

Table 8.1  
Cancer of the Esophagus (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2016</u>														
All Races	1975-04	0.5*	2004-16	-1.1*									-1.1*	-1.1*
White	1975-04	1.4*	2004-16	-0.6*									-0.6*	-0.6*
Black	1975-86	1.0	1986-16	-4.3*									-4.3*	-4.3*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-04	0.6	2004-16	-1.3*									-1.3*	-1.3*
White	2000-04	1.7	2004-16	-0.8*									-0.8*	-0.8*
White NH <sup>ef</sup>	2000-06	1.1	2006-16	-0.7*									-0.7*	-0.7*
Black	2000-16	-4.4*											-4.4*	-4.4*
Black NH <sup>ef</sup>	2000-16	-4.3*											-4.3*	-4.3*
API <sup>e</sup>	2000-16	-1.5*											-1.5*	-1.5*
AI/AN <sup>eg</sup>	2000-16	-0.8											-0.8	-0.8
Hispanic <sup>f</sup>	2000-16	-1.7*											-1.7*	-1.7*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-02	0.7*	2002-16	-0.9*									-0.9*	-0.9*
White	1975-83	0.4*	1983-00	1.7*	2000-05	0.8*	2005-16	-0.5*					-0.5*	-0.5*
Black	1975-82	1.1*	1982-93	-1.6*	1993-16	-4.6*							-4.6*	-4.6*
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-05	0.0	2005-16	-1.0*									-1.0*	-1.0*
White	2000-05	0.8*	2005-16	-0.5*									-0.5*	-0.5*
White NH <sup>ef</sup>	2000-05	0.9*	2005-16	-0.3*									-0.3*	-0.3*
Black	2000-16	-4.7*											-4.7*	-4.7*
Black NH <sup>ef</sup>	2000-16	-4.6*											-4.6*	-4.6*
API <sup>e</sup>	2000-16	-1.4*											-1.4*	-1.4*
AI/AN <sup>eg</sup>	2000-16	-0.9											-0.9	-0.9
Hispanic <sup>f</sup>	2000-16	-1.4*											-1.4*	-1.4*

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).

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

<sup>b</sup> 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).

<sup>c</sup> Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

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

<sup>f</sup> 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.

<sup>g</sup> 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 8.2  
Cancer of the Esophagus (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2016</u>														
All Races	1975-04	0.8*	2004-16	-1.1*									-1.1*	-1.1*
White	1975-04	1.7*	2004-16	-0.7*									-0.7*	-0.7*
Black	1975-86	0.9	1986-16	-4.6*									-4.6*	-4.6*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-04	1.1	2004-16	-1.4*									-1.4*	-1.4*
White	2000-07	0.8	2007-16	-1.3*									-1.3*	-1.3*
White NH <sup>ef</sup>	2000-07	1.1*	2007-16	-1.1*									-1.1*	-1.1*
Black	2000-16	-4.5*											-4.5*	-4.5*
Black NH <sup>ef</sup>	2000-16	-4.4*											-4.4*	-4.4*
API <sup>e</sup>	2000-16	-1.1											-1.1	-1.1
AI/AN <sup>eg</sup>	2000-16	-1.7											-1.7	-1.7
Hispanic <sup>f</sup>	2000-16	-2.0*											-2.0*	-2.0*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-85	0.7*	1985-94	1.2*	1994-05	0.4*	2005-16	-1.1*					-1.1*	-1.1*
White	1975-82	0.3	1982-99	1.9*	1999-05	1.1*	2005-16	-0.6*					-0.6*	-0.6*
Black	1975-82	1.4*	1982-93	-1.6*	1993-16	-4.8*							-4.8*	-4.8*
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-05	0.3	2005-16	-1.1*									-1.1*	-1.1*
White	2000-05	1.1*	2005-16	-0.6*									-0.6*	-0.6*
White NH <sup>ef</sup>	2000-05	1.2*	2005-16	-0.4*									-0.4*	-0.4*
Black	2000-16	-4.9*											-4.9*	-4.9*
Black NH <sup>ef</sup>	2000-16	-4.8*											-4.8*	-4.8*
API <sup>e</sup>	2000-16	-1.2*											-1.2*	-1.2*
AI/AN <sup>eg</sup>	2000-16	-0.8											-0.8	-0.8
Hispanic <sup>f</sup>	2000-16	-1.3*											-1.3*	-1.3*

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).

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

<sup>b</sup> 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).

<sup>c</sup> Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

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

<sup>f</sup> 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.

<sup>g</sup> 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 8.3  
Cancer of the Esophagus (Invasive)

Trends in SEER Incidence<sup>ab</sup> and U.S. Mortality<sup>c</sup> 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 <sup>d</sup>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	2007-16	2012-16
<u>SEER 9 Delay-Adjusted Incidence<sup>a</sup>, 1975-2016</u>														
All Races	1975-97	-0.1	1997-16	-1.3*									-1.3*	-1.3*
White	1975-16	-0.1											-0.1	-0.1
Black	1975-81	8.5*	1981-16	-3.3*									-3.3*	-3.3*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-16	-1.6*											-1.6*	-1.6*
White	2000-16	-0.9*											-0.9*	-0.9*
White NH <sup>ef</sup>	2000-16	-0.7*											-0.7*	-0.7*
Black	2000-16	-4.3*											-4.3*	-4.3*
Black NH <sup>ef</sup>	2000-16	-4.4*											-4.4*	-4.4*
API <sup>e</sup>	2000-16	-2.7*											-2.7*	-2.7*
AI/AN <sup>eg</sup>	2000-05	32.6*	2005-12	-17.1*	2012-16	31.1*							1.6	31.1*
Hispanic <sup>f</sup>	2000-16	-1.5*											-1.5*	-1.5*
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-00	0.1	2000-16	-1.5*									-1.5*	-1.5*
White	1975-02	0.4*	2002-16	-1.0*									-1.0*	-1.0*
Black	1975-92	-0.2	1992-16	-4.1*									-4.1*	-4.1*
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-16	-1.6*											-1.6*	-1.6*
White	2000-16	-1.0*											-1.0*	-1.0*
White NH <sup>ef</sup>	2000-16	-0.8*											-0.8*	-0.8*
Black	2000-16	-4.5*											-4.5*	-4.5*
Black NH <sup>ef</sup>	2000-16	-4.4*											-4.4*	-4.4*
API <sup>e</sup>	2000-16	-2.2*											-2.2*	-2.2*
AI/AN <sup>eg</sup>	2000-16	-1.0											-1.0	-1.0
Hispanic <sup>f</sup>	2000-16	-2.4*											-2.4*	-2.4*

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).

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

<sup>b</sup> 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).

<sup>c</sup> Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>d</sup> The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

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

<sup>f</sup> 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.

<sup>g</sup> 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 8.4  
Cancer of the Esophagus (Invasive)

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

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-1979	4.21	6.93	2.15	3.55	5.75	1.93	11.96	21.11	4.86
1980	4.27	6.87	2.28	3.54	5.75	1.86	12.32	18.79	7.41
1981	4.14	6.46	2.36	3.31	5.17	1.94	13.53	21.28	7.46
1982	4.26	6.81	2.28	3.46	5.46	1.96	13.61	22.72	6.41
1983	4.29	7.42	1.95	3.57	6.11	1.77	12.23	22.22	4.26
1984	4.18	6.66	2.24	3.52	5.60	1.92	12.00	19.85	5.98
1985	4.45	7.43	2.22	3.74	6.26	1.89	12.75	22.22	5.81
1986	4.64	7.49	2.47	3.90	6.23	2.19	14.07	24.02	6.31
1987	4.54	7.53	2.24	3.90	6.40	2.00	11.44	20.13	4.81
1988	4.43	7.32	2.21	3.87	6.31	2.02	11.18	19.49	4.99
1989	4.40	7.30	2.21	3.77	6.20	1.96	10.49	17.29	5.39
1990	4.82	8.25	2.19	4.19	7.24	1.90	12.49	21.33	5.83
1991	4.56	7.45	2.35	4.16	6.75	2.19	10.21	17.78	4.88
1992	4.60	8.01	2.00	4.21	7.38	1.80	10.74	18.35	5.32
1993	4.61	7.66	2.25	4.20	6.92	2.10	10.03	17.50	4.64
1994	4.50	7.70	2.06	4.16	7.16	1.87	9.20	14.68	5.13
1995	4.36	7.08	2.20	4.07	6.63	2.06	8.44	13.78	4.37
1996	4.80	8.12	2.20	4.40	7.48	1.98	9.69	16.36	4.81
1997	4.69	7.78	2.22	4.59	7.73	2.02	7.15	10.96	4.46
1998	4.73	8.18	2.04	4.52	7.92	1.87	7.86	12.65	4.32
1999	4.93	8.41	2.17	4.90	8.42	2.07	7.17	11.52	4.08
2000	4.78	7.99	2.17	4.72	8.02	2.02	7.04	10.58	4.44
2001	4.82	8.47	1.92	4.84	8.43	1.93	6.46	11.59	2.71
2002	4.63	7.95	1.99	4.62	8.09	1.83	6.37	10.04	3.65
2003	4.65	8.05	1.96	4.75	8.25	1.93	6.43	10.20	3.79
2004	5.31	9.00	2.37	5.44	9.28	2.34	6.06	8.90	3.98
2005	4.63	8.12	1.85	4.79	8.48	1.79	5.18	8.56	2.88
2006	4.74	7.96	2.10	4.90	8.26	2.08	5.42	8.78	2.95
2007	4.71	8.09	1.99	4.87	8.42	1.98	5.23	8.36	2.92
2008	4.67	8.19	1.79	4.88	8.57	1.79	4.69	7.90	2.25
2009	4.64	7.82	2.05	4.98	8.53	2.00	4.66	6.69	3.36
2010	4.41	7.67	1.73	4.57	7.95	1.69	4.70	7.51	2.78
2011	4.45	7.70	1.81	4.89	8.52	1.87	3.33	4.78	2.19
2012	4.39	7.56	1.75	4.80	8.24	1.87	3.63	6.23	1.69
2013	4.35	7.44	1.76	4.69	7.94	1.90	4.14	7.15	1.92
2014	4.26	7.27	1.76	4.54	7.76	1.79	3.95	6.19	2.40
2015	4.47	7.70	1.81	4.85	8.33	1.89	3.86	6.10	2.28
2016	4.33	7.48	1.70	4.58	7.95	1.68	4.01	6.36	2.26

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.

