Evaluation of the Head and Neck Mass

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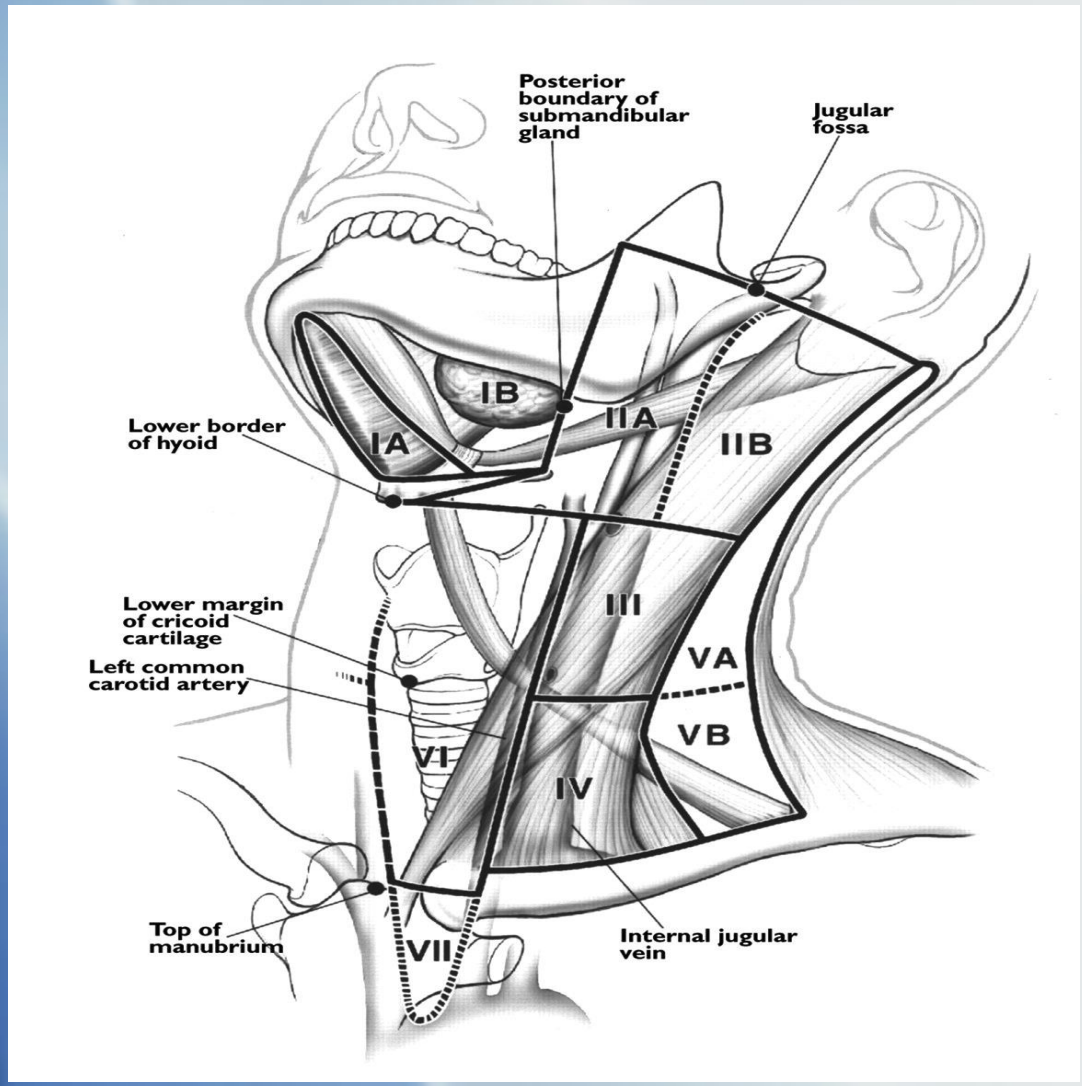
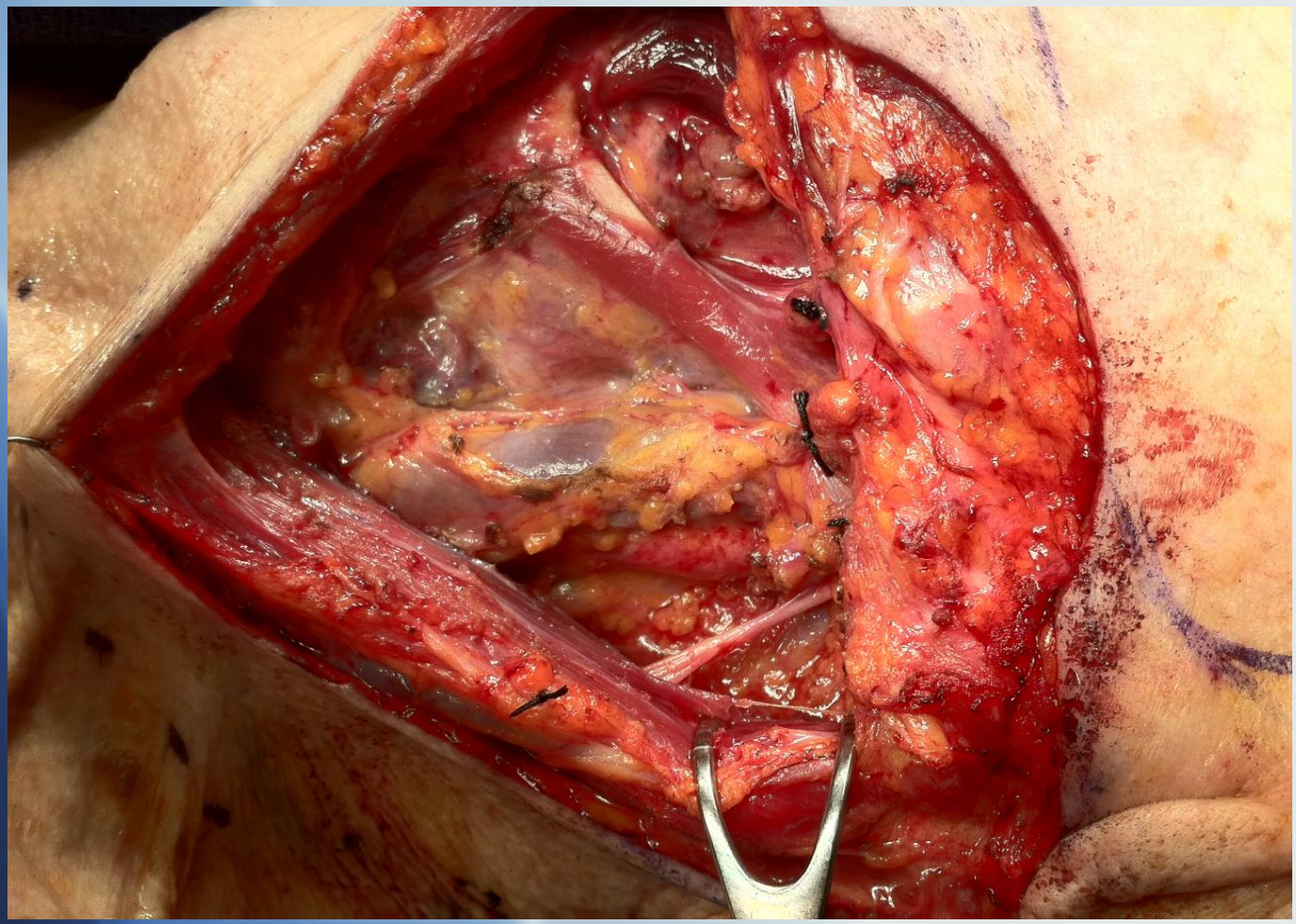

