

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,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Both Sexes by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-2006	2.0*									2.0*	2.0*
White	1975-1991	2.4*	1991-1997	0.8	1997-2006	2.8*					2.8*	2.8*
Black	1975-2006	2.7*									2.7*	2.7*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-1997	1.2*	1997-2006	2.5*							2.5*	2.5*
White	1992-2006	2.2*									2.2*	2.2*
Black	1992-2006	1.9*									1.9*	1.9*
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-2006	2.0*									2.0*	2.0*
White	1975-2006	2.0*									2.0*	2.0*
Black	1975-2006	2.6*									2.6*	2.6*
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.0*									2.0*	2.0*
White	1992-2006	2.1*									2.1*	2.1*
White NH ^{ef}	1992-2006	2.0*									2.0*	2.0*
Black	1992-2006	1.7*									1.7*	1.7*
Black NH ^{ef}	1992-2006	1.7*									1.7*	1.7*
API ^e	1992-2006	2.1*									2.1*	2.1*
AI/AN ^{eg}	1992-2006	0.7									0.7	0.7
Hispanic ^e	1992-2006	2.5*									2.5*	2.5*
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

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

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

Table 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,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Males by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-2006	1.8*									1.8*	1.8*
White	1975-2006	1.7*									1.7*	1.7*
Black	1975-2006	2.7*									2.7*	2.7*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	1.8*									1.8*	1.8*
White	1992-2006	1.9*									1.9*	1.9*
Black	1992-2006	1.9*									1.9*	1.9*
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-2006	1.7*									1.7*	1.7*
White	1975-2006	1.6*									1.6*	1.6*
Black	1975-2006	2.6*									2.6*	2.6*
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	1.7*									1.7*	1.7*
White	1992-2006	1.8*									1.8*	1.8*
White NH ^{ef}	1992-2006	1.7*									1.7*	1.7*
Black	1992-2006	1.7*									1.7*	1.7*
Black NH ^{ef}	1992-2006	1.6*									1.6*	1.6*
API ^e	1992-2006	1.4*									1.4*	1.4*
AI/AN ^{eg}	1992-2006	-0.3									-0.3	-0.3
Hispanic ^e	1992-2006	2.3*									2.3*	2.3*
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

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

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

Table 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,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Females by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-2006	2.4*									2.4*	2.4*
White	1975-1992	2.8*	1992-1999	0.8	1999-2006	4.0*					3.3*	4.0*
Black	1975-2006	2.8*									2.8*	2.8*
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.4*									2.4*	2.4*
White	1992-2006	2.5*									2.5*	2.5*
Black	1992-2006	2.0*									2.0*	2.0*
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-2006	2.3*									2.3*	2.3*
White	1975-2006	2.3*									2.3*	2.3*
Black	1975-2006	2.7*									2.7*	2.7*
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	2.2*									2.2*	2.2*
White	1992-2006	2.3*									2.3*	2.3*
White NH ^{ef}	1992-1997	0.1	1997-2006	3.1*							3.1*	3.1*
Black	1992-2006	1.8*									1.8*	1.8*
Black NH ^{ef}	1992-2006	1.9*									1.9*	1.9*
API ^e	1992-2006	3.3*									3.3*	3.3*
AI/AN ^{eg}	1992-2006	1.9									1.9	1.9
Hispanic ^e	1992-1995	12.4*	1995-2006	1.7*							1.7*	1.7*
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