<sup>a</sup>

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Table 8.5  
Cancer of the Esophagus (Invasive)

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

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	4.52	7.66	2.05	4.35	7.41	1.93	7.47	12.38	3.83
1975-1979	4.21	6.93	2.15	3.55	5.75	1.93	11.96	21.11	4.86
1980	4.27	6.87	2.28	3.54	5.75	1.86	12.32	18.79	7.41
1981	4.14	6.46	2.36	3.31	5.17	1.94	13.53	21.28	7.46
1982	4.26	6.81	2.28	3.46	5.46	1.96	13.61	22.72	6.41
1983	4.29	7.42	1.95	3.57	6.11	1.77	12.23	22.22	4.26
1984	4.18	6.66	2.24	3.52	5.60	1.92	12.00	19.85	5.98
1985	4.45	7.43	2.22	3.74	6.26	1.89	12.75	22.22	5.81
1986	4.64	7.49	2.47	3.90	6.23	2.19	14.07	24.02	6.31
1987	4.54	7.53	2.24	3.90	6.40	2.00	11.44	20.13	4.81
1988	4.43	7.32	2.21	3.87	6.31	2.02	11.18	19.49	4.99
1989	4.40	7.30	2.21	3.77	6.20	1.96	10.49	17.29	5.39
1990	4.82	8.25	2.19	4.19	7.24	1.90	12.49	21.33	5.83
1991	4.56	7.45	2.35	4.16	6.75	2.19	10.21	17.78	4.88
1992	4.60	8.01	2.00	4.21	7.38	1.80	10.74	18.35	5.32
1993	4.61	7.66	2.25	4.20	6.92	2.10	10.03	17.50	4.64
1994	4.50	7.70	2.06	4.16	7.16	1.87	9.20	14.68	5.13
1995	4.36	7.08	2.20	4.07	6.63	2.06	8.44	13.78	4.37
1996	4.80	8.12	2.20	4.40	7.48	1.98	9.69	16.36	4.81
1997	4.69	7.78	2.22	4.59	7.73	2.02	7.15	10.96	4.46
1998	4.73	8.18	2.04	4.52	7.92	1.87	7.86	12.65	4.32
1999	4.93	8.41	2.17	4.90	8.42	2.07	7.17	11.52	4.08
2000	4.78	7.99	2.17	4.72	8.02	2.02	7.04	10.58	4.44
2001	4.82	8.47	1.92	4.84	8.43	1.93	6.46	11.59	2.71
2002	4.63	7.95	1.99	4.62	8.09	1.83	6.37	10.04	3.65
2003	4.65	8.05	1.96	4.75	8.25	1.93	6.43	10.20	3.79
2004	5.31	9.00	2.37	5.44	9.28	2.34	6.06	8.90	3.98
2005	4.63	8.12	1.85	4.79	8.48	1.79	5.18	8.56	2.88
2006	4.74	7.96	2.10	4.90	8.26	2.08	5.42	8.78	2.95
2007	4.71	8.09	1.99	4.87	8.42	1.98	5.23	8.36	2.92
2008	4.67	8.18	1.79	4.87	8.57	1.79	4.69	7.90	2.25
2009	4.64	7.82	2.05	4.97	8.53	2.00	4.66	6.68	3.36
2010	4.41	7.66	1.73	4.56	7.94	1.69	4.70	7.51	2.78
2011	4.44	7.69	1.81	4.88	8.51	1.87	3.33	4.78	2.19
2012	4.39	7.55	1.75	4.79	8.23	1.86	3.62	6.22	1.69
2013	4.34	7.43	1.76	4.68	7.92	1.89	4.14	7.14	1.92
2014	4.24	7.24	1.75	4.53	7.73	1.78	3.94	6.17	2.40
2015	4.45	7.66	1.80	4.82	8.27	1.88	3.84	6.06	2.26
2016	4.27	7.37	1.68	4.51	7.83	1.65	3.94	6.25	2.23

<sup>a</sup> 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 8.6  
Cancer of the Esophagus (Invasive)

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

Year of Death:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975-2016	4.12	7.27	1.70	3.92	6.96	1.56	6.60	11.50	3.07
1975-1979	3.74	6.36	1.77	3.12	5.30	1.51	10.06	17.70	4.25
1980	3.85	6.60	1.82	3.17	5.49	1.50	10.60	18.30	4.88
1981	3.82	6.58	1.78	3.16	5.44	1.51	10.45	18.72	4.35
1982	3.84	6.52	1.84	3.17	5.37	1.56	10.49	18.60	4.51
1983	3.85	6.64	1.79	3.22	5.59	1.50	10.21	17.95	4.52
1984	3.93	6.74	1.86	3.28	5.63	1.56	10.60	18.80	4.65
1985	3.86	6.72	1.72	3.26	5.71	1.46	9.93	17.72	4.26
1986	3.94	6.76	1.84	3.34	5.76	1.57	10.19	17.96	4.55
1987	3.97	6.88	1.80	3.41	5.96	1.53	9.67	17.13	4.37
1988	4.05	7.04	1.80	3.47	6.01	1.58	9.95	18.40	3.89
1989	4.11	7.15	1.82	3.56	6.23	1.57	9.75	17.32	4.29
1990	4.10	7.16	1.81	3.58	6.32	1.55	9.35	16.33	4.37
1991	4.13	7.24	1.81	3.64	6.43	1.57	9.23	16.54	4.14
1992	4.17	7.30	1.81	3.74	6.61	1.57	8.65	15.10	4.11
1993	4.19	7.33	1.82	3.75	6.60	1.59	8.99	16.00	4.07
1994	4.27	7.59	1.77	3.87	6.94	1.56	8.57	15.28	3.88
1995	4.26	7.56	1.76	3.92	7.00	1.58	8.04	14.45	3.51
1996	4.31	7.52	1.86	4.01	7.06	1.67	7.77	13.57	3.72
1997	4.25	7.50	1.77	4.00	7.11	1.60	7.26	12.84	3.39
1998	4.36	7.65	1.84	4.13	7.31	1.66	7.11	12.21	3.56
1999	4.35	7.69	1.77	4.19	7.44	1.65	6.54	11.56	3.06
2000	4.39	7.71	1.83	4.27	7.56	1.69	6.44	10.93	3.26
2001	4.43	7.85	1.79	4.30	7.66	1.68	6.41	11.30	3.01
2002	4.41	7.82	1.75	4.35	7.77	1.64	5.89	10.15	2.92
2003	4.38	7.75	1.75	4.34	7.71	1.66	5.68	9.64	2.87
2004	4.36	7.74	1.73	4.35	7.77	1.63	5.36	8.98	2.85
2005	4.44	7.95	1.67	4.48	8.07	1.61	4.99	8.76	2.34
2006	4.41	7.84	1.69	4.47	7.99	1.64	4.77	8.25	2.34
2007	4.27	7.66	1.59	4.35	7.81	1.55	4.66	8.24	2.23
2008	4.22	7.54	1.58	4.31	7.74	1.52	4.46	7.64	2.27
2009	4.18	7.47	1.55	4.30	7.71	1.53	4.05	7.19	1.87
2010	4.26	7.54	1.61	4.40	7.79	1.60	4.19	7.38	1.99
2011	4.15	7.42	1.52	4.33	7.76	1.51	3.79	6.54	1.86
2012	4.10	7.31	1.49	4.28	7.67	1.46	3.73	6.19	1.94
2013	4.02	7.15	1.46	4.22	7.51	1.46	3.48	5.89	1.77
2014	3.99	7.09	1.44	4.21	7.50	1.44	3.32	5.50	1.77
2015	3.97	7.05	1.43	4.23	7.51	1.46	3.02	5.11	1.53
2016	3.94	6.95	1.45	4.20	7.42	1.48	3.09	5.18	1.59

<sup>a</sup> 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 8.7  
Cancer of the Esophagus (Invasive)

SEER Incidence<sup>a</sup> and U.S. Death<sup>b</sup> 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	4.3	7.3	1.8	4.6	7.9	1.8	3.9	6.4	2.1
Under 65	1.7	2.9	0.6	1.8	3.1	0.6	1.8	2.7	1.0
65 and over	21.9	38.2	9.5	23.5	40.9	9.9	18.5	31.8	9.8
All ages (WHO world std) <sup>c</sup>	3.1	5.3	1.2	3.3	5.7	1.3	2.9	4.7	1.5
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-
20-24	0.0	-	-	-	-	-	-	-	-
25-29	0.1	0.1	-	0.1	0.2	-	-	-	-
30-34	0.1	0.2	-	0.2	0.2	-	-	-	-
35-39	0.4	0.7	0.2	0.5	0.8	0.2	-	-	-
40-44	1.0	1.5	0.4	1.1	1.7	0.4	0.9	1.2	-
45-49	2.3	3.8	0.8	2.4	4.0	0.8	2.2	3.7	0.9
50-54	4.6	7.6	1.7	4.9	8.2	1.7	4.6	6.9	2.7
55-59	8.6	14.3	3.3	9.0	15.2	3.1	9.7	14.7	5.4
60-64	13.0	22.3	4.5	13.7	23.6	4.4	13.0	20.7	6.7
65-69	17.8	30.6	6.4	19.0	32.7	6.5	16.4	27.1	8.3
70-74	22.0	37.8	8.7	23.6	40.5	9.0	19.1	33.6	8.9
75-79	24.3	42.4	10.2	26.2	45.7	10.7	20.4	36.4	10.1
80-84	25.6	44.5	12.4	27.3	47.3	13.2	18.6	32.0	11.2
85+	22.7	41.1	13.2	23.9	43.6	13.7	18.1	29.8	13.2
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2012-2016									
All ages	4.0	7.1	1.5	4.2	7.5	1.5	3.3	5.6	1.7
Under 65	1.5	2.6	0.5	1.6	2.8	0.4	1.4	2.3	0.7
65 and over	21.3	38.3	8.3	22.5	40.5	8.5	16.4	28.3	8.7
All ages (WHO world std) <sup>c</sup>	2.5	4.5	0.9	2.7	4.7	0.8	2.2	3.6	1.1
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-
25-29	0.1	0.1	0.0	0.1	0.1	-	-	-	-
30-34	0.1	0.2	0.0	0.1	0.2	0.0	-	-	-
35-39	0.3	0.5	0.1	0.3	0.5	0.1	0.2	0.3	-
40-44	0.8	1.4	0.2	0.9	1.6	0.2	0.6	1.0	0.3
45-49	1.9	3.2	0.6	2.0	3.5	0.6	1.8	2.8	0.8
50-54	4.1	6.9	1.3	4.3	7.4	1.2	3.8	5.7	2.1
55-59	7.6	13.2	2.3	7.9	13.9	2.1	7.9	12.3	4.1
60-64	11.5	20.3	3.4	12.0	21.3	3.3	11.1	18.4	5.1
65-69	15.7	27.9	4.7	16.6	29.5	4.8	13.5	23.3	5.9
70-74	19.6	34.8	6.7	20.8	36.9	6.8	15.5	26.8	7.4
75-79	23.3	41.7	8.7	24.5	43.9	8.8	18.7	32.6	9.7
80-84	26.9	48.2	11.9	28.4	50.8	12.2	19.1	32.4	11.7
85+	27.5	51.4	15.1	28.9	54.2	15.6	17.4	30.0	12.1

<sup>a</sup> 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.

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

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

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

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

Table 8.8  
Cancer of the Esophagus (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 <sup>a</sup>	-	-	-	4	4	6	1	0	2
1970-1973 <sup>a</sup>	-	-	-	4	4	4	4	4	3
1975-1977 <sup>b</sup>	5.0	4.0	7.5	5.5	4.8	7.0	3.5	2.0	7.7
1978-1980 <sup>b</sup>	5.0	4.8	5.6	5.3	5.3	5.2	4.3	3.4	6.8
1981-1983 <sup>b</sup>	6.7	6.1	8.2	7.3	6.5	9.0	4.6	4.0	6.5
1984-1986 <sup>b</sup>	9.6	8.4	12.2	10.3	9.0	13.2	8.7	8.2	9.9
1987-1989 <sup>b</sup>	9.4	9.4	9.4	10.4	11.0	9.0	6.6	5.3	10.2
1990-1992 <sup>b</sup>	12.2	11.7	13.4	12.9	12.2	14.8	9.4	9.7	8.4
1993-1995 <sup>b</sup>	12.1	12.2	11.7	13.3	13.6	12.7	7.6	7.8	6.9
1996-1998 <sup>b</sup>	13.4	13.0	14.4	14.2	14.0	14.7	10.2	8.5	13.6
1999-2001 <sup>b</sup>	18.1	17.7	19.5	18.9	18.7	19.7	12.4	10.6	16.2
2002-2004 <sup>b</sup>	18.2	18.0	18.9	19.6	19.6	19.5	10.7	8.0	15.7
2005-2008 <sup>b</sup>	19.9	20.0	19.3	20.8	20.9	20.2	14.3	14.5	14.0
2009-2015 <sup>b</sup>	21.4 <sup>f</sup>	21.0 <sup>f</sup>	22.8 <sup>f</sup>	22.6 <sup>f</sup>	22.5 <sup>f</sup>	23.4 <sup>f</sup>	11.8 <sup>f</sup>	9.2 <sup>f</sup>	16.1 <sup>f</sup>
5-Year Period Survival (Percent) <sup>cd</sup>									
2015	20.6	19.9	23.6	21.5	20.9	24.2	13.5	11.9	16.9
Stage Distribution (%) 2009-2015 <sup>ce</sup>									
All Stages									
Number of cases	21,583	17,092	4,491	18,182	14,681	3,501	2,160	1,459	701
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	18	18	21	19	18	21	16	15	19
Regional	32	32	32	32	32	31	32	31	34
Distant	40	41	33	40	41	33	41	44	35
Unstaged/Unknown	10	9	14	10	8	14	11	10	13
5-Year Relative Survival (Percent), 2009-2015 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	20.0	18.4	26.3	19.5	19.0	22.0 <sup>g</sup>	17.1 <sup>g</sup>	7.2	-
Ages 45-54	21.2	20.3	26.1	22.6	21.7	28.5	13.1	12.2	15.0
Ages 55-64	21.3	20.4	26.0	23.0	22.2	28.0	11.9	8.9	19.1
Ages 65-74	23.0	22.1	26.9	23.8	22.9	28.1	14.8	13.0	17.8
Ages 75+	13.4	13.7	12.8	13.4	13.9	12.5	11.7	10.5	12.2
Ages <65	21.2	20.3	26.1	22.7	21.9	27.7	12.5	9.9	18.9
Ages 65+	18.7	18.7	18.8	19.1	19.2	18.8	13.6	12.3	15.5
Stage <sup>e</sup> :									
All Stages	19.9	19.4	21.5	20.7	20.4	21.9	13.0	10.8	17.4
Localized	46.7	49.2	38.4	48.4	51.1	38.7	29.2	27.0	32.5 <sup>g</sup>
Regional	25.1	24.3	28.4	26.0	25.3	29.4	18.0	16.1	21.5
Distant	4.8	4.2	8.1	4.9	4.4	7.7	3.5	1.9	7.2
Unstaged/Unknown	12.7	12.6	12.9	12.9	13.0	12.7	9.4	7.7	11.7

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

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

Based on follow-up of patients into 2016. [Expected survival rates](#) are derived from the U.S. Annual Life Tables.

<sup>c</sup> 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.

<sup>d</sup> 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).

<sup>e</sup> Stage at diagnosis is classified using SEER Summary Stage 2000. Stage distribution percentages may not sum to 100 due to rounding.

<sup>f</sup> The difference between 1975-1977 and 2009-2015 is statistically significant (p<.05).

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

<sup>h</sup> The standard error is greater than 10 percentage points.

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



Table 8.9  
Cancer of the Esophagus (Invasive)

SEER<sup>a</sup> 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	25.9	29.9	34.9	38.5	40.3	42.0	40.1	40.8	44.3	46.0	46.2	41.9	46.6	48.2	45.7	47.6	49.9	47.7	49.0	49.6	49.2	51.2	52.1	51.3	50.2
2-year	11.4	14.3	19.0	21.8	22.6	24.3	23.9	23.9	26.8	28.4	29.3	25.9	30.5	30.2	31.2	30.5	32.9	32.2	30.9	33.9	32.1	34.7	36.3	35.3	
3-year	7.7	10.0	13.5	16.3	16.8	18.6	17.5	18.3	20.8	23.8	23.1	20.9	23.9	25.9	24.2	25.1	27.0	24.5	24.5	27.8	24.7	27.1	28.9		
4-year	5.9	8.3	10.8	13.7	13.2	15.9	14.3	14.2	18.4	20.6	19.2	17.9	20.1	22.3	21.4	21.8	23.4	21.8	21.4	24.9	21.9	23.2			
5-year	4.9	7.0	9.5	12.2	11.6	15.0	12.4	12.6	17.4	18.9	17.9	16.8	17.2	20.2	18.9	20.0	21.7	18.8	20.7	22.5	18.7				
6-year	4.3	6.1	8.5	11.1	10.8	13.8	11.3	11.6	15.9	17.9	15.9	15.3	14.5	19.6	17.4	18.6	19.5	18.0	19.5	20.2					
7-year	3.8	5.6	7.7	10.2	10.2	12.9	10.7	11.3	14.7	16.6	14.8	14.9	13.3	18.3	15.6	17.7	18.3	16.8	18.5						
8-year	3.4	4.9	7.0	9.5	9.6	12.0	9.8	9.8	14.2	15.8	13.8	13.7	13.0	17.9	14.6	16.7	18.3	16.1							
9-year	3.2	4.5	6.4	9.0	8.9	11.4	9.3	9.6	13.5	15.6	13.6	13.2	12.9	16.5	13.7	15.8	17.5								
10-year	2.9	4.3	6.0	8.3	8.6	10.5	9.2	9.4	13.0	15.1	13.3	13.0	11.9	15.5	13.3	15.1									
11-year	2.7	4.0	5.4	7.8	7.6	9.6	9.0	9.1	12.8	14.3	12.3	13.0	11.9	14.8	13.2										
12-year	2.6	3.8	4.9	7.1	7.2	9.2	7.5	8.5	11.9	14.0	11.9	12.4	11.5	14.5											
13-year	2.4	3.5	4.6	7.0	6.8	9.2	7.0	8.5	11.0	12.2	11.7	11.8	11.3												
14-year	2.4	3.4	4.3	6.6	5.7	8.9	6.3	8.4	10.4	12.0	11.3	11.1													
15-year	2.4	3.4	4.2	6.2	5.5	8.6	6.0	7.6	10.3	11.5	11.2														
16-year	2.3	3.2	3.7	5.8	4.9	7.8	5.8	7.5	9.9	10.4															
17-year	2.3	3.0	3.2	5.5	4.9	6.9	5.8	7.5	9.8																
18-year	2.2	2.7	3.1	5.3	4.9	6.9	5.6	7.5																	
19-year	2.2	2.5	2.9	4.9	3.8	6.1	4.9																		
20-year	2.1	2.5	2.6	4.8	3.0	5.2																			

<sup>a</sup> 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 8.10  
Cancer of the Esophagus (Invasive)

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

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990- 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	23.9	29.2	34.1	38.9	39.9	43.2	40.6	41.0	43.6	47.5	47.1	43.1	46.3	47.6	46.7	48.5	51.6	48.6	50.4	48.6	48.7	51.8	52.9	50.4	51.0
2-year	10.0	13.8	18.4	21.6	22.8	24.8	24.7	24.3	26.4	28.7	29.7	26.4	29.9	30.2	31.1	30.9	33.2	32.8	31.1	33.1	31.8	34.6	36.8	34.2	
3-year	6.8	9.3	13.1	16.4	16.7	18.2	18.3	18.5	20.7	23.6	23.2	21.3	23.2	25.8	24.1	25.9	27.4	24.8	25.1	26.8	23.8	26.5	29.2		
4-year	5.1	7.3	10.3	13.4	13.0	15.1	15.2	14.2	18.2	19.6	19.4	18.1	19.6	22.4	20.8	22.8	23.6	21.9	21.6	23.8	20.8	22.3			
5-year	4.2	6.0	9.3	12.0	11.8	13.9	13.0	12.1	17.3	17.3	18.4	16.8	16.8	20.0	18.4	21.0	21.9	18.8	21.0	21.9	17.5				
6-year	3.7	5.1	8.4	10.8	11.0	12.9	11.8	11.5	16.2	16.4	16.3	15.4	13.9	19.3	17.1	19.4	19.4	17.8	20.1	19.2					
7-year	3.3	4.5	7.6	10.2	10.7	11.9	11.5	11.2	15.1	15.4	15.4	15.3	12.7	18.3	15.3	18.5	17.9	16.6	19.1						
8-year	3.0	4.0	6.9	9.3	9.9	11.2	10.3	9.4	14.8	14.6	14.6	13.7	12.2	17.8	14.1	17.3	17.9	15.7							
9-year	2.8	3.7	6.5	8.8	9.6	10.6	10.0	9.3	14.2	14.3	14.2	13.3	12.2	17.1	13.5	16.3	17.3								
10-year	2.7	3.5	6.2	7.9	9.2	9.9	9.7	9.3	13.4	14.0	13.9	13.3	11.6	16.0	13.2	15.4									
11-year	2.5	3.3	5.7	7.5	8.4	8.9	9.5	9.0	13.3	13.1	13.0	13.3	11.6	15.2	13.0										
12-year	2.4	3.3	5.1	6.8	7.7	8.6	8.4	8.8	12.9	12.8	12.7	12.4	11.6	14.7											
13-year	2.3	3.1	4.6	6.8	7.1	8.6	7.7	8.8	11.9	10.8	12.6	11.8	11.3												
14-year	2.2	3.0	4.2	6.6	6.3	8.3	6.9	8.8	11.1	10.5	12.0	11.1													
15-year	2.2	3.0	4.0	6.1	5.9	8.3	6.3	7.8	10.8	9.9	11.8														
16-year	2.2	2.9	3.4	5.9	5.3	8.1	6.1	7.8	10.5	8.8															
17-year	2.2	2.9	2.9	5.5	5.3	7.1	6.1	7.8	10.5																
18-year	2.2	2.6	2.8	5.3	5.3	7.1	5.8	7.8																	
19-year	2.1	2.4	2.5	5.1	3.9	5.7	5.3																		
20-year	2.0	2.3	2.3	5.0	3.1	5.1																			

<sup>a</sup> 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 8.11  
Cancer of the Esophagus (Invasive)

SEER<sup>a</sup> 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	31.2	31.6	37.1	37.3	41.4	38.4	38.8	39.9	46.6	41.4	42.9	38.2	48.0	50.1	42.2	44.7	44.3	44.3	44.2	54.0	50.8	48.7	49.2	54.5	47.1
2-year	15.1	15.6	20.7	22.4	22.2	22.9	21.6	22.5	28.3	27.3	27.9	24.3	32.4	30.1	31.5	29.2	31.9	30.2	30.2	37.3	33.2	35.1	34.1	38.9	
3-year	10.0	12.0	14.5	16.2	17.0	19.8	15.1	17.6	21.0	24.5	22.7	19.6	26.3	25.9	24.5	22.3	25.5	23.1	22.4	31.9	28.0	29.4	27.9		
4-year	7.9	10.5	12.3	14.5	13.7	18.2	11.7	14.3	18.7	23.7	18.6	17.3	21.9	21.9	23.5	18.3	22.5	21.5	21.0	29.3	26.1	26.9			
5-year	6.5	9.3	10.0	12.9	10.7	18.2	10.6	14.1	17.7	23.7	16.1	16.9	18.8	20.8	20.6	16.6	21.1	18.8	19.6	25.1	23.7				
6-year	5.9	8.6	8.5	11.8	9.9	16.3	9.8	11.9	15.0	22.6	14.2	14.8	16.7	20.5	18.3	15.9	20.0	18.4	17.3	24.6					
7-year	5.2	8.3	8.0	10.2	9.0	15.7	8.1	11.7	13.2	20.6	12.3	13.4	15.4	18.0	16.8	15.1	19.4	17.6	16.5						
8-year	4.4	7.1	7.3	10.0	8.7	14.2	8.1	10.8	11.9	19.5	10.7	13.1	15.4	17.8	16.5	14.4	18.9	17.5							
9-year	4.0	6.5	6.3	9.5	7.1	13.7	7.4	10.5	10.8	19.2	10.7	12.3	14.9	14.3	14.5	14.2	18.3								
10-year	3.5	6.5	5.3	9.2	6.6	12.3	7.4	9.5	10.8	18.3	10.7	12.0	12.7	13.4	13.6	13.8									
11-year	3.3	5.4	4.8	8.8	5.6	11.4	7.4	9.3	10.0	17.7	9.5	12.0	11.5	13.3	13.6										
12-year	3.1	5.2	4.6	7.9	5.6	11.0	5.2	7.6	8.1	17.5	8.9	12.0	10.2	13.3											
13-year	2.8	4.7	4.6	7.0	5.6	11.0	4.6	7.6	7.4	16.6	8.2	11.4	10.2												
14-year	2.8	4.5	4.5	6.4	4.2	10.5	4.6	6.8	7.4	16.3	8.2	10.8													
15-year	2.8	4.5	4.5	6.1	4.2	8.7	4.6	6.8	7.4	16.3	8.2														
16-year	2.7	3.8	4.2	5.5	3.7	6.8	4.6	6.4	7.3	15.3															
17-year	2.4	3.2	3.9	5.4	3.7	6.3	4.6	6.4	6.9																
18-year	2.2	3.0	3.8	5.2	3.7	6.3	4.6	6.4																	
19-year	2.2	2.8	3.7	4.5	3.4	6.3	3.7																		
20-year	2.2	2.8	3.3	4.2	2.6	5.3																			

