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OHSU

Where Healing, Teaching and Discovery Come Together

OHSU
OREGON
HEALTH
& SCIENCE
UNIVERSITY

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Taught Anatomy & Clinical Skills



Anatomy & Clinical Skills using Ultrasonography



Anatomy & Ultrasonography

- Integrated US into both
 - didactic lectures
 - lab
- Readdressed focus into the lab
 - Lecture 40% / Lab 60%
- Didactic lectures - used the cognitive load theory to label and discuss structures
- Lab – provided US tutorials in groups of 5-8
 - always used linear probe
 - US themselves and the cadaver

Anatomy & Ultrasonography



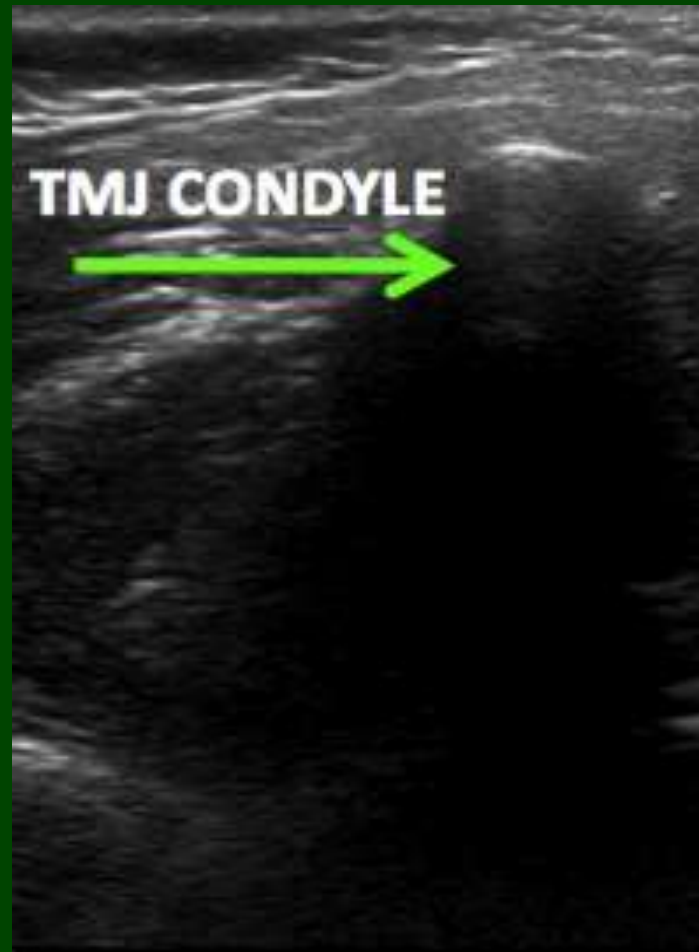
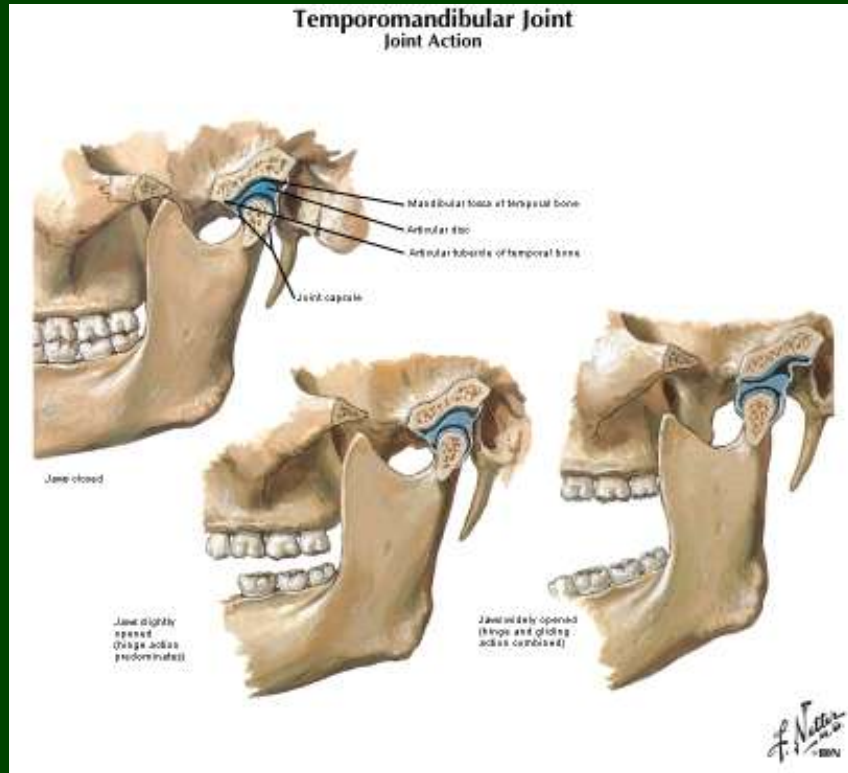
Anatomy & Ultrasonography

