

Diagnosis and Treatment of Common Oral Lesions Causing Pain

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Director, Oral Medicine and Forensic Sciences



EPIDEMIOLOGY

- Cancer strikes 1 in 3 Americans.
- Cancer directly affects 3 of every 4 American families.
- Estimates indicate that 85 million Americans now alive will be affected with some form of malignancy.



EPIDEMIOLOGY

- Cancer incidence in white men
 - Prostate
 - Lung
 - Colorectal
 - Urinary bladder



EPIDEMIOLOGY

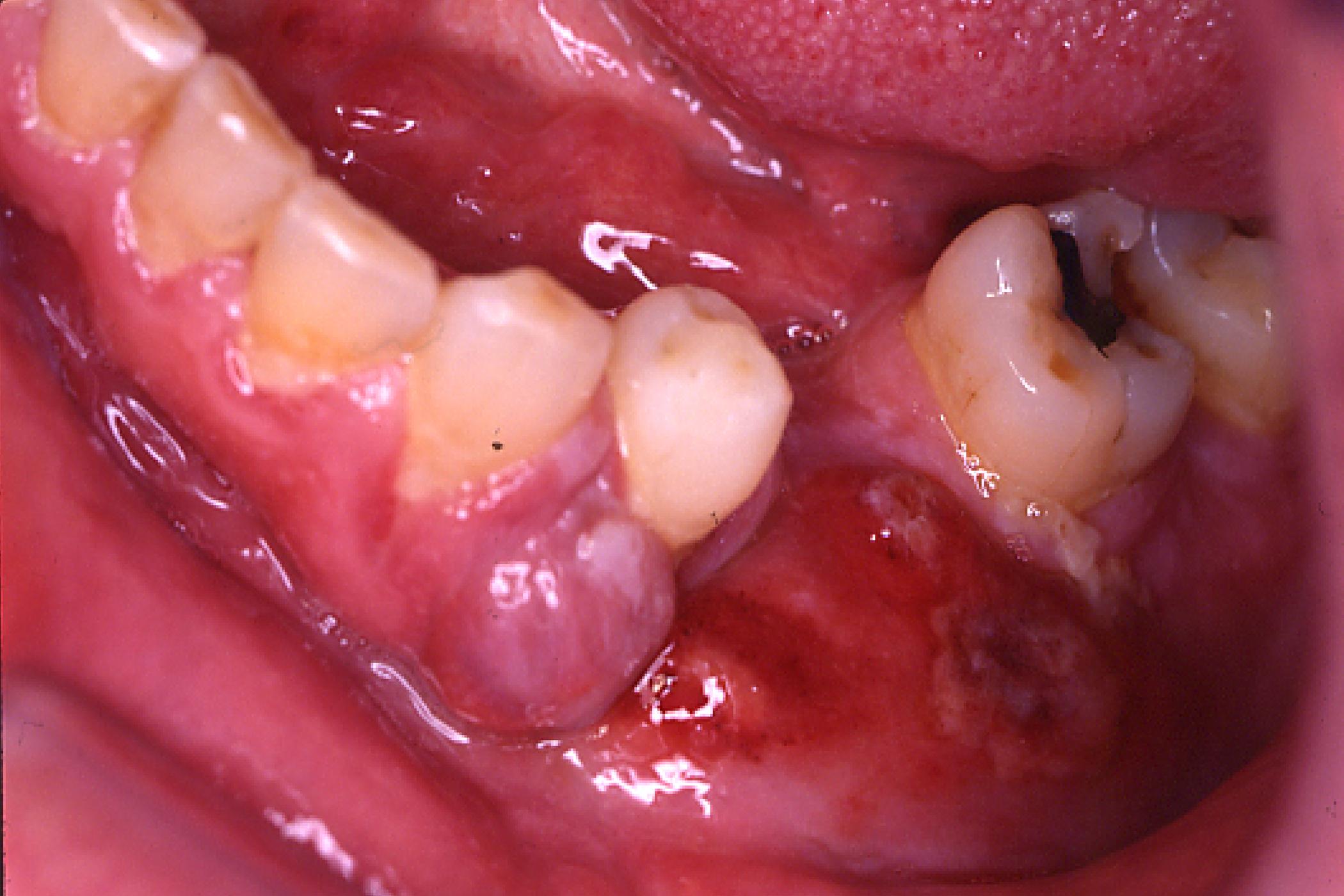
- Cancer incidence in black men
 - Prostate
 - Lung
 - Colorectal
 - Oral (mouth and oropharynx)



EPIDEMIOLOGY

- Many forms of cancer directly or indirectly affect the jaws or oropharynx either through direct invasion or metastasis.

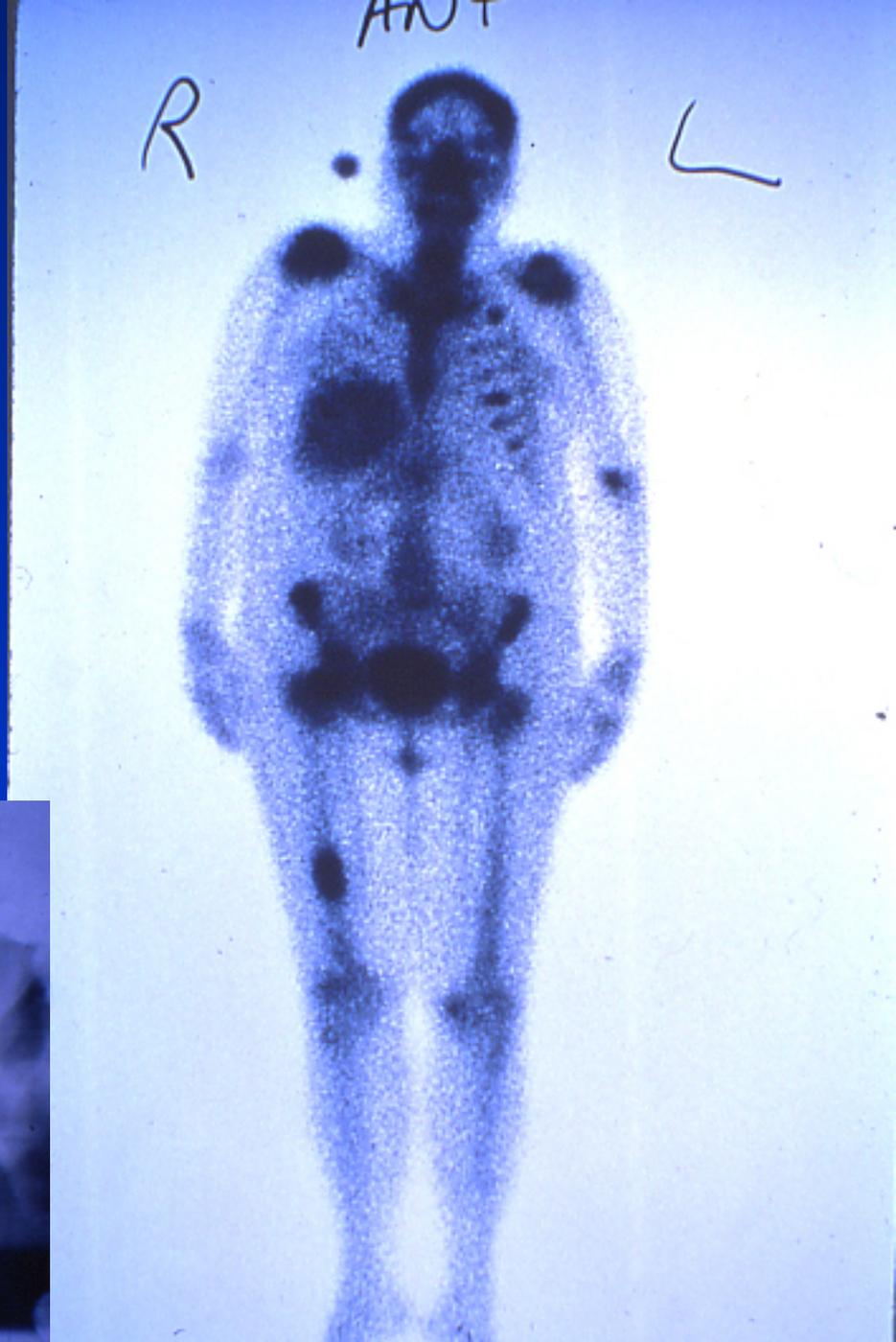
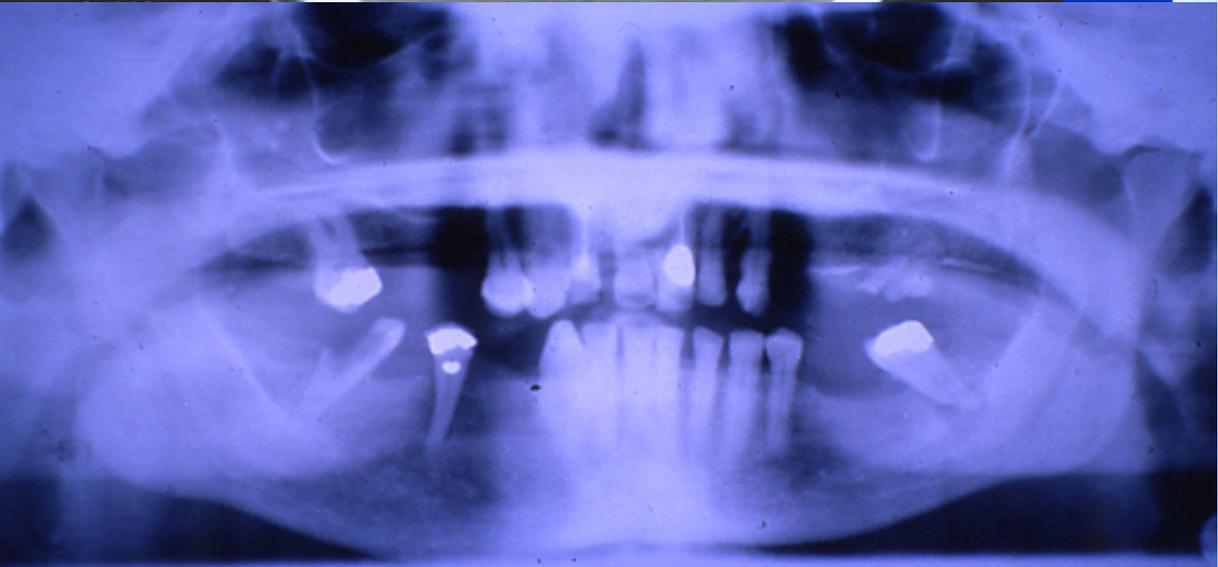
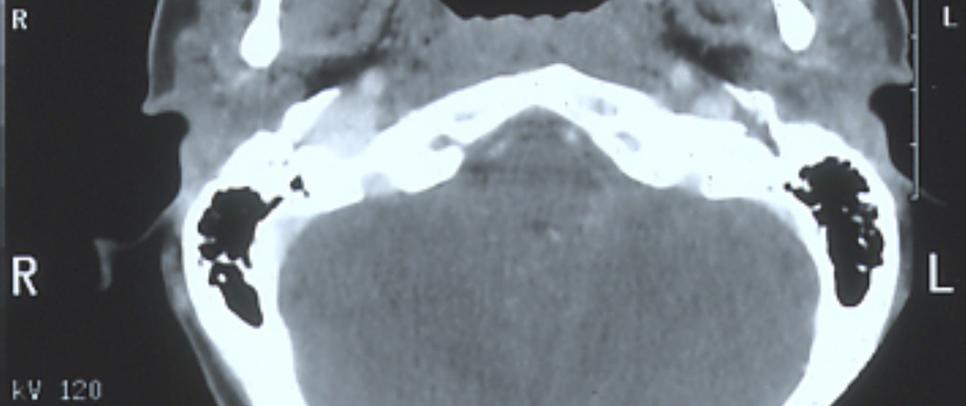


