

# BMUS Head & Neck Study Day

## May 2026

### 7 Sweep Technique

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# Aims

- 7 Sweeps in Neck
- Surgical neck anatomy
- Lymph node distribution
- Live demonstration of 7 sweeps

# Why Ultrasound of the Neck ?



Ultrasound become the primary imaging modality for investigation of head and neck lumps

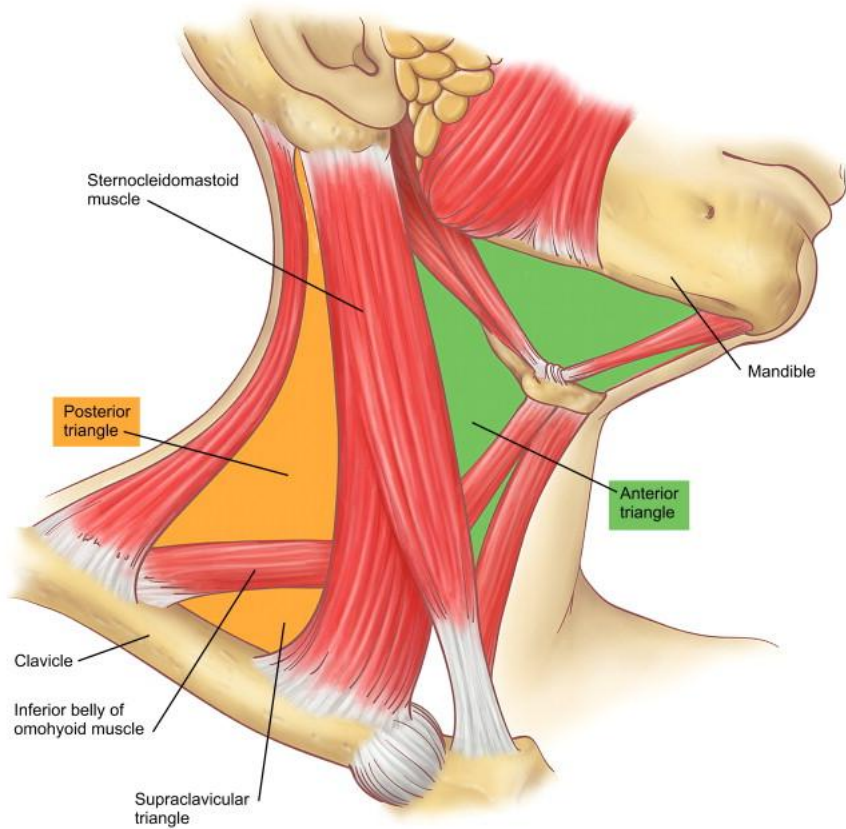


Due to its portability, ideal for One stop / rapid access neck lump clinics



Understanding the anatomy and site specific nature of neck lumps will aid in the differential diagnosis.

