

Table 26.1
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2011 With up to Five Joinpoints, 1992-2011 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	2002-11	2007-11
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2011</u>														
All Races	1975-77	6.2	1977-80	-6.6	1980-97	2.4*	1997-09	6.7*	2009-11	2.0			5.6*	4.3*
White	1975-77	7.4	1977-80	-6.6	1980-97	2.8*	1997-09	7.1*	2009-11	0.8			5.6*	3.9*
Black	1975-95	0.8	1995-11	6.3*									6.3*	6.3*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2011</u>														
All Races	1992-98	3.0*	1998-09	6.6*	2009-11	2.3							5.6*	4.4*
White	1992-98	3.6*	1998-09	6.8*	2009-11	1.5							5.6*	4.1*
Black	1992-95	-4.4	1995-11	6.8*									6.8*	6.8*
<u>SEER 9 Observed Incidence^a, 1975-2011</u>														
All Races	1975-77	6.2	1977-80	-6.6	1980-97	2.4*	1997-09	6.6*	2009-11	1.6			5.5*	4.1*
White	1975-77	7.4	1977-80	-6.6	1980-97	2.7*	1997-09	7.0*	2009-11	0.3			5.5*	3.6*
Black	1975-95	0.8	1995-11	6.2*									6.2*	6.2*
<u>SEER 13 Observed Incidence^b, 1992-2011</u>														
All Races	1992-98	3.0*	1998-09	6.5*	2009-11	1.9							5.5*	4.2*
White	1992-98	3.6*	1998-09	6.7*	2009-11	1.0							5.4*	3.8*
White NH ^{ef}	1992-98	4.4*	1998-09	6.9*	2009-11	1.1							5.6*	4.0*
Black	1992-95	-4.3	1995-11	6.7*									6.7*	6.7*
Black NH ^{ef}	1992-95	-4.7	1995-11	6.8*									6.8*	6.8*
API ^e	1992-00	0.7	2000-11	5.1*									5.1*	5.1*
AI/AN ^{eg}	1992-11	3.6*											3.6*	3.6*
Hispanic ^f	1992-95	-4.7	1995-11	5.0*									5.0*	5.0*
<u>U.S. Cancer Mortality^c, 1975-2011</u>														
All Races	1975-88	-2.2*	1988-11	0.8*									0.8*	0.8*
White	1975-88	-2.3*	1988-11	0.8*									0.8*	0.8*
Black	1975-11	0.0											0.0	0.0
<u>U.S. Cancer Mortality^c, 1992-2011</u>														
All Races	1992-11	0.9*											0.9*	0.9*
White	1992-11	0.8*											0.8*	0.8*
White NH ^{ef}	1992-11	0.8*											0.8*	0.8*
Black	1992-11	0.9*											0.9*	0.9*
Black NH ^{ef}	1992-11	1.0*											1.0*	1.0*
API ^e	1992-11	0.0											0.0	0.0
AI/AN ^{eg}	1992-11	1.4											1.4	1.4
Hispanic ^f	1992-11	0.0											0.0	0.0

Joinpoint Regression Program Version 4.1.0, April 2014, 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 New Hampshire and Oklahoma.

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

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

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

Table 26.2
Cancer of the Thyroid (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2011 With up to Five Joinpoints, 1992-2011 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	2002-11	2007-11
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2011</u>														
All Races	1975-80	-4.6	1980-97	1.8*	1997-11	5.5*							5.5*	5.5*
White	1975-77	10.6	1977-80	-9.2	1980-97	2.6*	1997-11	5.6*					5.6*	5.6*
Black	1975-11	3.0*											3.0*	3.0*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2011</u>														
All Races	1992-95	-3.1	1995-11	5.3*									5.3*	5.3*
White	1992-95	-1.7	1995-11	5.4*									5.4*	5.4*
Black	1992-95	-11.0	1995-11	5.3*									5.3*	5.3*
<u>SEER 9 Observed Incidence^a, 1975-2011</u>														
All Races	1975-80	-4.6	1980-97	1.8*	1997-11	5.4*							5.4*	5.4*
White	1975-77	10.6	1977-80	-9.2	1980-97	2.6*	1997-11	5.5*					5.5*	5.5*
Black	1975-11	3.0*											3.0*	3.0*
<u>SEER 13 Observed Incidence^b, 1992-2011</u>														
All Races	1992-95	-3.1	1995-11	5.2*									5.2*	5.2*
White	1992-95	-1.6	1995-11	5.3*									5.3*	5.3*
White NH ^{ef}	1992-96	0.8	1996-11	5.8*									5.8*	5.8*
Black	1992-95	-10.9	1995-11	5.1*									5.1*	5.1*
Black NH ^{ef}	1992-95	-10.6	1995-11	5.1*									5.1*	5.1*
API ^e	1992-03	0.4	2003-11	6.3*									5.6*	6.3*
AI/AN ^{eg}	1992-11	2.9											2.9	2.9
Hispanic ^f	1992-94	-17.9	1994-11	4.7*									4.7*	4.7*
<u>U.S. Cancer Mortality^c, 1975-2011</u>														
All Races	1975-83	-3.2*	1983-11	1.2*									1.2*	1.2*
White	1975-84	-2.6*	1984-11	1.3*									1.3*	1.3*
Black	1975-11	0.3											0.3	0.3
<u>U.S. Cancer Mortality^c, 1992-2011</u>														
All Races	1992-11	1.6*											1.6*	1.6*
White	1992-11	1.6*											1.6*	1.6*
White NH ^{ef}	1992-11	1.5*											1.5*	1.5*
Black	1992-11	1.5*											1.5*	1.5*
Black NH ^{ef}	1992-11	1.5*											1.5*	1.5*
API ^e	1992-11	0.3											0.3	0.3
AI/AN ^{eg}	-	-											-	-
Hispanic ^f	1992-11	1.5											1.5	1.5

Joinpoint Regression Program Version 4.1.0, April 2014, 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).

^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 New Hampshire and Oklahoma.

^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,
1975-2011 With up to Five Joinpoints, 1992-2011 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	2002-11	2007-11
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2011</u>														
All Races	1975-77	6.4	1977-80	-5.1	1980-93	2.3*	1993-99	4.5*	1999-09	7.1*	2009-11	1.6	5.9*	4.3*
White	1975-81	-1.1	1981-93	2.4*	1993-99	5.1*	1999-09	7.5*	2009-11	0.5			5.9*	3.9*
Black	1975-93	0.2	1993-11	6.4*									6.4*	6.4*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2011</u>														
All Races	1992-99	4.2*	1999-09	6.9*	2009-11	2.2							5.8*	4.5*
White	1992-98	4.4*	1998-09	7.0*	2009-11	1.6							5.8*	4.3*
Black	1992-98	2.9	1998-11	7.6*									7.6*	7.6*
<u>SEER 9 Observed Incidence^a, 1975-2011</u>														
All Races	1975-77	6.4	1977-80	-5.1	1980-93	2.2*	1993-99	4.5*	1999-09	7.0*	2009-11	1.3	5.7*	4.1*
White	1975-81	-1.1	1981-93	2.4*	1993-99	5.1*	1999-09	7.4*	2009-11	0.0			5.7*	3.6*
Black	1975-91	-0.5	1991-11	6.0*									6.0*	6.0*
<u>SEER 13 Observed Incidence^b, 1992-2011</u>														
All Races	1992-99	4.1*	1999-09	6.8*	2009-11	1.8							5.7*	4.3*
White	1992-98	4.4*	1998-09	6.9*	2009-11	1.2							5.6*	4.0*
White NH ^{ef}	1992-98	5.3*	1998-09	7.1*	2009-11	1.6							5.9*	4.3*
Black	1992-98	2.9	1998-11	7.5*									7.5*	7.5*
Black NH ^{ef}	1992-98	2.6	1998-11	7.7*									7.7*	7.7*
API ^e	1992-99	0.5	1999-11	4.9*									4.9*	4.9*
AI/AN ^{eg}	1992-11	3.7*											3.7*	3.7*
Hispanic ^f	1992-97	0.2	1997-11	5.3*									5.3*	5.3*
<u>U.S. Cancer Mortality^c, 1975-2011</u>														
All Races	1975-88	-2.6*	1988-11	0.5*									0.5*	0.5*
White	1975-88	-2.8*	1988-11	0.4*									0.4*	0.4*
Black	1975-11	-0.2											-0.2	-0.2
<u>U.S. Cancer Mortality^c, 1992-2011</u>														
All Races	1992-94	-6.0	1994-11	0.8*									0.8*	0.8*
White	1992-94	-5.3	1994-11	0.7*									0.7*	0.7*
White NH ^{ef}	1992-11	0.4*											0.4*	0.4*
Black	1992-11	0.8											0.8	0.8
Black NH ^{ef}	1992-11	0.9											0.9	0.9
API ^e	1992-11	-0.2											-0.2	-0.2
AI/AN ^{eg}	1992-11	-1.1											-1.1	-1.1
Hispanic ^f	1992-11	-0.8*											-0.8*	-0.8*

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

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

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

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

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

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

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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	3.12	6.45	4.65	2.77	6.37	2.97	-	4.21
1976	4.79	2.94	6.57	4.68	2.88	6.41	3.37	-	5.00
1977	5.44	3.50	7.32	5.35	3.45	7.19	3.83	-	5.56
1978	5.09	3.14	6.94	4.95	2.97	6.83	2.92	-	4.00
1979	4.48	2.68	6.17	4.45	2.59	6.21	3.24	-	4.30
1980	4.33	2.39	6.15	4.30	2.28	6.21	2.37	-	3.43
1981	4.42	2.52	6.23	4.38	2.48	6.26	2.39	-	3.44
1982	4.63	3.01	6.15	4.55	2.87	6.12	3.29	-	4.35
1983	4.71	2.80	6.50	4.74	2.61	6.73	3.02	2.15	3.77
1984	4.85	2.66	6.92	4.73	2.58	6.80	3.02	-	4.08
1985	5.13	3.09	7.09	5.08	3.09	7.05	2.87	-	3.66
1986	5.33	3.07	7.49	5.24	3.11	7.35	3.35	-	5.10
1987	5.05	2.81	7.14	5.04	2.86	7.08	2.82	-	4.30
1988	4.94	2.94	6.89	4.90	3.00	6.80	2.53	-	3.21
1989	5.37	2.98	7.67	5.47	3.21	7.72	2.57	-	4.04
1990	5.50	2.94	7.97	5.57	2.99	8.11	3.77	2.28	4.92
1991	5.49	3.19	7.70	5.69	3.31	8.01	3.23	2.08	4.21
1992	5.89	3.53	8.13	5.90	3.54	8.20	4.21	3.10	5.14
1993	5.64	3.59	7.65	5.76	3.69	7.81	3.39	2.08	4.57
1994	6.09	3.39	8.75	6.24	3.43	9.03	3.76	1.79	5.37
1995	6.23	3.37	9.02	6.43	3.60	9.25	3.10	-	4.57
1996	6.54	3.49	9.51	6.74	3.64	9.85	3.84	-	5.77
1997	6.79	3.67	9.80	7.06	3.79	10.34	4.00	2.45	5.27
1998	7.00	3.71	10.14	7.22	3.95	10.46	3.87	1.51	5.82
1999	7.35	3.88	10.68	7.58	4.09	11.01	4.63	1.60	7.10
2000	7.63	4.05	11.12	8.08	4.38	11.82	4.59	2.20	6.58
2001	8.32	4.35	12.20	8.70	4.64	12.80	4.96	2.54	6.93
2002	9.25	4.94	13.46	9.78	5.25	14.34	5.50	2.80	7.69
2003	9.68	4.73	14.49	10.40	5.09	15.73	5.34	2.84	7.57
2004	10.17	5.28	14.96	10.88	5.59	16.21	6.43	3.42	8.93
2005	11.01	5.84	16.03	11.98	6.49	17.48	5.93	2.78	8.66
2006	11.37	5.89	16.68	12.25	6.43	18.10	6.66	3.04	9.58
2007	12.46	6.13	18.61	13.35	6.58	20.18	7.36	3.21	10.75
2008	13.31	6.66	19.76	14.32	7.12	21.57	7.08	4.48	9.51
2009	14.49	7.07	21.64	15.55	7.71	23.38	8.78	3.31	13.48
2010	14.01	6.70	21.08	14.81	7.29	22.38	8.66	3.57	12.92
2011	14.93	7.51	22.13	15.89	8.03	23.78	9.05	3.83	13.37

