

# Rise in Tonsillar Cancer Parallels HPV Positivity

BY NEIL OSTERWEIL  
Contributing Writer

CHICAGO — A twofold to threefold increase in the incidence of tonsillar cancer over several decades was paralleled by a similar rise in the incidence of tumors positive for the human papillomavirus, the results of a Swedish cohort study indicate.

Survival rates among patients with tonsillar cancer also increased, possibly because of the higher proportion of HPV-

positive cancers, which tend to have a much better prognosis than other oral cancers, Dr. Hanna Dahlstrand said at the annual meeting of the American Society of Clinical Oncology.

The reasons for the increase in HPV-positive tumors are not known, she said.

In the United States, the incidence of HPV-related oropharyngeal squamous cell carcinomas has increased since 1973, while the incidence of squamous cell carcinomas at other oral sites has remained constant

or declined, said Dr. Dahlstrand of the department of oncology-pathology at the Karolinska Institute in Stockholm.

HPV DNA has been shown to be present in 40%-75% of oropharyngeal cancers, compared with about 25% of all head and neck cancers. "It is only the high-risk types of HPV that are found, with at least 90% dominance of HPV-16, and the oncogenes on HPV, E6 and E7 are transcribed," she said, "Exposure to HPV-16 precedes by at least 9 years the diag-

nosis, and has been shown to be a strong risk factor for tumor development."

HPV-positive oropharyngeal cancers tend to occur more often among non-smokers and younger patients. Risk factors include multiple sexual partners, younger age at first intercourse, and oral sex. Studies have shown that the presence of HPV positivity is associated with about a 50% reduction in 5-year mortality, she noted.

Dr. Dahlstrand and her colleagues at the Karolinska Institute conducted a nationwide cohort study to see whether there has been an increase in the incidence of tonsillar cancer in Sweden; to determine whether such an increase, if present, could be linked to the proportion of HPV-positive tumors; and to see whether the incidence of HPV-positive tonsillar cancers would have an effect on survival.

They identified a total of 2,165 incident cases of tonsillar squamous cell carcinoma from 1960 through 2003, using the Swedish National Cancer Registry. To determine survival, the investigators used records from the Swedish Causes of Death Register, and checked them against the Swedish Emigration Registry from 1960 to 2001 to ensure that cohort members were not lost to follow-up. They identified a total of 1,800 survivors as of 2003.

The investigators also assessed the incidence of tonsillar cancer from 1970 to 2001 and survival in a Stockholm cohort, and used this cohort to control for treatment, tumor-nodes-metastasis stage, and cause of death. They identified 515 cases in this cohort, and 337 survivors as of 2001.

They were able to obtain 203 biopsy samples and screened them for HPV using polymerase chain reaction testing; they then typed and sequenced the HPV to determine expression of the E6 and E7 oncogenes and expression of HPV-16.

In the nationwide cohort, there was a twofold increase in the incidence of tonsillar cancers, from 1.2/100,000 population to 2.4/100,000, from 1960 to 2003. There was no parallel increase in cancers of the oral cavity, Dr. Dahlstrand reported.

In the Stockholm cohort, tonsillar cancers increased from 1.3/100,000 to 3.6/100,000, or 2.8-fold, from 1970 to 2002, while there was a 2.9-fold increase in the proportion of HPV-positive tonsillar cancers. During the 1970s, 23% of cases were HPV positive, which increased to 28% in the 1980s, 57% in the 1990s, and to 68% into the 21st century.

The mean 5-year relative survival rate among men with tonsillar cancer also increased in Sweden since the 1960s, from 32% to 53% in 1990-2001. In the Stockholm cohort, in a Cox multivariate analysis adjusted for age, gender, stage, and treatment, the investigators found a similar significant increase in relative 5-year survival, with a relative hazard ratio of 0.54 for 1990-2001, compared with 1970-1979. The presence of a lower proportion of stage I and II tumors in the 1990s, compared with the 1970s, suggests that the improvement in survival over the years cannot be explained by earlier diagnosis, Dr. Dahlstrand said.

Dr. Dahlstrand stated that she had no relevant financial disclosures. ■

## IBS patients are seeking help

### IBS impacts patients' lives

From the professional to the personal, IBS patients feel the effects of this disease in nearly every aspect of life. Professionally, they are likely to miss 3 times as many days of work.<sup>1</sup> Personally, they suffer from dysphoria and impaired mood and are more conscious of body image.<sup>2</sup> IBS may also get in the way of physical activity,<sup>2</sup> and for more than half of patients IBS symptoms may interfere with physical relationships.<sup>3</sup>

### These patients are seeking help...

The disease also represents a disproportionate economic impact—not just from absenteeism and lost productivity at work<sup>3</sup>—but from the typical care that includes extensive medical testing and use of multiple medications.<sup>4</sup> In fact, one study found that a typical IBS patient commonly takes 3 to 5 different medications every month for his or her symptoms.<sup>2</sup>

### ...and are not yet satisfied

If a patient has been diagnosed with IBS, it's likely that he or she has tried treating the disease with diet, fiber, exercise, and OTC medications.<sup>2</sup> One study showed that despite these measures more than one-third of IBS patients were dissatisfied with their medical care.<sup>3</sup>

To learn more, please visit:  
[www.constipationlearningchannel.com](http://www.constipationlearningchannel.com)

References: 1. Drossman DA, Camilleri M, Mayer EA, Whitehead WE. *Gastroenterology*. 2002;123:2108-2131.  
2. Paré P, Gray J, Lam S, et al. *Clin Ther*. 2006;28:1726-1735.  
3. Hulisz D. *J Manag Care Pharm*. 2004;10:299-309. 4. Lacy BE, Lee RD. *J Clin Gastroenterol*. 2005;39:S230-S242.

SUCAMPO  
Pharmaceuticals, Inc.

Takeda

©2008 Takeda Pharmaceuticals North America, Inc.

LUB-01748

06/08