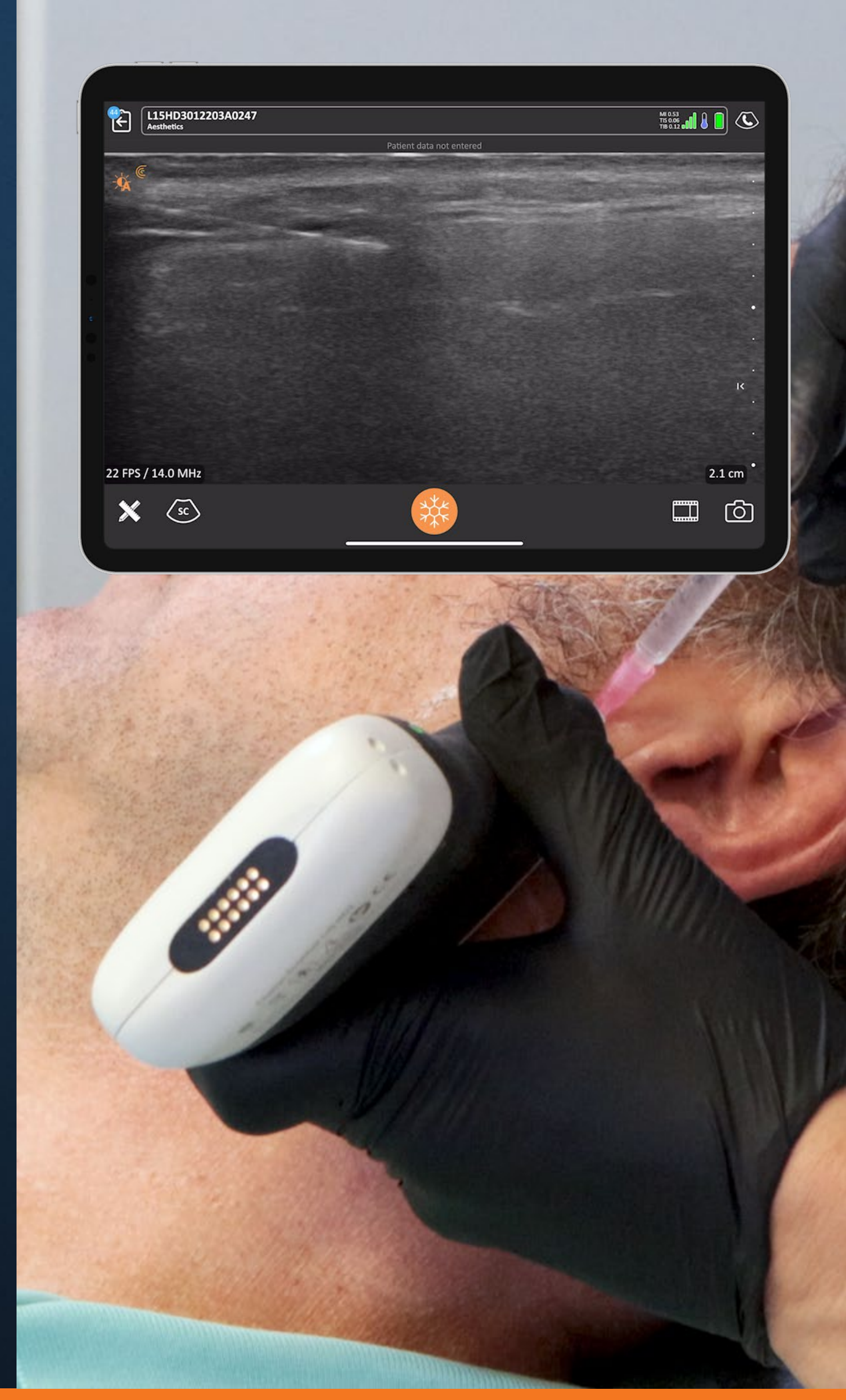




## SEMINARIO

Inyecciones faciales avanzadas:  
aprenda a hacer inyecciones  
complicadas seguras y evita  
complicaciones peligrosas

Mayo 2023



# "Visible": los músculos en las imágenes de ultrasonido hacen que la inyección de toxina botulínica sea más precisa: una revisión sistemática

“

Para maximizar la precisión y minimizar las complicaciones, los tratamientos guiados por ecografía se han utilizado activamente en tratamientos estéticos mínimamente invasivos, como BoNT, rellenos e hilos. No solo se pueden ver los puntos de referencia anatómicos en tiempo real, sino que también se pueden visualizar las agujas y cánulas de inyección durante los procedimientos, lo que hace que los resultados sean más predecibles”.

Hong SO. Cosmetic Treatment Using Botulinum Toxin in the Oral and Maxillofacial Area: A Narrative Review of Esthetic Techniques. *Toxins (Basel)*. 2023 Jan 17;15(2):82. doi: 10.3390/toxins15020082. PMID: 36828397; PMCID: PMC9964918.9.

The screenshot shows a PubMed search result for the article "The 'Visible' Muscles on Ultrasound Imaging Make Botulinum Toxin Injection More Precise: A Systematic Review". The search query is "ultrasound-guided botulinum injections facial aesthetics". The article is published in *Aesthetic Plast Surg.* 2022 Feb;46(1):406-418. The authors listed are Zhijin Li, Yanlong Yang, Nanze Yu, Wenzhe Zhou, Zirong Li, Yuming Chong, Yuwei Zhang, Hayson Chenyu Wang, Cheng Chen, Xiao Long, and Xiaojun Wang. The abstract states that the background is that botulinum toxin (BoNT) injection is common in cosmetic surgery but blind injection is prone to complications, and ultrasound (US) imaging can help. The method was a systematic electronic search of PubMed, MEDLINE, and Web of Science. The results identified 24 articles across five procedural categories: masseter (n=16), frontalis (n=2), glabella complex (n=2), trapezius (n=1), and gastrocnemius (n=3). The conclusion notes that muscles like the masseter, frontalis, glabella complex, trapezius, and gastrocnemius are visible on ultrasound.

# Tratamiento Cosmético con Toxina Botulínica en el Área Oral y Maxilofacial: Una Revisión Narrativa de los Tratamientos Estéticos

“

Para maximizar la precisión y minimizar las complicaciones, los tratamientos guiados por ecografía se han utilizado activamente en tratamientos estéticos mínimamente invasivos, como BoNT, rellenos e hilos. No solo se pueden ver los puntos de referencia anatómicos en tiempo real, sino que también se pueden visualizar las agujas y cánulas de inyección durante los procedimientos, lo que hace que los resultados sean más predecibles”.

Hong SO. Cosmetic Treatment Using Botulinum Toxin in the Oral and Maxillofacial Area: A Narrative Review of Esthetic Techniques. *Toxins (Basel)*. 2023 Jan 17;15(2):82. doi: 10.3390/toxins15020082. PMID: 36828397; PMCID: PMC9964918.9.

Review > Toxins (Basel). 2023 Jan 17;15(2):82. doi: 10.3390/toxins15020082.

## Cosmetic Treatment Using Botulinum Toxin in the Oral and Maxillofacial Area: A Narrative Review of Esthetic Techniques

Sung Ok Hong<sup>1</sup>

Affiliations + expand

PMID: 36828397 PMCID: [PMC9964918](#) DOI: [10.3390/toxins15020082](#)

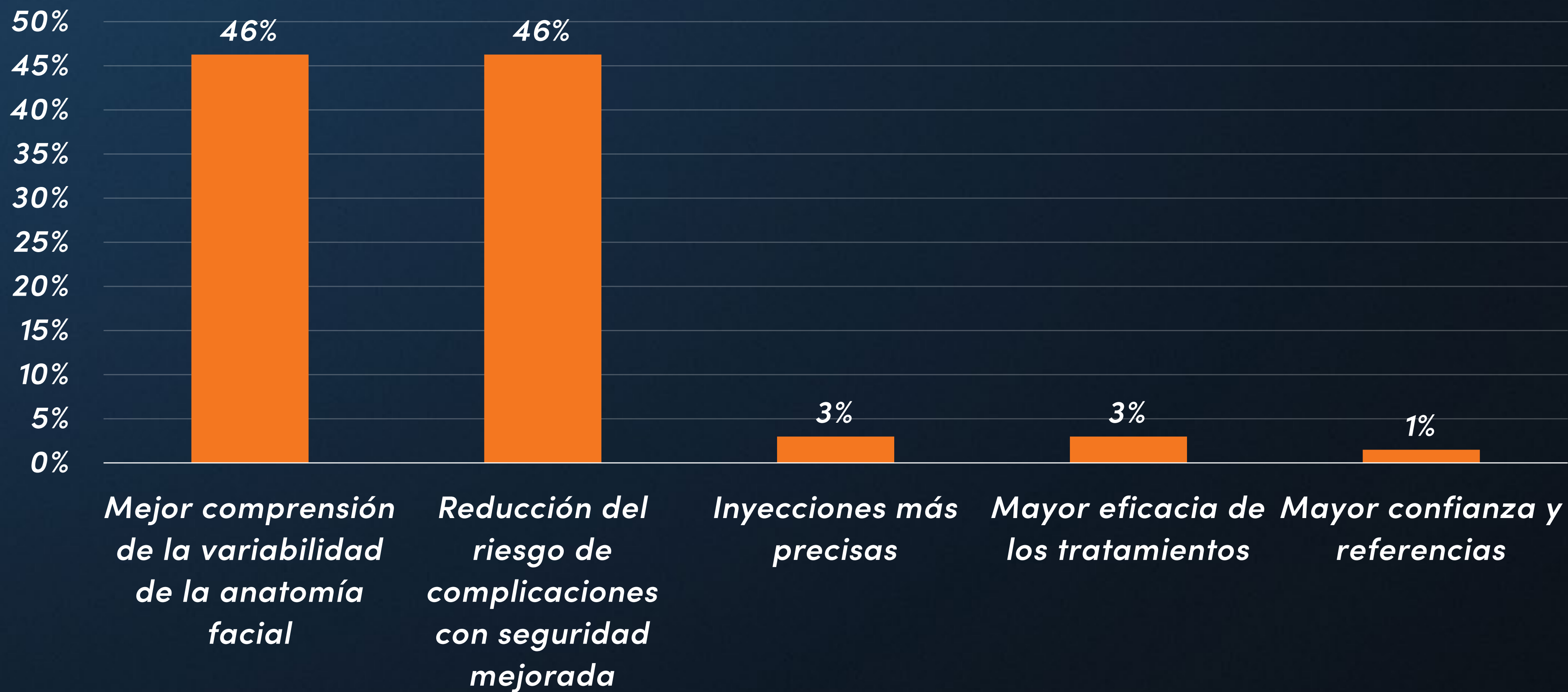
[Free PMC article](#)