Additional information on the model used to delay-adjust SEER Incidence rates can be found at <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
1975-2011	7.79	4.19	11.26	7.96	4.33	11.54	4.81	2.34	6.87
1975	4.85	3.12	6.45	4.65	2.77	6.37	2.97	-	4.21
1976	4.79	2.94	6.57	4.68	2.88	6.41	3.37	-	5.00
1977	5.44	3.50	7.32	5.35	3.45	7.19	3.83	-	5.56
1978	5.09	3.14	6.94	4.95	2.97	6.83	2.92	-	4.00
1979	4.48	2.68	6.17	4.45	2.59	6.21	3.24	-	4.30
1980	4.33	2.39	6.15	4.30	2.28	6.21	2.37	-	3.43
1981	4.42	2.52	6.23	4.38	2.48	6.26	2.39	-	3.44
1982	4.63	3.00	6.15	4.55	2.87	6.12	3.29	-	4.34
1983	4.71	2.80	6.50	4.74	2.61	6.72	3.02	2.15	3.77
1984	4.85	2.65	6.92	4.73	2.58	6.80	3.02	-	4.08
1985	5.13	3.09	7.09	5.08	3.09	7.04	2.86	-	3.66
1986	5.32	3.07	7.49	5.24	3.10	7.34	3.35	-	5.09
1987	5.05	2.81	7.13	5.03	2.86	7.07	2.82	-	4.30
1988	4.94	2.94	6.89	4.90	3.00	6.79	2.53	-	3.21
1989	5.37	2.98	7.66	5.47	3.21	7.71	2.57	-	4.03
1990	5.50	2.93	7.96	5.56	2.99	8.10	3.76	2.28	4.91
1991	5.49	3.19	7.69	5.68	3.31	8.00	3.22	2.07	4.20
1992	5.88	3.52	8.12	5.89	3.53	8.19	4.20	3.09	5.13
1993	5.64	3.58	7.64	5.75	3.68	7.79	3.38	2.07	4.56
1994	6.08	3.38	8.74	6.22	3.43	9.01	3.75	1.78	5.35
1995	6.22	3.36	9.00	6.42	3.59	9.23	3.09	-	4.55
1996	6.53	3.49	9.50	6.73	3.64	9.82	3.83	-	5.75
1997	6.78	3.66	9.79	7.04	3.77	10.31	3.98	2.44	5.24
1998	6.98	3.70	10.12	7.20	3.93	10.43	3.85	1.50	5.79
1999	7.33	3.86	10.66	7.55	4.08	10.98	4.61	1.60	7.06
2000	7.61	4.03	11.09	8.05	4.37	11.78	4.57	2.18	6.55
2001	8.29	4.33	12.16	8.67	4.62	12.75	4.93	2.52	6.88
2002	9.22	4.92	13.42	9.73	5.23	14.27	5.46	2.78	7.63
2003	9.64	4.71	14.43	10.35	5.06	15.65	5.30	2.82	7.51
2004	10.13	5.25	14.90	10.82	5.56	16.11	6.37	3.39	8.85
2005	10.96	5.80	15.96	11.91	6.45	17.37	5.87	2.76	8.58
2006	11.31	5.85	16.60	12.16	6.38	17.97	6.58	3.01	9.47
2007	12.39	6.09	18.50	13.24	6.52	20.01	7.27	3.17	10.62
2008	13.21	6.60	19.63	14.18	7.06	21.36	6.99	4.42	9.38
2009	14.38	7.00	21.48	15.39	7.63	23.13	8.64	3.26	13.27
2010	13.88	6.63	20.90	14.63	7.21	22.12	8.51	3.51	12.69
2011	14.71	7.37	21.82	15.58	7.87	23.31	8.80	3.72	13.00

^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
1975-2011	0.48	0.44	0.50	0.47	0.45	0.49	0.47	0.34	0.55
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	0.48	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	0.48	0.47	0.47	0.48	0.48	0.47	0.45	0.40	0.48
2005	0.48	0.48	0.49	0.48	0.50	0.46	0.51	0.30	0.64
2006	0.49	0.46	0.51	0.50	0.48	0.50	0.47	0.28	0.60
2007	0.50	0.51	0.48	0.48	0.51	0.46	0.50	0.40	0.56
2008	0.52	0.50	0.52	0.52	0.52	0.51	0.46	0.40	0.51
2009	0.52	0.51	0.52	0.51	0.52	0.50	0.57	0.41	0.66
2010	0.51	0.50	0.51	0.50	0.51	0.48	0.49	0.45	0.53
2011	0.51	0.52	0.49	0.51	0.54	0.48	0.44	0.32	0.51

^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, 2007-2011									
All ages	12.9	6.4	19.1	13.7	6.9	20.4	7.6	3.3	11.3
Under 65	11.7	5.1	18.1	12.5	5.5	19.6	6.5	2.3	10.2
65 and over	21.4	15.7	26.1	21.8	16.4	26.3	14.9	9.7	18.6
All ages (IARC world std) ^c	10.4	5.0	15.8	11.1	5.4	16.9	6.0	2.5	9.1
Age-Specific Rates, 2007-2011									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	-	0.2	0.1	-	0.2	-	-	-
10-14	0.7	0.3	1.1	0.8	0.3	1.3	-	-	-
15-19	2.5	0.9	4.1	2.8	1.0	4.7	0.8	-	1.3
20-24	5.3	1.5	9.3	6.1	1.7	10.9	1.6	-	2.9
25-29	9.4	2.9	16.2	10.5	3.2	18.3	3.8	1.2	6.2
30-34	13.9	4.6	23.4	15.3	4.9	26.3	6.9	1.7	11.5
35-39	17.4	6.3	28.4	18.6	6.9	30.7	8.6	2.1	14.4
40-44	19.4	7.8	31.0	20.7	8.4	33.3	11.4	4.8	17.3
45-49	20.8	9.4	32.0	22.3	10.3	34.4	11.7	3.9	18.6
50-54	23.2	11.1	34.9	24.5	12.1	36.9	13.3	4.3	21.3
55-59	23.1	13.0	32.6	24.0	13.8	34.0	15.7	7.3	22.9
60-64	23.6	15.0	31.5	24.4	16.1	32.2	17.6	7.5	25.9
65-69	25.8	16.9	33.7	26.4	17.7	34.2	19.1	11.3	25.1
70-74	24.7	17.9	30.3	25.2	18.9	30.5	18.0	12.1	22.2
75-79	21.2	16.1	25.0	21.6	16.9	25.3	12.8	7.9	16.0
80-84	16.1	13.3	18.0	16.3	13.9	17.9	9.5	-	11.1
85+	11.2	10.2	11.7	11.0	10.0	11.5	9.5	-	10.0
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2007-2011									
All ages	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.6
Under 65	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2
65 and over	3.0	2.9	3.0	3.0	3.0	2.9	2.8	2.2	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, 2007-2011									
<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	0.0	0.1	0.1	0.1	-	-	-
40-44	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-
45-49	0.2	0.2	0.2	0.2	0.3	0.2	0.2	-	0.2
50-54	0.4	0.4	0.3	0.4	0.4	0.3	0.5	0.5	0.4
55-59	0.7	0.7	0.6	0.6	0.7	0.6	0.7	0.5	0.8
60-64	1.0	1.1	1.0	1.0	1.1	0.9	1.1	0.9	1.3
65-69	1.6	1.8	1.5	1.6	1.8	1.4	1.6	1.5	1.6
70-74	2.3	2.3	2.4	2.3	2.3	2.2	2.4	1.2	3.3
75-79	3.3	3.3	3.2	3.3	3.3	3.2	2.6	2.8	2.5
80-84	4.2	4.1	4.3	4.1	4.2	4.1	3.8	2.4	4.5
85+	5.6	4.9	6.0	5.6	5.0	5.9	5.6	4.5	6.0

^a SEER 18 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

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

^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	92.1	91.1	92.5	91.8	90.7	92.2	89.8	-	91.1
1978-1980 ^b	92.1	87.2	93.6	91.5	87.5	92.7	90.1	68.0 ^h	95.4
1981-1983 ^b	93.6	92.2	93.9	93.1	90.9	93.7	96.4	100.0	93.2
1984-1986 ^b	93.2	89.8	94.2	93.2	89.4	94.3	89.3	85.5 ^g	90.3
1987-1989 ^b	94.4	91.6	95.2	94.1	91.5	95.0	92.3	91.2 ^g	92.3
1990-1992 ^b	94.3	90.5	95.5	94.9	91.6	96.0	85.8	84.5 ^g	86.2
1993-1995 ^b	95.4	91.6	96.6	95.5	91.6	96.8	93.2	88.1 ^g	94.3
1996-1998 ^b	95.6	91.0	97.0	95.9	91.3	97.3	95.0	86.1 ^g	96.4
1999-2003 ^b	96.8	94.2	97.6	97.0	94.5	97.8	94.1	94.0	93.9
2004-2010 ^b	98.1 ^f	96.3 ^f	98.5 ^f	98.3 ^f	96.6 ^f	98.8 ^f	96.4 ^f	88.1	98.0 ^f
5-Year Period Survival (Percent) ^{cd}									
2010	98.0	95.8	98.6	98.2	96.0	98.8	97.7	91.6	98.5
Stage Distribution (%) 2004-2010 ^{ce}									
All Stages									
Number of cases	59,613	13,582	46,031	48,752	11,481	37,271	3,889	700	3,189
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	68	59	71	69	59	71	78	69	80
Regional	26	32	24	26	32	24	15	20	14
Distant	4	8	3	4	7	3	5	10	4
Unstaged	2	2	2	2	2	1	2	2	2
5-Year Relative Survival (Percent), 2004-2010 ^c									
Age at Diagnosis:									
Ages <45	99.7	98.8	99.8	99.7	98.9	99.9	98.9	95.0	99.3
Ages 45-54	99.1	97.3	99.6	99.2	97.5	99.7	97.8	93.3	98.7
Ages 55-64	97.3	95.2	98.2	97.7	95.6	98.5	96.9	91.4	97.7
Ages 65-74	94.7	90.5	96.3	95.2	90.9	96.9	91.6	87.3 ^g	92.0
Ages 75+	84.7	83.5	84.8	85.6	84.2	86.0	74.1	63.8 ^h	76.1
Ages <65	99.0	97.4	99.5	99.2	97.6	99.6	98.3	93.5	99.0
Ages 65+	91.2	88.3	92.3	91.9	88.8	93.2	86.6	79.9 ^g	88.3
Stage ^e :									
All Stages	97.8	95.6	98.5	98.1	95.9	98.7	96.7	91.4	97.6
Localized	99.9	99.8	99.9	99.9	99.8	99.9	99.7	98.3	99.8
Regional	97.6	96.4	98.1	97.8	96.5	98.2	94.4	91.0	95.4
Distant	54.7	49.8	57.8	55.4	48.5	60.2	41.9	45.2 ^g	39.6 ^g
Unstaged	88.1	82.0	89.6	86.8	80.8	88.3	88.4	-	90.6

