

# Salivary glands tumors

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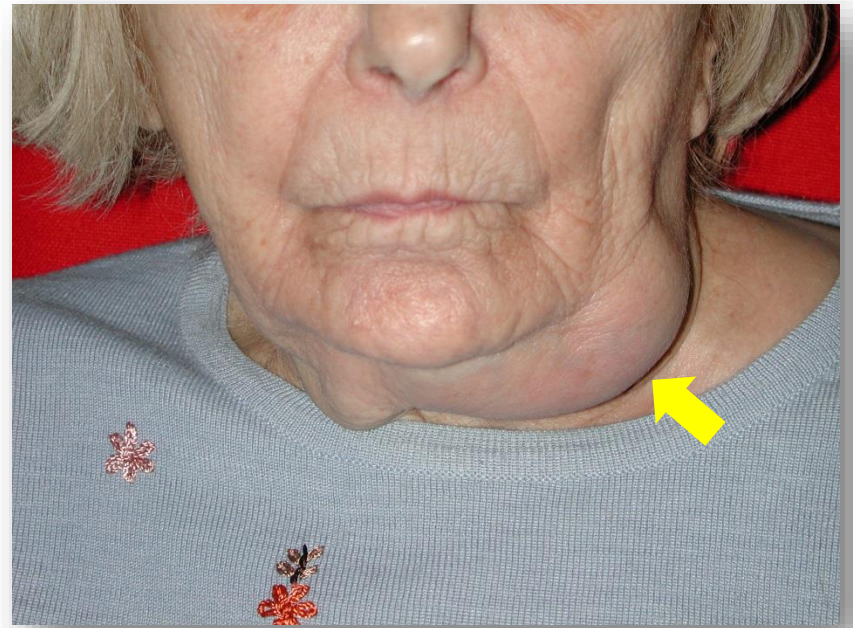


What kind of tumor and  
what kind of surgery?

# Is it a salivary gland tumor?



# Is it benign or malignant?



# Initial work-up

# Sonography



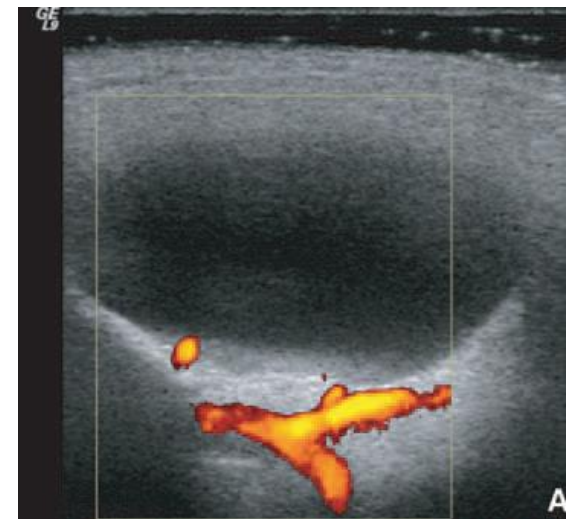
Location into salivary gland vs lymph node or other

FNAC guidance



Only superficial parotid analysis

Poor diagnosis accuracy



# CT scan



Cancer staging

Bone invasion

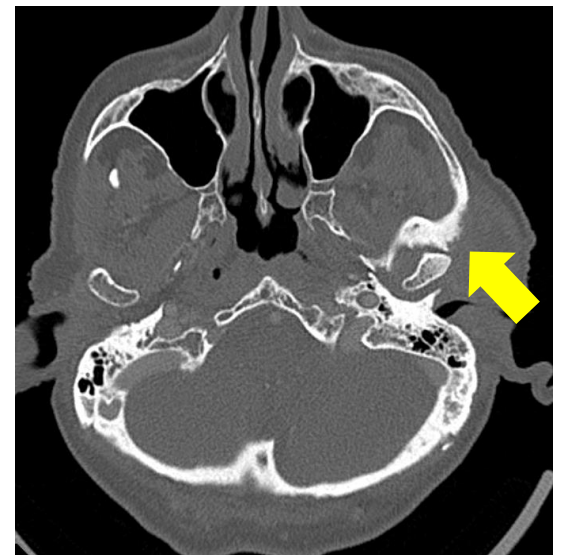
Lymph nodes

Distant metastases



Poor diagnosis accuracy

Poor anatomical definition



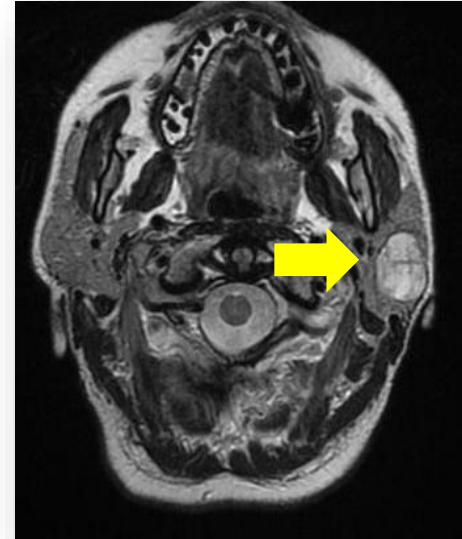
# MRI



Best anatomical definition  
Best diagnosis accuracy



Accessibility  
Cost

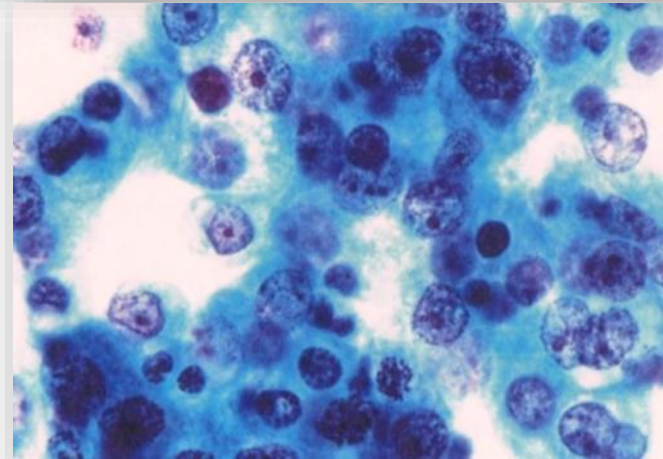
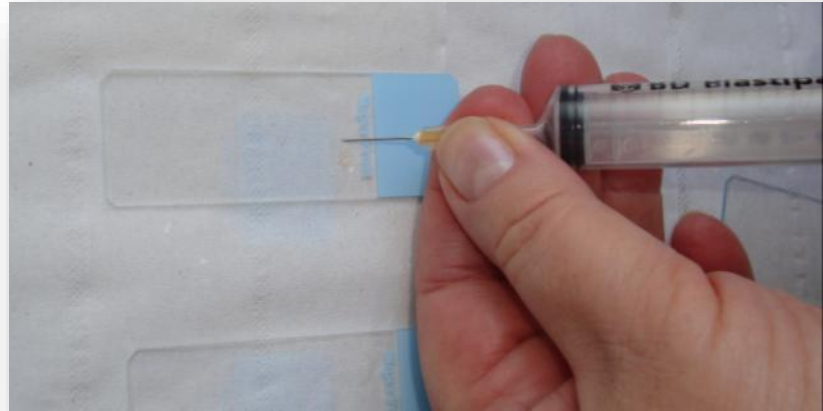




# FNAC



25 Gauges



# WHO classification 2017

## Malignant tumours

Acinic cell carcinoma	8550/3
Secretory carcinoma	8502/3
Mucoepidermoid carcinoma	8430/3
Adenoid cystic carcinoma	8200/3
Polymorphous adenocarcinoma	8525/3
Epithelial-myoepithelial carcinoma	8562/3
Clear cell carcinoma	8310/3
Basal cell adenocarcinoma	8147/3
Sebaceous adenocarcinoma	8410/3
Intraductal carcinoma	8500/2
Cystadenocarcinoma	8440/3
Adenocarcinoma, NOS	8140/3
Salivary duct carcinoma	8500/3
Myoepithelial carcinoma	8982/3
Carcinoma ex pleomorphic adenoma	8941/3
Carcinosarcoma	8980/3
Poorly differentiated carcinoma:	
Neuroendocrine and non-neuroendocrine	
Undifferentiated carcinoma	8020/3
Large cell neuroendocrine carcinoma	8013/3
Small cell neuroendocrine carcinoma	8041/3
Lymphoepithelial carcinoma	8082/3
Squamous cell carcinoma	8070/3
Oncocytic carcinoma	8290/3

## Borderline tumour

Sialoblastoma	8974/1
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## Benign tumours

Pleomorphic adenoma	8940/0
Myoepithelioma	8982/0

Basal cell adenoma	8147/0
Warthin tumour	8561/0
Oncocytoma	8290/0
Lymphadenoma	8563/0
Cystadenoma	8440/0
Sialadenoma papilliferum	8406/0
Ductal papillomas	8503/0
Sebaceous adenoma	8410/0
Canalicular adenoma and other ductal adenomas	8149/0

## Other epithelial lesions

Sclerosing polycystic adenosis  
Nodular oncocytic hyperplasia  
Lymphoepithelial lesions  
Intercalated duct hyperplasia

## Soft tissue lesions

Haemangioma	9120/0
Lipoma/sialolipoma	8850/0
Nodular fasciitis	8828/0

## Haematolymphoid tumours

Extranodal marginal zone lymphoma of MALT	9699/3
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The morphology codes are from the International Classification of Diseases for Oncology (ICD-O) [742A]. Behaviour is coded /0 for benign tumours; /1 for unspecified, borderline, or uncertain behaviour; /2 for carcinoma in situ and grade III intraepithelial neoplasia; and /3 for malignant tumours.

The classification is modified from the previous WHO classification, taking into account changes in our understanding of these lesions.

\*These new codes were approved by the IARC/WHO Committee for ICD-O.

*Italics:* Provisional tumour entities. \*\*Grading according to the 2013 WHO Classification of Tumours of Soft Tissue and Bone.

# Objectives of preoperative evaluation

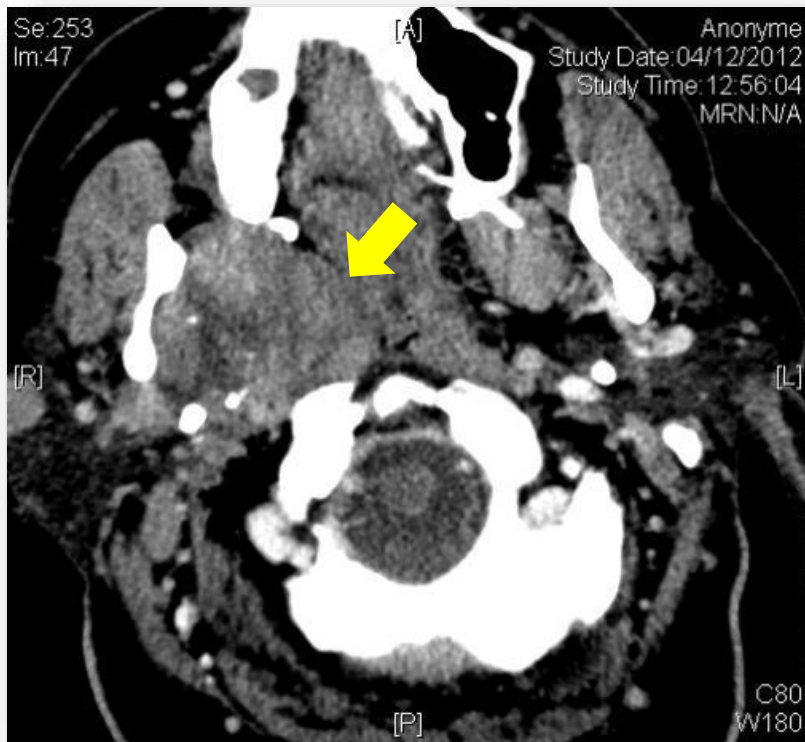
- To avoid unnecessary surgery (infective or non-neoplastic masses, lymphoma, unresectable tumour)
- To do appropriate surgery
- To avoid embarking on surgery that is beyond the scope of a surgeon e.g. deep lobe tumour, tumour extending to parapharyngeal space, tumour requiring neck dissection, or tumour requiring facial nerve reconstruction

