

Table 11.1
Cancer of the Kidney and Renal Pelvis (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Both Sexes by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-94	2.3*	1994-97	-0.7	1997-07	3.3*	2007-16	0.5*					0.5*	0.5*
White	1975-92	2.3*	1992-97	0.3	1997-07	3.2*	2007-16	0.5					0.5	0.5
Black	1975-08	3.0*	2008-16	0.7									1.0	0.7
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-07	3.4*	2007-16	0.6*									0.6*	0.6*
White	2000-07	3.4*	2007-16	0.5*									0.5*	0.5*
White NH ^{ef}	2000-07	3.4*	2007-16	0.5*									0.5*	0.5*
Black	2000-08	4.2*	2008-16	0.9*									1.2*	0.9*
Black NH ^{ef}	2000-08	4.2*	2008-16	0.9*									1.3*	0.9*
API ^e	2000-07	4.7*	2007-16	0.6									0.6	0.6
AI/AN ^{eg}	2000-16	1.2											1.2	1.2
Hispanic ^f	2000-05	4.7*	2005-16	1.4*									1.4*	1.4*
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-91	1.2*	1991-02	-0.1	2002-16	-0.9*							-0.9*	-0.9*
White	1975-95	1.0*	1995-16	-0.6*									-0.6*	-0.6*
Black	1975-94	2.4*	1994-16	-0.9*									-0.9*	-0.9*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-16	-0.9*											-0.9*	-0.9*
White	2000-16	-0.8*											-0.8*	-0.8*
White NH ^{ef}	2000-16	-0.8*											-0.8*	-0.8*
Black	2000-16	-1.1*											-1.1*	-1.1*
Black NH ^{ef}	2000-16	-1.0*											-1.0*	-1.0*
API ^e	2000-16	-0.2											-0.2	-0.2
AI/AN ^{eg}	2000-16	-1.1											-1.1	-1.1
Hispanic ^f	2000-16	-0.5*											-0.5*	-0.5*

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 11.2
Cancer of the Kidney and Renal Pelvis (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Males by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-04	1.8*	2004-07	4.8	2007-16	0.5							0.5	0.5
White	1975-89	2.2*	1989-97	0.8	1997-08	2.7*	2008-16	0.5					0.8*	0.5
Black	1975-14	2.9*	2014-16	-8.1									0.3	-2.8
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-07	3.3*	2007-16	0.5*									0.5*	0.5*
White	2000-07	3.2*	2007-16	0.5*									0.5*	0.5*
White NH ^{ef}	2000-07	3.2*	2007-16	0.6*									0.6*	0.6*
Black	2000-08	4.0*	2008-16	0.8*									1.1*	0.8*
Black NH ^{ef}	2000-08	4.0*	2008-16	0.9*									1.2*	0.9*
API ^e	2000-16	2.2*											2.2*	2.2*
AI/AN ^{eg}	2000-16	1.3											1.3	1.3
Hispanic ^f	2000-08	4.1*	2008-11	-2.9	2011-16	3.0*							1.1	3.0*
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-94	1.0*	1994-16	-0.6*									-0.6*	-0.6*
White	1975-94	1.0*	1994-16	-0.6*									-0.6*	-0.6*
Black	1975-91	3.1*	1991-16	-0.7*									-0.7*	-0.7*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-16	-0.8*											-0.8*	-0.8*
White	2000-16	-0.7*											-0.7*	-0.7*
White NH ^{ef}	2000-16	-0.7*											-0.7*	-0.7*
Black	2000-16	-1.0*											-1.0*	-1.0*
Black NH ^{ef}	2000-16	-0.9*											-0.9*	-0.9*
API ^e	2000-16	0.2											0.2	0.2
AI/AN ^{eg}	2000-16	-1.0											-1.0	-1.0
Hispanic ^f	2000-16	-0.7*											-0.7*	-0.7*

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 11.3
Cancer of the Kidney and Renal Pelvis (Invasive)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2016 With up to Five Joinpoints, 2000-2016 With up to Three Joinpoints,
Females by Race/Ethnicity

	JP Trend 1		JP Trend 2		JP Trend 3		JP Trend 4		JP Trend 5		JP Trend 6		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2016</u>														
All Races	1975-93	2.7*	1993-99	0.7	1999-06	4.1*	2006-16	0.0					0.0	0.0
White	1975-92	2.8*	1992-99	0.7	1999-06	4.2*	2006-16	-0.1					-0.1	-0.1
Black	1975-08	3.0*	2008-16	0.4									0.7	0.4
<u>SEER 21 Delay-Adjusted Incidence^b, 2000-2016</u>														
All Races	2000-07	3.4*	2007-16	0.3									0.3	0.3
White	2000-06	3.9*	2006-16	0.5*									0.5*	0.5*
White NH ^{ef}	2000-06	3.9*	2006-16	0.3									0.3	0.3
Black	2000-08	4.1*	2008-16	0.8									1.1*	0.8
Black NH ^{ef}	2000-08	4.2*	2008-16	0.8									1.2*	0.8
API ^e	2000-16	1.7*											1.7*	1.7*
AI/AN ^{eg}	2000-16	0.9											0.9	0.9
Hispanic ^f	2000-16	2.1*											2.1*	2.1*
<u>U.S. Cancer Mortality^c, 1975-2016</u>														
All Races	1975-92	1.2*	1992-05	-0.5*	2005-16	-1.6*							-1.6*	-1.6*
White	1975-92	1.2*	1992-05	-0.4*	2005-16	-1.5*							-1.5*	-1.5*
Black	1975-95	2.4*	1995-16	-1.2*									-1.2*	-1.2*
<u>U.S. Cancer Mortality^c, 2000-2016</u>														
All Races	2000-16	-1.4*											-1.4*	-1.4*
White	2000-16	-1.3*											-1.3*	-1.3*
White NH ^{ef}	2000-16	-1.3*											-1.3*	-1.3*
Black	2000-16	-1.5*											-1.5*	-1.5*
Black NH ^{ef}	2000-16	-1.4*											-1.4*	-1.4*
API ^e	2000-16	-0.9											-0.9	-0.9
AI/AN ^{eg}	2000-16	-1.2											-1.2	-1.2
Hispanic ^f	2000-16	-0.5											-0.5	-0.5

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 11.4
Cancer of the Kidney and Renal Pelvis (Invasive)

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

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-1979	7.72	11.19	5.07	7.88	11.54	5.13	7.56	10.05	5.51
1980	8.06	11.69	5.38	8.36	12.21	5.55	5.97	7.95	4.36
1981	8.49	12.83	5.30	8.57	13.03	5.32	10.00	15.77	5.82
1982	8.35	11.83	5.71	8.53	12.05	5.86	7.59	11.20	4.90
1983	8.94	13.25	5.66	9.24	13.78	5.80	8.81	13.53	5.52
1984	9.19	13.12	6.20	9.47	13.61	6.33	9.01	12.01	6.89
1985	8.94	13.12	5.76	9.22	13.59	5.92	8.63	11.69	6.22
1986	9.65	13.82	6.55	9.83	14.09	6.66	9.95	14.74	6.49
1987	9.90	14.07	6.73	10.08	14.35	6.87	11.06	15.60	7.51
1988	9.94	14.00	6.97	10.11	14.30	7.06	11.67	15.52	8.79
1989	10.32	14.50	7.16	10.61	15.06	7.23	10.78	15.06	7.82
1990	10.44	14.72	7.14	10.69	14.98	7.42	10.58	15.94	6.73
1991	10.65	15.06	7.18	10.81	15.24	7.34	12.24	18.19	7.79
1992	10.81	15.35	7.41	11.10	15.64	7.74	10.98	16.39	7.18
1993	10.76	14.70	7.63	10.85	14.75	7.74	12.81	17.41	9.43
1994	11.30	15.67	7.86	11.56	16.02	8.05	12.68	17.94	8.66
1995	11.12	15.48	7.67	11.14	15.40	7.73	14.21	21.51	9.19
1996	11.35	15.83	7.91	11.47	16.21	7.80	13.89	17.38	11.30
1997	10.97	15.14	7.64	11.02	15.13	7.71	13.70	19.66	9.37
1998	11.81	16.41	8.19	12.09	16.72	8.44	12.70	17.43	9.03
1999	11.45	15.99	7.82	11.62	16.23	7.88	13.79	19.08	9.95
2000	12.53	17.53	8.53	12.78	18.14	8.41	14.86	19.24	12.00
2001	12.61	17.58	8.62	12.82	17.80	8.79	15.68	23.04	10.40
2002	12.93	17.88	8.91	13.16	18.11	9.09	15.60	22.70	10.64
2003	13.57	18.31	9.73	13.92	18.51	10.17	14.63	21.70	9.42
2004	13.65	18.53	9.69	13.99	18.93	9.90	16.15	22.70	11.29
2005	14.07	19.43	9.72	14.30	19.67	9.85	17.19	25.23	11.63
2006	14.71	19.39	10.81	15.02	19.78	10.97	16.35	21.66	12.36
2007	15.62	21.47	10.75	15.80	21.54	10.97	19.07	27.07	13.14
2008	16.01	21.88	11.14	16.02	21.67	11.23	20.73	30.58	13.84
2009	15.42	21.37	10.41	15.59	21.50	10.46	19.45	29.02	12.67
2010	15.06	20.97	10.07	15.16	20.93	10.20	19.73	28.63	12.91
2011	15.66	21.60	10.63	15.96	21.95	10.76	18.56	25.65	13.23
2012	15.76	21.45	10.94	15.97	21.47	11.21	19.41	27.15	13.45
2013	15.71	22.14	10.25	15.79	22.04	10.36	19.72	29.00	12.59
2014	15.68	21.73	10.51	15.78	21.54	10.75	20.66	31.97	12.19
2015	16.20	22.50	10.79	16.41	22.80	10.78	19.31	27.06	13.41
2016	15.93	21.90	10.74	16.27	22.30	10.91	20.15	26.92	14.68

Reference: [Cancer Incidence Rates Adjusted for Reporting Delay](#).

Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).

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.

