The Role of the Dentist I – Oral Cancer Practice Guidelines

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Screening

- The application of a test or tests to people who are asymptomatic for the disease in question in order to sort out those who probably have the disease from those who probably do not.

  Examples: Blood pressure, Pap, mammography

- A screening test is not intended to be diagnostic.

- The purpose of screening is to interrupt the natural history of a disease at its asymptomatic stage when it is treatable and progression can be halted.
Screening Works

- Randomized Lung Screening CT Screening Trial: 20% decrease in Cancer Mortality.

- Randomized Flexible Sigmoidoscopy Screening: 26% decrease in Cancer Mortality.

- “Oral cancer screening” is not a stand alone test. It is part of the comprehensive visual and tactile exam for any pathologies of the oral and maxillofacial region.
Identification and Management of High-Risk Patients

Screening: clinical, histologic, molecular

Low-risk cohort

Observation

High-risk cohort

Intervention

Risk reduction

9 : 1
Challenges of Oral Cancer Screening

- ~10% of dental patients have some type of oral mucosal abnormality (Bouquot, JADA, 1985).

- The vast majority of these lesions are benign.

- Clinical inspection cannot always differentiate precancerous and cancerous lesions from common benign lesions.

- Detecting those that are precancerous and cancerous is the key to improving survival of oral cancer patients.
What is Early Detection?
“I didn’t see him – I wasn’t looking for him”
Let’s Play a Game of Heads and Tails!

“If you don’t play, the ADA/MD Anderson have agreed that you don’t get CE credit for the lecture!”
Current Screening ADJUNCTS

- **Cytology**: Brush Test, ClearCyte, ClearPrep OC, CytID
- **Tissue Reflectance**: ViziLite Plus, MicroLux DL
- **Tissue Autofluorescence**: VELscope, Oral ID, Sapphire Plus
- **Reflectance and Autofluorescence**: Identafi
- **Salivary Diagnostics**: OraRisk HPV, Advanced Labs Oral Cancer Saliva Test, SaliMark OSCC, ONCAAlert, MOP Oral Cancer Test, OraGenomics
- Many of these devices cleared under the FDA 510K paradigm
- **Will this test/device help me to determine the best clinical course of action for my patient?**
Adjuncts in the Context of Triage

- Patient undergoes conventional visual and tactile examination
- Adjuncts used to evaluate the lesion clinically and triage patient
  - Positive result: Higher probability of having a potentially malignant disorder
    - Biopsy and histopathological assessment performed to provide definitive diagnosis
      - Positive diagnosis
      - Negative diagnosis
  - Negative result: Lower probability of having a potentially malignant disorder
    - Follow up to confirm the negative result

Lingen, et al, JADA, 2017
“Dammit Jim, I’m a fictional character from the 23rd Century Not a REAL clinician with a VALIDATED hand held device!”
Evidence-based clinical practice guideline for the evaluation of potentially malignant disorders in the oral cavity

A report of the American Dental Association

ABSTRACT

The American Cancer Society estimates that there will be 46,670 new cancer cases in the oral cavity and oropharynx in 2017, with 9,700 deaths from this disease. More than 80% of these malignancies will be squamous cell carcinomas in the oral cavity (oral squamous cell carcinomas [OSCCs]) and oropharynx (oropharynx squamous cell carcinomas [OPSCCs]). For OSCC specifically, 32,690 new cases and 6,660 deaths are estimated. Various factors increase a person’s risk of developing OSCC, including increasing age, tobacco use, excessive alcohol use, and human papillomavirus (HPV) infection.

Background. An expert panel convened by the American Dental Association (ADA) Council on Scientific Affairs and the Center for Evidence-Based Dentistry conducted a systematic review and formulated clinical recommendations to inform primary care clinicians about the potential use of adjuncts as triage tools for the evaluation of lesions, including potentially malignant disorders (PMDs), in the oral cavity.

Types of Studies Reviewed. This is an update of the ADA’s 2010 recommendations on the early diagnosis of PMDs and oral squamous cell carcinoma. The authors conducted a systematic search of the literature in MEDLINE and Embase via Ovid and the Cochrane Central Register of Controlled Trials to identify randomized controlled trials and diagnostic test accuracy studies. The authors used the Grading of Recommendations Assessment, Development and Evaluation approach to assess the certainty in the evidence and to move from the evidence to the decisions.

Results. The panel formulated 1 good practice statement and 6 clinical recommendations that concluded that no available adjuncts demonstrated sufficient diagnostic test accuracy to support their routine use as triage tools during the evaluation of lesions in the oral cavity. For patients seeking care for suggestive lesions, immediate performance of a biopsy or referral to a specialist remain the single most important recommendations for clinical practice. In exceptional cases, when patients decline a biopsy or live in rural areas with limited access to care, the panel suggested that cytologic testing may be used to initiate the diagnostic process until a biopsy can be performed (conditional recommendation, low-quality evidence).

Conclusions and Practical Implications. The authors urge clinicians to remain alert and take diligent action when they identify a PMD. The authors emphasize the need for counseling because patients may delay diagnosis because of anxiety and denial.

Keywords. American Dental Association; oral squamous cell carcinoma; potentially malignant disorders; clinical recommendations; diagnostic test accuracy.

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Clinical Pathway for the Evaluation of Potentially Malignant Disorders in the Oral Cavity

Clinicians* should obtain or update a patient history† and perform an intraoral and extraoral conventional visual and tactile examination in all adult patients. If during initial, routine, or emergency examinations, a patient has

A. No clinically evident lesion or symptoms

B. A clinically evident, seemingly innocuous lesion (not suspected to be malignant)

C. A clinically evident, suspicious lesion (suspected to be either a PMD or malignant disorder)

Periodically follow up with patient to determine the need for further evaluation.

Lesion resolves (either spontaneously or after treatment).

No further action is necessary at this time.

Lesion persists or progresses or clinical diagnosis of PMD§ cannot be ruled out.

Perform a biopsy of lesion or provide immediate referral to a specialist.†

Should a patient decline a biopsy or referral

Use cytologic adjunct to triage patient and provide additional lesion assessment.¶

Positive or atypical test result

Negative test result

Definitive diagnosis of PMD or malignancy

Definitive diagnosis of no malignancy

Lingen, et al, JADA, 2017
Potential Schema of Early Detection and Prevention of SCC

Salivary Screen → Visual Screening Aid

Molecular Biomarkers → Risk Reduction/Prevention
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