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Learning Outcomes:

To understand incidence and prevalence of oral/oropharyngeal cancer in Canada

To recognize the critical components of the screening examination and the life-saving symptoms

To identify the dental professional's role in potentially life-saving outcomes

References:

All sites accessed August 2022

Canadian Cancer Statistics 2021.

<https://cancer.ca/en/research/cancer-statistics/canadian-cancer-statistics>

<https://www.cdc.gov/cancer/hpv/statistics/>

Life Interrupted: Dr. Dua's Survival Guide. Available online at www.amazon.ca

Dr. Parul Dua Makkar contact info;

parul_dua@yahoo.com

Lu DJ, Luu M, Mita A, et al. Human papillomavirus-associated oropharyngeal cancer among patients aged 70 and older: Dramatically increased prevalence and clinical implications. *European Journal of Cancer*. Volume 103, 2018, p.195-204.

Public Health Agency of Canada. Sexual Health and Sexually Transmitted Infections: Human Papillomavirus (HPV). Ottawa (ON): PHAC; 2020

www.cancer.ca/statistics

Chaturvedi AK, Engels EA, Pfeiffer RM, et al. Human papillomavirus and rising oropharyngeal cancer incidence in the United States. *J Clin Oncol*. 2011 Nov 10;29(32):4294-301.

<https://oralcancerfoundation.org/understanding/hpv/hpv-oral-cancer-facts/>

Office of the Chief Dental Officer of Canada. Human papillomavirus and oral health. *Can Commun Dis Rep* 2020;46(11/12):380-3.

Nath S, Ferreira J, McVicar A, et al. Rise in oral cancer risk factors associated with the COVID-19 pandemic mandates a more diligent approach to oral cancer screening and treatment. *Journal of the American Dental Association*. Mar 2022.

Report on the impact of the COVID-19 pandemic on smoking cessation. North American Quitline Consortium.

https://cdn.ymaws.com/www.naquitline.org/resource/resmgr/reports-naqc/report_impact_of_covid-19_p.pdf

Oral and Oropharyngeal Cancer Screening: *What's Changed? What's New?*

Incidence and Prevalence of Oral/Oropharyngeal Cancer in Canada

Percent Distribution of Projected New Cancer Cases*, by Sex, Canada, 2021

*A head and neck cancer grouping has been added to the 2021 publication. The new grouping includes the oral cavity, pharynx and laryngeal cancers, as well as nasal cavity cancers. Thyroid cancer continues to be reported separately.

7,400 new cases were projected for 2021

6th leading cancer site for males in Canada

The profile and demographic of 'typical' oral/oropharyngeal cancers in North America is changing

The reduction in smoking has resulted in LOWER incidence of oral cavity cancer

The widespread prevalence of HPV has resulted in SIGNIFICANT RISE in HPV-related oropharyngeal cancers (posterior/base of tongue, tonsils and soft palate)

4 in 5 new HPV oropharyngeal cancers are in males aged 35 – 55 years; 2nd cohort in males aged 70+

How Common is HPV in Canada?

HPV is so common that nearly all sexually active men and women get the virus at some point in their lives.

The majority of Canadians will clear the infection, however for those who have a persistent infection with a high-risk strain, the risk of cancer development is real.

The incidence of HPV-related oropharyngeal cancers (OPC) has been on the rise since the mid-1990's, and in 2012, surpassed the number of cervical cancers.

What's New? The Impact of COVID on Oral/Oropharyngeal Cancer

There's been a dramatic increase in the risk for oral/oropharyngeal cancer due to the COVID-19 pandemic

Interruptions in dental care; practice closures, restricted access, hesitancy of patients to return to practice environment

Changes in lifestyle risk factors

- Increased alcohol consumption
- Anxiety, boredom and irregular routines have led to increased use of tobacco coupled with lowest smoking cessation rates since 2007

- Poor diet and weight gain

Poor oral hygiene and decreased toothbrushing frequency

- Wearing of masks have eliminated the concern of halitosis and oral hygiene

A call to action for a more diligent, concerted effort towards oral cancer screening and treatment

Notes:

Office of the Chief Dental Officer of Canada

"Oral health professionals can play a key role in preventing HPV infection and HPV-related oropharyngeal cancers by raising awareness, educating and offering counselling to their clients, and promoting evidence-based preventive and diagnostic interventions."

