A misty forest scene with sunlight filtering through the trees and flowers in the foreground. The image is framed by a thin green border.

Oral Cancer in South Dakota

South Dakota Department of Health – May 2014

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.

Oral Cancer Estimates for 2014¹

The American Cancer Society estimates 42,440 new cases of cancer of the oral cavity and pharynx and 8,390 deaths in the United States in 2014.

Incidence and Mortality

During 2007-2011, there was an average of 100 (68 men and 32 women) new invasive cases of oral cancer diagnosed among South Dakota residents per year. Of those cases, 94 were white and 5 were American Indian.

In South Dakota, an average of 18 people died annually from oral cancer spanning the years from 2007 to 2011. Of that number, 16 were white and 1 was American Indian.

Incidence 2011		Mortality 2011	
Number of cases		Number of deaths	
Total	116	Total	19
Males	74	Males	12
Females	42	Females	7
White	110	White	17
American Indian	6	American Indian	2
Median age at diagnosis	63 yrs	Median age at death	70 yrs
Mode	54 yrs	Mode	51 yrs
Age range at diagnosis	17-93 yrs	Age range at death	46-91 yrs
S.D. age-adjusted incidence rate	12.4	S.D. age-adjusted death rate	1.9
U.S. SEER age-adjusted incidence rate	10.6	U.S. SEER age-adjusted death rate (2010)	*2.5

Rates per 100,000 U.S. 2000 Standard Population and S.D. 2011 Estimated Population / *2011 U.S. SEER age-adjusted mortality rate not available
Source: South Dakota Department of Health

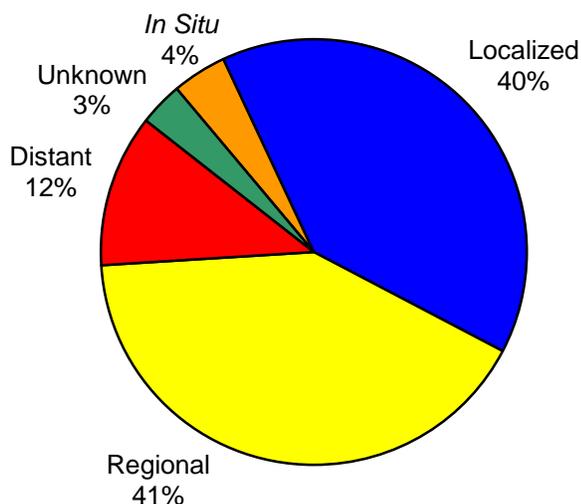


Figure 1
SEER Summary Stage

Oral cancer stage at diagnosis, South Dakota, 2011

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

Stage at Diagnosis	5-Year Relative Survival, 2003-2009
Localized	82.7%
Regional	59.2%
Distant	36.3%
Unknown	49.3%

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

Source: South Dakota Department of Health

¹Source: *Cancer Facts and Figures 2014* American Cancer Society

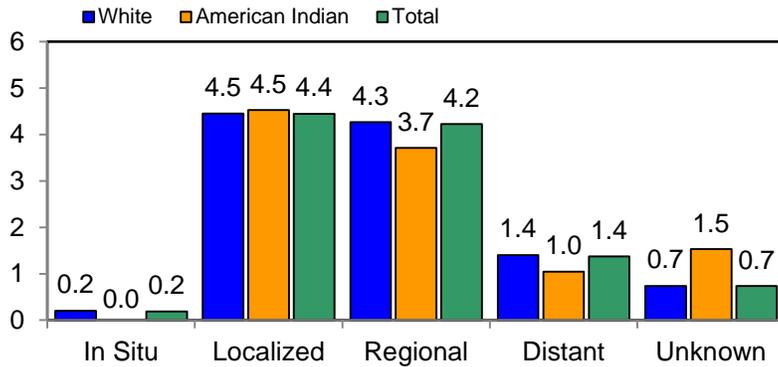


Figure 2
Stage at Diagnosis Incidence Rate
 Age-adjusted incidence rate for oral cancer cases at stage of diagnosis by race, South Dakota, 2007-2011

Smoking and alcohol use are linked to oral cancer.

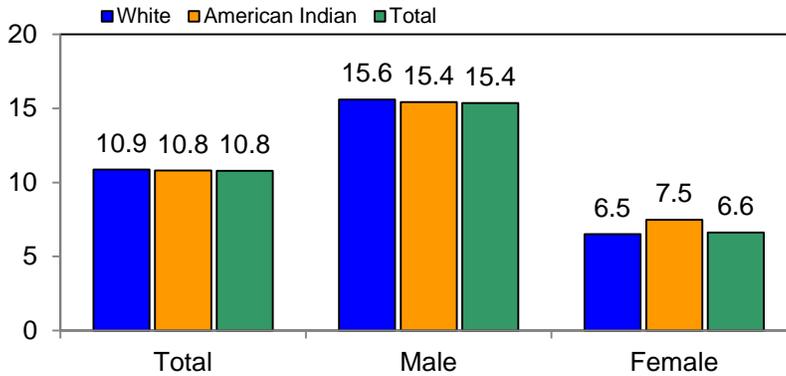


Figure 3
Oral Cancer Incidence Rate
 Age-adjusted incidence rate for oral cancer cases by race and gender, South Dakota, 2007-2011

Recent CDC studies attribute 63% of oropharyngeal cancers to Human Papilloma Virus (HPV), specifically HPV 16 and 18¹.