# Imaging in poorly resourced settings?

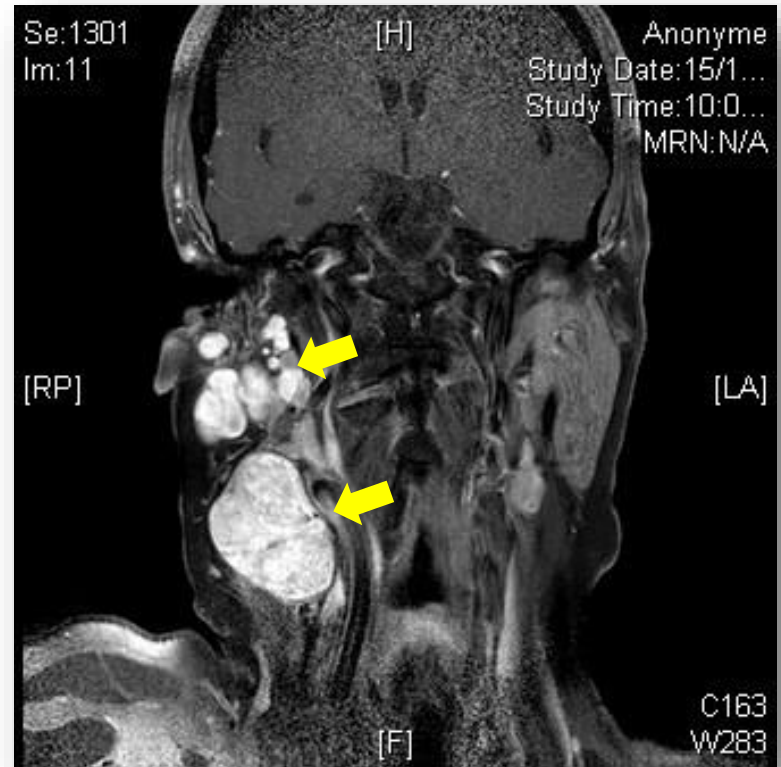
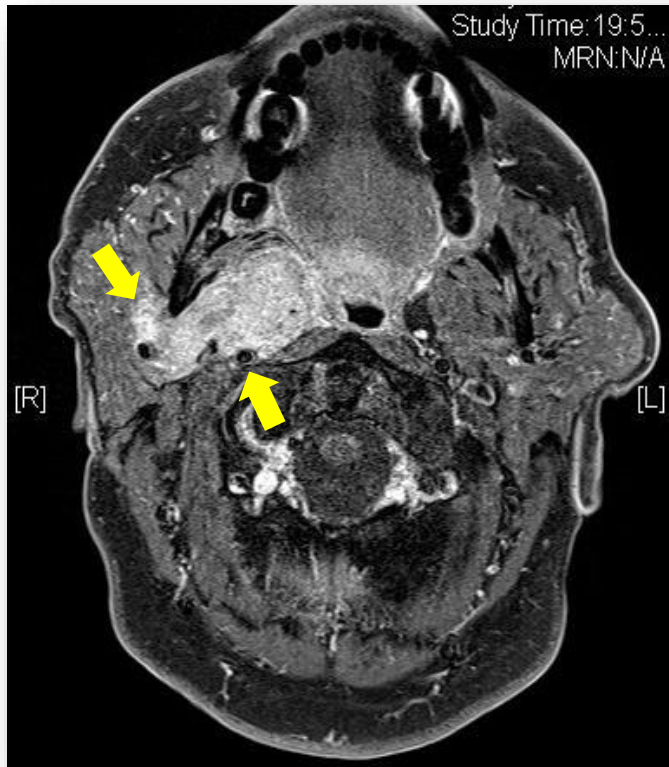
- Minority of parotid tumours require imaging
  - Only required if it might change management
  - Infrequently indicated for clinically benign, mobile parotid tumours as it rarely alters surgical management
- Indications
  - Deep lobe / extension to parapharyngeal space
  - Fixed tumor, invasion of local structures
  - Neurological deficits
  - Cancer staging

<https://developingworldheadandneckcancerguidelines.com/afhns-guidelines>

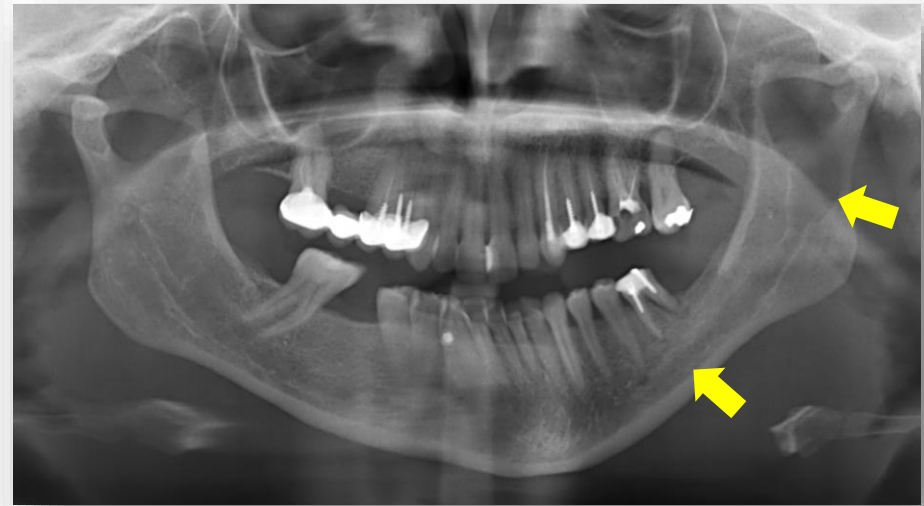
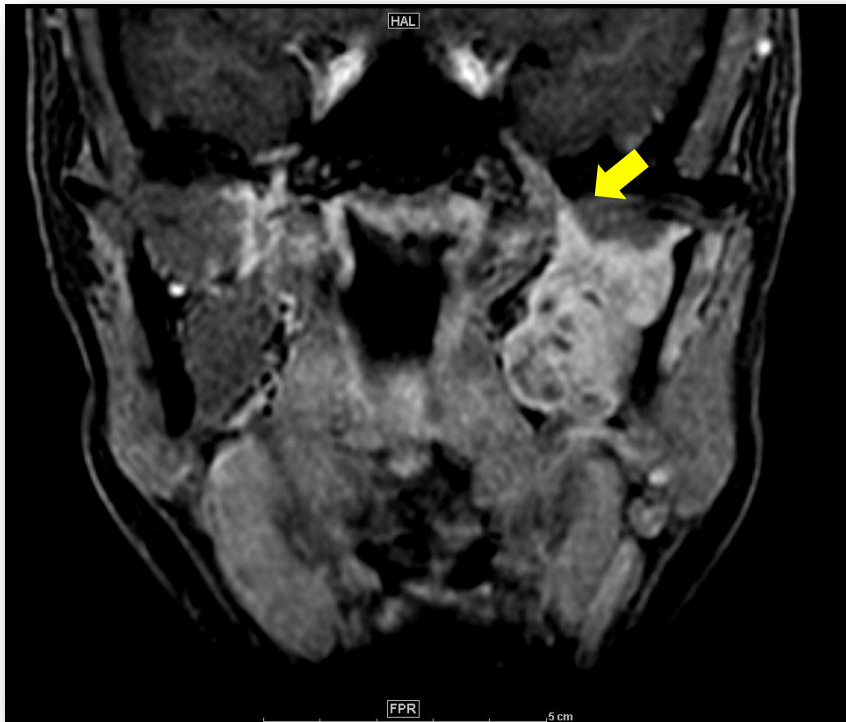
# Parapharyngeal space extension



# Local spread / recurrence



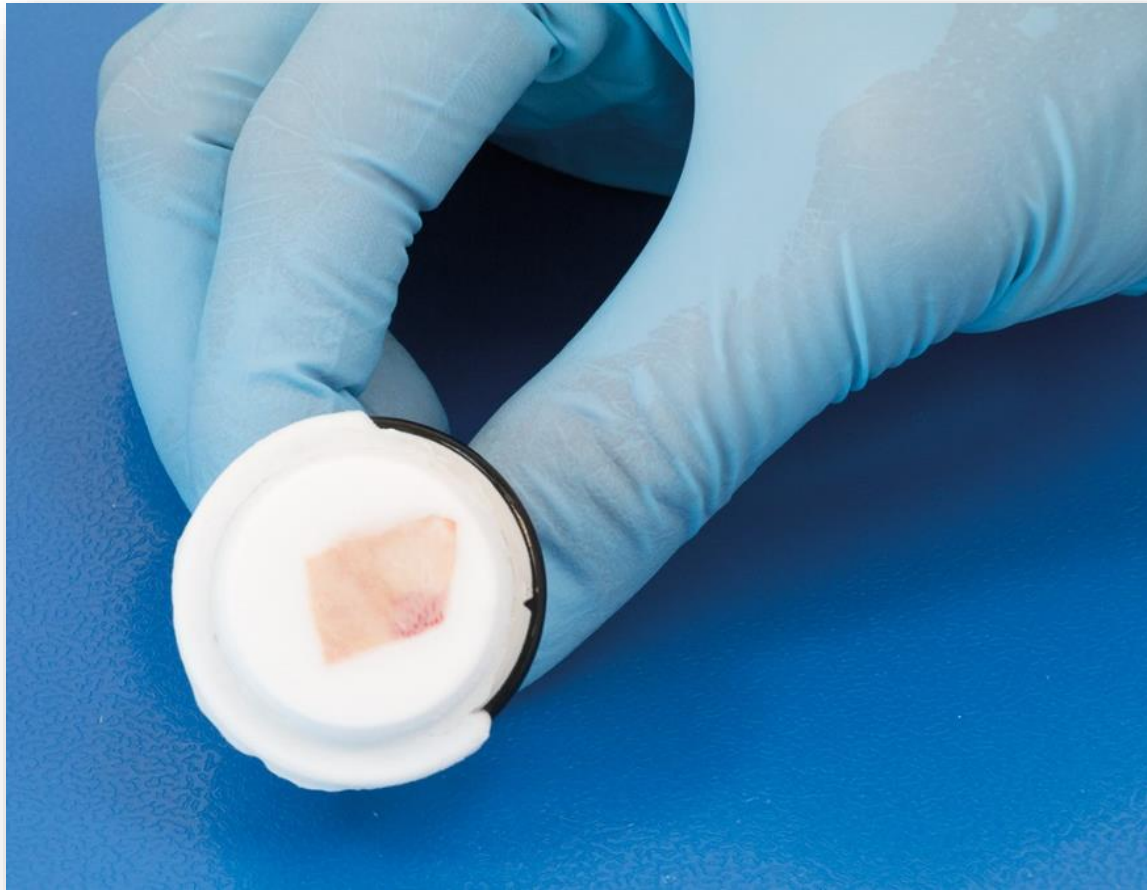
# Perineural spread: adenoid cystic carcinoma



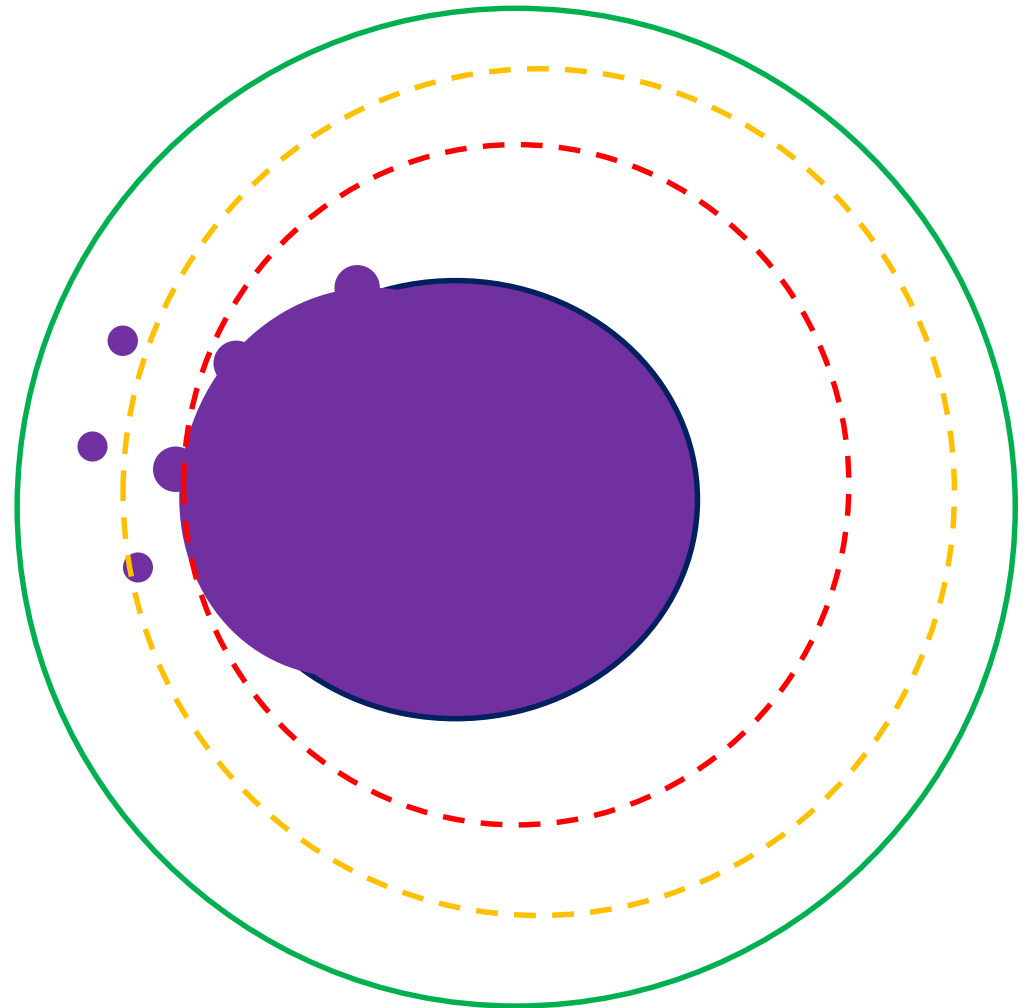
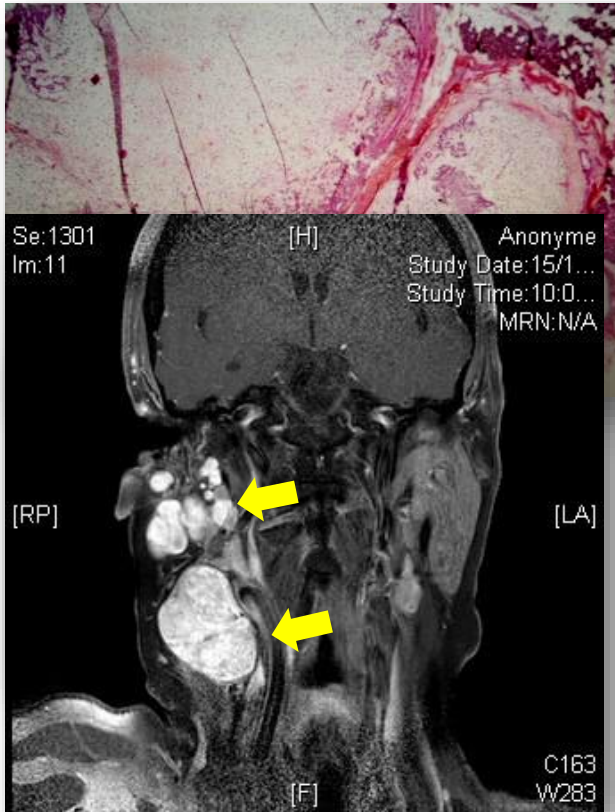
# Surgery



