

Table 16.1
Melanoma of the Skin (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Both Sexes by Race/Ethnicity

	Joinpoint Trend 1		Joinpoint Trend 2		Joinpoint Trend 3		Joinpoint Trend 4		Joinpoint Trend 5		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-1981	5.9*	1981-2006	2.9*							2.9*	2.9*
White	1975-1981	6.4*	1981-2006	3.2*							3.2*	3.2*
Black	-	-									-	-
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.5*									2.5*	2.5*
White	1992-2006	3.0*									3.0*	3.0*
Black	-	-									-	-
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-1985	4.6*	1985-2006	2.6*							2.6*	2.6*
White	1975-1981	6.5*	1981-2006	3.1*							3.1*	3.1*
Black	1975-2006	-0.5									-0.5	-0.5
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-1996	4.6*	1996-2006	1.7*							1.7*	1.7*
White	1992-1996	5.2*	1996-2006	2.2*							2.2*	2.2*
White NH ^{ef}	1992-2006	3.2*									3.2*	3.2*
Black	1992-1995	31.7*	1995-2006	-5.1*							-5.1*	-5.1*
Black NH ^{ef}	1992-1994	59.8	1994-2006	-4.2*							-4.2*	-4.2*
API ^e	1992-2006	1.7									1.7	1.7
AI/AN ^{eg}	1992-2006	0.3									0.3	0.3
Hispanic ^e	1992-1999	4.5*	1999-2006	-1.9							-0.5	-1.9
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

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

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

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

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

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g 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 16.2
Melanoma of the Skin (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Males by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-1986	5.4*	1986-2006	3.1*							3.1*	3.1*
White	1975-1986	5.8*	1986-2006	3.3*							3.3*	3.3*
Black	-	-									-	-
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.6*									2.6*	2.6*
White	1992-2006	3.0*									3.0*	3.0*
Black	-	-									-	-
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-1986	5.5*	1986-2006	2.9*							2.9*	2.9*
White	1975-1986	5.8*	1986-2006	3.1*							3.1*	3.1*
Black	1975-2006	0.2									0.2	0.2
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-1996	5.0*	1996-2006	1.7*							1.7*	1.7*
White	1992-2006	2.7*									2.7*	2.7*
White NH ^{ef}	1992-2006	3.1*									3.1*	3.1*
Black	1992-1995	71.0*	1995-2006	-8.4*							-8.4*	-8.4*
Black NH ^{ef}	1992-1995	71.4*	1995-2006	-8.2*							-8.2*	-8.2*
API ^e	1992-2006	1.7									1.7	1.7
AI/AN ^{eg}	1992-2006	1.7									1.7	1.7
Hispanic ^e	1992-2006	1.6									1.6*	1.6*
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

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

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

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

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g 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,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Females by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-1981	5.7*	1981-1993	1.9*	1993-2006	3.0*					3.0*	3.0*
White	1975-1981	6.1*	1981-1993	2.2*	1993-2006	3.4*					3.4*	3.4*
Black	-	-									-	-
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.4*									2.4*	2.4*
White	1992-2006	3.0*									3.0*	3.0*
Black	-	-									-	-
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-1980	5.6*	1980-2006	2.4*							2.4*	2.4*
White	1975-1981	6.3*	1981-1994	2.0*	1994-1997	5.3	1997-2006	2.5*			2.5*	2.5*
Black	1975-2006	-1.0									-1.0*	-1.0*
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.2*									2.2*	2.2*
White	1992-2006	2.8*									2.8*	2.8*
White NH ^{ef}	1992-2006	3.4*									3.4*	3.4*
Black	1992-2006	-0.9									-0.9	-0.9
Black NH ^{ef}	1992-2006	-1.0									-1.0	-1.0
API ^e	1992-2006	1.9									1.9	1.9
AI/AN ^{eg}	1992-2006	0.2									0.2	0.2
Hispanic ^e	1992-2006	0.6									0.6	0.6
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

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

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

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

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g 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 16.4
Melanoma of the Skin (Invasive)

