

Problem Solvers 46 Diagnosing Oral Cancer-The Oral Cancer Screening  
Synonyms: VelScope, Identify, Carcinoma, Oral Cancer.

Cancer of the head and neck is the sixth most common cancer and it accounts for 643,000 new cases per year.

A survey by the American Dental Association revealed that only 15% of patients reported that they received an oral cancer screening at their routine dental appointment.

Failure to diagnose oral cancer is the number 2 cause of dental malpractice claims. This problem solvers article will help to identify current oral cancer screening techniques.

What are the steps of a proper oral cancer screening?

Reviewing the medical history can reveal risk factors and family history that may give insights into the patients' risks factors for cancer. Smoking, chewing tobacco, human papillomavirus and family history are the greatest risk factors for oral cancer.

Next is the clinical examination. The dentist should examine the head and neck as well as evaluate the patient's voice and eye movements. The patient's voice could present with a hoarseness that may be indicative of a growth in the mouth, throat or surrounding tissues. The dentist will palpate the TMJ joint, the neck muscles and the chain of lymph nodes along the neck muscles. They will palpate your thyroid in the front of your neck and check the glands in the back of your neck.

What is the dentist checking for when they do an oral cancer check?

We are checking for any unusual bumps, lumps, growths, suspicious lesions or anomalies that may require additional evaluation, referral or biopsy.

What are they palpating?

1. Parotid salivary glands to look for bumps, stones or growths.
2. Submental nodes under the chin.
3. Submandibular nodes under the chin.
4. Cervical lymph nodes along the neck.
5. Supraclavicular nodes-these are lymph nodes above the clavicle in the lower neck.
6. Occipital nodes or lymph nodes behind the head.
7. Palpation of the pre-auricular and post auricular nodes-in front and behind the ears.

## 8. Thyroid gland.

Lymph nodes can be pathways for oral cancers to spread, so checking these for lumps or irregularities is important. If a lymph node is soft or moveable it may just indicate the person is fighting an infection. When a lymph node is cancerous it is generally non moveable and hard. So if a lymph node is like a blueberry or pea it is probably a sign of infection. If it is the consistency of a hard stone it may be indicative of cancer and should be evaluated. Generally speaking if something is found in pairs or both sides of the neck and they are the same, they are probably normal. Most cancers will be on one side or the other. That is a generality, however, and any growth warrants evaluation and if needed, treatment or careful monitoring.

The intra-oral examination is next and will include evaluating the checks, lip, tongue, hard and soft palate and gingiva or gums. The tongue will be gently grasped with a gauze and pulled forward so the base of the tongue can be visualized. This is the most common site of oral cancer! The dentist will palpate the floor of the mouth and will look for changes in color texture or surface changes.

Any unusual areas should be wiped to see if they are merely dead skin, bacteria, or a fungus.

Alcohol and tobacco are the two main factors other than family history for evaluating people's risk factors for developing cancer.

Another risk factor is HPV or human papillomavirus. There are 34,000 cases of oral cancer diagnosed each year and HPV is found in up to 50% of them.

What are risk factors for HPV? Can my dentist screen for this?

Human Papilloma virus is a group of more than 150 viruses of which many can be transmitted sexually. Some types of HPV can cause warts or noncancerous growths. Others can cause cancer of the cervix and are considered carcinogenic HPV's.

People that have high risk factors for developing HPV are people that have had multiple sexual partners. The thought that oral sex was "safe" has contributed to an increase in spread of this disease as well. While not everyone with HPV will develop cancer the presence of new salivary screening tests such as OralDNA labs can help screen people to catch this potentially life threatening disease much earlier. Your dentist can perform this screening or you may see your physician.

Your physician may use DNA tests called Pap tests, which can detect cervical cell changes in order to diagnose this disease early. This HPV DNA test looks at cervical cells to identify high- risk forms of HPV that can be identified in their early stages. There are no tests to detect this in men currently.

The best way to prevent this potentially life- threatening virus is to refrain from genital contact with other people who may be infected. This may be problematic as some people are unaware that they are infected. Another option is to have your physician administer one of two approved vaccines. One is called Gardasil and the other is Cerarix. Both are approved by the Food and Drug Administration to prevent HPV infection and they are highly effective.

Are there treatments for HPV infections?

There is not really a cure for HPV but the warts and lesions can be excised with an electrosurgical device or frozen off with cryosurgery.

Are there any new technologies for identifying oral cancers?

There are new technologies such as VELScope and Identafi, in which healthy cells in the mouth show fluorescence, emitting a bright green glow. By contrast, potential areas of concern will show a marked lack of fluorescence, appearing dark when viewed against the healthy tissue. These devices can detect changes in the cells of the mouth, tongue, throat and tonsils that may lead to oral cancer.

A recent study of 44 patients, and comparing results of Velscope against more traditional histology, found that this device can achieve a sensitivity of 98% and specificity of 100% when discriminating normal mucosa from severe dysplasia (carcinoma in situ) or invasive carcinoma.

Can this exam diagnose cancer? Unfortunately all of the screening devices such as brush biopsy, toluidine blue staining, and chemiluminescence are all just screening devices. Oral cancer is very difficult to identify in its early stages. So all screening devices that increase the prevalence of visual and manual exams will help to identify patients that need further screening and evaluation.

Richard B. Winter D.D.S.M.A.G.D.D.I.C.O.I.  
Master Academy of General Dentistry  
Diplomate International Congress of Oral Implantologists  
[WWW.WINTERDENTAL.COM](http://WWW.WINTERDENTAL.COM)