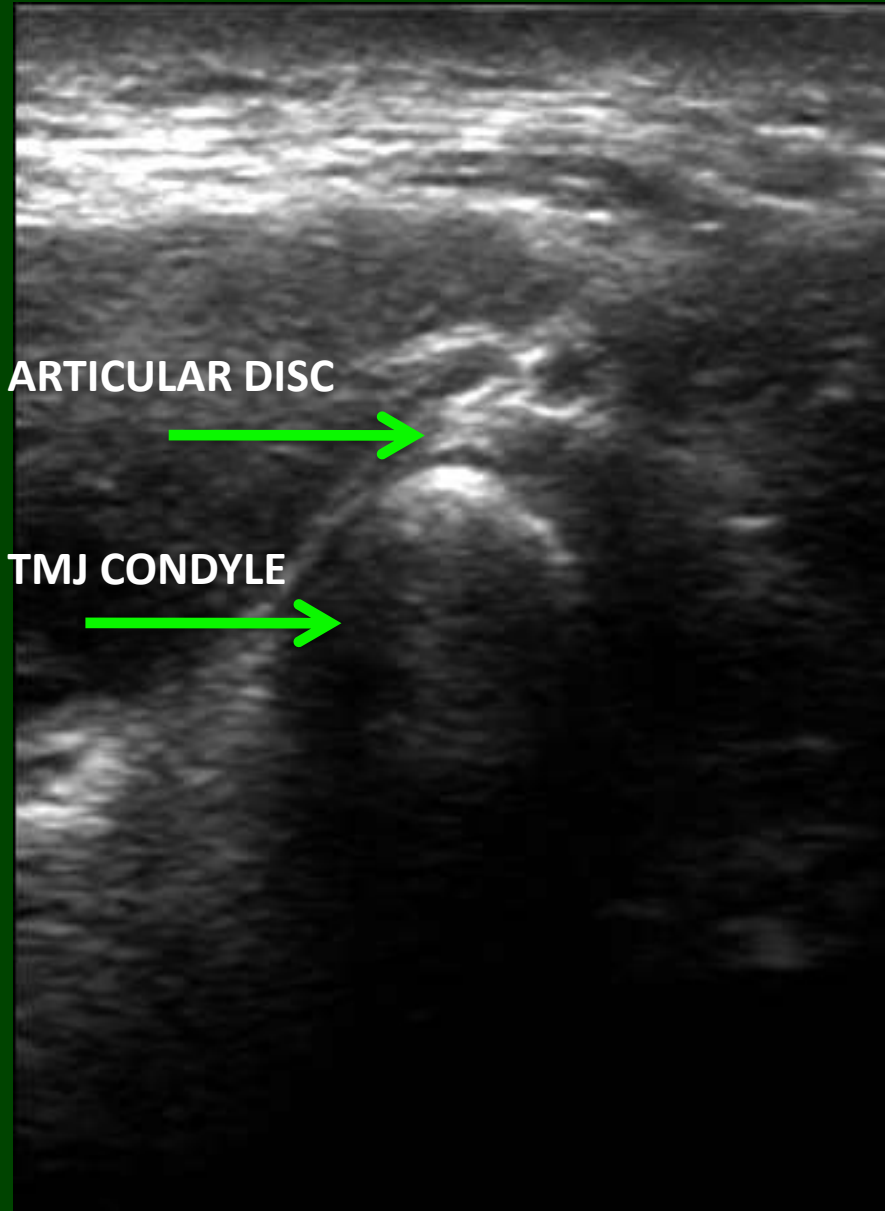
- Lab exam,
 1. TMJ
 2. Lateral pterygoid
 3. Masseter
 4. Submandibular Gland
 5. Thyroid Gland
- Volunteer patient – demonstrated ability to locate named structure

CMJ - TMJ

- The term TMJ is misleading and is often interpreted as a single side when referring to joint function
- Opens and closes 1500 -2000 times per day
- Approximately 50% of adult population will suffer from at least 1 sign of TMJ dysfunction
- Up to 25% of population suffer from severe TMJ dysfunction (dep on criteria)