# Anterior & Posterior Triangles



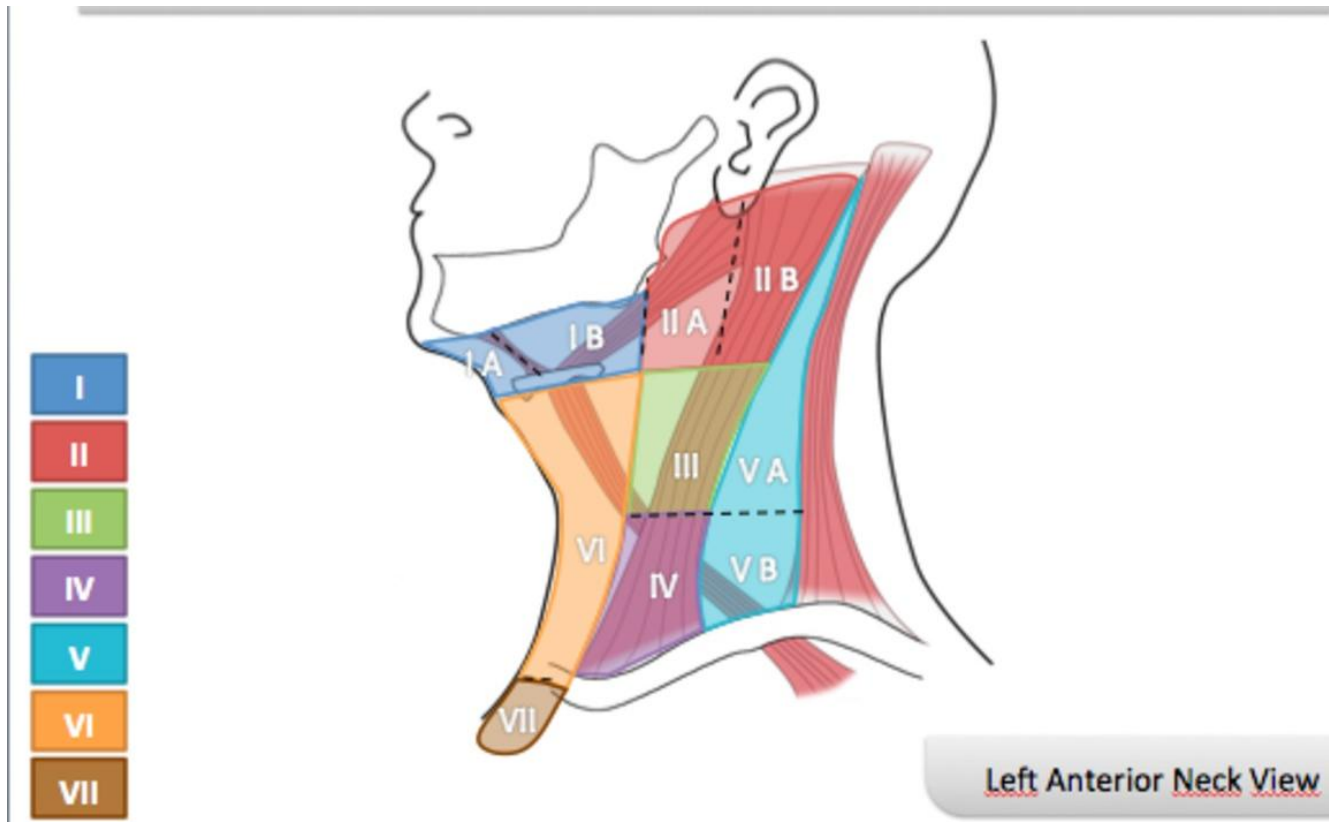
# Facial Nerve and Branches



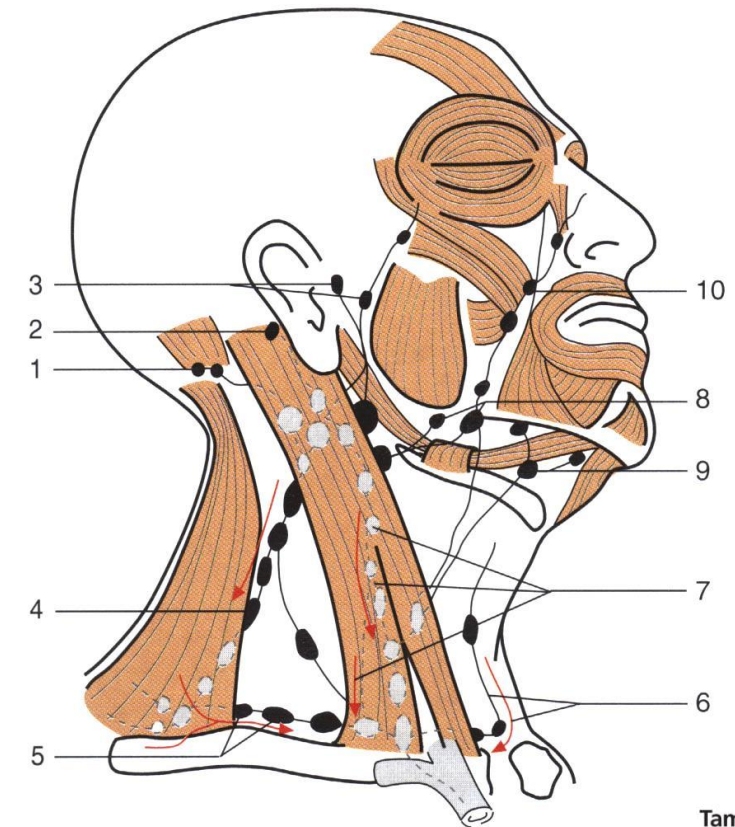
To  
Zanzibar  
By  
Motor  
Car

# Clinical Anatomy: Overview

# Surgical Levels in the Neck



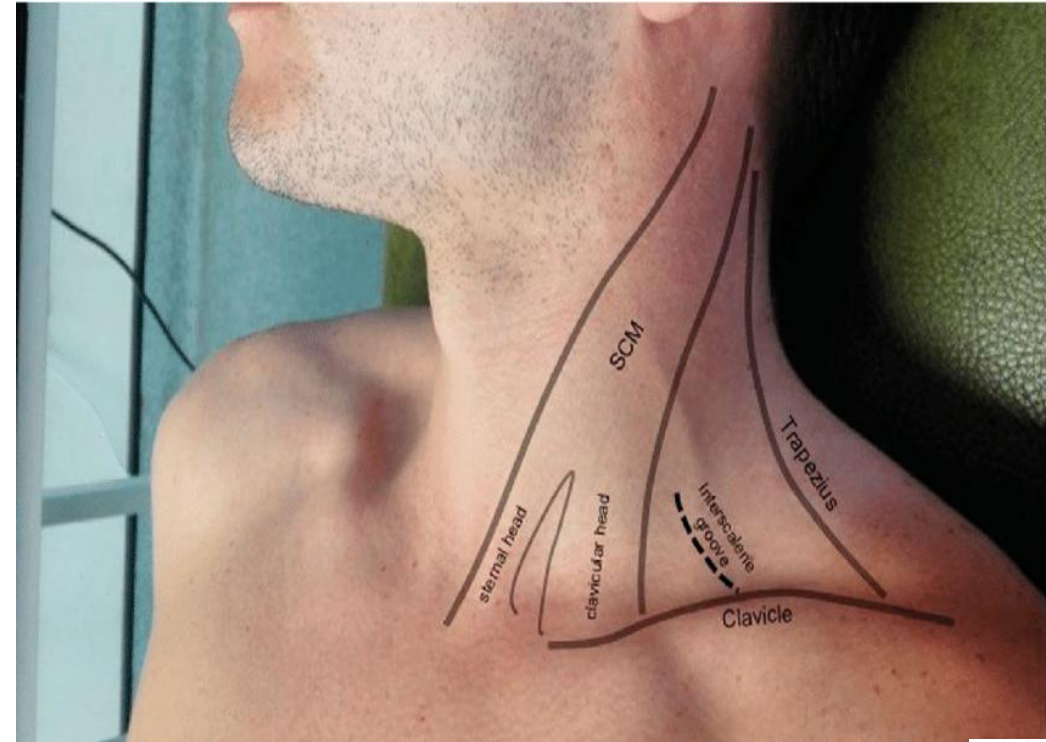
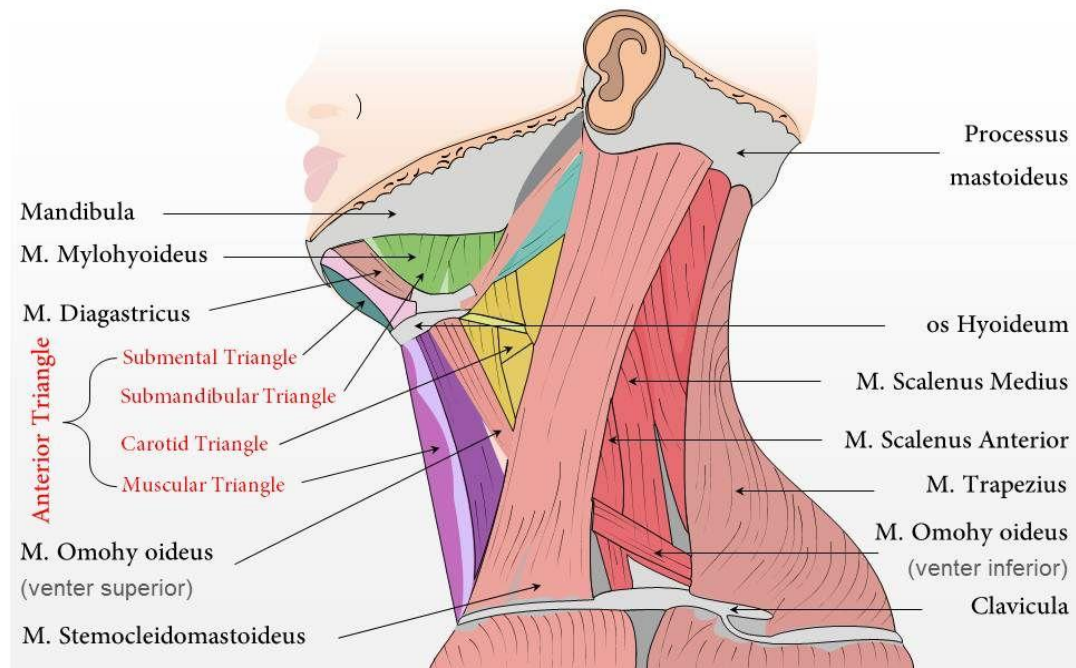
Rouveire