^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 2011.^c SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG). Based on follow-up of patients into 2011.^d Period survival provides a 2010 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2007-2009: 0-1 year survival), (2006-2008: 1-2 year survival), (2005-2007: 2-3 year survival), (2004-2006: 3-4 year survival), (2003-2005: 4-5 years survival).^e Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.^f The difference between 1975-1977 and 2004-2010 is statistically significant (p<.05).^g The standard error is between 5 and 10 percentage points.^h 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- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1-year	94.9	95.1	95.9	96.2	96.7	96.8	96.4	97.7	97.1	97.7	97.6	97.1	97.9	98.3	97.7	98.5	98.5	98.3	98.8	98.9
2-year	93.5	94.5	95.2	95.7	96.1	96.6	96.1	97.1	97.0	97.1	97.4	97.1	97.8	97.9	97.3	98.4	98.1	98.2	98.7	
3-year	92.9	93.7	94.8	95.3	96.0	96.0	96.1	96.9	97.0	97.0	96.9	97.1	97.6	97.9	97.3	98.3	98.1	98.2		
4-year	92.5	93.4	94.3	95.0	95.9	95.4	95.7	96.3	97.0	96.9	96.9	97.1	97.4	97.7	97.3	98.3	98.1	98.2		
5-year	92.1	93.3	94.1	94.6	95.8	94.9	95.3	96.2	96.8	96.3	96.2	97.1	97.3	97.3	97.3	98.2				
6-year	91.6	93.1	93.8	94.3	95.8	94.8	95.2	95.8	96.3	96.3	96.1	96.8	96.9	97.2	97.3					
7-year	91.4	92.6	93.4	94.1	95.6	94.5	95.2	95.8	96.1	96.1	96.1	96.5	96.7	96.8						
8-year	91.1	92.6	93.3	94.1	95.5	94.2	95.2	95.8	96.0	95.9	95.9	96.3	96.6							
9-year	90.7	92.3	93.1	93.9	95.5	93.8	95.0	95.8	95.6	95.9	95.3	96.3								
10-year	90.5	91.9	92.8	93.6	95.2	93.7	95.0	95.8	95.3	95.8	95.3									
11-year	90.2	91.7	92.7	93.3	95.1	93.4	95.0	95.8	94.9	95.8										
12-year	90.2	91.4	92.6	93.0	95.1	93.0	95.0	95.8	94.6											
13-year	90.0	91.2	92.4	93.0	95.1	92.8	95.0	95.0												
14-year	89.9	91.1	92.4	92.7	95.1	92.5	95.0													
15-year	89.6	90.6	92.3	92.3	94.2	92.2														
16-year	89.6	90.6	92.3	92.2	93.6															
17-year	89.5	90.6	92.2	92.2																
18-year	89.3	90.4	92.2																	
19-year	89.1	90.4	91.9																	
20-year	89.1	90.4	91.9																	

^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- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Survival Time																				
1-year	94.6	92.5	94.8	94.6	93.3	93.7	91.8	97.2	96.5	96.4	96.1	95.0	95.6	96.7	96.9	96.4	97.4	96.8	98.3	97.8
2-year	92.5	92.0	93.7	93.2	91.8	93.4	90.9	95.4	96.2	95.1	95.5	94.8	95.3	95.1	95.4	96.1	96.6	96.1	98.2	
3-year	91.5	90.8	93.5	92.4	91.6	92.2	90.9	94.7	96.2	95.1	94.2	94.8	94.2	94.9	95.4	96.1	96.6	96.1		
4-year	90.5	90.4	92.1	91.8	91.4	91.8	89.5	93.6	96.2	95.1	93.6	94.5	93.5	94.4	95.4	96.1	96.6			
5-year	89.9	90.2	91.6	91.0	91.1	89.9	88.3	93.6	96.2	94.0	92.4	94.3	93.2	94.1	95.4	95.8				
6-year	89.6	89.8	91.1	90.6	90.3	89.9	88.0	93.5	95.8	94.0	92.0	93.8	91.7	94.0	95.4					
7-year	89.4	89.3	90.0	90.4	88.7	89.6	88.0	93.3	95.4	93.6	91.9	92.3	91.7	92.8						
8-year	89.3	89.3	89.6	90.1	88.7	88.6	87.9	93.3	95.3	93.6	91.1	91.3	91.7							
9-year	88.8	88.6	88.5	89.9	88.7	86.8	86.9	93.3	93.1	93.6	89.8	90.8								
10-year	88.3	87.8	88.4	89.7	87.4	86.5	86.9	93.2	92.6	93.6	89.5									
11-year	87.5	87.2	88.4	89.5	86.3	85.0	86.6	93.2	92.6	93.6										
12-year	87.5	86.4	88.3	88.8	86.0	84.3	86.6	93.0	92.6											
13-year	87.3	86.2	87.7	88.2	86.0	83.3	86.6	93.0												
14-year	87.3	86.2	87.7	87.9	85.9	82.9	86.6													
15-year	86.7	85.4	87.7	87.3	85.9	82.9														
16-year	86.5	85.3	87.7	86.9	85.9															
17-year	86.5	84.8	87.7	86.9																
18-year	86.5	84.5	87.7																	
19-year	86.5	84.5	87.7																	
20-year	86.5	84.5	87.7																	

^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- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Survival Time																				
1-year	95.0	95.9	96.3	96.8	97.8	97.7	97.7	97.9	97.4	98.0	98.0	97.7	98.5	98.8	97.9	99.0	98.9	98.7	98.9	99.1
2-year	93.9	95.3	95.7	96.5	97.4	97.5	97.7	97.6	97.3	97.7	97.9	97.7	98.4	98.6	97.9	99.0	98.5	98.7	98.8	
3-year	93.3	94.6	95.2	96.3	97.3	97.1	97.7	97.5	97.3	97.5	97.7	97.7	98.4	98.6	97.9	99.0	98.5	98.7		
4-year	93.1	94.4	95.0	96.1	97.3	96.5	97.5	97.1	97.1	97.4	97.7	97.7	98.4	98.6	97.9	99.0	98.3			
5-year	92.7	94.3	94.9	95.9	97.2	96.4	97.5	96.9	96.8	96.9	97.3	97.7	98.4	98.3	97.9	98.9				
6-year	92.3	94.2	94.7	95.5	97.2	96.1	97.3	96.6	96.5	96.9	97.3	97.6	98.3	98.1	97.9					
7-year	92.1	93.8	94.5	95.3	97.2	95.9	97.3	96.6	96.2	96.9	97.2	97.6	98.0	98.0						
8-year	91.7	93.6	94.5	95.3	97.2	95.9	97.3	96.6	96.1	96.5	97.2	97.6	97.8							
9-year	91.3	93.5	94.5	95.2	97.2	95.9	97.3	96.6	96.1	96.5	96.9	97.6								
10-year	91.2	93.3	94.2	94.9	97.2	95.7	97.3	96.6	95.9	96.3	96.9									
11-year	91.2	93.1	94.0	94.6	97.2	95.7	97.3	96.6	95.6	96.3										
12-year	91.1	93.0	94.0	94.5	97.2	95.6	97.3	96.6	94.9											
13-year	90.9	92.8	93.9	94.4	97.2	95.6	97.3	95.5												
14-year	90.7	92.8	93.9	94.3	97.2	95.4	97.3													
15-year	90.6	92.4	93.8	94.0	96.5	94.8														
16-year	90.6	92.3	93.7	93.9	95.5															
17-year	90.3	92.3	93.6	93.9																
18-year	89.9	92.3	93.5																	
19-year	89.7	92.3	93.3																	
20-year	89.7	92.3	93.3																	

^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, 2009-2011 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	0.09	1.13	0.06	Asian/ Pacific Islander	0	0.00	0.02	0.08	1.21	0.12
	10	0.02	0.09	0.25	1.14	0.06		10	0.02	0.08	0.24	1.22	0.12
	20	0.08	0.23	0.44	1.12	0.06		20	0.06	0.22	0.42	1.20	0.12
	30	0.16	0.37	0.59	1.06	0.06		30	0.16	0.36	0.59	1.15	0.12
	40	0.21	0.44	0.66	0.91	0.07		40	0.20	0.43	0.66	1.00	0.12
	50	0.24	0.46	0.64	0.72	0.07		50	0.23	0.46	0.68	0.80	0.12
	60	0.24	0.43	0.50	0.51	0.06		60	0.24	0.46	0.55	0.59	0.12
	70	0.21	0.29	-	0.31	0.06		70	0.24	0.34	-	0.38	0.11
80	0.11	-	-	0.13	0.05	80	0.12	-	-	0.17	0.09		
White	0	0.00	0.02	0.11	1.18	0.06	American Indian/ Alaska Native ^a	0	0.00	0.01	0.06	0.75	0.05
	10	0.02	0.11	0.28	1.19	0.06		10	0.01	0.06	0.14	0.76	0.05
	20	0.09	0.26	0.47	1.18	0.06		20	0.04	0.12	0.23	0.75	0.05
	30	0.17	0.39	0.63	1.10	0.06		30	0.08	0.19	0.31	0.72	0.05
	40	0.22	0.46	0.69	0.94	0.06		40	0.11	0.23	0.37	0.66	0.06
	50	0.25	0.48	0.66	0.74	0.06		50	0.12	0.26	0.43	0.56	0.06
	60	0.25	0.44	0.51	0.52	0.06		60	0.15	0.34	0.40	0.47	0.06
	70	0.22	0.30	-	0.31	0.06		70	0.21	0.28	-	0.37	0.06
80	0.11	-	-	0.13	0.05	80	0.10	-	-	0.21	0.04		
Black	0	0.00	0.01	0.03	0.64	0.05	Hispanic ^b	0	0.00	0.02	0.08	1.04	0.08
	10	0.01	0.03	0.11	0.66	0.06		10	0.02	0.08	0.20	1.05	0.09
	20	0.03	0.11	0.23	0.65	0.06		20	0.06	0.18	0.34	1.04	0.09
	30	0.08	0.20	0.34	0.64	0.06		30	0.12	0.28	0.48	0.98	0.09
	40	0.12	0.27	0.42	0.57	0.06		40	0.16	0.36	0.57	0.87	0.09
	50	0.15	0.31	0.41	0.46	0.06		50	0.20	0.42	0.61	0.72	0.09
	60	0.18	0.29	0.33	0.34	0.06		60	0.23	0.43	0.52	0.55	0.08
	70	0.13	0.18	-	0.20	0.05		70	0.22	0.32	-	0.35	0.08
80	0.07	-	-	0.09	0.05	80	0.13	-	-	0.17	0.06		

Devcan 6.8.0, August 2014, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, and Georgia excluding ATL/RG). Mortality data are from the NCHS public use data file for the total US.

