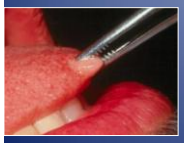
# Oral Cancer:

## Levels of intra-oral diagnosis/treatment

Excisional/Incisional Biopsy | Brush Biopsy/Oral CDx | ViziLite Plus/VELscope



Chemiluminescence / Fuorescence

## Oral Cancer

- What cancer do patients think is the most deadly?

  Melanoma, cervical cancer or oral cancer?

- Nearly one half of American adults think that melanoma is the most deadly.

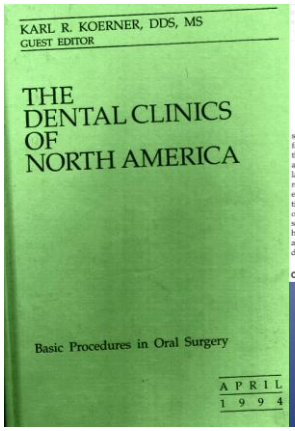
## Oral Cancer – 2009 estimates

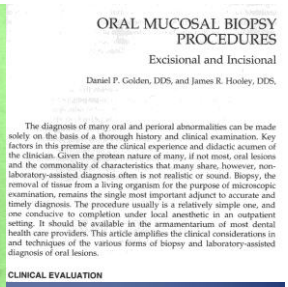
- Melanoma 68,720 new cases
- Oral Cancer: 35,720 new cases
- Cervical cancer: 11,270 new cases

- Oral cancer 5 yr. survival rate: 59%
- Melanoma 5 yr. survival rate: 91%
- Cervical cancer 5 yr. survival rate: 71%

- Melanoma: 8,650 will die
- Oral cancer: 7,600 will die
- Cervical cancer: 4,070 will die

- Oral cancer: less prevalent, more deadly.





ORAL MUCOSAL BIOPSY PROCEDURES

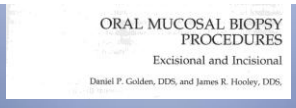
Excisional and Incisional

Daniel P. Golden, DDS, and James R. Hooley, DDS

The diagnosis of many oral and perioral abnormalities can be made solely on the basis of a thorough history and clinical examination. Key factors in this premise are the clinical experience and didactic acumen of the clinician. Given the protean nature of many, if not most, oral lesions and the commonality of characteristics that many share, however, non-laboratory-assisted diagnosis often is not realistic or sound. Biopsy, the removal of tissue from a living organism for the purpose of microscopic examination, remains the single most important adjunct to accurate and timely diagnosis. The procedure usually is a relatively simple one, and one conducive to completion under local anesthetic in an outpatient setting. It should be available in the armamentarium of most dental health care providers. This article amplifies the clinical considerations in and techniques of the various forms of biopsy and laboratory-assisted diagnosis of oral lesions.

CLINICAL EVALUATION

Guidelines for excisional biopsies……


ORAL MUCOSAL BIOPSY PROCEDURES

Excisional and Incisional

Daniel P. Golden, DDS, and James R. Hooley, DDS,

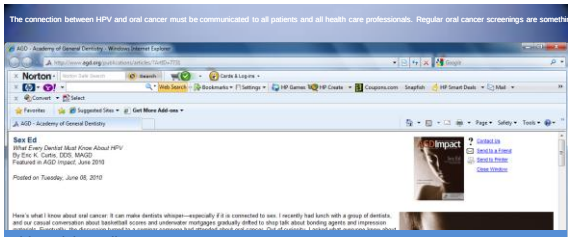
- Any lesion discovered on examination at least must be followed, and should be considered for biopsy or referral…
- A diagnosis of all lesions must be established. Complacency in this regard is not consistent with all accepted standards…
- In certain cases of ambiguity, an observation period of 10-14 days is warranted.
- One percent of benignly presenting oral lesions prove to be malignant…

## Oral Cancer

- Heavy smokers and drinkers are nearly 38 times more likely to suffer from oral cancer than those who don't have either habit.
- Number of oral cancer patients under 40 is increasing (4% in 1971 to over 18% now).

