



# Oral Lesions & Oral Cancer

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# Overview

- Inflammatory conditions
- Reactive lesions
- Oral manifestations of systemic diseases
- Precancerous lesions
- Oral cancer

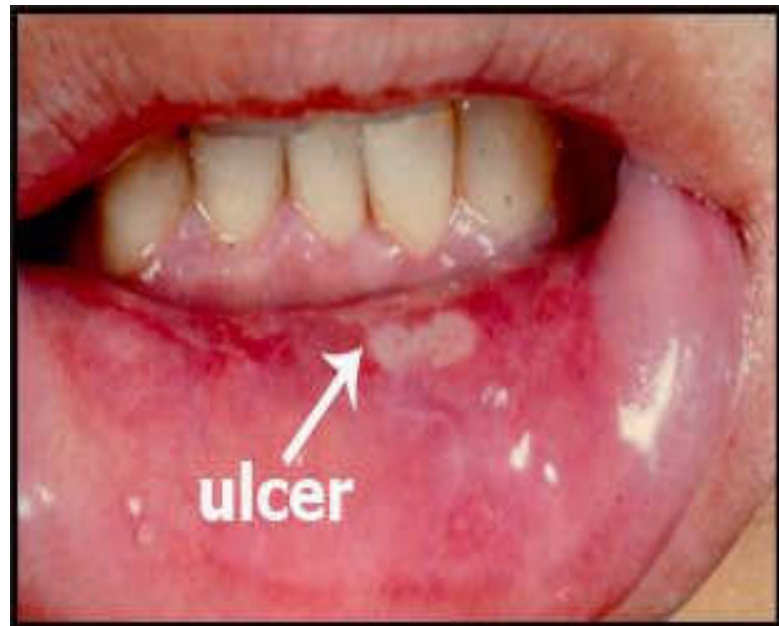


# Inflammatory lesions

- Herpes simplex virus infections (cold sore)
- HSV type 1 causative agent. But can be HSV type 2 (due to changes in sexual practices)
- Self limiting.
- Most adults harbor latent HSV type 1.  
Activated by decrease in immune status.
- Can be severe in children (acute herpetic gingivostomatitis)– diffuse involvement of oral and pharyngeal mucosa.

# Aphthous Ulcers

- Very common
- Painful and recurrent.
- Usually self limiting but can persist for weeks
- Cause unknown



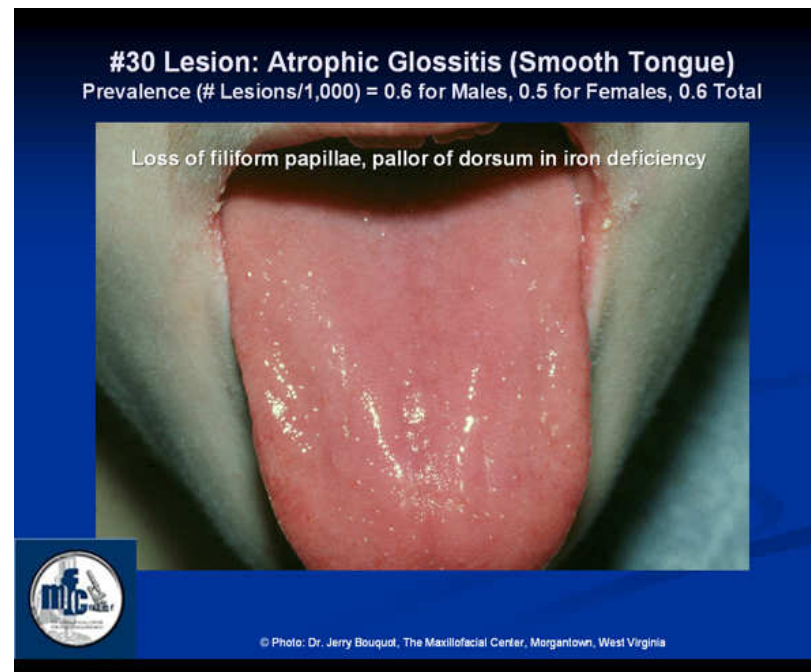


# Oral Candidiasis (Thrush)

- Can occur anywhere in the body
- Superficial, curdy, gray-white inflammatory membrane.
- Membrane composed of matted organisms in a fibrinosuppurative exudate that can be easily scrapped off to reveal an underlying erythematous inflammatory base
- Causative fungus is normal habitat of oral cavity
- Appears in immunosuppressed patients, diabetics, prolonged antibiotic use and others.

