

Table 26.1
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,
Both Sexes by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2008</u>														
All Races	1975-77	6.1	1977-80	-6.6	1980-97	2.4*	1997-08	6.6*					6.6*	6.6*
White	1975-77	7.3	1977-80	-6.7	1980-97	2.8*	1997-08	6.9*					6.9*	6.9*
Black	1975-88	-1.2	1988-08	4.8*									4.8*	4.8*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2008</u>														
All Races	1992-98	3.1*	1998-08	6.4*									6.4*	6.4*
White	1992-98	3.7*	1998-08	6.6*									6.6*	6.6*
Black	1992-95	-3.7	1995-08	6.5*									6.5*	6.5*
<u>SEER 9 Observed Incidence^a, 1975-2008</u>														
All Races	1975-77	6.1	1977-80	-6.6	1980-97	2.4*	1997-08	6.4*					6.4*	6.4*
White	1975-77	7.3	1977-80	-6.7	1980-97	2.7*	1997-08	6.8*					6.8*	6.8*
Black	1975-88	-1.1	1988-08	4.7*									4.7*	4.7*
<u>SEER 13 Observed Incidence^b, 1992-2008</u>														
All Races	1992-98	3.1*	1998-08	6.3*									6.3*	6.3*
White	1992-98	3.7*	1998-08	6.5*									6.5*	6.5*
White NH ^{ef}	1992-98	4.4*	1998-08	6.7*									6.7*	6.7*
Black	1992-95	-3.7	1995-08	6.3*									6.3*	6.3*
Black NH ^{ef}	1992-95	-4.0	1995-08	6.4*									6.4*	6.4*
API ^e	1992-97	-1.7	1997-08	4.7*									4.7*	4.7*
AI/AN ^{eg}	1992-08	2.3*											2.3*	2.3*
Hispanic ^f	1992-95	-4.6	1995-08	5.0*									5.0*	5.0*
<u>U.S. Cancer Mortality^c, 1975-2008</u>														
All Races	1975-88	-2.1*	1988-08	0.7*									0.7*	0.7*
White	1975-88	-2.2*	1988-08	0.7*									0.7*	0.7*
Black	1975-08	-0.2											-0.2	-0.2
<u>U.S. Cancer Mortality^c, 1992-2008</u>														
All Races	1992-08	0.8*											0.8*	0.8*
White	1992-08	0.8*											0.8*	0.8*
White NH ^{ef}	1992-08	0.9*											0.9*	0.9*
Black	1992-08	1.0*											1.0*	1.0*
Black NH ^{ef}	1992-08	1.1*											1.1*	1.1*
API ^e	1992-03	-3.9*	2003-08	8.4									2.8	8.4
AI/AN ^{eg}	1992-08	2.1											2.1	2.1
Hispanic ^f	1992-08	-0.2											-0.2	-0.2

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

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

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

Table 26.2
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,
Males by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2008</u>														
All Races	1975-80	-4.7*	1980-98	1.9*	1998-08	6.0*							6.0*	6.0*
White	1975-77	10.0	1977-80	-9.1	1980-98	2.6*	1998-08	6.1*					6.1*	6.1*
Black	1975-08	3.0*											3.0*	3.0*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2008</u>														
All Races	1992-96	-1.2	1996-08	5.5*									5.5*	5.5*
White	1992-96	-0.1	1996-08	5.7*									5.7*	5.7*
Black	1992-95	-13.6	1995-08	6.4*									6.4*	6.4*
<u>SEER 9 Observed Incidence^a, 1975-2008</u>														
All Races	1975-80	-4.7*	1980-98	1.9*	1998-08	5.8*							5.8*	5.8*
White	1975-77	10.0	1977-80	-9.1	1980-98	2.6*	1998-08	5.9*					5.9*	5.9*
Black	1975-08	2.9*											2.9*	2.9*
<u>SEER 13 Observed Incidence^b, 1992-2008</u>														
All Races	1992-96	-1.2	1996-08	5.3*									5.3*	5.3*
White	1992-95	-2.0	1995-08	5.4*									5.4*	5.4*
White NH ^{ef}	1992-96	0.3	1996-08	5.9*									5.9*	5.9*
Black	1992-95	-13.5	1995-08	6.2*									6.2*	6.2*
Black NH ^{ef}	1992-95	-13.3	1995-08	6.1*									6.1*	6.1*
API ^e	1992-08	2.1*											2.1*	2.1*
AI/AN ^{eg}	1992-08	1.9											1.9	1.9
Hispanic ^f	1992-08	3.5*											3.5*	3.5*
<u>U.S. Cancer Mortality^c, 1975-2008</u>														
All Races	1975-83	-3.1*	1983-08	1.2*									1.2*	1.2*
White	1975-84	-2.6*	1984-08	1.3*									1.3*	1.3*
Black	1975-08	0.1											0.1	0.1
<u>U.S. Cancer Mortality^c, 1992-2008</u>														
All Races	1992-08	1.6*											1.6*	1.6*
White	1992-08	1.7*											1.7*	1.7*
White NH ^{ef}	1992-08	1.7*											1.7*	1.7*
Black	1992-08	1.7*											1.7*	1.7*
Black NH ^{ef}	1992-08	1.6											1.6	1.6
API ^e	1992-08	0.0											0.0	0.0
AI/AN ^{eg}	-	-											-	-
Hispanic ^f	1992-08	2.4*											2.4*	2.4*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

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

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

Table 26.3
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2008 With up to Five Joinpoints, 1992-2008 With up to Three Joinpoints,
Females by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2008</u>														
All Races	1975-77	6.8	1977-80	-6.0	1980-97	2.7*	1997-08	6.9*					6.9*	6.9*
White	1975-81	-1.1	1981-93	2.4*	1993-99	5.1*	1999-08	7.4*					7.4*	7.4*
Black	1975-88	-1.4	1988-08	5.0*									5.0*	5.0*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2008</u>														
All Races	1992-98	3.8*	1998-08	6.6*									6.6*	6.6*
White	1992-98	4.4*	1998-08	6.9*									6.9*	6.9*
Black	1992-08	5.9*											5.9*	5.9*
<u>SEER 9 Observed Incidence^a, 1975-2008</u>														
All Races	1975-77	6.6	1977-80	-5.6	1980-96	2.5*	1996-08	6.6*					6.6*	6.6*
White	1975-81	-1.1	1981-93	2.4*	1993-99	5.1*	1999-08	7.2*					7.2*	7.2*
Black	1975-88	-1.3	1988-08	4.9*									4.9*	4.9*
<u>SEER 13 Observed Incidence^b, 1992-2008</u>														
All Races	1992-98	3.8*	1998-08	6.5*									6.5*	6.5*
White	1992-98	4.4*	1998-08	6.8*									6.8*	6.8*
White NH ^{ef}	1992-98	5.3*	1998-08	6.9*									6.9*	6.9*
Black	1992-08	5.8*											5.8*	5.8*
Black NH ^{ef}	1992-08	5.9*											5.9*	5.9*
API ^e	1992-99	0.4	1999-08	5.5*									5.5*	5.5*
AI/AN ^{eg}	1992-08	2.7											2.7	2.7
Hispanic ^f	1992-98	0.9	1998-08	5.9*									5.9*	5.9*
<u>U.S. Cancer Mortality^c, 1975-2008</u>														
All Races	1975-88	-2.6*	1988-08	0.4*									0.4*	0.4*
White	1975-88	-2.8*	1988-08	0.3*									0.3*	0.3*
Black	1975-08	-0.3											-0.3	-0.3
<u>U.S. Cancer Mortality^c, 1992-2008</u>														
All Races	1992-94	-6.1	1994-08	0.8*									0.8*	0.8*
White	1992-94	-5.4	1994-08	0.6*									0.6*	0.6*
White NH ^{ef}	1992-08	0.5*											0.5*	0.5*
Black	1992-08	0.9											0.9	0.9
Black NH ^{ef}	1992-08	1.0											1.0	1.0
API ^e	1992-03	-4.1*	2003-08	7.7									2.3	7.7
AI/AN ^{eg}	1992-08	-0.4											-0.4	-0.4
Hispanic ^f	1992-08	-1.4*											-1.4*	-1.4*

Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. (<http://surveillance.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

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

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

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	4.79	2.94	6.57	4.66	2.88	6.39	3.41	-	5.03
1977	5.44	3.49	7.32	5.35	3.43	7.23	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	2.58	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	6.80	3.02	-	4.08
1985	5.13	3.08	7.09	5.08	3.09	7.05	2.85	-	3.64
1986	5.32	3.07	7.48	5.24	3.11	7.33	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	7.65	5.48	3.21	7.74	2.51	-	3.93
1990	5.50	2.93	7.96	5.57	2.99	8.10	3.77	2.28	4.92
1991	5.49	3.20	7.69	5.69	3.31	8.00	3.23	2.08	4.21
1992	5.87	3.52	8.11	5.89	3.53	8.18	4.22	3.10	5.14
1993	5.65	3.59	7.65	5.77	3.69	7.82	3.39	2.08	4.58
1994	6.08	3.39	8.74	6.23	3.44	9.01	3.77	1.79	5.37
1995	6.22	3.38	8.98	6.42	3.62	9.22	3.08	-	4.52
1996	6.51	3.48	9.47	6.73	3.63	9.83	3.85	-	5.78
1997	6.78	3.67	9.80	7.05	3.78	10.32	4.00	2.46	5.27
1998	6.98	3.73	10.10	7.22	3.98	10.41	3.87	1.51	5.83
1999	7.35	3.88	10.68	7.59	4.09	11.03	4.60	1.61	7.03
2000	7.61	4.04	11.10	8.06	4.38	11.79	4.64	2.21	6.65
2001	8.29	4.33	12.15	8.69	4.62	12.79	4.95	2.63	6.81
2002	9.22	4.92	13.42	9.74	5.24	14.29	5.50	2.80	7.68
2003	9.64	4.71	14.46	10.34	5.05	15.66	5.31	2.88	7.50
2004	10.10	5.22	14.90	10.80	5.56	16.12	6.34	3.31	8.85
2005	10.91	5.80	15.91	11.86	6.44	17.32	5.86	2.79	8.53
2006	11.29	5.85	16.62	12.14	6.39	17.97	6.61	3.11	9.45
2007	12.34	6.02	18.54	13.15	6.43	20.00	7.36	3.35	10.67
2008	13.22	6.61	19.73	14.14	7.04	21.39	7.06	4.44	9.49

Additional information on the model used to delay-adjust SEER Incidence rates can be found at [\(http://surveillance.cancer.gov/delay/\)](http://surveillance.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	4.79	2.94	6.57	4.66	2.88	6.39	3.41	-	5.03
1977	5.44	3.49	7.32	5.35	3.43	7.23	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	2.58	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	5.08	3.08	7.04	2.85	-	3.64
1986	5.32	3.07	7.48	5.23	3.10	7.33	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	5.36	2.98	7.64	5.47	3.21	7.73	2.51	-	3.92
1990	5.49	2.93	7.95	5.56	2.99	8.09	3.76	2.28	4.91
1991	5.48	3.19	7.68	5.68	3.31	7.99	3.22	2.07	4.20
1992	5.86	3.51	8.10	5.88	3.52	8.17	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	6.21	3.43	8.99	3.75	1.78	5.35
1995	6.21	3.37	8.97	6.40	3.60	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	9.77	7.02	3.76	10.28	3.98	2.44	5.24
1998	6.96	3.71	10.07	7.19	3.96	10.37	3.85	1.50	5.79
1999	7.32	3.86	10.64	7.54	4.07	10.98	4.57	1.60	6.98
2000	7.58	4.02	11.06	8.01	4.35	11.72	4.60	2.18	6.60
2001	8.25	4.31	12.10	8.62	4.58	12.69	4.89	2.60	6.74
2002	9.17	4.89	13.35	9.66	5.19	14.17	5.43	2.76	7.59
2003	9.58	4.67	14.37	10.23	4.99	15.51	5.24	2.83	7.40
2004	10.03	5.17	14.80	10.68	5.48	15.95	6.25	3.25	8.72
2005	10.83	5.74	15.79	11.71	6.35	17.11	5.75	2.73	8.39
2006	11.19	5.78	16.48	11.96	6.28	17.72	6.48	3.04	9.27
2007	12.20	5.94	18.36	12.93	6.31	19.68	7.20	3.26	10.44
2008	12.98	6.47	19.39	13.77	6.83	20.85	6.82	4.27	9.18
1975-2008	7.02	3.84	10.09	7.16	3.95	10.33	4.25	2.18	5.98

^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	0.42	0.58
2002	0.48	0.45	0.48	0.48	0.46	0.48	0.48	0.39	0.52
2003	0.45	0.43	0.46	0.46	0.45	0.46	0.38	0.29	0.44
2004	0.47	0.47	0.47	0.47	0.48	0.46	0.45	0.41	0.48
2005	0.48	0.48	0.49	0.48	0.50	0.46	0.52	0.31	0.64
2006	0.49	0.47	0.51	0.49	0.48	0.49	0.48	0.28	0.60
2007	0.50	0.51	0.48	0.48	0.51	0.45	0.50	0.40	0.56
2008	0.51	0.50	0.52	0.51	0.52	0.51	0.47	0.41	0.52
1975-2008	0.47	0.43	0.50	0.47	0.44	0.48	0.47	0.34	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, 2004-2008									
All ages	11.0	5.6	16.3	11.5	5.9	17.2	6.5	3.2	9.3
Under 65	9.9	4.3	15.5	10.5	4.7	16.6	5.4	2.2	8.3
65 and over	18.3	14.0	21.8	18.5	14.4	21.9	13.8	10.2	16.4
All ages (IARC world std) ^c	8.9	4.3	13.5	9.4	4.6	14.3	5.1	2.4	7.5
Age-Specific Rates, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	-	0.2	0.2	-	0.2	-	-	-
10-14	0.5	0.2	0.8	0.6	0.2	1.0	-	-	-
15-19	2.0	0.7	3.4	2.2	0.8	3.7	0.5	-	1.0
20-24	4.9	1.3	8.8	5.3	1.4	9.6	2.2	-	3.7
25-29	8.3	2.7	14.2	8.9	2.9	15.5	3.9	1.2	6.6
30-34	12.0	4.0	20.3	13.2	4.3	22.9	5.0	1.5	8.3
35-39	14.8	5.3	24.6	15.7	5.8	26.3	7.5	2.2	12.3
40-44	16.1	6.6	25.6	17.1	7.1	27.4	8.3	3.4	12.6
45-49	18.1	7.7	28.3	19.3	8.5	30.2	9.1	3.1	14.4
50-54	19.2	9.1	29.0	20.0	9.8	30.2	11.9	4.2	18.5
55-59	19.9	11.7	27.7	20.4	12.2	28.4	14.1	8.4	18.7
60-64	20.2	13.1	26.7	20.7	13.8	27.1	15.0	8.0	20.6
65-69	22.0	15.2	28.0	22.5	16.0	28.2	16.3	10.9	20.4
70-74	20.6	15.5	24.7	21.0	16.2	24.9	14.9	8.7	19.2
75-79	17.9	13.7	21.0	18.2	14.3	21.2	12.8	9.9	14.7
80-84	14.7	13.0	15.8	14.7	13.1	15.6	10.6	-	11.1
85+	10.0	9.7	10.1	9.7	9.1	10.0	11.5	-	11.0
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2004-2008									
All ages	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.6
Under 65	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
65 and over	2.9	2.8	2.9	2.9	2.9	2.8	2.8	2.0	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, 2004-2008									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-
25-29	0.0	-	-	0.0	-	-	-	-	-
30-34	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	-	0.3
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	1.0	1.0	1.0	1.0	1.0	1.0	1.1	0.9	1.2
65-69	1.6	1.7	1.5	1.6	1.8	1.5	1.6	1.2	1.9
70-74	2.3	2.5	2.2	2.3	2.6	2.0	2.2	1.0	3.1
75-79	3.1	2.9	3.2	3.1	3.0	3.2	2.3	2.1	2.4
80-84	4.1	3.9	4.2	4.1	3.9	4.1	3.5	2.4	4.1
85+	5.2	4.7	5.4	5.0	4.7	5.2	6.5	5.2	7.0

^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	92.2	91.1	92.5	91.9	90.7	92.3	90.3	-	91.5
1978-1980 ^b	92.1	87.3	93.6	91.5	87.6	92.7	90.2	68.0 ^g	95.5
1981-1983 ^b	93.7	92.2	94.0	93.1	90.9	93.8	96.4	100.0	93.2
1984-1986 ^b	93.1	89.9	94.2	93.2	89.5	94.2	89.4	85.5 ^f	90.4
1987-1989 ^b	94.5	91.6	95.3	94.2	91.7	95.0	92.2	91.2 ^f	92.2
1990-1992 ^b	94.3	90.5	95.6	95.0	91.7	96.0	85.9	84.7 ^f	86.3
1993-1995 ^b	95.4	91.7	96.6	95.5	91.6	96.9	93.2	88.1 ^f	94.3
1996-2000 ^b	96.1	92.9	97.0	96.4	93.4	97.4	93.7	85.2	95.2
2001-2007 ^b	97.3 ^e	94.4 ^e	98.1 ^e	97.6 ^e	94.7 ^e	98.5 ^e	95.2	93.0	95.5
5-Year Period Survival (Percent) ^{cd}									
2007	97.4	94.3	98.3	97.8	94.5	98.6	94.7	89.4	95.8
Stage Distribution (%) 2001-2007 ^c									
All Stages									
Number of cases	45,390	10,391	34,999	37,433	8,851	28,582	2,672	499	2,173
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	68	58	71	68	59	71	75	65	78
Regional	25	31	23	25	31	23	15	20	14
Distant	5	8	4	5	8	4	7	12	6
Unstaged	2	3	2	2	2	2	2	3	2
5-Year Relative Survival (Percent), 2001-2007 ^c									
Age at Diagnosis:									
Ages <45	99.5	98.5	99.7	99.5	98.5	99.8	98.8	96.4	99.2
Ages 45-54	98.8	96.2	99.5	99.1	96.5	99.7	95.9	89.8	97.0
Ages 55-64	96.6	93.9	97.7	96.9	94.0	98.0	93.4	88.0	94.6
Ages 65-74	92.0	87.6	94.0	92.6	88.4	94.6	87.4	84.3 ^f	87.9
Ages 75+	82.2	77.3	83.7	83.4	77.1	84.3	70.0 ^f	69.7 ^g	69.9 ^f
Ages <65	98.8	96.6	99.3	98.9	96.7	99.5	97.0	92.4	97.8
Ages 65+	88.6	84.3	90.3	89.4	84.8	91.0	82.2	80.1 ^f	82.3
Stage:									
All Stages	97.2	94.2	98.1	97.5	94.4	98.3	94.9	90.9	95.7
Localized	99.8	99.6	99.9	99.9	99.7	99.9	99.1	95.7	99.4
Regional	96.8	94.9	97.6	96.8	94.4	97.8	95.5	95.4	94.4
Distant	55.4	48.3	59.5	54.6	46.7	59.7	49.2	49.6 ^f	48.5 ^f
Unstaged	87.6	80.3	90.1	86.7	78.4	89.4	77.7 ^f	-	77.0 ^f

^a Based on End Results data from a series of hospital registries and one population-based registry.^b SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).
Based on follow-up of patients into 2008.^c 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).
Based on follow-up of patients into 2008.^d Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).
The difference between 1975-1977 and 2001-2007 is statistically significant (p<.05).^e The standard error is between 5 and 10 percentage points.^f The standard error is greater than 10 percentage points.^g -
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	2007
1-year	95.0	95.2	96.0	96.6	96.6	95.6	95.2	97.5	96.7	96.9	96.5	97.7	97.4	97.7	97.6	97.2	98.0	98.4	97.7	98.5	98.6
2-year	93.6	94.5	95.3	96.2	95.9	94.8	94.7	97.0	96.2	96.5	96.2	97.1	97.1	97.1	97.4	97.1	97.8	97.9	97.3	98.4	
3-year	92.9	93.7	94.7	95.5	95.6	94.2	94.7	96.4	96.0	96.0	96.2	96.9	97.1	97.1	96.9	97.1	97.6	97.9	97.3		
4-year	92.5	93.4	94.3	95.5	95.1	93.8	94.3	96.0	95.9	95.4	95.7	96.4	97.0	97.0	96.9	97.1	97.4	97.8			
5-year	92.1	93.3	94.1	95.5	94.4	93.0	94.3	95.7	95.8	94.9	95.4	96.3	96.8	96.4	96.1	97.1	97.2				
6-year	91.7	93.2	93.8	95.0	94.1	92.8	94.1	95.3	95.8	94.8	95.2	95.9	96.3	96.4	96.1	96.8					
7-year	91.5	92.7	93.5	94.7	93.7	92.7	93.9	95.2	95.6	94.4	95.2	95.9	96.2	96.2	96.1						
8-year	91.1	92.6	93.3	94.7	93.7	92.7	93.9	94.5	95.5	94.2	95.2	95.9	96.0	96.0							
9-year	90.7	92.3	93.1	94.7	93.6	92.7	93.7	94.2	95.5	93.7	95.1	95.9	95.6								
10-year	90.6	92.0	92.8	94.1	93.3	92.7	93.1	94.0	95.1	93.6	95.1	95.9									
11-year	90.3	91.7	92.7	93.5	93.1	92.4	92.8	94.0	94.9	93.3	95.1										
12-year	90.3	91.5	92.6	93.4	92.7	92.1	92.7	93.6	94.9	93.0											
13-year	90.1	91.2	92.4	93.0	92.7	92.1	92.7	93.6	94.9												
14-year	90.0	91.1	92.3	92.5	92.4	92.1	92.3	93.6													
15-year	89.8	90.7	92.3	92.4	91.7	91.8	92.1														
16-year	89.7	90.6	92.2	92.2	91.2	91.8															
17-year	89.6	90.6	92.1	92.2	91.2																
18-year	89.3	90.4	92.1	92.2																	
19-year	89.2	90.4	91.8																		
20-year	89.2	90.4																			

