

New Classification of Dental Diseases



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New Classification

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Classification of oral diseases of HIV-associated immune suppression (ODHIS)

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Classification of oral diseases of HIV – associated immune suppression (ODHIS)

- Present classification systems for HIV – associated oral lesions developed in the early 1990's
- HAART
- Changing pattern of oral conditions
- New system needed

Classification of oral diseases of HIV - associated immune suppression (ODHIS)

- System should reflect:
 - Changes in epidemiology of oral lesions
 - Therapeutics
 - Development of lesions and immune systems
 - Oral lesions to oral disease
- Oral disease: abnormality characterized by a defined set of signs and symptoms in the oral cavity, extending from the vermilion border of the lip to the oropharynx, with the exception of salivary gland disease

New Classification

- Group 1 – ODHIS associated with severe immune suppression ($CD4 < 200$ cells/mm³)
- Group 2 – ODHIS associated with immune suppression ($CD4 < 500$ cells/mm³)
- Group 3 – ODHIS assumed associated with immune suppression
 - A) More commonly observed
 - B) Rarely reported
- Group 4 – Therapeutically-induced oral diseases
- Group 5 – Emerging oral diseases

Classification of oral disease of HIV-associated immune suppression (ODHIS)

- Oral diseases do not belong exclusively to one classification Group
- Overlap may exist

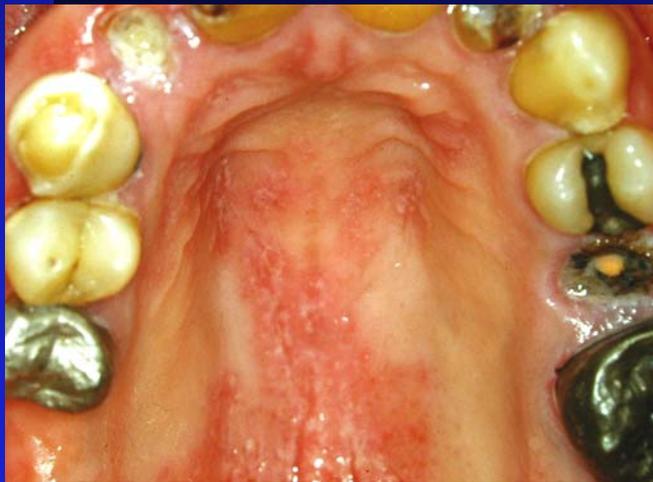
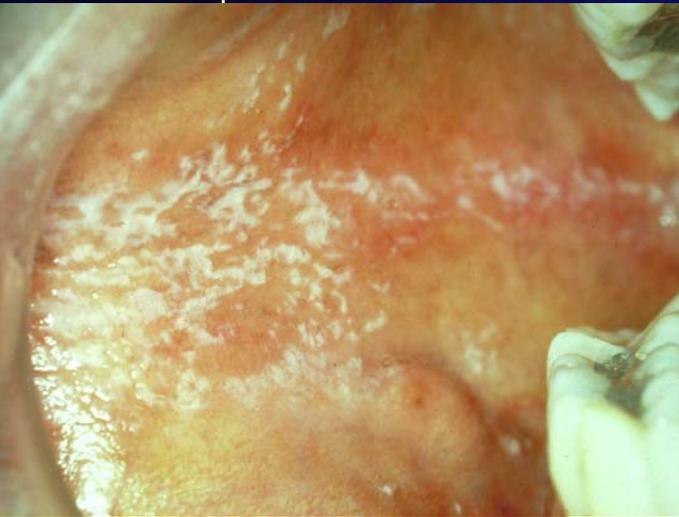
Use for the New Classification

- Identifying undiagnosed individuals
- Provides additional rationale for HIV testing
- Affects access and type of HIV-related healthcare
- Provides clinical markers for therapeutic interventions and efficacy

Group 1. ODHIS associated with severe immune suppression (CD4<200 cells/mm³)

