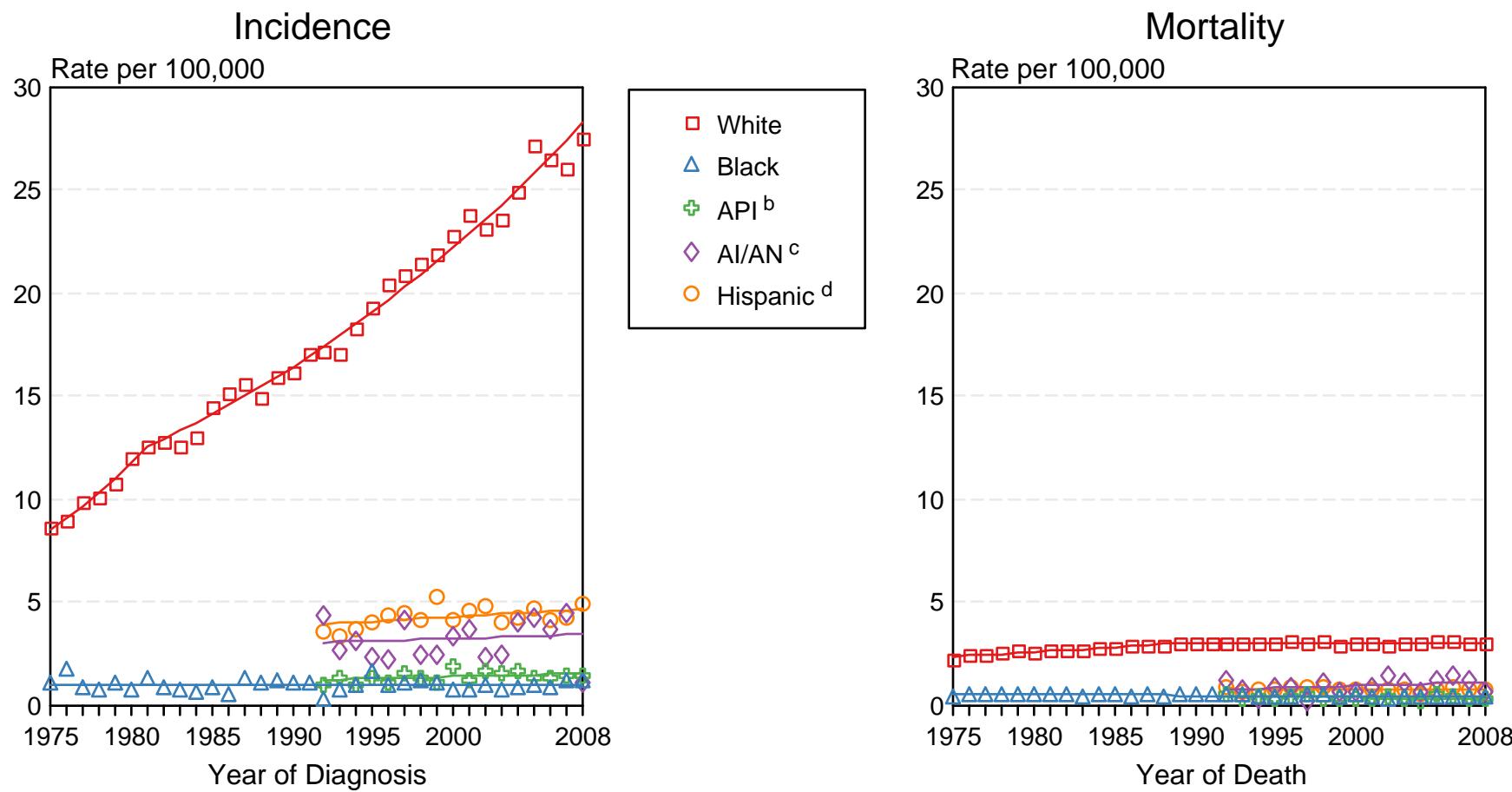
Figure 16.1

- <sup>a</sup> 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 3.5, April 2011, 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 ( $p < 0.05$ ).

# SEER Incidence and US Death Rates<sup>a</sup>

## Melanoma of the Skin, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2008  
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2008



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.