## Cancer in Young People

- Reason for increased incidence of oral cancer in younger individuals:
  - A rise in mouth cancer may be due to sexually transmitted disease. The Daily Telegraph. March, 2010.
  - Oropharyngeal carcinoma is related to the human papillomavirus. British Medical Journal. March 2010
  - Oral sex can add to human papillomavirus (HPV) cancer risk. Time Magazine. May 2007.
- People with HPV-positive (oral squamous cell carcinomas (OSCC) are, on average, 3-5 years younger than patients with other OSCCs and they are less likely to have a history of alcohol and tobacco use.




This article outlines:
- Nature of the problem.
- Risk Factors.
- Warning signs.
- Components of an oral cancer exam.

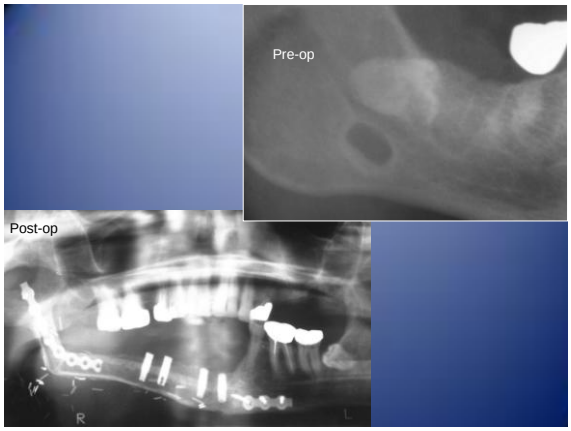
**"The connection between HPV and oral cancer must be communicated to all patients and all health care professionals. Regular oral cancer screenings are something that every dentist can do. "**

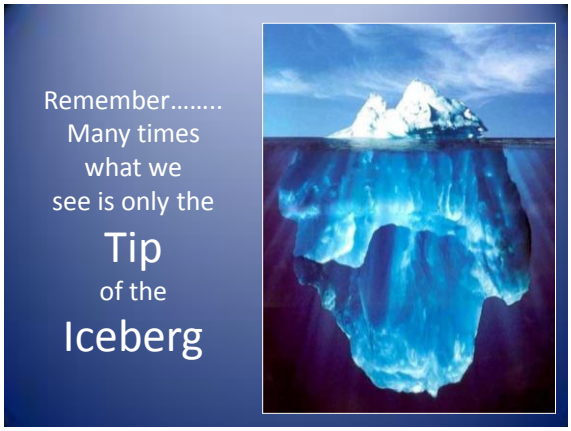
## HPV Statistics

- Of the 100 HPV strains, at least 15 are oncogenic.
- More than 40 can infect the genital areas, as well as the mouth and throat of both males and females.
- Available vaccines prevent only a few strains.
- HPV vaccines are currently FDA-approved only for cervical cancer.
- HPV is now the most common sexually transmitted infection in the United States.

Male, age, 48
Mutiple myeloma (cancer of plasma cells).
Has had 2 stem cell operations.
Lesions are plasmacytomas.
Caught early, good prognosis.

Male, age 51.
Chrondrosarcoma

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Department of Pathology, School of Dentistry
611 SW Campus Drive
Portland, OR 97239-3097
Phone: (503) 494-8904
FAX: (503) 494-8905

**PATHOLOGY REPORT**

SURGERY DATE: 9-17-05 LAB NUMBER: 05-S-0233
DATE RECEIVED: 9-22-05 REPORT DATE: 9-26-05
PATIENT: CHART #: N/A AGE: 83 SEX: M
REFERRING DOCTOR: Karl Koerner STUDENT: N/A