### Abstract

Botulinum toxin (BoNT) is an anaerobic rod-shaped-neurotoxin produced by *Clostridium botulinum*, that has both therapeutic and lethal applications. BoNT injection is the most popular cosmetic procedure worldwide with various applications. Patients with dynamic wrinkles in areas such as the glabella, forehead, peri-orbital lines, nasal rhytides, and perioral rhytides are indicated. Excessive contraction of muscles or hyperactivity of specific muscles such as bulky masseters, cobble stone chins, gummy smiles, asymmetric smiles, and depressed mouth corners can achieve esthetic results by targeting the precise muscles. Patients with hypertrophic submandibular glands and parotid glands can also benefit esthetically. There are several FDA-approved BoNTs (obabotulinumtoxinA, abobotulinumtoxinA, incobotulinumtoxinA, letibotulinumtoxinA, prabotulinumtoxinA, daxibotulinumtoxinA, rimbotulinumtoxinB) and novel BoNTs on the market. This paper is a narrative review of the consensus statements of expert practitioners and various literature on the injection points and techniques, highlighting both the Asian and Caucasian population separately. This paper can serve as a practical illustrative guide and reference for optimal, safe injection areas and effective doses for application of BoNT in the face and oral and maxillofacial area. The history of BoNT indications, contraindications, and complications, and the merits of ultrasonography (US)-assisted injections are also discussed.

**Keywords:** BoNT; Botox; aging; beauty; botulinum toxin; cosmetic treatment; dentist; esthetic treatment; face; facial anatomy; injection; maxillofacial; non-invasive; rhytides; toxin; wrinkles.

# ¿Qué beneficios clave cree que aporta el ultrasonido a la estética facial?



# Su oradora invitada experta



## **Dra. Karina Ravera, MD**

Médica Especialista en Diagnóstico por Imágenes

Post grado en Medicina Estética



# **Cómo realizar inyecciones cervicofaciales complejas de una manera segura y eficaz**

**Dra. Karina Ravera**

Médica Especialista en Diagnóstico por Imágenes

Post grado en Medicina Estética

**Argentina**



Dra. Karina Ravera

- Médica Especialista Diagnóstico por Imágenes
- Posgrado en Medicina Estética  
Universidad de Buenos Aires
- Miembro Patient Safety Committee  
Craniofacial Research and Study Center  
Miami University USA
- Directora Medica de Ultraskinus ,  
plataforma de aprendizaje de Ecografía  
Cutánea e Intervencionismo Percutáneo
- Scientific advisor Dermica Laboratoires
- Docente Master Medicina Estética  
Universidad Católica de Valencia
- Miembro European Medical College



**UltraSkinUS**

ULTRASOUND BASIC & ADVANCED TRAINING

# Índice

Inyecciones de lipolíticos e inductores de la lipólisis en:

- 1-** Bola adiposa de Bichat
- 2-** Grasa submental

Inyecciones de toxina botulínica en:

- 3-** Parótida
- 4-** Glándula submaxilar



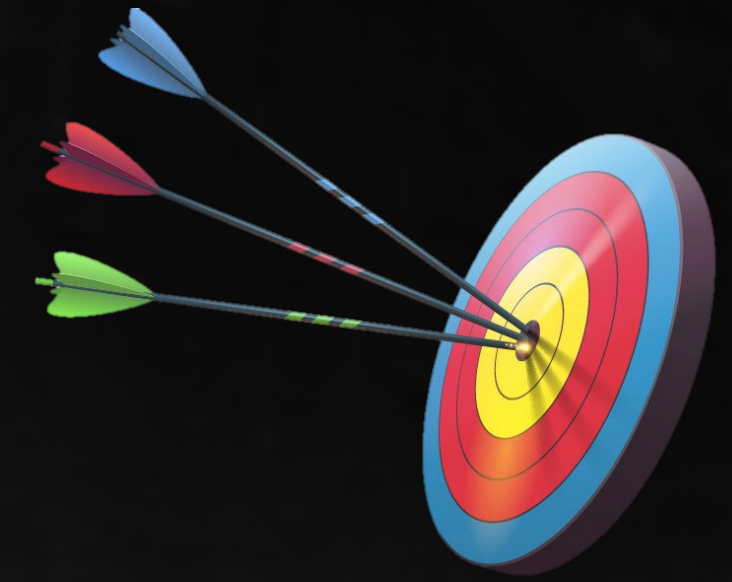
# Objetivos terapéuticos

**1-** EFICACIA

**2-** SEGURIDAD



**Quimiodenervación glandular TB ecoguiada**  
**Lipólisis e inducción de lipólisis ecoguiada**



## Concepto:

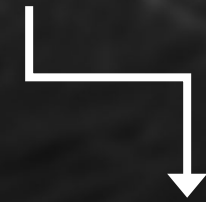
Inyecciones ecoguiadas de Fármacos

### 1- EFICACIA

Latín efficacia , es la capacidad de alcanzar un efecto tras la realización de una acción.

- INYECCIÓN A CIEGAS
- INYECCIÓN ECOGUIADA

DIFERENTE EFECTO



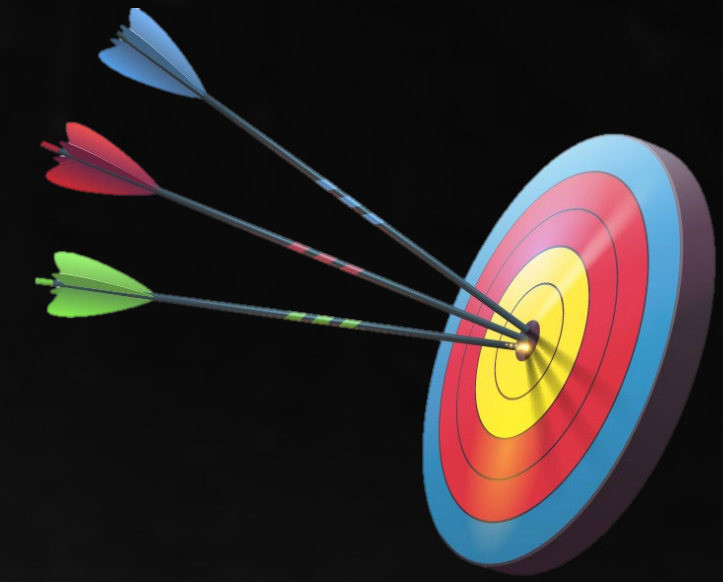
Las **inyecciones ecoguiadas de fármacos** incrementan la **eficacia** terapéutica



**Precisión milimétrica y sublimétrica**

# Concepto:

## Inyecciones ecoguiadas de Fármacos



### 1- SEGURIDAD

Evitar o reducir daños potenciales

- INYECCIÓN A CIEGAS

#### 1- INYECCIÓN POR FUERA DEL OBJETIVO: A- NO EFECTO TERAPÉUTICO

Menor efecto terapéutico pues tendremos una dosis menor en el sitio deseado. **MENOR EFICACIA**

#### B- EFECTOS ADVERSOS

Debido a la acción de la toxina en otra estructura anatómica diferente a la buscada **MENOR SEGURIDAD**