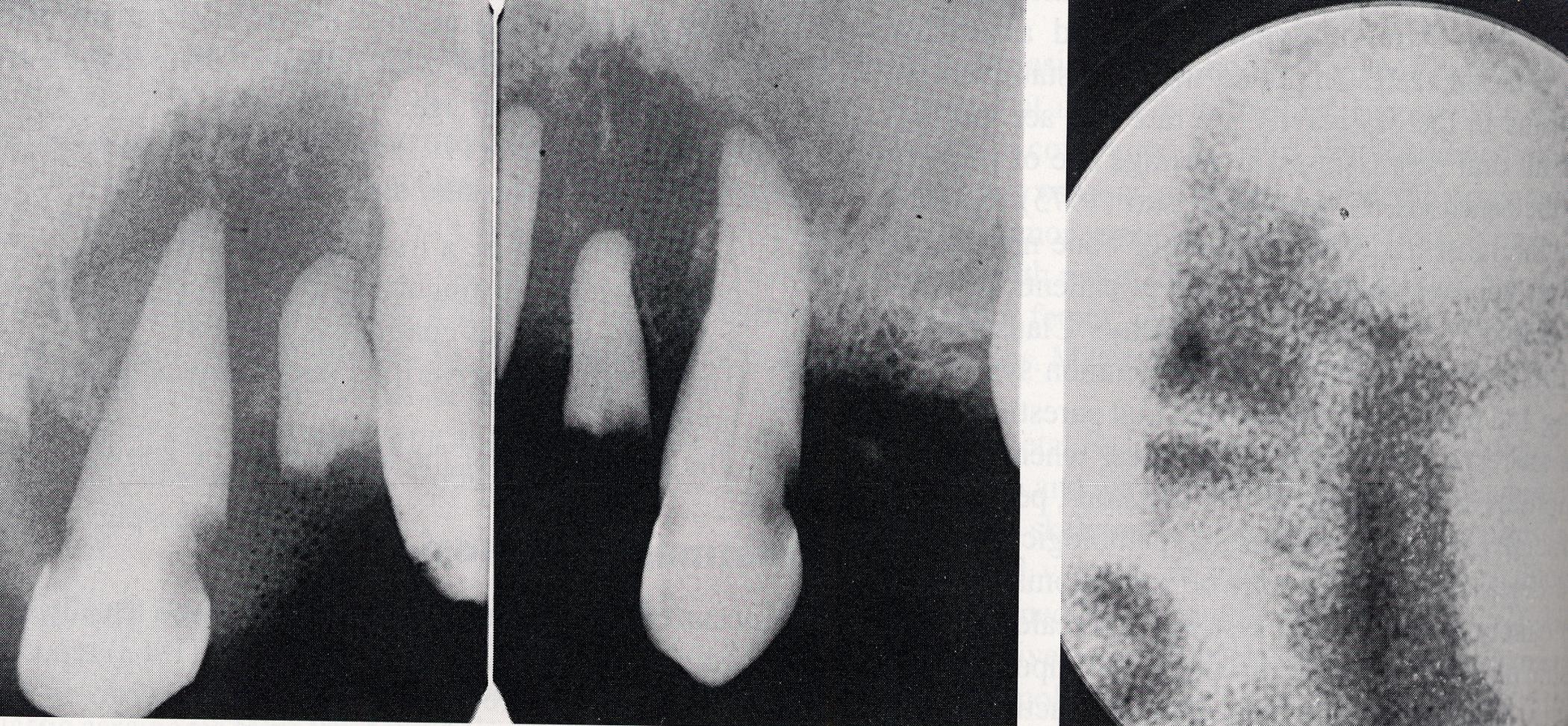


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Metastatic colon lesion to maxilla

EPIDEMIOLOGY

- Most common cancers in children and adolescents
 - 1-4 year olds: leukemia
 - 15-19 year olds: lymphomas



Leukemias and lymphomas do affect the oral tissues particularly the gingiva.

















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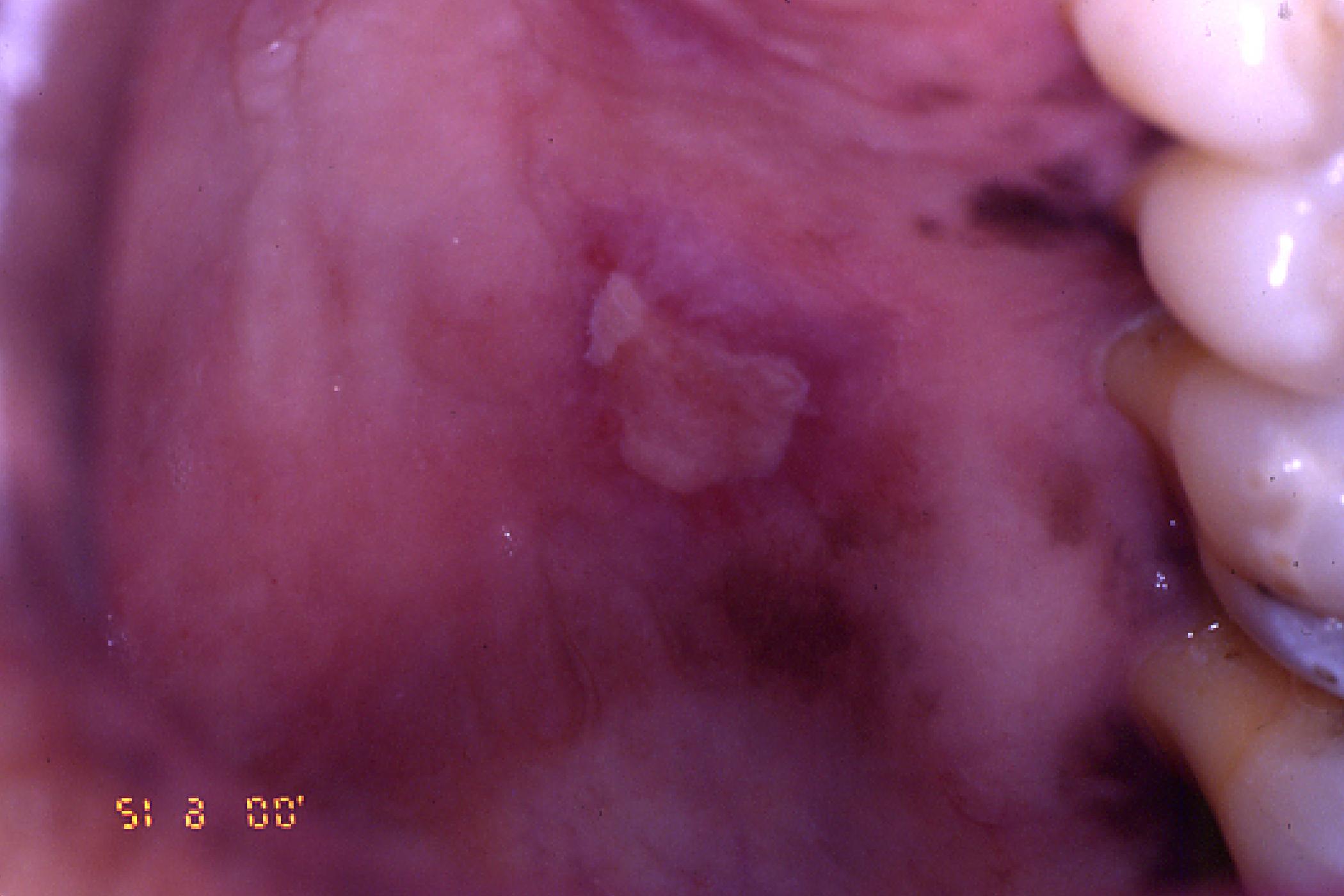




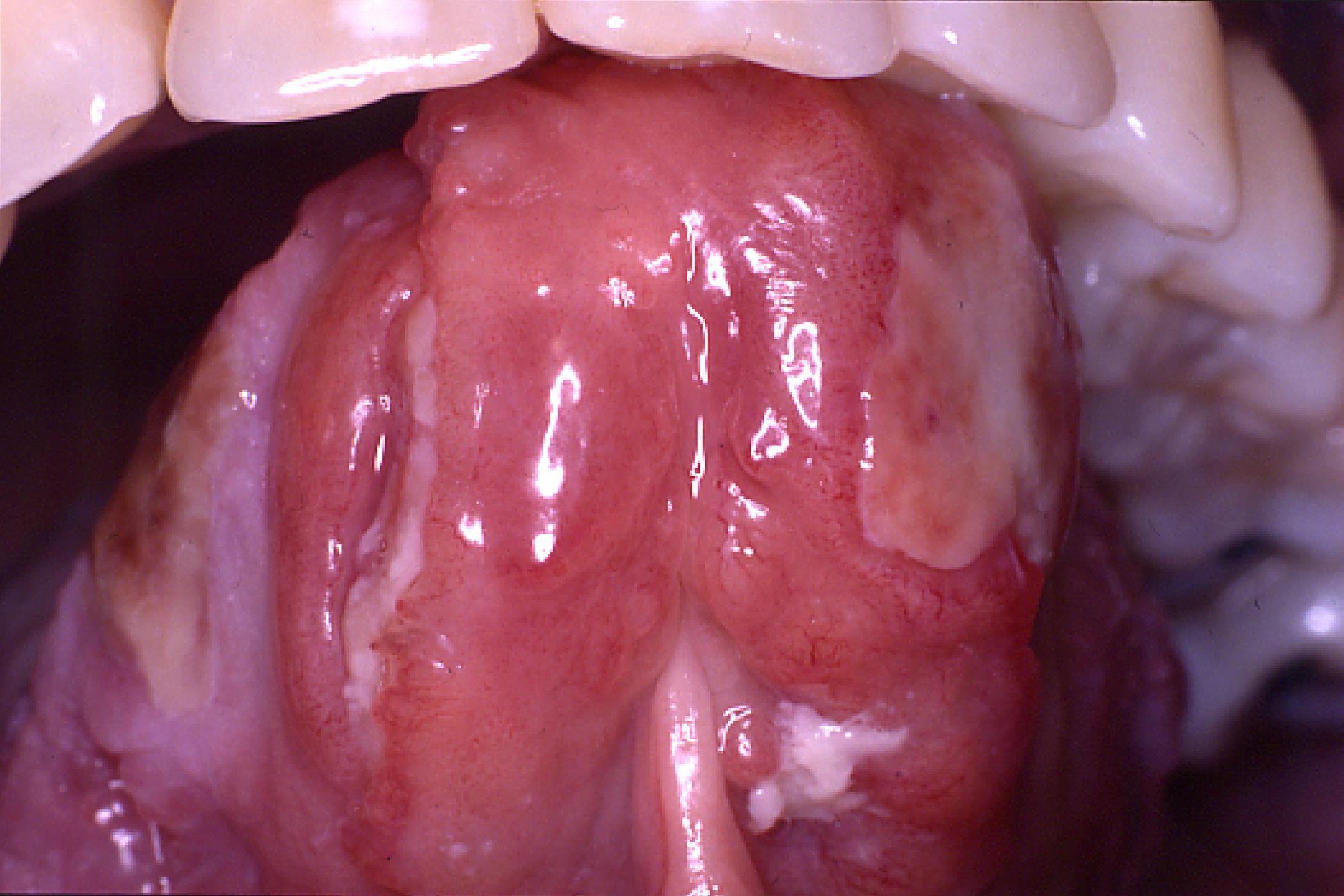
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EPIDEMIOLOGY of OROPHARYNGEAL CANCER