The Critical Components of the Screening Examination and the Life-Saving Symptoms

Integrating Effective Extraoral/Intraoral Cancer Screening into Practice

Allocate reasonable amount of time to perform an annual screening

- Attention to high-risk anatomical areas both extraoral/intraoral
- Systematic screening protocol

Elevate awareness of risk factors and prevention strategies

- Educational materials available both in practice and on website

Documentation of findings made easy

- Clinical resource to guide documentation categories and descriptive terminology

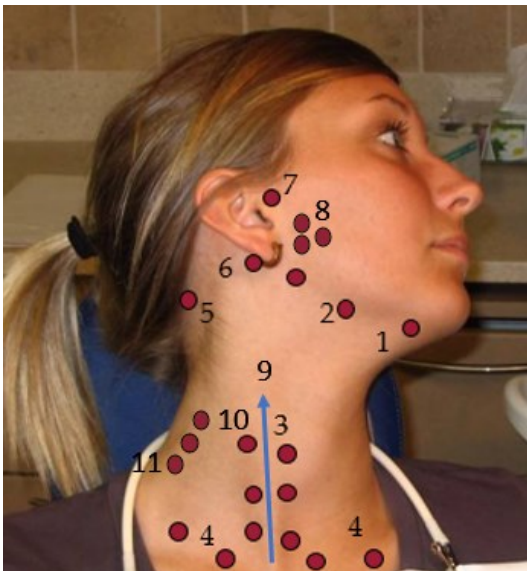
When to refer

- Any abnormal finding that persists more than 14 days always should be further investigated

Starting with the client Interview...ask the right questions!

Systematic Examination of Lymph Nodes and Extraoral Landmarks

1. Submental
2. Submandibular
3. Anterior cervical chain
4. Supraclavicular
5. Occipital
6. Posterior auricular
7. Anterior auricular
8. Parotid
9. Sternocleidomastoid muscle
10. Posterior superficial cervical chain
11. Posterior cervical spinal nerve chain



References

Office of the Chief Dental Officer of Canada. Human papillomavirus and oral health. Can Commun Dis Rep 2020;46(11/12):380–3.

<https://oralcancerfoundation.org/understanding/hpv/hpv-oral-cancer-facts/>

<https://www.dentistryiq.com/dental-hygiene/article/14176803/are-dental-hygienists-asking-patients-the-right-questions-to-prevent-oral-cancer>

Resources

Medical History Update Form

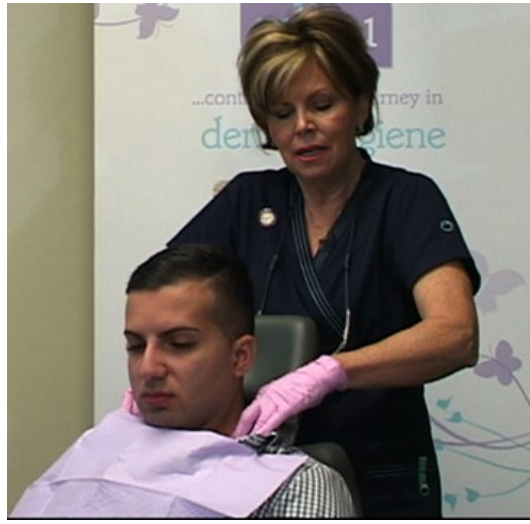
Documentation Glossary of Descriptive Terms

CDHA EO/IO Findings Document

All available at the following link for download;

<https://jo-annejonas.com/articles/103-30-days-30-resources>

Notes:



Clinical Consideration: Supraclavicular Nodes

Among this group of lymph nodes, supraclavicular nodes have the greatest potential to likely be malignant.

An enlargement that persists more than 14 days should always be investigated; a hard, fixed node should be referred

Prevalence in malignancy possess a rate of 54 – 84% according to biopsy series reports

High Risk Intraoral Anatomical Areas for HPV and Non-HPV Oral/Oropharyngeal Cancers

7 Step Intraoral Examination:

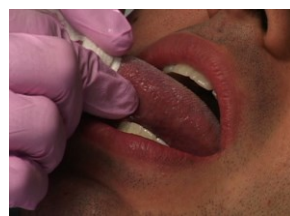
1. Lips
2. Labial mucosa
3. Buccal mucosa
4. Gingival tissues
5. **Tongue**
6. **Floor of mouth**
7. **Oropharyngeal and Palatal Tissues**

Step 5: Tongue

A. Dorsum



B: Lateral Borders



Notes:

C. Ventral Surface



Visual observation and tactile examination
 High risk anatomical area for HPV and non-HPV related oral cancer
 Examine for unrestricted movement, swelling or fixed mass, ulceration, coating or variations in size, colour or texture

Step 6: Floor of the Mouth

Particularly vulnerable area
 Inspect floor of mouth for any changes in;
Colour, Texture, Swelling or Surface abnormalities
 Use bimanual palpation; compare technique to palpation intraoral alone
 Bimanual palpation is the only way to detect an area of induration or swelling