<sup>a</sup> 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 8.12  
Cancer of the Esophagus (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	0.00	0.00	0.00	0.51	0.47	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.33	0.26
	10	0.00	0.00	0.00	0.51	0.48		10	0.00	0.00	0.00	0.33	0.26
	20	0.00	0.00	0.02	0.52	0.48		20	0.00	0.00	0.01	0.33	0.26
	30	0.00	0.02	0.08	0.52	0.48		30	0.00	0.01	0.04	0.33	0.26
	40	0.02	0.08	0.21	0.52	0.49		40	0.01	0.04	0.11	0.33	0.26
	50	0.06	0.20	0.37	0.52	0.49		50	0.03	0.10	0.20	0.33	0.26
	60	0.14	0.32	0.45	0.48	0.46		60	0.08	0.18	0.27	0.31	0.25
	70	0.20	0.34	-	0.38	0.37		70	0.11	0.21	-	0.25	0.22
80	0.19	-	-	0.23	0.25	80	0.12	-	-	0.17	0.16		
White	0	0.00	0.00	0.00	0.54	0.50	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	0.41	0.38
	10	0.00	0.00	0.00	0.55	0.51		10	0.00	0.00	0.00	0.41	0.39
	20	0.00	0.00	0.02	0.55	0.51		20	0.00	0.00	0.03	0.41	0.39
	30	0.00	0.02	0.09	0.55	0.51		30	0.00	0.03	0.09	0.42	0.40
	40	0.02	0.08	0.23	0.56	0.52		40	0.02	0.09	0.21	0.43	0.41
	50	0.07	0.21	0.40	0.55	0.51		50	0.07	0.20	0.33	0.42	0.42
	60	0.15	0.35	0.48	0.51	0.48		60	0.14	0.28	0.37	0.38	0.39
	70	0.22	0.37	-	0.40	0.39		70	0.16	0.26	-	0.27	0.34
80	0.20	-	-	0.24	0.27	80	0.14	-	-	0.15	0.27		
Black	0	0.00	0.00	0.00	0.39	0.33	Hispanic <sup>b</sup>	0	0.00	0.00	0.00	0.40	0.30
	10	0.00	0.00	0.00	0.39	0.33		10	0.00	0.00	0.00	0.40	0.31
	20	0.00	0.00	0.02	0.39	0.33		20	0.00	0.00	0.01	0.40	0.31
	30	0.00	0.02	0.08	0.40	0.34		30	0.00	0.01	0.05	0.41	0.31
	40	0.01	0.08	0.19	0.40	0.34		40	0.01	0.05	0.12	0.41	0.31
	50	0.07	0.19	0.31	0.40	0.35		50	0.04	0.12	0.23	0.41	0.31
	60	0.13	0.26	0.35	0.37	0.32		60	0.08	0.21	0.32	0.39	0.30
	70	0.16	0.26	-	0.28	0.26		70	0.13	0.26	-	0.33	0.26
80	0.13	-	-	0.17	0.17	80	0.16	-	-	0.24	0.20		

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.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCDA (Purchased/Referred Care Delivery Areas) counties.

<sup>b</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

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

Table 8.13  
Cancer of the Esophagus (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	0.00	0.00	0.00	0.80	0.76	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.54	0.41
	10	0.00	0.00	0.01	0.80	0.76		10	0.00	0.00	0.00	0.54	0.42
	20	0.00	0.01	0.03	0.81	0.77		20	0.00	0.00	0.02	0.54	0.42
	30	0.00	0.03	0.13	0.82	0.78		30	0.00	0.02	0.07	0.54	0.42
	40	0.03	0.13	0.35	0.83	0.79		40	0.01	0.06	0.19	0.55	0.42
	50	0.11	0.33	0.60	0.82	0.79		50	0.05	0.18	0.33	0.54	0.42
	60	0.24	0.53	0.73	0.77	0.75		60	0.14	0.29	0.45	0.50	0.40
	70	0.34	0.56	-	0.61	0.62		70	0.17	0.34	-	0.40	0.34
80	0.31	-	-	0.38	0.43	80	0.21	-	-	0.29	0.25		
White	0	0.00	0.00	0.00	0.85	0.81	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	0.58	0.64
	10	0.00	0.00	0.01	0.86	0.81		10	0.00	0.00	0.01	0.59	0.65
	20	0.00	0.01	0.03	0.86	0.82		20	0.00	0.01	0.04	0.59	0.65
	30	0.01	0.03	0.14	0.87	0.83		30	0.01	0.05	0.15	0.61	0.67
	40	0.03	0.14	0.37	0.88	0.84		40	0.04	0.15	0.32	0.62	0.69
	50	0.11	0.35	0.65	0.87	0.84		50	0.12	0.29	0.50	0.61	0.72
	60	0.26	0.57	0.77	0.82	0.80		60	0.19	0.42	0.53	0.54	0.68
	70	0.36	0.60	-	0.64	0.65		70	0.26	0.40	-	0.40	0.61
80	0.33	-	-	0.40	0.45	80	0.19	-	-	0.20	0.55		
Black	0	0.00	0.00	0.00	0.56	0.48	Hispanic <sup>b</sup>	0	0.00	0.00	0.00	0.64	0.50
	10	0.00	0.00	0.00	0.57	0.49		10	0.00	0.00	0.00	0.64	0.50
	20	0.00	0.00	0.02	0.58	0.49		20	0.00	0.00	0.02	0.64	0.50
	30	0.00	0.02	0.12	0.59	0.50		30	0.00	0.02	0.08	0.65	0.51
	40	0.02	0.12	0.29	0.60	0.51		40	0.02	0.07	0.21	0.65	0.51
	50	0.10	0.28	0.48	0.60	0.52		50	0.06	0.20	0.39	0.65	0.51
	60	0.21	0.42	0.53	0.56	0.49		60	0.15	0.35	0.52	0.63	0.50
	70	0.26	0.40	-	0.44	0.40		70	0.23	0.42	-	0.54	0.44
80	0.21	-	-	0.27	0.27	80	0.25	-	-	0.40	0.34		

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.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCDA (Purchased/Referred Care Delivery Areas) counties.

<sup>b</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

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

Table 8.14  
Cancer of the Esophagus (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	0.00	0.00	0.00	0.24	0.20	Asian/ Pacific Islander	0	0.00	0.00	0.00	0.15	0.13
	10	0.00	0.00	0.00	0.24	0.20		10	0.00	0.00	0.00	0.16	0.13
	20	0.00	0.00	0.01	0.24	0.20		20	0.00	0.00	0.00	0.16	0.13
	30	0.00	0.01	0.03	0.24	0.20		30	0.00	0.00	0.01	0.16	0.13
	40	0.01	0.03	0.08	0.25	0.20		40	0.00	0.01	0.04	0.16	0.13
	50	0.02	0.08	0.15	0.24	0.20		50	0.01	0.03	0.09	0.15	0.13
	60	0.05	0.13	0.20	0.23	0.19		60	0.03	0.08	0.12	0.15	0.13
	70	0.09	0.17	-	0.19	0.17		70	0.06	0.10	-	0.13	0.12
80	0.10	-	-	0.13	0.13	80	0.05	-	-	0.08	0.10		
White	0	0.00	0.00	0.00	0.25	0.20	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	0.24	0.14
	10	0.00	0.00	0.00	0.25	0.21		10	0.00	0.00	0.00	0.24	0.15
	20	0.00	0.00	0.01	0.25	0.21		20	0.00	0.00	0.01	0.24	0.15
	30	0.00	0.01	0.03	0.25	0.21		30	0.00	0.01	0.03	0.24	0.15
	40	0.01	0.03	0.08	0.25	0.21		40	0.01	0.03	0.11	0.25	0.15
	50	0.02	0.08	0.16	0.25	0.21		50	0.03	0.11	0.17	0.25	0.15
	60	0.05	0.14	0.21	0.24	0.20		60	0.09	0.15	0.23	0.24	0.15
	70	0.09	0.17	-	0.20	0.18		70	0.07	0.15	-	0.16	0.13
80	0.10	-	-	0.14	0.14	80	0.11	-	-	0.12	0.08		
Black	0	0.00	0.00	0.00	0.24	0.19	Hispanic <sup>b</sup>	0	0.00	0.00	0.00	0.20	0.14
	10	0.00	0.00	0.00	0.24	0.20		10	0.00	0.00	0.00	0.20	0.14
	20	0.00	0.00	0.01	0.24	0.20		20	0.00	0.00	0.01	0.21	0.14
	30	0.00	0.01	0.05	0.24	0.20		30	0.00	0.01	0.02	0.21	0.14
	40	0.01	0.04	0.11	0.24	0.20		40	0.00	0.02	0.05	0.21	0.14
	50	0.04	0.10	0.17	0.24	0.20		50	0.01	0.04	0.09	0.20	0.14
	60	0.07	0.14	0.20	0.22	0.19		60	0.03	0.08	0.16	0.20	0.14
	70	0.09	0.15	-	0.17	0.15		70	0.06	0.13	-	0.18	0.13
80	0.09	-	-	0.11	0.12	80	0.09	-	-	0.15	0.11		

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.

<sup>a</sup> Underlying incidence and mortality data for American Indian/Alaska Native are based on the PRCA (Purchased/Referred Care Delivery Areas) counties.

<sup>b</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic could not be calculated.