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

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975	7.89	8.54	7.44	8.70	9.41	8.21	-	-	-
1976	8.16	8.68	7.69	9.00	9.55	8.51	1.75	-	-
1977	8.86	9.77	8.15	9.87	10.83	9.17	-	-	-
1978	8.95	9.49	8.72	10.10	10.72	9.87	-	-	-
1979	9.54	10.56	8.90	10.76	11.88	10.09	-	-	-
1980	10.50	11.77	9.63	12.01	13.37	11.12	-	-	-
1981	11.09	12.10	10.44	12.57	13.56	11.99	1.35	-	-
1982	11.17	12.49	10.27	12.77	14.15	11.85	-	-	-
1983	11.08	12.65	10.01	12.60	14.38	11.42	-	-	-
1984	11.39	12.91	10.42	13.05	14.79	11.95	-	-	-
1985	12.75	15.12	11.14	14.44	17.12	12.67	-	-	-
1986	13.29	15.67	11.59	15.15	17.82	13.28	-	-	-
1987	13.66	15.92	12.16	15.60	18.09	13.96	1.30	-	-
1988	12.86	14.97	11.43	14.90	17.39	13.23	1.11	-	-
1989	13.73	16.41	11.89	15.90	18.93	13.83	1.19	-	-
1990	13.83	16.63	11.84	16.13	19.25	13.92	1.16	-	-
1991	14.60	17.58	12.51	17.05	20.42	14.72	1.17	-	-
1992	14.78	18.30	12.24	17.19	21.17	14.37	-	-	-
1993	14.58	18.08	12.08	16.99	20.91	14.19	-	-	-
1994	15.61	19.76	12.57	18.31	23.09	14.85	1.11	-	-
1995	16.40	20.23	13.75	19.23	23.41	16.39	1.65	2.97	-
1996	17.28	21.64	14.13	20.40	25.26	16.92	1.06	-	-
1997	17.72	21.69	14.85	20.87	25.17	17.83	1.10	-	-
1998	17.87	22.11	14.92	21.34	26.11	18.05	1.19	-	-
1999	18.22	22.83	15.00	21.77	26.86	18.25	1.14	-	-
2000	18.81	23.73	15.38	22.66	28.14	18.88	0.80	-	-
2001	19.55	24.33	16.21	23.72	29.04	20.05	0.81	-	-
2002	19.06	23.67	15.90	23.03	28.06	19.63	1.04	-	-
2003	19.28	23.77	16.13	23.34	28.22	19.97	0.83	-	-
2004	20.21	24.89	16.98	24.60	29.95	20.92	0.77	-	-
2005	21.74	27.10	18.00	26.64	32.64	22.50	0.99	-	1.00
2006	21.14	26.14	17.63	25.63	31.16	21.82	0.89	-	-
1975-2006	15.17	18.47	12.93	17.70	21.38	15.24	0.99	1.18	0.87

^a 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)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2002-2006									
All ages	19.6	25.0	15.8	22.9	28.9	18.7	1.0	1.1	1.0
Under 65	12.7	13.3	12.2	15.1	15.6	14.6	0.5	0.4	0.5
65 and over	67.5	105.5	41.0	77.3	120.6	46.9	4.8	5.6	4.3
All ages (IARC world std) ^c	14.0	16.9	12.0	16.6	19.6	14.3	0.6	0.7	0.6
Age-Specific Rates, 2002-2006									
<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	0.4	0.4	0.4	0.4	0.5	-	-	-
15-19	1.7	1.3	2.1	2.0	1.6	2.5	-	-	-
20-24	4.2	2.6	6.1	5.1	3.1	7.3	-	-	-
25-29	7.3	4.9	9.7	8.8	5.9	12.0	-	-	-
30-34	9.6	7.0	12.2	11.5	8.4	14.9	0.6	-	-
35-39	12.8	10.4	15.2	15.5	12.4	18.7	0.6	-	-
40-44	17.9	16.3	19.6	21.3	19.2	23.5	0.5	-	-
45-49	22.9	23.3	22.4	27.3	27.5	27.0	0.8	-	1.0
50-54	28.8	33.0	24.9	34.3	39.0	29.8	-	-	-
55-59	36.1	45.7	27.1	42.1	52.7	31.9	1.7	1.9	1.5
60-64	45.4	61.1	31.1	53.2	71.0	36.6	1.9	-	-
65-69	53.2	76.1	33.4	62.6	88.7	39.6	2.7	3.7	-
70-74	64.9	96.6	39.4	75.7	111.9	46.0	4.8	5.4	4.4
75-79	76.6	120.7	45.1	87.5	137.4	51.3	5.2	-	5.0
80-84	82.2	134.9	49.1	91.9	152.3	54.0	7.4	-	6.6
85+	71.7	128.9	44.9	78.8	143.3	49.0	5.7	-	-
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2002-2006									
All ages									
Under 65									
65 and over									
All ages (IARC world std) ^c									
Age-Specific Rates, 2002-2006									
<1									
1-4									
5-9									
10-14									
15-19									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70-74									
75-79									
80-84									
85+									

^a 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.

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

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

- Rates are per 100,000 and are age-adjusted to the IARC world standard population.