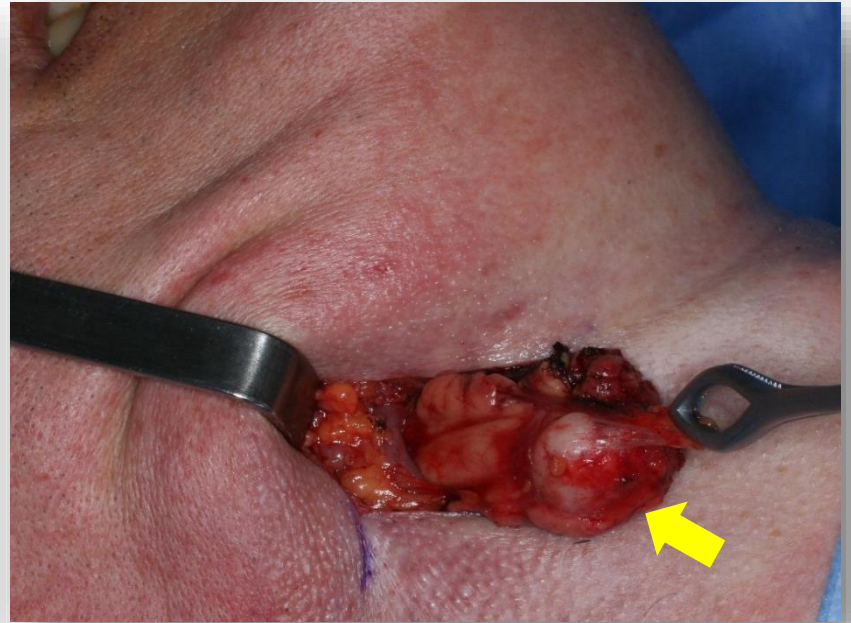
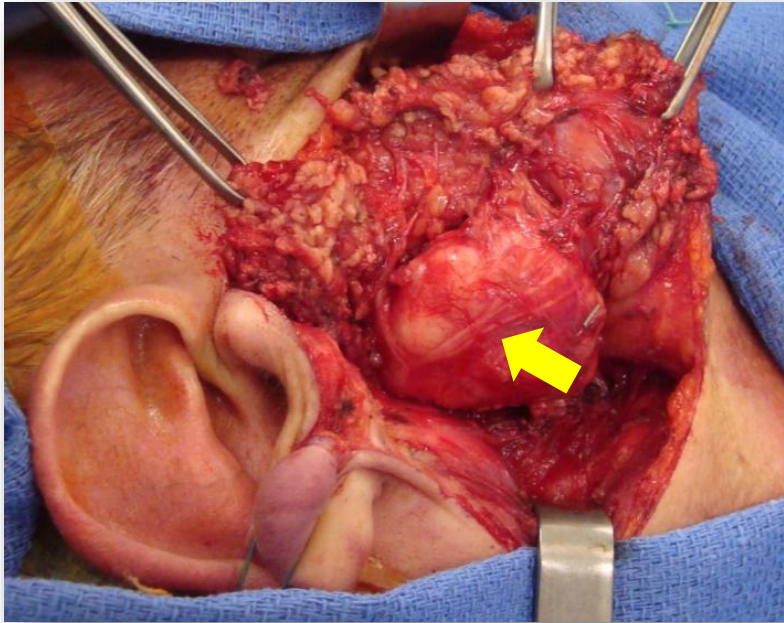
# Frozen section



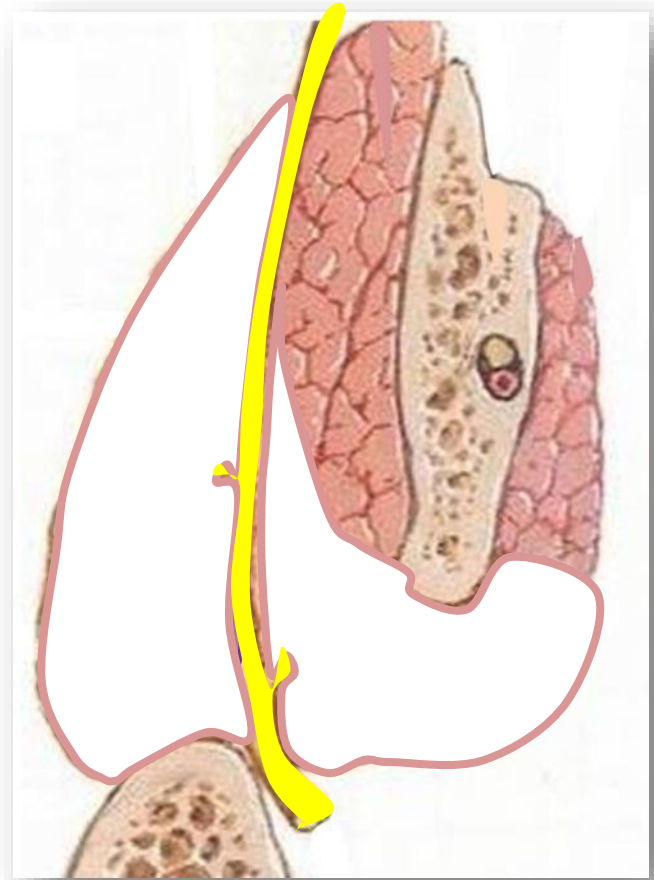
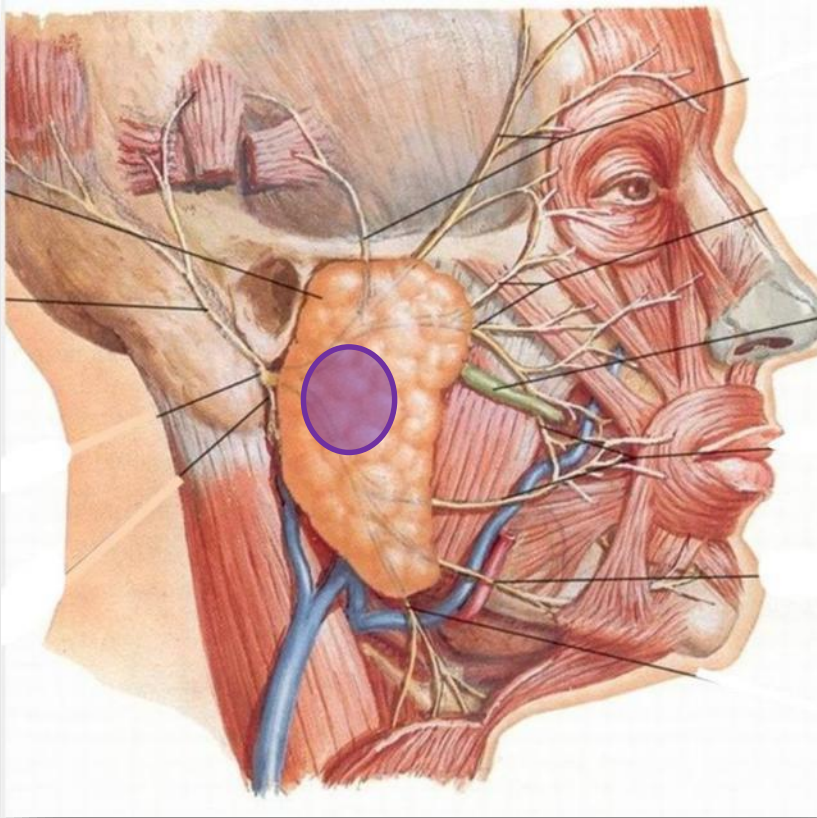
# Surgical margins



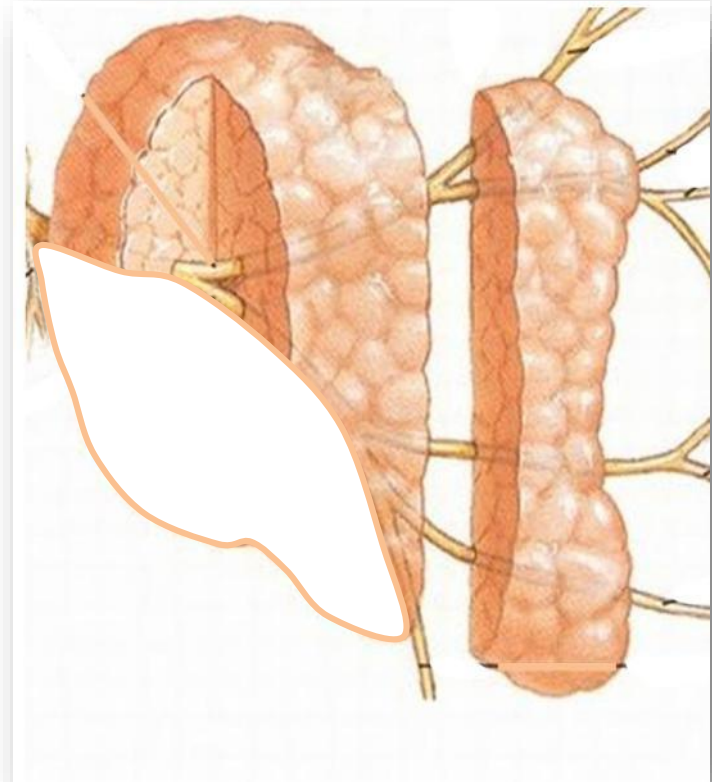
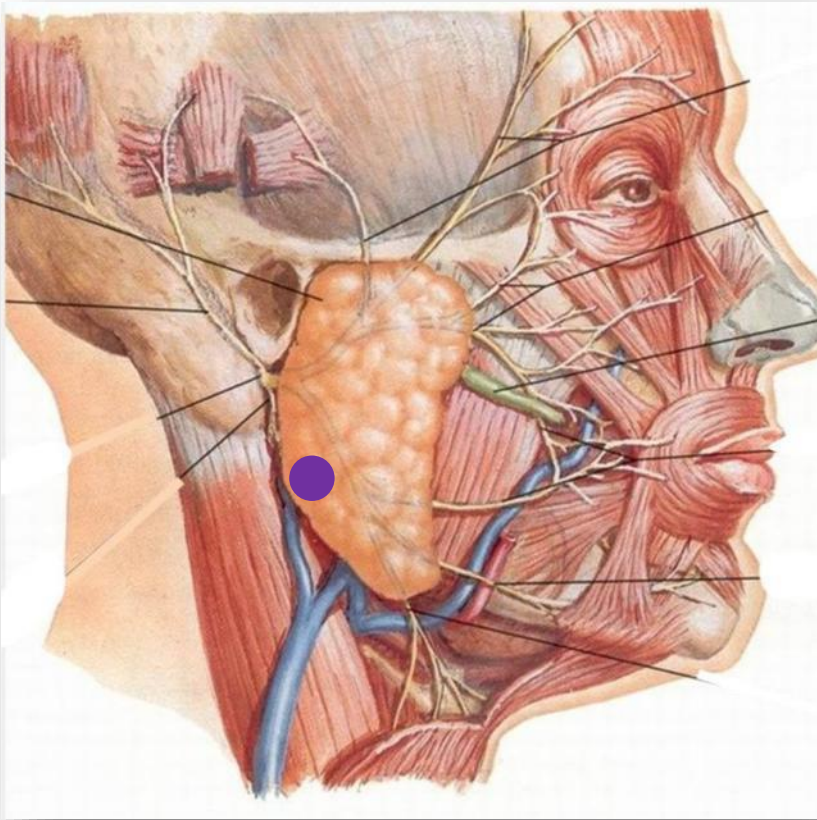
Clear margins?



