Introduction

Oral cancer includes lesions and malignancies of the mouth, tongue, lips, throat, parts of the nose, and larynx. The major non-modifiable risk factors associated with oral cancer are age, race and gender, while the major modifiable risk factors are tobacco smoking, excessive alcohol consumption, unprotected exposure to ultraviolet radiation (i.e., sunlight), dietary factors, and viral infection.

Detection of oral lesions at earlier stages of development is associated with much more favorable oral cancer survival rates; however, only 35% of oral cancer is detected at the earliest stage.1

The American Cancer Society recommends:

- Routine cancer-related check-ups by primary care doctors and dentists to examine the mouth and throat
- Monthly self-examinations should be completed by those at a higher risk of developing oral cancer

Risk Factors

- Approximately 25% of oral cancer patients have no known risk factors.2
- Most oral cancer cases (95%) occur in adults 40 years of age and older; the mean age at diagnosis is 60.3
- Oral cancer occurs twice as often in males compared to females nationally and in the state of Michigan.3
- Tobacco use has been found to result in approximately 75% of oral cancers, including cancer of the mouth, tongue, lips, and throat.3
- Alcohol consumption has been identified as primary risk factor for oral cancer. When combined with tobacco use, the risk is greatly increased.3
- Dietary factors, particularly low consumption of fruit, and some types of viral infections also have been implicated as risk factors for oral cancer.
- More recent data has shown that about 25% of mouth and 35% of throat cancers are caused by Human Papillomavirus (HPV).4

Signs and Symptoms

Oral cancer lesions may appear as a persistent white or red patch of tissue in the mouth, or a small hardened ulcer, which looks like a common canker sore. Other symptoms include:

- A lump or mass which can be felt inside the mouth or neck
- Pain or difficulty in swallowing, speaking, or chewing
- Any wart-like masses
- Prolonged hoarseness or distortion of any sense/numbness in the oral and facial region
- Chronic earache
- Unusual nosebleeds or other bleeding from the oral cavity
- Progressive swelling or enlargement
- Shifting of the teeth1
Incidence & Mortality

Incidence

- Oral cancer incidence rates have been decreasing nationally and in Michigan for the past thirty years.
- In 2007, 1138 Michigan residents were diagnosed with oral cancer and the age-adjusted oral cancer incidence rate was 10.4 per 100,000 (Figure 1).
- Michigan ranked 18th worst out of all 50 states for statewide oral cancer incidence in 2007.
- In 2007, Michigan males (15.8, CI: 14.7-16.9) had a significantly higher oral cancer incidence compared to females (5.9, CI 5.3-6.5).
- Incidence peaked in African Americans ten years before the rest of the population.5
- Figure 2 displays higher oral cancer incidence rates in black males compared to white males and females, as well as black females from 2000-2007.6
- Geographic location has also been found to be associated with oral cancer incidence.
- Map 1 shows the distribution of incidence rates by county throughout the state.
- Counties on the east side of the state are shown to have generally higher rates of incidence.

Although incidence rates have continued to decrease nationally, the decline has not been consistent or uniform in the population. Studies have found increases in incidence and mortality rates among certain demographic groups.7
**Mortality**

- Oral cancer accounts for 3% of all cancer deaths in the United States.⁸
- In 2007, the oral cancer mortality rate in Michigan was 2.8 per 100,000 which was 36th worst out of 49 states.
- A total of 311 Michigan residents died due to oral cancer in 2007.⁶
- Despite a steady improvement in cancer survival rates since 1975, survival rates have continued to be significantly lower for black men and women, nationally.⁹
- The mortality rate for whites (2.7, CI: 2.4-3.0) was considerably lower than for blacks (4.2, CI:3.1-5.6).⁸
- Figure 7 shows oral cancer mortality rates in Michigan from 2000-2007 by race and gender.
- Map 2 shows oral cancer mortality rates in sixteen Michigan counties. Since the majority of counties in the state experience less than 16 oral cancer-related deaths per year, much of the county-level data has been suppressed.⁶

* Source: statecancerprofiles.cancer.gov
**Data was suppressed for counties with less than 16 oral cancer cases to ensure confidentiality and stability of rate estimates
Stage at Diagnosis
- Oral cancer has one of the poorest prognoses of all cancers; about half (52%) of patients survive five years after diagnosis.
- The five-year relative survival rate for persons with oral cancer diagnosed at the earliest stage is 81%. In contrast, the five-year survival rate is only 22% at an advanced stage.¹
- In Michigan, only 32.9% of those diagnosed with oral cancer were at the earliest recordable stage in 2007.¹⁰
- Figure 3 shows the stage at oral cancer diagnosis increases in stage four from 2000-2007. Percent of diagnoses at stage four increased over the time period.
- Figures 4 and 5 compare the stage at diagnosis for whites compared to blacks. A much higher percentage of whites are diagnosed at the earliest stage when compared to blacks.

Screening Behaviors
- Data from the 1998 National Health Interview Survey showed that only 20.1% of adults had ever received an oral cancer exam.¹¹
- In addition, blacks, Hispanics, and patients with low educational attainment were considerably less likely to have had such an examination.¹²-¹⁴
- Lack of patient awareness and access to dental care have been major contributors to failing to obtain an oral cancer screening.

References: