Division of Chronic Disease, Primary Care, and Rural Health

Head & Neck Cancer

Indiana Department of Health

Bottom Line

Cancers of the head and neck consist of cancers in the oral cavity (lips, tongue, floor of mouth, gums, hard palate, inner cheek, minor salivary glands), oropharynx (tonsils, soft palate, base of tongue), nasopharynx, hypopharynx, and larynx. These are also referred to as laryngeal and oropharyngeal cancers. In 2024, an estimated 58,450 new cases of cancer of the oral cavity (mouth) and pharynx (throat) will be diagnosed in the US and 12,230 people will die from the disease.[1] A rise in both incidence and mortality rates has occurred in the last decade.[1,2]

Table 9. Burden of Invasive Head and Neck Cancer- Indiana, 2016-2020*

*Age-adjusted to the US 2000 Standard Population. Source: Indiana State Cancer Registry

	Average number of cases per year (2016-2020)	Rate per 100,000 people (2016-2020)	Number of cases (2020)	Rate per 100,000 people (2020)
Indiana Incidence	1,374	16.8	1,333	16.0
Indiana Deaths	294	3.6	266	3.2

Who Gets Head and Neck Cancer?

Incidence and mortality trends for cancers of the oral cavity have varied by race and sex. Among both Black men and women, incidence and mortality have steadily declined from 2000 to 2018. For white men, incidence has increased while mortality has remained level. Among white women, incidence and mortality have remained constant.[3] It is thought that the disparities in cancer mortality and incidence may reflect differences in smoking, alcohol consumption, diet, obesity, and levels of physical activity.[4] The average age of most people diagnosed with head and neck cancers is 63, but they can occur in young people. Just over 20 percent (1 in 5) of cases occur in patients younger than 55.[5]

Additional Risk Factors for Head and Neck Cancer Include:

- **Being male:** Men are more than twice as likely as women to be diagnosed.[1]
- **Human papillomavirus (HPV),** particularly types 16 and 18. These strains now account for more than half of the cancers of the oropharynx. The prevalence of oral HPV is approximately 10 percent for adult men and 3.6 percent for women, for an overall average of 6.9 percent.[6] Most men clear the infection within one year, with a median duration of infection of 6.9 months.[7] The current HPV vaccine could potentially reduce most cancers caused by HPV, with the 9-valent vaccine offering a small potential increased benefit.[8] The HPV vaccine is FDA approved for the prevention of oropharyngeal and other head and neck cancers caused by HPV types 16, 18, 31, 33, 45, 52, and 58.[1]

Modifiable Risk Factors

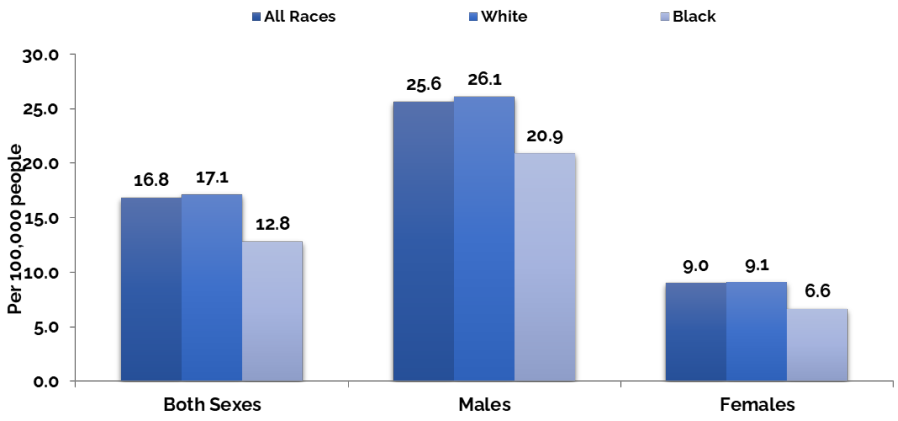
- Tobacco and alcohol use are two of the highest risk factors for head and neck cancers.
    - According to the ACS, tobacco users have an increased risk of developing these cancers, which is related to how much and how long they smoked, chewed, or vaped. However, due to a decrease in smoking prevalence in the US, there has been a trend towards a decrease in the incidence of tobacco-related cancers.[9]
    - Drinking alcohol also increases the risk of developing head and neck cancers.
    - Together, there is a 30-fold increased risk for individuals who both smoke and drink heavily.[1]
- Vietnam Era veterans exposed to Agent Orange have an increased risk of developing head and neck cancer.[10]
- People who have undergone solid organ transplants also have a higher incidence of head and neck cancer as well as other types of cancer.[11]

Can Head and Neck Cancer Be Detected Early?

