

# First direct evidence of HPV-related tonsillar cancer on the rise in Canada

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This is Dr. David Palma, Scientist at Lawson Health Research Institute (Lawson) and Ontario Institute for Cancer Research, and Dr. Anthony Nichols, also a Scientist at Lawson. Credit: Lawson Health Research Institute

American and European research shows an alarming increase in the rate of tonsillar cancer related to the human papilloma virus (HPV), a sexually transmitted virus. Experts suggest a similar trend has emerged in Canada, but it had yet to be confirmed through scientific analysis. In a new study published in *Current Oncology*, a group of researchers from Lawson Health Research Institute and Western University have

produced evidence confirming this epidemic.

Oropharyngeal [cancer](#) impacts part of the throat, including the tonsils and the base of the tongue. Historically, these types of throat cancers were caused by smoking and alcohol use, but recent studies show that HPV is now a major cause. When an individual contracts HPV, the virus's DNA can infiltrate healthy cells and induce cancer years later.

As sexually-transmitted diseases become increasingly common, American and European data shows the rates of HPV-related tonsillar cancer are also climbing at an alarming rate. To assess the impact in Canada, a team of researchers led by Drs. Anthony Nichols, David Palma, who is also a Clinician-Scientist at the Ontario Institute for Cancer Research, and Marina Salvadori led a retrospective study of [throat cancer](#) patients at London Health Sciences Centre (LHSC).

Looking at three different time periods – 1993-1999, 2000-2005, and 2006-2011 – the study team searched the LHSC [pathology database](#) for patients with tonsillar cancer diagnosed during those time periods. The team then reviewed each patient's chart for information on diagnosis, treatment, and follow-up, and analyzed their biopsy samples to determine whether HPV was present in their DNA.

In total, 160 patient records were identified with sufficient data for analysis. HPV was detected in 57% of cases, most commonly amongst young non-smokers. Results show the incidence of these cancers rose significantly over each time period. Over the same period, treatment generally evolved from radiation to a concurrent mix of chemotherapy and radiation. Survival rates also improved significantly; recurrence free survival increased from 53% to 82%, and 5-year survival rates increased from 37% to 83%.

While these results show positive patient outcomes, they also suggest

serious complications for the available health resources in Canada. Unlike traditional throat cancer patients, those with HPV-related tonsillar cancer are younger, healthier, and more likely to survive their disease. New treatments allow them to live longer, but also expose them to more concentrated levels of toxicity, and make them more reliant on health care resources for a longer period of time. Existing vaccinations can help to prevent this disease, but uptake across the nation has been limited.

"Based on this data, we can anticipate a major impact on the Canadian health care system and the patients it serves," says Dr. Nichols. "We now need to seriously consider strategies to prevent the disease including vaccinations, and to continue to develop better treatments with fewer side effects in order to preserve patient quality of life."

**More information:** [www.current-oncology.com/index...gy/article/view/1375](http://www.current-oncology.com/index...gy/article/view/1375)

Provided by Lawson Health Research Institute

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