^a

-

Table 11.5
 Cancer of the Kidney and Renal Pelvis (Invasive)
 Age-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	12.22	17.12	8.31	12.29	17.21	8.34	14.72	20.95	10.10
1975-1979	7.72	11.19	5.07	7.88	11.54	5.13	7.56	10.05	5.51
1980	8.06	11.69	5.38	8.36	12.21	5.55	5.97	7.95	4.36
1981	8.49	12.83	5.30	8.57	13.03	5.32	10.00	15.77	5.82
1982	8.35	11.83	5.71	8.53	12.05	5.86	7.59	11.20	4.90
1983	8.94	13.25	5.66	9.24	13.78	5.80	8.81	13.53	5.52
1984	9.19	13.12	6.20	9.47	13.61	6.33	9.01	12.01	6.89
1985	8.94	13.12	5.76	9.22	13.59	5.92	8.63	11.69	6.22
1986	9.65	13.82	6.55	9.83	14.09	6.66	9.95	14.74	6.49
1987	9.90	14.07	6.73	10.08	14.35	6.87	11.06	15.60	7.51
1988	9.94	14.00	6.97	10.11	14.30	7.06	11.67	15.52	8.79
1989	10.32	14.50	7.16	10.61	15.06	7.23	10.78	15.06	7.82
1990	10.44	14.72	7.14	10.69	14.98	7.42	10.58	15.94	6.73
1991	10.65	15.06	7.18	10.81	15.24	7.34	12.24	18.19	7.79
1992	10.81	15.35	7.41	11.10	15.64	7.74	10.98	16.39	7.18
1993	10.76	14.70	7.63	10.85	14.75	7.74	12.81	17.41	9.43
1994	11.30	15.67	7.86	11.56	16.02	8.05	12.68	17.94	8.66
1995	11.12	15.48	7.67	11.14	15.40	7.73	14.21	21.51	9.19
1996	11.35	15.83	7.91	11.47	16.21	7.80	13.89	17.38	11.30
1997	10.97	15.14	7.64	11.02	15.13	7.71	13.70	19.66	9.37
1998	11.81	16.41	8.19	12.09	16.72	8.44	12.70	17.43	9.03
1999	11.45	15.99	7.82	11.62	16.23	7.88	13.79	19.08	9.95
2000	12.53	17.53	8.53	12.78	18.14	8.41	14.86	19.24	12.00
2001	12.61	17.58	8.62	12.82	17.80	8.79	15.68	23.04	10.40
2002	12.93	17.88	8.91	13.16	18.11	9.09	15.60	22.70	10.64
2003	13.57	18.31	9.73	13.92	18.51	10.17	14.63	21.70	9.42
2004	13.65	18.53	9.69	13.99	18.93	9.90	16.15	22.70	11.29
2005	14.07	19.43	9.72	14.30	19.67	9.85	17.19	25.23	11.63
2006	14.71	19.39	10.81	15.02	19.78	10.97	16.35	21.66	12.36
2007	15.62	21.47	10.75	15.80	21.54	10.97	19.07	27.07	13.14
2008	15.99	21.85	11.13	15.99	21.64	11.21	20.68	30.50	13.80
2009	15.38	21.32	10.38	15.53	21.43	10.43	19.35	28.86	12.60
2010	14.99	20.89	10.02	15.09	20.82	10.15	19.57	28.40	12.81
2011	15.57	21.48	10.57	15.85	21.80	10.69	18.35	25.37	13.08
2012	15.65	21.30	10.86	15.84	21.29	11.12	19.14	26.78	13.27
2013	15.58	21.95	10.16	15.63	21.82	10.25	19.39	28.51	12.38
2014	15.49	21.46	10.38	15.56	21.23	10.59	20.23	31.30	11.93
2015	15.91	22.10	10.59	16.09	22.36	10.57	18.77	26.30	13.04
2016	15.43	21.21	10.40	15.73	21.56	10.55	19.16	25.59	13.95

^a Individual rates for diagnosis years 1975-1979 available in web browser version of [Cancer Statistics Review](#).
 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 11.6
 Cancer of the Kidney and Renal Pelvis (Invasive)
 Age-adjusted U.S. Death^a Rates by Year, Race and Sex

Year of Death:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	4.01	5.84	2.63	4.09	5.95	2.68	3.79	5.61	2.53
1975-1979	3.65	5.30	2.42	3.73	5.43	2.47	2.94	4.28	1.94
1980	3.68	5.46	2.38	3.77	5.61	2.44	2.96	4.19	2.01
1981	3.73	5.40	2.51	3.80	5.50	2.56	3.18	4.60	2.14
1982	3.85	5.68	2.54	3.92	5.80	2.56	3.40	4.83	2.37
1983	3.85	5.57	2.60	3.93	5.69	2.67	3.26	4.85	2.15
1984	3.90	5.75	2.57	3.96	5.88	2.60	3.45	4.86	2.45
1985	3.96	5.76	2.66	4.00	5.79	2.71	3.83	6.00	2.35
1986	4.05	5.83	2.78	4.11	5.94	2.82	3.68	5.34	2.52
1987	4.14	6.04	2.77	4.23	6.15	2.83	3.66	5.49	2.42
1988	4.03	5.86	2.71	4.09	5.93	2.76	3.78	5.82	2.41
1989	4.16	6.08	2.79	4.22	6.15	2.83	3.99	6.05	2.64
1990	4.19	6.16	2.77	4.23	6.22	2.79	4.20	6.35	2.76
1991	4.30	6.18	2.95	4.34	6.24	2.98	4.34	6.35	2.97
1992	4.29	6.24	2.88	4.37	6.33	2.94	3.97	5.94	2.61
1993	4.16	6.09	2.75	4.22	6.18	2.77	4.07	6.09	2.75
1994	4.27	6.20	2.89	4.32	6.25	2.92	4.24	6.40	2.81
1995	4.34	6.19	2.99	4.39	6.28	3.01	4.38	6.26	3.14
1996	4.27	6.19	2.84	4.33	6.29	2.88	4.15	5.93	2.93
1997	4.27	6.19	2.86	4.32	6.23	2.91	4.32	6.55	2.84
1998	4.26	6.19	2.81	4.34	6.27	2.88	4.01	6.28	2.46
1999	4.06	5.90	2.68	4.10	5.96	2.71	4.15	6.10	2.82
2000	4.22	6.14	2.79	4.30	6.24	2.84	4.13	6.28	2.74
2001	4.27	6.24	2.80	4.34	6.33	2.84	4.26	6.45	2.82
2002	4.23	6.16	2.77	4.33	6.30	2.81	4.06	5.86	2.85
2003	4.20	6.09	2.75	4.28	6.21	2.80	4.11	6.12	2.75
2004	4.13	5.94	2.74	4.24	6.08	2.80	3.99	5.87	2.72
2005	4.13	5.95	2.74	4.22	6.04	2.81	4.04	6.11	2.61
2006	4.00	5.76	2.66	4.09	5.86	2.73	3.88	5.90	2.52
2007	4.02	5.81	2.65	4.08	5.88	2.69	4.08	5.98	2.78
2008	3.99	5.83	2.56	4.07	5.93	2.60	3.87	5.73	2.58
2009	3.93	5.75	2.51	4.01	5.83	2.55	3.95	5.80	2.65
2010	3.92	5.71	2.52	4.04	5.86	2.58	3.65	5.24	2.53
2011	3.94	5.70	2.55	4.05	5.88	2.57	3.78	5.42	2.70
2012	3.83	5.64	2.39	3.95	5.79	2.47	3.62	5.59	2.24
2013	3.86	5.60	2.46	4.00	5.78	2.54	3.53	5.30	2.27
2014	3.75	5.59	2.28	3.85	5.70	2.34	3.71	5.87	2.24
2015	3.81	5.64	2.34	3.93	5.80	2.40	3.68	5.47	2.39
2016	3.59	5.24	2.26	3.72	5.38	2.34	3.40	5.20	2.15

^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 11.7
Cancer of the Kidney and Renal Pelvis (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2012-2016									
All ages	16.1	22.1	10.9	16.6	22.8	11.3	17.4	24.3	12.1
Under 65	9.0	12.0	6.2	9.3	12.2	6.4	10.3	14.2	6.9
65 and over	64.8	92.3	43.5	67.3	95.9	44.7	66.9	94.4	48.6
All ages (WHO world std) ^c	12.5	17.1	8.5	12.9	17.5	8.8	13.8	19.2	9.5
Age-Specific Rates, 2012-2016									
<1	1.9	1.7	2.0	1.7	1.7	1.7	2.0	-	-
1-4	1.9	1.8	2.0	2.0	1.9	2.1	2.2	1.9	2.5
5-9	0.6	0.5	0.8	0.6	0.5	0.8	0.8	-	1.0
10-14	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-
15-19	0.2	0.2	0.3	0.3	0.2	0.3	0.3	-	-
20-24	0.5	0.5	0.6	0.5	0.4	0.5	0.7	0.6	0.7
25-29	1.2	1.3	1.1	1.3	1.4	1.2	1.4	1.6	1.2
30-34	3.1	3.6	2.6	3.3	3.7	2.9	2.8	3.4	2.2
35-39	5.8	7.1	4.5	6.1	7.2	4.9	5.8	7.8	3.9
40-44	10.5	13.5	7.5	11.0	13.8	8.0	11.5	15.5	8.0
45-49	15.9	21.3	10.6	16.4	21.7	11.0	17.8	24.8	11.7
50-54	23.9	32.5	15.6	24.6	33.1	16.2	26.7	38.2	16.6
55-59	33.5	46.2	21.5	34.3	46.9	22.1	39.0	56.1	24.5
60-64	45.1	62.6	29.1	45.8	63.1	29.6	54.6	77.6	36.0
65-69	60.1	84.1	38.9	61.7	85.5	40.1	69.5	101.0	45.6
70-74	68.2	96.7	44.4	70.6	100.4	45.1	72.8	101.4	52.7
75-79	72.8	102.9	49.4	76.3	108.2	51.0	71.5	100.7	52.7
80-84	66.1	95.1	46.0	69.3	99.9	47.6	60.6	84.0	47.7
85+	52.6	79.5	38.7	54.6	83.3	39.7	48.5	66.5	41.1
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2012-2016									
All ages	3.8	5.5	2.3	3.9	5.7	2.4	3.6	5.5	2.3
Under 65	1.2	1.8	0.7	1.3	1.9	0.7	1.3	2.0	0.7
65 and over	21.2	31.1	13.8	22.0	32.0	14.3	19.2	29.4	12.8
All ages (WHO world std) ^c	2.3	3.3	1.3	2.3	3.4	1.4	2.2	3.4	1.3
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-
5-9	0.1	0.1	0.1	0.1	0.1	0.0	-	-	-
10-14	0.0	0.0	0.0	0.0	-	-	-	-	-
15-19	0.0	0.0	0.0	0.0	-	0.0	0.1	-	-
20-24	0.1	0.1	0.1	0.0	0.1	0.0	0.3	0.4	0.2
25-29	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.2
30-34	0.2	0.2	0.1	0.1	0.2	0.1	0.4	0.6	0.3
35-39	0.4	0.5	0.2	0.3	0.4	0.2	0.7	1.0	0.4
40-44	0.8	1.1	0.4	0.8	1.1	0.4	0.9	1.4	0.4
45-49	1.7	2.6	0.8	1.8	2.7	0.9	1.8	2.9	0.9
50-54	3.3	4.9	1.7	3.4	5.1	1.8	3.1	4.8	1.7
55-59	5.9	8.7	3.2	6.1	9.0	3.3	5.7	8.6	3.2
60-64	8.8	13.3	4.8	9.2	13.6	5.0	8.5	13.4	4.4
65-69	12.8	19.0	7.3	13.3	19.5	7.6	12.5	19.9	6.8
70-74	17.3	25.2	10.6	18.0	26.1	11.0	15.4	24.1	9.2
75-79	22.6	32.6	14.7	23.5	33.6	15.2	19.9	29.9	13.4
80-84	28.8	41.8	19.6	29.8	43.1	20.3	24.5	37.5	17.2
85+	36.7	55.1	27.1	37.5	56.4	27.5	34.4	51.2	27.3

^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.