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

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

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

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

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

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

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

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

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

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

Table 11.4
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	7.08	10.34	4.52	7.33	10.82	4.63	6.17	8.24	4.31
1976	7.96	11.20	5.47	8.13	11.48	5.59	7.75	11.68	4.69
1977	8.06	11.42	5.49	8.13	11.68	5.48	8.51	11.10	6.39
1978	7.84	11.81	4.83	7.96	12.08	4.88	8.01	11.01	5.65
1979	7.63	11.11	5.05	7.84	11.58	5.10	7.26	8.22	6.30
1980	8.06	11.69	5.38	8.36	12.21	5.55	5.97	7.95	4.36
1981	8.49	12.84	5.29	8.57	13.04	5.31	10.00	15.77	5.82
1982	8.35	11.82	5.72	8.53	12.03	5.87	7.59	11.20	4.90
1983	8.94	13.24	5.67	9.24	13.77	5.81	8.81	13.53	5.52
1984	9.19	13.12	6.20	9.47	13.61	6.33	9.02	12.01	6.90
1985	8.95	13.13	5.77	9.23	13.61	5.93	8.60	11.63	6.22
1986	9.66	13.84	6.56	9.83	14.09	6.67	10.12	14.97	6.62
1987	9.90	14.07	6.73	10.09	14.37	6.88	11.06	15.60	7.51
1988	9.93	13.99	6.95	10.10	14.31	7.03	11.59	15.36	8.77
1989	10.29	14.47	7.14	10.58	15.02	7.21	10.78	15.06	7.82
1990	10.43	14.71	7.14	10.70	14.97	7.45	10.51	15.94	6.61
1991	10.64	15.06	7.18	10.82	15.24	7.35	12.29	18.30	7.79
1992	10.78	15.29	7.41	11.08	15.60	7.73	10.98	16.39	7.18
1993	10.74	14.67	7.63	10.84	14.73	7.73	12.77	17.29	9.44
1994	11.29	15.65	7.86	11.54	15.98	8.04	12.71	18.01	8.66
1995	11.11	15.49	7.65	11.12	15.40	7.70	14.26	21.62	9.19
1996	11.35	15.84	7.91	11.46	16.23	7.77	13.78	17.38	11.13
1997	10.92	15.08	7.60	10.99	15.09	7.69	13.56	19.47	9.29
1998	11.79	16.40	8.16	12.07	16.70	8.43	12.62	17.22	9.05
1999	11.42	15.94	7.81	11.63	16.24	7.88	13.71	18.82	10.02
2000	12.45	17.37	8.54	12.71	17.90	8.46	14.78	19.24	11.84
2001	12.52	17.42	8.57	12.72	17.62	8.74	15.53	22.91	10.25
2002	12.76	17.60	8.82	13.00	17.82	9.03	15.14	22.05	10.29
2003	13.35	18.00	9.58	13.68	18.20	9.97	14.37	21.41	9.16
2004	13.34	18.07	9.47	13.66	18.46	9.68	15.52	21.74	10.82
2005	13.60	18.62	9.51	13.78	18.82	9.62	16.01	23.19	10.91
2006	13.90	18.11	10.38	14.14	18.40	10.51	15.08	19.65	11.60
1975-2006	10.68	14.98	7.33	10.82	15.21	7.41	12.05	16.97	8.43

^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 11.6
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, 2002-2006									
All ages	13.6	18.6	9.5	14.1	19.2	9.9	15.0	21.3	10.3
Under 65	7.2	9.5	5.0	7.4	9.7	5.2	8.4	11.9	5.5
65 and over	57.8	81.6	40.6	60.0	84.8	42.0	60.2	86.2	43.7
All ages (IARC world std) ^c	9.5	12.9	6.7	9.9	13.2	6.9	10.7	15.1	7.3
Age-Specific Rates, 2002-2006									
<1	1.5	1.6	1.3	1.6	1.9	1.4	-	-	-
1-4	1.8	1.8	1.9	1.9	1.8	2.0	1.8	2.1	1.5
5-9	0.4	0.3	0.5	0.5	0.4	0.5	0.5	-	-
10-14	0.1	-	0.2	0.1	-	0.2	-	-	-
15-19	0.2	0.1	0.2	0.2	-	0.3	-	-	-
20-24	0.3	0.3	0.3	0.3	0.3	0.3	-	-	-
25-29	0.8	0.9	0.8	0.8	0.8	0.8	1.1	1.3	-
30-34	1.7	1.9	1.5	1.8	2.1	1.6	1.9	2.0	1.9
35-39	3.5	4.4	2.6	3.6	4.4	2.8	4.2	5.4	3.1
40-44	6.9	8.5	5.2	7.0	8.6	5.4	8.2	11.0	5.6
45-49	12.2	16.0	8.4	12.5	16.4	8.6	14.1	19.0	9.8
50-54	19.0	25.6	12.7	19.4	25.7	13.1	23.0	33.8	13.9
55-59	29.2	39.4	19.7	30.0	39.8	20.6	35.2	52.0	21.2
60-64	40.8	56.9	26.0	42.4	58.5	27.4	45.7	68.3	27.6
65-69	51.9	71.5	34.8	53.7	73.5	36.2	59.1	86.6	38.2
70-74	58.9	80.5	41.5	61.4	84.2	42.8	61.3	82.9	46.2
75-79	66.7	94.3	47.0	69.3	98.2	48.5	68.6	90.9	54.8
80-84	61.6	88.9	44.6	64.1	92.1	46.5	58.6	95.6	38.3
85+	48.7	76.0	35.9	50.2	79.5	36.6	47.8	72.9	37.4
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2002-2006									
All ages									
Under 65									
65 and over									
All ages (IARC world std) ^c									
Age-Specific Rates, 2002-2006									
<1									
1-4									
5-9									
10-14									
15-19									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70-74									
75-79									
80-84									
85+									

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

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

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

- Rates are per 100,000 and are age-adjusted to the IARC world standard population.