TMJ/CMJ



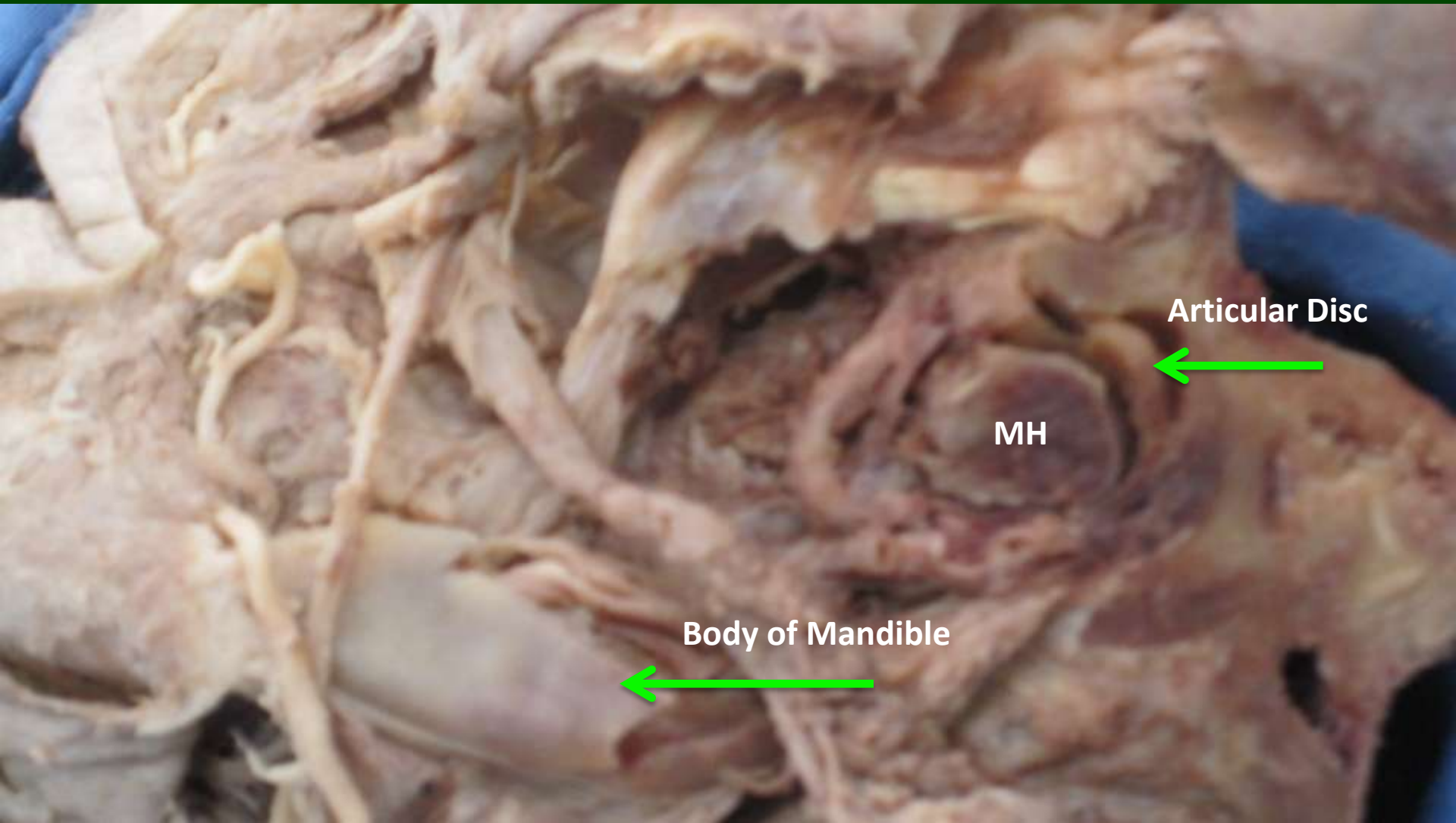


ARTICULAR DISC

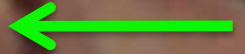


TMJ CONDYLE



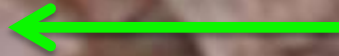