HISTORY:
Clinical description: see picture.
History of lesion: has been present for about 2 years. It is painful. It has started out small and has grown over time.
Past medical dental history: normal. Smoked for 3 years then chewed tobacco for 3 years (the last years). Always pulls tobacco in left side. Submandibular lymphadenopathy on left side (cut there is a molar there needing a root canal.
Provisional clinical diagnosis: leukoplakia

GROSS DESCRIPTION:
Received in a container of formalin labeled with the patients name is a 0.7 x 0.5 x 0.4 cm fragment of tan soft tissue which is inked and bisected. JH/NG/DI/PJF/JK

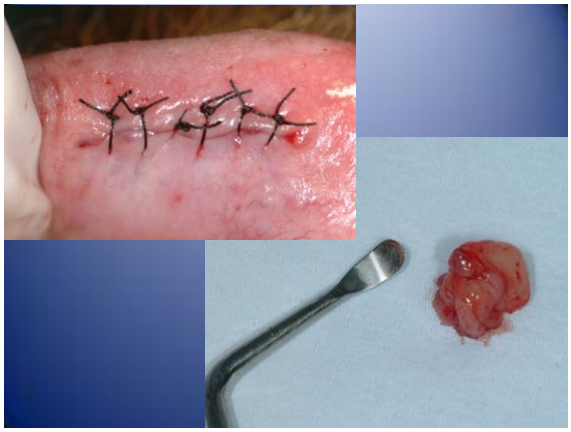
MICROSCOPIC DESCRIPTION:
Microscopic examination reveals sections of mucosa surfaced by markedly hyperparakeratotic stratified squamous epithelium that exhibits moderately developed, bulbous rete pegs. The basal layer of epithelial cells exhibits mild hyperplasia with mild hyperchromatism. The parakeratin layer is eosinophilic. There is evidence of "chevroning" at the parakeratin spinous cell interface. The lamina propria contains a sparse chronic inflammatory cell infiltrate beneath the epithelium that contains a few extravasated red blood cells. Deeper sections of the specimen contain follicles of striated muscle.

DIAGNOSIS:
Left buccal mucosa: hyperparakeratosis and mild chronic mucositis consistent with snuff dippers keratosis.

