Table 23.1
Cancer of the Prostate (Invasive)

Trends in SEER Incidence[a,b] and U.S. Mortality[c] Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 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	2007-16	2012-16
SEER 9 Delay-Adjusted Incidence[a], 1975-2016														
All Races	1975-88	2.6*	1988-92	16.1*	1992-95	-9.5	1995-08	-0.2	2008-14	-7.9*	2014-16	3.8	-4.6*	-2.2
White	1975-88	2.8*	1988-92	16.3*	1992-95	-12.5	1995-00	2.5	2000-08	-1.7	2008-16	-5.9*	-5.5*	-5.9*
Black	1975-89	2.0*	1989-92	22.0*	1992-95	-4.7	1995-09	-1.1*	2009-14	-7.8*	2014-16	3.7	-3.9*	-2.2
SEER 21 Delay-Adjusted Incidence[b], 2000-2016														
All Races	2000-10	-1.7*	2010-14	-8.8*	2014-16	3.9							-3.8	-2.7
White	2000-09	-1.5*	2009-14	-7.9*	2014-16	3.0							-4.2	-2.6
White NH[e,f]	2000-10	-1.8*	2010-14	-9.1*	2014-16	4.9							-3.7	-2.4
Black	2000-11	-1.8*	2011-14	-9.1*	2014-16	3.4							-3.2*	-3.1
Black NH[e,f]	2000-11	-1.8*	2011-14	-9.1*	2014-16	3.8							-3.1	-2.9
API[e]	2000-11	-2.9*	2011-14	-11.2	2014-16	4.8							-4.1	-3.5
AI/AN[e,g]	2000-16	-3.0*											-3.0*	-3.0*
Hispanic[f]	2000-09	-1.8*	2009-16	-6.6*									-5.5*	-6.6*
U.S. Cancer Mortality[c], 1975-2016														
All Races	1975-87	0.9*	1987-91	3.0*	1991-94	-0.5	1994-98	-4.2*	1998-13	-3.5*	2013-16	0.0	-2.4*	-0.9
White	1975-87	0.8*	1987-91	3.1*	1991-94	-0.7	1994-99	-4.3*	1999-13	-3.4*	2013-16	0.3	-2.2*	-0.6
Black	1975-88	1.9*	1988-93	3.3*	1993-01	-2.6*	2001-10	-3.9*	2010-14	-5.6*	2014-16	1.2	-3.5*	-2.2
U.S. Cancer Mortality[c], 2000-2016														
All Races	2000-13	-3.5*	2013-16	0.0									-2.4*	-0.9
White	2000-13	-3.4*	2013-16	0.3									-2.2*	-0.6
White NH[e,f]	2000-13	-3.4*	2013-16	0.4									-2.1*	-0.6
Black	2000-16	-4.0*											-4.0*	-4.0*
Black NH[e,f]	2000-16	-3.9*											-3.9*	-3.9*
API[e]	2000-16	-2.5*											-2.5*	-2.5*
AI/AN[e,g]	2000-16	-1.4*											-1.4*	-1.4*
Hispanic[f]	2000-16	-2.8*											-2.8*	-2.8*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (https://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 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
[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.
[g] Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) 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[a][b] and U.S. Mortality[c] Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 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	2007-16	2012-16
SEER 9 Delay-Adjusted Incidence[a], 1975-2016														
All Races	1975-88	3.1*	1988-92	23.4*	1992-01	3.3*	2001-09	0.2	2009-14	-8.2*	2014-16	2.4	-4.1*	-3.1
White	1975-88	3.5*	1988-92	22.9*	1992-01	3.2*	2001-10	-0.3	2010-13	-11.9*	2013-16	-1.0	-4.5*	-3.8
Black	1975-89	2.0*	1989-93	26.1*	1993-00	3.0*	2000-10	-0.3	2010-14	-7.6*	2014-16	4.1	-2.7	-1.9
SEER 21 Delay-Adjusted Incidence[b], 2000-2016														
All Races	2000-09	0.0	2009-16	-5.7*									-4.4*	-5.7*
White	2000-09	-0.1	2009-16	-6.4*									-5.0*	-6.4*
White NH[e][f]	2000-09	0.0	2009-16	-6.2*									-4.8*	-6.2*
Black	2000-11	-0.3	2011-14	-8.3	2014-16	2.8							-2.4	-2.9
Black NH[e][f]	2000-11	-0.2	2011-14	-8.2	2014-16	3.3							-2.2	-2.6
API[e]	2000-09	0.6	2009-16	-5.2*									-4.0*	-5.2*
AI/AN[e][g]	2000-16	-3.1*											-3.1*	-3.1*
Hispanic[f]	2000-09	-0.1	2009-16	-5.4*									-4.2*	-5.4*
U.S. Cancer Mortality[c], 1975-2016														
All Races	1975-87	0.5*	1987-90	3.1	1990-96	-3.2*	1996-00	-5.8*	2000-13	-1.4*	2013-16	1.1	-0.6	0.4
White	1975-87	0.7*	1987-90	3.6	1990-02	-4.4*	2002-16	-0.8*					-0.8*	-0.8*
Black	1975-92	0.5*	1992-13	-2.9*	2013-16	2.0							-1.3*	0.7
U.S. Cancer Mortality[c], 2000-2016														
All Races	2000-16	-1.1*											-1.1*	-1.1*
White	2000-16	-1.0*											-1.0*	-1.0*
White NH[e][f]	2000-16	-1.0*											-1.0*	-1.0*
Black	2000-14	-2.5*	2014-16	3.5									-1.2	0.5
Black NH[e][f]	2000-14	-2.4*	2014-16	3.6									-1.1	0.6
API[e]	2000-16	0.2											0.2	0.2
AI/AN[e][g]	2000-16	0.2											0.2	0.2
Hispanic[f]	2000-16	-0.6											-0.6	-0.6

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (https://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 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

[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.

[g] Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

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

Table 23.3
Cancer of the Prostate (Invasive)

