

Table 20.1  
Cancer of the Oral Cavity and Pharynx (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	1975-81	0.7	1981-03	-1.2*	2003-16	0.9*							0.9*	0.9*
White	1975-03	-0.9*	2003-16	1.2*									1.2*	1.2*
Black	1975-84	2.2*	1984-16	-2.3*									-2.3*	-2.3*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-05	-0.2	2005-16	0.9*									0.9*	0.9*
White	2000-03	-0.4	2003-16	1.2*									1.2*	1.2*
White NH <sup>ef</sup>	2000-05	0.4	2005-16	1.6*									1.6*	1.6*
Black	2000-16	-1.6*											-1.6*	-1.6*
Black NH <sup>ef</sup>	2000-16	-1.6*											-1.6*	-1.6*
API <sup>e</sup>	2000-07	-1.6*	2007-16	1.2*									1.2*	1.2*
AI/AN <sup>eg</sup>	2000-16	1.3											1.3	1.3
Hispanic <sup>f</sup>	2000-16	-0.1											-0.1	-0.1
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-79	-0.5	1979-93	-1.7*	1993-00	-2.7*	2000-09	-1.4*	2009-16	0.8*			0.3	0.8*
White	1975-06	-1.9*	2006-16	0.7*									0.7*	0.7*
Black	1975-80	3.3*	1980-93	-1.5*	1993-09	-4.0*	2009-16	-1.3					-1.9*	-1.3
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-09	-1.4*	2009-16	0.8*									0.3	0.8*
White	2000-09	-0.9*	2009-16	1.2*									0.7*	1.2*
White NH <sup>ef</sup>	2000-09	-0.8*	2009-16	1.3*									0.8*	1.3*
Black	2000-16	-2.8*											-2.8*	-2.8*
Black NH <sup>ef</sup>	2000-16	-2.7*											-2.7*	-2.7*
API <sup>e</sup>	2000-09	-3.0*	2009-16	1.6									0.6	1.6
AI/AN <sup>eg</sup>	2000-16	-0.5											-0.5	-0.5
Hispanic <sup>f</sup>	2000-16	-0.8*											-0.8*	-0.8*

Joinpoint Regression Program Version 4.7, February 2019, National Cancer Institute. (<https://surveillance.cancer.gov/joinpoint/>).

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

<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 20.2  
Cancer of the Oral Cavity and Pharynx for Selected Subsites (Invasive)

Trends in SEER 9 Observed Incidence<sup>a</sup> Using the Joinpoint Regression Program,  
1975-2016 With up to Five Joinpoints,  
By Race and Sex

		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	2012-16
<u>Cancer of the Tongue</u>														
All Races	Both Sexes	1975-99	0.4*	1999-16	2.2*									2.2*
All Races	Male	1975-99	0.4*	1999-16	2.5*									2.5*
All Races	Female	1975-10	0.5*	2010-16	3.8*									3.8*
White	Male	1975-98	0.5*	1998-16	3.0*									3.0*
White	Female	1975-99	0.3	1999-16	1.7*									1.7*
Black	Male	1975-89	1.1	1989-16	-2.5*									-2.5*
Black	Female	1975-16	-1.5*											-1.5*
<u>Cancer of the Floor of Mouth, Gum and Other Mouth</u>														
All Races	Both Sexes	1975-87	-1.1	1987-16	-3.9*									-3.9*
All Races	Male	1975-87	-1.4	1987-16	-4.0*									-4.0*
All Races	Female	1975-80	4.7	1980-16	-3.4*									-3.4*
White	Male	1975-16	-3.2*											-3.2*
White	Female	1975-82	1.9	1982-16	-3.3*									-3.3*
Black	Male	1975-77	56.2	1977-93	-2.6*	1993-16	-6.8*							-6.8*
Black	Female	-	-											-
<u>Cancer of the Oropharynx and Tonsil</u>														
All Races	Both Sexes	1975-99	0.0	1999-14	3.1*	2014-16	-3.1							0.0
All Races	Male	1975-97	0.3	1997-16	3.0*									3.0*
All Races	Female	1975-00	-1.5*	2000-16	1.2*									1.2*
White	Male	1975-96	0.3	1996-16	3.7*									3.7*
White	Female	1975-00	-1.3*	2000-16	1.7*									1.7*
Black	Male	1975-16	-0.6*											-0.6*
Black	Female	1975-16	-1.5*											-1.5*
<u>Cancer of the Salivary Gland</u>														
All Races	Both Sexes	1975-16	0.5*											0.5*
All Races	Male	1975-16	0.5*											0.5*
All Races	Female	1975-16	0.4*											0.4*
White	Male	1975-16	0.5*											0.5*
White	Female	1975-16	0.3*											0.3*
Black	Male	1975-96	3.3*	1996-10	-4.2*	2010-16	12.4*							12.4*
Black	Female	1975-16	0.8											0.8
<u>Cancer of the Lip</u>														
All Races	Both Sexes	1975-99	-3.2*	1999-08	-5.9*	2008-16	1.6							1.6
All Races	Male	1975-96	-3.7*	1996-09	-6.0*	2009-16	1.2							1.2
All Races	Female	1975-96	0.2	1996-11	-2.3*	2011-16	7.2*							7.2*
White	Male	1975-96	-3.4*	1996-09	-5.9*	2009-16	1.2							1.2
White	Female	1975-16	-0.3											-0.3
Black	Male	-	-											-
Black	Female	-	-											-

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).

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

The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint over the time range of 1975-2016.

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

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

Table 20.3  
Cancer of the Oral Cavity and Pharynx (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	1975-83	-0.2	1983-03	-1.4*	2003-16	1.0*							1.0*	1.0*
White	1975-03	-1.2*	2003-16	1.4*									1.4*	1.4*
Black	1975-86	2.0*	1986-16	-2.7*									-2.7*	-2.7*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-05	-0.2	2005-16	1.0*									1.0*	1.0*
White	2000-16	1.1*											1.1*	1.1*
White NH <sup>ef</sup>	2000-16	1.5*											1.5*	1.5*
Black	2000-16	-2.1*											-2.1*	-2.1*
Black NH <sup>ef</sup>	2000-16	-2.0*											-2.0*	-2.0*
API <sup>e</sup>	2000-16	0.4											0.4	0.4
AI/AN <sup>eg</sup>	2000-16	1.3											1.3	1.3
Hispanic <sup>f</sup>	2000-16	-0.4											-0.4	-0.4
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-93	-1.9*	1993-00	-3.0*	2000-09	-1.2*	2009-16	1.0*					0.5	1.0*
White	1975-05	-2.1*	2005-16	0.9*									0.9*	0.9*
Black	1975-80	3.7*	1980-92	-1.4*	1992-08	-4.0*	2008-16	-2.2*					-2.4*	-2.2*
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-09	-1.3*	2009-16	1.0*									0.5*	1.0*
White	2000-09	-0.8*	2009-16	1.5*									1.0*	1.5*
White NH <sup>ef</sup>	2000-09	-0.6	2009-16	1.6*									1.1*	1.6*
Black	2000-16	-3.1*											-3.1*	-3.1*
Black NH <sup>ef</sup>	2000-16	-3.0*											-3.0*	-3.0*
API <sup>e</sup>	2000-10	-2.7*	2010-16	2.6									0.8	2.6
AI/AN <sup>eg</sup>	2000-16	0.0											0.0	0.0
Hispanic <sup>f</sup>	2000-08	-2.8*	2008-16	0.3									-0.1	0.3

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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 20.4  
Cancer of the Oral Cavity and Pharynx (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	1975-80	2.5	1980-07	-0.9*	2007-16	0.9*							0.9*	0.9*
White	1975-81	2.0*	1981-05	-0.9*	2005-16	0.8*							0.8*	0.8*
Black	1975-16	-1.5*											-1.5*	-1.5*
<u>SEER 21 Delay-Adjusted Incidence<sup>b</sup>, 2000-2016</u>														
All Races	2000-16	0.3*											0.3*	0.3*
White	2000-16	0.5*											0.5*	0.5*
White NH <sup>ef</sup>	2000-16	0.7*											0.7*	0.7*
Black	2000-16	-0.9*											-0.9*	-0.9*
Black NH <sup>ef</sup>	2000-16	-0.9*											-0.9*	-0.9*
API <sup>e</sup>	2000-16	-0.2											-0.2	-0.2
AI/AN <sup>eg</sup>	2000-16	0.6											0.6	0.6
Hispanic <sup>f</sup>	2000-16	0.3											0.3	0.3
<u>U.S. Cancer Mortality<sup>c</sup>, 1975-2016</u>														
All Races	1975-90	-0.9*	1990-04	-2.4*	2004-14	-1.2*	2014-16	4.8					0.1	1.7
White	1975-90	-1.0*	1990-03	-2.3*	2003-14	-1.1*	2014-16	5.3					0.3	2.1
Black	1975-94	-0.6*	1994-05	-4.6*	2005-16	-1.4*							-1.4*	-1.4*
<u>U.S. Cancer Mortality<sup>c</sup>, 2000-2016</u>														
All Races	2000-14	-1.4*	2014-16	5.3									0.0	1.9
White	2000-14	-1.3*	2014-16	5.7									0.2	2.2
White NH <sup>ef</sup>	2000-14	-1.2*	2014-16	5.8									0.3	2.3
Black	2000-16	-2.1*											-2.1*	-2.1*
Black NH <sup>ef</sup>	2000-16	-2.0*											-2.0*	-2.0*
API <sup>e</sup>	2000-16	-1.2											-1.2	-1.2
AI/AN <sup>eg</sup>	2000-16	-2.7											-2.7	-2.7
Hispanic <sup>f</sup>	2000-16	-0.3											-0.3	-0.3

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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 20.5  
Cancer of the Oral Cavity and Pharynx (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	13.33	21.02	7.43	13.21	21.00	7.33	15.51	24.44	8.46
1980	13.34	20.25	7.91	12.98	19.96	7.62	16.82	25.39	9.59
1981	13.58	20.84	7.91	13.41	20.53	7.95	16.60	28.16	7.36
1982	13.34	20.32	7.93	13.08	19.94	7.85	17.06	27.39	8.75
1983	13.28	21.20	7.24	13.25	21.21	7.28	16.13	26.08	8.32
1984	13.47	20.79	7.86	13.00	20.16	7.64	18.91	29.99	10.07
1985	13.33	19.82	8.24	13.28	19.62	8.36	15.98	25.82	8.41
1986	12.47	19.14	7.20	12.36	18.86	7.30	16.18	28.09	6.97
1987	13.21	20.54	7.52	13.11	20.17	7.68	16.81	30.00	6.99
1988	12.14	18.15	7.32	11.79	17.69	7.11	16.54	25.67	9.19
1989	12.13	18.31	7.29	11.85	17.72	7.32	15.75	27.16	7.05
1990	12.67	19.42	7.35	12.40	18.84	7.39	16.05	27.89	6.92
1991	12.16	18.34	7.25	12.08	18.09	7.32	14.56	23.93	7.41
1992	11.97	18.34	6.92	11.82	18.05	6.93	14.85	25.21	6.94
1993	12.42	18.70	7.29	12.20	18.35	7.21	15.64	25.06	8.10
1994	11.72	17.69	6.84	11.41	16.87	6.92	15.74	26.82	7.07
1995	11.54	16.95	7.20	11.52	16.73	7.34	13.58	22.71	6.66
1996	11.78	17.77	6.98	11.47	17.27	6.85	15.12	24.44	7.81
1997	11.51	17.36	6.74	11.52	17.21	6.85	11.58	18.55	6.18
1998	11.24	16.68	6.77	11.24	16.37	6.95	13.20	22.61	6.42
1999	10.59	15.56	6.48	10.48	15.42	6.35	11.95	20.27	5.83
2000	10.76	16.08	6.31	10.67	15.66	6.41	11.75	20.76	4.93
2001	10.85	15.56	6.92	10.92	15.62	6.95	12.11	19.03	7.01
2002	11.13	16.34	6.74	11.31	16.58	6.80	11.15	16.95	6.55
2003	10.53	15.65	6.19	10.49	15.64	6.04	11.89	17.22	7.66
2004	10.85	16.15	6.29	11.09	16.52	6.31	10.26	16.18	5.89
2005	10.74	15.67	6.53	10.89	16.05	6.40	11.19	16.73	7.06
2006	10.80	15.87	6.43	11.05	16.10	6.61	10.14	16.70	5.24
2007	10.84	16.11	6.28	11.13	16.55	6.30	10.17	15.78	5.89
2008	11.04	16.41	6.43	11.49	16.95	6.66	8.88	14.02	4.97
2009	11.08	16.43	6.40	11.33	16.78	6.46	10.69	16.27	6.39
2010	10.99	16.36	6.25	11.45	16.94	6.46	8.80	13.29	5.25
2011	11.35	16.85	6.56	11.99	17.76	6.81	9.11	14.35	5.11
2012	11.25	16.42	6.72	11.81	17.20	6.93	8.63	14.27	4.26
2013	11.57	17.35	6.54	12.11	18.20	6.68	9.65	14.99	5.55
2014	11.55	17.64	6.19	12.12	18.42	6.40	9.37	15.48	4.73
2015	11.93	17.66	6.93	12.63	18.82	7.05	9.02	14.05	5.39
2016	11.98	17.68	6.95	12.64	18.66	7.12	8.64	13.26	5.16

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

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

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

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

- Delay-adjusted rate is not shown for observed rates based on less than 16 cases for the time interval.