^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	2007
Survival Time																					
1-year	94.6	92.5	95.0	93.9	95.3	93.9	93.3	96.7	93.4	93.7	92.4	97.3	97.0	96.4	96.2	95.2	96.2	96.6	96.9	96.4	97.3
2-year	92.6	92.0	93.8	92.5	92.5	92.9	92.5	95.5	91.9	93.4	91.0	95.4	96.2	95.1	95.3	94.9	95.5	95.2	95.5	96.1	
3-year	91.6	90.8	93.6	91.5	91.3	92.0	91.8	94.8	91.7	92.2	91.0	94.7	96.2	95.1	94.0	94.9	94.2	94.9	95.5		
4-year	90.5	90.4	92.2	91.5	91.1	91.3	90.2	94.2	91.4	91.6	89.4	93.7	96.2	95.1	93.4	94.6	93.6	94.5			
5-year	89.9	90.3	91.6	91.1	89.4	90.7	90.0	93.4	91.3	89.7	88.5	93.7	96.2	94.0	92.1	94.3	93.3				
6-year	89.6	89.9	91.2	90.4	88.4	90.7	89.8	93.0	90.4	89.7	88.0	93.5	95.8	94.0	91.8	93.9					
7-year	89.6	89.4	90.1	90.4	87.5	90.7	89.6	92.3	88.8	89.4	88.0	93.3	95.4	93.6	91.8						
8-year	89.3	89.3	89.7	90.4	87.1	90.7	89.2	91.3	88.8	88.6	88.0	93.3	95.3	93.6							
9-year	88.8	88.7	88.6	90.4	87.1	90.7	88.9	90.9	88.8	86.6	87.3	93.3	93.1								
10-year	88.6	87.9	88.5	90.3	87.1	90.7	87.3	90.9	87.5	86.2	87.3	93.3									
11-year	87.5	87.4	88.5	90.2	87.0	90.5	87.3	90.9	86.3	84.8	87.0										
12-year	87.5	86.5	88.5	89.0	86.9	89.1	87.3	89.8	86.1	83.9											
13-year	87.4	86.1	87.8	86.9	86.9	89.1	87.3	89.4	86.1												
14-year	87.3	86.1	87.7	86.7	86.6	89.0	86.7	89.4													
15-year	86.7	85.2	87.7	83.7	85.2	88.9	85.9														
16-year	86.5	85.2	87.7	83.4	85.2	88.4															
17-year	86.5	84.8	87.7	83.4	85.2																
18-year	86.5	84.4	87.7	83.4																	
19-year	86.5	84.4	87.7																		
20-year	86.5	84.4																			

^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	2007
Survival Time																					
1-year	95.1	96.0	96.4	97.4	97.0	96.3	95.8	97.8	97.7	97.9	97.7	97.8	97.5	98.0	98.0	97.7	98.5	98.9	98.0	99.0	99.0
2-year	93.9	95.4	95.7	97.3	96.9	95.4	95.6	97.4	97.4	97.5	97.7	97.6	97.3	97.7	97.9	97.7	98.4	98.7	97.9	99.0	
3-year	93.3	94.7	95.1	96.8	96.9	95.0	95.6	96.8	97.3	97.1	97.7	97.6	97.3	97.5	97.7	97.7	98.4	98.7	97.9		
4-year	93.2	94.5	95.0	96.8	96.3	94.7	95.6	96.6	97.3	96.5	97.5	97.2	97.1	97.5	97.7	97.7	98.4	98.7			
5-year	92.8	94.3	94.9	96.8	96.0	93.8	95.6	96.4	97.2	96.4	97.5	97.0	96.8	97.1	97.3	97.7	98.3				
6-year	92.4	94.2	94.7	96.4	95.9	93.6	95.6	95.9	97.2	96.3	97.3	96.5	96.5	97.0	97.3	97.6					
7-year	92.1	93.8	94.6	95.8	95.6	93.4	95.4	95.9	97.2	95.8	97.3	96.5	96.2	97.0	97.3						
8-year	91.7	93.7	94.5	95.8	95.6	93.4	95.4	95.4	97.2	95.8	97.3	96.5	96.1	96.6							
9-year	91.4	93.6	94.4	95.8	95.6	93.4	95.4	95.1	97.2	95.8	97.3	96.5	96.1								
10-year	91.2	93.4	94.2	95.1	95.1	93.4	95.3	94.8	97.2	95.7	97.3	96.5									
11-year	91.2	93.1	94.0	94.5	95.0	93.0	94.8	94.8	97.2	95.7	97.3										
12-year	91.2	93.1	93.9	94.5	94.5	93.0	94.7	94.7	97.2	95.7											
13-year	91.0	92.9	93.9	94.5	94.4	93.0	94.6	94.7	97.2												
14-year	90.8	92.8	93.8	94.2	94.2	93.0	94.4	94.7													
15-year	90.7	92.5	93.7	94.2	93.6	92.7	94.3														
16-year	90.7	92.3	93.5	94.2	93.0	92.7															
17-year	90.5	92.3	93.4	94.2	93.0																
18-year	89.9	92.3	93.3	94.2																	
19-year	89.7	92.3	93.1																		
20-year	89.7	92.3																			

^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, 2006-2008 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	0.08	0.97	0.06	Asian/ Pacific Islander	0	0.00	0.01	0.08	1.08	0.12
	10	0.02	0.08	0.22	0.98	0.06		10	0.01	0.08	0.21	1.09	0.12
	20	0.07	0.20	0.38	0.96	0.06		20	0.06	0.19	0.37	1.08	0.12
	30	0.14	0.31	0.51	0.91	0.06		30	0.13	0.31	0.51	1.02	0.12
	40	0.18	0.37	0.57	0.78	0.06		40	0.18	0.38	0.59	0.90	0.12
	50	0.20	0.40	0.55	0.62	0.06		50	0.21	0.42	0.60	0.73	0.12
	60	0.21	0.37	0.43	0.44	0.06		60	0.22	0.41	0.52	0.54	0.12
	70	0.18	0.25	-	0.27	0.06		70	0.21	0.33	-	0.35	0.10
80	0.10	-	-	0.12	0.04	80	0.15	-	-	0.18	0.08		
White	0	0.00	0.02	0.09	1.01	0.06	American Indian/ Alaska Native ^a	0	0.00	0.01	0.06	0.49	0.07
	10	0.02	0.09	0.24	1.02	0.06		10	0.01	0.06	0.15	0.50	0.07
	20	0.07	0.22	0.41	1.01	0.06		20	0.05	0.14	0.21	0.49	0.07
	30	0.15	0.33	0.53	0.94	0.06		30	0.09	0.17	0.25	0.45	0.07
	40	0.19	0.39	0.59	0.80	0.06		40	0.08	0.17	0.26	0.37	0.07
	50	0.21	0.41	0.56	0.63	0.06		50	0.09	0.19	0.27	0.30	0.07
	60	0.22	0.38	0.44	0.45	0.06		60	0.10	0.19	0.23	0.23	0.08
	70	0.18	0.25	-	0.26	0.05		70	0.10	0.14	-	0.14	0.09
80	0.10	-	-	0.12	0.04	80	0.06	-	-	0.06	0.09		
Black	0	0.00	0.00	0.03	0.53	0.05	Hispanic ^b	0	0.00	0.01	0.07	0.89	0.10
	10	0.00	0.03	0.09	0.54	0.05		10	0.01	0.07	0.17	0.90	0.10
	20	0.03	0.09	0.17	0.54	0.05		20	0.06	0.16	0.30	0.89	0.10
	30	0.06	0.14	0.26	0.52	0.05		30	0.10	0.24	0.41	0.84	0.10
	40	0.09	0.20	0.33	0.47	0.05		40	0.14	0.32	0.49	0.75	0.10
	50	0.12	0.26	0.35	0.40	0.05		50	0.18	0.36	0.50	0.62	0.10
	60	0.15	0.25	0.29	0.31	0.05		60	0.19	0.34	0.42	0.46	0.10
	70	0.12	0.17	-	0.20	0.05		70	0.17	0.26	-	0.30	0.09
80	0.08	-	-	0.11	0.04	80	0.11	-	-	0.17	0.07		

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

Source: Incidence data are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Mortality data are from the NCHS public use data file for the total US.

^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, 2006-2008 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	0.50	0.05	Asian/ Pacific Islander	0	0.00	0.00	0.03	0.50	0.08
	10	0.01	0.03	0.07	0.50	0.05		10	0.00	0.03	0.08	0.50	0.08
	20	0.02	0.07	0.14	0.50	0.05		20	0.02	0.07	0.13	0.50	0.08
	30	0.05	0.12	0.22	0.49	0.05		30	0.05	0.11	0.20	0.48	0.08
	40	0.07	0.18	0.30	0.45	0.05		40	0.06	0.15	0.25	0.43	0.08
	50	0.11	0.23	0.33	0.39	0.05		50	0.09	0.19	0.29	0.38	0.08
	60	0.14	0.25	0.30	0.30	0.05		60	0.11	0.21	0.28	0.30	0.08
	70	0.13	0.19	-	0.19	0.05		70	0.11	0.19	-	0.21	0.07
80	0.08	-	-	0.10	0.04	80	0.10	-	-	0.13	0.04		
White	0	0.00	0.01	0.03	0.53	0.05	American Indian/ Alaska Native ^a	0	0.00	0.01	0.02	0.20	0.04
	10	0.01	0.03	0.08	0.53	0.05		10	0.01	0.02	0.04	0.20	0.04
	20	0.02	0.07	0.15	0.53	0.05		20	0.02	0.04	0.06	0.20	0.05
	30	0.05	0.13	0.24	0.51	0.05		30	0.02	0.04	0.08	0.19	0.05
	40	0.08	0.19	0.32	0.47	0.06		40	0.02	0.06	0.12	0.17	0.05
	50	0.11	0.25	0.35	0.40	0.06		50	0.04	0.10	0.16	0.16	0.05
	60	0.14	0.26	0.31	0.31	0.05		60	0.07	0.13	0.13	0.13	0.05
	70	0.14	0.19	-	0.20	0.05		70	0.07	0.07	-	0.07	0.05
80	0.08	-	-	0.09	0.04	80	0.01	-	-	0.01	0.04		
Black	0	0.00	0.00	0.01	0.25	0.03	Hispanic ^b	0	0.00	0.01	0.02	0.39	0.08
	10	0.00	0.01	0.03	0.25	0.03		10	0.00	0.02	0.04	0.40	0.08
	20	0.01	0.03	0.06	0.25	0.03		20	0.01	0.04	0.08	0.40	0.08
	30	0.02	0.05	0.10	0.25	0.03		30	0.02	0.07	0.15	0.39	0.08
	40	0.03	0.09	0.15	0.24	0.03		40	0.05	0.13	0.21	0.37	0.08
	50	0.06	0.13	0.18	0.22	0.03		50	0.08	0.17	0.26	0.33	0.08
	60	0.08	0.14	0.17	0.18	0.03		60	0.09	0.19	0.24	0.26	0.08
	70	0.07	0.12	-	0.13	0.03		70	0.11	0.17	-	0.19	0.07
80	0.08	-	-	0.10	0.03	80	0.08	-	-	0.11	0.06		

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

Source: Incidence data are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Mortality data are from the NCHS public use data file for the total US.