<sup>a</sup> 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 3.5, April 2011, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2008 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2008 allow a maximum of 3 joinpoints.

<sup>b</sup> API = Asian/Pacific Islander.

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

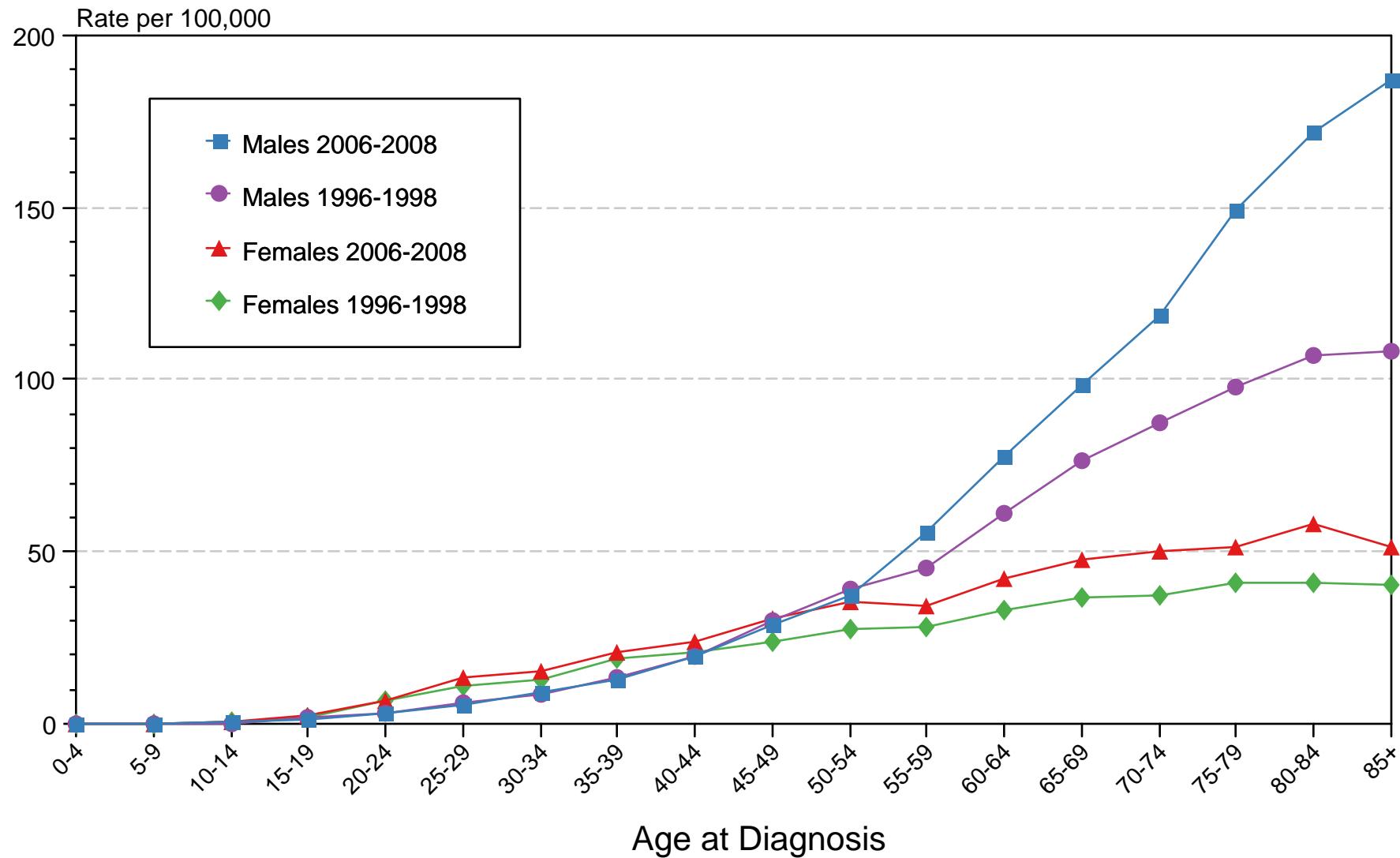
<sup>d</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.

