Detecting Oral Cancer

A guide for health care professionals

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
National Institute of Dental and Craniofacial Research

Presented by:
Lynne M. Moseley, D.D.S.
Director: Oral Oncology
Karmanos Cancer Institute

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Introduction

- In 2008, the ACS estimated that over 1.4 million new cancer cases would be diagnosed in the United States.
- Further estimated that over 500,000 were expected to die which equals to more than 1500 /day.
- Overall, cancer is the leading cause of death in women age 40-79 and among men from age 60-79.

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- The incidence of cancer and the mortality rates vary significantly among racial and ethnic groups

For all cancer sites combined:

African American men have a 25% higher cancer incidence and 43% mortality rate compared to white men

African American women have lower incidence rates than do white women, but have 20% higher mortality rate.

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- Cancer is characterized by the uncontrolled growth and spread of abnormal cells
- Extrinsic and Intrinsic factors
- Extrinsic: tobacco, alcohol, chemicals, solar and ionizing radiation, infectious microorganisms, environmental pollutants and medications
- Intrinsic: inherited mutations, hormones and immune conditions

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Cancer Treatment

- Surgery, chemotherapy, radiation therapy, hormones and immunotherapy
- Surgery is most common for primary tumors and may be curative
- When tumor metastasizes, RT and chemotherapy are necessary for definitive care

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Incidence and Survival of Oral or Pharyngeal Cancer

- 30,000 new cases diagnosed yearly
- 8,000 deaths each year
- 5 year survival rate: 50%

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Early Detection Saves Lives

- 5-year survival for localized disease is 76%
- 5-year survival for metastatic disease is 19%

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Early Detection is Often Possible

- Tissue changes in the mouth that may signal cancer can often be seen and felt easily

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Warning Signs

- Leukoplakia
- Erythroplakia

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Other Possible Warning Signs

- Lump or thickening of oral soft tissue
- Soreness or "lump" in throat
- Difficulty chewing or swallowing
- Ear pain
- Difficulty moving jaw or tongue
- Hoarseness
- Numbness of tongue or mouth
- Swelling of the jaw

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Review of Risk Factors

- Tobacco use
- Alcohol use
- Exposure to sunlight
- Age
- Gender
- Race

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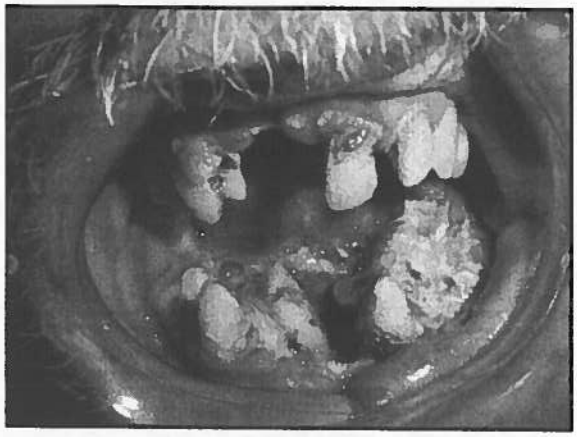

Examination Overview

- Head and neck exam should be a routine part of dental and medical check-ups.
- Take a history of alcohol and tobacco use.
- Follow up on suspicious signs.

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Tools and Time

- Proper lighting
- Dental mouth mirror
- Gauze squares
- Gloves
- 5 minutes

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Extraoral Examination

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Perioral and Intraoral Soft Tissue Examination: Lips

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Perioral and Intraoral Soft Tissue Examination: Labial Mucosa

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Perioral and Intraoral Soft Tissue Examination: Labial Mucosa

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Perioral and Intraoral Soft Tissue Examination: Buccal Mucosa

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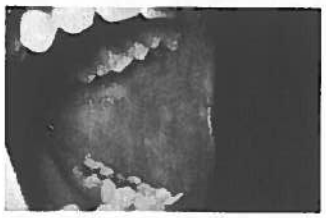
Perioral and Intraoral Soft Tissue Examination: Buccal Mucosa