Trends in SEER Incidence[a][b] and U.S. Mortality[c] Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 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	2007-16	2012-16
SEER 9 Delay-Adjusted Incidence[a], 1975-2016														
All Races	1975-88	2.5*	1988-92	14.9*	1992-95	-13.3*	1995-07	-0.8*	2007-14	-7.2*	2014-16	3.9	-4.9*	-1.8
White	1975-87	2.3*	1987-92	12.6*	1992-95	-13.5*	1995-07	-0.7	2007-14	-7.3*	2014-16	3.9	-4.9*	-1.9
Black	1975-89	2.0*	1989-92	20.3*	1992-95	-9.0*	1995-09	-2.1*	2009-14	-8.6*	2014-16	4.0	-4.5*	-2.5
SEER 21 Delay-Adjusted Incidence[b], 2000-2016														
All Races	2000-10	-2.5*	2010-14	-8.9*	2014-16	4.8							-3.9	-2.3
White	2000-10	-2.6*	2010-14	-9.1*	2014-16	4.9							-4.0	-2.3
White NH[e][f]	2000-10	-2.6*	2010-14	-8.9*	2014-16	5.8							-3.7	-1.8
Black	2000-11	-2.7*	2011-14	-9.8*	2014-16	3.8							-3.8*	-3.2
Black NH[e][f]	2000-11	-2.7*	2011-14	-9.8*	2014-16	4.2							-3.7*	-3.0
API[e]	2000-11	-3.7*	2011-14	-11.6	2014-16	5.6							-4.5	-3.4
AI/AN[e][g]	2000-16	-2.9*											-2.9*	-2.9*
Hispanic[f]	2000-09	-2.4*	2009-16	-7.1*									-6.1*	-7.1*
U.S. Cancer Mortality[c], 1975-2016														
All Races	1975-85	0.9*	1985-93	2.1*	1993-13	-3.7*	2013-16	-0.1					-2.5*	-1.0
White	1975-87	0.8*	1987-91	3.2*	1991-94	-0.5	1994-98	-4.3*	1998-13	-3.5*	2013-16	0.3	-2.3*	-0.7
Black	1975-88	2.1*	1988-93	3.5*	1993-01	-2.5*	2001-10	-4.0*	2010-14	-5.8*	2014-16	0.9	-3.7*	-2.5
U.S. Cancer Mortality[c], 2000-2016														
All Races	2000-13	-3.6*	2013-16	-0.2									-2.5*	-1.0
White	2000-13	-3.5*	2013-16	0.3									-2.3*	-0.7
White NH[e][f]	2000-13	-3.5*	2013-16	0.4									-2.2*	-0.6
Black	2000-16	-4.2*											-4.2*	-4.2*
Black NH[e][f]	2000-16	-4.1*											-4.1*	-4.1*
API[e]	2000-16	-2.7*											-2.7*	-2.7*
AI/AN[e][g]	2000-16	-1.6*											-1.6*	-1.6*
Hispanic[f]	2000-16	-2.9*											-2.9*	-2.9*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (https://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 21 areas (SEER 9 areas, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
[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.
[g] Data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) 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[a] 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+
1975-1979	99.14	14.71	682.70	97.69	14.16	675.05	150.71	27.73	1,000.84
1980	106.05	15.52	731.77	105.00	14.69	729.23	161.14	33.79	1,041.42
1981	108.88	16.84	745.11	107.87	15.96	743.20	162.01	34.72	1,041.86
1982	108.25	16.36	743.41	107.33	15.81	739.99	167.75	31.46	1,109.83
1983	111.63	17.17	764.62	110.84	16.62	762.09	171.07	34.02	1,118.41
1984	111.69	17.26	764.40	110.10	16.20	759.14	178.74	37.05	1,158.14
1985	115.52	17.95	790.00	114.66	17.70	784.82	170.41	31.59	1,129.99
1986	119.10	18.55	814.14	119.05	18.30	815.47	168.59	34.08	1,098.34
1987	133.78	21.53	909.65	134.61	21.12	919.13	189.42	36.06	1,249.49
1988	137.63	22.18	935.70	138.73	22.25	943.85	190.20	34.88	1,263.80
1989	145.41	24.21	983.22	146.21	24.11	990.23	191.83	37.41	1,259.25
1990	171.14	28.91	1,154.25	172.92	28.98	1,167.93	222.53	44.83	1,450.91
1991	214.88	38.94	1,431.05	216.57	39.41	1,441.16	289.85	57.64	1,894.97
1992	237.54	49.51	1,537.30	238.69	49.53	1,546.22	330.96	78.77	2,074.25
1993	209.63	50.47	1,309.80	204.75	48.94	1,281.78	347.54	95.45	2,090.03
1994	180.41	48.69	1,090.92	174.47	46.88	1,056.40	315.68	96.20	1,832.83
1995	169.55	50.19	994.54	164.77	48.18	970.67	286.02	100.86	1,565.91
1996	169.66	53.61	971.85	165.64	52.13	950.22	286.38	101.44	1,564.74
1997	173.80	55.36	992.50	170.45	53.99	975.44	288.35	98.88	1,598.03
1998	171.23	55.07	974.21	167.78	53.13	960.30	292.39	104.98	1,587.84
1999	183.70	60.89	1,032.63	179.60	58.85	1,014.26	296.56	114.34	1,556.16
2000	183.35	61.90	1,022.80	179.83	59.82	1,009.37	296.63	117.18	1,537.03
2001	185.37	64.72	1,019.33	183.30	62.73	1,016.72	279.97	116.46	1,410.21
2002	182.66	65.66	991.40	180.15	64.07	982.52	293.06	118.71	1,498.21
2003	170.16	62.12	916.92	166.84	59.83	906.51	265.71	117.66	1,289.03
2004	166.31	62.12	886.51	162.91	60.56	870.35	262.85	107.93	1,333.74
2005	157.05	58.09	841.07	152.46	55.55	822.37	256.76	107.94	1,285.43
2006	172.57	64.88	916.92	169.01	62.70	903.84	259.12	110.83	1,284.17
2007	175.66	66.93	927.25	171.15	64.04	911.59	271.20	121.20	1,308.06
2008	158.82	62.87	822.04	154.37	60.23	805.07	258.12	112.94	1,261.65
2009	156.14	62.74	801.77	152.30	60.46	787.12	249.79	112.18	1,201.02
2010	148.95	59.38	768.04	145.46	56.91	757.54	236.60	108.24	1,123.87
2011	142.89	57.81	730.96	138.88	55.29	716.64	226.93	107.08	1,055.34
2012	116.93	47.05	599.96	112.06	43.86	583.53	196.33	94.11	902.96
2013	111.86	44.90	574.67	107.93	42.33	561.37	190.74	89.03	893.77
2014	102.87	41.89	524.40	99.82	39.57	516.30	165.50	79.58	759.48
2015	108.79	42.94	564.00	105.36	39.77	558.74	174.82	87.43	778.85
2016	111.89	43.68	583.37	106.98	40.24	568.26	184.12	87.22	853.90

Reference: Cancer Incidence Rates Adjusted for Reporting Delay.
Individual rates for diagnosis years 1975-1979 available in web browser version of Cancer Statistics Review.
[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 23.5
Cancer of the Prostate (Invasive)

Age-adjusted SEER Incidence[a] 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+
1975-2016	145.42	43.88	847.32	142.28	41.60	838.25	228.88	83.39	1,234.54
1975-1979	99.14	14.71	682.70	97.69	14.16	675.05	150.71	27.73	1,000.84
1980	106.05	15.52	731.77	105.00	14.69	729.23	161.14	33.79	1,041.42
1981	108.88	16.84	745.11	107.87	15.96	743.20	162.01	34.72	1,041.86
1982	108.25	16.36	743.41	107.33	15.81	739.99	167.75	31.46	1,109.83
1983	111.63	17.17	764.62	110.84	16.62	762.09	171.07	34.02	1,118.41
1984	111.69	17.26	764.40	110.10	16.20	759.14	178.74	37.05	1,158.14
1985	115.52	17.95	790.00	114.66	17.70	784.82	170.41	31.59	1,129.99
1986	119.10	18.55	814.14	119.05	18.30	815.47	168.59	34.08	1,098.34
1987	133.78	21.53	909.65	134.61	21.12	919.13	189.42	36.06	1,249.49
1988	137.63	22.18	935.70	138.73	22.25	943.85	190.20	34.88	1,263.80
1989	145.41	24.21	983.22	146.21	24.11	990.23	191.83	37.41	1,259.25
1990	171.14	28.91	1,154.25	172.92	28.98	1,167.93	222.53	44.83	1,450.91
1991	214.88	38.94	1,431.05	216.57	39.41	1,441.16	289.85	57.64	1,894.97
1992	237.54	49.51	1,537.30	238.69	49.53	1,546.22	330.96	78.77	2,074.25
1993	209.63	50.47	1,309.80	204.75	48.94	1,281.78	347.54	95.45	2,090.03
1994	180.41	48.69	1,090.92	174.47	46.88	1,056.40	315.68	96.20	1,832.83
1995	169.55	50.19	994.54	164.77	48.18	970.67	286.02	100.86	1,565.91
1996	169.66	53.61	971.85	165.64	52.13	950.22	286.38	101.44	1,564.74
1997	173.80	55.36	992.50	170.45	53.99	975.44	288.35	98.88	1,598.03
1998	171.23	55.07	974.21	167.78	53.13	960.30	292.39	104.98	1,587.84
1999	183.70	60.89	1,032.63	179.60	58.85	1,014.26	296.56	114.34	1,556.16
2000	183.35	61.90	1,022.80	179.83	59.82	1,009.37	296.63	117.18	1,537.03
2001	185.37	64.72	1,019.33	183.30	62.73	1,016.72	279.97	116.46	1,410.21
2002	182.66	65.66	991.40	180.15	64.07	982.52	293.06	118.71	1,498.21
2003	170.16	62.12	916.92	166.84	59.83	906.51	265.71	117.66	1,289.03
2004	166.31	62.12	886.51	162.91	60.56	870.35	262.85	107.93	1,333.74
2005	157.05	58.09	841.07	152.46	55.55	822.37	256.76	107.94	1,285.43
2006	172.57	64.88	916.92	169.01	62.70	903.84	259.12	110.83	1,284.17
2007	175.66	66.93	927.25	171.15	64.04	911.59	271.20	121.20	1,308.06
2008	158.59	62.81	820.69	154.00	60.11	802.98	256.84	112.40	1,255.23
2009	155.70	62.61	799.13	151.57	60.22	783.04	247.35	111.14	1,188.85
2010	148.32	59.20	764.36	144.42	56.56	751.76	233.06	106.71	1,106.43
2011	142.10	57.58	726.34	137.56	54.84	709.35	222.50	105.08	1,034.15
2012	116.13	46.82	595.22	110.75	43.41	576.17	191.45	91.93	879.34
2013	110.92	44.64	569.13	106.40	41.81	552.87	184.97	86.51	865.53
2014	101.61	41.51	517.00	97.81	38.87	505.21	159.80	76.93	732.62
2015	106.86	42.36	552.71	102.42	38.78	542.30	167.43	83.87	744.98
2016	108.40	42.53	563.70	102.05	38.58	540.78	172.83	82.03	800.46

Individual rates for diagnosis years 1975-1979 available in web browser version of Cancer Statistics Review.