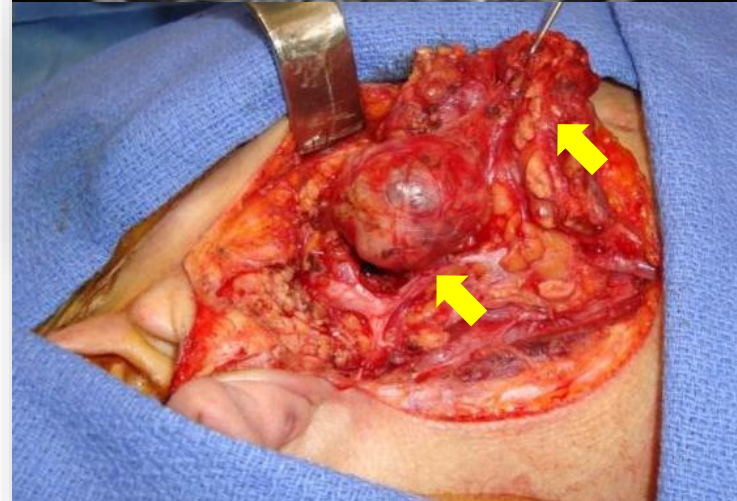
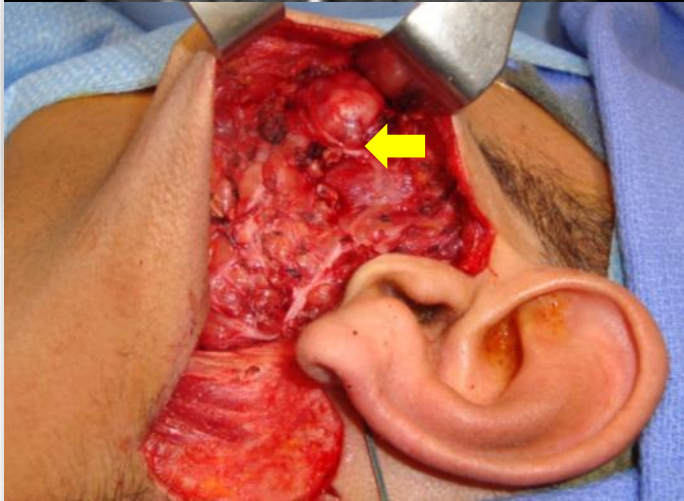
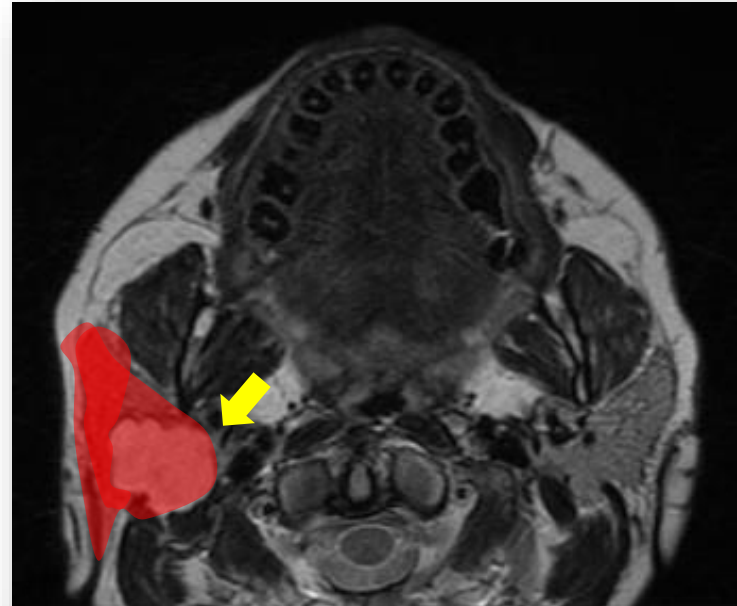
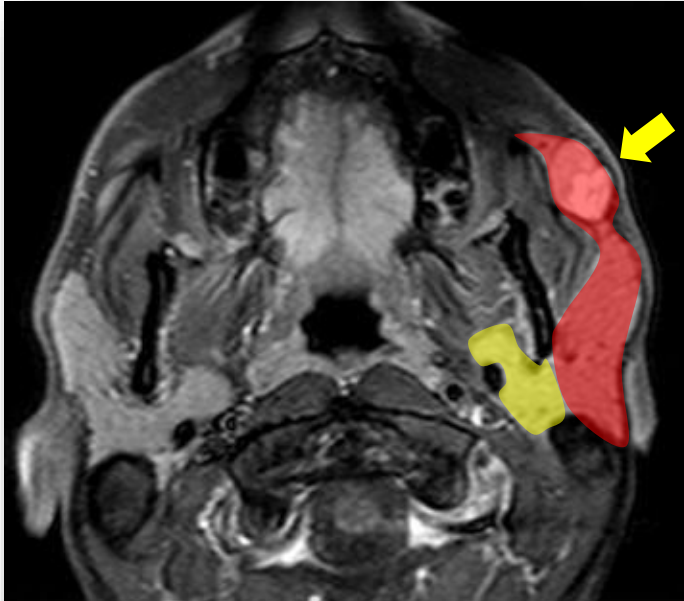
# Pleiomorphic adenoma (parotid gland)



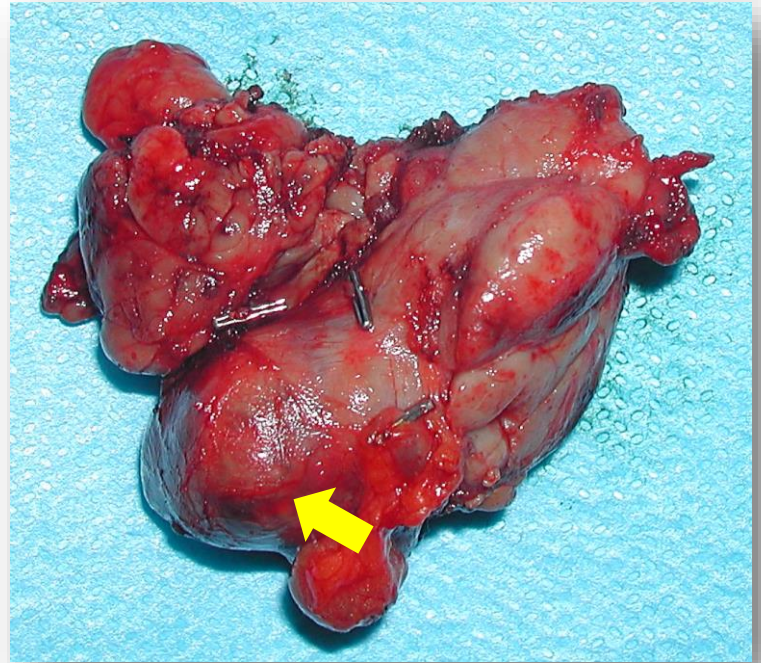
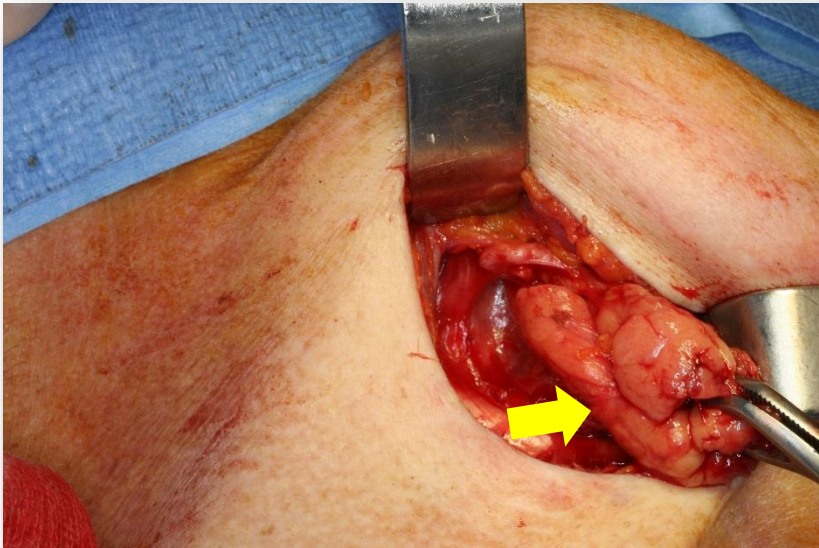
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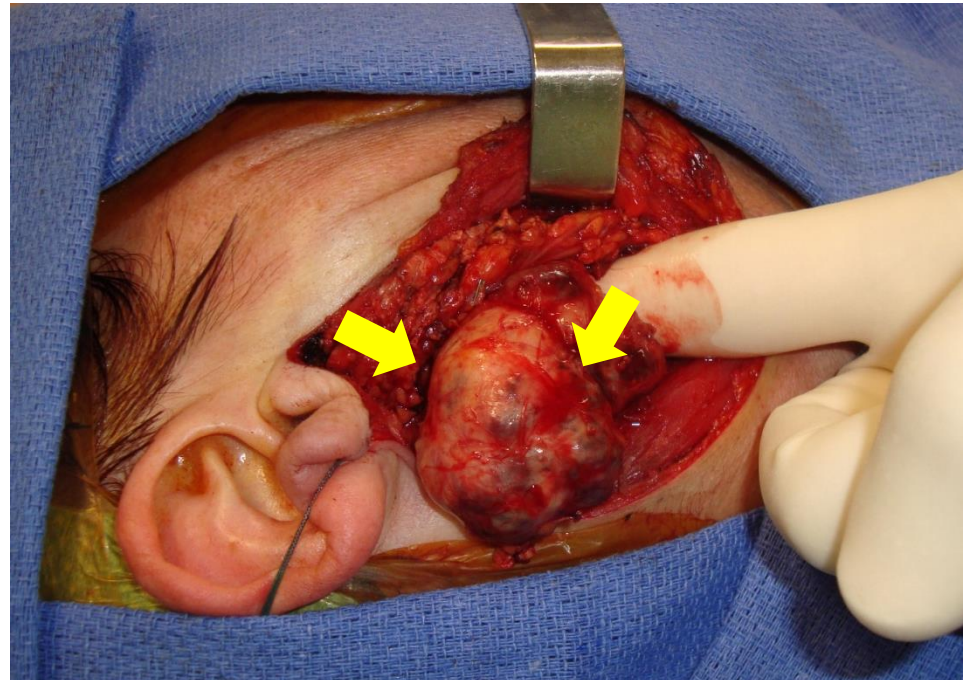
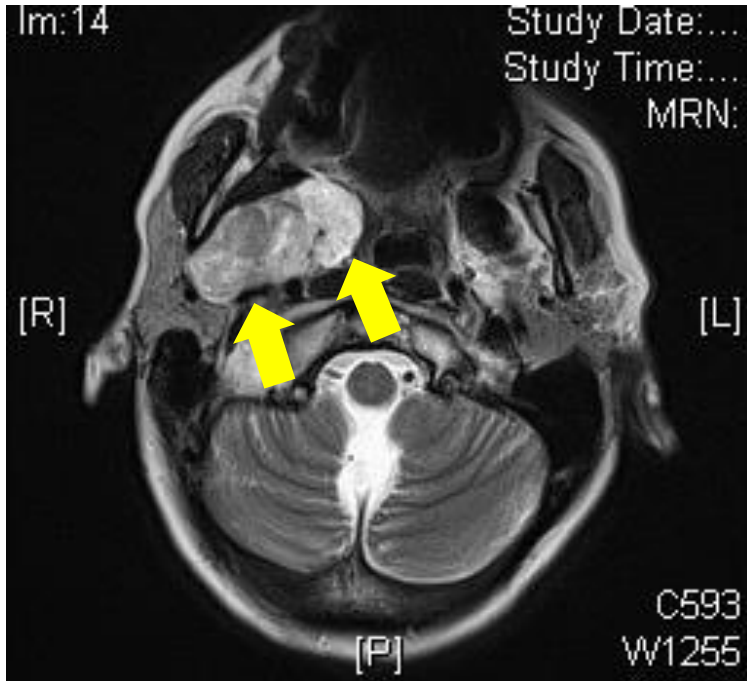
# Pleiomorphic adenoma (parotid gland)