# Glossitis

- Referred to beefy red tongue seen in deficiency states.
- Appearance results from atrophy of papillae and thinning of the mucosa
- Common seen in Vit B12, riboflavin, niacin deficiency





# Reactive Lesions

- Number of lesions appear in oral cavity as reaction lesions. Most represent inflammations
- 3 notable ones are:
  - Irritation fibroma
  - Pyogenic granuloma.
  - Peripheral giant cell granuloma (giant cell epulis)

Read up on the physical characteristics of these reactive lesions



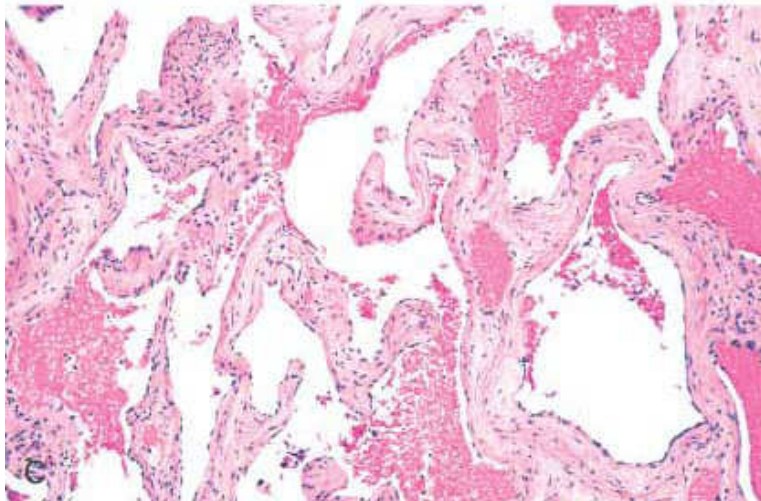
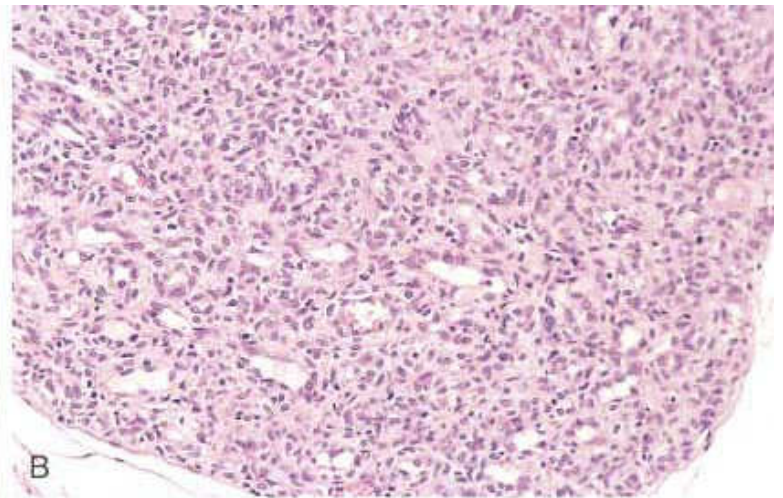
# Oral Manifestations of Systemic Diseases

