

# ORAL PATHOLOGY

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Inland Empire Periodontal Study Club

# Roadmap

- ⦿ Normal/Healthy Oral Cavity
- ⦿ Acute Gingival Diseases
- ⦿ Vesiculo-erosive Lesions/Desquamative
- ⦿ Benign Growths
- ⦿ Carcinoma In-situ
- ⦿ Dental Pain/Abscesses

# Normal/Healthy Oral Cavity



# Normal/Healthy Oral Cavity



# Floor of Mouth



# Tongue



# Normal/Healthy Oral Cavity

- Firm/Pink gingiva
- No caries
- No palpable masses
- No swelling
- No sinus tracts

# Necrotizing Periodontal Diseases

- Necrotizing Ulcerative Gingivitis (NUG)

# NUG

## Clinical Features

- Pain
- Interdental (soft tissue) cratering
- Most characteristic finding is necrotic punched out papillae, covered with a gray pseudomembrane
- Gingival Bleeding

# NUG

## Clinical Features

- Lymphadenopathy
  - Increased salivation
  - Fever and malaise
  - Fetid odor
- 
- All of the above may occur







# Acute Herpetic Gingivostomatitis

- Etiology
  - HSV type I
  - Equal in males and females
  - Most common < age 6
  - Can be seen in adolescents and adults but **MOST** common below age of 6

# Herpetic Gingivostomatitis

## Oral Signs

- Diffuse involvement of gingiva and oral mucosa
- Vesicles/ulcers
- Usually 7-10 day course

# Gingivostomatitis

## Oral/Systemic Symptoms

- ⦿ Generalized soreness of mouth
- ⦿ Herpes labialis may accompany intraoral disease
- ⦿ Common to find lymphadenopathy
- ⦿ Fever and malaise
- ⦿ May follow debilitating disease
- ⦿ Anxiety, stress, or exhaustion may predispose









# Gingivostomatitis

- Recurrent herpes labialis- virus ascends through the sensory and autonomic ganglia
- Resides in the trigeminal ganglion
- Activated by overexposure to sunlight, trauma, fever, or stress

# Herpes Labialis



# Treatment

- Generally palliative care only
- Acyclovir if detected prior to vesicle formation
- Xylocaine mouth rinse
- Hydration
- Patient education
- Lysine?

# Desquamative Gingivitis Oral Mucous Membrane Diseases

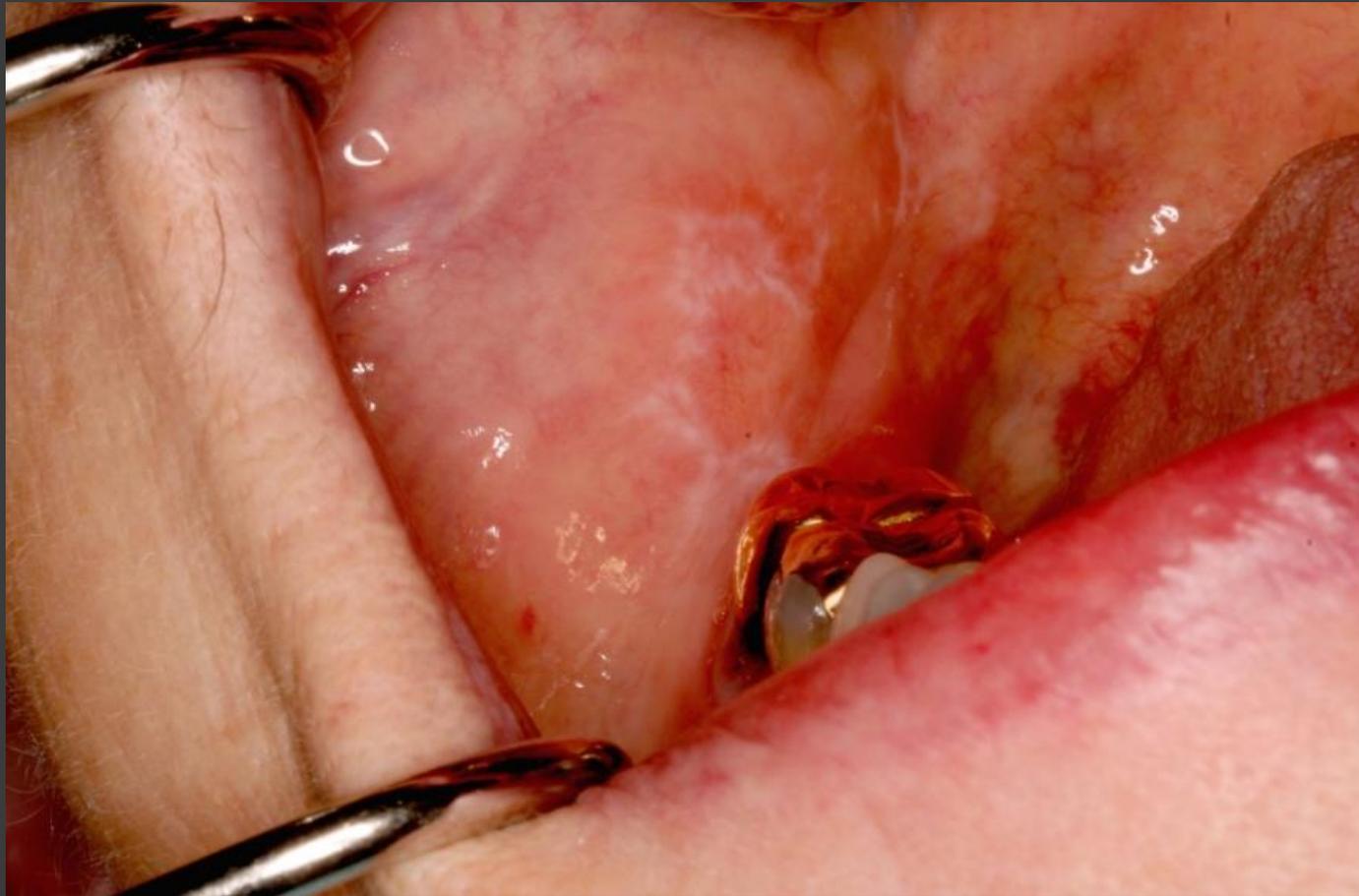
- ◉ Desquamative Gingivitis-NOT a specific disease entity, a gingival response associated with a variety of conditions
- ◉ Dermatoses- Lichen planus, BMMP, Pemphigus, Erythema Multiforme, Lupus Erythematosus

# Lichen Planus

- Common, chronic dermatosis
- Middle aged and older females
- Hyperkeratosis
- Autoimmune etiology
- Oral lesions-most common are reticular and erosive, both follow a chronic course that waxes and wanes
- No cure!

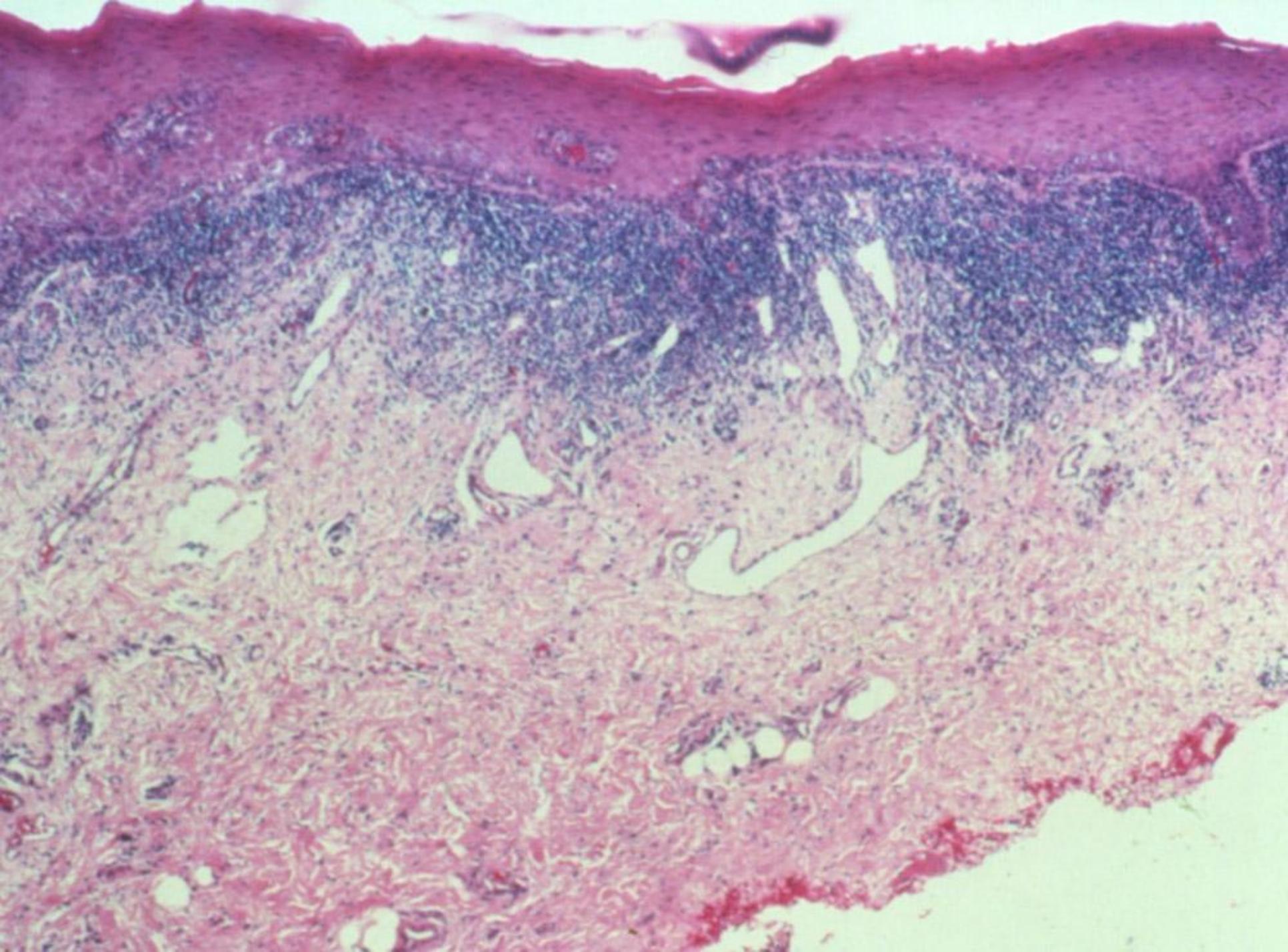


# Lichen Planus



# Lichen Planus

- ⦿ Gingival lesions-10% of the patients have lesions restricted to the gingiva
  - Some lesions may be very painful
- ⦿ Histologic evaluation
  - Hyperkeratosis
  - Degeneration of basal layer
  - “Saw-toothed” rete ridges
  - Dense infiltrate in lamina propria



# Lichen Planus

- ⦿ Differential-squamous cell, vesiculobullous disorders
- ⦿ Treatment-only the erosive or ulcerative lesions require treatment, usually with topical steroids
- ⦿ Consider systemic steroids if erosive/ulcerative forms persist

# Lichen Planus

- ◎ Lichenoid drug reactions
  - Lisinopril or other ACE Inhibitors
  - Consultation with physician ~ change BP med??

# Benign Mucous Membrane Pemphigoid (BMMP)

- ⦿ Chronic
- ⦿ Vesiculobullous, autoimmune disorder
- ⦿ Females in the 5<sup>th</sup> decade
- ⦿ Oral lesions
  - Erythema, desquamation, ulceration, vesiculation of keratinized gingiva

# BMMP

- ⦿ Histologic evaluation-subepithelial vesiculation
  - Epithelium separated from underlying lamina propria, basal layer intact
  - Immunofluorescence along the basement membrane

# BMMP



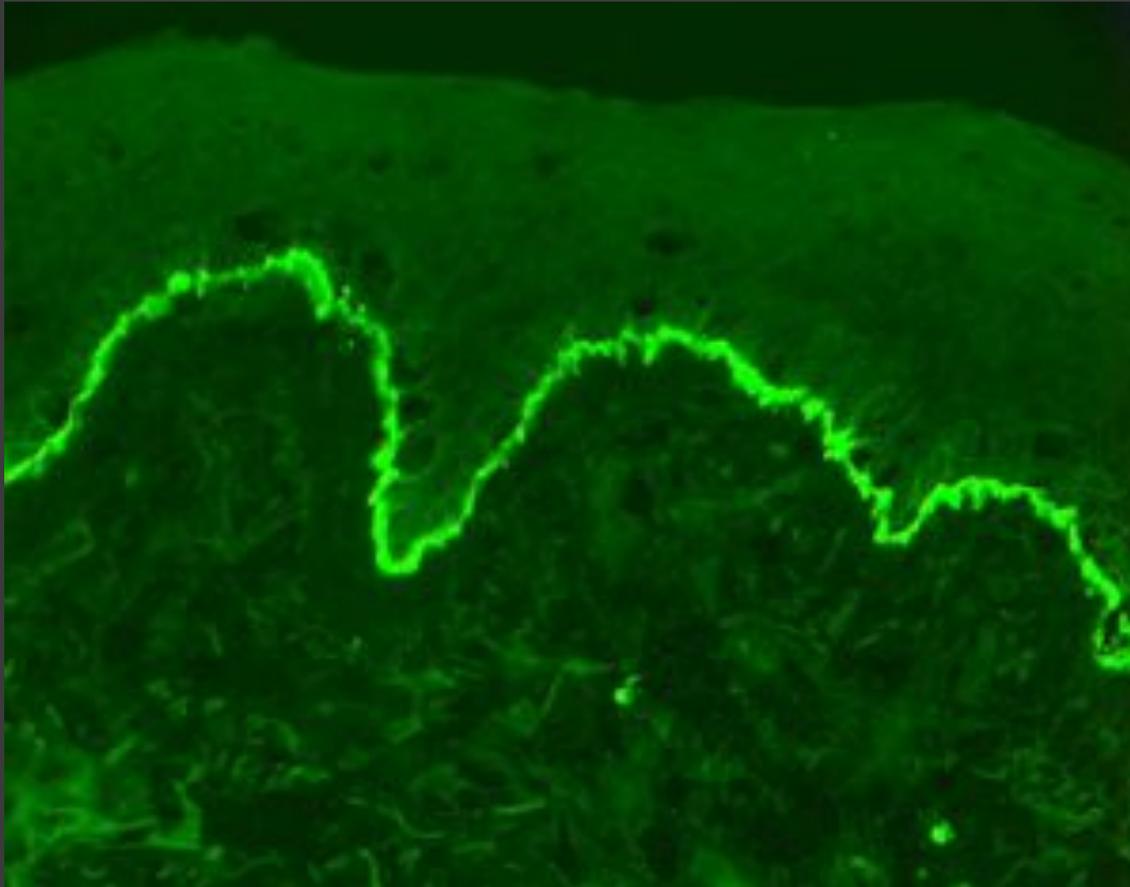
# BMMP



# Diagnosis

- Michel's Solution ~ oral biopsy

# Direct Immunofluorescence



# BMMP

- Ocular lesions-unilateral conjunctivitis, within 2 years becomes bilateral, may produce scarring, blindness
- Differential-any of the vesiculobullous disorders
- Therapy-topical steroids or systemic

# Pemphigus

- ⦿ Group of autoimmune bullous disorders
- ⦿ Predominant IgG immunoglobulin
- ⦿ Pemphigus vulgaris-most common
- ⦿ Cutaneous and/or mucous membrane vesicles
- ⦿ Lethal 10% of the time
- ⦿ 60% of patients present with oral lesions as the first sign of disease

# Pemphigus

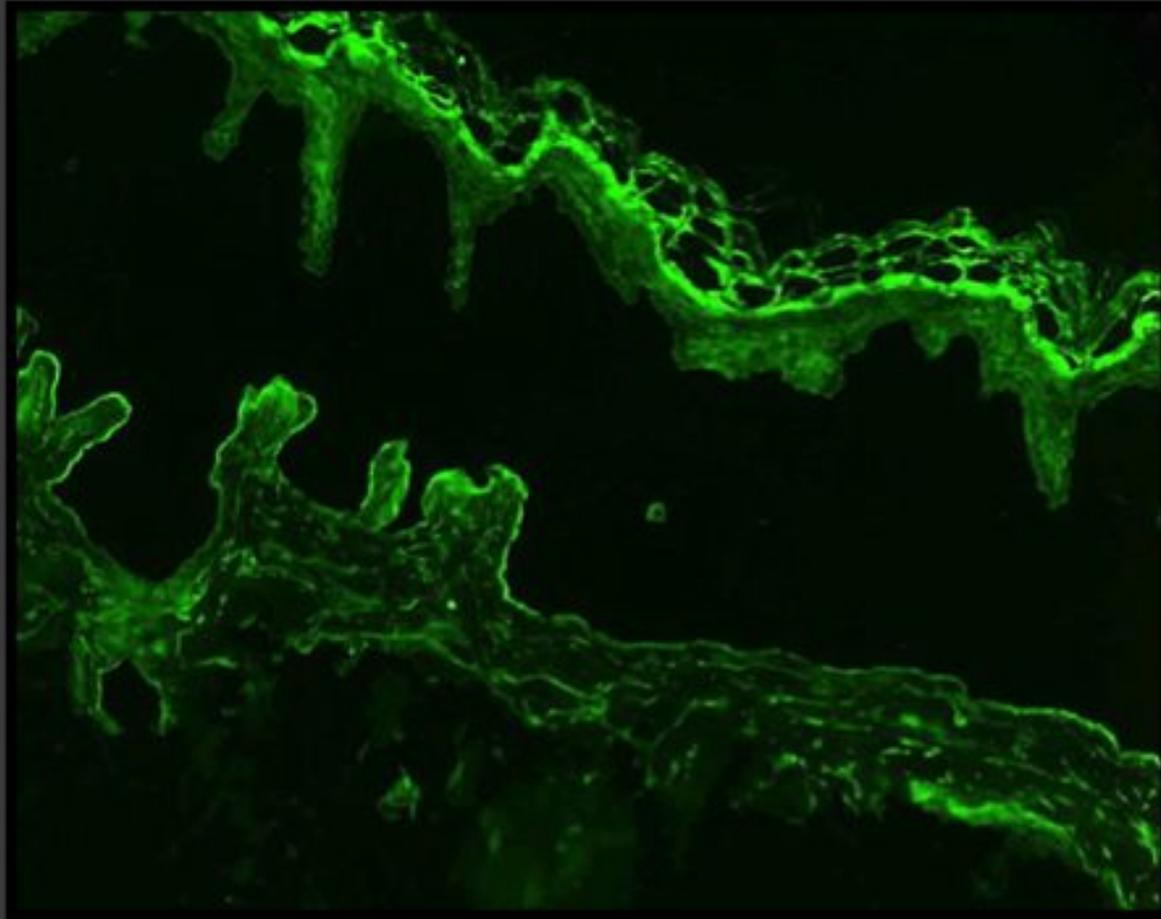
- ◉ Oral lesions- small vesicles to large bullae
- ◉ Skin lesions-bullae present on flexor surfaces

