

Table 26.1
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints, 1992-2007 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	1998-2007	2003-2007
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2007</u>												
All Races	1975-1977	6.1	1977-1980	-6.6	1980-1997	2.4*	1997-2007	6.4*			6.4*	6.4*
White	1975-1977	7.3	1977-1980	-6.7	1980-1997	2.8*	1997-2007	6.9*			6.9*	6.9*
Black	1975-1988	-1.2	1988-2007	4.8*							4.8*	4.8*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2007</u>												
All Races	1992-1998	3.1*	1998-2007	6.3*							6.3*	6.3*
White	1992-1998	3.7*	1998-2007	6.5*							6.5*	6.5*
Black	1992-1995	-4.1	1995-2007	6.7*							6.7*	6.7*
<u>SEER 9 Observed Incidence^a, 1975-2007</u>												
All Races	1975-1977	6.1	1977-1980	-6.7	1980-1997	2.4*	1997-2007	6.3*			6.3*	6.3*
White	1975-1977	7.3	1977-1980	-6.7	1980-1997	2.7*	1997-2007	6.7*			6.7*	6.7*
Black	1975-1988	-1.1	1988-2007	4.6*							4.6*	4.6*
<u>SEER 13 Observed Incidence^b, 1992-2007</u>												
All Races	1992-1998	3.1*	1998-2007	6.1*							6.1*	6.1*
White	1992-1998	3.7*	1998-2007	6.3*							6.3*	6.3*
White NH ^{ef}	1992-1998	4.4*	1998-2007	6.6*							6.6*	6.6*
Black	1992-1995	-4.1	1995-2007	6.5*							6.5*	6.5*
Black NH ^{ef}	1992-1995	-4.6	1995-2007	6.6*							6.6*	6.6*
API ^e	1992-1996	-1.7	1996-2004	3.1*	2004-2007	7.6*					4.6*	6.4*
AI/AN ^{eg}	1992-2007	2.1									2.1	2.1
Hispanic ^f	1992-1995	-4.1	1995-2007	4.6*							4.6*	4.6*
<u>U.S. Cancer Mortality^c, 1975-2007</u>												
All Races	1975-1988	-2.1*	1988-2007	0.6*							0.6*	0.6*
White	1975-1988	-2.2*	1988-2007	0.7*							0.7*	0.7*
Black	1975-2007	-0.2									-0.2	-0.2
<u>U.S. Cancer Mortality^c, 1992-2007</u>												
All Races	1992-2007	0.6*									0.6*	0.6*
White	1992-2007	0.6*									0.6*	0.6*
White NH ^{ef}	1992-2007	0.7*									0.7*	0.7*
Black	1992-2007	1.0									1.0*	1.0*
Black NH ^{ef}	1992-2007	1.1*									1.1*	1.1*
API ^e	1992-2003	-4.3*	2003-2007	10.3							2.0	10.3
AI/AN ^{eg}	1992-2007	2.4									2.4	2.4
Hispanic ^f	1992-2007	-0.5									-0.5	-0.5

Joinpoint Regression Program Version 3.4.3, April 2010, 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, DC, 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 26.2
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints, 1992-2007 With up to Two Joinpoints,
Males 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	1998-2007	2003-2007
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2007</u>												
All Races	1975-1980	-4.8*	1980-1998	1.9*	1998-2007	5.7*					5.7*	5.7*
White	1975-1977	10.0	1977-1980	-9.2	1980-1998	2.6*	1998-2007	6.0*			6.0*	6.0*
Black	1975-2007	2.5*									2.5*	2.5*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2007</u>												
All Races	1992-1995	-3.0	1995-2007	5.0*							5.0*	5.0*
White	1992-1995	-1.8	1995-2007	5.3*							5.3*	5.3*
Black	1992-1995	-12.5	1995-2007	5.7*							5.7*	5.7*
<u>SEER 9 Observed Incidence^a, 1975-2007</u>												
All Races	1975-1980	-4.8*	1980-1998	1.9*	1998-2007	5.6*					5.6*	5.6*
White	1975-1977	10.0	1977-1980	-9.2	1980-1998	2.6*	1998-2007	5.7*			5.7*	5.7*
Black	1975-2007	2.4*									2.4*	2.4*
<u>SEER 13 Observed Incidence^b, 1992-2007</u>												
All Races	1992-1995	-3.0	1995-2007	4.9*							4.9*	4.9*
White	1992-1995	-1.8	1995-2007	5.1*							5.1*	5.1*
White NH ^{ef}	1992-1996	0.5	1996-2007	5.8*							5.8*	5.8*
Black	1992-1995	-12.4	1995-2007	5.4*							5.4*	5.4*
Black NH ^{ef}	1992-1995	-12.4	1995-2007	5.5*							5.5*	5.5*
API ^e	1992-2007	1.7*									1.7*	1.7*
AI/AN ^{eg}	1992-2007	3.3									3.3	3.3
Hispanic ^f	1992-2007	2.8*									2.8*	2.8*
<u>U.S. Cancer Mortality^c, 1975-2007</u>												
All Races	1975-1983	-3.0*	1983-2007	1.1*							1.1*	1.1*
White	1975-1984	-2.5*	1984-2007	1.2*							1.2*	1.2*
Black	1975-2007	-0.1									-0.1	-0.1
<u>U.S. Cancer Mortality^c, 1992-2007</u>												
All Races	1992-2007	1.6*									1.6*	1.6*
White	1992-2007	1.6*									1.6*	1.6*
White NH ^{ef}	1992-2007	1.6*									1.6*	1.6*
Black	1992-2007	1.3									1.3	1.3
Black NH ^{ef}	1992-2007	1.2									1.2	1.2
API ^e	1992-2007	0.2									0.2	0.2
AI/AN ^{eg}	-	-									-	-
Hispanic ^f	1992-2007	3.0*									3.0*	3.0*

Joinpoint Regression Program Version 3.4.3, April 2010, 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, DC, 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 26.3
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2007 With up to Four Joinpoints, 1992-2007 With up to Two Joinpoints,
Females 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	1998-2007	2003-2007
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2007</u>												
All Races	1975-1977	6.6	1977-1980	-5.6	1980-1996	2.5*	1996-2007	6.5*			6.5*	6.5*
White	1975-1977	6.4	1977-1980	-4.8	1980-1993	2.4*	1993-1999	5.1*	1999-2007	7.4*	7.2*	7.4*
Black	1975-1989	-1.0	1989-2007	5.3*							5.3*	5.3*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2007</u>												
All Races	1992-1998	3.8*	1998-2007	6.6*							6.6*	6.6*
White	1992-1998	4.4*	1998-2007	6.9*							6.9*	6.9*
Black	1992-1998	3.0*	1998-2007	7.5*							7.5*	7.5*
<u>SEER 9 Observed Incidence^a, 1975-2007</u>												
All Races	1975-1977	6.6	1977-1980	-5.7	1980-1996	2.5*	1996-2007	6.4*			6.4*	6.4*
White	1975-1977	6.4	1977-1980	-4.7	1980-1993	2.4*	1993-1999	5.0*	1999-2007	7.2*	6.9*	7.2*
Black	1975-1989	-1.0	1989-2007	5.1*							5.1*	5.1*
<u>SEER 13 Observed Incidence^b, 1992-2007</u>												
All Races	1992-1998	3.8*	1998-2007	6.4*							6.4*	6.4*
White	1992-1998	4.4*	1998-2007	6.7*							6.7*	6.7*
White NH ^{ef}	1992-2000	5.4*	2000-2003	8.8*	2003-2007	5.5*					6.6*	5.5*
Black	1992-1998	3.0*	1998-2007	7.2*							7.2*	7.2*
Black NH ^{ef}	1992-2001	4.1*	2001-2007	8.5*							7.0*	8.5*
API ^e	1992-1999	0.4	1999-2007	5.3*							4.8*	5.3*
AI/AN ^{eg}	1992-2007	2.0									2.0	2.0
Hispanic ^f	1992-1998	0.8	1998-2007	5.7*							5.7*	5.7*
<u>U.S. Cancer Mortality^c, 1975-2007</u>												
All Races	1975-1988	-2.5*	1988-2007	0.3							0.3	0.3
White	1975-1988	-2.8*	1988-2007	0.2							0.2	0.2
Black	1975-2007	-0.4									-0.4	-0.4
<u>U.S. Cancer Mortality^c, 1992-2007</u>												
All Races	1992-1994	-5.8	1994-2007	0.6*							0.6*	0.6*
White	1992-1994	-4.9	1994-2007	0.4*							0.4*	0.4*
White NH ^{ef}	1992-2007	0.3									0.3	0.3
Black	1992-2007	1.0									1.0	1.0
Black NH ^{ef}	1992-2007	1.2									1.2	1.2
API ^e	1992-2007	-1.5									-1.5	-1.5
AI/AN ^{eg}	1992-2007	-0.1									-0.1	-0.1
Hispanic ^f	1992-2007	-2.3*									-2.3*	-2.3*

Joinpoint Regression Program Version 3.4.3, April 2010, 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, DC, 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 26.4
Cancer of the Thyroid (Invasive)

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

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975	4.85	3.14	6.45	4.66	2.79	6.37	2.97	-	4.21
1976	4.80	2.95	6.57	4.67	2.88	6.39	3.41	-	5.03
1977	5.44	3.49	7.32	5.34	3.43	7.21	3.74	-	5.40
1978	5.09	3.14	6.94	4.95	2.97	6.83	2.92	-	4.00
1979	4.48	2.67	6.17	4.43	2.57	6.19	3.24	-	4.30
1980	4.33	2.39	6.14	4.30	2.28	6.20	2.37	-	3.43
1981	4.41	2.51	6.23	4.38	2.47	6.26	2.38	-	3.41
1982	4.63	3.01	6.15	4.55	2.87	6.13	3.29	-	4.35
1983	4.70	2.80	6.48	4.73	2.61	6.71	3.02	2.15	3.77
1984	4.84	2.64	6.92	4.72	2.57	6.81	3.02	-	4.08
1985	5.13	3.08	7.09	5.09	3.10	7.05	2.85	-	3.64
1986	5.32	3.07	7.48	5.22	3.10	7.32	3.35	-	5.10
1987	5.05	2.80	7.14	5.04	2.87	7.08	2.82	-	4.30
1988	4.94	2.94	6.89	4.90	3.00	6.80	2.53	-	3.21
1989	5.36	2.98	7.64	5.48	3.21	7.73	2.51	-	3.93
1990	5.49	2.92	7.96	5.56	2.98	8.10	3.77	2.28	4.93
1991	5.49	3.19	7.69	5.69	3.31	8.00	3.20	-	4.21
1992	5.87	3.52	8.11	5.90	3.53	8.20	4.22	3.11	5.14
1993	5.65	3.59	7.65	5.77	3.70	7.82	3.39	2.08	4.58
1994	6.08	3.39	8.74	6.24	3.45	9.02	3.77	1.79	5.38
1995	6.22	3.38	8.99	6.42	3.61	9.23	3.08	-	4.52
1996	6.51	3.48	9.48	6.73	3.63	9.84	3.85	-	5.79
1997	6.78	3.67	9.79	7.06	3.79	10.32	4.01	2.46	5.28
1998	6.98	3.73	10.09	7.22	3.99	10.40	3.88	1.51	5.84
1999	7.36	3.89	10.69	7.61	4.11	11.05	4.61	1.61	7.05
2000	7.62	4.04	11.11	8.08	4.39	11.81	4.64	2.21	6.66
2001	8.28	4.33	12.14	8.69	4.63	12.79	4.89	2.65	6.72
2002	9.20	4.90	13.40	9.75	5.24	14.30	5.51	2.82	7.68
2003	9.60	4.70	14.39	10.32	5.05	15.62	5.30	2.80	7.50
2004	10.06	5.19	14.84	10.77	5.54	16.09	6.32	3.32	8.83
2005	10.84	5.76	15.81	11.81	6.41	17.25	5.89	2.83	8.54
2006	11.20	5.76	16.54	12.10	6.33	17.96	6.54	2.95	9.42
2007	12.23	5.89	18.47	13.10	6.31	20.03	7.27	3.02	10.72

Additional information on the model used to delay-adjust SEER Incidence rates can be found at (<http://srab.cancer.gov/delay/>).

