Bump under tongue:
- Radiopaque (removal and feeding gland)
- dermoid cyst (neoplasms from 3 germ layers) (surgical removal)
- cystic teratoma,
- cyst of blandin nuhn (surgical removal down to muscle, recurrence likely)
- mucoepidermoid carcinoma

Bump anterior palate:
- minor salivary gland tumor
- nasal polyp duct cyst (surgical removal, rare recurrence)
- torus palatinus
- 4 P’s (excise for biopsy; curette vigorously!)
  o Pyogenic granuloma (vascular, granulation tissue)
  o Peripheral giant cell granuloma (purple blue lesions)
  o Peripheral ossifying fibroma (bone, cartilage/ ossifying material)
  o Peripheral fibroma (fibrous ct)
- Kertocystic Odontogenic Tumor (KOT): unique histology of cyst lining! (see histo notes below) 3 important things: (1) high recurrence rate (2) highly aggressive (3) related to Gorlin syndrome
- Hyperparathyroidism: excess PTH found via lab test
- mucoepidermoid carcinoma (mixture of muco-producing and squamous epidermoid cells; most common minor salivary gland tumor) (get it out!)

Bump on hard palate:
- minor salivary gland tumor
- malignant lymphoma
- vascular lesion
- tumor of other subepithelial tissue

Bump on skin by ear:
- pleomorphic adenoma
- epidermoid cyst of the skin (ball of keratin w/ epithelial lining)
- lymphoma
- Sjögren’s syndrome
- acinic cell adenocarcinoma (most in parotid; acinar differentiation)
- malignant mixed tumor (malignant conversion of pleomorphic adenoma)

Yellow bump:
- oral lymphoepithelial cyst (crypt of lymphoid tissue collapses)
- verruform xanthoma (macrophages filled w/ fat) (excision, biopsy)
- lipoma (benign ball of fat)
- neurofibroma (neoplasm of cells surrounding nerves)

Radioluency impacted tooth:
- dentigerous cyst (separation of follicle from the unerupted tooth; most common developmental odontogenic cyst)
- AOT: adenomatoid odontogenic tumor (kid) (gland-like)
- KOT: keratocystic odontogenic tumor (adult if not kid)
- Ameloblastoma
- Cementoblastoma
- central odontogenic fibroma
- ameloblastic fibroma

Radioluency non-impacted tooth:
- periapical cyst/ granuloma
- osteomyelitis
- odontogenic cysts
- focal cemento-osseous dysplasia
- ossifying fibroma
- aneurysmal bone cyst
- Ameloblastoma: (1 large radiolucency)
- unicystic ameloblastoma
- simple (traumatic bone cyst)
- stafne defect
- Langerhan’s cell disease (malignancy)
- ameloblastic fibroma

Radiopaque lesions:
- cemento-osseous dysplasia
- condensing osteitis
- idiopathic osteosclerosis

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**Oral Pathology**

**Final Exam Review Table**

- **Cementoblastoma (50% 1st molar)**

**Multilocular radiolucencies:**
- cherubism
- ameloblastoma
- KOT
- odontogenic myxoma

**Mixed radiolucencies:**
- calcifying odontogenic (Gorlin) cyst
- periapical cemento-osseous dysplasia (nothing)
- florid cemento-osseous dysplasia (nothing)
- focal cemento-osseous dysplasia (biopsy then do nothing)

**Multiple bumps on skin:**
- Nevoid basal cell carcinoma (Gorlin syndrome)
- Neurofibromatosis (see notes below) (refer to derm MD, tell family members)
- Nevus

**Bump on gingiva:**
- gingival cyst of the adult/ newborn
- 4 4 P’s
- malignant lymphoma
- gingival cyst
- lateral periodontal cyst
- Wegener’s granulomatosis (strawberry gingivitis) (necrotizing granulomatous lesion)

**Bump on lower lip:**
- Mucocele (remove if stays longer than 2 weeks)
- Fibroma (fibrous → trauma) (excise, biopsy)
- Lipoma (adipose tissue) (excise, biopsy →biopsy)
- Neurofibromatosis (see notes below) (refer to derm MD, tell family members)