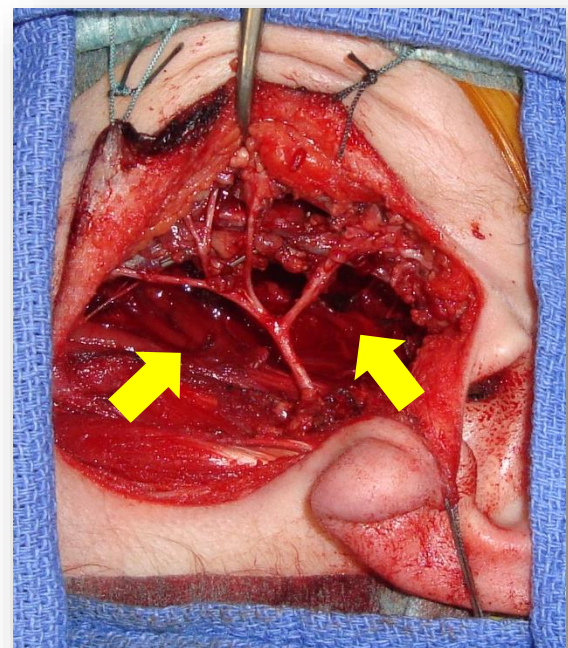
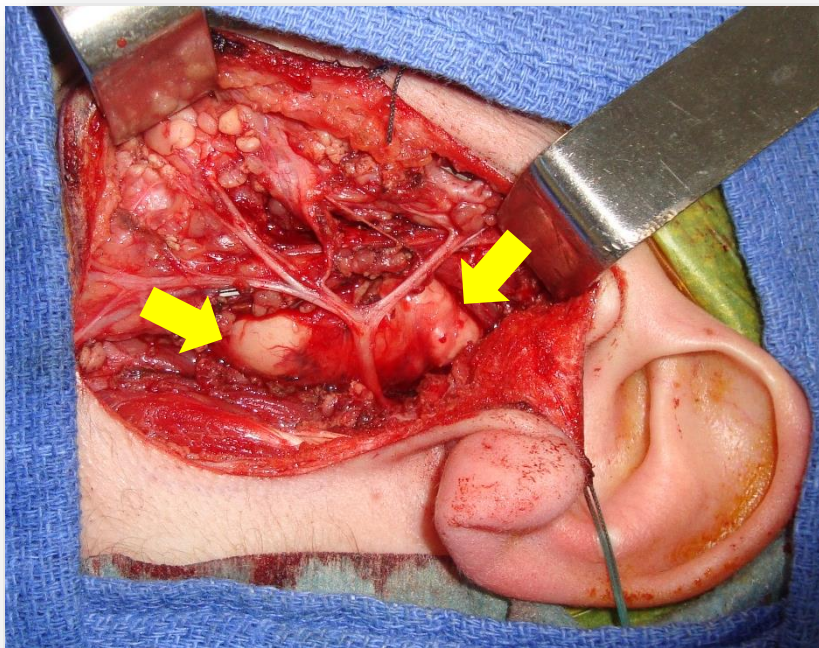
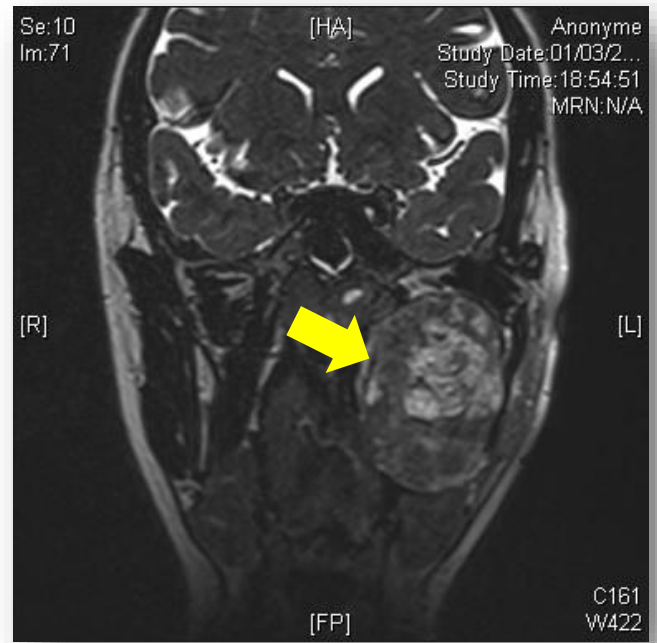
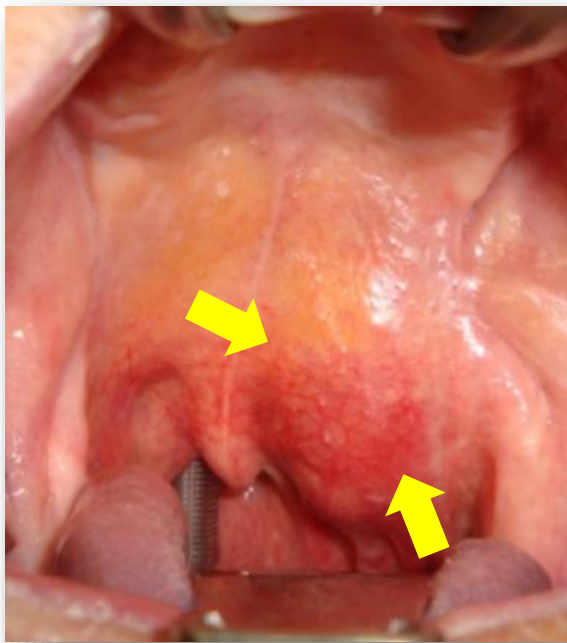
# Pleiomorphic adenoma (submandibular gland)



# Parapharyngeal space tumors

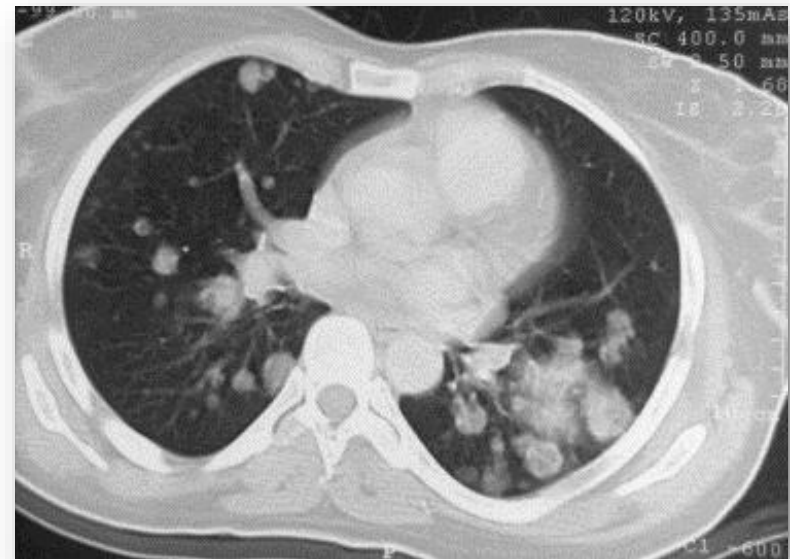
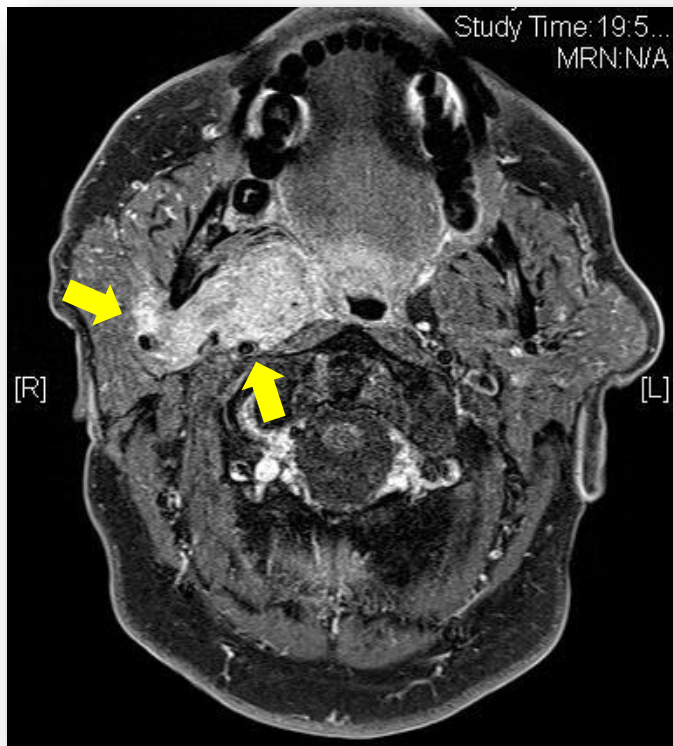






# Cancer

## Preoperative cancer work-up !

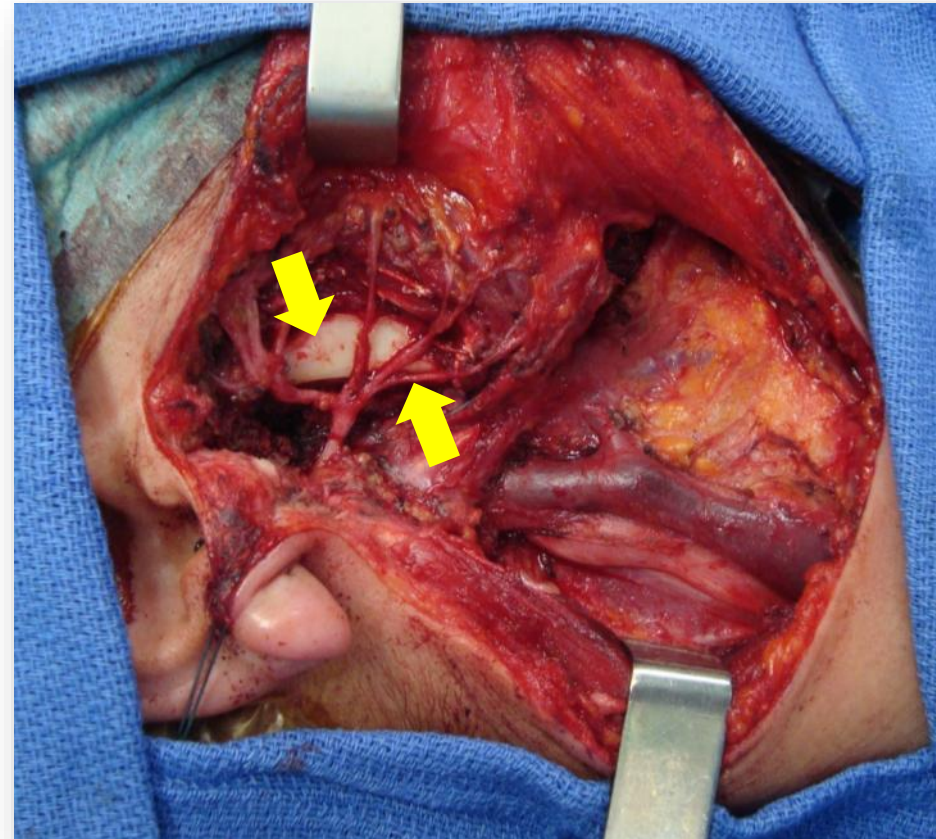
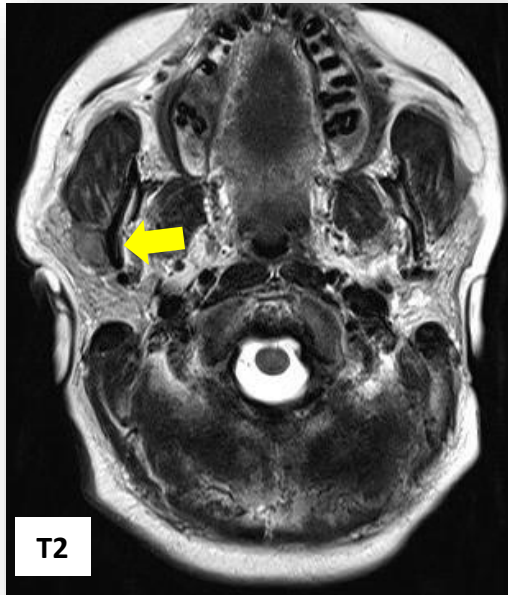