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

Table 8.15  
Cancer of the Esophagus (Invasive)

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

SEER Incidence	SEER 21 Areas <sup>b</sup>			SEER 21 Areas <sup>b</sup>			SEER 9 Areas <sup>b</sup>		
	Rate 2012-2016			Trend 2007-2016 <sup>c</sup>			Trend 2007-2016 <sup>d</sup>		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
Race/Ethnicity	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	4.3	7.3	1.8	-1.4*	-1.8*	-1.6*	-1.2*	-1.2*	-1.3*
White	4.6	7.9	1.8	-1.1*	-1.5*	-1.0*	-0.6*	-0.7*	-0.1
White Hispanic <sup>e</sup>	2.9	5.1	1.2	-1.7*	-2.0*	-1.7*	-	-	-
White Non-Hispanic <sup>e</sup>	4.8	8.3	1.9	-0.9*	-1.2*	-0.8*	-	-	-
Black	3.9	6.4	2.1	-4.4*	-4.5*	-4.4*	-4.4*	-4.6*	-3.3*
Asian/Pacific Islander	2.1	3.6	0.9	-1.6*	-1.2*	-2.8*	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	3.6	5.9	1.7	-1.3	-2.2	0.8	-	-	-
Hispanic <sup>e</sup>	2.8	4.9	1.1	-1.8*	-2.1*	-1.6*	-	-	-
<u>U.S. Mortality<sup>g</sup></u>									
U.S. Mortality <sup>g</sup>	Rate 2012-2016			Trend 2007-2016 <sup>h</sup>					
	Rate per 100,000 persons			AAPC (%)					
	Total	Males	Females	Total	Males	Females			
All Races	4.0	7.1	1.5	-1.0*	-1.1*	-1.6*			
White	4.2	7.5	1.5	-0.5*	-0.6*	-1.0*			
White Hispanic <sup>e</sup>	2.1	3.9	0.8	-1.3*	-1.2*	-2.4*			
White Non-Hispanic <sup>e</sup>	4.5	7.9	1.5	-0.3*	-0.4*	-0.8*			
Black	3.3	5.6	1.7	-4.7*	-4.9*	-4.5*			
Asian/Pacific Islander	1.6	2.7	0.7	-1.4*	-1.2*	-2.2*			
Amer Ind/Alaska Nat									
Total U.S.	2.6	4.6	1.0	-1.6*	-1.3	-3.0*			
PRCDA Counties	3.5	6.2	1.4	-0.9	-0.8	-1.0			
Non-PRCDA Counties	1.5	2.8	0.5	-2.5	-1.8	-7.5*			
Hispanic <sup>e</sup>	2.0	3.7	0.7	-1.4*	-1.3*	-2.4*			

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 8.16  
Cancer of the Esophagus (Invasive)

Age-Adjusted SEER Incidence Rates<sup>a</sup>  
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates<sup>a</sup>, 2012-2016</u>									
California	3.53	5.95	1.51	3.94	6.65	1.62	2.91	4.17	1.87
Greater Bay Area	3.50	5.62	1.72	4.05	6.40	2.00	3.99	5.67	2.61
San Francisco-Oakland	3.53	5.64	1.75	4.07	6.44	2.00	3.97	5.50	2.69
San Jose-Monterey	3.46	5.60	1.66	4.01	6.32	2.01	-	-	-
Los Angeles	2.84	4.86	1.23	3.16	5.48	1.24	2.75	4.23	1.66
Greater California	3.85	6.54	1.57	4.20	7.17	1.66	2.57	3.41	1.79
Connecticut	4.73	8.19	1.94	4.87	8.44	1.94	3.94	6.92	1.96
Detroit	5.19	8.98	2.14	5.40	9.42	2.06	4.83	7.94	2.58
Georgia	4.38	7.69	1.67	4.49	7.80	1.63	4.25	7.81	1.77
Atlanta	3.75	6.51	1.67	4.06	6.94	1.72	3.35	5.91	1.64
Rural Georgia	5.28	10.26	-	5.36	9.57	-	-	-	-
Greater Georgia	4.69	8.22	1.73	4.65	8.10	1.63	4.93	8.98	1.95
Hawaii	3.37	5.90	1.16	4.82	7.41	2.14	-	-	-
Idaho	4.79	8.31	1.62	4.73	8.16	1.64	-	-	-
Iowa	5.62	9.95	1.88	5.66	10.05	1.85	-	-	-
Kentucky	4.90	8.61	1.76	4.98	8.84	1.70	3.95	5.66	2.59
Louisiana	4.67	8.12	1.85	4.66	8.21	1.64	4.90	8.24	2.43
Massachusetts	5.38	9.35	2.18	5.61	9.76	2.23	3.25	5.23	1.88
New Jersey	4.33	7.42	1.85	4.61	8.03	1.81	3.69	5.41	2.51
New Mexico	3.62	6.67	1.00	3.74	6.87	1.02	-	-	-
New York	4.50	7.69	1.97	4.83	8.22	2.02	3.72	6.41	2.04
Seattle-Puget Sound	4.67	7.81	2.03	4.96	8.29	2.11	3.18	4.05	-
Utah	3.25	5.71	1.06	3.30	5.79	1.08	-	-	-
SEER 9 Areas <sup>b</sup>	4.34	7.45	1.75	4.66	7.99	1.82	3.90	6.36	2.10
SEER 13 Areas <sup>b</sup>	3.97	6.80	1.63	4.32	7.39	1.71	3.66	5.96	1.98
SEER 18 Areas <sup>b</sup>	4.12	7.08	1.67	4.40	7.59	1.69	3.93	6.37	2.11
SEER 21 Areas <sup>b</sup>	4.28	7.34	1.75	4.56	7.85	1.79	3.86	6.36	2.08

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

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

The SEER 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 8.17  
Cancer of the Esophagus (Invasive)

Age-Adjusted SEER Death Rates<sup>a</sup>  
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Death Rates<sup>a</sup>, 2012-2016</u>									
California	3.25	5.70	1.26	3.67	6.44	1.37	2.57	3.84	1.59
Greater Bay Area	3.10	5.12	1.42	3.70	6.11	1.64	2.82	4.20	1.74
San Francisco-Oakland	3.15	5.14	1.49	3.80	6.24	1.71	2.73	3.78	1.93
San Jose-Monterey	3.00	5.09	1.28	3.52	5.89	1.52	-	-	-
Los Angeles	2.63	4.64	1.07	2.97	5.28	1.13	2.42	3.46	1.69
Greater California	3.59	6.36	1.29	3.93	6.96	1.38	2.68	4.07	1.49
Connecticut	3.92	7.02	1.47	4.04	7.29	1.43	3.36	5.24	2.04
Detroit	4.31	7.74	1.65	4.59	8.33	1.60	3.63	6.04	1.93
Georgia	3.65	6.52	1.36	3.75	6.65	1.30	3.60	6.66	1.55
Atlanta	3.22	5.50	1.55	3.61	6.10	1.62	2.74	4.77	1.48
Rural Georgia	4.95	9.17	-	4.41	7.74	-	6.59	-	-
Greater Georgia	3.85	6.95	1.30	3.81	6.84	1.22	4.18	7.76	1.62
Hawaii	2.72	4.53	1.17	4.48	6.47	2.32	-	-	-
Idaho	4.44	7.51	1.75	4.47	7.54	1.77	-	-	-
Iowa	4.59	8.16	1.62	4.64	8.26	1.62	-	-	-
Kentucky	4.28	7.76	1.36	4.40	8.02	1.33	2.88	4.51	1.73
Louisiana	4.23	7.60	1.46	4.21	7.66	1.28	4.45	7.75	1.96
Massachusetts	4.62	8.36	1.67	4.86	8.80	1.74	2.77	5.03	1.24
New Jersey	3.62	6.49	1.39	3.91	7.05	1.40	3.13	5.06	1.83
New Mexico	3.23	6.03	0.87	3.40	6.34	0.88	-	-	-
New York	3.69	6.52	1.48	4.10	7.23	1.56	2.61	4.38	1.49
Seattle-Puget Sound	3.96	6.85	1.57	4.29	7.40	1.66	2.05	-	-
Utah	2.91	5.26	0.83	2.99	5.40	0.86	-	-	-
SEER 9 Areas <sup>b</sup>	3.68	6.44	1.43	4.04	7.09	1.49	3.02	4.88	1.70
SEER 13 Areas <sup>b</sup>	3.44	6.01	1.35	3.81	6.68	1.43	2.94	4.72	1.68
SEER 18 Areas <sup>b</sup>	3.61	6.39	1.34	3.91	6.94	1.38	3.33	5.55	1.70
SEER 21 Areas <sup>b</sup>	3.70	6.55	1.40	4.01	7.12	1.45	3.13	5.25	1.63
Total U.S.	4.00	7.11	1.45	4.23	7.52	1.46	3.32	5.56	1.72

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

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

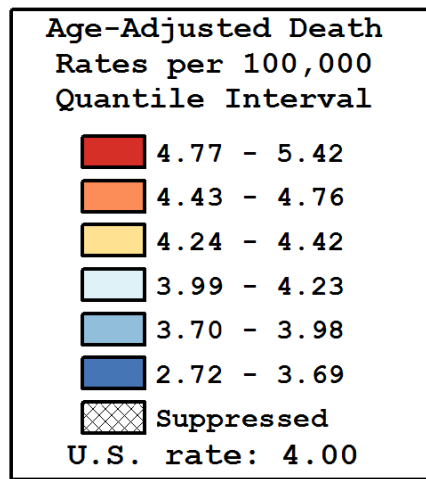
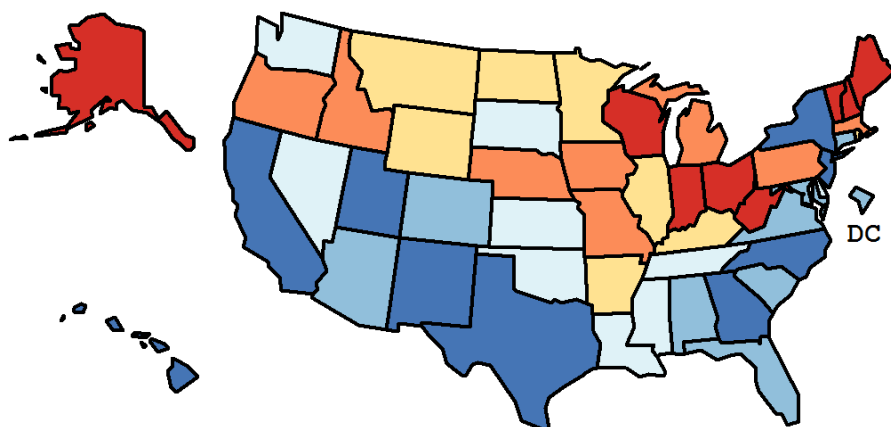
Table 8.18  
Cancer of the Esophagus (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2012-2016