^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, 2006-2008 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	0.03	0.14	1.44	0.07	Asian/ Pacific Islander	0	0.00	0.03	0.13	1.61	0.15
	10	0.03	0.14	0.37	1.45	0.07		10	0.02	0.13	0.33	1.62	0.15
	20	0.12	0.35	0.62	1.43	0.07		20	0.10	0.31	0.59	1.60	0.15
	30	0.23	0.51	0.79	1.32	0.07		30	0.21	0.49	0.79	1.50	0.15
	40	0.28	0.57	0.83	1.10	0.07		40	0.28	0.59	0.89	1.30	0.16
	50	0.29	0.56	0.75	0.84	0.07		50	0.31	0.61	0.87	1.03	0.16
	60	0.28	0.48	0.56	0.57	0.07		60	0.31	0.58	0.72	0.74	0.15
	70	0.22	0.31	-	0.32	0.06		70	0.28	0.43	-	0.46	0.13
80	0.11	-	-	0.14	0.05	80	0.18	-	-	0.21	0.11		
White	0	0.00	0.03	0.16	1.51	0.07	American Indian/ Alaska Native ^a	0	0.00	0.02	0.09	0.78	0.08
	10	0.03	0.16	0.41	1.52	0.07		10	0.02	0.10	0.25	0.79	0.09
	20	0.13	0.38	0.68	1.50	0.07		20	0.08	0.24	0.37	0.78	0.09
	30	0.25	0.55	0.85	1.38	0.07		30	0.16	0.30	0.43	0.71	0.09
	40	0.30	0.60	0.87	1.13	0.07		40	0.14	0.28	0.40	0.56	0.09
	50	0.30	0.58	0.77	0.85	0.07		50	0.14	0.26	0.37	0.43	0.09
	60	0.29	0.48	0.56	0.57	0.07		60	0.13	0.24	0.31	0.31	0.09
	70	0.22	0.30	-	0.32	0.06		70	0.13	0.20	-	0.20	0.11
80	0.11	-	-	0.13	0.05	80	0.10	-	-	0.10	0.11		
Black	0	0.00	0.01	0.05	0.79	0.06	Hispanic ^b	0	0.00	0.02	0.13	1.40	0.11
	10	0.01	0.06	0.15	0.81	0.07		10	0.02	0.13	0.31	1.41	0.11
	20	0.05	0.15	0.28	0.80	0.07		20	0.11	0.29	0.54	1.39	0.11
	30	0.10	0.23	0.41	0.76	0.07		30	0.19	0.43	0.70	1.29	0.11
	40	0.13	0.31	0.49	0.67	0.07		40	0.25	0.52	0.78	1.11	0.11
	50	0.18	0.37	0.49	0.56	0.07		50	0.27	0.54	0.73	0.88	0.11
	60	0.20	0.33	0.38	0.41	0.07		60	0.28	0.47	0.57	0.63	0.11
	70	0.15	0.21	-	0.24	0.06		70	0.21	0.32	-	0.38	0.10
80	0.08	-	-	0.12	0.05	80	0.14	-	-	0.21	0.08		

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

Source: Incidence data are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Mortality data are from the NCHS public use data file for the total US.

^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 2004-2008			Trend 1999-2008 ^c			Trend 1999-2008 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	11.0	5.6	16.3	6.3*	5.3*	6.5*	6.4*	5.8*	6.6*
White	11.5	5.9	17.2	6.5*	5.4*	6.8*	6.8*	5.9*	7.2*
White Hispanic ^e	9.7	4.1	15.4	4.9*	3.3*	6.0*	-	-	-
White Non-Hispanic ^e	12.2	6.4	18.0	6.7*	5.9*	6.9*	-	-	-
Black	6.5	3.2	9.3	6.3*	6.2*	5.8*	4.7*	2.9*	4.9*
Asian/Pacific Islander	10.9	4.9	16.4	4.7*	2.1*	5.5*	-	-	-
Amer Ind/Alaska Nat ^f	6.3	3.2	9.4	2.3*	-	-	-	-	-
Hispanic ^e	9.4	4.0	15.0	5.0*	3.5*	5.9*	-	-	-
<u>U.S. Mortality^g</u>									
RACE/ETHNICITY	Rate 2004-2008			Trend 1999-2008 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	0.5	0.5	0.5	0.8*	1.6*	0.8*			
White	0.5	0.5	0.5	0.8*	1.7*	0.6*			
White Hispanic ^e	0.6	0.6	0.7	-0.1	2.5*	-1.3*			
White Non-Hispanic ^e	0.5	0.5	0.5	0.9*	1.7*	0.5*			
Black	0.5	0.4	0.6	1.0*	1.7*	0.9			
Asian/Pacific Islander	0.7	0.5	0.8	2.8	-	2.3			
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	-0.2	2.4*	-1.4*			

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

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

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

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 1999-2008 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2008.

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

Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. The 2004-2008 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia and North Dakota.

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

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 1999-2008 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2008.

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

Table 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, 2004-2008</u>									
Atlanta & Rural Georgia	9.89	5.01	14.46	12.15	6.31	18.22	6.15	2.85	8.74
Atlanta	9.93	5.11	14.45	12.28	6.49	18.33	6.06	2.77	8.62
Rural Georgia	8.39	-	13.41	8.43	-	13.70	7.96	-	12.07
California	9.61	4.85	14.37	9.78	5.03	14.67	5.68	2.91	8.21
Greater Bay Area	8.85	4.30	13.47	8.95	4.51	13.73	4.00	2.41	5.43
San Francisco-Oakland	8.10	3.92	12.26	8.15	4.10	12.48	3.76	2.18	5.12
San Jose-Monterey	10.24	5.01	15.75	10.31	5.23	15.87	5.39	-	-
Los Angeles	10.15	4.97	15.14	10.41	5.25	15.59	6.72	2.94	9.81
Greater California	9.63	4.99	14.34	9.79	5.11	14.60	5.38	3.05	7.78
Connecticut	15.54	7.76	22.96	16.33	8.14	24.23	7.89	4.39	10.80
Detroit	11.01	5.97	15.79	12.22	6.62	17.83	7.13	3.57	9.96
Hawaii	12.77	6.20	19.51	10.47	5.58	16.42	11.27	-	-
Iowa	10.74	5.94	15.61	10.72	5.84	15.65	7.14	-	-
Kentucky	11.34	5.57	16.91	11.54	5.65	17.27	8.96	4.40	12.99
Louisiana	8.75	4.58	12.67	10.21	5.42	14.97	5.37	2.30	7.86
New Jersey	14.44	7.18	21.42	15.45	7.72	23.04	7.60	3.76	10.90
New Mexico	12.42	5.82	18.84	13.14	6.20	19.95	-	-	-
Seattle-Puget Sound	11.69	6.03	17.35	11.83	6.28	17.46	7.29	-	11.73
Utah	13.85	6.61	21.12	14.10	6.62	21.62	-	-	-
9 SEER Areas ^b	11.46	5.83	16.99	12.22	6.26	18.27	6.51	3.31	9.21
11 SEER Areas ^b	11.06	5.58	16.45	11.66	5.96	17.47	6.55	3.23	9.36
13 SEER Areas ^b	11.05	5.57	16.42	11.65	5.95	17.46	6.56	3.23	9.38
17 SEER Areas ^b	10.99	5.56	16.33	11.53	5.89	17.25	6.50	3.20	9.35

^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, 2004-2008</u>									
Atlanta & Rural Georgia	0.34	0.37	0.33	0.32	-	-	-	-	-
Atlanta	0.34	0.40	0.32	0.33	-	-	-	-	-
Rural Georgia	-	-	-	-	-	-	-	-	-
California	0.59	0.55	0.62	0.55	0.54	0.56	0.49	-	0.55
Greater Bay Area	0.60	0.51	0.67	0.55	0.52	0.57	-	-	-
San Francisco-Oakland	0.57	0.47	0.64	0.52	0.45	0.57	-	-	-
San Jose-Monterey	0.66	0.58	0.72	0.61	0.64	0.58	-	-	-
Los Angeles	0.65	0.61	0.67	0.64	0.63	0.65	0.41	-	-
Greater California	0.55	0.53	0.57	0.52	0.52	0.53	0.58	-	-
Connecticut	0.49	0.50	0.48	0.50	0.54	0.46	-	-	-
Detroit	0.41	0.46	0.37	0.45	0.50	0.39	-	-	-
Hawaii	0.55	-	0.65	-	-	-	-	-	-
Iowa	0.53	0.60	0.47	0.54	0.61	0.48	-	-	-
Kentucky	0.52	0.50	0.53	0.53	0.50	0.54	-	-	-
Louisiana	0.46	0.37	0.52	0.51	0.44	0.55	0.32	-	-
New Jersey	0.53	0.52	0.54	0.55	0.55	0.55	0.40	-	-
New Mexico	0.50	0.52	0.49	0.52	0.53	0.52	-	-	-
Seattle-Puget Sound	0.53	0.49	0.56	0.51	0.47	0.53	-	-	-
Utah	0.56	0.70	0.44	0.57	0.72	0.43	-	-	-
9 SEER Areas ^b	0.50	0.50	0.50	0.50	0.52	0.47	0.39	-	0.42
11 SEER Areas ^b	0.54	0.53	0.55	0.53	0.55	0.52	0.39	0.34	0.45
13 SEER Areas ^b	0.54	0.53	0.55	0.53	0.55	0.51	0.39	0.34	0.45
17 SEER Areas ^b	0.54	0.52	0.55	0.53	0.53	0.52	0.40	0.34	0.47
Total U.S.	0.49	0.49	0.49	0.49	0.50	0.47	0.48	0.36	0.56

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

^b 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.