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Perioral and Intraoral Soft Tissue Examination: Gingiva

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Perioral and Intraoral Soft Tissue Examination: Dorsum of the Tongue

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Perioral and Intraoral Soft Tissue Examination: Left Margin of the Tongue

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Perioral and Intraoral Soft Tissue Examination: Right Margin of the Tongue

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Perioral and Intraoral Soft Tissue Examination: Ventral Surface of the Tongue

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Perioral and Intraoral Soft Tissue Examination: Floor of the Mouth

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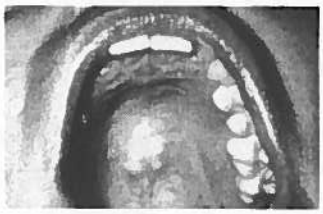
Perioral and Intraoral Soft Tissue Examination: Hard Palate



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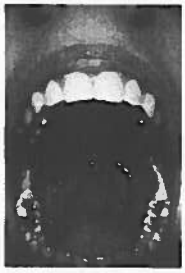
Perioral and Intraoral Soft Tissue Examination: Oropharynx



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Perioral and Intraoral Soft Tissue Examination

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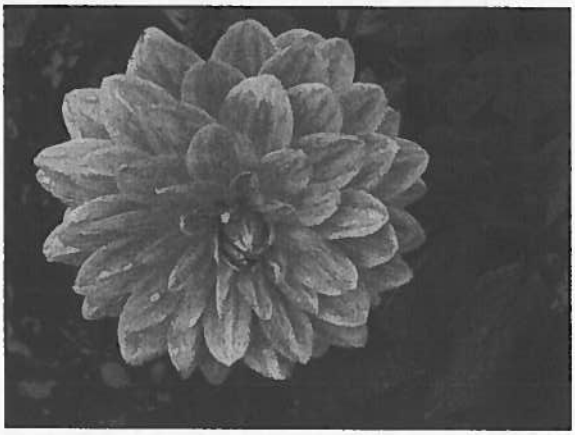

Oral Lesions Suspicious for Oral Cancer

- Homogenous leukoplakia
- Leukoplakia with early squamous cell carcinoma
- Nodular leukoplakia with severe epithelial dysplasia
- Erythroleukoplakia with candida infection

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Homogenous Leukoplakia

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Leukoplakia with early squamous cell carcinoma

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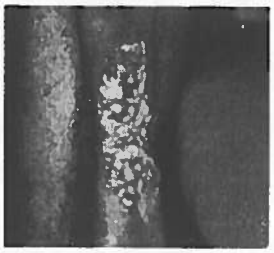
Nodular leukoplakia with severe epithelial dysplasia



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Erythroleukoplakia with candida infection

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Case Study #1

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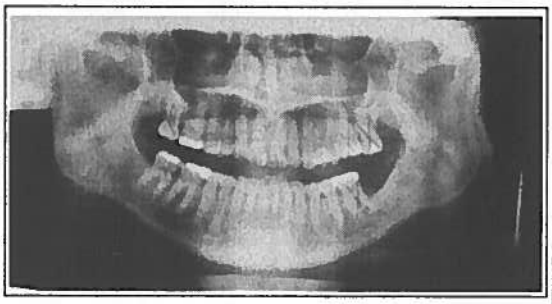