[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 23.6
Cancer of the Prostate (Invasive)

Age-adjusted U.S. Death[a] 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+
1975-2016	28.89	2.19	213.44	26.81	1.89	199.08	59.61	5.48	433.77
1975-1979	32.04	2.62	235.43	30.08	2.25	222.44	57.10	6.75	405.12
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	30.39	1.98	226.82	27.78	1.66	208.29	68.90	5.40	507.82
2001	29.52	1.94	220.14	26.97	1.63	202.08	67.82	5.33	499.72
2002	28.71	1.92	213.87	26.36	1.60	197.48	64.98	5.26	477.81
2003	27.19	1.90	201.97	25.02	1.59	186.95	60.37	5.30	441.02
2004	26.19	1.82	194.64	24.04	1.55	179.54	59.00	4.79	433.72
2005	25.40	1.80	188.57	23.33	1.51	174.20	57.02	4.83	417.76
2006	24.24	1.84	179.14	22.34	1.58	165.81	53.73	4.57	393.54
2007	24.23	1.75	179.68	22.23	1.49	165.58	54.88	4.51	403.03
2008	23.01	1.78	169.73	21.34	1.52	158.30	49.11	4.48	357.62
2009	22.12	1.70	163.30	20.34	1.43	151.06	49.35	4.45	359.70
2010	21.81	1.78	160.29	20.10	1.51	148.61	48.08	4.40	350.00
2011	20.78	1.66	152.99	19.25	1.39	142.74	43.97	4.25	318.55
2012	19.56	1.66	143.32	18.13	1.44	133.51	41.63	3.86	302.70
2013	19.26	1.67	140.90	18.00	1.44	132.48	39.12	3.94	282.28
2014	19.10	1.66	139.69	17.90	1.42	131.83	37.98	3.95	273.26
2015	18.93	1.64	138.44	17.72	1.41	130.48	37.51	3.83	270.31
2016	19.39	1.72	141.54	18.18	1.45	133.84	38.39	4.20	274.68

[a]
    Individual rates for years of death 1975-1979 available in web browser version of Cancer Statistics Review.
    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[a] and U.S. Death[b] Rates, Age-Adjusted and Age-Specific Rates, by Race

	SEER Incidence[a]			U.S. Mortality[b]		
	All Races Males	White Males	Black Males	All Races Males	White Males	Black Males
Age-Adjusted Rates, 2012-2016						
Age at Diagnosis/Death:						
All ages	109.5	101.9	176.7	19.2	18.0	38.9
Under 65	44.3	39.9	82.7	1.7	1.4	4.0
65 and over	560.4	530.7	826.0	140.7	132.4	280.1
All ages (WHO world std)[c]	83.5	77.3	138.0	8.5	7.8	18.0
Age-Specific Rates, 2012-2016						
Age at Diagnosis/Death:						
<1	-	-	-	-	-	-
1-4	-	-	-	-	-	-
5-9	-	-	-	-	-	-
10-14	-	-	-	-	-	-
15-19	-	-	-	-	-	-
20-24	-	-	-	-	-	-
25-29	-	-	-	-	-	-
30-34	0.1	-	-	-	-	-
35-39	0.6	0.5	1.6	0.0	-	-
40-44	7.8	6.5	19.0	0.2	0.1	0.4
45-49	34.0	28.0	83.0	0.8	0.7	1.7
50-54	116.0	102.5	229.0	3.2	2.7	7.3
55-59	248.6	224.0	459.2	8.6	7.3	20.5
60-64	417.6	384.7	720.8	19.8	17.1	47.6
65-69	627.8	584.6	1,017.3	38.1	33.8	91.4
70-74	652.0	618.5	961.8	70.0	63.4	160.6
75-79	567.4	537.4	798.3	124.4	114.7	267.2
80-84	425.3	408.5	547.1	217.2	205.1	433.5
85+	367.0	360.5	494.5	452.9	438.9	787.6

[a]   SEER 21 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.
Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.
[c]   Rates are per 100,000 and are age-adjusted to the world (WHO 2000-2025) standard million.
-    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[a]	–	–	–	50	–	–	35	–	–
1970–1973[a]	–	–	–	63	–	–	55	–	–
1975–1977[b]	67.8	73.4	66.1	68.5	75.2	66.6	60.7	62.0	60.1
1978–1980[b]	70.1	75.2	68.6	71.2	76.7	69.6	62.1	65.0	60.6
1981–1983[b]	72.0	76.0	70.9	73.1	77.6	71.9	62.8	65.0	61.9
1984–1986[b]	75.2	77.4	74.6	76.4	79.1	75.7	65.6	67.2	64.9
1987–1989[b]	82.8	83.2	82.7	84.4	84.7	84.3	71.1	72.8	70.6
1990–1992[b]	92.9	93.0	92.9	94.1	94.0	94.1	84.5	86.8	83.6
1993–1995[b]	95.2	95.9	94.9	96.0	96.6	95.7	91.8	93.4	90.9
1996–1998[b]	97.4	98.5	96.7	97.9	99.0	97.4	95.0	96.7	93.7
1999–2001[b]	99.3	99.1	99.3	99.7	99.5	99.6	97.4	98.0	96.4
2002–2004[b]	99.7	99.5	99.7	99.8	99.6	99.7	97.9	99.2	96.3
2005–2008[b]	99.5	99.5	99.5	99.8	99.9	99.6	98.2	98.4	97.9
2009–2015[b]	98.6[f]	99.2[f]	98.1[f]	99.0[f]	99.6[f]	98.6[f]	96.5[f]	97.9[f]	94.5[f]
5-Year Period Survival (Percent)[cd]									
2015	97.5	98.1	97.0	97.5	98.2	96.9	95.1	96.9	92.7
Stage Distribution (%) 2009–2015[ce]									
All Stages									
Number of cases	337,761	150,486	187,275	254,409	109,319	145,090	53,318	29,733	23,585
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	77	78	77	77	78	77	79	79	79
Regional	13	16	10	14	17	11	11	14	7
Distant	6	4	7	6	4	7	7	5	8
Unstaged/Unknown	4	3	6	3	2	5	3	2	5
5-Year Relative Survival (Percent), 2009–2015[c]									
Age at Diagnosis:									
Ages <45	95.7	–	–	94.4	–	–	97.4	–	–
Ages 45–54	97.5	–	–	97.3	–	–	97.8	–	–
Ages 55–64	98.7	–	–	98.9	–	–	97.1	–	–
Ages 65–74	100.0	–	–	100.0	–	–	96.8	–	–
Ages 75+	91.6	–	–	91.3	–	–	83.6	–	–
Ages <65	98.4	–	–	98.5	–	–	97.3	–	–
Ages 65+	97.7	–	–	97.8	–	–	93.5	–	–
Stage[e]:									
All Stages	98.0	98.4	97.7	98.1	98.5	97.8	95.7	97.3	93.5
Localized	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Regional	100.0	99.6	100.0	100.0	99.5	100.0	100.0	100.0	99.1
Distant	30.5	34.0	29.0	29.9	33.4	28.5	29.5	33.4	26.5
Unstaged/Unknown	81.6	91.1	78.2	74.5	88.0	70.4	70.2	84.8	62.5

[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 2016. Expected survival rates are derived from the U.S. Annual Life Tables.
[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). Expected survival rates are derived from life tables by socio-economic status, geography and race developed by the SEER program.
Based on follow-up of patients into 2016.
[d] Period survival provides a 2015 estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2010-2012: 0-1 year survival), (2009-2011: 1-2 year survival), (2008-2010: 2-3 year survival), (2007-2009: 3-4 year survival), (2006-2008: 4-5 years survival).
[e] Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.
[f] The difference between 1975-1977 and 2009-2015 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 23.9
Cancer of the Prostate (Invasive)