P. Krasowski, D.D.S.
Chairman and Associate Professor
Department of Pathology

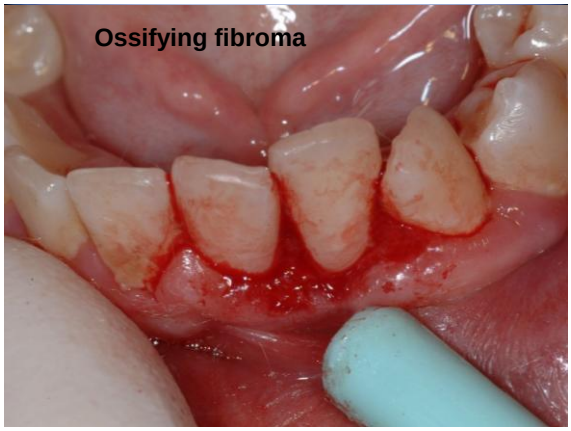
FJK:dc
ICD-9-CM: 528.6

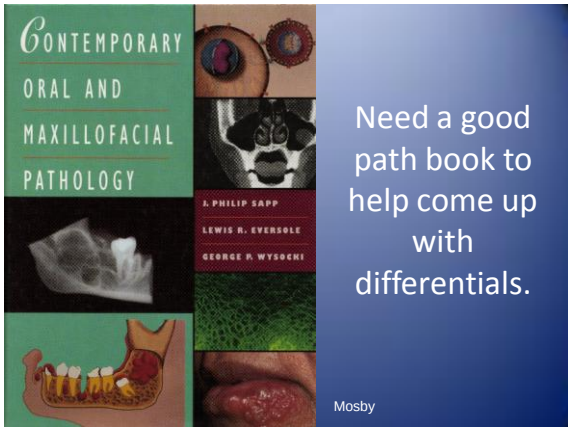


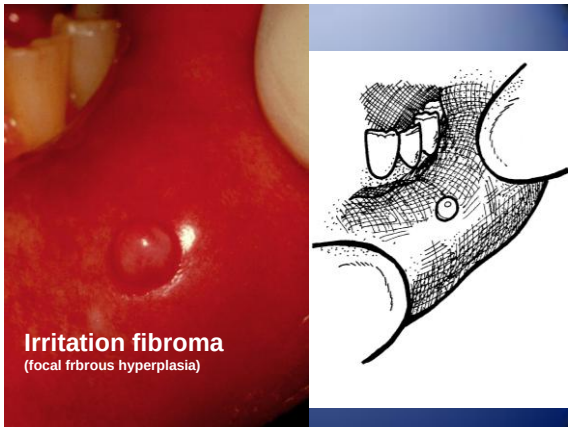


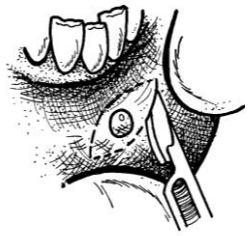

Mucous Escape Reaction.


Pregnancy tumor, fibroma....?

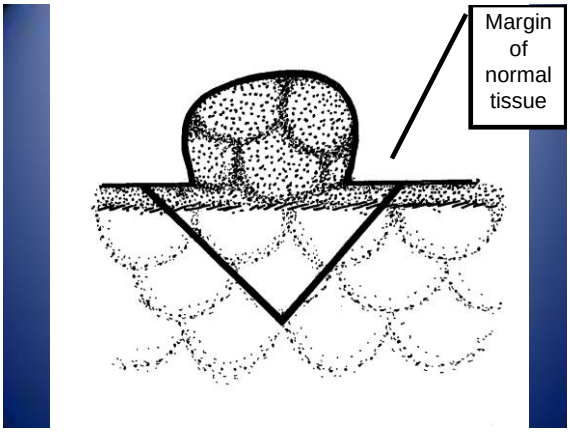

Ossifying fibroma

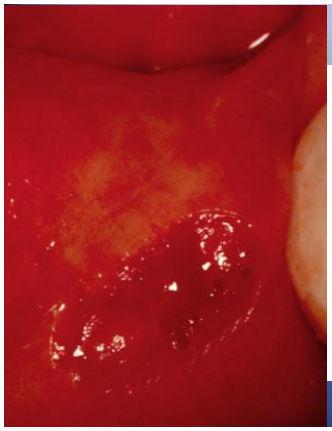

CONTEMPORARY
ORAL AND
MAXILLOFACIAL
PATHOLOGY
J. PHILIP SAPP
LEWIS R. EVERSOLE
GEORGE P. WYSOCKI
Need a good path book to help come up with differentials.
Mosby

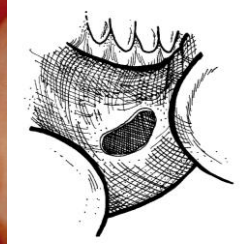

Irritation fibroma
(focal frbrous hyperplasia)



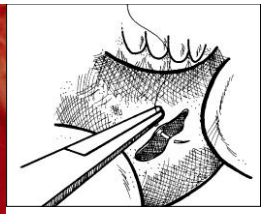
Note: Don't use laser or electrosurgery as flume could contain HPV.