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

- Rates are per 100,000 and are age-adjusted to the world (WHO 2000-2025) standard million.

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

Table 11.8
Cancer of the Kidney and Renal Pelvis (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival (Percent)									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	37	36	39	38	38	37
1970-1973 ^a	-	-	-	46	44	50	44	40	49
1975-1977 ^b	50.1	50.2	49.8	49.8	50.1	49.3	48.8	47.9	50.4 ^g
1978-1980 ^b	52.9	52.7	53.3	52.6	52.8	52.1	56.9	51.9	62.8 ^g
1981-1983 ^b	50.0	51.1	48.2	49.9	51.2	47.6	50.6	50.2	51.2
1984-1986 ^b	54.5	55.0	53.7	54.7	55.4	53.5	52.6	49.2	57.5
1987-1989 ^b	56.7	57.1	56.1	57.3	58.0	56.1	54.8	53.0	57.0
1990-1992 ^b	60.2	60.6	59.6	60.7	61.3	59.7	57.0	55.2	59.1
1993-1995 ^b	61.5	61.7	61.1	62.0	62.9	60.7	57.6	54.2	62.1
1996-1998 ^b	62.5	62.9	61.9	62.1	62.6	61.2	66.9	68.1	64.5
1999-2001 ^b	64.9	63.4	67.2	64.9	63.6	66.9	64.1	59.4	69.4
2002-2004 ^b	69.2	69.5	68.9	69.3	69.8	68.7	65.5	64.7	66.7
2005-2008 ^b	74.5	73.5	76.0	74.5	73.5	76.0	74.7	73.5	76.5
2009-2015 ^b	75.5 ^f	74.8 ^f	76.6 ^f	75.3 ^f	74.7 ^f	76.4 ^f	77.1 ^f	77.1 ^f	77.2 ^f
5-Year Period Survival (Percent) ^{cd}									
2015	75.3	74.4	76.8	75.2	74.2	76.8	76.8	75.8	78.3
Stage Distribution (%) 2009-2015 ^{ce}									
All Stages									
Number of cases	79,409	49,836	29,573	64,244	40,612	23,632	9,274	5,502	3,772
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	65	63	68	64	63	67	71	70	73
Regional	17	18	15	17	18	15	12	12	11
Distant	16	16	14	16	17	14	14	15	12
Unstaged/Unknown	3	3	3	3	3	3	3	3	3
5-Year Relative Survival (Percent), 2009-2015 ^c									
Age at Diagnosis:									
Ages <45	88.4	86.6	91.1	90.0	88.3	92.5	80.7	76.7	86.3
Ages 45-54	81.2	79.4	84.6	80.9	79.0	84.8	80.8	80.1	82.1
Ages 55-64	76.0	74.5	79.0	76.1	74.7	79.1	75.8	73.7	79.2
Ages 65-74	73.6	72.6	75.3	73.7	72.6	75.8	73.6	74.1	73.1
Ages 75+	59.4	60.7	58.0	59.6	60.8	58.0	58.4	57.4	58.5
Ages <65	80.0	78.2	83.4	80.2	78.4	83.7	78.4	76.5	81.7
Ages 65+	67.8	68.2	67.2	67.8	68.1	67.4	68.6	69.6	67.4
Stage ^e :									
All Stages	74.8	74.2	75.9	74.8	74.0	76.0	75.1	74.5	76.0
Localized	92.5	92.6	92.4	92.7	92.5	93.0	91.4	92.4	90.0
Regional	69.6	70.5	67.8	70.3	71.3	68.1	60.8	59.9	62.2
Distant	12.0	12.0	12.1	12.2	12.3	11.9	10.2	8.4	13.3
Unstaged/Unknown	41.9	42.6	40.7	39.8	40.2	38.5	47.0	51.2 ^g	41.6 ^g

^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 11.9
Cancer of the Kidney and Renal Pelvis (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males and Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	68.9	70.4	72.9	76.4	76.9	77.1	76.4	77.9	77.8	79.7	81.3	79.7	81.8	85.0	84.0	85.1	86.4	85.2	86.5	86.5	85.9	87.3	87.8	86.4	86.8
2-year	60.3	61.7	65.0	69.2	69.7	70.5	70.1	71.1	71.7	73.8	73.9	74.7	76.1	79.7	80.1	81.8	82.5	81.3	82.3	81.5	80.9	83.4	83.6	81.9	
3-year	56.3	57.0	60.8	65.8	65.4	67.3	66.1	67.3	67.5	69.3	70.8	71.2	73.3	76.4	77.7	78.5	80.3	79.0	79.4	79.2	77.9	80.6	81.1		
4-year	53.0	53.9	57.8	63.2	63.2	64.2	63.6	64.5	64.5	67.4	68.1	69.0	71.1	73.4	76.0	75.8	77.7	76.4	77.5	76.9	75.1	78.7			
5-year	50.9	52.0	55.8	60.7	61.4	62.6	61.7	63.2	62.5	65.4	66.4	67.5	68.9	71.1	74.5	73.8	75.1	74.4	76.2	74.7	73.2				
6-year	49.3	49.7	53.9	59.1	59.4	60.5	59.7	61.2	60.4	63.9	64.9	65.4	67.9	69.2	73.0	72.4	73.6	73.1	74.3	73.8					
7-year	47.4	48.6	52.3	57.5	58.0	59.0	58.0	59.5	59.1	62.3	63.0	63.5	66.2	67.8	71.9	70.8	72.5	71.7	73.0						
8-year	46.2	47.4	51.1	56.1	56.8	58.5	55.9	57.9	57.3	60.1	61.8	61.8	64.8	65.8	71.0	69.3	70.9	70.5							
9-year	45.0	46.0	49.6	55.0	55.3	57.8	54.0	56.6	55.7	58.8	60.7	60.4	63.4	64.0	69.8	68.1	69.9								
10-year	44.0	44.9	48.0	53.3	54.3	56.0	53.1	55.5	53.9	56.8	59.4	59.3	62.2	62.5	69.0	67.2									
11-year	43.1	43.6	46.5	51.8	52.3	55.0	52.0	55.0	52.7	55.8	57.4	58.4	60.8	61.4	66.9										
12-year	42.2	42.7	45.3	50.7	50.7	53.5	51.3	54.3	51.8	55.0	56.1	57.6	59.4	60.1											
13-year	41.5	42.0	44.3	49.5	49.1	51.8	50.3	53.5	51.2	54.1	54.3	56.1	57.9												
14-year	40.5	41.4	43.0	48.2	48.2	50.3	49.7	52.1	49.8	52.7	53.5	55.8													
15-year	39.5	41.0	42.1	47.5	47.1	48.9	48.7	50.6	48.5	52.2	52.8														
16-year	39.2	40.4	41.1	46.8	46.8	48.1	47.4	49.5	47.5	51.2															
17-year	38.7	39.8	40.2	46.0	45.7	47.9	46.1	48.3	46.6																
18-year	37.6	39.3	39.3	45.0	44.5	47.4	45.0	47.5																	
19-year	36.7	38.3	38.5	44.3	43.9	46.3	44.5																		
20-year	36.1	37.3	37.9	43.4	43.0	45.0																			

^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 11.10
Cancer of the Kidney and Renal Pelvis (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	69.5	70.5	73.4	77.4	79.1	78.0	78.1	78.5	77.3	79.2	80.7	80.2	80.6	85.5	84.2	84.9	86.3	85.1	86.4	86.5	86.0	87.1	87.9	85.9	87.0
2-year	60.7	61.9	65.5	69.5	71.3	71.7	71.0	72.0	70.8	72.8	73.5	75.0	75.7	80.5	80.7	81.3	82.4	80.7	81.9	80.7	81.0	83.1	83.7	81.2	
3-year	56.4	57.4	61.4	66.3	67.1	68.0	66.8	67.9	66.7	67.9	70.2	70.8	73.4	77.1	77.9	77.9	79.7	78.1	78.9	78.1	77.8	80.0	81.1		
4-year	52.9	54.4	58.3	63.5	64.4	64.8	64.2	64.9	63.4	65.7	67.5	68.4	70.7	74.8	75.8	74.8	76.7	75.5	77.2	75.8	74.8	77.8			
5-year	51.0	52.4	56.3	60.9	62.4	63.1	61.7	63.7	61.4	62.8	65.6	67.2	69.1	71.9	74.1	72.9	73.7	73.2	75.8	73.4	72.8				
6-year	49.5	50.2	53.9	59.1	59.5	61.8	59.5	61.3	58.7	61.5	63.6	65.2	68.1	69.5	72.0	70.9	72.5	72.0	73.9	72.1					
7-year	47.3	48.9	52.1	57.5	58.5	60.1	57.5	59.4	57.6	59.7	60.9	63.3	66.2	67.8	70.7	69.0	71.6	70.9	72.6						
8-year	45.8	47.7	50.8	56.1	57.2	59.2	54.5	57.2	55.6	57.6	59.6	61.6	64.5	65.9	69.4	67.5	69.8	69.8							
9-year	44.8	46.3	48.8	55.2	56.0	58.7	52.6	56.4	53.6	55.9	58.8	60.4	63.1	63.9	68.6	66.9	68.9								
10-year	43.4	45.3	47.5	53.5	54.7	56.3	52.2	55.2	51.5	54.3	57.4	59.2	62.0	62.5	68.3	65.8									
11-year	42.4	44.1	45.6	52.0	53.3	55.6	50.5	54.6	50.2	53.2	55.6	58.3	60.5	61.3	66.2										
12-year	41.3	43.2	44.0	50.9	50.9	53.7	49.4	53.2	49.3	52.9	54.6	57.2	58.8	60.6											
13-year	40.6	42.6	42.9	49.7	49.2	52.3	48.7	53.0	49.0	52.0	53.3	55.4	57.2												
14-year	39.5	41.6	41.6	48.5	49.1	50.6	48.3	52.0	48.0	50.3	52.5	55.1													
15-year	38.4	41.3	40.9	47.8	47.7	48.6	46.6	50.1	46.8	50.2	51.6														
16-year	38.0	40.4	39.5	47.3	47.7	47.3	45.3	48.8	46.0	48.9															
17-year	37.5	40.1	38.7	46.4	46.3	47.1	43.2	47.8	44.5																
18-year	36.5	39.6	37.7	45.3	44.8	47.1	41.5	47.1																	
19-year	35.6	38.7	36.9	44.5	44.1	46.5	40.6																		
20-year	34.7	37.5	36.3	43.6	43.4	44.8																			

^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 11.11
Cancer of the Kidney and Renal Pelvis (Invasive)

