

Salivary Gland Tumors-Highlights, Pearls and Pitfalls

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Disclosure

- Zimmer/Biomet
- Speaker



Ranked #17 in the nation and Best in Ohio

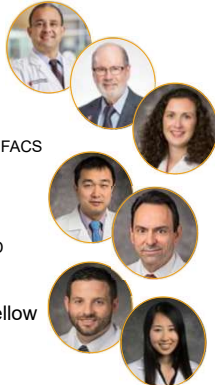
U.S. News & World Report ranking awarded to UH Cleveland Medical Center

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UNIVERSITY HOSPITALS HEAD AND NECK SURGERY TEAM

Providers

- Rod Rezaee, MD
- Pierre Lavertu, MD
- Nicole Fowler, MD, FACS
- Shawn Li, MD
- Ted Teknos, MD
- Jason Thuener, MD
- Akina Tamaki, MD
- Head and Neck Fellow



Extenders

Nursing Team

- Cindy Knapp, BSN, RN-C (RR)
- Lauren Sahagian, RN (NF, AT)
- Megan Potts, RN (JT)
- Kelly Banks, RN (SL)
- Kathy Halloway, CNS (TT)
- Cheryl Brandt, MSN, ACNSBC, CORLN (PL)

Nurse Practitioner

- Kerry-Ann Walker, CNP

Nursing Leads

- Kristin Whelan RN (HN)
- Mike Cifranic RN (Seidman)

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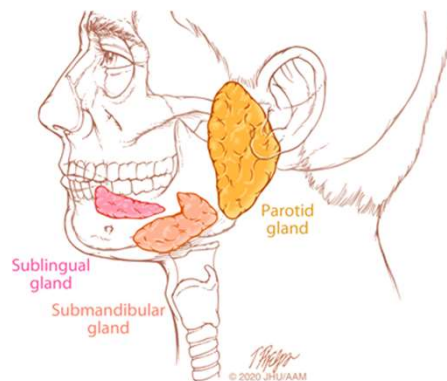
Partners

Key Practitioners

- SEIDMAN CANCER CENTER
- Jennifer Dorth MD (Rad Onc)
- Giselle Dutcher, MD (Med Onc)
- Kyunghee Burkitt, DO, PhD
- ENDOCRINOLOGY
- Baha Arafah, MD
- Laleh Razavi, MD
- Steve Burgun, MD
- RADIOLOGY
- Ari Blitz, MD (NeuroRad)
- Norbert Avril, MD (Nuc Med)
- Nami Azar (IR)
- SPEECH THERAPY

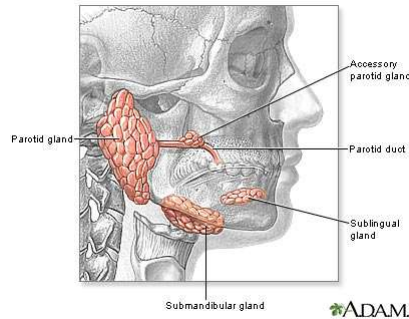
Outline

- Anatomy
- Differential
- Workup
- Treatment Options
- Case Examples



Anatomy

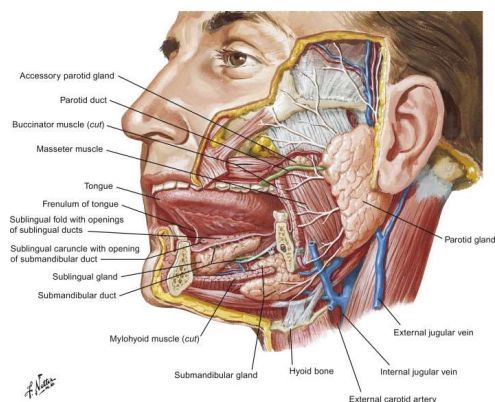
- Parotid
 - accessory gland
- Submandibular
- Sublingual
- Minor Salivary Glands
 - Distributed sub-mucosally throughout lips, gums, palate, larynx pharynx, trachea
 - ***Be wary of a submucosal mass ***