# Diagnosis

- ⦿ Nikolsky's Sign
- ⦿ Michel's Solution ~ oral biopsy



# Direct Immunofluorescence



# Treatment

- Systemic corticosteroids

# Benign Lesions

- ◎ Fibroma
  - Firm, asymptomatic, smooth surfaced
  - Buccal mucosa and lower lip
  - Response to trauma/chronic irritation

# Treatment



# Benign Lesions

- ◎ Pyogenic granuloma
  - Sessile, hemorrhagic, exophytic, ulcerated
  - Overgrowth of granulation tissue secondary to irritation
  - Female predilection

# Pyogenic Granuloma



# Treatment

- ⦿ Excisional
- ⦿ Low rate of recurrence if fully resected

# Benign Lesions

- ⦿ Peripheral ossifying fibroma
  - Young adults
  - Female predilection
  - Exclusively on the gingiva
  - Firm, sessile, exophytic

# Peripheral Ossifying Fibroma



# Histology

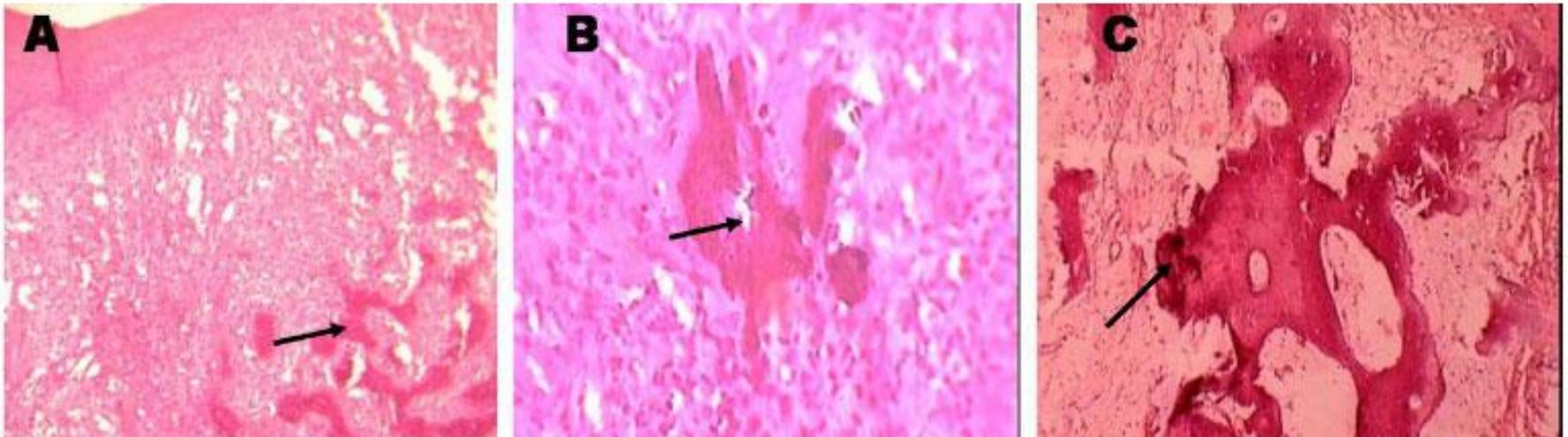


Fig. 3. Photomicrograph shows partially parakeratinised stratified squamous epithelium, with areas of trabecular bone/cementicle/calcification formation in connective tissue in case 1 (A), case 2 (B), and case 3 (C).

# Treatment

- ⦿ Excisional biopsy
- ⦿ 15-20% recurrence rate

# Benign Lesions

- ⦿ Peripheral Giant Cell Granuloma
  - Female predilection
  - Firm, pink/red/blue, sessile
  - Confined to gingiva

# Peripheral Giant Cell Granuloma



# Histology



# Treatment

- ⦿ Excisional
- ⦿ 15-20% recurrence

# Floor of Mouth/Ventral or Lateral Tongue Lesions

- ⦿ White plaques
- ⦿ Generally painless
- ⦿ Painful if ulcerated
- ⦿ History of smoking/smokeless tobacco and/or alcohol consumption
  
- ⦿ Floor of mouth and lateral tongue lesions are areas highly associated with carcinoma