^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).

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

Table 26.5
Cancer of the Thyroid (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	4.85	3.14	6.45	4.66	2.79	6.37	2.97	-	4.21
1976	4.80	2.95	6.57	4.67	2.88	6.39	3.41	-	5.03
1977	5.44	3.49	7.32	5.34	3.43	7.21	3.74	-	5.40
1978	5.09	3.14	6.94	4.95	2.97	6.83	2.92	-	4.00
1979	4.48	2.67	6.17	4.43	2.57	6.19	3.24	-	4.30
1980	4.33	2.39	6.14	4.30	2.28	6.20	2.37	-	3.43
1981	4.41	2.51	6.23	4.38	2.47	6.26	2.38	-	3.41
1982	4.63	3.00	6.15	4.55	2.87	6.13	3.29	-	4.34
1983	4.70	2.80	6.48	4.73	2.61	6.71	3.02	2.15	3.77
1984	4.84	2.64	6.92	4.72	2.57	6.80	3.02	-	4.08
1985	5.12	3.08	7.09	5.09	3.10	7.05	2.85	-	3.64
1986	5.32	3.07	7.48	5.22	3.10	7.31	3.35	-	5.09
1987	5.04	2.80	7.13	5.04	2.87	7.07	2.82	-	4.30
1988	4.94	2.94	6.89	4.90	3.00	6.79	2.53	-	3.21
1989	5.35	2.98	7.63	5.47	3.21	7.72	2.51	-	3.92
1990	5.49	2.92	7.95	5.55	2.97	8.09	3.76	2.28	4.91
1991	5.48	3.18	7.68	5.68	3.31	7.99	3.19	-	4.20
1992	5.86	3.51	8.10	5.88	3.52	8.18	4.20	3.09	5.13
1993	5.64	3.58	7.64	5.75	3.68	7.80	3.38	2.07	4.56
1994	6.07	3.38	8.72	6.22	3.44	8.99	3.75	1.78	5.35
1995	6.21	3.37	8.97	6.40	3.59	9.20	3.06	-	4.50
1996	6.49	3.47	9.45	6.70	3.61	9.80	3.83	-	5.75
1997	6.76	3.65	9.76	7.02	3.76	10.27	3.98	2.44	5.24
1998	6.95	3.71	10.06	7.18	3.96	10.35	3.85	1.50	5.79
1999	7.33	3.87	10.64	7.55	4.08	10.98	4.57	1.60	6.98
2000	7.58	4.01	11.06	8.01	4.35	11.72	4.59	2.18	6.60
2001	8.23	4.30	12.07	8.60	4.57	12.67	4.82	2.60	6.63
2002	9.14	4.86	13.32	9.63	5.17	14.14	5.42	2.77	7.56
2003	9.52	4.65	14.29	10.18	4.97	15.42	5.21	2.74	7.37
2004	9.96	5.14	14.72	10.61	5.44	15.86	6.19	3.24	8.66
2005	10.73	5.69	15.66	11.60	6.28	16.96	5.75	2.76	8.35
2006	11.07	5.68	16.35	11.86	6.18	17.62	6.37	2.86	9.18
2007	11.99	5.75	18.12	12.70	6.09	19.44	6.99	2.89	10.32
1975-2007	6.77	3.72	9.72	6.90	3.82	9.94	4.12	2.06	5.82

^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 26.6
Cancer of the Thyroid (Invasive)

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

Year of Death:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975	0.55	0.39	0.65	0.55	0.40	0.65	0.47	0.35	0.56
1976	0.56	0.49	0.61	0.56	0.49	0.60	0.52	0.42	0.60
1977	0.57	0.46	0.63	0.56	0.46	0.62	0.67	0.53	0.74
1978	0.55	0.44	0.61	0.55	0.45	0.61	0.48	0.33	0.60
1979	0.53	0.43	0.58	0.53	0.45	0.58	0.47	0.28	0.60
1980	0.48	0.38	0.53	0.49	0.40	0.54	0.42	0.29	0.51
1981	0.50	0.42	0.55	0.50	0.43	0.54	0.48	0.26	0.62
1982	0.48	0.37	0.53	0.47	0.37	0.53	0.48	0.38	0.54
1983	0.44	0.34	0.50	0.45	0.35	0.50	0.41	0.28	0.49
1984	0.47	0.38	0.52	0.47	0.39	0.51	0.47	-	0.64
1985	0.45	0.39	0.48	0.44	0.39	0.46	0.49	0.34	0.58
1986	0.46	0.39	0.49	0.45	0.39	0.49	0.48	0.34	0.57
1987	0.45	0.40	0.48	0.45	0.41	0.47	0.48	0.33	0.58
1988	0.44	0.41	0.45	0.44	0.42	0.44	0.44	0.33	0.50
1989	0.44	0.41	0.44	0.43	0.41	0.43	0.51	0.40	0.56
1990	0.44	0.37	0.48	0.44	0.38	0.47	0.45	0.30	0.54
1991	0.43	0.38	0.46	0.42	0.39	0.43	0.50	0.37	0.58
1992	0.46	0.38	0.50	0.46	0.39	0.48	0.41	0.30	0.48
1993	0.46	0.39	0.50	0.46	0.40	0.48	0.46	0.26	0.58
1994	0.42	0.38	0.44	0.42	0.38	0.44	0.37	0.30	0.40
1995	0.44	0.41	0.44	0.44	0.43	0.44	0.40	0.27	0.46
1996	0.45	0.42	0.47	0.45	0.43	0.46	0.44	0.33	0.49
1997	0.46	0.45	0.46	0.45	0.45	0.44	0.49	0.37	0.55
1998	0.44	0.38	0.47	0.43	0.39	0.45	0.43	0.27	0.53
1999	0.45	0.44	0.45	0.45	0.45	0.44	0.44	0.39	0.47
2000	0.48	0.47	0.48	0.47	0.48	0.45	0.51	0.34	0.59
2001	0.48	0.47	0.48	0.47	0.48	0.46	0.51	0.41	0.58
2002	0.47	0.45	0.48	0.48	0.46	0.48	0.47	0.39	0.52
2003	0.45	0.42	0.46	0.46	0.45	0.46	0.37	0.28	0.44
2004	0.47	0.47	0.47	0.47	0.48	0.46	0.44	0.38	0.47
2005	0.48	0.47	0.49	0.47	0.49	0.46	0.51	0.30	0.63
2006	0.49	0.46	0.51	0.49	0.48	0.49	0.47	0.27	0.59
2007	0.49	0.51	0.48	0.48	0.51	0.45	0.50	0.40	0.55
1975-2007	0.47	0.42	0.50	0.47	0.43	0.48	0.47	0.33	0.55

^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 26.7
Cancer of the Thyroid (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, 2003-2007									
All ages	10.2	5.2	15.2	10.7	5.5	16.0	6.2	3.0	8.9
Under 65	9.3	4.1	14.5	9.8	4.4	15.4	5.2	2.1	7.9
65 and over	16.9	12.8	20.1	17.1	13.3	20.3	13.1	8.7	16.1
All ages (IARC world std) ^c	8.3	4.0	12.5	8.7	4.3	13.3	4.9	2.2	7.2
Age-Specific Rates, 2003-2007									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	-	0.2	0.1	-	0.2	-	-	-
10-14	0.5	0.2	0.8	0.6	0.2	0.9	-	-	-
15-19	1.9	0.6	3.3	2.1	0.7	3.6	0.5	-	0.9
20-24	4.7	1.3	8.3	5.0	1.4	9.0	2.2	-	3.9
25-29	8.0	2.6	13.9	8.6	2.7	15.0	3.9	1.0	6.5
30-34	11.1	3.7	18.7	12.1	3.8	20.8	4.9	1.7	7.8
35-39	13.9	5.1	22.9	14.8	5.6	24.4	7.6	2.3	12.5
40-44	15.0	6.1	23.9	16.0	6.7	25.7	7.5	2.8	11.8
45-49	16.9	7.1	26.5	18.1	7.9	28.3	8.7	3.0	13.7
50-54	17.8	8.6	26.7	18.6	9.2	27.9	11.2	5.1	16.4
55-59	18.3	10.8	25.4	18.7	11.4	25.8	13.4	7.5	18.3
60-64	18.3	12.2	23.9	19.0	13.0	24.6	13.4	7.8	17.9
65-69	20.2	14.1	25.5	20.6	14.7	25.8	15.9	10.6	19.9
70-74	18.9	14.3	22.6	19.3	15.1	22.9	13.9	5.9	19.6
75-79	16.7	12.4	19.8	16.9	12.9	19.9	12.0	9.7	13.4
80-84	14.0	12.4	15.0	14.1	12.6	15.0	10.7	-	12.3
85+	9.1	8.3	9.5	8.9	7.8	9.5	10.0	-	10.1
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2003-2007									
All ages	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5
Under 65	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
65 and over	2.8	2.7	2.8	2.7	2.7	2.7	2.7	1.8	3.2
All ages (IARC world std) ^c	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
Age-Specific Rates, 2003-2007									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-
25-29	0.0	-	-	0.0	-	-	-	-	-
30-34	0.0	0.0	-	0.0	-	-	-	-	-
35-39	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
40-44	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
45-49	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-	0.2
50-54	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3
55-59	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.8
60-64	1.1	1.1	1.0	1.0	1.1	1.0	1.0	0.8	1.2
65-69	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.1	1.8
70-74	2.2	2.5	2.1	2.2	2.5	1.9	2.1	1.0	2.9
75-79	3.0	2.7	3.2	3.0	2.8	3.2	2.6	2.2	2.8
80-84	3.9	3.7	4.0	3.9	3.8	3.9	3.6	2.4	4.2
85+	4.8	4.2	5.1	4.7	4.3	4.9	5.3	3.6	6.0

^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 26.8
Cancer of the Thyroid (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	83	75	87	-	-	-
1970-1973 ^a	-	-	-	86	82	87	-	-	-
1975-1977 ^b	93.3	92.8	93.5	93.1	92.4	93.3	90.8	-	91.9
1978-1980 ^b	93.1	88.4	94.6	92.6	88.7	93.8	90.5	68.8 ^g	95.8
1981-1983 ^b	94.3	92.9	94.7	93.7	91.7	94.4	96.6	100.0	93.7
1984-1986 ^b	93.9	91.0	94.9	94.0	90.6	94.8	90.0	86.2 ^f	90.8
1987-1989 ^b	95.1	92.4	95.9	94.9	92.4	95.5	92.5	91.2 ^f	92.6
1990-1992 ^b	95.0	91.2	96.2	95.6	92.4	96.6	87.3	84.6 ^f	88.2
1993-1995 ^b	96.0	92.6	97.0	96.1	92.5	97.2	93.4	88.2 ^f	94.5
1996-1998 ^b	96.2	91.7	97.4	96.5	92.2	97.8	95.4	86.2 ^f	96.7
1999-2006 ^b	97.4 ^e	94.7 ^e	98.2 ^e	97.6 ^e	95.0 ^e	98.4 ^e	95.4	92.6	95.9
5-Year Period Survival (Percent) ^{cd}									
Year of Diagnosis:									
1999-2006	97.4	94.2	98.3	97.7	94.3	98.5	95.7	93.2	95.9
Stage Distribution (%) 1999-2006 ^c									
All Stages									
Number of cases	44,818	10,328	34,490	37,008	8,823	28,185	2,646	495	2,151
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	68	58	71	68	58	71	75	66	77
Regional	24	31	23	25	31	23	15	18	14
Distant	5	9	4	5	8	4	8	13	7
Unstaged	2	3	2	2	3	2	2	3	2
5-Year Relative Survival (Percent), 1999-2006 ^c									
Age at Diagnosis:									
Ages <45	99.4	98.3	99.6	99.5	98.5	99.7	98.4	93.1	99.2
Ages 45-54	98.5	95.5	99.4	98.7	95.7	99.6	95.3	87.6	96.8
Ages 55-64	96.1	93.7	97.0	96.4	93.6	97.6	92.8	91.0	92.0
Ages 65-74	91.7	87.7	93.6	92.3	88.6	94.2	87.0	83.9 ^f	87.9
Ages 75+	82.0	76.9	82.8	83.5	76.9	84.0	67.1 ^f	-	64.2 ^f
Ages <65	98.6	96.4	99.2	98.8	96.6	99.4	96.5	91.6	97.4
Ages 65+	88.6	84.8	89.8	89.4	85.3	90.4	81.8	84.5 ^f	81.0
Stage:									
All Stages	97.3	94.4	98.0	97.6	94.6	98.2	94.7	90.9	95.4
Localized	99.8	99.6	99.9	99.8	99.6	99.9	99.2	96.8	99.3
Regional	97.1	95.2	97.8	97.2	95.0	98.0	94.4	92.6	94.5
Distant	58.1	52.1	61.3	57.1	50.1	61.3	51.8	55.7 ^f	49.4 ^f
Unstaged	89.7	81.4	92.3	89.6	81.2	92.1	78.9 ^f	-	78.6 ^f

^a Based on End Results data from a series of hospital registries and one population-based registry.^b Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2007.