Table 20.6  
Cancer of the Oral Cavity and Pharynx (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	11.83	17.78	6.91	11.96	17.94	6.97	12.18	19.61	6.45
1975-1979	13.33	21.02	7.43	13.21	21.00	7.33	15.51	24.44	8.46
1980	13.34	20.25	7.91	12.98	19.96	7.62	16.82	25.39	9.59
1981	13.58	20.84	7.91	13.41	20.53	7.95	16.60	28.16	7.36
1982	13.34	20.32	7.93	13.08	19.94	7.85	17.06	27.39	8.75
1983	13.28	21.20	7.24	13.25	21.21	7.28	16.13	26.08	8.32
1984	13.47	20.79	7.86	13.00	20.16	7.64	18.91	29.99	10.07
1985	13.33	19.82	8.24	13.28	19.62	8.36	15.98	25.82	8.41
1986	12.47	19.14	7.20	12.36	18.86	7.30	16.18	28.09	6.97
1987	13.21	20.54	7.52	13.11	20.17	7.68	16.81	30.00	6.99
1988	12.14	18.15	7.32	11.79	17.69	7.11	16.54	25.67	9.19
1989	12.13	18.31	7.29	11.85	17.72	7.32	15.75	27.16	7.05
1990	12.67	19.42	7.35	12.40	18.84	7.39	16.05	27.89	6.92
1991	12.16	18.34	7.25	12.08	18.09	7.32	14.56	23.93	7.41
1992	11.97	18.34	6.92	11.82	18.05	6.93	14.85	25.21	6.94
1993	12.42	18.70	7.29	12.20	18.35	7.21	15.64	25.06	8.10
1994	11.72	17.69	6.84	11.41	16.87	6.92	15.74	26.82	7.07
1995	11.54	16.95	7.20	11.52	16.73	7.34	13.58	22.71	6.66
1996	11.78	17.77	6.98	11.47	17.27	6.85	15.12	24.44	7.81
1997	11.51	17.36	6.74	11.52	17.21	6.85	11.58	18.55	6.18
1998	11.24	16.68	6.77	11.24	16.37	6.95	13.20	22.61	6.42
1999	10.59	15.56	6.48	10.48	15.42	6.35	11.95	20.27	5.83
2000	10.76	16.08	6.31	10.67	15.66	6.41	11.75	20.76	4.93
2001	10.85	15.56	6.92	10.92	15.62	6.95	12.11	19.03	7.01
2002	11.13	16.34	6.74	11.31	16.58	6.80	11.15	16.95	6.55
2003	10.53	15.65	6.19	10.49	15.64	6.04	11.89	17.22	7.66
2004	10.85	16.15	6.29	11.09	16.52	6.31	10.26	16.18	5.89
2005	10.74	15.67	6.53	10.89	16.05	6.40	11.19	16.73	7.06
2006	10.80	15.87	6.43	11.05	16.10	6.61	10.14	16.70	5.24
2007	10.84	16.11	6.28	11.13	16.55	6.30	10.17	15.78	5.89
2008	11.03	16.39	6.42	11.47	16.93	6.65	8.86	14.00	4.96
2009	11.06	16.40	6.38	11.30	16.73	6.44	10.66	16.22	6.36
2010	10.96	16.31	6.24	11.41	16.88	6.44	8.75	13.22	5.22
2011	11.31	16.79	6.53	11.93	17.67	6.77	9.05	14.26	5.07
2012	11.20	16.34	6.69	11.74	17.09	6.89	8.55	14.15	4.23
2013	11.50	17.26	6.51	12.02	18.07	6.63	9.56	14.84	5.49
2014	11.46	17.50	6.14	12.00	18.23	6.33	9.25	15.25	4.68
2015	11.81	17.48	6.86	12.45	18.55	6.95	8.86	13.80	5.30
2016	11.76	17.36	6.82	12.33	18.21	6.94	8.40	12.90	5.01

<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 20.7  
Cancer of the Oral Cavity and Pharynx (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	3.07	4.75	1.73	2.93	4.48	1.71	4.33	7.54	1.95
1975-1979	4.25	6.87	2.30	4.05	6.50	2.25	6.18	10.71	2.69
1980	4.16	6.69	2.27	3.87	6.12	2.22	6.97	12.48	2.76
1981	4.05	6.46	2.24	3.78	5.96	2.17	6.52	11.36	2.84
1982	4.02	6.46	2.22	3.74	5.96	2.13	6.62	11.46	2.94
1983	3.94	6.27	2.20	3.64	5.73	2.10	6.65	11.83	2.76
1984	3.88	6.18	2.17	3.61	5.64	2.12	6.37	11.70	2.38
1985	3.75	5.93	2.11	3.49	5.44	2.05	6.23	11.03	2.62
1986	3.72	5.80	2.16	3.42	5.27	2.07	6.51	11.35	2.93
1987	3.53	5.46	2.05	3.29	5.01	2.00	5.70	9.95	2.54
1988	3.59	5.63	2.05	3.33	5.14	1.98	5.99	10.67	2.55
1989	3.50	5.34	2.07	3.23	4.84	2.00	5.92	10.44	2.59
1990	3.58	5.61	2.03	3.29	5.07	1.96	6.12	11.05	2.52
1991	3.47	5.34	2.03	3.21	4.87	1.95	5.84	10.06	2.70
1992	3.34	5.15	1.94	3.09	4.66	1.89	5.56	9.97	2.31
1993	3.34	5.19	1.90	3.07	4.68	1.83	5.68	10.09	2.44
1994	3.15	4.84	1.83	2.92	4.41	1.77	5.33	9.26	2.39
1995	3.16	4.87	1.84	2.91	4.42	1.75	5.37	9.28	2.54
1996	3.03	4.64	1.75	2.82	4.24	1.71	4.86	8.69	2.07
1997	2.98	4.53	1.76	2.79	4.17	1.70	4.68	8.10	2.19
1998	2.96	4.53	1.72	2.80	4.20	1.68	4.53	7.91	2.09
1999	2.73	4.15	1.60	2.55	3.80	1.54	4.37	7.49	2.12
2000	2.69	4.06	1.58	2.52	3.72	1.55	4.12	7.30	1.76
2001	2.72	4.15	1.56	2.58	3.87	1.53	3.86	6.65	1.80
2002	2.68	4.08	1.55	2.57	3.87	1.51	3.65	6.26	1.73
2003	2.64	4.07	1.48	2.51	3.80	1.45	3.83	6.86	1.65
2004	2.61	3.99	1.48	2.49	3.72	1.46	3.81	6.84	1.62
2005	2.53	3.84	1.44	2.42	3.59	1.44	3.49	6.42	1.37
2006	2.48	3.78	1.40	2.39	3.60	1.38	3.22	5.57	1.49
2007	2.52	3.85	1.43	2.45	3.70	1.41	3.27	5.60	1.59
2008	2.45	3.74	1.39	2.40	3.61	1.38	2.98	5.04	1.47
2009	2.37	3.64	1.31	2.33	3.53	1.32	2.80	4.97	1.22
2010	2.47	3.75	1.40	2.45	3.68	1.40	2.79	4.76	1.36
2011	2.47	3.86	1.31	2.42	3.74	1.30	3.06	5.36	1.37
2012	2.49	3.86	1.35	2.46	3.77	1.35	2.88	5.04	1.32
2013	2.41	3.72	1.30	2.39	3.66	1.29	2.81	4.77	1.37
2014	2.51	3.97	1.28	2.50	3.91	1.30	2.79	4.87	1.28
2015	2.53	3.92	1.36	2.53	3.91	1.35	2.57	4.12	1.39
2016	2.59	3.98	1.41	2.60	3.96	1.43	2.63	4.50	1.24

<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 20.8  
Cancer of the Oral Cavity and Pharynx (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	11.3	17.0	6.4	11.9	17.9	6.6	8.6	13.4	5.0
Under 65	6.7	10.0	3.6	7.0	10.4	3.6	5.6	8.3	3.4
65 and over	43.0	65.5	25.4	45.7	69.4	26.9	29.2	48.5	16.3
All ages (WHO world std) <sup>c</sup>	8.9	13.3	4.9	9.3	14.0	5.0	6.9	10.7	4.0
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	0.1	0.1	0.1	0.1	-	-	-	-	-
10-14	0.3	0.3	0.3	0.3	0.2	0.3	-	-	-
15-19	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6	-
20-24	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5
25-29	1.1	1.1	1.1	1.0	1.0	1.1	0.9	0.9	0.9
30-34	1.8	2.0	1.7	1.7	1.9	1.5	1.3	1.1	1.5
35-39	2.9	3.4	2.4	2.6	3.1	2.2	2.2	2.3	2.1
40-44	5.6	7.9	3.4	5.5	7.6	3.3	4.3	5.8	3.0
45-49	11.5	16.8	6.2	11.7	17.3	6.0	9.8	14.1	6.1
50-54	19.8	29.9	10.0	20.9	31.6	10.2	16.8	25.1	9.5
55-59	29.4	46.1	13.7	31.4	49.3	14.0	24.4	37.0	13.6
60-64	35.9	56.7	16.9	38.1	59.9	17.6	30.3	49.5	14.9
65-69	40.5	63.5	20.2	43.1	67.0	21.4	30.8	53.0	13.9
70-74	43.6	67.3	23.8	46.4	70.8	25.4	30.9	52.6	15.6
75-79	44.5	66.4	27.6	47.6	70.5	29.4	29.8	49.1	17.5
80-84	44.5	66.1	29.6	47.2	70.2	31.0	28.6	44.5	19.9
85+	42.8	64.4	31.6	45.3	68.6	33.2	21.7	33.5	16.8
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2012-2016									
All ages	2.5	3.9	1.3	2.5	3.8	1.3	2.7	4.7	1.3
Under 65	1.1	1.8	0.5	1.1	1.7	0.5	1.4	2.3	0.7
65 and over	12.1	18.7	7.1	12.3	18.7	7.3	11.9	21.2	5.8
All ages (WHO world std) <sup>c</sup>	1.6	2.6	0.8	1.6	2.5	0.8	1.9	3.2	0.9
Age-Specific Rates, 2012-2016									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.0	-	-	-	-	-	-	-	-
20-24	0.0	0.1	-	0.0	0.0	-	0.1	0.2	-
25-29	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-
30-34	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3	-
35-39	0.3	0.4	0.2	0.3	0.4	0.2	0.3	0.4	0.2
40-44	0.6	0.9	0.4	0.6	0.8	0.3	0.7	1.1	0.4
45-49	1.6	2.4	0.8	1.5	2.2	0.8	2.3	3.6	1.2
50-54	3.3	5.1	1.6	3.2	5.0	1.5	4.2	6.5	2.3
55-59	5.4	8.6	2.3	5.3	8.5	2.2	6.6	10.7	3.1
60-64	7.4	12.3	3.0	7.4	12.1	2.9	9.2	16.1	3.5
65-69	8.9	14.4	3.9	9.0	14.4	4.0	10.2	18.5	3.8
70-74	10.3	16.2	5.3	10.2	15.8	5.4	12.9	23.5	5.3
75-79	12.3	19.1	7.0	12.6	19.2	7.1	11.9	20.3	6.4
80-84	15.0	22.5	9.7	15.3	22.6	10.1	12.9	23.6	7.0
85+	19.5	28.1	15.0	20.2	29.0	15.6	12.5	21.1	8.9

<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 20.9  
 Cancer of the Oral Cavity and Pharynx by Subsite (Invasive)  
 SEER Incidence<sup>a</sup> Stage Distribution by Site,  
 Age-Adjusted SEER Incidence<sup>a</sup> and U.S. Death<sup>b</sup> Rates by Age, Race and Sex

	Site									
	Oral Cavity & Pharynx	Lip	Tongue	Floor of Mouth	Gum & Other Mouth <sup>c</sup>	Oropharynx & Tonsil <sup>c</sup>	Hypophar. <sup>c</sup>	Salivary Gland	Nasophar. <sup>c</sup>	Other Oral Cavity & Pharynx <sup>c</sup>
<u>SEER Incidence</u>										
Stage Distribution, 2012-2016										
Percent of Total <sup>d</sup>										
Localized	31	83	33	43	-	-	-	47	-	-
Regional	46	5	48	44	-	-	-	28	-	-
Distant	18	1	15	8	-	-	-	19	-	-
Unstaged/Unknown	6	10	4	4	-	-	-	7	-	-
Age-Adjusted Rates, 2012-2016										
Age at Diagnosis										
All ages	11.3	0.6	3.5	0.5	1.5	2.4	0.6	1.3	0.6	0.3
Under 65	6.7	0.3	2.1	0.3	0.7	1.8	0.3	0.7	0.5	0.1
65+	43.0	3.1	12.9	1.9	7.5	6.9	2.5	5.6	1.5	1.1
All ages(WHO world std) <sup>e</sup>	8.9	0.4	2.7	0.4	1.1	2.0	0.4	1.0	0.5	0.2
Sex										
Male	17.0	1.0	5.2	0.7	1.9	4.2	1.0	1.7	0.9	0.4
Female	6.4	0.3	1.9	0.3	1.3	0.9	0.2	1.0	0.4	0.1
Race										
White	11.9	0.7	3.8	0.5	1.6	2.7	0.6	1.3	0.4	0.3
Black	8.6	0.1	2.0	0.4	1.3	2.1	0.8	1.1	0.7	0.2
Other	9.5	0.3	2.4	0.3	1.5	1.0	0.4	1.2	2.3	0.1
<u>U.S. Mortality</u>										
Age-Adjusted Rates, 2012-2016										
Age at Death										
All ages	2.5	0.0	0.6	0.0	0.4	0.5	0.1	0.3	0.2	0.4
Under 65	1.1	0.0	0.3	0.0	0.1	0.3	0.0	0.1	0.1	0.2
65+	12.1	0.1	3.0	0.1	2.0	2.2	0.4	1.5	0.7	2.1
All ages(WHO world std) <sup>e</sup>	1.8	0.0	0.5	0.0	0.2	0.4	0.1	0.2	0.1	0.3
Sex										
Male	3.9	0.0	1.0	0.0	0.5	0.8	0.2	0.4	0.3	0.7
Female	1.3	0.0	0.4	0.0	0.3	0.2	0.0	0.2	0.1	0.2
Race										
White	2.5	0.0	0.7	0.0	0.4	0.5	0.1	0.3	0.1	0.4
Black	2.7	-	0.5	0.0	0.3	0.6	0.2	0.2	0.2	0.6
Other	1.9	-	0.4	-	0.3	0.2	0.1	0.1	0.7	0.2

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

<sup>c</sup> Stage distribution was not calculated for this site due to inconsistent coding of stage over time.

<sup>d</sup> Percents may not sum to 100 due to rounding.