TABLE 16-1 -- Oral Manifestations of Some Systemic Diseases

<i>Infectious Diseases</i>	
Scarlet fever	Fiery red tongue with prominent papillae (raspberry tongue); white coated tongue through which hyperemic papillae project (strawberry tongue)
Measles	A spotty enanthema in the oral cavity often precedes the rash; ulcerations on the buccal mucosa about Stensen duct produce Koplik spots
Infectious mononucleosis	An acute pharyngitis and tonsillitis that may cause coating with a gray-white exudative membrane; enlargement of lymph nodes in the neck
Diphtheria	A characteristic dirty white, fibrinosuppurative, tough, inflammatory membrane over the tonsils and retropharynx
Human immunodeficiency virus infection; AIDS	Predisposition to opportunistic oral infections, particularly with herpesvirus, <i>Candida</i> , and other fungi; sometimes oral lesions of Kaposi sarcoma and hairy leukoplakia (described in text)
<i>Dermatologic Conditions</i> *	
Lichen planus	Reticulate, lacelike, white keratotic lesions that rarely become bullous and ulcerated; seen in more than 50% of patients with cutaneous lichen planus; rarely, is the sole manifestation
Pemphigus	Usually vulgaris; vesicles and bullae prone to rupture, leaving hyperemic erosions covered with exudate
Bullous pemphigoid	Oral lesions resemble macroscopically those of pemphigus but can be differentiated histologically
Erythema multiforme	A maculopapular, vesiculobullous eruption that sometimes follows an infection elsewhere, ingestion of drugs, development of cancer, or a collagen vascular disease; when it involves the lips and oral mucosa, it is referred to as <i>Stevens-Johnson syndrome</i>
<i>Hematologic Disorders</i>	
Pancytopenia (agranulocytosis, aplastic anemia)	Severe oral infections in the form of gingivitis, pharyngitis, tonsillitis; may extend to cellulitis of the neck ( <i>Ludwig angina</i> )
Leukemia	With depletion of functioning neutrophils, oral lesions may appear like those in pancytopenia
Monocytic leukemia	Leukemic infiltration and enlargement of the gingivae, often with accompanying periodontitis
<i>Miscellaneous</i>	
Melanotic pigmentation	May appear in Addison disease, hemochromatosis, fibrous dysplasia of bone (Albright syndrome), and Peutz-Jegher syndrome (gastrointestinal polyposis)
Phenytoin (Dilantin) ingestion	Striking fibrous enlargement of the gingivae
Pregnancy	A friable, red, pyogenic granuloma protruding from the gingiva ("pregnancy tumor")
Rendu-Osler-Weber syndrome	Autosomal dominant disorder with multiple aneurysmal telangiectasias from birth beneath the skin or mucosal surfaces of the oral cavity, lips, gastrointestinal tract, respiratory tract, and urinary tract as well as in internal viscera



# Benign Lesions



Ref: Robins Pathological Basis of Diseases, 7<sup>th</sup> Ed

Figure 16-2 Fibroma. Smooth, pink, exophytic nodule on the buccal mucosa.



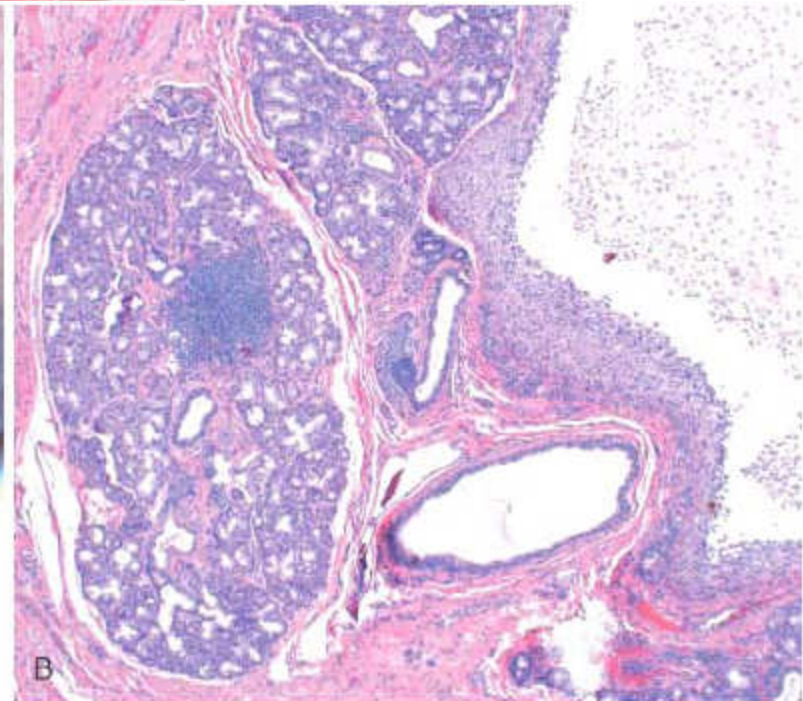
Apthous ulcers



Pyogenic granuloma



mucocele







# Precancerous Lesions

- Leukoplakia
- Erythroplakia
- Papillomas – read up on your own.