- Major recurrent aphthous ulcer
- Neutropenia-induced ulcers
- Necrotizing ulcerative periodontitis
- Necrotizing stomatitis
- Cytomegalovirus (CMV)
- Chronic HSV
- Histoplasmosis
- Esophageal, pseudomembranous, and hypertrophic candidiasis
- Oral hairy leukoplakia
- Kaposi's sarcoma

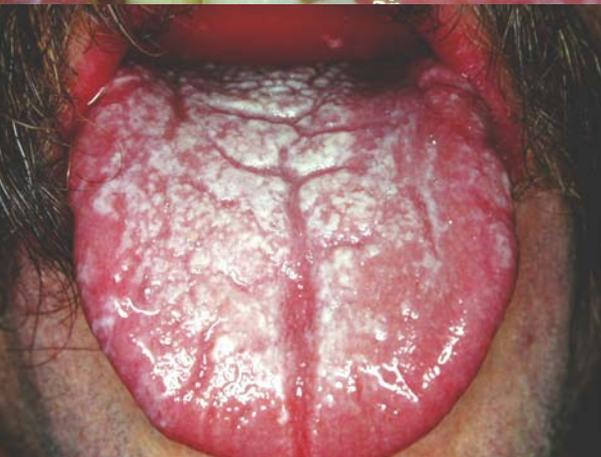
Pseudomembranous Candidiasis



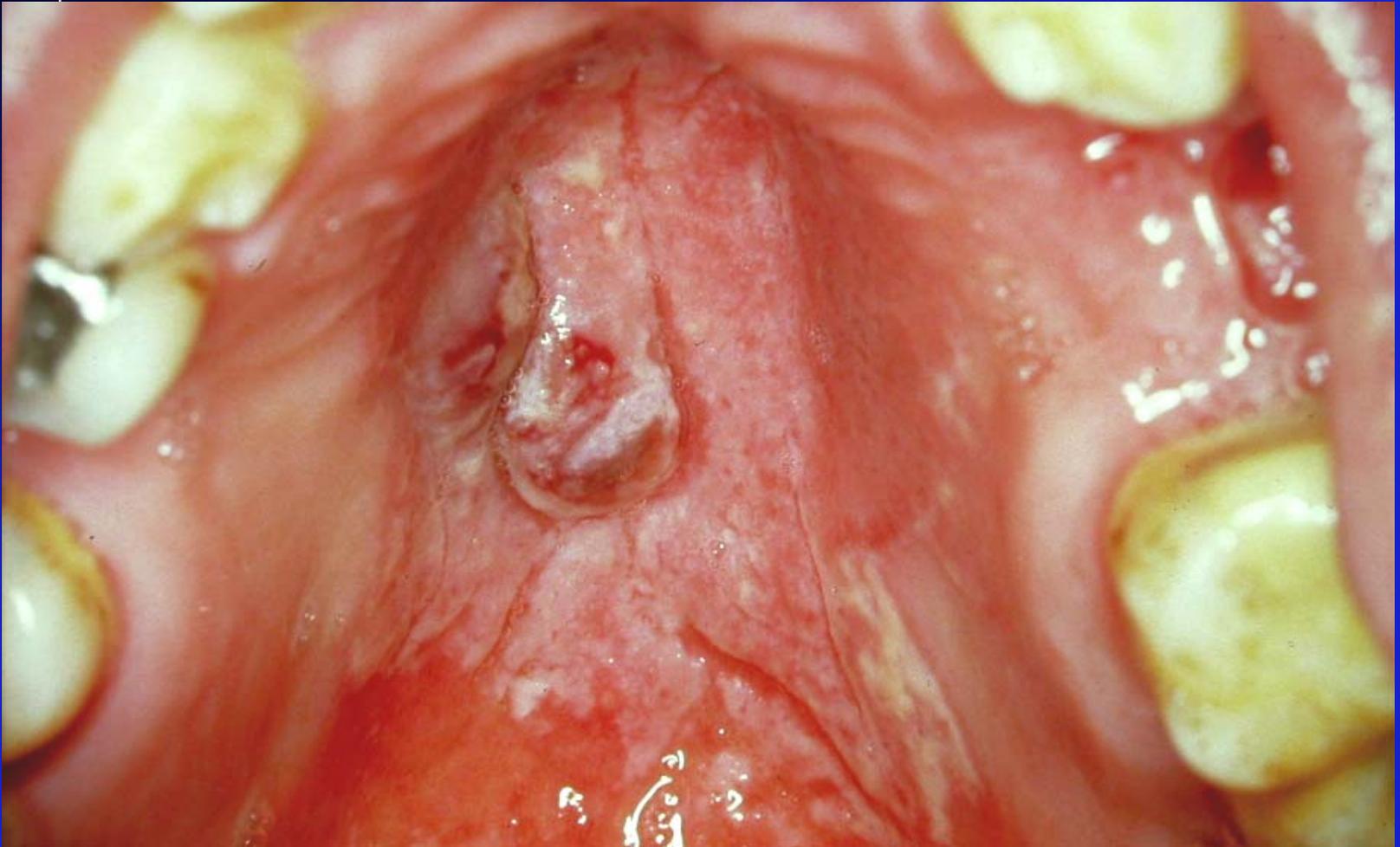
Esophageal Candidiasis



Hyperplastic Candidiasis



Pseudomembranous Candidiasis / KS



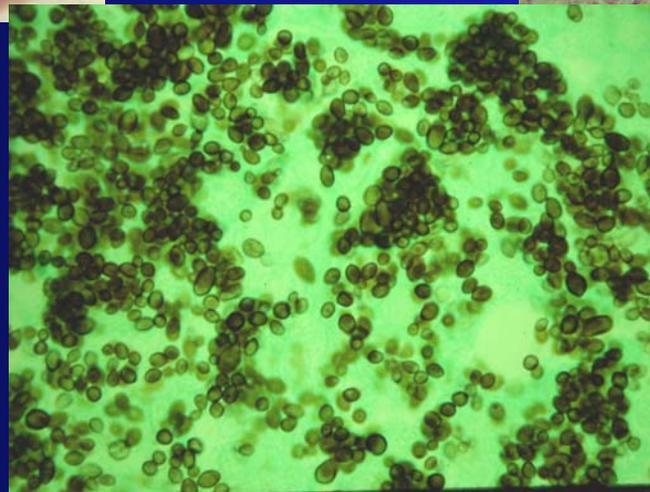
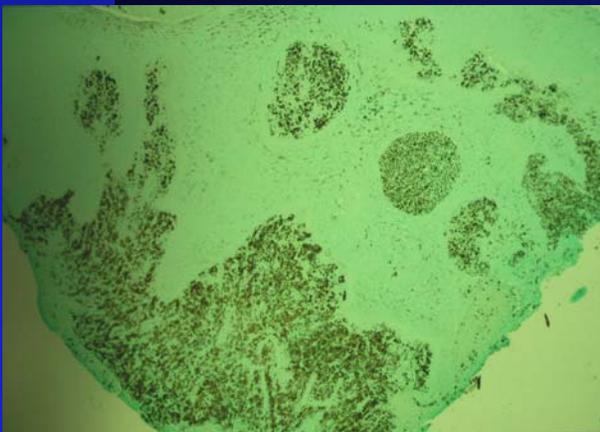