# Clinical Presentation



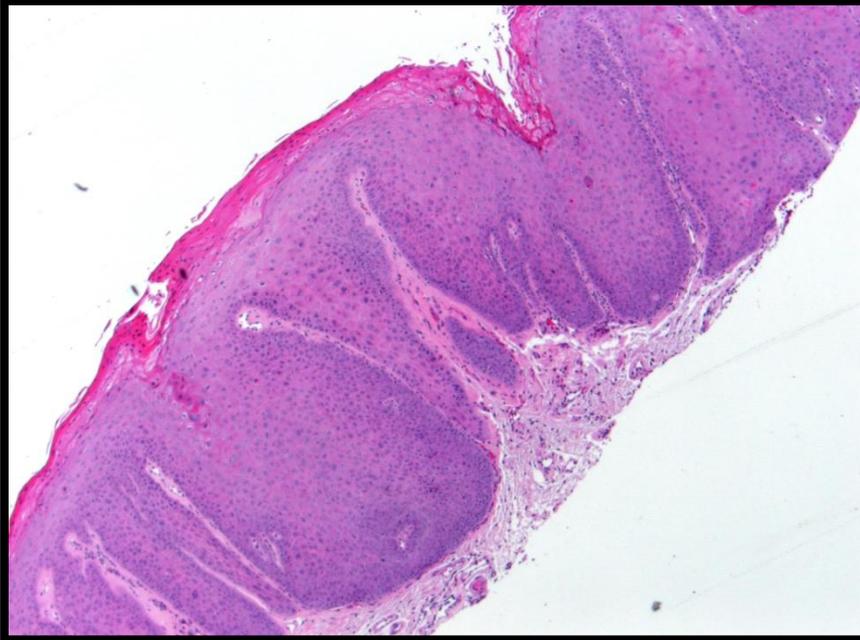
# Clinical Presentation



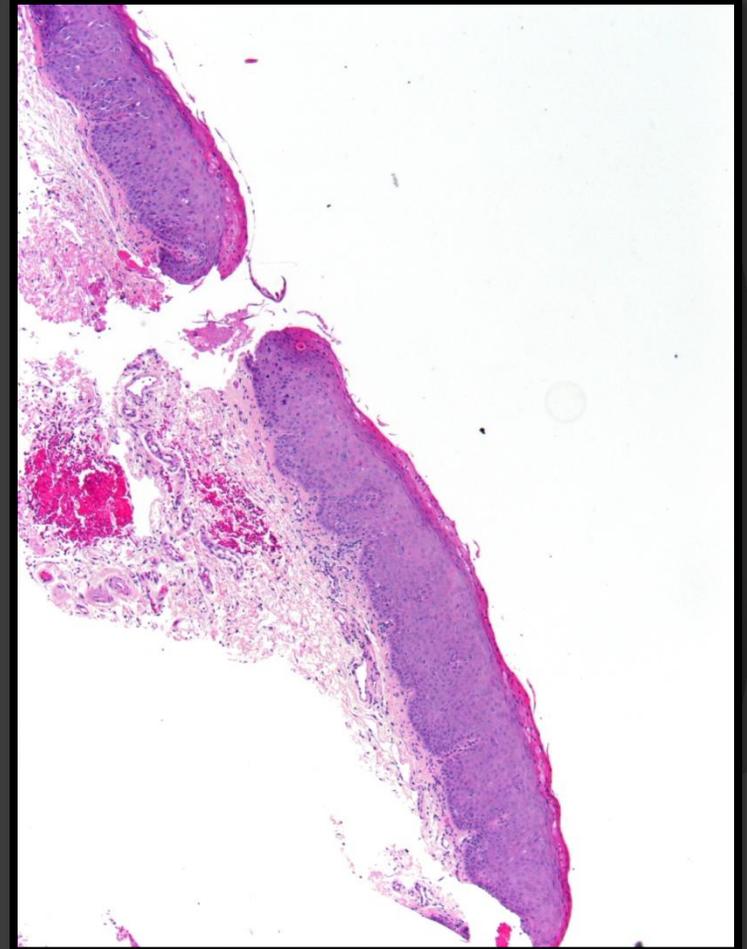
# Lesion Description

- ◉ Circumscribed, adherent, white plaques with variations in size and surface characteristics
- ◉ Patients description: Painless and persistent

# Histology

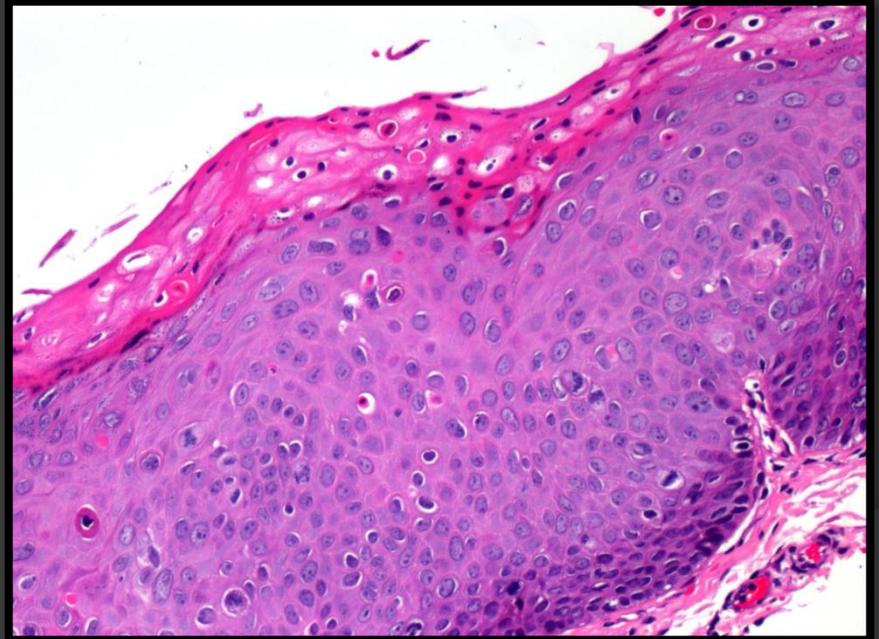
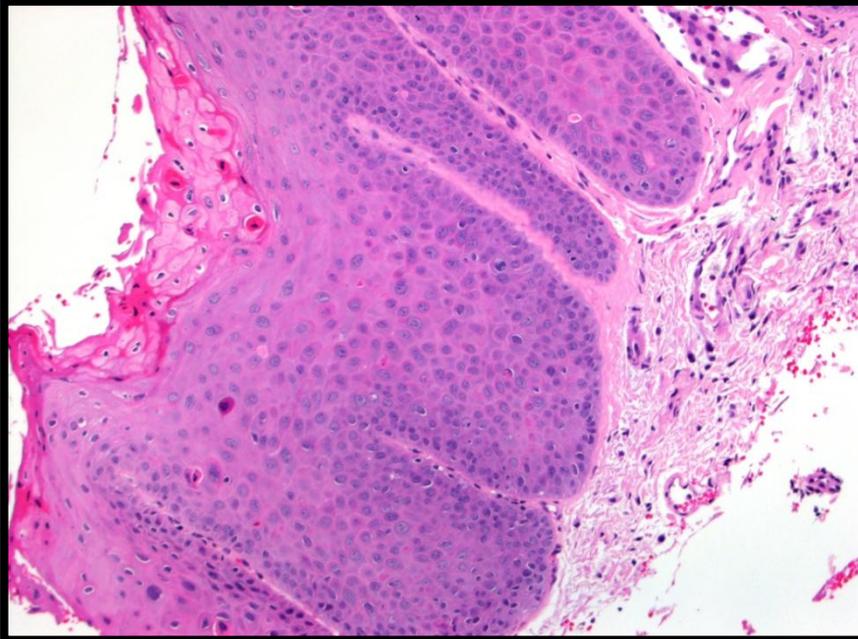