^c Based on 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 2000-2006. The remaining 13 SEER Areas contribute cases for the entire period 1999-2006. Based on follow-up of patients into 2007.^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 (2004-2006: 0-1 year survival),

(2003-2005: 1-2 year survival), (2002-2004: 2-3 year survival), (2001-2003: 3-4 year survival), (2000-2002: 4-5 years survival).

^e The difference between 1975-1977 and 1999-2006 is statistically significant (p<.05).^f The standard error is between 5 and 10 percentage points.^g The standard error is greater than 10 percentage points.

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

Table 26.9
Cancer of the Thyroid (Invasive)

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

All Races, Males and Females

Survival Time	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
1-year	95.1	95.3	96.1	96.7	96.7	95.7	95.3	97.6	96.8	96.9	96.6	97.8	97.5	97.7	97.7	97.2	98.1	98.4	97.8	98.5
2-year	93.9	94.8	95.6	96.4	96.1	95.0	95.1	97.1	96.4	96.7	96.3	97.3	97.2	97.2	97.5	97.2	97.9	98.0	97.5	
3-year	93.4	94.2	95.2	95.9	95.9	94.7	95.1	96.7	96.3	96.3	96.3	97.2	97.2	97.2	97.1	97.2	97.7	98.0		
4-year	93.3	94.1	95.0	95.9	95.5	94.5	95.1	96.3	96.3	95.8	96.1	96.8	97.2	97.2	97.1	97.2	97.6			
5-year	93.1	94.1	94.9	95.9	95.0	93.9	95.1	96.2	96.3	95.5	95.9	96.7	97.2	96.8	96.4	97.2				
6-year	93.1	94.1	94.9	95.8	94.8	93.9	95.1	95.9	96.3	95.5	95.7	96.5	96.9	96.7	96.4					
7-year	93.1	93.9	94.7	95.7	94.5	93.9	95.1	95.9	96.3	95.3	95.7	96.5	96.9	96.6						
8-year	93.1	93.9	94.6	95.7	94.5	93.9	95.1	95.4	96.3	95.3	95.7	96.5	96.7							
9-year	93.0	93.9	94.6	95.7	94.5	93.9	95.1	95.3	96.3	95.0	95.7	96.5								
10-year	93.0	93.9	94.6	95.3	94.5	93.9	95.1	95.2	96.3	95.0	95.7									
11-year	93.0	93.7	94.6	95.0	94.5	93.9	94.9	95.2	96.2	95.0										
12-year	93.0	93.6	94.6	95.0	94.3	93.9	94.9	95.1	96.2											
13-year	93.0	93.5	94.6	94.8	94.3	93.9	94.9	95.1												
14-year	93.0	93.5	94.6	94.5	94.1	93.9	94.9													
15-year	93.0	93.5	94.6	94.5	93.5	93.9														
16-year	93.0	93.4	94.6	94.5	93.1															
17-year	93.0	93.4	94.6	94.5																
18-year	93.0	93.4	94.6																	
19-year	93.0	93.4																		
20-year	93.0	93.4																		

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

Table 26.10
Cancer of the Thyroid (Invasive)

SEER^a 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
Survival Time																				
1-year	94.7	92.7	95.1	94.0	95.3	94.0	93.3	96.8	93.6	93.8	92.5	97.4	97.1	96.5	96.2	95.3	96.3	96.7	97.0	96.4
2-year	93.0	92.4	94.0	92.7	92.6	93.2	92.8	95.7	92.3	93.7	91.2	95.7	96.4	95.3	95.3	95.0	95.6	95.4	95.7	
3-year	92.3	91.4	94.0	91.9	91.5	92.4	92.5	95.2	92.3	92.6	91.2	95.1	96.4	95.3	94.0	95.0	94.6	95.2		
4-year	91.6	91.3	92.9	91.9	91.3	92.0	91.0	94.8	92.1	92.2	90.1	94.3	96.4	95.3	93.3	94.9	94.1			
5-year	91.2	91.3	92.6	91.9	89.8	91.6	91.0	94.2	92.1	90.5	89.4	94.3	96.4	94.5	92.1	94.6				
6-year	91.2	91.2	92.4	91.3	89.0	91.6	91.0	94.0	91.8	90.5	89.1	94.3	96.4	94.5	91.9					
7-year	91.2	91.0	91.5	91.3	88.2	91.6	91.0	93.6	90.3	90.5	89.1	94.2	96.0	94.3						
8-year	91.2	91.0	91.2	91.3	88.0	91.6	90.9	92.8	90.3	90.2	89.1	94.2	95.8							
9-year	91.2	90.7	90.5	91.3	88.0	91.6	90.7	92.6	90.3	88.4	89.1	94.2								
10-year	91.2	90.2	90.4	91.3	88.0	91.6	89.6	92.6	89.5	88.4	89.1									
11-year	90.8	89.8	90.4	91.3	88.0	91.6	89.6	92.6	88.6	87.4										
12-year	90.8	89.2	90.4	91.3	88.0	91.4	89.6	92.2	88.5											
13-year	90.8	89.0	90.4	89.7	88.0	91.4	89.6	91.8												
14-year	90.8	89.0	90.4	89.7	88.0	91.4	89.6													
15-year	90.8	88.9	90.4	87.4	87.8	91.4														
16-year	90.8	88.9	90.4	87.3	87.8															
17-year	90.8	88.9	90.4	87.3																
18-year	90.8	88.8	90.4																	
19-year	90.8	88.8																		
20-year	90.8	88.8																		

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

Table 26.11
Cancer of the Thyroid (Invasive)

SEER^a 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
Survival Time																				
1-year	95.2	96.1	96.5	97.5	97.1	96.4	95.9	97.8	97.8	97.9	97.8	97.9	97.6	98.1	98.1	97.8	98.6	98.9	98.1	99.1
2-year	94.2	95.6	96.0	97.4	97.0	95.7	95.9	97.4	97.5	97.6	97.8	97.7	97.5	97.8	98.1	97.8	98.5	98.7	98.0	
3-year	93.8	95.1	95.6	97.1	97.0	95.5	95.9	97.0	97.5	97.3	97.8	97.7	97.5	97.7	97.9	97.8	98.5	98.7		
4-year	93.8	95.1	95.5	97.1	96.8	95.4	95.9	96.8	97.5	96.9	97.8	97.5	97.5	97.7	97.9	97.8	98.5			
5-year	93.8	95.1	95.5	97.1	96.5	94.6	95.9	96.8	97.5	96.8	97.8	97.4	97.3	97.4	97.6	97.8				
6-year	93.7	95.1	95.5	97.1	96.5	94.6	95.9	96.4	97.5	96.8	97.7	97.0	97.0	97.3	97.6					
7-year	93.6	94.9	95.5	96.6	96.4	94.6	95.9	96.4	97.5	96.6	97.7	97.0	97.0	97.3						
8-year	93.5	94.8	95.5	96.6	96.4	94.6	95.9	96.2	97.5	96.6	97.7	97.0	96.9							
9-year	93.4	94.8	95.5	96.6	96.4	94.6	95.9	96.0	97.5	96.6	97.7	97.0								
10-year	93.4	94.8	95.5	96.1	96.4	94.6	95.9	95.8	97.5	96.6	97.7									
11-year	93.4	94.8	95.5	95.6	96.3	94.6	95.9	95.8	97.5	96.6										
12-year	93.4	94.8	95.5	95.6	95.8	94.6	95.9	95.8	97.5											
13-year	93.4	94.8	95.5	95.6	95.7	94.6	95.9	95.8												
14-year	93.4	94.8	95.5	95.6	95.6	94.6	95.9													
15-year	93.4	94.8	95.5	95.6	95.0	94.6														
16-year	93.4	94.8	95.5	95.6	94.5															
17-year	93.4	94.8	95.5	95.6																
18-year	93.4	94.8	95.5																	
19-year	93.4	94.8																		
20-year	93.4	94.8																		

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

Table 26.12
Cancer of the Thyroid (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, 2005-2007 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.01	0.08	0.90	0.06	Asian/ Pacific Islander	0	0.00	0.01	0.08	0.98	0.12
	10	0.01	0.08	0.20	0.91	0.06		10	0.01	0.08	0.20	0.98	0.12
	20	0.06	0.19	0.35	0.90	0.06		20	0.07	0.19	0.35	0.97	0.12
	30	0.13	0.29	0.47	0.84	0.06		30	0.12	0.28	0.47	0.91	0.12
	40	0.17	0.35	0.53	0.72	0.06		40	0.16	0.35	0.54	0.79	0.12
	50	0.19	0.37	0.51	0.57	0.06		50	0.19	0.38	0.55	0.64	0.12
	60	0.19	0.34	0.40	0.41	0.06		60	0.20	0.37	0.45	0.46	0.11
	70	0.17	0.24	-	0.25	0.05		70	0.19	0.27	-	0.29	0.10
80	0.09	-	-	0.11	0.04	80	0.11	-	-	0.13	0.08		
White	0	0.00	0.02	0.08	0.94	0.06	American Indian/ Alaska Native ^a	0	0.00	0.01	0.05	0.45	0.04
	10	0.01	0.08	0.22	0.95	0.06		10	0.01	0.05	0.12	0.45	0.04
	20	0.07	0.20	0.38	0.94	0.06		20	0.04	0.11	0.20	0.45	0.04
	30	0.14	0.31	0.50	0.88	0.06		30	0.08	0.17	0.24	0.41	0.04
	40	0.18	0.37	0.55	0.75	0.06		40	0.09	0.17	0.25	0.35	0.04
	50	0.19	0.38	0.52	0.59	0.06		50	0.08	0.17	0.23	0.27	0.04
	60	0.20	0.35	0.41	0.42	0.06		60	0.09	0.16	0.20	0.20	0.04
	70	0.17	0.24	-	0.25	0.05		70	0.08	0.12	-	0.13	0.05
80	0.09	-	-	0.11	0.04	80	0.06	-	-	0.07	0.03		
Black	0	0.00	0.00	0.03	0.52	0.05	Hispanic ^b	0	0.00	0.01	0.06	0.81	0.09
	10	0.00	0.03	0.09	0.53	0.05		10	0.01	0.06	0.15	0.82	0.10
	20	0.03	0.09	0.17	0.53	0.05		20	0.05	0.14	0.27	0.81	0.10
	30	0.06	0.14	0.25	0.51	0.05		30	0.09	0.22	0.37	0.76	0.10
	40	0.08	0.20	0.32	0.46	0.05		40	0.13	0.29	0.45	0.68	0.10
	50	0.12	0.25	0.34	0.39	0.05		50	0.16	0.33	0.46	0.57	0.10
	60	0.14	0.24	0.29	0.30	0.05		60	0.17	0.31	0.39	0.42	0.10
	70	0.12	0.18	-	0.19	0.05		70	0.15	0.24	-	0.28	0.09
80	0.08	-	-	0.11	0.04	80	0.11	-	-	0.16	0.07		

Devcan Version 6.5.0, June 2010, National Cancer Institute (<http://srab.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.