# Cancer (parotid gland)

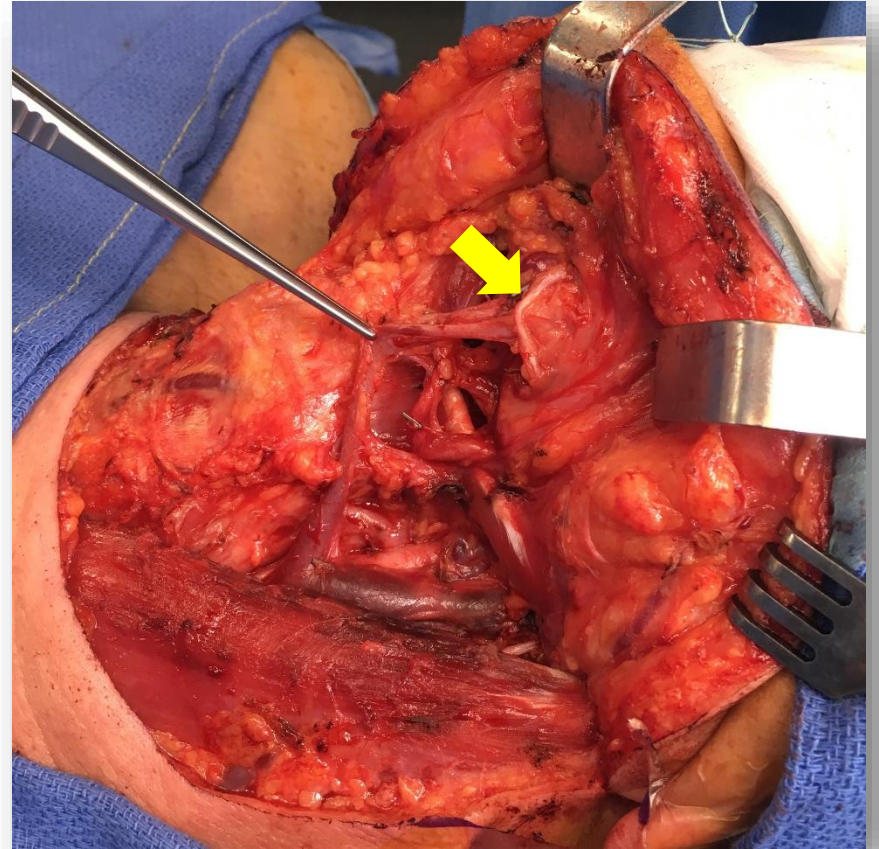
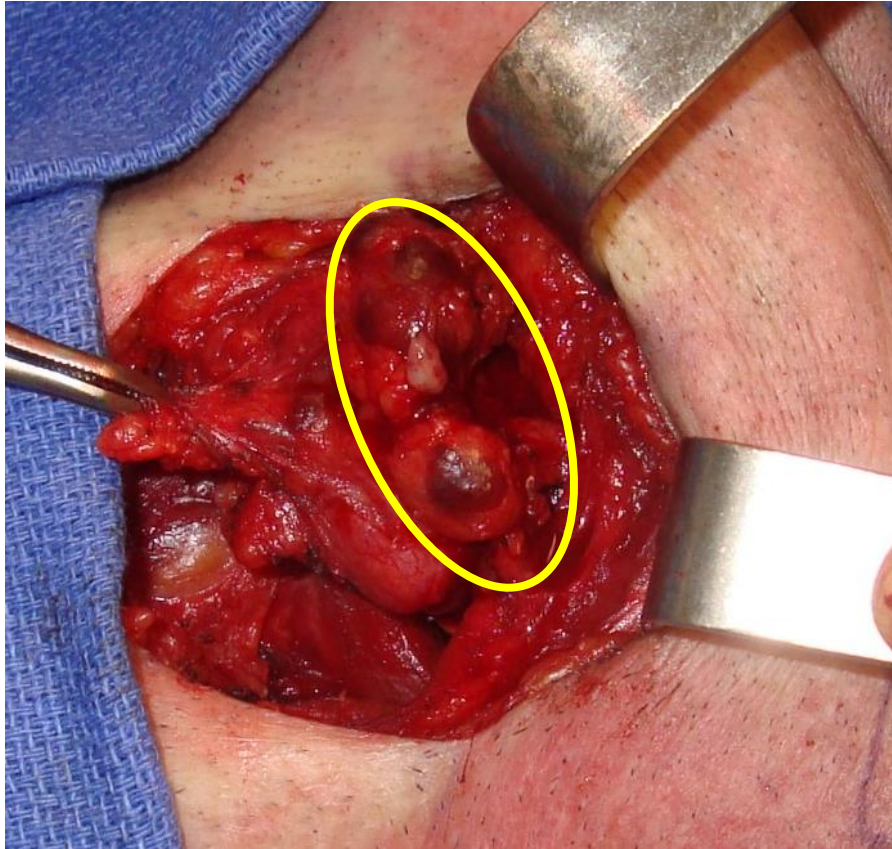
## Total parotidectomy

Radical or not (facial nerve preservation when possible)

Lymph node dissection



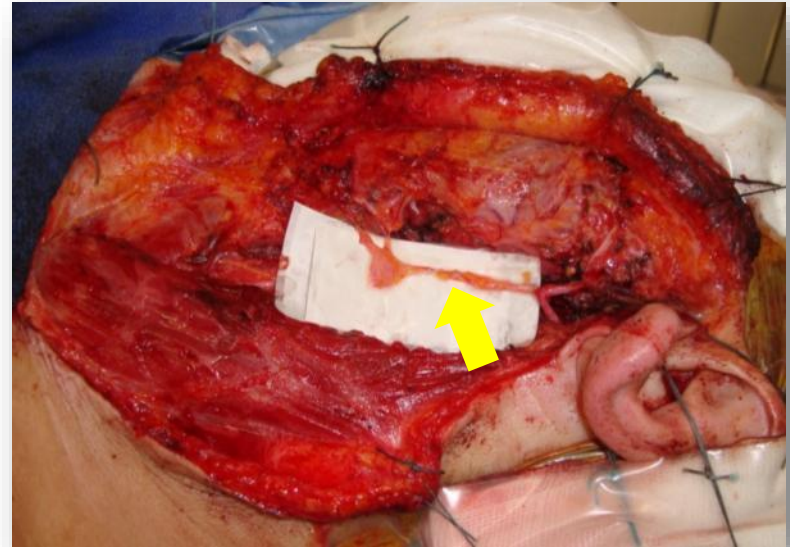
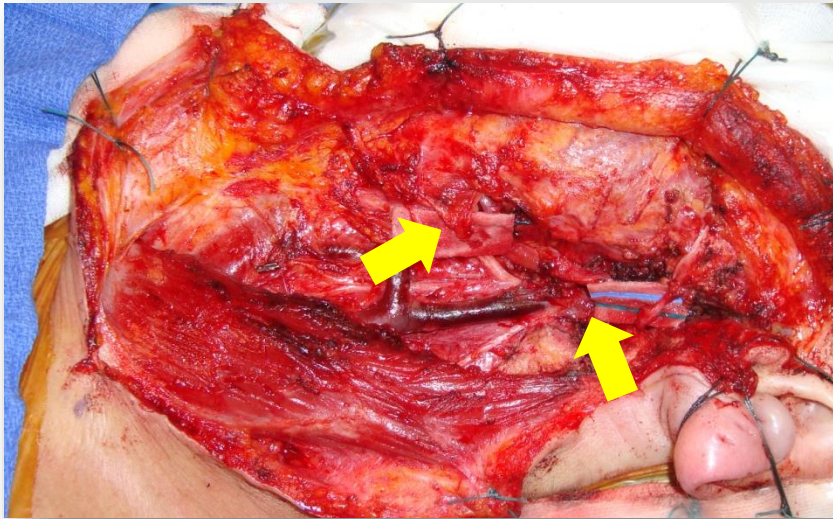
# Cancer (submandibular gland)



Submandibular gland excision

Lymph node dissection

# Nerves management (cancer)

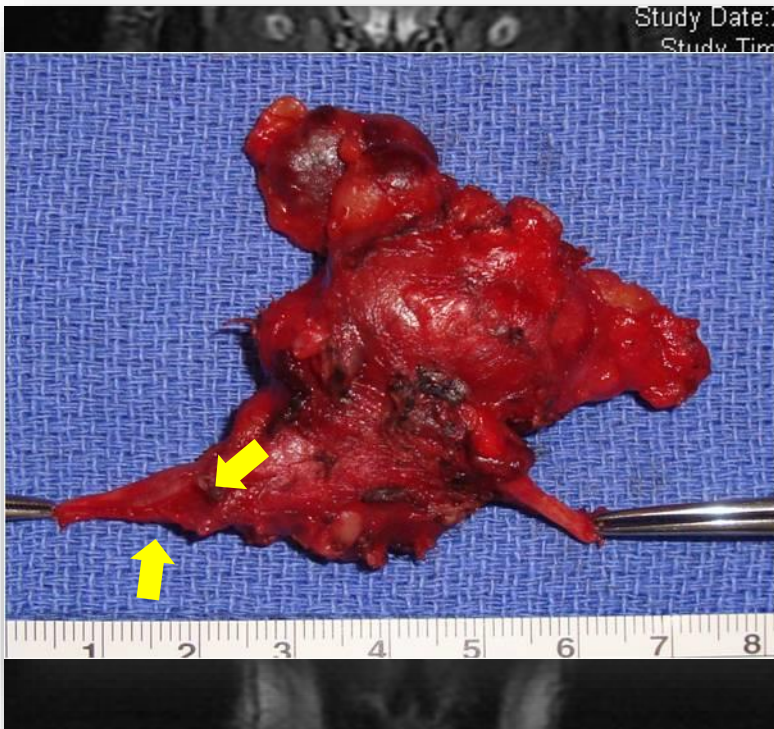


Facial nerve preservation whenever possible,  
neuromonitoring

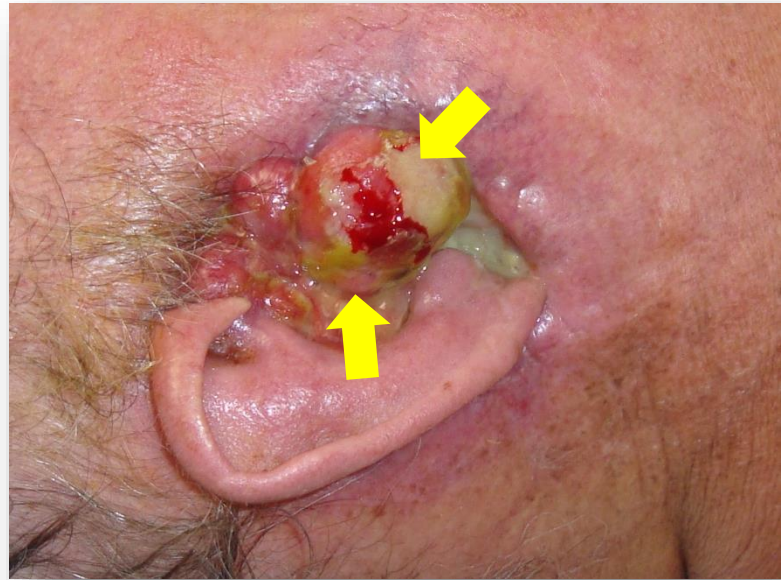
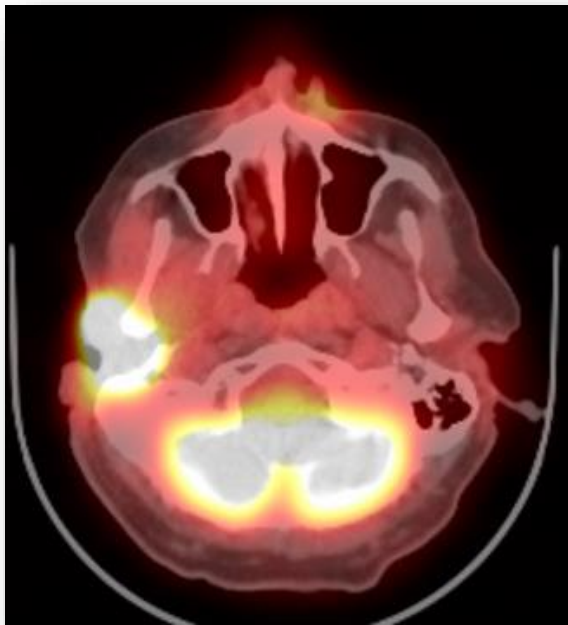
Nerve graft must be anticipated

**Patient information++**

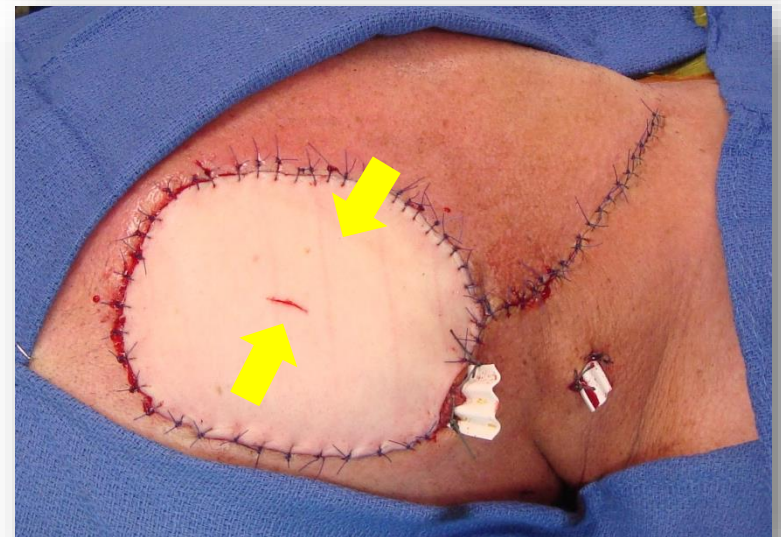
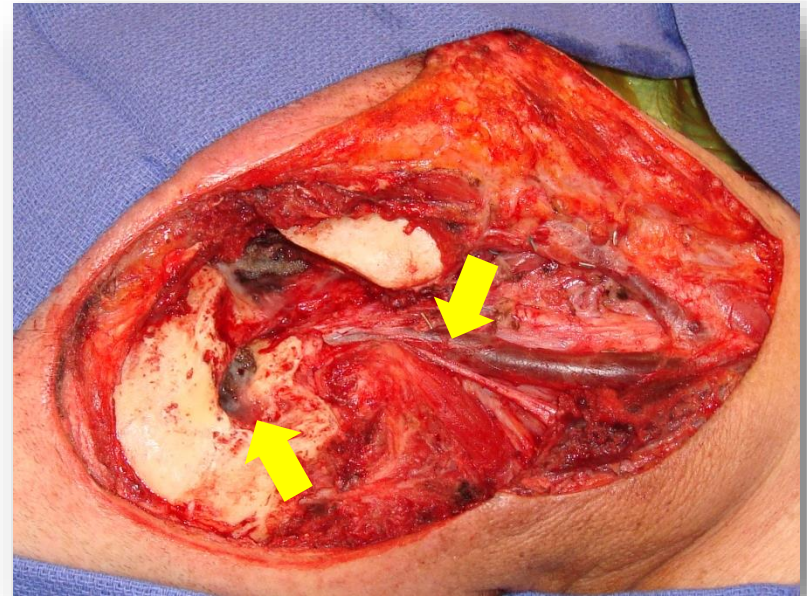
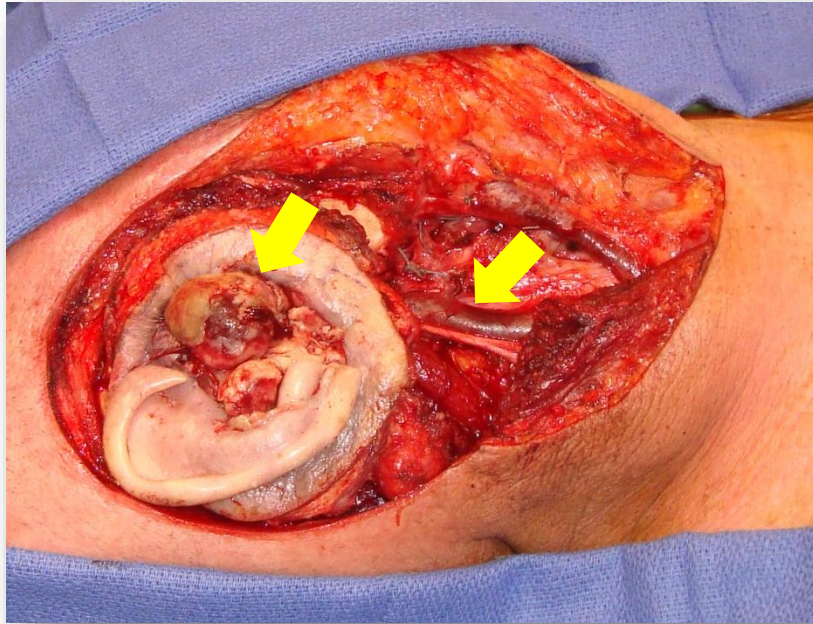
# Beware of perineural spread!