AJCC

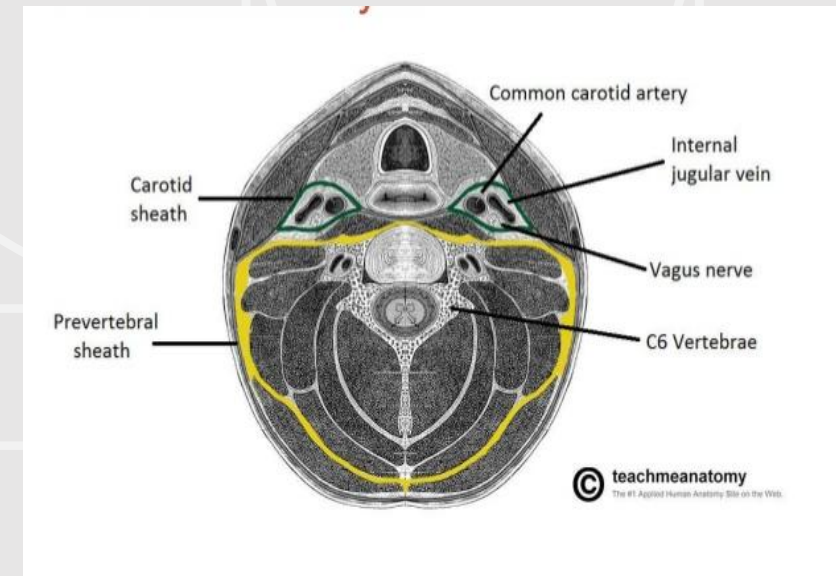
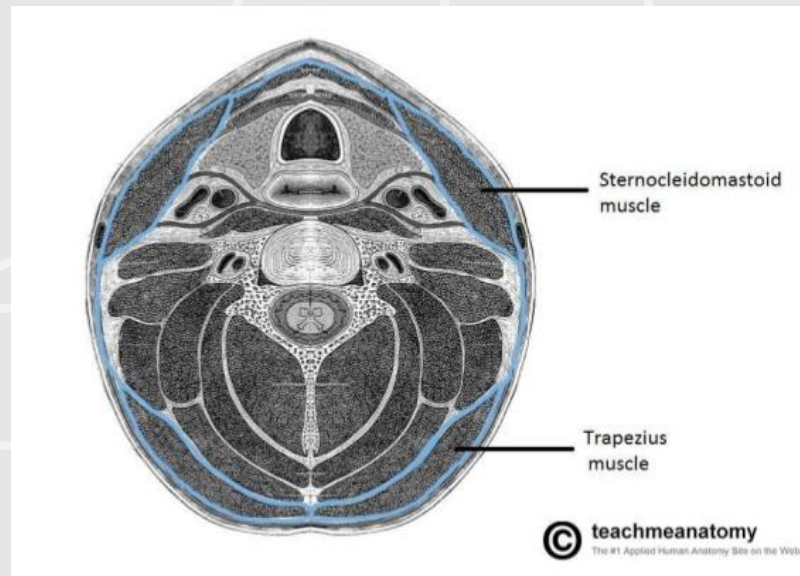
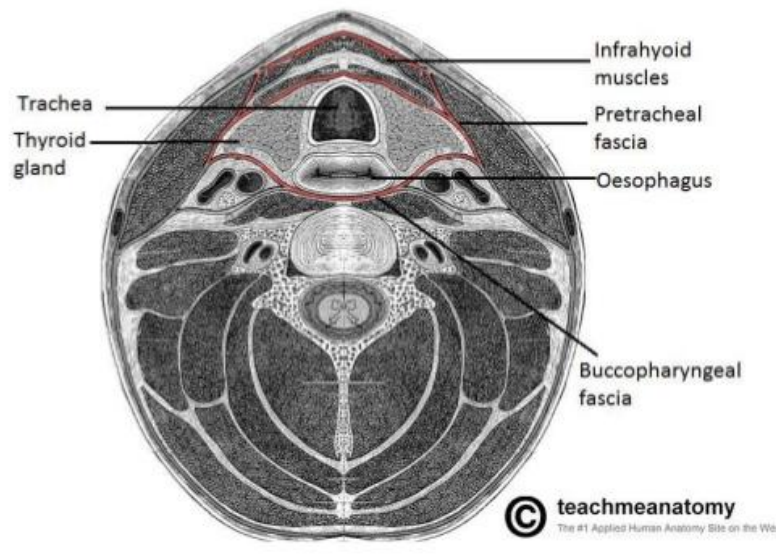
# Neck Muscles

## Anterior Triangle of Neck



# Neck Fascia: Clinical relevance

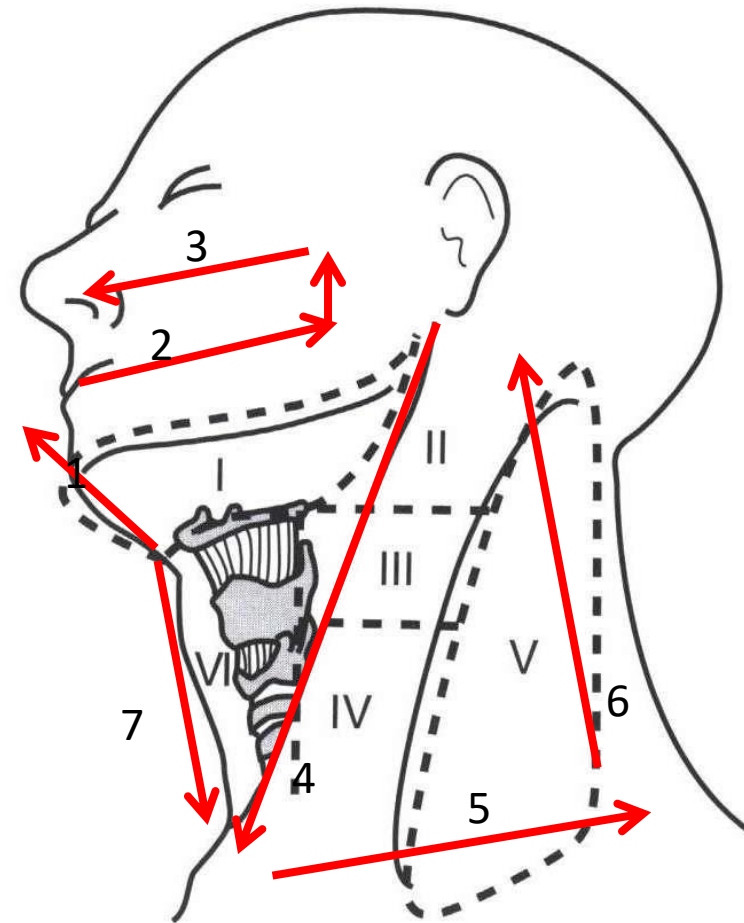
- 3 discrete neck layers
- Investing layer
- Pretrachea layer
- Prevertebral layer
- The **neck** fascia compartmentalises structures within the **neck**. These **layers** of tough fascia can limit the spread of infection (for example, a superficial skin abscess may be prevented from spreading deeper into the **neck** by the **investing** fascia).