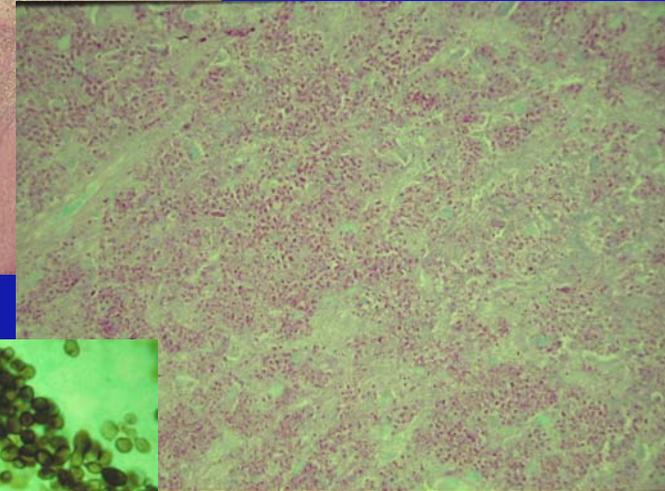
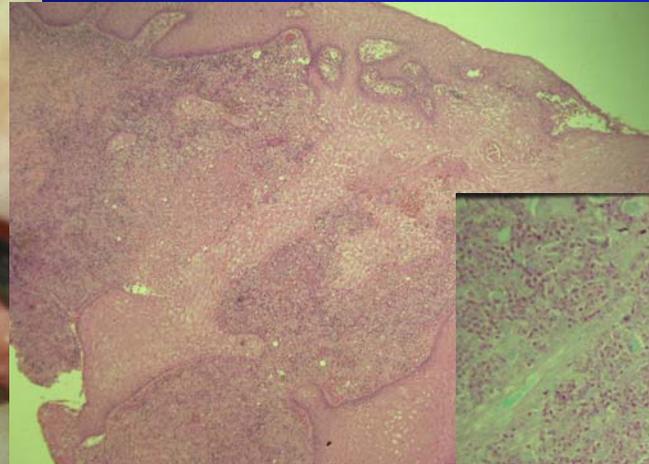
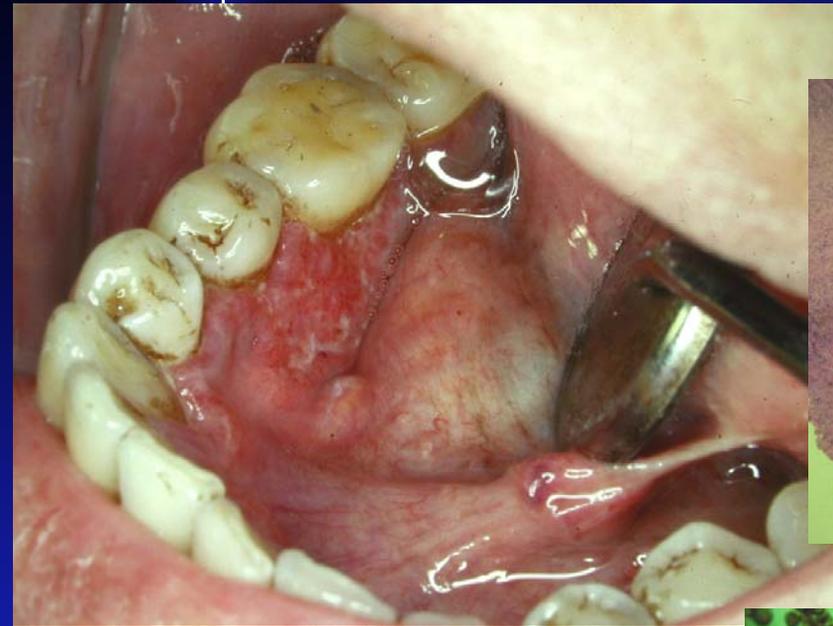
Kaposi's Sarcoma



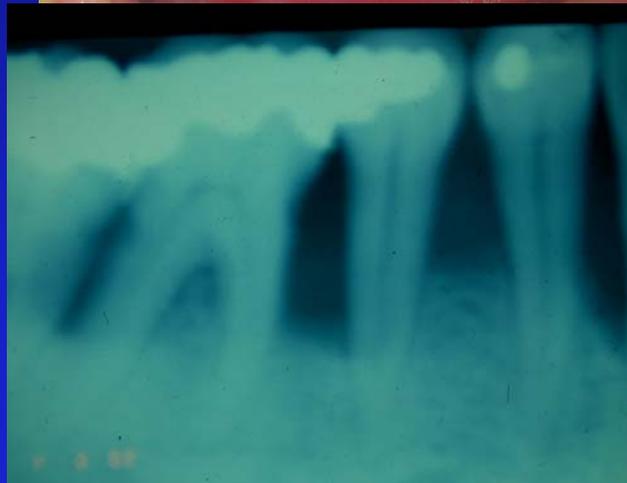
Kaposi's Sarcoma



Histoplasmosis



Periodontitis



Idiopathic Necrotizing Stomatitis



Consider:

- Bacterial
- Viral
- Fungal
- Combination

Necrotizing Stomatitis



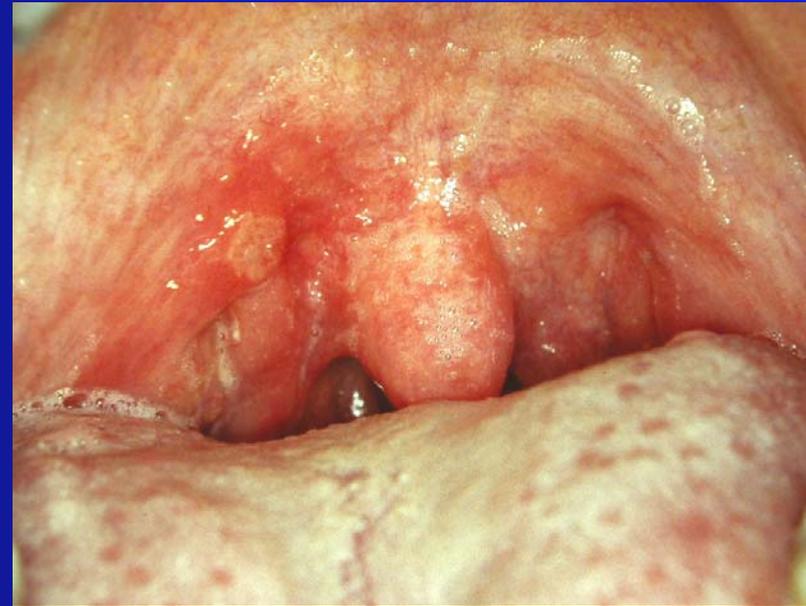
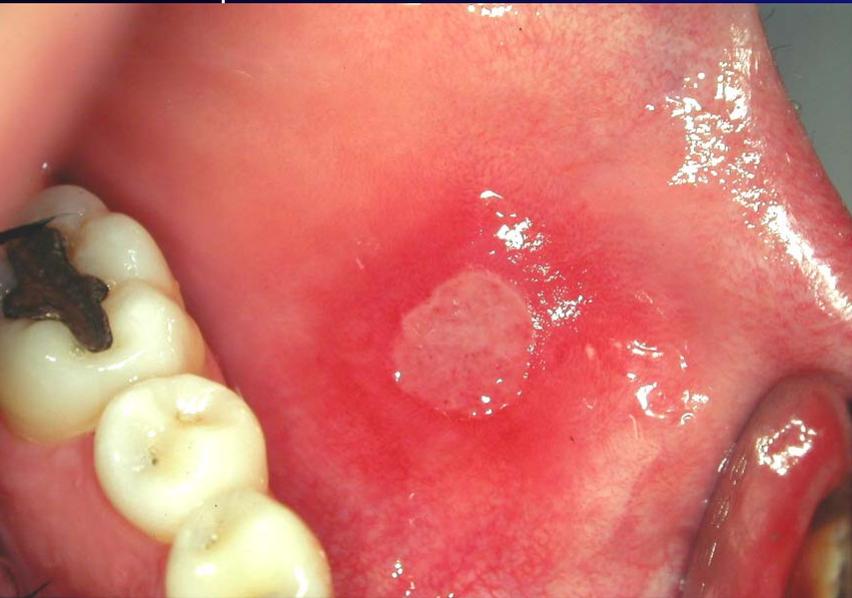
Chronic HSV



Group 2. ODHIS associated with immune suppression (CD4,500 cells/mm³)