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

Table 16.7
Melanoma of the Skin (Invasive)

Survival Rates, 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 Rates									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	60	51	68	-	-	-
1970-1973 ^a	-	-	-	68	62	75	-	-	-
1975-1977 ^b	82.4	78.0	86.8	82.4	78.0	86.7	59.7 ^f	-	-
1978-1980 ^b	83.3	78.2	88.2	83.3	78.3	88.3	59.7 ^g	-	-
1981-1983 ^b	83.4	78.9	87.8	83.3	78.9	87.7	60.8 ^g	-	-
1984-1986 ^b	86.8	82.6	91.3	86.6	82.2	91.2	69.7 ^g	-	-
1987-1989 ^b	88.5	85.4	91.8	88.3	85.3	91.5	79.9 ^f	-	90.4 ^f
1990-1992 ^b	89.6	87.3	92.1	89.6	87.3	92.1	60.3 ^f	-	-
1993-1995 ^b	89.8	87.3	92.9	89.7	87.0	92.9	66.8 ^f	65.4 ^g	-
1996-1998 ^b	91.3	89.7	93.2	91.1	89.3	93.2	74.9 ^f	69.6 ^g	78.6 ^f
1999-2005 ^b	93.0 ^e	91.0 ^e	95.2 ^e	92.9 ^e	90.9 ^e	95.3 ^e	77.7 ^f	76.4 ^f	77.6 ^f
5-Year Period Survival Rates^{cd}									
Year of Diagnosis:									
1999-2005	91.4	89.3	93.8	91.1	89.0	93.6	79.1	70.6	85.3
Stage Distribution (%) 1999-2005^c									
All Stages									
Number of cases	71,842	39,640	32,202	67,898	37,643	30,255	336	148	188
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	84	82	86	84	82	86	60	52	65
Regional	8	9	7	8	9	7	21	23	19
Distant	4	4	2	4	4	2	13	18	9
Unstaged	4	4	4	4	4	4	7	7	7
5-Year Relative Survival Rates, 1999-2005^c									
Age at Diagnosis:									
Ages <45	93.9	90.8	96.3	93.8	90.5	96.3	73.9 ^f	67.4 ^f	77.4 ^f
Ages 45-54	91.8	89.3	94.8	91.4	88.8	94.6	85.3 ^f	-	-
Ages 55-64	91.8	90.2	94.5	91.6	89.9	94.3	82.4 ^f	74.6 ^f	89.8 ^f
Ages 65-74	90.6	89.6	92.4	90.4	89.4	92.1	79.2 ^f	69.7 ^g	83.9 ^g
Ages 75+	84.4	83.1	85.9	84.3	83.0	85.8	59.0 ^g	52.2 ^g	60.0 ^g
Ages <65	92.7	90.1	95.5	92.4	89.8	95.4	78.5	75.0 ^f	81.1
Ages 65+	88.2	87.2	89.6	88.1	87.2	89.3	70.8 ^f	63.7 ^g	73.5 ^f
Stage:									
All Stages	91.4	89.3	94.0	91.2	89.0	93.9	77.3	73.3 ^f	80.4
Localized	98.1	97.5	98.8	98.0	97.3	98.7	94.5	91.7 ^f	95.8
Regional	61.9	57.8	68.0	62.1	57.9	68.3	47.7 ^f	56.7 ^g	37.2 ^g
Distant	15.3	14.0	18.2	14.7	13.6	17.2	29.1 ^f	20.9 ^g	-
Unstaged	75.4	72.5	79.4	74.0	71.1	78.0	67.0 ^g	-	-

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

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

Rates are based on follow-up of patients into 2006.

^c Rates 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). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005.

The remaining 13 SEER Areas contribute cases for the entire period 1999-2005. Rates are based on follow-up of patients into 2006.

^d Period survival provides a more up-to-date estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2003-2005: 0-1 year survival),

(2002-2004: 1-2 year survival), (2001-2003: 2-3 year survival), (2000-2002: 3-4 year survival), (1999-2001: 4-5 years survival).

^e The difference in rates between 1975-1977 and 1999-2005 is statistically significant (p<.05).

^f The standard error of the survival rate is between 5 and 10 percentage points.

^g The standard error of the survival rate is greater than 10 percentage points.

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

Table 16.8
Melanoma of the Skin (Invasive)