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

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

Survival Rates, 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 Rates									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	37	36	39	38	38	37
1970-1973 ^a	-	-	-	46	44	50	44	40	49
1975-1977 ^b	50.9	51.0	50.8	50.7	50.9	50.3	49.7	48.2	52.0 ^f
1978-1980 ^b	54.1	53.8	54.6	53.8	54.1	53.3	57.6	52.0	64.5 ^f
1981-1983 ^b	51.4	52.3	50.0	51.4	52.5	49.5	51.9	51.8	52.0
1984-1986 ^b	55.8	56.3	55.0	56.0	56.6	55.0	54.0	50.5	59.1
1987-1989 ^b	57.9	58.2	57.4	58.5	59.2	57.4	56.0	53.5	58.6
1990-1992 ^b	61.5	61.6	61.3	62.1	62.4	61.6	57.8	55.9	59.8
1993-1995 ^b	62.7	62.5	63.0	63.1	63.6	62.5	58.7	55.4	63.4
1996-1998 ^b	63.9	63.8	63.9	63.4	63.6	63.2	67.3	67.9	65.6
1999-2005 ^b	69.1 ^e	68.0 ^e	70.8 ^e	69.4 ^e	68.6 ^e	70.7 ^e	65.9 ^e	62.9 ^e	69.5 ^e
5-Year Period Survival Rates^{cd}									
Year of Diagnosis:									
1999-2005	70.3	69.9	70.9	70.4	69.9	71.2	67.3	67.2	67.1
Stage Distribution (%) 1999-2005^c									
All Stages									
Number of cases	47,144	28,900	18,244	39,716	24,412	15,304	4,619	2,752	1,867
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	58	57	60	58	57	60	63	63	63
Regional	18	19	17	19	19	17	14	14	13
Distant	19	20	18	19	20	18	19	20	18
Unstaged	4	4	5	4	4	5	5	4	5
5-Year Relative Survival Rates, 1999-2005^c									
Age at Diagnosis:									
Ages <45	81.1	79.3	83.6	82.5	80.5	85.4	73.0	70.2	76.4
Ages 45-54	74.3	72.3	78.2	74.5	72.3	79.2	69.9	68.8	71.8
Ages 55-64	69.5	68.7	71.2	70.1	69.3	71.7	64.6	62.4	69.0
Ages 65-74	65.1	64.1	66.5	64.8	63.9	66.3	64.8	64.3	63.8
Ages 75+	54.6	55.9	53.3	55.1	56.8	53.5	48.1	46.0 ^f	49.0
Ages <65	73.6	72.0	76.6	74.1	72.4	77.4	68.8	66.6	72.5
Ages 65+	60.8	61.2	60.4	60.8	61.3	60.2	59.0	59.5	58.1
Stage:									
All Stages	68.4	67.9	69.0	68.5	68.1	69.1	65.9	64.7	67.4
Localized	90.4	90.3	90.5	91.0	90.9	91.2	85.6	85.0	86.1
Regional	62.3	63.7	60.0	62.4	63.7	60.0	56.7	56.2	55.8
Distant	10.4	10.8	9.5	9.9	10.6	8.6	11.9	10.1	14.7
Unstaged	37.5	38.0	35.9	36.3	37.9	33.5	37.4	32.7 ^f	41.8 ^f

^a Rates are based on End Results data from a series of hospital registries and one population-based registry.

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

Rates are based on follow-up of patients into 2006.

^c Rates are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005.

The remaining 13 SEER Areas contribute cases for the entire period 1999-2005. Rates are based on follow-up of patients into 2006.

^d Period survival provides a more up-to-date estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2003-2005: 0-1 year survival),

(2002-2004: 1-2 year survival), (2001-2003: 2-3 year survival), (2000-2002: 3-4 year survival), (1999-2001: 4-5 years survival).

^e The difference in rates between 1975-1977 and 1999-2005 is statistically significant ($p < .05$).

^f The standard error of the survival rate is between 5 and 10 percentage points.

^g The standard error of the survival rate is greater than 10 percentage points.

- Statistic could not be calculated due to fewer than 25 cases during the time period.