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

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

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

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 26.13
Cancer of the Thyroid (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, 2005-2007 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.01	0.03	0.46	0.05	Asian/ Pacific Islander	0	0.00	0.00	0.03	0.46	0.08
	10	0.00	0.03	0.07	0.47	0.05		10	0.00	0.03	0.07	0.46	0.08
	20	0.02	0.07	0.13	0.47	0.05		20	0.02	0.07	0.12	0.46	0.08
	30	0.05	0.11	0.21	0.45	0.05		30	0.04	0.10	0.18	0.44	0.08
	40	0.07	0.17	0.28	0.41	0.05		40	0.05	0.13	0.23	0.40	0.08
	50	0.10	0.22	0.31	0.36	0.05		50	0.08	0.18	0.28	0.35	0.08
	60	0.13	0.23	0.27	0.28	0.05		60	0.10	0.21	0.27	0.28	0.08
	70	0.12	0.17	-	0.18	0.05		70	0.11	0.19	-	0.20	0.07
80	0.08	-	-	0.09	0.03	80	0.09	-	-	0.11	0.05		
White	0	0.00	0.01	0.03	0.49	0.05	American Indian/ Alaska Native ^a	0	0.00	0.01	0.02	0.24	0.04
	10	0.01	0.03	0.07	0.50	0.05		10	0.01	0.02	0.04	0.25	0.04
	20	0.02	0.07	0.14	0.49	0.05		20	0.02	0.03	0.05	0.24	0.04
	30	0.05	0.12	0.23	0.48	0.05		30	0.02	0.03	0.06	0.23	0.04
	40	0.08	0.18	0.30	0.44	0.05		40	0.02	0.05	0.10	0.22	0.04
	50	0.11	0.23	0.33	0.37	0.05		50	0.03	0.09	0.16	0.22	0.04
	60	0.13	0.24	0.28	0.29	0.05		60	0.06	0.15	0.20	0.21	0.04
	70	0.13	0.18	-	0.18	0.05		70	0.10	0.16	-	0.17	0.05
80	0.08	-	-	0.08	0.04	80	0.10	-	-	0.10	0.02		
Black	0	0.00	0.00	0.01	0.24	0.03	Hispanic ^b	0	0.00	0.00	0.02	0.37	0.09
	10	0.00	0.01	0.03	0.25	0.03		10	0.00	0.02	0.04	0.38	0.09
	20	0.01	0.03	0.06	0.25	0.03		20	0.01	0.04	0.08	0.37	0.09
	30	0.02	0.05	0.10	0.24	0.03		30	0.02	0.06	0.13	0.36	0.09
	40	0.03	0.08	0.15	0.23	0.03		40	0.04	0.11	0.19	0.35	0.09
	50	0.06	0.13	0.18	0.21	0.03		50	0.07	0.15	0.24	0.31	0.09
	60	0.09	0.14	0.17	0.18	0.03		60	0.09	0.19	0.24	0.26	0.09
	70	0.07	0.11	-	0.12	0.03		70	0.11	0.17	-	0.20	0.08
80	0.07	-	-	0.08	0.02	80	0.08	-	-	0.12	0.08		

Devcan Version 6.5.0, June 2010, National Cancer Institute (<http://srab.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.

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

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

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

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 26.14
Cancer of the Thyroid (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, 2005-2007 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.02	0.13	1.34	0.07	Asian/ Pacific Islander	0	0.00	0.02	0.14	1.45	0.14
	10	0.02	0.13	0.35	1.35	0.07		10	0.02	0.14	0.33	1.46	0.14
	20	0.11	0.32	0.58	1.33	0.07		20	0.11	0.31	0.57	1.44	0.14
	30	0.21	0.47	0.74	1.23	0.07		30	0.20	0.46	0.75	1.33	0.14
	40	0.26	0.53	0.77	1.02	0.07		40	0.26	0.55	0.82	1.14	0.14
	50	0.27	0.52	0.70	0.78	0.07		50	0.29	0.56	0.78	0.89	0.14
	60	0.26	0.44	0.51	0.53	0.07		60	0.28	0.50	0.60	0.61	0.14
	70	0.21	0.29	-	0.30	0.06		70	0.24	0.34	-	0.36	0.12
80	0.11	-	-	0.13	0.05	80	0.11	-	-	0.14	0.09		
White	0	0.00	0.03	0.14	1.40	0.06	American Indian/ Alaska Native ^a	0	0.00	0.02	0.08	0.66	0.04
	10	0.02	0.15	0.37	1.41	0.06		10	0.02	0.08	0.21	0.67	0.04
	20	0.12	0.35	0.63	1.39	0.06		20	0.06	0.20	0.36	0.66	0.04
	30	0.23	0.51	0.78	1.28	0.06		30	0.14	0.30	0.42	0.60	0.04
	40	0.28	0.56	0.80	1.06	0.06		40	0.16	0.29	0.39	0.47	0.04
	50	0.28	0.53	0.71	0.79	0.06		50	0.13	0.24	0.29	0.32	0.04
	60	0.26	0.45	0.52	0.53	0.06		60	0.11	0.17	0.20	0.20	0.04
	70	0.21	0.29	-	0.30	0.06		70	0.06	0.10	-	0.10	0.05
80	0.11	-	-	0.12	0.04	80	0.04	-	-	0.04	0.03		
Black	0	0.00	0.01	0.05	0.77	0.07	Hispanic ^b	0	0.00	0.02	0.12	1.26	0.10
	10	0.01	0.06	0.15	0.79	0.07		10	0.02	0.12	0.28	1.27	0.10
	20	0.05	0.14	0.27	0.78	0.07		20	0.10	0.26	0.48	1.26	0.10
	30	0.10	0.23	0.39	0.74	0.07		30	0.16	0.39	0.63	1.16	0.10
	40	0.13	0.30	0.47	0.66	0.07		40	0.23	0.48	0.71	1.01	0.10
	50	0.18	0.35	0.48	0.54	0.07		50	0.25	0.50	0.66	0.80	0.10
	60	0.19	0.33	0.38	0.40	0.07		60	0.25	0.42	0.52	0.57	0.10
	70	0.16	0.22	-	0.25	0.07		70	0.18	0.29	-	0.34	0.09
80	0.09	-	-	0.13	0.05	80	0.13	-	-	0.20	0.08		

Devcan Version 6.5.0, June 2010, National Cancer Institute (<http://srab.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.

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

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

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

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 26.15
Cancer of the Thyroid (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 2003-2007			Trend 1998-2007 ^c			Trend 1998-2007 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	10.2	5.2	15.2	6.1*	4.9*	6.4*	6.3*	5.6*	6.4*
White	10.7	5.5	16.0	6.3*	5.1*	6.7*	6.7*	5.7*	6.9*
White Hispanic ^e	8.6	3.7	13.6	4.5*	2.6*	5.7*	-	-	-
White Non-Hispanic ^e	11.5	6.0	16.9	6.6*	5.8*	6.6*	-	-	-
Black	6.2	3.0	8.9	6.5*	5.4*	7.2*	4.6*	2.4*	5.1*
Asian/Pacific Islander	10.1	4.4	15.2	4.6*	1.7*	4.8*	-	-	-
Amer Ind/Alaska Nat ^f	5.8	3.1	8.5	2.1	-	-	-	-	-
Hispanic ^e	8.4	3.6	13.3	4.6*	2.8*	5.7*	-	-	-
<u>U.S. Mortality^g</u>									
RACE/ETHNICITY	Rate 2003-2007			Trend 1998-2007 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	0.5	0.5	0.5	0.6*	1.6*	0.6*			
White	0.5	0.5	0.5	0.6*	1.6*	0.4*			
White Hispanic ^e	0.6	0.6	0.6	-0.4	3.1*	-2.2*			
White Non-Hispanic ^e	0.5	0.5	0.4	0.7*	1.6*	0.3			
Black	0.5	0.3	0.5	1.0*	1.3	1.0			
Asian/Pacific Islander	0.6	0.5	0.7	2.0	-	-1.5			
Amer Ind/Alaska Nat									
Total U.S.	0.3	-	0.3	-	-	-			
CHSDA Counties	0.5	-	-	-	-	-			
Non-CHSDA Counties	-	-	-	-	-	-			
Hispanic ^e	0.6	0.6	0.6	-0.5	3.0*	-2.3*			

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.4.3, April 2010, 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.

a 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).

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

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

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

c The 1998-2007 AAPC estimates are based on a Joinpoint analysis with up to 2 Joinpoints over diagnosis years 1992-2007.

d The 1998-2007 AAPC estimates are based on a Joinpoint analysis with up to 4 Joinpoints over diagnosis years 1975-2007.

e 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 2003-2007 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia, New Hampshire, and North Dakota. The 1998-2007 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.

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

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

h The 1998-2007 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2007.

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

Table 26.16
Cancer of the Thyroid (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, 2003-2007</u>									
Atlanta & Rural Georgia	9.06	4.49	13.37	11.12	5.66	16.86	5.53	2.42	8.00
Atlanta	9.13	4.56	13.44	11.28	5.84	17.02	5.39	2.15	7.92
Rural Georgia	7.24	-	11.23	7.44	-	12.30	7.42	-	-
California	8.91	4.49	13.31	9.07	4.67	13.58	5.48	2.80	7.89
Greater Bay Area	8.04	3.83	12.34	8.08	4.01	12.47	4.05	1.88	5.96
San Francisco-Oakland	7.32	3.43	11.21	7.32	3.52	11.39	3.93	-	5.88
San Jose-Monterey	9.39	4.60	14.46	9.39	4.89	14.32	4.77	-	-
Los Angeles	9.55	4.62	14.27	9.79	4.88	14.70	6.32	2.99	9.01
Greater California	8.93	4.68	13.22	9.08	4.79	13.47	5.31	3.16	7.55
Connecticut	14.55	7.20	21.52	15.31	7.56	22.74	7.36	3.85	10.14
Detroit	10.08	5.63	14.29	11.12	6.13	16.12	7.08	3.86	9.63
Hawaii	11.88	5.68	18.18	8.65	4.80	13.33	-	-	-
Iowa	10.08	5.53	14.67	10.06	5.46	14.68	-	-	-
Kentucky	10.29	5.12	15.28	10.39	5.20	15.45	8.89	3.83	13.24
Louisiana	8.09	4.29	11.68	9.39	5.11	13.66	5.05	2.12	7.47
New Jersey	13.52	6.69	20.02	14.47	7.21	21.54	7.32	3.46	10.54
New Mexico	12.24	5.66	18.62	13.05	6.04	19.89	-	-	-
Seattle-Puget Sound	10.94	5.51	16.35	11.18	5.79	16.64	7.17	-	12.17
Utah	13.16	6.57	19.73	13.43	6.65	20.20	-	-	-
9 SEER Areas ^b	10.67	5.39	15.85	11.40	5.80	17.08	6.12	2.90	8.81
11 SEER Areas ^b	10.31	5.16	15.37	10.88	5.53	16.32	6.16	2.93	8.85
13 SEER Areas ^b	10.30	5.16	15.34	10.87	5.52	16.31	6.18	2.97	8.86
17 SEER Areas ^b	10.23	5.17	15.19	10.73	5.49	16.02	6.18	2.97	8.93