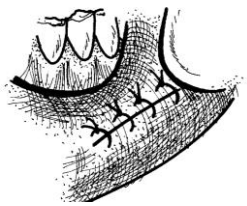


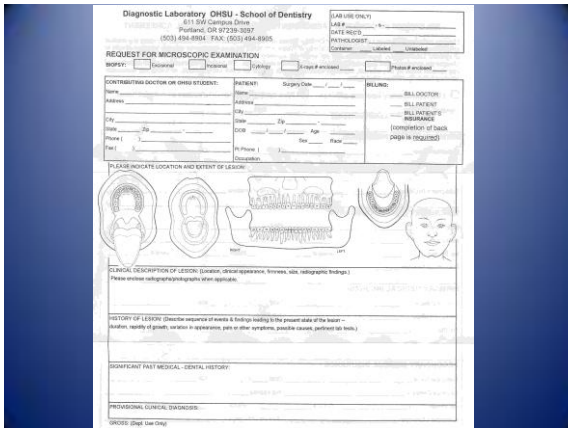













Diagnostic Laboratory OHSU - School of Dentistry
611 SW Campus Drive
Portland, OR 97239-3097
(503) 494-8904 FAX: (503) 494-8905

REQUEST FOR MICROSCOPIC EXAMINATION

BILLING:
BILL DOCTOR
BILL PATIENT
BILL PATIENT'S INSURANCE
(completion of back page is required)

PLEASE INDICATE LOCATION AND EXTENT OF LESION:

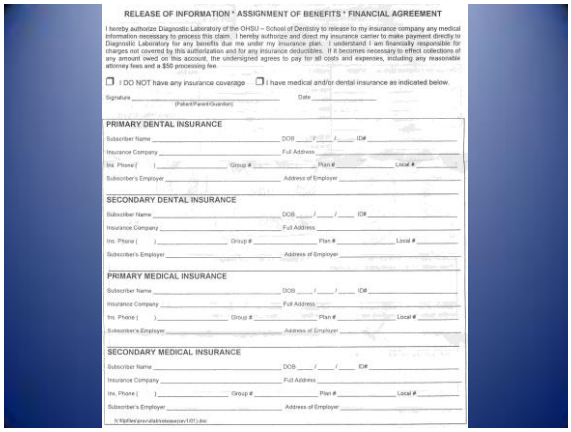
CLINICAL DESCRIPTION OF LESION: (Location, clinical appearance, firmness, size, radiographic findings.)
Please enclose radiographs/photographs when applicable.

HISTORY OF LESION: (Describe sequence of events & findings leading to the present state of the lesion – duration, rapidity of growth, variation in appearance, pain or other symptoms, possible causes, pertinent lab tests.)

SIGNIFICANT PAST MEDICAL - DENTAL HISTORY:

PROVISIONAL CLINICAL DIAGNOSIS:

GROSS: (Dept. Use Only)



RELEASE OF INFORMATION * ASSIGNMENT OF BENEFITS * FINANCIAL AGREEMENT

I hereby authorize Diagnostic Laboratory of the OHSU – School of Dentistry to release to my insurance company any medical information necessary to process this claim. I hereby authorize and direct my insurance carrier to make payment directly to Diagnostic Laboratory for any benefits due me under my insurance plan. I understand I am financially responsible for charges not covered by this authorization and for any insurance deductibles. If it becomes necessary to effect collections of any amount owed on this account, the undersigned agrees to pay for all costs and expenses, including any reasonable attorney fees and a $50 processing fee.

☐ I DO NOT have any insurance coverage ☐ I have medical and/or dental insurance as indicated below.

Signature _____ Date _____
(Patient/Parent/Guardian)

PRIMARY DENTAL INSURANCE

Subscriber Name _____ DOB ___/___/___ ID# _____
Insurance Company _____ Full Address _____
Ins. Phone ( ) _____ Group # _____ Plan # _____ Local # _____
Subscriber's Employer _____ Address of Employer _____

SECONDARY DENTAL INSURANCE

Subscriber Name _____ DOB ___/___/___ ID# _____
Insurance Company _____ Full Address _____
Ins. Phone ( ) _____ Group # _____ Plan # _____ Local # _____
Subscriber's Employer _____ Address of Employer _____

PRIMARY MEDICAL INSURANCE

Subscriber Name _____ DOB ___/___/___ ID# _____
Insurance Company _____ Full Address _____
Ins. Phone ( ) _____ Group # _____ Plan # _____ Local # _____
Subscriber's Employer _____ Address of Employer _____