Articular Disc



MH

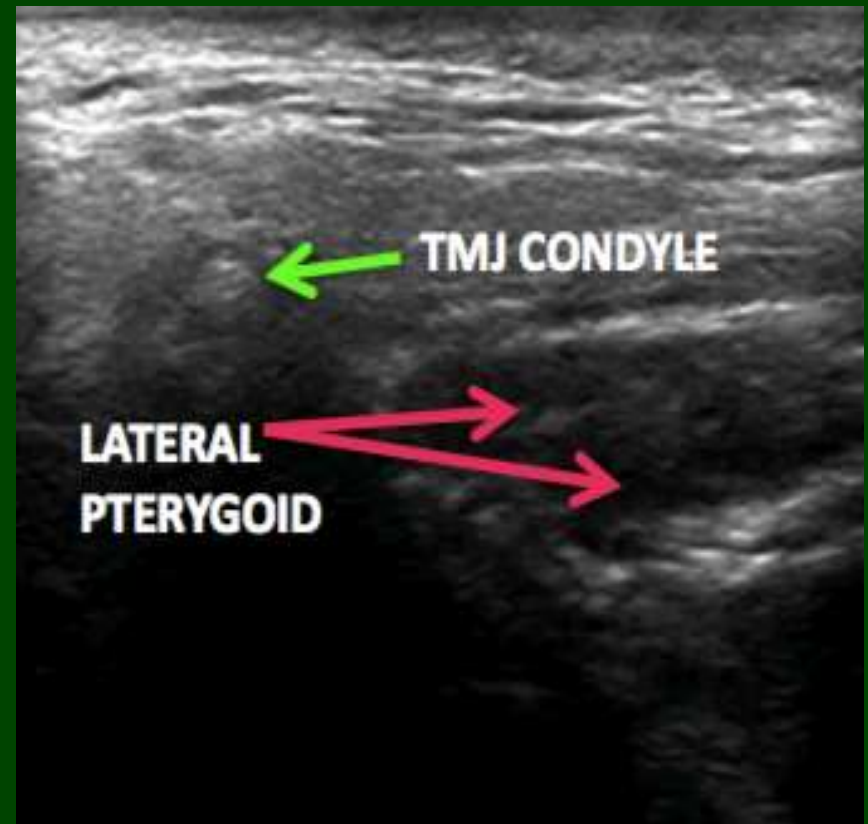
Body of Mandible



Sagital Cut

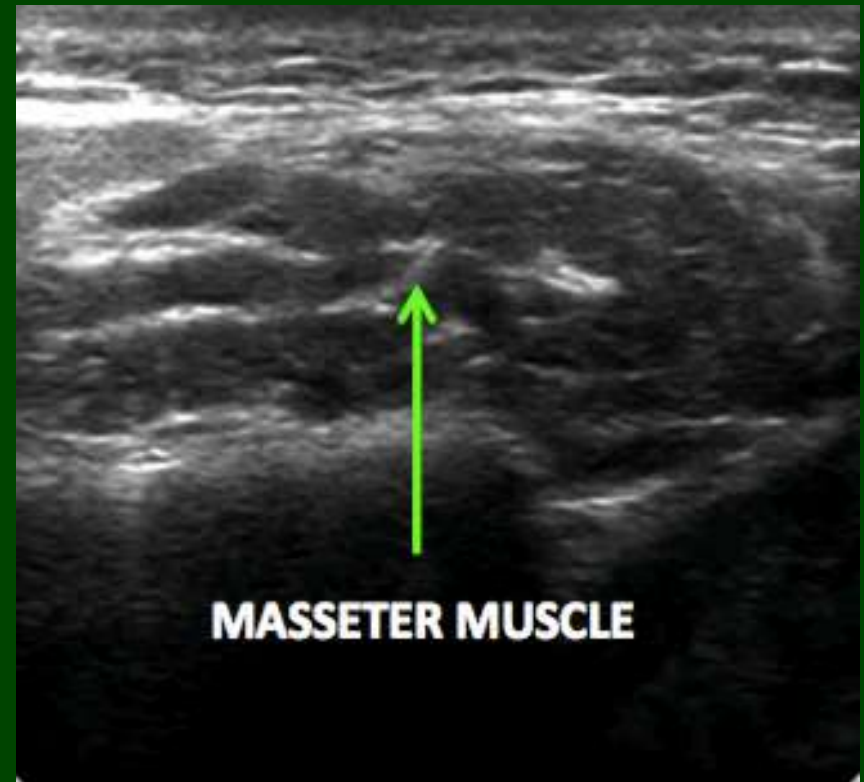
Lateral Pterygoid

- Transverse
- Angle superior to inf
- Dynamic & Static = \$



Masseter

- Cross section near mandibular angle
- transverse

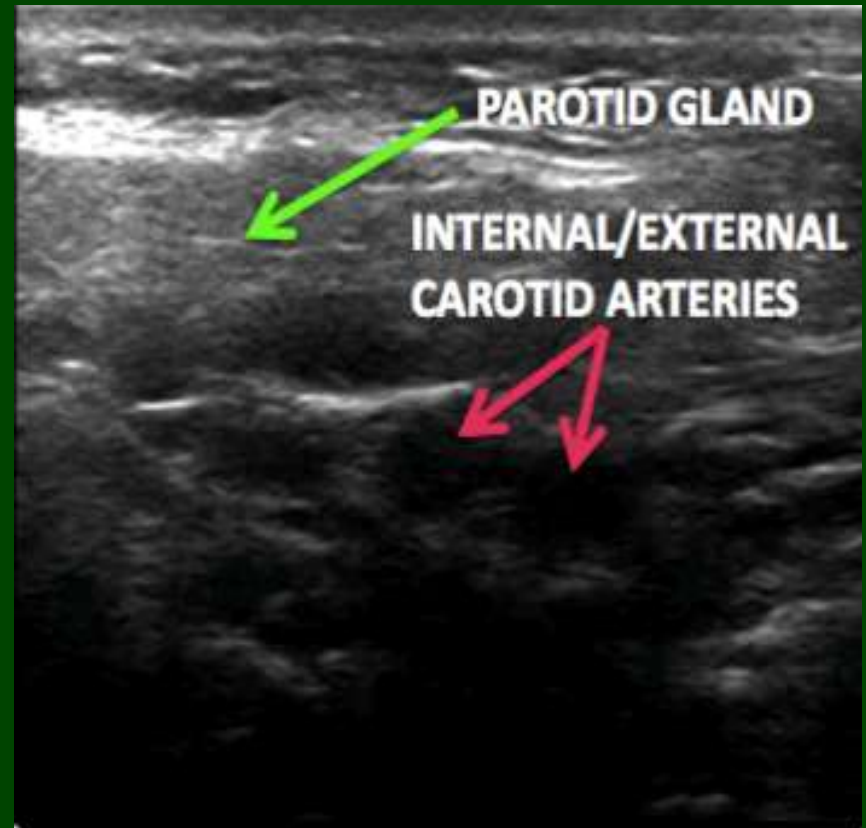
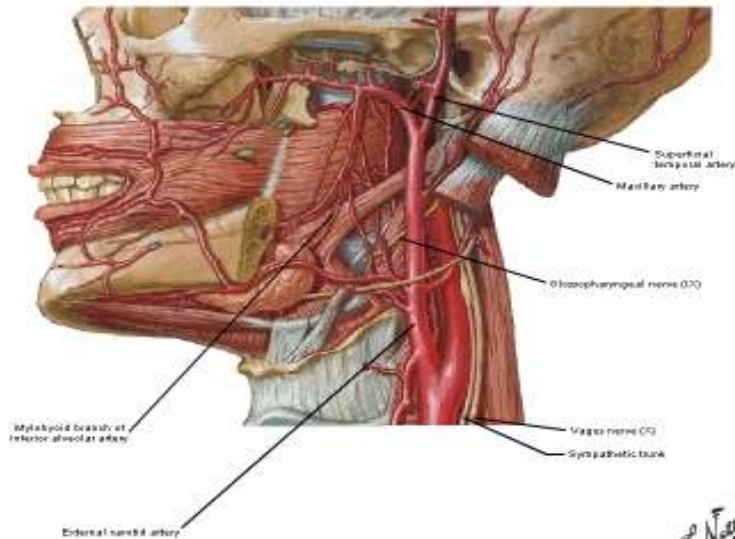