- There are no standard screening tests for head and neck cancer. The sooner a person notices potential symptoms and brings their symptoms to the attention of their doctor, the greater the likelihood of diagnosing cancer at an earlier stage.[5]
- Cancers of the oral cavity are often detected by a dentist. The dentist may see cancer developing on the tongue, gums, cheeks, or the floor of the mouth at the time the patient comes to have their teeth cleaned. Early cancer detection is one advantage of routine dental care.[5]

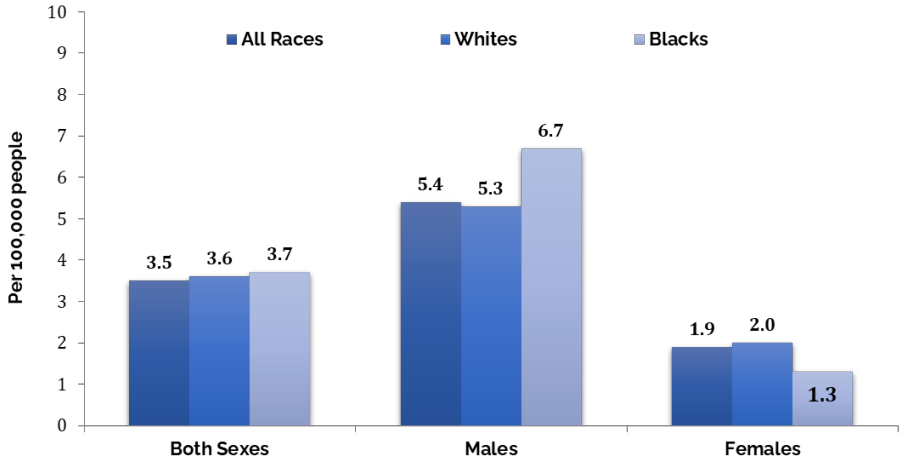
Figure 22. Head and Neck Cancer Incidence (A) and Mortality (death) (B) Rates by Sex and Race*- Indiana, 2016-2020

A. Incidence



*Age-adjusted to the US 2000 Standard Population. Source: Indiana State Cancer Registry

B. Mortality



What Factors Influence Head and Neck Cancer Survival?

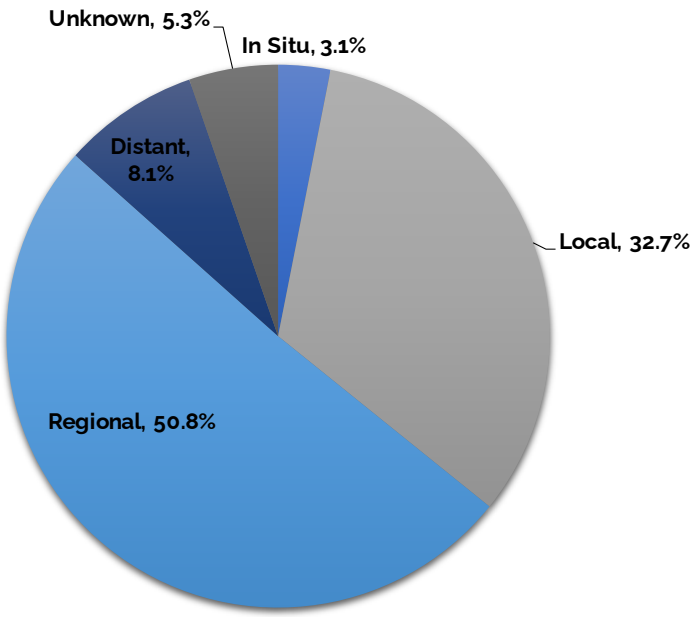
The head and neck each have their own treatment strategy based on the cancer site of origin and the tumor extent. The earlier the stage of diagnosis, the higher the five-year survival rate.