EPIDEMIOLOGY

- Incidence: cancer of the mouth and pharynx are the 6th most common location for all cancers
- Represents about 5% of all cancers
- Carcinomas account for about 95% of oral cancers (squamous cells about 90% of those)
- Average age at diagnosis is 65 years old
- Male:Female ratio is now about 2:1



EPIDEMIOLOGY

- Cancers of the lips, oral tissues and oropharynx account for about 30,000 new cancer cases in the United States per year.
- If cancers of the nasopharynx, hypopharynx, larynx, sinus and major salivary glands are included, then there are approximately 50,000 new cases of "head and neck" (NON-SKIN, NON-CNS) cancers per year.



EPIDEMIOLOGY

- Oropharyngeal cancers kill roughly one person every hour.
- Survival rates for these forms of cancer have not significantly improved over the last decade.
- The death rate for oral cancer exceeds that of cervical cancer, Hodgkins disease, cancers of the brain, liver, testes, kidney ovary and melanoma.



ORAL CANCER

- Oral and pharyngeal cancers account of 8,000 deaths annually
- If cancers of the larynx are included with oral cancers, then there are 12,500 deaths per year
- Of newly diagnosed oropharyngeal cancers, only half will be alive in 5 years (~33% for African-Americans)



Site

Male:Female

- Tongue (30%) ■ 2:1
- Lip (17%) ■ 5:1
- Floor of Mouth (14%) ■ 2.2:1

Adapted from the National Cancer Institute SEER Program



United States Cancer Statistics 2000 Incidence Report



Cancer Incidence by Primary Site

2000, Males, Age-adjusted (Table 1.1)†‡

Close Window

Primary Site	All Races	White	Black	Asian/Pacific Islander §
All Sites	546.9 (545.5-548.4)	537.3 (535.8-538.8)	612.6 (607.2-618.1)	341.6 (334.9-348.4)
Oral Cavity and Pharynx	15.7 (15.5-16.0)	15.3 (15.1-15.6)	18.2 (17.3-19.1)	11.2 (10.1-12.5)
Lip	1.5 (1.4-1.6)	1.6 (1.6-1.7)	0.2 (0.1-0.3)	~
Tongue	3.7 (3.6-3.9)	3.8 (3.7-3.9)	3.6 (3.2-4.0)	2.1 (1.6-2.7)
Salivary Gland	1.6 (1.5-1.7)	1.6 (1.6-1.7)	0.9 (0.7-1.1)	1.0 (0.7-1.4)
Floor of Mouth	1.2 (1.1-1.2)	1.1 (1.0-1.1)	2.0 (1.7-2.3)	0.6 (0.4-1.1)
Gum and Other Mouth	2.0 (1.9-2.1)	1.9 (1.8-2.0)	2.6 (2.3-3.0)	1.2 (0.8-1.7)
Nasopharynx	0.8 (0.8-0.9)	0.6 (0.6-0.7)	1.1 (0.9-1.3)	4.0 (3.4-4.7)
Tonsil	2.3 (2.2-2.4)	2.3 (2.2-2.4)	2.7 (2.4-3.1)	0.9 (0.6-1.3)
Oropharynx	0.7 (0.6-0.7)	0.6 (0.6-0.7)	1.3 (1.0-1.5)	~
Hypopharynx	1.4 (1.4-1.5)	1.3 (1.2-1.4)	2.8 (2.5-3.2)	1.0 (0.7-1.5)
Other Oral Cavity and Pharynx	0.6 (0.5-0.6)	0.5 (0.5-0.6)	1.1 (0.9-1.4)	~
Digestive System	109.8 (109.1-110.4)	106.7 (106.0-107.4)	128.3 (125.7-130.9)	108.2 (104.4-112.1)
Esophagus	8.5 (8.3-8.6)	8.2 (8.0-8.4)	12.1 (11.4-12.9)	3.9 (3.2-4.7)



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The Dental Snuff

relieves Tooth ache.

cures Scurvy,

Neuralgia.

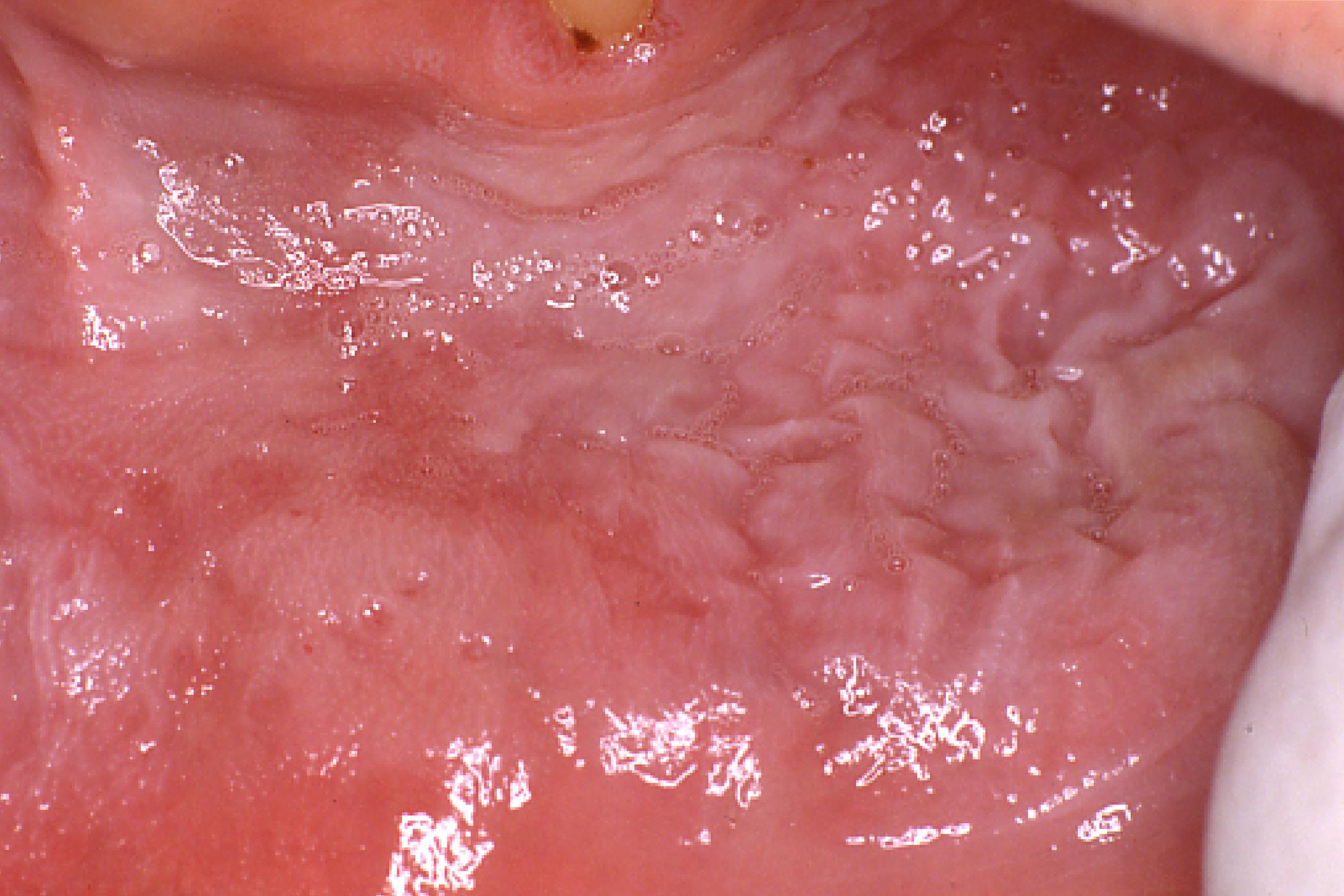
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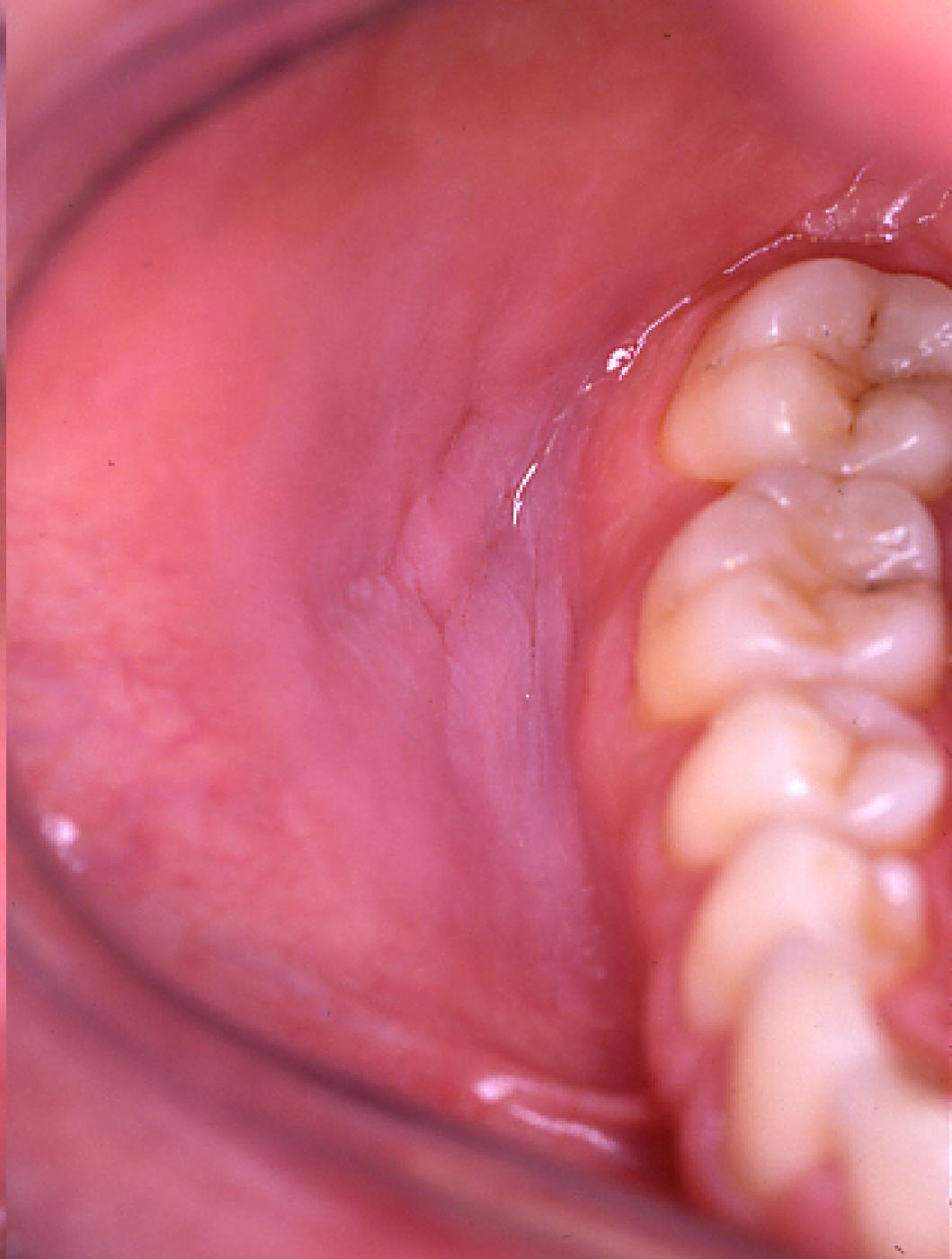