Figure 16.2

# Melanoma of the Skin

## SEER Incidence 1996-1998 vs 2006-2008

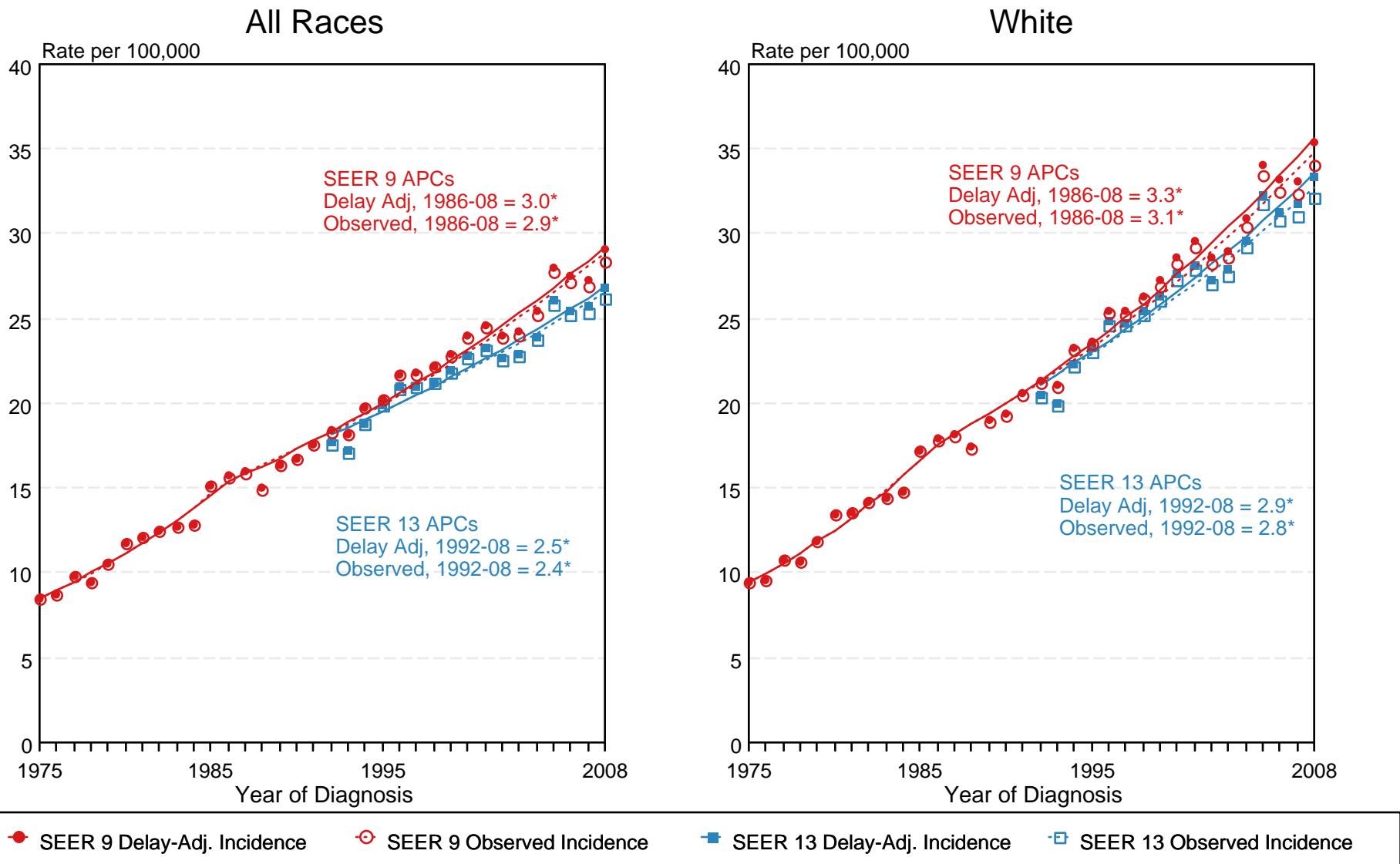
### White, by Age and Sex



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 16.3

SEER Observed Incidence and SEER Delay Adjusted Incidence Rates<sup>a</sup>  
 SEER 9 Areas Compared to SEER 13 Areas  
 Melanoma of the Skin, Male, by Race



<sup>a</sup> Source: SEER 9 areas and SEER 13 areas.

