

Table 21.1
Cancer of the Ovary (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2009 With up to Five Joinpoints, 1992-2009 With up to Three Joinpoints,
All Ages 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	2000-09	2005-09
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2009</u>														
All Races	1975-79	-1.7	1979-84	1.4	1984-09	-0.9*							-0.9*	-0.9*
White	1975-81	-0.9	1981-84	2.7	1984-09	-0.9*							-0.9*	-0.9*
Black	1975-09	-0.4*											-0.4*	-0.4*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2009</u>														
All Races	1992-09	-0.9*											-0.9*	-0.9*
White	1992-97	-1.1*	1997-01	0.6	2001-04	-3.2	2004-09	-0.3					-1.2	-0.3
Black	1992-09	-0.3											-0.3	-0.3
<u>SEER 9 Observed Incidence^a, 1975-2009</u>														
All Races	1975-79	-1.6	1979-84	1.1	1984-01	-0.8*	2001-09	-1.5*					-1.5*	-1.5*
White	1975-81	-0.8	1981-84	2.2	1984-01	-0.8*	2001-09	-1.7*					-1.6*	-1.7*
Black	1975-09	-0.5*											-0.5*	-0.5*
<u>SEER 13 Observed Incidence^b, 1992-2009</u>														
All Races	1992-01	-0.6*	2001-09	-1.4*									-1.3*	-1.4*
White	1992-97	-1.1*	1997-01	0.5	2001-04	-3.3	2004-09	-0.8					-1.5*	-0.8
White NH ^{ef}	1992-09	-1.1*											-1.1*	-1.1*
Black	1992-09	-0.5											-0.5	-0.5
Black NH ^{ef}	1992-09	-0.4											-0.4	-0.4
API ^e	1992-09	-0.1											-0.1	-0.1
AI/AN ^{eg}	1992-09	0.5											0.5	0.5
Hispanic ^f	1992-09	-0.5											-0.5	-0.5
<u>U.S. Cancer Mortality^c, 1975-2009</u>														
All Races	1975-82	-1.2*	1982-92	0.3*	1992-98	-1.2*	1998-02	1.0	2002-09	-2.0*			-1.3*	-2.0*
White	1975-81	-1.4*	1981-94	0.2	1994-98	-1.7	1998-02	1.2	2002-09	-2.0*			-1.3*	-2.0*
Black	1975-92	0.4*	1992-09	-0.9*									-0.9*	-0.9*
<u>U.S. Cancer Mortality^c, 1992-2009</u>														
All Races	1992-98	-1.2*	1998-02	1.0	2002-09	-2.0*							-1.3*	-2.0*
White	1992-98	-1.1*	1998-02	1.1	2002-09	-2.0*							-1.3*	-2.0*
White NH ^{ef}	1992-98	-0.9*	1998-02	1.2	2002-09	-2.0*							-1.2*	-2.0*
Black	1992-09	-0.9*											-0.9*	-0.9*
Black NH ^{ef}	1992-09	-0.7*											-0.7*	-0.7*
API ^e	1992-09	0.2											0.2	0.2
AI/AN ^{eg}	1992-09	0.5											0.5	0.5
Hispanic ^f	1992-09	-0.5											-0.5	-0.5

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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).

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

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

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

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

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

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

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

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

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

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

Table 21.2
Cancer of the Ovary (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2009 With up to Five Joinpoints, 1992-2009 With up to Three Joinpoints,
Ages <65 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	2000-09	2005-09
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2009</u>														
All Races	1975-09	-1.1*											-1.1*	-1.1*
White	1975-09	-1.1*											-1.1*	-1.1*
Black	1975-09	-0.9*											-0.9*	-0.9*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2009</u>														
All Races	1992-09	-0.8*											-0.8*	-0.8*
White	1992-09	-1.0*											-1.0*	-1.0*
Black	1992-09	-0.3											-0.3	-0.3
<u>SEER 9 Observed Incidence^a, 1975-2009</u>														
All Races	1975-09	-1.1*											-1.1*	-1.1*
White	1975-09	-1.2*											-1.2*	-1.2*
Black	1975-09	-1.0*											-1.0*	-1.0*
<u>SEER 13 Observed Incidence^b, 1992-2009</u>														
All Races	1992-09	-0.9*											-0.9*	-0.9*
White	1992-09	-1.1*											-1.1*	-1.1*
White NH ^{ef}	1992-09	-1.2*											-1.2*	-1.2*
Black	1992-09	-0.5											-0.5	-0.5
Black NH ^{ef}	1992-09	-0.5											-0.5	-0.5
API ^e	1992-09	0.1											0.1	0.1
AI/AN ^{eg}	1992-09	-1.0											-1.0	-1.0
Hispanic ^f	1992-09	-0.1											-0.1	-0.1
<u>U.S. Cancer Mortality^c, 1975-2009</u>														
All Races	1975-80	-3.2*	1980-99	-1.6*	1999-02	0.8	2002-09	-2.7*					-1.9*	-2.7*
White	1975-80	-3.3*	1980-99	-1.5*	1999-02	0.6	2002-09	-2.7*					-2.0*	-2.7*
Black	1975-96	-1.9*	1996-03	0.6	2003-09	-2.9*							-1.7*	-2.9*
<u>U.S. Cancer Mortality^c, 1992-2009</u>														
All Races	1992-98	-2.3*	1998-02	0.7	2002-09	-2.7*							-1.9*	-2.7*
White	1992-98	-2.2*	1998-02	0.7	2002-09	-2.7*							-2.0*	-2.7*
White NH ^{ef}	1992-05	-0.9*	2005-09	-3.5*									-2.1*	-3.5*
Black	1992-09	-1.0*											-1.0*	-1.0*
Black NH ^{ef}	1992-04	0.1	2004-09	-3.4*									-1.9*	-3.4*
API ^e	1992-09	-1.0*											-1.0*	-1.0*
AI/AN ^{eg}	1992-09	-1.1											-1.1	-1.1
Hispanic ^f	1992-09	-0.5*											-0.5*	-0.5*

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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).

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

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

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

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

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

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

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

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

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

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

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

Table 21.3
Cancer of the Ovary (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2009 With up to Five Joinpoints, 1992-2009 With up to Three Joinpoints,
Ages 65+ 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	2000-09	2005-09
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2009</u>														
All Races	1975-90	1.4*	1990-09	-1.0*									-1.0*	-1.0*
White	1975-90	1.5*	1990-09	-0.8*									-0.8*	-0.8*
Black	1975-09	0.1											0.1	0.1
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2009</u>														
All Races	1992-09	-1.0*											-1.0*	-1.0*
White	1992-09	-0.9*											-0.9*	-0.9*
Black	1992-09	-0.2											-0.2	-0.2
<u>SEER 9 Observed Incidence^a, 1975-2009</u>														
All Races	1975-90	1.4*	1990-09	-1.1*									-1.1*	-1.1*
White	1975-90	1.5*	1990-09	-1.0*									-1.0*	-1.0*
Black	1975-09	0.0											0.0	0.0
<u>SEER 13 Observed Incidence^b, 1992-2009</u>														
All Races	1992-09	-1.1*											-1.1*	-1.1*
White	1992-09	-1.0*											-1.0*	-1.0*
White NH ^{ef}	1992-09	-0.9*											-0.9*	-0.9*
Black	1992-09	-0.4											-0.4	-0.4
Black NH ^{ef}	1992-09	-0.4											-0.4	-0.4
API ^e	1992-09	-0.4											-0.4	-0.4
AI/AN ^{eg}	1992-09	1.4											1.4	1.4
Hispanic ^f	1992-09	-1.0											-1.0	-1.0
<u>U.S. Cancer Mortality^c, 1975-2009</u>														
All Races	1975-85	0.7*	1985-91	1.8*	1991-06	-0.1	2006-09	-3.2*					-1.2*	-2.4*
White	1975-84	0.5*	1984-91	1.8*	1991-98	-0.4	1998-01	1.4	2001-07	-0.8	2007-09	-4.0*	-1.3*	-2.4*
Black	1975-92	2.3*	1992-09	-0.9*									-0.9*	-0.9*
<u>U.S. Cancer Mortality^c, 1992-2009</u>														
All Races	1992-05	0.0	2005-09	-2.5*									-1.1*	-2.5*
White	1992-06	0.0	2006-09	-3.4*									-1.1*	-2.5*
White NH ^{ef}	1992-04	0.3	2004-09	-1.9*									-0.9*	-1.9*
Black	1992-09	-0.9*											-0.9*	-0.9*
Black NH ^{ef}	1992-09	-0.7*											-0.7*	-0.7*
API ^e	1992-09	1.2*											1.2*	1.2*
AI/AN ^{eg}	1992-09	1.3											1.3	1.3
Hispanic ^f	1992-09	-0.5											-0.5	-0.5

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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).