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

Survival Rates^a
By Year of Diagnosis

All Races, Males and Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	69.7	71.4	73.6	76.4	77.3	77.6	76.9	77.2	77.5	77.7	76.9	78.4	78.4	80.2	81.7	80.1	82.3	85.5	84.3
2-year	60.9	62.4	65.6	68.7	69.4	69.5	71.4	70.2	70.2	71.0	70.4	71.7	72.3	74.5	74.6	75.5	76.9	80.1	
3-year	57.0	57.9	61.4	66.1	65.2	66.8	67.5	67.6	66.1	68.1	66.7	68.5	68.3	70.1	71.7	72.2	74.2		
4-year	53.7	55.0	58.8	63.8	63.1	63.9	64.1	65.8	64.3	65.3	64.4	65.8	65.5	68.5	69.4	70.5			
5-year	51.9	53.4	57.0	61.1	61.6	61.7	62.3	63.1	62.5	63.9	63.0	64.8	63.6	66.9	68.0				
6-year	50.6	51.3	55.4	59.3	59.7	60.4	60.8	62.1	60.7	62.4	61.2	63.3	62.2	65.7					
7-year	48.9	50.4	54.1	57.0	58.9	58.1	60.4	60.7	59.6	61.0	59.9	61.8	61.0						
8-year	47.9	49.4	53.2	56.3	58.0	57.3	59.0	59.3	58.7	60.7	58.0	60.6							
9-year	47.0	48.4	52.1	55.3	56.6	56.2	58.2	58.9	57.6	60.5	56.6								
10-year	46.2	47.5	50.6	54.6	54.9	55.6	55.9	57.2	56.9	58.8									
11-year	45.6	46.5	49.3	53.7	53.8	53.6	54.8	56.0	55.2										
12-year	44.9	46.0	48.4	52.1	53.1	52.8	54.7	54.8											
13-year	44.5	45.6	47.7	51.3	52.8	51.7	54.3												
14-year	43.7	45.2	46.7	50.1	51.7	51.5													
15-year	43.0	45.1	46.1	48.7	51.7														
16-year	42.9	44.9	45.5	48.7															
17-year	42.8	44.8	45.0																
18-year	42.0	44.4																	
19-year	41.3	43.7																	
20-year	40.9	43.2																	

^a Survival rates are relative rates expressed as percents.
^b Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

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

Survival Rates^a
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	70.4	71.5	74.1	78.0	78.9	78.8	78.0	77.1	79.8	78.5	78.5	78.9	77.8	79.5	81.1	80.5	81.1	86.0	84.2
2-year	61.2	62.6	66.1	69.7	69.9	69.8	71.8	69.5	71.5	72.3	71.2	72.4	71.3	73.4	74.0	75.6	76.6	81.1	
3-year	57.0	58.3	62.1	67.2	66.4	67.2	68.0	66.5	67.4	68.7	67.2	68.6	67.3	68.4	71.0	71.6	74.5		
4-year	53.6	55.4	59.2	64.3	64.8	63.5	64.3	64.7	64.7	65.7	64.6	65.7	64.3	66.6	68.5	69.4			
5-year	51.9	53.7	57.4	61.3	63.0	60.6	62.2	62.3	62.9	64.1	62.6	64.7	62.4	64.0	66.9				
6-year	50.6	51.6	55.4	58.6	60.2	59.6	60.2	61.6	60.2	63.2	60.2	62.7	60.3	63.2					
7-year	48.6	50.5	53.9	56.3	59.1	57.2	59.9	60.3	59.3	61.7	58.9	61.0	58.9						
8-year	47.3	49.6	52.8	55.3	57.6	56.4	58.6	58.8	58.1	60.9	55.7	59.2							
9-year	46.6	48.5	51.2	54.3	56.5	55.5	57.7	58.6	57.3	60.7	54.2								
10-year	45.3	47.6	49.9	53.3	54.7	54.7	55.3	57.2	56.2	58.5									
11-year	44.6	46.7	48.0	51.8	53.0	52.8	54.5	56.1	55.1										
12-year	43.6	46.2	46.8	50.0	52.4	52.1	54.5	54.8											
13-year	43.1	45.8	45.7	49.3	52.2	50.7	53.7												
14-year	42.3	44.9	44.8	48.6	50.3	50.3													
15-year	41.4	44.9	44.3	47.3	50.3														
16-year	41.2	44.3	43.4	47.3															
17-year	41.1	44.3	42.9																
18-year	40.4	44.1																	
19-year	39.7	43.3																	
20-year	39.1	42.6																	

^a

Survival rates are relative rates expressed as percents.

