Lymph Nodes and cysts.
Lymph Node Examination
Anterior

Middle

Posterior

Submental

Digastric

Mylohyoid
Lymph Node Examination
Digastric
Facial artery & vein
Retro-Mandibular vein
Submandibular
Digastic
Submandibular

Facial artery & vein

Retro-Mandibular vein

Digastric
Lymph Node Examination
Parotid

Superficial Pre-auricular

Sub fascial Pre-auricular

Sub fascial Infra-auricular

Deep intraglandular
Lymph Node Examination
Inferior maxillary
Masseter

Facial

Buccal
Buccinator
Lymph Node Examination
Deep Cervical Chain

IJV

Omohyoid

CCA
Deep Cervical Chain

IJV

CCA
Physics

Parallelism
Lymph Node Examination
Spinal Accessory Chain

Trapezius

Splenius Capitus

Levator Scapulae

Posterior Scalene

Middle Scalene

Sternomastoid
Lymph Node Examination
Lymph Node Examination
Anterior Cervical

CCA

Longus Colli

Pre Tracheal

Para Tracheal

Longus Colli
Criteria for Malignancy?
SIZE
Size?

- 3-4 cm in normal young Adults (Long)
- Maximum Axial Diameter (Short)
Size?

- 3-4 cm in normal young Adults
- Maximum Axial Diameter (Short axis)
- 7mm : Submental and Submandibular
- 8mm : All other nodes
- 4mm : N0, SCC patients (Van den Brenkel)
SHAPE
HILUS
ECHOCGENICITY
ECHOGENICITY
TB

- Mimic
- Necrosis
- Surrounding tissues
- Matted
- Colour flow – cold
- Needle.
EXTRACAPSULAR SPREAD
COLOUR FLOW

Na. et al. AJR
1997
CALCIFICATION
Diagnostic Criteria?

Benign or Malignant?
Diagnostic Criteria

- **Size**
  - Short axis

- **Shape**
  - Round

- **Hilus**
  - Beware necrosis

- **Echogenicity**
  - Pseudo-cystic ?Core bx

- **Outline**
  - Extra-capsular spread

- **Necrosis**
  - Beware TB mimics

- **Colour flow**
  - Patterns not indices

- **Calcification**
  - Specific for papillary Ca
Normal lymph nodes.
Normal lymph nodes.
Normal lymph nodes.
Normal lymph nodes.
Lymphoma?
Lymphoma
Metastatic lymph nodes
Metastatic lymph nodes
Metastatic lymph nodes
Metastatic lymph nodes
Normal lymph nodes.
Normal lymph nodes.
Malignant lymph nodes.
Malignant lymph nodes.
Malignant lymph nodes.
Malignant lymph nodes.
Malignant lymph nodes.
Spectrum of criteria.

• No sign is absolute.
• Use signs to select lymph node for FNA
• Allows a valid staging of the neck
• Use signs in combination in correct clinical context.
Anatomical classification – language.
SCC Staging.

• Primary – MRI.
• Lymph nodes – Ultrasound & FNA.
• Accuracy?
Accuracy?

- Lymph nodes are the most important prognostic indicator.
- Management of the neck is controversial.
- Accuracy of 75% would allow appropriate management.

Accuracy?

- Two year period – 49 patients.
- Mean follow up – 30 months (range 24-48)
- 3 false negatives (two: micro metastases)
- Accuracy: 86%. Sensitivity: 92%. Specificity: 83%
- Conservative option for the N0 neck.

Cysts and their mimics.

- Anatomy.
- Rules
Rules.

- Cysts look solid.
- Solids can look cystic.
Rules.

- Cysts don’t usually look like cysts.
- Cysts will invariably look solid.
- If a mass looks cystic, it probably won’t be a cyst.
- Solids can look cystic
Anatomy

Key structures
Rules.

• Cysts look solid.
• Solids can look cystic.
Cystic?
Pseudo-cystic?
Pseudo-cystic?

- Pleomorphic adenoma.
- Lymphoma
- Nerve sheath tumour.
- Parathyroid adenoma.
Lymphoma
Lymphoma
Lymphoma
Pseudo-cystic?

- Lymphoma.
- Pleomorphic adenoma.
- Nerve sheath tumour.
- Parathyroid adenoma.
Rules.

• Cysts don’t usually look like cysts.
• Cysts will invariably look solid.
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• Solids can look cystic
Cystic mass – upper cervical.

- Second Branchial cleft cyst.
- Metastatic lymph node: S.C.C.
- Metastatic lymph node: Papillary Carcinoma Thyroid.
Cysts.

- Location location.
- Anatomy.
carnucula sublingualis
ductus sublingualis major
tunica mucosa oris
ductus sublinguales minores
ductus submaxillaris
nervus lingualis (×)
mandibula
Genioglossus ×
Geniohyoideus ×
Mylohyo...
Mylohyoid Defects.

- Defects occur in 67% - cadavers. (RSNA 2004).
- Bilateral in 50%.
- “Mylohyoid boutonniere” & “sublingual bouton” (Gaughran 1963)
Anatomy

Key structures
Rules.

- Cysts look solid.
- Solids can look cystic.