Parotid Gland

Facial n/ Retromandibular v
Ext carotid-Sup temp-Max

- Transverse (oblique)
- C2/3

Arteries of Oral and Pharyngeal Regions
Enlarged View of Head and Upper Neck Portion

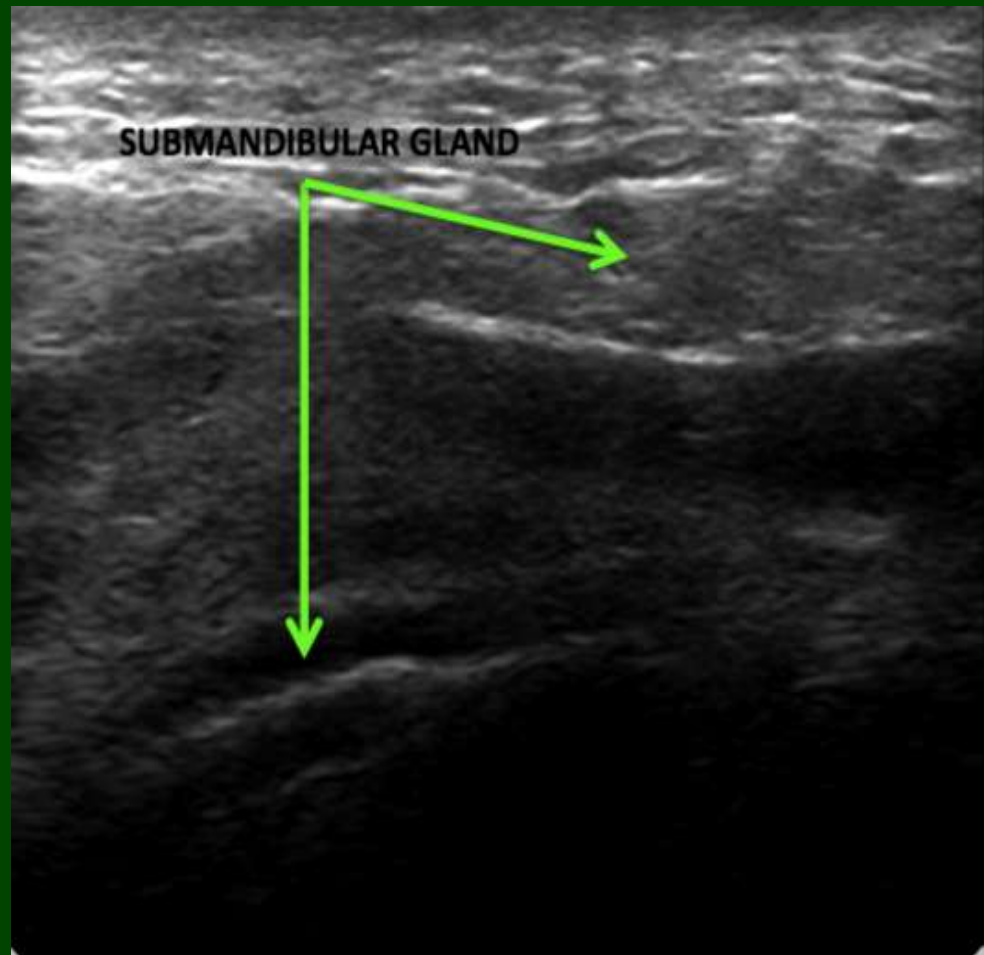




VH Dissector

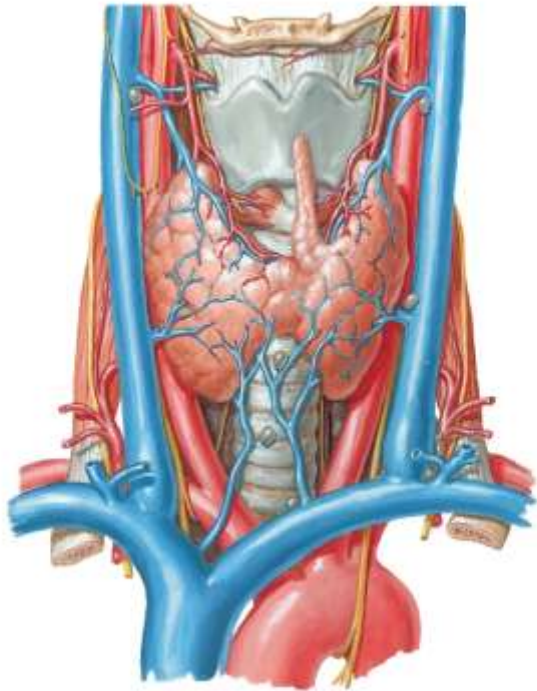
Submandibular Gland

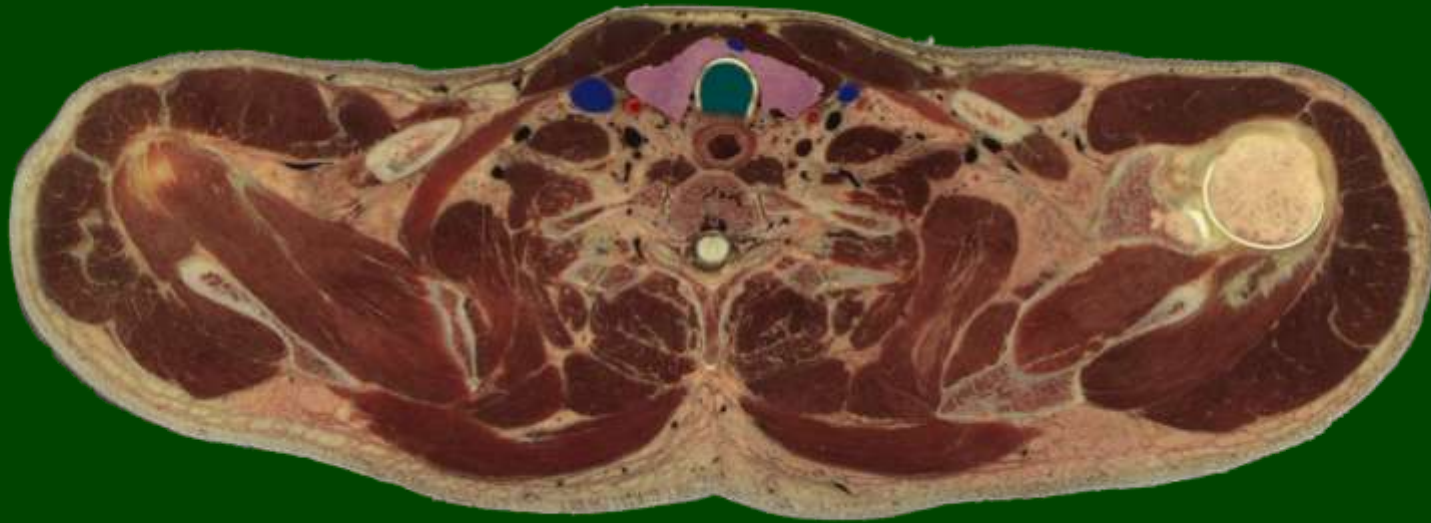
- Transverse (oblique)
- Mandibular border
 - Marginal mandibular n
 - Facial artery