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

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

The SEER 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 26.17
Cancer of the Thyroid (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Death Rates^a, 2003-2007</u>									
Atlanta & Rural Georgia	0.38	0.39	0.39	0.38	-	0.41	-	-	-
Atlanta	0.36	0.39	0.36	0.38	-	0.38	-	-	-
Rural Georgia	-	-	-	-	-	-	-	-	-
California	0.54	0.51	0.55	0.51	0.51	0.51	0.49	0.42	0.54
Greater Bay Area	0.55	0.50	0.59	0.52	0.51	0.51	-	-	-
San Francisco-Oakland	0.50	0.43	0.56	0.49	0.42	0.53	-	-	-
San Jose-Monterey	0.65	0.66	0.65	0.56	0.67	0.49	-	-	-
Los Angeles	0.61	0.59	0.63	0.60	0.59	0.61	0.43	-	-
Greater California	0.49	0.48	0.51	0.47	0.48	0.46	0.59	-	-
Connecticut	0.50	0.45	0.52	0.51	0.49	0.51	-	-	-
Detroit	0.38	0.41	0.36	0.42	0.44	0.39	-	-	-
Hawaii	0.55	-	0.65	-	-	-	-	-	-
Iowa	0.50	0.58	0.44	0.51	0.59	0.45	-	-	-
Kentucky	0.54	0.57	0.52	0.55	0.58	0.53	-	-	-
Louisiana	0.49	0.38	0.56	0.50	0.46	0.52	0.46	-	0.69
New Jersey	0.54	0.51	0.57	0.56	0.53	0.57	0.37	-	-
New Mexico	0.55	0.52	0.57	0.58	0.54	0.60	-	-	-
Seattle-Puget Sound	0.51	0.47	0.53	0.50	0.46	0.52	-	-	-
Utah	0.46	0.62	0.32	0.46	0.61	0.33	-	-	-
9 SEER Areas ^b	0.48	0.47	0.48	0.48	0.49	0.47	0.32	-	0.37
11 SEER Areas ^b	0.52	0.51	0.52	0.51	0.52	0.50	0.35	0.28	0.42
13 SEER Areas ^b	0.51	0.50	0.52	0.51	0.51	0.50	0.36	0.30	0.42
17 SEER Areas ^b	0.51	0.50	0.53	0.51	0.51	0.51	0.41	0.31	0.48
Total U.S.	0.48	0.47	0.48	0.47	0.48	0.46	0.46	0.33	0.54

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

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

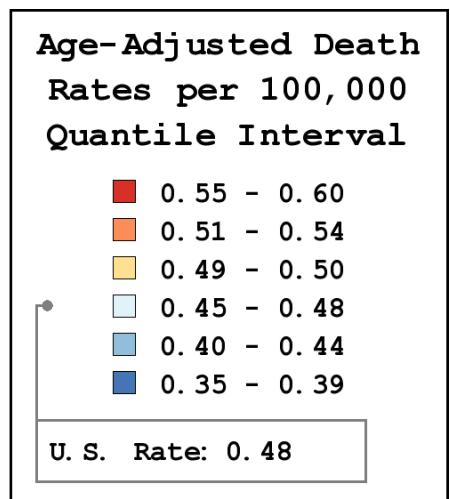
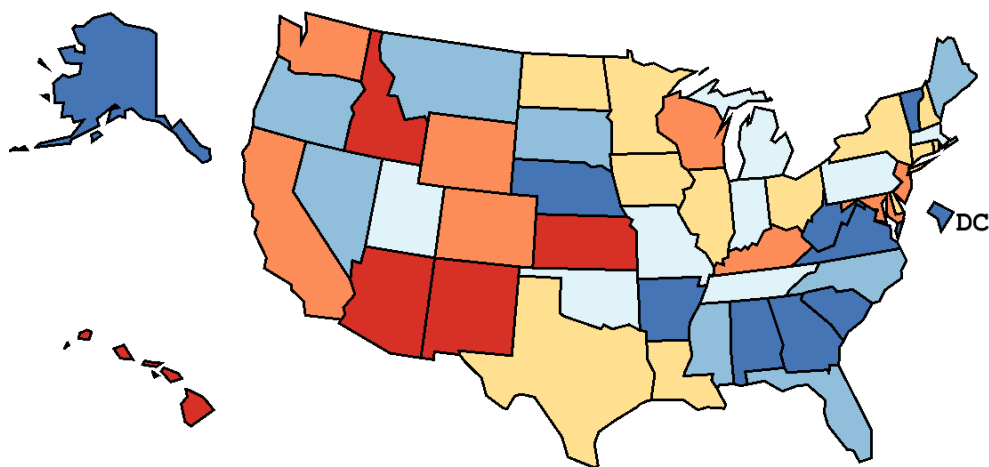
Table 26.18
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2003-2007

Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.48	0.01		
High Five States				
Kansas	0.60	0.07	(01)	26.77 ^c
Idaho	0.58	0.09	(02)	20.95 ^c
Arizona	0.55	0.04	(03)	15.59 ^c
Hawaii	0.55	0.09	(04)	15.06 ^c
New Mexico	0.55	0.08	(05)	14.80
Low Five States				
Nebraska	0.37	0.06	(47)	-22.97 ^c
Alaska	0.36	0.15	(48)	-23.71 ^c
Vermont	0.36	0.11	(49)	-23.99 ^c
South Carolina	0.36	0.04	(50)	-24.32 ^c
Alabama	0.35	0.04	(51)	-25.65 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.35	0.04	(51)	-25.65 ^c	Montana	0.40	0.09	(40)	-15.91 ^c
Alaska	0.36	0.15	(48)	-23.71 ^c	Nebraska	0.37	0.06	(47)	-22.97 ^c
Arizona	0.55	0.04	(03)	15.59 ^c	Nevada	0.43	0.06	(37)	-9.36
Arkansas	0.39	0.05	(44)	-19.07 ^c	New Hampshire	0.50	0.09	(16)	5.01
California	0.54	0.02	(09)	12.25	New Jersey	0.54	0.03	(07)	13.71
Colorado	0.52	0.05	(12)	7.99	New Mexico	0.55	0.08	(05)	14.80
Connecticut	0.50	0.05	(21)	3.99	New York	0.50	0.02	(19)	4.42
Delaware	0.49	0.11	(23)	3.07	North Carolina	0.41	0.03	(39)	-14.50
D.C.	0.39	0.12	(42)	-17.96 ^c	North Dakota	0.50	0.12	(22)	3.94
Florida	0.40 ^b	0.02	(41)	-16.79 ^c	Ohio	0.50	0.03	(20)	4.29
Georgia	0.39	0.03	(43)	-18.39 ^c	Oklahoma	0.47	0.05	(28)	-0.74
Hawaii	0.55	0.09	(04)	15.06 ^c	Oregon	0.43	0.05	(36)	-9.33
Idaho	0.58	0.09	(02)	20.95 ^c	Pennsylvania	0.48	0.03	(26)	0.55
Illinois	0.50	0.03	(18)	4.45	Rhode Island	0.49	0.09	(24)	2.87
Indiana	0.46	0.04	(32)	-4.56	South Carolina	0.36	0.04	(50)	-24.32 ^c
Iowa	0.50	0.05	(15)	5.41	South Dakota	0.44	0.10	(34)	-7.50
Kansas	0.60	0.07	(01)	26.77 ^c	Tennessee	0.45	0.04	(33)	-5.11
Kentucky	0.54	0.05	(06)	13.80	Texas	0.50	0.02	(14)	5.75
Louisiana	0.49	0.05	(25)	2.50	Utah	0.46	0.07	(30)	-2.60
Maine	0.44	0.07	(35)	-8.42	Vermont	0.36	0.11	(49)	-23.99 ^c
Maryland	0.54	0.04	(08)	12.98	Virginia	0.37	0.03	(46)	-21.97 ^c
Massachusetts	0.48	0.04	(27)	0.10	Washington	0.51	0.04	(13)	7.02
Michigan	0.47	0.03	(29)	-1.23	West Virginia	0.38	0.06	(45)	-21.25 ^c
Minnesota	0.50	0.04	(17)	4.46	Wisconsin	0.53	0.04	(11)	10.20
Mississippi	0.43	0.05	(38)	-10.07	Wyoming	0.53	0.14	(10)	10.59
Missouri	0.46	0.04	(31)	-3.65					



^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Difference between state rate and total U.S. rate is statistically significant ($p \leq .0002$).
^c Absolute percent difference between state rate and total U.S. rate is 15% or more.
SE Standard error of the rate.
PD Percent difference between state rate and total U.S. rate.

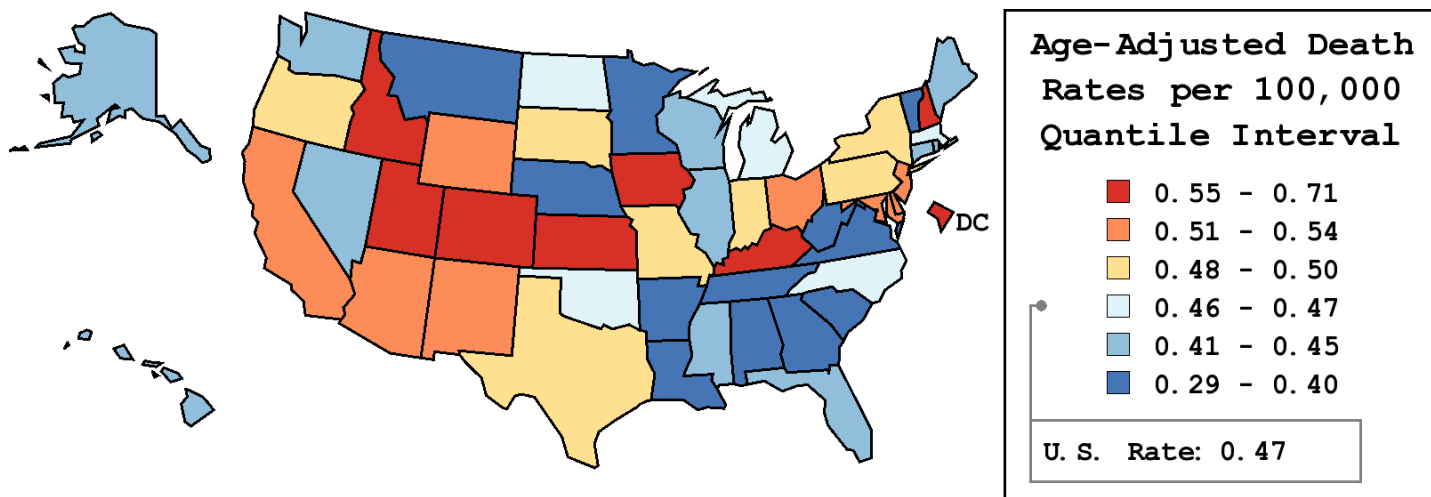
Table 26.19
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2003-2007

