

A close-up photograph of yellow wildflowers with green buds, growing in tall, dry, golden-brown grass. The background is softly blurred, emphasizing the flowers in the foreground.

Oral Cancer in South Dakota

Oral cancer forms in tissues of the oral cavity (the mouth) or the oropharynx (the part of the throat at the back of the mouth). Oral cancer most often occurs in people over the age of 40 and affects more than twice as many men as women. It accounts for roughly two percent of all cancers diagnosed annually in the United States. The death rate for these cancers has been decreasing over the last 30 years. Since 2008, there has been about a 1 percent increase for whites reflecting an uptick in subsites associated with HPV (Human Papillomavirus).

Oral Cancer Estimates for 2020¹

The American Cancer Society estimates 53,260 new cases of cancer of the oral cavity and pharynx and 10,750 deaths in the United States in 2017.

Incidence and Mortality

During 2013-2017, there was an average of 134 (96 men and 38 women) new invasive cases of oral cancer diagnosed among South Dakota residents per year. Of those cases, 126 were white and 5 were American Indian.

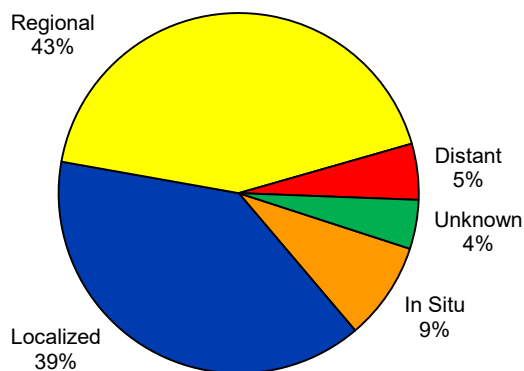
In South Dakota, an average of 22 people died annually from oral cancer spanning the years from 2013 to 2017. Of that number, 20 were white and 2 were American Indian.

Incidence 2017		Mortality 2017	
Number of cases		Number of deaths	
Total	148	Total	28
Males	95	Males	23
Females	50	Females	5
White	137	White	27
American Indian	7	American Indian	1
Median age at diagnosis	66 yrs	Median age at death	71 yrs
Mode	68 yrs	Mode	71 yrs
Age range at diagnosis	24-93 yrs	Age range at death	46-94 yrs
S.D. age-adjusted incidence rate	13.8	S.D. age-adjusted death rate	2.6
U.S. SEER age-adjusted incidence rate	11.2	U.S. SEER age-adjusted death rate	2.7

Rates per 100,000 U.S. 2000 Standard Population and S.D. 2017 Estimated Population
Source: South Dakota Department of Health

Figure 1 SEER Summary Stage

Oral cancer stage at diagnosis, South Dakota, 2017



Source: South Dakota Department of Health

5-Year Relative Survival for Oral Cancer, U.S.

Stage at Diagnosis	5-Year Relative Survival, 2010-2016
Localized	85.1%
Regional	66.8%
Distant	40.1%
Unknown	54.0%

Source: National Cancer Institute
<http://seer.cancer.gov/statfacts/html/oralcav.html>

Cancer stage at diagnosis defines the original location of the cancer and if it has spread in the body and how far. The table above demonstrates how stage at diagnosis affects survival.

¹Source: *Cancer Facts and Figures 2020* American Cancer Society
Cover picture courtesy of Mary Sarvis, Data Manager, SDCR

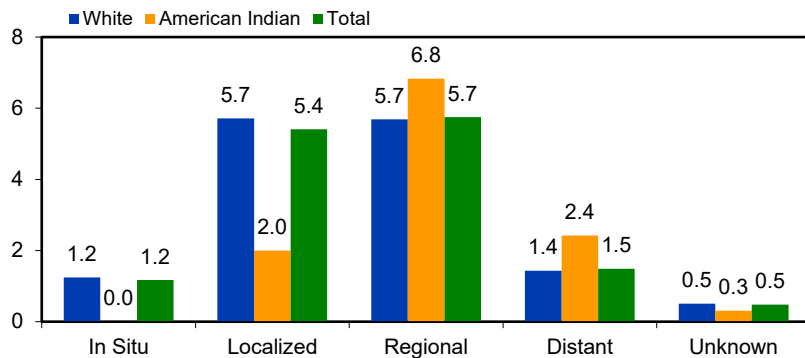


Figure 2
Stage at Diagnosis Incidence Rate
 Age-adjusted incidence rate for oral cancer cases at stage of diagnosis by race, South Dakota, 2013-2017

Smoking and alcohol use are linked to oral cancer.