Thyroid Gland

Thyroid Gland
Anterior View



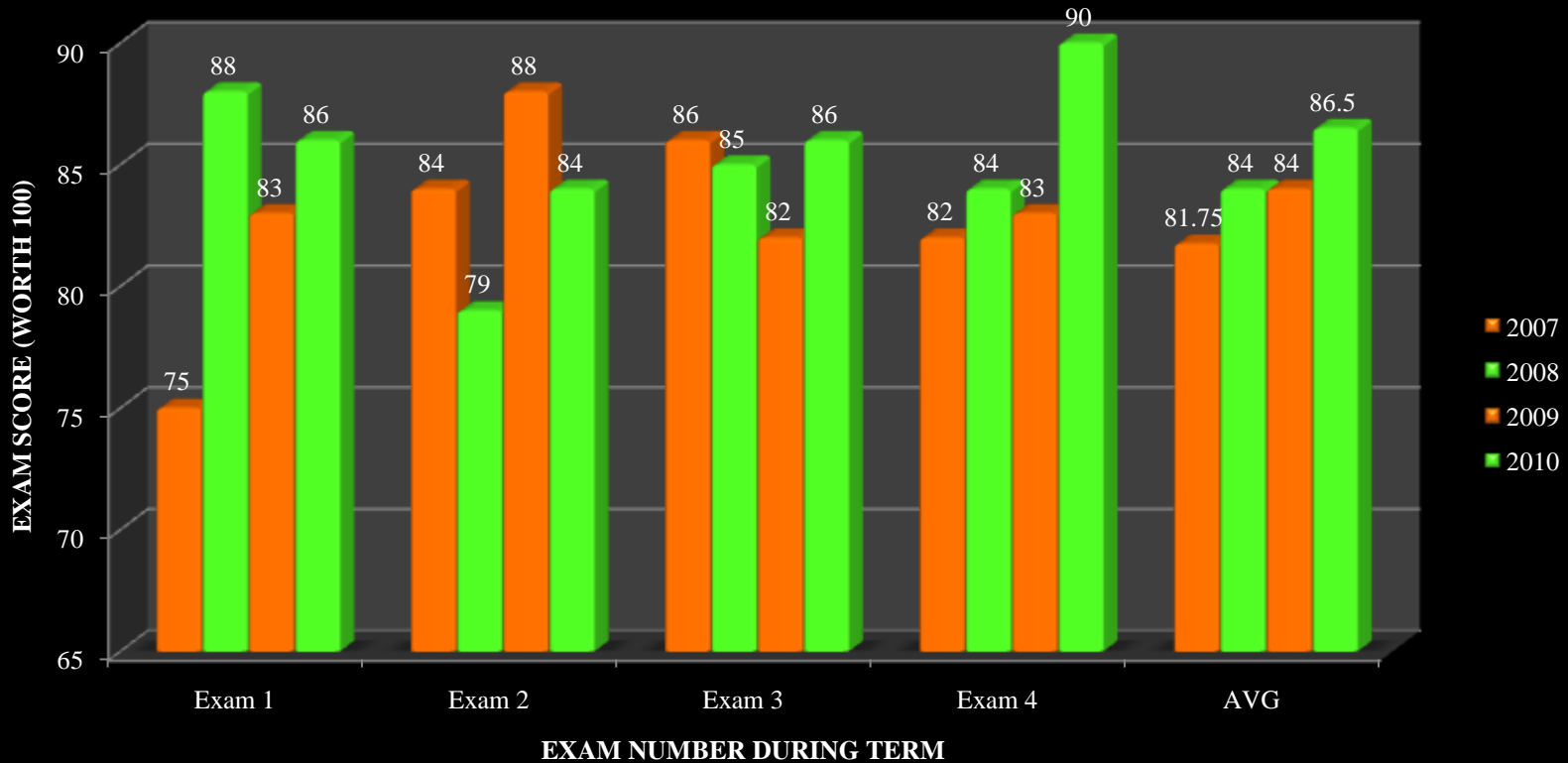


VH Dissector

Likert Scale Questions

- A: Did you feel the ultrasound would give you a better impression of what was beneath the skin prior to dissection? 3.5
- B: Did you feel that learning to use and interpret ultrasound of clinically important structures during a dissection lab would improve your confidence when performing a clinical examination of extra – oral structures? 3.6
- C: Did you find that combining the ultrasound with cadaver dissection was useful for both dissection and ultrasound interpretation? 3.7
- D: Would you prefer more ultrasound integration with the cadaver dissection? 3.3
- E: Do you feel comfortable with using an ultrasound machine and general interpretation of the anatomy demonstrated? 3.4