- Major recurrent aphthous ulcer
 - Increased frequency, harder to treat, atypical location
- Erythematous candidiasis
- Salivary gland disease
 - Drug induced low salivation
 - Facial palsy
 - Neuropathies
- Hyposalivation
- Human papilloma virus (HPV)
- Linear gingival erythema
- Non-Hodgkin's lymphoma

Aphthous Ulcer



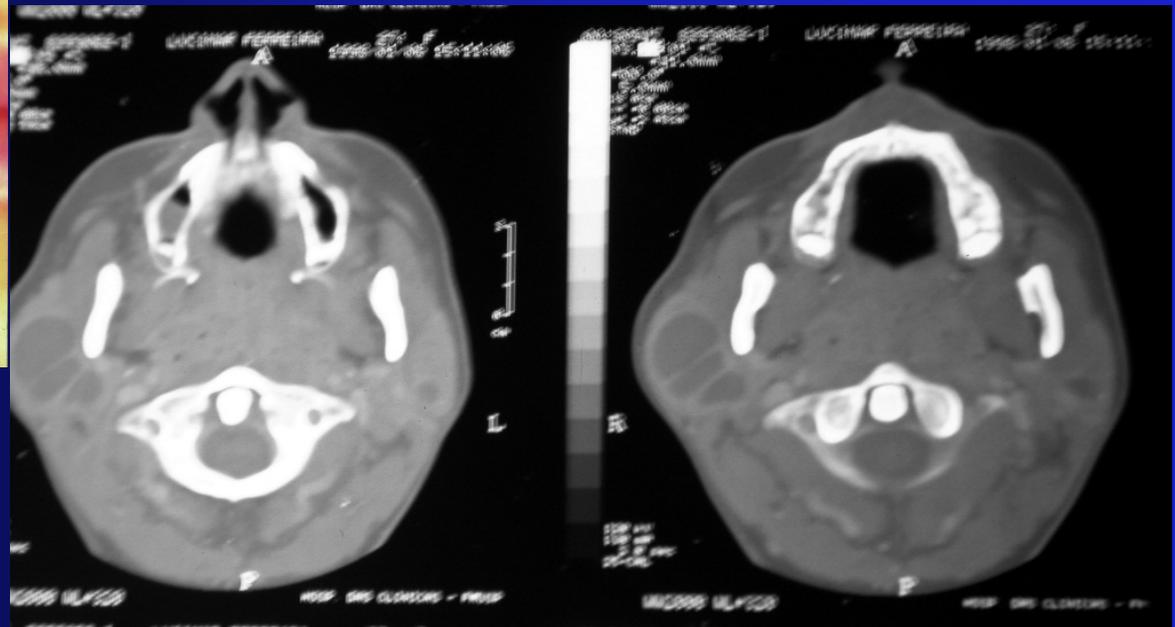
Erythematous Candidiasis



Linear Gingival Erythema



Lymphoepithelial Cyst



Human Papilloma Virus



Group 3. ODHIS assumed associated with immune suppression

- More commonly observed
 - Angular candidiasis
 - Herpes labialis
 - Intra-oral herpes
 - Minor aphthous ulcers
- Rarely reported
 - Bacillary epithelioid angiomatosis
 - Tuberculosis
 - Deep-seated mycosis (except histoplasmosis)
 - Molluscum contagiosum
 - Varicella Zoster Virus (VZV)

Angular Candidiasis



HSV Labialis



Intra-oral Herpes



Minor Aphthous Ulcers



Silverman, Eversole, Truelove. Essentials of Oral Medicine. London, B.C. Decker, 2001.