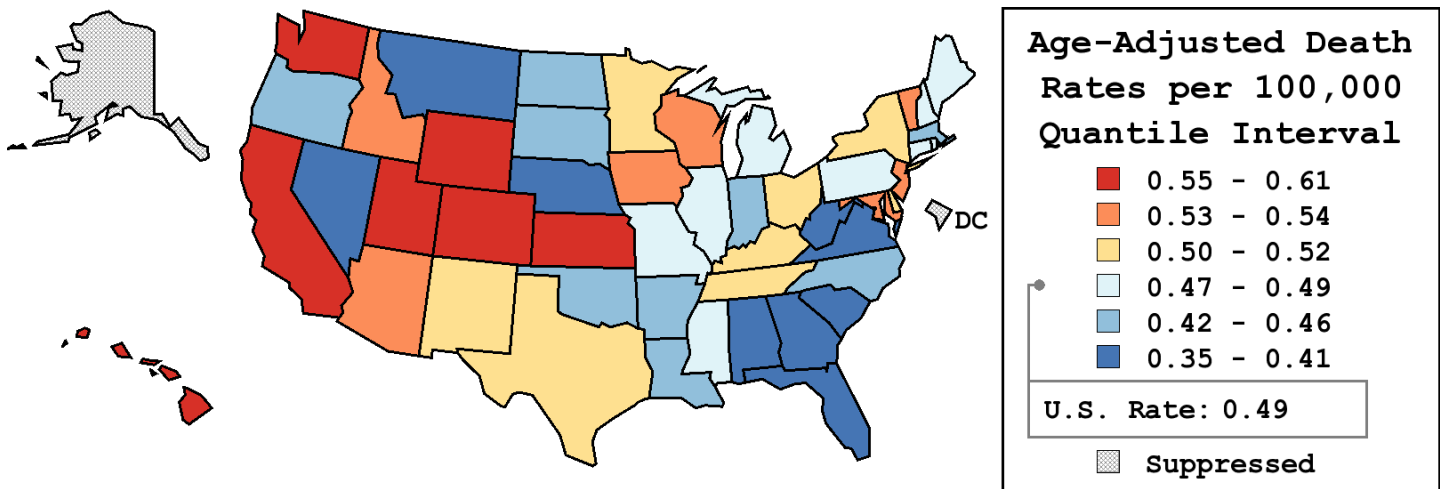
Table 26.18
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2004-2008

Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.49	0.01		
High Five States				
Wyoming	0.61	0.15	(01)	24.24 ^c
Colorado	0.59	0.05	(02)	19.39 ^c
California	0.59 ^b	0.02	(03)	19.14 ^c
Utah	0.56	0.08	(04)	13.73
Kansas	0.56	0.06	(05)	13.66
Low Five States				
Virginia	0.40	0.03	(45)	-17.98 ^c
Nebraska	0.38	0.06	(46)	-23.20 ^c
South Carolina	0.37	0.04	(47)	-24.02 ^c
Georgia	0.36 ^b	0.03	(48)	-26.53 ^c
Montana	0.35	0.08	(49)	-28.04 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.41	0.04	(43)	-16.04 ^c	Montana	0.35	0.08	(49)	-28.04 ^c
Alaska	-	-	(-)	-	Nebraska	0.38	0.06	(46)	-23.20 ^c
Arizona	0.53	0.04	(12)	8.71	Nevada	0.41	0.06	(41)	-15.64 ^c
Arkansas	0.43	0.05	(39)	-12.47	New Hampshire	0.47	0.08	(31)	-5.41
California	0.59 ^b	0.02	(03)	19.14 ^c	New Jersey	0.53	0.03	(11)	8.71
Colorado	0.59	0.05	(02)	19.39 ^c	New Mexico	0.50	0.07	(21)	2.43
Connecticut	0.49	0.05	(24)	0.24	New York	0.51	0.02	(20)	2.70
Delaware	0.52	0.11	(17)	5.66	North Carolina	0.43	0.03	(40)	-12.86
D.C.	-	-	(-)	-	North Dakota	0.46	0.11	(36)	-6.84
Florida	0.41 ^b	0.02	(42)	-15.65 ^c	Ohio	0.51	0.03	(19)	3.68
Georgia	0.36 ^b	0.03	(48)	-26.53 ^c	Oklahoma	0.46	0.05	(33)	-5.92
Hawaii	0.55	0.09	(07)	12.56	Oregon	0.44	0.05	(37)	-10.99
Idaho	0.54	0.09	(09)	9.34	Pennsylvania	0.49	0.03	(26)	-0.43
Illinois	0.49	0.03	(23)	0.58	Rhode Island	0.47	0.08	(30)	-4.88
Indiana	0.46	0.04	(34)	-6.33	South Carolina	0.37	0.04	(47)	-24.02 ^c
Iowa	0.53	0.05	(13)	7.19	South Dakota	0.44	0.10	(38)	-11.44
Kansas	0.56	0.06	(05)	13.66	Tennessee	0.52	0.04	(16)	5.87
Kentucky	0.52	0.05	(15)	6.25	Texas	0.52	0.02	(18)	5.02
Louisiana	0.46	0.05	(35)	-6.51	Utah	0.56	0.08	(04)	13.73
Maine	0.49	0.08	(25)	0.02	Vermont	0.54	0.13	(10)	8.92
Maryland	0.54	0.04	(08)	9.74	Virginia	0.40	0.03	(45)	-17.98 ^c
Massachusetts	0.46	0.04	(32)	-5.66	Washington	0.56	0.04	(06)	13.26
Michigan	0.47	0.03	(28)	-3.45	West Virginia	0.41	0.06	(44)	-17.20 ^c
Minnesota	0.50	0.04	(22)	1.81	Wisconsin	0.53	0.04	(14)	6.77
Mississippi	0.47	0.06	(29)	-4.63	Wyoming	0.61	0.15	(01)	24.24 ^c
Missouri	0.48	0.04	(27)	-2.53					



^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.

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

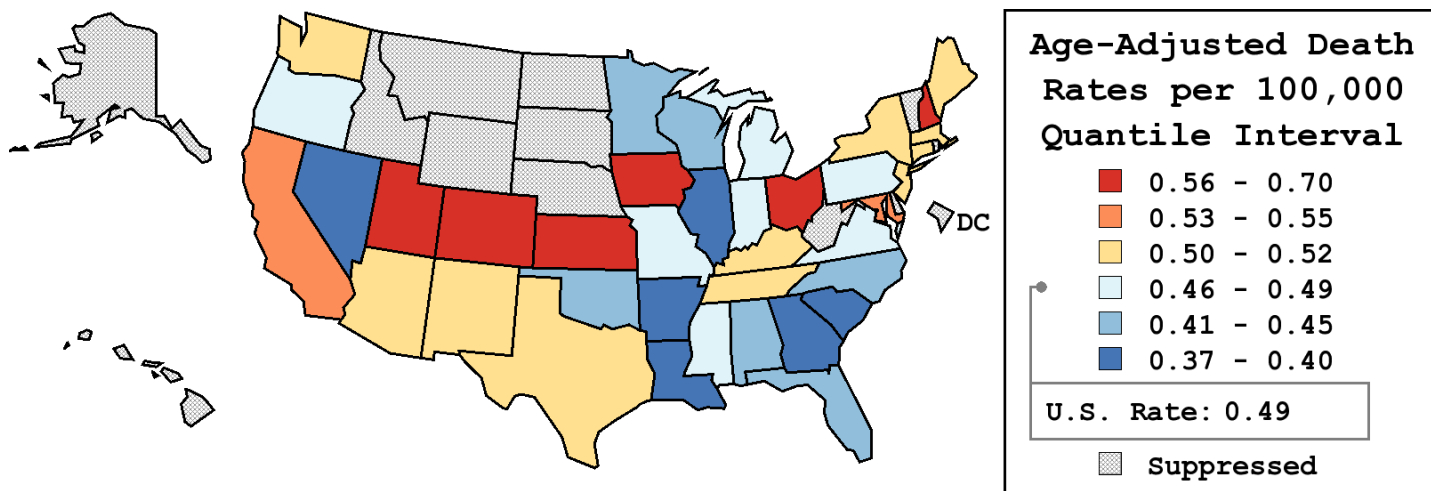
Table 26.19
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2004-2008

Males

State	Rate	SE	Rank	PD
TOTAL U.S.	0.49	0.01		
High Five States				
Utah	0.70	0.13	(01)	44.11 ^c
Colorado	0.69	0.09	(02)	42.85 ^c
Kansas	0.66	0.11	(03)	34.78 ^c
Iowa	0.60	0.09	(04)	23.90 ^c
New Hampshire	0.59	0.15	(05)	21.29 ^c
Low Five States				
South Carolina	0.39	0.07	(34)	-19.24 ^c
Arkansas	0.37	0.07	(35)	-22.87 ^c
Georgia	0.37	0.05	(36)	-22.96 ^c
Louisiana	0.37	0.06	(37)	-24.39 ^c
Nevada	0.37	0.09	(38)	-24.71 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.45	0.07	(28)	-7.60	Montana	-	-	(-)	-
Alaska	-	-	(-)	-	Nebraska	-	-	(-)	-
Arizona	0.50	0.06	(16)	2.92	Nevada	0.37	0.09	(38)	-24.71 ^c
Arkansas	0.37	0.07	(35)	-22.87 ^c	New Hampshire	0.59	0.15	(05)	21.29 ^c
California	0.55	0.03	(08)	12.58	New Jersey	0.52	0.05	(10)	7.29
Colorado	0.69	0.09	(02)	42.85 ^c	New Mexico	0.52	0.11	(09)	7.63
Connecticut	0.50	0.08	(17)	2.78	New York	0.52	0.04	(11)	6.98
Delaware	-	-	(-)	-	North Carolina	0.44	0.05	(29)	-9.68
D.C.	-	-	(-)	-	North Dakota	-	-	(-)	-
Florida	0.43	0.03	(32)	-12.23	Ohio	0.56	0.05	(06)	15.04 ^c
Georgia	0.37	0.05	(36)	-22.96 ^c	Oklahoma	0.43	0.07	(31)	-12.19
Hawaii	-	-	(-)	-	Oregon	0.47	0.07	(23)	-3.19
Idaho	-	-	(-)	-	Pennsylvania	0.47	0.04	(25)	-3.73
Illinois	0.40	0.04	(33)	-17.23 ^c	Rhode Island	-	-	(-)	-
Indiana	0.49	0.06	(20)	1.69	South Carolina	0.39	0.07	(34)	-19.24 ^c
Iowa	0.60	0.09	(04)	23.90 ^c	South Dakota	-	-	(-)	-
Kansas	0.66	0.11	(03)	34.78 ^c	Tennessee	0.50	0.06	(15)	3.26
Kentucky	0.50	0.07	(19)	2.15	Texas	0.51	0.04	(14)	4.58
Louisiana	0.37	0.06	(37)	-24.39 ^c	Utah	0.70	0.13	(01)	44.11 ^c
Maine	0.52	0.12	(13)	6.36	Vermont	-	-	(-)	-
Maryland	0.55	0.07	(07)	13.84	Virginia	0.47	0.06	(26)	-3.91
Massachusetts	0.52	0.06	(12)	6.87	Washington	0.50	0.06	(18)	2.30
Michigan	0.47	0.05	(24)	-3.58	West Virginia	-	-	(-)	-
Minnesota	0.43	0.06	(30)	-11.38	Wisconsin	0.45	0.06	(27)	-6.66
Mississippi	0.49	0.09	(21)	0.21	Wyoming	-	-	(-)	-
Missouri	0.48	0.06	(22)	-1.52					



^a US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
^b Difference between state rate and total U.S. rate is statistically significant (p<=.0002).
^c Absolute percent difference between state rate and total U.S. rate is 15% or more.
SE Standard error of the rate.
PD Percent difference between state rate and total U.S. rate.
- Statistic not shown. Rate based on less than 16 cases for the time interval.