<sup>e</sup> 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 20.10  
Cancer of the Oral Cavity and Pharynx (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>	-	-	-	45	-	-	-	-	-
1970-1973 <sup>a</sup>	-	-	-	43	-	-	-	-	-
1975-1977 <sup>b</sup>	52.5	51.6	54.8	54.1	53.8	54.7	36.0	29.7	49.0
1978-1980 <sup>b</sup>	53.3	51.8	56.5	55.4	54.5	57.4	34.9	29.8	45.8
1981-1983 <sup>b</sup>	51.7	50.1	55.1	54.0	52.8	56.5	30.9	25.4	45.6
1984-1986 <sup>b</sup>	54.1	51.7	59.0	56.3	54.8	59.4	35.0	29.5	49.1
1987-1989 <sup>b</sup>	53.6	51.0	58.8	56.0	54.1	59.8	34.0	30.0	44.0
1990-1992 <sup>b</sup>	55.4	53.2	60.1	57.9	56.4	61.0	33.1	28.4	46.0
1993-1995 <sup>b</sup>	57.7	56.2	60.6	60.1	59.4	61.3	38.0	33.1	50.5
1996-1998 <sup>b</sup>	57.8	56.2	61.0	59.9	59.1	61.4	36.4	31.3	49.5
1999-2001 <sup>b</sup>	60.3	59.2	62.5	62.2	62.0	62.7	44.6	39.6	57.1
2002-2004 <sup>b</sup>	63.9	63.1	65.7	65.7	65.7	65.7	48.2	42.8	58.8
2005-2008 <sup>b</sup>	65.5	65.1	66.5	67.4	67.2	67.9	43.0	40.7	48.0
2009-2015 <sup>b</sup>	68.4 <sup>f</sup>	67.6 <sup>f</sup>	70.4 <sup>f</sup>	70.3 <sup>f</sup>	69.9 <sup>f</sup>	71.4 <sup>f</sup>	50.9 <sup>f</sup>	49.2 <sup>f</sup>	54.4
5-Year Period Survival (Percent) <sup>cd</sup>									
2015	65.8	65.2	67.4	67.2	66.8	68.2	49.3	48.3	51.5
Stage Distribution (%) 2009-2015 <sup>ce</sup>									
All Stages									
Number of cases	57,854	41,585	16,269	47,354	34,485	12,869	5,169	3,580	1,589
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
Localized	29	24	41	30	25	43	19	14	29
Regional	47	51	37	48	52	38	48	51	40
Distant	20	21	16	18	20	15	30	32	27
Unstaged/Unknown	4	4	5	4	4	5	3	3	4
5-Year Relative Survival (Percent), 2009-2015 <sup>c</sup>									
Age at Diagnosis:									
Ages <45	79.8	77.3	83.9	81.1	78.8	84.9	70.9	67.1	75.7
Ages 45-54	70.2	69.7	71.8	72.8	72.5	74.0	50.0	49.3	52.0
Ages 55-64	66.6	65.6	70.3	68.6	67.5	72.6	46.5	45.9	48.3
Ages 65-74	62.4	60.8	66.5	63.9	62.6	67.3	43.1	40.0	49.8
Ages 75+	51.2	51.1	51.2	52.1	52.5	51.2	32.7	30.1	35.0
Ages <65	69.7	68.4	73.8	71.6	70.4	75.5	51.4	49.7	55.7
Ages 65+	57.9	57.5	58.6	59.0	59.0	58.9	40.1	37.8	43.5
Stage <sup>e</sup> :									
All Stages	65.3	64.6	67.1	66.7	66.4	67.7	48.4	46.7	52.0
Localized	84.4	83.2	86.3	84.5	83.6	85.8	78.1	73.8	82.7
Regional	66.0	67.2	61.7	67.4	68.8	62.1	49.6	50.0	48.2
Distant	39.1	39.9	36.6	40.2	41.2	36.5	28.3	29.0	26.5
Unstaged/Unknown	50.9	51.1	50.3	48.3	48.7	47.5	40.2	45.3 <sup>g</sup>	32.2 <sup>g</sup>

<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 20.11  
Cancer of the Oral Cavity and Pharynx by Subsite (Invasive)

SEER<sup>a</sup> Relative Survival (Percent) by Cancer Site, 2009-2015

Site	Number of Cases	Case Distribution (%)	Survival Time				
			1-Year Percent	2-Year Percent	3-Year Percent	4-Year Percent	5-Year Percent
Oral Cavity & Pharynx	57854	100	84.9	75.9	71.1	67.8	65.3
Lip	3393	6	98.2	95.4	93.7	91.8	89.7
Tongue	17556	30	85.4	76.0	71.4	68.4	66.4
Gum & Other Mouth	6868	12	80.7	70.7	65.5	61.8	59.0
Floor of Mouth	2490	4	79.9	66.9	61.2	56.3	51.7
Oropharynx & Tonsil	13929	24	87.4	79.9	75.3	72.1	70.0
Hypopharynx	2797	5	67.1	50.1	42.1	37.1	34.6
Salivary Gland	6169	11	88.6	81.5	76.5	73.7	71.4
Nasopharynx	3523	6	84.2	74.7	68.8	65.0	61.3
Other Oral Cavity & Pharynx	1129	2	68.8	59.2	53.5	49.6	46.6

5-Year Relative Survival (Percent), 2009-2015

Site	Stage					All Stages			
	All Stages	Localized	Regional	Distant	Unstaged/ Unknown	White Male	White Female	Black Male	Black Female
Oral Cavity & Pharynx	65.3	84.4	66.0	39.1	50.9	66.4	67.7	46.7	52.0
Lip	89.7	92.4	60.4 <sup>b</sup>	27.5 <sup>b</sup>	86.9	89.9	88.7	66.6 <sup>c</sup>	-
Tongue	66.4	81.3	67.8	39.0	50.0	68.6	66.5	45.3	42.0
Gum & Other Mouth <sup>d</sup>	59.0	-	-	-	-	55.5	63.0	48.9	57.1
Floor of Mouth	51.7	76.9	38.2	19.8	40.0 <sup>b</sup>	50.8	57.7	39.0	38.2 <sup>b</sup>
Oropharynx & Tonsil <sup>d</sup>	70.0	-	-	-	-	72.6	68.0	51.7	45.5
Hypopharynx <sup>d</sup>	34.6	-	-	-	-	37.3	39.2	20.2	17.3 <sup>b</sup>
Salivary Gland	71.4	93.6	65.2	35.4	48.6	61.5	80.1	71.3	81.0
Nasopharynx <sup>d</sup>	61.3	-	-	-	-	57.0	61.5	53.7	49.9 <sup>b</sup>
Other Oral Cavity & Pharynx <sup>d</sup>	46.6	-	-	-	-	52.9	37.9	29.4 <sup>b</sup>	32.6 <sup>b</sup>

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

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

<sup>d</sup> Survival by stage was not calculated for this site due to inconsistent coding of stage over time.

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

Table 20.12  
Cancer of the Oral Cavity and Pharynx (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	79.3	79.1	80.4	81.1	82.7	81.8	83.3	80.8	83.6	84.5	82.4	83.4	83.9	84.4	83.4	85.1	84.8	86.2	85.9	87.3	87.2	85.8	86.0	87.1	86.8
2-year	65.8	65.9	67.5	69.4	71.6	69.7	71.3	70.1	72.3	73.6	73.1	72.8	75.0	75.3	74.0	75.3	76.2	77.5	77.5	78.6	78.7	78.2	78.1	79.0	
3-year	59.8	59.5	61.0	63.2	65.3	63.5	66.2	64.3	65.5	68.6	67.0	67.4	70.3	70.7	68.7	70.6	71.3	71.9	73.1	74.2	74.3	73.1	72.6		
4-year	55.9	55.5	57.1	59.0	61.4	60.0	62.1	60.1	62.1	64.8	62.5	64.1	67.1	66.9	65.8	67.4	68.4	68.4	69.7	71.1	71.7	70.6			
5-year	52.8	52.3	54.0	56.1	58.5	57.7	58.5	57.1	58.9	62.0	60.0	61.7	65.2	64.9	63.9	65.1	66.5	66.5	67.3	68.9	69.7				
6-year	50.5	49.6	51.5	53.6	56.0	55.2	56.0	55.5	56.2	59.8	57.9	59.9	63.9	62.1	61.6	62.8	65.1	64.5	65.3	67.2					
7-year	48.4	47.5	49.0	51.5	53.5	53.3	54.3	54.0	53.9	57.8	56.1	58.4	62.3	60.5	59.9	61.4	62.8	62.7	64.0						
8-year	46.2	45.9	46.9	49.4	51.3	51.1	53.2	52.8	52.1	55.6	53.8	56.2	60.8	59.2	58.1	59.4	61.5	60.5							
9-year	44.3	43.9	45.1	47.1	49.4	49.7	51.7	52.2	50.3	53.9	51.5	54.5	58.4	57.2	56.6	57.9	59.4								
10-year	42.3	42.2	43.4	45.4	47.8	47.6	49.9	51.1	48.9	52.2	49.4	52.5	57.4	55.5	54.7	56.4									
11-year	40.4	40.7	42.1	43.6	46.0	46.3	47.8	48.9	48.0	50.5	48.2	50.9	55.4	54.0	54.1										
12-year	39.0	39.3	40.5	42.4	44.1	45.3	46.1	47.8	46.6	48.8	46.4	50.4	52.9	52.7											
13-year	37.7	37.6	39.0	40.8	42.5	43.1	44.7	46.2	46.0	47.8	46.0	49.9	51.6												
14-year	36.7	36.5	37.7	39.6	40.0	41.3	43.8	44.3	44.6	46.5	45.4	48.5													
15-year	35.2	35.0	36.6	38.6	38.5	40.0	42.5	43.6	43.1	45.7	44.1														
16-year	33.9	33.7	35.5	37.4	37.6	39.0	41.3	42.5	42.3	44.5															
17-year	32.9	32.8	34.6	36.3	36.6	38.1	40.4	40.9	40.8																
18-year	31.9	31.7	33.2	35.2	35.2	37.2	39.1	39.7																	
19-year	31.1	30.2	31.9	34.2	34.6	35.7	37.5																		
20-year	29.9	29.6	31.4	33.4	33.9	34.8																			

<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 20.13  
Cancer of the Oral Cavity and Pharynx For Selected Subsites (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																									
<u>Cancer of the Tongue</u>																									
1-year	74.2	73.3	76.8	79.5	79.3	79.1	81.6	79.9	80.5	84.4	80.8	81.0	84.4	86.8	84.7	84.3	86.0	86.7	87.4	86.6	88.0	87.8	87.2	87.6	86.9
2-year	54.9	57.5	60.6	64.8	65.2	66.6	71.2	65.8	68.2	71.2	70.6	69.4	71.4	75.5	72.1	73.9	76.5	77.0	79.0	76.5	78.5	80.8	78.5	79.5	
3-year	47.4	50.8	54.4	57.4	58.6	60.4	65.1	59.1	60.0	65.8	63.8	63.9	66.9	70.9	64.8	69.3	70.6	72.1	73.8	71.9	74.5	74.9	71.7		
4-year	43.5	47.4	49.9	53.6	56.4	57.3	62.1	55.5	57.9	63.1	61.0	61.7	64.2	66.5	61.4	66.9	68.9	69.7	71.1	69.3	71.9	73.3			
5-year	40.1	44.6	47.4	50.8	54.0	55.4	58.0	52.8	54.7	61.8	58.4	59.8	61.5	64.8	60.0	65.2	66.9	67.6	68.6	67.4	71.3				
6-year	38.4	41.8	45.1	48.5	50.4	52.8	56.4	52.2	52.8	59.8	56.3	57.7	61.1	61.6	59.0	63.7	65.6	66.0	67.1	66.5					
7-year	37.2	38.9	42.4	46.7	48.4	51.2	55.1	49.6	50.5	57.6	54.3	56.7	59.5	59.3	57.5	63.0	63.3	65.1	65.9						
8-year	35.7	37.4	40.4	44.3	46.5	49.8	53.9	48.0	50.4	55.5	50.6	53.5	59.0	56.9	55.9	60.2	61.7	63.1							
9-year	34.2	34.8	38.9	42.0	44.6	48.6	52.9	47.4	48.5	54.5	48.1	52.2	57.0	55.0	54.7	58.5	59.9								
10-year	32.5	33.3	37.5	40.0	43.3	46.6	52.3	45.9	47.7	52.9	46.1	49.9	56.1	53.8	52.0	57.0									
<u>Cancer of the Lip</u>																									
1-year	99.1	97.6	99.2	100.0	99.9	98.1	100.0	99.2	97.3	98.1	95.1	99.3	99.3	99.6	98.2	96.9	96.1	99.8	93.7	100.0	98.3	95.6	99.8	100.0	100.0
2-year	97.4	95.8	98.0	98.8	99.4	94.1	97.0	97.9	95.1	96.2	93.7	99.3	99.2	99.6	95.3	94.5	95.5	99.0	92.2	99.6	98.3	91.7	98.4	99.5	
3-year	96.9	93.4	97.2	98.4	98.7	92.8	95.8	95.1	93.7	95.1	93.7	97.1	98.2	98.7	95.1	93.2	95.5	98.2	91.7	94.8	98.3	89.9	95.4		
4-year	95.7	92.0	96.9	97.3	96.3	91.3	93.4	93.2	92.1	92.7	90.3	97.1	98.2	95.7	95.1	90.1	94.6	94.1	90.5	94.8	98.3	88.8			
5-year	94.1	90.0	95.8	96.0	95.0	88.6	91.2	91.0	90.5	90.3	90.3	93.9	98.2	94.1	95.1	88.6	94.6	94.1	87.7	93.6	98.3				
6-year	92.3	87.6	95.0	94.6	95.0	87.4	89.4	89.6	89.3	90.3	87.6	93.6	98.2	94.1	95.1	85.9	94.6	92.0	86.4	92.2					
7-year	91.2	86.5	93.4	93.3	95.0	86.6	88.2	89.6	88.8	90.2	84.5	93.6	97.3	93.4	94.9	85.9	94.6	89.9	83.4						
8-year	89.8	86.0	91.8	92.1	90.4	83.2	88.2	87.4	88.5	90.2	82.2	93.4	97.3	93.2	91.5	85.9	94.6	87.5							
9-year	87.5	85.1	91.3	89.8	86.0	82.5	88.0	86.8	88.1	88.6	78.7	90.8	95.8	93.2	88.8	85.9	91.7								
10-year	85.8	83.5	91.3	88.0	81.9	82.5	85.5	86.8	88.1	88.4	75.9	87.8	95.4	92.1	88.8	85.9									
<u>Cancer of the Oropharynx and Tonsil</u>																									
1-year	70.5	70.7	72.9	74.4	80.3	79.7	81.1	81.3	86.9	82.2	83.7	85.2	82.6	83.9	84.1	85.2	86.0	86.1	88.6	90.3	90.7	86.5	87.1	89.8	87.5
2-year	53.3	52.8	55.9	61.4	69.7	66.3	66.8	67.1	74.8	67.3	72.0	76.0	75.3	74.9	74.3	75.1	77.4	78.6	81.2	83.4	83.8	80.2	81.8	83.2	
3-year	44.5	44.4	45.7	53.7	62.7	60.6	61.8	59.8	66.9	62.3	66.7	71.4	71.3	71.2	70.6	70.4	72.2	73.3	76.5	79.9	79.8	75.5	77.4		
4-year	38.9	39.3	41.5	49.1	58.4	54.1	56.3	54.9	63.0	57.4	60.6	67.3	68.0	67.2	66.9	68.4	70.3	70.0	73.9	76.6	77.3	73.4			
5-year	35.4	35.3	37.8	44.9	53.9	52.6	51.3	52.9	59.7	53.6	58.7	64.4	65.1	64.6	65.4	65.6	67.9	67.5	72.6	74.8	75.3				
6-year	32.1	31.8	34.6	42.6	50.1	47.7	48.3	51.0	57.5	52.2	54.7	63.5	63.5	62.5	64.1	65.0	66.0	65.8	71.2	72.3					
7-year	30.2	29.6	31.9	41.3	46.6	43.7	47.3	49.7	55.7	48.8	52.8	62.6	62.6	61.7	61.5	62.9	63.5	62.4	70.1						
8-year	26.1	28.0	30.1	39.0	45.4	42.3	46.1	48.9	52.1	46.6	52.8	59.5	60.8	60.9	59.3	60.2	60.9	61.7							
9-year	23.7	25.8	28.3	36.6	44.1	41.3	44.3	48.6	51.9	45.0	49.6	58.9	60.4	57.7	57.8	58.8	58.8								
10-year	22.4	23.2	26.1	35.4	42.9	40.1	43.6	46.4	49.8	43.1	48.5	57.0	58.0	56.0	57.7	58.8									