Survival Rates^a
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
Relative Survival Rates (SEER ^b)																			
1-year	94.5	96.0	96.5	96.6	97.2	96.4	97.0	97.2	97.5	97.6	96.9	96.8	97.7	97.9	97.4	98.0	98.0	97.8	98.1
2-year	90.0	92.0	93.4	93.8	94.3	93.9	94.6	94.0	94.4	95.6	94.5	94.7	95.7	96.1	95.7	95.7	96.4	96.3	
3-year	86.4	88.4	90.9	92.0	92.2	92.0	92.8	91.8	92.7	93.9	92.5	92.8	94.2	94.6	94.3	94.5	95.2		
4-year	83.8	85.9	89.4	90.2	91.0	90.0	91.0	90.0	91.4	93.1	91.6	91.7	93.4	93.3	93.2	93.6			
5-year	82.5	84.0	88.1	89.6	90.0	89.0	90.3	89.0	90.2	92.3	90.4	91.2	92.7	92.5	92.6				
6-year	80.9	82.9	87.1	88.8	88.8	88.5	89.8	88.1	90.2	91.5	89.8	90.8	92.1	92.1					
7-year	79.8	82.3	86.4	88.3	88.0	88.2	88.7	87.6	90.2	91.2	89.5	90.8	92.1						
8-year	78.9	81.7	85.9	87.6	87.3	87.7	88.3	86.8	90.1	90.9	88.8	90.6							
9-year	78.2	81.1	85.7	87.4	87.1	87.4	88.1	86.5	89.8	90.5	88.6								
11-year	77.7	80.7	85.7	87.2	87.1	87.1	87.7	86.5	89.7	90.0									
11-year	77.2	80.6	85.1	86.9	86.9	86.8	87.6	86.5	89.7										
12-year	76.7	80.4	84.9	86.9	86.5	86.8	87.6	86.4											
13-year	76.5	80.2	84.8	86.9	86.4	86.7	87.6												
14-year	76.3	80.1	84.6	86.8	86.0	86.7													
15-year	76.1	80.0	84.6	86.4	85.7														
16-year	75.9	80.0	84.6	86.4															
17-year	75.9	79.7	84.6																
18-year	75.9	79.7																	
19-year	75.9	79.7																	
20-year	75.9	79.7																	

^a
^b

Survival rates are relative rates expressed as percents.
Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 16.9
Melanoma of the Skin (Invasive)

Survival Rates^a
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
Relative Survival Rates (SEER ^b)																			
1-year	92.7	94.5	95.4	95.9	96.2	96.0	96.3	97.0	96.5	96.6	96.4	96.4	97.3	97.6	96.6	97.1	97.3	97.7	97.9
2-year	86.8	89.0	91.5	92.0	93.3	93.0	93.7	92.6	92.2	94.2	93.6	93.9	94.4	95.5	94.0	94.4	95.2	95.9	
3-year	82.6	84.6	88.4	89.9	91.0	90.7	91.1	89.7	89.9	92.1	91.0	92.0	92.5	93.7	91.8	92.8	93.8		
4-year	79.3	81.7	86.5	87.8	89.7	87.9	89.4	87.7	88.1	91.1	90.1	90.5	91.4	92.2	90.4	91.4			
5-year	78.0	79.0	84.7	86.7	88.6	86.6	88.6	86.7	86.6	90.2	88.5	90.2	90.6	91.5	89.8				
6-year	76.1	77.9	83.5	85.5	87.2	85.6	87.5	85.9	86.4	89.4	87.6	89.7	89.4	90.8					
7-year	74.5	77.4	82.6	85.2	86.1	85.3	85.6	85.0	86.4	89.1	87.6	89.7	89.4						
8-year	73.4	76.8	82.1	84.5	85.2	85.0	85.1	83.5	86.2	88.6	87.0	89.7							
9-year	72.7	76.0	81.7	84.5	84.5	84.1	84.8	83.2	85.9	88.2	86.8								
10-year	72.1	75.7	81.7	84.2	84.5	84.0	84.0	83.2	85.9	87.8									
11-year	71.2	75.5	81.4	83.9	84.5	83.7	83.5	83.2	85.9										
12-year	70.6	75.4	81.1	83.9	84.5	83.6	83.3	82.8											
13-year	70.3	75.3	81.0	83.9	84.5	83.4	83.3												
14-year	70.3	74.9	80.5	83.1	84.5	83.4													
15-year	70.1	74.9	80.4	82.6	84.5														
16-year	69.8	74.9	80.1	82.6															
17-year	69.8	74.8	80.1																
18-year	69.8	74.8																	
19-year	69.8	74.8																	
20-year	69.8	74.8																	

^a
^b

Survival rates are relative rates expressed as percents.
Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 16.10
Melanoma of the Skin (Invasive)