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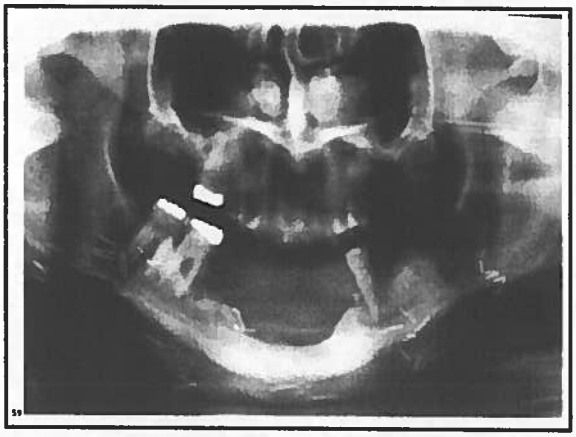
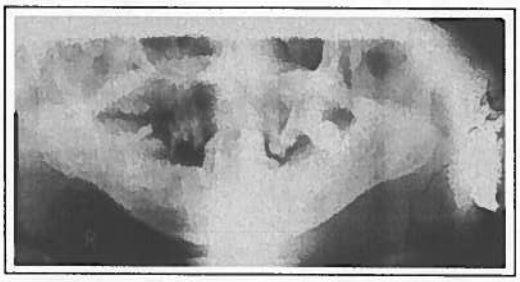
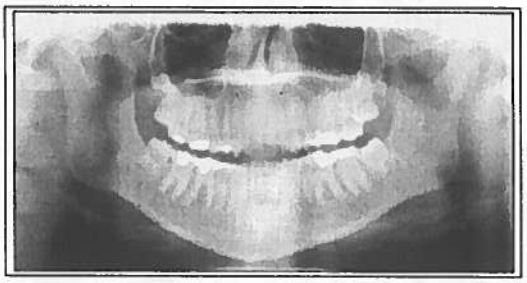


Case Study #2



Case Study #3



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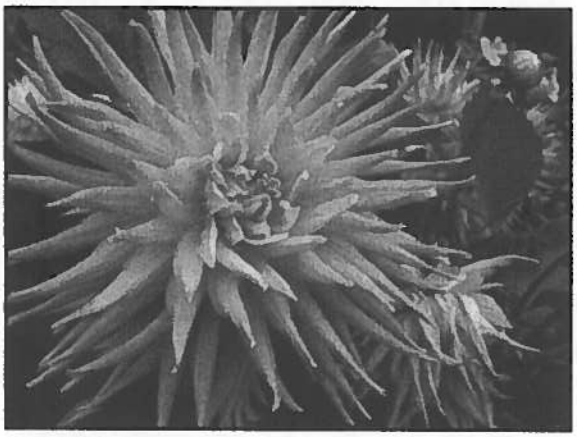

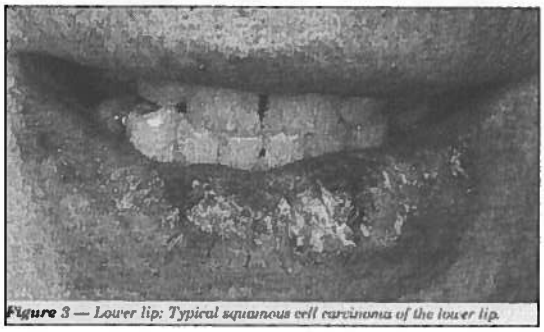

Figure 3 — Lower lip: Typical squamous cell carcinoma of the lower lip.

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*photos taken from Journal of The Michigan Dental Association March 1974

Figure 4 — Skin above eyelid: lesion in area of sun damage that is a squamous cell carcinoma.

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*photos taken from Journal of The Michigan Dental Association March 1976

***Figure 6 — Leukoplakia** of the ventral tongue, floor of mouth and alveolar ridge.*

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*photos taken from Journal of The Michigan Dental Association March 1976

***Figure** 7 — Leukoplakia of the buccal mucosal.*

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*photos taken from Journal of The Michigan Dental Association March 1976

***Figure 10** — Early squamous cell carcinoma of the ventral tongue in a patient with a long history of multiple sites of leukoplakia.*

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*photos taken from Journal of The Michigan Dental Association

***Figure 9** — Snuff dipper's leukoplakia of the inferior labiobuccal sulcus.*

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*photos taken from Journal of The Michigan Dental Association

***Figure 8** — Buccal leukoplakia: shaggy appearance, red zones indicative of higher risk for dysplasia or cancer.*

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*photos taken from Journal of The Michigan Dental Association

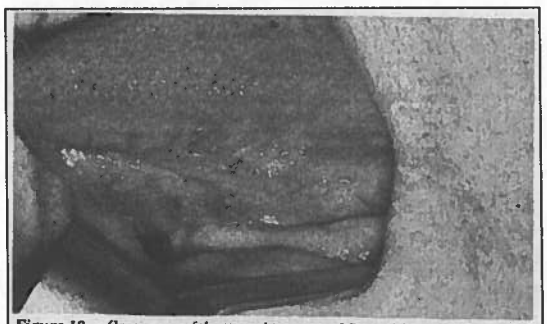

Figure 13 — Carcinoma of the ventral tongue and floor of the mouth. Palpation finds the mass!