According to the Indiana State Cancer Registry, there were 7,094 patients who were diagnosed in Indiana with cancers of the head and neck between 2016 and 2020, including in situ. Of these, 3.1 percent of cases were in situ, 32.7 percent were local, 50.8 percent were regional, 8.1 percent were distant, and 5.3 percent were of unknown extent at the time of diagnosis. During this time 1,471 patients died from cancers of the head and neck, of which 1,337 (90.9 percent) were white, 120 (8.2 percent) were Black, and 14 (1.0 percent) were of other racial groups. Of this total, 1,055 (71.7 percent) were males and 416 (28.3 percent) were females.[12]

A population-based study from the SEER-Medicare database demonstrated that for men over the age of 65, Black patients had the worst survival. They were more likely to present with an advanced stage, and were less likely to have aggressive treatment. These disparities could potentially be lessened with improved access to healthcare, participation in screening programs, and tobacco cessation.[13] Part of this is because Black men are less likely to visit the dentist although they are twice as likely to experience tooth decay.

Figure 23. Percent of Head and Neck Cancer Cases Diagnosed During Each Stage*- Indiana, 2016-2020

*Includes all in situ and invasive cases. Source: Indiana State Cancer Registry



Early-stage cancers are primarily treated with surgery. More advanced cancers require radiation therapy and chemotherapy, as well. Many patients with head and neck cancer are diagnosed at a stage in which there are a variety of options, so it is best if they are evaluated at a center that can provide a full spectrum of treatment opportunities. Some patients require highly specialized care and may be best served by referral to a high-volume center offering surgical expertise.[14]

Patients with HPV-positive oropharyngeal cancer have a better prognosis than those whose tumors are HPV negative.[14] This has led to the hypothesis that less intensive treatment may be sufficient for these better prognosis patients. Reducing the intensity of chemotherapy or radiation therapy could potentially reduce the long-term toxicities of treatment and thus result in improved quality of life. The DE-ESCALATE and RTOG 1016 studies, unfortunately, resulted in decreased survival for those treated less intensively.[15]

Immunotherapy has emerged in the last few years as an effective form of cancer treatment for some patients. These drugs use the immune system to target cancer cells and have been used effectively alone or in combination with chemotherapy.[16]

New drugs are being developed and patients may be offered the opportunity to participate in clinical trials. Personalized cancer therapy typically involves identifying a gene in the patient's tumor for which there is an existing drug available to treat the cancer. Cancer care can be very expensive, and attention is being given to the financial hardships head and neck cancer patients may experience.[17]

The American Cancer Society has also released guidelines covering a variety of survivorship issues including dry mouth, changes in taste, dental issues, shoulder problems, lymphedema, fatigue, pain, altered body image, speech difficulties, problems swallowing, and a host of other concerns.[18, 19] These interventions should help improve the lives of those who are successfully treated and expect to live for many more years.

Be aware! Take charge!

Common signs and symptoms of head and neck cancer include:

- An area that doesn't heal completely
- Poorly fitting dentures
- Persistent pain in the throat, tongue, ear, or jaw
- Persistent sore throat or hoarseness
- Changes in voice quality or clarity
- Problems swallowing
- Bleeding
- Persistent lump in the neck
- Blocked sinuses or chronic sinus infections that do not respond to treatment

Although each of these symptoms and signs can be caused by things other than cancer, it is important to bring them to the attention of your doctor.

Prevent Head and Neck Cancer

- Be smoke free – Visit QuitNowIndiana.com or call 1-800-Quit-Now for free tobacco dependence treatment resources
- Reduce alcohol intake
- Have routine dental care. Your dentist may discover cancer at an early stage.
- Be aware of the typical symptoms of head and neck cancer. Notify your doctor for an evaluation if any of these occur.
- Adolescents and young adults up to age 45 should consider getting the HPV vaccine to reduce their risk of oropharyngeal cancer

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