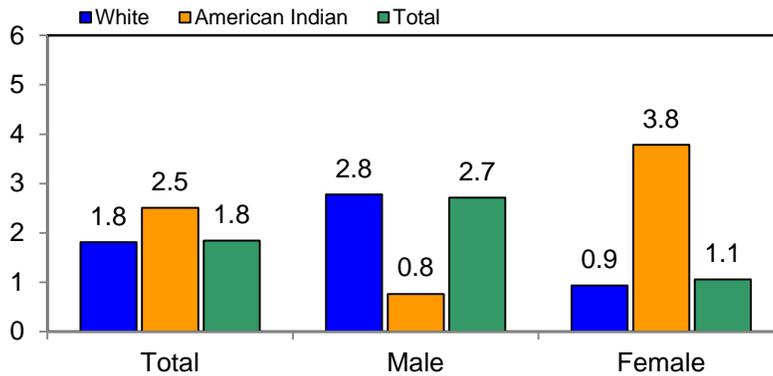


Figure 4
Oral Cancer Mortality Rate
 Age-adjusted mortality rate for oral cancer deaths by race and gender, South Dakota, 2007-2011

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

Symptoms

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
- Voice changes
- Weight loss
- Difficulty chewing or swallowing food
- Numbness in the mouth
- A sore in the mouth that bleeds and 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>

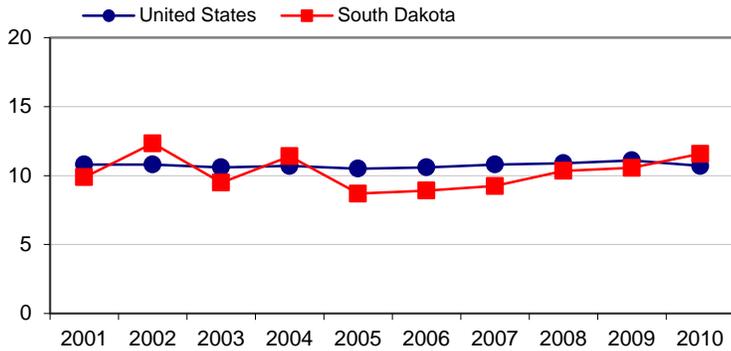


Figure 5
Oral Cancer Incidence Rates,
United States and South Dakota
 Oral cancer incidence rates for the United States and South Dakota by year, 2001-2010

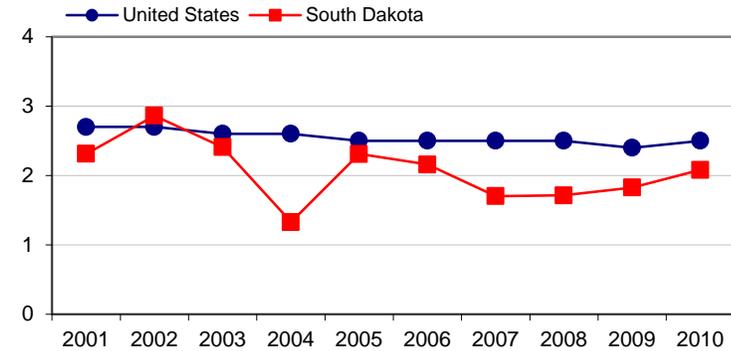


Figure 6
Oral Cancer Mortality Rates,
United States and South Dakota
 Oral cancer mortality rates for the United States and South Dakota by year, 2001-2010

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 among South Dakotans. It demonstrates in years the loss of productive life due to premature death. The Average Years of Life Lost before age 75 years (AYLL₇₅) is the YPLL divided by the number of deaths.

For South Dakotans in 2011, the oral cancer YPLL₇₅ was 125 years for males and 57 years for females. The AYLL₇₅ was 21 years for males and 11 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:

- 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 26 years to prevent the virus. 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, sulphuric 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.
- Tobacco use – don’t use tobacco products. To learn how to quit tobacco, see <http://www.befreesd.com>. Currently in SD, 22% of adults and 16.5% high school students smoke. Additionally, 6.4% adults and 11.5% high school students use spit-tobacco¹.

¹ 2012 South Dakota Behavioral Risk Factor Surveillance System and 2013 South Dakota Youth Risk Behavior Survey