SEER^a Relative Survival (Percent)
By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Survival Time																									
1-year	67.8	70.3	72.3	74.7	73.4	75.7	73.8	76.8	78.7	80.6	82.4	79.0	83.5	84.2	83.7	85.3	86.4	85.4	86.8	86.3	85.6	87.7	87.6	87.2	86.4
2-year	59.6	61.5	64.2	68.7	67.1	68.5	68.7	69.6	73.2	75.5	74.6	74.2	76.7	78.5	79.2	82.3	82.7	82.2	82.9	82.9	80.8	84.0	83.4	83.2	
3-year	56.1	56.4	59.8	65.1	62.8	66.2	64.9	66.5	68.8	71.6	71.7	71.9	73.2	75.3	77.2	79.3	81.4	80.2	80.2	80.9	77.9	81.4	81.1		
4-year	53.0	53.2	57.1	62.7	61.4	63.3	62.7	63.7	66.2	70.1	69.0	70.1	71.7	71.3	76.2	77.4	79.4	77.7	78.1	78.9	75.6	80.3			
5-year	50.6	51.2	55.0	60.5	59.7	61.7	61.4	62.4	64.1	69.6	67.6	68.0	68.7	69.9	75.0	75.2	77.4	76.3	76.8	77.0	74.0				
6-year	49.0	49.0	53.7	59.2	58.8	58.6	60.1	61.0	63.0	67.6	66.8	65.8	67.5	68.6	74.5	74.4	75.5	74.7	74.9	76.6					
7-year	47.7	47.9	52.5	57.5	57.2	57.2	58.6	59.5	61.2	66.5	66.2	63.8	66.1	67.8	73.8	73.5	73.8	72.8	73.8						
8-year	46.9	46.8	51.5	56.1	56.2	57.2	57.7	58.8	59.9	64.2	65.4	62.2	65.1	65.4	73.5	72.1	72.8	71.5							
9-year	45.2	45.5	50.8	54.8	54.1	56.5	56.1	57.0	58.9	63.6	63.8	60.2	63.9	63.9	71.7	69.8	71.4								
10-year	44.9	44.3	48.7	52.9	53.6	55.3	54.4	55.9	57.6	61.0	62.6	59.3	62.5	62.4	69.9	69.3									
11-year	44.2	42.8	47.9	51.4	50.7	54.1	54.0	55.5	56.8	60.0	60.2	58.6	61.2	61.3	67.9										
12-year	43.6	41.9	47.2	50.3	50.1	53.0	54.0	55.5	55.9	58.5	58.6	58.3	60.3	59.4											
13-year	43.0	41.1	46.5	49.2	48.9	50.9	52.6	54.1	54.6	57.4	55.9	57.3	59.0												
14-year	42.1	40.6	45.1	47.8	46.7	49.6	51.6	52.3	52.6	56.6	55.1	56.4													
15-year	41.2	40.3	43.9	47.0	46.0	49.2	51.6	51.3	51.2	55.3	54.6														
16-year	41.1	40.2	43.3	46.2	44.9	49.0	50.5	50.4	49.9	54.9															
17-year	40.4	39.4	42.2	45.5	44.5	48.9	50.3	48.9	49.6																
18-year	39.3	38.7	41.6	44.6	44.0	47.4	49.8	47.9																	
19-year	38.4	37.6	40.9	43.9	43.5	45.9	49.7																		
20-year	38.2	37.0	40.2	43.0	42.2	45.2																			

^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 11.12
Cancer of the Kidney and Renal Pelvis (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and
Lifetime Risk of Dying from Cancer Given Alive at Current Age
Both Sexes, 2014-2016 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	0.01	0.02	0.03	1.68	0.46	Asian/ Pacific Islander	0	0.01	0.01	0.02	1.08	0.32
	10	0.00	0.01	0.06	1.68	0.46		10	0.00	0.01	0.03	1.08	0.32
	20	0.01	0.06	0.18	1.69	0.47		20	0.00	0.03	0.09	1.08	0.32
	30	0.05	0.17	0.44	1.69	0.47		30	0.03	0.09	0.23	1.08	0.32
	40	0.13	0.40	0.84	1.67	0.47		40	0.07	0.20	0.44	1.06	0.32
	50	0.28	0.73	1.22	1.57	0.47		50	0.14	0.38	0.70	1.01	0.32
	60	0.48	1.00	1.30	1.38	0.46		60	0.25	0.58	0.81	0.90	0.31
	70	0.59	0.93	-	1.01	0.40		70	0.35	0.59	-	0.69	0.28
80	0.45	-	-	0.56	0.31	80	0.28	-	-	0.40	0.23		
White	0	0.01	0.02	0.03	1.74	0.47	American Indian/ Alaska Native ^a	0	0.00	0.01	0.02	1.60	0.58
	10	0.00	0.01	0.06	1.74	0.48		10	0.00	0.01	0.07	1.61	0.59
	20	0.01	0.06	0.19	1.74	0.48		20	0.01	0.07	0.22	1.61	0.60
	30	0.05	0.18	0.46	1.75	0.48		30	0.06	0.21	0.50	1.63	0.61
	40	0.14	0.41	0.87	1.72	0.49		40	0.16	0.45	0.91	1.61	0.62
	50	0.29	0.75	1.26	1.62	0.49		50	0.30	0.78	1.20	1.51	0.63
	60	0.49	1.04	1.35	1.42	0.47		60	0.51	0.96	1.25	1.30	0.61
	70	0.62	0.96	-	1.04	0.41		70	0.51	0.84	-	0.90	0.56
80	0.47	-	-	0.57	0.32	80	0.44	-	-	0.52	0.47		
Black	0	0.01	0.02	0.03	1.60	0.39	Hispanic ^b	0	0.01	0.01	0.02	1.81	0.53
	10	0.00	0.01	0.06	1.62	0.40		10	0.00	0.01	0.06	1.81	0.53
	20	0.01	0.06	0.18	1.62	0.40		20	0.01	0.05	0.18	1.82	0.53
	30	0.04	0.17	0.46	1.63	0.40		30	0.05	0.17	0.44	1.82	0.54
	40	0.13	0.42	0.89	1.62	0.40		40	0.13	0.40	0.87	1.79	0.54
	50	0.30	0.79	1.23	1.54	0.40		50	0.28	0.75	1.28	1.70	0.54
	60	0.53	1.01	1.27	1.35	0.39		60	0.50	1.05	1.37	1.48	0.52
	70	0.58	0.88	-	0.97	0.36		70	0.61	0.96	-	1.08	0.46
80	0.43	-	-	0.56	0.31	80	0.44	-	-	0.59	0.36		

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 PRCD (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 11.13
Cancer of the Kidney and Renal Pelvis (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				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	0.01	0.01	0.02	2.16	0.60	Asian/ Pacific Islander	0	0.01	0.01	0.02	1.42	0.44
	10	0.00	0.01	0.07	2.17	0.61		10	0.00	0.01	0.04	1.42	0.44
	20	0.01	0.07	0.23	2.18	0.61		20	0.01	0.04	0.14	1.42	0.44
	30	0.06	0.22	0.58	2.20	0.62		30	0.04	0.13	0.32	1.43	0.44
	40	0.17	0.53	1.12	2.18	0.63		40	0.10	0.29	0.64	1.40	0.44
	50	0.38	0.98	1.64	2.07	0.63		50	0.19	0.55	0.97	1.32	0.44
	60	0.65	1.36	1.74	1.82	0.61		60	0.37	0.81	1.09	1.17	0.42
	70	0.82	1.26	-	1.36	0.54		70	0.48	0.79	-	0.88	0.38
80	0.62	-	-	0.75	0.43	80	0.38	-	-	0.49	0.31		
White	0	0.01	0.02	0.02	2.23	0.62	American Indian/ Alaska Native ^a	0	0.01	0.01	0.02	1.86	0.75
	10	0.00	0.01	0.07	2.24	0.63		10	0.00	0.01	0.05	1.88	0.76
	20	0.01	0.07	0.24	2.24	0.63		20	0.01	0.05	0.22	1.88	0.77
	30	0.06	0.23	0.60	2.26	0.64		30	0.05	0.21	0.57	1.92	0.79
	40	0.18	0.55	1.15	2.24	0.65		40	0.17	0.54	1.12	1.94	0.81
	50	0.38	1.00	1.69	2.13	0.65		50	0.39	1.00	1.48	1.86	0.82
	60	0.67	1.41	1.80	1.88	0.63		60	0.67	1.20	1.55	1.61	0.79
	70	0.86	1.32	-	1.41	0.55		70	0.63	1.03	-	1.10	0.69
80	0.65	-	-	0.77	0.43	80	0.57	-	-	0.67	0.59		
Black	0	0.01	0.01	0.03	2.02	0.51	Hispanic ^b	0	0.01	0.01	0.02	2.30	0.69
	10	0.00	0.02	0.07	2.05	0.52		10	0.00	0.01	0.06	2.31	0.70
	20	0.01	0.07	0.24	2.06	0.52		20	0.01	0.06	0.21	2.31	0.70
	30	0.06	0.24	0.63	2.08	0.53		30	0.05	0.20	0.54	2.33	0.71
	40	0.18	0.59	1.21	2.07	0.54		40	0.15	0.50	1.11	2.31	0.71
	50	0.42	1.08	1.65	1.98	0.54		50	0.35	0.98	1.68	2.21	0.71
	60	0.73	1.36	1.65	1.73	0.53		60	0.66	1.41	1.83	1.97	0.69
	70	0.79	1.16	-	1.25	0.48		70	0.85	1.32	-	1.48	0.61
80	0.56	-	-	0.72	0.43	80	0.63	-	-	0.83	0.50		

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 PRCD (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 11.14
Cancer of the Kidney and Renal Pelvis (Invasive)

Risk of Being Diagnosed With Cancer in 10, 20 and 30 Years,
Lifetime Risk of Being Diagnosed with Cancer Given Alive and Cancer-Free at Current Age, and
Lifetime Risk of Dying from Cancer Given Alive at Current Age
Females, 2014-2016 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	0.01	0.02	0.03	1.23	0.33	Asian/ Pacific Islander	0	0.01	0.01	0.02	0.80	0.22
	10	0.00	0.01	0.05	1.22	0.33		10	0.00	0.01	0.02	0.79	0.22
	20	0.01	0.05	0.14	1.22	0.33		20	0.00	0.02	0.06	0.79	0.22
	30	0.04	0.13	0.30	1.22	0.33		30	0.02	0.05	0.14	0.79	0.22
	40	0.09	0.27	0.57	1.19	0.33		40	0.04	0.12	0.27	0.77	0.22
	50	0.18	0.48	0.83	1.12	0.33		50	0.09	0.24	0.47	0.74	0.22
	60	0.32	0.68	0.92	0.98	0.32		60	0.15	0.39	0.57	0.67	0.21
	70	0.40	0.66	-	0.73	0.30		70	0.25	0.44	-	0.54	0.20
80	0.33	-	-	0.42	0.24	80	0.22	-	-	0.33	0.17		
White	0	0.01	0.02	0.03	1.26	0.34	American Indian/ Alaska Native ^a	0	0.00	0.00	0.02	1.35	0.42
	10	0.00	0.01	0.05	1.26	0.34		10	0.00	0.02	0.09	1.36	0.43
	20	0.01	0.05	0.15	1.26	0.34		20	0.02	0.09	0.23	1.36	0.43
	30	0.04	0.14	0.32	1.25	0.34		30	0.07	0.21	0.43	1.36	0.43
	40	0.10	0.28	0.59	1.22	0.34		40	0.14	0.36	0.71	1.31	0.44
	50	0.19	0.50	0.85	1.15	0.34		50	0.22	0.58	0.93	1.21	0.45
	60	0.32	0.70	0.94	1.00	0.33		60	0.37	0.75	0.99	1.04	0.45
	70	0.41	0.67	-	0.74	0.30		70	0.41	0.68	-	0.73	0.44
80	0.34	-	-	0.43	0.24	80	0.35	-	-	0.41	0.38		
Black	0	0.02	0.02	0.03	1.25	0.29	Hispanic ^b	0	0.01	0.02	0.03	1.39	0.39
	10	0.00	0.01	0.04	1.25	0.30		10	0.00	0.01	0.05	1.39	0.39
	20	0.01	0.04	0.13	1.25	0.30		20	0.01	0.05	0.16	1.39	0.39
	30	0.03	0.12	0.31	1.25	0.30		30	0.04	0.15	0.35	1.38	0.39
	40	0.09	0.28	0.61	1.23	0.30		40	0.11	0.31	0.65	1.35	0.39
	50	0.20	0.54	0.89	1.18	0.30		50	0.20	0.55	0.93	1.26	0.39
	60	0.36	0.74	0.97	1.05	0.29		60	0.36	0.75	0.99	1.09	0.38
	70	0.43	0.69	-	0.78	0.28		70	0.42	0.68	-	0.79	0.35
80	0.35	-	-	0.47	0.24	80	0.31	-	-	0.44	0.27		

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 PRCD (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 11.15
Cancer of the Kidney and Renal Pelvis (Invasive)

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

SEER Incidence	SEER 21 Areas ^b			SEER 21 Areas ^b			SEER 9 Areas ^b		
	Rate 2012-2016			Trend 2007-2016 ^c			Trend 2007-2016 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
Race/Ethnicity	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	16.1	22.1	10.9	0.3	0.3	0.1	0.3	0.2	-0.2
White	16.6	22.8	11.3	0.3	0.3	0.0	0.2	0.5	-0.3
White Hispanic ^e	16.3	21.6	12.0	0.8*	0.7	0.8	-	-	-
White Non-Hispanic ^e	16.7	23.1	11.1	0.2	0.3	0.0	-	-	-
Black	17.4	24.3	12.1	0.8*	0.7*	0.7	0.6	-0.1	0.3
Asian/Pacific Islander	8.4	12.0	5.5	0.1	0.4	-0.2	-	-	-
Amer Ind/Alaska Nat ^f	16.8	21.2	13.1	-1.5	-1.7	0.3	-	-	-
Hispanic ^e	15.7	20.8	11.6	1.1*	0.8*	1.9*	-	-	-
<u>U.S. Mortality^g</u>									
	Rate 2012-2016			Trend 2007-2016 ^h					
	Rate per 100,000 persons			AAPC (%)					
Race/Ethnicity	Total	Males	Females	Total	Males	Females			
All Races	3.8	5.5	2.3	-0.9*	-0.8*	-1.4*			
White	3.9	5.7	2.4	-0.8*	-0.7*	-1.3*			
White Hispanic ^e	3.7	5.3	2.4	-0.3	-0.5	-0.3			
White Non-Hispanic ^e	3.9	5.7	2.4	-0.8*	-0.7*	-1.3*			
Black	3.6	5.5	2.3	-1.1*	-1.0*	-1.5*			
Asian/Pacific Islander	1.8	2.7	1.1	-0.2	0.2	-0.9			
Amer Ind/Alaska Nat									
Total U.S.	3.8	5.3	2.6	-1.8*	-2.0*	-1.5			
PRCDA Counties	5.7	8.1	3.8	-1.1	-1.0	-1.2			
Non-PRCDA Counties	1.7	2.3	1.3	-2.4*	-2.6	-1.1			
Hispanic ^e	3.5	5.0	2.3	-0.5*	-0.7*	-0.5			

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.

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

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

The SEER 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.

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

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

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.

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

US Mortality Files, National Center for Health Statistics, CDC.

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 11.16
Cancer of the Kidney and Renal Pelvis (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates^a, 2012-2016</u>									
California	14.40	19.86	9.70	15.45	21.16	10.43	16.88	23.16	11.69
Greater Bay Area	12.99	18.16	8.48	14.33	19.96	9.27	18.25	24.70	12.61
San Francisco-Oakland	13.11	18.69	8.31	14.26	20.41	8.77	19.03	25.78	13.38
San Jose-Monterey	12.77	17.14	8.82	14.46	19.18	10.15	13.13	18.06	-
Los Angeles	13.76	19.24	9.19	14.89	20.52	10.07	15.39	22.38	10.08
Greater California	15.20	20.74	10.38	16.00	21.79	10.92	17.75	23.29	12.91
Connecticut	15.78	22.16	10.36	15.62	21.99	10.15	14.93	21.67	9.65
Detroit	18.13	25.55	12.00	17.66	24.35	11.95	20.87	31.48	13.22
Georgia	16.67	22.95	11.54	16.47	22.64	11.22	18.28	25.22	13.20
Atlanta	15.65	22.07	10.47	14.33	20.13	9.41	19.34	28.13	13.04
Rural Georgia	19.59	27.33	13.50	21.38	29.74	14.37	17.51	23.40	13.39
Greater Georgia	17.21	23.33	12.19	17.26	23.54	11.93	17.57	23.09	13.50
Hawaii	13.38	18.98	8.38	14.04	19.55	8.04	13.18	-	-
Idaho	16.15	21.49	11.24	15.98	21.08	11.28	-	-	-
Iowa	18.86	25.73	12.86	18.69	25.65	12.60	28.45	30.76	26.74
Kentucky	20.58	27.01	15.02	20.43	26.77	14.94	25.08	32.22	18.85
Louisiana	21.69	28.98	15.49	22.44	29.80	15.94	20.61	27.75	15.16
Massachusetts	15.90	22.34	10.48	16.13	22.71	10.57	14.20	18.74	10.74
New Jersey	16.13	22.29	11.01	16.77	23.14	11.38	16.15	22.70	11.29
New Mexico	14.76	19.05	10.98	14.19	18.30	10.55	13.57	16.90	-
New York	16.47	23.26	10.84	17.29	24.18	11.40	15.17	22.19	10.17
Seattle-Puget Sound	16.05	21.78	11.13	16.39	22.04	11.47	20.91	27.37	14.64
Utah	13.50	18.25	9.23	13.59	18.32	9.32	-	-	-
SEER 9 Areas ^b	15.61	21.60	10.47	15.77	21.65	10.61	19.31	27.63	12.91
SEER 13 Areas ^b	15.05	20.84	10.12	15.52	21.29	10.47	18.31	26.24	12.19
SEER 18 Areas ^b	15.99	21.89	10.96	16.53	22.50	11.32	18.38	25.38	12.95
SEER 21 Areas ^b	16.07	22.14	10.91	16.61	22.76	11.28	17.41	24.35	12.15

^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 11.17
Cancer of the Kidney and Renal Pelvis (Invasive)

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

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Death Rates^a, 2012-2016</u>									
California	3.47	5.17	2.09	3.75	5.55	2.27	3.44	5.23	2.00
Greater Bay Area	3.05	4.59	1.80	3.32	4.96	1.95	4.00	5.85	2.54
San Francisco-Oakland	2.96	4.64	1.63	3.19	5.06	1.65	3.77	5.51	2.43
San Jose-Monterey	3.21	4.48	2.12	3.56	4.78	2.48	5.74	-	-
Los Angeles	3.20	4.91	1.84	3.47	5.24	2.03	3.34	5.51	1.76
Greater California	3.74	5.49	2.30	3.98	5.83	2.46	3.23	4.60	1.99
Connecticut	2.81	4.29	1.65	2.87	4.35	1.70	2.53	4.28	-
Detroit	3.71	5.57	2.28	3.74	5.54	2.29	3.83	6.00	2.33
Georgia	3.68	5.60	2.24	3.90	5.85	2.36	3.29	5.29	2.01
Atlanta	3.06	4.69	1.86	3.36	4.89	2.15	2.87	5.18	1.46
Rural Georgia	4.49	6.58	-	4.48	6.64	-	-	-	-
Greater Georgia	3.94	5.98	2.39	4.07	6.17	2.43	3.56	5.40	2.35
Hawaii	2.69	3.92	1.71	2.91	4.00	1.83	-	-	-
Idaho	3.84	5.42	2.43	3.91	5.51	2.48	-	-	-
Iowa	4.62	7.01	2.67	4.65	7.04	2.69	-	-	-
Kentucky	4.76	6.93	3.02	4.77	6.92	3.01	5.10	7.99	3.13
Louisiana	4.66	6.76	2.97	4.80	6.84	3.10	4.45	6.72	2.75
Massachusetts	3.36	5.02	2.06	3.51	5.22	2.16	2.33	4.00	1.28
New Jersey	3.18	4.62	2.07	3.37	4.91	2.16	2.78	4.02	1.91
New Mexico	4.12	5.77	2.69	3.90	5.43	2.56	-	-	-
New York	3.00	4.54	1.84	3.26	4.86	2.02	2.31	3.92	1.30
Seattle-Puget Sound	3.56	5.36	2.08	3.77	5.58	2.26	3.50	5.78	-
Utah	3.44	5.01	2.08	3.49	5.06	2.13	-	-	-
SEER 9 Areas ^b	3.44	5.18	2.05	3.61	5.38	2.16	3.33	5.36	1.91
SEER 13 Areas ^b	3.38	5.08	2.02	3.58	5.31	2.15	3.39	5.44	1.94
SEER 18 Areas ^b	3.62	5.37	2.22	3.82	5.62	2.35	3.52	5.42	2.15
SEER 21 Areas ^b	3.50	5.21	2.14	3.70	5.46	2.28	3.16	5.00	1.89
Total U.S.	3.77	5.54	2.34	3.89	5.68	2.42	3.58	5.48	2.26

^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.