SECONDARY MEDICAL INSURANCE

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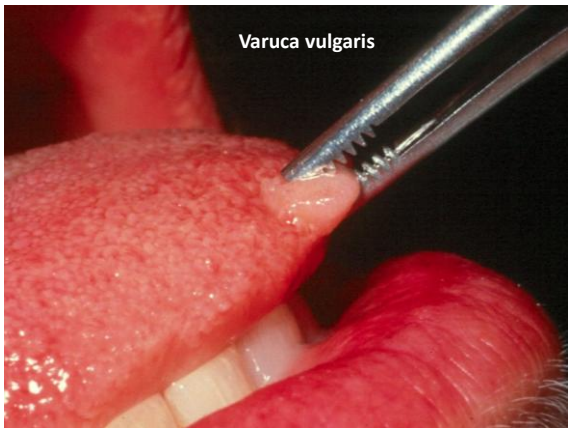
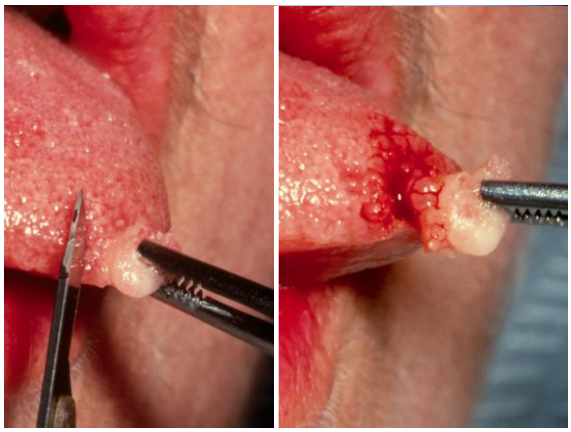
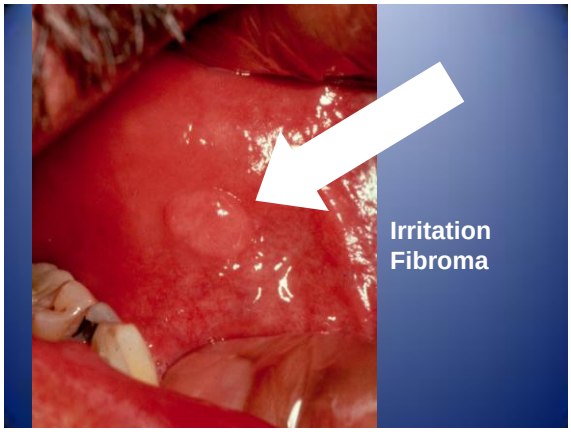
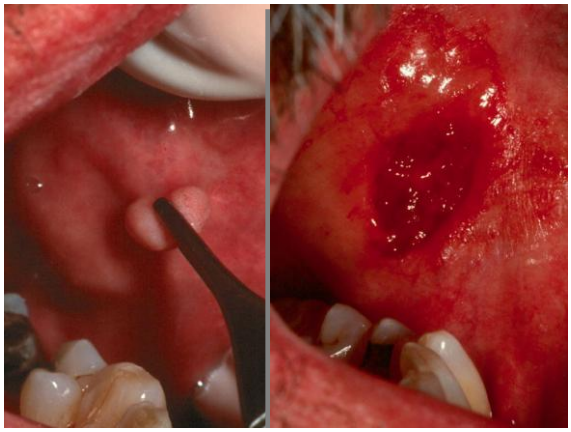
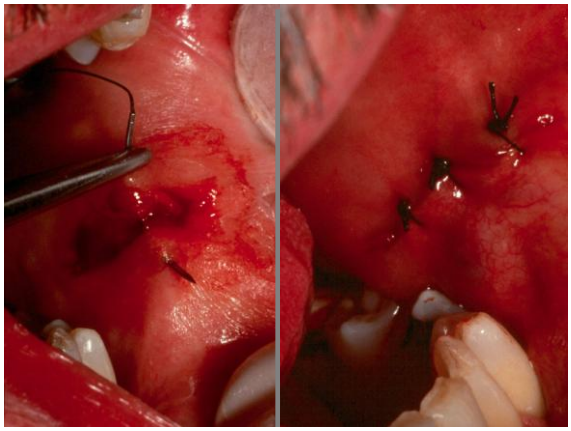
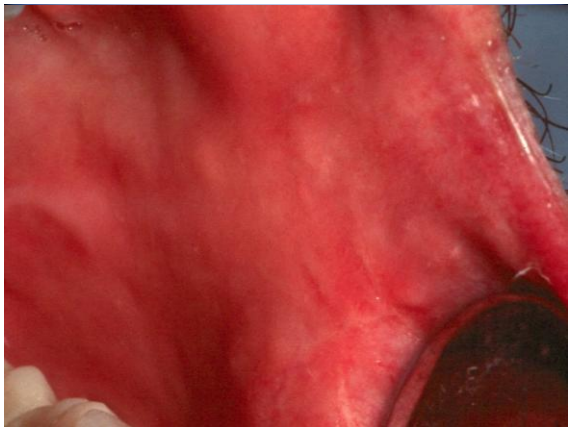