Males

State	Rate	SE	Rank	PD
TOTAL U.S.	0.47	0.01		
High Five States				
D.C.	0.71	0.25	(01)	50.88 ^c
Kansas	0.63	0.10	(02)	33.63 ^c
Utah	0.62	0.12	(03)	33.33 ^c
Idaho	0.59	0.14	(04)	25.87 ^c
Colorado	0.59	0.08	(05)	25.17 ^c
Low Five States				
Arkansas	0.37	0.08	(47)	-20.40 ^c
Alabama	0.37	0.06	(48)	-21.57 ^c
South Carolina	0.37	0.06	(49)	-21.82 ^c
West Virginia	0.34	0.09	(50)	-27.68 ^c
Nebraska	0.29	0.08	(51)	-38.54 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.37	0.06	(48)	-21.57 ^c	Montana	0.40	0.13	(43)	-15.22 ^c
Alaska	0.45	0.29	(34)	-4.07	Nebraska	0.29	0.08	(51)	-38.54 ^c
Arizona	0.51	0.06	(14)	8.77	Nevada	0.42	0.09	(37)	-9.85
Arkansas	0.37	0.08	(47)	-20.40 ^c	New Hampshire	0.58	0.15	(06)	24.42 ^c
California	0.51	0.03	(13)	9.20	New Jersey	0.51	0.05	(15)	8.50
Colorado	0.59	0.08	(05)	25.17 ^c	New Mexico	0.52	0.11	(12)	10.10
Connecticut	0.45	0.07	(32)	-3.55	New York	0.48	0.03	(23)	1.79
Delaware	0.54	0.17	(09)	15.04 ^c	North Carolina	0.46	0.05	(28)	-2.24
D.C.	0.71	0.25	(01)	50.88 ^c	North Dakota	0.47	0.17	(26)	0.93
Florida	0.41	0.03	(38)	-13.10	Ohio	0.52	0.04	(11)	11.27
Georgia	0.40	0.05	(42)	-14.83	Oklahoma	0.46	0.08	(27)	-1.44
Hawaii	0.44	0.12	(36)	-5.52	Oregon	0.50	0.08	(19)	5.89
Idaho	0.59	0.14	(04)	25.87 ^c	Pennsylvania	0.48	0.04	(22)	3.39
Illinois	0.41	0.04	(39)	-13.34	Rhode Island	0.45	0.14	(35)	-4.60
Indiana	0.50	0.06	(18)	7.23	South Carolina	0.37	0.06	(49)	-21.82 ^c
Iowa	0.58	0.09	(07)	23.93 ^c	South Dakota	0.50	0.16	(17)	7.71
Kansas	0.63	0.10	(02)	33.63 ^c	Tennessee	0.40	0.06	(41)	-14.28
Kentucky	0.57	0.08	(08)	20.96 ^c	Texas	0.49	0.04	(20)	4.44
Louisiana	0.38	0.06	(46)	-19.04 ^c	Utah	0.62	0.12	(03)	33.33 ^c
Maine	0.45	0.11	(33)	-4.06	Vermont	0.40	0.16	(44)	-15.24 ^c
Maryland	0.53	0.07	(10)	13.37	Virginia	0.40	0.05	(40)	-14.18
Massachusetts	0.47	0.06	(25)	1.03	Washington	0.45	0.06	(31)	-3.51
Michigan	0.47	0.05	(24)	1.29	West Virginia	0.34	0.09	(50)	-27.68 ^c
Minnesota	0.39	0.06	(45)	-17.60 ^c	Wisconsin	0.45	0.06	(29)	-2.92
Mississippi	0.45	0.09	(30)	-3.38	Wyoming	0.51	0.21	(16)	7.83
Missouri	0.48	0.06	(21)	3.47					



^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Difference between state rate and total U.S. rate is statistically significant ($p \leq .0002$).
^c Absolute percent difference between state rate and total U.S. rate is 15% or more.
SE Standard error of the rate.
PD Percent difference between state rate and total U.S. rate.

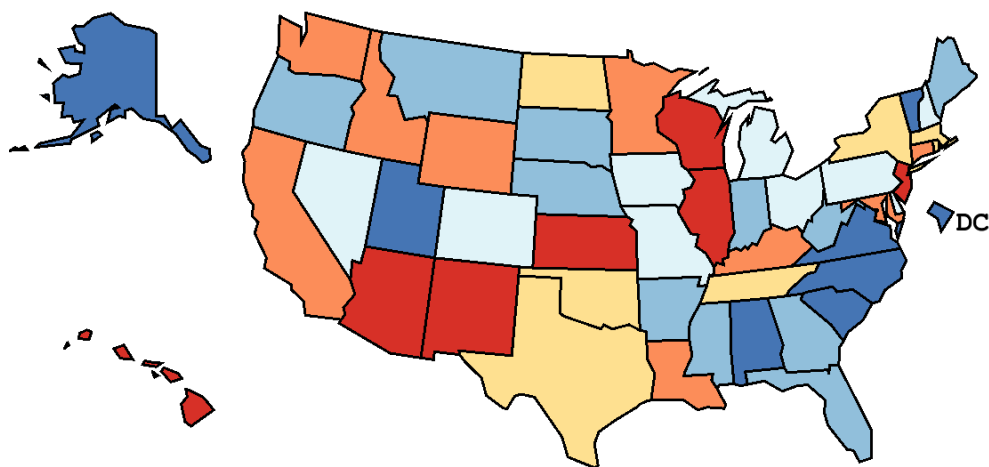
Table 26.20
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2003-2007

Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.48	0.01		
High Five States				
Hawaii	0.65	0.13	(01)	34.88 ^c
Kansas	0.60	0.09	(02)	25.77 ^c
Arizona	0.59	0.06	(03)	23.31 ^c
New Mexico	0.57	0.10	(04)	19.02 ^c
Wisconsin	0.57	0.06	(05)	18.65 ^c
Low Five States				
Virginia	0.35	0.04	(47)	-27.20 ^c
Alabama	0.33	0.05	(48)	-31.64 ^c
Utah	0.32	0.08	(49)	-33.76 ^c
Vermont	0.31	0.13	(50)	-34.41 ^c
D.C.	0.14 ^b	0.08	(51)	-69.77 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.33	0.05	(48)	-31.64 ^c	Montana	0.39	0.11	(38)	-18.37 ^c
Alaska	0.36	0.19	(44)	-24.72 ^c	Nebraska	0.40	0.09	(36)	-15.67 ^c
Arizona	0.59	0.06	(03)	23.31 ^c	Nevada	0.45	0.09	(30)	-6.73
Arkansas	0.38	0.06	(43)	-21.66 ^c	New Hampshire	0.47	0.11	(26)	-2.42
California	0.55	0.02	(10)	15.81 ^c	New Jersey	0.57	0.05	(07)	18.05 ^c
Colorado	0.45	0.06	(29)	-6.11	New Mexico	0.57	0.10	(04)	19.02 ^c
Connecticut	0.52	0.07	(15)	9.38	New York	0.51	0.03	(19)	6.32
Delaware	0.47	0.14	(27)	-2.55	North Carolina	0.36	0.04	(45)	-24.81 ^c
D.C.	0.14 ^b	0.08	(51)	-69.77 ^c	North Dakota	0.49	0.17	(20)	3.24
Florida	0.39 ^b	0.02	(41)	-19.46 ^c	Ohio	0.47	0.04	(25)	-2.21
Georgia	0.39	0.04	(40)	-19.36 ^c	Oklahoma	0.48	0.07	(21)	1.07
Hawaii	0.65	0.13	(01)	34.88 ^c	Oregon	0.39	0.06	(37)	-17.79 ^c
Idaho	0.55	0.12	(12)	15.07 ^c	Pennsylvania	0.47	0.03	(24)	-1.53
Illinois	0.57	0.04	(06)	18.60 ^c	Rhode Island	0.51	0.11	(18)	6.38
Indiana	0.41	0.05	(34)	-14.19	South Carolina	0.36	0.05	(46)	-24.86 ^c
Iowa	0.44	0.07	(31)	-8.12	South Dakota	0.38	0.12	(42)	-20.28 ^c
Kansas	0.60	0.09	(02)	25.77 ^c	Tennessee	0.48	0.05	(22)	-0.35
Kentucky	0.52	0.06	(16)	8.61	Texas	0.51	0.03	(17)	6.80
Louisiana	0.56	0.07	(09)	16.71 ^c	Utah	0.32	0.08	(49)	-33.76 ^c
Maine	0.41	0.09	(35)	-14.87	Vermont	0.31	0.13	(50)	-34.41 ^c
Maryland	0.53	0.06	(14)	10.40	Virginia	0.35	0.04	(47)	-27.20 ^c
Massachusetts	0.48	0.05	(23)	-0.38	Washington	0.55	0.06	(13)	14.56
Michigan	0.46	0.04	(28)	-4.75	West Virginia	0.39	0.08	(39)	-18.41 ^c
Minnesota	0.55	0.06	(11)	15.55 ^c	Wisconsin	0.57	0.06	(05)	18.65 ^c
Mississippi	0.41	0.07	(33)	-13.43	Wyoming	0.56	0.20	(08)	16.81 ^c
Missouri	0.44	0.05	(32)	-9.07					



Age-Adjusted Death Rates per 100,000 Quantile Interval

- 0.57 - 0.65
- 0.52 - 0.56
- 0.48 - 0.51
- 0.42 - 0.47
- 0.37 - 0.41
- 0.14 - 0.36

U. S. Rate: 0.48

^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Difference between state rate and total U.S. rate is statistically significant ($p \leq .0002$).
^c Absolute percent difference between state rate and total U.S. rate is 15% or more.
SE Standard error of the rate.
PD Percent difference between state rate and total U.S. rate.

Table 26.21
Cancer of the Thyroid (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2007
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 <17 ^e	0 to <32 ^e	>=32 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	129,436	84,397	60,842	43,865	34,734	28,796	293,782	392,263	41,993	434,256
	Males	28,915	18,810	13,638	9,320	7,506	5,976	65,378	86,537	9,693	96,230
	Females	100,521	65,587	47,204	34,545	27,228	22,820	228,404	305,726	32,300	338,026
White ^b	Both Sexes	113,306	74,195	53,885	39,494	31,213	25,971	258,618	347,261	37,998	385,259
	Males	25,872	17,067	12,412	8,663	6,765	5,476	59,105	78,450	8,184	86,634
	Females	87,434	57,128	41,473	30,831	24,448	20,495	199,513	268,811	29,814	298,625
Black ^b	Both Sexes	7,967	4,681	3,266	1,980	1,621	1,348	16,820	21,343	1,766	23,109
	Males	1,505	766	606	340	306	180	3,014	3,761	193	3,954
	Females	6,462	3,915	2,660	1,640	1,315	1,168	13,806	17,582	1,573	19,155
Asian/ Pacific Islander ^c	Both Sexes	5,842	3,838	2,659	+	+	+	13,108	+	+	+
	Males	1,067	714	445	+	+	+	2,347	+	+	+
	Females	4,775	3,124	2,214	+	+	+	10,761	+	+	+
Hispanic ^d	Both Sexes	11,622	7,347	5,057	+	+	+	25,316	+	+	+
	Males	1,999	1,238	843	+	+	+	4,275	+	+	+
	Females	9,623	6,109	4,214	+	+	+	21,041	+	+	+

Estimated prevalence percent^a on January 1, 2007, of the SEER 11 population diagnosed in the previous 17 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	0.0882%	0.0001%	0.0040%	0.0343%	0.1005%	0.1496%	0.1698%	0.1686%	0.1495%	0.1008%	0.0866%
	Males	0.0389%	-	0.0019%	0.0095%	0.0331%	0.0579%	0.0797%	0.0998%	0.1008%	0.0679%	0.0397%
	Females	0.1366%	-	0.0062%	0.0611%	0.1699%	0.2413%	0.2559%	0.2308%	0.1874%	0.1192%	0.1321%
White ^c	Both Sexes	0.0950%	-	0.0043%	0.0379%	0.1113%	0.1633%	0.1780%	0.1720%	0.1517%	0.0994%	0.0921%
	Males	0.0431%	-	0.0020%	0.0100%	0.0368%	0.0644%	0.0869%	0.1043%	0.1074%	0.0679%	0.0429%
	Females	0.1469%	-	0.0067%	0.0688%	0.1913%	0.2657%	0.2679%	0.2349%	0.1869%	0.1167%	0.1417%
Black ^c	Both Sexes	0.0409%	-	0.0015%	0.0123%	0.0433%	0.0670%	0.0918%	0.1191%	0.0994%	0.0726%	0.0459%
	Males	0.0157%	-	0.0012%	0.0032%	0.0132%	0.0233%	0.0352%	0.0603%	0.0585%	0.0629%	0.0200%
	Females	0.0638%	-	0.0017%	0.0211%	0.0696%	0.1053%	0.1389%	0.1647%	0.1268%	0.0773%	0.0672%
Asian/ Pacific Islander ^c	Both Sexes	0.0896%	-	0.0039%	0.0334%	0.0900%	0.1373%	0.1772%	0.1790%	0.1649%	0.1246%	0.0863%
	Males	0.0336%	-	-	0.0119%	0.0282%	0.0459%	0.0660%	0.0940%	0.0802%	0.0684%	0.0342%
	Females	0.1422%	-	0.0070%	0.0552%	0.1486%	0.2215%	0.2747%	0.2514%	0.2272%	0.1609%	0.1324%
Hispanic ^d	Both Sexes	0.0549%	-	0.0035%	0.0272%	0.0695%	0.1110%	0.1502%	0.1512%	0.1512%	0.1010%	0.0718%
	Males	0.0179%	-	0.0013%	0.0058%	0.0193%	0.0299%	0.0575%	0.0755%	0.0788%	0.0510%	0.0267%
	Females	0.0940%	-	0.0058%	0.0527%	0.1279%	0.1978%	0.2387%	0.2160%	0.2042%	0.1301%	0.1164%

^a US 2007 cancer prevalence counts are based on 2007 cancer prevalence proportions from the SEER registries and 1/1/2007 US population estimates based on the average of 2006 and 2007 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: 32 years for 1975-2007 SEER 9 data; 17 years for 1990-2007 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 32 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 <32 and >=32. (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.