Coccidioidomycosis



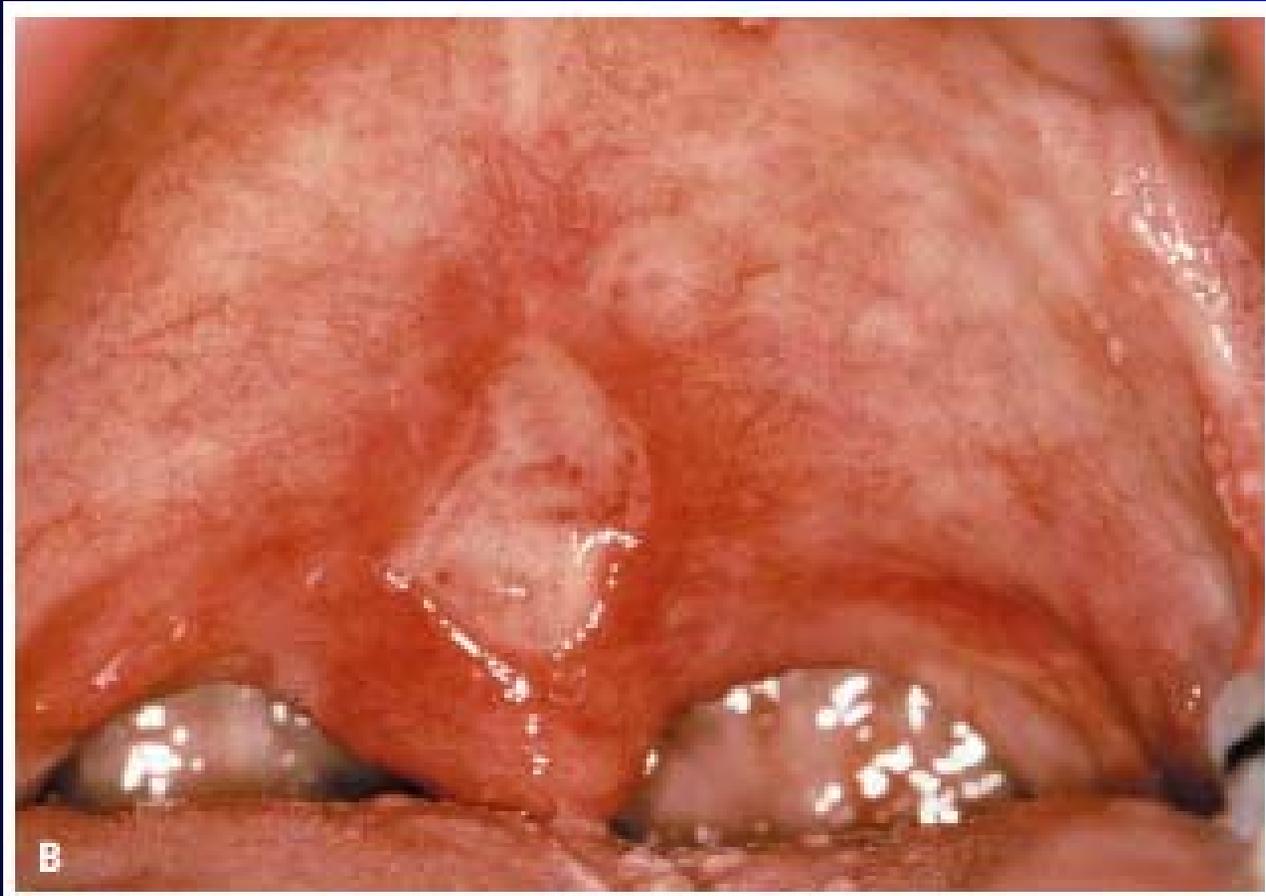
Group 4. Therapeutically-induced oral diseases

- Side-effect
 - Melanotic hyperpigmentation
 - Ulcers
 - Hyposalivation
 - Lichenoid drug reaction
 - Neutropenia-induced ulcers
 - Thrombocytopenia
 - Lypodystrophy-associated oral changes
 - Perioral paresthesia
 - Steven Johnson's?
 - Exfoliative cheilitis?
- Resistance-induced disease
 - Different *Candida* spp and strains
 - HSV

Antiretrovirals and Adverse Reactions

- Drugs
 - Indinavir
 - Saquinavir
 - Amprenavir
 - Nevirapine
 - Delavirdine
 - Efavirenz
 - Stavudine
 - Didanosine
- Adverse reactions
 - Oral ulcers
 - Stevens Johnson's
 - Taste changes
 - Dryness
 - Perioral paresthesia
 - Thrombocytopenia

Ulcers - Medication Induced



Silverman, Eversole, Truelove. Essentials of Oral Medicine. London, B.C. Decker, 2001.