Survival Rates^a
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
Relative Survival Rates (SEER ^b)																			
1-year	96.3	97.5	97.7	97.5	98.4	96.8	97.7	97.4	98.6	98.8	97.4	97.3	98.2	98.4	98.5	99.1	98.9	97.9	98.2
2-year	93.2	95.0	95.4	95.9	95.5	95.0	95.7	95.8	97.0	97.4	95.5	95.5	97.0	96.9	97.7	97.2	97.8	96.8	
3-year	90.1	92.2	93.6	94.3	93.6	93.4	94.6	94.3	95.9	96.2	94.2	93.8	96.0	95.8	97.3	96.4	96.8		
4-year	88.2	90.1	92.5	93.0	92.5	92.3	92.7	92.9	95.1	95.4	93.2	93.0	95.6	94.6	96.4	96.1			
5-year	86.8	89.0	91.6	92.9	91.6	91.8	92.3	91.8	94.3	94.7	92.5	92.4	95.2	93.6	95.9				
6-year	85.5	87.9	90.8	92.4	90.6	91.8	92.1	90.7	94.3	94.0	92.3	91.9	95.1	93.6					
7-year	84.7	87.1	90.3	91.6	90.1	91.3	92.1	90.7	94.2	93.6	91.5	91.7	95.1						
8-year	84.0	86.5	89.8	90.8	89.7	90.6	91.9	90.7	94.2	93.5	90.9	91.4							
9-year	83.4	86.1	89.6	90.5	89.5	90.6	91.7	90.4	93.8	93.1	90.8								
11-year	82.9	85.5	89.6	90.2	89.5	90.3	91.7	90.3	93.8	92.6									
10-year	82.7	85.4	88.9	89.8	88.8	90.1	91.7	90.3	92.8										
12-year	82.2	85.2	88.7	89.8	88.1	90.1	91.7	90.3											
13-year	82.1	84.8	88.5	89.8	87.8	89.8	91.7												
14-year	81.6	84.8	88.5	89.8	86.4	89.8													
15-year	81.4	84.5	88.5	89.8	86.3														
16-year	81.2	84.3	88.5	89.8															
17-year	81.2	84.1	88.5																
18-year	81.1	84.0																	
19-year	81.1	84.0																	
20-year	81.1	84.0																	

^a

Survival rates are relative rates expressed as percents.

^b

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

Table 16.12
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 17 Areas ^b			SEER 13 Areas ^b			SEER 9 Areas ^b		
	Rate 2002-2006			Trend 1997-2006 ^c			Trend 1997-2006 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
RACE/ETHNICITY									
All Races	19.6	25.0	15.8	1.7*	1.7*	2.2*	2.6*	2.9*	2.4*
White	22.9	28.9	18.7	2.2*	2.7*	2.8*	3.1*	3.1*	2.5*
White Hispanic ^e	4.6	4.7	4.7	1.1	1.9*	0.7	-	-	-
White Non-Hispanic ^e	26.7	33.2	22.0	3.2*	3.1*	3.4*	-	-	-
Black	1.0	1.1	1.0	-5.1*	-	-	-0.5	0.2	-1.0*
Asian/Pacific Islander	1.4	1.6	1.3	1.7	1.7	1.9	-	-	-
Amer Ind/Alaska Nat ^f	3.3	3.9	2.8	-	-	-	-	-	-
Hispanic ^e	4.5	4.6	4.7	-0.5	1.6*	0.6	-	-	-
U.S. Mortality ^g									
	Rate 2002-2006			Trend 1997-2006 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
RACE/ETHNICITY									
All Races									
White									
White Hispanic ^e									
White Non-Hispanic ^e									
Black									
Asian/Pacific Islander									
Amer Ind/Alaska Nat									
Total U.S.									
CHSDA Counties									
Non-CHSDA Counties									
Hispanic ^e									

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.3, April 2008, National Cancer Institute.

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

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

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

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

The SEER 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.

The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 2 Joinpoints over diagnosis years 1992-2006.

The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 4 Joinpoints over diagnosis years 1975-2006.

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 2002-2006 Hispanic and Non-Hispanic death rates exclude deaths from Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.

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

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

The 1997-2006 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2006.

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

Table 16.13
Melanoma of the Skin (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates^a, 2002-2006</u>									
Atlanta & Rural Georgia	22.67	31.22	17.04	33.54	43.55	26.98	1.09	1.58	0.91
Atlanta	22.94	31.50	17.37	33.81	43.78	27.40	1.18	1.74	0.97
Rural Georgia	17.20	26.32	9.99	26.75	38.19	16.86	-	-	-
California	19.17	24.94	14.96	22.21	28.80	17.37	0.95	0.93	0.96
Greater Bay Area	16.72	21.49	13.35	21.91	27.90	17.73	-	-	-
San Francisco-Oakland	16.43	20.93	13.28	22.22	28.11	18.09	-	-	-
San Jose-Monterey	17.29	22.62	13.47	21.36	27.59	17.04	-	-	-
Los Angeles	13.93	18.91	10.38	17.95	24.19	13.48	0.78	-	0.76
Greater California	22.67	29.09	17.89	24.14	31.00	18.97	1.33	1.08	1.47
Connecticut	23.36	29.14	19.44	25.11	30.88	21.21	1.61	-	-
Detroit	16.37	20.10	14.01	21.38	25.46	18.97	0.70	-	0.82
Hawaii	18.59	24.08	14.06	62.40	78.93	47.73	-	-	-
Iowa	18.04	20.93	16.28	17.37	20.20	15.65	-	-	-
Kentucky	20.43	25.01	17.36	20.89	25.80	17.54	1.34	-	-
Louisiana	12.35	16.95	9.13	16.52	22.06	12.57	1.08	1.31	0.96
New Jersey	20.56	26.17	16.82	23.82	29.82	19.84	1.15	1.12	1.17
New Mexico	17.29	21.85	13.63	19.08	23.86	15.22	-	-	-
Seattle-Puget Sound	25.31	29.44	22.59	28.88	33.11	26.16	-	-	-
Utah	25.41	32.24	20.01	26.42	33.44	20.87	-	-	-
9 SEER Areas ^b	20.31	25.16	16.94	24.67	30.05	20.98	0.91	0.98	0.87
11 SEER Areas ^b	18.63	23.57	15.17	22.94	28.60	19.00	0.87	0.94	0.83
13 SEER Areas ^b	18.59	23.54	15.12	22.95	28.63	18.99	0.85	0.92	0.82
17 SEER Areas ^b	19.59	24.97	15.80	22.92	28.90	18.69	1.01	1.08	0.97