The Dental Snuff
prevents Decay
preserves and whitens the
TEETH.

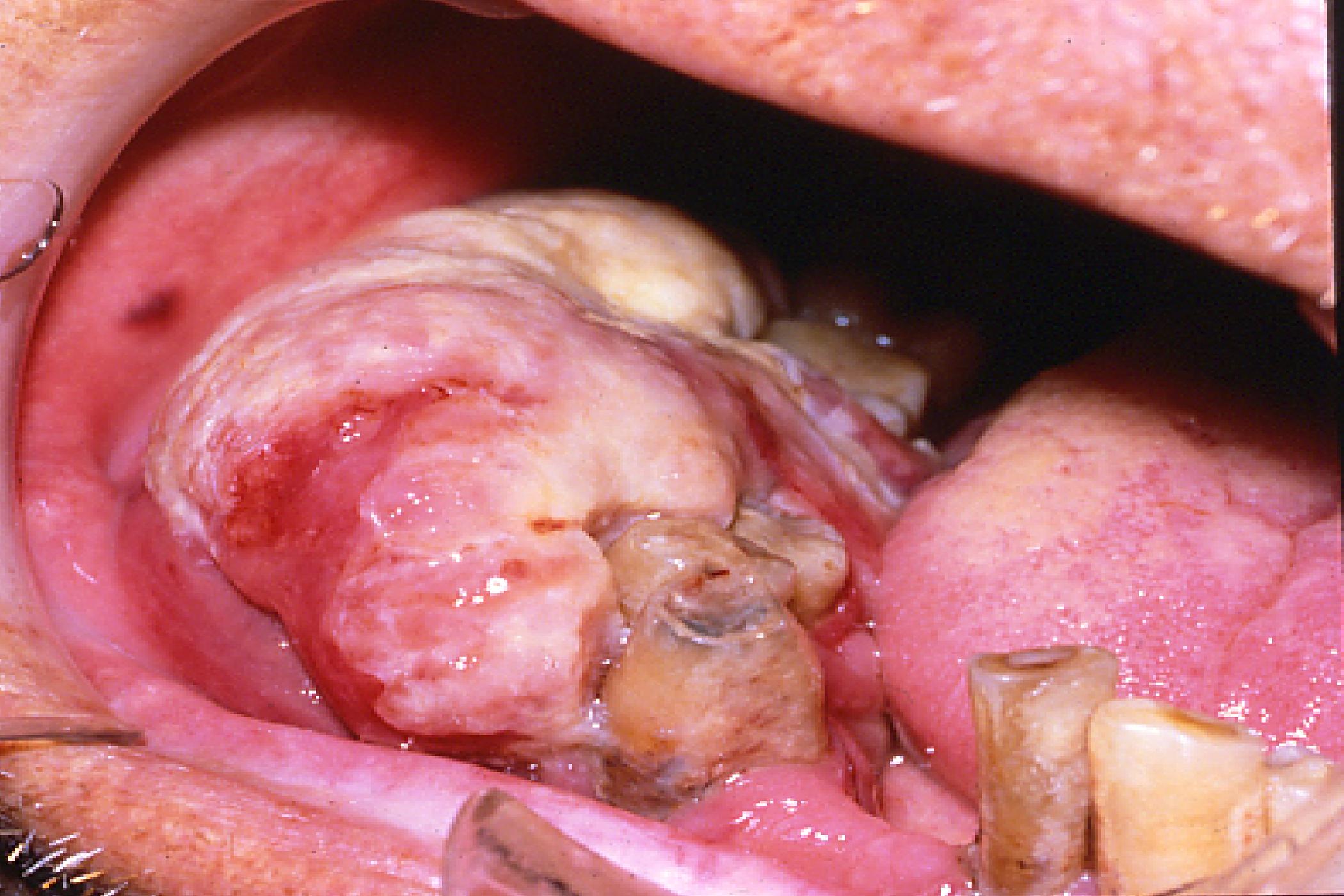


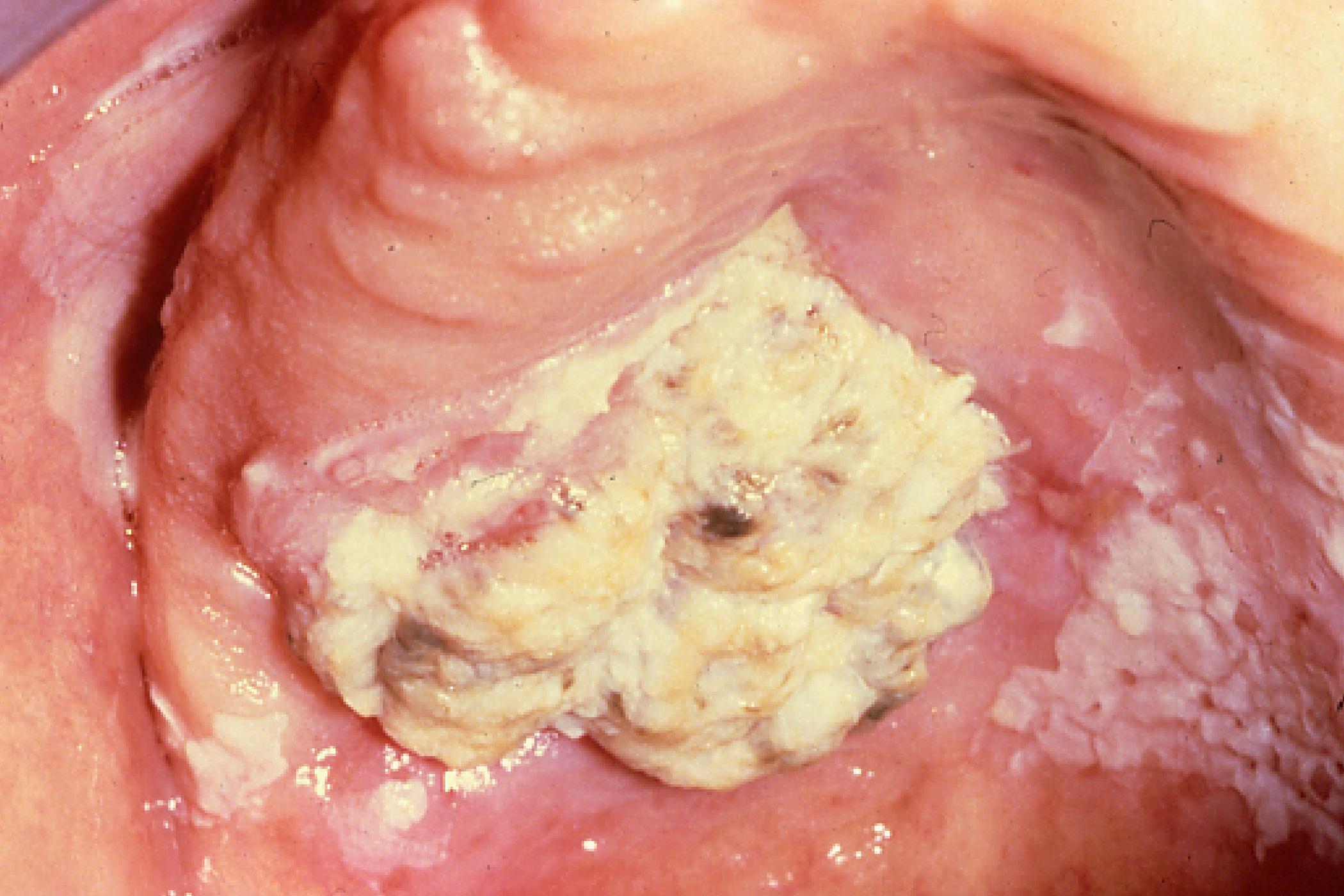








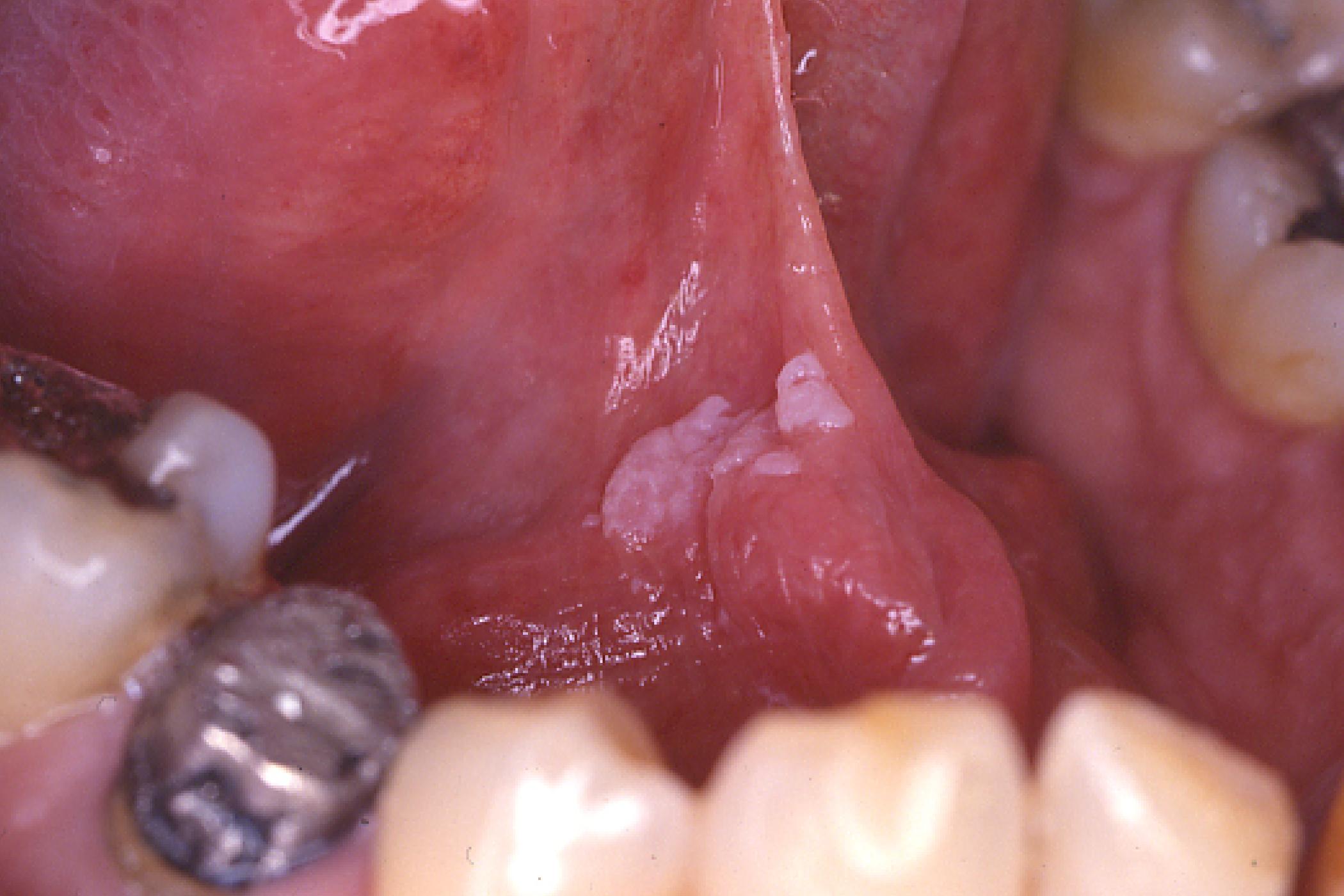


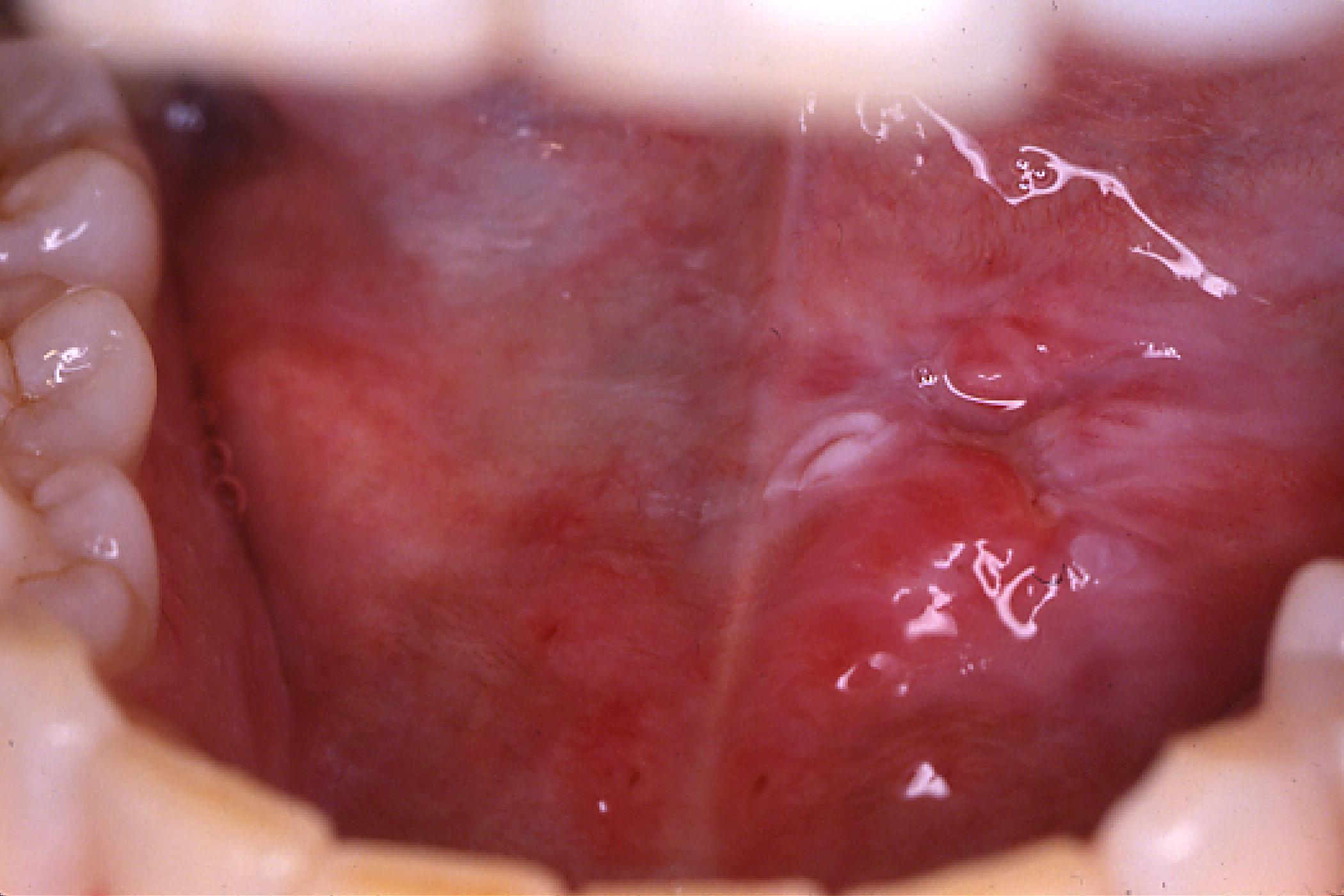






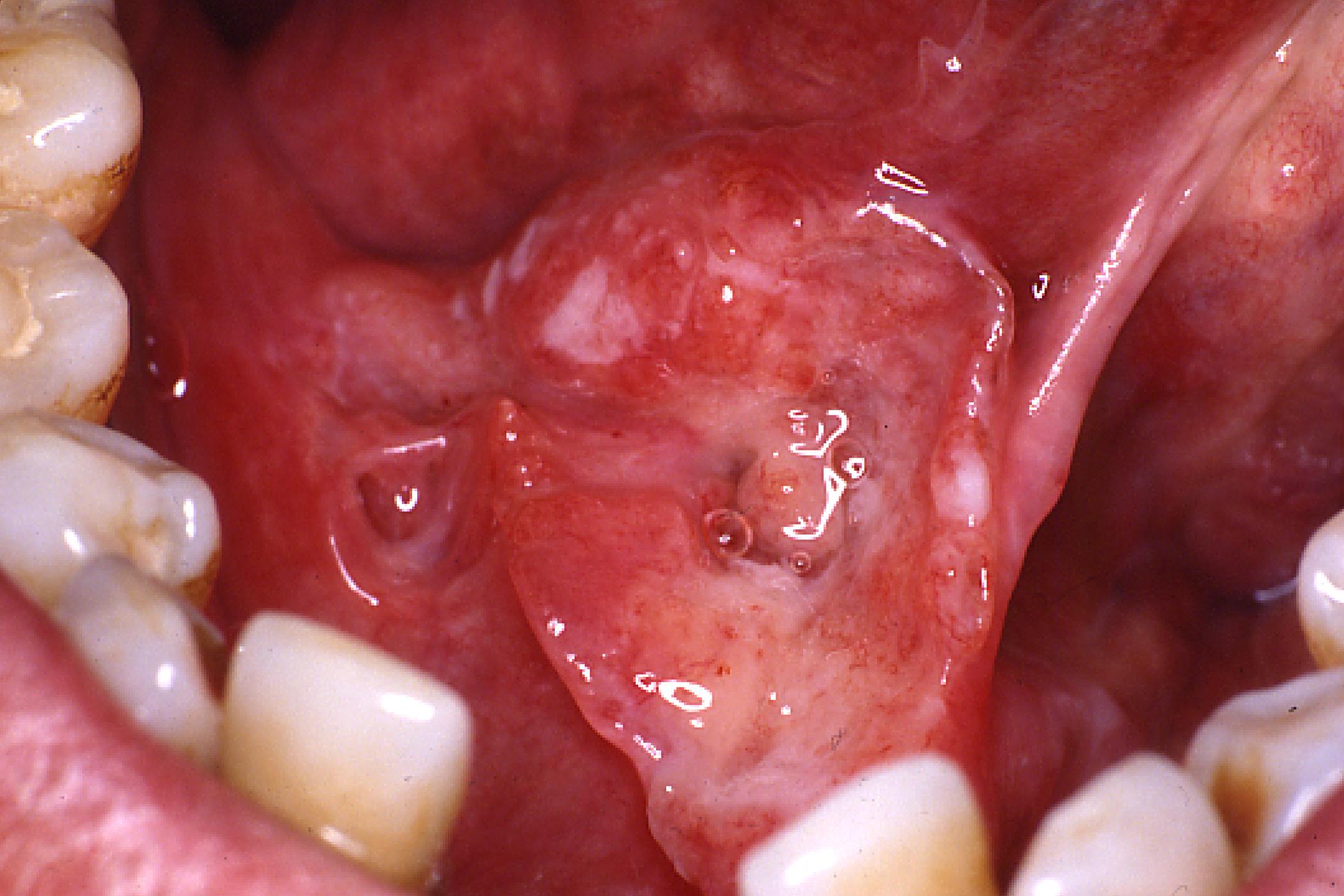




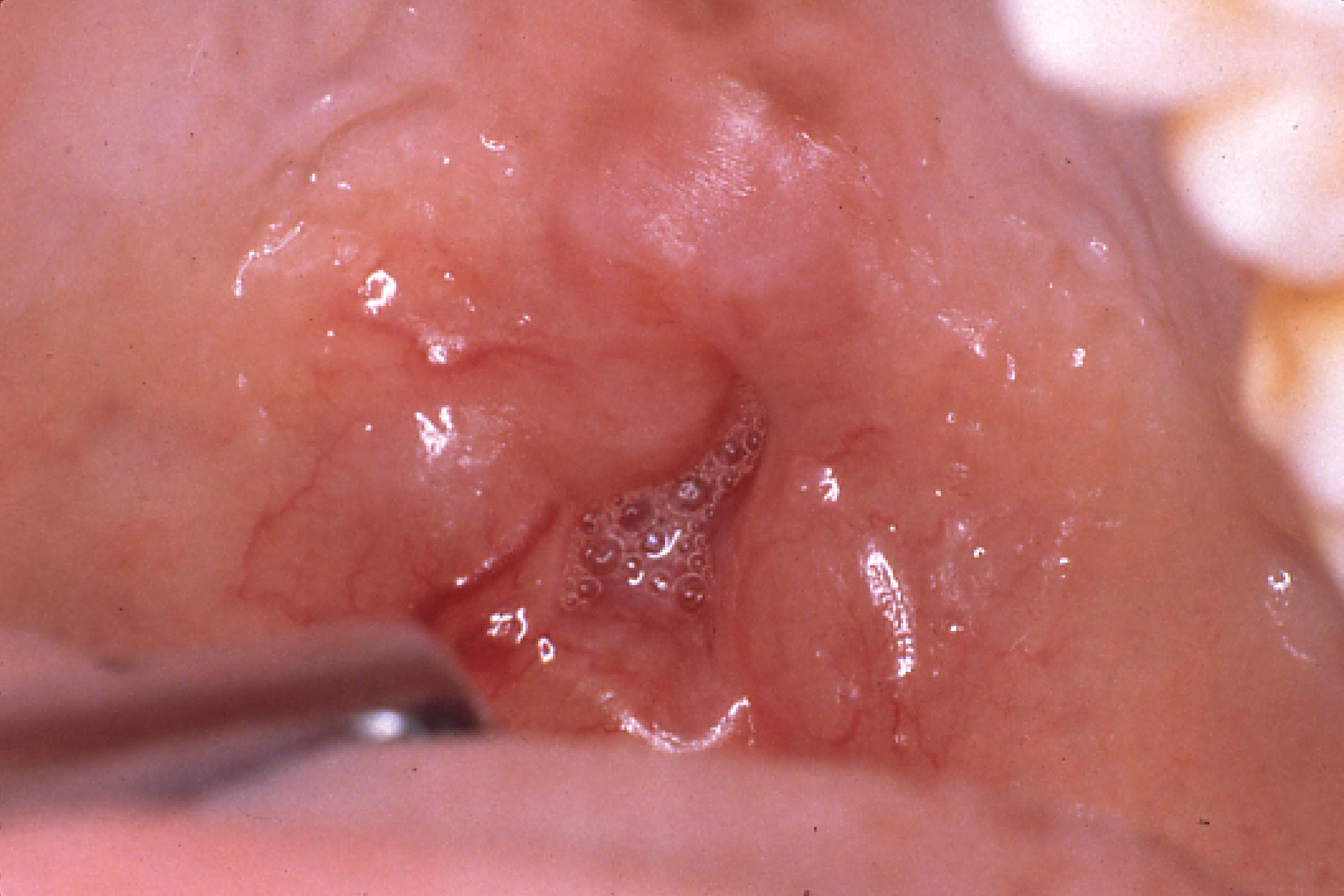














At the time of diagnosis, pain or perception of a “lump” are the main reasons that patients present to the dentist for evaluation. However, many oral cancers are asymptomatic ulcers or nodules discovered during routine examinations.