SEER[a] Relative Survival (Percent)
By Year of Diagnosis

All Races, Males

Year of Diagnosis

Survival Time	1975–1979	1980–1984	1985–1989	1990–1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1-year	91.4	93.5	95.6	98.8	98.7	99.1	99.3	99.5	99.6	99.7	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.7	99.6	99.7	99.3	99.4	98.7	99.1
2-year	84.5	87.4	91.0	97.3	97.6	98.0	98.8	98.9	99.6	99.5	99.8	99.8	99.6	99.7	99.6	99.7	99.8	99.6	99.4	99.5	99.4	98.7	98.8	98.0	
3-year	78.3	81.5	86.9	96.0	96.9	97.4	98.4	98.5	99.5	99.1	99.8	99.7	99.4	99.7	99.5	99.7	99.8	99.3	99.3	99.5	99.3	98.3	98.3		
4-year	73.2	76.4	83.5	94.9	96.3	96.8	97.9	98.2	99.2	98.9	99.8	99.7	99.4	99.7	99.4	99.6	99.8	99.2	99.3	99.5	99.2	98.1			
5-year	68.7	72.0	80.5	93.8	95.7	96.4	97.4	98.1	99.2	98.8	99.8	99.7	99.1	99.7	99.2	99.6	99.8	99.2	99.3	99.5	99.2				
6-year	65.3	68.5	77.9	92.7	95.4	96.0	97.2	97.9	99.2	98.5	99.8	99.7	99.1	99.7	99.2	99.6	99.8	99.2	99.3	99.5					
7-year	61.8	65.0	75.4	91.6	94.9	95.4	97.1	97.6	99.0	98.4	99.8	99.7	99.1	99.7	99.2	99.6	99.8	99.2	99.3						
8-year	58.5	61.9	73.3	90.6	94.6	94.9	97.0	97.6	98.7	98.2	99.8	99.7	99.0	99.7	99.2	99.6	99.8	99.2							
9-year	55.8	59.7	71.4	89.5	94.2	94.4	96.6	97.0	98.5	98.2	99.8	99.7	98.5	99.6	99.2	99.6	99.8								
10-year	53.2	57.7	69.6	88.5	93.5	94.3	96.5	96.6	98.1	98.1	99.8	99.7	98.4	99.4	99.2	99.6									
11-year	50.6	55.5	67.9	87.5	92.8	94.0	96.3	96.2	97.9	97.3	99.8	99.7	98.2	99.2	99.2										
12-year	48.4	53.5	66.1	86.6	91.9	93.5	96.0	95.5	97.4	97.2	99.8	99.7	97.8	98.8											
13-year	46.5	51.7	64.4	85.9	90.9	93.0	95.2	95.3	97.1	96.7	99.8	99.7	97.8												
14-year	44.8	50.1	63.0	85.1	90.0	92.7	94.7	94.9	96.6	96.1	99.8	99.7													
15-year	43.6	48.7	61.5	84.2	89.3	92.1	94.6	94.9	95.9	95.5	99.7														
16-year	41.9	46.9	60.0	83.3	88.8	91.1	94.0	94.3	95.7	95.5															
17-year	40.1	45.8	59.4	82.4	87.9	90.7	93.6	94.0	95.6																
18-year	38.8	44.4	58.3	81.8	87.7	90.3	92.8	94.0																	
19-year	38.0	43.0	57.8	80.8	87.3	89.6	92.5																		
20-year	37.0	41.7	56.9	80.4	85.7	88.7																			
21-year	35.4	40.8	56.1	79.6	84.9																				
22-year	34.0	39.5	54.8	78.6																					
23-year	33.2	38.3	53.6																						
24-year	32.4	37.4	52.4																						
25-year	31.0	35.8	51.3																						
26-year	30.4	34.7	50.3																						
27-year	29.8	34.4	49.5																						
28-year	29.1	33.9																							
29-year	28.5	33.2																							
30-year	27.0	32.3																							

[a] Based on the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). Expected survival rates are derived from the U.S. Annual Life Tables.

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, 2014-2016 By Race/Ethnicity

Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer +10 yrs	+20 yrs	+30 yrs	Ever	Risk of Dying from Cancer	Race/ Ethnicity	Current Age	Risk of Being Diagnosed with Cancer +10 yrs	+20 yrs	+30 yrs	Ever	Risk of Dying from Cancer
All Races	0	0.00	0.00	0.00	11.60	2.44	Asian/	0	0.00	0.00	0.00	7.37	2.18
	10	0.00	0.00	0.01	11.72	2.47	Pacific	10	0.00	0.00	0.00	7.42	2.20
	20	0.00	0.01	0.23	11.77	2.48	Islander	20	0.00	0.00	0.06	7.44	2.20
	30	0.01	0.23	1.90	11.92	2.52		30	0.00	0.06	0.70	7.48	2.22
	40	0.23	1.93	6.11	12.11	2.57		40	0.06	0.71	2.95	7.53	2.23
	50	1.75	6.07	10.19	12.26	2.65		50	0.66	2.93	5.65	7.58	2.26
	60	4.71	9.21	11.05	11.47	2.79		60	2.37	5.21	6.72	7.22	2.32
	70	5.46	7.70	–	8.21	2.95		70	3.16	4.83	–	5.40	2.39
	80	3.30	–	–	4.05	3.03		80	2.11	–	–	2.82	2.46
White	0	0.00	0.00	0.00	10.82	2.29	American	0	0.00	0.00	0.00	5.86	2.20
	10	0.00	0.00	0.01	10.92	2.32	Indian/	10	0.00	0.00	0.00	5.93	2.24
	20	0.00	0.01	0.19	10.96	2.33	Alaska	20	0.00	0.00	0.06	5.96	2.25
	30	0.01	0.19	1.68	11.09	2.36	Native[a]	30	0.00	0.06	0.68	6.09	2.31
	40	0.19	1.71	5.58	11.28	2.40		40	0.06	0.71	2.54	6.30	2.40
	50	1.56	5.56	9.47	11.44	2.48		50	0.68	2.60	4.55	6.56	2.55
	60	4.35	8.60	10.36	10.75	2.62		60	2.12	4.26	6.02	6.46	2.80
	70	5.13	7.26	–	7.72	2.77		70	2.55	4.64	–	5.17	3.10
	80	3.14	–	–	3.82	2.86		80	2.99	–	–	3.74	3.29
Black	0	0.00	0.00	0.00	15.78	3.94	Hispanic[b]	0	0.00	0.00	0.00	10.82	2.76
	10	0.00	0.00	0.02	16.09	4.03		10	0.00	0.00	0.00	10.92	2.79
	20	0.00	0.02	0.52	16.19	4.06		20	0.00	0.00	0.14	10.96	2.80
	30	0.02	0.53	3.54	16.48	4.14		30	0.00	0.14	1.36	11.07	2.83
	40	0.53	3.61	9.94	16.88	4.25		40	0.14	1.37	4.95	11.21	2.87
	50	3.24	9.88	14.91	17.16	4.44		50	1.27	4.93	8.81	11.35	2.93
	60	7.61	13.36	15.32	15.94	4.80		60	3.92	8.08	10.06	10.79	3.05
	70	7.78	10.42	–	11.26	5.27		70	4.86	7.18	–	8.03	3.18
	80	4.36	–	–	5.74	5.59		80	3.18	–	–	4.35	3.19

Devcan 6.7.7, April 2019, National Cancer Institute (https://surveillance.cancer.gov/devcan/).
Source: Incidence data are from the SEER 21 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, Georgia excluding ATL/RG, Idaho, New York and Massachusetts). 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 PRCDA(Purchased/Referred Care Delivery Areas) counties.
[b] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
- Statistic could not be calculated.
A percent of 0.00 represents a value that is below 0.005.

Table 23.11
Cancer of the Prostate (Invasive)

SEER Incidence and U.S. Mortality
Age-Adjusted Rates and Trends[a]
By Race/Ethnicity

SEER Incidence	SEER 21 Areas[b] Rate 2012-2016 Rate per 100,000 persons	SEER 21 Areas[b] Trend 2007-2016[c] AAPC (%)	SEER 9 Areas[b] Trend 2007-2016[d] AAPC (%)
	Males	Males	Males
Race/Ethnicity			
All Races	109.5	-5.2*	-4.9*
White	101.9	-5.7*	-5.8*
White Hispanic[e]	86.8	-7.0*	–
White Non-Hispanic[e]	104.5	-5.5*	–
Black	176.7	-4.0*	-4.5*
Asian/Pacific Islander	55.6	-6.3*	–
Amer Ind/Alaska Nat[f]	55.4	-6.4*	–
Hispanic[e]	93.4	-6.0*	–

U.S. Mortality[g]	Rate 2012-2016 Rate per 100,000 persons	Trend 2007-2016[h] AAPC (%)
	Males	Males
Race/Ethnicity		
All Races	19.2	-2.4*
White	18.0	-2.2*
White Hispanic[e]	16.5	-2.7*
White Non-Hispanic[e]	18.1	-2.1*
Black	38.9	-4.0*
Asian/Pacific Islander	8.6	-2.5*
Amer Ind/Alaska Nat		
Total U.S.	14.2	-2.7*
PRCDA Counties	19.2	-1.4*
Non-PRCDA Counties	8.6	-4.7*
Hispanic[e]	15.8	-2.8*

    The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 4.7, February 2019, 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 21 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts.

[c]   The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 3 Joinpoints over diagnosis years 2000-2016.

[d]   The 2007-2016 AAPC estimates are based on a Joinpoint analysis with up to 5 Joinpoints over diagnosis years 1975-2016.

[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.

[f]   Incidence data for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

[h]   The 2007-2016 mortality AAPCs are based on a Joinpoint analysis using years of death 2000-2016.

