

Table 23.1  
Cancer of the Prostate (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	2.6*	1988-92	16.5*	1992-95	-11.5*	1995-00	2.2	2000-08	-1.7*			-1.3*	-1.7*
White	1975-88	2.8*	1988-92	16.3*	1992-95	-12.6*	1995-00	2.7	2000-08	-1.9*			-1.4*	-1.9*
Black	1975-89	2.0*	1989-92	21.9*	1992-95	-5.0	1995-08	-1.0*					-1.0*	-1.0*
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-11.1*	1995-00	2.0	2000-08	-1.9*							-1.5*	-1.9*
White	1992-95	-12.0*	1995-00	2.5	2000-08	-2.0*							-1.5*	-2.0*
Black	1992-08	-1.8*											-1.8*	-1.8*
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	2.6*	1988-92	16.5*	1992-95	-11.6*	1995-00	2.2	2000-08	-1.9*			-1.4*	-1.9*
White	1975-88	2.8*	1988-92	16.3*	1992-95	-12.6*	1995-00	2.7	2000-08	-2.3*			-1.7*	-2.3*
Black	1975-89	2.1*	1989-92	19.1*	1992-08	-1.8*							-1.8*	-1.8*
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-11.2*	1995-00	2.1	2000-08	-2.1*							-1.7*	-2.1*
White	1992-95	-12.0*	1995-00	2.5	2000-08	-2.4*							-1.9*	-2.4*
White NH <sup>ef</sup>	1992-94	-17.2*	1994-01	0.9	2001-08	-2.3*							-1.6*	-2.3*
Black	1992-08	-2.0*											-2.0*	-2.0*
Black NH <sup>ef</sup>	1992-08	-2.0*											-2.0*	-2.0*
API <sup>e</sup>	1992-96	-7.8*	1996-01	2.7	2001-08	-2.6*							-1.4	-2.6*
AI/AN <sup>eg</sup>	1992-08	-2.3*											-2.3*	-2.3*
Hispanic <sup>f</sup>	1992-95	-4.9	1995-02	0.5	2002-08	-3.7*							-2.3*	-3.7*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races	1975-87	0.9*	1987-91	3.1*	1991-94	-0.7	1994-04	-3.9*	2004-08	-3.1*			-3.5*	-3.1*
White	1975-87	0.8*	1987-91	3.1*	1991-94	-0.7	1994-99	-4.3*	1999-08	-3.4*			-3.4*	-3.4*
Black	1975-88	1.9*	1988-93	3.2*	1993-01	-2.6*	2001-08	-4.0*					-3.7*	-4.0*
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races	1992-94	-1.3	1994-08	-3.7*									-3.7*	-3.7*
White	1992-94	-0.7	1994-98	-4.4*	1998-06	-3.6*	2006-08	-2.3					-3.3*	-3.0*
White NH <sup>ef</sup>	1992-94	-1.1	1994-04	-4.0*	2004-08	-2.7*							-3.4*	-2.7*
Black	1992-96	-0.7	1996-08	-3.5*									-3.5*	-3.5*
Black NH <sup>ef</sup>	1992-96	-0.7	1996-08	-3.3*									-3.3*	-3.3*
API <sup>e</sup>	1992-08	-3.9*											-3.9*	-3.9*
AI/AN <sup>eg</sup>	1992-08	-2.3*											-2.3*	-2.3*
Hispanic <sup>f</sup>	1992-94	3.9	1994-08	-3.5*									-3.5*	-3.5*

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 23.2  
Cancer of the Prostate (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	3.1*	1988-92	23.3*	1992-01	3.3*	2001-08	0.1					0.8	0.1
White	1975-88	3.5*	1988-92	23.0*	1992-01	3.2*	2001-08	-0.1					0.6	-0.1
Black	1975-89	2.0*	1989-93	26.0*	1993-01	2.7*	2001-08	0.0					0.6	0.0
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-01	3.4*	2001-08	-0.4									0.4	-0.4
White	1992-01	3.3*	2001-08	-0.5									0.3	-0.5
Black	1992-00	3.9*	2000-08	-0.4									0.1	-0.4
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	3.1*	1988-92	23.3*	1992-01	3.3*	2001-08	-0.2					0.6	-0.2
White	1975-88	3.5*	1988-92	23.0*	1992-01	3.2*	2001-08	-0.5					0.3	-0.5
Black	1975-89	2.0*	1989-93	26.0*	1993-01	2.7*	2001-08	-0.5					0.2	-0.5
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-01	3.4*	2001-08	-0.6									0.2	-0.6
White	1992-01	3.3*	2001-08	-0.9									0.0	-0.9
White NH <sup>ef</sup>	1992-01	3.3*	2001-08	-0.7									0.2	-0.7
Black	1992-00	3.9*	2000-08	-0.9									-0.4	-0.9
Black NH <sup>ef</sup>	1992-00	3.8*	2000-08	-0.7									-0.2	-0.7
API <sup>e</sup>	1992-01	6.3*	2001-08	0.8									2.0*	0.8
AI/AN <sup>eg</sup>	1992-08	-0.8											-0.8	-0.8
Hispanic <sup>f</sup>	1992-02	4.6*	2002-08	-2.4*									-0.1	-2.4*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races	1975-87	0.5*	1987-90	3.1	1990-96	-3.2*	1996-00	-5.7*	2000-08	-1.3*			-1.8*	-1.3*
White	1975-87	0.7*	1987-90	3.0	1990-96	-3.6*	1996-00	-6.2*	2000-08	-1.0*			-1.6*	-1.0*
Black	1975-92	0.5*	1992-08	-2.8*									-2.8*	-2.8*
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races	1992-01	-4.4*	2001-08	-1.2*									-1.9*	-1.2*
White	1992-95	-2.7	1995-00	-5.9*	2000-08	-1.0*							-1.6*	-1.0*
White NH <sup>ef</sup>	1992-01	-4.8*	2001-08	-0.6									-1.5*	-0.6
Black	1992-08	-2.9*											-2.9*	-2.9*
Black NH <sup>ef</sup>	1992-08	-2.9*											-2.9*	-2.9*
API <sup>e</sup>	1992-08	-0.7											-0.7	-0.7
AI/AN <sup>eg</sup>	1992-08	-3.8*											-3.8*	-3.8*
Hispanic <sup>f</sup>	1992-00	-5.2*	2000-08	-0.1									-0.7	-0.1

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

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

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

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

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

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

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

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

Table 23.3  
Cancer of the Prostate (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> Using the Joinpoint Regression Program,  
1975-2008 With up to Five Joinpoints, 1992-2008 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1999-08	2004-08
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	2.5*	1988-92	15.1*	1992-95	-14.8*	1995-00	1.2	2000-08	-2.6*			-2.1*	-2.6*
White	1975-88	2.7*	1988-92	14.9*	1992-95	-15.8*	1995-00	1.8	2000-08	-2.7*			-2.2*	-2.7*
Black	1975-89	2.0*	1989-92	20.1*	1992-95	-9.1*	1995-08	-2.2*					-2.2*	-2.2*
<u>SEER 13 Delay-Adjusted Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-14.1*	1995-00	0.9	2000-08	-2.7*							-2.3*	-2.7*
White	1992-95	-15.1*	1995-00	1.5	2000-08	-2.8*							-2.3*	-2.8*
Black	1992-08	-3.4*											-3.4*	-3.4*
<u>SEER 9 Observed Incidence<sup>a</sup>, 1975-2008</u>														
All Races	1975-88	2.5*	1988-92	15.1*	1992-95	-14.8*	1995-00	1.2	2000-08	-2.8*			-2.3*	-2.8*
White	1975-88	2.7*	1988-92	14.9*	1992-95	-15.9*	1995-00	1.8	2000-08	-3.1*			-2.6*	-3.1*
Black	1975-89	2.0*	1989-92	20.0*	1992-95	-8.9*	1995-08	-2.6*					-2.6*	-2.6*
<u>SEER 13 Observed Incidence<sup>b</sup>, 1992-2008</u>														
All Races	1992-95	-14.2*	1995-00	1.0	2000-08	-2.9*							-2.5*	-2.9*
White	1992-95	-15.2*	1995-00	1.5	2000-08	-3.1*							-2.6*	-3.1*
White NH <sup>ef</sup>	1992-95	-15.6*	1995-00	1.5	2000-08	-3.0*							-2.5*	-3.0*
Black	1992-08	-3.7*											-3.7*	-3.7*
Black NH <sup>ef</sup>	1992-08	-3.6*											-3.6*	-3.6*
API <sup>e</sup>	1992-97	-7.9*	1997-00	4.8	2000-08	-3.2*							-2.3*	-3.2*
AI/AN <sup>eg</sup>	1992-08	-2.8*											-2.8*	-2.8*
Hispanic <sup>f</sup>	1992-96	-6.1*	1996-99	2.9	1999-08	-3.6*							-3.6*	-3.6*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2008</u>														
All Races	1975-87	0.9*	1987-91	3.2*	1991-94	-0.6	1994-08	-3.8*					-3.8*	-3.8*
White	1975-87	0.8*	1987-91	3.2*	1991-94	-0.8	1994-06	-3.9*	2006-08	-2.1			-3.5*	-3.0*
Black	1975-94	2.3*	1994-01	-2.7*	2001-08	-4.0*							-3.7*	-4.0*
<u>U.S. Cancer Mortality<sup>c</sup>, 1992-2008</u>														
All Races	1992-94	-1.0	1994-08	-3.8*									-3.8*	-3.8*
White	1992-94	-1.1	1994-06	-3.9*	2006-08	-2.2							-3.5*	-3.0*
White NH <sup>ef</sup>	1992-94	-1.0	1994-04	-4.0*	2004-08	-3.0*							-3.5*	-3.0*
Black	1992-96	-0.4	1996-08	-3.5*									-3.5*	-3.5*
Black NH <sup>ef</sup>	1992-96	-0.3	1996-08	-3.3*									-3.3*	-3.3*
API <sup>e</sup>	1992-08	-4.0*											-4.0*	-4.0*
AI/AN <sup>eg</sup>	1992-08	-2.2*											-2.2*	-2.2*
Hispanic <sup>f</sup>	1992-95	1.6	1995-08	-3.6*									-3.6*	-3.6*