^b

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

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

Survival Rates^a
By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	68.6	71.2	72.7	73.9	74.7	75.8	75.1	77.4	74.0	76.3	74.5	77.6	79.4	81.4	82.7	79.4	84.1	84.7	84.4
2-year	60.3	62.1	64.9	67.2	68.6	68.9	70.7	71.3	68.0	69.0	69.1	70.7	73.9	76.4	75.4	75.3	77.2	78.6	
3-year	56.9	57.3	60.4	64.5	63.3	66.3	66.7	69.1	64.0	67.1	65.9	68.3	69.9	72.8	73.0	73.1	73.7		
4-year	53.9	54.4	58.2	63.1	60.4	64.5	63.8	67.3	63.5	64.7	63.9	65.9	67.4	71.6	70.8	72.1			
5-year	51.7	52.8	56.3	61.0	59.5	63.4	62.6	64.3	61.9	63.4	63.0	64.9	65.5	71.5	69.8				
6-year	50.5	50.9	55.5	60.3	58.8	61.6	61.3	62.9	61.4	61.1	62.7	64.1	65.1	69.6					
7-year	49.3	50.1	54.5	58.1	58.6	59.2	61.0	61.4	60.0	59.8	61.6	63.0	63.5						
8-year	48.8	49.1	53.9	57.7	58.4	58.4	59.5	60.0	59.5	59.7	61.0	62.6							
9-year	47.6	48.2	53.5	56.9	56.9	57.0	58.9	59.0	57.8	59.7	60.4								
10-year	47.4	47.5	51.7	56.0	55.3	56.8	56.6	57.1	57.8	59.3									
11-year	47.2	46.3	51.3	56.0	54.9	54.9	55.1	55.9	55.2										
12-year	46.8	45.7	50.9	55.1	54.2	53.7	54.7	54.7											
13-year	46.6	45.3	50.7	54.2	53.8	53.1	54.6												
14-year	45.8	45.0	49.5	51.8	53.8	53.1													
15-year	45.6	45.0	48.7	50.5	53.8														
16-year	45.4	45.0	48.7	49.4															
17-year	45.2	45.0	48.0																
18-year	44.5	45.0																	
19-year	43.6	44.1																	
20-year	43.6	44.0																	

^a

Survival rates are relative rates expressed as percents.

^b

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

Table 11.12
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 17 Areas ^b			SEER 13 Areas ^b			SEER 9 Areas ^b		
	Rate 2002-2006			Trend 1997-2006 ^c			Trend 1997-2006 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
RACE/ETHNICITY									
All Races	13.6	18.6	9.5	2.0*	1.7*	2.2*	2.0*	1.7*	2.3*
White	14.1	19.2	9.9	2.1*	1.8*	2.3*	2.0*	1.6*	2.3*
White Hispanic ^e	13.6	18.2	9.9	2.4*	2.1*	2.6*	-	-	-
White Non-Hispanic ^e	14.2	19.4	9.9	2.0*	1.7*	3.1*	-	-	-
Black	15.0	21.3	10.3	1.7*	1.7*	1.8*	2.6*	2.6*	2.7*
Asian/Pacific Islander	6.9	9.6	4.8	2.1*	1.4*	3.3*	-	-	-
Amer Ind/Alaska Nat ^f	17.5	21.7	14.1	0.7	-0.3	-	-	-	-
Hispanic ^e	13.2	17.6	9.6	2.5*	2.3*	1.7*	-	-	-
U.S. Mortality ^g									
	Rate 2002-2006			Trend 1997-2006 ^h					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
RACE/ETHNICITY									
All Races									
White									
White Hispanic ^e									
White Non-Hispanic ^e									
Black									
Asian/Pacific Islander									
Amer Ind/Alaska Nat									
Total U.S.									
CHSDA Counties									
Non-CHSDA Counties									
Hispanic ^e									

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.3, April 2008, National Cancer Institute.

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

Trend based on less than 10 cases for at least one year within the time interval.

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

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

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

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

^c The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 2 Joinpoints over diagnosis years 1992-2006.

^d The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 4 Joinpoints over diagnosis years 1975-2006.

^e Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. The 2002-2006 Hispanic and Non-Hispanic death rates exclude deaths from Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.

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

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

^h The 1997-2006 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2006.

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

Table 11.13
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, 2002-2006</u>									
Atlanta & Rural Georgia	11.91	16.48	8.33	11.85	16.62	7.93	12.87	17.73	9.53
Atlanta	11.95	16.43	8.44	11.75	16.38	7.94	13.34	18.39	9.91
Rural Georgia	11.33	17.40	6.59	13.20	20.48	7.17	7.32	-	-
California	12.26	17.04	8.34	13.04	18.05	8.87	14.30	20.44	9.54
Greater Bay Area	11.23	15.29	7.87	12.03	16.31	8.43	16.00	21.69	11.43
San Francisco-Oakland	11.21	15.15	7.96	11.89	16.12	8.33	16.05	21.78	11.62
San Jose-Monterey	11.29	15.57	7.69	12.30	16.68	8.62	14.94	19.93	-
Los Angeles	11.41	15.99	7.77	12.42	17.42	8.39	12.50	18.13	8.55
Greater California	13.06	18.19	8.80	13.61	18.86	9.20	15.53	22.44	9.61
Connecticut	14.47	19.71	10.32	14.51	19.54	10.52	13.78	20.93	8.45
Detroit	15.34	20.62	11.25	15.13	20.15	11.18	16.67	23.38	11.95
Hawaii	10.95	15.42	7.03	12.29	17.47	7.15	19.19	-	-
Iowa	15.62	20.90	11.28	15.42	20.52	11.22	19.39	34.37	-
Kentucky	16.25	22.20	11.59	16.15	22.03	11.53	19.16	26.81	13.38
Louisiana	17.44	23.54	12.67	18.07	24.10	13.19	16.15	22.44	11.71
New Jersey	14.88	20.51	10.43	15.31	20.96	10.78	14.14	20.42	9.70
New Mexico	12.30	16.18	8.95	12.03	15.98	8.58	-	-	-
Seattle-Puget Sound	14.49	19.69	10.08	14.73	19.92	10.29	17.54	25.97	9.05
Utah	10.46	13.91	7.47	10.62	14.10	7.60	-	-	-
9 SEER Areas ^b	13.40	18.09	9.56	13.65	18.34	9.76	15.23	21.59	10.57
11 SEER Areas ^b	12.82	17.46	9.04	13.31	18.04	9.40	14.57	20.74	10.07
13 SEER Areas ^b	12.83	17.48	9.04	13.31	18.05	9.40	14.47	20.59	9.99
17 SEER Areas ^b	13.59	18.61	9.51	14.06	19.17	9.85	14.96	21.30	10.31