Survival Time Following Diagnosis of Oral Cancer*

- About 50% survival at 5 years
- Almost 6 out of 10 whites survive 5 years
- Less than 4 out of 10 blacks survive 5 years

Adapted from National Cancer Institutes SEER Program

* Variable depending upon histologic type and stage of "cancer"



RISK FACTORS

- Age
- Gender
- Race
- Genetics/Hereditiy
- Tobacco and other habits
- Alcohol
- Immune system
- **Viruses** (HIV, HSV1, HSV2, HSV6, HSV8 [HSKS], EBV, HPV)



Oral lichen planus as a risk factor for oral/pharyngeal cancer

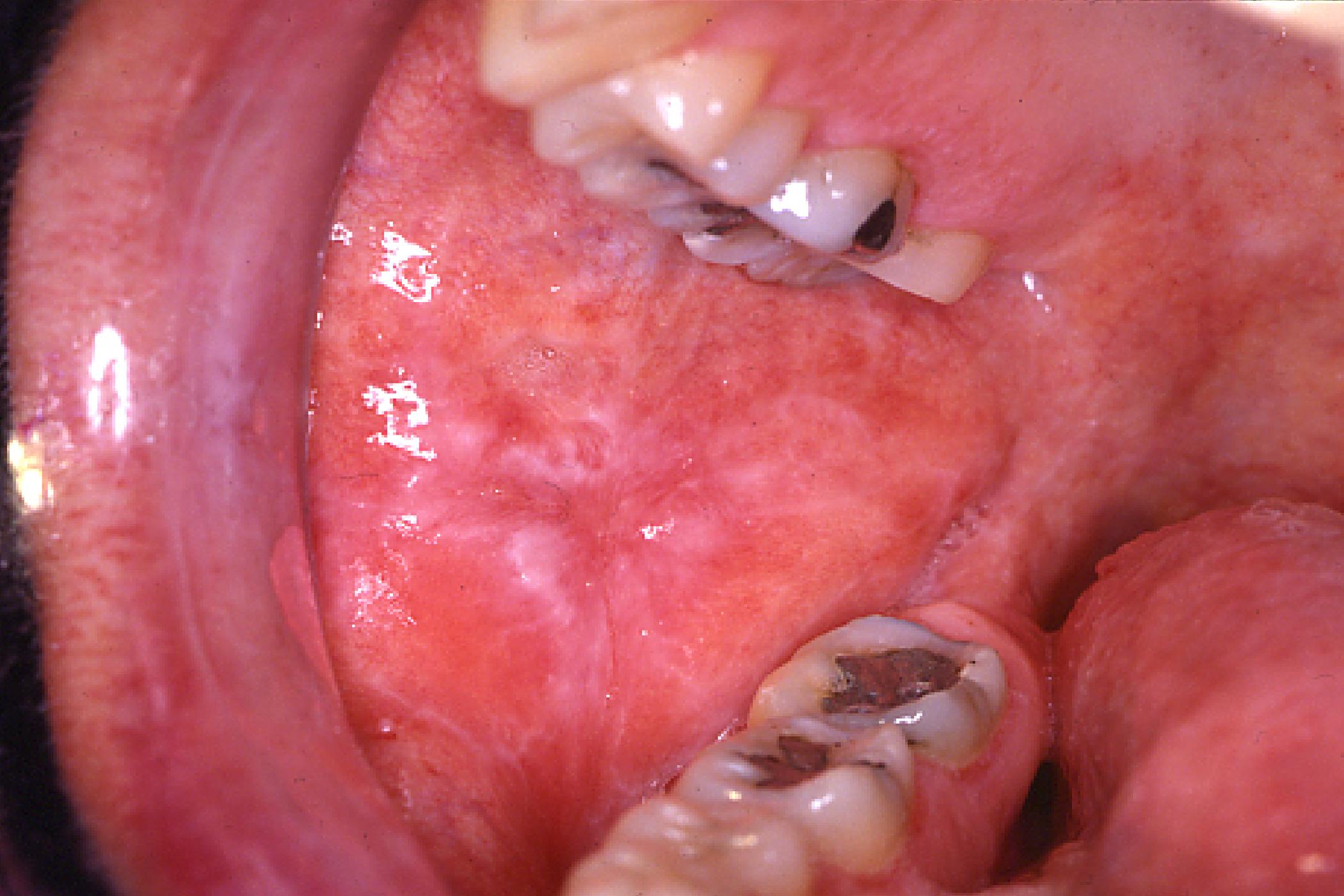
- Chronic, inflammatory disease of skin and mucosa
- Affects between 0.5 and 4% of population
- Oral lichen planus (about 25% of cases) follows a chronic course



Oral lichen planus as a risk factor for oral/pharyngeal cancer

- Malignant transformation is not common (0.4%-2% when LP lesions persist for more than 5 years)
- Most likely a “co-factor” and not a primary cause
- To date, no direct causal relationship established