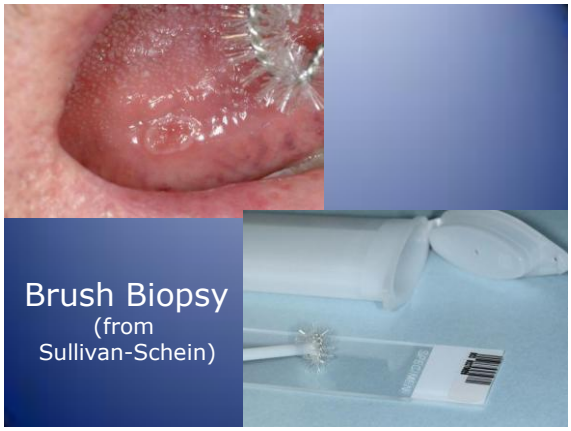


**ORAL CANCER CLINICAL DIAGNOSTIC AIDS**

- Biopsy is considered the gold standard for oral pathology diagnosis.
- Although a 2008 review of adjunctive screening procedures in the Journal of the American Dental Association concludes that the jury is still out as to whether their use actually results in higher numbers of oral cancers diagnosed or diminished oral cancer mortality and morbidity, these additional measures may augment soft tissue oral examinations and possibly expedite a biopsy.
-