Posterior boundary of submandibular gland
Jugular fossa
IB
IA
IIA
IIB
Lower border of hyoid
III
Lower margin of cricoid cartilage
Left common carotid artery
VA
VB
VI
IV
Top of manubrium
VII
Internal jugular vein



Initial Evaluation

- Adult or child?
  - Children >90% benign (inflammatory infectious)
  - Adults 80% neoplastic

Questions to Ask

- How long?
- Pain?
- Rapid Growth?
- Other masses?
- Pain elsewhere? (ear, throat)
- Change in voice or swallowing?
- Fevers, night sweats, weight loss?
- History of skin cancer?
- History of other cancers?

Exam

- Complete head and neck evaluation
- Include fiberoptic laryngoscopy
- Palpate base of tongue, tonsil
- Exam skin (large scars from dermatological procedures)

Differential Diagnosis

- “CATNIPS”
  - Congenital
  - Autoimmune
  - Traumatic
  - Neoplastic
  - Inflammatory
  - Psychological
  - Sarcoid

Congenital

- Location

  Midline:

  Thyroglossal Duct Cyst

  midline mass

  moves with swallowing

  treatment is sistrunk procedure

  Lateral:

  Branchial Cleft Cyst

  mass underlying SCM in level II

  most common is second branchial cleft cyst

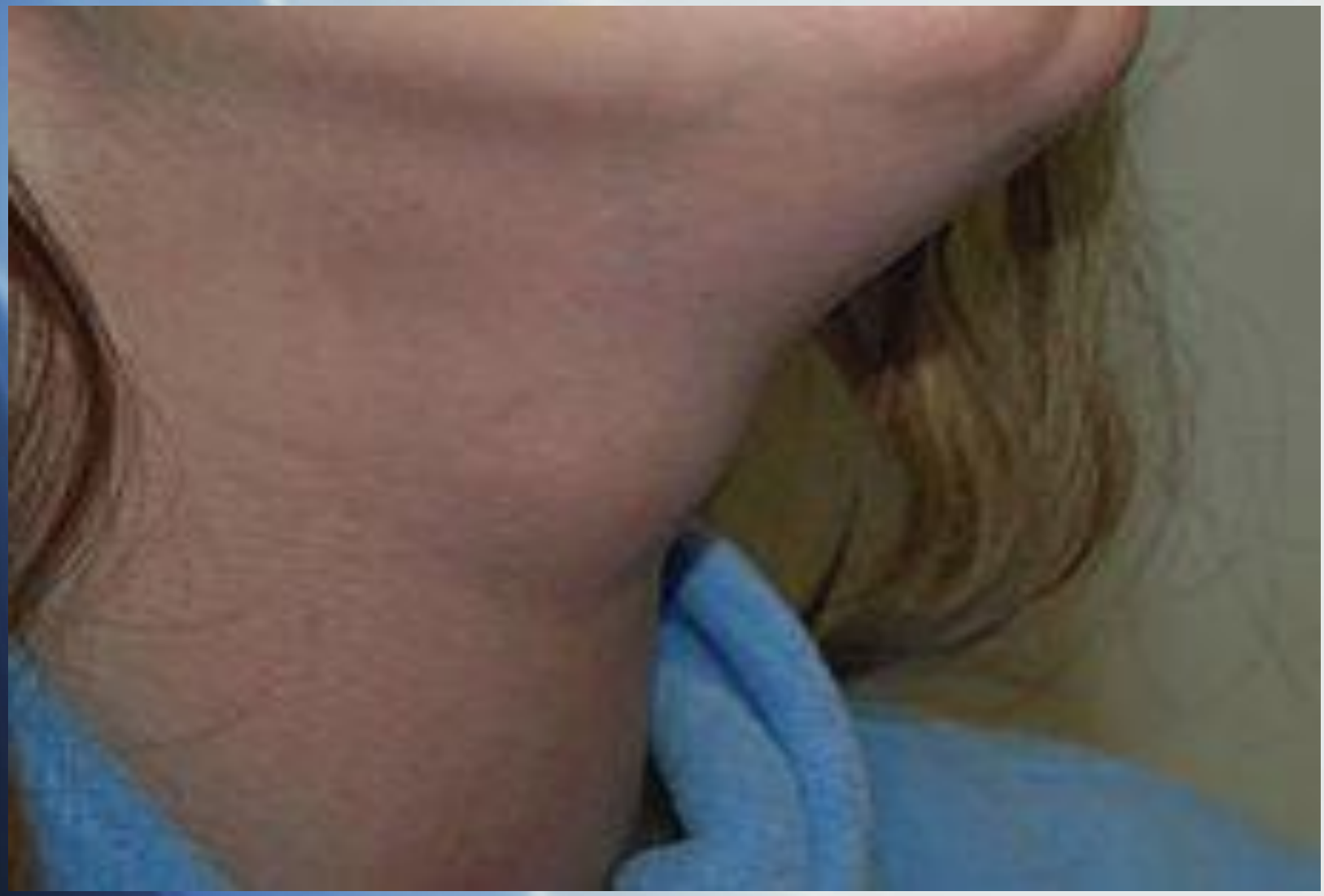
  tracts back to the tonsil

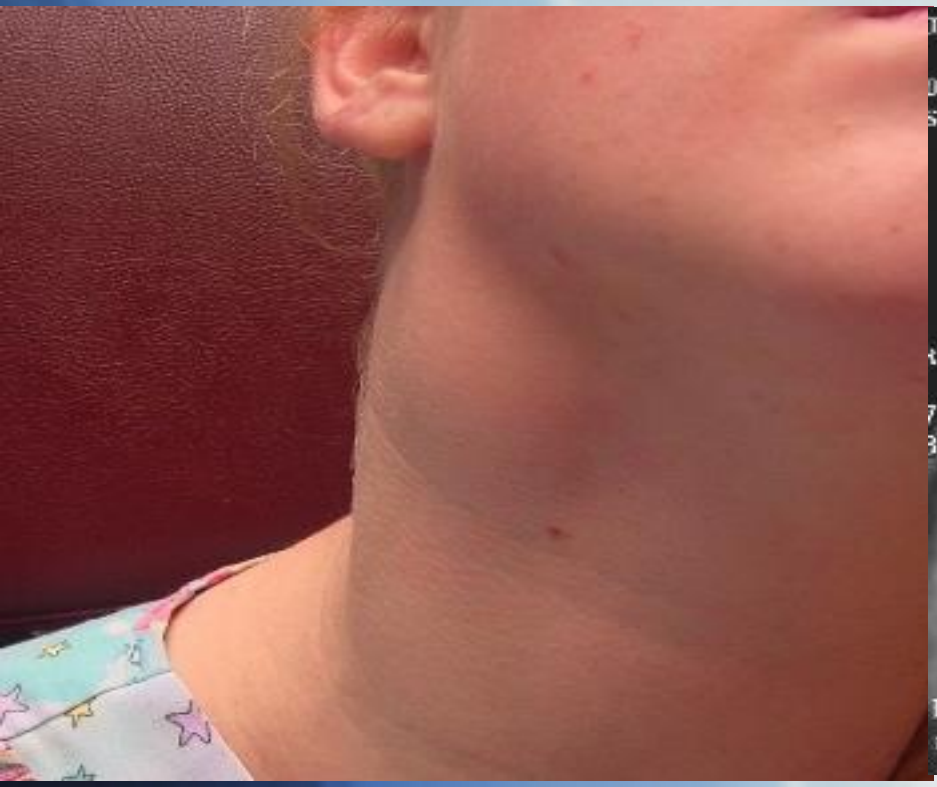
  rule out other possible cystic masses

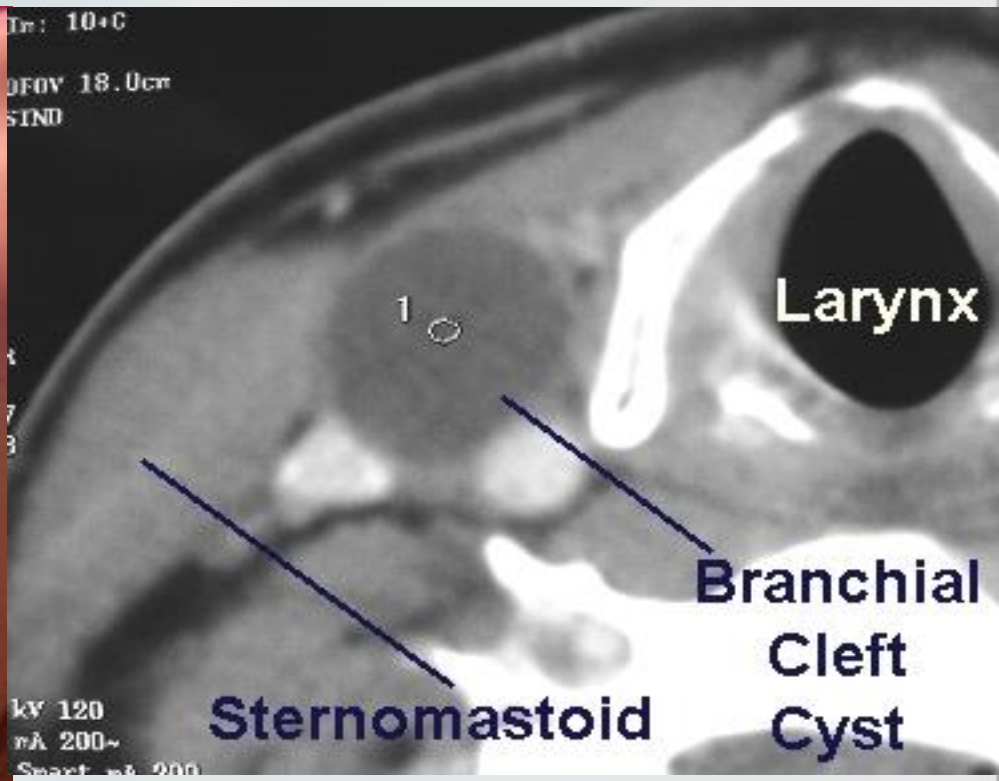
  treatment excision

  Random:

  sebaceous cyst






Larynx
Branchial
Cleft
Cyst