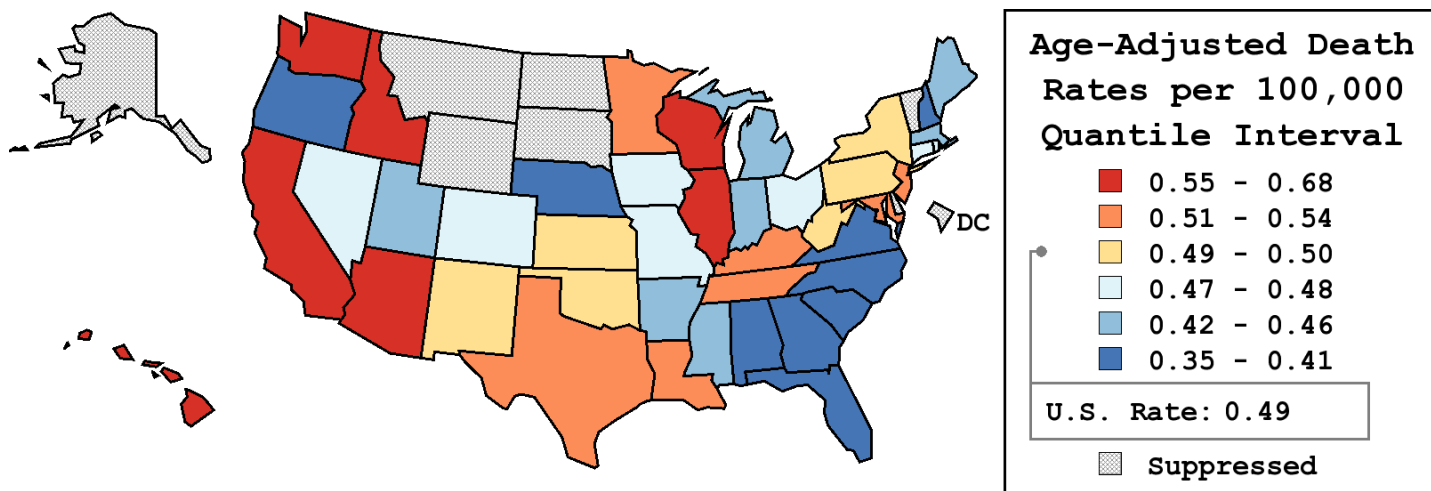
Table 26.20
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2004-2008

Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.49	0.01		
High Five States				
Idaho	0.68	0.13	(01)	37.23 ^c
Hawaii	0.65	0.13	(02)	31.17 ^c
California	0.62 ^b	0.03	(03)	25.14 ^c
Washington	0.60	0.06	(04)	21.87 ^c
Wisconsin	0.57	0.06	(05)	15.71 ^c
Low Five States				
New Hampshire	0.39	0.10	(39)	-20.66 ^c
Alabama	0.38	0.05	(40)	-23.60 ^c
South Carolina	0.36	0.05	(41)	-26.14 ^c
Virginia	0.36	0.04	(42)	-26.78 ^c
Georgia	0.35 ^b	0.04	(43)	-28.64 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.38	0.05	(40)	-23.60 ^c	Montana	-	-	(-)	-
Alaska	-	-	(-)	-	Nebraska	0.41	0.09	(35)	-16.02 ^c
Arizona	0.56	0.06	(07)	13.85	Nevada	0.47	0.09	(27)	-5.39
Arkansas	0.46	0.07	(29)	-6.58	New Hampshire	0.39	0.10	(39)	-20.66 ^c
California	0.62 ^b	0.03	(03)	25.14 ^c	New Jersey	0.54	0.05	(08)	10.66
Colorado	0.48	0.06	(21)	-1.57	New Mexico	0.49	0.09	(18)	-0.59
Connecticut	0.48	0.06	(22)	-2.63	New York	0.50	0.03	(17)	1.21
Delaware	-	-	(-)	-	North Carolina	0.41	0.04	(37)	-17.60 ^c
D.C.	-	-	(-)	-	North Dakota	-	-	(-)	-
Florida	0.40 ^b	0.02	(38)	-18.35 ^c	Ohio	0.47	0.04	(26)	-5.10
Georgia	0.35 ^b	0.04	(43)	-28.64 ^c	Oklahoma	0.49	0.07	(20)	-1.22
Hawaii	0.65	0.13	(02)	31.17 ^c	Oregon	0.41	0.06	(36)	-16.57 ^c
Idaho	0.68	0.13	(01)	37.23 ^c	Pennsylvania	0.50	0.03	(16)	1.83
Illinois	0.56	0.04	(06)	14.07	Rhode Island	0.48	0.11	(23)	-2.95
Indiana	0.42	0.05	(34)	-14.50	South Carolina	0.36	0.05	(41)	-26.14 ^c
Iowa	0.47	0.07	(25)	-4.36	South Dakota	-	-	(-)	-
Kansas	0.50	0.08	(15)	2.46	Tennessee	0.53	0.05	(11)	7.50
Kentucky	0.53	0.07	(09)	8.03	Texas	0.52	0.03	(13)	5.38
Louisiana	0.52	0.07	(12)	6.22	Utah	0.44	0.09	(32)	-11.36
Maine	0.46	0.10	(30)	-7.45	Vermont	-	-	(-)	-
Maryland	0.52	0.06	(14)	4.66	Virginia	0.36	0.04	(42)	-26.78 ^c
Massachusetts	0.43	0.05	(33)	-13.42	Washington	0.60	0.06	(04)	21.87 ^c
Michigan	0.46	0.04	(28)	-5.80	West Virginia	0.49	0.09	(19)	-0.92
Minnesota	0.53	0.06	(10)	7.58	Wisconsin	0.57	0.06	(05)	15.71 ^c
Mississippi	0.45	0.07	(31)	-7.79	Wyoming	-	-	(-)	-
Missouri	0.47	0.05	(24)	-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<=.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.
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 26.21
Cancer of the Thyroid (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2008
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	25 to <30	0 to <18 ^e	0 to <33 ^e	>=33 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	128,157	83,662	60,394	43,715	34,679	28,867	320,828	417,546	40,857	458,403
	Males	28,749	18,752	13,617	9,327	7,535	6,022	71,016	91,582	9,370	100,952
	Females	99,408	64,910	46,777	34,388	27,144	22,845	249,812	325,964	31,487	357,451
White ^b	Both Sexes	112,068	73,460	53,439	39,316	31,124	26,013	282,053	369,232	37,010	406,242
	Males	25,703	16,999	12,387	8,664	6,782	5,516	64,055	82,881	7,901	90,782
	Females	86,365	56,461	41,052	30,652	24,342	20,497	217,998	286,351	29,109	315,460
Black ^b	Both Sexes	7,823	4,611	3,218	1,958	1,609	1,339	18,272	22,598	1,690	24,288
	Males	1,489	760	600	340	307	177	3,281	3,991	188	4,179
	Females	6,334	3,851	2,618	1,618	1,302	1,162	14,991	18,607	1,502	20,109
Asian/ Pacific Islander ^c	Both Sexes	6,296	4,245	2,761	+	+	+	14,548	+	+	+
	Males	1,112	811	446	+	+	+	2,574	+	+	+
	Females	5,184	3,434	2,315	+	+	+	11,974	+	+	+
Hispanic ^d	Both Sexes	13,241	8,258	5,457	+	+	+	29,246	+	+	+
	Males	2,232	1,447	875	+	+	+	4,937	+	+	+
	Females	11,009	6,811	4,582	+	+	+	24,309	+	+	+

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

Age at Prevalence	All Ages	Age Specific (Crude)									Age-Adjusted ^f	
		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	0.0935%	0.0001%	0.0044%	0.0328%	0.1045%	0.1611%	0.1836%	0.1870%	0.1575%	0.1073%	0.0924%
	Males	0.0407%	-	0.0019%	0.0091%	0.0333%	0.0611%	0.0853%	0.1060%	0.1053%	0.0730%	0.0418%
	Females	0.1455%	-	0.0071%	0.0579%	0.1779%	0.2614%	0.2777%	0.2604%	0.1987%	0.1263%	0.1415%
White ^c	Both Sexes	0.1008%	0.0002%	0.0048%	0.0359%	0.1156%	0.1760%	0.1928%	0.1918%	0.1603%	0.1047%	0.0983%
	Males	0.0452%	-	0.0021%	0.0099%	0.0366%	0.0681%	0.0930%	0.1122%	0.1119%	0.0721%	0.0451%
	Females	0.1566%	-	0.0077%	0.0643%	0.2005%	0.2884%	0.2917%	0.2659%	0.1994%	0.1227%	0.1519%
Black ^c	Both Sexes	0.0437%	-	0.0014%	0.0120%	0.0434%	0.0749%	0.0999%	0.1232%	0.1052%	0.0864%	0.0490%
	Males	0.0162%	-	0.0012%	0.0025%	0.0116%	0.0266%	0.0395%	0.0550%	0.0643%	0.0671%	0.0206%
	Females	0.0686%	-	0.0015%	0.0212%	0.0713%	0.1172%	0.1502%	0.1756%	0.1333%	0.0954%	0.0724%
Asian/ Pacific Islander ^c	Both Sexes	0.0939%	-	0.0048%	0.0319%	0.0950%	0.1454%	0.1892%	0.1983%	0.1734%	0.1330%	0.0918%
	Males	0.0348%	-	-	0.0090%	0.0325%	0.0464%	0.0701%	0.0974%	0.0869%	0.0793%	0.0360%
	Females	0.1493%	-	0.0090%	0.0549%	0.1542%	0.2360%	0.2929%	0.2842%	0.2380%	0.1667%	0.1410%
Hispanic ^d	Both Sexes	-	-	-	-	-	-	-	-	-	-	-
	Males	-	-	-	-	-	-	-	-	-	-	-
	Females	-	-	-	-	-	-	-	-	-	-	-

^a US 2008 cancer prevalence counts are based on 2008 cancer prevalence proportions from the SEER registries and 1/1/2008 US population estimates based on the average of 2007 and 2008 population estimates from the US Bureau of the Census. 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: 33 years for 1975-2008 SEER 9 data; 18 years for 1990-2008 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^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 33 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (h) Complete prevalence is obtained by summing 0 to <33 and >=33. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.

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

+ Not available.