Table 26.22

Cancer of the Thyroid (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2003-2007
Both Sexes by Race

Histology ^a	All Races		White		Black		Asian/Pacific Islander		American Indian/ Alaska Native ^b		Hispanic ^c	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Carcinoma	38,847	99.8%	32,187	99.8%	2,298	99.7%	3,690	99.8%	153	100.0%	5,269	99.8%
Epidermoid carcinoma ^d (8051-8131)	46	0.1%	38	0.1%	-	-	-	-	-	-	-	-
Adenocarcinoma ^e	37,556	96.5%	31,126	96.5%	2,202	95.5%	3,584	97.0%	148	96.7%	5,116	96.9%
Papillary adenocarcinoma (8050,8260,8340-8344, 8350,8450)	33,397	85.8%	27,742	86.0%	1,831	79.4%	3,255	88.1%	130	85.0%	4,688	88.8%
Follicular carcinoma (8330-8332,8335)	2,519	6.5%	1,990	6.2%	253	11.0%	225	6.1%	-	-	265	5.0%
Oxyphilic (8290)	1,238	3.2%	1,060	3.3%	92	4.0%	71	1.9%	-	-	116	2.2%
Other specific carcinomas ^f	647	1.7%	549	1.7%	47	2.0%	37	1.0%	-	-	80	1.5%
Medullary carcinoma (8510)	609	1.6%	518	1.6%	44	1.9%	34	0.9%	-	-	78	1.5%
Carcinoma, NOS (8004,8010-8012, 8020-8022,8030-8032)	598	1.5%	474	1.5%	47	2.0%	66	1.8%	-	-	66	1.2%
Anaplastic carcinoma (8004,8012,8020-8021, 8030-8032)	377	1.0%	302	0.9%	29	1.3%	41	1.1%	-	-	36	0.7%
Sarcoma and other soft tissue tumors (8680-8713,8800-8921, 8990-8991,9040-9044, 9120-9136,9150-9252, 9370-9373,9540-9582)	-	-	-	-	-	-	-	-	-	-	-	-
Other specific types ^g	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified (8000-8003,8005)	74	0.2%	55	0.2%	-	-	-	-	-	-	-	-
Total	38,935	100.0%	32,253	100.0%	2,305	100.0%	3,696	100.0%	153	100.0%	5,281	100.0%

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). Percents may not sum to 100 due to rounding.

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

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

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

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

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

^e Adenocarcinoma includes histologies 8050, 8140-8147, 8160-8162, 8180-8221, 8250-8507, 8514, 8520-8551, 8560, 8570-8574, 8576, 8940-8941.

^f Other specific carcinomas include histologies 8013-8015, 8033-8046, 8150-8155, 8170-8171, 8230-8249, 8510, 8512, 8561-8562, 8575, 8580-8671.

^g Other specific types include histologies 8720-8790, 8930-8936, 8950-8983, 9000-9030, 9060-9110, 9260-9365, 9380-9539.

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

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

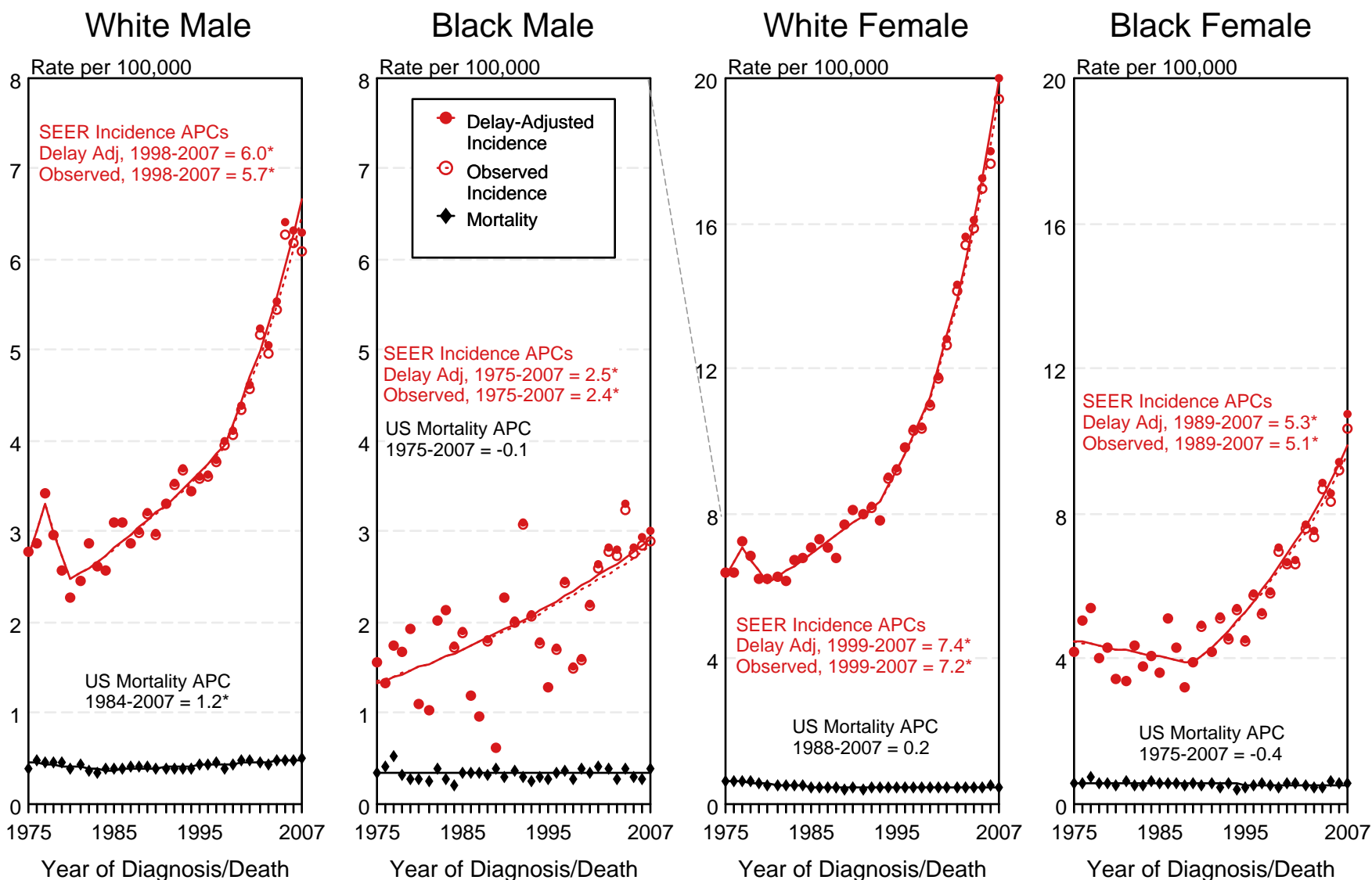


Figure 26.1

^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 3.4.3, April 2010, 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 Cancer of the Thyroid, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2007

and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2007

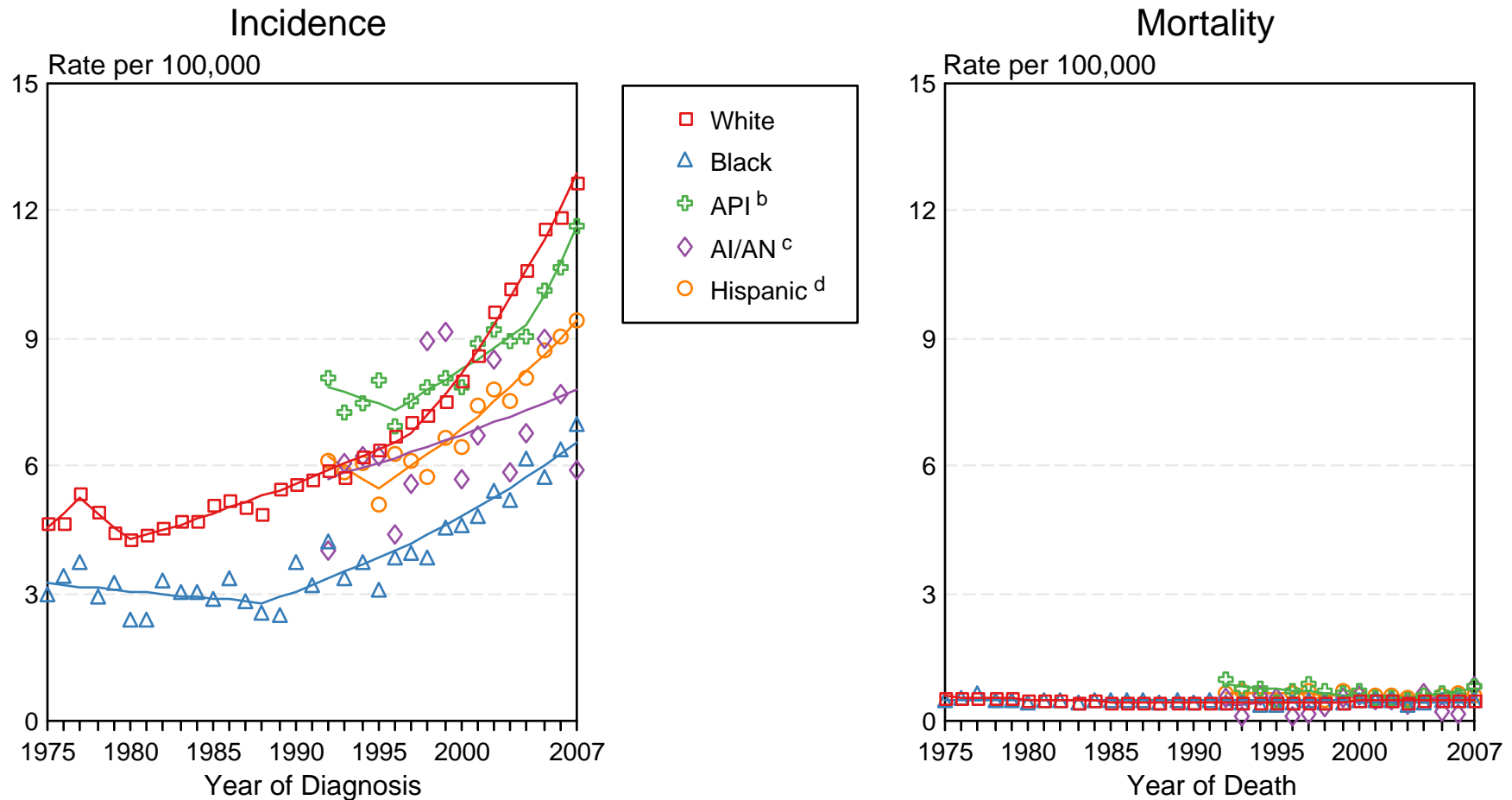


Figure 26.2

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).

