

# What you need to know about HPV, oral cancer and your dental patients

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*Vibrant, energetic and fitness-conscious, Sandy Wexler, a pediatric nurse who appeared to be in perfect health, was shocked to learn during her routine dental check up that she had a large suspicious lump on the right side of her neck. Sandy had not noticed anything different about her neck until that moment and thought it must be simply a swollen lymph node due to a subclinical infection of some kind. She assumed a course of antibiotics would easily remedy the situation.*

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However, her dentist, Dr. Dorothy Paul, was concerned enough about the soft, movable, non-tender growth to pursue further investigation. Dr. Paul, always vigilant about performing a thorough extra- and intra-oral head and neck examination for every patient at every appointment, was aware that suspicious areas are often assumed to be innocuous. When a dental professional makes the choice to “watch and wait” to see if the growth, lesion, or discoloration goes away, they risk missing an early diagnosis of cancer. Late stage diagnosis of head and neck cancer results in poor prognosis.

Dr. Paul was not willing to let a potentially dangerous growth go unchecked, so she referred Sandy to her internist, who referred her immediately to an otolaryngologist (ENT) for further assessment.

A fine needle aspiration was inconclusive, but after a computerized tomography radiograph (CT scan) followed by a biopsy, she was diagnosed with metastatic Squamous Cell Carcinoma. The subsequent PET scan did not reveal a primary source. Sandy was immediately referred to MD Anderson Cancer Center in Houston. Surgery at MD Anderson revealed the primary source in the oral pharyngeal area and a biopsy illuminated that the Human Papilloma Virus (HPV) caused the tumor.

According to the Oral Cancer Foundation, there are nearly 200 different strains of HPV, most of which are harmless. Out of all of these, nine are known to cause cancers and six others are suspected to cause cancers. In oral and oropharyngeal cancer, HPV 16 is the version most responsible.

In the oral and oropharyngeal environment, HPV manifests itself primarily in the posterior regions, such as the base of the tongue, the back of the throat, the tonsils, the tonsillar crypts and the tonsillar pillars. It is extremely difficult to visualize these areas of the mouth and throat during a routine head and neck cancer screening. Vigilance in the use of fluorescence technology and in pursuit of further evaluation of suspicious growths is critical in order to improve survival rates of those diagnosed with oral cancer.

Sandy underwent six weeks of proton therapy, a form of radiation, and seven weeks of chemotherapy. The treatment for throat cancer is severe and the side effects are extremely painful. The proton therapy caused the skin on Sandy's neck to break down, resulting in painful sores and peeling. She also had tremendous difficulty swallowing, leaving her extremely dehydrated. Sandy lost 25 pounds from her already slim frame and needed frequent hydration treatment.

The radiation therapy that Sandy received damaged her salivary glands, resulting in severe dry mouth, and at risk for dental decay and mouth sores. She tried numerous prescription and over-the-counter saliva substitutes and salivary gland stimulants, with little relief. Sandy's salivary glands were so damaged they are beyond stimulation. Constantly sipping water and daily fluoride use are the only preventive measures she is able to take, and she worries that her teeth will suffer from lack of salivary buffering and protective agents.

Another common side effect of radiation therapy that Sandy experienced was a loss of taste function, leaving her with the sensation that foods tasted either like cardboard or like they have a metallic flavor. The result is that she no longer enjoys eating and eats only to survive. This is a quality of life issue because she finds she has to force herself to eat.

Fatigue is another common side effect that Sandy dealt with. "It's very difficult as a normally energetic, active person to become exhausted by simply walking down the stairs to try and eat something." There is tremendous frustration when a typically vigorous person is suddenly unable to complete normal every day tasks without becoming debilitated.

Some people with laryngeal cancer experience different side effects of radiation therapy, including a worsening of hoarseness and difficulty breathing due to swelling of the larynx.

Chemotherapy can result in numerous side effects, such as nausea and vomiting, loss of appetite, mouth sores, diarrhea, hair loss, an increased chance of infection from a shortage of white blood cells, bleeding or bruising from a shortage of blood platelets, fatigue or shortness of breath from low red blood cell counts.

Certain chemotherapy medications cause nerve damage that can cause numbness and tingling in the extremities and some cause hearing loss. Certain side effects resolve after the therapy is stopped, though some continue long-term, sometimes forever.