# US Neck in 7 Sweeps & Surgical levels

- The Neck in 7 Sweeps

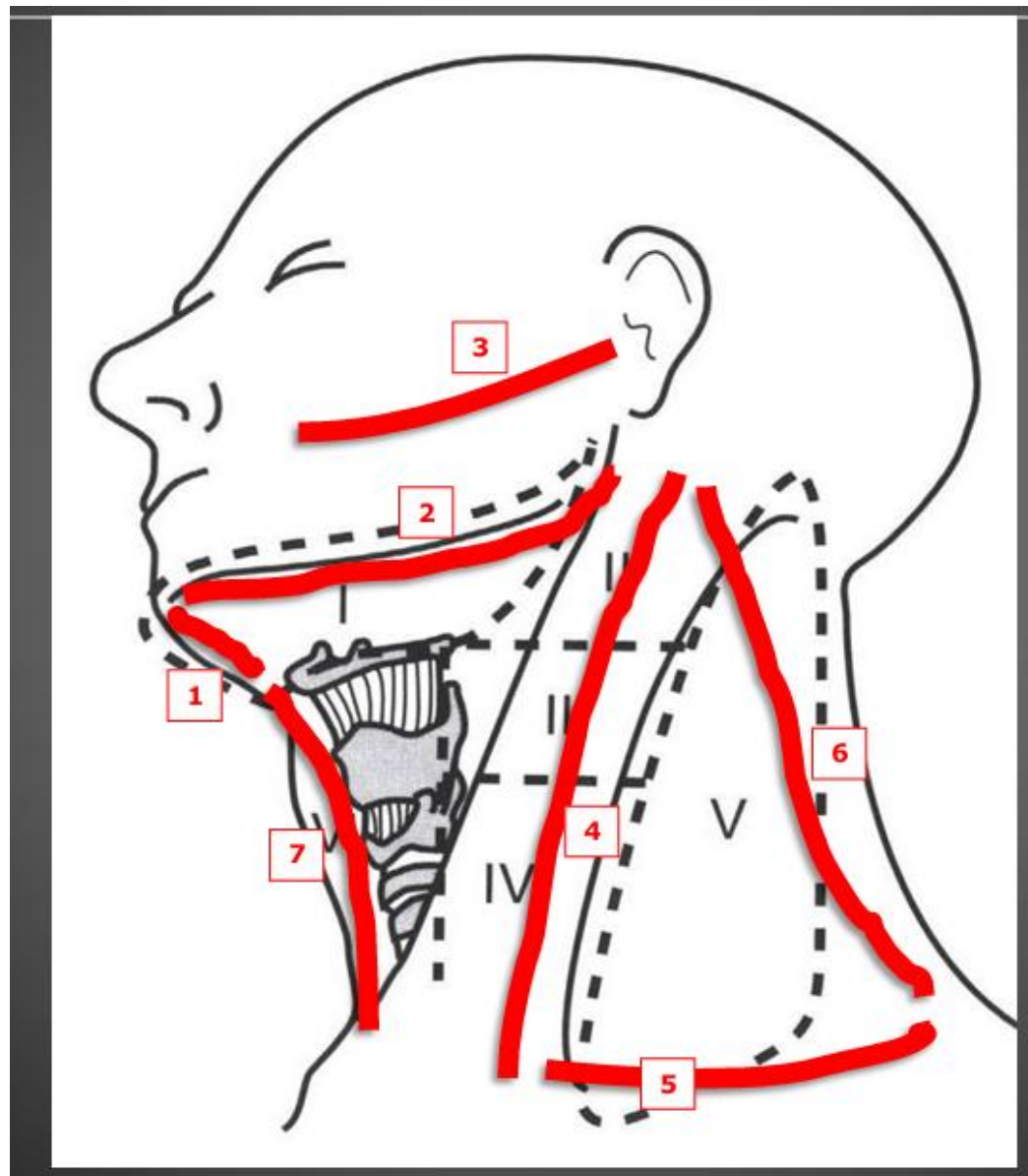
1. Submental (Ia)
2. Submandibular (Ib)
3. Parotid and Buccal Region (IIb)
4. Deep Cervical (IV)
5. Transverse Cervical or (V)  
Supraclavicular
6. Posterior Cervical (V)
7. Anterior Cervical (VII)



# Why 7 Sweeps approach?

- Standardisation, less likely to miss pathology, eliminates Target scanning
- Aids and facilitates reproducible teaching method
- Less likely to be surprised
- Follows the paths of the surgical neck levels
- Anatomical location of the pathology will allow the practitioner to be more accurate with differential diagnoses.
- Better patient outcomes

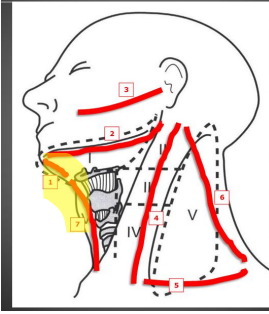
# 7 Sweeps in the Neck



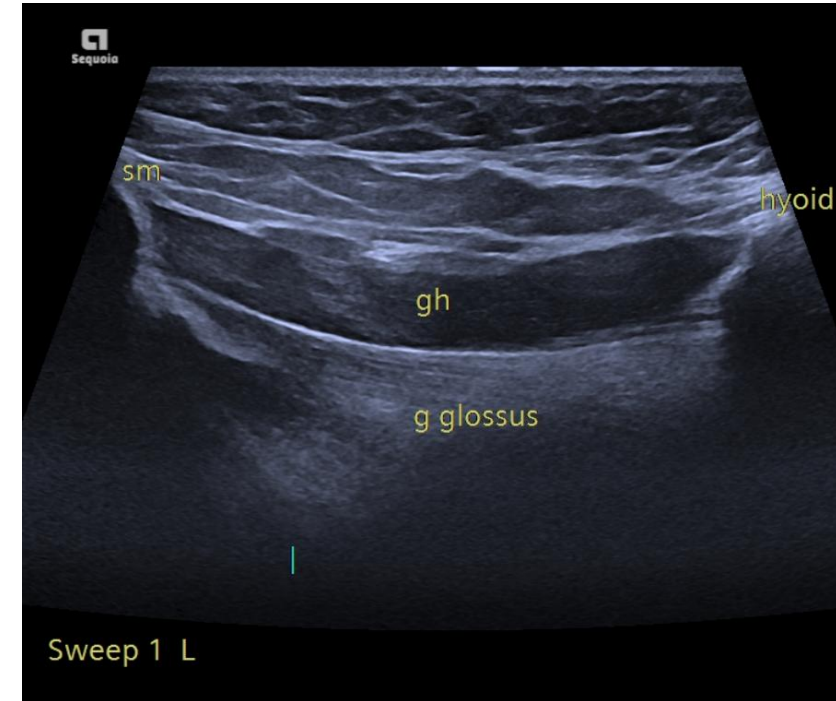
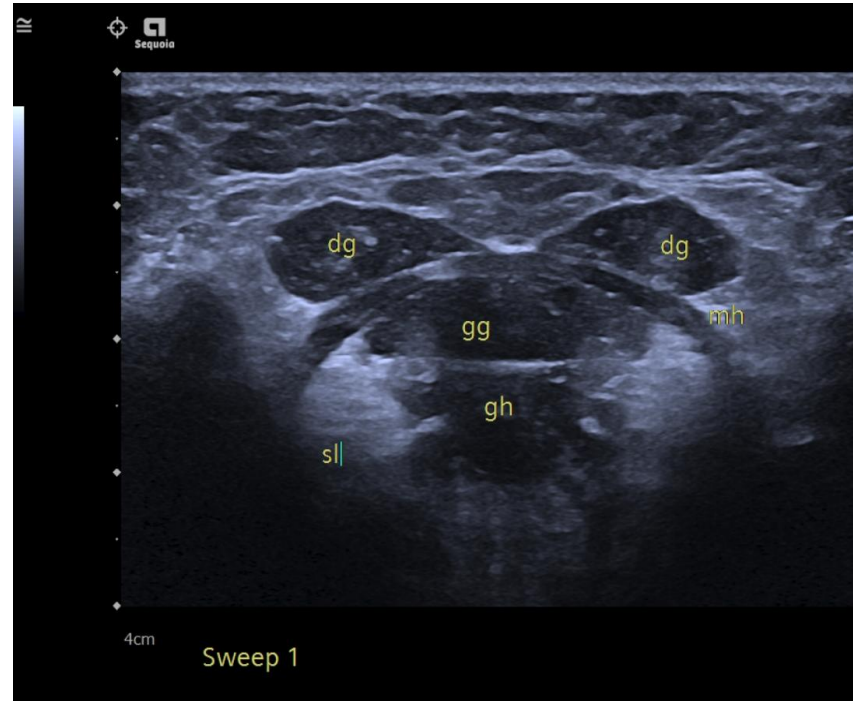
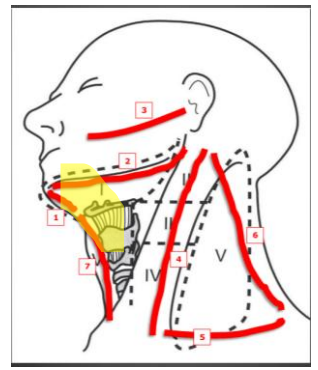
# Sweep 1: Submental (Ia) Anatomy