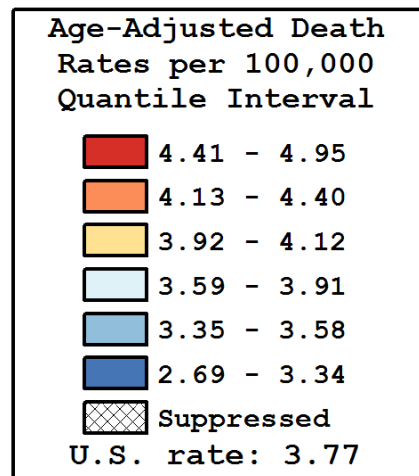
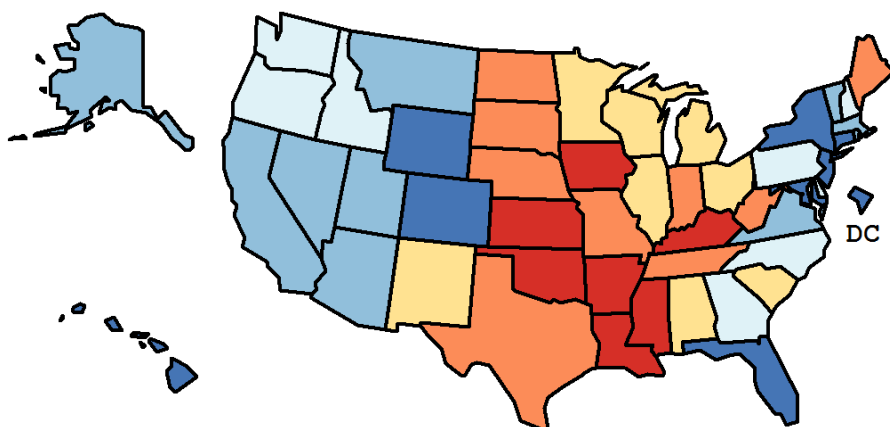
Table 11.18
Cancer of the Kidney and Renal Pelvis (Invasive)

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

Males and Females

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	3.77	0.01		
High Five States				
Oklahoma	4.95	0.15	01(01,08)	31.39 ^c
Arkansas	4.77	0.17	02(01,13)	26.56 ^c
Kentucky	4.76	0.14	03(01,11)	26.37 ^c
Louisiana	4.66	0.14	04(01,14)	23.80 ^c
Iowa	4.62	0.16	05(01,17)	22.66 ^c
Low Five States				
New Jersey	3.18	0.08	47(39,49)	-15.73 ^c
New York	3.00	0.05	48(45,50)	-20.39 ^c
Connecticut	2.81	0.11	49(45,51)	-25.45 ^c
D.C.	2.76	0.30	50(30,51)	-26.64 ^c
Hawaii	2.69	0.17	51(45,51)	-28.49 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	3.97	0.12	22(11,34)	5.45	Montana	3.53	0.23	36(13,49)	-6.43
Alaska	3.58	0.37	34(03,51)	-5.02	Nebraska	4.18	0.20	15(02,35)	11.05
Arizona	3.58	0.10	33(24,44)	-5.01	Nevada	3.55	0.16	35(19,47)	-5.81
Arkansas	4.77	0.17	02(01,13)	26.56 ^c	New Hampshire	3.85	0.22	26(06,45)	2.08
California	3.47	0.04	38(32,43)	-7.89	New Jersey	3.18	0.08	47(39,49)	-15.73 ^c
Colorado	3.27	0.11	45(33,49)	-13.22	New Mexico	4.12	0.19	17(03,34)	9.35
Connecticut	2.81	0.11	49(45,51)	-25.45 ^c	New York	3.00	0.05	48(45,50)	-20.39 ^c
Delaware	3.91	0.26	25(03,47)	3.84	North Carolina	3.77	0.08	28(20,38)	-0.04
D.C.	2.76	0.30	50(30,51)	-26.64 ^c	North Dakota	4.16	0.32	16(01,45)	10.35
Florida	3.34	0.05	43(36,47)	-11.33	Ohio	3.92	0.08	24(15,32)	3.92
Georgia	3.68	0.09	31(22,41)	-2.42	Oklahoma	4.95	0.15	01(01,08)	31.39 ^c
Hawaii	2.69	0.17	51(45,51)	-28.49 ^c	Oregon	3.72	0.13	30(16,43)	-1.32
Idaho	3.84	0.21	27(07,45)	2.01	Pennsylvania	3.67	0.07	32(24,39)	-2.71
Illinois	4.08	0.08	19(11,27)	8.41	Rhode Island	3.46	0.23	39(15,50)	-8.12
Indiana	4.33	0.11	11(04,22)	14.82	South Carolina	4.01	0.12	20(09,33)	6.37
Iowa	4.62	0.16	05(01,17)	22.66 ^c	South Dakota	4.30	0.30	13(01,40)	14.04
Kansas	4.43	0.17	07(01,24)	17.65 ^c	Tennessee	4.21	0.11	14(06,25)	11.78
Kentucky	4.76	0.14	03(01,11)	26.37 ^c	Texas	4.40	0.06	09(05,16)	16.67 ^c
Louisiana	4.66	0.14	04(01,14)	23.80 ^c	Utah	3.44	0.17	40(21,49)	-8.78
Maine	4.31	0.22	12(01,33)	14.48	Vermont	3.38	0.29	41(13,51)	-10.28
Maryland	3.33	0.10	44(31,48)	-11.60	Virginia	3.52	0.09	37(27,45)	-6.63
Massachusetts	3.36	0.09	42(32,47)	-10.85	Washington	3.72	0.10	29(20,40)	-1.24
Michigan	3.94	0.08	23(14,32)	4.59	West Virginia	4.38	0.19	10(01,28)	16.36 ^c
Minnesota	4.00	0.11	21(11,33)	6.21	Wisconsin	4.11	0.11	18(07,28)	9.14
Mississippi	4.48	0.17	06(01,22)	18.92 ^c	Wyoming	3.20	0.32	46(14,51)	-14.99
Missouri	4.40	0.11	08(03,19)	16.86 ^c					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 15% or more.

^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.

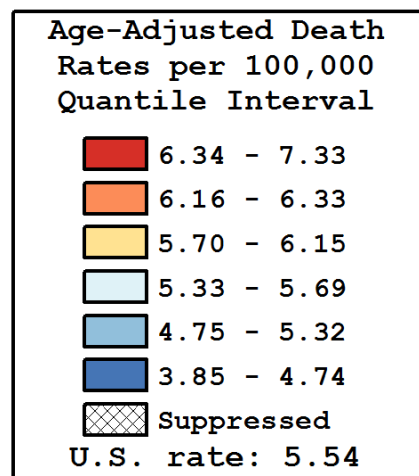
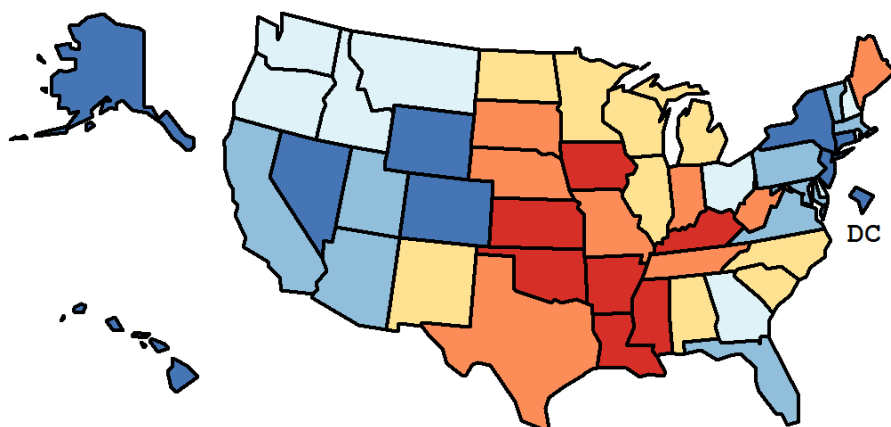
Table 11.19
Cancer of the Kidney and Renal Pelvis (Invasive)

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

Males

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	5.54	0.03		
High Five States				
Oklahoma	7.33	0.28	01(01,08)	32.38 ^c
Arkansas	7.12	0.30	02(01,13)	28.63 ^c
Iowa	7.01	0.29	03(01,15)	26.54 ^c
Kentucky	6.93	0.25	04(01,15)	25.06 ^c
Louisiana	6.76	0.25	05(01,18)	22.08 ^c
Low Five States				
New York	4.54	0.10	47(41,50)	-17.98 ^c
Wyoming	4.42	0.56	48(10,51)	-20.25 ^c
Connecticut	4.29	0.21	49(40,51)	-22.49 ^c
Hawaii	3.92	0.31	50(41,51)	-29.28 ^c
D.C.	3.85	0.54	51(23,51)	-30.47 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	6.15	0.23	17(04,30)	11.01	Montana	5.37	0.42	33(06,49)	-3.02
Alaska	4.69	0.63	44(05,51)	-15.41 ^c	Nebraska	6.19	0.36	15(02,37)	11.69
Arizona	5.26	0.17	35(22,44)	-5.04	Nevada	4.74	0.26	43(27,51)	-14.45
Arkansas	7.12	0.30	02(01,13)	28.63 ^c	New Hampshire	5.69	0.39	25(04,46)	2.67
California	5.17	0.08	36(29,42)	-6.63	New Jersey	4.62	0.14	46(37,50)	-16.67 ^c
Colorado	4.64	0.20	45(34,51)	-16.27 ^c	New Mexico	5.77	0.33	22(04,43)	4.16
Connecticut	4.29	0.21	49(40,51)	-22.49 ^c	New York	4.54	0.10	47(41,50)	-17.98 ^c
Delaware	5.63	0.48	27(02,49)	1.58	North Carolina	5.86	0.16	21(09,32)	5.81
D.C.	3.85	0.54	51(23,51)	-30.47 ^c	North Dakota	5.93	0.57	19(01,48)	7.15
Florida	4.95	0.09	42(34,46)	-10.68	Ohio	5.64	0.14	26(15,36)	1.81
Georgia	5.60	0.17	28(15,39)	1.09	Oklahoma	7.33	0.28	01(01,08)	32.38 ^c
Hawaii	3.92	0.31	50(41,51)	-29.28 ^c	Oregon	5.48	0.23	29(14,43)	-1.03
Idaho	5.42	0.37	31(07,48)	-2.09	Pennsylvania	5.32	0.12	34(24,41)	-3.98
Illinois	5.92	0.14	20(09,30)	6.84	Rhode Island	5.40	0.44	32(04,50)	-2.46
Indiana	6.24	0.20	12(04,26)	12.66	South Carolina	6.15	0.23	16(03,30)	11.10
Iowa	7.01	0.29	03(01,15)	26.54 ^c	South Dakota	6.27	0.53	09(01,44)	13.17
Kansas	6.40	0.30	07(01,30)	15.60 ^c	Tennessee	6.23	0.20	13(04,27)	12.47
Kentucky	6.93	0.25	04(01,15)	25.06 ^c	Texas	6.33	0.11	08(05,19)	14.29
Louisiana	6.76	0.25	05(01,18)	22.08 ^c	Utah	5.01	0.31	40(18,50)	-9.63
Maine	6.21	0.39	14(01,39)	12.16	Vermont	4.96	0.53	41(06,51)	-10.51
Maryland	5.08	0.19	38(25,47)	-8.26	Virginia	5.12	0.16	37(26,46)	-7.53
Massachusetts	5.02	0.17	39(28,47)	-9.39	Washington	5.47	0.18	30(17,41)	-1.24
Michigan	5.73	0.15	23(13,35)	3.38	West Virginia	6.26	0.34	11(01,34)	12.93
Minnesota	5.70	0.20	24(10,38)	2.95	Wisconsin	5.97	0.20	18(06,33)	7.85
Mississippi	6.54	0.31	06(01,25)	18.07 ^c	Wyoming	4.42	0.56	48(10,51)	-20.25 ^c
Missouri	6.27	0.20	10(03,26)	13.17					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 15% or more.

^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.