Males and Females

State	Rate	SE	Rank(CI) <sup>d</sup>	PD
TOTAL U.S.	4.00	0.01		
High Five States				
Maine	5.42	0.24	01(01,10)	35.51 <sup>c</sup>
West Virginia	5.20	0.21	02(01,14)	29.86 <sup>c</sup>
Alaska	5.17	0.44	03(01,35)	29.30 <sup>c</sup>
New Hampshire	5.15	0.25	04(01,17)	28.79 <sup>c</sup>
Ohio	5.06	0.09	05(01,09)	26.45 <sup>c</sup>
Low Five States				
California	3.25	0.04	47(46,50)	-18.66 <sup>c</sup>
Texas	3.25	0.05	48(46,50)	-18.91 <sup>c</sup>
New Mexico	3.23	0.16	49(41,51)	-19.20 <sup>c</sup>
Utah	2.91	0.16	50(47,51)	-27.23 <sup>c</sup>
Hawaii	2.72	0.18	51(48,51)	-32.10 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	3.86	0.12	40(24,46)	-3.44	Montana	4.40	0.26	18(02,45)	10.01
Alaska	5.17	0.44	03(01,35)	29.30 <sup>c</sup>	Nebraska	4.51	0.21	15(03,36)	12.60
Arizona	3.89	0.10	38(25,45)	-2.73	Nevada	4.05	0.16	32(14,46)	1.28
Arkansas	4.42	0.16	17(06,35)	10.40	New Hampshire	5.15	0.25	04(01,17)	28.79 <sup>c</sup>
California	3.25	0.04	47(46,50)	-18.66 <sup>c</sup>	New Jersey	3.62	0.08	45(36,47)	-9.44
Colorado	3.95	0.12	36(19,45)	-1.25	New Mexico	3.23	0.16	49(41,51)	-19.20 <sup>c</sup>
Connecticut	3.92	0.13	37(20,46)	-1.99	New York	3.69	0.06	43(36,46)	-7.82
Delaware	4.16	0.27	27(04,47)	3.88	North Carolina	3.61	0.08	46(37,47)	-9.76
D.C.	3.98	0.36	34(04,50)	-0.66	North Dakota	4.28	0.33	22(02,47)	6.91
Florida	3.75	0.05	42(35,46)	-6.40	Ohio	5.06	0.09	05(01,09)	26.45 <sup>c</sup>
Georgia	3.65	0.09	44(35,47)	-8.81	Oklahoma	4.11	0.14	31(14,42)	2.63
Hawaii	2.72	0.18	51(48,51)	-32.10 <sup>c</sup>	Oregon	4.54	0.14	14(05,29)	13.52
Idaho	4.44	0.22	16(04,41)	10.91	Pennsylvania	4.71	0.08	10(05,18)	17.77 <sup>c</sup>
Illinois	4.29	0.08	21(14,31)	7.16	Rhode Island	4.25	0.26	24(04,46)	6.18
Indiana	4.87	0.11	06(02,16)	21.81 <sup>c</sup>	South Carolina	3.95	0.12	35(21,46)	-1.20
Iowa	4.59	0.16	13(03,29)	14.78	South Dakota	4.15	0.29	29(04,47)	3.59
Kansas	4.15	0.16	28(11,43)	3.68	Tennessee	4.12	0.10	30(16,40)	3.05
Kentucky	4.28	0.13	23(11,38)	6.91	Texas	3.25	0.05	48(46,50)	-18.91 <sup>c</sup>
Louisiana	4.23	0.13	25(12,38)	5.83	Utah	2.91	0.16	50(47,51)	-27.23 <sup>c</sup>
Maine	5.42	0.24	01(01,10)	35.51 <sup>c</sup>	Vermont	4.83	0.35	08(01,40)	20.60 <sup>c</sup>
Maryland	3.84	0.11	41(26,46)	-4.00	Virginia	3.88	0.09	39(27,45)	-3.02
Massachusetts	4.62	0.11	11(05,22)	15.35 <sup>c</sup>	Washington	4.23	0.11	26(14,37)	5.68
Michigan	4.76	0.09	09(04,17)	18.89 <sup>c</sup>	West Virginia	5.20	0.21	02(01,14)	29.86 <sup>c</sup>
Minnesota	4.30	0.12	20(11,36)	7.34	Wisconsin	4.87	0.12	07(02,17)	21.66 <sup>c</sup>
Mississippi	4.03	0.15	33(15,45)	0.60	Wyoming	4.33	0.36	19(01,47)	8.11
Missouri	4.60	0.11	12(06,23)	14.91					



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

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

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

<sup>d</sup> 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.

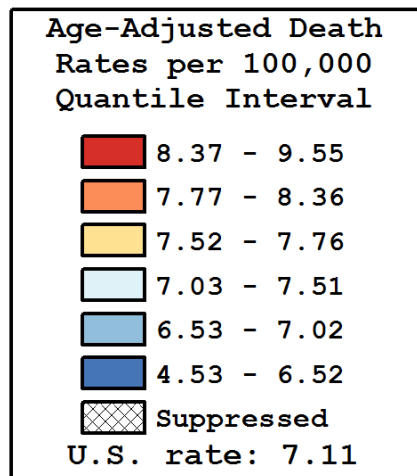
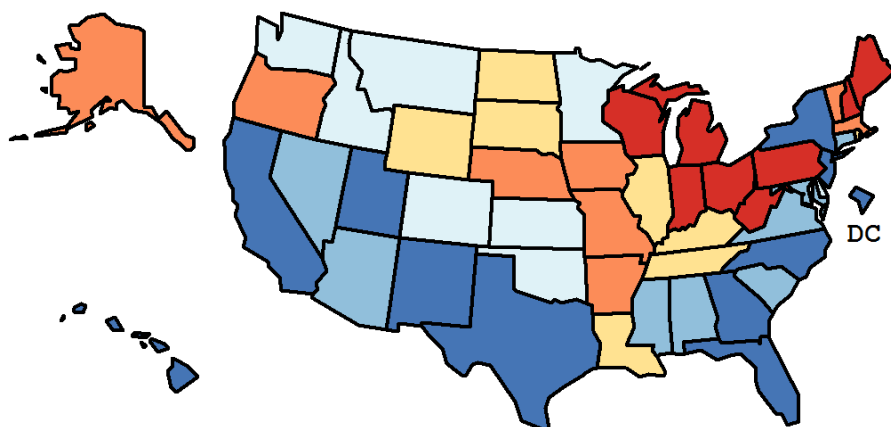
Table 8.19  
Cancer of the Esophagus (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2012-2016

Males

State	Rate	SE	Rank(CI) <sup>d</sup>	PD
TOTAL U.S.	7.11	0.03		
High Five States				
Maine	9.55	0.48	01(01,15)	34.28 <sup>c</sup>
West Virginia	9.18	0.41	02(01,16)	29.08 <sup>c</sup>
Ohio	9.16	0.17	03(01,08)	28.81 <sup>c</sup>
New Hampshire	9.10	0.50	04(01,22)	27.96 <sup>c</sup>
Indiana	8.84	0.23	05(01,14)	24.36 <sup>c</sup>
Low Five States				
Texas	5.81	0.10	47(45,50)	-18.24 <sup>c</sup>
California	5.70	0.08	48(46,50)	-19.88 <sup>c</sup>
D.C.	5.66	0.67	49(19,51)	-20.43 <sup>c</sup>
Utah	5.26	0.31	50(46,51)	-26.02 <sup>c</sup>
Hawaii	4.53	0.34	51(49,51)	-36.30 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	6.96	0.24	35(20,46)	-2.15	Montana	7.21	0.49	32(05,48)	1.48
Alaska	8.25	0.84	11(01,46)	16.05 <sup>c</sup>	Nebraska	8.16	0.41	13(02,35)	14.81
Arizona	6.73	0.19	40(27,46)	-5.35	Nevada	6.95	0.31	36(16,46)	-2.20
Arkansas	7.96	0.32	15(04,33)	11.98	New Hampshire	9.10	0.50	04(01,22)	27.96 <sup>c</sup>
California	5.70	0.08	48(46,50)	-19.88 <sup>c</sup>	New Jersey	6.49	0.17	44(32,47)	-8.69
Colorado	7.27	0.25	31(14,43)	2.21	New Mexico	6.03	0.33	46(31,50)	-15.11 <sup>c</sup>
Connecticut	7.02	0.27	33(17,46)	-1.24	New York	6.52	0.11	43(34,47)	-8.33
Delaware	7.51	0.54	26(03,47)	5.60	North Carolina	6.52	0.16	42(32,47)	-8.26
D.C.	5.66	0.67	49(19,51)	-20.43 <sup>c</sup>	North Dakota	7.67	0.65	20(01,47)	7.83
Florida	6.49	0.10	45(36,47)	-8.73	Ohio	9.16	0.17	03(01,08)	28.81 <sup>c</sup>
Georgia	6.52	0.17	41(32,47)	-8.23	Oklahoma	7.48	0.27	28(10,40)	5.16
Hawaii	4.53	0.34	51(49,51)	-36.30 <sup>c</sup>	Oregon	7.91	0.27	16(06,32)	11.33
Idaho	7.51	0.43	25(05,45)	5.70	Pennsylvania	8.57	0.15	06(03,15)	20.62 <sup>c</sup>
Illinois	7.67	0.16	19(12,32)	7.84	Rhode Island	7.70	0.53	18(02,46)	8.36
Indiana	8.84	0.23	05(01,14)	24.36 <sup>c</sup>	South Carolina	6.94	0.23	37(21,46)	-2.31
Iowa	8.16	0.31	12(03,30)	14.85	South Dakota	7.62	0.57	21(02,46)	7.16
Kansas	7.50	0.32	27(09,42)	5.50	Tennessee	7.58	0.21	24(11,36)	6.64
Kentucky	7.76	0.26	17(08,35)	9.18	Texas	5.81	0.10	47(45,50)	-18.24 <sup>c</sup>
Louisiana	7.60	0.26	22(10,37)	6.89	Utah	5.26	0.31	50(46,51)	-26.02 <sup>c</sup>
Maine	9.55	0.48	01(01,15)	34.28 <sup>c</sup>	Vermont	8.30	0.67	10(01,44)	16.73 <sup>c</sup>
Maryland	6.83	0.22	39(23,46)	-3.88	Virginia	6.86	0.19	38(25,46)	-3.52
Massachusetts	8.36	0.22	09(03,20)	17.65 <sup>c</sup>	Washington	7.32	0.21	30(15,39)	2.90
Michigan	8.52	0.18	07(03,17)	19.89 <sup>c</sup>	West Virginia	9.18	0.41	02(01,16)	29.08 <sup>c</sup>
Minnesota	7.43	0.23	29(12,39)	4.55	Wisconsin	8.51	0.24	08(02,19)	19.76 <sup>c</sup>
Mississippi	6.96	0.31	34(16,46)	-2.13	Wyoming	7.59	0.71	23(01,49)	6.79
Missouri	8.09	0.22	14(05,26)	13.83					



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

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

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

<sup>d</sup> 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.

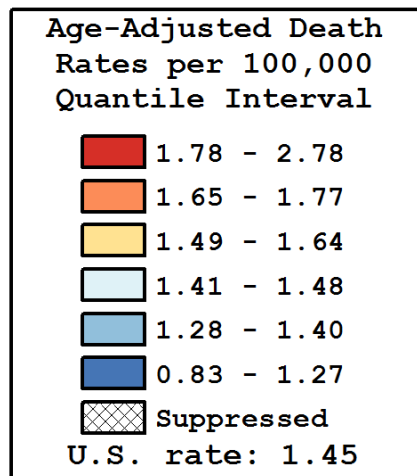
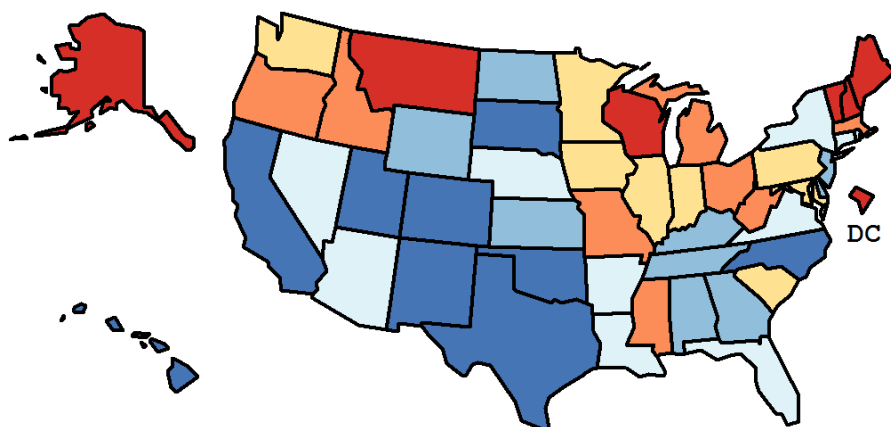
Table 8.20  
Cancer of the Esophagus (Invasive)