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

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

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

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

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

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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 23.4  
Cancer of the Prostate (Invasive)

Delay-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Age

Year of Diagnosis:	All Races, Males			White Males			Black Males		
	All	<65	65+	All	<65	65+	All	<65	65+
1975	94.00	13.67	649.30	92.18	13.02	639.37	140.97	26.76	930.45
1976	97.93	14.60	673.94	97.32	13.93	673.76	140.79	29.38	910.86
1977	100.47	15.04	690.94	98.54	14.35	680.53	159.16	29.24	1,057.18
1978	99.40	15.25	681.14	97.73	14.82	670.83	148.11	26.83	986.42
1979	103.44	14.98	714.91	102.31	14.69	708.01	162.31	26.35	1,102.12
1980	106.01	15.51	731.56	104.96	14.68	728.99	161.14	33.79	1,041.42
1981	108.89	16.83	745.26	107.88	15.96	743.28	161.86	34.55	1,041.86
1982	108.21	16.33	743.35	107.34	15.79	740.16	167.65	31.32	1,110.00
1983	111.62	17.16	764.60	110.84	16.60	762.27	170.89	34.06	1,116.73
1984	111.70	17.27	764.39	110.12	16.23	759.11	178.85	37.09	1,158.72
1985	115.52	17.87	790.55	114.67	17.59	785.71	170.17	31.42	1,129.20
1986	119.08	18.52	814.20	119.05	18.26	815.70	168.74	34.10	1,099.36
1987	133.70	21.49	909.38	134.59	21.07	919.22	189.39	36.09	1,249.05
1988	137.65	22.19	935.72	138.86	22.35	944.22	190.14	34.62	1,265.14
1989	145.36	24.11	983.52	146.22	23.99	991.14	192.30	37.33	1,263.54
1990	171.03	28.81	1,154.14	172.91	28.88	1,168.45	222.57	44.62	1,452.60
1991	214.90	38.87	1,431.65	216.65	39.30	1,442.58	289.21	57.42	1,891.43
1992	237.46	49.40	1,537.44	238.62	49.43	1,546.33	329.14	77.95	2,065.39
1993	209.58	50.48	1,309.34	204.73	49.05	1,280.83	345.86	94.49	2,083.41
1994	180.33	48.63	1,090.74	174.48	46.90	1,056.38	314.69	95.55	1,829.45
1995	169.18	49.99	993.09	164.52	48.16	968.80	283.09	98.87	1,556.49
1996	169.43	53.48	970.91	165.25	52.07	947.61	284.01	100.72	1,550.97
1997	173.61	55.24	991.86	170.42	54.18	973.88	285.84	97.51	1,587.65
1998	170.89	54.92	972.52	167.78	53.23	959.54	288.18	103.05	1,567.92
1999	183.63	60.82	1,032.57	179.88	59.07	1,014.96	292.65	112.92	1,535.00
2000	183.11	61.86	1,021.21	180.22	60.19	1,009.92	294.40	115.39	1,531.81
2001	185.05	64.76	1,016.58	183.80	63.00	1,018.82	277.71	116.21	1,394.11
2002	182.51	65.83	989.09	180.89	64.40	986.10	292.86	119.99	1,487.80
2003	169.98	62.35	913.96	167.54	60.31	908.79	264.91	119.22	1,271.96
2004	165.99	62.33	882.53	163.49	60.83	873.11	261.01	108.93	1,312.26
2005	156.28	58.02	835.54	152.68	55.54	824.12	252.30	108.82	1,244.11
2006	170.83	64.73	904.21	167.82	62.70	894.46	256.87	112.14	1,257.23
2007	173.64	66.84	911.84	169.46	63.84	899.58	271.55	122.98	1,298.52
2008	157.04	62.95	807.41	153.45	60.49	796.06	260.43	116.51	1,255.28

Additional information on the model used to delay-adjust SEER Incidence rates can be found at [\(http://surveillance.cancer.gov/delay/\)](http://surveillance.cancer.gov/delay/).

<sup>a</sup> 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 23.5  
Cancer of the Prostate (Invasive)

Age-adjusted SEER Incidence<sup>a</sup> Rates by Year, Race and Age

Year of Diagnosis:	All Races, Males			White Males			Black Males		
	All	<65	65+	All	<65	65+	All	<65	65+
1975	94.00	13.67	649.30	92.18	13.02	639.37	140.97	26.76	930.45
1976	97.93	14.60	673.94	97.32	13.93	673.76	140.79	29.38	910.86
1977	100.47	15.04	690.94	98.54	14.35	680.53	159.16	29.24	1,057.18
1978	99.40	15.25	681.14	97.73	14.82	670.83	148.11	26.83	986.42
1979	103.44	14.98	714.91	102.31	14.69	708.01	162.31	26.35	1,102.12
1980	106.01	15.51	731.56	104.96	14.68	728.99	161.14	33.79	1,041.42
1981	108.89	16.83	745.26	107.88	15.96	743.28	161.86	34.55	1,041.86
1982	108.21	16.33	743.32	107.33	15.79	740.10	167.63	31.32	1,109.83
1983	111.61	17.16	764.54	110.83	16.60	762.14	170.84	34.05	1,116.37
1984	111.68	17.27	764.29	110.09	16.23	758.91	178.77	37.08	1,158.14
1985	115.50	17.86	790.41	114.63	17.58	785.42	170.05	31.41	1,128.41
1986	119.05	18.51	814.00	118.99	18.26	815.30	168.59	34.08	1,098.34
1987	133.66	21.48	909.10	134.51	21.07	918.65	189.18	36.06	1,247.58
1988	137.60	22.19	935.35	138.75	22.33	943.49	189.87	34.58	1,263.30
1989	145.30	24.10	983.06	146.09	23.97	990.19	191.98	37.28	1,261.29
1990	170.94	28.80	1,153.48	172.70	28.86	1,167.03	222.09	44.55	1,449.35
1991	214.76	38.86	1,430.67	216.38	39.27	1,440.67	288.54	57.32	1,886.84
1992	237.28	49.37	1,536.18	238.26	49.38	1,543.87	328.24	77.79	2,059.42
1993	209.39	50.45	1,308.05	204.36	48.98	1,278.39	344.76	94.26	2,076.29
1994	180.14	48.59	1,089.46	174.11	46.82	1,053.98	313.51	95.26	1,822.09
1995	168.97	49.94	991.71	164.10	48.07	966.17	281.85	98.52	1,549.11
1996	169.18	53.42	969.29	164.80	51.96	944.84	282.68	100.34	1,543.08
1997	173.30	55.17	989.89	169.73	54.01	969.66	283.90	96.96	1,576.09
1998	170.54	54.83	970.33	167.03	53.04	954.91	286.03	102.41	1,555.34
1999	183.12	60.69	1,029.44	178.75	58.77	1,008.13	289.70	111.95	1,518.36
2000	182.50	61.70	1,017.47	178.86	59.82	1,001.77	290.90	114.21	1,512.21
2001	184.31	64.55	1,012.08	182.14	62.53	1,008.93	273.80	114.78	1,373.03
2002	181.62	65.58	983.77	178.92	63.81	974.56	287.96	118.24	1,461.16
2003	168.97	62.06	907.97	165.33	59.63	895.94	259.68	117.15	1,244.94
2004	164.77	61.96	875.45	160.87	60.00	858.16	254.82	106.64	1,279.12
2005	154.87	57.59	827.31	149.69	54.60	806.98	245.17	106.07	1,206.67
2006	168.92	64.13	893.21	163.82	61.40	871.79	248.19	108.75	1,212.04
2007	171.22	66.07	898.09	164.51	62.20	871.73	260.52	118.44	1,242.63
2008	153.03	61.57	785.29	146.30	57.95	756.98	244.29	109.88	1,173.42
1975-2008	152.80	41.61	921.32	149.50	39.63	908.95	237.88	78.15	1,341.96

<sup>a</sup> 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 23.6  
Cancer of the Prostate (Invasive)