Sternomastoid

Autoimmune, Others

- Rare
- Kimuras disease
- Castlemans disease
- Other

Trauma

- Antecedent history
- Hematoma
- Pseudoaneurysm
  - History of trauma
  - Thrill or bruit

Neoplastic

- Benign
  - Lipomas
    - Soft tissue, asymptomatic, slow growth
  - Neuroma
    - Solitary, slow growing
    - Parapharyngeal space most common
    - Sporadic but associated with NF
  - Vascular tumors
    - At level of carotid bifurcation, pulsatile mass
    - Bruit or thrill

Neoplastic

- Malignant
  - Nodal Metastasis
    - origin
    - evaluation
  - Primary Tumors
    - origin
    - evaluation

Neoplastic - Malignant

- Nodal Masses
- Origin

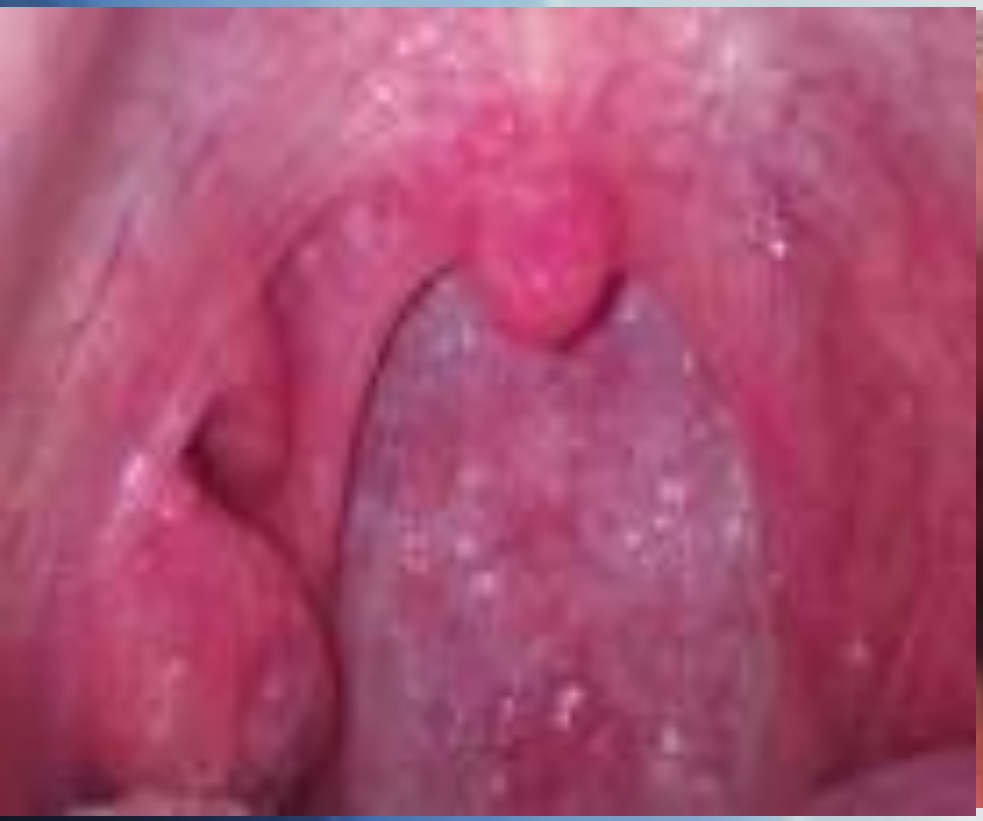
Nodal mass:

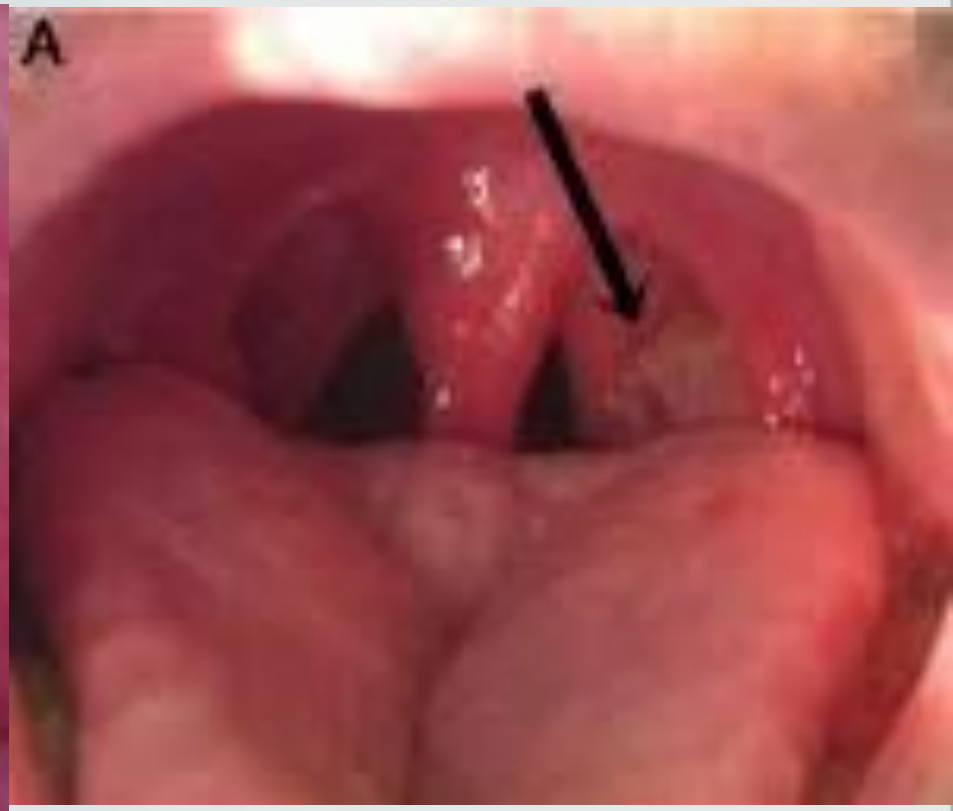
Asymptomatic neck mass presenting symptom
12% head and neck cancer case.