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

Table 23.12
Cancer of the Prostate (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+
SEER Incidence Rates[a], 2012-2016									
California	93.83	35.07	500.01	90.55	33.46	485.18	142.51	69.14	649.66
Greater Bay Area	95.15	36.66	499.49	97.46	37.74	510.29	149.49	72.90	678.90
San Francisco-Oakland	96.19	37.50	501.91	97.29	37.80	508.52	151.38	74.77	680.91
San Jose-Monterey	93.21	35.12	494.75	97.74	37.64	513.18	139.72	64.04	662.90
Los Angeles	91.75	34.07	490.41	85.70	30.73	465.63	142.27	67.73	657.52
Greater California	94.28	34.95	504.33	90.40	33.29	485.15	139.18	68.65	626.72
Connecticut	108.37	45.14	545.43	101.50	40.92	520.24	160.41	74.74	752.61
Detroit	130.14	57.74	630.59	116.44	48.15	588.46	182.58	95.06	787.50
Georgia	122.32	51.35	612.90	101.84	38.58	539.05	190.32	86.11	910.66
Atlanta	136.55	56.73	688.26	113.20	42.02	605.27	195.47	87.36	942.74
Rural Georgia	132.80	64.08	607.82	109.24	50.06	518.37	185.90	86.99	869.57
Greater Georgia	115.97	48.25	584.08	98.00	36.98	519.79	186.98	85.10	891.23
Hawaii	84.90	27.65	480.59	84.59	29.49	465.42	176.86	109.29	643.88
Idaho	105.71	37.45	577.57	102.07	36.00	558.78	129.38	63.44	–
Iowa	104.66	41.81	539.15	103.05	40.87	532.87	164.09	80.89	739.19
Kentucky	104.87	43.69	527.80	93.83	37.11	485.95	149.03	68.55	705.36
Louisiana	131.71	56.92	648.70	115.40	47.45	585.11	182.97	82.60	876.78
Massachusetts	99.31	44.94	475.13	92.91	41.45	448.63	158.11	78.97	705.16
New Jersey	129.59	53.34	656.66	119.37	47.84	613.76	185.69	84.14	887.64
New Mexico	80.10	30.33	424.10	78.76	30.18	414.57	106.65	54.93	464.14
New York	125.00	52.85	623.73	114.67	46.64	584.91	196.76	91.71	922.90
Seattle-Puget Sound	109.16	39.77	588.82	108.40	39.29	586.11	156.38	69.62	756.11
Utah	113.08	42.09	603.79	113.26	42.42	602.94	172.38	70.85	874.20
SEER 9 Areas[b]	108.68	43.55	558.85	103.79	40.28	542.79	174.87	84.15	802.01
SEER 13 Areas[b]	104.07	40.95	540.39	99.85	38.16	526.27	166.75	80.31	764.31
SEER 18 Areas[b]	106.83	42.38	552.30	99.83	38.30	525.16	170.76	80.08	797.58
SEER 21 Areas[b]	109.50	44.27	560.37	101.89	39.86	530.68	176.67	82.73	826.03

[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 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 SEER 21 areas comprise the SEER 18 areas plus Idaho, New York and Massachusetts.
–   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[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+
SEER Death Rates[a], 2012-2016									
California	19.76	1.56	145.56	20.41	1.51	151.01	41.61	4.58	297.56
Greater Bay Area	17.10	1.25	126.68	18.61	1.19	138.96	40.64	4.88	287.80
San Francisco-Oakland	17.17	1.34	126.58	17.90	1.19	133.40	42.40	4.99	301.06
San Jose-Monterey	16.98	1.08	126.82	19.83	1.21	148.58	28.91	–	199.46
Los Angeles	19.29	1.59	141.68	19.28	1.39	142.93	43.54	5.01	309.87
Greater California	20.92	1.66	154.02	21.33	1.65	157.40	40.42	4.08	291.58
Connecticut	17.45	1.31	129.06	16.83	1.16	125.13	31.24	3.36	223.99
Detroit	19.84	1.76	144.82	16.23	1.23	119.91	36.75	3.89	263.93
Georgia	22.22	2.04	161.67	17.59	1.48	128.99	43.42	3.71	317.93
Atlanta	24.83	2.12	181.85	18.57	1.43	137.06	44.98	3.63	330.82
Rural Georgia	28.73	–	210.99	22.60	–	165.20	49.09	–	367.83
Greater Georgia	21.03	2.00	152.55	17.14	1.49	125.34	42.29	3.80	308.35
Hawaii	13.72	1.21	100.19	18.86	1.32	140.06	–	–	–
Idaho	23.39	1.51	174.61	23.61	1.52	176.27	–	–	–
Iowa	19.66	1.52	145.02	19.68	1.53	145.18	24.49	–	183.27
Kentucky	19.88	1.42	147.43	19.23	1.36	142.75	34.82	2.51	258.14
Louisiana	21.00	2.12	151.52	16.96	1.44	124.22	36.38	3.92	260.75
Massachusetts	18.58	1.38	137.49	18.38	1.39	135.84	32.51	2.15	242.36
New Jersey	18.01	1.37	133.02	16.35	1.15	121.42	41.35	3.50	302.97
New Mexico	19.89	1.59	146.44	19.74	1.61	145.05	35.02	–	262.46
New York	18.09	1.51	132.73	16.86	1.30	124.39	33.58	3.09	244.34
Seattle-Puget Sound	19.74	1.55	145.46	19.95	1.49	147.58	33.63	3.73	240.28
Utah	20.56	1.34	153.40	20.86	1.38	155.48	–	–	–
SEER 9 Areas[b]	19.11	1.54	140.56	18.61	1.36	137.79	38.64	3.75	279.75
SEER 13 Areas[b]	19.05	1.53	140.16	18.81	1.37	139.36	39.84	4.02	287.44
SEER 18 Areas[b]	19.66	1.60	144.50	18.99	1.42	140.44	39.78	3.86	288.10
SEER 21 Areas[b]	19.36	1.57	142.34	18.64	1.40	137.83	37.92	3.62	275.05
Total U.S.	19.25	1.67	140.73	17.98	1.43	132.41	38.86	3.96	280.08

[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 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 SEER 21 areas comprise the SEER 18 areas plus Idaho, New York and Massachusetts.
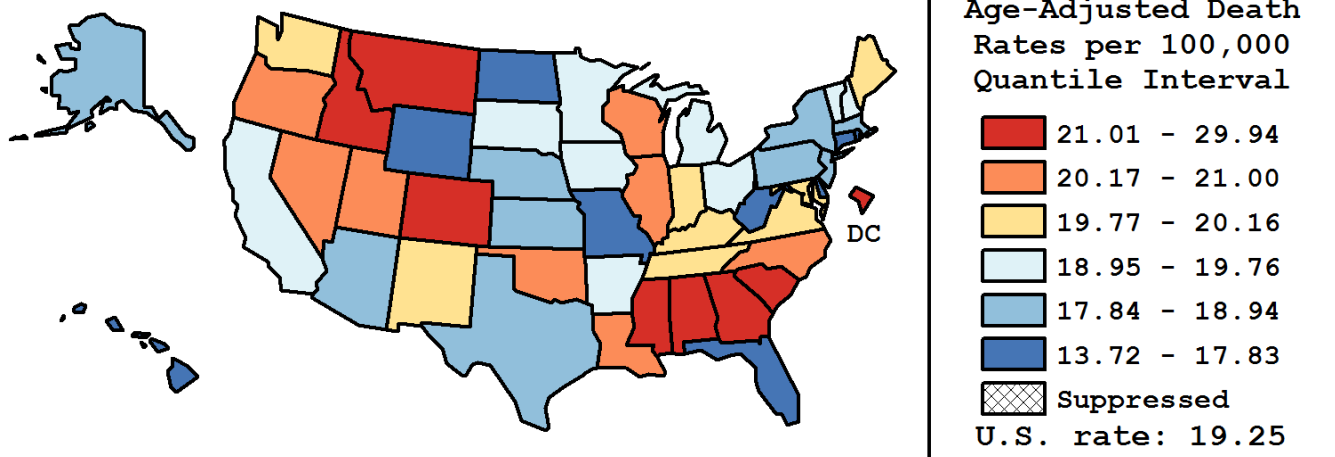–   Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 23.14
Cancer of the Prostate (Invasive)

Age-Adjusted Cancer Death[a] Rates By State, All Races, 2012-2016

Males

State	Rate	SE	Rank(CI)[d]	PD
TOTAL U.S.	19.25	0.05		
High Five States				
D.C.	29.94	1.61	01(01,02)	55.57[c]
Mississippi	24.80	0.64	02(01,03)	28.88[c]
Idaho	23.39	0.80	03(02,10)	21.54[c]
Georgia	22.22	0.36	04(03,10)	15.45[c]
South Carolina	22.20	0.46	05(03,12)	15.38[c]
Low Five States				
Connecticut	17.45	0.44	47(34,50)	-9.30
West Virginia	17.35	0.59	48(30,50)	-9.84
Florida	16.79	0.16	49(44,50)	-12.76[c]
Wyoming	16.57	1.13	50(20,51)	-13.89[c]
Hawaii	13.72	0.60	51(50,51)	-28.71[c]