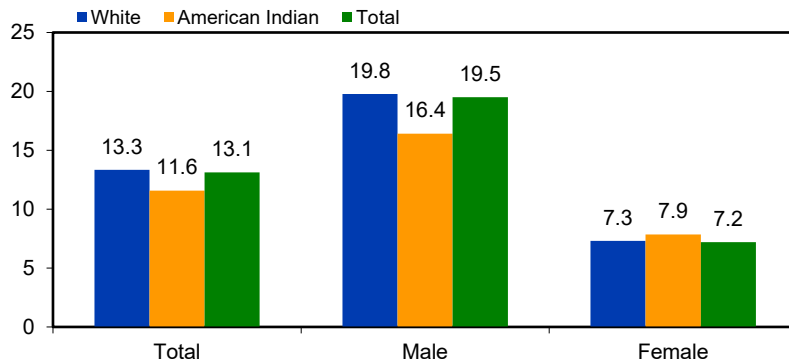


Figure 3
Oral Cancer Incidence Rate
 Age-adjusted incidence rate for oral cancer cases by race and gender, South Dakota, 2013-2017

Recent CDC studies attribute 70% of oropharyngeal cancers to Human Papillomavirus (HPV), specifically HPV 16 and 18¹.

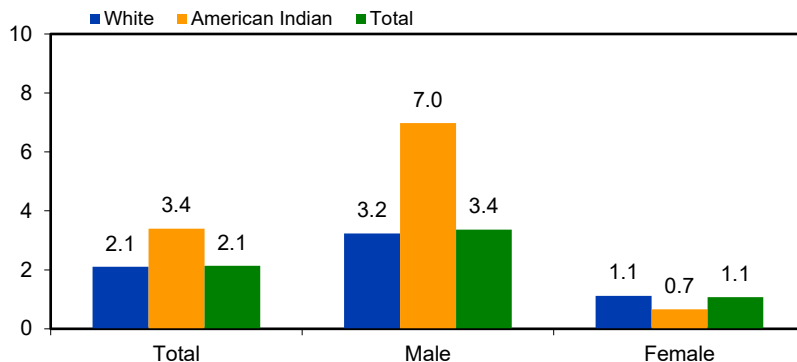


Figure 4
Oral Cancer Mortality Rate
 Age-adjusted mortality rate for oral cancer deaths by race and gender, South Dakota, 2013-2017

About 1 in 4 persons with oral cancer die because of delayed diagnosis and treatment.

Rates per 100,000 U.S. 2000 Standard Population and S.D. Estimated Population
 Source: South Dakota Department of Health

Symptoms²

One of the real dangers of this cancer is that in its early stages, it can go unnoticed. It can be painless and physical changes may not be obvious. Some of the signs or symptoms may include:

- Swelling of the jaw
- Trouble breathing or speaking
- Ear pain
- Difficulty chewing or swallowing food
- Numbness in the mouth
- Pain in the throat that won't go away
- A sore in the mouth or lip that does not heal
- A lump or thickening in the mouth, throat, or tongue
- A white or red patch on the gums, tongue, tonsil, or lining of the mouth
- A sore throat or a feeling that something is caught in the throat