^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 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)

Estimated United States Cancer Prevalence Counts^a on January 1, 2006
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 <16 ^e	0 to <31 ^e	>=31 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	233,089	170,371	118,667	88,895	60,159	38,309	541,829	714,792	43,896	758,688
	Males	122,409	87,895	58,917	40,417	25,909	15,628	278,623	353,155	14,770	367,925
	Females	110,680	82,476	59,750	48,478	34,250	22,681	263,206	361,637	29,126	390,763
White ^b	Both Sexes	225,347	164,016	113,738	85,054	57,712	36,868	522,176	687,691	41,522	729,213
	Males	118,610	84,648	56,570	38,946	24,872	14,965	268,979	340,488	14,095	354,583
	Females	106,737	79,368	57,168	46,108	32,840	21,903	253,197	347,203	27,427	374,630
Black ^b	Both Sexes	811	635	431	298	142	86	1,942	2,451	119	2,570
	Males	335	274	232	93	19	26	866	990	46	1,036
	Females	476	361	199	205	123	60	1,076	1,461	73	1,534
Asian/ Pacific Islander ^c	Both Sexes	618	410	177	+	+	+	1,240	+	+	+
	Males	270	177	75	+	+	+	531	+	+	+
	Females	348	233	102	+	+	+	709	+	+	+
Hispanic ^d	Both Sexes	4,093	2,799	1,907	+	+	+	9,141	+	+	+
	Males	1,543	1,067	709	+	+	+	3,424	+	+	+
	Females	2,550	1,732	1,198	+	+	+	5,717	+	+	+

Estimated prevalence percent^a on January 1, 2006, of the SEER 11 population diagnosed in the previous 16 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence		Age Specific (Crude)									Age-Adjusted ^f	
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races ^c	Both Sexes	0.1476%	0.0004%	0.0033%	0.0293%	0.0892%	0.1721%	0.2762%	0.3912%	0.4918%	0.4840%	0.1485%
	Males	0.1555%	0.0003%	0.0028%	0.0194%	0.0624%	0.1510%	0.2964%	0.4969%	0.6976%	0.7540%	0.1711%
	Females	0.1399%	0.0004%	0.0038%	0.0399%	0.1167%	0.1932%	0.2570%	0.2959%	0.3330%	0.3342%	0.1340%
White ^c	Both Sexes	0.1856%	0.0004%	0.0042%	0.0367%	0.1137%	0.2142%	0.3395%	0.4729%	0.5940%	0.5619%	0.1814%
	Males	0.1941%	0.0004%	0.0035%	0.0238%	0.0773%	0.1849%	0.3596%	0.5933%	0.8333%	0.8856%	0.2055%
	Females	0.1771%	0.0004%	0.0048%	0.0510%	0.1528%	0.2445%	0.3197%	0.3614%	0.4049%	0.3844%	0.1666%
Black ^c	Both Sexes	0.0047%	-	-	0.0015%	0.0038%	0.0038%	0.0074%	0.0196%	0.0250%	0.0269%	0.0061%
	Males	0.0045%	-	-	-	0.0031%	0.0030%	0.0068%	0.0227%	0.0387%	0.0340%	0.0070%
	Females	0.0049%	-	-	0.0023%	0.0044%	0.0045%	0.0078%	0.0172%	0.0158%	0.0235%	0.0056%
Asian/ Pacific Islander ^c	Both Sexes	0.0093%	-	-	0.0025%	0.0070%	0.0103%	0.0149%	0.0266%	0.0253%	0.0342%	0.0094%
	Males	0.0084%	-	-	0.0032%	0.0041%	0.0074%	0.0155%	0.0266%	0.0319%	0.0347%	0.0091%
	Females	0.0102%	-	-	0.0018%	0.0097%	0.0130%	0.0144%	0.0266%	0.0204%	0.0339%	0.0097%
Hispanic ^d	Both Sexes	0.0205%	-	0.0006%	0.0046%	0.0168%	0.0372%	0.0565%	0.0795%	0.1050%	0.1464%	0.0323%
	Males	0.0148%	-	0.0006%	0.0027%	0.0069%	0.0230%	0.0439%	0.0737%	0.1125%	0.2174%	0.0294%
	Females	0.0266%	-	-	0.0069%	0.0283%	0.0523%	0.0684%	0.0844%	0.0995%	0.1051%	0.0367%