Self directed reading:

- Define leukoplakia & erythroplakia
- Describe the physical characteristics of leukoplakia & erythroplakia. What is the difference between these two precancerous lesions?
- List risk factors for developing leukoplakia & erythroplakia

# Erythroplakia

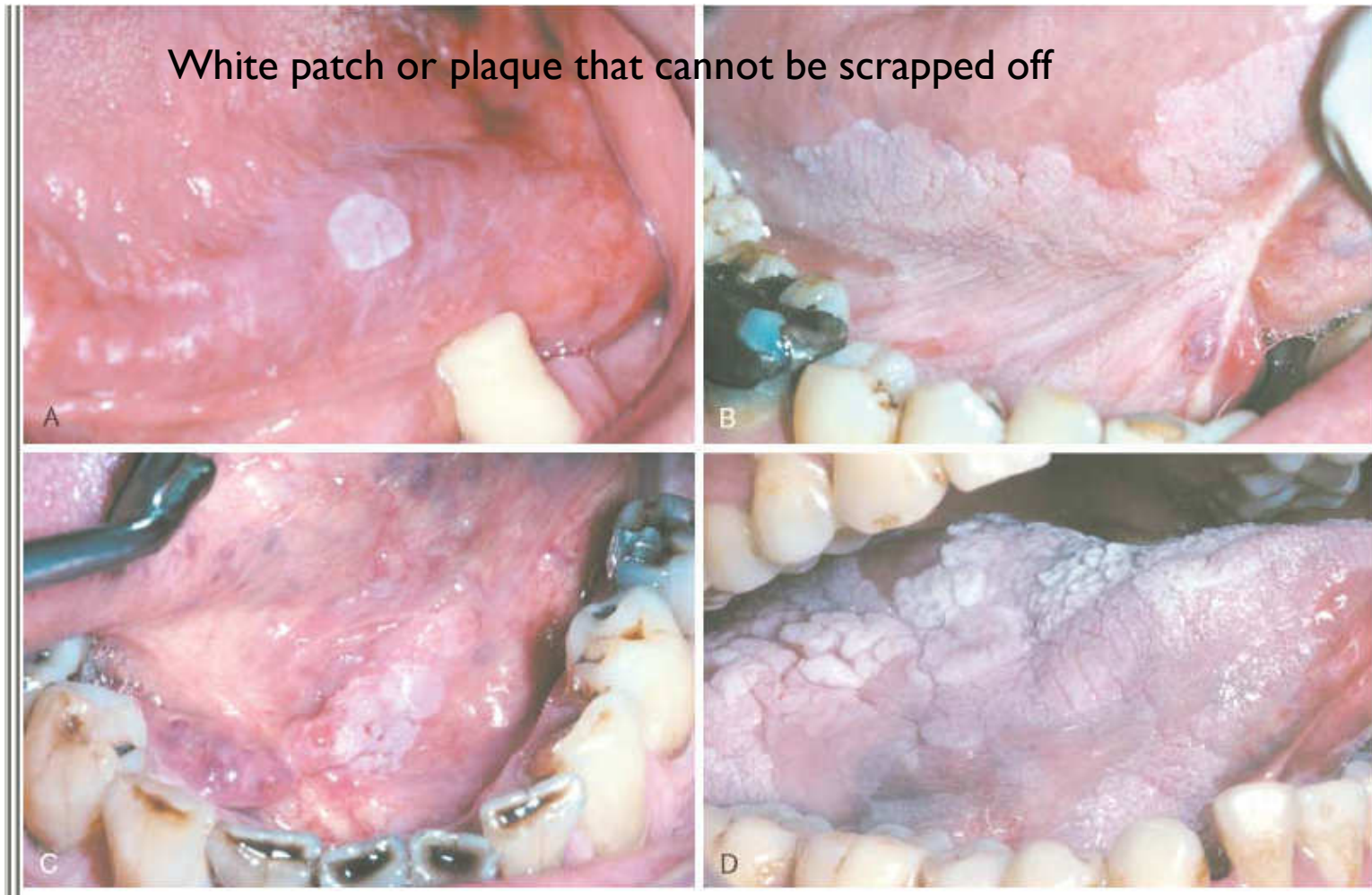
Figure 16-5 Erythroplakia. *A*, Lesion of the maxillary gingiva. *B*, Red lesion of the mandibular alveolar ridge. Biopsy of both lesions revealed carcinoma in situ.