- Anterior belly of Digastric (dg)
- Mandible
- Mylohyoid muscle (mh)
- Hyoglossus (ho)
- Sublingual salivary gland
- Genioglossus muscle
- Geniohyoid muscle
- Lymph node level Ia

# Sweep 1: Submental: Mandible to Hyoid (Ia)



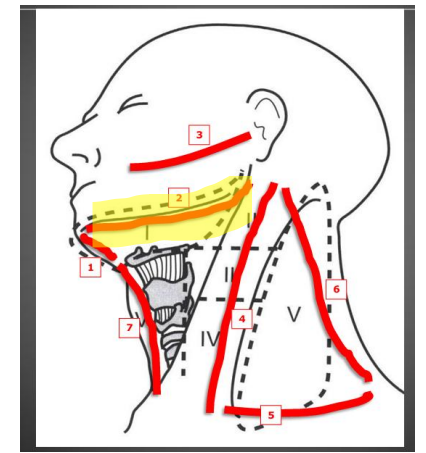
# Sweep 1: Submental : Mandible to Hyoid



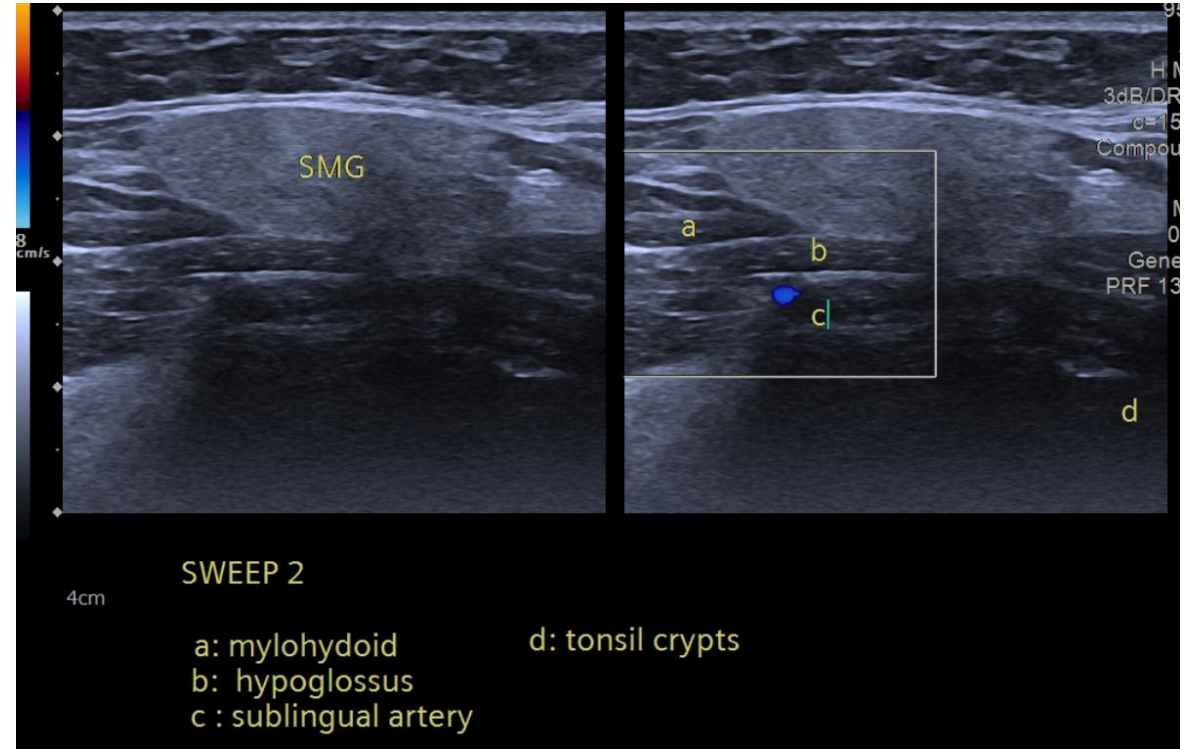
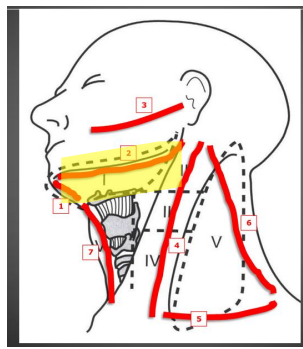
# Sweep 2 : Chin to angle of Mandible(Ib) Anatomy

- Anterior belly of Digastric (dg ant)
- Mylohyoid muscle (mh)
- Hyoglossus (ho)
- Submandibular salivary gland
- Submandibular duct (“kit-kat 2 finger view”)
- Sublingual artery
- Tonsillar crypts
- Posterior digastric (dg post)

# Sweep 2: Chin to Angle of Mandible



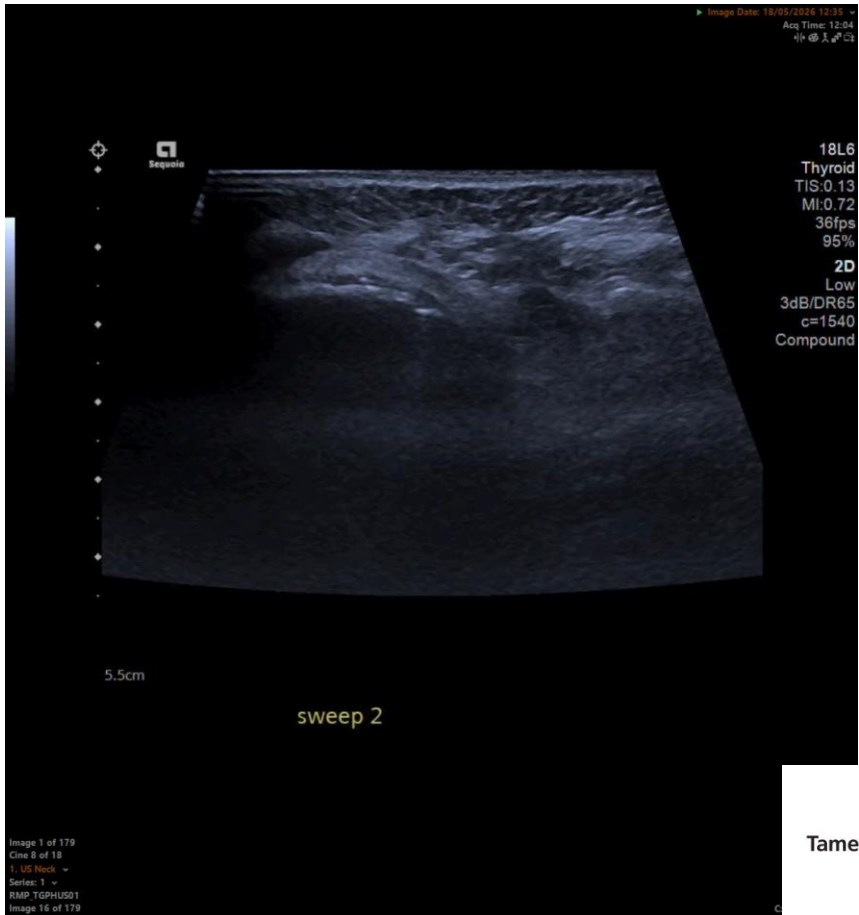
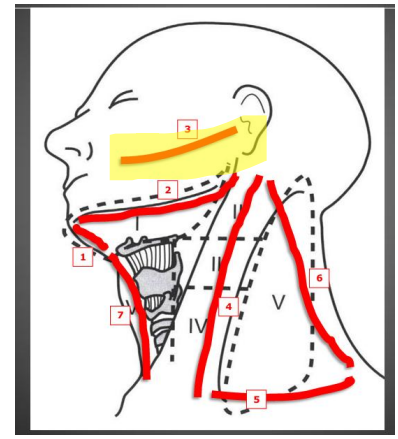
# Sweep 2: Submandibular (Ib): Chin to angle of Mandible



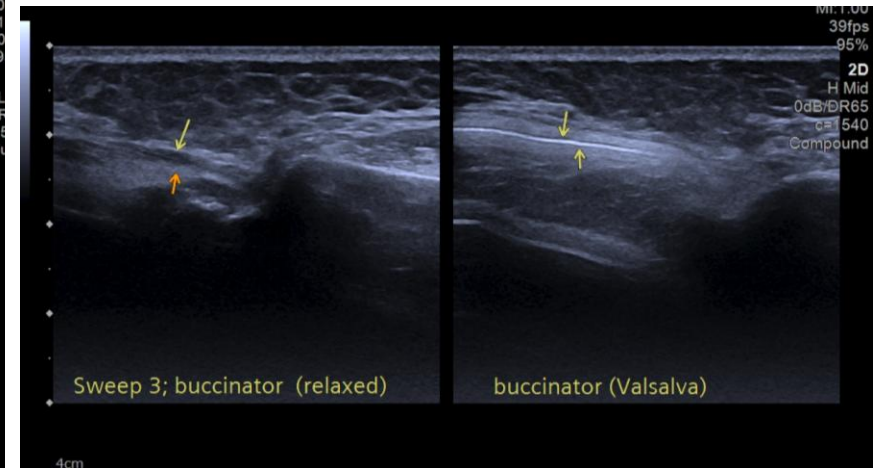
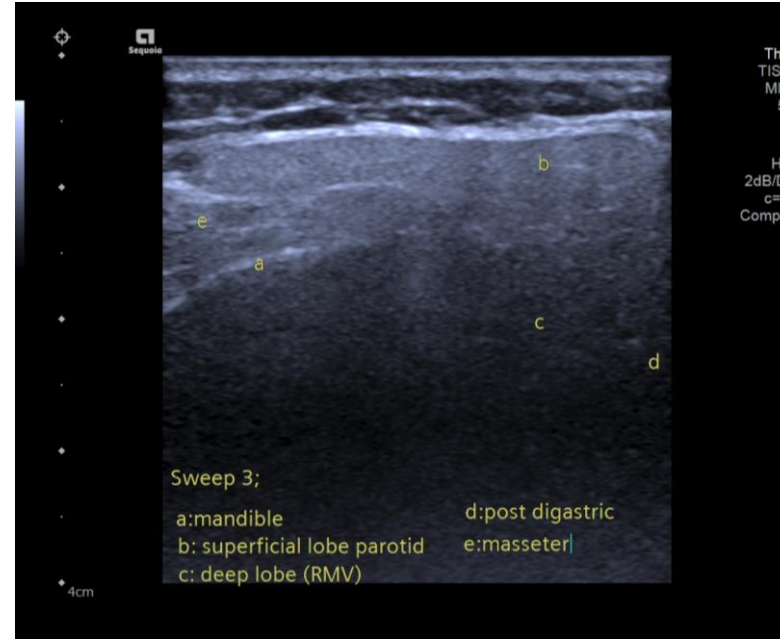
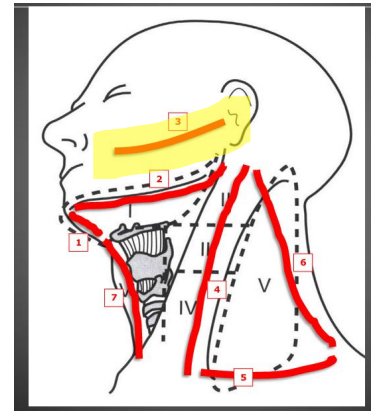
# Sweep 3 : Angle of Mandible to mouth, following parotid duct

- Posterior digastric (dg post)
- Masseter muscle
- Parotid gland, superficial and deep lobes
- Parotid duct (Stenson's)
- Retromandibular vein (RMV)
- Branch of Facial nerve
- Buccinator muscle (blowing, chewing, from latin *buccinator* "trumpeter")

# Sweep 3: Angle of Mandible outer Mouth

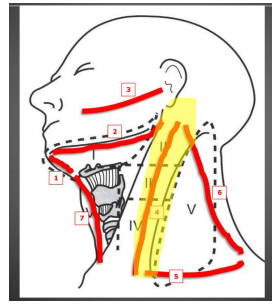


# Sweep 3: Angle of Mandible to Mouth



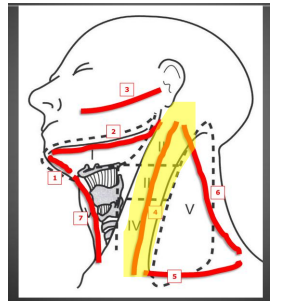
# Sweep 4 : Anatomy

## Deep cervical chain, Angle of mandible to SCJ

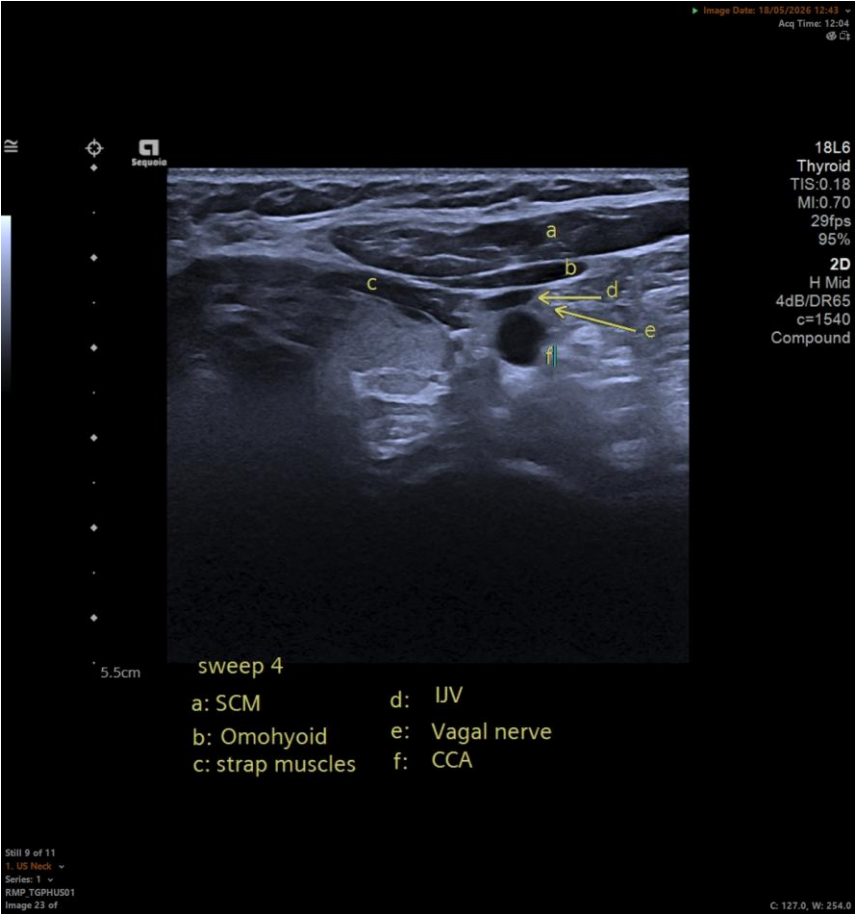
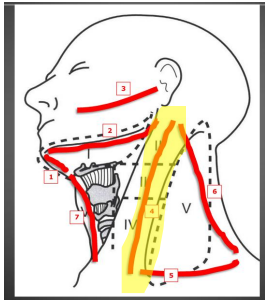


- Sternocleidomastoid (scm)
- Omohyoid (oh)
- Strap muscles (infra thyroid muscles, pair 4)
- Thyroid
- Carotid sheath (CCA, IJV, Vagal nerve)
- Oesophagus (left)

# Sweep 4: Deep cervical chain: angle of mandible to SCJ

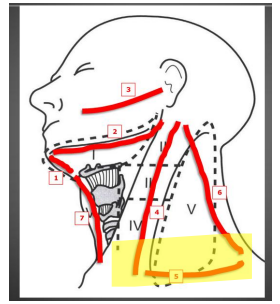


# Sweep 4: Deep cervical chain :along SCM



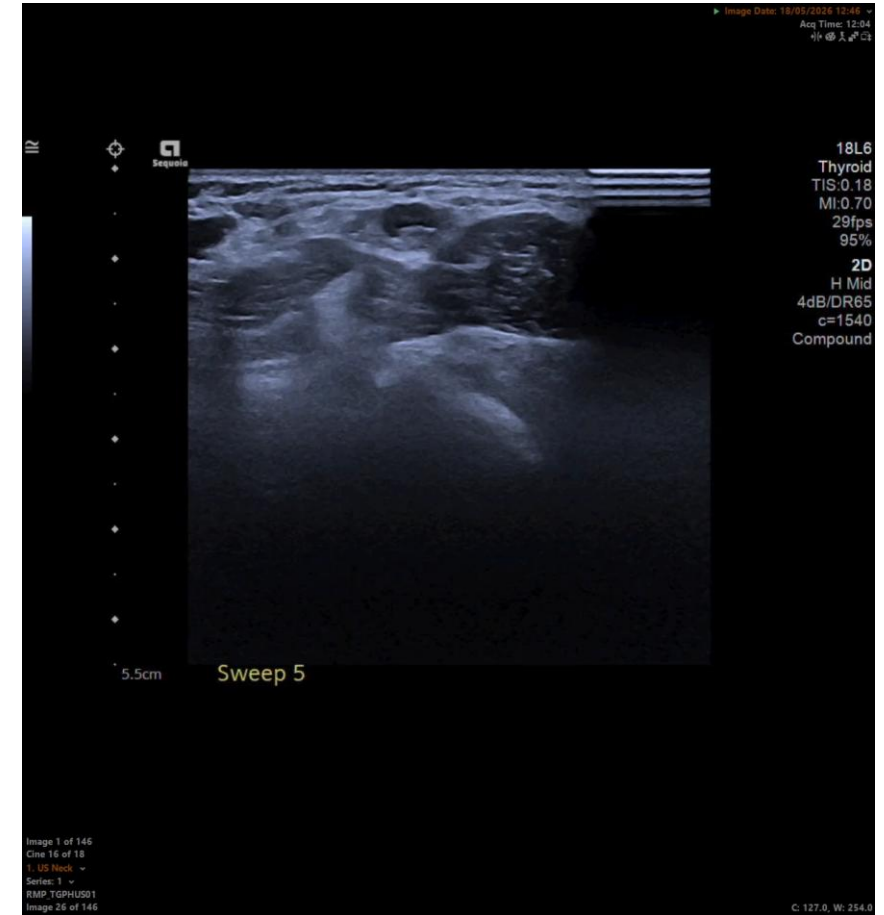
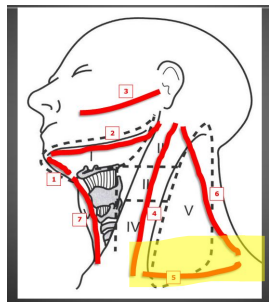
# Sweep 5 : Anatomy

## Supraclavicular fossa to trapezius



- Sternocleidomastoid (scm)
- Scalene anterior (sc ant)
- Scalene medius ( sc med)
- Trapezius
- Brachial plexus

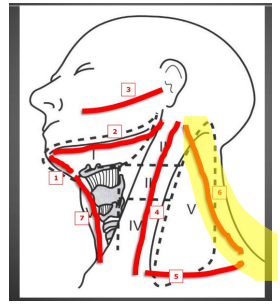
# Sweep 5: Supraclavicular fossa to Trapezius