Ventral Tongue

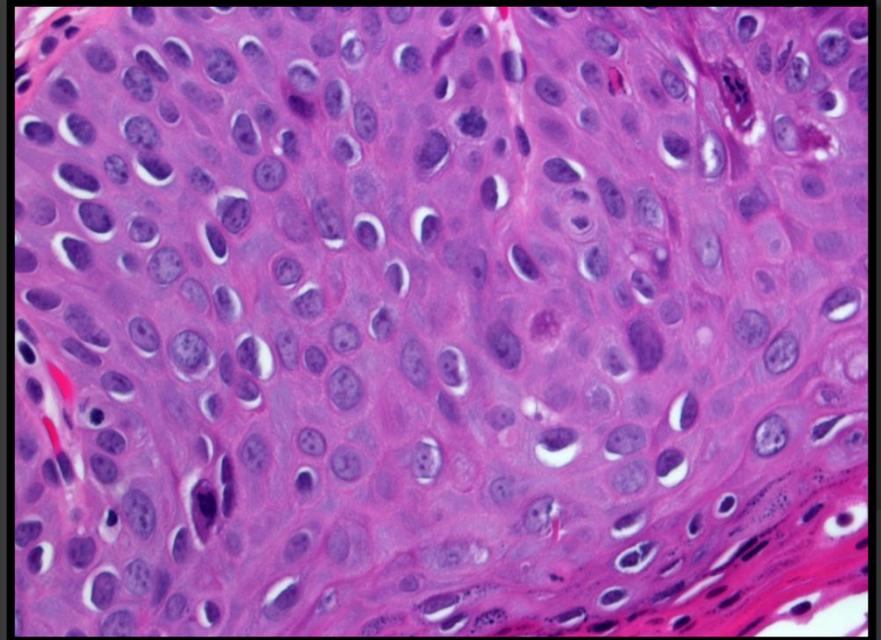
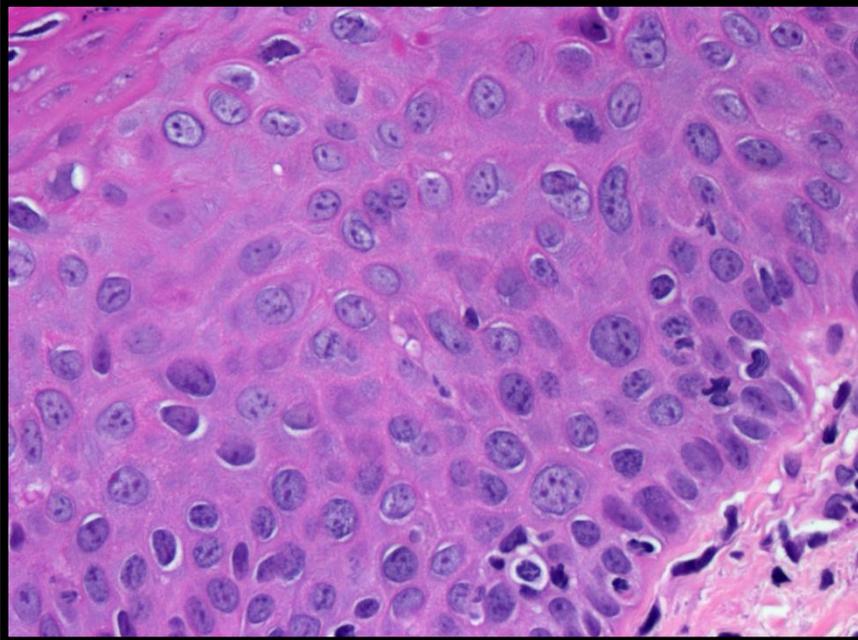


Floor of Mouth

# Histology



# Histology



# Microscopic Findings

- ⦿ Keratotic stratified squamous epithelium exhibiting severe maturational changes
- ⦿ Nuclear hyperchromaticity
- ⦿ Cellular pleomorphism
- ⦿ Increased mitotic figures
  
- ⦿ Histologic diagnosis: Carcinoma in-situ with severe dysplasia

# Lateral Tongue Carcinoma



# Case #1

- 63 yo Caucasian Female
- Unremarkable health history
- Unremarkable dental history
- Chief Complaint: “My gums have recently swelled up, I think I have an abscess”



