

# Oral Cancer and the Human Papilloma Virus: What's the Connection?

By Elizabeth Johnson

Estimates indicate that more than 34,000 Americans will be diagnosed with oral or pharyngeal cancer in 2010 (Squamous cell carcinoma). When oral cancer is found early, there's about an 82% survival rate with treatment. However, it still could cause over 8,000 deaths, as oral cancer is many times not diagnosed until it's too late. In fact, in the early stages the patient may not notice it, as there are few symptoms and frequently no pain.

"About 75% of these cancers are related to alcohol and tobacco use," says Dr. Brett Magnuson, DMD, of Magnuson Dental Design in Kalamazoo. Providing a family-based practice with specialty in cosmetic, implant and reconstructive dentistry, Dr. Magnuson says that up until recently, oral cancer had been a man's disease, about a 6 to 1 ratio (Oral Center Foundation). "But these days, more women are smoking and drinking, so the ratio is more like 2 to 1."

While alcohol and tobacco are responsible for most oral cancers, doctors have noticed an increase in patients with little or no history of smoking or drinking. In fact, 25% of oral cancers occur in people who don't smoke and have no other risk factors.

The current research indicates that the human papilloma virus (HPV) may be changing the numbers, as smoking and drinking promote the invasion of HPV. Over 80 different strains of HPV have been identified, and is one of the most common virus groups in the world to affect the skin and mucosal areas of the body (Mouth Cancer Foundation). Different strains of the virus infect different parts of the body, but HPV 16 and 18 are responsible for about 95% of cervical cancer, and are also responsible for oral cancer, which is transferred through sexual contact.

"The environment of the mouth is similar to the vagina and cervix," Dr. Magnuson says. "Consequently, this allows the virus to bind with the epithelial cells." These cell surfaces include all areas covered by skin and/or mucosa, such as the mouth, throat, tongue, tonsils, vagina, penis, and

anus. Infection occurs when these areas come into contact with a virus, and it's transferred between cells (Mouth Cancer Foundation).

"The majority of HPV are not a problem," Dr. Magnuson says. "The Centers for Disease Control says that about 60% of people in their 20s have some form of HPV, the most common form produce warts. But these can be treated."

According to Dr. Richard Tooker, Kalamazoo County's chief medical officer, the prevalence of oral cancer in the county is pretty low. "From a public health point of view," he says, "it's not something that we routinely track. The only context I've seen recently was that Gardasil (vaccine for girls to protect against cervical cancer and genital warts) was recently approved for boys."

There are four HPV strains that Gardasil targets: HPV 6 and 11 (genital warts) and HPV 16 and 18 (cervical cancer). "The FDA approved the vaccine Gardasil to help prevent genital warts in boys and young men, ages nine to 26. Gardasil already has FDA approval for use in girls and young women ages nine to 26." ([www.webmd.com/sexual-conditions/hpv](http://www.webmd.com/sexual-conditions/hpv))

It's important to note that being HPV positive does not mean you will develop cancer. It's also important to note that oral sex is basically how the two more severe strains of HPV are transmitted. And if oral lesions develop, they should be examined. "A thorough oral, head and neck cancer exam can easily be completed in less than five minutes," Dr. Magnuson says. "The exam primarily consists of a visual and palpation (touch)."

A visual exam checks for both red and white (leukoplakia) lesions. The exam also includes checking lips, inside of the cheek, tongue, and gums, looking and feeling for any kind of mass. "I do a visual exam every time my patients come in. And I'm checking boys and girls at a much younger age, starting at around age 13," he says.

Annually, Dr. Magnuson performs a ViziLite exam on all of his patients, from ages 13 and up. Since

2000, ViziLite has been available as a screening aid using a special light source to identify abnormalities that might be missed under normal lighting. "The patient first rinses with a 1 percent acetic acid solution," says Dr. Magnuson, one of several ViziLite providers in the area. "It's a blue-white light source, which looks like a 'glow stick' and helps us better detect anything suspicious. If something is discovered, it's marked with Toluidine (T-Blue), a blue dye, and documented."

According to Dr. Magnuson, ViziLite helps give dentists a good second look with better lighting conditions for areas in the mouth that are tough to see. "We can diagnose a precancerous lesion at an earlier state, which is a great benefit to the patient," he says. "Oral cancer isn't tough to treat if it's caught early."

If a suspicious area is detected and marked with T-Blue, the patient is rechecked in a few weeks. It's only if the area doesn't clear up that a patient is sent to an oral surgeon for biopsy.

"We end up finding more suspicious areas with ViziLite," Dr. Magnuson says, "but 99% of the time it's benign or precancerous. Our awareness of oral cancer has increased, so we look a little harder, and the ViziLite tool helps us with that detection."

## Are You at Risk?

### Increased risk

- People age 40 and older (95% of all cases)
- 18-39 years of age combined with the following:
  - Tobacco use
  - Chronic alcohol consumption
  - Oral HPV infection

### Highest risk

- People age 65 and older with lifestyle risk factors
- People with history of oral cancer (Source: Zila Pharmaceuticals, Inc. [www.vizilite.com](http://www.vizilite.com))