# Sweep 6 : Anatomy

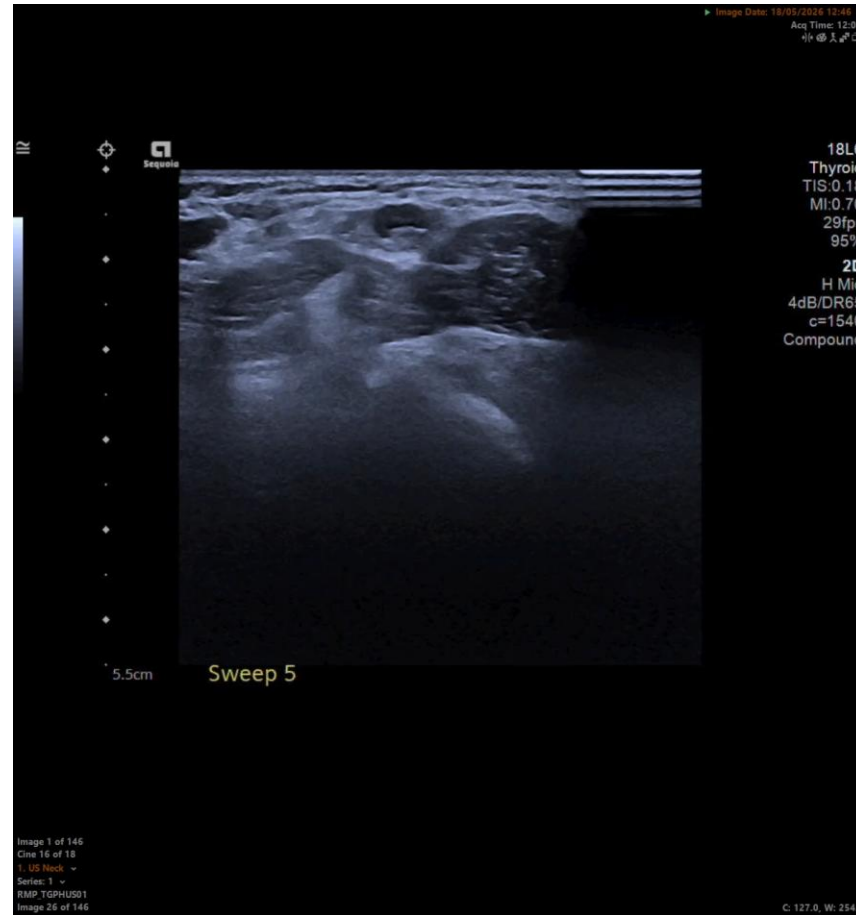
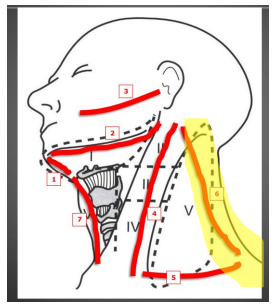
## Trapezius to Mastoid tip ( Post triangle)

- Sternocleidomastoid (scm)
- Trapezius
- Levator Scap
- Mastoid



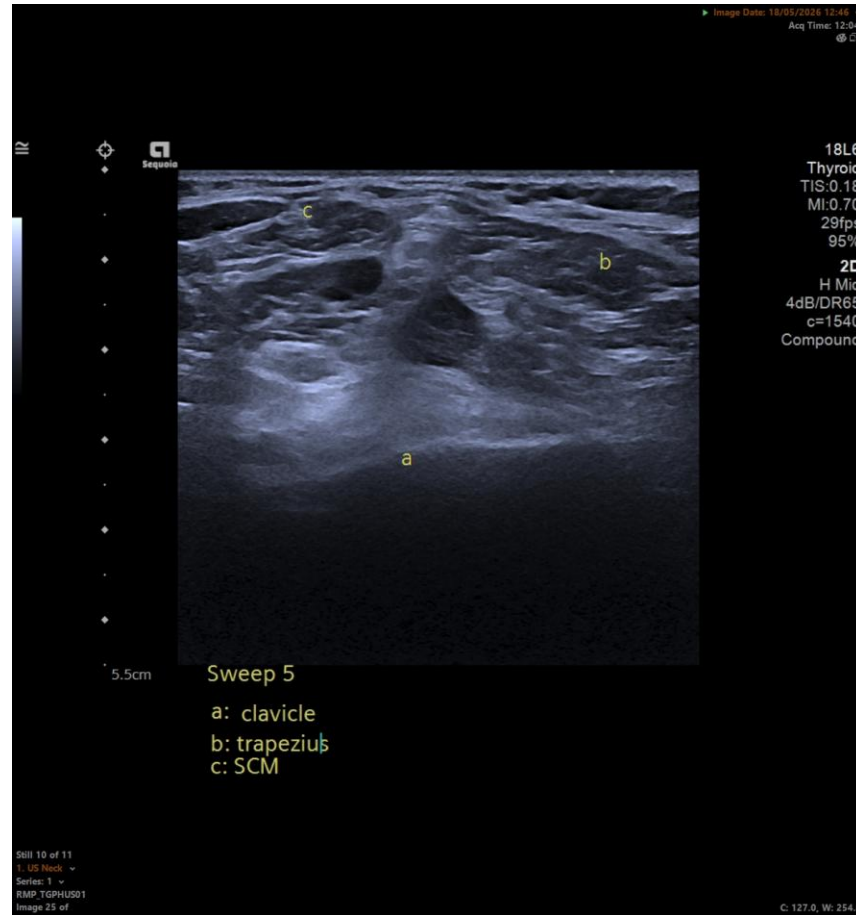
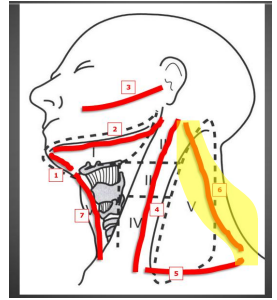
# Sweep 6: Trapezius to Mastoid tip

## Posterior triangle



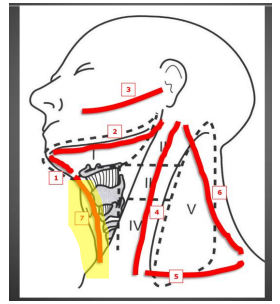
# Sweep 6: Trapezius then up to Mastoid tip

## Posterior triangle



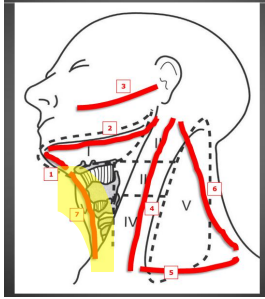
# Sweep 7 : Anatomy

## Anterior Neck: Hyoid to Sternal notch

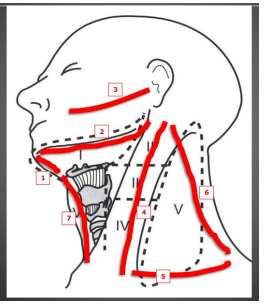


- Hyoid
- False and true vocal cords
- Paraglottic fat
- Thyroid isthmus
- Thyroid lobes
- Carotid sheath (CCA, IJV, Vagal nerve)
- Sternal notch

# Sweep 7



# Sweep 7:



# Take Home

- Review 7 surgical levels, correspond to 7 sweeps
- Know your Anatomy
- Find a friendly Head & Neck Consultant !!
- Practice , Practice