**General radiopacities:**
- Pagets
- Thalassemia
- Osteopetrosis

**Lips spots:**
- Addison’s disease
- Peutz Jeggars
- oral melanotic macule
- racial pigmentation (nothing)
- melanomas

**Buccal spots:**
- Addison’s disease
- amalgam tattoo
- oral melanocanthesia
- blue nevus

**Bump(s) on buccal mucosa:**
- Crohn’s disease
- Multifocal epithelial hyperplasia
- Sarcoioidsis
- Varix
- Fordyce granules

**Inflamed gingiva:**
- ANUG (better oral hygiene, antibiotics)
- Crohn’s disease
- Wegener’s syndrome
- Leukemia / lymphoma
- Diabetes
**Oral Pathology**

**Multiple bony bumps:**
- Exostosis
- osteoma
- osteosarcoma
- chondrosarcoma

**Tumors of jaws:**
- BRONJ
- osteoradionecrosis,

*any bone related radiograph = osteosarcoma, chondrosarcoma, metastatic tumors (breast/ prostate, lungs/ kidneys)*

**Diffuse white lesions (buccal/ lateral tongue mucosa):**
- lichen planus
- leukophaemia (variation of normal, disappear with stretch)
- cinnamon stomatitis
- dentirifice stomatitis
- cheek chewing
- speckled erythroplakia (red with white spots) (biopsy most likely SCC surgery)
- pseudomembranous/ hyperplastic candidiasis
- diabetes, drugs, debilitation, dryness, dentures
- GVHD
- SCC
- white sponge nevus (bilateral),
- idiopathic leukoplakia (see notes) (biopsy; tx according to what it is)

**Tongue lesions:**
- SCC
- erosive lichen planus
- GVHD
- geographic tongue
- median rhomboid glossitis (erythematous candidiasis from palate moves to middle of tongue)
- lichen planus
- xerostomia
- neurofibromatosis (see notes below) (refer to derm MD, tell family members)
- granular cell tumor (swannoma, histo looks like SCC b/c has PEH) (biopsy to oral pathologist)
- hemangiona (benign tumor of bld vessels, larger than varix) (DO not biopsy – bleed! OMFS)

**Ulcer:**
- deep fungal: histoplasmosis
- major aphthous (CD4/CD8, stress/sick) (corticosteroids)
- Behcet’s syndrome: autoimmune
- erosive lichen planus
- GVHD
- pemphigus vulgaris (referral to derm MD)
- cicatricial pemphigoid (referral to derm MD, topical corticosteroids, oral hygiene, bleaching tray)
- herpes (low grade fever, malaise, lymphadenopathy) (aciclovir)
  - major herpes
  - herpes zoster – excruciatingly painful (wants endo or extract)
  - recurrent intraoral herpes

**Ulcer on palate:**
- necrotizing sialometaplasia
- SCC
- major aphthous (CD4/CD8, stress/sick) (corticosteroids)
- erosive lichen planus
- histoplasmosis
- adenoid cystic carcinoma (perineural invasion)

**Diffuse red lesion:**
- GVHD
- speckled erythroplakia (red with white spots) (biopsy most likely SCC surgery)
- pseudomembranous candidiasis (wipes off) (antifungal: Diflucan)
- dentirifice/cinnamon stomatitis
- pseudoepithelial hyperplasia

**Gingival lesion:**
- GVHD
- pemphigus/ pemphigoid
- waterpick lesion

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**Final Exam Review Table**

**TuAnh Le & Enoch Ng, DDS 2014**

**Swollen Lips**
- orofacial granulomatosis (over time) (eliminate cause or intralsonal steroid injections)
- angioedema (overnight) (mast cell degranulation) (oral antihistamines, IM epinephrine)
- stomatitis (allergic reaction)