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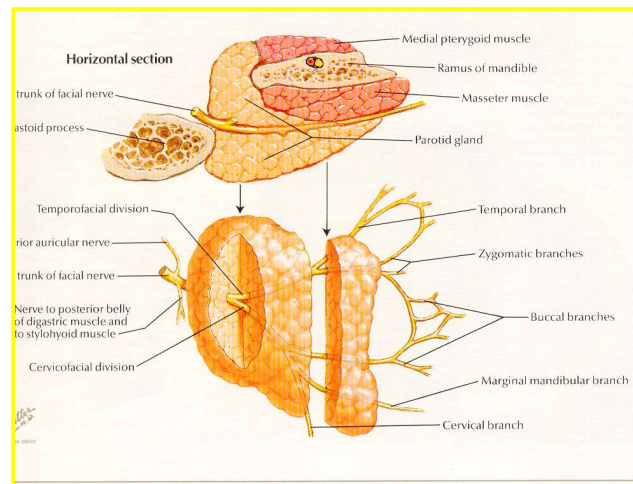
Regional Anatomy

- Critical to understand
- Has symptom and surgical implications



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Facial Nerve Anatomy



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Complexity of the Topic

- Major salivary glands
 - Parotid (high percentage benign)
 - primary
 - metastatic
 - Submandibular (approx. 50% malignant)
 - sublingual

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Complexity of the Topic

- Minor salivary glands (high % malignant)
 - sinonasal
 - oral cavity
 - oropharynx (tonsil, BOT)
 - larynx
 - trachea

Complexity of the Topic

- Different histologies/grades (different behavior)
 - High Grade
 - rapid progression
 - Intermediate Grade
 - Low grade

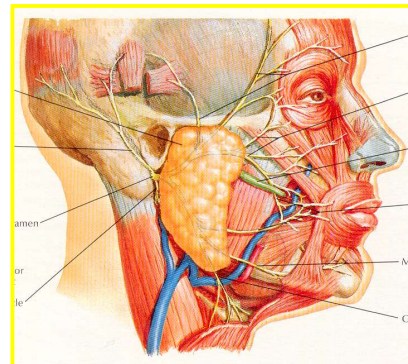
Parotid Tumors

- 80% benign
 - 80% pleomorphic adenoma
 - 15% warthin's
- 20% malignant
 - mucoepidermoid ca
 - adenoid cystic ca
 - acinic cell ca

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Differential Diagnosis

- Benign
 - Pleomorphic Adenoma
 - Warthin's Tumor
 - Lymphoepithelial Cyst
 - Lymphangioma
 - Hemangioma/Venous Malformations
 - Lipoma
 - Oncocytoma
 - Reactive Lymph Node
 - Inflammatory Conditions
 - Sarcoid
 - Infectious Conditions
 - TB, Cat scratch
 - Congenital
 - First branchial cleft cyst
 - Neurogenic



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Differential Diagnosis

- Malignant
 - Adenoid Cystic Carcinoma
 - Acinic Cell Carcinoma
 - Mucoepidermoid Carcinoma
 - Adenocarcinoma
 - Salivary Duct Carcinoma
 - Carcinoma Ex-Pleomorphic Carcinoma
 - Myoepithelial Carcinoma
 - Squamous Cell Carcinoma
 - Metastasis
 - Lymphoma
 - Oncocytic Carcinoma
 - Sarcoma

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Evaluation

- History
 - Onset, duration, change in size, timeline, prior cutaneous malignancies
- Physical Exam
 - What does it feel like?
 - Firm vs Soft
 - Mobile vs Fixed
 - Trismus
 - Condition of overlying skin
 - FN function



