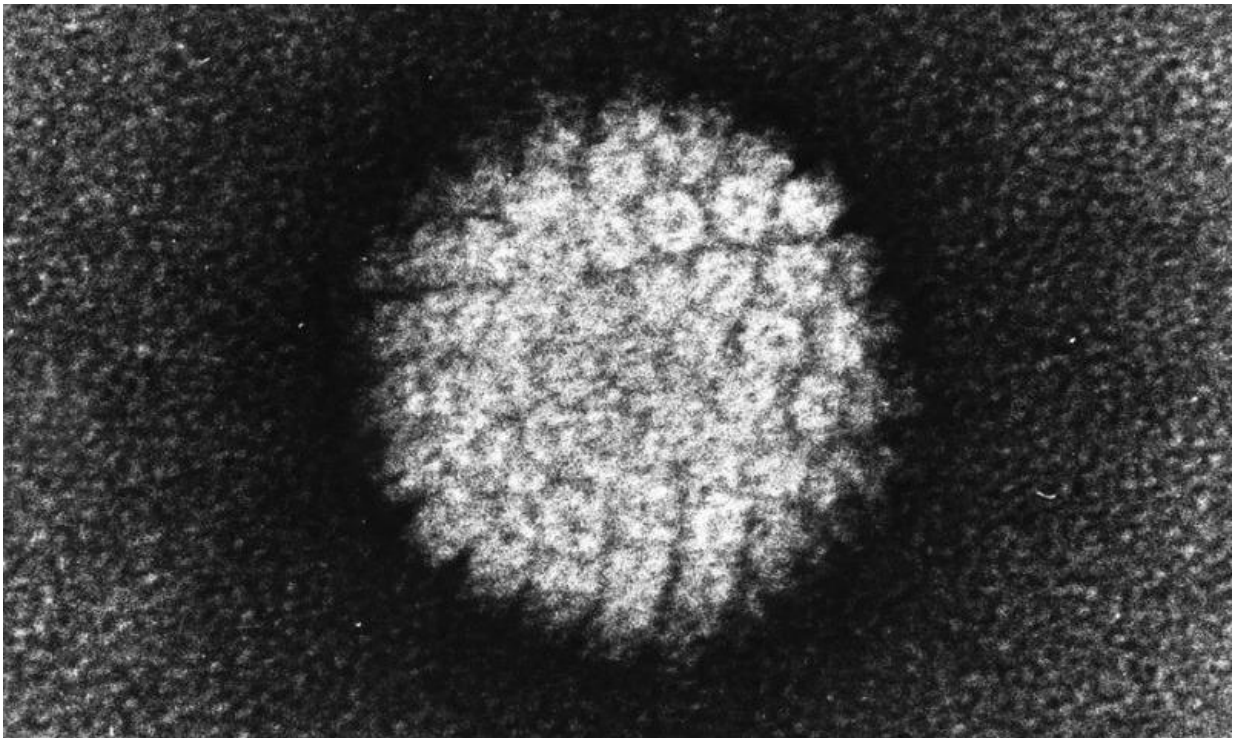


Study examines link between HPV and risk of head and neck cancers

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Electron micrograph of a negatively stained human papilloma virus (HPV) which occurs in human warts. Credit: public domain

Researchers at Albert Einstein College of Medicine have found that when human papillomavirus (HPV)-16 is detected in peoples' mouths, they are 22 times more likely than those without HPV-16 to develop a type of head and neck cancer. The study was published online today in

JAMA Oncology and was led by Ilir Agalliu, M.D., Sc.D., and Robert D. Burk, M.D.

HPV-16 is a well-known cause of head and neck cancers. A rising proportion of these cancers are oropharyngeal cancers (cancers of the middle part of the throat including the soft palate, the base of the tongue and the tonsils). This study is the first to demonstrate conclusively that HPV-16's presence in the [oral cavity](#) precedes the development of oropharyngeal cancers. (HPV-16 is also responsible for the majority of cervical cancers.) Other studies indicate that detection of HPV in the oral cavity is related to sexual behavior.

The Einstein study involved nearly 97,000 people taking part in two large, national prospective studies. At the start of the studies, participants provided mouthwash samples and were cancer-free. A total of 132 cases of head and neck cancer were identified during an average of nearly four years of follow-up. The study also included a comparison group of 396 healthy subjects (controls), i.e., three controls for each case. Mouthwashes samples for head-and-[neck cancer](#) cases and for the controls were analyzed for the presence of several types of oral HPVs.

People with HPV-16 in their mouthwash samples were 22 times more likely to develop oropharyngeal cancer than were study participants with no detectable HPV-16 in their samples, the researchers found. In addition, the researchers found for the first time that the presence of other types of oral HPVs—beta- and gamma-HPVs, which are usually detected in the skin—was also associated with the development of head and neck cancers, indicating a broader role for HPVs in causing these cancers than has been recognized to date. This study shows that using easily collected oral mouthwash samples may help in predicting people's risk for developing head and neck cancers.

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