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*photos taken from Journal of The Michigan Dental Association

Figure 12 — Early squamous cell carcinoma of the lateral floor of the mouth.

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*photos taken from Journal of The Michigan Dental Association

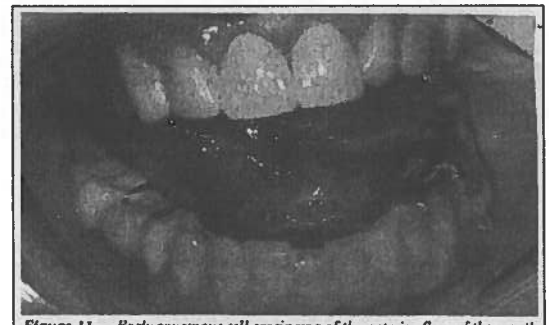

Figure 11 — Early squamous cell carcinoma of the anterior floor of the mouth in a nonsmoking white woman.

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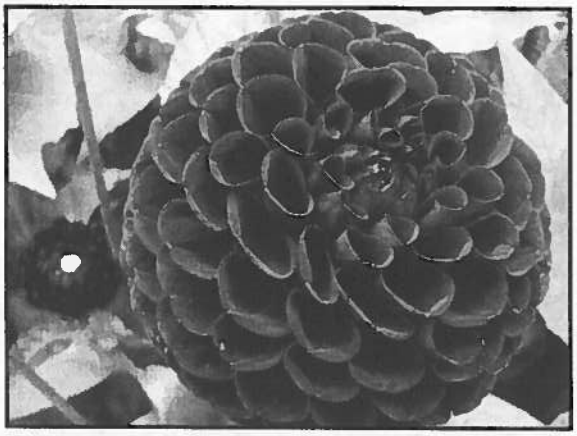
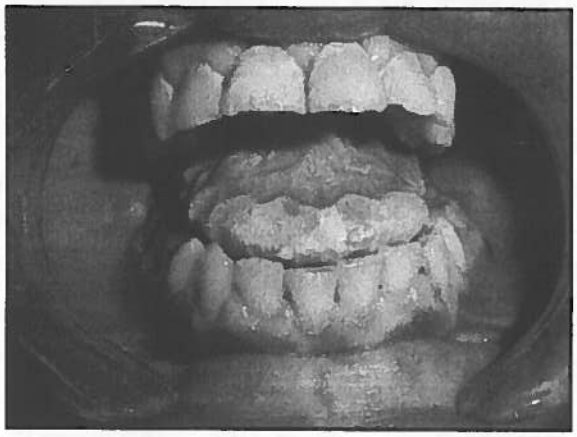
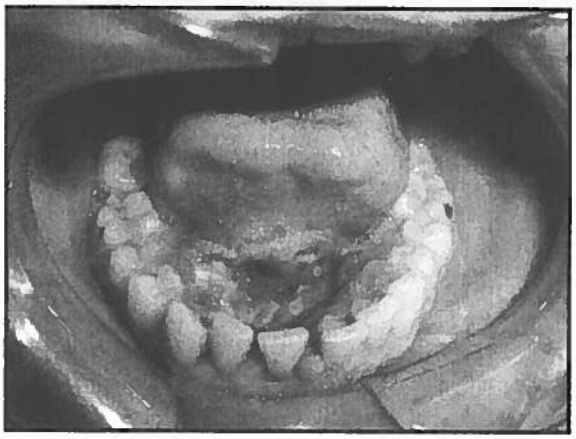
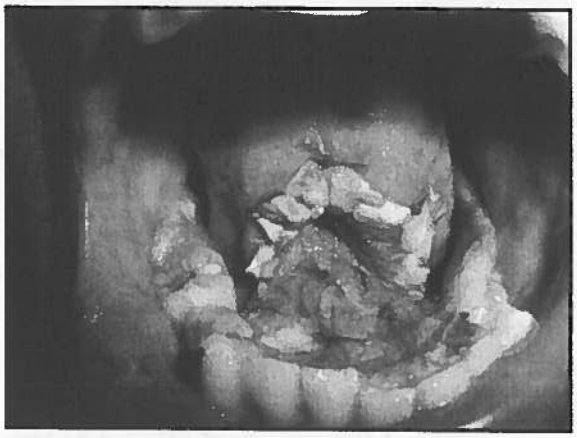
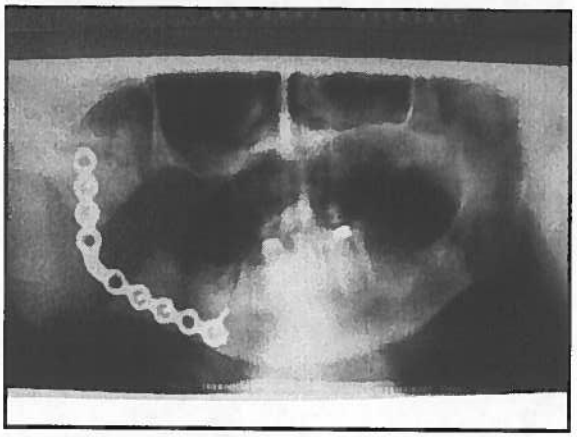
*photos taken from Journal of The Michigan Dental Association