Table 26.22

Cancer of the Thyroid (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2004-2008
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	42,070	99.7%	34,770	99.8%	2,440	99.5%	4,075	99.8%	167	99.4%	6,087	99.8%
Epidermoid carcinoma ^d (8051-8131)	52	0.1%	45	0.1%	-	-	-	-	-	-	-	-
Adenocarcinoma ^e	40,624	96.3%	33,588	96.4%	2,329	94.9%	3,959	97.0%	160	95.2%	5,894	96.6%
Papillary adenocarcinoma (8050,8260,8340-8344, 8350,8450)	36,370	86.2%	30,141	86.5%	1,947	79.4%	3,612	88.5%	142	84.5%	5,415	88.8%
Follicular carcinoma (8330-8332,8335)	2,648	6.3%	2,087	6.0%	263	10.7%	244	6.0%	-	-	308	5.0%
Oxyphilic (8290)	1,240	2.9%	1,060	3.0%	93	3.8%	72	1.8%	-	-	125	2.0%
Other specific carcinomas ^f	736	1.7%	616	1.8%	61	2.5%	37	0.9%	-	-	106	1.7%
Medullary carcinoma (8510)	698	1.7%	585	1.7%	56	2.3%	36	0.9%	-	-	102	1.7%
Carcinoma, NOS (8004,8010-8012, 8020-8022,8030-8032)	658	1.6%	521	1.5%	49	2.0%	75	1.8%	-	-	79	1.3%
Anaplastic carcinoma (8004,8012,8020-8021, 8030-8032)	406	1.0%	324	0.9%	33	1.3%	44	1.1%	-	-	44	0.7%
Sarcoma and other soft tissue tumors ^g	-	-	-	-	-	-	-	-	-	-	-	-
Other specific types ^h	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified (8000-8003,8005)	102	0.2%	78	0.2%	-	-	-	-	-	-	-	-
Total	42,186	100.0%	34,857	100.0%	2,453	100.0%	4,082	100.0%	168	100.0%	6,100	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.

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

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

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

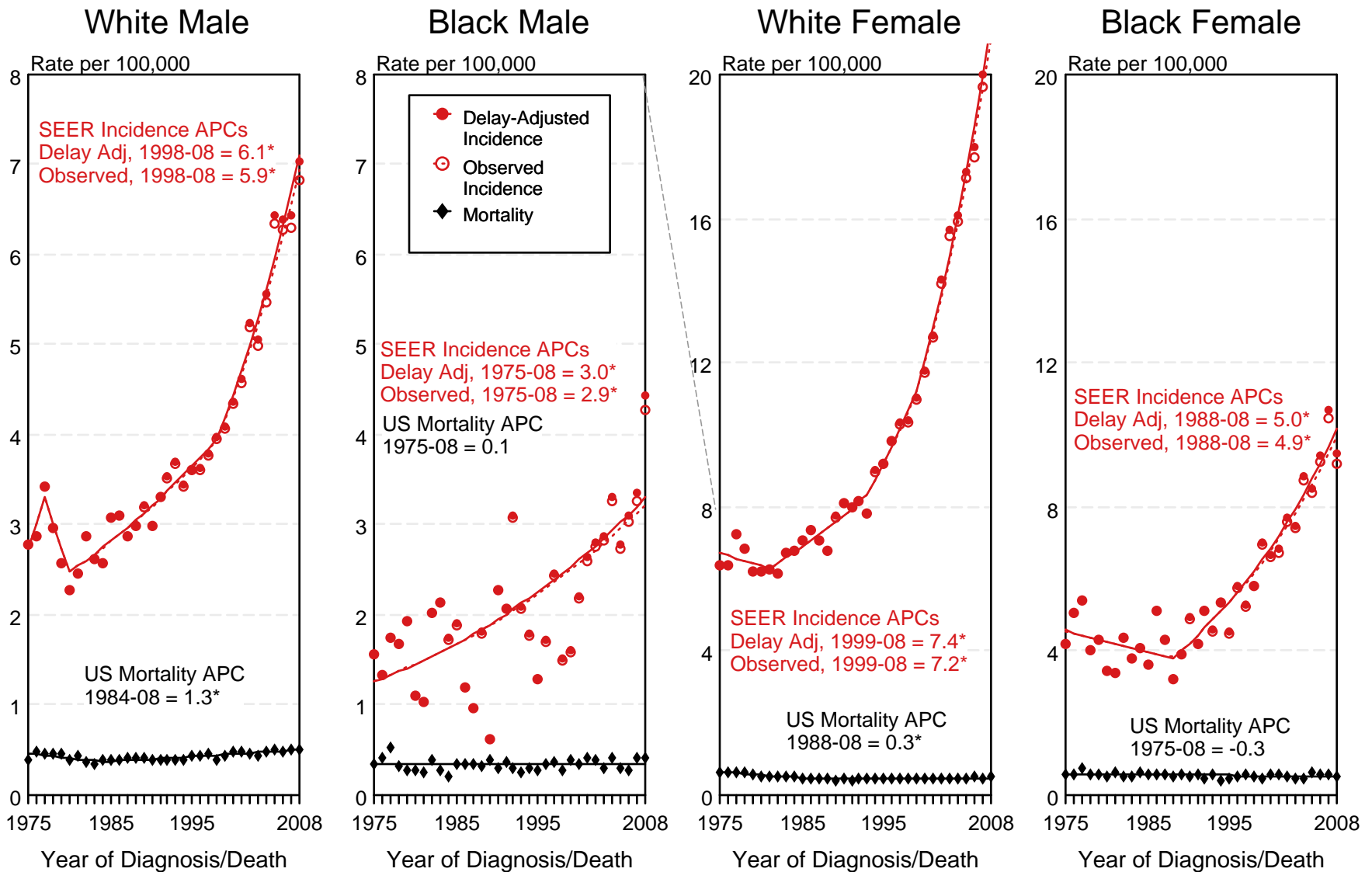
^g Other specific carcinomas include histologies 8013-8015, 8033-8046, 8150-8155, 8170-8171, 8230-8249, 8510, 8512, 8561-8562, 8575, 8580-8671.

^h Sarcoma and other soft tissue tumors include histologies 8680-8713, 8800-8921, 8990-8991, 9040-9044, 9120-9136, 9150-9252, 9370-9373, 9540-9582.

ⁱ 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



^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 3.5, April 2011, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
* The APC is significantly different from zero ($p < 0.05$).