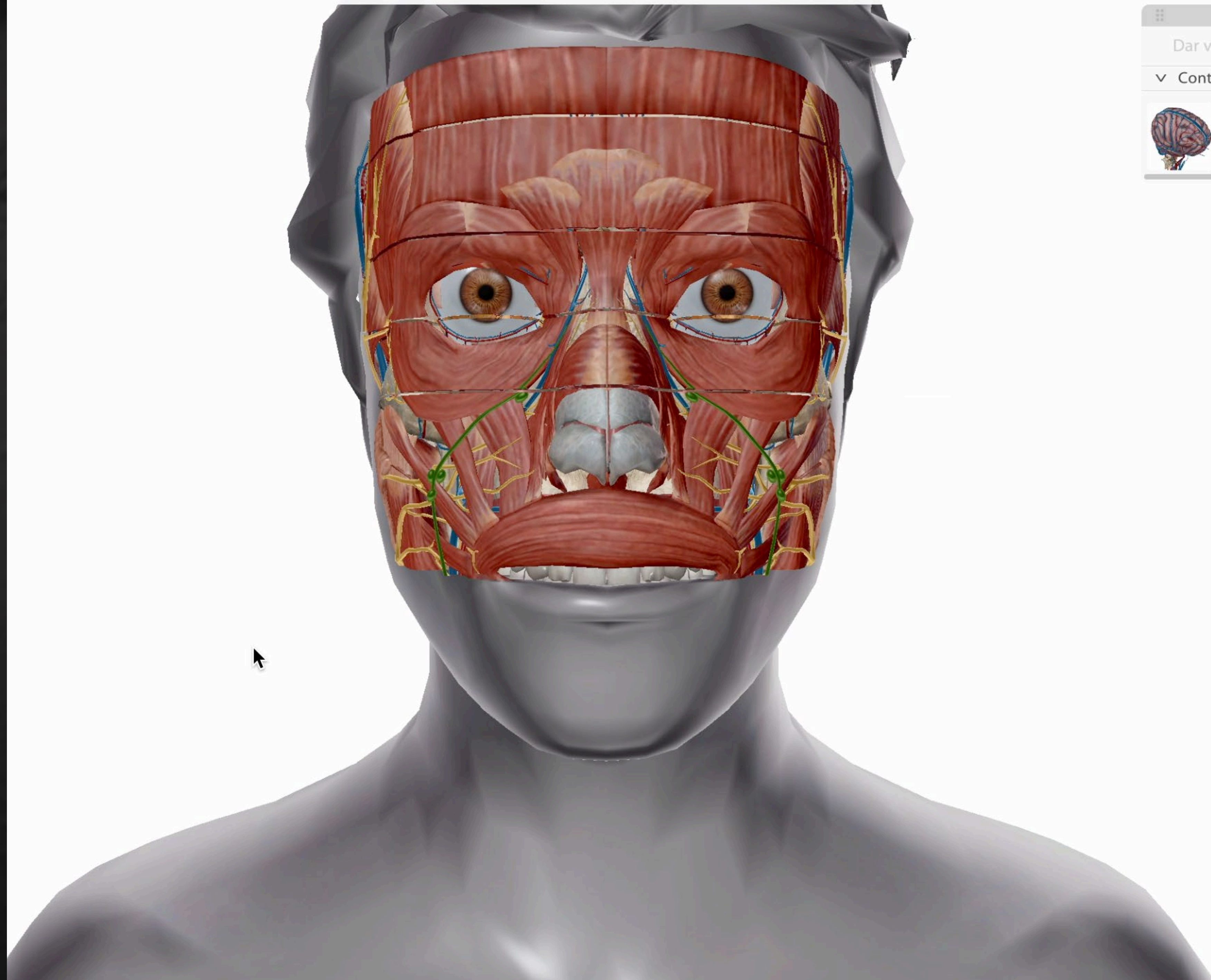
- INYECCIÓN ECOGUIADA



INOCULAR EN EL SITIO DIANA  
SEGURIDAD  
EFICACIA  
DOSIS CORRECTA



1- **Bola adiposa de Bichat** o Buccal fat pad

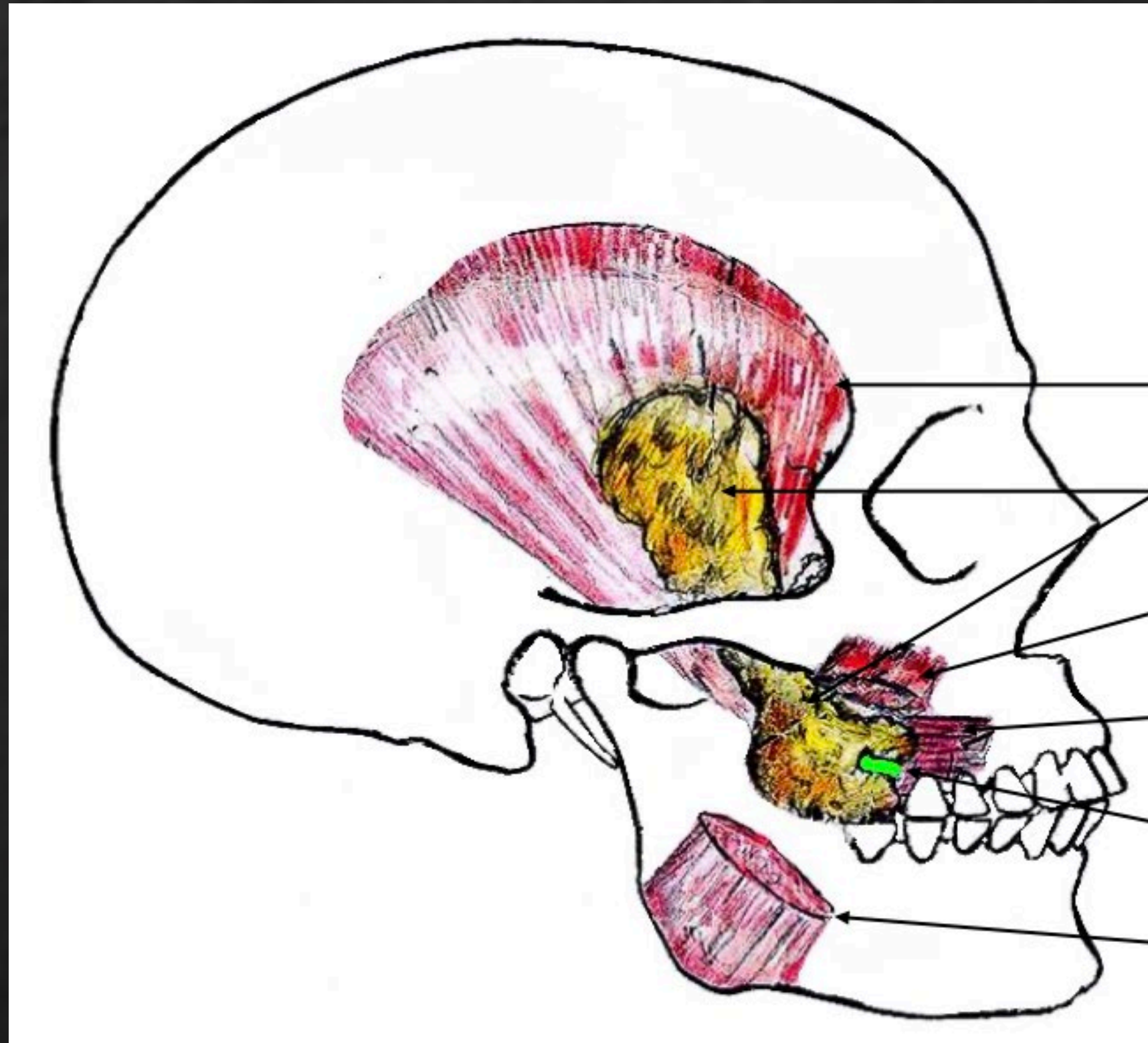


Cabe

Dar vuelta

▼ Contenidos relacio

Two small anatomical icons are displayed below the text. The first icon on the left shows a lateral view of a human brain with its vascular and neural structures. The second icon on the right shows a detailed view of a specific muscle, likely from the face or neck, with its fibers and attachments.



## Anatomical structure of the buccal fat pad and its clinical adaptations

Hai-Ming Zhang<sup>1</sup>, Yi-Ping Yan, Ke-Ming Qi, Jia-Qi Wang, Zhi-Fei Liu

**Estructura** -factor deslizante músculos masticatorios y mímica

Amortigua ciertas acciones musculares

Rellena espacios profundos

Volumen puede cambiar durante la vida



# The Importance of Ultrasound in Excision of the Buccal Fat Pad

Wilson Gustavo Cral<sup>1</sup>

## Abstract

Partial excision of the buccal fat pad is a surgery indicated for different functional and aesthetic procedures. Although this surgery offers minimal risks, the ultrasound examination can provide security in performing the surgery, in addition to predicting preoperative anatomical variations and assisting in the treatment of postoperative complications. With the worldwide search for aesthetic procedures, concomitant with the development of imaging tests that help in different diagnoses and treatments, ultrasonography has become an excellent indication for planning oral fat pad surgeries. Level of Evidence V This journal requires that authors assign a level of evidence to each article. For a full description of these Evidence-Based Medicine ratings, please refer to the Table of Contents or the online Instructions to Authors [www.springer.com/00266](http://www.springer.com/00266) .

## Buccal fat pad removal to improve facial aesthetics: an established technique?

[Lucas-Borin Moura](#),<sup>1</sup> [José-Rodolfo Spin](#),<sup>2</sup> [Rubens Spin-Neto](#),<sup>3</sup> and [Valfrido-Antonio Pereira-Filho](#)<sup>4</sup>

There are two methods to perform BFP removal, through intraoral approach or by facial approach during the facelift procedure. According to the literature, the safest method is to perform an intraoral incision (5,9). Usually, the intraoral BFP removal is performed under local anesthesia and the incision is performed in the maxillary gingivobuccal sulcus (3,8-10) or in buccal mucosa at bite level (7). After incision, the buccal muscle is dissected and the BFP is exposed. An external pressure is applied over the skin to manipulate the BFP into the incision, and without excessive traction the exposed portion is clamped and excised. An absorbable suture is used to close the wound (8-10). The potential complications include: hematoma, trismus, infection, facial nerve impairment, parotid duct injury, over resection, induration, and asymmetry (3,6,10).

The complication rate of the included studies, considering the reported results, amounts to 8.45% of the treated patients. This list included hemorrhage, facial asymmetry, and trismus. Although the reported complications are considered minor, injuries to parotid duct and facial nerve may occur (3-4,10,14). Engdahl, *et al.* (15) (2012), reported a massive hemorrhage of internal maxillary artery after intraoral BFP removal, in which the patient almost died. The lack of information about complications suggests that prospective clinical trials should be performed in order to define the potential complications of the technique.