<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 20.14  
Cancer of the Oral Cavity and Pharynx (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	78.7	78.5	79.5	80.5	82.6	81.5	82.5	80.3	83.9	84.2	82.8	83.5	84.2	85.0	83.9	85.0	85.9	86.6	86.4	87.3	88.0	87.0	85.5	86.9	86.9
2-year	65.0	65.1	66.1	68.2	70.6	69.0	69.8	70.0	71.2	73.0	73.3	71.6	74.8	75.2	74.2	74.6	76.8	78.1	77.9	78.1	78.4	79.2	77.0	78.8	
3-year	59.0	58.2	59.0	61.4	64.7	62.6	64.6	63.7	64.1	67.4	67.4	65.5	70.0	69.9	68.4	69.3	71.2	72.4	72.3	73.5	73.8	73.9	71.2		
4-year	54.7	54.0	54.8	57.0	60.3	58.8	60.0	59.1	60.5	63.7	62.2	62.3	66.6	65.5	65.6	66.1	67.7	68.5	68.5	69.9	70.8	71.2			
5-year	51.6	50.6	51.4	54.1	57.5	56.3	56.3	56.0	57.2	60.8	59.5	60.3	65.1	63.8	63.8	64.2	65.9	66.2	66.3	67.6	68.7				
6-year	49.4	48.0	49.2	51.7	54.8	53.4	53.8	54.4	54.6	58.2	57.1	58.5	64.1	61.3	60.9	62.2	64.2	63.8	64.4	66.3					
7-year	47.2	45.9	47.0	49.4	51.8	51.1	52.5	52.8	52.6	56.1	55.2	57.5	62.8	60.0	59.2	60.9	61.8	61.9	62.8						
8-year	45.2	44.3	44.7	47.6	49.4	49.1	51.4	51.3	51.1	53.7	52.6	55.3	61.0	58.2	57.0	58.8	60.6	60.0							
9-year	43.2	42.5	42.8	45.3	47.6	48.0	49.7	50.5	49.4	51.8	50.6	53.2	58.4	55.9	55.3	57.5	58.2								
10-year	41.2	40.6	40.8	43.8	45.8	45.8	48.3	49.6	48.4	50.1	48.7	51.0	57.2	54.1	53.3	56.4									
11-year	39.2	39.0	39.6	42.2	43.8	44.1	46.4	47.3	47.4	48.4	47.4	49.6	55.4	53.3	53.0										
12-year	38.0	37.9	38.3	40.8	42.0	43.2	44.5	46.4	46.3	46.5	45.8	49.0	53.0	52.2											
13-year	36.8	36.3	36.7	39.3	40.3	41.1	42.8	44.9	45.6	45.8	45.8	48.2	51.5												
14-year	35.8	35.3	35.6	38.0	37.0	39.9	41.4	43.1	43.9	44.4	45.2	47.0													
15-year	34.5	33.9	34.6	36.9	35.0	38.3	40.1	42.5	42.4	43.6	44.0														
16-year	33.1	32.7	33.6	35.7	34.0	37.2	38.9	41.0	41.4	42.2															
17-year	32.0	31.8	32.6	34.6	33.0	36.7	37.9	39.2	39.3																
18-year	31.1	30.5	31.4	33.4	31.5	35.7	36.9	37.9																	
19-year	30.4	28.7	29.9	32.7	30.9	33.5	35.6																		
20-year	29.3	28.2	29.2	31.8	30.2	32.9																			

<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 20.15  
Cancer of the Oral Cavity and Pharynx (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	80.8	80.3	82.3	82.3	82.9	82.3	85.2	81.7	82.8	85.1	81.7	83.0	83.4	83.1	82.3	85.4	82.4	85.4	84.6	87.3	85.0	82.9	87.5	87.7	86.3
2-year	67.8	67.7	70.6	72.0	73.3	71.2	74.5	70.1	74.4	74.8	72.6	75.3	75.4	75.8	73.4	76.9	74.8	76.3	76.6	79.6	79.5	75.8	80.9	79.4	
3-year	61.5	62.4	65.3	67.0	66.4	65.4	69.5	65.4	68.5	71.4	66.4	71.6	71.1	72.5	69.2	73.8	71.6	70.7	74.9	76.1	75.5	71.3	75.9		
4-year	58.5	58.6	61.9	63.1	63.4	62.5	66.9	62.1	65.6	67.1	63.1	67.9	68.2	69.9	66.3	70.4	69.7	68.2	72.4	74.2	74.1	69.3			
5-year	55.5	56.0	59.2	60.3	60.4	60.3	63.5	59.2	62.1	64.6	60.8	64.6	65.1	67.4	64.2	67.0	67.8	67.0	69.5	72.1	72.1				
6-year	53.0	52.9	56.3	57.8	58.1	58.9	60.9	57.7	59.7	63.2	59.3	63.0	63.4	64.2	63.0	64.3	66.9	66.1	67.7	69.4					
7-year	51.0	50.7	53.2	55.9	56.6	57.9	58.2	56.4	56.7	61.6	57.8	60.5	61.4	61.6	61.4	62.4	65.2	64.5	66.8						
8-year	48.3	49.2	51.6	53.2	54.6	55.1	56.9	55.7	54.1	59.6	56.2	58.2	60.2	61.5	60.4	60.7	63.5	61.8							
9-year	46.8	46.9	49.7	50.9	52.7	53.1	56.0	55.7	52.1	58.5	53.4	57.1	58.2	60.1	59.3	58.8	61.9								
10-year	44.7	45.7	48.5	48.9	51.5	51.2	53.6	54.3	50.0	56.8	50.7	55.7	57.5	58.5	57.9	56.2									
11-year	42.9	44.2	47.0	46.6	50.0	50.6	51.0	52.3	49.2	55.1	49.7	53.6	55.4	55.8	56.5										
12-year	41.4	42.3	45.1	45.7	47.9	49.4	49.6	50.6	47.2	53.8	47.3	53.2	52.6	53.8											
13-year	39.9	40.2	43.5	44.0	46.6	47.2	48.7	48.9	46.8	52.3	46.1	53.2	51.7												
14-year	38.6	39.1	42.0	42.9	45.4	44.3	48.6	46.9	46.2	50.6	45.7	51.7													
15-year	37.0	37.2	40.7	42.0	44.9	43.5	47.5	46.1	44.5	50.2	44.1														
16-year	35.8	35.9	39.4	41.1	44.0	42.6	46.5	45.8	44.1	49.1															
17-year	34.9	35.0	38.5	39.9	42.9	40.9	45.6	44.3	43.7																
18-year	33.6	34.2	36.8	39.0	41.8	40.2	44.0	43.5																	
19-year	32.5	33.0	36.0	37.4	41.1	39.9	41.7																		
20-year	31.2	32.5	35.7	36.9	40.3	38.5																			

<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 20.16  
Cancer of the Oral Cavity and Pharynx (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	0.01	1.17	0.30	Asian/ Pacific Islander	0	0.00	0.00	0.02	0.95	0.33
	10	0.00	0.01	0.04	1.18	0.30		10	0.00	0.02	0.05	0.95	0.33
	20	0.01	0.03	0.11	1.18	0.30		20	0.01	0.05	0.14	0.95	0.33
	30	0.02	0.11	0.33	1.18	0.31		30	0.04	0.12	0.27	0.94	0.33
	40	0.08	0.31	0.62	1.18	0.31		40	0.09	0.24	0.45	0.91	0.33
	50	0.23	0.55	0.86	1.12	0.31		50	0.15	0.37	0.59	0.83	0.32
	60	0.34	0.67	0.88	0.94	0.28		60	0.22	0.45	0.64	0.70	0.30
	70	0.37	0.61	-	0.68	0.23		70	0.25	0.45	-	0.51	0.26
80	0.31	-	-	0.41	0.17	80	0.23	-	-	0.32	0.21		
White	0	0.00	0.00	0.01	1.23	0.30	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	0.77	0.27
	10	0.00	0.01	0.03	1.24	0.31		10	0.00	0.00	0.01	0.78	0.27
	20	0.01	0.03	0.11	1.24	0.31		20	0.00	0.01	0.06	0.78	0.27
	30	0.02	0.10	0.34	1.24	0.31		30	0.01	0.05	0.24	0.79	0.27
	40	0.08	0.32	0.66	1.24	0.31		40	0.05	0.24	0.48	0.80	0.28
	50	0.24	0.59	0.91	1.18	0.31		50	0.20	0.45	0.63	0.78	0.29
	60	0.37	0.71	0.93	1.00	0.28		60	0.27	0.47	0.60	0.63	0.25
	70	0.39	0.64	-	0.71	0.23		70	0.22	0.38	-	0.41	0.23
80	0.33	-	-	0.43	0.18	80	0.21	-	-	0.25	0.20		
Black	0	0.00	0.00	0.01	0.79	0.27	Hispanic <sup>b</sup>	0	0.00	0.00	0.01	0.82	0.24
	10	0.00	0.01	0.03	0.80	0.27		10	0.00	0.01	0.02	0.83	0.24
	20	0.01	0.03	0.09	0.80	0.27		20	0.01	0.02	0.06	0.83	0.24
	30	0.02	0.09	0.26	0.80	0.28		30	0.01	0.06	0.17	0.83	0.24
	40	0.07	0.25	0.48	0.80	0.28		40	0.04	0.16	0.35	0.82	0.24
	50	0.19	0.43	0.62	0.76	0.28		50	0.12	0.31	0.54	0.79	0.24
	60	0.26	0.47	0.59	0.62	0.24		60	0.20	0.44	0.61	0.70	0.23
	70	0.25	0.39	-	0.42	0.19		70	0.26	0.45	-	0.55	0.20
80	0.19	-	-	0.24	0.12	80	0.24	-	-	0.36	0.16		

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 PRCD (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 20.17  
Cancer of the Oral Cavity and Pharynx (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	0.01	1.66	0.42	Asian/ Pacific Islander	0	0.00	0.00	0.02	1.27	0.46
	10	0.00	0.01	0.04	1.68	0.43		10	0.00	0.02	0.07	1.28	0.47
	20	0.01	0.04	0.15	1.68	0.43		20	0.01	0.06	0.18	1.28	0.47
	30	0.03	0.14	0.48	1.69	0.43		30	0.05	0.17	0.38	1.27	0.47
	40	0.12	0.46	0.94	1.69	0.44		40	0.12	0.34	0.64	1.23	0.46
	50	0.35	0.85	1.29	1.62	0.43		50	0.22	0.53	0.84	1.13	0.45
	60	0.54	1.01	1.29	1.37	0.40		60	0.32	0.64	0.88	0.94	0.41
	70	0.55	0.88	-	0.97	0.32		70	0.35	0.61	-	0.68	0.36
80	0.46	-	-	0.58	0.23	80	0.31	-	-	0.40	0.27		
White	0	0.00	0.00	0.01	1.74	0.42	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	1.04	0.36
	10	0.00	0.01	0.04	1.76	0.43		10	0.00	0.00	0.01	1.06	0.37
	20	0.01	0.03	0.15	1.76	0.43		20	0.00	0.01	0.07	1.06	0.37
	30	0.03	0.14	0.50	1.78	0.43		30	0.00	0.07	0.36	1.08	0.38
	40	0.12	0.48	1.00	1.78	0.44		40	0.07	0.36	0.72	1.12	0.39
	50	0.37	0.90	1.37	1.72	0.43		50	0.31	0.69	0.95	1.10	0.40
	60	0.57	1.07	1.37	1.44	0.40		60	0.41	0.69	0.82	0.87	0.35
	70	0.58	0.92	-	1.01	0.32		70	0.33	0.47	-	0.53	0.30
80	0.48	-	-	0.60	0.24	80	0.20	-	-	0.28	0.23		
Black	0	0.00	0.00	0.01	1.12	0.40	Hispanic <sup>b</sup>	0	0.00	0.00	0.01	1.12	0.33
	10	0.00	0.01	0.03	1.14	0.41		10	0.00	0.01	0.02	1.13	0.33
	20	0.01	0.03	0.12	1.15	0.41		20	0.01	0.02	0.07	1.13	0.33
	30	0.02	0.11	0.37	1.16	0.42		30	0.01	0.07	0.24	1.14	0.34
	40	0.09	0.36	0.72	1.17	0.43		40	0.05	0.23	0.51	1.14	0.34
	50	0.28	0.66	0.95	1.12	0.43		50	0.18	0.47	0.79	1.11	0.34
	60	0.42	0.75	0.90	0.94	0.38		60	0.31	0.65	0.89	0.99	0.33
	70	0.41	0.60	-	0.65	0.29		70	0.38	0.65	-	0.76	0.28
80	0.29	-	-	0.36	0.19	80	0.35	-	-	0.49	0.22		