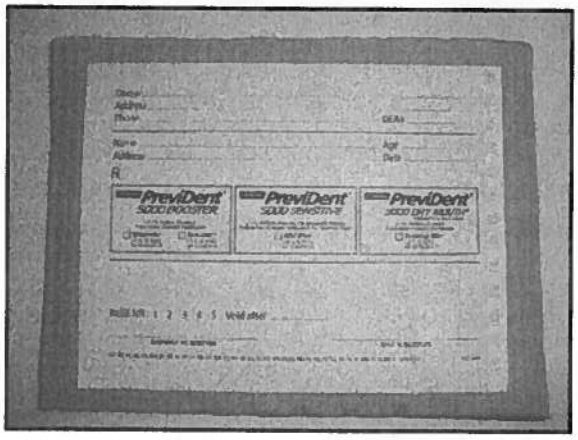








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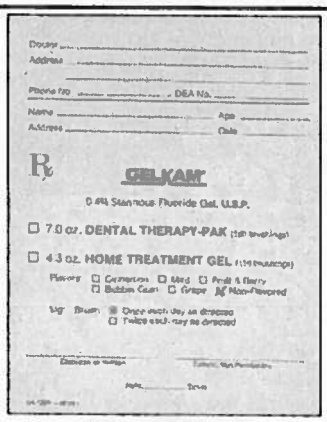
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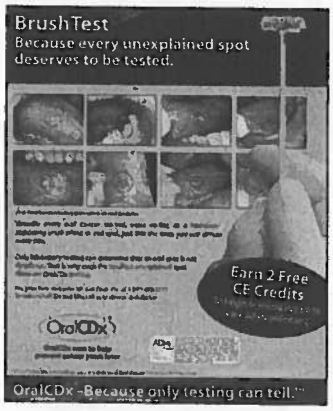
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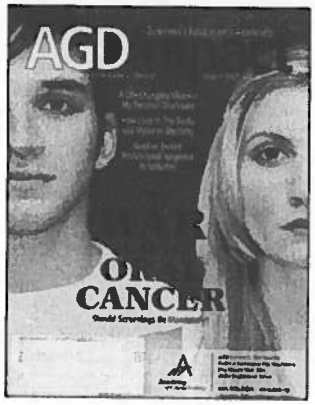
AGD
CANCER

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