^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

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

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

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

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

Table 21.4
Cancer of the Ovary (Invasive)

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

Year of Diagnosis:	All Races, Females			White Females			Black Females		
	All	<65	65+	All	<65	65+	All	<65	65+
1975	16.32	11.61	48.88	16.77	12.00	49.79	11.72	7.40	41.58
1976	15.86	11.23	47.86	16.64	11.88	49.55	11.41	7.37	39.32
1977	15.62	11.20	46.15	16.19	11.58	48.07	11.34	8.69	29.65
1978	15.38	10.78	47.18	16.16	11.36	49.31	9.96	6.07	36.83
1979	15.40	10.71	47.79	15.85	10.92	49.91	11.94	9.07	31.79
1980	15.44	10.64	48.68	16.21	11.18	50.95	11.73	7.41	41.60
1981	15.42	10.49	49.53	16.01	10.88	51.47	11.68	7.58	40.08
1982	15.59	10.11	53.43	16.14	10.50	55.14	12.40	7.50	46.24
1983	15.97	10.45	54.14	16.42	10.74	55.71	13.06	9.18	39.90
1984	16.26	10.98	52.79	17.15	11.72	54.71	10.98	5.87	46.32
1985	16.54	10.78	56.42	17.45	11.42	59.14	11.17	7.11	39.28
1986	15.03	9.89	50.56	15.71	10.47	51.92	10.70	6.24	41.49
1987	16.15	10.15	57.66	17.04	10.84	59.89	11.83	6.26	50.29
1988	15.28	9.57	54.72	16.01	10.08	56.97	11.57	6.64	45.68
1989	15.52	9.54	56.83	16.50	10.27	59.56	11.00	5.43	49.50
1990	15.40	9.45	56.52	16.27	10.06	59.19	10.24	5.69	41.70
1991	15.78	9.71	57.71	16.57	10.32	59.78	11.05	5.48	49.53
1992	14.94	9.35	53.57	15.67	9.73	56.74	11.25	7.78	35.22
1993	15.24	9.14	57.42	16.06	9.63	60.48	11.64	6.61	46.44
1994	14.48	8.88	53.21	15.02	9.18	55.39	12.47	6.51	53.66
1995	14.62	8.79	54.95	15.39	9.35	57.19	10.40	4.99	47.84
1996	14.13	8.42	53.61	15.29	9.23	57.17	9.06	4.55	40.25
1997	14.76	9.23	52.97	15.46	9.70	55.28	10.72	5.75	45.09
1998	14.37	8.85	52.55	15.12	9.26	55.58	10.99	6.04	45.20
1999	14.76	8.75	56.26	15.46	8.96	60.40	10.95	6.51	41.62
2000	14.39	9.09	51.03	15.28	9.68	53.97	10.96	5.53	48.45
2001	14.65	9.23	52.08	15.68	9.83	56.10	9.54	6.34	31.66
2002	13.94	8.10	54.29	14.58	8.47	56.79	10.53	5.65	44.26
2003	13.76	8.53	49.89	14.27	8.97	50.90	12.28	6.14	54.73
2004	13.35	8.14	49.36	13.94	8.28	53.07	10.57	6.65	37.60
2005	13.03	8.20	46.41	13.60	8.31	50.14	10.81	7.28	35.18
2006	13.04	7.76	49.54	13.71	8.12	52.36	9.27	5.51	35.29
2007	13.12	8.24	46.82	13.62	8.55	48.67	11.55	5.99	50.01
2008	12.97	7.61	49.98	13.73	7.94	53.76	9.75	5.19	41.30
2009	13.11	8.14	47.43	13.79	8.36	51.36	9.91	5.39	41.10

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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 21.5
Cancer of the Ovary (Invasive)

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

	All Races, Females			White Females			Black Females		
	All	<65	65+	All	<65	65+	All	<65	65+
Year of Diagnosis:									
1975-2009	14.65	9.25	51.98	15.40	9.74	54.58	10.88	6.30	42.55
1975	16.32	11.61	48.88	16.77	12.00	49.79	11.72	7.40	41.58
1976	15.86	11.23	47.86	16.64	11.88	49.55	11.41	7.37	39.32
1977	15.62	11.20	46.15	16.19	11.58	48.07	11.34	8.69	29.65
1978	15.38	10.78	47.18	16.16	11.36	49.31	9.96	6.07	36.83
1979	15.40	10.71	47.79	15.85	10.92	49.91	11.94	9.07	31.79
1980	15.44	10.64	48.68	16.21	11.18	50.95	11.73	7.41	41.60
1981	15.42	10.49	49.53	16.01	10.88	51.47	11.68	7.58	40.08
1982	15.59	10.11	53.43	16.14	10.50	55.14	12.40	7.50	46.23
1983	15.97	10.45	54.13	16.42	10.74	55.71	13.06	9.18	39.89
1984	16.26	10.98	52.79	17.15	11.72	54.71	10.98	5.87	46.31
1985	16.54	10.77	56.41	17.45	11.41	59.13	11.17	7.10	39.27
1986	15.02	9.88	50.55	15.71	10.47	51.91	10.69	6.24	41.47
1987	16.15	10.14	57.64	17.04	10.84	59.87	11.82	6.26	50.27
1988	15.27	9.57	54.69	16.00	10.08	56.95	11.56	6.63	45.65
1989	15.51	9.53	56.80	16.49	10.27	59.53	10.99	5.42	49.45
1990	15.39	9.45	56.48	16.26	10.06	59.15	10.23	5.68	41.65
1991	15.77	9.70	57.66	16.56	10.31	59.74	11.03	5.48	49.47
1992	14.92	9.34	53.52	15.66	9.73	56.69	11.23	7.77	35.16
1993	15.22	9.13	57.35	16.04	9.62	60.42	11.62	6.59	46.34
1994	14.46	8.86	53.14	15.00	9.16	55.32	12.44	6.49	53.54
1995	14.60	8.78	54.86	15.37	9.33	57.10	10.37	4.97	47.70
1996	14.10	8.40	53.51	15.26	9.22	57.06	9.03	4.53	40.11
1997	14.72	9.21	52.84	15.42	9.68	55.16	10.68	5.73	44.91
1998	14.34	8.83	52.43	15.08	9.24	55.44	10.94	6.02	45.00
1999	14.71	8.72	56.06	15.41	8.93	60.19	10.88	6.47	41.36
2000	14.33	9.06	50.81	15.21	9.64	53.74	10.88	5.49	48.10
2001	14.57	9.19	51.82	15.60	9.78	55.82	9.46	6.28	31.39
2002	13.86	8.05	53.97	14.49	8.42	56.43	10.42	5.59	43.80
2003	13.66	8.47	49.54	14.16	8.90	50.51	12.13	6.06	54.06
2004	13.23	8.07	48.94	13.82	8.21	52.58	10.41	6.56	37.05
2005	12.90	8.12	45.93	13.44	8.22	49.57	10.62	7.15	34.57
2006	12.88	7.67	48.93	13.52	8.01	51.64	9.08	5.40	34.55
2007	12.92	8.12	46.13	13.39	8.41	47.85	11.26	5.84	48.76
2008	12.74	7.48	49.08	13.45	7.77	52.65	9.46	5.04	40.06
2009	12.70	7.89	45.97	13.30	8.06	49.52	9.42	5.13	39.07

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

^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 21.6
Cancer of the Ovary (Invasive)

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

	All Races, Females			White Females			Black Females		
	All	<65	65+	All	<65	65+	All	<65	65+
Year of Death:									
1975-2009	9.02	4.13	42.85	9.32	4.30	44.03	7.45	3.33	35.94
1975	9.84	5.83	37.55	10.16	6.01	38.81	7.16	4.64	24.58
1976	10.02	5.73	39.66	10.28	5.90	40.58	8.01	4.61	31.52
1977	9.58	5.47	38.05	9.87	5.65	39.08	7.41	4.25	29.21
1978	9.55	5.44	37.97	9.83	5.62	38.88	7.35	4.17	29.33
1979	9.33	5.10	38.58	9.56	5.20	39.70	7.53	4.43	28.94
1980	9.29	4.97	39.15	9.52	5.11	39.96	7.85	4.18	33.21
1981	9.23	4.94	38.89	9.48	5.10	39.75	7.36	3.74	32.36
1982	9.22	4.80	39.81	9.49	4.97	40.72	7.41	3.64	33.45
1983	9.20	4.70	40.34	9.43	4.80	41.38	7.67	4.11	32.25
1984	9.11	4.63	40.08	9.36	4.79	40.93	7.55	3.76	33.80
1985	9.08	4.57	40.23	9.34	4.72	41.29	7.30	3.74	31.87
1986	9.24	4.57	41.55	9.52	4.73	42.63	7.42	3.66	33.43
1987	9.18	4.46	41.86	9.46	4.64	42.82	7.55	3.52	35.45
1988	9.31	4.41	43.16	9.55	4.56	44.08	7.87	3.67	36.88
1989	9.21	4.30	43.20	9.52	4.49	44.27	7.41	3.26	36.16
1990	9.33	4.26	44.35	9.61	4.46	45.23	7.86	3.32	39.24
1991	9.51	4.32	45.37	9.74	4.48	46.13	8.36	3.43	42.46
1992	9.46	4.24	45.51	9.70	4.38	46.49	8.19	3.59	39.99
1993	9.08	4.02	44.06	9.34	4.19	44.93	7.74	3.02	40.42
1994	9.38	4.14	45.64	9.67	4.32	46.70	7.82	3.20	39.72
1995	9.12	3.96	44.77	9.47	4.17	46.07	7.37	2.93	38.04
1996	8.86	3.82	43.70	9.13	3.97	44.80	7.32	2.89	37.92
1997	8.94	3.77	44.70	9.21	3.94	45.59	7.93	3.11	41.19
1998	8.73	3.68	43.64	9.02	3.81	45.03	7.37	3.22	36.06
1999	8.77	3.73	43.57	9.07	3.90	44.83	7.38	3.05	37.31
2000	8.89	3.67	44.98	9.25	3.85	46.57	7.15	2.91	36.49
2001	9.00	3.73	45.38	9.31	3.87	46.86	7.52	3.20	37.41
2002	9.03	3.79	45.20	9.37	3.97	46.73	7.44	3.11	37.35
2003	8.85	3.68	44.62	9.17	3.83	46.06	7.47	3.12	37.50
2004	8.77	3.54	44.90	9.06	3.65	46.44	7.66	3.14	38.95
2005	8.64	3.58	43.67	8.97	3.74	45.10	7.28	2.90	37.60
2006	8.55	3.47	43.61	8.91	3.63	45.45	6.87	2.92	34.17
2007	8.23	3.21	42.92	8.60	3.36	44.83	6.57	2.68	33.49
2008	7.95	3.14	41.27	8.24	3.24	42.79	6.65	2.67	34.11
2009	7.84	3.18	40.07	8.11	3.30	41.43	6.79	2.73	34.87