Oropharynx, Palatal Tissues and Tonsillar Area

- Examine the entire area of the oropharynx including the tonsil region, uvula, tonsillar pillars and palatine tonsils for presence, color, size or any noted abnormalities
- Depress the tongue towards the floor of the mouth using either a tongue blade or the back of the mouth mirror
- Instruct the client to take a deep breath and hold while depressing the tongue preferably with a tongue depressor; this enables the clinician improved visual acuity



Recognizing the Subtle and Life-Saving Symptoms

Continuous sore throat; persistent infections
 Pain when swallowing or difficulty swallowing
 Unilateral ear pain; ringing in the ears or trouble hearing

References:

Watch the Oral Cancer Examination Video

YouTube Link:

<https://www.youtube.com/watch?v=q9kPdQMyU40&t=17s>

Notes:

- Pain when chewing
- Non-healing oral lesions
- Bleeding in the mouth or throat
- Hoarseness
- A lump in the throat or the feeling that something is stuck
- Continual lymphadenopathy
- Unexplained weight loss
- Trouble breathing, speaking, slurred speech
- Tongue that tracks to 1 side when stuck out
- Asymmetry in tonsillar area
- Persistent neck masses despite antibiotic therapy

The Dental Professional's Role in Earliest Possible Discovery

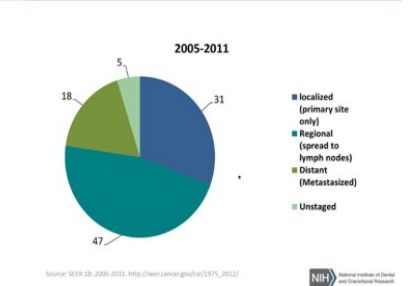
Talking Ethics: Oral and Oropharyngeal Cancer Screening is Not a Choice

Oral and oropharyngeal cancer is a life-threatening disease; referral is mandatory of any suspicious or persistent abnormality
 Complaints of pain, numbness and tingling may be related to cranial nerve involvement with an undiagnosed lesion; referral to an oral or maxillofacial surgeon for additional examination/imaging is appropriate

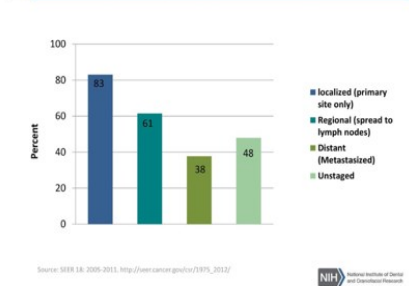
Remember the 'cost' of delayed diagnosis;

- Decreased survival rate
- Significant impact on curative therapy
- Diminished quality of life for survivors
- Disfigurement
- Ongoing threat of recurrence

Percent of cases by stage at Diagnosis for oral and pharyngeal cancer: United States



5-Year relative survival by stage at Diagnosis for oral and pharyngeal cancer: United States



References:

- https://files.cdha.ca/profession/resources/talkofEthics/Talking_Ethics_%20fallwinter%202021.pdf
- <https://www.cdc.gov/media/releases/2019/p0822-cancer-prevented-vaccine.html>
- <https://www.dentistrytoday.com/dental-professionals-should-remember-the-hpv-vaccine-too/>
- <https://oralcancerfoundation.org/understanding/hpv/hpv-oral-cancer-facts>
- Tiwari L, Kujan O, Farah CS. Optical fluorescence imaging in oral cancer and potentially malignant disorders: A systematic review. Oral Dis. 2019;00:1–20.
- Laronde et al: Influence of fluorescence on screening decisions for oral mucosal lesions in community dental practices. J Oral Pathol Med 2013.
- Truelove E et al: Narrow band (light) imaging of oral mucosa in routine dental patients. Part I: Assessment of value in detection of mucosal changes. Gen Dent. 2010 Jul-Aug; 281.
- Additional clinical study listing:**
- <https://velscope.com/velscope/education/clinical-studies/>

Best Practices for Earliest Discovery

Recognize the etiologic pathways related to both oral and oropharyngeal cancer
 Magnification (loupes) and illumination (dedicated light source) are critical component enabling best possible opportunity to assess visual changes
 Employment of adjunctive screening devices adds another layer of assessment capability to see beyond white light examination or the naked eye may reveal

- Majority of cellular changes start beneath the surface at the basement membrane
- More than 2/3's of oral cancers are discovered in later stages
 Most of all...perform opportunistic on every adult on an annual basis
 Educate your clients on the HPV vaccine...the anti-cancer vaccine!