State	Rate	SE	Rank(CI)[d]	PD	State	Rate	SE	Rank(CI)[d]	PD
Alabama	21.74	0.46	06(03,16)	12.95[c]	Montana	21.20	0.88	08(03,36)	10.15[c]
Alaska	18.19	1.41	38(04,50)	-5.49	Nebraska	18.94	0.65	34(10,48)	-1.58
Arizona	17.89	0.32	42(33,49)	-7.07	Nevada	20.22	0.59	16(05,38)	5.04
Arkansas	19.37	0.53	29(10,44)	0.67	New Hampshire	19.20	0.77	31(08,49)	-0.25
California	19.76	0.16	25(16,31)	2.69	New Jersey	18.01	0.30	40(33,48)	-6.41
Colorado	21.55	0.46	07(03,19)	11.99[c]	New Mexico	19.89	0.64	21(06,41)	3.37
Connecticut	17.45	0.44	47(34,50)	-9.30	New York	18.09	0.20	39(34,47)	-5.99
Delaware	17.48	0.87	46(19,50)	-9.19	North Carolina	20.31	0.31	14(08,30)	5.56
D.C.	29.94	1.61	01(01,02)	55.57[c]	North Dakota	17.83	0.98	43(10,50)	-7.36
Florida	16.79	0.16	49(44,50)	-12.76[c]	Ohio	19.02	0.26	32(23,39)	-1.15
Georgia	22.22	0.36	04(03,10)	15.45[c]	Oklahoma	20.48	0.49	13(05,32)	6.40
Hawaii	13.72	0.60	51(50,51)	-28.71[c]	Oregon	21.00	0.46	10(04,26)	9.12
Idaho	23.39	0.80	03(02,10)	21.54[c]	Pennsylvania	18.92	0.23	35(25,40)	-1.70
Illinois	20.22	0.27	15(09,29)	5.07	Rhode Island	17.63	0.81	45(18,50)	-8.37
Indiana	19.95	0.37	20(09,35)	3.67	South Carolina	22.20	0.46	05(03,12)	15.38[c]
Iowa	19.66	0.49	26(09,40)	2.15	South Dakota	19.63	0.96	28(04,48)	1.99
Kansas	18.42	0.52	37(19,49)	-4.28	Tennessee	19.84	0.38	24(10,36)	3.07
Kentucky	19.88	0.46	22(08,37)	3.28	Texas	17.89	0.20	41(36,48)	-7.03
Louisiana	21.00	0.47	09(04,28)	9.14	Utah	20.56	0.66	12(04,37)	6.83
Maine	20.13	0.74	19(05,41)	4.60	Vermont	19.36	1.10	30(04,50)	0.60
Maryland	20.16	0.40	17(08,33)	4.73	Virginia	19.87	0.34	23(10,34)	3.25
Massachusetts	18.58	0.34	36(25,46)	-3.43	Washington	20.13	0.36	18(08,32)	4.62
Michigan	19.00	0.28	33(22,40)	-1.28	West Virginia	17.35	0.59	48(30,50)	-9.84
Minnesota	19.63	0.39	27(11,38)	1.99	Wisconsin	20.74	0.39	11(06,27)	7.79
Mississippi	24.80	0.64	02(01,03)	28.88[c]	Wyoming	16.57	1.13	50(20,51)	-13.89[c]
Missouri	17.80	0.35	44(33,49)	-7.51					

Age-Adjusted Death Rates per 100,000 Quantile Interval

- 21.01 - 29.94
- 20.17 - 21.00
- 19.77 - 20.16
- 18.95 - 19.76
- 17.84 - 18.94
- 13.72 - 17.83
- Suppressed

U.S. rate: 19.25

[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 10% or more.
[d] Rank of state level death rate and the 95% confidence intervals (low, high) for the rank.
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[a] on January 1, 2016
By Race/Ethnicity and Years Since Diagnosis

Years Since Diagnosis	0 to <5	5 to <10	10 to <15	15 to <20	20 to <24	0 to <24[b]	>=24[d]	Complete[e]
Race								
All Races	925,846	945,574	660,380	387,565	150,033	3,069,398	41,006	3,110,403
White	724,023	764,898	550,849	327,374	129,883	2,497,026	44,331	2,628,705
Black	138,607	128,648	83,217	46,936	16,450	413,858	4,779	418,637
Asian/Pacific Islander	21,563	19,811	12,673	5,940	1,897	61,883	+	+
Hispanic	60,114	54,746	36,830	17,966	6,233	175,889	+	+

Estimated prevalence percent[a] on January 1, 2016, of the SEER population diagnosed in the previous 24 years
By Age at Prevalence and Race/Ethnicity

Age at Prevalence	All Ages	Age Specific (Crude)									Age-Adjusted[c] All Ages
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	
Race											
All Races	1.9347	0.0001	0.0002	0.0002	0.0010	0.0692	1.0107	5.0637	12.8866	17.5576	1.8440
White	1.9984	0.0002	0.0003	0.0003	0.0008	0.0538	0.8859	4.7049	12.3728	17.0503	1.7533
Black	1.9131	–	–	0.0002	0.0021	0.1784	1.9464	8.3071	18.4946	22.5283	2.7086
Asian/Pacific Islander	0.6344	–	–	–	–	0.0130	0.2989	1.9809	5.7864	9.5868	0.8474
Hispanic	0.6095	0.0002	0.0002	0.0001	0.0006	0.0334	0.5553	3.2066	9.3286	13.5466	1.3218

[a]   US 2016 cancer prevalence counts are based on 2016 cancer prevalence proportions from the SEER 13 Areas (excluding the Alaska Native Registry) and 1/1/2016 US population estimates based on the average of 2015 and 2016 population estimates from the US Bureau of the Census.
      Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 24 years.
[b]   Maximum limited-duration prevalence is 24 years for 1992-2016 data.
[c]   Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.
[d]   Cases diagnosed more than 24 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).
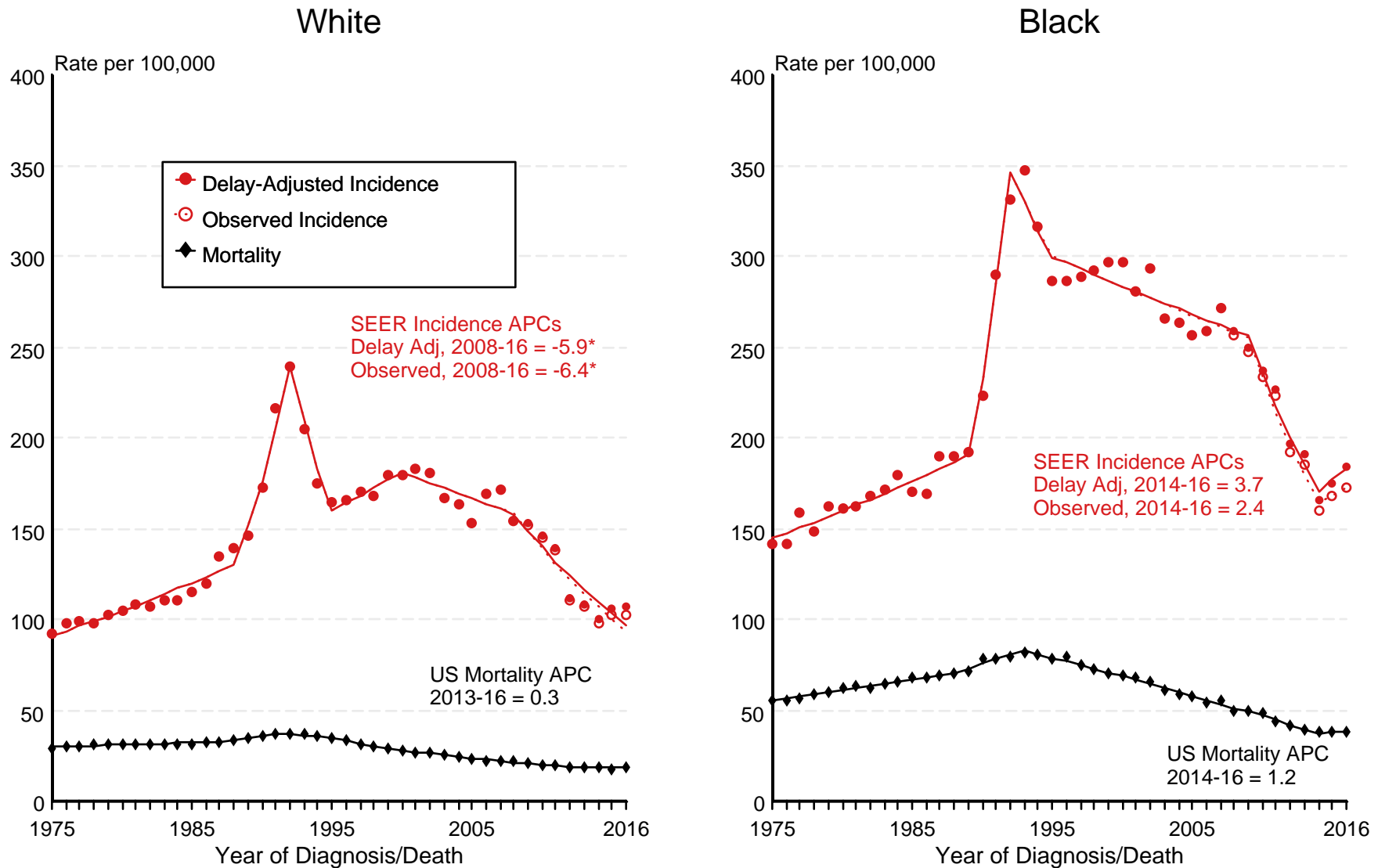[e]   Complete prevalence is obtained by summing 0 to <24 and >=24.
–   Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.
+   Not available.