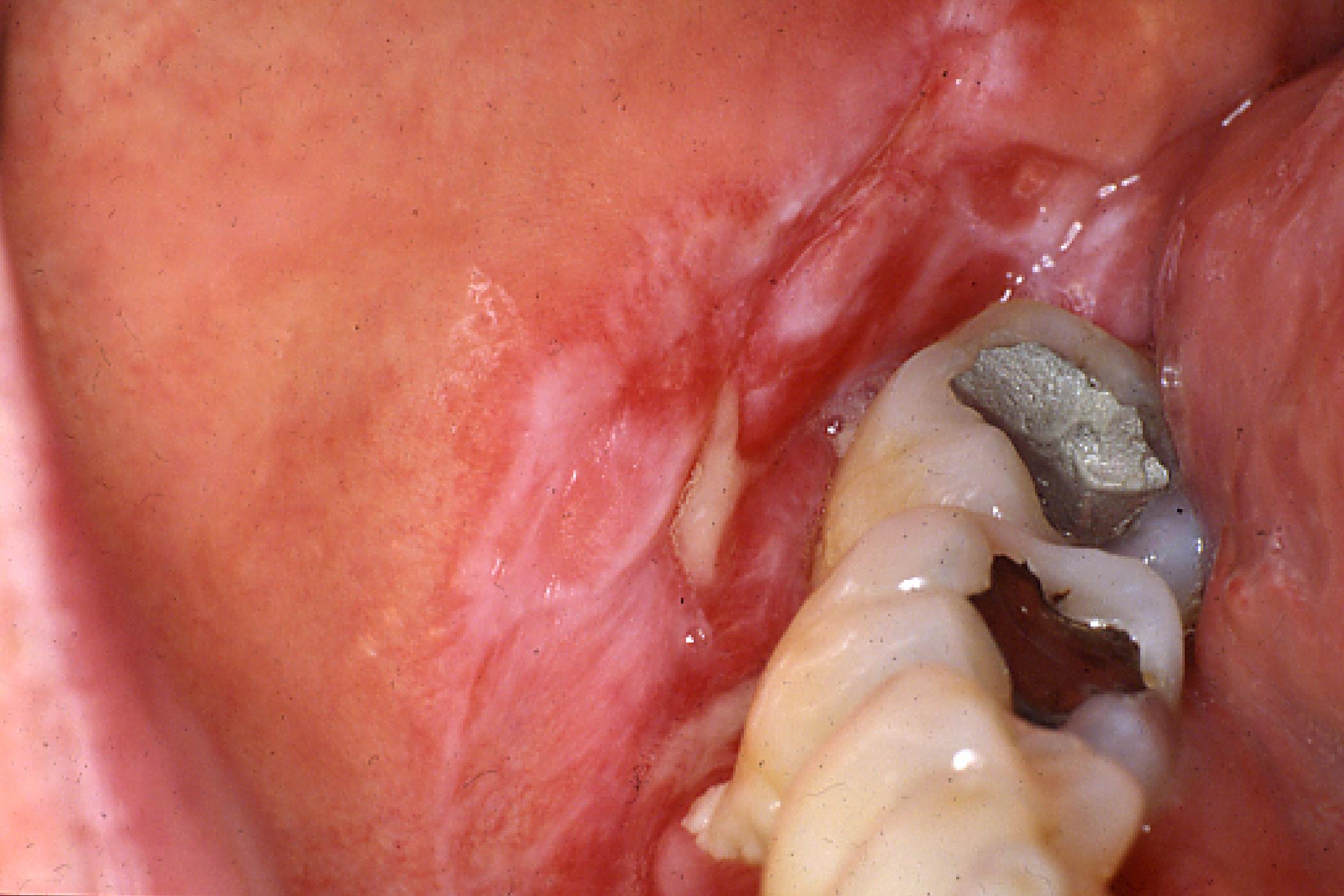




Lichen Planus

- Often requires co-therapy with physician and dentist
- Treated with steroids (usually topical but may require systemic treatment as well)
- Serial biopsies taken at multiple sites are often indicated
- Patient education essential to long-term success





Screening questions to ask patients to establish risk for oropharyngeal cancer

- Do you use tobacco or alcohol? If so, how much and for how long?
- Has any direct member of your family (mother, father, grandparents, etc.) had mouth or throat cancer?
- Have you noticed any lumps or bumps in your mouth, throat or neck?
- Has there been any change in your voice including hoarseness or coarseness?



Screening questions to ask patients to establish risk for oropharyngeal cancer

- Has there been any change in your swallowing pattern?
- Do you have any difficulty swallowing?
- Do you have a feeling that something is stuck in your throat or do you feel that you need to frequently clear your throat because there is something irritating that area?
- Have you had any irritation or non-healing sore in your mouth or throat that has been in the same location for more than 2 weeks without completely healing?



Risk for oropharyngeal cancer

- Increases dramatically with increasing use of alcohol and tobacco
- If patient smokes two packs of cigarettes per day and consumes 12 whiskey equivalents per day, then risk for oropharyngeal cancer increases 100 times over that of a non-smoker, non-drinker.



If your patient answered “yes” to any of the previously listed questions, then your patient might be or is at greater risk for oropharyngeal cancer than is the general population.



Other factors increasing the risk for developing oral cancer

- Tobacco use continued after diagnosis of first cancer (approximately 1:3 chance of developing another primary oropharyngeal cancer)
- Cancer diagnosis at another site especially respiratory and upper digestive anatomic location
- Chronic candidiasis: although no firm data, endogenous nitrosamine production may play a role in transformation of "pre-cancer" to "cancer"

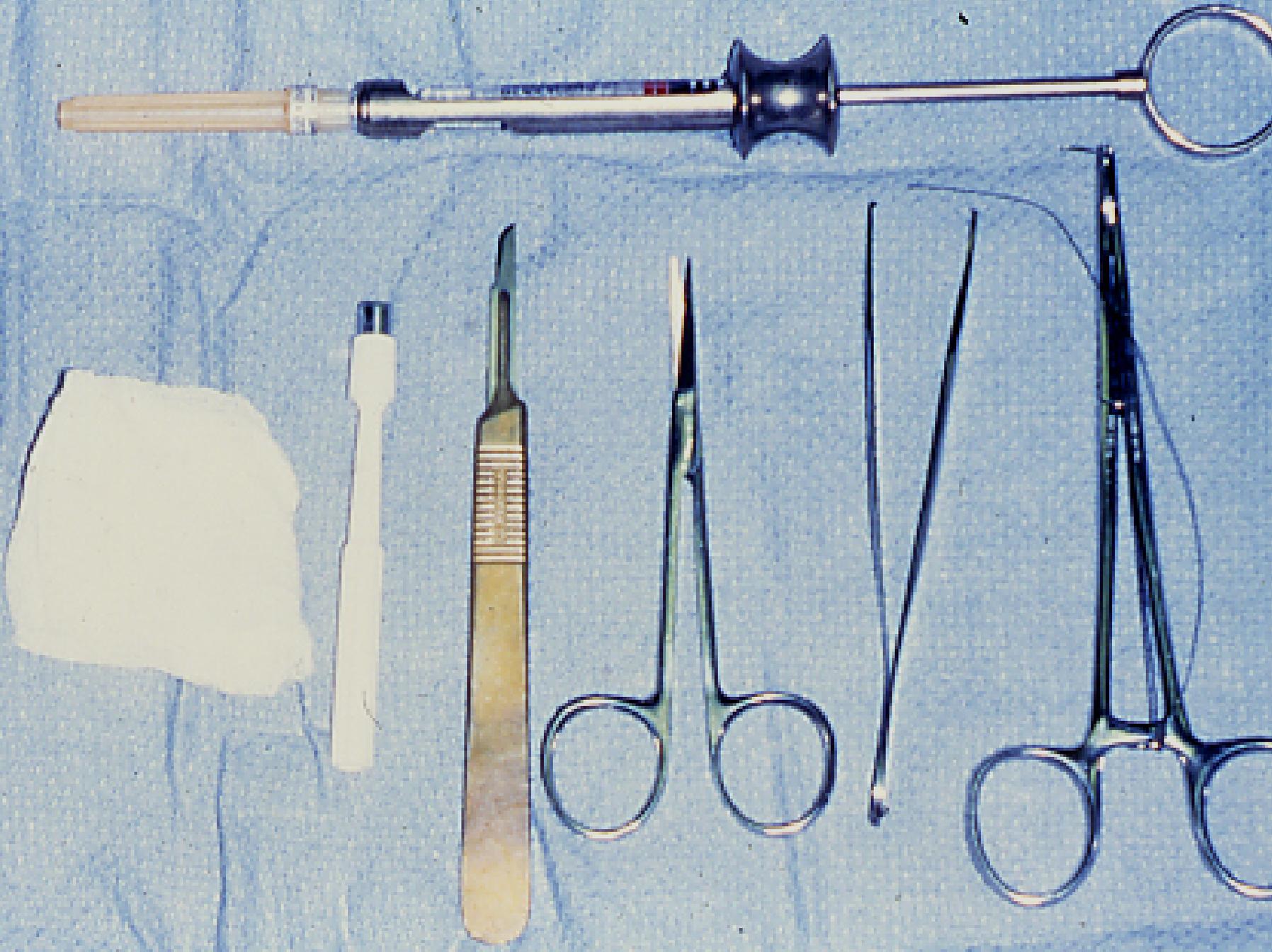


Early detection is the key to long term survival following diagnosis of oropharyngeal cancer. If you don't look, you will not find oropharyngeal cancer.



Remember that a biopsy is the only way to actually diagnose a cancer of the oropharyngeal tissues.



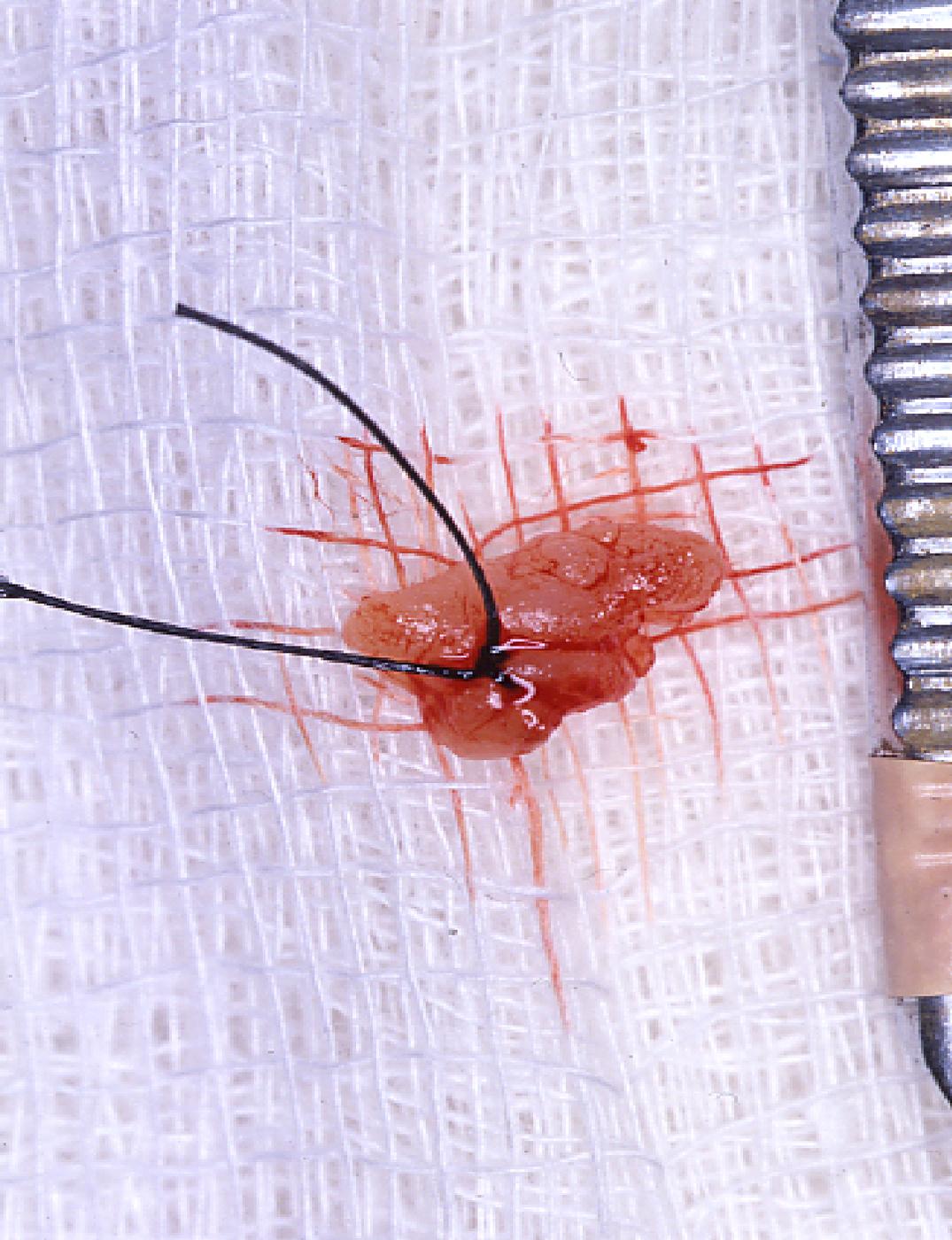












HOW TO USE:
COMO USAR:



1. COMPLETE ADDRESS LABEL AREA

Type or print required return address and addressee information.