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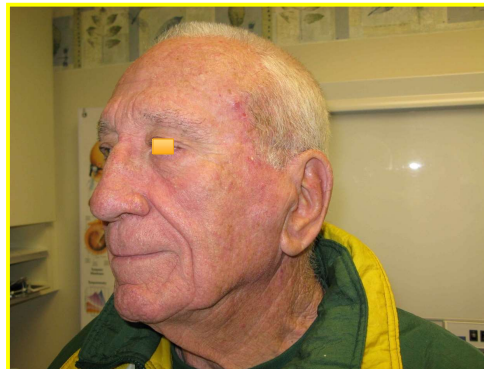
Suspicious for Malignancy

- Most present with asymptomatic mass
- Rapid growth (lymphoma)
- Pain
- Numbness
- Facial weakness (partial)
- Fixed (skin)
- Neck nodes

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Suspicious for Malignancy

- Cancer history
 - Skin cancer
 - SCC, melanoma
 - Breast
 - Kidney
 - Lung
 - Lymphoma



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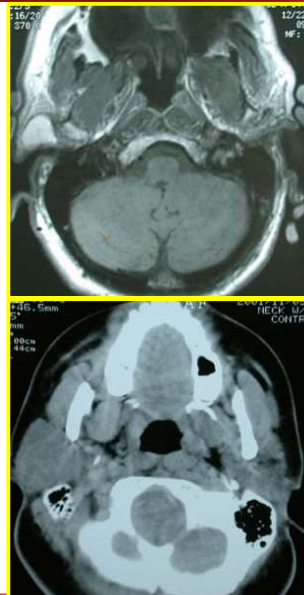
Physical Exam is Key!



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Work-up

- Biopsy
 - FNA, Core, Image guided
 - Timing?
- Imaging
 - Ultrasound
 - CT Neck with contrast
 - MRI
 - PET



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Tissue Diagnosis

- Needle biopsy
 - FNA
 - US?
 - Core?
- Open biopsy?
- Excisional biopsy

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Fine Needle Aspiration

- 22 or < gauge needle
- Multiple passes (3-4)
- Fixation
- Experienced cytologist
- Never 100%

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Fine Needle Aspiration Biopsy

- May modify treatment
 - Non-epithelial neoplasm, or inflammation
 - metastasis
 - Poor risk patient
 - Allows for better preoperative planning and counseling
- A negative (non-diagnostic) result should be repeated

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Open Biopsy

Rarely

“Almost” never



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Indications for Open Biopsy

- Skin invasion
- Suspected non-epithelial lesion
 - Sarcoid
 - Lymphoma (after FNA)
- As part of definitive procedure before sacrificing the facial nerve
- Rarely indicated



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Imaging Techniques

- Ultrasound
- CT
- MRI
- PET

- Evaluate for metastatic disease (lung)

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Indications for CT or MRI

Routinely?

- Origin
 - parotid
 - lymph node
 - parapharyngeal lesion
- Extent
 - ear
 - soft tissue or mandible
 - great vessels
 - perineural

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Advantages of MRI

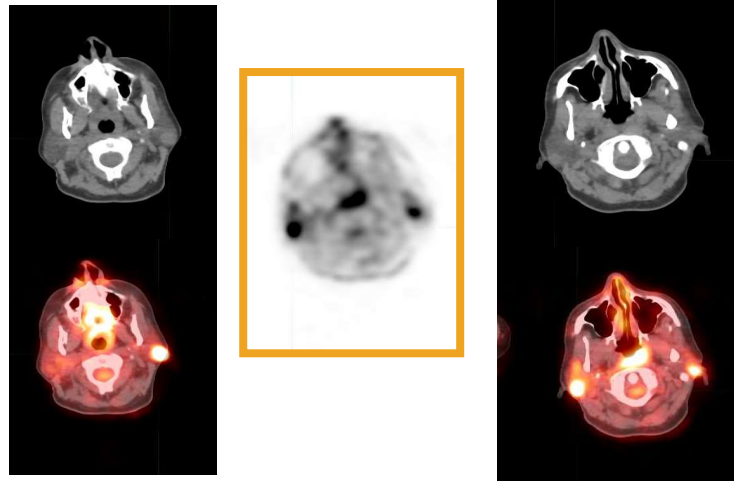
- Soft Tissue Resolution
 - When CT has poor definition
- Superior contrast resolution
- Relation to facial nerve ?
- Facial nerve involvement
- Intraparotid vs extraparotid