# OPEN ACCESS ATLAS OF OTOLARYNGOLOGY, HEAD & NECK OPERATIVE SURGERY

Johan Fagan MBChB, FCS (ORL), MMed  
Professor and Chairman  
Division of Otolaryngology  
University of Cape Town  
Cape Town, South Africa

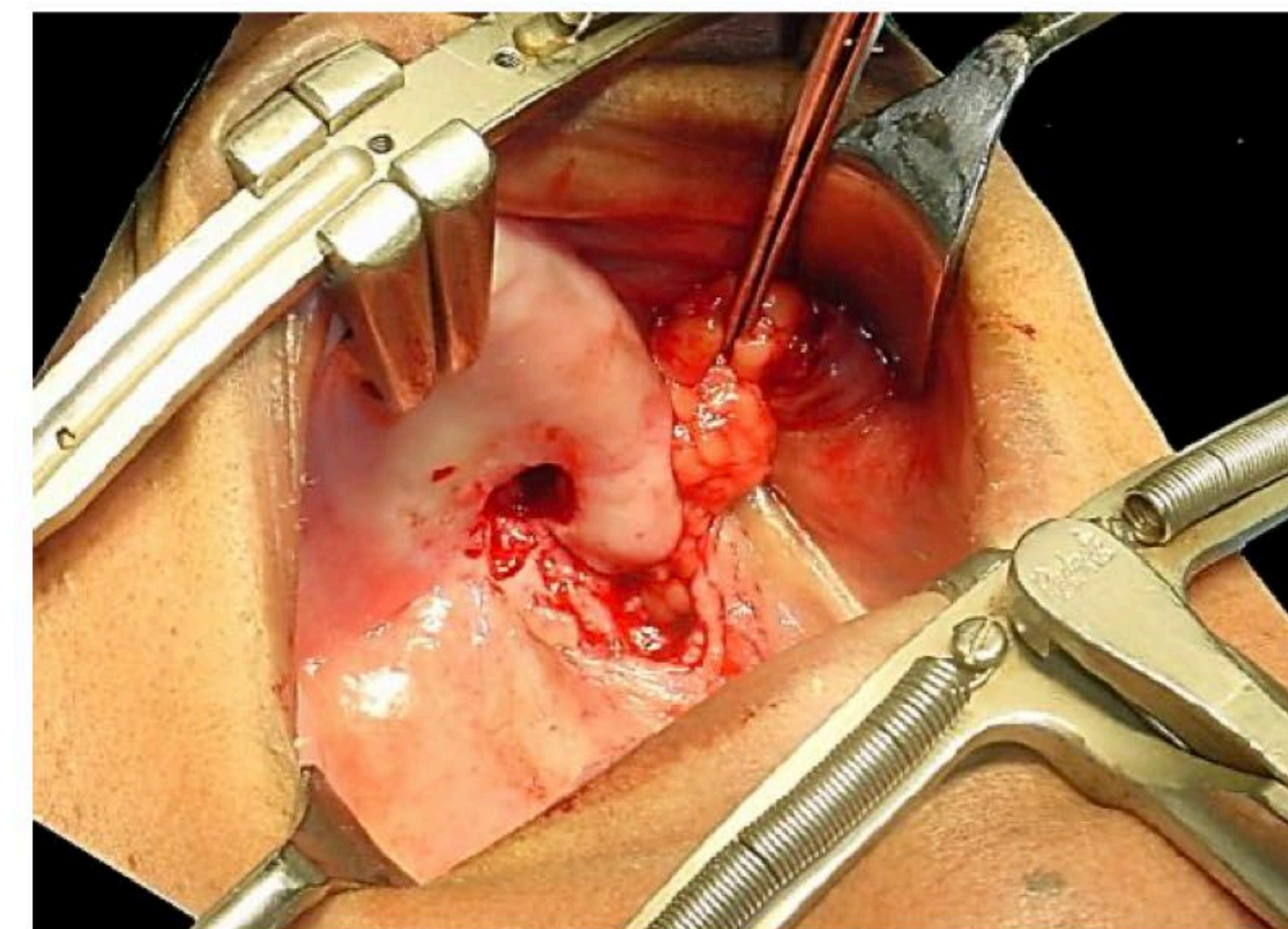
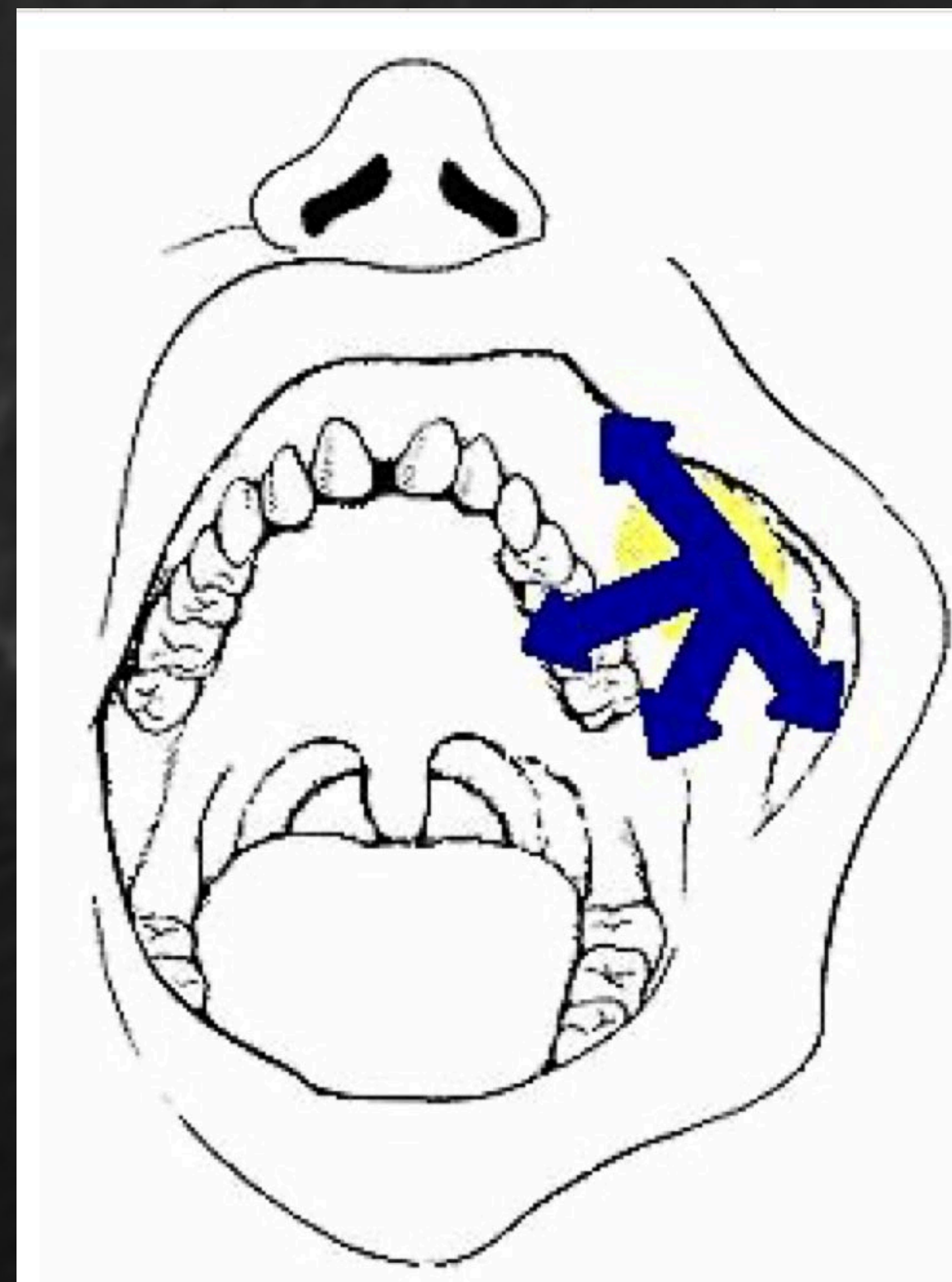
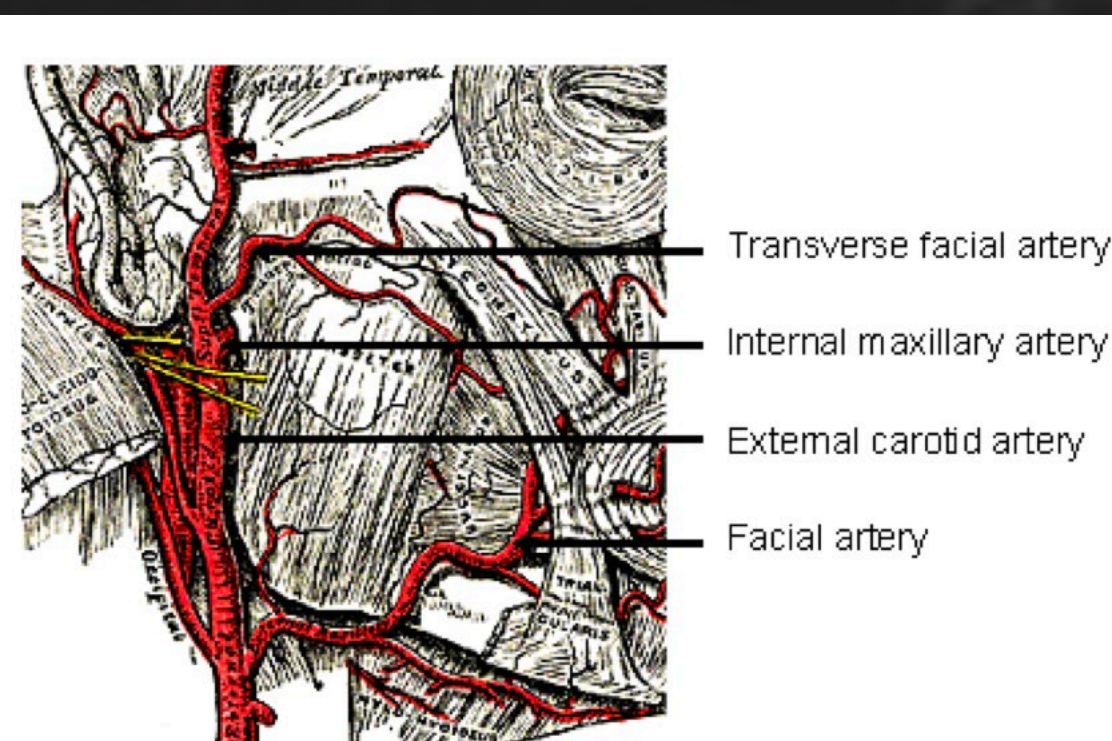
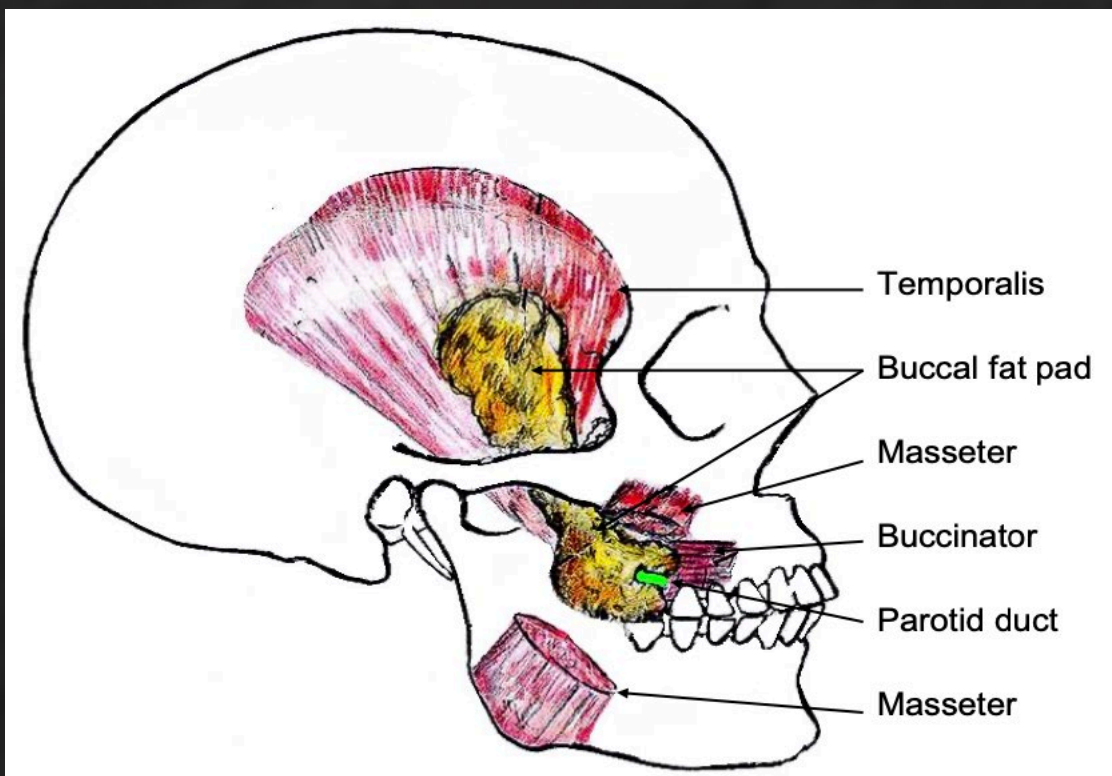