80% of these are squamous cell carcinomas

Neoplastic - Malignant

- History
  - History ETOH and tobacco
  - HPV
    - Emerging data, importance
- Physical Exam
  - Evaluation oral cavity, oropharnx, larnx
  - Careful laryngoscopy
  - In unknown primary malignancies, 80% of the were from the base of tongue and tosillar region.
- Imaging
  - CT
    - Imaging of choice
    - Solid vs cystic
    - Nodal changes (necrosis, >1.5 cm, indistinct borders)
    - No contrast if thyroid suspicion
  - MRI
    - Vascular suspicion
    - Skull base




A

Neoplasm - Malignant

- Primary Tumors
  - Thyroid
  - Lymphoma
  - Salivary

Neoplasm - Malignant

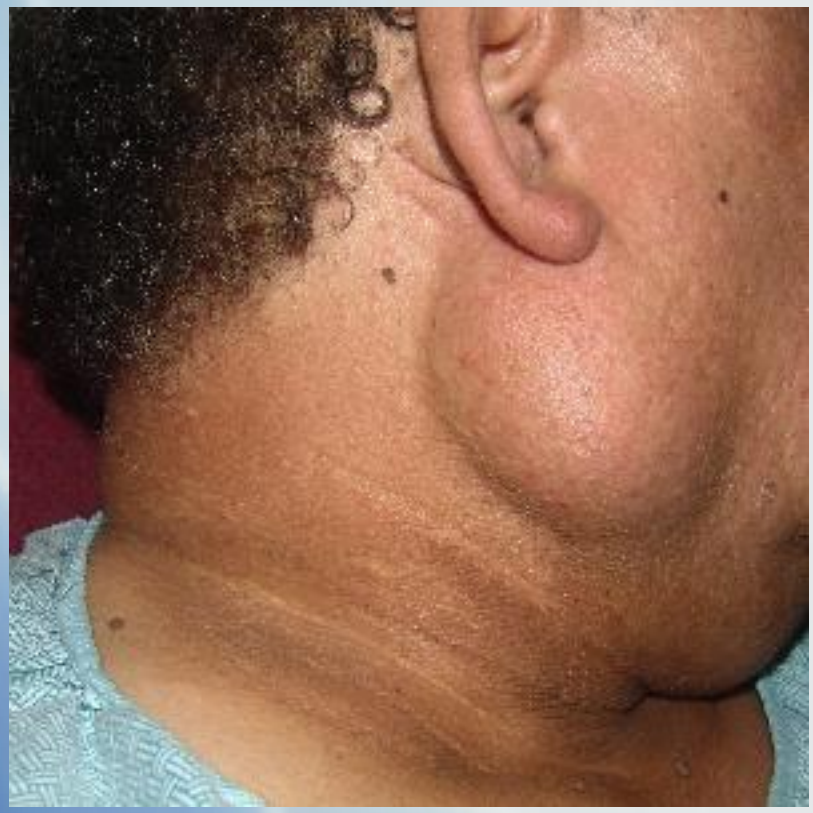
- Thyroid
  - Lymph node metastasis may be initial symptom in 15% patients
  - Anterior compartment mass
  - Ultrasound imaging of choice
  - Types of thyroid cancer

Neoplasm - Malignant

- Lymphoma
  - Constitutional “B” symtoms
  - Generalized lymphadenopathy
  - FNA may be inconclusive
    - A “normal” biopsy may still be lymphoma
    - Persistant node may require excisional biopsy

Neoplasm - Malignant

- Salivary Tumors
  - Angle of mandible or submandibular triangle
  - 80% parotid tumors benign
  - 50% submandibular tumors malignant
  - Worrisome features for malignancy:
    - Cranial nerve weakness
    - Skin fixation
    - History of skin cancer
    - Rapid growth
    - Pain



Infectious

- Less common in adults
- Pain, rapid onset
- Increase WBC, fever
- No response to antibiotics consider FNA
- Types of inflammatory
  - Cat scratch (bartonella)
  - Atypical Mycobacterium

Psychological

- Carotid bulb (atherolscerotic)
- Ptotic submandibular glands
- Normal lymph node
- Transverse process of C1
- Hyoid bone

Sarcoid

- Systemic granulomatous disease
- Unknown etiology
- More common in female
  - Northern European
  - African American

Conclusion

- Wide variety of causes of neck mas
- Always high index of suspicion with adults
- Full history and thorough physical necessary
- If unsure, at the very least imaging to assist in diagnosis.