Age-Adjusted Cancer Death<sup>a</sup> Rates By State, All Races, 2012-2016

Females

State	Rate	SE	Rank(CI) <sup>d</sup>	PD
TOTAL U.S.	1.45	0.01		
High Five States				
D.C.	2.78	0.39	01(01,12)	91.48 <sup>c</sup>
Alaska	2.41	0.42	02(01,40)	65.77 <sup>c</sup>
Maine	1.99	0.20	03(01,32)	36.95 <sup>c</sup>
Vermont	1.89	0.30	04(01,48)	30.02 <sup>c</sup>
New Hampshire	1.85	0.20	05(01,40)	27.40 <sup>c</sup>
Low Five States				
Hawaii	1.17	0.16	47(12,51)	-19.55 <sup>c</sup>
Colorado	1.15	0.09	48(31,50)	-20.71 <sup>c</sup>
Texas	1.14	0.04	49(40,50)	-21.44 <sup>c</sup>
New Mexico	0.87	0.12	50(42,51)	-40.14 <sup>c</sup>
Utah	0.83	0.11	51(45,51)	-42.70 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	1.40	0.09	34(12,48)	-3.79	Montana	1.82	0.24	06(01,48)	25.23 <sup>c</sup>
Alaska	2.41	0.42	02(01,40)	65.77 <sup>c</sup>	Nebraska	1.47	0.16	26(04,49)	1.35
Arizona	1.43	0.08	31(12,46)	-1.35	Nevada	1.43	0.13	32(05,49)	-1.83
Arkansas	1.45	0.12	30(06,48)	-0.38	New Hampshire	1.85	0.20	05(01,40)	27.40 <sup>c</sup>
California	1.26	0.03	44(34,47)	-13.34	New Jersey	1.39	0.07	35(17,46)	-4.52
Colorado	1.15	0.09	48(31,50)	-20.71 <sup>c</sup>	New Mexico	0.87	0.12	50(42,51)	-40.14 <sup>c</sup>
Connecticut	1.47	0.11	28(06,47)	0.87	New York	1.48	0.05	24(15,39)	2.01
Delaware	1.38	0.21	36(03,51)	-4.94	North Carolina	1.27	0.06	43(27,49)	-12.45
D.C.	2.78	0.39	01(01,12)	91.48 <sup>c</sup>	North Dakota	1.30	0.25	40(03,51)	-10.51
Florida	1.42	0.04	33(20,42)	-2.05	Ohio	1.73	0.07	10(03,24)	19.03 <sup>c</sup>
Georgia	1.36	0.07	38(19,47)	-6.78	Oklahoma	1.23	0.10	45(20,50)	-15.06 <sup>c</sup>
Hawaii	1.17	0.16	47(12,51)	-19.55 <sup>c</sup>	Oregon	1.68	0.11	12(03,37)	15.21 <sup>c</sup>
Idaho	1.75	0.19	09(02,45)	20.24 <sup>c</sup>	Pennsylvania	1.62	0.06	19(06,32)	11.09
Illinois	1.58	0.06	21(07,35)	8.79	Rhode Island	1.47	0.20	27(03,50)	1.27
Indiana	1.60	0.09	20(05,38)	10.14	South Carolina	1.49	0.10	23(07,45)	2.67
Iowa	1.62	0.12	18(03,42)	11.20	South Dakota	1.21	0.21	46(05,51)	-16.47 <sup>c</sup>
Kansas	1.33	0.12	39(11,50)	-8.73	Tennessee	1.28	0.08	42(23,49)	-11.94
Kentucky	1.36	0.10	37(13,49)	-6.28	Texas	1.14	0.04	49(40,50)	-21.44 <sup>c</sup>
Louisiana	1.46	0.10	29(07,47)	0.61	Utah	0.83	0.11	51(45,51)	-42.70 <sup>c</sup>
Maine	1.99	0.20	03(01,32)	36.95 <sup>c</sup>	Vermont	1.89	0.30	04(01,48)	30.02 <sup>c</sup>
Maryland	1.52	0.09	22(06,42)	4.67	Virginia	1.48	0.08	25(10,43)	1.87
Massachusetts	1.67	0.09	13(03,33)	14.81	Washington	1.64	0.09	17(04,36)	12.83
Michigan	1.66	0.07	14(04,31)	14.16	West Virginia	1.77	0.17	08(02,41)	21.46 <sup>c</sup>
Minnesota	1.64	0.10	16(04,39)	13.11	Wisconsin	1.82	0.10	07(02,24)	24.95 <sup>c</sup>
Mississippi	1.66	0.14	15(03,42)	13.83	Wyoming	1.29	0.26	41(03,51)	-11.12
Missouri	1.72	0.09	11(03,31)	18.59 <sup>c</sup>					



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

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

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 15% or more.

<sup>d</sup> 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 8.21  
Cancer of the Esophagus (Invasive)

Estimated United States Cancer Prevalence Counts<sup>a</sup> 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 <sup>b</sup>	>=24 <sup>d</sup>	Complete <sup>e</sup>
<u>Race</u>	<u>Sex</u>								
All Races	Both Sexes	27,114	9,592	4,960	2,379	827	44,872	1,605	46,477
	Males	21,041	7,281	3,783	1,779	619	34,504	1,055	35,559
	Females	6,073	2,311	1,176	600	208	10,368	550	10,918
White	Both Sexes	24,421	8,819	4,574	2,089	672	40,576	1,297	42,147
	Males	19,236	6,816	3,554	1,629	507	31,742	891	32,837
	Females	5,185	2,003	1,019	461	165	8,834	406	9,310
Black	Both Sexes	1,881	508	251	215	107	2,963	208	3,171
	Males	1,226	272	129	109	79	1,814	84	1,898
	Females	655	237	122	107	28	1,148	124	1,273
Asian/ Pacific Islander	Both Sexes	552	169	85	57	25	888	+	+
	Males	392	112	57	35	20	616	+	+
	Females	160	57	28	21	5	271	+	+
Hispanic	Both Sexes	1,472	387	201	78	64	2,203	+	+
	Males	1,158	322	175	67	45	1,767	+	+
	Females	314	66	26	11	19	436	+	+

Estimated prevalence percent<sup>a</sup> 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 <sup>c</sup>
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races	Both Sexes	0.0139	-	-	0.0001	0.0006	0.0028	0.0129	0.0407	0.0726	0.0725	0.0116
	Males	0.0217	-	-	0.0001	0.0009	0.0044	0.0204	0.0678	0.1256	0.1324	0.0199
	Females	0.0063	-	-	0.0001	0.0003	0.0012	0.0057	0.0161	0.0284	0.0356	0.0049
White	Both Sexes	0.0161	-	-	0.0001	0.0006	0.0031	0.0138	0.0442	0.0783	0.0764	0.0125
	Males	0.0254	-	-	0.0001	0.0010	0.0049	0.0221	0.0737	0.1368	0.1402	0.0215
	Females	0.0069	-	-	0.0000	0.0002	0.0012	0.0057	0.0168	0.0286	0.0365	0.0050
Black	Both Sexes	0.0066	-	-	-	0.0006	0.0020	0.0100	0.0262	0.0439	0.0428	0.0074
	Males	0.0084	-	-	-	0.0006	0.0025	0.0144	0.0389	0.0585	0.0714	0.0108
	Females	0.0049	-	-	-	0.0005	0.0014	0.0061	0.0160	0.0337	0.0287	0.0050
Asian/ Pacific Islander	Both Sexes	0.0044	-	-	0.0003	-	0.0013	0.0061	0.0145	0.0276	0.0355	0.0048
	Males	0.0063	-	-	0.0004	-	0.0018	0.0087	0.0252	0.0413	0.0591	0.0076
	Females	0.0026	-	-	-	-	0.0008	0.0038	0.0059	0.0166	0.0203	0.0027
Hispanic	Both Sexes	0.0039	-	-	0.0001	0.0004	0.0022	0.0070	0.0193	0.0390	0.0398	0.0063
	Males	0.0061	-	-	0.0001	0.0007	0.0035	0.0124	0.0306	0.0757	0.0766	0.0114
	Females	0.0015	-	-	-	-	0.0009	0.0017	0.0092	0.0109	0.0170	0.0022

<sup>a</sup> 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.

<sup>b</sup> 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.

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

<sup>d</sup> Cases diagnosed more than 24 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

<sup>e</sup> 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.

Table 8.22

## Cancer of the Esophagus (Invasive)

Percent Distribution and Counts by Histology among Histologically Confirmed Cases, 2012-2016  
Both Sexes by Race

Histology <sup>a</sup>	All Races		White		Black		Asian/Pacific Islander		American Indian/ Alaska Native <sup>b</sup>		Hispanic <sup>c</sup>	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Carcinoma	27,121	99.2%	23,055	99.3%	2,597	99.1%	1,191	98.6%	121	99.2%	2,046	99.0%
Epidermoid carcinoma <sup>d</sup> (8051-8131)	8,574	31.4%	5,651	24.3%	1,997	76.2%	834	69.0%	43	35.2%	806	39.0%
Squamous cell carcinoma (8070-8078, 8083-8084)	8,550	31.3%	5,640	24.3%	1,987	75.8%	832	68.9%	43	35.2%	806	39.0%
Adenocarcinoma <sup>e</sup>	17,529	64.1%	16,529	71.2%	514	19.6%	315	26.1%	75	61.5%	1,155	55.9%
Other specific carcinomas <sup>f</sup>	407	1.5%	341	1.5%	34	1.3%	25	2.1%	-	-	32	1.5%
Unspecified, Carcinoma, NOS (8010-8011,8020-8022)	611	2.2%	534	2.3%	52	2.0%	17	1.4%	-	-	53	2.6%
Other specific types <sup>g</sup>	101	0.4%	73	0.3%	-	-	-	-	-	-	-	-
Unspecified (8000-8005)	118	0.4%	100	0.4%	-	-	-	-	-	-	-	-
Total	27,340	100.0%	23,228	100.0%	2,621	100.0%	1,208	100.0%	122	100.0%	2,067	100.0%

Source: 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).  
Percents may not sum to 100 due to rounding.

<sup>a</sup> Excludes Kaposi Sarcoma, mesothelioma, lymphomas, leukemias, myelomas, lymphoreticular, and immunoproliferative diseases.

<sup>b</sup> Estimates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

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

<sup>d</sup> Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

<sup>e</sup> Epidermoid carcinoma includes squamous, basal, and transitional cell carcinomas.

<sup>f</sup> Adenocarcinoma is defined as histologies 8050, 8140-8147, 8160-8162, 8180-8221, 8250-8507, 8514, 8520-8551, 8560, 8570-8574, 8576, 8940-8941.

<sup>g</sup> Other specific carcinomas is defined as histologies 8012-8015, 8030-8046, 8150-8155, 8170-8175, 8230-8249, 8508, 8510-8513, 8561-8562, 8575, 8580-8671.