In January 2013, Sandy was declared cancer free. She is still living with the effects of the cancer and the cancer treatment, though, and will never have a “normal” life. To this day, she has minimal taste function and negligible salivary gland function, leaving her plagued by profound dry mouth at all times. Sandy will have to have frequent check-ups every few months for the next several years to be sure the cancer doesn’t recur.

Prior to her diagnosis, Sandy never had any symptoms. She credits her dentist’s diligence in performing a comprehensive head and neck abnormality screening for finding her tumor and ultimately saving her life. The exam that Sandy’s dentist performed is the standard of care, and is to be performed for every patient at least once a year. The use of a fluorescence device, such as the OralID, to assist in visualization of oral abnormalities, is not considered the standard of care, but, in this author’s professional opinion, should be. With rates of head and neck cancers continuing to increase as a result of HPV, dental professionals should be using every tool at their disposal to detect early changes in oral mucosa. And while Sandy’s tumor was not detectable intra-orally, many are.

Signs and symptoms of oral cancer that dental professionals look for include leukoplakia (white), erythroplakia (red), and erythroleukoplakia (mixed white and red) lesions. According to the American Academy of Oral Medicine, any white, red or mixed lesion that doesn’t resolve on it’s own in two weeks should be reevaluated and considered for biopsy to obtain a definitive diagnosis.

Other potential signs and symptoms of head and neck cancer include a lump or thickening in the oral soft tissues, soreness or a feeling that something is caught in the throat, difficulty chewing or swallowing, ear pain, difficulty moving the jaw or tongue, hoarseness, numbness of the tongue or other areas of the mouth, a lump in the neck (as in Sandy’s case) or swelling of the jaw that causes dentures to fit poorly or become uncomfortable. If any of these problems persist for more than two weeks, a meticulous clinical examination must be conducted. If a

definitive diagnosis cannot be obtained, immediate referral to a specialist is indicated.

Historically, those at risk for oral cancer have been men 62 years of age and up, with a history of tobacco use and/or excessive alcohol use. Now, however, the face of head and neck cancer has changed. HPV infection is considered a validated risk factor for oral squamous cell carcinoma in both men and women at much younger ages, even in the absence of tobacco use and excessive alcohol consumption.

Given this change, dental professionals must increase their vigilance in searching for signs of cancer with careful intra- and extra-oral examinations. It's critical to be aware that HPV-related oral or oropharyngeal cancers are affecting people of much younger age than traditional tobacco or alcohol related cancers. To minimize the presence of any signs or symptoms simply because the patient is in his or her 20s, 30s or 40s, is imprudent.

A comprehensive review of the patient's health history is critical in exposing potentially suggestive symptoms of HPV-related cancer, such as persistent sore throat, dysphagia (difficulty or discomfort with swallowing), hoarseness, ear pain, enlarged lymph nodes, or unexplained weight loss. These symptoms should be addressed and patients should be referred for medical evaluation and follow up.

Sandy had no awareness of any of the above-mentioned signs or symptoms of HPV infection. She and her husband, Michael, a pediatrician, recall being surprised to learn that her cancer was caused by HPV. However, according to the Centers for Disease Control and Prevention, HPV is so common that most sexually-active men and women will get at least one type of HPV infection at some point in their lives. In most cases, HPV goes away on its own. Most people with HPV are not aware that they are infected and never develop any symptoms or any health problems as a result of HPV. But when it doesn't go away, HPV can cause major health problems, including genital warts, cervical cancer, penile cancer and oropharyngeal cancer.

Sandy and Michael, having both worked in pediatrics for 40 years, strongly believe in vaccinating children against life-threatening diseases. Now having faced a cancer caused by a vaccine preventable disease, they feel more strongly than ever that parents should protect their children. “I wish I had had the chance to have been protected against this disease. You never think it’s going to happen to you, and it’s frightening when it does. I can’t imagine any parent refusing to vaccinate their child from this preventable disease. If they would have seen what I went through, they wouldn’t hesitate to protect their child.”



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Kathryn Gilliam, BA, RDH, FAAOSH, is a regular contributing author to Today’s RDH and many other publications. Kathryn is a proponent of incorporating the latest scientific research on the multiple oral – systemic links into practical clinical protocols. She is a well-recognized speaker, dental practice consultant, and practicing clinician. Kathryn can be reached for comments or questions at [Kathryn@PerioLinks.com](mailto:Kathryn@PerioLinks.com).