Red macule or plaque with defined borders. Micro commonly show epithelial dysplasia show carcinoma-in-situ or invasive carcinoma

Ref: Robins Pathological Basis of Diseases, 7<sup>th</sup> Ed.

# Leukoplakia – wide variation



Ref: Robins Pathological Basis of Diseases, 7<sup>th</sup> Ed



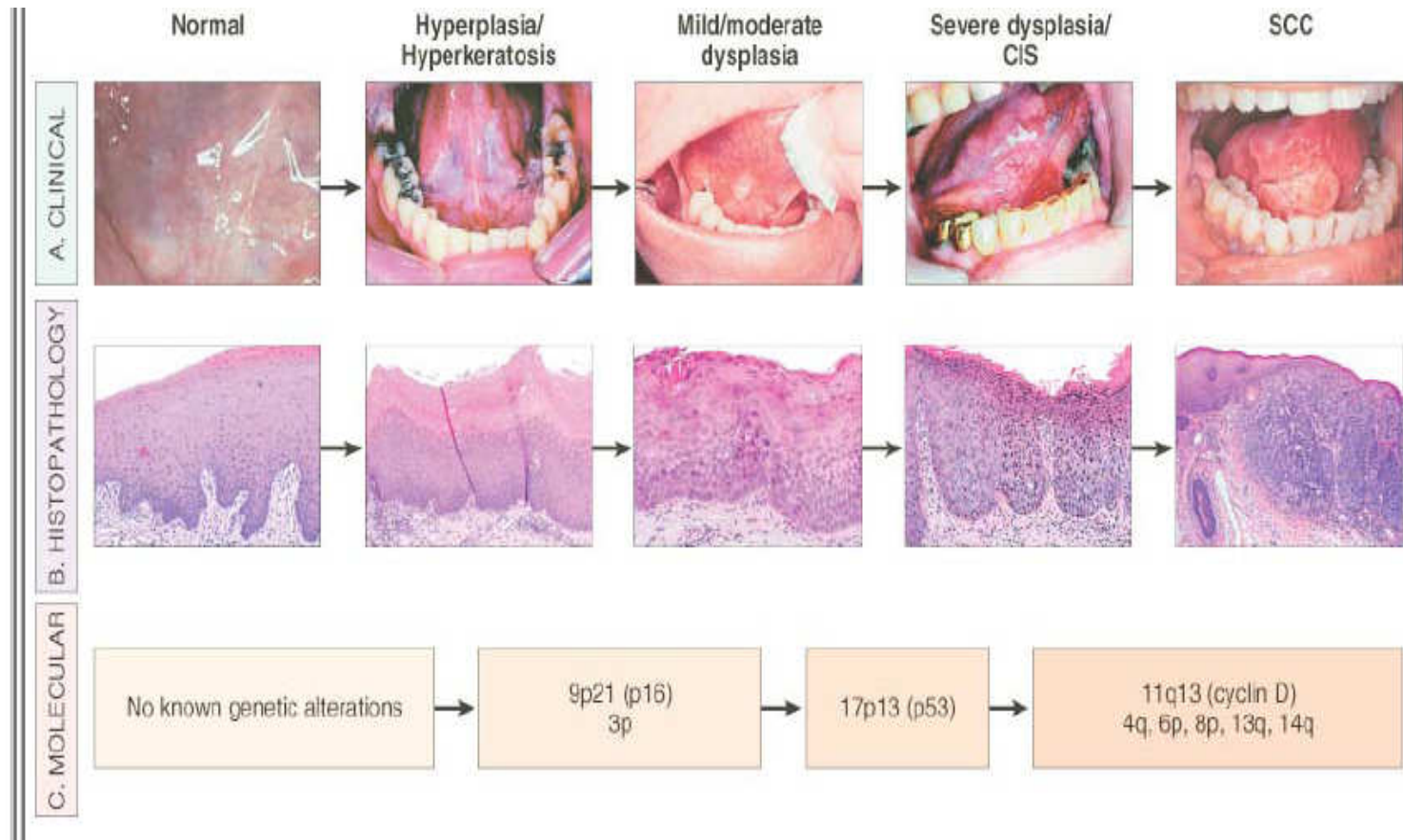
# Squamous Cell Carcinoma

- Forms 95% of cancers of the oral cavity, including tongue.
- Common cancer in PNG
- Strong link between smoking and chewing betel nut.
- Incidence: 50-70 but younger in PNG.