# Radical surgery + reconstruction



# Radical surgery + reconstruction

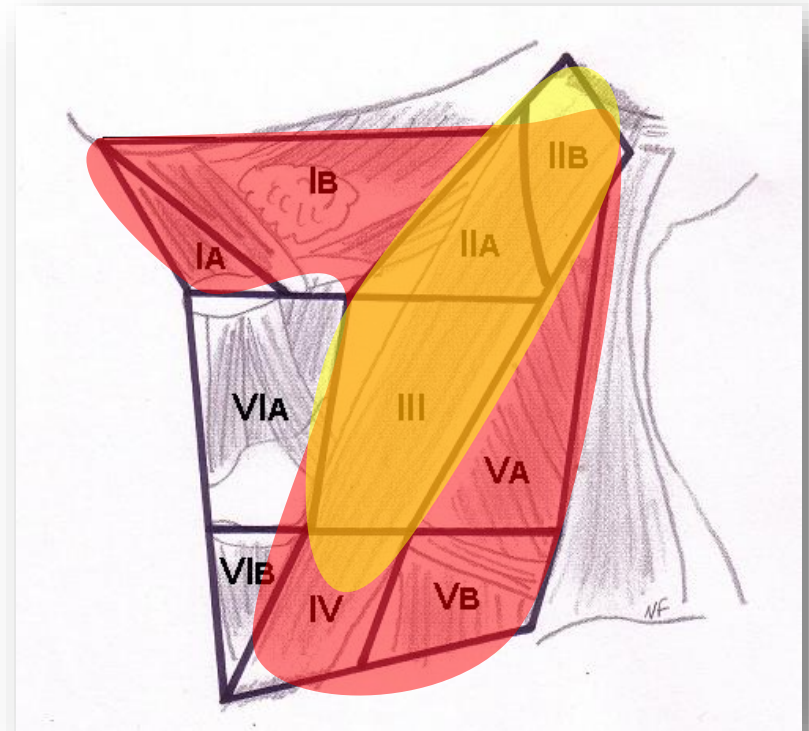




# Lymph node dissection (cancer)

cN0 : levels (I)-II - III

cN+ : levels I - V



# Postoperative radiotherapy (PORT)

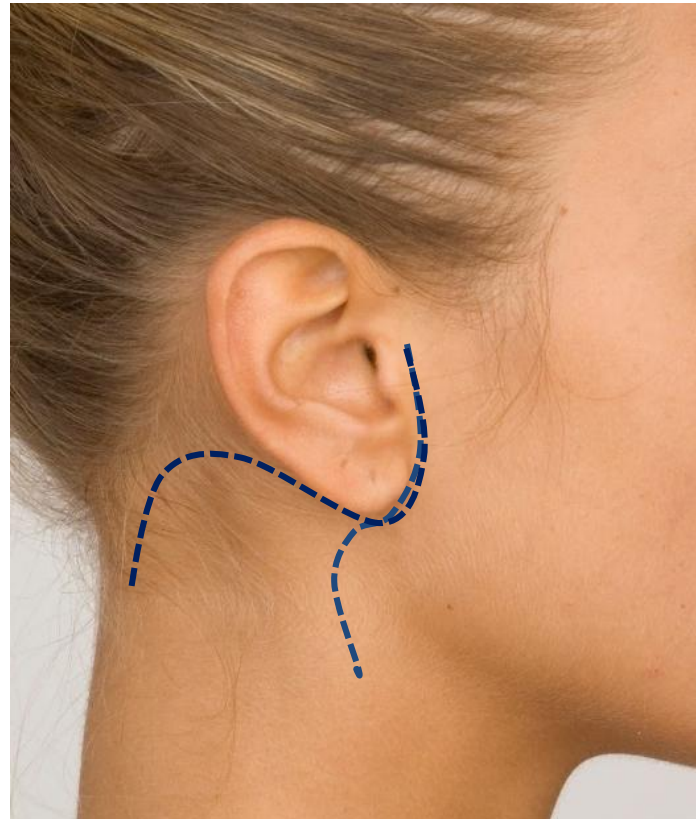
- High grade tumors
- T3-T4 stages
- Positive lymph nodes
- Positive margins or close margins
- Recurrence (if no previous RT)
  
- Chemotherapy?

<http://refcor.org/>

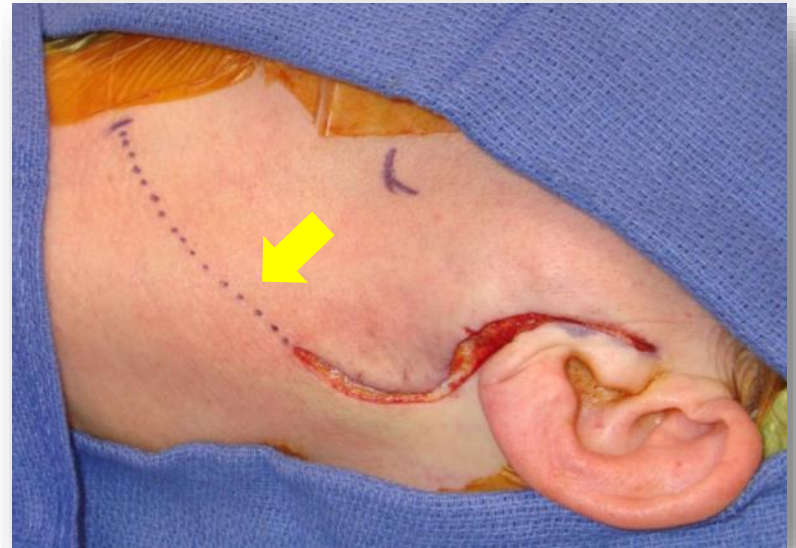
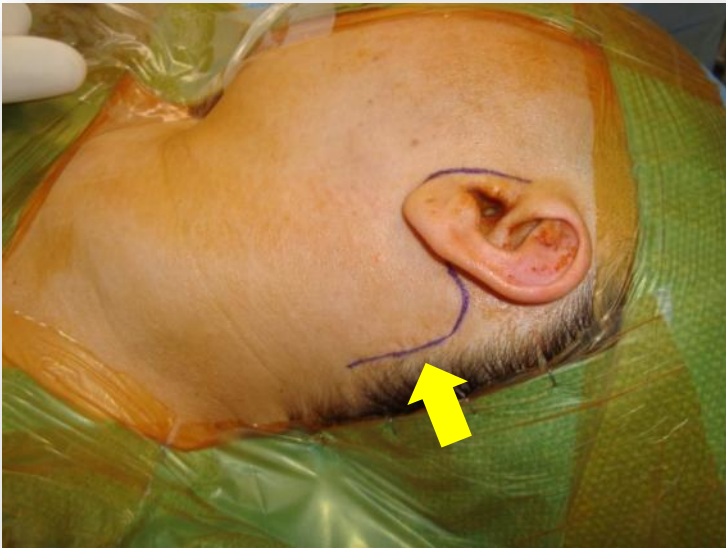
# Surgical approach (parotid gland)

# Skin incision

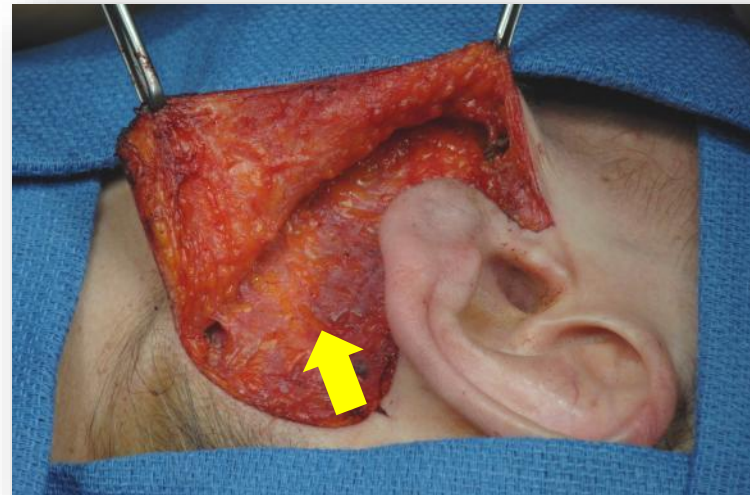
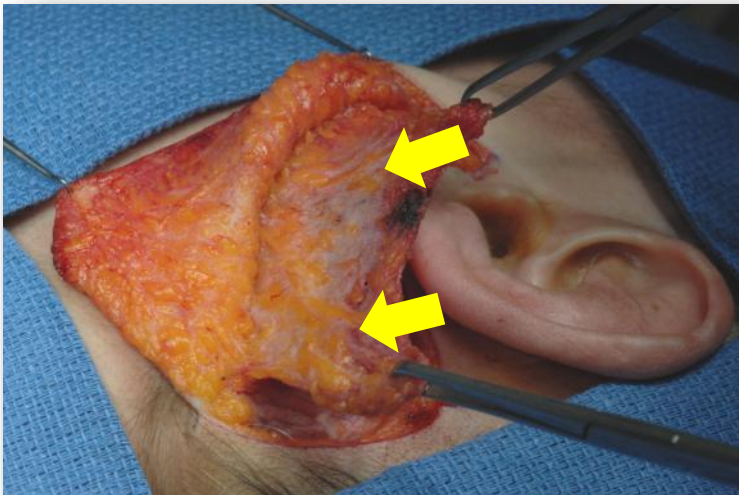
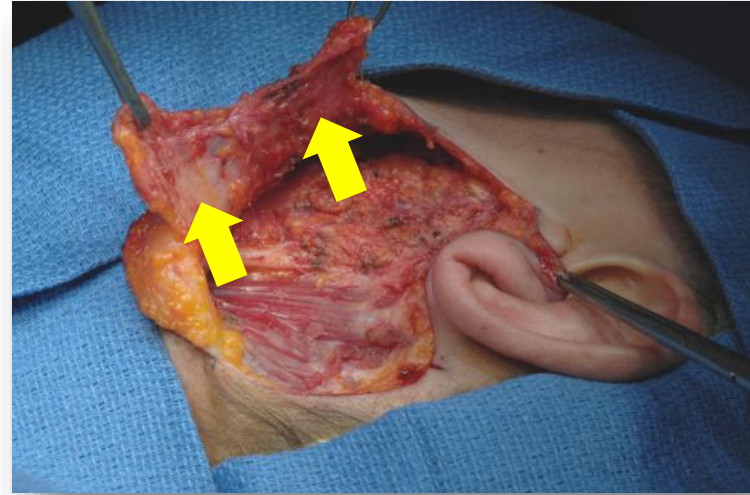
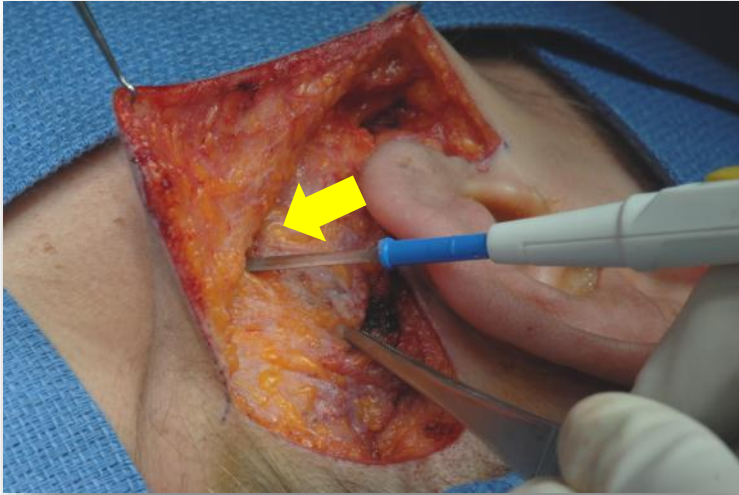
Lazy-S ++  
Face lift