^a US 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER registries and 1/1/2006 US population estimates based on the average of 2005 and 2006 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

^{b c d} 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.

^e Maximum limited-duration prevalence: 31 years for 1975-2006 SEER 9 data; 16 years for 1990-2006 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

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

^{g h i} (g) Cases diagnosed more than 31 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 <31 and >=31. (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^a Melanoma of the Skin, White, by Sex



Figure 16.1

^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 3.3.1, April 2008, 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^a Melanoma of the Skin, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2006

and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2006

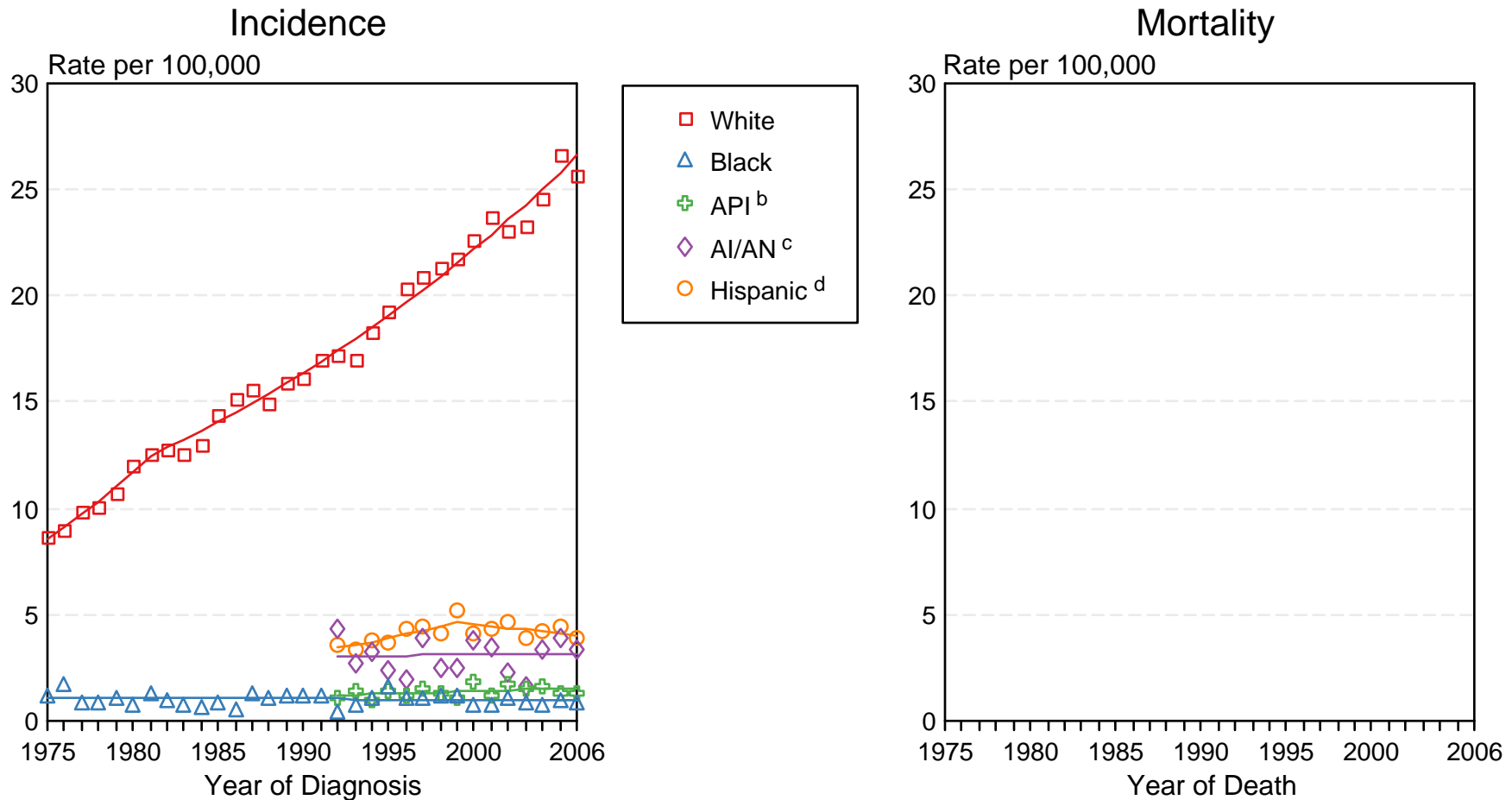


Figure 16.2

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 3.3.1, April 2008, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2006 period allow a maximum of 4 joinpoints. Analyses for other ethnic groups during the period 1992-2006 allow a maximum of 2 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 Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.