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 PRCD (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 20.18  
Cancer of the Oral Cavity and Pharynx (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	0.01	0.71	0.19	Asian/ Pacific Islander	0	0.00	0.01	0.02	0.67	0.22
	10	0.00	0.01	0.03	0.72	0.19		10	0.00	0.02	0.04	0.68	0.22
	20	0.01	0.03	0.08	0.71	0.19		20	0.01	0.04	0.10	0.67	0.22
	30	0.02	0.07	0.17	0.71	0.19		30	0.03	0.08	0.18	0.66	0.22
	40	0.05	0.16	0.31	0.69	0.19		40	0.06	0.15	0.28	0.64	0.22
	50	0.11	0.27	0.45	0.66	0.19		50	0.09	0.23	0.38	0.59	0.22
	60	0.17	0.36	0.52	0.57	0.18		60	0.13	0.29	0.44	0.50	0.20
	70	0.21	0.38	-	0.44	0.16		70	0.16	0.32	-	0.39	0.19
80	0.22	-	-	0.29	0.13	80	0.18	-	-	0.26	0.17		
White	0	0.00	0.00	0.01	0.73	0.19	American Indian/ Alaska Native <sup>a</sup>	0	0.00	0.00	0.00	0.50	0.17
	10	0.00	0.01	0.03	0.74	0.19		10	0.00	0.00	0.01	0.50	0.17
	20	0.01	0.03	0.07	0.73	0.19		20	0.00	0.01	0.04	0.51	0.17
	30	0.02	0.06	0.17	0.73	0.19		30	0.01	0.04	0.13	0.51	0.17
	40	0.05	0.15	0.32	0.72	0.19		40	0.03	0.12	0.25	0.51	0.18
	50	0.11	0.28	0.47	0.68	0.19		50	0.09	0.22	0.34	0.49	0.18
	60	0.17	0.38	0.54	0.60	0.18		60	0.14	0.26	0.41	0.42	0.16
	70	0.22	0.40	-	0.46	0.16		70	0.14	0.30	-	0.31	0.16
80	0.22	-	-	0.30	0.13	80	0.21	-	-	0.22	0.18		
Black	0	0.00	0.00	0.01	0.49	0.15	Hispanic <sup>b</sup>	0	0.00	0.00	0.01	0.56	0.15
	10	0.00	0.01	0.03	0.50	0.15		10	0.00	0.01	0.02	0.56	0.16
	20	0.01	0.02	0.07	0.50	0.15		20	0.01	0.02	0.05	0.56	0.16
	30	0.02	0.06	0.17	0.50	0.15		30	0.01	0.04	0.11	0.56	0.16
	40	0.05	0.15	0.27	0.49	0.15		40	0.03	0.09	0.19	0.54	0.16
	50	0.11	0.23	0.34	0.45	0.15		50	0.06	0.17	0.31	0.52	0.16
	60	0.13	0.25	0.34	0.37	0.13		60	0.11	0.26	0.39	0.47	0.15
	70	0.14	0.24	-	0.27	0.11		70	0.16	0.30	-	0.39	0.14
80	0.13	-	-	0.17	0.09	80	0.17	-	-	0.28	0.13		

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 20.19  
Cancer of the Oral Cavity and Pharynx (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	11.3	17.0	6.4	0.7*	0.6*	0.2*	0.8*	0.9*	0.8
White	11.9	17.9	6.6	0.9*	1.0*	0.4*	1.1*	1.3*	0.5
White Hispanic <sup>e</sup>	7.0	10.3	4.3	-1.1	-0.5	0.2	-	-	-
White Non-Hispanic <sup>e</sup>	12.8	19.3	7.0	1.2*	1.3*	0.6*	-	-	-
Black	8.6	13.4	5.0	-1.8*	-2.2*	-1.1*	-2.4*	-2.7*	-1.5*
Asian/Pacific Islander	8.4	11.8	5.6	-0.1	0.1	-0.5	-	-	-
Amer Ind/Alaska Nat <sup>f</sup>	8.3	11.8	5.3	0.7	0.7	0.0	-	-	-
Hispanic <sup>e</sup>	6.9	10.1	4.2	-0.2	-0.5	0.2	-	-	-
<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	2.5	3.9	1.3	0.3	0.5*	0.0			
White	2.5	3.8	1.3	0.7*	1.0*	0.2			
White Hispanic <sup>e</sup>	1.6	2.6	0.9	-0.5	-0.8*	-0.2			
White Non-Hispanic <sup>e</sup>	2.6	4.0	1.4	0.8*	1.1*	0.3			
Black	2.7	4.7	1.3	-2.8*	-3.1*	-2.1*			
Asian/Pacific Islander	2.0	3.1	1.2	0.6	0.8	-1.2			
Amer Ind/Alaska Nat									
Total U.S.	1.5	2.4	0.7	-2.6*	-2.4*	-4.1*			
PRCDA Counties	2.2	3.7	1.0	-0.5	0.0	-2.7			
Non-PRCDA Counties	0.8	1.1	0.5	-6.3*	-6.9*	-5.8			
Hispanic <sup>e</sup>	1.5	2.4	0.8	-0.8*	-0.1	-0.3			

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 20.20  
Cancer of the Oral Cavity and Pharynx by Subsite (Invasive)

SEER Incidence  
Age-Adjusted Rates and Trends<sup>a</sup> by Race and Sex

	Site									
	Oral Cavity & Pharynx	Lip	Tongue	Floor of Mouth	Gum & Other Mouth	Oropharynx & Tonsil	Hypophar.	Salivary Gland	Nasophar.	Other Oral Cavity & Pharynx
<u>2012-2016, Rate per 100,000 persons<sup>b</sup></u>										
All Races										
Male and Female	11.3	0.6	3.5	0.5	1.5	2.4	0.6	1.3	0.6	0.3
Male	17.0	1.0	5.2	0.7	1.9	4.2	1.0	1.7	0.9	0.4
Female	6.4	0.3	1.9	0.3	1.3	0.9	0.2	1.0	0.4	0.1
White										
Male and Female	11.9	0.7	3.8	0.5	1.6	2.7	0.6	1.3	0.4	0.3
Male	17.9	1.2	5.8	0.7	1.9	4.6	1.0	1.8	0.6	0.5
Female	6.6	0.4	2.0	0.3	1.3	1.0	0.2	1.0	0.2	0.1
Black										
Male and Female	8.6	0.1	2.0	0.4	1.3	2.1	0.8	1.1	0.7	0.2
Male	13.4	0.1	3.2	0.7	1.6	3.7	1.5	1.1	1.0	0.4
Female	5.0	-	1.1	0.2	1.0	0.8	0.3	1.1	0.4	0.1
<u>Trend 2007-2016<sup>b</sup>, APC(%)</u>										
All Races										
Male and Female	0.6*	-0.5	1.4*	-3.2*	0.0	2.2*	-2.7*	0.2	-1.2*	2.9
Male	0.6*	-1.1	1.5*	-4.0*	0.2	2.4*	-2.7*	0.0	-1.0	3.5*
Female	0.2	0.7	1.2*	-1.9	-0.3	1.1	-3.3*	0.2	-1.7*	0.4
White										
Male and Female	0.8*	-0.4	1.7*	-3.1*	-0.1	2.7*	-2.6*	-0.1	-2.9*	4.0*
Male	0.9*	-1.1	1.8*	-3.8*	0.0	2.9*	-2.5*	-0.2	-2.7*	4.4*
Female	0.3	0.9	1.2*	-1.7	-0.2	1.6*	-3.9*	-0.2	-3.1*	1.9
Black										
Male and Female	-1.7*	-	-1.5*	-3.7	-2.2*	-1.0	-4.1*	0.5	-0.9	-3.1
Male	-1.8*	-	-1.8	-4.0*	-2.2	-0.7	-4.9*	-0.4	-1.1	-1.2
Female	-1.4*	-	-1.3	-3.1	-2.3*	-1.7	-0.7	1.0	-0.8	-

<sup>a</sup> The APC is the Annual Percent Change over 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).

<sup>b</sup> Incidence data used in calculating the rates and trends 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).

- 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.

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

Table 20.21  
Cancer of the Oral Cavity and Pharynx by Subsite

U.S. Mortality<sup>a</sup>  
Age-Adjusted Rates and Trends<sup>b</sup> by Race and Sex

	Site									
	Oral Cavity & Pharynx	Lip	Tongue	Floor of Mouth	Gum & Other Mouth	Oropharynx & Tonsil	Hypophar.	Salivary Gland	Nasophar.	Other Oral Cavity & Pharynx
<u>2012-2016, Rate per 100,000 persons</u>										
All Races										
Male and Female	2.5	0.0	0.6	0.0	0.4	0.5	0.1	0.3	0.2	0.4
Male	3.9	0.0	1.0	0.0	0.5	0.8	0.2	0.4	0.3	0.7
Female	1.3	0.0	0.4	0.0	0.3	0.2	0.0	0.2	0.1	0.2
White										
Male and Female	2.5	0.0	0.7	0.0	0.4	0.5	0.1	0.3	0.1	0.4
Male	3.8	0.0	1.0	0.0	0.5	0.8	0.2	0.4	0.2	0.7
Female	1.3	0.0	0.4	0.0	0.3	0.2	0.0	0.2	0.1	0.2
Black										
Male and Female	2.7	-	0.5	0.0	0.3	0.6	0.2	0.2	0.2	0.6
Male	4.7	-	0.8	0.0	0.5	1.1	0.3	0.3	0.4	1.2
Female	1.3	-	0.3	-	0.2	0.3	0.0	0.1	0.1	0.2
<u>Trend 2007-2016 ,APC(%)</u>										
All Races										
Male and Female	0.4	-0.5	1.0*	-4.7*	0.5	2.7*	0.5	1.7*	-1.3*	-2.4*
Male	0.6*	-1.7	1.4*	-3.2	0.8	2.9*	0.9	1.8*	-0.8*	-2.4*
Female	-0.3	1.0	0.1	-8.1*	0.0	1.8*	-1.6	1.2	-2.4	-3.0*
White										
Male and Female	0.8*	-0.7	1.4*	-4.5*	0.7	3.3*	0.2	1.8*	-1.8*	-2.1*
Male	1.0*	-2.3	1.9*	-2.8	1.1	3.6*	0.5	2.1*	-1.5*	-2.1*
Female	-0.1	2.4	0.3	-8.0*	0.1	2.4*	-1.5	0.9	-2.3	-2.8*
Black										
Male and Female	-1.9*	-	-2.0*	-	-1.7	-1.3	1.2	2.3	-1.6	-4.2*
Male	-2.1*	-	-2.1*	-	-2.6*	-1.5	3.1*	0.6	-1.0	-4.6*
Female	-1.5	-	-2.4	-	0.0	-0.7	-	4.1	-3.4	-3.5

<sup>a</sup> The APC is the Annual Percent Change over the time interval.

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

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).

- 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.

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

Table 20.22  
Cancer of the Oral Cavity and Pharynx (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	10.27	15.58	5.63	10.88	16.61	5.77	7.73	11.75	4.38
Greater Bay Area	10.24	15.14	5.91	10.94	16.59	5.76	8.07	13.21	3.78
San Francisco-Oakland	10.49	15.62	5.97	11.24	17.06	5.85	8.37	13.85	3.94
San Jose-Monterey	9.79	14.28	5.80	10.42	15.76	5.60	6.62	10.28	-
Los Angeles	8.91	13.50	5.01	9.42	14.19	5.27	8.00	12.34	4.63
Greater California	10.89	16.65	5.81	11.44	17.56	5.97	7.39	10.64	4.47
Connecticut	11.81	17.20	7.13	12.11	17.56	7.31	8.37	13.65	4.69
Detroit	12.32	19.14	6.54	12.80	19.69	6.70	11.08	17.94	6.10
Georgia	12.65	19.29	7.08	14.02	21.31	7.58	9.12	13.59	5.80
Atlanta	11.03	16.73	6.47	12.70	18.95	7.25	8.14	12.84	4.90
Rural Georgia	14.04	24.00	5.18	15.87	27.17	-	10.37	16.55	-
Greater Georgia	13.48	20.48	7.50	14.52	22.11	7.80	9.95	14.21	6.60
Hawaii	13.25	18.82	8.15	18.39	26.58	9.14	-	-	-
Idaho	12.23	17.30	7.54	12.19	17.30	7.42	-	-	-
Iowa	13.07	19.52	7.22	13.07	19.57	7.18	9.34	12.09	-
Kentucky	14.22	21.75	7.65	14.43	21.98	7.79	9.90	17.38	4.11
Louisiana	13.05	20.42	6.70	14.25	21.88	7.41	10.03	16.69	4.82
Massachusetts	12.12	17.76	7.23	12.28	18.00	7.28	8.49	13.88	4.52
New Jersey	10.65	16.20	6.01	11.02	16.72	6.15	8.39	13.12	5.01
New Mexico	8.80	13.61	4.54	9.28	14.33	4.77	-	-	-
New York	10.92	16.32	6.40	11.45	17.10	6.56	7.71	11.76	4.87
Seattle-Puget Sound	12.76	18.67	7.47	13.33	19.44	7.76	7.50	11.32	3.28
Utah	9.81	14.20	5.79	9.83	14.27	5.76	-	-	-
SEER 9 Areas <sup>b</sup>	11.56	17.21	6.61	12.12	18.06	6.75	8.92	14.17	4.95
SEER 13 Areas <sup>b</sup>	10.89	16.25	6.21	11.47	17.13	6.37	8.67	13.67	4.86
SEER 18 Areas <sup>b</sup>	11.34	17.15	6.29	11.93	18.06	6.48	8.91	13.87	5.07
SEER 21 Areas <sup>b</sup>	11.32	17.04	6.38	11.87	17.87	6.56	8.60	13.35	5.00