Figure 7: Careful delivery of fat pad after incising the capsule

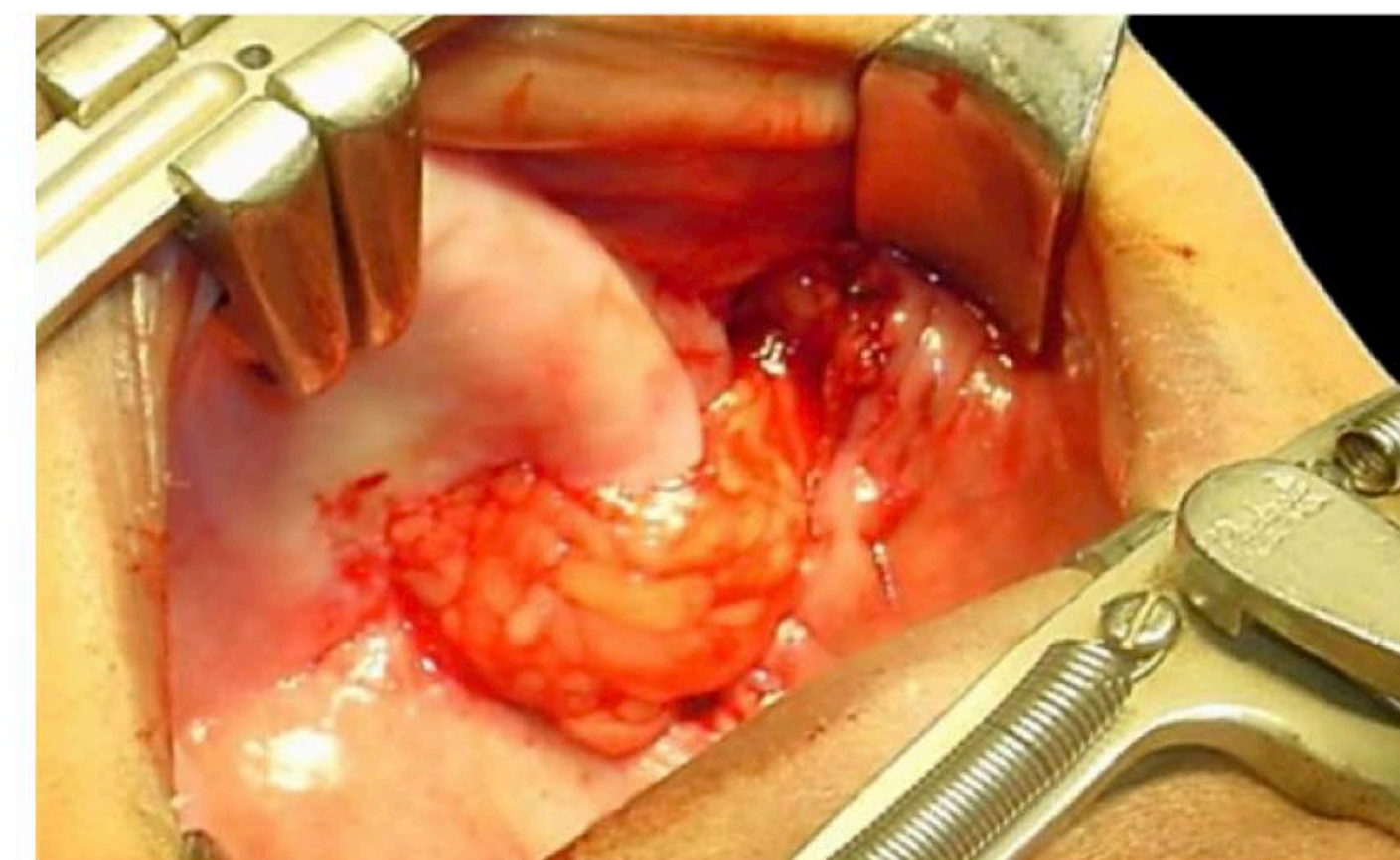