Melanoma of the Skin

SEER Incidence 1994-1996 vs 2004-2006

White, by Age and Sex

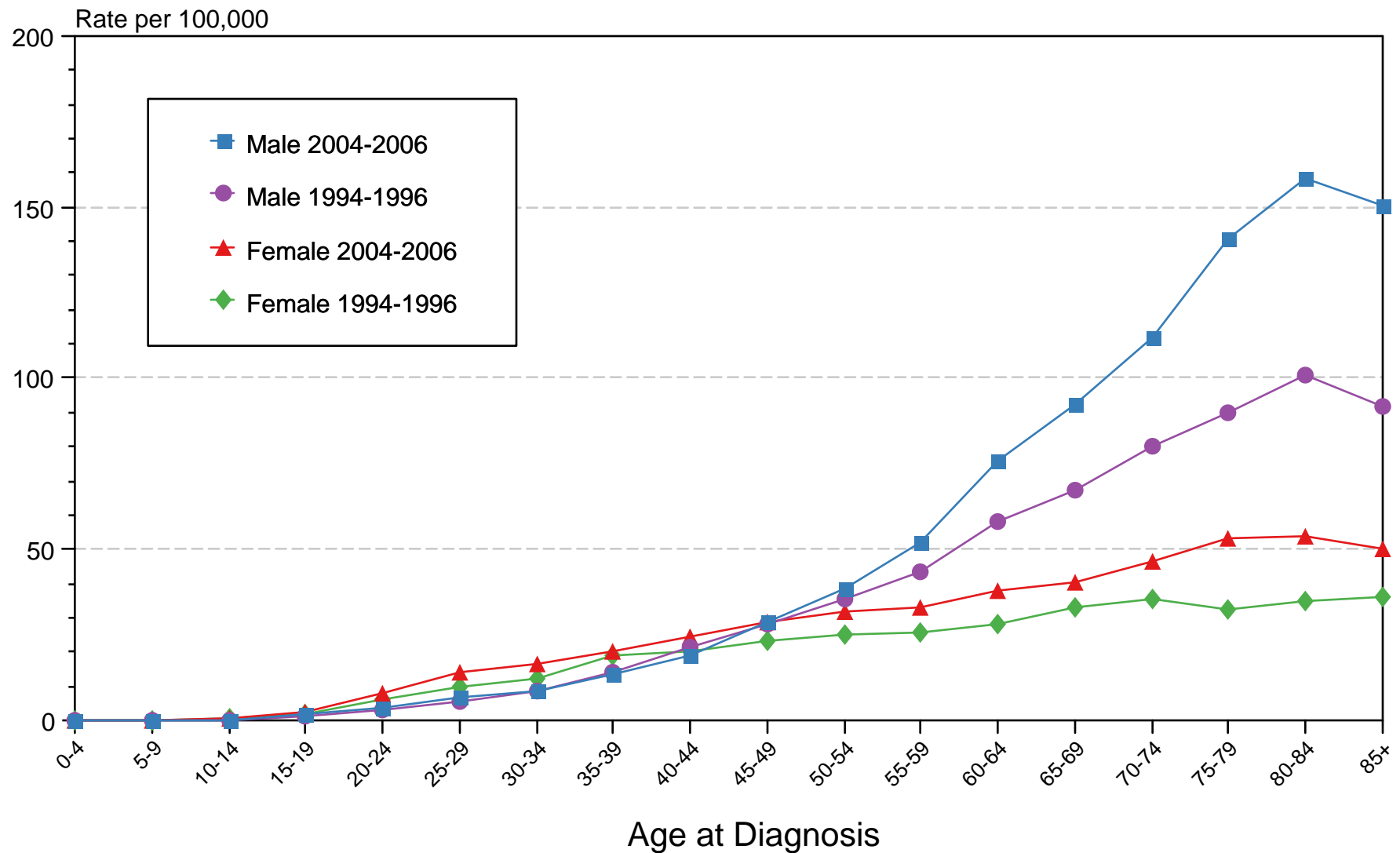


Figure 16.3

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).