<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 20.23  
Cancer of the Oral Cavity and Pharynx (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	2.47	3.83	1.33	2.55	3.95	1.37	2.44	3.66	1.49
Greater Bay Area	2.26	3.54	1.19	2.30	3.55	1.22	2.77	5.19	-
San Francisco-Oakland	2.30	3.60	1.23	2.24	3.43	1.22	2.69	5.10	-
San Jose-Monterey	2.19	3.41	1.13	2.40	3.76	1.23	-	-	-
Los Angeles	2.29	3.53	1.31	2.34	3.57	1.32	2.33	3.21	1.73
Greater California	2.62	4.07	1.40	2.71	4.22	1.42	2.40	3.30	1.58
Connecticut	1.81	2.91	0.93	1.79	2.89	0.89	1.94	3.62	-
Detroit	2.55	3.95	1.43	2.49	3.77	1.44	2.85	4.82	1.46
Georgia	2.72	4.08	1.59	2.67	3.98	1.52	2.86	4.47	1.71
Atlanta	2.32	3.44	1.43	2.21	3.17	1.37	2.46	4.00	1.44
Rural Georgia	4.11	6.92	-	3.97	6.22	-	-	-	-
Greater Georgia	2.89	4.33	1.67	2.82	4.25	1.58	3.13	4.66	1.97
Hawaii	2.77	4.08	1.66	3.99	5.70	2.25	-	-	-
Idaho	2.24	3.18	1.40	2.23	3.19	1.35	-	-	-
Iowa	2.45	3.96	1.13	2.45	3.97	1.11	-	-	-
Kentucky	3.13	4.86	1.69	3.17	4.94	1.70	2.71	4.46	-
Louisiana	3.14	5.14	1.49	2.92	4.71	1.43	3.63	6.25	1.61
Massachusetts	2.29	3.49	1.30	2.31	3.45	1.36	2.10	4.25	-
New Jersey	2.02	3.22	1.06	1.98	3.12	1.06	2.38	3.88	1.32
New Mexico	2.36	3.65	1.26	2.46	3.82	1.29	-	-	-
New York	2.14	3.38	1.15	2.14	3.37	1.12	2.08	3.42	1.18
Seattle-Puget Sound	2.58	3.71	1.60	2.59	3.75	1.56	2.16	2.97	-
Utah	1.75	2.57	0.99	1.75	2.55	1.02	-	-	-
SEER 9 Areas <sup>b</sup>	2.32	3.55	1.28	2.30	3.51	1.25	2.49	4.20	1.26
SEER 13 Areas <sup>b</sup>	2.31	3.55	1.28	2.31	3.53	1.26	2.49	4.07	1.36
SEER 18 Areas <sup>b</sup>	2.48	3.85	1.34	2.48	3.84	1.33	2.73	4.36	1.50
SEER 21 Areas <sup>b</sup>	2.40	3.73	1.30	2.41	3.72	1.29	2.54	4.13	1.38
Total U.S.	2.51	3.89	1.34	2.50	3.85	1.35	2.73	4.65	1.32

<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.

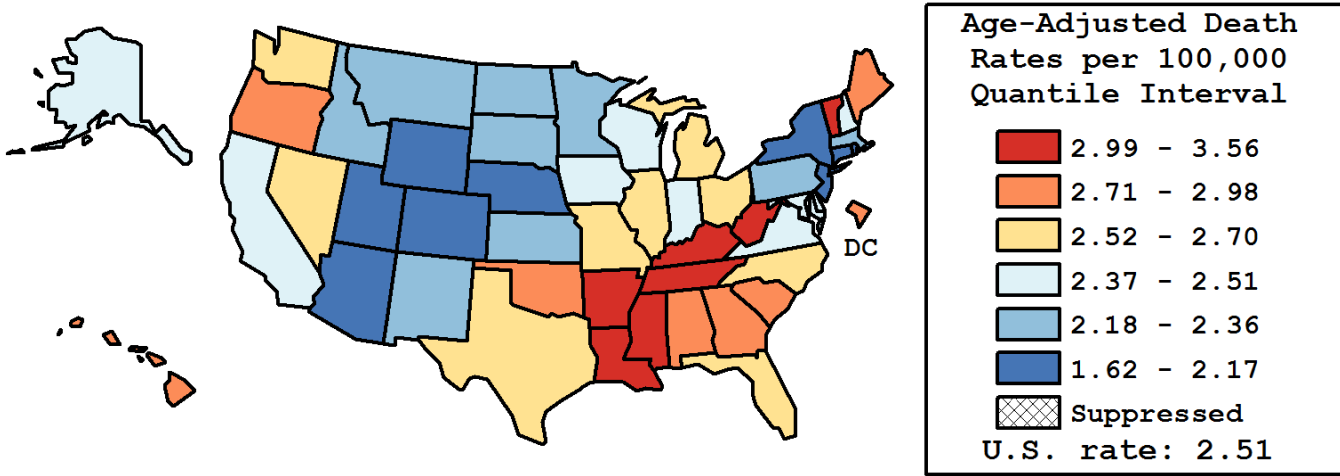
Table 20.24  
Cancer of the Oral Cavity and Pharynx (Invasive)

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.	2.51	0.01		
High Five States				
Mississippi	3.56	0.14	01(01,05)	41.81 <sup>c</sup>
Vermont	3.22	0.29	02(01,30)	28.53 <sup>c</sup>
Arkansas	3.18	0.13	03(01,14)	26.78 <sup>c</sup>
Louisiana	3.14	0.11	04(01,12)	25.06 <sup>c</sup>
Kentucky	3.13	0.11	05(01,13)	24.73 <sup>c</sup>
Low Five States				
Wyoming	1.98	0.25	47(12,51)	-21.09 <sup>c</sup>
Colorado	1.93	0.08	48(39,51)	-23.12 <sup>c</sup>
Connecticut	1.81	0.09	49(43,51)	-27.80 <sup>c</sup>
Utah	1.75	0.12	50(42,51)	-30.38 <sup>c</sup>
Rhode Island	1.62	0.15	51(43,51)	-35.56 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	2.80	0.10	11(04,27)	11.70	Montana	2.25	0.19	38(11,50)	-10.36
Alaska	2.37	0.29	32(02,51)	-5.45	Nebraska	2.17	0.14	43(23,50)	-13.60
Arizona	2.03	0.07	45(37,50)	-19.01 <sup>c</sup>	Nevada	2.61	0.13	21(06,40)	4.21
Arkansas	3.18	0.13	03(01,14)	26.78 <sup>c</sup>	New Hampshire	2.40	0.17	31(08,48)	-4.23
California	2.47	0.04	26(22,35)	-1.49	New Jersey	2.02	0.06	46(39,49)	-19.48 <sup>c</sup>
Colorado	1.93	0.08	48(39,51)	-23.12 <sup>c</sup>	New Mexico	2.36	0.14	34(11,47)	-5.74
Connecticut	1.81	0.09	49(43,51)	-27.80 <sup>c</sup>	New York	2.14	0.04	44(35,47)	-14.48
Delaware	2.51	0.21	25(04,48)	0.11	North Carolina	2.59	0.07	23(11,33)	3.42
D.C.	2.98	0.31	08(01,42)	18.79 <sup>c</sup>	North Dakota	2.30	0.24	35(05,51)	-8.26
Florida	2.68	0.04	19(10,26)	6.96	Ohio	2.69	0.06	18(09,28)	7.22
Georgia	2.72	0.07	14(07,28)	8.41	Oklahoma	2.71	0.11	15(05,33)	8.19
Hawaii	2.77	0.18	13(02,39)	10.66	Oregon	2.79	0.11	12(04,28)	11.25
Idaho	2.24	0.16	39(14,50)	-10.53	Pennsylvania	2.24	0.05	40(30,45)	-10.54
Illinois	2.60	0.06	22(11,32)	3.66	Rhode Island	1.62	0.15	51(43,51)	-35.56 <sup>c</sup>
Indiana	2.37	0.08	33(21,43)	-5.46	South Carolina	2.97	0.10	09(02,19)	18.61 <sup>c</sup>
Iowa	2.45	0.11	28(11,43)	-2.11	South Dakota	2.23	0.22	41(09,51)	-10.96
Kansas	2.18	0.12	42(25,49)	-13.13	Tennessee	2.99	0.09	07(02,16)	19.26 <sup>c</sup>
Kentucky	3.13	0.11	05(01,13)	24.73 <sup>c</sup>	Texas	2.56	0.04	24(16,33)	1.98
Louisiana	3.14	0.11	04(01,12)	25.06 <sup>c</sup>	Utah	1.75	0.12	50(42,51)	-30.38 <sup>c</sup>
Maine	2.91	0.18	10(01,32)	15.90 <sup>c</sup>	Vermont	3.22	0.29	02(01,30)	28.53 <sup>c</sup>
Maryland	2.42	0.09	30(16,42)	-3.62	Virginia	2.44	0.07	29(18,40)	-2.67
Massachusetts	2.29	0.08	36(25,45)	-8.78	Washington	2.67	0.08	20(08,32)	6.40
Michigan	2.70	0.07	16(09,28)	7.59	West Virginia	3.02	0.16	06(01,24)	20.40 <sup>c</sup>
Minnesota	2.27	0.09	37(24,46)	-9.30	Wisconsin	2.46	0.08	27(15,40)	-1.94
Mississippi	3.56	0.14	01(01,05)	41.81 <sup>c</sup>	Wyoming	1.98	0.25	47(12,51)	-21.09 <sup>c</sup>
Missouri	2.70	0.09	17(07,31)	7.53					



<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.



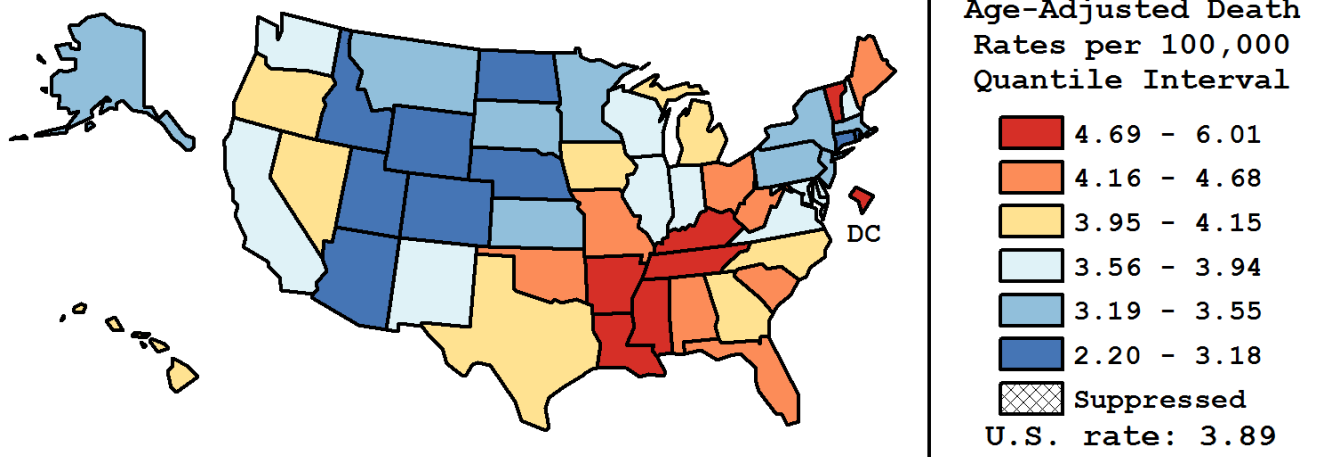
Table 20.25  
Cancer of the Oral Cavity and Pharynx (Invasive)