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

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 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, 2009-2011 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	0.57	0.05	Asian/ Pacific Islander	0	0.00	0.01	0.03	0.58	0.07
	10	0.01	0.03	0.09	0.58	0.06		10	0.01	0.03	0.08	0.59	0.07
	20	0.02	0.08	0.17	0.58	0.06		20	0.02	0.08	0.15	0.58	0.07
	30	0.06	0.15	0.26	0.56	0.06		30	0.06	0.13	0.25	0.57	0.07
	40	0.09	0.21	0.35	0.51	0.06		40	0.08	0.20	0.32	0.51	0.07
	50	0.12	0.26	0.38	0.43	0.06		50	0.12	0.25	0.37	0.44	0.07
	60	0.15	0.28	0.33	0.34	0.06		60	0.13	0.26	0.33	0.34	0.07
	70	0.15	0.21	-	0.22	0.05		70	0.14	0.22	-	0.22	0.06
80	0.09	-	-	0.10	0.04	80	0.10	-	-	0.10	0.04		
White	0	0.00	0.01	0.03	0.61	0.06	American Indian/ Alaska Native ^a	0	0.00	0.00	0.02	0.35	0.05
	10	0.01	0.03	0.09	0.62	0.06		10	0.01	0.02	0.06	0.35	0.05
	20	0.03	0.09	0.18	0.61	0.06		20	0.02	0.05	0.09	0.35	0.05
	30	0.06	0.16	0.28	0.60	0.06		30	0.04	0.08	0.16	0.34	0.05
	40	0.10	0.22	0.37	0.54	0.06		40	0.04	0.13	0.23	0.31	0.05
	50	0.13	0.28	0.40	0.46	0.06		50	0.09	0.19	0.28	0.28	0.05
	60	0.16	0.30	0.35	0.35	0.06		60	0.12	0.21	0.21	0.21	0.06
	70	0.16	0.22	-	0.22	0.05		70	0.11	0.11	-	0.11	0.07
80	0.09	-	-	0.10	0.04	80	0.01	-	-	0.01	0.03		
Black	0	0.00	0.00	0.01	0.26	0.03	Hispanic ^b	0	0.00	0.01	0.02	0.46	0.06
	10	0.00	0.01	0.03	0.27	0.04		10	0.01	0.02	0.05	0.46	0.06
	20	0.01	0.03	0.07	0.27	0.04		20	0.01	0.05	0.10	0.46	0.06
	30	0.02	0.07	0.12	0.26	0.04		30	0.04	0.09	0.18	0.45	0.06
	40	0.05	0.10	0.17	0.25	0.04		40	0.06	0.14	0.25	0.42	0.06
	50	0.06	0.13	0.19	0.21	0.04		50	0.09	0.20	0.30	0.37	0.06
	60	0.08	0.15	0.17	0.17	0.04		60	0.12	0.23	0.29	0.30	0.06
	70	0.08	0.11	-	0.12	0.03		70	0.12	0.19	-	0.20	0.05
80	0.04	-	-	0.05	0.03	80	0.10	-	-	0.11	0.04		

Devcan 6.8.0, August 2014, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, and Georgia excluding ATL/RG). Mortality data are from the NCHS public use data file for the total US.

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

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 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, 2009-2011 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	0.16	1.68	0.07	Asian/ Pacific Islander	0	0.00	0.03	0.14	1.77	0.16
	10	0.03	0.16	0.42	1.69	0.07		10	0.03	0.14	0.38	1.78	0.16
	20	0.13	0.39	0.72	1.67	0.07		20	0.11	0.35	0.67	1.76	0.16
	30	0.26	0.59	0.92	1.54	0.07		30	0.25	0.56	0.89	1.65	0.16
	40	0.33	0.67	0.97	1.29	0.07		40	0.32	0.64	0.96	1.41	0.16
	50	0.35	0.66	0.89	0.99	0.07		50	0.33	0.65	0.94	1.11	0.16
	60	0.33	0.56	0.65	0.67	0.07		60	0.33	0.63	0.74	0.80	0.16
	70	0.26	0.36	-	0.38	0.07		70	0.31	0.43	-	0.50	0.15
80	0.13	-	-	0.15	0.05	80	0.14	-	-	0.22	0.12		
White	0	0.00	0.04	0.19	1.77	0.07	American Indian/ Alaska Native ^a	0	0.00	0.02	0.09	1.15	0.06
	10	0.03	0.19	0.47	1.79	0.07		10	0.02	0.09	0.22	1.16	0.06
	20	0.15	0.44	0.78	1.75	0.07		20	0.07	0.20	0.38	1.14	0.06
	30	0.29	0.63	0.98	1.61	0.07		30	0.13	0.31	0.45	1.08	0.06
	40	0.35	0.71	1.02	1.34	0.07		40	0.19	0.33	0.51	0.97	0.06
	50	0.36	0.68	0.91	1.01	0.07		50	0.15	0.33	0.58	0.81	0.06
	60	0.33	0.57	0.66	0.68	0.07		60	0.19	0.45	0.57	0.69	0.06
	70	0.27	0.37	-	0.38	0.06		70	0.29	0.42	-	0.56	0.06
80	0.13	-	-	0.15	0.05	80	0.17	-	-	0.36	0.05		
Black	0	0.00	0.01	0.05	1.00	0.07	Hispanic ^b	0	0.00	0.03	0.15	1.62	0.11
	10	0.01	0.05	0.19	1.01	0.07		10	0.03	0.15	0.36	1.64	0.11
	20	0.04	0.18	0.37	1.01	0.07		20	0.12	0.33	0.60	1.61	0.11
	30	0.13	0.33	0.55	0.97	0.07		30	0.21	0.48	0.78	1.50	0.11
	40	0.19	0.42	0.65	0.85	0.07		40	0.27	0.58	0.88	1.30	0.11
	50	0.23	0.47	0.61	0.68	0.07		50	0.31	0.62	0.89	1.04	0.11
	60	0.26	0.40	0.46	0.48	0.07		60	0.32	0.60	0.71	0.76	0.10
	70	0.17	0.23	-	0.25	0.07		70	0.30	0.42	-	0.47	0.10
80	0.09	-	-	0.11	0.06	80	0.15	-	-	0.21	0.07		

Devcan 6.8.0, August 2014, National Cancer Institute (<http://surveillance.cancer.gov/devcan/>).

Source: Incidence data are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, and Georgia excluding ATL/RG). Mortality data are from the NCHS public use data file for the total US.

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

^b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

A percent of 0.00 represents a value that is below 0.005.

Table 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 18 Areas ^b			SEER 13 Areas ^b			SEER 9 Areas ^b		
	Rate 2007-2011			Trend 2002-2011 ^c			Trend 2002-2011 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	12.9	6.4	19.1	5.5*	5.2*	5.7*	5.5*	5.4*	5.7*
White	13.7	6.9	20.4	5.4*	5.3*	5.6*	5.5*	5.5*	5.7*
White Hispanic ^e	11.5	4.8	18.1	5.1*	3.9*	5.5*	-	-	-
White Non-Hispanic ^e	14.4	7.5	21.4	5.6*	5.8*	5.9*	-	-	-
Black	7.6	3.3	11.3	6.7*	5.1*	7.5*	6.2*	3.0*	6.0*
Asian/Pacific Islander	12.5	5.7	18.5	5.1*	5.6*	4.9*	-	-	-
Amer Ind/Alaska Nat ^f	7.7	3.4	11.8	3.6*	-	-	-	-	-
Hispanic ^e	10.9	4.6	17.1	5.0*	4.7*	5.3*	-	-	-
<u>U.S. Mortality^g</u>									
RACE/ETHNICITY	Rate 2007-2011			Trend 2002-2011 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	0.5	0.5	0.5	0.9*	1.6*	0.8*			
White	0.5	0.5	0.5	0.8*	1.6*	0.7*			
White Hispanic ^e	0.6	0.5	0.7	0.1	1.6	-0.7			
White Non-Hispanic ^e	0.5	0.5	0.5	0.8*	1.5*	0.4*			
Black	0.5	0.4	0.6	0.9*	1.5*	0.8			
Asian/Pacific Islander	0.7	0.6	0.9	0.0	-	-0.2			
Amer Ind/Alaska Nat									
Total U.S.	0.4	0.5	0.3	-	-	-			
CHSDA Counties	0.6	-	0.5	-	-	-			
Non-CHSDA Counties	-	-	-	-	-	-			
Hispanic ^e	0.6	0.5	0.7	0.0	1.5	-0.8*			

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 4.1.0, April 2014, 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 18 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, and Georgia excluding ATL/RG.

^c The 2002-2011 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2011.

^d The 2002-2011 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2011.

^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 2002-2011 Hispanic and Non-Hispanic mortality trends exclude deaths from New Hampshire and Oklahoma.

^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 2002-2011 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2011.

* 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, 2007-2011</u>									
California	11.40	5.72	16.98	11.70	5.95	17.54	7.06	3.13	10.66
Greater Bay Area	10.55	5.34	15.72	10.88	5.73	16.29	4.75	2.28	7.01
San Francisco-Oakland	9.98	5.20	14.71	10.31	5.61	15.28	4.54	2.42	6.42
San Jose-Monterey	11.60	5.57	17.62	11.86	5.93	18.03	6.00	-	10.84
Los Angeles	12.06	5.93	17.90	12.44	6.20	18.69	8.35	3.43	12.37
Greater California	11.41	5.76	17.02	11.64	5.92	17.44	6.78	3.23	10.41
Connecticut	18.15	8.77	27.00	18.80	9.14	28.03	10.48	5.69	14.86
Detroit	14.04	6.84	20.68	15.56	7.65	23.31	9.01	3.73	13.08
Georgia	10.49	5.39	15.30	12.18	6.44	17.95	6.57	2.61	9.80
Atlanta	11.67	6.17	16.71	14.51	8.09	21.02	7.41	3.10	10.88
Rural Georgia	10.05	5.19	14.67	11.94	-	18.08	6.90	-	-
Greater Georgia	9.90	5.00	14.58	11.28	5.80	16.75	5.86	2.23	8.88
Hawaii	14.99	6.78	23.31	13.86	6.69	22.58	13.46	-	-
Iowa	13.07	6.89	19.28	13.24	6.94	19.56	8.04	-	11.02
Kentucky	13.39	6.58	19.99	13.81	6.79	20.64	8.68	4.04	12.93
Louisiana	10.83	5.58	15.83	12.54	6.66	18.43	7.18	2.72	10.92
New Jersey	17.51	8.84	25.71	19.05	9.72	28.13	8.24	3.72	12.00
New Mexico	13.30	5.97	20.42	13.68	5.96	21.24	7.60	-	-
Seattle-Puget Sound	13.54	6.62	20.44	13.59	6.85	20.43	7.74	-	13.28
Utah	17.23	7.94	26.54	17.61	8.03	27.22	-	-	-
9 SEER Areas ^b	13.72	6.75	20.48	14.61	7.26	22.00	8.06	3.62	11.82
11 SEER Areas ^b	13.18	6.48	19.66	13.92	6.93	20.96	8.12	3.51	12.00
13 SEER Areas ^b	13.16	6.48	19.63	13.92	6.93	20.95	8.10	3.52	11.97
18 SEER Areas ^b	12.88	6.42	19.15	13.65	6.88	20.44	7.55	3.25	11.26