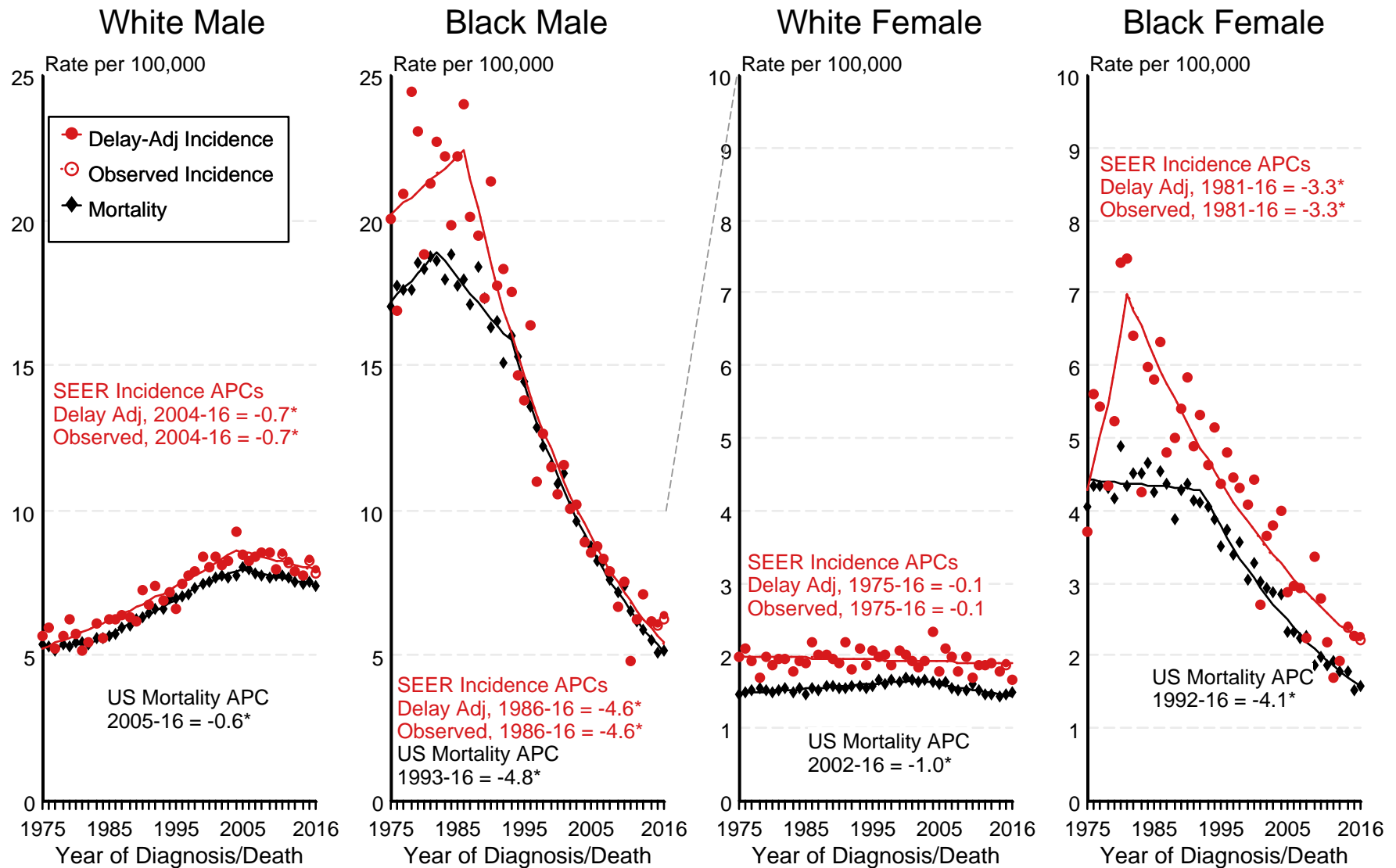
<sup>h</sup> Other specific types includes sarcomas and other soft tissue tumors.

<sup>i</sup> Other specific types is defined as histologies 8680-8713, 8720-8790, 8800-8921, 8930-8936, 8950-9030, 9040-9044, 9060-9110, 9120-9136, 9150-9252, 9260-9365, 9370-9373, 9380-9539, 9540-9582.

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

Figure 8.1

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



Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC).

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

Regression lines 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.

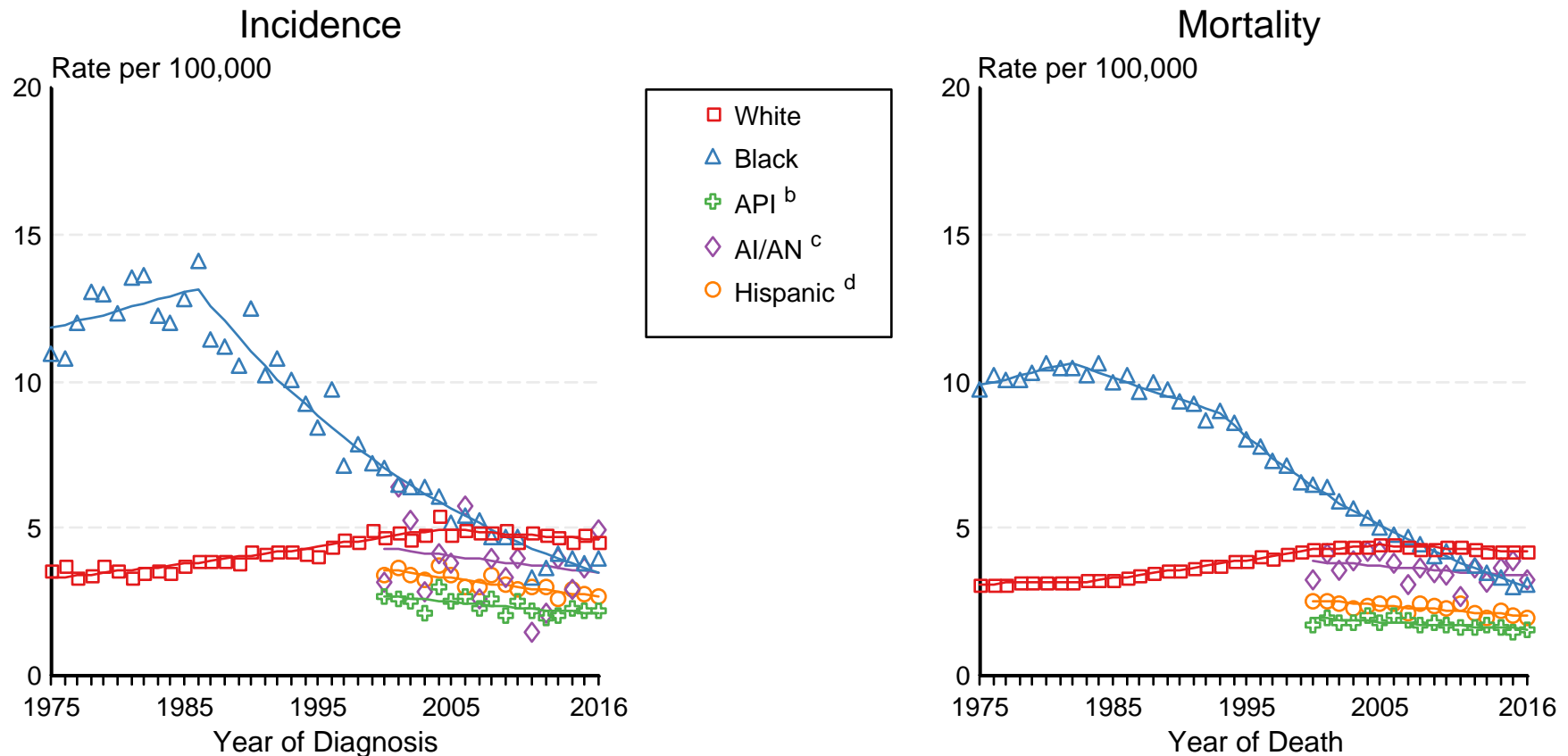
\* The APC is significantly different from zero ( $p < 0.05$ ).

Figure 8.2

# SEER Incidence and US Death Rates<sup>a</sup> Cancer of the Esophagus, 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.

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

Regression lines are calculated using the Joinpoint Regression Program Version 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.

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

<sup>c</sup> AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the Purchased/Referred Care Delivery Area (PRCDA) counties.

<sup>d</sup> Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

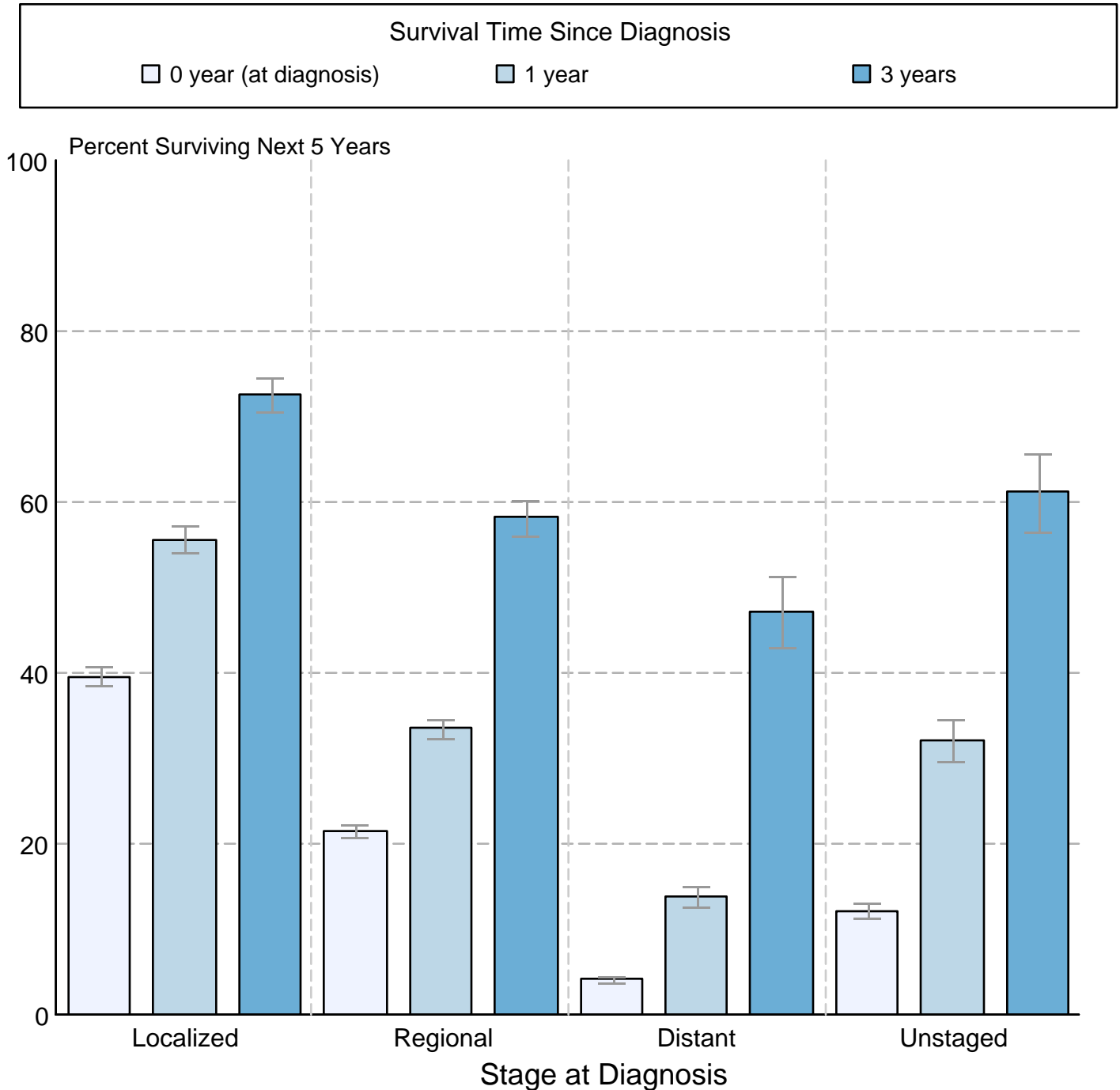


Figure 8.3

## Cancer of the Esophagus

### 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.