Age-adjusted U.S. Death<sup>a</sup> Rates by Year, Race and Age

Year of Death:	All Races, Males			White Males			Black Males		
	All	<65	65+	All	<65	65+	All	<65	65+
1975	30.97	2.54	227.48	29.06	2.18	214.88	55.52	6.56	393.98
1976	31.78	2.69	232.91	29.93	2.31	220.84	55.60	6.90	392.19
1977	31.83	2.69	233.28	29.90	2.31	220.57	56.44	6.93	398.67
1978	32.66	2.61	240.33	30.62	2.24	226.79	58.49	6.76	416.09
1979	32.84	2.56	242.13	30.77	2.21	228.17	59.24	6.63	422.90
1980	33.05	2.67	243.08	30.77	2.33	227.39	61.99	6.57	445.03
1981	33.17	2.68	243.95	30.76	2.30	227.52	63.61	7.06	454.45
1982	33.36	2.68	245.47	31.09	2.34	229.85	62.36	6.62	447.67
1983	33.92	2.76	249.30	31.57	2.40	233.18	64.55	6.99	462.46
1984	34.06	2.71	250.77	31.58	2.37	233.49	65.93	6.74	475.13
1985	33.91	2.73	249.43	31.28	2.34	231.34	67.26	7.16	482.68
1986	34.93	2.80	256.99	32.46	2.47	239.72	67.39	6.63	487.36
1987	35.11	2.71	259.06	32.57	2.38	241.27	68.88	6.66	499.03
1988	35.88	2.83	264.40	33.38	2.47	247.08	69.57	6.98	502.28
1989	37.10	2.97	273.01	34.54	2.62	255.20	71.71	7.06	518.54
1990	38.56	3.02	284.23	35.67	2.65	263.98	77.98	7.43	565.65
1991	39.31	2.89	291.08	36.50	2.52	271.39	78.24	7.06	570.21
1992	39.22	2.86	290.58	36.29	2.44	270.28	79.84	7.66	578.73
1993	39.34	2.72	292.48	36.26	2.33	270.82	81.86	7.04	599.08
1994	38.54	2.67	286.48	35.64	2.31	266.04	79.96	6.76	585.93
1995	37.29	2.58	277.23	34.41	2.22	256.93	78.20	6.70	572.47
1996	36.00	2.50	267.61	33.00	2.13	246.38	78.84	6.45	579.20
1997	34.15	2.31	254.26	31.35	1.94	234.58	74.30	6.32	544.22
1998	32.63	2.27	242.49	29.89	1.90	223.36	72.77	6.28	532.41
1999	31.56	2.06	235.48	28.91	1.72	216.88	70.13	5.80	514.78
2000	30.37	1.98	226.62	27.75	1.66	208.11	68.93	5.41	508.01
2001	29.41	1.94	219.29	26.87	1.64	201.28	67.86	5.40	499.67
2002	28.55	1.93	212.56	26.20	1.61	196.24	65.04	5.36	477.58
2003	27.01	1.92	200.43	24.85	1.60	185.53	60.48	5.45	440.92
2004	25.99	1.83	192.96	23.86	1.56	178.01	59.20	4.96	434.11
2005	25.20	1.82	186.86	23.15	1.52	172.66	57.29	5.04	418.48
2006	24.06	1.86	177.51	22.17	1.60	164.36	54.01	4.79	394.23
2007	24.04	1.77	177.95	22.05	1.50	164.10	55.27	4.76	404.44
2008	22.82	1.81	168.07	21.17	1.54	156.89	49.49	4.75	358.74
1975-2008	32.14	2.40	237.72	29.74	2.07	221.00	66.48	6.19	483.23

<sup>a</sup> 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 23.7  
Cancer of the Prostate (Invasive)

SEER Incidence<sup>a</sup> and U.S. Death<sup>b</sup> Rates, Age-Adjusted and Age-Specific Rates, by Race

	SEER Incidence <sup>a</sup>			U.S. Mortality <sup>b</sup>		
	All Races Males	White Males	Black Males	All Races Males	White Males	Black Males
<u>Age-Adjusted Rates, 2004-2008</u>						
Age at Diagnosis/Death:						
All ages	156.0	149.5	233.8	24.4	22.4	54.9
Under 65	58.1	55.3	103.1	1.8	1.5	4.9
65 and over	832.7	800.7	1,137.8	180.4	167.0	401.1
All ages (IARC world std) <sup>c</sup>	106.1	101.8	165.4	10.6	9.6	24.7
<u>Age-Specific Rates, 2004-2008</u>						
Age at Diagnosis/Death:						
<1	-	-	-	-	-	-
1-4	-	-	-	-	-	-
5-9	-	-	-	-	-	-
10-14	-	-	-	-	-	-
15-19	-	-	-	-	-	-
20-24	-	-	-	-	-	-
25-29	-	-	-	-	-	-
30-34	-	-	-	-	-	-
35-39	0.8	0.7	1.9	0.0	-	-
40-44	10.0	8.4	25.6	0.2	0.2	0.5
45-49	43.0	38.8	92.7	0.9	0.7	2.3
50-54	139.1	131.2	255.3	3.3	2.7	8.8
55-59	326.6	312.0	569.6	9.0	7.6	24.1
60-64	573.1	550.7	964.7	22.2	19.1	59.2
65-69	857.4	829.5	1,300.9	46.0	40.2	116.8
70-74	935.1	909.6	1,249.2	88.5	78.2	220.3
75-79	885.5	848.8	1,106.3	159.8	146.1	360.6
80-84	721.4	677.7	903.2	285.0	266.4	606.1
85+	604.4	571.8	874.4	580.5	550.7	1,233.9

<sup>a</sup> SEER 17 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

<sup>b</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>c</sup> 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 23.8  
Cancer of the Prostate (Invasive)

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

	All Races, Males			White Males			Black Males		
	All	<65	65+	All	<65	65+	All	<65	65+
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 <sup>a</sup>	-	-	-	50	-	-	35	-	-
1970-1973 <sup>a</sup>	-	-	-	63	-	-	55	-	-
1975-1977 <sup>b</sup>	68.3	73.7	66.6	69.0	75.4	67.1	61.0	62.2	60.5
1978-1980 <sup>b</sup>	70.5	75.5	69.1	71.7	77.1	70.1	62.1	65.2	60.8
1981-1983 <sup>b</sup>	72.4	76.3	71.4	73.5	77.9	72.3	63.2	65.4	62.3
1984-1986 <sup>b</sup>	75.5	77.6	75.0	76.8	79.3	76.2	65.8	67.6	65.2
1987-1989 <sup>b</sup>	83.2	83.3	83.2	84.8	84.8	84.8	71.5	72.7	71.2
1990-1992 <sup>b</sup>	93.3	93.1	93.3	94.4	94.1	94.5	84.6	86.6	83.8
1993-1995 <sup>b</sup>	95.4	95.9	95.2	96.1	96.6	95.9	91.7	93.2	90.9
1996-2000 <sup>b</sup>	98.3	98.7	98.1	98.9	99.1	98.7	95.6	97.2	94.3
2001-2007 <sup>b</sup>	99.9 <sup>e</sup>	99.7 <sup>e</sup>	99.9 <sup>e</sup>	99.9 <sup>e</sup>	99.8 <sup>e</sup>	99.9 <sup>e</sup>	97.9 <sup>e</sup>	99.1 <sup>e</sup>	96.2 <sup>e</sup>
5-Year Period Survival (Percent) <sup>cd</sup>									
2007	99.4	99.2	99.3	99.6	99.3	99.5	96.5	98.7	94.1
Stage Distribution (%) 2001-2007 <sup>c</sup>									
All Stages									
Number of cases	332,115	132,852	199,263	263,353	103,366	159,987	41,690	21,015	20,675
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	81	79	83	81	79	83	80	79	82
Regional	12	17	8	12	18	8	11	15	7
Distant	4	3	5	4	3	5	6	4	7
Unstaged	3	1	4	3	1	4	3	1	4
5-Year Relative Survival (Percent), 2001-2007 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	96.4	-	-	96.1	-	-	96.6	-	-
Ages 45-54	98.2	-	-	98.3	-	-	97.6	-	-
Ages 55-64	99.5	-	-	99.7	-	-	98.4	-	-
Ages 65-74	100.0	-	-	100.0	-	-	97.8	-	-
Ages 75+	97.4	-	-	98.0	-	-	85.9	-	-
Ages <65	99.1	-	-	99.3	-	-	98.2	-	-
Ages 65+	99.5	-	-	99.7	-	-	94.1	-	-
Stage:									
All Stages	99.4	99.1	99.5	99.7	99.3	99.7	96.2	98.2	94.1
Localized	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Regional	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.6
Distant	28.7	30.8	27.9	28.1	30.4	27.4	27.9	30.4	26.2
Unstaged	69.9	83.4	66.8	68.8	83.4	65.9	58.8	74.4	52.8

<sup>a</sup> Based on End Results data from a series of hospital registries and one population-based registry.

<sup>b</sup> SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Based on follow-up of patients into 2008.

<sup>c</sup> SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Based on follow-up of patients into 2008.

<sup>d</sup> Period survival provides a 2007 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2005-2007: 0-1 year survival), (2004-2006: 1-2 year survival), (2003-2005: 2-3 year survival), (2002-2004: 3-4 year survival), (2001-2003: 4-5 years survival).

<sup>e</sup> The difference between 1975-1977 and 2001-2007 is statistically significant ( $p < .05$ ).

<sup>f</sup> The standard error is between 5 and 10 percentage points.

<sup>g</sup> 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 23.9  
Cancer of the Prostate (Invasive)

SEER<sup>a</sup> Relative Survival (Percent)  
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Survival Time																					
1-year	91.9	94.0	95.9	97.7	98.8	99.6	99.4	99.2	98.9	99.3	99.5	99.6	99.7	99.9	100.0	99.9	99.9	100.0	99.9	99.9	99.9
2-year	85.1	87.9	91.5	94.8	97.4	98.4	98.2	98.1	97.8	98.2	98.9	99.1	99.7	99.7	100.0	99.9	99.8	99.9	99.8	99.9	
3-year	78.8	82.0	87.2	92.4	95.9	97.8	97.0	96.8	97.1	97.6	98.6	98.6	99.7	99.3	100.0	99.9	99.6	99.9	99.8		
4-year	73.6	76.8	83.8	90.3	94.4	97.2	96.5	95.6	96.5	97.0	98.1	98.4	99.4	99.1	100.0	99.9	99.6	99.9			
5-year	69.2	72.4	80.9	88.9	93.0	96.4	95.5	94.8	95.8	96.7	97.7	98.4	99.4	99.1	100.0	99.9	99.4				
6-year	65.6	68.8	78.2	87.4	91.5	95.2	94.7	94.0	95.4	96.3	97.5	98.2	99.4	98.8	100.0	99.9					
7-year	62.1	65.3	75.7	85.3	90.8	94.3	93.6	93.1	95.0	95.6	97.4	98.0	99.4	98.8	100.0						
8-year	58.9	62.3	73.7	83.7	89.6	93.0	93.0	92.5	94.8	95.1	97.3	98.0	99.1	98.7							
9-year	56.1	60.0	71.7	82.5	88.5	92.1	91.7	91.7	94.4	94.7	97.0	97.5	99.0								
10-year	53.5	58.1	69.9	80.7	87.6	91.1	90.8	91.2	93.8	94.5	96.9	97.2									
11-year	51.0	55.8	68.2	79.2	86.2	90.6	90.3	90.1	93.1	94.3	96.8										
12-year	48.7	53.8	66.4	78.3	85.5	89.9	88.9	89.3	92.3	94.0											
13-year	46.9	52.0	64.7	77.6	84.5	89.0	88.4	88.7	91.4												
14-year	45.1	50.4	63.3	76.5	84.1	88.4	87.8	87.6													
15-year	43.9	49.1	61.7	75.5	83.2	87.7	86.7														
16-year	42.1	47.2	60.1	73.8	82.1	86.8															
17-year	40.5	46.1	59.6	72.7	81.8																
18-year	39.1	44.7	58.5	72.1																	
19-year	38.3	43.3	58.0																		
20-year	37.3	41.9																			