^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 21.7
Cancer of the Ovary (Invasive)

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

	SEER Incidence ^a			U.S. Mortality ^b		
	All Races Females	White Females	Black Females	All Races Females	White Females	Black Females
<u>Age-Adjusted Rates, 2005-2009</u>						
Age at Diagnosis/Death:						
All ages	12.7	13.4	9.8	8.2	8.6	6.8
Under 65	7.8	8.1	5.5	3.3	3.4	2.8
65 and over	46.8	49.6	39.4	42.3	43.9	34.8
All ages (IARC world std) ^c	9.1	9.6	6.9	5.2	5.4	4.4
<u>Age-Specific Rates, 2005-2009</u>						
Age at Diagnosis/Death:						
<1	-	-	-	-	-	-
1-4	-	-	-	-	-	-
5-9	0.3	0.2	-	-	-	-
10-14	0.8	0.9	-	-	-	-
15-19	1.4	1.3	1.2	0.1	0.0	-
20-24	1.8	1.8	1.4	0.2	0.2	-
25-29	2.2	2.3	1.7	0.3	0.3	0.3
30-34	3.2	3.3	2.4	0.6	0.6	0.7
35-39	5.0	5.1	3.7	1.1	1.1	1.0
40-44	9.0	9.4	6.3	2.4	2.5	2.3
45-49	14.5	15.1	9.4	5.1	5.3	4.2
50-54	21.1	21.9	13.9	9.5	9.8	7.9
55-59	27.1	28.7	18.7	14.8	15.6	11.6
60-64	34.0	36.1	26.9	22.0	22.9	18.2
65-69	39.9	42.9	32.6	30.1	31.2	26.7
70-74	45.7	49.0	37.4	38.8	40.5	32.4
75-79	49.7	53.0	41.5	46.2	48.1	36.8
80-84	53.3	55.6	46.5	54.4	56.5	41.2
85+	51.3	53.1	46.6	55.7	57.1	47.0

^a Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473. 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 21.8
Cancer of the Ovary(Invasive)

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

	All Races, Females			White Females			Black Females		
	All	<65	65+	All	<65	65+	All	<65	65+
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	32	-	-	32	-	-
1970-1973 ^a	-	-	-	36	-	-	32	-	-
1975-1977 ^b	36.1	44.2	21.5	35.3	43.6	21.2	41.9	48.9	25.0 ^g
1978-1980 ^b	37.7	47.3	22.2	36.9	46.5	22.4	38.9	49.3	12.8
1981-1983 ^b	39.2	50.4	23.5	38.8	50.4	23.6	37.6	45.5	22.6
1984-1986 ^b	38.5	49.5	24.2	37.6	48.5	23.9	39.4	52.2	21.2
1987-1989 ^b	38.3	51.1	23.7	38.2	51.3	24.0	33.8	46.9	17.6
1990-1992 ^b	40.7	55.5	24.4	40.5	56.1	24.3	36.2	49.7	17.5
1993-1995 ^b	41.7	55.8	26.7	40.8	55.5	26.2	41.9	55.4	26.9
1996-1998 ^b	43.9	57.1	28.4	43.3	56.7	28.4	39.2	53.1	20.7
1999-2001 ^b	43.9	55.8	29.1	43.6	56.3	29.0	35.7	44.2	22.3
2002-2008 ^b	43.2 ^f	56.1 ^f	26.4 ^f	42.8 ^f	56.1 ^f	26.8 ^f	35.6	43.9	21.5
5-Year Period Survival (Percent) ^{cd}									
2008	44.0	56.9	27.0	43.6	56.8	27.5	35.8	46.0	19.4
Stage Distribution (%) 2002-2008 ^{ee}									
All Stages									
Number of cases	33,667	18,640	15,027	28,253	15,169	13,084	2,715	1,604	1,111
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	15	20	7	14	20	7	15	20	7
Regional	17	21	13	17	21	13	15	16	12
Distant	61	55	69	62	56	70	62	58	68
Unstaged	7	4	10	7	3	10	8	6	12
5-Year Relative Survival (Percent), 2002-2008 ^c									
Age at Diagnosis:									
Ages <45	73.6	-	-	73.3	-	-	69.4	-	-
Ages 45-54	57.6	-	-	58.4	-	-	39.4	-	-
Ages 55-64	45.3	-	-	45.8	-	-	32.4	-	-
Ages 65-74	36.0	-	-	36.8	-	-	25.0	-	-
Ages 75+	20.2	-	-	20.7	-	-	15.3	-	-
Ages <65	56.4	-	-	56.4	-	-	46.1	-	-
Ages 65+	27.3	-	-	27.8	-	-	20.1	-	-
Stage ^e :									
All Stages	43.7	56.4	27.3	43.5	56.4	27.8	36.0	46.1	20.1
Localized	91.5	92.7	87.3	91.5	92.8	87.4	88.9	90.2	80.4 ^g
Regional	71.9	79.6	56.1	72.5	80.3	57.4	55.2	64.1	37.2 ^g
Distant	26.9	35.0	18.5	27.3	35.7	19.1	19.0	24.6	11.7
Unstaged	22.0	48.8	10.1	20.3	46.7	10.2	29.7	50.7 ^g	13.6

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

^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 2009.

^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 2009.

^d Period survival provides a 2008 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2006-2008: 0-1 year survival), (2005-2007: 1-2 year survival), (2004-2006: 2-3 year survival), (2003-2005: 3-4 year survival), (2002-2004: 4-5 years survival).^e Stage at diagnosis is classified using SEER Summary Stage 2000.^f The difference between 1975-1977 and 2002-2008 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 21.9
Cancer of the Ovary (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	2008
Survival Time																						
1-year	65.0	70.4	70.5	72.0	72.6	74.5	72.3	71.9	73.7	74.4	77.0	75.5	74.2	77.3	76.4	76.2	76.2	75.8	75.8	75.6	75.7	75.6
2-year	49.3	53.5	54.4	57.3	58.4	60.0	58.4	60.7	60.4	61.8	65.6	64.4	61.9	64.6	65.4	63.9	66.2	64.8	64.4	64.1	63.9	
3-year	42.4	46.1	46.6	48.4	48.8	50.9	48.8	53.2	51.2	53.0	56.8	55.3	53.1	54.9	56.0	54.4	58.4	56.1	56.0	55.8		
4-year	38.8	41.6	41.6	43.8	43.3	46.1	42.7	46.9	46.2	46.3	49.0	50.2	47.8	47.5	50.3	48.4	49.9	49.1	49.5			
5-year	36.6	39.0	38.2	40.3	39.8	41.8	38.6	44.1	42.4	42.3	44.2	45.1	42.8	43.2	45.6	42.9	44.2	43.5				
6-year	35.2	37.0	36.1	38.3	37.3	39.2	36.4	40.5	38.8	38.9	40.6	42.3	40.2	39.8	42.8	39.4	40.8					
7-year	33.9	36.1	34.7	36.9	35.4	37.4	35.4	38.6	36.9	37.3	38.1	40.4	38.1	37.3	40.2	37.5						
8-year	33.0	34.7	33.7	35.5	34.0	36.4	34.0	37.8	35.1	36.1	36.6	38.3	36.5	35.6	37.7							
9-year	32.4	33.7	32.9	34.4	33.1	35.7	32.8	35.8	33.5	35.3	35.2	36.6	34.8	34.1								
10-year	32.0	32.9	32.3	34.0	32.3	35.3	31.7	34.8	32.7	34.6	34.2	35.6	33.9									
11-year	31.6	32.5	32.0	33.3	31.5	34.7	30.7	33.8	31.9	33.7	32.9	34.7										
12-year	31.0	31.8	31.3	33.0	30.7	33.8	30.1	33.5	31.8	33.2	31.9											
13-year	30.7	31.2	30.8	32.4	30.5	33.4	30.0	32.9	31.2	32.5												
14-year	30.2	30.8	30.3	32.1	30.3	32.9	29.9	32.6	31.2													
15-year	29.6	30.6	30.2	31.5	29.6	32.2	29.8	32.5														
16-year	29.2	30.4	30.2	31.2	29.5	31.9	29.8															
17-year	28.9	29.9	30.0	30.7	29.5	31.1																
18-year	28.8	29.8	29.8	30.5	29.5																	
19-year	28.5	29.6	29.8	29.7																		
20-year	28.4	29.3	29.5																			