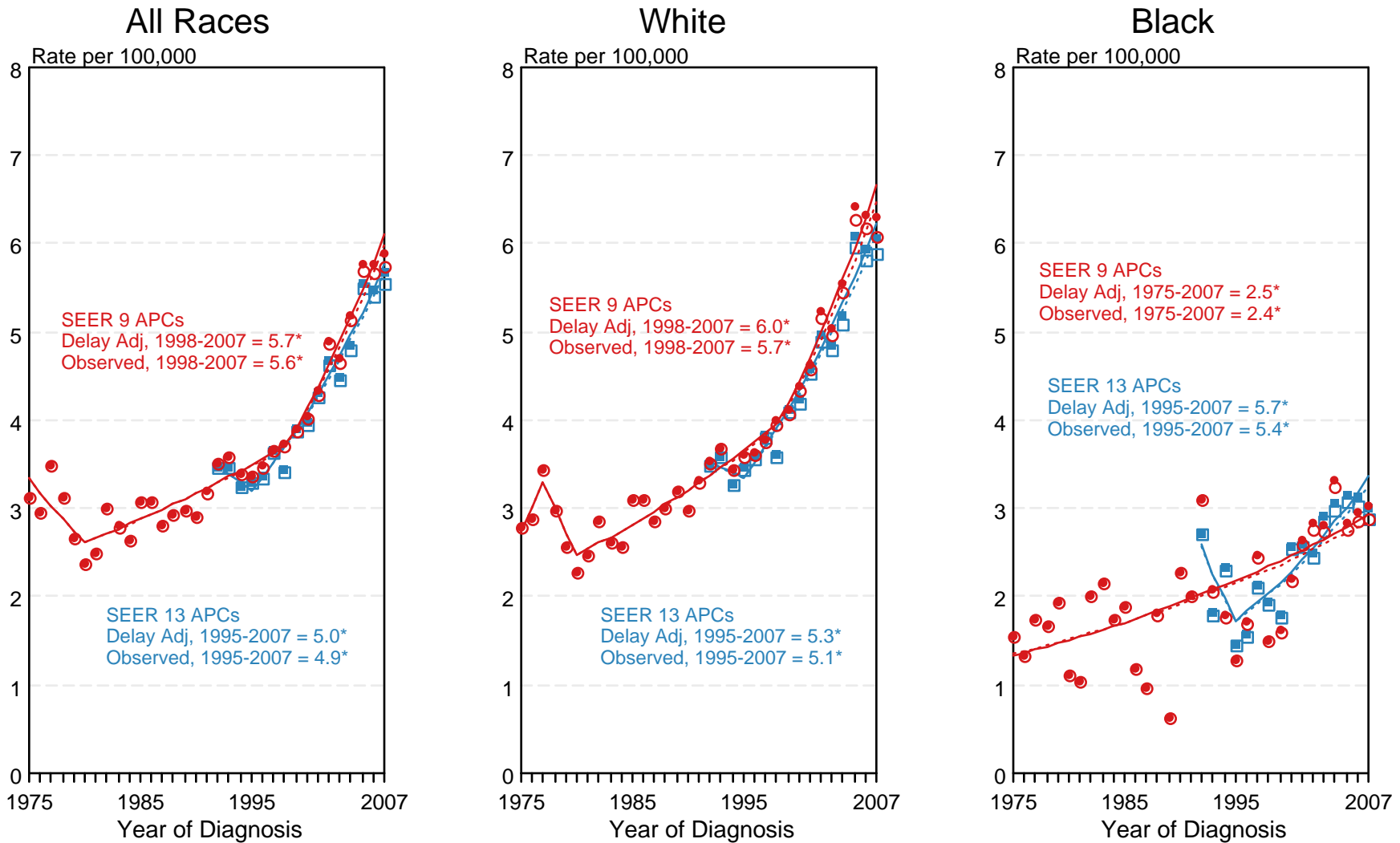
Regression lines are calculated using the Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2007 period allow a maximum of 4 joinpoints. Analyses for other ethnic groups during the period 1992-2007 allow a maximum 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, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.

SEER Observed Incidence and SEER Delay Adjusted Incidence Rates^a SEER 9 Areas Compared to SEER 13 Areas Cancer of the Thyroid, Male, by Race



● SEER 9 Delay-Adjusted Incidence ○ SEER 9 Observed Incidence ■ SEER 13 Delay-Adjusted Incidence □ SEER 13 Observed Incidence

^a 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 3.4.3, April 2010, 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 26.3

SEER Observed Incidence and SEER Delay Adjusted Incidence Rates^a SEER 9 Areas Compared to SEER 13 Areas Cancer of the Thyroid, Female, by Race

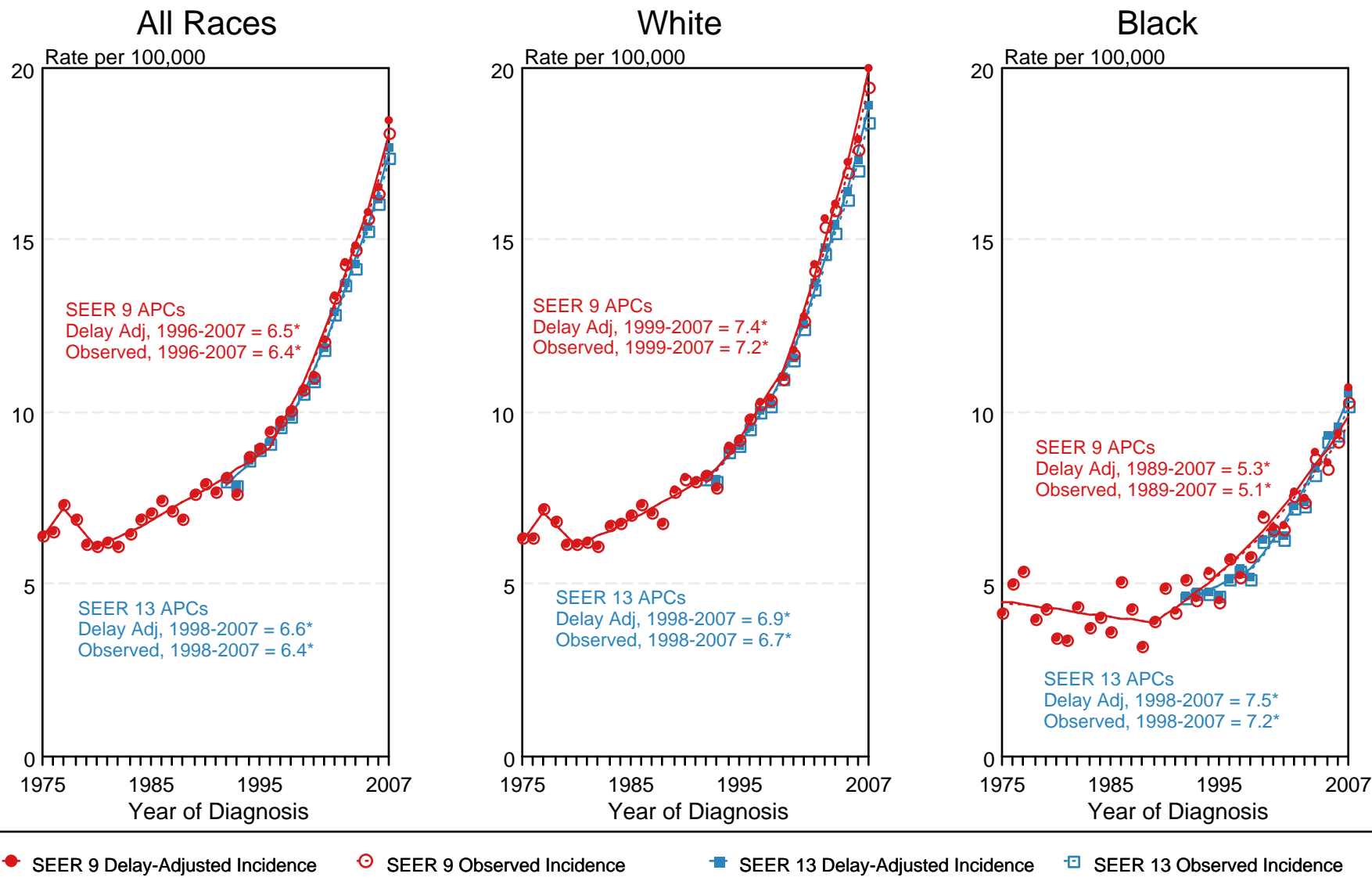


Figure 26.4

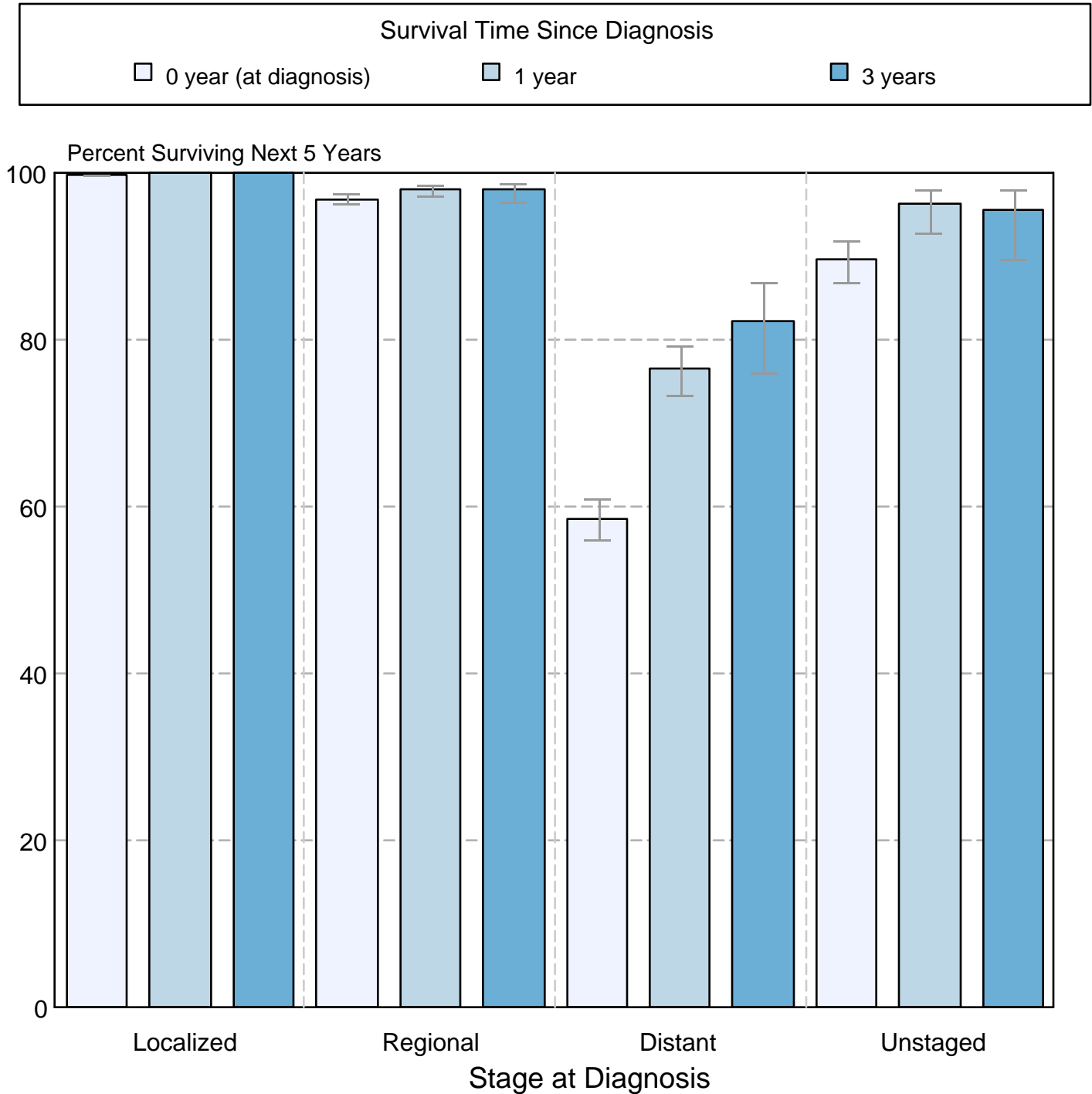
^a Source: SEER 9 areas and SEER 13 areas.
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.4.3, April 2010, National Cancer Institute.
The APC is the Annual Percent Change 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 26.5

Cancer of the Thyroid

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
1998-2006 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 2000-2006. The remaining 13 SEER Areas contribute cases for the entire period 1998-2006. 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.