**Crusty Lips:**
- Erythema multiforme (autoimmune; HSV, Bacterial, or Fungal can predispose)
- acinic cheilitis
- angular cheilitis
- Addison’s disease (adrenal insufficiency)
- impetigo (strep or staph infection; outbreaks in close living quarters) (Topical antibiotics that kill penicillin resistant staph)
- primary herpetic gingivostomatitis
- recurrent herpes labialis
- seborrheic keratosis (benign, common on old ppl, “stuck on lesions”, thickening of epithelium) (refer to derm MD)

**White Plaque lesions:**
- idiopathic leukoplakia
- hyperkeratosis
- pseudomembranous candidiasis
- hyperplastic candidiasis
- erythroplakia (giant red area than white) (biopsy = cancer remove)
- CSS

**Teeth color:**
- WHITE:
  - fluorosis (must rule out)
  - amelogenesis imperfecta
  - decalcification

**YELLOW:**
- extrinsic
  - staining
  - caries
  - bacterial staining
  - food/ drinks
  - tobacco
- intrinsic
  - amelogenesis imperfecta
  - dentinogenesis imperfecta
  - dentin dysplasia (type II)
  - tetracycline
  - congenital erythroplastic porphyria
  - hyperbilirubinemia

**Physical teeth characteristics:**
- Notch in incisor:
  - Turner’s teeth
  - Syphilis
  - Hutchinson’s incisors

**Hard Palate (radiographic):**
- antral pseudocyst
- sinusitis

**Papillary Growth:**
- squamous papilloma (remove: surgery, laser, or cold)
- proliferative verrucous leukoplakia
- verrucaous carcinoma (low grade variant SCC) (excisional biopsy)

**BOLD:** lesion location
**BLUE:** differential
**RED:** discriminating characteristic
**GREEN:** treatment

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**HISTOLOGY**

Histology for KOT: epithelium came from dental lamina or extensions of basal cells from the overlying oral epithelium

1. Uniform (5-8 cells) thickness
2. Hyperchromatic, cuboidal or columnar basal cell layer
3. Corrugated parakeratin layer
4. Virtually no inflammation in cyst wall

**Histology of Giant Cells**

1. CGCG
2. PGGG
3. ABC
4. Cherubism
5. Brown Tumor Hyperparathyroidism
6. Neurofibromatosis
7. Sarcoïdosis (chronic inflammatory and histiocytes)

**Histology of Lichen Planus**

1. Hyperkeratosis
2. Acanthosis
3. Irregular rete ridges "saw tooth"
4. "Band-like" infiltrate of lymphocytes
5. Liquefactive degeneration of the basal cell layer

**Histology of Pemphigus/ Pemphigoid**

1. Pemphigus: between cells – loss of desmosomes in spinous layer – sloughing, fatal
2. Pemphigoid: basement membrane detachment – cornea problems

**Gingival Cyst**

- Lining from remnants of dental lamina

**Periapical Cyst**

- Lining from rests of malassez

**Periapical Granuloma**

- Granulation tissue, no epithelium

**Ameloblastoma**

- Palisading cells, nuclei polarized away from basement membrane
- Epithelial only

**AOT**

- Glandlike structures within solid tumor of odontogenic cells
- Epithelial only

**Nasopalatine Cysts**

- Squamous and respiratory lining
- Large blood vessels and nerves within cyst wall

**Ameloblastic Fibroma**

- Mixed odontogenic tumor (ectoderm and ectomesenchyme)
- If tooth material present—Ameloblastic Fibro-odontoma

**Neurofibromatosis**

At least 2 or more of the following:

- 6 or more café au lait spots
- 2 or more neurofibroma of any type/ plexiform
- Freckling in axillary/ inguinal regions
- Optic glioma
- 2 or more lisch nodules
- Distinctive osseous lesions
- 1st deg relative with NF

**Idiopathic Leukoplakia**

1. No cause
2. Causative agent carcinogen
3. Location (High risk: ventral/ posterior-lateral tongue, Low risk: hard palate, dorsal tongue)
4. Ulceration, induration, redness (erythroplakia)

*Granulation tissue = fibrovascular healing tissue, a stage of inflammation-repair
*granuloma = localized chronic inflammatory response characterized by histiocytes & giant cells

**Antifungal:** azos
**Antivirals:** cyclovir