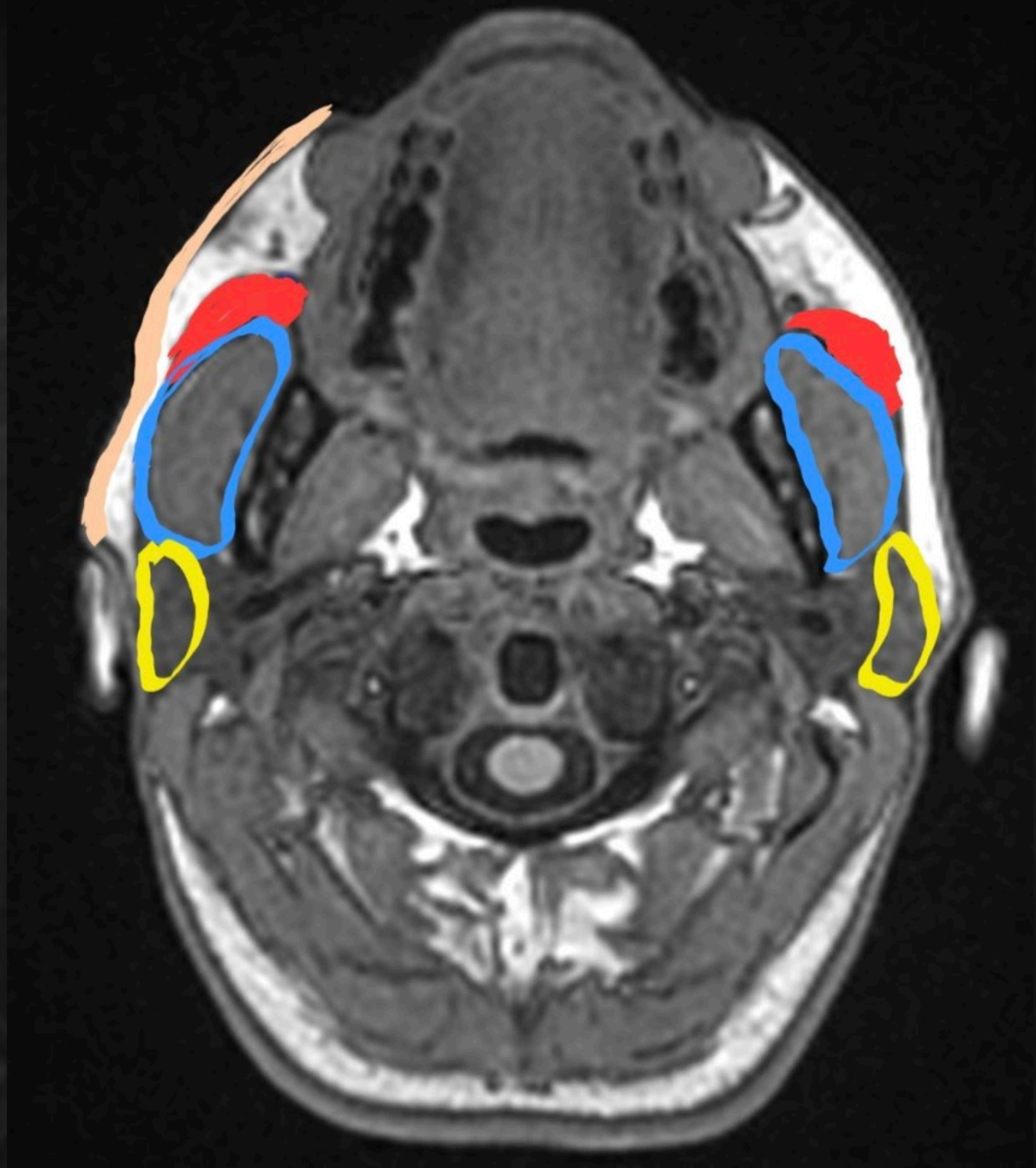
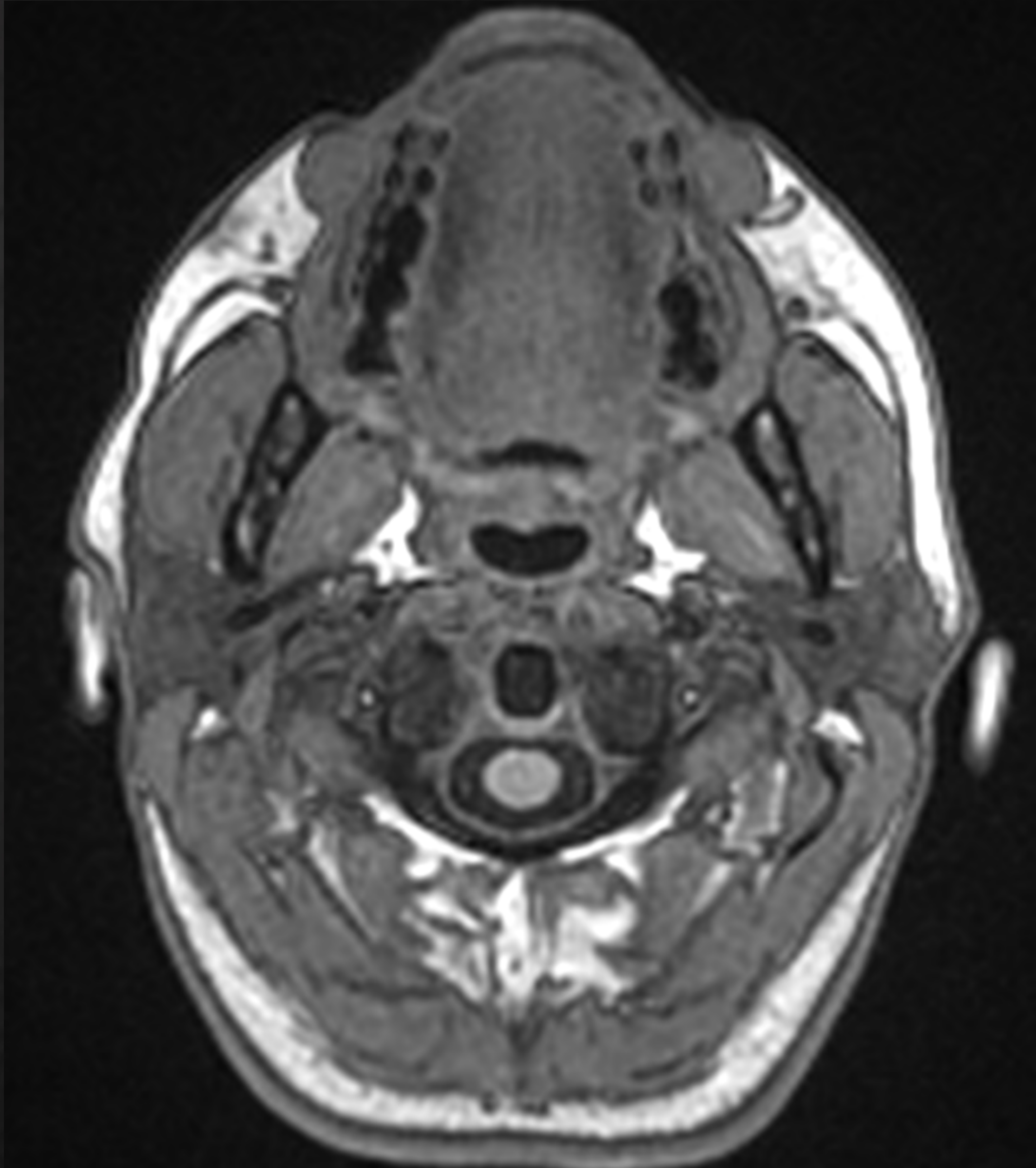
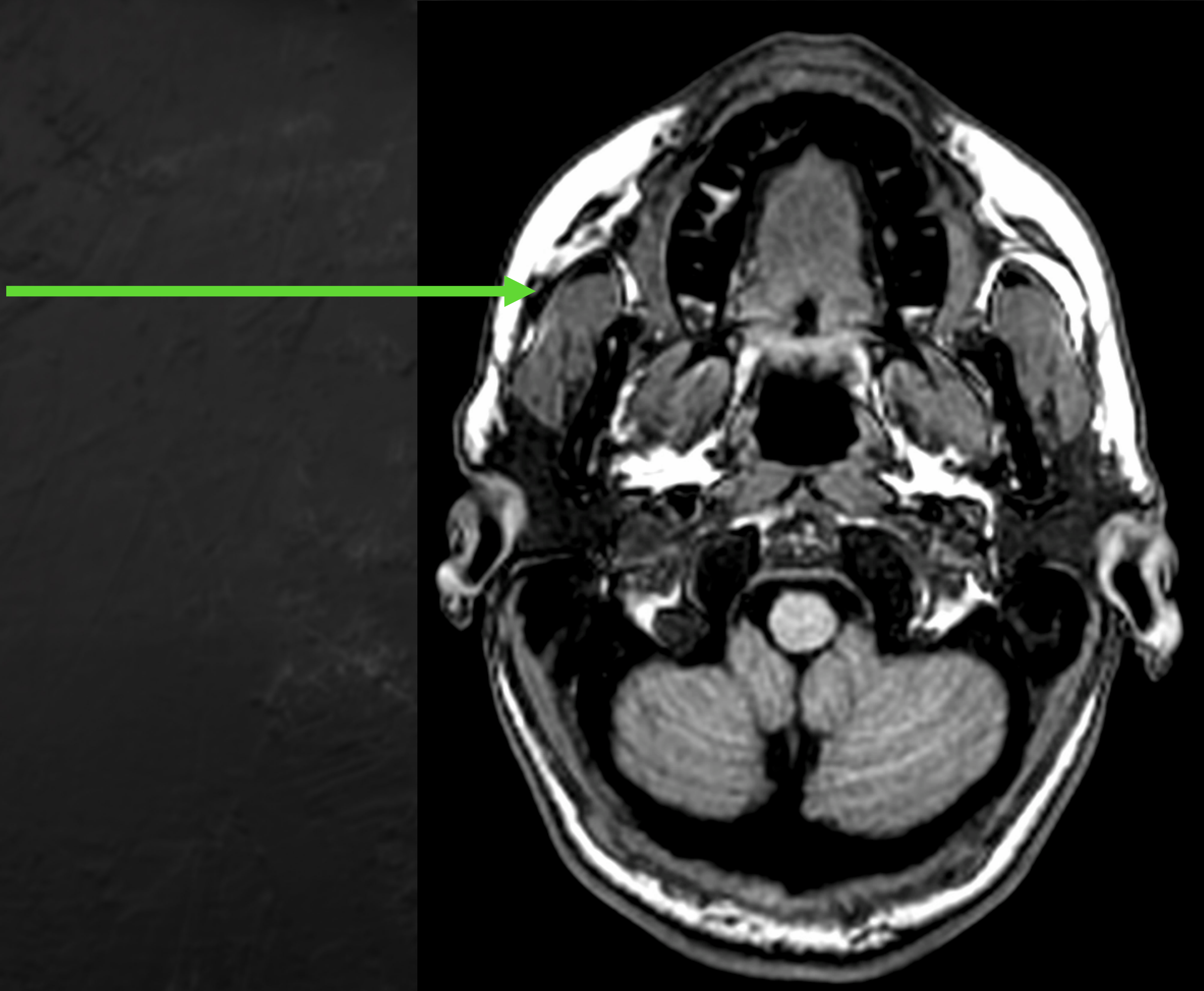


