

Combination HPV diagnostic test for head and neck cancer outperformed other tests

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Researchers have determined that a combination of P16 immunohistochemistry and DNA qPCR to test for viral E6 can accurately determine the oropharyngeal squamous cell carcinoma, a form of head and neck cancer, which derive from HPV16, according to a study published in *Clinical Cancer Research*, a journal of the American Association for Cancer Research.

"This has immediate clinical applications as we consider recruitment to clinical trials designed to de-escalate the intensity of therapy based on HPV status" said lead researcher Andrew Schache, D.D.S., M.D., research fellow and surgeon at the University of Liverpool.

Schache said that the attention surrounding HPV, particularly in the last several years, has given rise to a number of diagnostic tests, but the evaluation of these tests has lagged behind.

For the current study, Schache and colleagues evaluated eight possible combinations of known [diagnostic tests](#) on 108 cases of HPV16 derived oropharyngeal [squamous cell carcinoma](#). They used viral gene expression as the standard marker.

"Viral gene expression has 100 percent specificity and sensitivity, but it requires very high quality tissue that is often not available," said Schache.

After evaluating the tests, they found that a combination of DNA qPCR

and P16 [immunohistochemistry](#) had 97 percent sensitivity, a measure of accurate positive tests, and 94 percent specificity, a measure of accurate negative tests.

Both of these assays are commercially available in proprietary and generic forms, Schache said, so the combination test could be administered.

"Getting the diagnosis right is extremely important because cases like this may receive less aggressive therapy based on a positive test. You do not want to withhold treatment from a more aggressive case," he said.

Provided by American Association for Cancer Research

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