^a Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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

Table 21.10
Cancer of the Ovary (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, 2007-2009 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	1.38	1.00	Asian/ Pacific Islander	0	0.00	0.02	0.04	1.12	0.76
	10	0.01	0.03	0.07	1.40	1.02		10	0.01	0.04	0.09	1.13	0.77
	20	0.02	0.06	0.18	1.39	1.02		20	0.02	0.07	0.19	1.12	0.77
	30	0.04	0.16	0.38	1.38	1.02		30	0.05	0.17	0.38	1.10	0.77
	40	0.12	0.34	0.66	1.34	1.02		40	0.12	0.34	0.54	1.05	0.77
	50	0.23	0.56	0.92	1.25	1.01		50	0.21	0.42	0.66	0.94	0.74
	60	0.35	0.73	0.99	1.07	0.93		60	0.21	0.45	0.62	0.75	0.67
	70	0.42	0.72	-	0.81	0.77		70	0.25	0.43	-	0.56	0.55
80	0.38	-	-	0.50	0.53	80	0.21	-	-	0.36	0.42		
White	0	0.00	0.01	0.03	1.46	1.05	American Indian/ Alaska Native ^a	0	0.00	0.00	0.00	1.16	0.83
	10	0.01	0.03	0.08	1.47	1.06		10	0.00	0.00	0.03	1.18	0.84
	20	0.02	0.07	0.19	1.46	1.06		20	0.00	0.03	0.15	1.18	0.85
	30	0.04	0.16	0.40	1.45	1.07		30	0.03	0.15	0.33	1.20	0.86
	40	0.12	0.36	0.70	1.42	1.07		40	0.13	0.31	0.52	1.19	0.87
	50	0.24	0.59	0.98	1.32	1.05		50	0.18	0.41	0.68	1.10	0.88
	60	0.37	0.77	1.05	1.13	0.97		60	0.24	0.53	0.85	0.98	0.85
	70	0.45	0.75	-	0.84	0.80		70	0.33	0.70	-	0.84	0.74
80	0.40	-	-	0.52	0.54	80	0.48	-	-	0.67	0.56		
Black	0	0.00	0.01	0.03	1.00	0.74	Hispanic ^b	0	0.00	0.02	0.04	1.34	0.82
	10	0.01	0.03	0.06	1.01	0.75		10	0.02	0.04	0.08	1.35	0.83
	20	0.02	0.05	0.12	1.01	0.75		20	0.02	0.07	0.17	1.34	0.83
	30	0.03	0.10	0.25	1.00	0.75		30	0.04	0.15	0.37	1.32	0.83
	40	0.07	0.22	0.47	0.98	0.76		40	0.11	0.32	0.62	1.28	0.83
	50	0.16	0.41	0.69	0.94	0.75		50	0.22	0.52	0.82	1.19	0.80
	60	0.28	0.57	0.80	0.85	0.71		60	0.31	0.62	0.87	1.01	0.74
	70	0.35	0.61	-	0.67	0.59		70	0.34	0.61	-	0.76	0.62
80	0.36	-	-	0.45	0.41	80	0.33	-	-	0.51	0.44		

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Devcan Version 6.6.1, April 2012, 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. Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire, North Dakota and South Carolina.

- Statistic could not be calculated.

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

Table 21.11
Cancer of the Ovary (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 2005-2009	Trend 2000-2009 ^c	Trend 2000-2009 ^d
	Rate per 100,000 persons	AAPC (%)	AAPC (%)
RACE/ETHNICITY	Females	Females	Females
All Races	12.7	-1.3*	-1.5*
White	13.4	-1.5*	-1.6*
White Hispanic ^e	11.6	-0.7	-
White Non-Hispanic ^e	13.6	-1.1*	-
Black	9.8	-0.5	-0.5*
Asian/Pacific Islander	9.8	-0.1	-
Amer Ind/Alaska Nat ^f	11.2	-	-
Hispanic ^e	11.3	-0.5	-
<u>U.S. Mortality^g</u>			
	Rate 2005-2009	Trend 2000-2009 ^h	
	Rate per 100,000 persons	AAPC (%)	
RACE/ETHNICITY	Females	Females	
All Races	8.2	-1.3*	
White	8.6	-1.3*	
White Hispanic ^e	6.1	-0.5	
White Non-Hispanic ^e	8.8	-1.2*	
Black	6.8	-0.9*	
Asian/Pacific Islander	5.0	0.2	
Amer Ind/Alaska Nat			
Total U.S.	5.4	0.4	
CHSDA Counties	6.8	0.5	
Non-CHSDA Counties	3.7	-	
Hispanic ^e	5.9	-0.5	

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

The 2000-2009 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 1992-2009.

The 2000-2009 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2009.

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 2005-2009 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia, North Dakota, and South Carolina. The 2000-2009 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, South Carolina 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 2000-2009 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2009.

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

Table 21.12
Cancer of the Ovary (Invasive)

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

	All Races			Whites			Blacks		
	All Ages	Ages <65	Ages 65+	All Ages	Ages <65	Ages 65+	All Ages	Ages <65	Ages 65+
<u>SEER Incidence Rates^a, 2005-2009</u>									
California	12.72	7.90	46.06	13.42	8.12	50.01	10.11	5.92	39.09
Greater Bay Area	12.86	8.42	43.51	13.82	8.57	50.08	9.86	5.96	36.79
San Francisco-Oakland	13.23	8.69	44.55	14.19	8.70	52.13	10.32	6.36	37.70
San Jose-Monterey	12.16	7.91	41.50	13.17	8.34	46.61	-	-	-
Los Angeles	12.87	8.19	45.22	13.79	8.45	50.68	10.52	6.29	39.75
Greater California	12.59	7.56	47.37	13.15	7.85	49.77	9.81	5.44	40.03
Connecticut	12.86	7.44	50.36	13.25	7.78	51.08	8.12	3.87	37.49
Detroit	13.25	8.28	47.59	14.23	8.98	50.59	10.03	6.01	37.81
Georgia	12.79	7.44	49.75	13.86	8.14	53.45	10.00	5.84	38.75
Atlanta	12.73	7.40	49.57	13.92	8.30	52.80	11.20	6.29	45.18
Rural Georgia	13.91	7.50	58.26	14.50	-	66.69	12.91	-	-
Greater Georgia	12.83	7.51	49.61	13.84	8.11	53.45	9.12	5.35	35.14
Hawaii	11.10	8.07	32.06	11.45	7.19	40.89	-	-	-
Iowa	12.99	7.89	48.25	13.07	7.90	48.82	-	-	-
Kentucky	11.85	7.37	42.79	12.30	7.70	44.12	6.04	3.38	24.45
Louisiana	10.84	6.15	43.24	11.31	6.64	43.56	9.94	4.95	44.44
New Jersey	13.80	8.82	48.18	14.57	9.42	50.17	10.45	5.81	42.51
New Mexico	11.88	7.34	43.26	11.93	7.43	43.03	-	-	-
Seattle-Puget Sound	13.81	7.95	54.36	14.38	8.22	56.98	7.82	3.91	-
Utah	11.17	6.86	40.99	11.20	6.87	41.15	-	-	-
9 SEER Areas ^b	12.82	7.85	47.19	13.42	8.09	50.23	9.95	5.69	39.41
11 SEER Areas ^b	12.81	7.94	46.44	13.50	8.20	50.13	10.03	5.79	39.37
13 SEER Areas ^b	12.82	7.94	46.51	13.50	8.19	50.18	10.07	5.82	39.46
18 SEER Areas ^b	12.72	7.80	46.75	13.38	8.14	49.60	9.81	5.53	39.37

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

^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 21.13
Cancer of the Ovary (Invasive)