ESCRIBA LA DIRECCIÓN EN EL AREA INDICADA

Escriba en letras de imprenta la dirección del remitente y la del destinatario.



2. PAYMENT METHOD

Affix postage, meter strip or PC postage label to area indicated in upper right hand corner.

FORMA DE PAGO

En el área superior del lado derecho, coloque sello postal, franja de máquina franqueadora o etiqueta de franqueo impreso por computadora.



3. ATTACH LABEL (If provided)

Remove label backing and adhere where indicated.

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Si le fue provista, remueva la parte posterior y adhiera sobre la zona de dirección.

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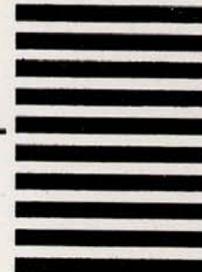
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ORAL BRUSH BIOPSY FOR COMPUTER ASSISTED ANALYSIS

INSTRUCTIONS FOR USE

A. Indications and Contraindications

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ORAL BRUSH BIOPSY FOR COMPUTER ASSISTED ANALYSIS

cancer
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SINGLE SAMPLE TEST MATERIALS IN PRE-PAID RETURN MAILER

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precisely designed to obtain a complete trans-epithelial biopsy with minimum discomfort to the patient. In clinical experience to date, no significant bleeding or requirement for local or topical anesthesia has been reported when using this device. It must be utilized to obtain all specimens. Proper utilization of this instrument assures an adequate biopsy sample of all three epithelial layers (basal, intermediate and superficial) of the lesion.

Topical anesthesia is not required and should not be used as it may distort the sample.

The glass slide is pre-labeled to match the label on the OralCDx



ORAL BRUSH BIOPSY FOR COMPUTER ASSISTED ANALYSIS TEST REQUISITION FORM



ORALSCAN USE ONLY PRACTICE #

NAME OF SUBMITTING DENTIST OR PHYSICIAN Dr. _____	PHONE _____	FAX _____
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PATIENT INFORMATION AND CONSENT

Patient Name: (Last, First, Middle) _____	Social Security Number: _____	Date of Birth: _____	Sex: <input type="checkbox"/> M <input type="checkbox"/> F
Phone: _____	Street Address: _____	City, State, Zip: _____	
Patient Status <input type="checkbox"/> Single <input type="checkbox"/> Married		<input type="checkbox"/> Employed <input type="checkbox"/> Full Time Student <input type="checkbox"/> Part Time Student	

I authorize the release of any medical or other information necessary to process a claim with my health insurer, and I also authorize release of test results to any specialist selected by the submitting dentist or physician. I authorize payment of any government or other insurance benefits for laboratory analysis to the laboratory. For those who are not a Medicare or Medicaid beneficiary: I accept responsibility for the payment of the laboratory fee if this service is not covered by my health benefits plan.

Patient Signature _____

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Medical Insurance ID Number: _____	Responsible Party _____ DOB ____ / ____ / ____
	Medical Insurance Company _____

B	_____	City, State, Zip: _____
	Authorization Number _____	Patients Relationship to Insured <input type="checkbox"/> self <input type="checkbox"/> spouse <input type="checkbox"/> child <input type="checkbox"/> other
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	_____	Dental Insurance Company: _____
	Dental Insurance Group Number: _____	Street Address: _____
	_____	City, State, Zip: _____
		Patients Relationship to Insured <input type="checkbox"/> self <input type="checkbox"/> spouse <input type="checkbox"/> child <input type="checkbox"/> other

C	Check included <input type="checkbox"/> Checks should be made to the order of ORALSCAN LABORATORIES			
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Cardholder Signature: _____

CLINICAL HISTORY AND IMPRESSION OF ORAL LESION

Date of Brush Biopsy ____/____/____		
Color: <input type="checkbox"/> White <input type="checkbox"/> Red <input type="checkbox"/> Mixed <input type="checkbox"/> Mucosal	Appearance: <input type="checkbox"/> Flat <input type="checkbox"/> Plaque-Like <input type="checkbox"/> Verrucous	Ulcerated: <input type="checkbox"/> Yes <input type="checkbox"/> No
Symptoms: <input type="checkbox"/> None <input type="checkbox"/> Pain <input type="checkbox"/> Bleeding	Location: <input type="checkbox"/> Floor of Mouth <input type="checkbox"/> Ventral Tongue <input type="checkbox"/> Buccal Mucosa <input type="checkbox"/> Lateral Tongue <input type="checkbox"/> Retromolar Trigone <input type="checkbox"/> Dorsal Tongue <input type="checkbox"/> Hard Palate <input type="checkbox"/> Soft Palate <input type="checkbox"/> Oropharynx <input type="checkbox"/> Attached Gingiva <input type="checkbox"/> Alveolar Mucosa <input type="checkbox"/> Labial Vestibule	Duration of Lesion: <input type="checkbox"/> <6 months <input type="checkbox"/> 6 months to 1 year <input type="checkbox"/> >1 year <input type="checkbox"/> Unknown
Currently Using Tobacco: <input type="checkbox"/> Y or <input type="checkbox"/> N		Previous Pathology Result of Lesion: _____ _____ _____
Number of Pack Years: _____		
Pipe Use: <input type="checkbox"/> Y or <input type="checkbox"/> N		
Chewing Tobacco : <input type="checkbox"/> Y or <input type="checkbox"/> N		



SPECIMEN



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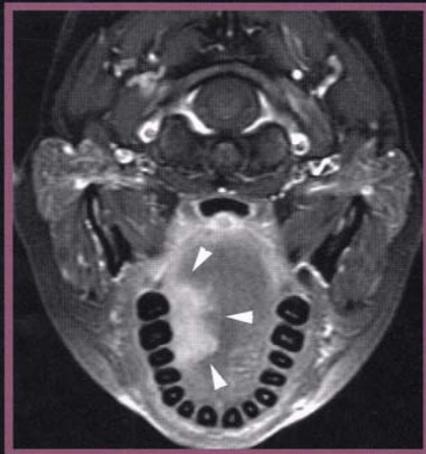
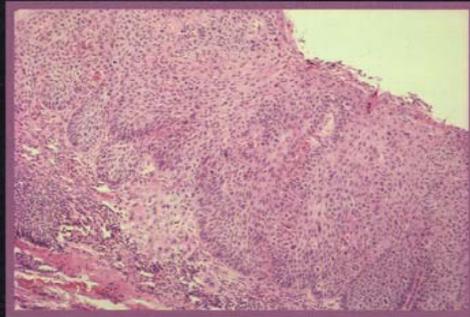
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ORAL CANCER

FIFTH EDITION



SILVERMAN

SILVERMAN

ORAL CANCER

FIFTH EDITION

ATLAS OF CLINICAL ONCOLOGY

Currently, almost 29,000 Americans will be diagnosed with oral or pharyngeal cancer. Mortality is high 50%—owing to late diagnosis and treatment. Early diagnosis of a lesion in the localized stage, together with adequate treatment, are still the most effective means to oral cancer control.

Dr. Silverman and more than 50 distinguished colleagues have written and revised *Oral Cancer*, a key volume in the American Cancer Society Atlases of Clinical Oncology. This new Fifth Edition belongs on the desktop of every dentist, otolaryngologist, and dermatologist managing oral lesions.

Since a spectrum of medical practitioners treat oral cancer, experts in their fields contribute to the text, experts in:

- dentistry
- pathology
- prosthodontics
- otolaryngology
- radiology, radiation oncology and neuroradiology
- oral and maxillofacial surgery
- stomatology
- microbiology and immunology
- medicine
- surgery

Fully updated and expanded, this text gives you an overview of what is now known about the disease:

- occurrence
- etiology
- prevention
- treatment
- diagnosis
- premalignant factors
- survival
- rehabilitation

Coverage includes the latest diagnostic and therapeutic modalities:

- biopsy and exfoliative cytology
- monoclonal antibodies
- imaging
- radiation
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- toluidine blue
- chemotherapy



CD-ROM Inside

Oral Cancer, comes complete with its own CD-ROM. The disc includes the complete text and illustrations contained within the text in fully searchable PDF files.

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Oral Cancer Information Sources

- American Dental Association (www.ada.org)
- Oral Cancer Foundation
(www.oralcancerfoundation.org)
- US Government Surveillance, Epidemiology
and End Results (SEER)
- Centers for Disease Control
(www.cdc.gov/OralHealth)



Points to Remember

- Oral and oropharyngeal cancer is not rare.
- There appears to be a genetic component in some form of oral and oropharyngeal cancers.
- Certain behaviors (use of alcohol, tobacco, etc.) places patients at much higher risk for cancer.
- “Asymptomatic” malignancies are often discovered during routine exams.



The body does not begin posterior to the anterior tonsillar pillar. Look around in your patient's mouth. If you see something you don't recognize or it looks suspicious, get a consultation from a competent general dentist or oral-maxillofacial surgeon!



QUESTIONS?



Biography

John D. McDowell, DDS , MS

John D. McDowell is an Associate Professor in the Department of Diagnostic and Biological Sciences at the University of Colorado School of Dentistry. He presently serves as the Director of Oral Medicine and Forensic Sciences and Chairman, Division of Oral Diagnosis, Medicine and Radiology.

Dr. McDowell is a board certified forensic odontologist serving as a consultant to various forensic organizations including the University of Colorado School of Medicine Kempe Center for the Diagnosis and Treatment of Child Abuse and Neglect, and the Medical Examiner's Offices in Denver , Colorado and San Antonio , Texas . He is presently the President-elect of the American Academy of Forensic Sciences. He is also a past President of the American Society of Forensic Odontology.

In addition to his busy forensic consulting practice, Dr. McDowell has an oral medicine practice at the University of Colorado with primary emphasis on oral manifestations of systemic disease and the infections and tumors associated with HIV/AIDS. He is the Dental Representative for the Mountain/Plains AIDS Education and Training Center in Denver , Colorado and is a consultant to the National AIDS Education and Training Center in Washington , DC .

Dr. McDowell has multiple publications in the professional literature regarding the diagnosis and treatment of the domestic violence victim. He is a reviewer for the *Journal of the American Dental Association* and is a member of the editorial board of the *American Journal of Forensic Medicine and Pathology*.