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**HPV and Oral Cancer**

Role of Dentists in Screening for Oral Cancer

Dentists provide critical health care screenings for various types of oral cancers. At biannual visits, dentists may examine patients’ mouths for irregularities and unusual growths. To support optimal health, patients should schedule dental visits at least twice a year. If a growth is suspicious, the dentist will refer the patient for appropriate testing and/or treatment. Cancer is always best treated at its earliest stage – screening for cancer on a regular basis benefits patients functionality and decreases the costs of treating advanced staged cancers.

The American Cancer Society uses the **ACBDE** checklist for signs of melanoma.[[1]](#endnote-1)

* **A is for Asymmetry:** One half of a mole or birthmark does not match the other.
* **B is for Border:**The edges are irregular, ragged, notched, or blurred.
* **C is for Color:**The color is not the same all over and may include different shades of brown or black, or sometimes with patches of pink, red, white, or blue.
* **D is for Diameter:**The spot is larger than 6 millimeters across (about ¼ inch – the size of a pencil eraser), although melanomas can sometimes be smaller than this.
* **E is for Evolving:** The mole is changing in size, shape, or color.

Causes of Oral Cancer

Increased age is considered a risk factor in many types of cancers.[[2]](#endnote-2),[[3]](#endnote-3),[[4]](#endnote-4) More specifically, with regard to oral cancers, risk factors also include male gender, prolonged exposure to ultraviolet light, genetic diseases, tobacco and/or heavy alcohol use, immune system suppression, select disease conditions such as graft vs. host disease, lichen planus, and infection of the human papilloma virus.[[5]](#endnote-5), [[6]](#endnote-6),[[7]](#endnote-7)

Basal and squamous cell carcinoma are the most common neoplasms of the oral cavity and manifest on the lips.[[8]](#endnote-8) Oropharyngeal cancer is a type of malignancy that forms in the tissues at the base of mouth and throat to include the hard palate, soft palate uvula, tonsils, and tongue.[[9]](#endnote-9)

HPV

Human papilloma virus (HPV) is a common virus affecting nearly 80 million people.[[10]](#endnote-10) There are over 150 types of HPV with 40 different varieties that can infect the genital tract alone.[[11]](#endnote-11) Most HPV infections resolve within a few years but some can cause a variety of cancers.[[12]](#endnote-12)

HPV Transmission

HPV is acquired from skin-to-skin contact, mostly through intimate contact, when interacting with an HPV infected area.[[13]](#endnote-13) Some infections are spread when an infection is not visible but is still present without causing any symptoms.[[14]](#endnote-14) An HPV infection may manifest in months or years after the initial exposure.[[15]](#endnote-15)

Prevalence

Approximately 14 million people become infected with HPV each year according to the Centers for Disease Control and Prevention (CDC).[[16]](#endnote-16) Most sexually active men and women will become infected with at least one type of HPV infection during their lives.[[17]](#endnote-17) HPV is the most common sexually transmitted disease in the U.S.[[18]](#endnote-18) HPV infections are more likely in people who have had multiple sex partners.[[19]](#endnote-19)

Testing & Treatment

Women can be tested for the presence of the HPV by a cervical test at the same time as a Pap test is administered.[[20]](#endnote-20) An FDA approved HPV test is only available for women; no FDA approved HPV test currently exists for men.[[21]](#endnote-21)

No known medical products are available to eradicate HPV infections. If an infection is persistent and produces lesions, the current treatment is surgical excision.[[22]](#endnote-22)

Clinical Studies

In 2005, Kreimer et. al. reported that HPV deoxyribonucleic acid (DNA) was detected in almost 36% of oropharyngeal cancers with HPV type 16 accounting for 87% of the HPV positive cases.[[23]](#endnote-23) Studies have not been conducted to determine if HPV vaccines can prevent oropharyngeal cancers. As of 2018, clinical studies have been conducted on three FDA approved vaccines in order to provide greater protection from acquiring HPV infections.[[24]](#endnote-24)

Prevention

The CDC recommends that girls and boys aged 11 or 12 receive two doses of HPV vaccine at least six months apart, to protect against HPV infection.[[25]](#endnote-25) The CDC further recommends a 3- dose schedule for boys and girls starting the HPV vaccination series on or after their 15th birthday.[[26]](#endnote-26)

More research is needed to provide for greater options in HPV testing and treatment. Additionally, since HPV vaccinations raise the subject of children’s sexuality years before most of them are sexually active, many adults find the HPV vaccination issue to be an uncomfortable one to discuss. Public communication efforts in the U.S. and other countries have not widely promoted the benefits of HPV vaccinations or the need to prevent HPV infections.[[27]](#endnote-27)

FDA Considerations

Manufacturers of drugs, devices, and biologics seek clearance for marketing by the U.S. Food and Drug Administration (FDA). Medical products are approved and cleared based upon the preponderance of evidence supporting a determination that the risks outweigh the benefits. The FDA continually assesses the outcomes of products and monitors reports of adverse events to maintain a favorable benefit vs. risk determination. If adverse events occur from medical products, health care professionals and the public should provide the FDA with information to assess the benefit/risk ratio of that particular product. Adverse events from medical products can be submitted to [MedWatch](https://www.accessdata.fda.gov/scripts/medwatch/index.cfm?action=reporting.home) or if from a vaccine, the [vaccine injury form](https://vaers.hhs.gov/esub/index.jsp).

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