Figure 23.1

SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates[a]
Cancer of the Prostate, by Race

White

Rate per 100,000

- ● Delay-Adjusted Incidence
- ⊙ Observed Incidence
- ◆ Mortality

SEER Incidence APCs
Delay Adj, 2008-16 = -5.9*
Observed, 2008-16 = -6.4*

US Mortality APC
2013-16 = 0.3

Year of Diagnosis/Death

Black

Rate per 100,000

SEER Incidence APCs
Delay Adj, 2014-16 = 3.7
Observed, 2014-16 = 2.4

US Mortality APC
2014-16 = 1.2

Year of Diagnosis/Death

Source: SEER 9 areas and 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 and APCs are calculated using the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute.
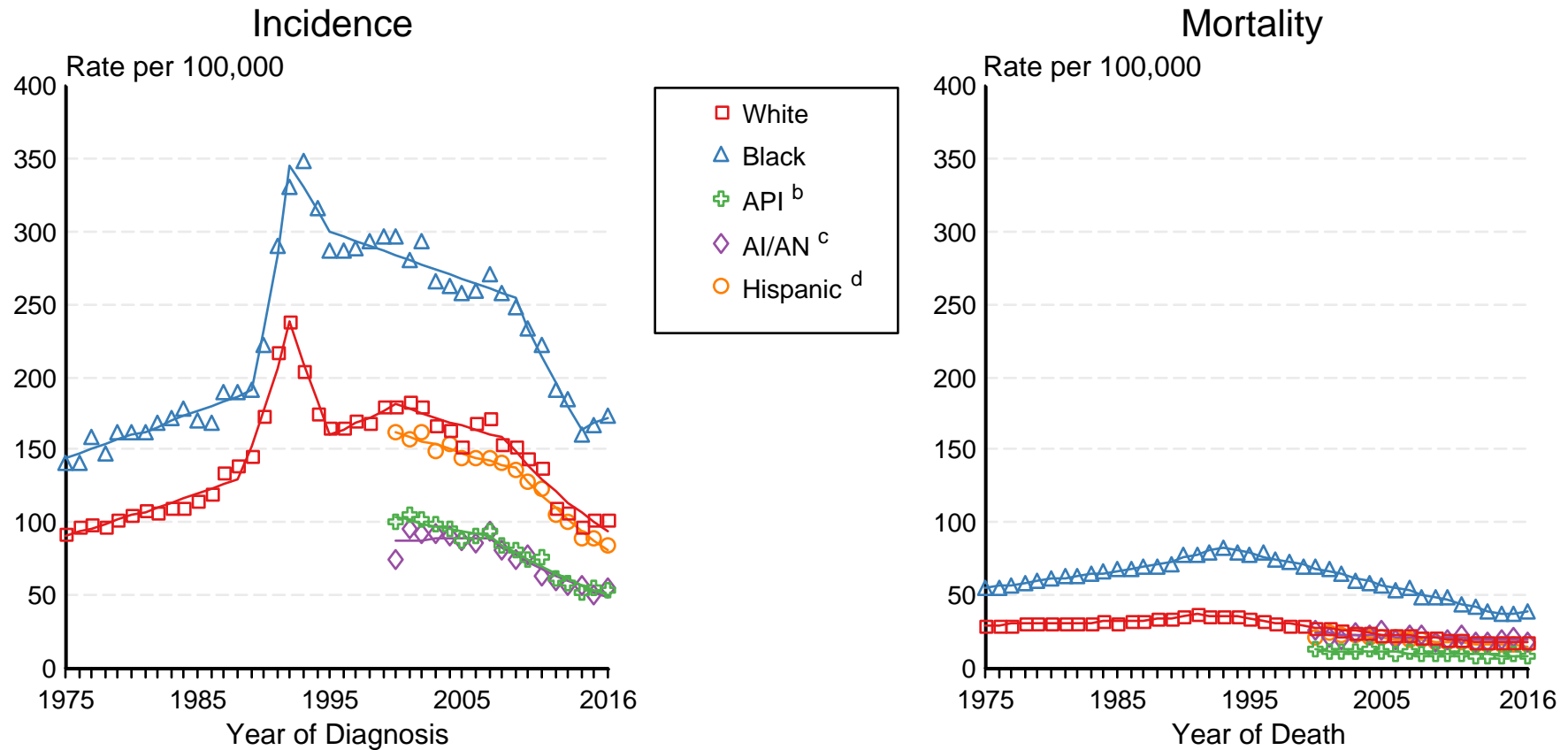   The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
*   The APC is significantly different from zero (p < 0.05).

Figure 23.2

SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates[a]
Cancer of the Prostate, by Age and Race

Source: SEER 9 areas and 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 and APCs are calculated using the Joinpoint Regression Program Version 4.7, February 2019, 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 Cancer Statistics Review 1975-2016

National Cancer Institute

Figure 23.3

SEER Incidence and US Death Rates[a]
Cancer of the Prostate
Joinpoint Analyses for Whites and Blacks from 1975-2016
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 2000-2016

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 21 areas (SEER 9 areas, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).
Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.
[a] Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines are calculated using the Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2016 period allow a maximum of 5 joinpoints. Analyses for other ethnic groups during the period 2000-2016 allow a maximum of 3 joinpoints.
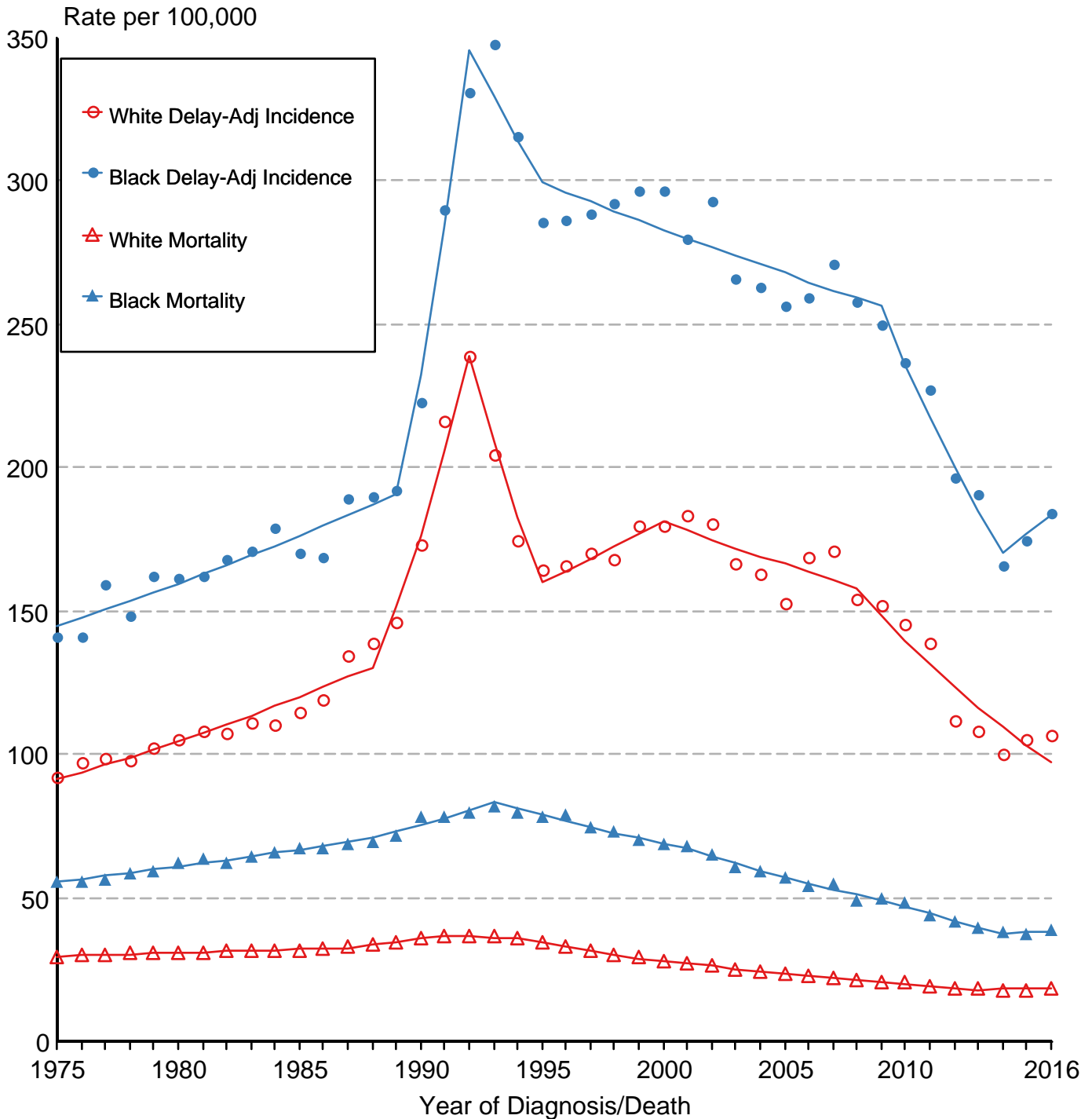[b] API = Asian/Pacific Islander.
[c] AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.
[d] Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