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

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

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

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

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

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

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

Estimated United States Cancer Prevalence Counts^a on January 1, 2006
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	25 to <30	0 to <16 ^e	0 to <31 ^e	>=31 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	111,278	61,228	38,793	22,513	12,707	7,477	216,737	254,925	11,143	266,068
	Males	66,844	35,728	22,828	12,604	7,573	3,858	128,580	150,001	6,165	156,166
	Females	44,434	25,500	15,965	9,909	5,134	3,619	88,157	104,924	4,978	109,902
White ^b	Both Sexes	95,119	52,432	33,890	20,212	11,285	6,680	186,269	220,503	12,716	233,219
	Males	57,212	31,202	20,208	11,467	6,887	3,527	111,481	131,035	5,866	136,901
	Females	37,907	21,230	13,682	8,745	4,398	3,153	74,788	89,468	6,850	96,318
Black ^b	Both Sexes	11,588	6,692	3,755	1,875	1,183	638	22,510	25,768	1,931	27,699
	Males	6,809	3,303	1,956	897	545	248	12,317	13,791	686	14,477
	Females	4,779	3,389	1,799	978	638	390	10,193	11,977	1,245	13,222
Asian/ Pacific Islander ^c	Both Sexes	2,432	1,132	592	+	+	+	4,221	+	+	+
	Males	1,531	682	356	+	+	+	2,609	+	+	+
	Females	901	450	236	+	+	+	1,612	+	+	+
Hispanic ^d	Both Sexes	8,659	4,167	2,352	+	+	+	15,590	+	+	+
	Males	5,105	2,367	1,323	+	+	+	8,951	+	+	+
	Females	3,554	1,800	1,029	+	+	+	6,639	+	+	+

Estimated prevalence percent^a on January 1, 2006, of the SEER 11 population diagnosed in the previous 16 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence		Age Specific (Crude)									Age-Adjusted ^f	
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races ^c	Both Sexes	0.0628%	0.0067%	0.0088%	0.0024%	0.0102%	0.0391%	0.1085%	0.2188%	0.2962%	0.2651%	0.0644%
	Males	0.0762%	0.0064%	0.0079%	0.0023%	0.0107%	0.0473%	0.1446%	0.2971%	0.4003%	0.3777%	0.0852%
	Females	0.0497%	0.0070%	0.0098%	0.0024%	0.0096%	0.0309%	0.0740%	0.1482%	0.2159%	0.2025%	0.0475%
White ^c	Both Sexes	0.0686%	0.0070%	0.0094%	0.0023%	0.0108%	0.0411%	0.1119%	0.2321%	0.3129%	0.2762%	0.0677%
	Males	0.0829%	0.0070%	0.0085%	0.0023%	0.0112%	0.0492%	0.1478%	0.3113%	0.4234%	0.4001%	0.0892%
	Females	0.0542%	0.0071%	0.0103%	0.0024%	0.0105%	0.0328%	0.0767%	0.1587%	0.2257%	0.2083%	0.0498%
Black ^c	Both Sexes	0.0534%	0.0075%	0.0101%	0.0035%	0.0113%	0.0426%	0.1295%	0.2161%	0.2921%	0.2801%	0.0680%
	Males	0.0633%	0.0060%	0.0084%	0.0038%	0.0128%	0.0518%	0.1827%	0.3005%	0.3764%	0.3793%	0.0895%
	Females	0.0443%	0.0090%	0.0120%	0.0032%	0.0099%	0.0345%	0.0852%	0.1504%	0.2360%	0.2320%	0.0524%
Asian/ Pacific Islander ^c	Both Sexes	0.0339%	0.0029%	0.0028%	-	0.0050%	0.0213%	0.0600%	0.1168%	0.1759%	0.1576%	0.0357%
	Males	0.0431%	0.0019%	0.0027%	-	0.0049%	0.0286%	0.0832%	0.1722%	0.2444%	0.2101%	0.0490%
	Females	0.0254%	0.0040%	0.0030%	-	0.0050%	0.0145%	0.0397%	0.0698%	0.1257%	0.1230%	0.0251%
Hispanic ^d	Both Sexes	0.0350%	0.0059%	0.0064%	0.0016%	0.0092%	0.0327%	0.0980%	0.2062%	0.3084%	0.2791%	0.0621%
	Males	0.0391%	0.0059%	0.0044%	0.0014%	0.0093%	0.0365%	0.1236%	0.2709%	0.4336%	0.3727%	0.0803%
	Females	0.0307%	0.0059%	0.0084%	0.0018%	0.0091%	0.0287%	0.0738%	0.1513%	0.2172%	0.2247%	0.0479%