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

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

Table 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, 2007-2011</u>									
California	0.61	0.55	0.65	0.57	0.55	0.59	0.53	0.43	0.59
Greater Bay Area	0.63	0.55	0.70	0.58	0.58	0.59	-	-	-
San Francisco-Oakland	0.59	0.49	0.67	0.52	0.51	0.52	-	-	-
San Jose-Monterey	0.71	0.66	0.75	0.70	0.69	0.72	-	-	-
Los Angeles	0.70	0.66	0.72	0.66	0.65	0.67	0.53	-	-
Greater California	0.56	0.50	0.60	0.53	0.51	0.55	0.42	-	-
Connecticut	0.45	0.47	0.44	0.44	0.46	0.42	-	-	-
Detroit	0.49	0.45	0.52	0.47	0.48	0.47	0.54	-	0.72
Georgia	0.39	0.42	0.36	0.41	0.45	0.35	0.34	-	0.36
Atlanta	0.41	0.49	0.35	0.43	0.51	0.37	-	-	-
Rural Georgia	-	-	-	-	-	-	-	-	-
Greater Georgia	0.39	0.40	0.36	0.39	0.42	0.33	0.40	-	0.46
Hawaii	0.66	-	0.89	-	-	-	-	-	-
Iowa	0.47	0.56	0.40	0.47	0.56	0.40	-	-	-
Kentucky	0.51	0.49	0.53	0.52	0.49	0.53	-	-	-
Louisiana	0.47	0.42	0.50	0.50	0.49	0.51	0.36	-	0.46
New Jersey	0.49	0.53	0.46	0.51	0.56	0.47	0.37	-	-
New Mexico	0.51	0.39	0.58	0.51	0.42	0.56	-	-	-
Seattle-Puget Sound	0.54	0.50	0.55	0.52	0.49	0.53	-	-	-
Utah	0.53	0.68	0.39	0.54	0.70	0.39	-	-	-
9 SEER Areas ^b	0.51	0.49	0.52	0.48	0.50	0.46	0.47	0.43	0.49
11 SEER Areas ^b	0.56	0.54	0.58	0.53	0.54	0.52	0.50	0.42	0.54
13 SEER Areas ^b	0.57	0.54	0.58	0.54	0.55	0.52	0.49	0.41	0.53
18 SEER Areas ^b	0.54	0.51	0.55	0.52	0.53	0.51	0.43	0.35	0.49
Total U.S.	0.51	0.51	0.51	0.50	0.52	0.49	0.49	0.40	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 18 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG.

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

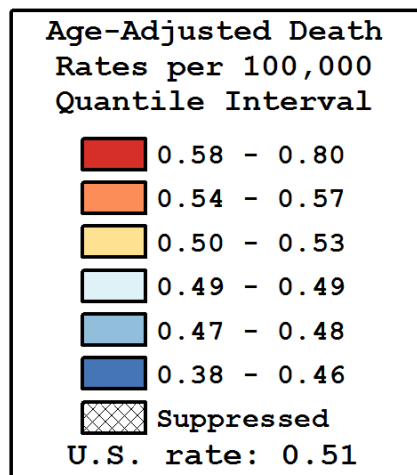
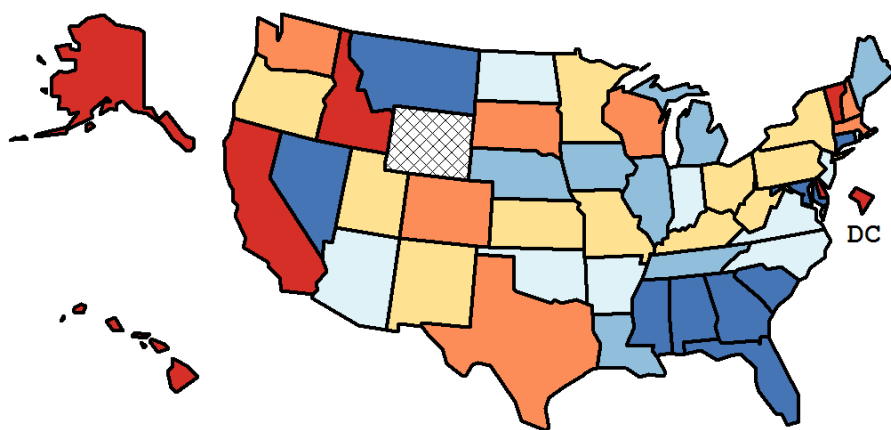
Table 26.18
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2007-2011

Males and Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.51	0.01		
High Five States				
Alaska	0.80	0.19	(01)	57.62 ^c
Vermont	0.76	0.14	(02)	48.16 ^c
Idaho	0.66	0.09	(03)	29.84 ^c
Hawaii	0.66	0.09	(04)	29.12 ^c
D.C.	0.65	0.15	(05)	28.23 ^c
Low Five States				
Maryland	0.42	0.04	(46)	-17.44 ^c
Mississippi	0.40	0.05	(47)	-20.87 ^c
South Carolina	0.40	0.04	(48)	-21.42 ^c
Georgia	0.39 ^b	0.03	(49)	-22.76 ^c
Montana	0.38	0.08	(50)	-24.91 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.45	0.04	(44)	-11.62	Montana	0.38	0.08	(50)	-24.91 ^c
Alaska	0.80	0.19	(01)	57.62 ^c	Nebraska	0.48	0.07	(36)	-5.72
Arizona	0.49	0.04	(28)	-3.65	Nevada	0.46	0.06	(42)	-9.78
Arkansas	0.49	0.06	(26)	-3.60	New Hampshire	0.54	0.09	(14)	6.21
California	0.61 ^b	0.02	(07)	19.20 ^c	New Jersey	0.49	0.03	(33)	-4.60
Colorado	0.57	0.05	(09)	11.09	New Mexico	0.51	0.07	(25)	-0.77
Connecticut	0.45	0.05	(43)	-11.45	New York	0.53	0.02	(17)	4.00
Delaware	0.62	0.11	(06)	20.79 ^c	North Carolina	0.49	0.03	(31)	-4.26
D.C.	0.65	0.15	(05)	28.23 ^c	North Dakota	0.49	0.11	(27)	-3.64
Florida	0.43 ^b	0.02	(45)	-14.91	Ohio	0.52	0.03	(20)	2.02
Georgia	0.39 ^b	0.03	(49)	-22.76 ^c	Oklahoma	0.49	0.05	(34)	-4.65
Hawaii	0.66	0.09	(04)	29.12 ^c	Oregon	0.52	0.05	(19)	2.70
Idaho	0.66	0.09	(03)	29.84 ^c	Pennsylvania	0.52	0.03	(21)	1.91
Illinois	0.48	0.03	(35)	-5.61	Rhode Island	0.49	0.09	(32)	-4.32
Indiana	0.49	0.04	(29)	-4.16	South Carolina	0.40	0.04	(48)	-21.42 ^c
Iowa	0.47	0.05	(41)	-8.45	South Dakota	0.56	0.11	(10)	9.61
Kansas	0.53	0.06	(16)	4.09	Tennessee	0.48	0.04	(37)	-6.41
Kentucky	0.51	0.05	(23)	-0.27	Texas	0.55	0.02	(13)	8.18
Louisiana	0.47	0.05	(40)	-8.40	Utah	0.53	0.07	(18)	3.60
Maine	0.47	0.07	(39)	-8.09	Vermont	0.76	0.14	(02)	48.16 ^c
Maryland	0.42	0.04	(46)	-17.44 ^c	Virginia	0.49	0.04	(30)	-4.22
Massachusetts	0.55	0.04	(12)	8.37	Washington	0.57	0.04	(08)	11.11
Michigan	0.47	0.03	(38)	-7.52	West Virginia	0.52	0.07	(22)	0.94
Minnesota	0.51	0.04	(24)	-0.76	Wisconsin	0.56	0.04	(11)	9.55
Mississippi	0.40	0.05	(47)	-20.87 ^c	Wyoming	-	-	(-)	-
Missouri	0.53	0.04	(15)	4.21					



^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.

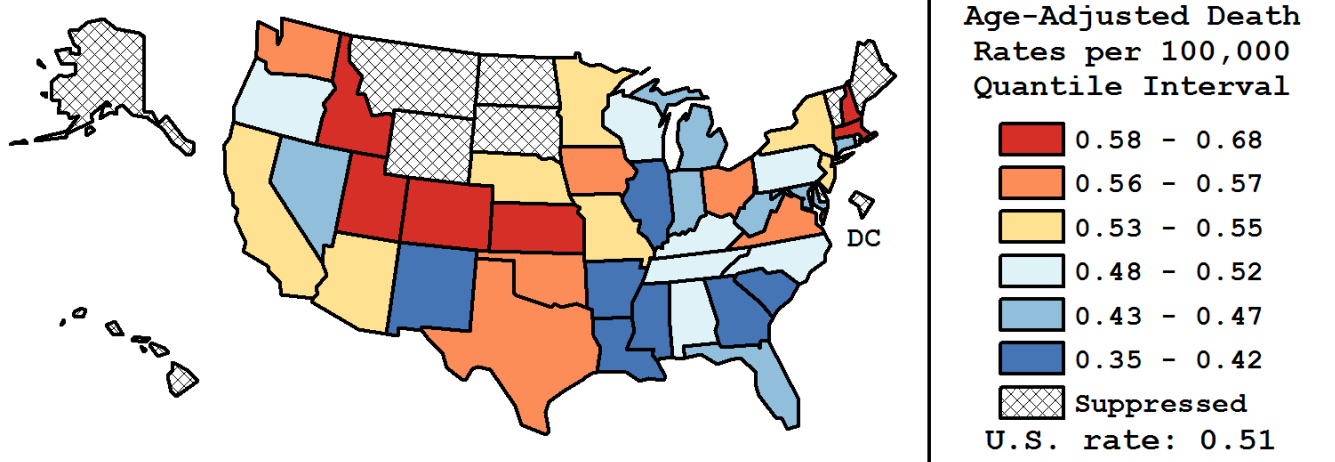
Table 26.19
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2007-2011