¹ <http://www.cdc.gov/cancer/hpv/statistics/headneck.htm>

² <https://www.cdc.gov/cancer/headneck/index.htm>

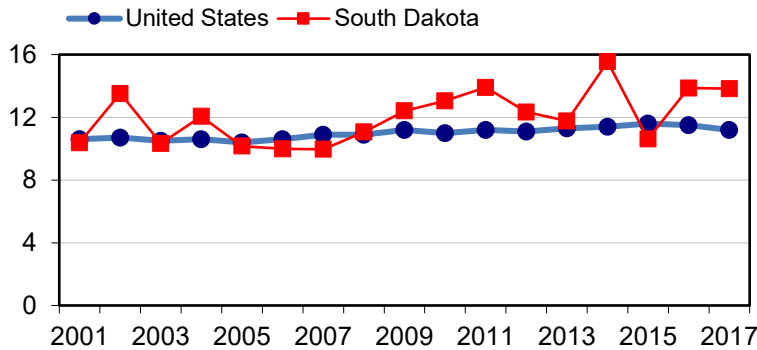


Figure 5
Oral Cancer Incidence Rates,
United States and South Dakota
 Oral cancer incidence rates for the United States and South Dakota by year, 2001-2017

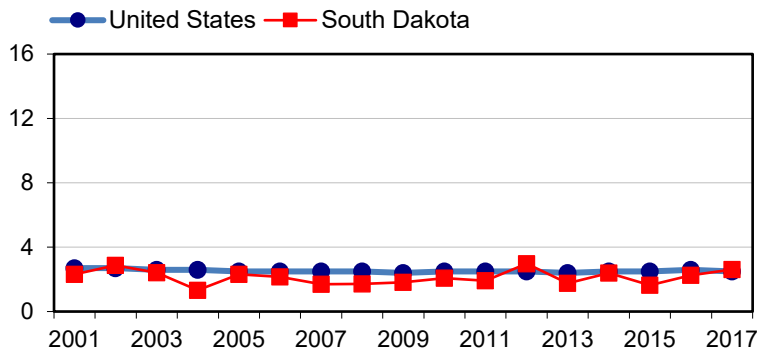


Figure 6
Oral Cancer Mortality Rates,
United States and South Dakota
 Oral cancer mortality rates for the United States and South Dakota by year, 2001-2017

Rates per 100,000 U.S. 2000 Standard Population and S.D. Estimated Population, U.S. rates are provided by SEER Program www.seer.cancer.gov, National Cancer Institute
 Source: South Dakota Department of Health

Burden

Years of Potential Life Lost before age 75 years (YPLL₇₅) reflect the impact of the cancer burden. It demonstrates in years the loss of productive life due to premature death¹. The Average Years of Life Lost before age 75 years (AYLL₇₅) is the YPLL divided by the number of deaths.

For South Dakotans in 2017, the oral cancer YPLL₇₅ was 130 years for males and 46 years for females. The AYLL₇₅ was 9 years for males and 15 years for females.

Risk Factors

The risk of oral cancer increases with age; in South Dakota 95% of oral cancer occurs in patients 45 years or older. Unlike age, there are other risk factors that are modifiable such as:

- Tobacco use – don't use tobacco products. To learn how to quit tobacco, see <http://www.SDQuitline.com>. Currently in SD, 19% of adults and 12% high school students smoke. Additionally, 7% adults and 7.1% high school students use spit-tobacco².
- Alcohol consumption – drink in moderation, if at all.
- Exposure to HPV 16 and 18 – HPV vaccinations are available for males and females ages 11 to 45 years to prevent the virus³. For more information on vaccinations, contact the South Dakota Department of Health Immunization Program at 800-592-1861.
- Exposure to ultraviolet light – use sunscreen and cover up when in the sun.
- Exposure to chemicals - especially asbestos, sulfuric acid, and formaldehyde.
- Poor nutrition – a healthy diet is important for a person's general health and oral health, see <http://www.healthysd.gov/> or <http://doh.sd.gov/oralhealth> for more information.

¹ <https://www.cdc.gov/mmwr/preview/mmwrhtml/00001773.htm>

² <https://doh.sd.gov/statistics/BRFSS.aspx> and <https://doh.sd.gov/documents/statistics/YRBS2007-2015summary.pdf>

³ <https://www.fda.gov/news-events/press-announcements/fda-approves-expanded-use-gardasil-9-include-individuals-27-through-45-years-old>

Source: Cancer Facts and Figures 2020 American Cancer Society