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 3.5, April 2011, 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 16.4

# SEER Observed Incidence and SEER Delay Adjusted Incidence Rates<sup>a</sup>

## SEER 9 Areas Compared to SEER 13 Areas

### Melanoma of the Skin, Female, by Race

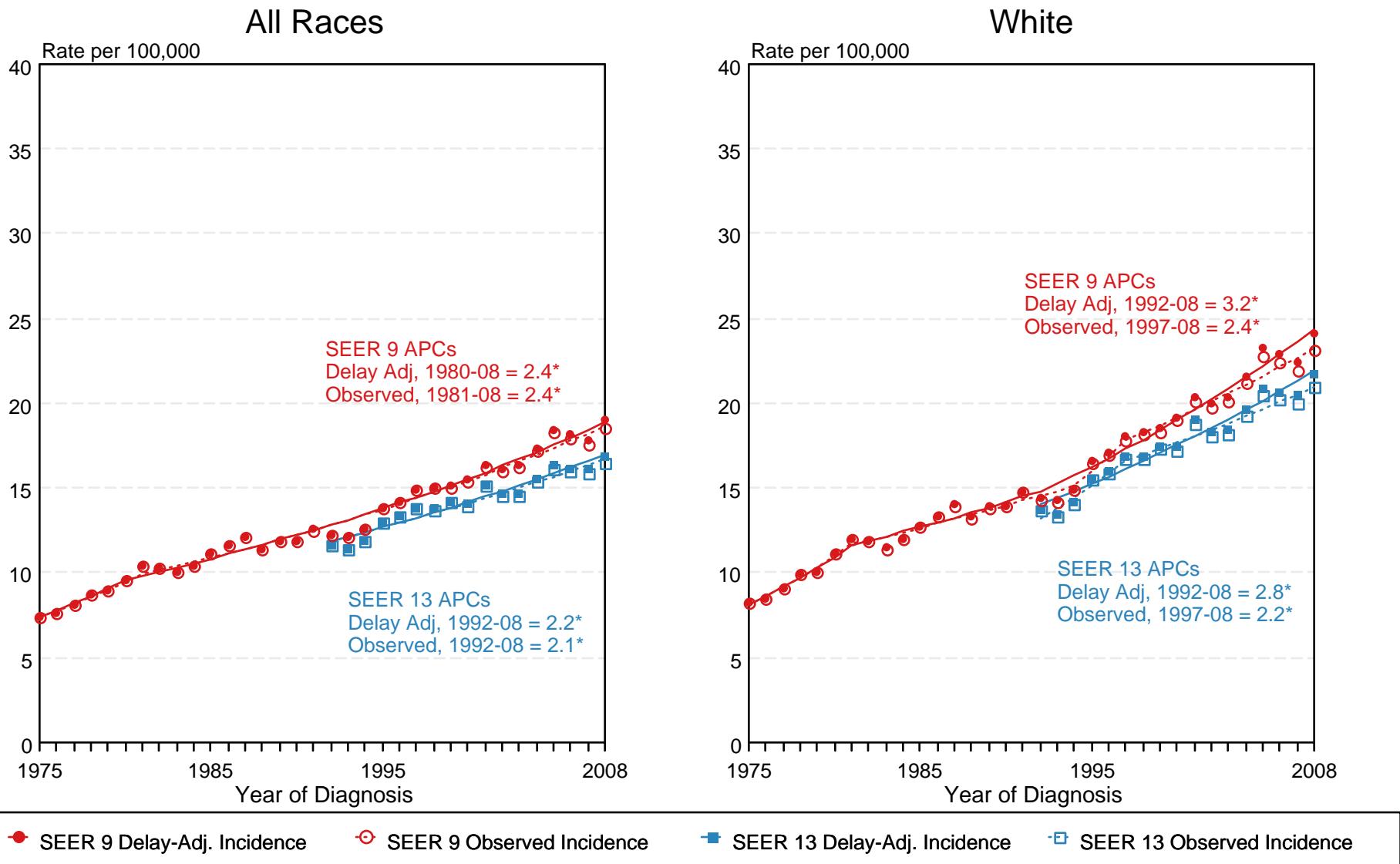


Figure 16.5

<sup>a</sup> Source: SEER 9 areas and SEER 13 areas.