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.	3.89	0.02		
High Five States				
Mississippi	6.01	0.28	01(01,04)	54.36 <sup>c</sup>
Louisiana	5.14	0.21	02(01,11)	32.17 <sup>c</sup>
D.C.	5.01	0.61	03(01,42)	28.80 <sup>c</sup>
Arkansas	4.98	0.25	04(01,13)	28.00 <sup>c</sup>
Kentucky	4.86	0.21	05(02,15)	24.94 <sup>c</sup>
Low Five States				
Wyoming	2.92	0.45	47(12,51)	-25.06 <sup>c</sup>
Connecticut	2.91	0.17	48(36,51)	-25.13 <sup>c</sup>
Colorado	2.81	0.15	49(40,51)	-27.93 <sup>c</sup>
Utah	2.57	0.22	50(40,51)	-34.02 <sup>c</sup>
Rhode Island	2.20	0.27	51(44,51)	-43.39 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	4.60	0.19	11(02,21)	18.14 <sup>c</sup>	Montana	3.44	0.34	37(10,50)	-11.69
Alaska	3.52	0.51	35(02,51)	-9.52	Nebraska	3.08	0.25	45(25,51)	-20.89 <sup>c</sup>
Arizona	3.17	0.13	44(33,49)	-18.61 <sup>c</sup>	Nevada	3.95	0.23	23(08,41)	1.57
Arkansas	4.98	0.25	04(01,13)	28.00 <sup>c</sup>	New Hampshire	3.63	0.30	32(09,48)	-6.68
California	3.83	0.07	26(19,34)	-1.60	New Jersey	3.22	0.12	42(32,48)	-17.20 <sup>c</sup>
Colorado	2.81	0.15	49(40,51)	-27.93 <sup>c</sup>	New Mexico	3.65	0.25	31(11,47)	-6.25
Connecticut	2.91	0.17	48(36,51)	-25.13 <sup>c</sup>	New York	3.38	0.08	39(30,45)	-13.18
Delaware	3.59	0.37	33(06,50)	-7.80	North Carolina	4.07	0.13	19(09,31)	4.69
D.C.	5.01	0.61	03(01,42)	28.80 <sup>c</sup>	North Dakota	2.98	0.40	46(12,51)	-23.48 <sup>c</sup>
Florida	4.20	0.08	15(09,24)	7.98	Ohio	4.23	0.12	13(08,26)	8.69
Georgia	4.08	0.14	17(09,32)	4.80	Oklahoma	4.29	0.21	12(04,32)	10.13
Hawaii	4.08	0.32	18(03,43)	4.77	Oregon	3.97	0.19	21(09,38)	2.03
Idaho	3.18	0.28	43(20,51)	-18.30 <sup>c</sup>	Pennsylvania	3.55	0.10	34(25,42)	-8.79
Illinois	3.94	0.11	25(13,34)	1.11	Rhode Island	2.20	0.27	51(44,51)	-43.39 <sup>c</sup>
Indiana	3.66	0.15	30(17,43)	-6.06	South Carolina	4.68	0.19	08(02,18)	20.19 <sup>c</sup>
Iowa	3.96	0.22	22(08,41)	1.69	South Dakota	3.42	0.39	38(07,51)	-12.07
Kansas	3.32	0.21	41(22,49)	-14.79	Tennessee	4.82	0.17	06(02,13)	23.87 <sup>c</sup>
Kentucky	4.86	0.21	05(02,15)	24.94 <sup>c</sup>	Texas	4.05	0.08	20(12,29)	4.06
Louisiana	5.14	0.21	02(01,11)	32.17 <sup>c</sup>	Utah	2.57	0.22	50(40,51)	-34.02 <sup>c</sup>
Maine	4.61	0.34	10(02,32)	18.46 <sup>c</sup>	Vermont	4.78	0.51	07(01,42)	22.69 <sup>c</sup>
Maryland	3.74	0.16	28(13,42)	-3.82	Virginia	3.70	0.14	29(17,41)	-4.84
Massachusetts	3.49	0.14	36(23,46)	-10.33	Washington	3.94	0.15	24(10,36)	1.16
Michigan	4.15	0.12	16(08,29)	6.62	West Virginia	4.63	0.29	09(02,28)	18.97 <sup>c</sup>
Minnesota	3.34	0.15	40(27,48)	-14.10	Wisconsin	3.78	0.15	27(13,41)	-2.90
Mississippi	6.01	0.28	01(01,04)	54.36 <sup>c</sup>	Wyoming	2.92	0.45	47(12,51)	-25.06 <sup>c</sup>
Missouri	4.20	0.16	14(07,30)	8.01					



<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.

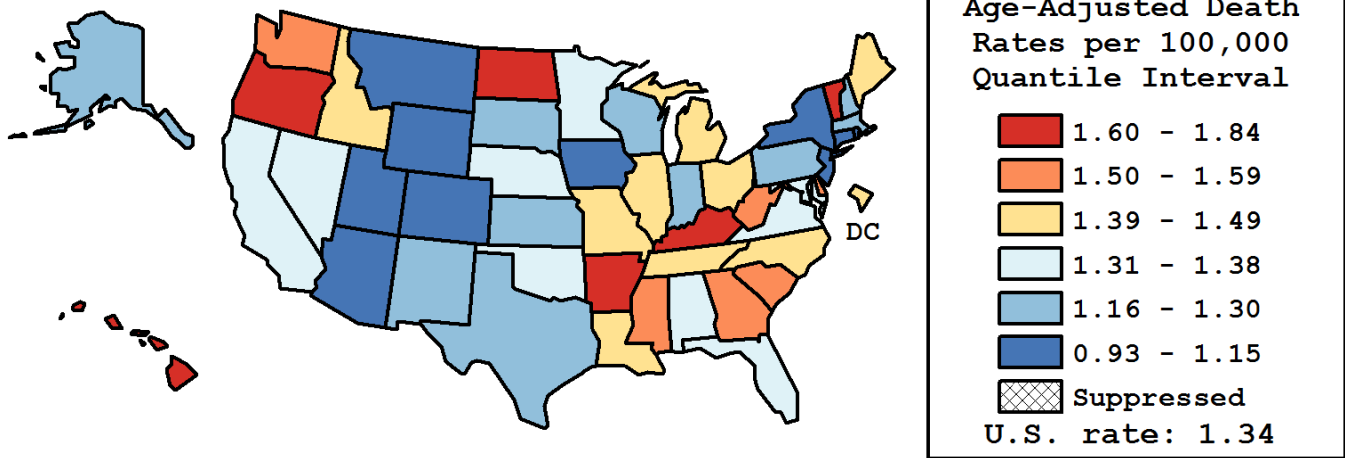
Table 20.26  
Cancer of the Oral Cavity and Pharynx (Invasive)

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.	1.34	0.01		
High Five States				
Vermont	1.84	0.29	01(01,47)	37.33 <sup>c</sup>
Oregon	1.75	0.12	02(01,22)	30.46 <sup>c</sup>
North Dakota	1.72	0.29	03(01,50)	28.51 <sup>c</sup>
Kentucky	1.69	0.11	04(01,25)	26.10 <sup>c</sup>
Hawaii	1.66	0.19	05(01,43)	23.71 <sup>c</sup>
Low Five States				
Rhode Island	1.12	0.17	47(05,51)	-16.30 <sup>c</sup>
New Jersey	1.06	0.06	48(36,51)	-21.15 <sup>c</sup>
Arizona	1.04	0.07	49(34,51)	-22.53 <sup>c</sup>
Utah	0.99	0.13	50(23,51)	-26.10 <sup>c</sup>
Connecticut	0.93	0.09	51(38,51)	-30.69 <sup>c</sup>

State	Rate	SE	Rank(CI) <sup>d</sup>	PD	State	Rate	SE	Rank(CI) <sup>d</sup>	PD
Alabama	1.34	0.09	30(07,46)	-0.30	Montana	1.15	0.18	43(04,51)	-14.03
Alaska	1.20	0.30	40(01,51)	-10.78	Nebraska	1.37	0.15	26(01,50)	2.32
Arizona	1.04	0.07	49(34,51)	-22.53 <sup>c</sup>	Nevada	1.38	0.13	23(02,49)	3.10
Arkansas	1.66	0.14	06(01,35)	23.51 <sup>c</sup>	New Hampshire	1.30	0.18	32(02,51)	-2.77
California	1.33	0.04	31(16,39)	-0.49	New Jersey	1.06	0.06	48(36,51)	-21.15 <sup>c</sup>
Colorado	1.15	0.09	42(17,51)	-13.94	New Mexico	1.26	0.14	37(05,51)	-6.37
Connecticut	0.93	0.09	51(38,51)	-30.69 <sup>c</sup>	New York	1.15	0.04	44(33,49)	-14.36
Delaware	1.58	0.23	08(01,50)	18.00 <sup>c</sup>	North Carolina	1.40	0.07	20(07,40)	4.44
D.C.	1.49	0.29	14(01,51)	10.95	North Dakota	1.72	0.29	03(01,50)	28.51 <sup>c</sup>
Florida	1.38	0.04	24(12,38)	2.54	Ohio	1.40	0.06	22(08,39)	4.17
Georgia	1.59	0.08	07(01,26)	18.48 <sup>c</sup>	Oklahoma	1.34	0.10	28(05,48)	-0.23
Hawaii	1.66	0.19	05(01,43)	23.71 <sup>c</sup>	Oregon	1.75	0.12	02(01,22)	30.46 <sup>c</sup>
Idaho	1.40	0.18	21(01,50)	4.18	Pennsylvania	1.16	0.05	41(29,49)	-13.36
Illinois	1.49	0.06	13(04,31)	11.28	Rhode Island	1.12	0.17	47(05,51)	-16.30 <sup>c</sup>
Indiana	1.28	0.08	36(13,47)	-4.83	South Carolina	1.55	0.10	11(01,37)	15.64 <sup>c</sup>
Iowa	1.13	0.10	45(18,51)	-15.58 <sup>c</sup>	South Dakota	1.20	0.22	39(01,51)	-10.54
Kansas	1.22	0.12	38(09,51)	-9.27	Tennessee	1.46	0.08	17(03,38)	9.04
Kentucky	1.69	0.11	04(01,25)	26.10 <sup>c</sup>	Texas	1.30	0.04	33(17,42)	-3.00
Louisiana	1.49	0.10	15(02,41)	10.76	Utah	0.99	0.13	50(23,51)	-26.10 <sup>c</sup>
Maine	1.44	0.17	18(01,49)	7.13	Vermont	1.84	0.29	01(01,47)	37.33 <sup>c</sup>
Maryland	1.34	0.09	27(08,45)	0.07	Virginia	1.37	0.07	25(08,42)	2.40
Massachusetts	1.30	0.08	34(11,46)	-3.01	Washington	1.57	0.09	09(01,32)	17.22 <sup>c</sup>
Michigan	1.47	0.07	16(05,36)	9.34	West Virginia	1.56	0.15	10(01,43)	16.36 <sup>c</sup>
Minnesota	1.34	0.09	29(08,46)	-0.30	Wisconsin	1.29	0.08	35(11,48)	-3.99
Mississippi	1.53	0.13	12(01,41)	13.98	Wyoming	1.13	0.27	46(01,51)	-15.84 <sup>c</sup>
Missouri	1.41	0.08	19(05,42)	4.94					



<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 20.27  
Cancer of the Oral Cavity and Pharynx (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>
Race	Sex								
All Races	Both Sexes	137,601	83,078	52,272	33,186	16,846	322,983	47,326	370,309
	Males	97,382	56,660	34,723	21,268	10,139	220,172	29,888	250,059
	Females	40,219	26,418	17,549	11,918	6,707	102,811	17,438	120,250
White	Both Sexes	119,389	71,998	45,504	28,485	14,475	279,851	40,358	325,100
	Males	85,471	49,690	30,750	18,599	8,853	193,362	25,529	222,024
	Females	33,919	22,309	14,754	9,885	5,622	86,489	14,829	103,077
Black	Both Sexes	10,229	5,844	3,613	2,443	1,333	23,462	2,368	25,830
	Males	6,966	3,712	2,101	1,354	678	14,811	1,246	16,057
	Females	3,262	2,132	1,512	1,090	655	8,651	1,121	9,773
Asian/ Pacific Islander	Both Sexes	5,206	3,370	2,197	1,497	670	12,941	+	+
	Males	3,161	2,040	1,290	850	380	7,721	+	+
	Females	2,045	1,330	907	647	290	5,220	+	+
Hispanic	Both Sexes	7,864	4,600	2,787	1,690	868	17,809	+	+
	Males	5,180	2,704	1,697	983	418	10,982	+	+
	Females	2,684	1,896	1,090	707	450	6,828	+	+

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		All Ages	0-9	10-19	20-29	Age Specific (Crude)					Age-Adjusted <sup>c</sup>	
Race	Sex											All Ages
All Races	Both Sexes	0.1002	0.0004	0.0023	0.0066	0.0168	0.0488	0.1514	0.2996	0.3762	0.3571	0.0835
	Males	0.1388	0.0004	0.0023	0.0062	0.0162	0.0604	0.2212	0.4620	0.5721	0.5369	0.1218
	Females	0.0629	0.0004	0.0024	0.0071	0.0174	0.0374	0.0848	0.1524	0.2130	0.2464	0.0509
White	Both Sexes	0.1110	0.0004	0.0021	0.0065	0.0162	0.0480	0.1574	0.3148	0.3973	0.3757	0.0868
	Males	0.1548	0.0004	0.0020	0.0059	0.0153	0.0603	0.2321	0.4855	0.6023	0.5628	0.1269
	Females	0.0680	0.0004	0.0023	0.0072	0.0172	0.0356	0.0846	0.1566	0.2228	0.2585	0.0518
Black	Both Sexes	0.0520	0.0004	0.0029	0.0068	0.0144	0.0395	0.1077	0.2014	0.2167	0.1750	0.0546
	Males	0.0685	0.0005	0.0031	0.0073	0.0142	0.0444	0.1503	0.3108	0.3419	0.2814	0.0791
	Females	0.0369	0.0003	0.0027	0.0063	0.0146	0.0352	0.0705	0.1141	0.1295	0.1224	0.0366
Asian/ Pacific Islander	Both Sexes	0.0636	-	0.0022	0.0061	0.0237	0.0607	0.1289	0.1964	0.2441	0.2337	0.0650
	Males	0.0792	-	0.0027	0.0058	0.0268	0.0733	0.1718	0.2771	0.3360	0.3056	0.0859
	Females	0.0492	-	0.0017	0.0064	0.0208	0.0496	0.0918	0.1312	0.1703	0.1873	0.0479
Hispanic	Both Sexes	0.0312	0.0005	0.0019	0.0048	0.0093	0.0284	0.0713	0.1499	0.2128	0.2184	0.0456
	Males	0.0381	0.0006	0.0019	0.0047	0.0086	0.0323	0.0941	0.2145	0.2996	0.3112	0.0616
	Females	0.0242	0.0003	0.0019	0.0050	0.0100	0.0243	0.0489	0.0927	0.1463	0.1610	0.0326

<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 20.28

## Cancer of the Oral Cavity and Pharynx (Invasive)

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

Histology <sup>a</sup>	Oral Cavity and Pharynx		Lip		Tongue		Salivary Gland		Floor of Mouth	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Epidermoid carcinoma <sup>b</sup> (8051-8131)	63,339	85.4%	3,814	94.3%	22,466	97.7%	1,766	21.6%	3,088	95.8%
Squamous cell carcinoma (8070-8078,8083-8084)	61,917	83.5%	3,608	89.2%	22,108	96.1%	1,685	20.6%	3,055	94.8%
Adenocarcinoma <sup>c</sup>	7,315	9.9%	166	4.1%	277	1.2%	5,108	62.5%	109	3.4%
Other specific carcinomas <sup>d</sup>	673	0.9%	-	-	65	0.3%	414	5.1%	-	-
Unspecified, Carcinoma, NOS (8010-8011,8020-8022)	1,948	2.6%	-	-	104	0.5%	550	6.7%	-	-
Sarcoma and soft tissue <sup>e</sup>	233	0.3%	-	-	34	0.1%	53	0.6%	-	-
Other specific types <sup>f</sup>	413	0.6%	36	0.9%	-	-	205	2.5%	-	-
Unspecified (8000-8005)	244	0.3%	-	-	42	0.2%	76	0.9%	-	-
Total	74,166	100.0%	4,044	100.0%	23,000	100.0%	8,172	100.0%	3,224	100.0%

Histology <sup>a</sup>	Gum and Other Mouth		Nasopharynx		Oropharynx and Tonsil		Hypopharynx		Other Oral Cavity and Pharynx	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Epidermoid carcinoma <sup>b</sup> (8051-8131)	8,194	82.7%	2,605	67.2%	16,315	98.3%	3,677	97.3%	1,414	90.0%
Squamous cell carcinoma (8070-8078,8083-8084)	7,805	78.8%	2,454	63.3%	16,150	97.3%	3,648	96.5%	1,404	89.4%
Adenocarcinoma <sup>c</sup>	1,400	14.1%	122	3.1%	86	0.5%	21	0.6%	26	1.7%
Other specific carcinomas <sup>d</sup>	46	0.5%	38	1.0%	47	0.3%	33	0.9%	17	1.1%
Unspecified, Carcinoma, NOS (8010-8011,8020-8022)	70	0.7%	1,037	26.7%	88	0.5%	23	0.6%	59	3.8%
Sarcoma and soft tissue <sup>e</sup>	46	0.5%	46	1.2%	17	0.1%	17	0.4%	-	-
Other specific types <sup>f</sup>	125	1.3%	-	-	-	-	-	-	-	-
Unspecified (8000-8005)	23	0.2%	16	0.4%	28	0.2%	-	-	42	2.7%
Total	9,905	100.0%	3,878	100.0%	16,592	100.0%	3,780	100.0%	1,571	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> Epidermoid carcinoma includes squamous, basal, and transitional cell carcinomas.