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

Table 23.10  
Cancer of the Prostate (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,  
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and  
Lifetime Risk of Dying from Cancer Given Alive at Current Age  
Males, 2006-2008 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer				Risk of Dying from Cancer
		+10 yrs	+20 yrs	+30 yrs	Ever				+10 yrs	+20 yrs	+30 yrs	Ever	
All Races	0	0.00	0.00	0.00	16.48	2.77	Asian/ Pacific Islander	0	0.00	0.00	0.00	11.46	2.24
	10	0.00	0.00	0.01	16.69	2.81		10	0.00	0.00	0.00	11.56	2.26
	20	0.00	0.01	0.33	16.78	2.83		20	0.00	0.01	0.09	11.60	2.27
	30	0.01	0.33	2.60	17.00	2.87		30	0.00	0.09	1.04	11.67	2.28
	40	0.33	2.63	8.60	17.27	2.92		40	0.09	1.04	4.30	11.76	2.30
	50	2.39	8.58	14.67	17.57	3.02		50	0.97	4.28	8.74	11.88	2.33
	60	6.84	13.57	16.29	16.77	3.20		60	3.49	8.18	10.70	11.49	2.40
	70	8.50	11.93	-	12.54	3.42		70	5.36	8.25	-	9.14	2.48
80	5.49	-	-	6.47	3.58	80	3.92	-	-	5.14	2.54		
White	0	0.00	0.00	0.00	15.89	2.60	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	7.43	2.26
	10	0.00	0.00	0.01	16.07	2.64		10	0.00	0.00	0.00	7.55	2.30
	20	0.00	0.01	0.30	16.15	2.65		20	0.00	0.00	0.09	7.62	2.32
	30	0.01	0.30	2.46	16.36	2.68		30	0.00	0.09	0.93	7.83	2.39
	40	0.30	2.48	8.28	16.60	2.73		40	0.09	0.96	3.36	8.13	2.48
	50	2.27	8.27	14.19	16.89	2.82		50	0.92	3.46	6.28	8.49	2.65
	60	6.60	13.11	15.64	16.08	2.98		60	2.81	5.94	7.89	8.38	2.89
	70	8.17	11.34	-	11.90	3.18		70	3.85	6.25	-	6.86	3.22
80	5.08	-	-	5.97	3.36	80	3.61	-	-	4.52	3.57		
Black	0	0.00	0.00	0.00	19.10	4.44	Hispanic <sup>b</sup>	0	0.00	0.00	0.00	14.93	3.12
	10	0.00	0.00	0.03	19.58	4.56		10	0.00	0.00	0.01	15.10	3.16
	20	0.00	0.03	0.68	19.75	4.60		20	0.00	0.01	0.18	15.19	3.18
	30	0.03	0.69	4.37	20.19	4.70		30	0.01	0.18	1.67	15.37	3.22
	40	0.68	4.48	12.55	20.76	4.84		40	0.18	1.69	6.44	15.57	3.26
	50	4.04	12.63	18.81	21.39	5.11		50	1.55	6.45	12.22	15.85	3.34
	60	10.28	17.66	20.29	20.75	5.67		60	5.29	11.53	14.50	15.46	3.50
	70	10.83	14.69	-	15.36	6.40		70	7.51	11.08	-	12.24	3.67
80	7.16	-	-	8.42	6.95	80	5.21	-	-	6.89	3.78		

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

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

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

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

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

Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

- Statistic could not be calculated.

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

Table 23.11  
Cancer of the Prostate (Invasive)

SEER Incidence and U.S. Mortality  
Age-Adjusted Rates and Trends<sup>a</sup>  
By Race/Ethnicity

SEER Incidence	SEER 17 Areas <sup>b</sup>	SEER 13 Areas <sup>b</sup>	SEER 9 Areas <sup>b</sup>
	Rate 2004-2008	Trend 1999-2008 <sup>c</sup>	Trend 1999-2008 <sup>d</sup>
	Rate per 100,000 persons	AAPC (%)	AAPC (%)
RACE/ETHNICITY	Males	Males	Males
All Races	156.0	-1.7*	-1.4*
White	149.5	-1.9*	-1.7*
White Hispanic <sup>e</sup>	127.2	-2.7*	-
White Non-Hispanic <sup>e</sup>	153.1	-1.6*	-
Black	233.8	-2.0*	-1.8*
Asian/Pacific Islander	88.3	-1.4	-
Amer Ind/Alaska Nat <sup>f</sup>	75.3	-2.3*	-
Hispanic <sup>e</sup>	129.0	-2.3*	-
<u>U.S. Mortality<sup>g</sup></u>			
	Rate 2004-2008	Trend 1999-2008 <sup>h</sup>	
	Rate per 100,000 persons	AAPC (%)	
RACE/ETHNICITY	Males	Males	
All Races	24.4	-3.7*	
White	22.4	-3.3*	
White Hispanic <sup>e</sup>	18.9	-3.1*	
White Non-Hispanic <sup>e</sup>	22.6	-3.4*	
Black	54.9	-3.5*	
Asian/Pacific Islander	10.5	-3.9*	
Amer Ind/Alaska Nat			
Total U.S.	16.9	-3.1*	
CHSDA Counties	20.7	-2.3*	
Non-CHSDA Counties	12.3	-3.8*	
Hispanic <sup>e</sup>	18.5	-3.5*	

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.

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

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

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

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

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

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

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

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 2004-2008 Hispanic and Non-Hispanic death rates exclude deaths from the District of Columbia and North Dakota.

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

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

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

Table 23.12  
Cancer of the Prostate (Invasive)

Age-Adjusted SEER Incidence Rates<sup>a</sup>  
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<sup>a</sup>, 2004-2008</u>									
Atlanta & Rural Georgia	181.47	76.78	905.05	151.05	61.88	767.46	275.02	117.02	1367.18
Atlanta	181.08	76.79	901.96	150.01	61.86	759.32	278.79	117.70	1392.34
Rural Georgia	186.34	76.02	948.92	163.46	60.46	875.38	229.54	104.91	1091.03
California	146.55	52.26	798.28	143.01	51.65	774.52	209.83	97.11	989.05
Greater Bay Area	154.46	58.15	820.13	162.35	61.22	861.38	220.12	101.05	1043.20
San Francisco-Oakland	153.51	58.98	806.92	157.77	60.44	830.57	222.23	101.38	1057.56
San Jose-Monterey	156.46	56.54	847.11	170.57	62.57	917.09	203.68	98.53	930.51
Los Angeles	142.92	50.02	785.09	132.93	47.29	724.84	201.67	98.02	918.11
Greater California	145.35	51.12	796.76	141.17	50.40	768.67	214.97	94.23	1049.56
Connecticut	162.06	64.65	835.42	156.54	61.16	815.84	229.92	104.75	1095.13
Detroit	189.71	75.02	982.50	163.03	61.88	862.19	263.75	114.29	1296.87
Hawaii	132.08	41.22	760.12	148.09	51.37	816.67	167.07	101.12	623.00
Iowa	141.68	52.41	758.78	136.92	50.26	735.88	208.73	95.67	990.22
Kentucky	139.80	52.41	743.86	133.92	47.53	731.12	204.82	97.57	946.16
Louisiana	172.13	64.80	914.06	153.69	55.44	832.85	240.59	95.36	1244.49
New Jersey	170.99	67.50	886.33	160.15	62.69	833.77	238.02	104.62	1160.17
New Mexico	137.65	50.45	740.38	141.62	52.64	756.66	95.03	57.90	351.64
Seattle-Puget Sound	167.52	60.25	908.95	170.17	61.04	924.58	242.29	102.90	1205.78
Utah	173.74	63.65	934.76	176.43	65.10	945.97	112.57	46.42	569.84
9 SEER Areas <sup>b</sup>	162.55	62.31	855.44	156.99	59.24	832.69	250.62	110.10	1221.95
11 SEER Areas <sup>b</sup>	157.94	59.32	839.65	152.91	57.02	815.74	236.57	107.12	1131.40
13 SEER Areas <sup>b</sup>	157.89	59.31	839.30	152.96	57.04	816.00	236.45	107.08	1130.71
17 SEER Areas <sup>b</sup>	156.03	58.14	832.70	149.47	55.26	800.68	233.83	103.05	1137.84

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

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

The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.