Notes:

References:

<https://www.dentistrytoday.com/dental-professionals-should-remember-the-hpv-vaccine-too/>

<https://www.bccrcdc.org/wp-content/uploads/2019/05/OPC-AAP-Handouts.pdf>

www.hpvandme.org

Latini G, DE Felice C, Barducci A, et al. Oral mucosal color changes as a clinical biomarker for cancer detection. *Eur J Cancer Prev* 2012 Jul;21(4):360-6. Doi: 10.1097/CEJ.0b013e328350de51

Additional clinical study listing;

<https://velscope.com/velscope/education/clinical-studies/>

Health Canada Approves GARDASIL®9 (Human Papillomavirus 9-valent Vaccine, Recombinant) for the Prevention of Oropharyngeal and Other Head and Neck Cancers



NEWS PROVIDED BY
 Merck Canada Inc. →
 Apr 11, 2022, 07:45 ET

SHARE THIS ARTICLE

GARDASIL®9 is the first vaccine in Canada approved for the prevention of HPV-Related Oropharyngeal and other Head and Neck Cancers caused by HPV types 16, 18, 31, 33, 45, 52, and 58

HPV vaccination can prevent about **92%** of HPV-attributable cancers in the future

Technology Platform of Direct Fluorescence Visualization

Pre-cancerous lesions typically start below the surface of the tissue, at the basement membrane, and can remain unseen until they reach the outer layer.

It is critical that discovery and intervention occur during the earliest stages of dysplastic progression before it has developed and expanded beyond the basement membrane.

A proprietary wavelength that can penetrate beneath the surface to the basement membrane is used. In normal healthy tissue, the excitation from the light will cause an apple-green glow in real time feedback. As abnormal cell differentiation begins to occur, the collagen cross links begin to deteriorate, increased vascularity occurs, and enzymes associated with normal metabolic activity significantly diminish. The tissue is unable to absorb and reflect the light. Instead of an apple-green glow, a dark, very well demarcated border appears that is in stark contrast to the surrounding tissue appearance.

Management and Referral Pathway

Step 1

Complete medical/dental history (objective/subjective interview) and review of risk factors.

Step 2

Perform a visual and tactile extraoral and intraoral examination. Use of adjunctive screening devices/tool if available and photography at this time.

Step 3

Evaluate and document clinical findings.

Step 4A

Determine risk of lesion;
 Low risk (Ex. Aphthous ulcer). Client instructed to re-appoint if not resolved in 7-10 days

Resources:

Share the 'Check Your Mouth' website with your clients and enroll them in monthly screening at home.

www.checkyourmouth.org

Postcards, brochures and materials for your dental practice available through the Oral Cancer Foundation.

www.ocfstore.org

Oral Cancer Support Systems:

Oral Cancer Foundation

www.oralcancer.org

www.sideeffectssupport.com

EO/IO Cancer Screening VIDEO

<https://www.youtube.com/watch?v=q9kPdQMMyU40&t=213>

s (YouTube video)

Team Maureen Dental Tool Kit

<https://www.teammaureen.org/about/materials/c/680>

Product Listing

VELscope - The World's #1 Adjunctive Examination Device

www.velscope.com

Contact: wayne.rees@velscope.com



Orascope Loupes/headlights

<https://www.orascope.com/en-us/request-your-complimentary-demo>



Step 4B

Suspicious lesion

Identified risk factors, client awareness and known etiology; remove causative factor and re-appoint in 14 days to verify resolution

Identified/non-identified risk factors, no known etiology, lack of client awareness; refer for biopsy if lesion is highly suspect or re-appoint to re-evaluate in 14 days

Step 5

a. Abnormal finding has resolved

b. Lesion has not resolved. Referral for further investigation.

Options may include oral medicine specialist, oral/maxillofacial surgeon, periodontist, ENT.

Step 6

Client education, appropriate recare interval, chairside and self-care protocols if undergoing treatment for a malignant lesion.

Evaluate Your Current Practices

- Are you performing a complete head and neck examination including an oral cancer screening at least 1x/year on all adult clients?
- Does your clinical team use magnification (loupes) and a light source?
- Are you using any adjunctive screening techniques or devices?
- Are your clients aware of the fast growing sexually transmitted oral cancer profile?
- Do you have any printed material on the new profile for oral cancer?
- Does your medical history and updates include any questions regarding presence of subtle symptoms that may be related to HPV profile?
- Is there updated information on the link between HPV and oral cancer on your website?
- Are your clients aware of the HPV vaccine and its impact on prevention of head and neck cancers?
- Are you enrolling your clients in self-examination?

thank you

Thank you to LED Dental Inc., and to the Canadian Dental Hygienists Association for the use of the photographs used in this presentation. A special thank you to sponsors, VELscope and Orascope, for their commitment to improving outcomes and earliest possible discovery of oral and oropharyngeal cancer.

If I may assist you with any further information regarding today's presentation, please don't hesitate to contact me at jjones@jo-annejones.com Thank you for joining me in the quest for earlier discovery of oral and oropharyngeal cancer!

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