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

	All Races			Whites			Blacks		
	All Ages	Ages <65	Ages 65+	All Ages	Ages <65	Ages 65+	All Ages	Ages <65	Ages 65+
<u>SEER Death Rates^a, 2005-2009</u>									
California	8.21	3.35	41.81	8.78	3.52	45.10	7.66	3.14	38.93
Greater Bay Area	7.83	3.36	38.72	8.54	3.54	43.11	8.20	3.91	37.86
San Francisco-Oakland	8.07	3.49	39.72	8.82	3.64	44.62	8.68	4.18	39.72
San Jose-Monterey	7.36	3.11	36.70	8.05	3.37	40.44	-	-	-
Los Angeles	8.64	3.54	43.89	9.49	3.83	48.62	8.36	3.23	43.80
Greater California	8.15	3.26	41.95	8.57	3.40	44.31	6.33	2.56	32.42
Connecticut	8.11	3.13	42.53	8.37	3.30	43.40	5.56	2.15	29.13
Detroit	8.36	3.43	42.41	8.91	3.65	45.28	6.58	2.81	32.67
Georgia	8.34	3.11	44.48	8.87	3.28	47.52	6.98	2.85	35.57
Atlanta	8.13	2.82	44.82	8.86	2.85	50.44	6.92	2.90	34.74
Rural Georgia	11.51	-	74.27	11.57	-	77.69	11.49	-	-
Greater Georgia	8.41	3.33	43.56	8.88	3.51	45.97	6.87	2.87	34.53
Hawaii	5.99	2.73	28.51	7.39	3.08	37.18	-	-	-
Iowa	8.98	3.66	45.73	9.07	3.72	46.09	-	-	-
Kentucky	8.06	3.41	40.21	8.26	3.52	41.01	5.83	2.24	30.68
Louisiana	7.85	3.00	41.33	8.12	3.17	42.32	7.36	2.66	39.84
New Jersey	8.71	3.67	43.55	9.23	3.87	46.31	6.80	3.24	31.41
New Mexico	7.92	3.36	39.45	7.84	3.27	39.43	-	-	-
Seattle-Puget Sound	9.88	3.64	53.02	10.54	3.88	56.57	5.08	-	-
Utah	7.70	3.08	39.68	7.76	3.09	40.07	-	-	-
9 SEER Areas ^b	8.35	3.32	43.09	8.88	3.49	46.15	6.82	2.91	33.88
11 SEER Areas ^b	8.36	3.36	42.92	8.96	3.55	46.35	7.20	2.97	36.47
13 SEER Areas ^b	8.36	3.34	43.01	8.95	3.54	46.34	7.28	2.96	37.09
18 SEER Areas ^b	8.31	3.34	42.63	8.80	3.52	45.28	7.02	2.88	35.66
Total U.S.	8.23	3.31	42.29	8.56	3.45	43.90	6.82	2.77	34.83

^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.

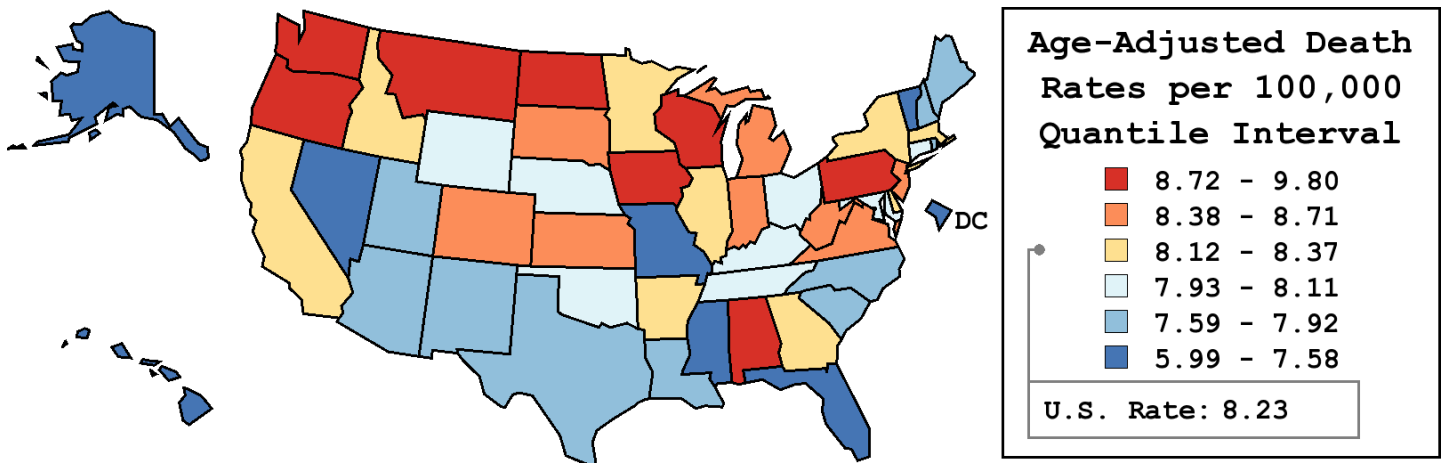
Table 21.14
Cancer of the Ovary (Invasive)

Age-Adjusted Cancer Death^a Rates By State, All Races, 2005-2009

Females

State	Rate	SE	Rank	PD
TOTAL U.S.	8.23	0.03		
High Five States				
Washington	9.80 ^b	0.24	(01)	18.96 ^c
Wisconsin	9.46 ^b	0.24	(02)	14.82
Oregon	9.30 ^b	0.29	(03)	12.89
Alabama	9.28 ^b	0.25	(04)	12.74
Montana	9.08	0.55	(05)	10.32
Low Five States				
Missouri	7.36 ^b	0.20	(47)	-10.58
Nevada	7.32	0.34	(48)	-11.12
Alaska	7.06	0.79	(49)	-14.28
Vermont	6.97	0.61	(50)	-15.39 ^c
Hawaii	5.99 ^b	0.39	(51)	-27.30 ^c

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	9.28 ^b	0.25	(04)	12.74	Montana	9.08	0.55	(05)	10.32
Alaska	7.06	0.79	(49)	-14.28	Nebraska	8.10	0.40	(29)	-1.61
Arizona	7.88	0.21	(37)	-4.30	Nevada	7.32	0.34	(48)	-11.12
Arkansas	8.37	0.31	(17)	1.60	New Hampshire	7.85	0.45	(39)	-4.64
California	8.21	0.09	(22)	-0.29	New Jersey	8.71	0.18	(09)	5.80
Colorado	8.66	0.27	(11)	5.17	New Mexico	7.92	0.38	(35)	-3.79
Connecticut	8.11	0.27	(27)	-1.51	New York	8.20	0.12	(25)	-0.39
Delaware	8.21	0.56	(24)	-0.31	North Carolina	7.87	0.17	(38)	-4.37
D.C.	7.58	0.68	(44)	-7.97	North Dakota	8.97	0.69	(08)	8.94
Florida	7.57 ^b	0.11	(45)	-8.06	Ohio	8.11	0.15	(26)	-1.50
Georgia	8.34	0.19	(18)	1.31	Oklahoma	8.06	0.27	(31)	-2.12
Hawaii	5.99 ^b	0.39	(51)	-27.30 ^c	Oregon	9.30 ^b	0.29	(03)	12.89
Idaho	8.27	0.47	(21)	0.42	Pennsylvania	9.08 ^b	0.15	(06)	10.22
Illinois	8.32	0.15	(19)	1.04	Rhode Island	7.89	0.48	(36)	-4.22
Indiana	8.60	0.22	(12)	4.40	South Carolina	7.92	0.24	(34)	-3.78
Iowa	8.98	0.31	(07)	9.04	South Dakota	8.45	0.60	(16)	2.63
Kansas	8.69	0.33	(10)	5.51	Tennessee	8.06	0.21	(32)	-2.17
Kentucky	8.06	0.25	(30)	-2.11	Texas	7.69 ^b	0.12	(43)	-6.65
Louisiana	7.85	0.25	(40)	-4.70	Utah	7.70	0.38	(42)	-6.44
Maine	7.82	0.42	(41)	-5.01	Vermont	6.97	0.61	(50)	-15.39 ^c
Maryland	8.10	0.23	(28)	-1.59	Virginia	8.55	0.20	(14)	3.77
Massachusetts	8.29	0.20	(20)	0.64	Washington	9.80 ^b	0.24	(01)	18.96 ^c
Michigan	8.57	0.17	(13)	4.10	West Virginia	8.48	0.37	(15)	2.97
Minnesota	8.21	0.24	(23)	-0.30	Wisconsin	9.46 ^b	0.24	(02)	14.82
Mississippi	7.52	0.30	(46)	-8.68	Wyoming	8.01	0.75	(33)	-2.77
Missouri	7.36 ^b	0.20	(47)	-10.58					



^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 21.15
Cancer of the Ovary (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2009
By Race/Ethnicity 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 <34 ^e	>=34 ^g	Complete ^h
<u>Race</u>										
All Races ^b	55,497	31,173	23,579	19,390	15,986	12,050	126,262	164,877	17,881	182,758
White ^b	48,202	27,307	20,665	17,431	14,416	10,736	110,554	145,192	15,290	160,482
Black ^b	4,120	1,938	1,676	1,179	1,042	808	8,717	11,336	1,719	13,055
Asian/Pacific Islander ^c	2,365	1,425	870	+	+	+	5,183	+	+	+
Hispanic ^d	4,541	2,518	1,662	+	+	+	9,748	+	+	+