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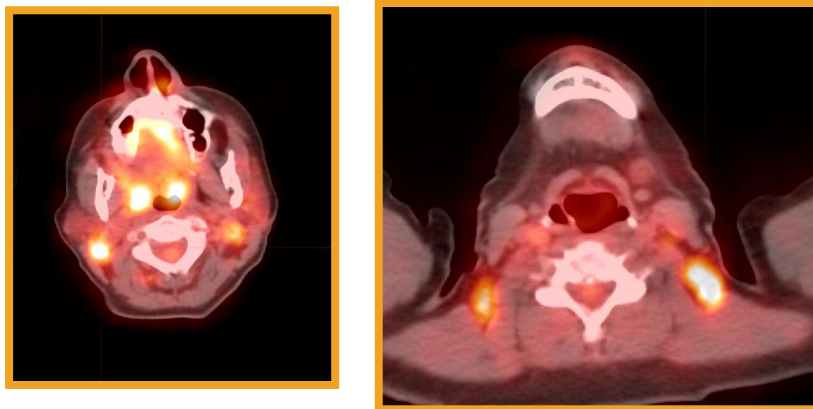
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PET Scan...Pancreatic CA.....Warthin's



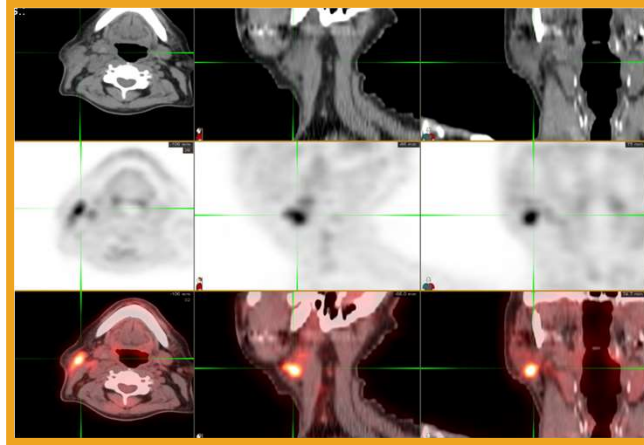
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Pancreatic CA...Warthin's



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Parotid Metastasis from Skin Cancer

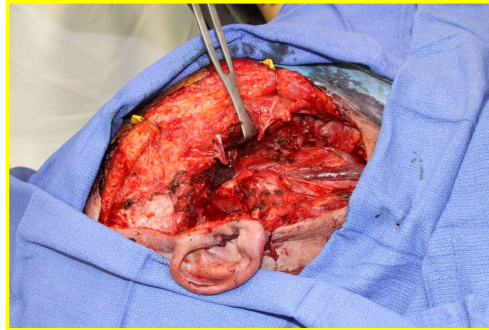
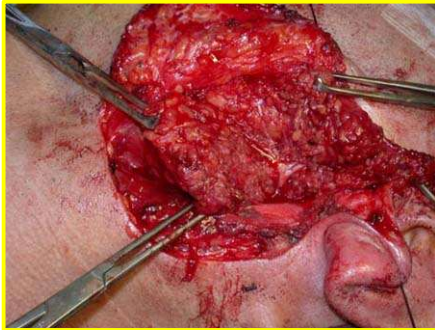