^a US 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER registries and 1/1/2006 US population estimates based on the average of 2005 and 2006 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

^{b c d} Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.

^e Maximum limited-duration prevalence: 31 years for 1975-2006 SEER 9 data; 16 years for 1990-2006 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

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

^{g h i} (g) Cases diagnosed more than 31 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (h) Complete prevalence is obtained by summing 0 to <31 and >=31. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.

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

+ Not available.

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

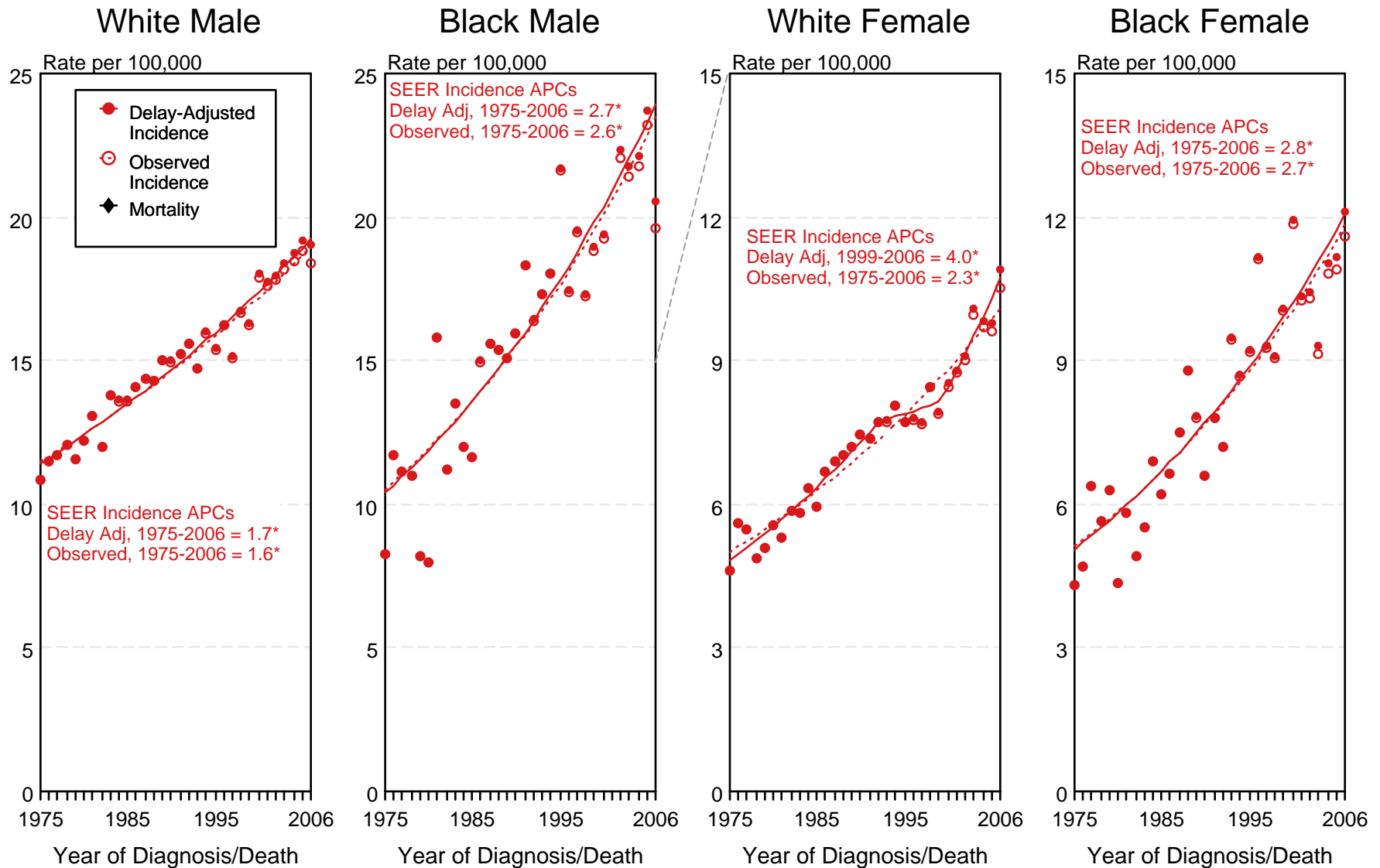


Figure 11.1

^a Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
* The APC is significantly different from zero ($p < 0.05$).