The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

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

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

Table 23.13  
Cancer of the Prostate (Invasive)

Age-Adjusted SEER Death Rates<sup>a</sup>  
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<sup>a</sup>, 2004-2008</u>									
Atlanta & Rural Georgia	28.35	2.33	208.25	20.06	1.38	149.13	61.42	4.93	451.85
Atlanta	27.55	2.24	202.46	19.74	1.30	147.20	59.95	4.83	440.97
Rural Georgia	39.75	-	288.42	24.60	-	174.19	75.52	-	553.24
California	23.60	1.72	174.85	23.80	1.64	176.94	54.14	5.37	391.30
Greater Bay Area	20.50	1.50	151.83	21.59	1.47	160.62	48.43	5.31	346.48
San Francisco-Oakland	20.96	1.55	155.10	21.41	1.39	159.82	49.02	5.77	348.04
San Jose-Monterey	19.57	1.40	145.17	21.95	1.63	162.38	44.97	-	337.78
Los Angeles	23.55	1.87	173.40	22.57	1.66	167.11	56.00	5.57	404.58
Greater California	24.73	1.73	183.72	24.92	1.69	185.51	56.20	5.22	408.53
Connecticut	25.74	1.70	191.92	24.83	1.42	186.66	45.67	5.88	320.72
Detroit	24.51	2.10	179.43	19.51	1.43	144.47	48.99	4.81	354.34
Hawaii	16.81	1.33	123.79	23.80	2.31	172.34	-	-	-
Iowa	25.10	1.74	186.58	24.84	1.75	184.49	66.58	-	509.72
Kentucky	25.56	1.75	190.14	24.13	1.65	179.50	56.02	3.52	418.94
Louisiana	28.61	2.43	209.58	21.64	1.47	161.12	56.15	5.49	406.28
New Jersey	23.40	1.81	172.66	21.51	1.56	159.37	50.78	4.63	369.73
New Mexico	24.62	1.50	184.50	24.82	1.52	185.86	30.02	-	237.50
Seattle-Puget Sound	24.60	1.67	183.09	24.68	1.60	184.27	52.40	4.47	383.71
Utah	25.62	1.31	193.61	25.90	1.31	195.91	-	-	-
9 SEER Areas <sup>b</sup>	24.05	1.73	178.31	23.36	1.50	174.46	50.60	4.92	366.39
11 SEER Areas <sup>b</sup>	23.69	1.74	175.41	23.12	1.54	172.31	51.94	5.02	376.21
13 SEER Areas <sup>b</sup>	23.73	1.74	175.75	23.13	1.54	172.41	52.31	5.03	379.08
17 SEER Areas <sup>b</sup>	24.30	1.79	179.93	23.37	1.58	174.00	53.29	5.01	387.02
Total U.S.	24.38	1.82	180.35	22.45	1.54	166.95	54.93	4.85	401.06

<sup>a</sup> 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).

<sup>b</sup> The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.  
The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.  
The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.  
The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.  
- Statistic not shown. Rate based on less than 16 cases for the time interval.

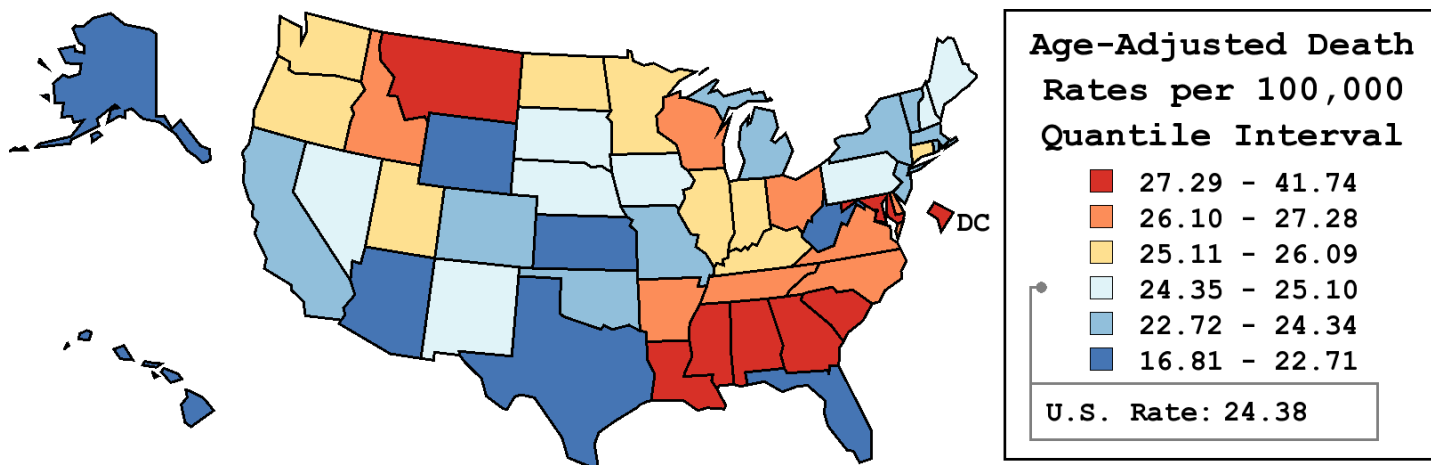
Table 23.14  
Cancer of the Prostate (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2004-2008

Males

State	Rate	SE	Rank	PD
TOTAL U.S.	24.38	0.06		
High Five States				
D.C.	41.74 <sup>b</sup>	2.08	(01)	71.21 <sup>c</sup>
Mississippi	31.67 <sup>b</sup>	0.79	(02)	29.88 <sup>c</sup>
Alabama	29.88 <sup>b</sup>	0.59	(03)	22.56 <sup>c</sup>
Georgia	28.62 <sup>b</sup>	0.49	(04)	17.39 <sup>c</sup>
Louisiana	28.61 <sup>b</sup>	0.62	(05)	17.34 <sup>c</sup>
Low Five States				
Kansas	22.16 <sup>b</sup>	0.62	(47)	-9.10
West Virginia	21.58 <sup>b</sup>	0.72	(48)	-11.49 <sup>c</sup>
Arizona	20.57 <sup>b</sup>	0.39	(49)	-15.64 <sup>c</sup>
Florida	20.29 <sup>b</sup>	0.20	(50)	-16.76 <sup>c</sup>
Hawaii	16.81 <sup>b</sup>	0.73	(51)	-31.06 <sup>c</sup>

State	Rate	SE	Rank	PD	State	Rate	SE	Rank	PD
Alabama	29.88 <sup>b</sup>	0.59	(03)	22.56 <sup>c</sup>	Montana	28.00	1.13	(07)	14.83 <sup>c</sup>
Alaska	22.52	1.90	(46)	-7.65	Nebraska	24.87	0.81	(29)	2.02
Arizona	20.57 <sup>b</sup>	0.39	(49)	-15.64 <sup>c</sup>	Nevada	24.51	0.76	(32)	0.55
Arkansas	26.24	0.66	(16)	7.64	New Hampshire	25.08	1.00	(27)	2.88
California	23.60 <sup>b</sup>	0.19	(40)	-3.20	New Jersey	23.40	0.37	(41)	-4.00
Colorado	24.34	0.58	(35)	-0.17	New Mexico	24.62	0.80	(30)	1.00
Connecticut	25.74	0.59	(20)	5.59	New York	22.97 <sup>b</sup>	0.24	(43)	-5.79
Delaware	26.66	1.25	(12)	9.34	North Carolina	27.04 <sup>b</sup>	0.42	(10)	10.91 <sup>c</sup>
D.C.	41.74 <sup>b</sup>	2.08	(01)	71.21 <sup>c</sup>	North Dakota	25.87	1.26	(19)	6.11
Florida	20.29 <sup>b</sup>	0.20	(50)	-16.76 <sup>c</sup>	Ohio	26.26 <sup>b</sup>	0.34	(15)	7.71
Georgia	28.62 <sup>b</sup>	0.49	(04)	17.39 <sup>c</sup>	Oklahoma	23.89	0.58	(37)	-2.03
Hawaii	16.81 <sup>b</sup>	0.73	(51)	-31.06 <sup>c</sup>	Oregon	26.00	0.57	(18)	6.63
Idaho	27.28	0.99	(09)	11.88 <sup>c</sup>	Pennsylvania	24.52	0.29	(31)	0.59
Illinois	26.09 <sup>b</sup>	0.34	(17)	7.02	Rhode Island	23.81	1.01	(38)	-2.34
Indiana	25.21	0.47	(23)	3.42	South Carolina	28.46 <sup>b</sup>	0.60	(06)	16.75 <sup>c</sup>
Iowa	25.10	0.59	(26)	2.95	South Dakota	24.37	1.12	(33)	-0.06
Kansas	22.16 <sup>b</sup>	0.62	(47)	-9.10	Tennessee	26.35 <sup>b</sup>	0.49	(13)	8.06
Kentucky	25.56	0.58	(22)	4.84	Texas	22.57 <sup>b</sup>	0.25	(45)	-7.42
Louisiana	28.61 <sup>b</sup>	0.62	(05)	17.34 <sup>c</sup>	Utah	25.62	0.84	(21)	5.07
Maine	24.96	0.92	(28)	2.39	Vermont	24.34	1.38	(34)	-0.17
Maryland	27.51 <sup>b</sup>	0.54	(08)	12.85 <sup>c</sup>	Virginia	26.28 <sup>b</sup>	0.46	(14)	7.80
Massachusetts	24.10	0.43	(36)	-1.15	Washington	25.17	0.46	(24)	3.24
Michigan	23.63	0.35	(39)	-3.07	West Virginia	21.58 <sup>b</sup>	0.72	(48)	-11.49 <sup>c</sup>
Minnesota	25.12	0.50	(25)	3.04	Wisconsin	26.72 <sup>b</sup>	0.48	(11)	9.58
Mississippi	31.67 <sup>b</sup>	0.79	(02)	29.88 <sup>c</sup>	Wyoming	22.71	1.50	(44)	-6.87
Missouri	23.08	0.44	(42)	-5.35					



<sup>a</sup> 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).  
<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant (p<=.0002).  
<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 10% 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 23.15  
Cancer of the Prostate (Invasive)

Estimated United States Cancer Prevalence Counts<sup>a</sup> on January 1, 2008  
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 <18 <sup>e</sup>	0 to <33 <sup>e</sup>	>=33 <sup>g</sup>	Complete <sup>h</sup>
<u>Race</u>										
All Races <sup>b</sup>	947,233	719,432	438,078	142,054	27,477	8,596	2,275,367	2,353,355	2,109	2,355,464
White <sup>b</sup>	780,290	608,406	378,709	129,392	25,198	7,935	1,910,974	1,982,239	2,364	1,984,603
Black <sup>b</sup>	124,196	87,139	48,310	10,111	1,967	553	278,480	284,018	190	284,208
Asian/Pacific Islander <sup>c</sup>	18,979	12,388	5,850	+	+	+	38,742	+	+	+
Hispanic <sup>d</sup>	52,180	35,973	18,196	+	+	+	110,871	+	+	+

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

Age at Prevalence	Age Specific (Crude)										Age-Adjusted <sup>f</sup>
	All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>											
All Races <sup>c</sup>	1.2583%	0.0002%	0.0002%	0.0003%	0.0013%	0.0755%	0.9874%	4.8815%	10.8493%	12.1247%	1.5298%
White <sup>c</sup>	1.3115%	-	-	-	0.0009%	0.0659%	0.9418%	4.8095%	10.8928%	11.8279%	1.5102%
Black <sup>c</sup>	1.3855%	-	-	-	0.0036%	0.1892%	1.9501%	8.4946%	15.6555%	16.9040%	2.3657%
Asian/Pacific Islander <sup>c</sup>	0.6427%	-	-	-	0.0014%	0.0195%	0.3296%	2.0396%	5.8479%	8.5821%	0.8257%
Hispanic <sup>d</sup>	-	-	-	-	-	-	-	-	-	-	-

<sup>a</sup> US 2008 cancer prevalence counts are based on 2008 cancer prevalence proportions from the SEER registries and 1/1/2008 US population estimates based on the average of 2007 and 2008 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

<sup>b c d</sup> 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.