Figure 8: Flap placed over an oronasal defect



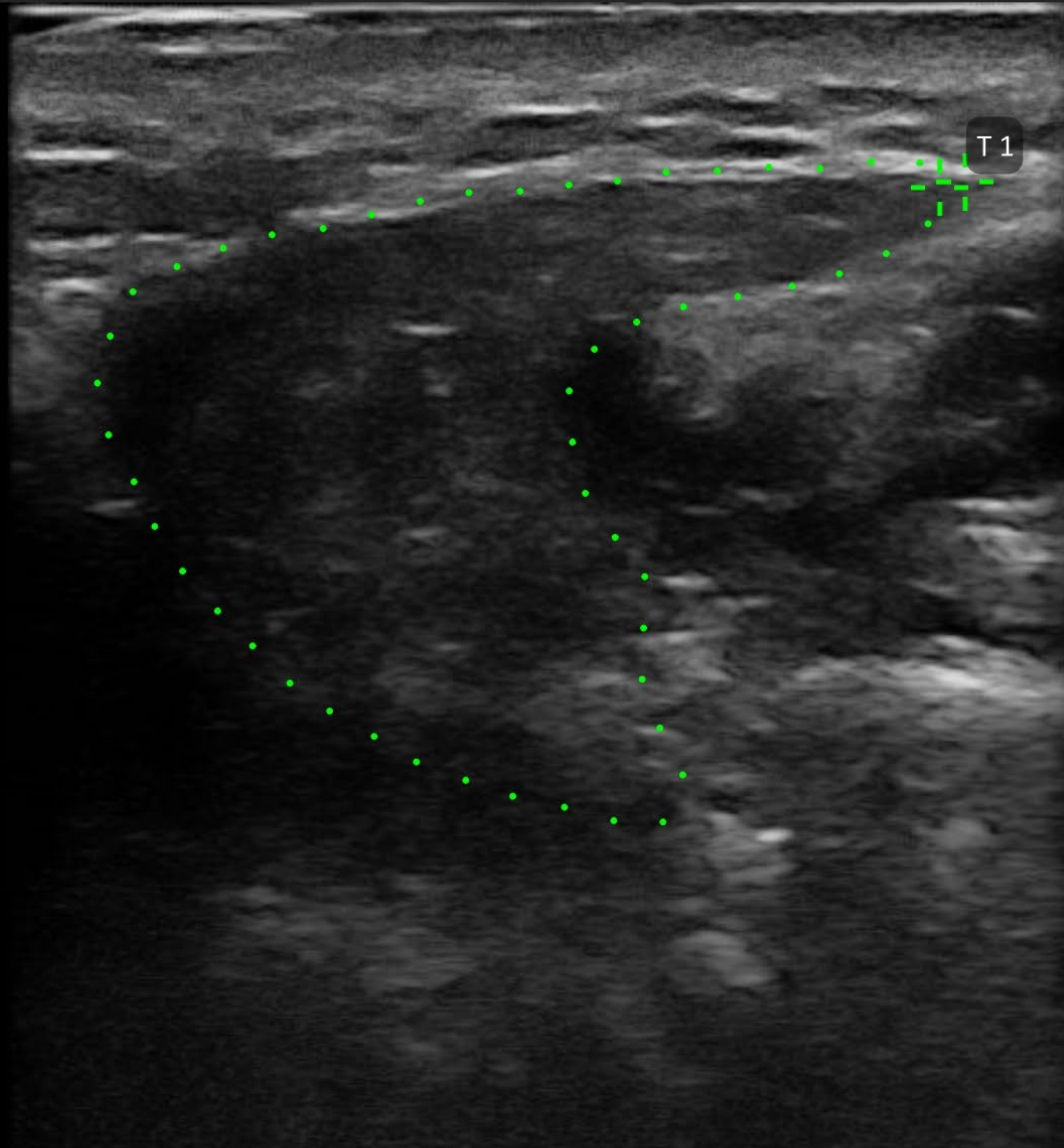




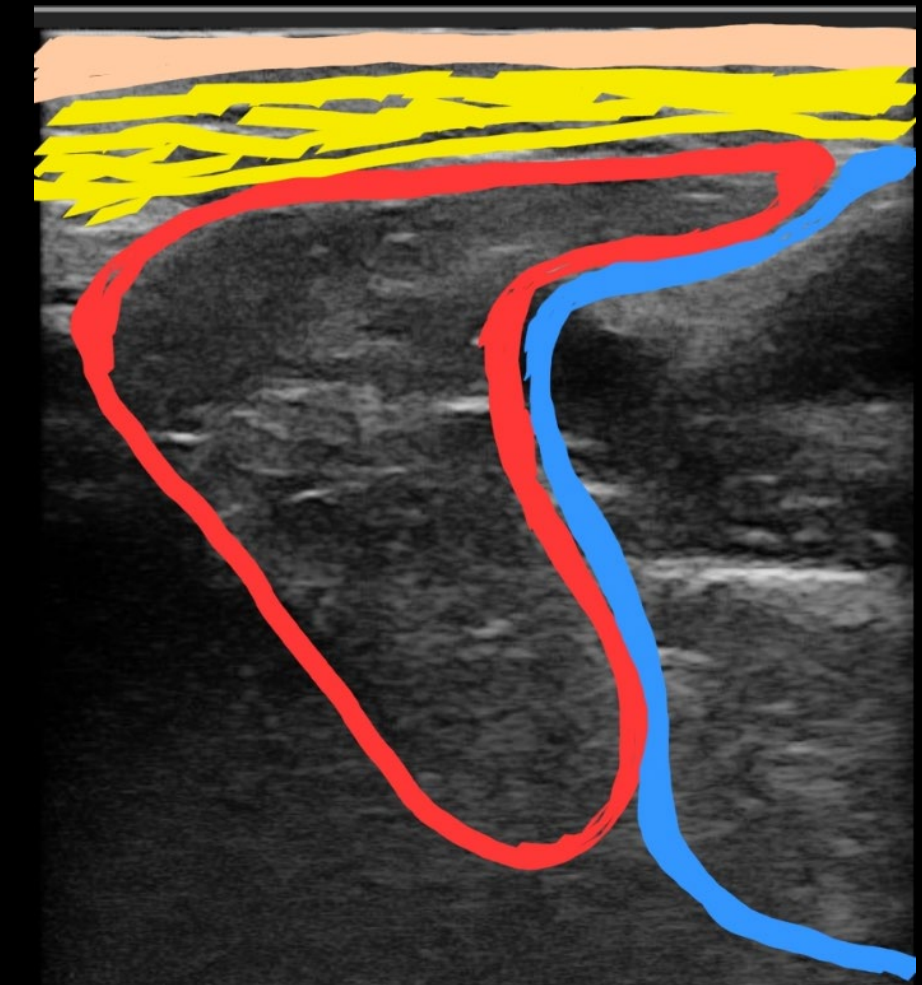
L20HD3032209A0782  
Estética



T 1 --  
Distancia 61,9 mm  
Área 1,53 cm<sup>2</sup>



T 1



2,7 cm

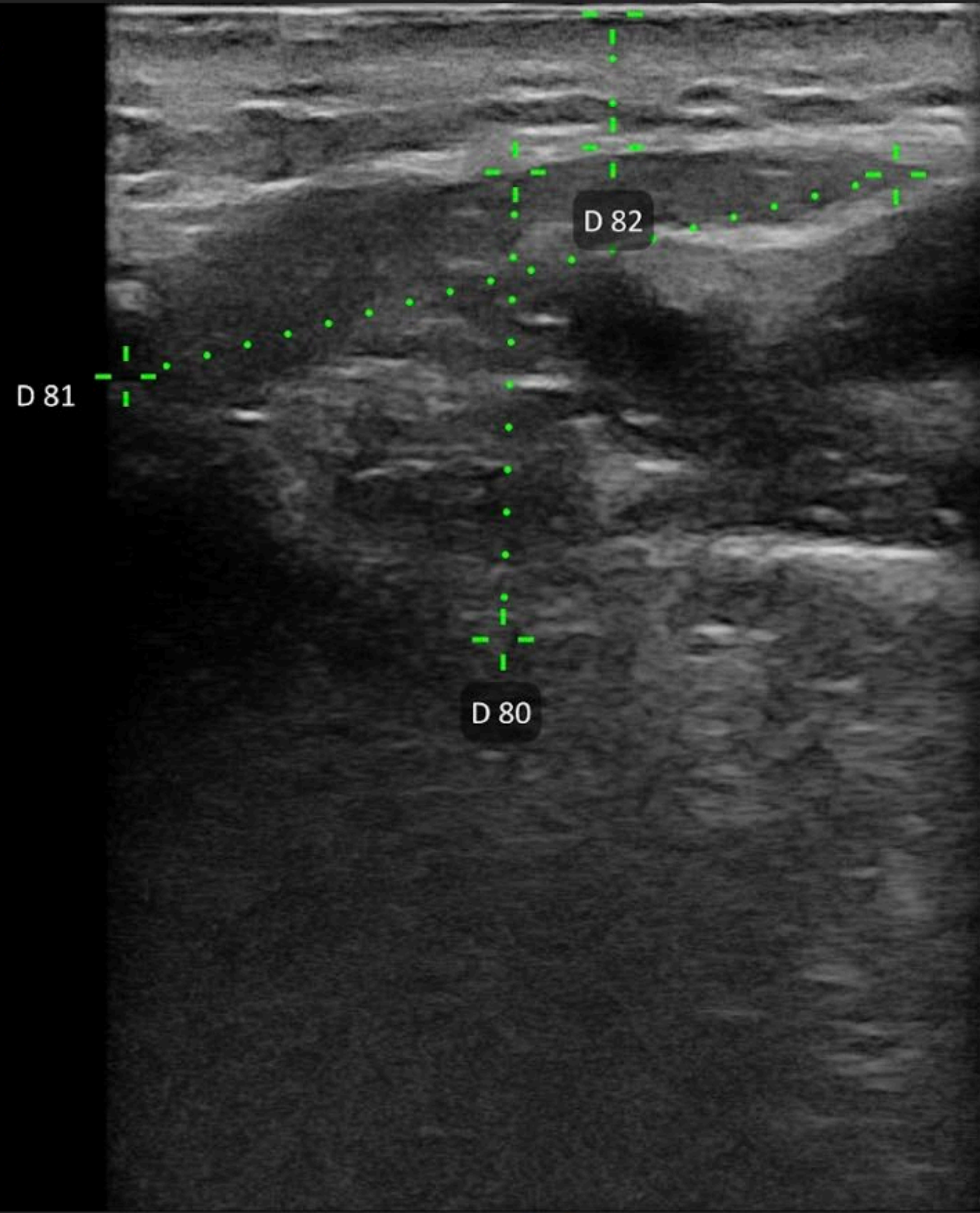




L20HD3032209A0782  
Estética



- D 80 13,23 mm (X)
- D 81 22,54 mm (X)
- D 82 3,773 mm (X)