Estimated prevalence percent^a on January 1, 2009, of the SEER 11 population diagnosed in the previous 19 years
By Age at Prevalence and Race/Ethnicity

Age at Prevalence	Age Specific (Crude)										Age-Adjusted ^f All Ages
	All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	
<u>Race</u>											
All Races ^c	0.0682%	0.0003%	0.0056%	0.0168%	0.0269%	0.0628%	0.1320%	0.2019%	0.2076%	0.1606%	0.0637%
White ^c	0.0741%	0.0003%	0.0060%	0.0175%	0.0264%	0.0641%	0.1379%	0.2174%	0.2266%	0.1690%	0.0671%
Black ^c	0.0374%	-	0.0041%	0.0113%	0.0225%	0.0421%	0.0761%	0.1112%	0.1372%	0.1305%	0.0411%
Asian/Pacific Islander ^c	0.0633%	-	0.0046%	0.0177%	0.0318%	0.0714%	0.1418%	0.1745%	0.1366%	0.1135%	0.0591%
Hispanic ^d	0.0386%	-	0.0080%	0.0186%	0.0245%	0.0507%	0.1005%	0.1595%	0.1734%	0.1341%	0.0527%

- ^a Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
^a US 2009 cancer prevalence counts are based on 2009 cancer prevalence proportions from the SEER registries and 1/1/2009 US population estimates based on the average of 2008 and 2009 population estimates from the US Bureau of the Census.
^{b c d} Prevalence was calculated using the First Malignant Primary Only for a person. Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.
^e Maximum limited-duration prevalence: 34 years for 1975-2009 SEER 9 data; 19 years for 1990-2009 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 34 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 <34 and >=34. (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 21.16

Cancer of the Ovary (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2005-2009
Females 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	24,307	91.8%	20,549	92.3%	1,774	88.7%	1,687	89.9%	117	91.4%	2,666	87.5%
Epidermoid carcinoma ^d (8051-8131)	204	0.8%	160	0.7%	16	0.8%	23	1.2%	-	-	31	1.0%
Adenocarcinoma ^e	22,241	84.0%	18,870	84.7%	1,543	77.1%	1,562	83.3%	107	83.6%	2,385	78.3%
Adenocarcinoma, NOS (8140)	3,450	13.0%	2,852	12.8%	371	18.5%	196	10.4%	-	-	356	11.7%
Papillary adenocarcinoma, NOS (8050,8260)	511	1.9%	439	2.0%	48	2.4%	20	1.1%	-	-	47	1.5%
Clear cell adenocarcinoma (8310,9110)	1,331	5.0%	1,050	4.7%	42	2.1%	233	12.4%	-	-	124	4.1%
Endometrioid carcinoma (8380-8383,8570)	2,559	9.7%	2,190	9.8%	112	5.6%	220	11.7%	-	-	300	9.8%
Cystadenocarcinoma, NOS (8440,8450)	148	0.6%	118	0.5%	19	0.9%	-	-	-	-	-	-
Serous cystadenocarcinoma (8441)	4,318	16.3%	3,689	16.6%	281	14.0%	272	14.5%	35	27.3%	434	14.2%
Papillary serous cystadenocarcinoma (8460-8462)	7,113	26.9%	6,204	27.9%	489	24.4%	355	18.9%	33	25.8%	737	24.2%
Mucinous cystadenocarcinoma (8470-8473)	488	1.8%	404	1.8%	31	1.5%	40	2.1%	-	-	86	2.8%
Mucinous adenocarcinoma (8480,8482)	938	3.5%	743	3.3%	86	4.3%	98	5.2%	-	-	120	3.9%
Mucin-producing adenocarcinoma(8481)	71	0.3%	61	0.3%	-	-	-	-	-	-	-	-
Other adenocarcinoma ^f	1,314	5.0%	1,120	5.0%	56	2.8%	119	6.3%	-	-	156	5.1%
Other specific carcinomas ^g	614	2.3%	467	2.1%	104	5.2%	32	1.7%	-	-	98	3.2%
Stromal cell tumor (8620-8631,8650)	379	1.4%	270	1.2%	78	3.9%	21	1.1%	-	-	60	2.0%
Other ^h	235	0.9%	197	0.9%	26	1.3%	-	-	-	-	38	1.2%
Unspecified, Carcinoma, NOS (8010,8020-8022)	1,248	4.7%	1,052	4.7%	111	5.5%	70	3.7%	-	-	152	5.0%

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.

^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 8050,8140-8147,8160-8162,8180-8221,8250-8507,8514,8520-8551,8560,8570-8574,8576,8940-8941,9110.

^g Other adenocarcinoma includes histologies 8141-8147,8160-8162,8180-8221,8250-8259,8261-8309,8311-8379,8384-8439,8442-8449,8451-8459,8463-8469,8474-8479,8483-8507,8514,8520-8551,8560,8571-8574,8576,8940-8941.

^h Other specific carcinomas includes histologies 8011-8015,8030-8046,8150-8155,8170-8175,8230-8231,8247-8249,8508,8510-8513,8561-8562,8575,8580-8671.

ⁱ Other subgroup of other specific carcinomas includes histologies 8011-8015,8030-8046,8150-8155,8170-8175,8230-8231,8247-8249,8508,8510-8513,8561-8562,8575,8580-8619,8632-8649,8651-8671.

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

Table 21.16 - continued

Cancer of the Ovary (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2005-2009
Females 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
Sarcoma and other soft tissue tumors (8680-8713,8800-8921, 8990-8991,9040-9044, 9120-9136,9141-9340, 9540-9582)	99	0.4%	75	0.3%	17	0.8%	-	-	-	-	16	0.5%
Other specific types (8240-8246,8720-8790, 8930-8936,8950-8983, 9000-9030,9060-9105, 9350-9364,9380-9513, 9530-9539)	1,819	6.9%	1,435	6.4%	189	9.4%	169	9.0%	-	-	336	11.0%
Mullerian mixed tumor (8950-8951,8980)	766	2.9%	649	2.9%	64	3.2%	47	2.5%	-	-	66	2.2%
Teratoma, malignant (9080-9085,9102)	388	1.5%	281	1.3%	49	2.4%	52	2.8%	-	-	121	4.0%
Other	665	2.5%	505	2.3%	76	3.8%	70	3.7%	-	-	149	4.9%
Unspecified (8000-8005)	251	0.9%	211	0.9%	21	1.0%	-	-	-	-	28	0.9%
Total ^d	26,476	100.0%	22,270	100.0%	2,001	100.0%	1,876	100.0%	128	100.0%	3,046	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 Total includes carcinoma cases from the previous page.