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

Joinpoint Analyses for Whites and Blacks from 1975-2006
and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2006

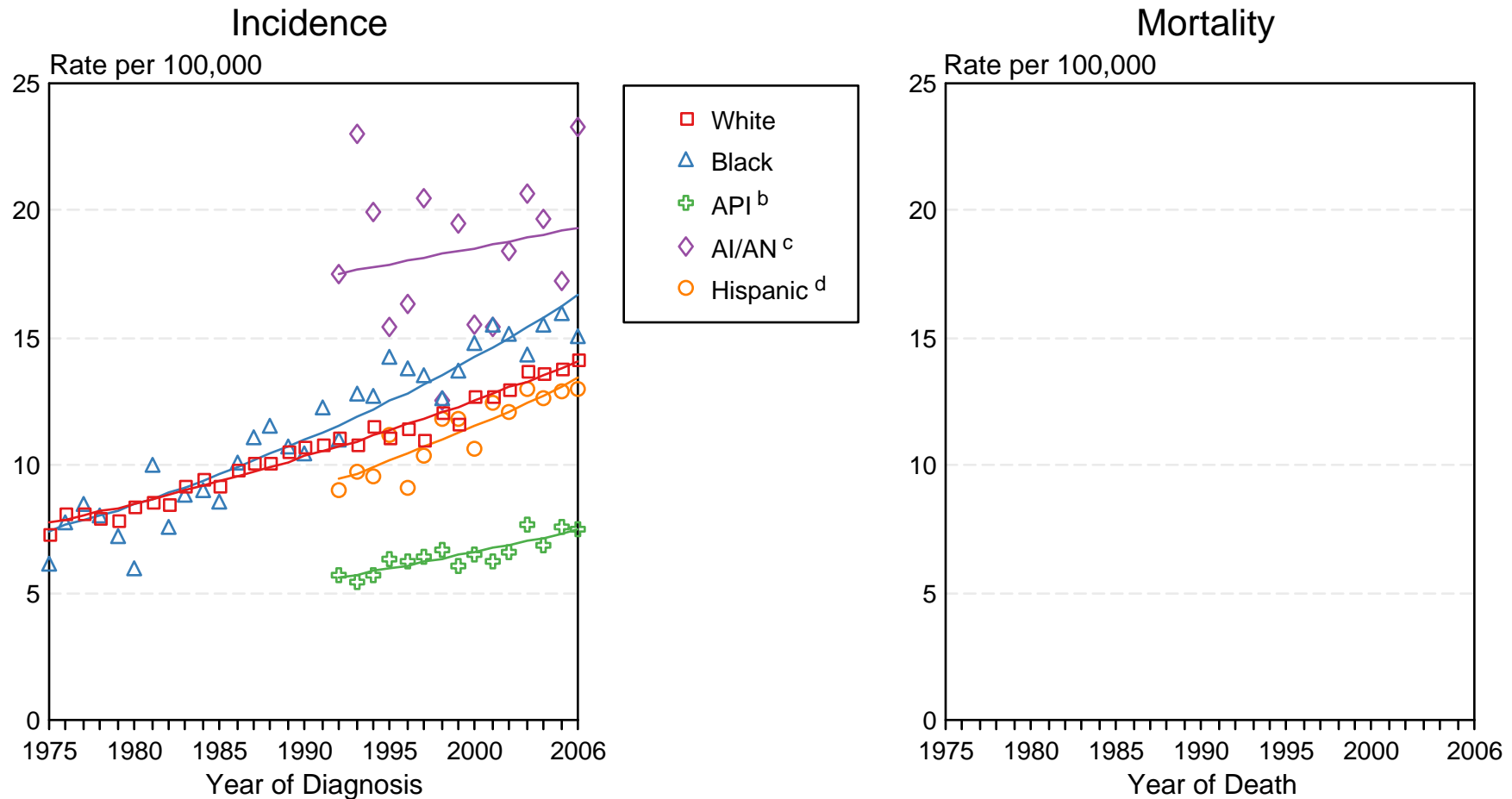


Figure 11.2

Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta). Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

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

Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2006 period allow a maximum of 4 joinpoints. Analyses for other ethnic groups during the period 1992-2006 allow a maximum of 2 joinpoints.

^b API = Asian/Pacific Islander.

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

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