Head and Neck Anatomy Lab Scores

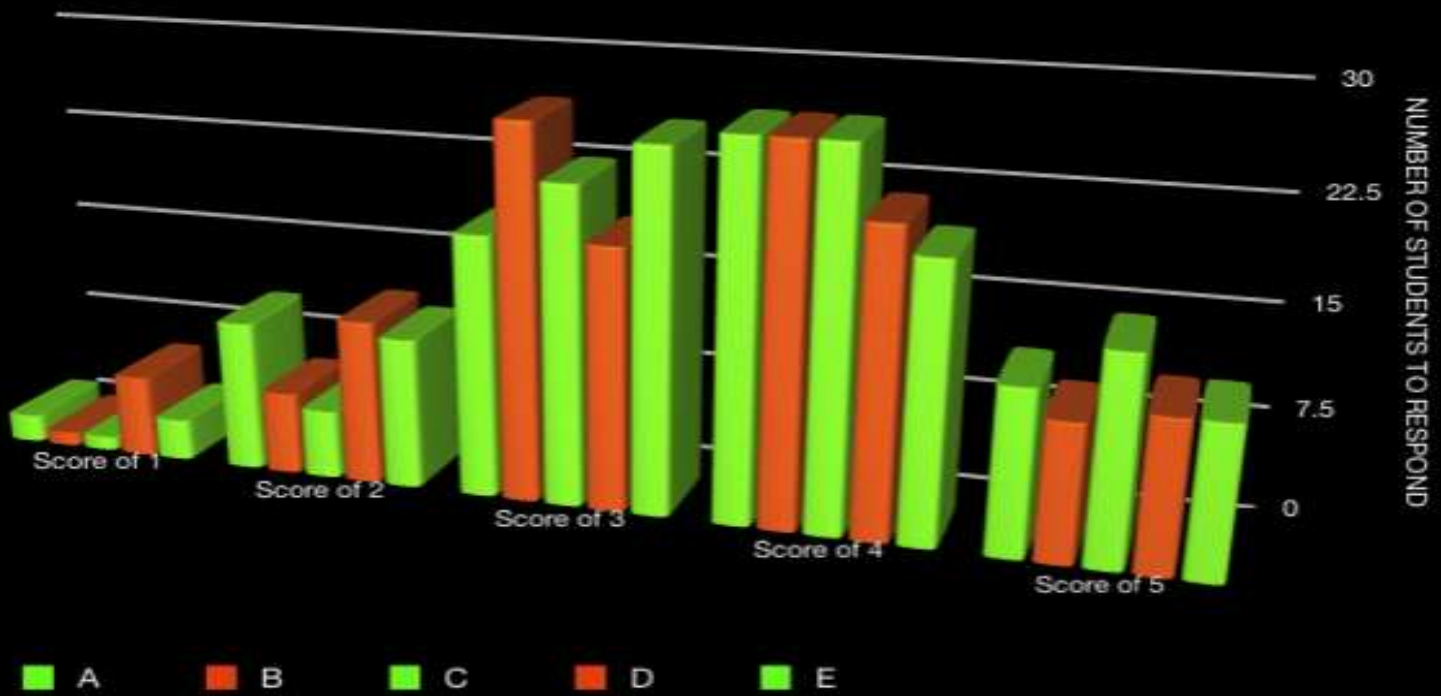


- ANOVA

- F-Test = .6534

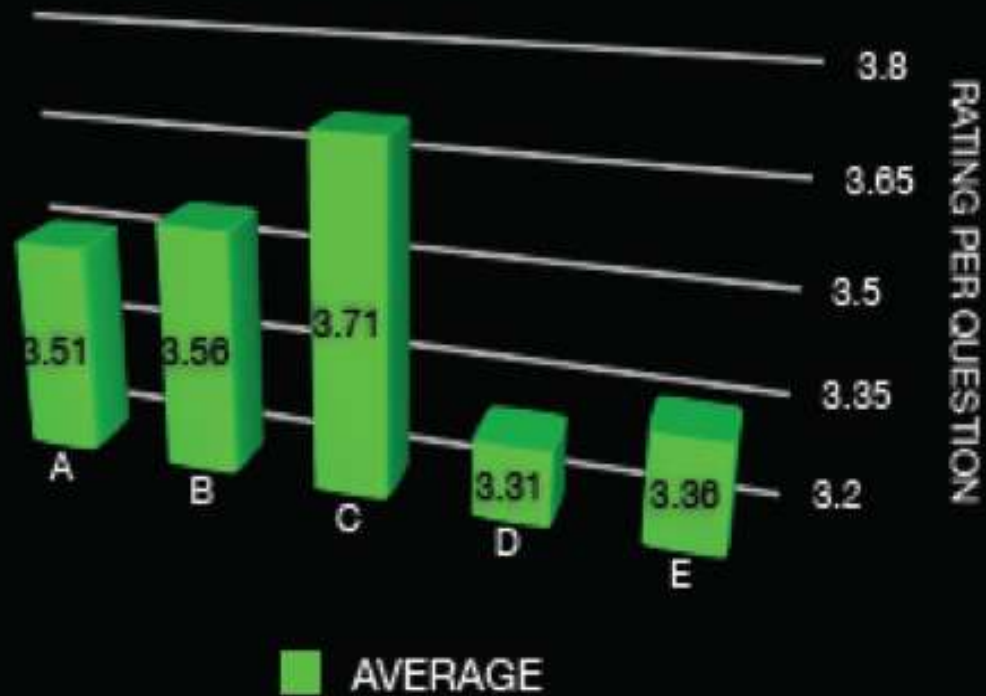
- Greater than .5 therefore, not stat sig because we only had 1 year of USS data (3:1 ratio)

QUESTIONNAIRE RESPONSES



Likert scale

AVERAGE RESPONSES



Conclusion

- US can be and perhaps should be introduced at the beginning of a healthcare professionals training career
- US may be best introduced with anatomy for long term memory and efficient recall
- Students embraced US and wanted more
- More studies to better teach and implement medium
- Thank you