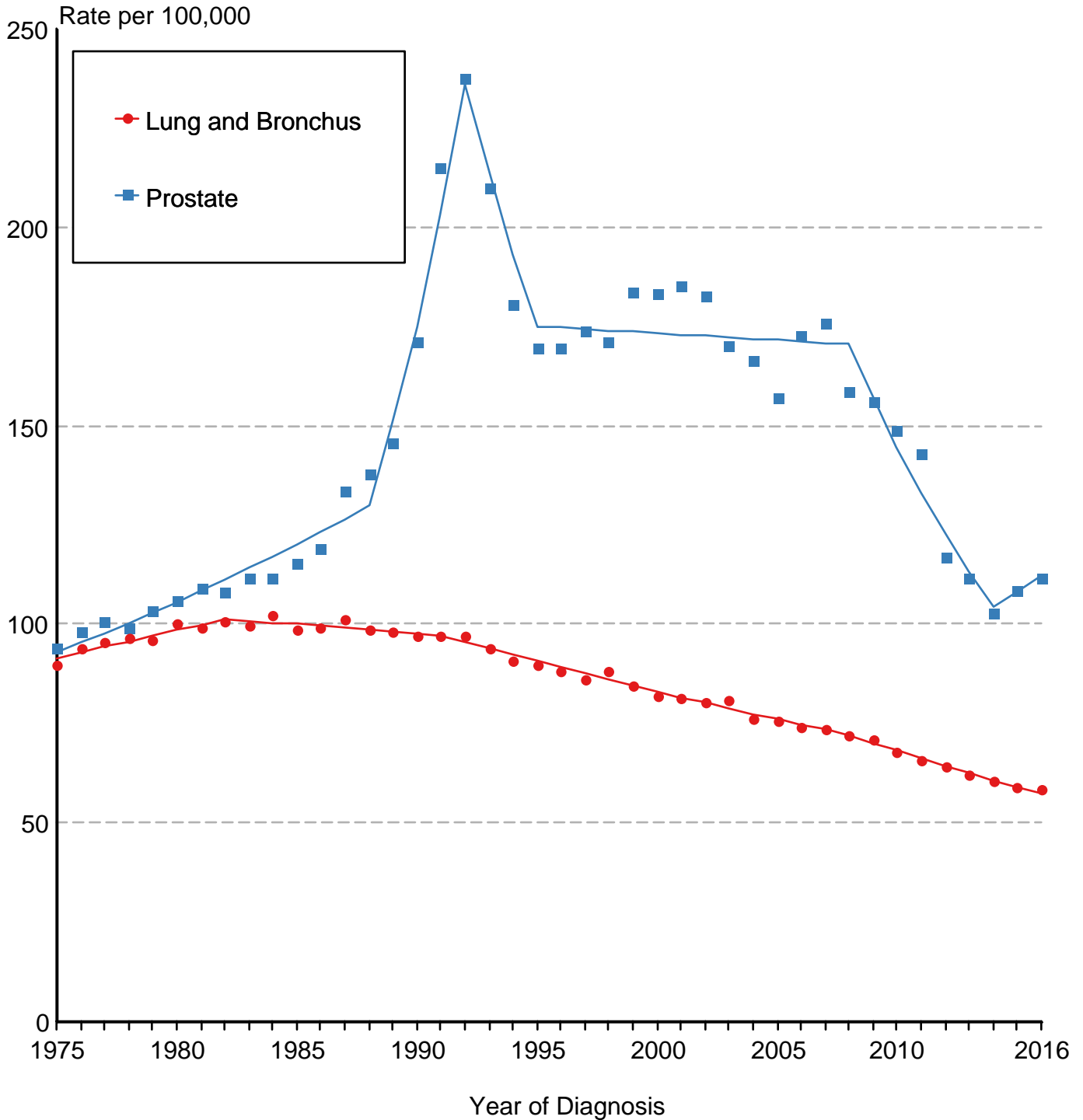Figure 23.4

Cancer of the Prostate
Delay-Adjusted SEER Incidence & US Mortality
1975-2016

Rate per 100,000

Legend:
- White Delay-Adj Incidence
- Black Delay-Adj Incidence
- White Mortality
- Black Mortality

Year of Diagnosis/Death

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 4.7, February 2019,
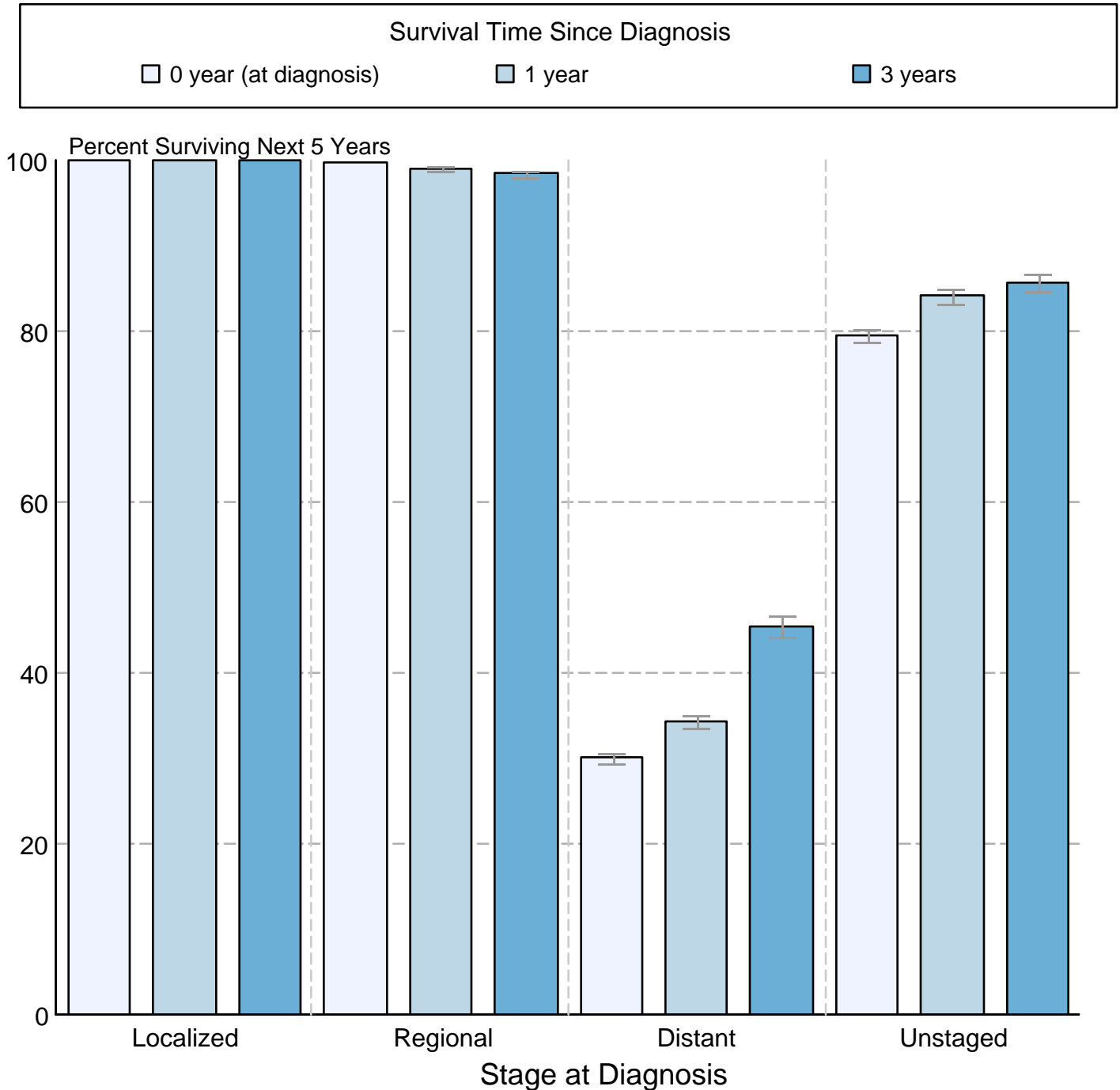National Cancer Institute.

Figure 23.5

Delay-Adjusted Incidence Rates for Cancer of the Prostate and Cancer of the Lung and Bronchus
All Races, Males
1975-2016

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 4.7, February 2019,
National Cancer Institute.

Figure 23.6

Cancer of the Prostate
5-Year SEER Conditional Relative Survival and
95% Confidence Intervals
Probabilty of surviving the next 5 years given the cohort
has already survived 0, 1, or 3 years
2000-2015 by stage at diagnosis

Survival Time Since Diagnosis
☐ 0 year (at diagnosis)   ☐ 1 year   ■ 3 years

Percent Surviving Next 5 Years

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).
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.

SEER Cancer Statistics Review 1975-2016   National Cancer Institute