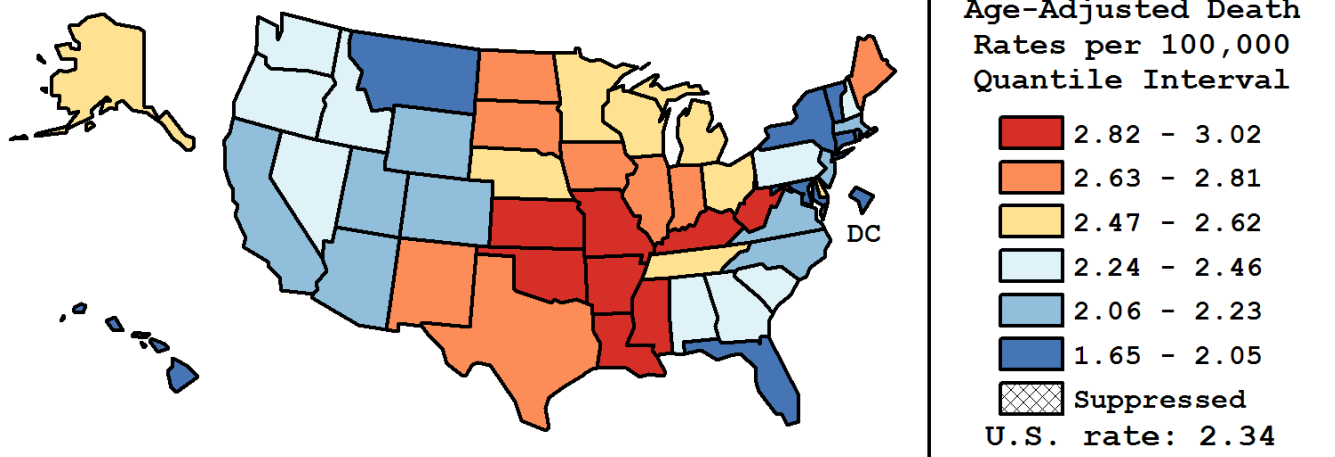
Table 11.20
Cancer of the Kidney And Renal Pelvis (Invasive)

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

Females

State	Rate	SE	Rank(CI) ^d	PD
TOTAL U.S.	2.34	0.02		
High Five States				
Kentucky	3.02	0.15	01(01,19)	28.73 ^c
Oklahoma	2.99	0.16	02(01,22)	27.46 ^c
Louisiana	2.97	0.15	03(01,21)	26.56 ^c
Missouri	2.92	0.12	04(01,20)	24.75 ^c
West Virginia	2.86	0.21	05(01,33)	22.02 ^c
Low Five States				
Montana	1.90	0.24	47(14,51)	-19.04 ^c
D.C.	1.86	0.31	48(05,51)	-20.60 ^c
New York	1.84	0.05	49(42,51)	-21.62 ^c
Hawaii	1.71	0.19	50(27,51)	-27.05 ^c
Connecticut	1.65	0.11	51(42,51)	-29.56 ^c

State	Rate	SE	Rank(CI) ^d	PD	State	Rate	SE	Rank(CI) ^d	PD
Alabama	2.32	0.12	29(14,45)	-1.15	Montana	1.90	0.24	47(14,51)	-19.04 ^c
Alaska	2.53	0.43	23(01,51)	7.85	Nebraska	2.53	0.21	22(01,46)	8.09
Arizona	2.11	0.10	38(24,49)	-9.82	Nevada	2.46	0.18	25(03,46)	4.77
Arkansas	2.84	0.17	07(01,29)	21.33 ^c	New Hampshire	2.29	0.23	31(03,50)	-2.45
California	2.09	0.04	39(31,46)	-10.89	New Jersey	2.07	0.08	41(28,49)	-11.88
Colorado	2.17	0.12	36(20,48)	-7.62	New Mexico	2.69	0.20	12(01,40)	14.69
Connecticut	1.65	0.11	51(42,51)	-29.56 ^c	New York	1.84	0.05	49(42,51)	-21.62 ^c
Delaware	2.57	0.28	20(01,49)	9.83	North Carolina	2.16	0.08	37(24,47)	-7.71
D.C.	1.86	0.31	48(05,51)	-20.60 ^c	North Dakota	2.65	0.36	16(01,50)	13.26
Florida	1.99	0.05	45(35,49)	-14.99	Ohio	2.55	0.08	21(09,31)	8.66
Georgia	2.24	0.09	33(20,45)	-4.57	Oklahoma	2.99	0.16	02(01,22)	27.46 ^c
Hawaii	1.71	0.19	50(27,51)	-27.05 ^c	Oregon	2.30	0.13	30(12,46)	-2.04
Idaho	2.43	0.23	26(01,49)	3.86	Pennsylvania	2.37	0.07	27(17,38)	1.24
Illinois	2.66	0.08	15(05,26)	13.51	Rhode Island	2.01	0.24	44(10,51)	-14.17
Indiana	2.80	0.12	10(01,25)	19.64 ^c	South Carolina	2.35	0.12	28(12,45)	0.41
Iowa	2.67	0.16	13(01,34)	14.02	South Dakota	2.66	0.32	14(01,49)	13.51
Kansas	2.82	0.18	08(01,30)	20.30 ^c	Tennessee	2.62	0.11	17(04,32)	11.77
Kentucky	3.02	0.15	01(01,19)	28.73 ^c	Texas	2.81	0.06	09(02,18)	20.06 ^c
Louisiana	2.97	0.15	03(01,21)	26.56 ^c	Utah	2.08	0.18	40(16,51)	-11.45
Maine	2.76	0.23	11(01,40)	17.56 ^c	Vermont	2.05	0.30	43(04,51)	-12.72
Maryland	1.99	0.11	46(28,50)	-15.17 ^c	Virginia	2.23	0.10	34(20,46)	-4.97
Massachusetts	2.06	0.09	42(27,49)	-11.95	Washington	2.27	0.11	32(17,46)	-3.03
Michigan	2.49	0.09	24(11,34)	6.28	West Virginia	2.86	0.21	05(01,33)	22.02 ^c
Minnesota	2.58	0.12	19(04,34)	10.10	Wisconsin	2.59	0.12	18(04,34)	10.46
Mississippi	2.85	0.18	06(01,29)	21.66 ^c	Wyoming	2.21	0.37	35(01,51)	-5.91
Missouri	2.92	0.12	04(01,20)	24.75 ^c					



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

^b Difference between state rate and total U.S. rate is statistically significant ($p < .0002$).

^c Absolute percent difference between state rate and total U.S. rate is 15% or more.

^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 11.21
Cancer of the Kidney And Renal Pelvis (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2016
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <24	0 to <24 ^b	>=24 ^d	Complete ^e
<u>Race</u>	<u>Sex</u>								
All Races	Both Sexes	204,952	136,846	77,236	40,634	19,773	479,440	53,764	533,204
	Males	129,796	83,708	46,315	23,572	11,329	294,719	31,435	326,154
	Females	75,156	53,138	30,921	17,061	8,444	184,720	22,329	207,050
White	Both Sexes	169,767	114,748	66,313	34,810	17,383	403,021	51,538	459,398
	Males	108,041	70,416	39,790	20,653	10,128	249,028	26,810	278,804
	Females	61,726	44,332	26,524	14,157	7,254	153,993	24,729	180,594
Black	Both Sexes	25,424	16,219	8,023	4,521	1,821	56,009	7,697	63,706
	Males	15,638	9,671	4,814	2,207	873	33,202	3,486	36,689
	Females	9,787	6,549	3,209	2,314	949	22,807	4,210	27,017
Asian/ Pacific Islander	Both Sexes	6,056	3,469	1,845	862	353	12,585	+	+
	Males	3,840	2,139	1,076	493	206	7,755	+	+
	Females	2,216	1,330	769	368	147	4,831	+	+
Hispanic	Both Sexes	21,695	12,760	6,623	3,172	1,511	45,761	+	+
	Males	12,589	7,171	3,716	1,741	793	26,010	+	+
	Females	9,106	5,589	2,907	1,431	718	19,751	+	+

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

Age at Prevalence		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+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races	Both Sexes	0.1488	0.0080	0.0113	0.0103	0.0200	0.0717	0.1876	0.3863	0.6473	0.6571	0.1272
	Males	0.1858	0.0075	0.0100	0.0090	0.0228	0.0876	0.2406	0.5189	0.9073	0.9629	0.1706
	Females	0.1129	0.0086	0.0126	0.0116	0.0171	0.0560	0.1369	0.2662	0.4308	0.4690	0.0914
White	Both Sexes	0.1598	0.0077	0.0115	0.0106	0.0204	0.0734	0.1894	0.3861	0.6555	0.6676	0.1285
	Males	0.1993	0.0068	0.0108	0.0095	0.0228	0.0882	0.2404	0.5140	0.9153	0.9788	0.1713
	Females	0.1210	0.0086	0.0122	0.0119	0.0179	0.0584	0.1396	0.2675	0.4344	0.4728	0.0925
Black	Both Sexes	0.1242	0.0102	0.0134	0.0113	0.0209	0.0723	0.2029	0.4498	0.6969	0.6468	0.1374
	Males	0.1535	0.0111	0.0095	0.0090	0.0257	0.0929	0.2717	0.6324	1.0112	0.9844	0.1912
	Females	0.0972	0.0094	0.0174	0.0135	0.0165	0.0540	0.1430	0.3040	0.4781	0.4801	0.0990
Asian/ Pacific Islander	Both Sexes	0.0618	0.0049	0.0042	0.0028	0.0090	0.0374	0.0970	0.2006	0.3198	0.3893	0.0661
	Males	0.0795	0.0041	0.0029	0.0028	0.0110	0.0495	0.1334	0.2905	0.4475	0.5515	0.0916
	Females	0.0455	0.0057	0.0054	0.0028	0.0071	0.0266	0.0655	0.1280	0.2172	0.2848	0.0461
Hispanic	Both Sexes	0.0801	0.0059	0.0092	0.0072	0.0199	0.0686	0.1693	0.3697	0.6059	0.6287	0.1198
	Males	0.0901	0.0049	0.0085	0.0047	0.0208	0.0743	0.2016	0.4717	0.8191	0.8511	0.1519
	Females	0.0699	0.0070	0.0100	0.0099	0.0189	0.0628	0.1374	0.2794	0.4425	0.4913	0.0946

^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.

^b Prevalence was calculated using the first invasive tumor for each cancer site diagnosed during the previous 24 years. 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).

