

Gender, insurance type tied to HPV infection in laryngeal cancer patients

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The human papillomavirus (HPV) is more likely to be found in tumors of laryngeal cancer patients who are male and those with private health insurance, according to a new study from researchers at Henry Ford Hospital.

The study also reveals that laryngeal [cancer patients](#) with [Medicare](#), who tend to be 65 and older, have a lower prevalence of HPV, suggesting that HPV infection may be closely tied to age and changes in [sexual behavior](#) with younger generations.

"Our study is an important step forward in learning more about HPV trends, and ultimately learning how HPV positive status could impact screening and treatment for laryngeal cancer patients," says study lead author Josena Stephen, M.D., a research scientist investigator in the Department of Otolaryngology-Head & Neck Surgery at Henry Ford.

"This is relevant because HPV positive patients, particularly those with oropharyngeal cancer, have improved survival. For laryngeal cancer this remains to be established."

Results from the study will be presented Wednesday, Sept. 14 in San Francisco at the American Academy of Otolaryngology-Head & Neck Surgery Foundation Annual Meeting. The research was funded by a NIH grant.

In 2010, an estimated 12,700 new cases of laryngeal cancer – cancers

that start in the voice box – were diagnosed, according to the National Cancer Institute. Like other head and neck cancers, risk factors include smoking, alcohol consumption. HPV is a risk factor in some head and neck cancers, such as oropharyngeal cancer.

Prior HPV-related research for head and neck cancer has been focused on oropharyngeal cancer, which includes the base of the tongue, the tonsils, the soft palate (back of the mouth), and the walls of the pharynx (throat).

In those studies, HPV-positive patients with oropharyngeal cancer were shown to have a reduced risk of death and respond better to treatment. With laryngeal cancer, little is known about HPV prevalence and how HPV might impact survival.

The Henry Ford study takes a closer look at HPV prevalence based on race, gender and [insurance](#) type, as well as stage and survival for laryngeal cancer patients.

The study group included information and tissue samples for 79 patients, of which 60 were male and 19 were female. The patients were categorized into two groups: no treatment and treatment (radiation and/or chemotherapy).

Most notably, 41% percent of the study group was African American, and the majority of the study group (95%) had a history of smoking. The study found HPV-positive status for laryngeal cancer to be significantly tied to gender, with 34% of men and 5% of women having HPV.

Insurance type also was associated with HPV status. The majority of private insurance patients were found to have HPV, while the Medicare group had far more HPV-negative patients than HPV-positive patients.

HPV had a lower prevalence in African American patients. It was detected in 16% of African Americans as compared to 33% of Caucasian in the study.

"It's very revealing what's embedded in this study, particularly for African American patients," says co-author Maria J. Worsham, Ph.D., director of research in the Department of Otolaryngology-Head & [Neck Surgery](#) at Henry Ford.

"We know that African Americans are disproportionately diagnosed with late-stage cancer and have worse outcomes than Caucasians. This study really builds on sexual behavioral lifestyle-related evidence that may be contributing to outcomes, especially since there's a significant difference between HPV status in African Americans and Caucasian populations."

The study results also suggest that, similar to oropharyngeal cancer research, [laryngeal cancer](#) patients with HPV have better survival and tend to respond better to chemotherapy and radiation treatments than patients who do not have HPV.

The researchers say, however, that this pattern needs to be further studied to confirm such results, and they plan to do so using a larger group of patients.

Provided by Henry Ford Health System

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