Recurrent HSV



Group 5. Emerging oral diseases

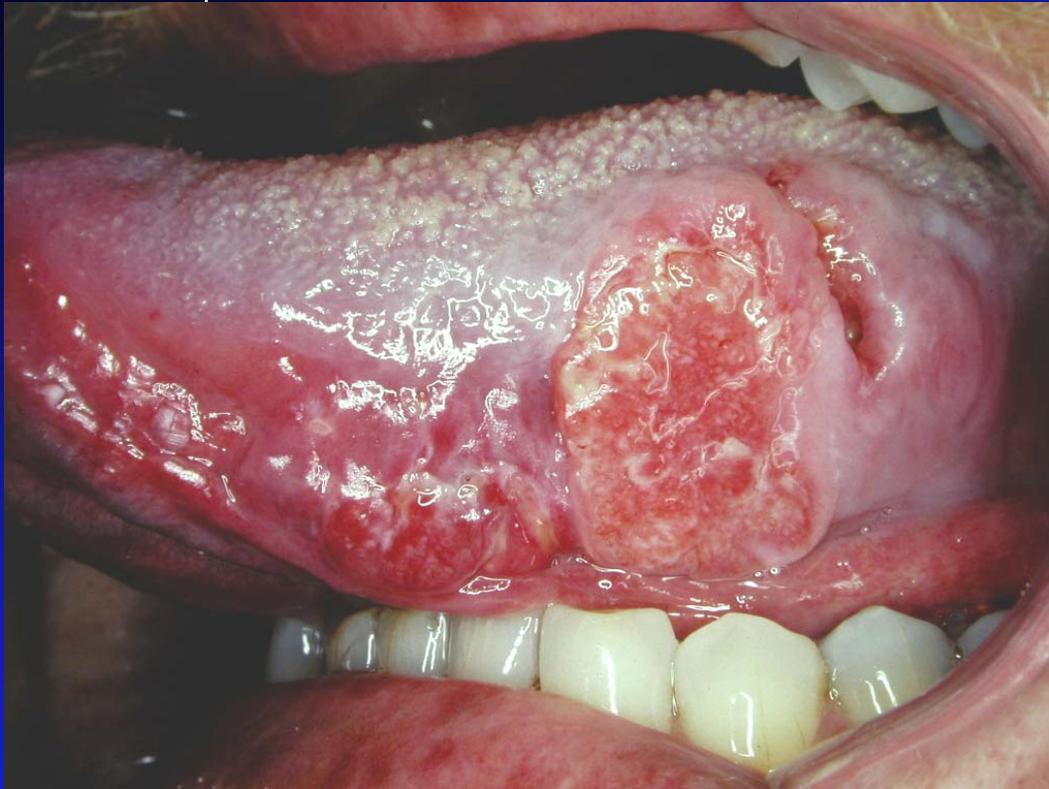
- Human papilloma virus, several HPV types (may be associated with immune reconstitution)
- Erythema migrans
- Variants of Non-Hodgkin's Lymphoma (NHL B-cell types)
- Epithelial neoplasms
- Aggressive interproximal dental caries

Condyloma Accuminatum



**HPV
Genotypes
6 & 11**

Squamous Cell Carcinoma



Trends in Cancer and HIV

- Between 1996-2002, KS and cervical cancer declined, not NHL
- Among Chicago clinic patients
 - ↑ lung (RR = 3.63),
 - HD (RR = 77.43),
 - anorectal (RR = 5.03),
 - melanoma (RR = 4.10),
 - head/neck (RR = 9.96)
- Compared to general population, incidence has notably increased in HIV-infected individuals

Aggressive Interproximal Caries