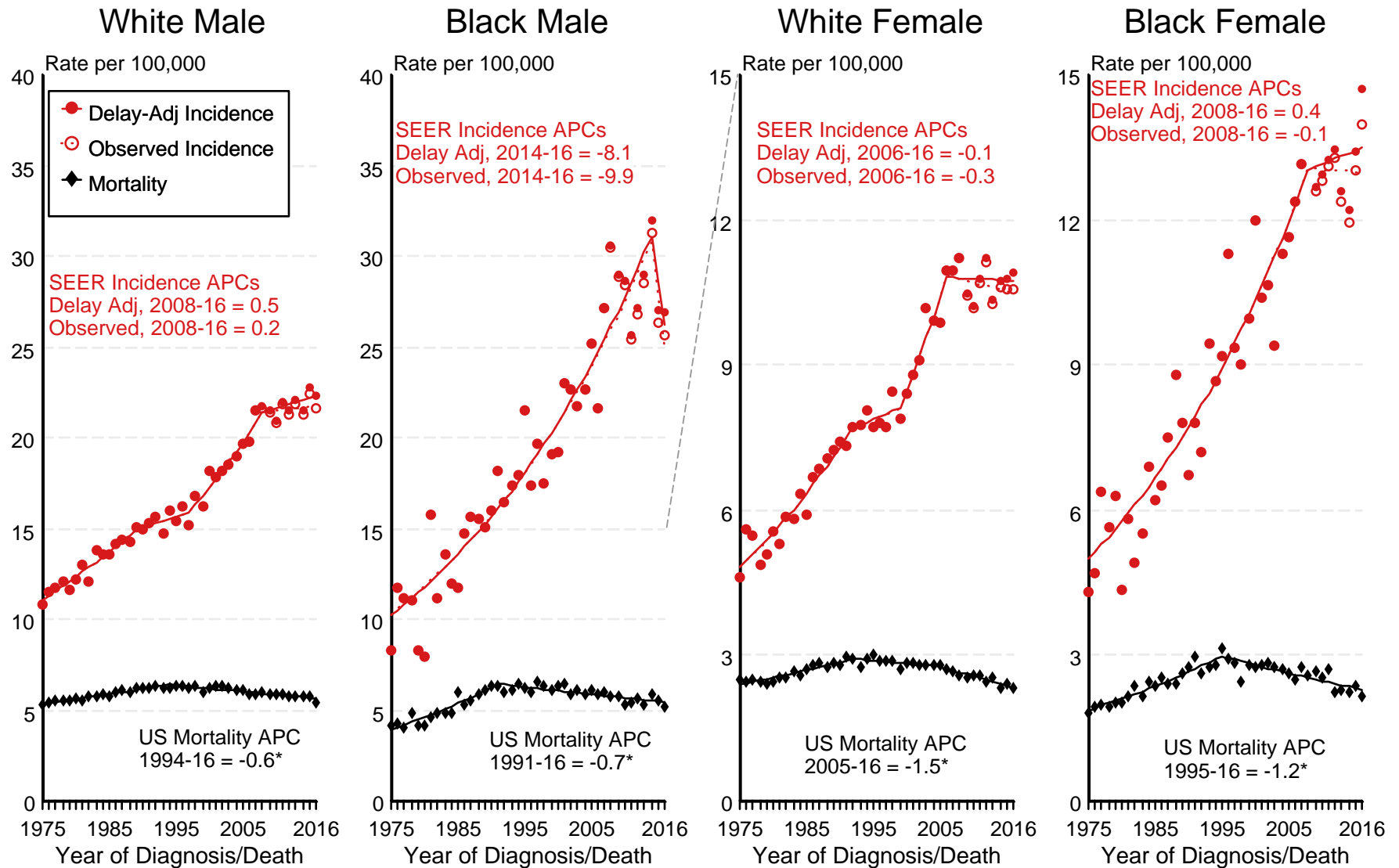
^e Complete prevalence is obtained by summing 0 to <24 and >=24.

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

+ Not available.

Figure 11.1

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



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.

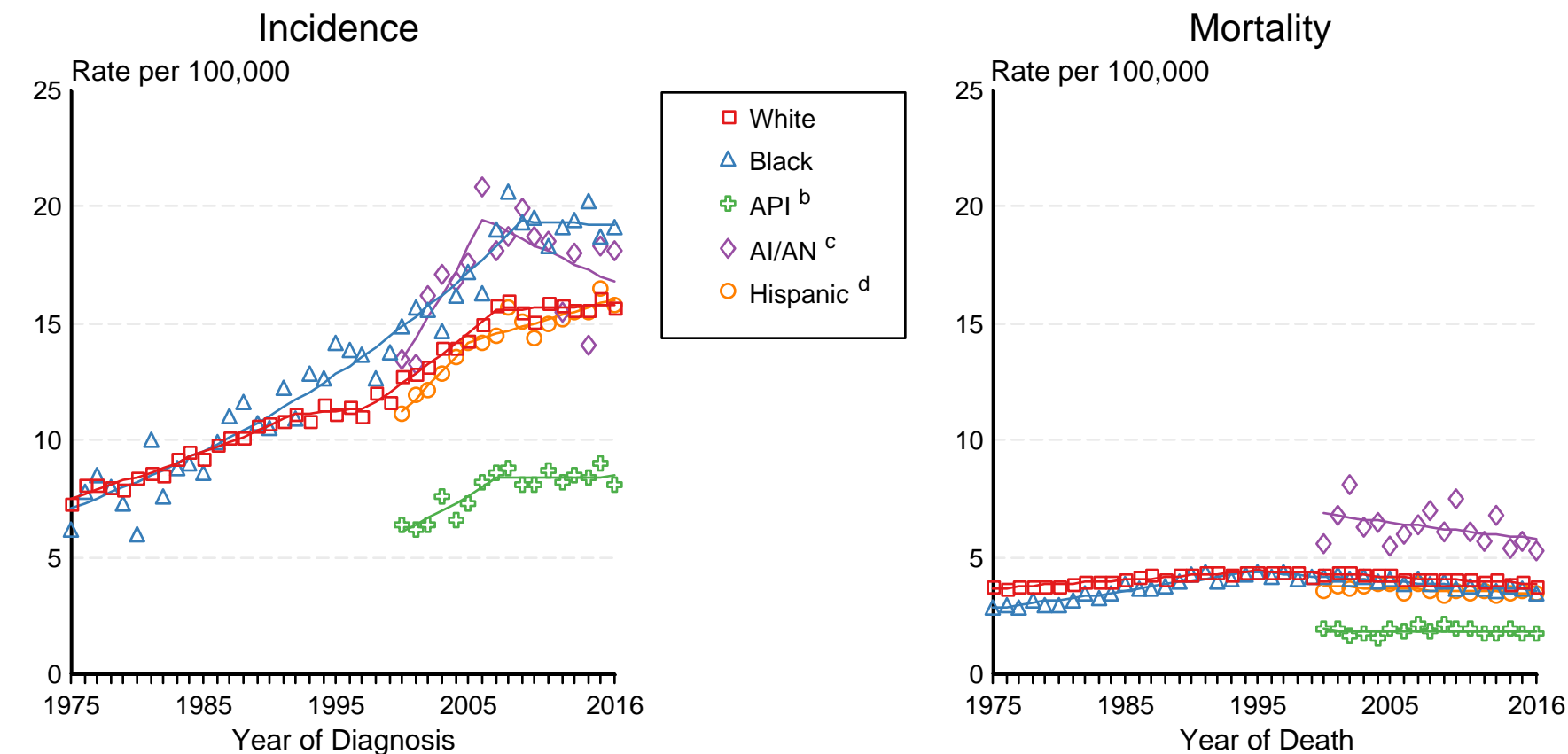
The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

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

Figure 11.2

SEER Incidence and US Death Rates^a Cancer of the Kidney and Renal Pelvis, Both Sexes

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.

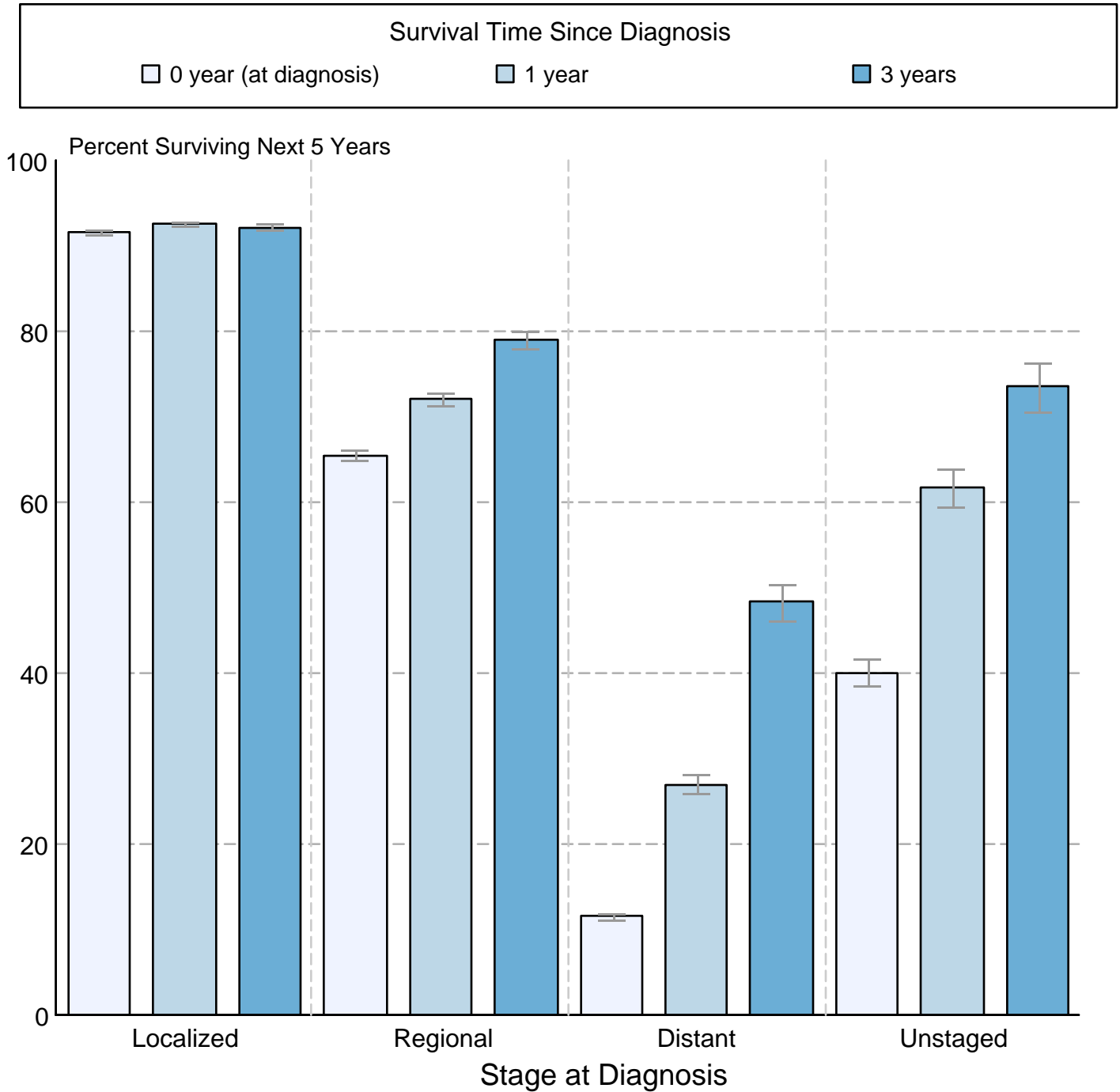
^b API = Asian/Pacific Islander.

^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 11.3

Cancer of the Kidney and Renal Pelvis
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
 2000-2015 by stage at diagnosis



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