<sup>e</sup> Maximum limited-duration prevalence: 33 years for 1975-2008 SEER 9 data; 18 years for 1990-2008 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

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

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

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

+ Not available.

# SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates<sup>a</sup> Cancer of the Prostate, by Race

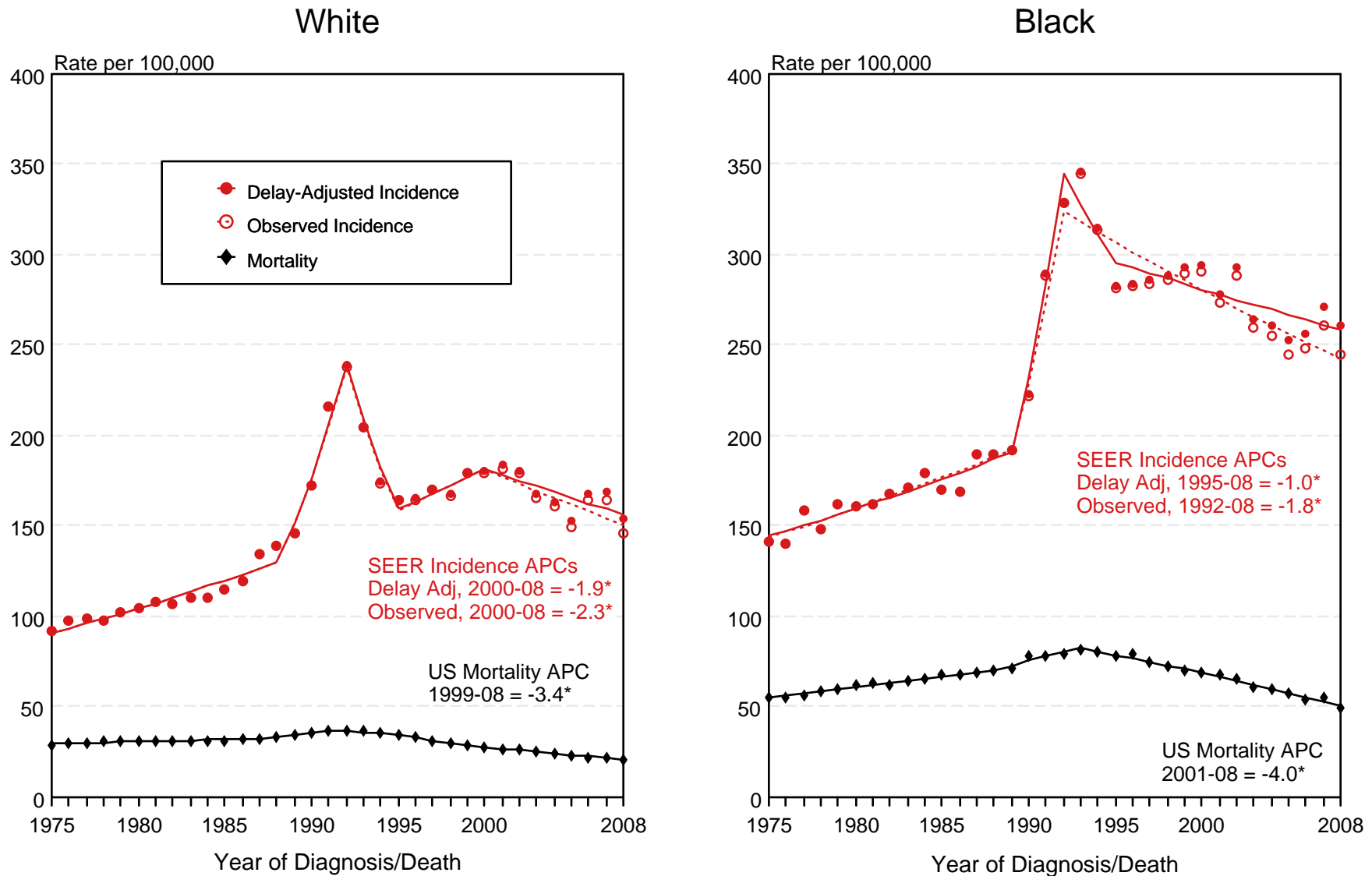


Figure 23.1

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



# SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates<sup>a</sup> Cancer of the Prostate, by Age and Race

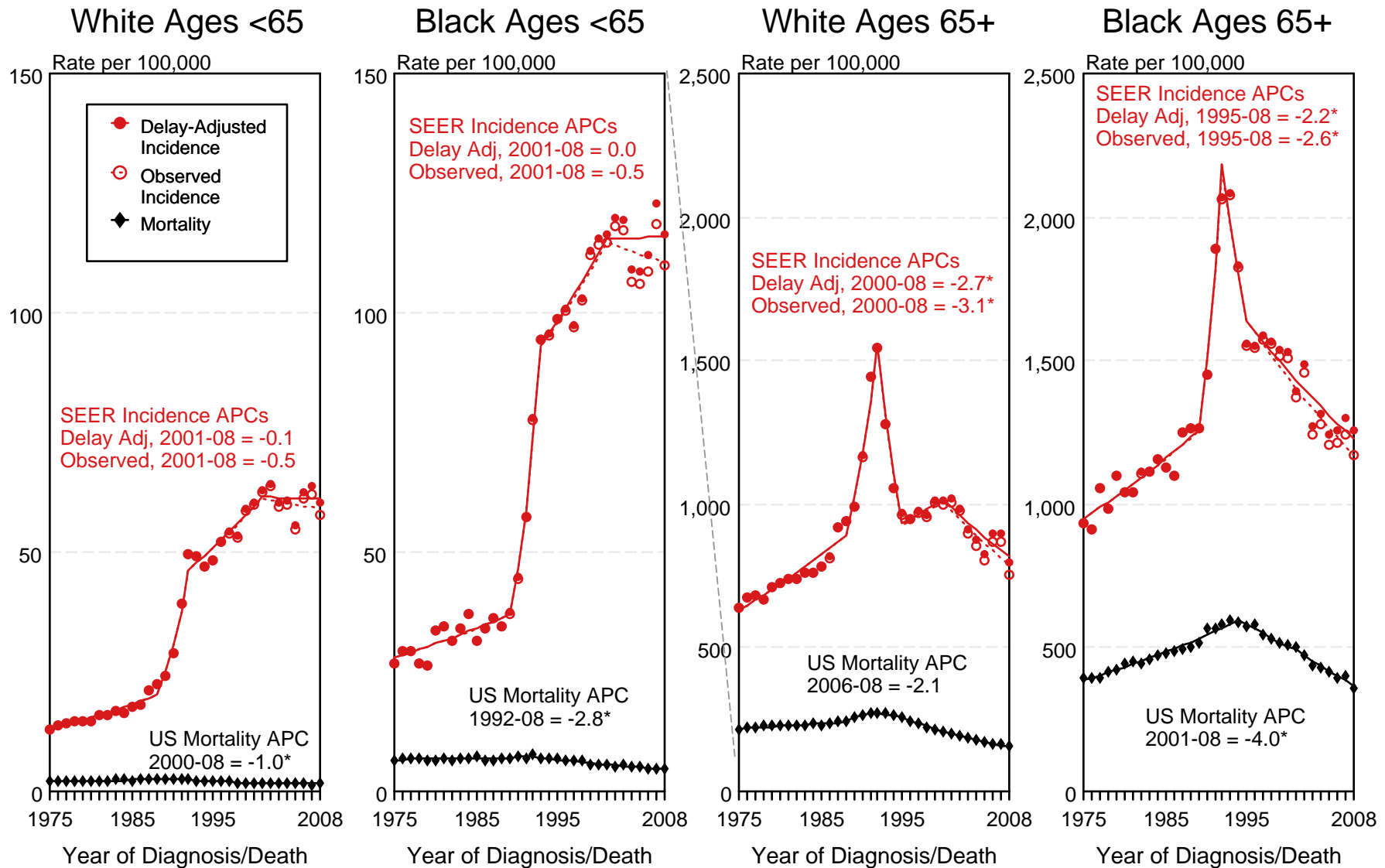


Figure 23.2

<sup>a</sup> Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

\* The APC is significantly different from zero ( $p < 0.05$ ).