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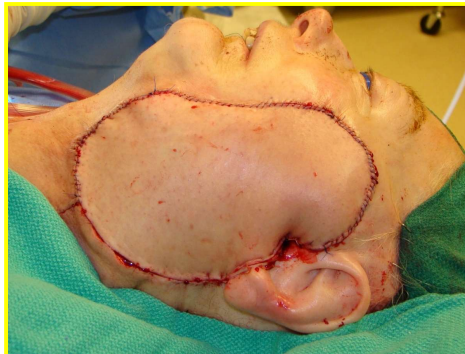
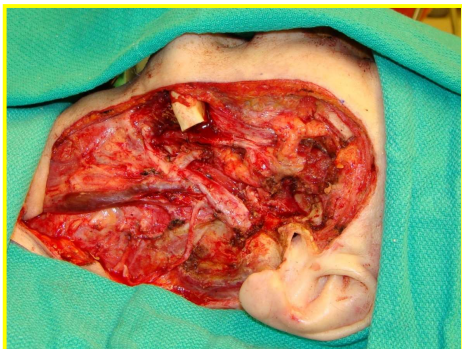
Treatment

- Surgery
 - Extent?
 - Superficial
 - Benign
 - Complete
 - Malignancies
 - Nodal Mets?
 - Facial Nerve
 - Preserve if functional preop
 - Intraop Assessment
 - ?Frozen section vs Visual Assessment
 - Reconstruction/Rehabilitation

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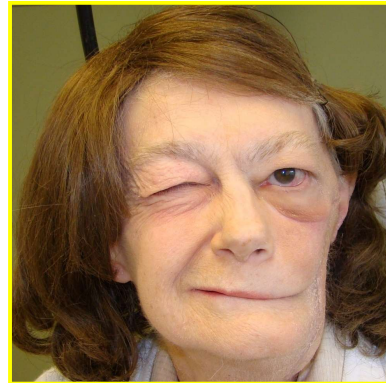
Superficial**vs Total Parotidectomy**

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Extended Parotidectomy

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2 months post op



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Additional Treatment

- Neck Dissection
 - High Grade Pathology
 - Mucoepidermoid
 - Salivary Duct
 - Nodal Disease at presentation
 - ?flap reconstruction

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Frozen Section

- Diagnosis
- Margins
- Extension to adjacent structures
 - Soft tissue
 - Facial nerve
- Nodal metastases
- ?Benign Disease?

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Reconstruction

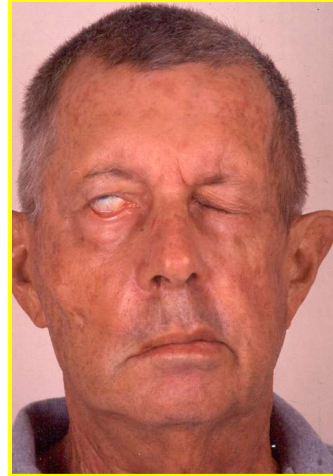
- Total Parotid/Significant Defect
 - Free fat graft
 - Abdominal
 - Alloderm
 - Free Flap
 - ALT/Lateral Arm
 - Submental/Supraclav/Temporalis
- Facial Nerve/Reanimation
 - Dynamic
 - Temporalis Tendon Transfer
 - Gracilis
 - Static
 - Gold/Platinum Weight/Ribbon
 - Cathopexy/Tarsorrhaphy/Adhesion
 - Brow lift/pexy
 - Midface lift
 - Alloderm
 - TFL



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Complications of Surgery

- Nerve
 - Lingual, facial, hypoglossal
- Hematoma
- Infection
- Frey's Syndrome
- Sialocele
- Salivary Fistula
- Tongue Tethering
 - Sublingual procedures



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Indications for Postoperative Adjuvant Tx: XRT/Chemo/Immunotherapy

- Large lesions
- High grade lesions
- Nodal metastasis
- Deep lobe
- Extraglandular extension
- Positive margins
- Recurrence
- Cutaneous Origin?

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Cleveland Views

Thank you!