- 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 Ovary, by Race

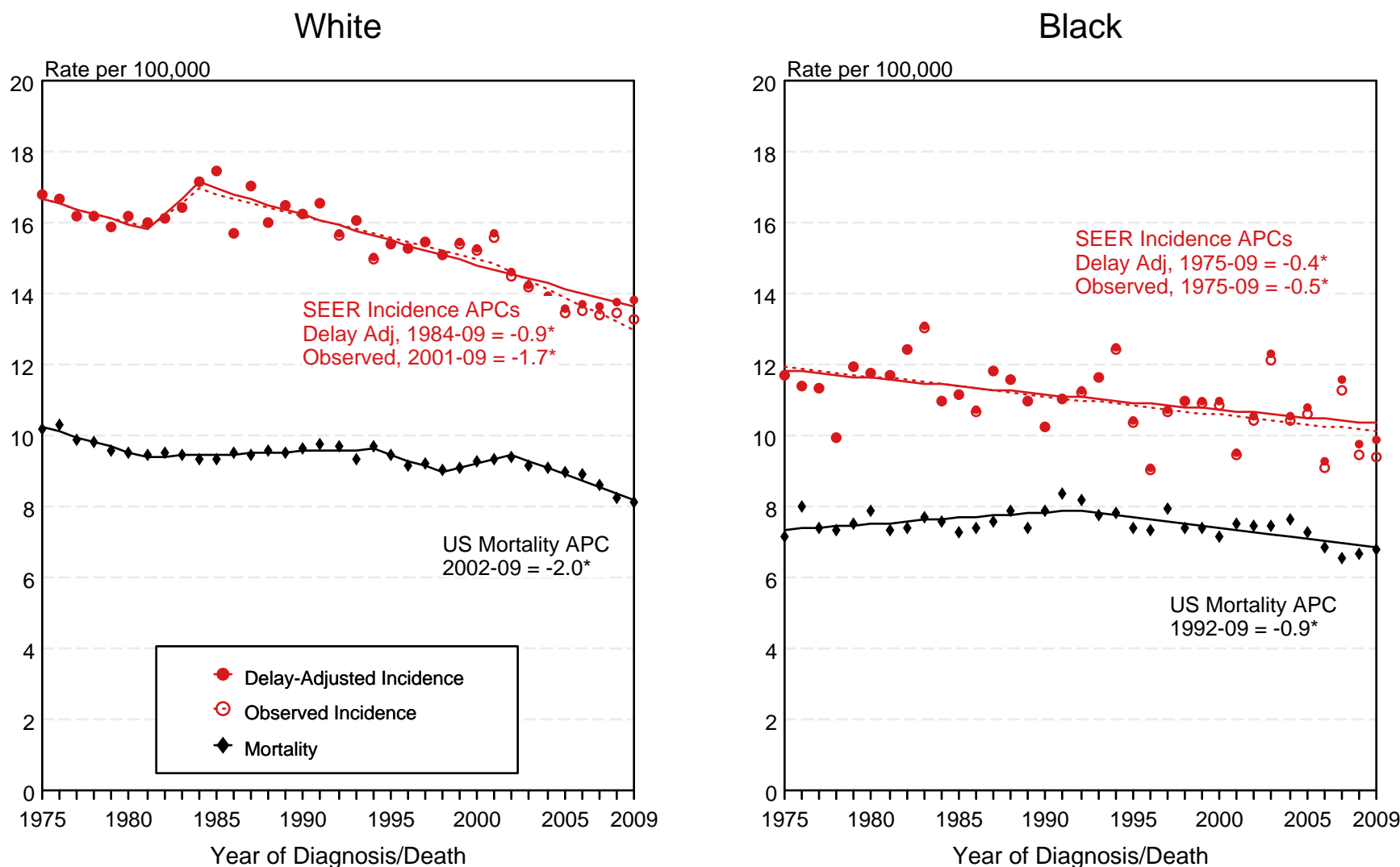


Figure 21.1

^a Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473. 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, SEER Delay Adjusted Incidence and US Death Rates^a Cancer of the Ovary, by Age and Race

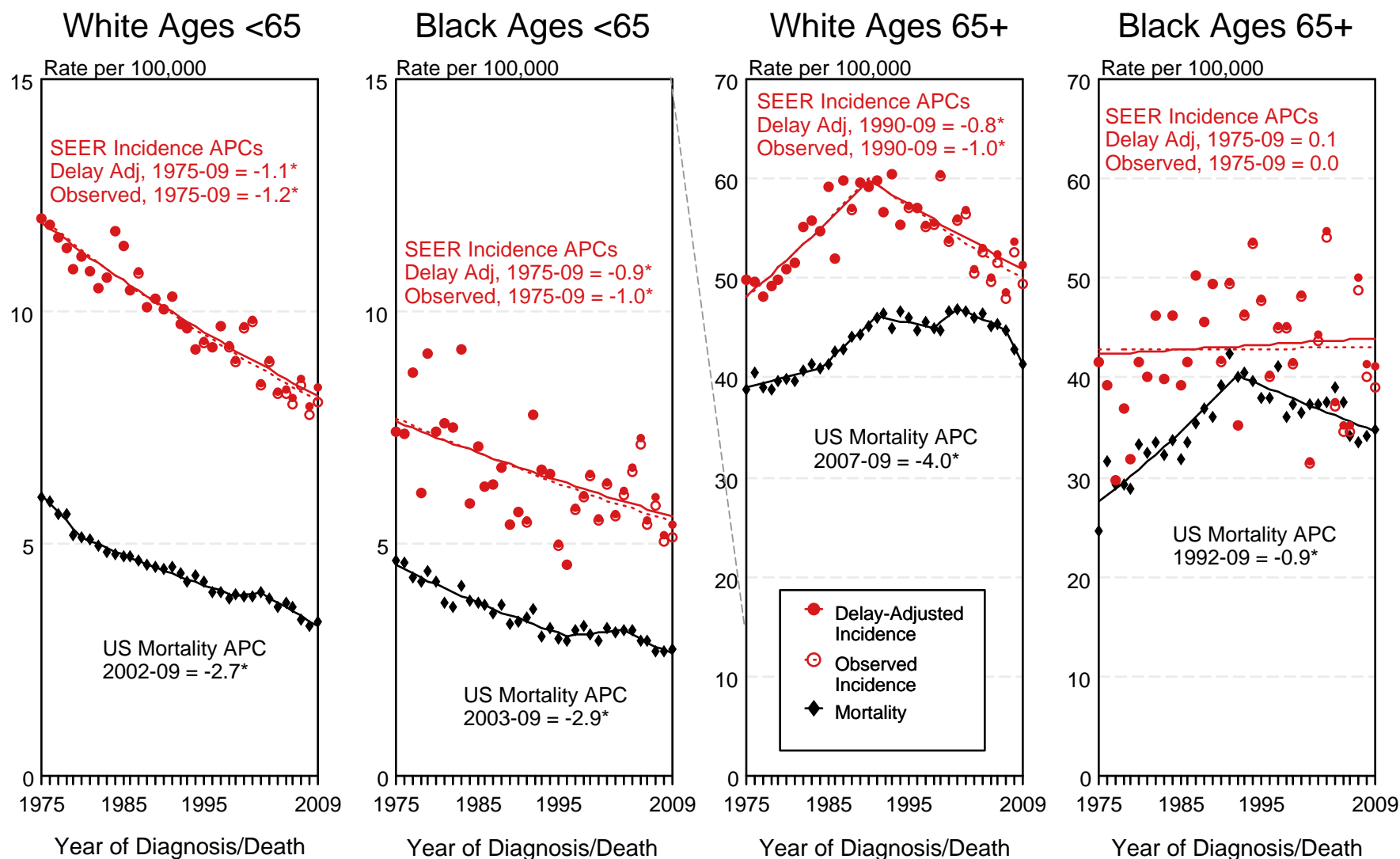


Figure 21.2

^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). Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473. 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 Ovary

Joinpoint Analyses for Whites and Blacks from 1975-2009
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2009

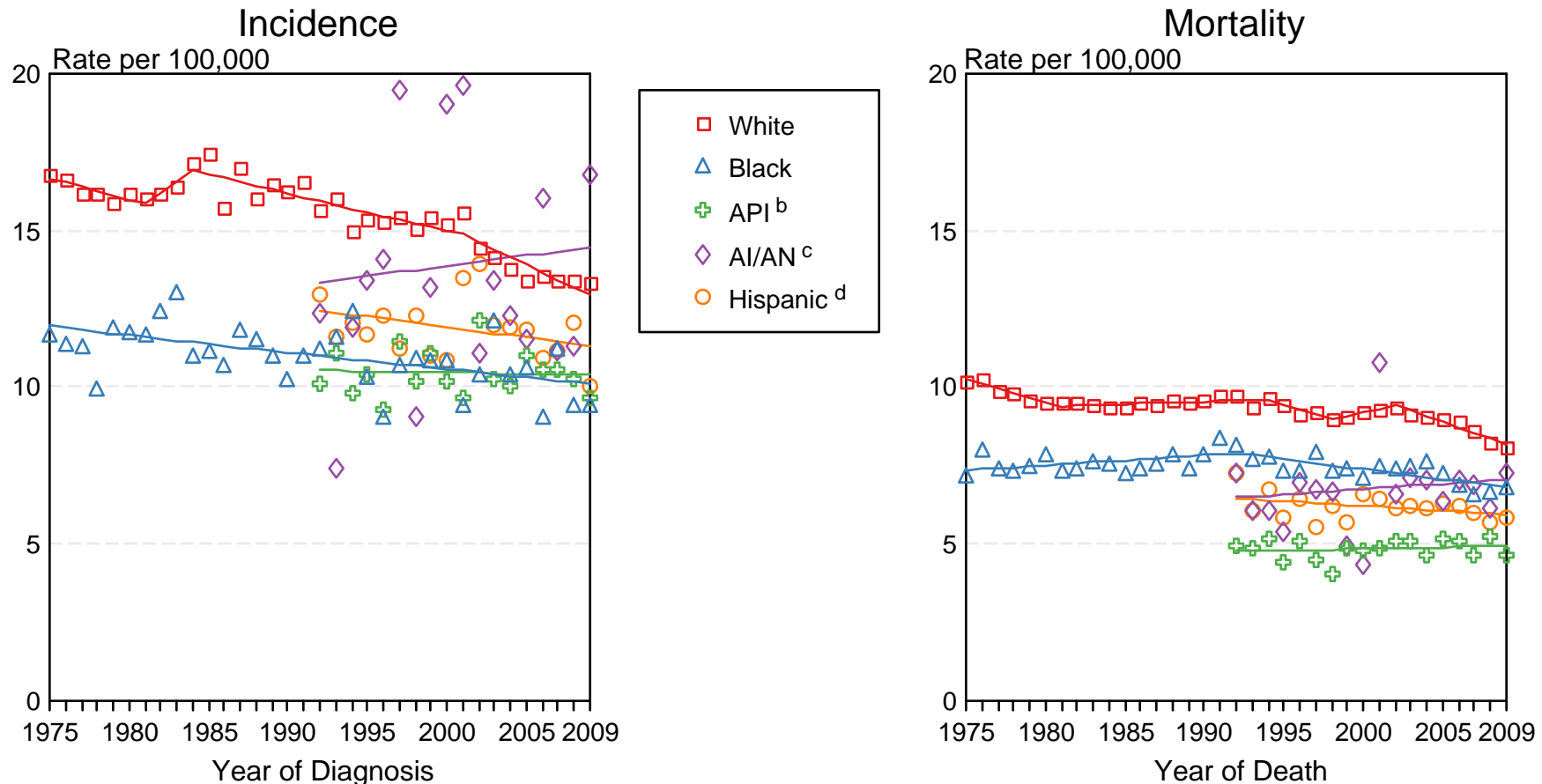


Figure 21.3

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). Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473. 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 1975-2009 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 1992-2009 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, South Carolina, Oklahoma, and Vermont.