# SEER Incidence and US Death Rates<sup>a</sup> Cancer of the Prostate

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

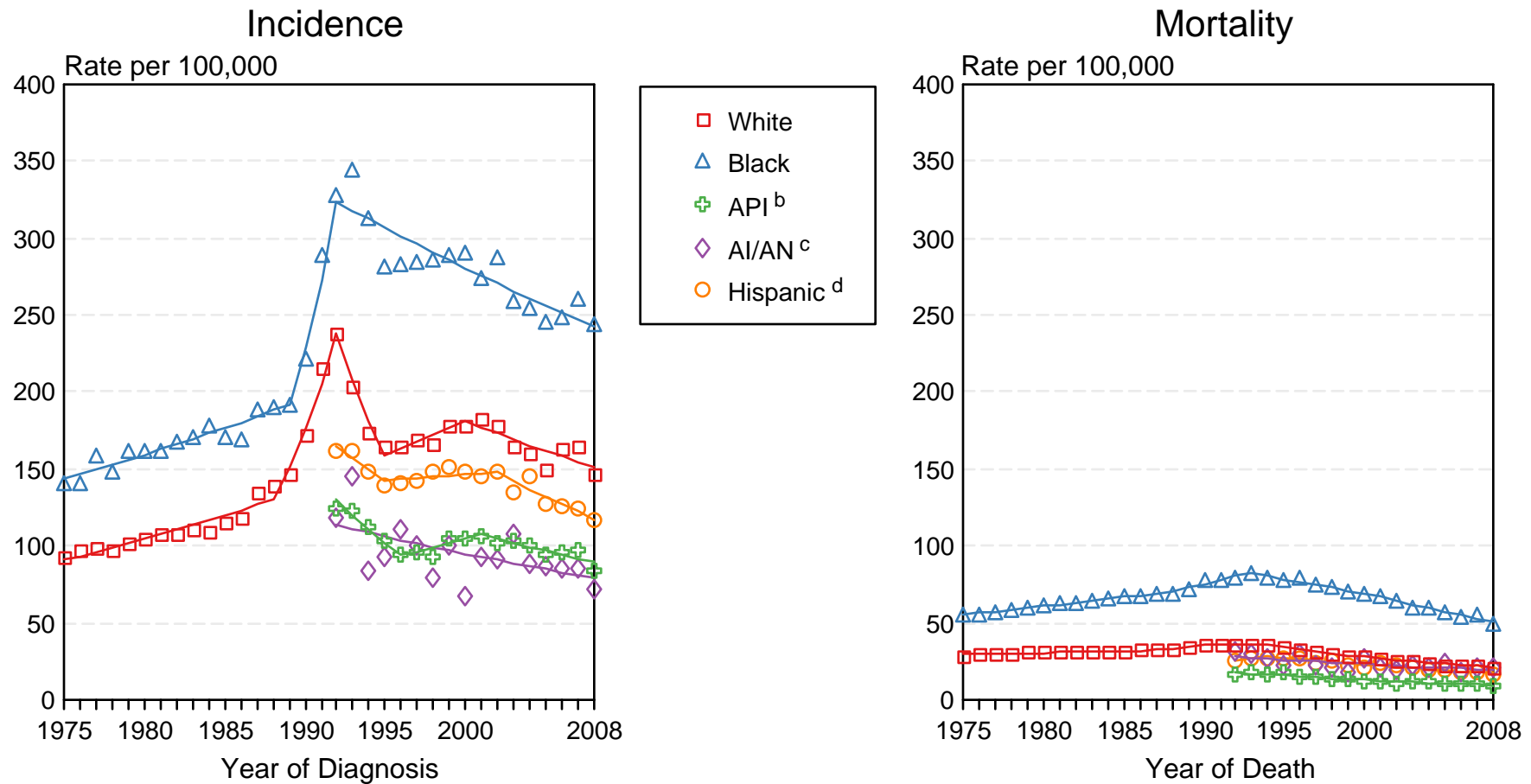


Figure 23.3

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). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

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

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

<sup>b</sup> API = Asian/Pacific Islander.

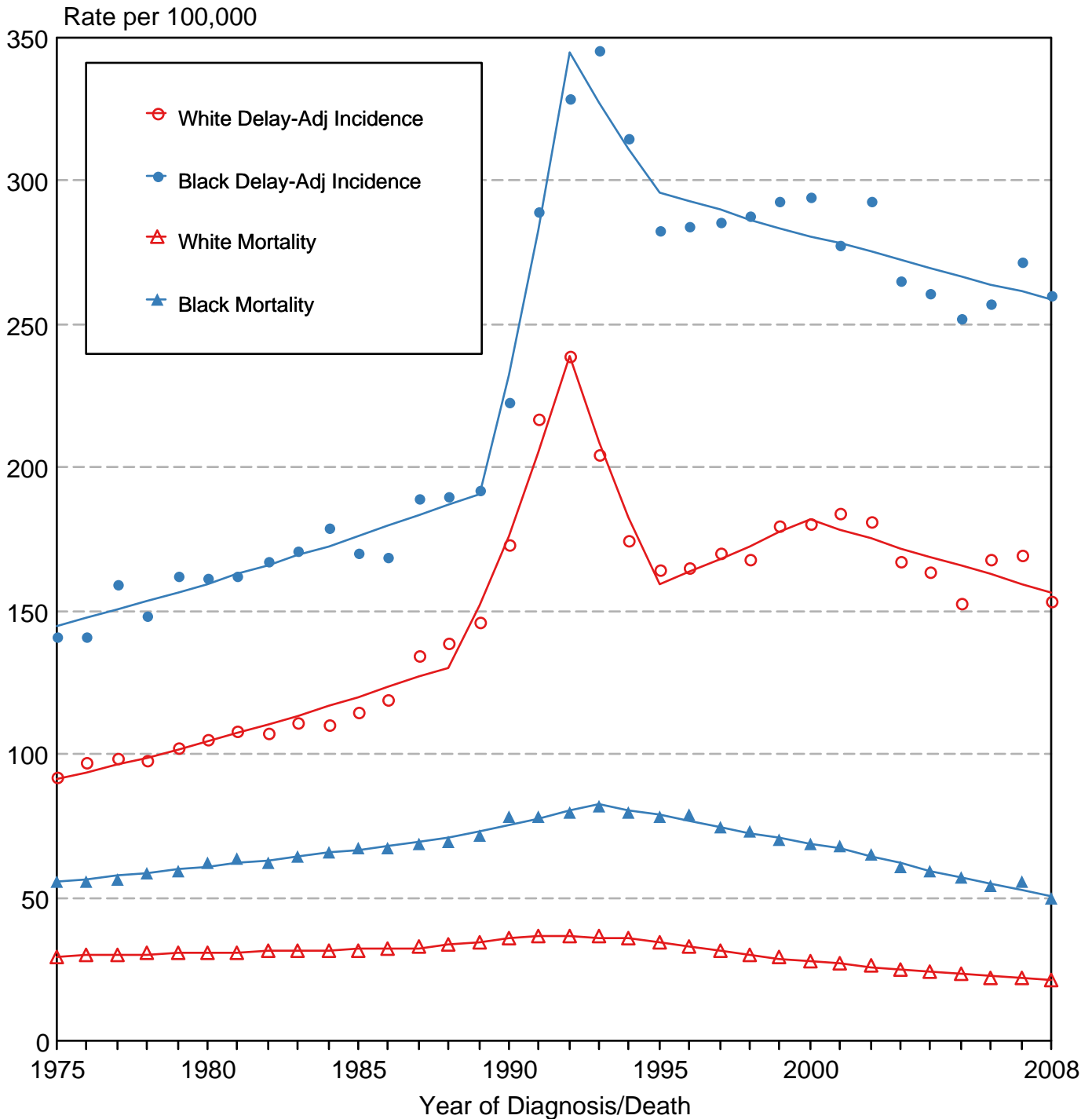
<sup>c</sup> AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>d</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from Connecticut, the District of Columbia, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.

Figure 23.4

# Cancer of the Prostate

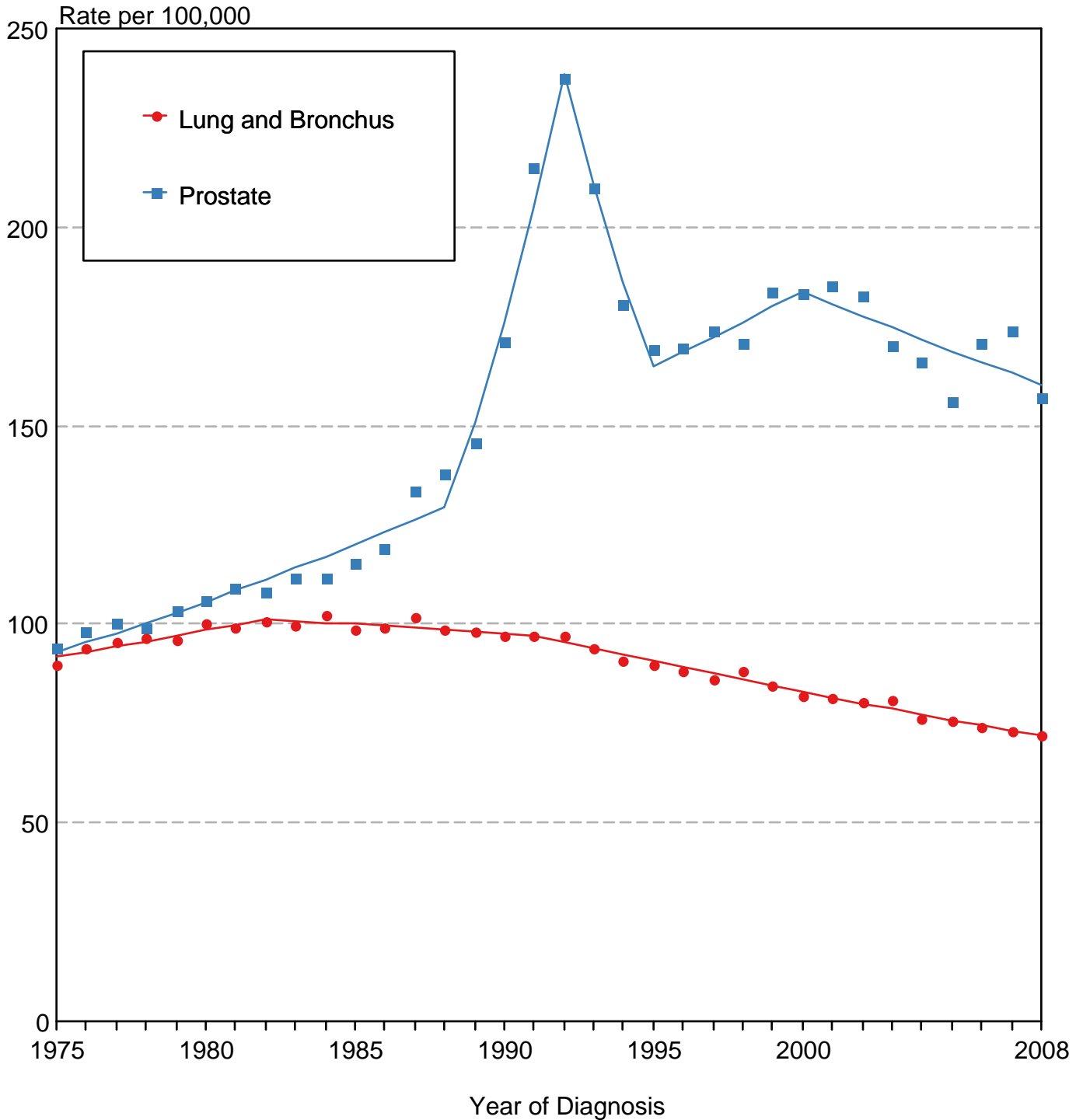
## Delay-Adjusted SEER Incidence & US Mortality 1975-2008



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 are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.