Males

State	Rate	SE	Rank	PD
TOTAL U.S.	0.51	0.01		
High Five States				
Utah	0.68	0.12	(01)	33.05 ^c
New Hampshire	0.66	0.15	(02)	30.34 ^c
Kansas	0.64	0.10	(03)	25.79 ^c
Colorado	0.63	0.08	(04)	22.85 ^c
Idaho	0.61	0.14	(05)	20.45 ^c
Low Five States				
Arkansas	0.41	0.08	(36)	-19.86 ^c
Illinois	0.40	0.04	(37)	-20.63 ^c
South Carolina	0.40	0.06	(38)	-22.13 ^c
New Mexico	0.39	0.09	(39)	-22.56 ^c
Mississippi	0.35	0.08	(40)	-30.87 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.51	0.07	(21)	-0.55	Montana	-	-	(-)	-
Alaska	-	-	(-)	-	Nebraska	0.55	0.11	(14)	7.27
Arizona	0.53	0.06	(17)	4.97	Nevada	0.44	0.08	(31)	-14.01
Arkansas	0.41	0.08	(36)	-19.86 ^c	New Hampshire	0.66	0.15	(02)	30.34 ^c
California	0.55	0.03	(13)	7.74	New Jersey	0.53	0.05	(18)	4.01
Colorado	0.63	0.08	(04)	22.85 ^c	New Mexico	0.39	0.09	(39)	-22.56 ^c
Connecticut	0.47	0.07	(29)	-8.20	New York	0.54	0.04	(15)	5.72
Delaware	-	-	(-)	-	North Carolina	0.49	0.05	(23)	-3.07
D.C.	-	-	(-)	-	North Dakota	-	-	(-)	-
Florida	0.44	0.03	(30)	-13.18	Ohio	0.57	0.05	(07)	12.81
Georgia	0.42	0.05	(35)	-17.30 ^c	Oklahoma	0.57	0.08	(10)	11.02
Hawaii	-	-	(-)	-	Oregon	0.52	0.08	(20)	2.64
Idaho	0.61	0.14	(05)	20.45 ^c	Pennsylvania	0.50	0.04	(22)	-2.56
Illinois	0.40	0.04	(37)	-20.63 ^c	Rhode Island	-	-	(-)	-
Indiana	0.47	0.06	(28)	-7.57	South Carolina	0.40	0.06	(38)	-22.13 ^c
Iowa	0.56	0.09	(12)	10.46	South Dakota	-	-	(-)	-
Kansas	0.64	0.10	(03)	25.79 ^c	Tennessee	0.48	0.06	(26)	-5.41
Kentucky	0.49	0.07	(25)	-4.46	Texas	0.56	0.04	(11)	10.85
Louisiana	0.42	0.07	(34)	-16.73 ^c	Utah	0.68	0.12	(01)	33.05 ^c
Maine	-	-	(-)	-	Vermont	-	-	(-)	-
Maryland	0.43	0.06	(32)	-15.95 ^c	Virginia	0.57	0.06	(08)	12.34
Massachusetts	0.58	0.06	(06)	13.84	Washington	0.57	0.06	(09)	11.54
Michigan	0.47	0.05	(27)	-7.28	West Virginia	0.43	0.09	(33)	-16.41 ^c
Minnesota	0.54	0.07	(16)	5.12	Wisconsin	0.49	0.06	(24)	-3.89
Mississippi	0.35	0.08	(40)	-30.87 ^c	Wyoming	-	-	(-)	-
Missouri	0.53	0.06	(19)	3.28					



^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.

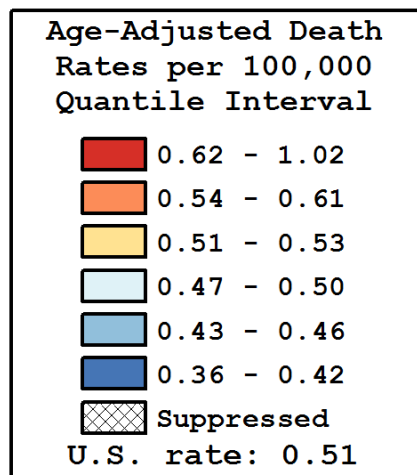
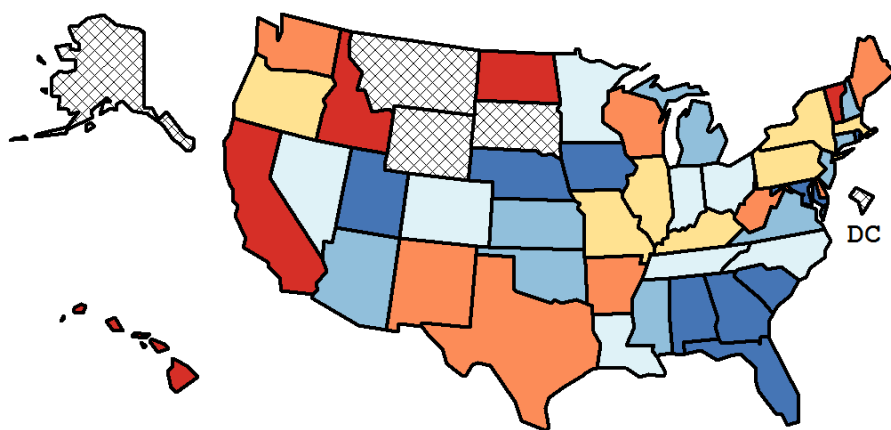
Table 26.20
Cancer of the Thyroid (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2007-2011

Females

State	Rate	SE	Rank	PD
TOTAL U.S.	0.51	0.01		
High Five States				
Vermont	1.02	0.23	(01)	101.48 ^c
Hawaii	0.89	0.15	(02)	75.47 ^c
Idaho	0.71	0.13	(03)	40.59 ^c
North Dakota	0.65	0.18	(04)	28.67 ^c
California	0.65 ^b	0.03	(05)	28.39 ^c
Low Five States				
Iowa	0.40	0.06	(42)	-20.48 ^c
South Carolina	0.40	0.05	(43)	-21.12 ^c
Utah	0.39	0.09	(44)	-22.19 ^c
Nebraska	0.38	0.08	(45)	-24.35 ^c
Georgia	0.36 ^b	0.04	(46)	-28.45 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	0.41	0.05	(40)	-18.50 ^c	Montana	-	-	(-)	-
Alaska	-	-	(-)	-	Nebraska	0.38	0.08	(45)	-24.35 ^c
Arizona	0.45	0.05	(33)	-10.23	Nevada	0.47	0.08	(28)	-7.44
Arkansas	0.55	0.08	(10)	7.87	New Hampshire	0.45	0.11	(32)	-10.18
California	0.65 ^b	0.03	(05)	28.39 ^c	New Jersey	0.46	0.04	(31)	-9.57
Colorado	0.50	0.06	(21)	-0.89	New Mexico	0.58	0.10	(08)	13.69
Connecticut	0.44	0.06	(34)	-12.88	New York	0.52	0.03	(19)	3.49
Delaware	0.61	0.14	(07)	19.92 ^c	North Carolina	0.48	0.04	(24)	-4.56
D.C.	-	-	(-)	-	North Dakota	0.65	0.18	(04)	28.67 ^c
Florida	0.42	0.02	(38)	-16.12 ^c	Ohio	0.47	0.04	(26)	-6.80
Georgia	0.36 ^b	0.04	(46)	-28.45 ^c	Oklahoma	0.44	0.06	(35)	-13.37
Hawaii	0.89	0.15	(02)	75.47 ^c	Oregon	0.53	0.07	(15)	5.05
Idaho	0.71	0.13	(03)	40.59 ^c	Pennsylvania	0.53	0.03	(14)	5.14
Illinois	0.53	0.04	(18)	3.94	Rhode Island	0.40	0.10	(41)	-20.43 ^c
Indiana	0.48	0.05	(23)	-4.49	South Carolina	0.40	0.05	(43)	-21.12 ^c
Iowa	0.40	0.06	(42)	-20.48 ^c	South Dakota	-	-	(-)	-
Kansas	0.46	0.07	(30)	-9.10	Tennessee	0.47	0.05	(27)	-7.09
Kentucky	0.53	0.06	(17)	4.32	Texas	0.54	0.03	(13)	6.31
Louisiana	0.50	0.06	(22)	-2.24	Utah	0.39	0.09	(44)	-22.19 ^c
Maine	0.54	0.11	(12)	7.40	Vermont	1.02	0.23	(01)	101.48 ^c
Maryland	0.42	0.05	(39)	-17.67 ^c	Virginia	0.43	0.04	(37)	-14.77
Massachusetts	0.52	0.05	(20)	3.40	Washington	0.56	0.06	(09)	10.04
Michigan	0.46	0.04	(29)	-8.53	West Virginia	0.55	0.09	(11)	7.63
Minnesota	0.48	0.06	(25)	-5.87	Wisconsin	0.61	0.06	(06)	21.00 ^c
Mississippi	0.43	0.07	(36)	-14.31	Wyoming	-	-	(-)	-
Missouri	0.53	0.05	(16)	4.72					



^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, 2011
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 <19 ^e	0 to <36 ^e	>=36 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	174,786	117,871	76,909	54,925	41,306	31,258	433,781	527,919	38,789	566,708
	Males	38,665	25,267	16,501	12,249	8,454	6,424	94,464	114,267	8,821	123,088
	Females	136,121	92,604	60,408	42,676	32,852	24,834	339,317	413,652	29,968	443,620
White ^b	Both Sexes	150,376	103,251	67,741	48,798	37,221	28,251	378,604	463,565	35,135	498,700
	Males	34,346	22,675	14,957	11,190	7,774	5,810	84,812	102,959	7,429	110,388
	Females	116,030	80,576	52,784	37,608	29,447	22,441	293,792	360,606	27,706	388,312
Black ^b	Both Sexes	11,424	7,203	4,276	2,862	1,830	1,396	26,148	30,404	1,637	32,041
	Males	1,844	1,295	658	550	342	275	4,418	5,118	178	5,296
	Females	9,580	5,908	3,618	2,312	1,488	1,121	21,730	25,286	1,459	26,745
Asian/ Pacific Islander ^c	Both Sexes	8,426	5,356	3,410	+	+	+	19,246	+	+	+
	Males	1,551	917	610	+	+	+	3,417	+	+	+
	Females	6,875	4,439	2,800	+	+	+	15,829	+	+	+
Hispanic ^d	Both Sexes	17,678	11,227	6,911	+	+	+	39,901	+	+	+
	Males	2,946	1,951	1,112	+	+	+	6,642	+	+	+
	Females	14,732	9,276	5,799	+	+	+	33,259	+	+	+

Estimated prevalence percent^a on January 1, 2011, of the SEER^c population diagnosed in the previous 19 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	0.1268%	0.0001%	0.0052%	0.0394%	0.1266%	0.2103%	0.2486%	0.2560%	0.2290%	0.1536%	0.1226%
	Males	0.0549%	-	0.0022%	0.0114%	0.0409%	0.0790%	0.1098%	0.1402%	0.1454%	0.1011%	0.0546%
	Females	0.1968%	-	0.0084%	0.0686%	0.2126%	0.3404%	0.3812%	0.3608%	0.2962%	0.1843%	0.1875%
White ^c	Both Sexes	0.1387%	0.0002%	0.0059%	0.0453%	0.1418%	0.2317%	0.2673%	0.2654%	0.2351%	0.1512%	0.1322%
	Males	0.0619%	-	0.0025%	0.0133%	0.0448%	0.0888%	0.1208%	0.1511%	0.1573%	0.1011%	0.0597%
	Females	0.2153%	-	0.0096%	0.0794%	0.2438%	0.3790%	0.4119%	0.3720%	0.2993%	0.1808%	0.2042%
Black ^c	Both Sexes	0.0604%	-	0.0016%	0.0123%	0.0544%	0.1052%	0.1287%	0.1725%	0.1483%	0.1152%	0.0658%
	Males	0.0213%	-	-	0.0031%	0.0152%	0.0350%	0.0447%	0.0723%	0.0760%	0.0860%	0.0258%
	Females	0.0961%	-	0.0023%	0.0210%	0.0885%	0.1674%	0.2017%	0.2518%	0.1985%	0.1292%	0.0991%
Asian/ Pacific Islander ^c	Both Sexes	0.1181%	-	0.0046%	0.0305%	0.1089%	0.1814%	0.2323%	0.2521%	0.2373%	0.1841%	0.1133%
	Males	0.0444%	-	0.0020%	0.0070%	0.0388%	0.0606%	0.0902%	0.1147%	0.1141%	0.1000%	0.0450%
	Females	0.1857%	-	0.0073%	0.0536%	0.1717%	0.2887%	0.3542%	0.3660%	0.3318%	0.2358%	0.1717%
Hispanic ^d	Both Sexes	0.0799%	-	0.0056%	0.0314%	0.0955%	0.1571%	0.2101%	0.2286%	0.2277%	0.1696%	0.1030%
	Males	0.0261%	-	0.0022%	0.0065%	0.0254%	0.0437%	0.0760%	0.1052%	0.1214%	0.0998%	0.0383%
	Females	0.1350%	-	0.0091%	0.0592%	0.1703%	0.2752%	0.3377%	0.3337%	0.3062%	0.2112%	0.1647%