# Periapical

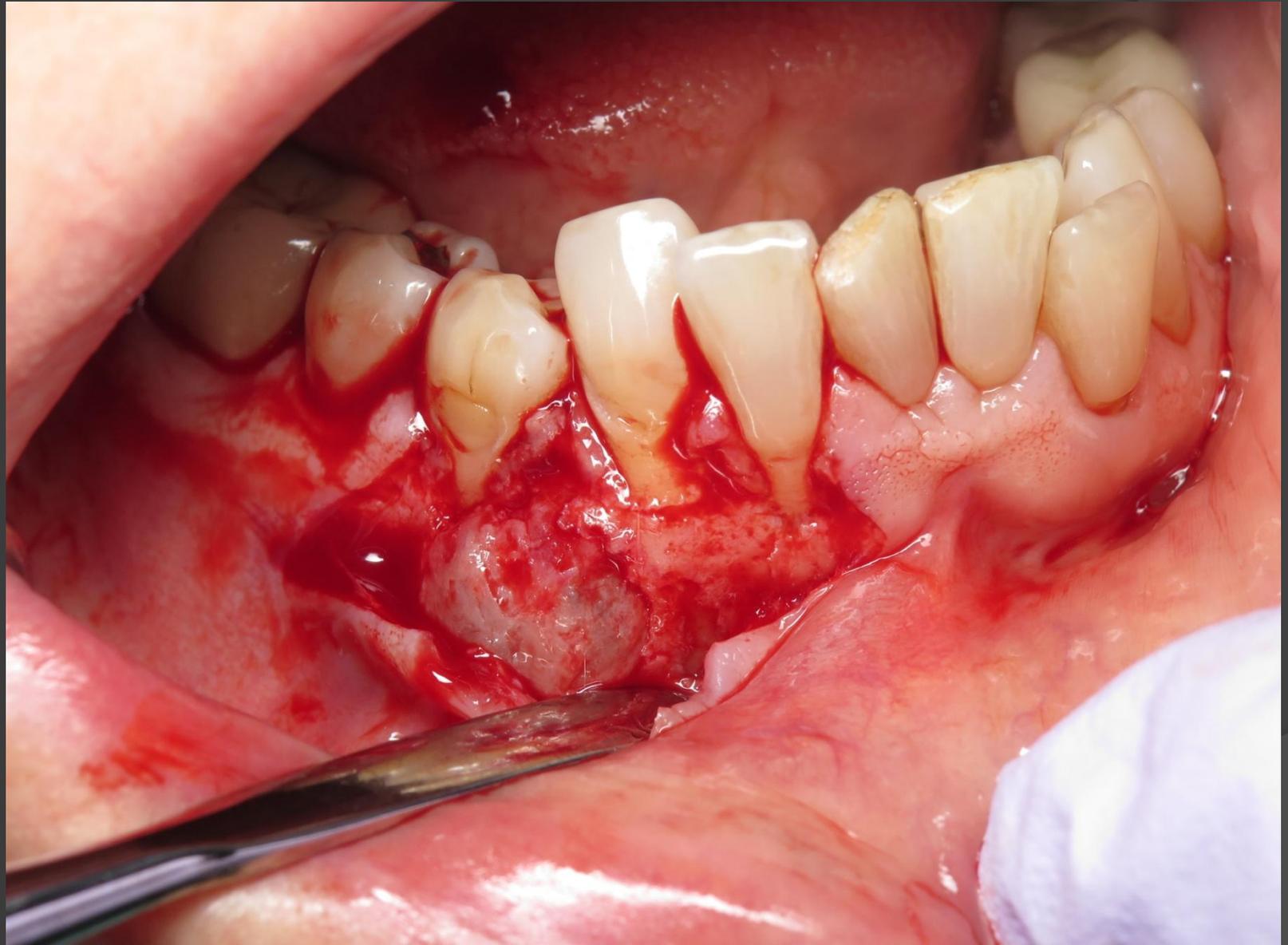


# Clinical Evaluation

- ⦿ Periodontal probe depths WNL
- ⦿ Endodontic ice #'s 27-30 WNL
- ⦿ Percussion/Palpation #27-30 WNL
- ⦿ Class II Mobility #28 and Class I #29
- ⦿ Soft, fluctuant swelling in the alveolar mucosa facial #27/28

# Surgical Exposure









# Histological Diagnosis

- Ameloblastoma
- Most commonly posterior mandible
- Derived from cells involved in tooth formation
- Aggressive lesions
- Predominantly 4<sup>th</sup>/5<sup>th</sup> decade of life
- Tooth displacement/cortical expansion
- High recurrence rates
- Surgical resection is recommended treatment

# Case #2

- ⦿ 80 y.o. Caucasian Male
- ⦿ Referred for endodontic assessment
- ⦿ History of dental trauma
- ⦿ Chief complaint: “Gum tissue swelling in past few months”