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

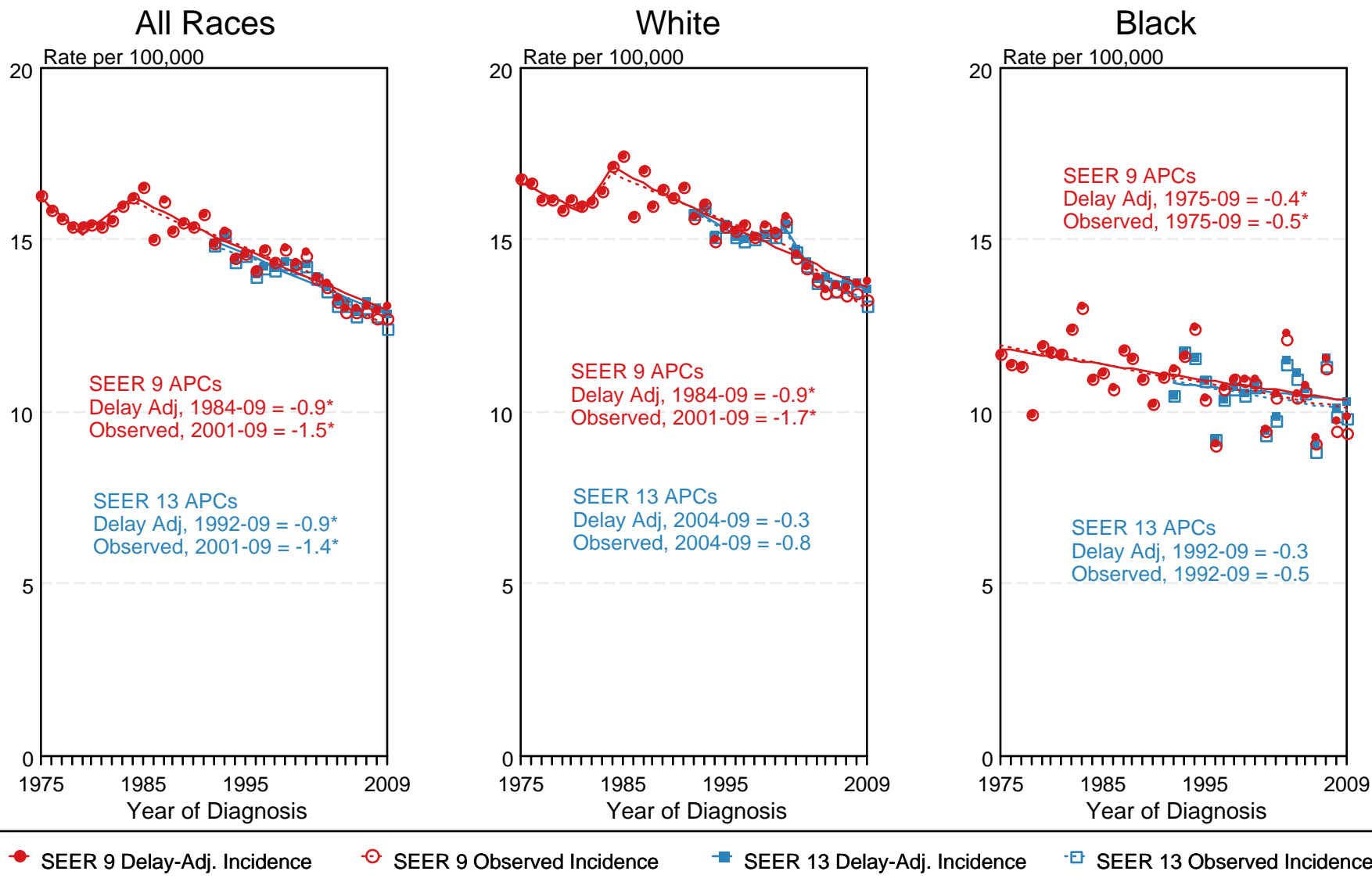


Figure 21.4

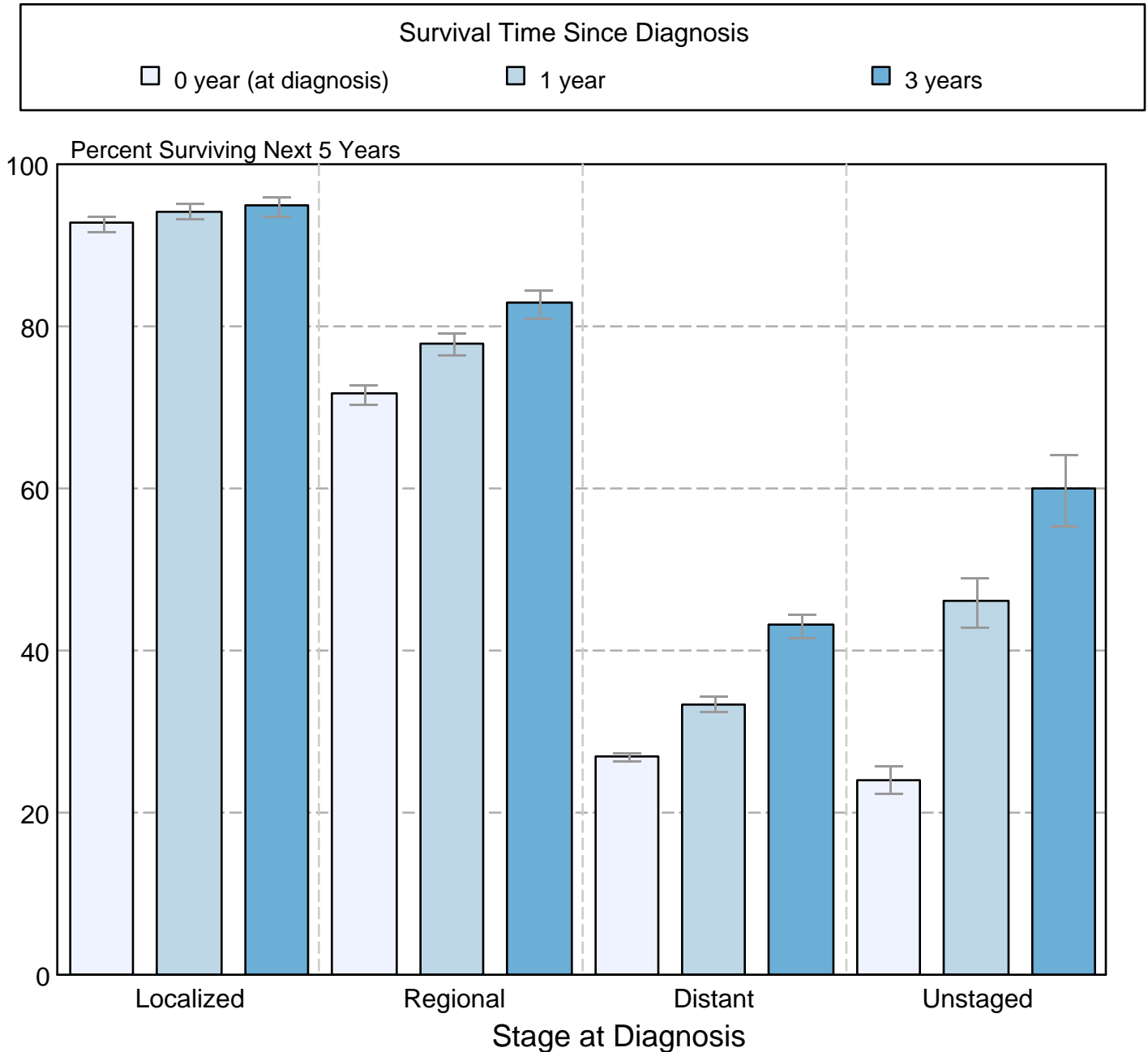
^a Source: SEER 9 areas and SEER 13 areas.
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.
The APC is the Annual Percent Change for 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 21.5

Cancer of the Ovary

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
1998-2008 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 2000-2008. The remaining 13 SEER Areas contribute cases for the entire period 1998-2008.

Stage at diagnosis is classified using SEER Summary Stage 2000.

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.