^a US 2011 cancer prevalence counts are based on 2011 cancer prevalence proportions from the SEER registries and 1/1/2011 US population estimates based on the average of 2010 and 2011 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: 36 years for 1975-2011 SEER 9 data; 19 years for 1992-2011 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 36 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 <36 and >=36. (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, 2007-2011
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	55,363	99.7%	45,207	99.7%	3,633	99.5%	5,401	99.7%	232	100.0%	8,037	99.7%
Epidermoid carcinoma ^d (8051-8131)	54	0.1%	43	0.1%	-	-	-	-	-	-	-	-
Adenocarcinoma ^e	53,495	96.3%	43,682	96.3%	3,468	94.9%	5,254	97.0%	226	97.4%	7,797	96.7%
Papillary adenocarcinoma (8050,8260,8340-8344, 8350,8450)	48,857	87.9%	40,016	88.2%	2,955	80.9%	4,894	90.3%	204	87.9%	7,246	89.9%
Follicular carcinoma (8330-8332,8335)	3,060	5.5%	2,361	5.2%	368	10.1%	262	4.8%	16	6.9%	385	4.8%
Oxyphilic (8290)	1,280	2.3%	1,078	2.4%	108	3.0%	73	1.3%	-	-	135	1.7%
Other specific carcinomas ^f	1,017	1.8%	847	1.9%	97	2.7%	51	0.9%	-	-	139	1.7%
Medullary carcinoma (8510)	985	1.8%	819	1.8%	93	2.5%	51	0.9%	-	-	134	1.7%
Carcinoma, NOS (8004,8010-8012, 8020-8022,8030-8032)	797	1.4%	635	1.4%	63	1.7%	90	1.7%	-	-	95	1.2%
Anaplastic carcinoma (8004,8012,8020-8021, 8030-8032)	486	0.9%	392	0.9%	31	0.8%	60	1.1%	-	-	54	0.7%
Sarcoma and other soft tissue tumors ^g	-	-	-	-	-	-	-	-	-	-	-	-
Other specific types ^h	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified (8000-8003,8005)	170	0.3%	130	0.3%	16	0.4%	17	0.3%	-	-	22	0.3%
Total	55,554	100.0%	45,354	100.0%	3,653	100.0%	5,418	100.0%	232	100.0%	8,063	100.0%

Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).

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.

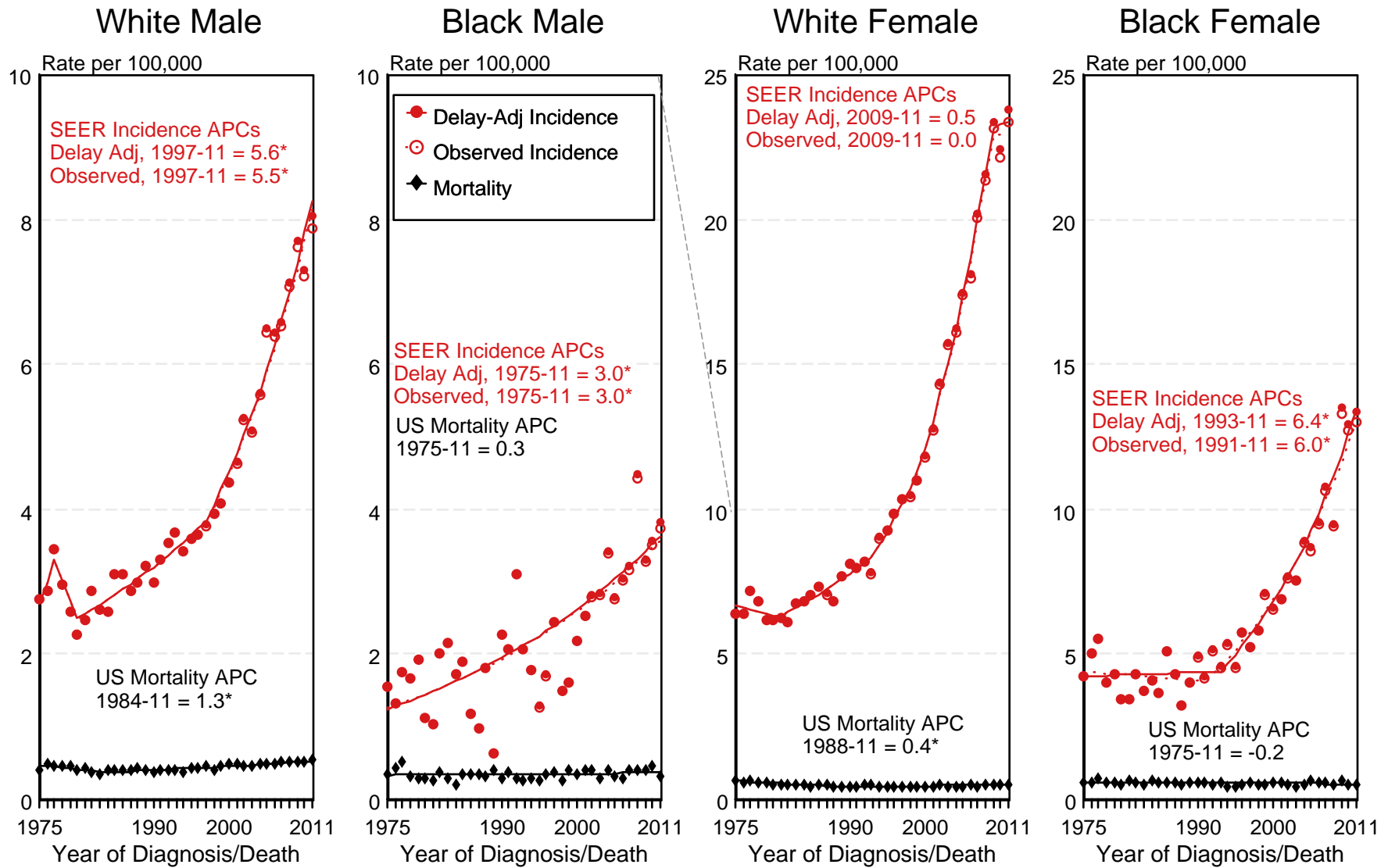
^g Sarcoma and other soft tissue tumors include histologies 8680-8713, 8800-8921, 8990-8991, 9040-9044, 9120-9136, 9150-9252, 9370-9373, 9540-9582.

^h 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.

Figure 26.1

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



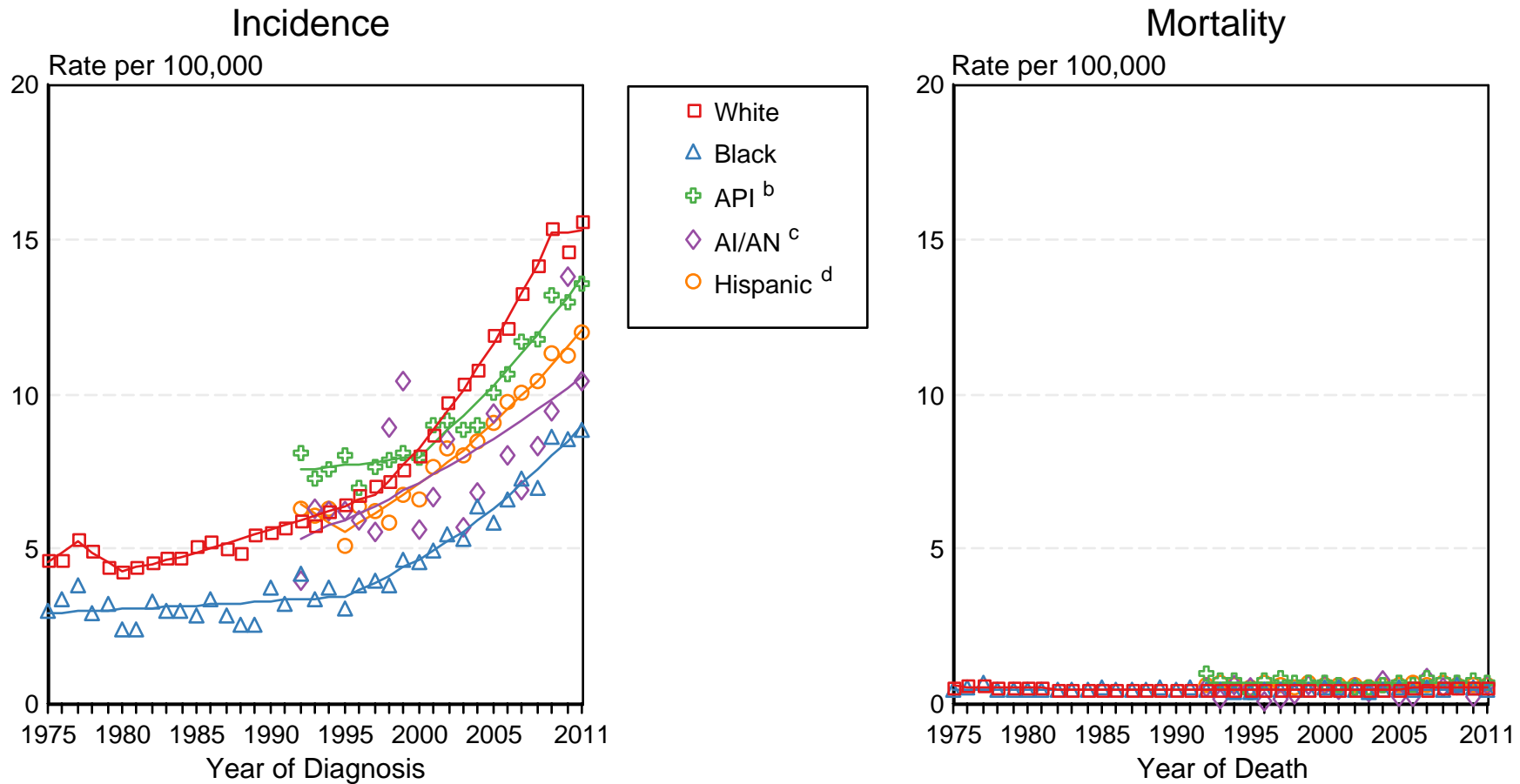
^a Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.1.0, April 2014, National Cancer 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 26.2