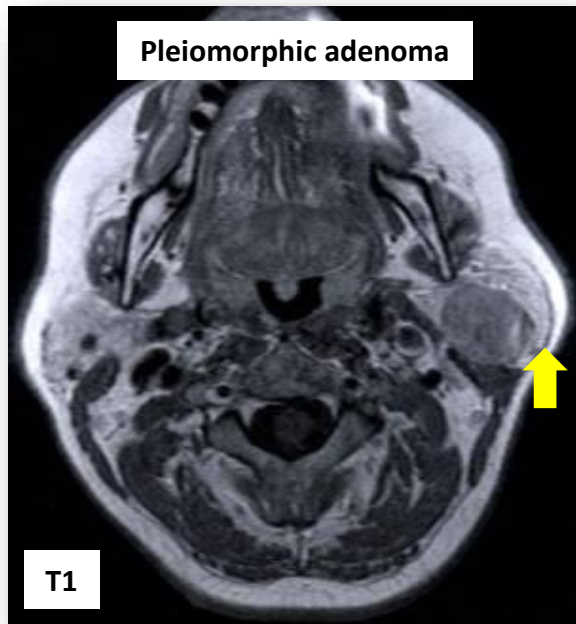
# Skin incision



# SMAS flap



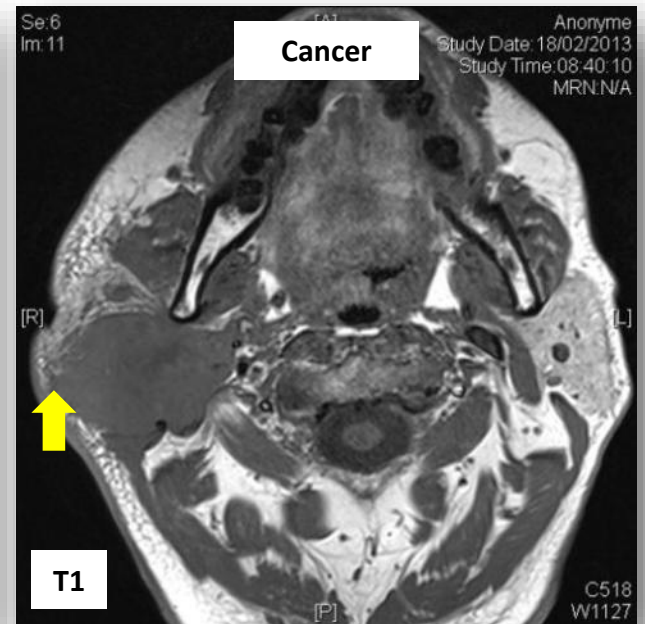
# SMAS flap?



Yes



No



No

# Facial nerve dissection



# Facial nerve trunk

Stylomastoid foramen

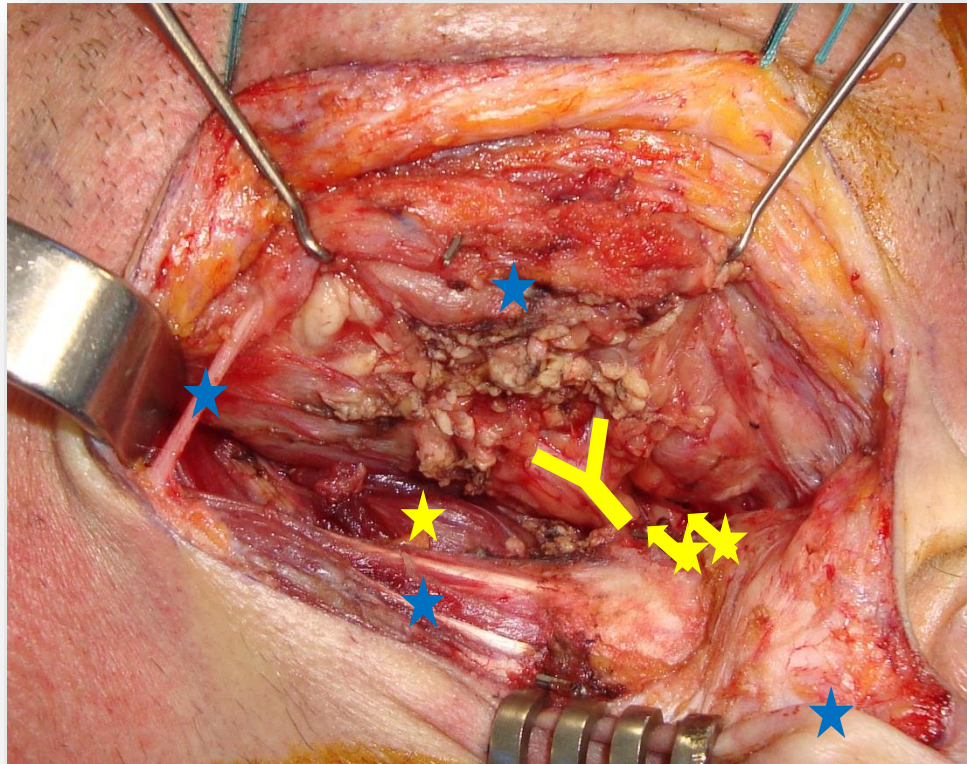
## Landmarks

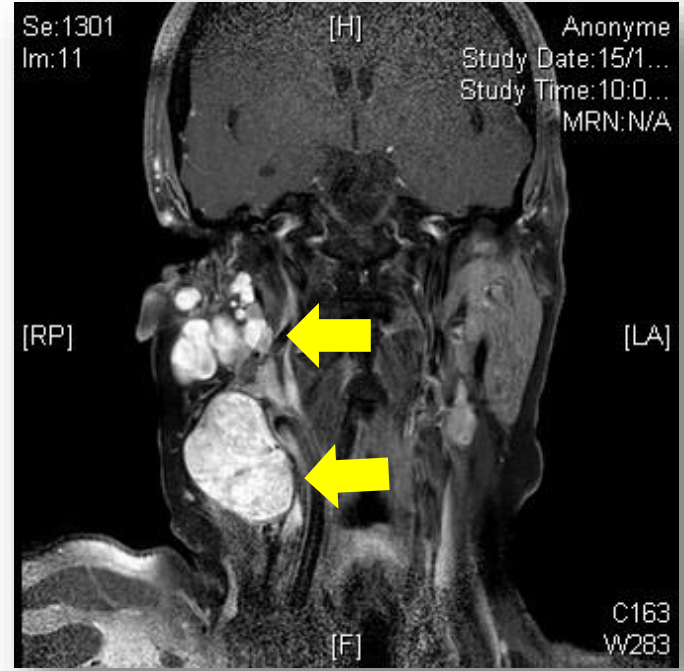
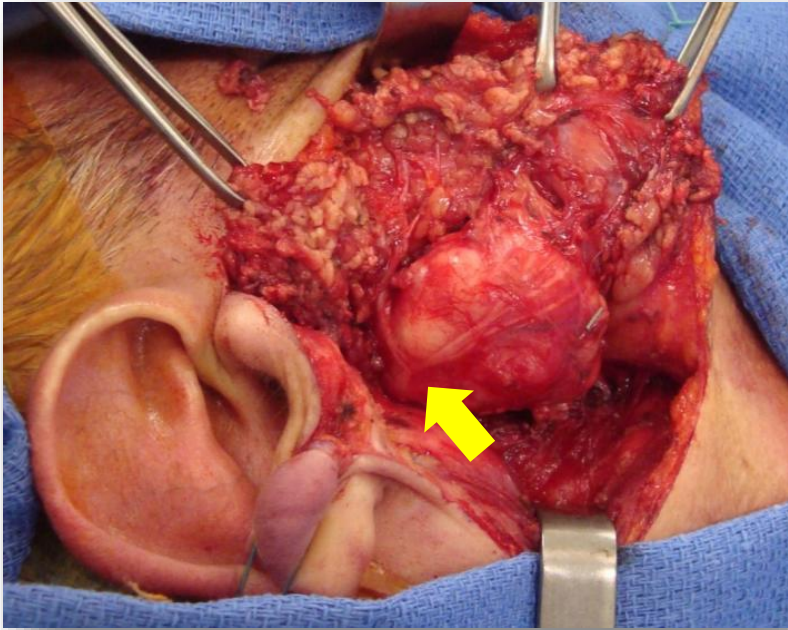
Posterior belly of the digastric muscle

Cartilage pointer

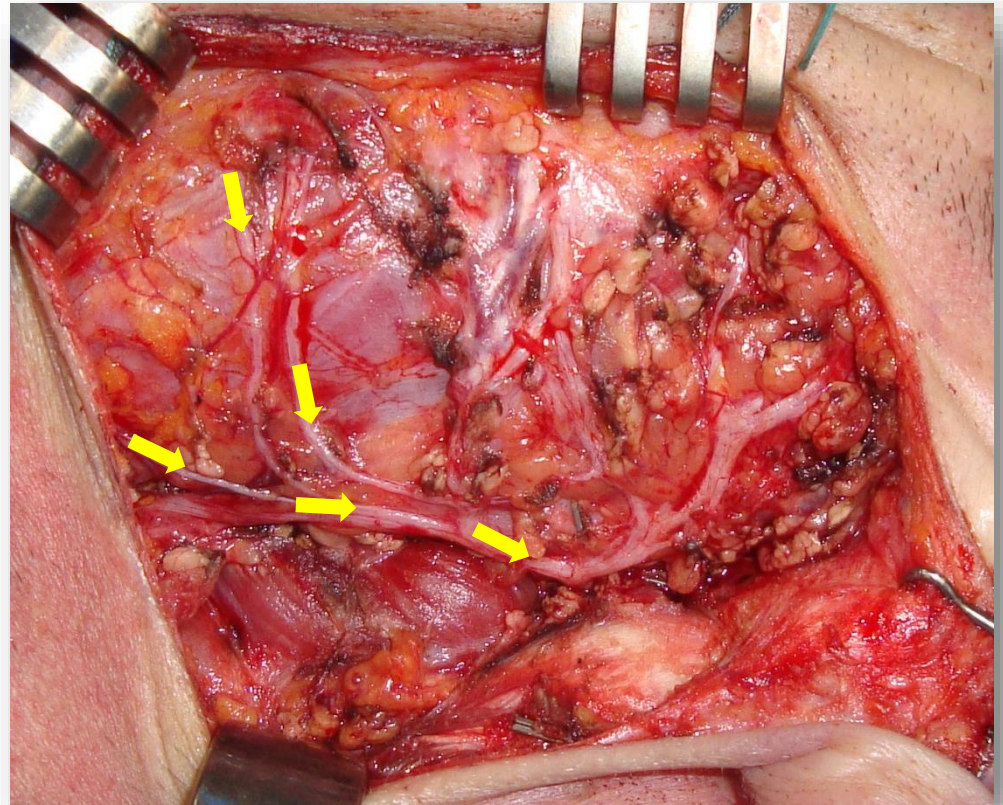
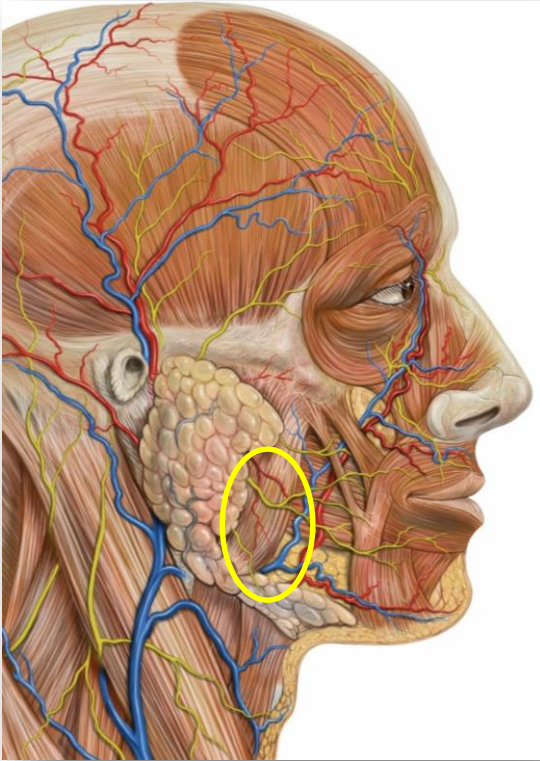
Tympanomastoid suture line

# Prograde dissection





# Retrograde dissection





# Key points

# Salivary glands tumors

2/3 of cancers have a benign clinical presentation

Preoperative work-up if possible

Imaging

FNAC

Frozen section

# Surgery

## Parotid gland

**Partial parotidectomy:** Benign tumors (Warthin and small pleiomorphic adenomas) ...SMAS flap, face lift incision

**Total parotidectomy:** Malignant and large pleiomorphic adenomas

## Submandibular gland

Submandibular gland excision

+/- systematic level I removal

# Surgery

If no previous work-up and no frozen section:

Systematic total parotidectomy?

Management of lymph nodes?

If no access to Postoperative radiotherapy?

Radical surgery ?

Consider resecting nerves adherent to a malignant tumour?

Consider who **not** to offer surgery for advanced tumours when outcomes without PORT will be poor

**Discussion is open !**





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# Facial nerve dissection



Techniques de recherche du nerf facial  
lors des parotidectomies

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CHU Conception, Marseille