Figure 23.5

# Delay-Adjusted Incidence Rates for Cancer of the Prostate and Cancer of the Lung and Bronchus All Races, Males 1975-2008



Source: SEER 9 areas. 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.

# SEER Observed Incidence and SEER Delay Adjusted Incidence Rates<sup>a</sup> SEER 9 Areas Compared to SEER 13 Areas Cancer of the Prostate, by Race

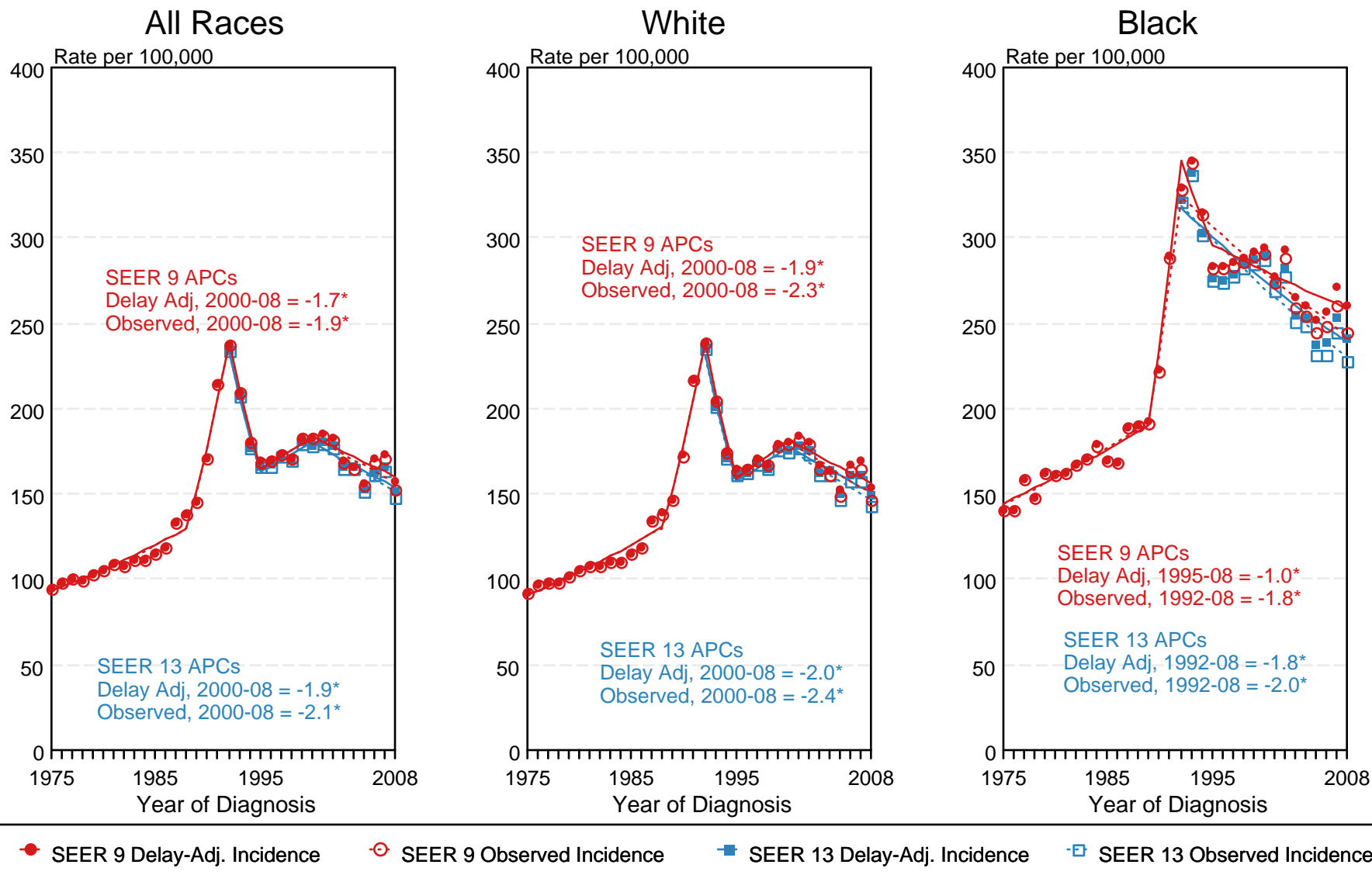


Figure 23.6

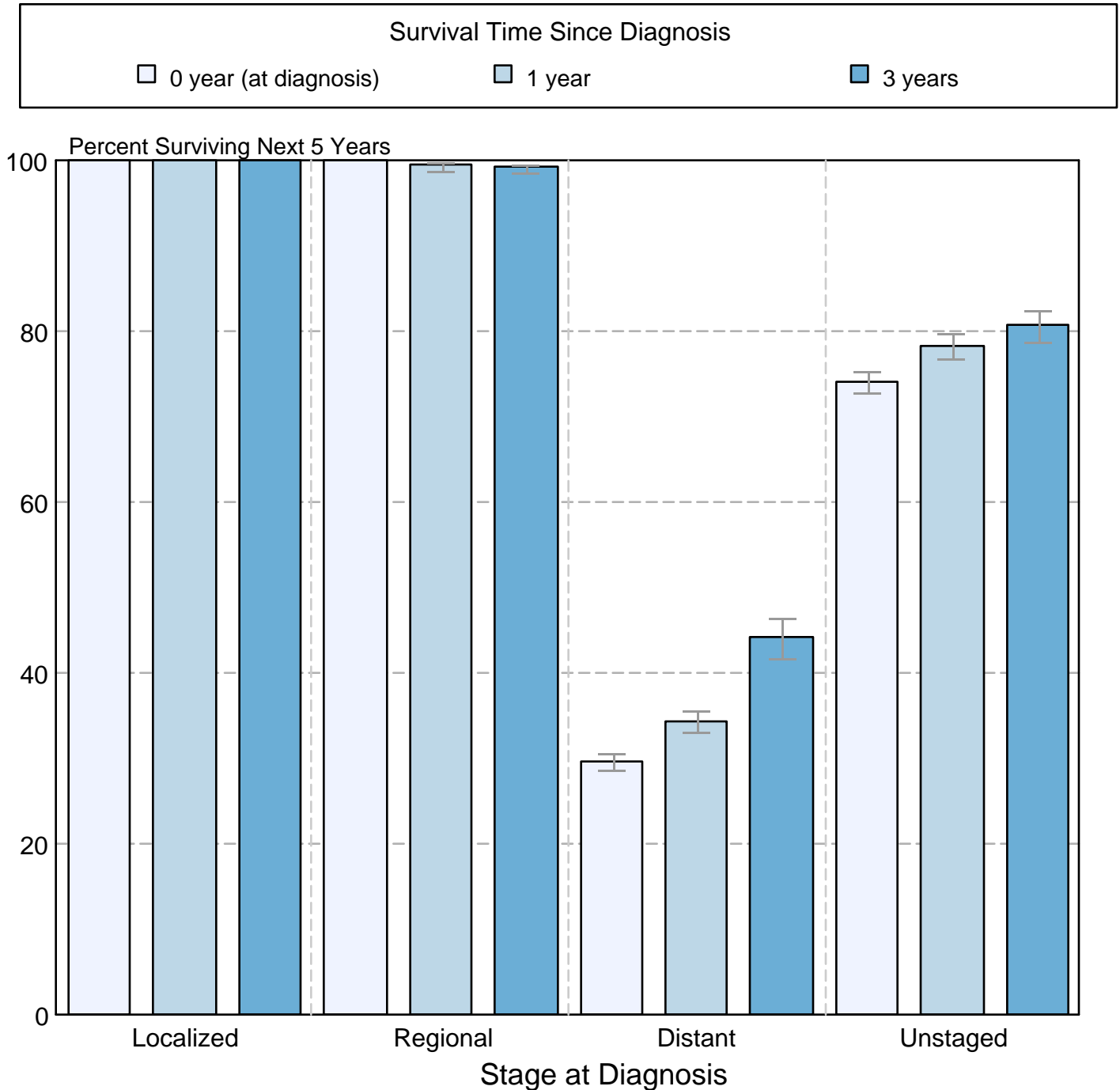
<sup>a</sup> Source: SEER 9 areas and SEER 13 areas.  
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).  
Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.5, April 2011, National Cancer Institute.  
The APC is the Annual 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 23.7

## Cancer of the Prostate

### 5-Year SEER Conditional Relative Survival and 95% Confidence Intervals

Probability of surviving the next 5 years given the cohort  
has already survived 0, 1, or 3 years  
1998-2007 by stage at diagnosis



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

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

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