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

Joinpoint Analyses for Whites and Blacks from 1975-2011

and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2011



Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

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

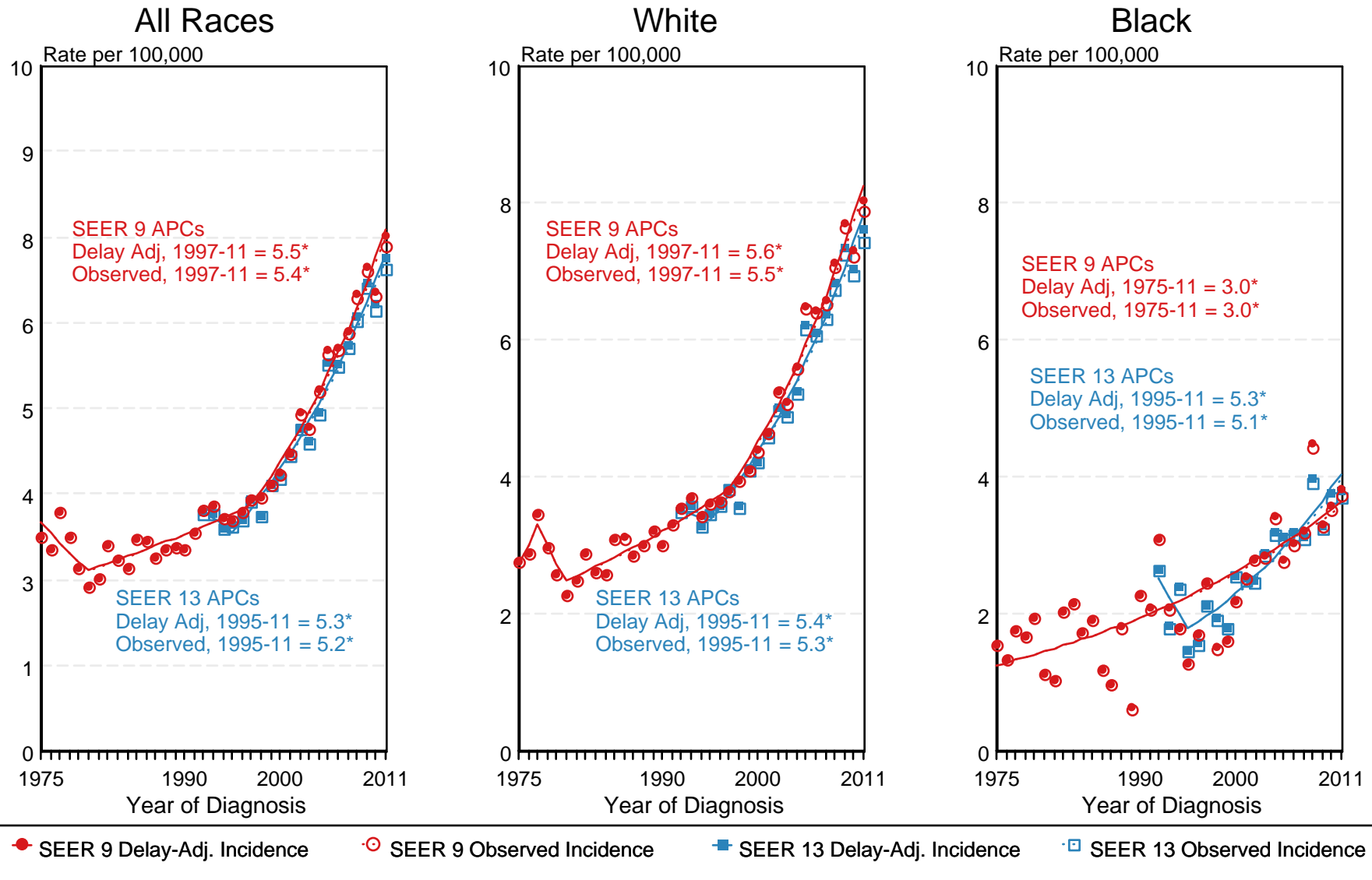
Regression lines are calculated using the Joinpoint Regression Program Version 4.1.0, April 2014, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2011 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2011 allow a maximum 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. Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from New Hampshire and Oklahoma.

Figure 26.3

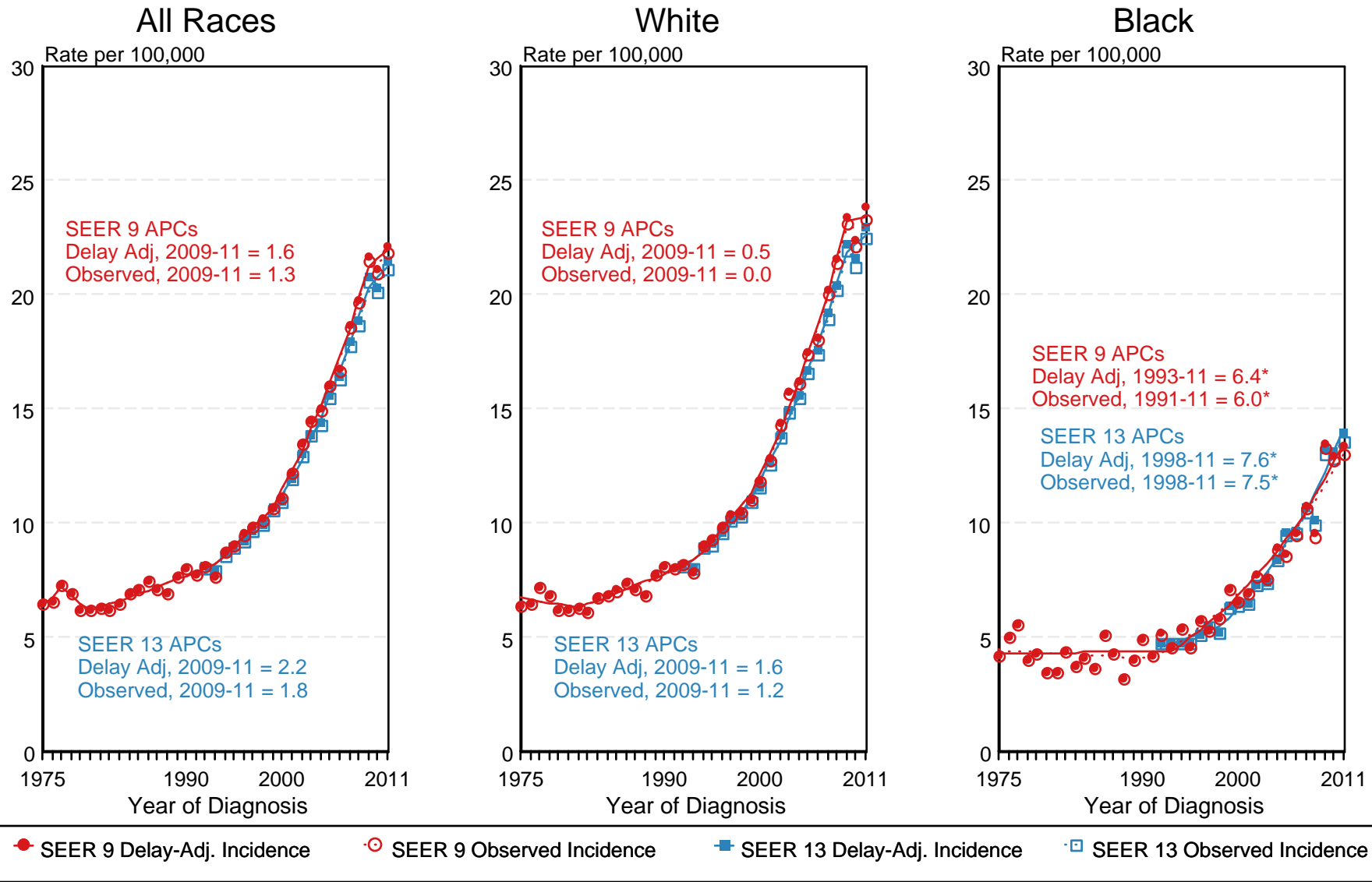
SEER Observed Incidence and SEER Delay Adjusted Incidence Rates^a SEER 9 Areas Compared to SEER 13 Areas Cancer of the Thyroid, Male, by Race



^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 4.1.0, April 2014, 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 26.4

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



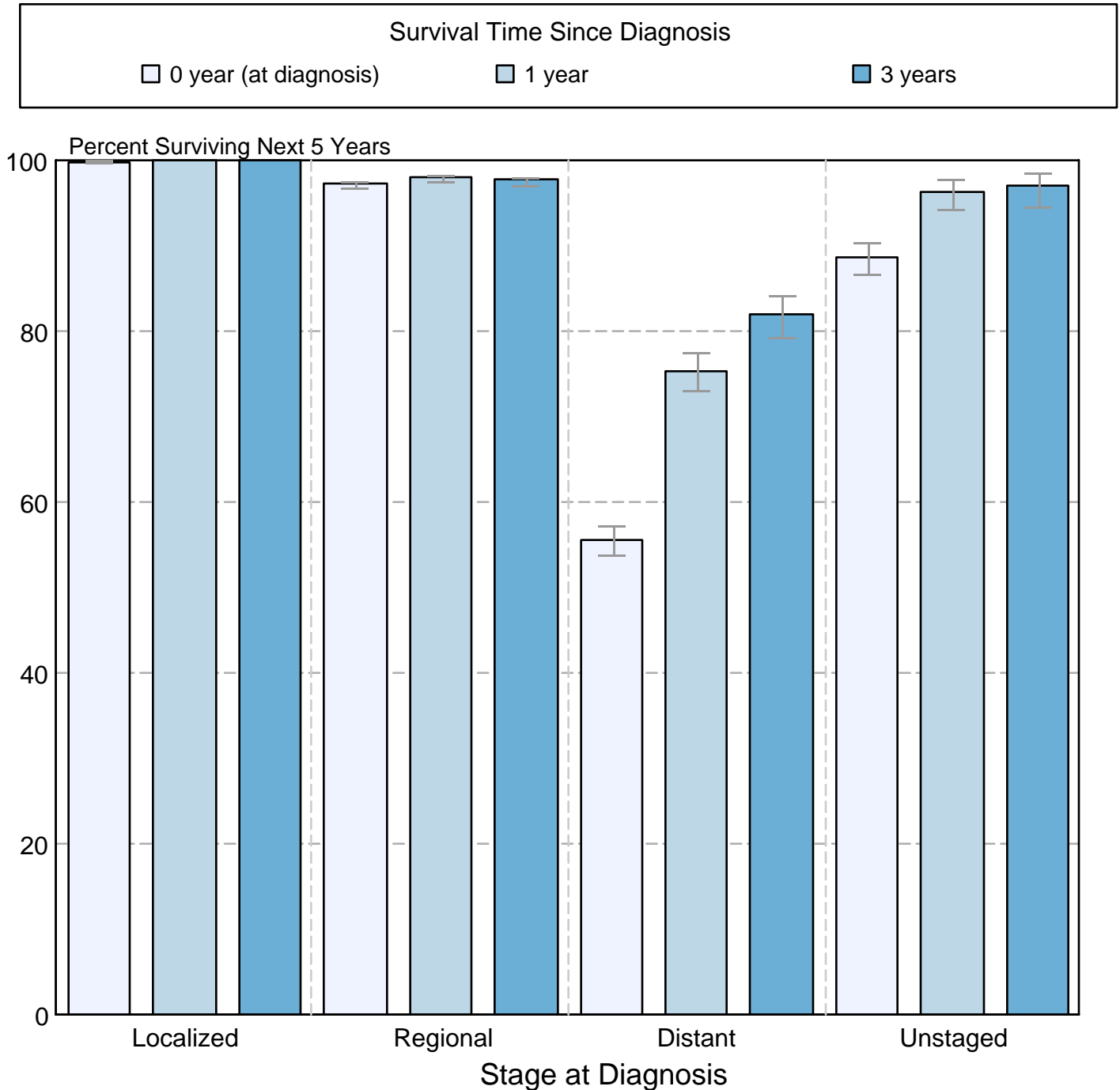
^a Source: SEER 9 areas and SEER 13 areas.
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 4.1.0, April 2014, National Cancer Institute.
The APC is the Annual Percent Change 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
1998-2010 by stage at diagnosis



Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG). California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG contribute cases for diagnosis years 2000-2009. The remaining 13 SEER Areas contribute cases for the entire period 1998-2010. 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.