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

<sup>d</sup> Other specific carcinomas includes histologies 8012-8015, 8030-8046, 8150-8155, 8170-8180, 8230-8249, 8508, 8510-8513, 8561-8562, 8575, 8580-8671.

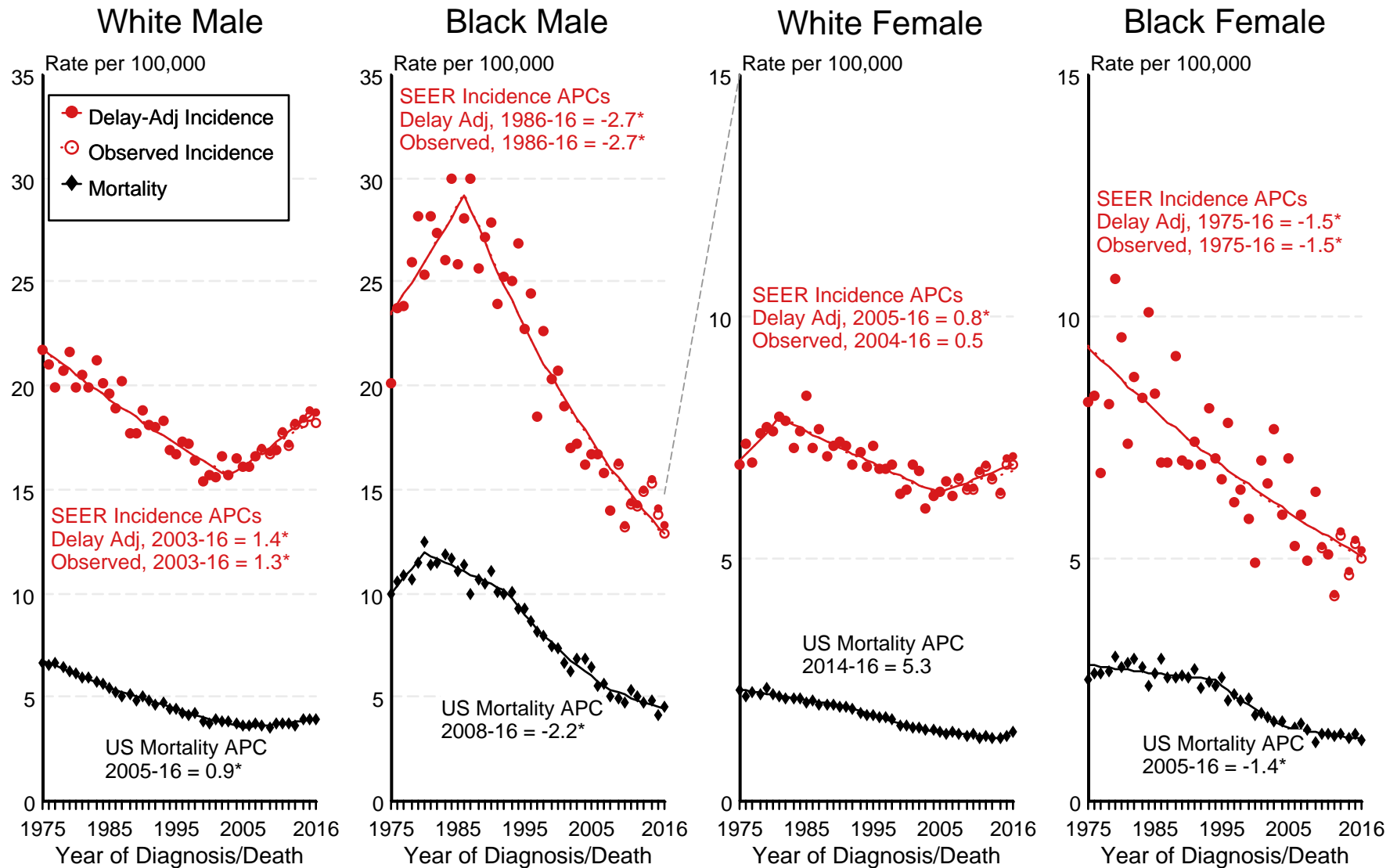
<sup>e</sup> Sarcoma and soft tissue includes histologies 8680-8713, 8800-8921, 8990-8991, 9040-9044, 9120-9136, 9150-9252, 9370-9373, 9540-9582.

<sup>f</sup> Other specific types includes histologies 8720-8790, 8930-8936, 8950-8983, 9060-9110, 9260-9365, 9380-9539.

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

Figure 20.1

# SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates<sup>a</sup> Cancer of the Oral Cavity and Pharynx, 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.

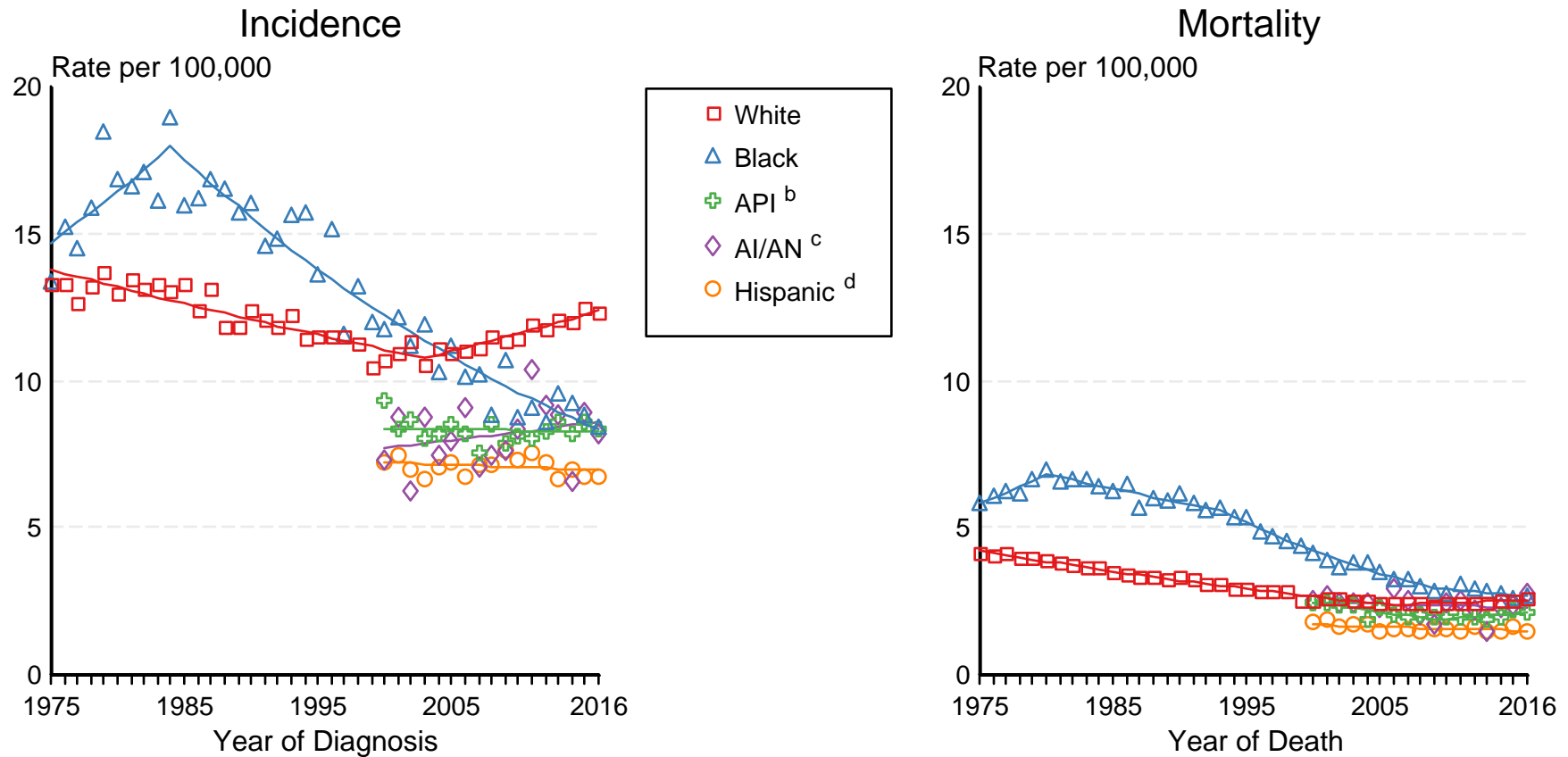
\* The APC is significantly different from zero ( $p < 0.05$ ).

Figure 20.2

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

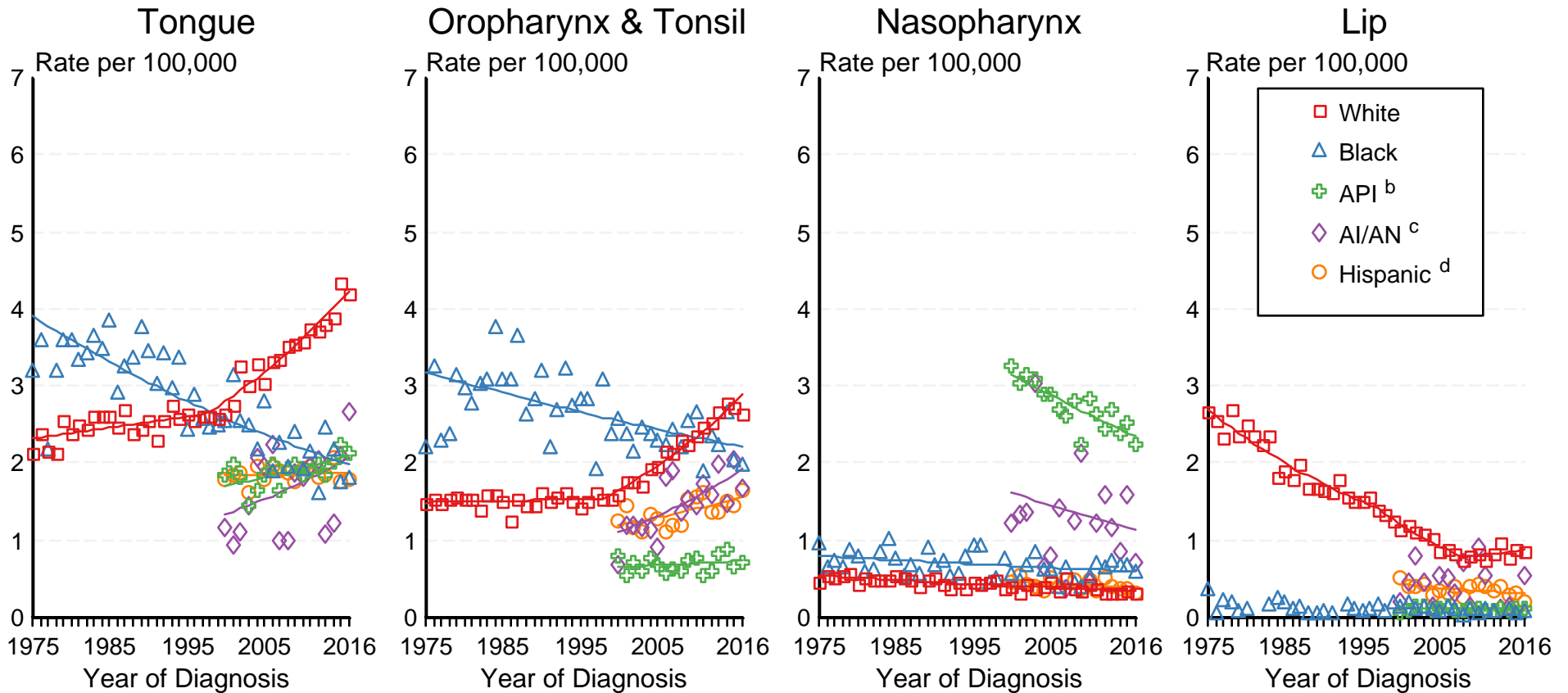
Figure 20.3

# SEER Incidence Rates<sup>a</sup>

## Cancer of the Oral Cavity and Pharyngeal for Selected Subsites, 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).

<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. Regression lines could not be calculated for data series that had at least one diagnosis year with a 0 case count.

<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.