SEER Incidence and US Death Rates^a Cancer of the Thyroid, Both Sexes

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

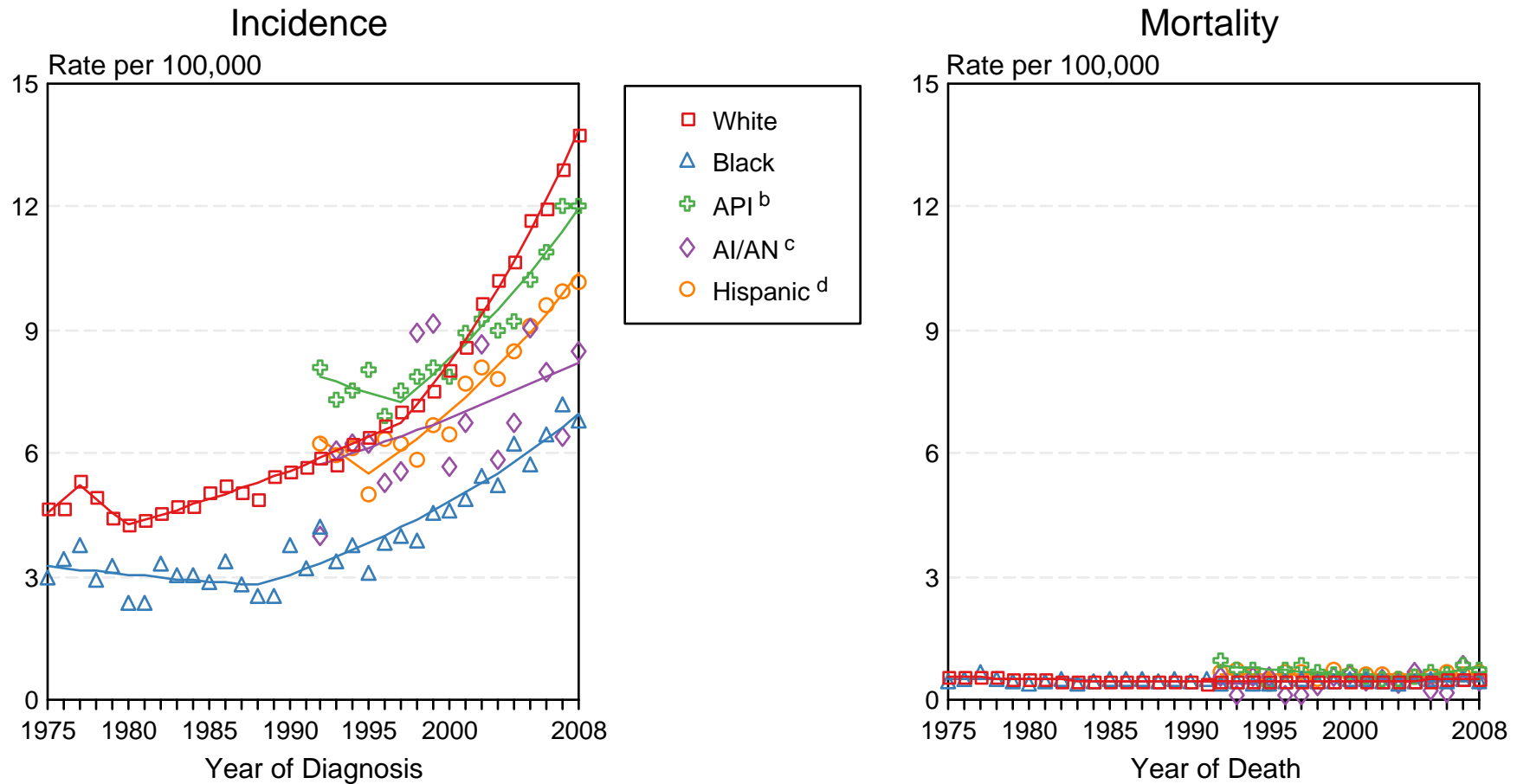


Figure 26.2

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

^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

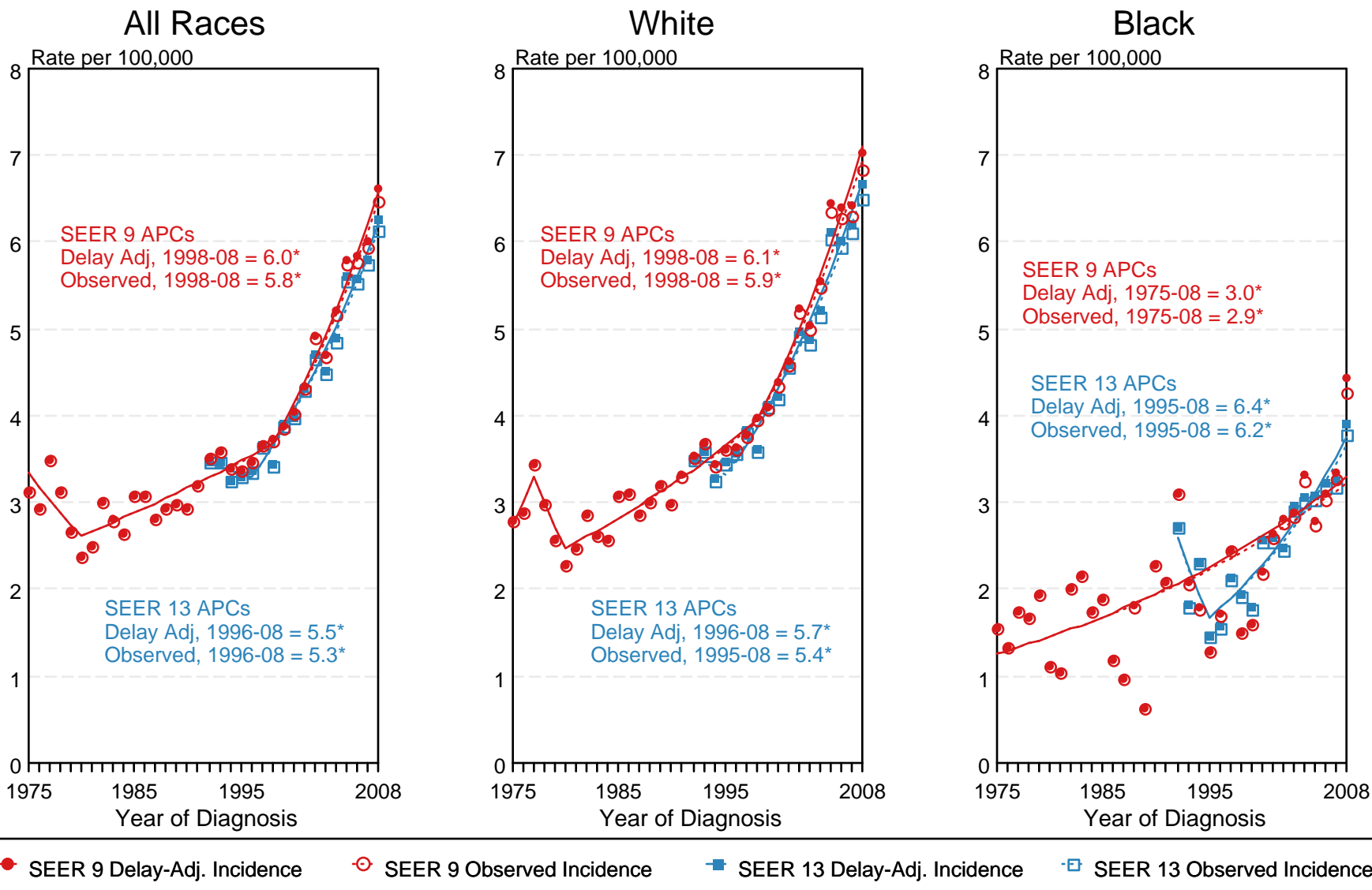


Figure 26.3

^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 3.5, April 2011, National Cancer Institute.
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
* The APC is significantly different from zero ($p < 0.05$).

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

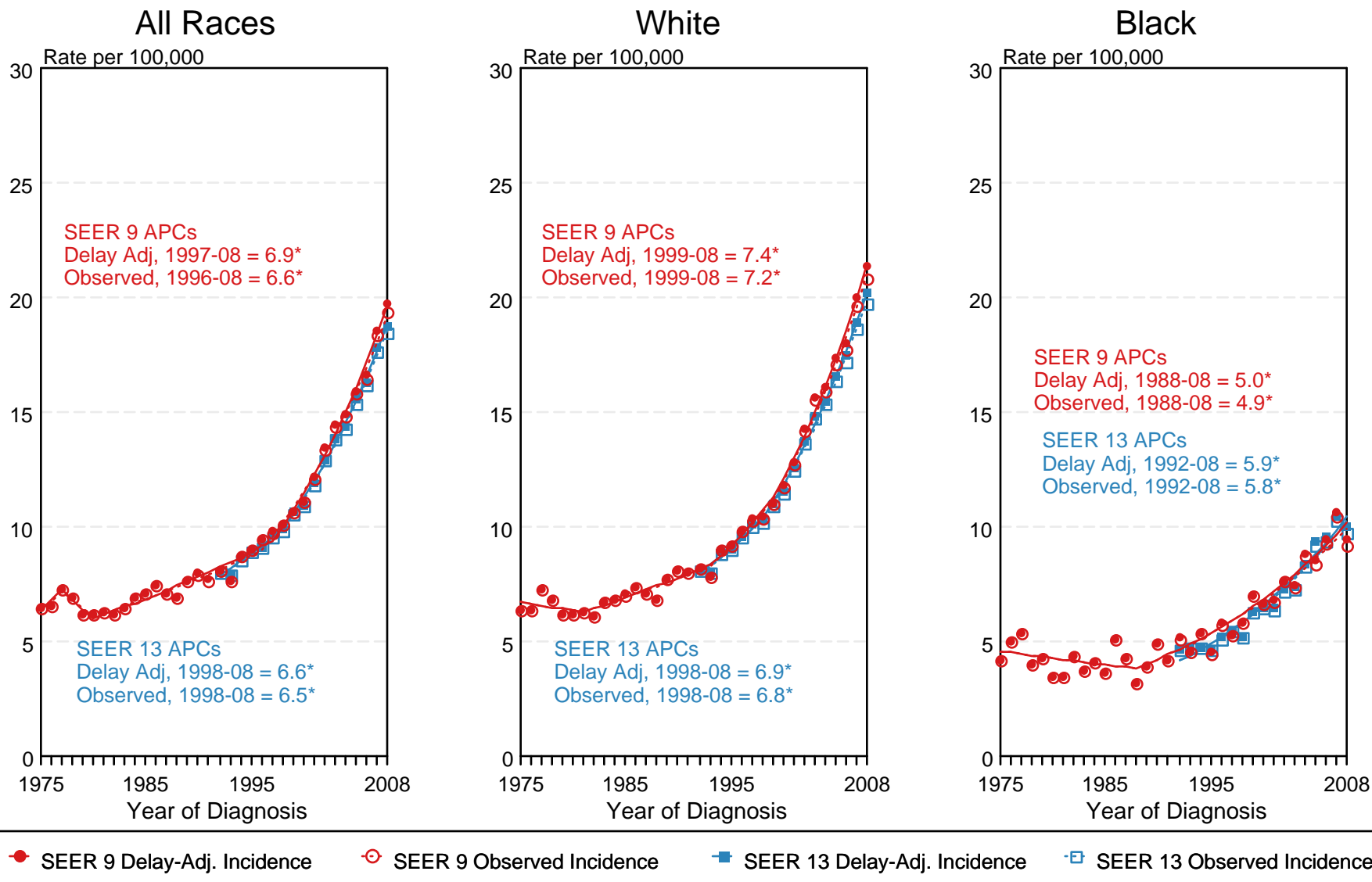


Figure 26.4

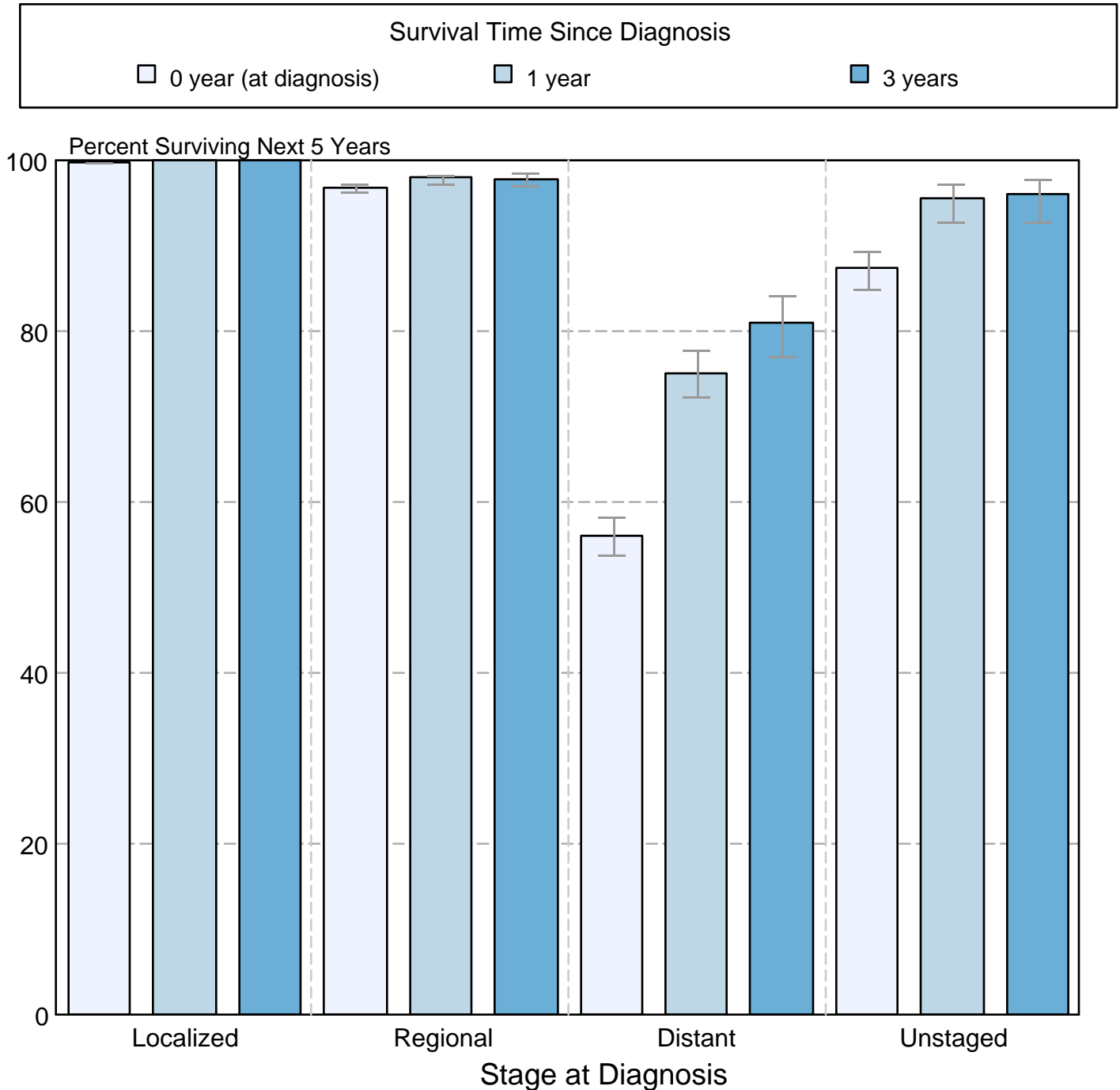
^a Source: SEER 9 areas and SEER 13 areas.
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
* The APC is significantly different from zero ($p < 0.05$).

Figure 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
1998-2007 by stage at diagnosis



Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2007. The remaining 13 SEER Areas contribute cases for the entire period 1998-2007.

Percent surviving is not shown if based on less than 25 cases.

Confidence intervals are not shown if length of the confidence interval is greater than 5 times the standard error.