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

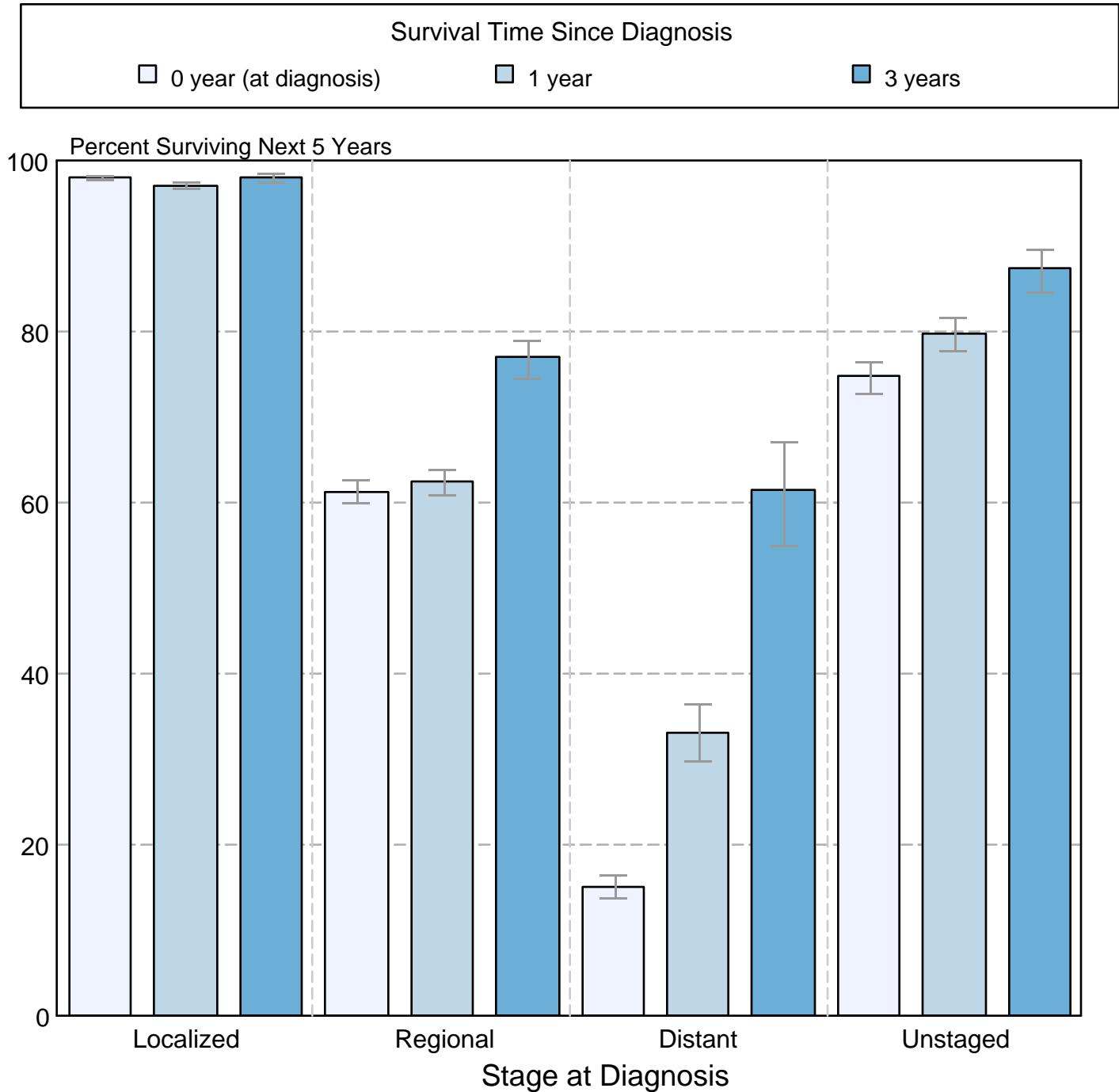
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.

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**  
**1998-2007 by stage at diagnosis**



Source: SEER 17 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, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2007. The remaining 13 SEER Areas contribute cases for the entire period 1998-2007.

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.