**Sex Ed**
*What Every Dentist Must Know About HPV*
By Eric K. Curtis, DDS, MAGD
Featured in AGD Impact, June 2010

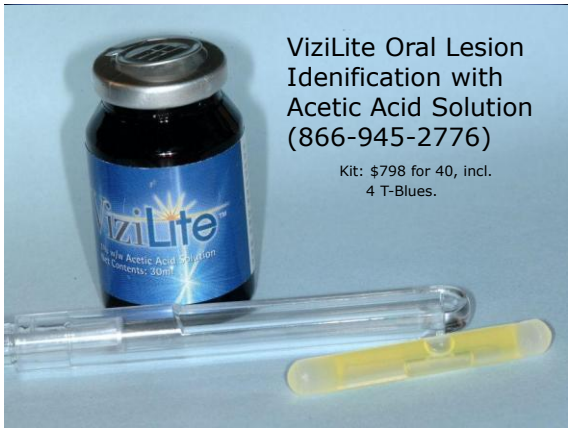
Posted on Tuesday, June 08, 2010

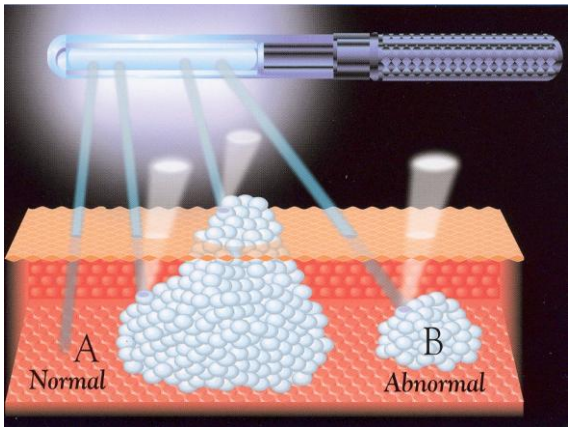


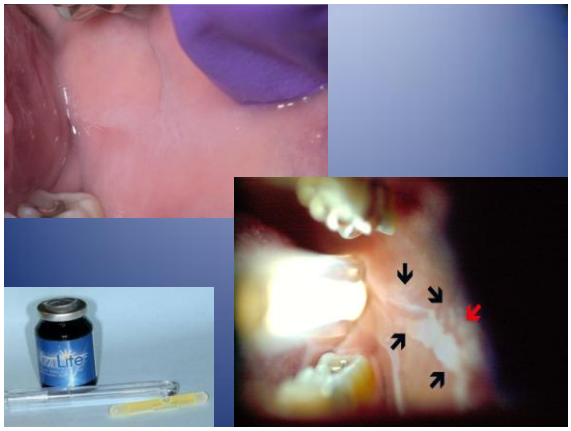
Brush Biopsy
(from
Sullivan-Schein)

- **Chemoluminescence**—When soft tissue is conditioned with 1% acetic acid and inspected under a fluorescent light,

  **a suspicious lesion, particularly at its hard-to-read borders, appears to glow white.**



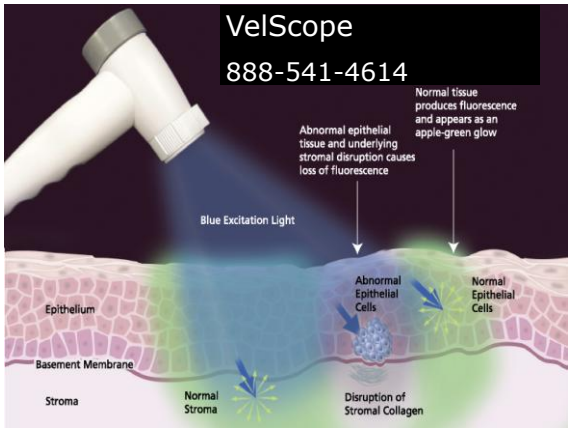



- **Toluidine blue**—This inexpensive metachromatic thiazine dye, also known as tolonium chloride, binds to DNA to achieve a vital nuclear stain marking high-risk lesions.

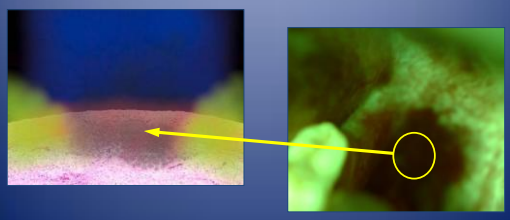
- While the National Institute of Dental and Craniofacial Research notes that toluidine blue often misses low- or moderate-grade precancerous lesions manifesting late alterations in cell structure, **the dye accurately stains most cancerous lesions.**

- **Direct optical**
- When examined under a light-emitting device such as the VELscope® or Identafi® 3000, healthy tissue normally glows.
- VELscope light produces a green fluorescence, while the violet Identafi 3000 light produces a blue fluorescence), **while dysplastic tissue may show a loss of fluorescence and appear dark.**




## Abnormal Tissue Fluorescence

- Changes in tissue fluorescence can help determine areas where molecular/structural changes have occurred



Schematic representation of tissue fluorescence

## VelScope

**Photo-documentation**

MagnaVu's Video Microscope