Self study: List the risk factors associated with squamous cell carcinoma



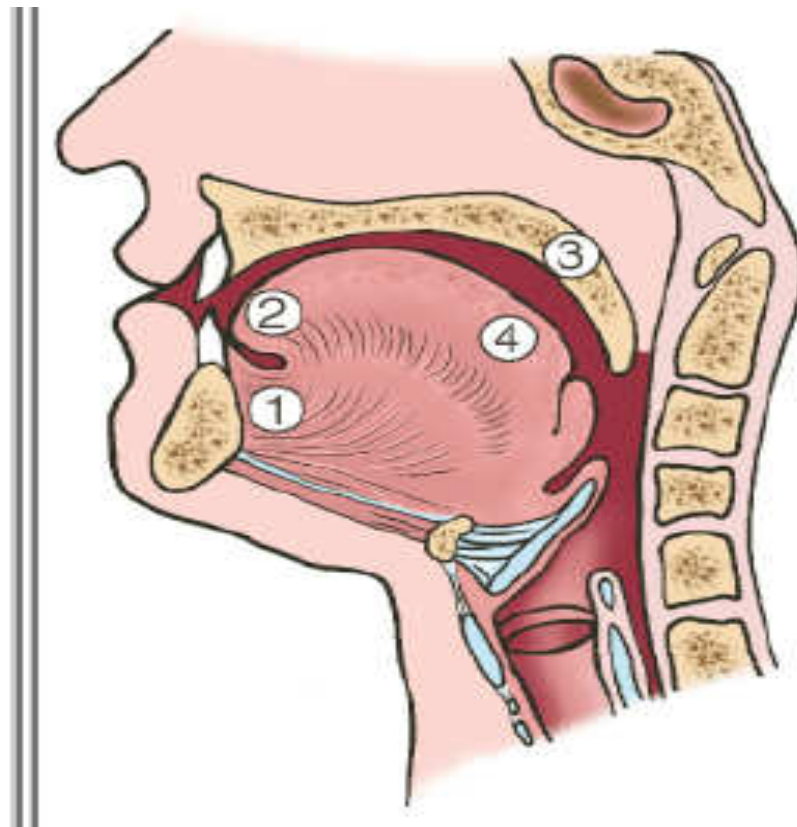
# Progression of Oral Carcinoma



Histological & molecular progression of oral cancer



# Common Sites for Oral CA



Common sites in  
numerical order of  
frequency

Ref: Robins Pathological Basis of Diseases, 7<sup>th</sup> Ed.

# Relative Risk factors for Oral Cancers

Habit	Relative Risk %
• None	• 1%
• Bettle nut Chewing	• 4%
• Smoking only	• 3-6%
• Bettel chewing+Tobacco chewing	• 8-15%
• Bettel chewing+Smoking	• 4-25%
• Bettel+Tobacco+smoking	• 20%



# SCC - Morphology

- Site: anywhere in oral cavity
- Early: raised, firm, pearly plaques or irregular, rough mucosal thickening. Can be mistaken for leukoplakia.
- Late: protruding masses or irregular, shaggy ulcer with elevated firm rolled borders.
- Metastasis: infiltrate locally first. Later to mediastinal nodes, liver, lungs & bones.



# Laboratory Diagnosis

- Biopsy for tissue diagnosis
- Put biopsy specimen in formalin **NOT** saline (autolysis).



# END

Main reference: Robins Pathological Basis of Disease.

Download seminar notes in PDF format at:

<http://pathologyatsmhs.wordpress.com/>

Useful website:

[www.webpathology.com](http://www.webpathology.com)

<http://library.med.utah.edu/WebPath/>

<http://pathology.jhu.edu/>