# Periapical



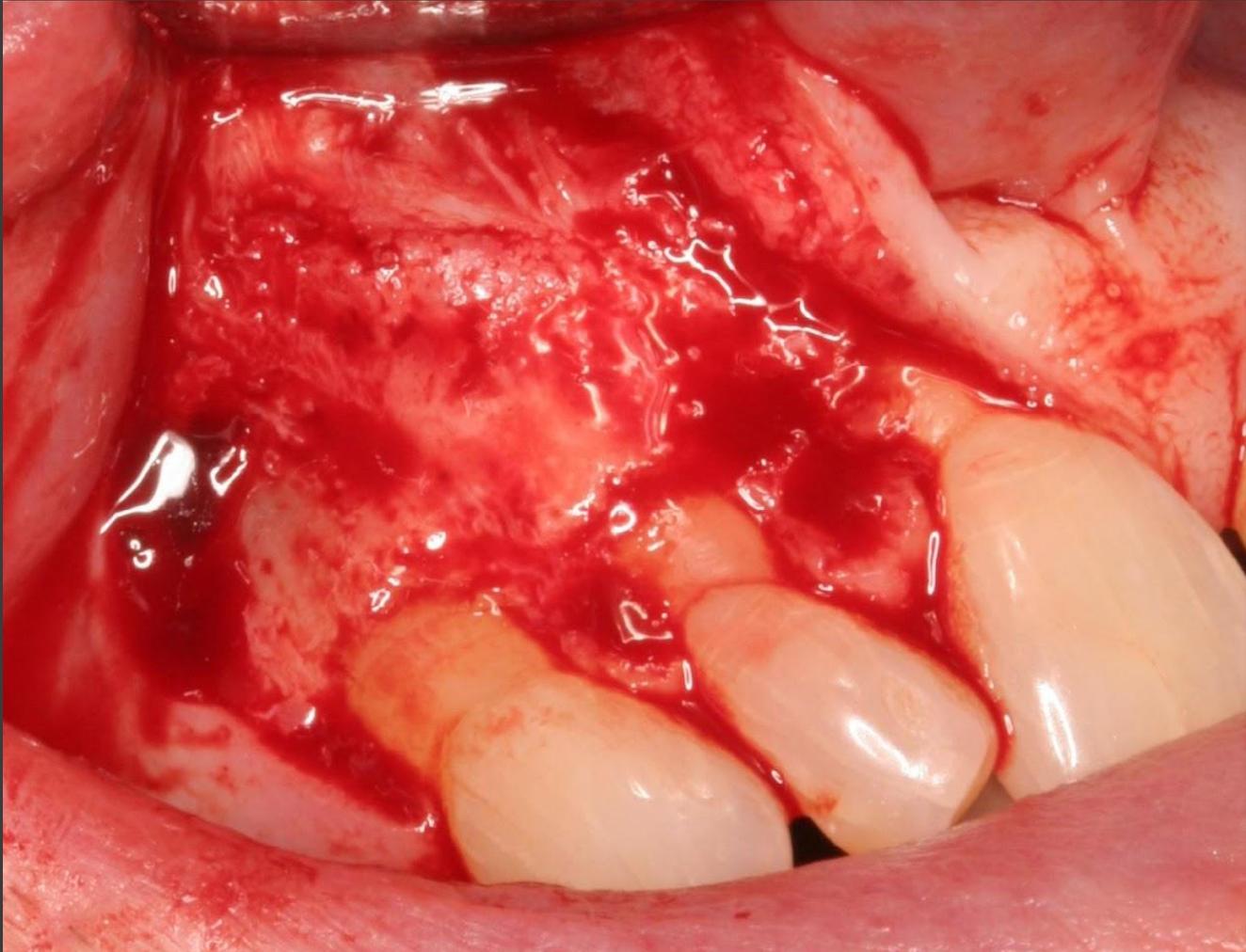
# Perio/Endo Testing

- ⦿ Periodontal findings WNL
- ⦿ Normal pulpal responses #6-10
- ⦿ Normal periapical responses #6-10
- ⦿ EPT responses #6-10
- ⦿ Firm/indurated elevation buccal #6/7/8

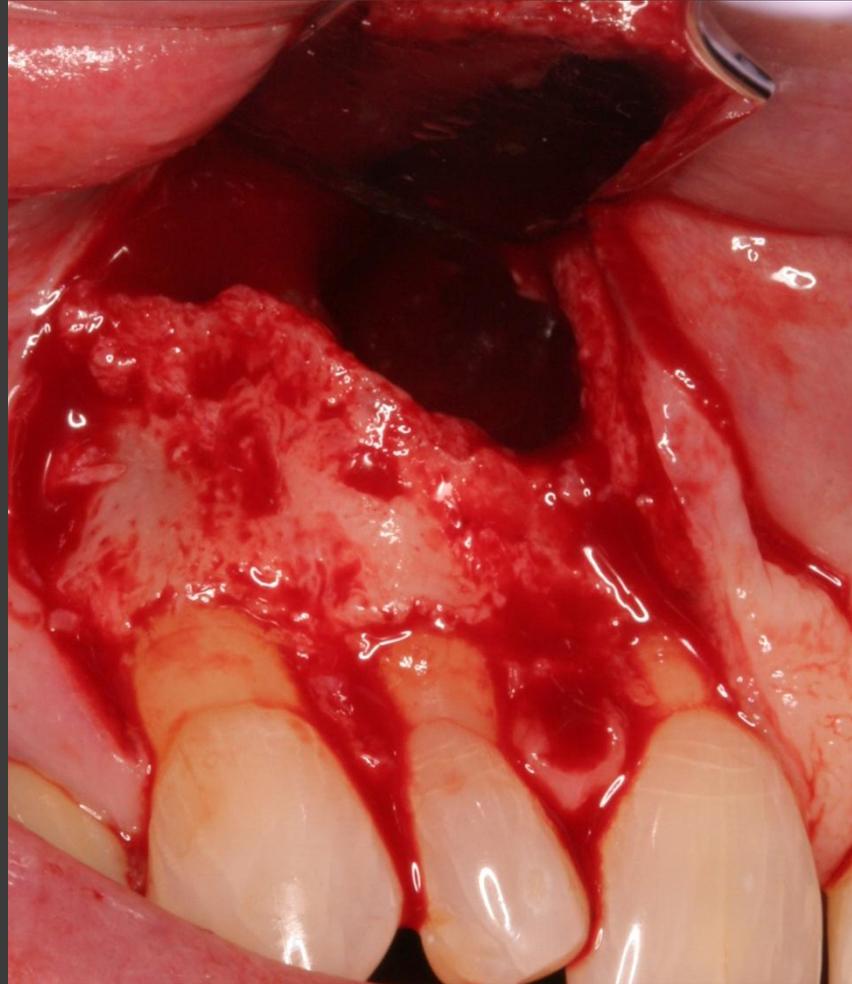
# Preoperative



# Intraoperative



# Enucleation



# Postoperative



# Diagnosis

- ⦿ Keratocystic Odontogenic Tumor (KCOT or OKC)
- ⦿ Aggressive lesion
- ⦿ High recurrence rate ~ 30%
- ⦿ More common posterior mandible
- ⦿ More common in 2<sup>nd</sup>/3<sup>rd</sup> decades of life

# Case #3

- ⦿ 82 year old Caucasian Male
- ⦿ History of uncontrolled type II diabetes
- ⦿ History of periodontal disease
- ⦿ Unremarkable health history/nonsmoker
- ⦿ Chief complaint: “Gum tissue is starting to swell in past month”

# Periapical



# Clinical Presentation



# Case #4

- ① 13 y.o. Caucasian male
- ① Unremarkable health history
- ① History of dorsal tongue white lesion

# Preop



# Biopsy