3,4



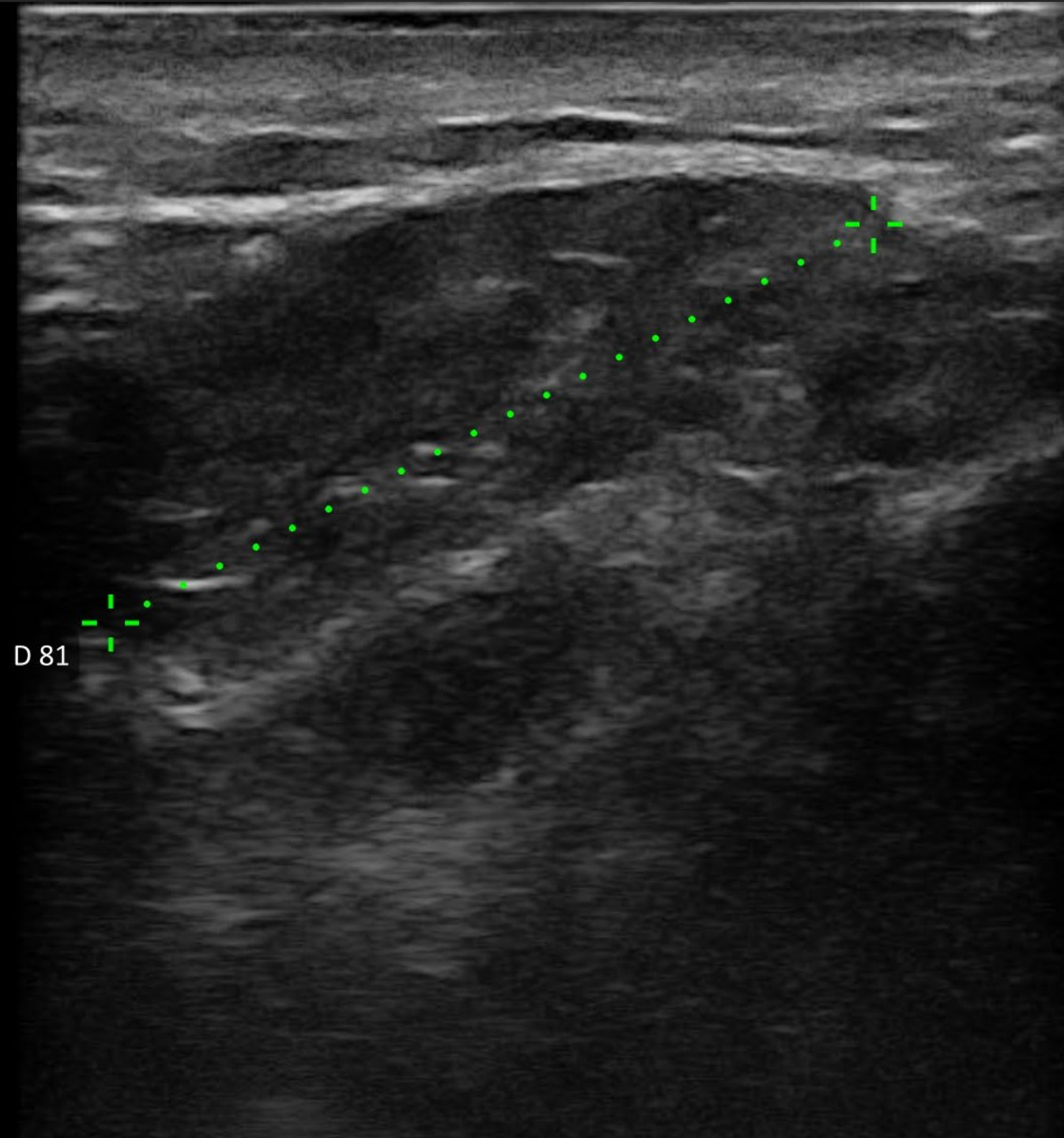


L20HD3032209A0782  
Estética



D 81

20,14 mm



D 81

2,7 cm



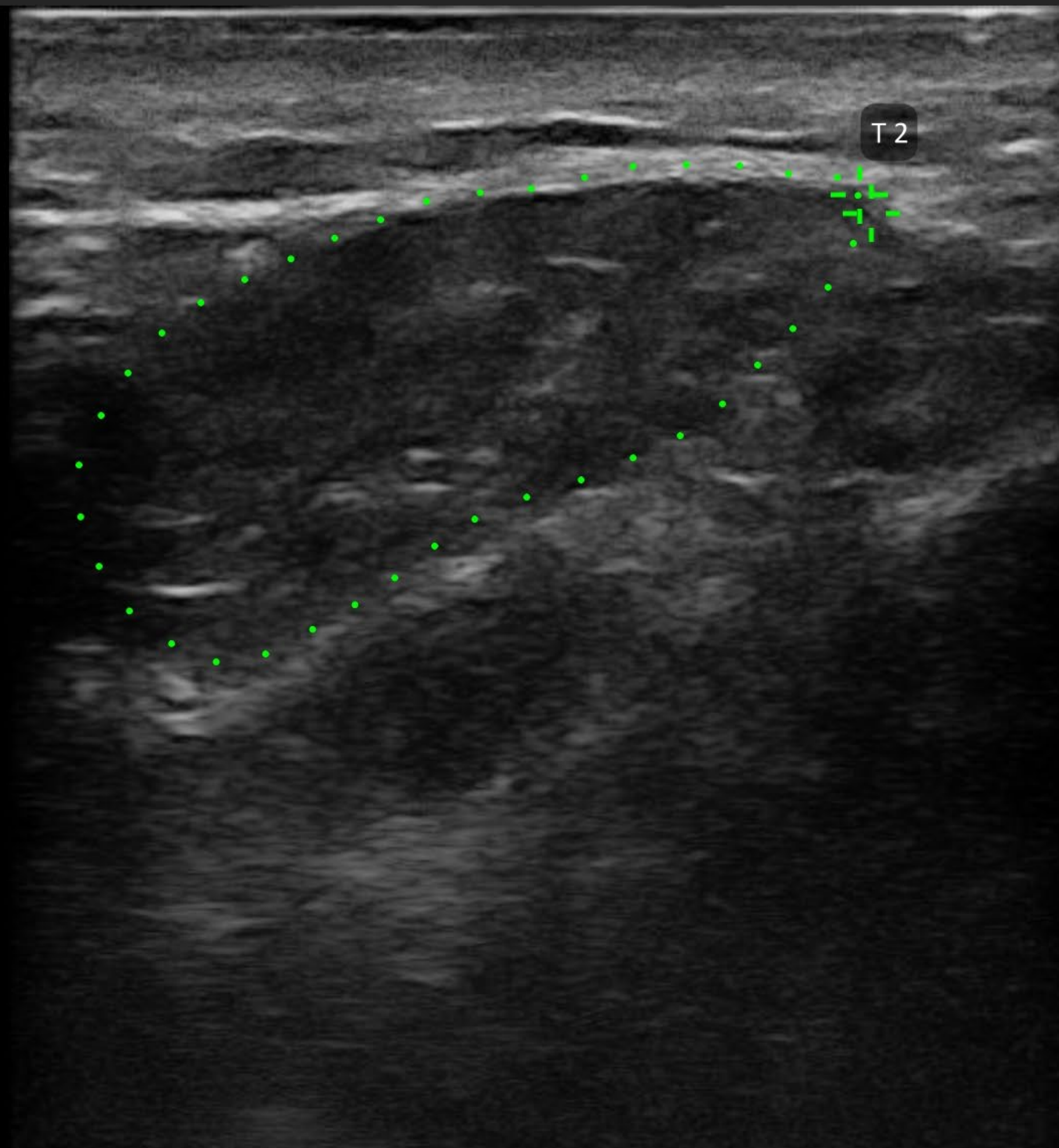




L20HD3032209A0782  
Estética



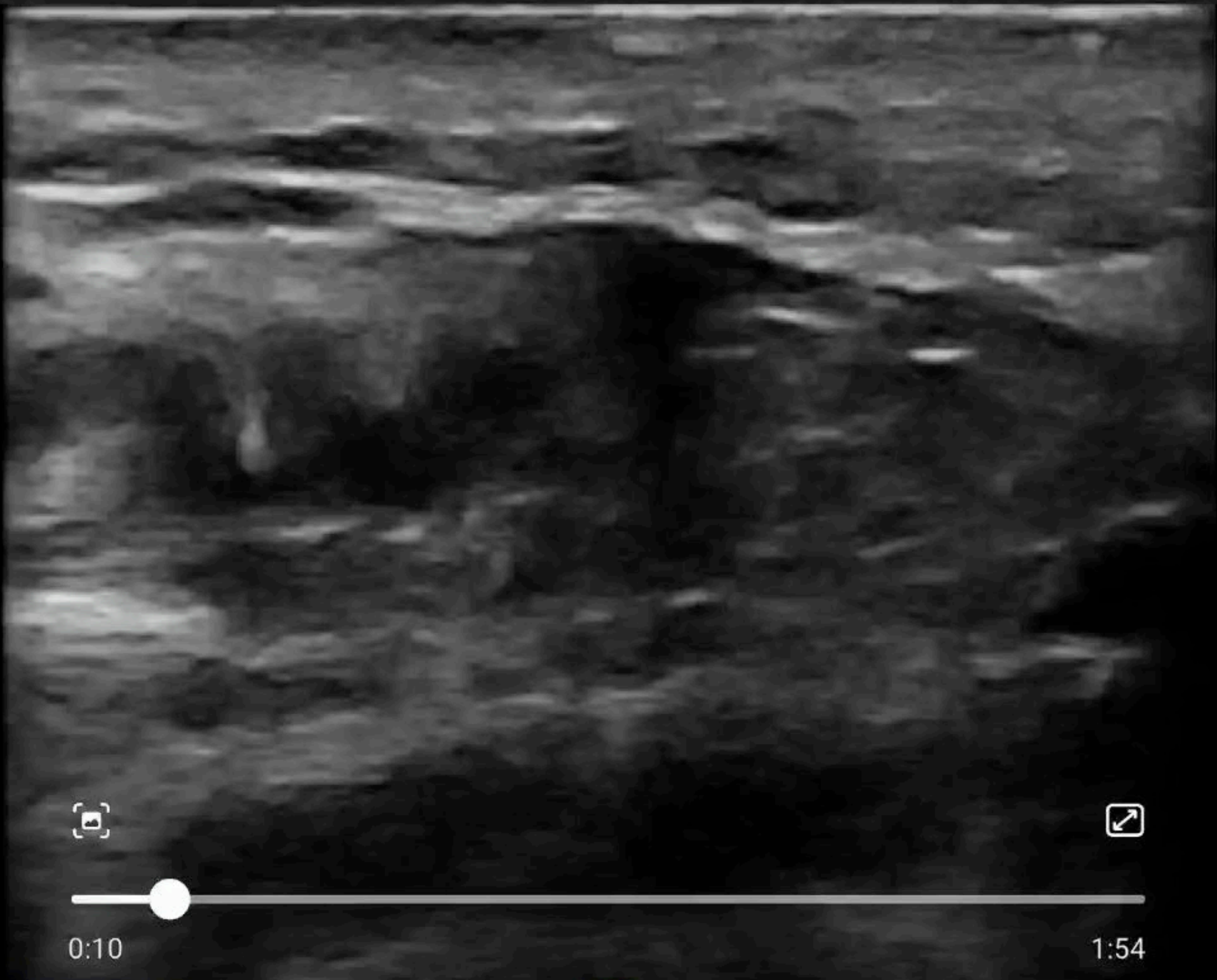
T 2  
Distancia 47,3 mm  
Área 1,21 cm<sup>2</sup>



2,7 cm



GIF



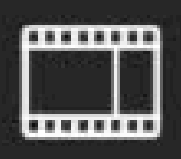
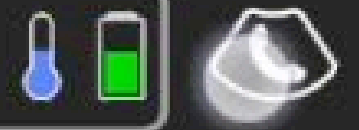
0:10

1:54

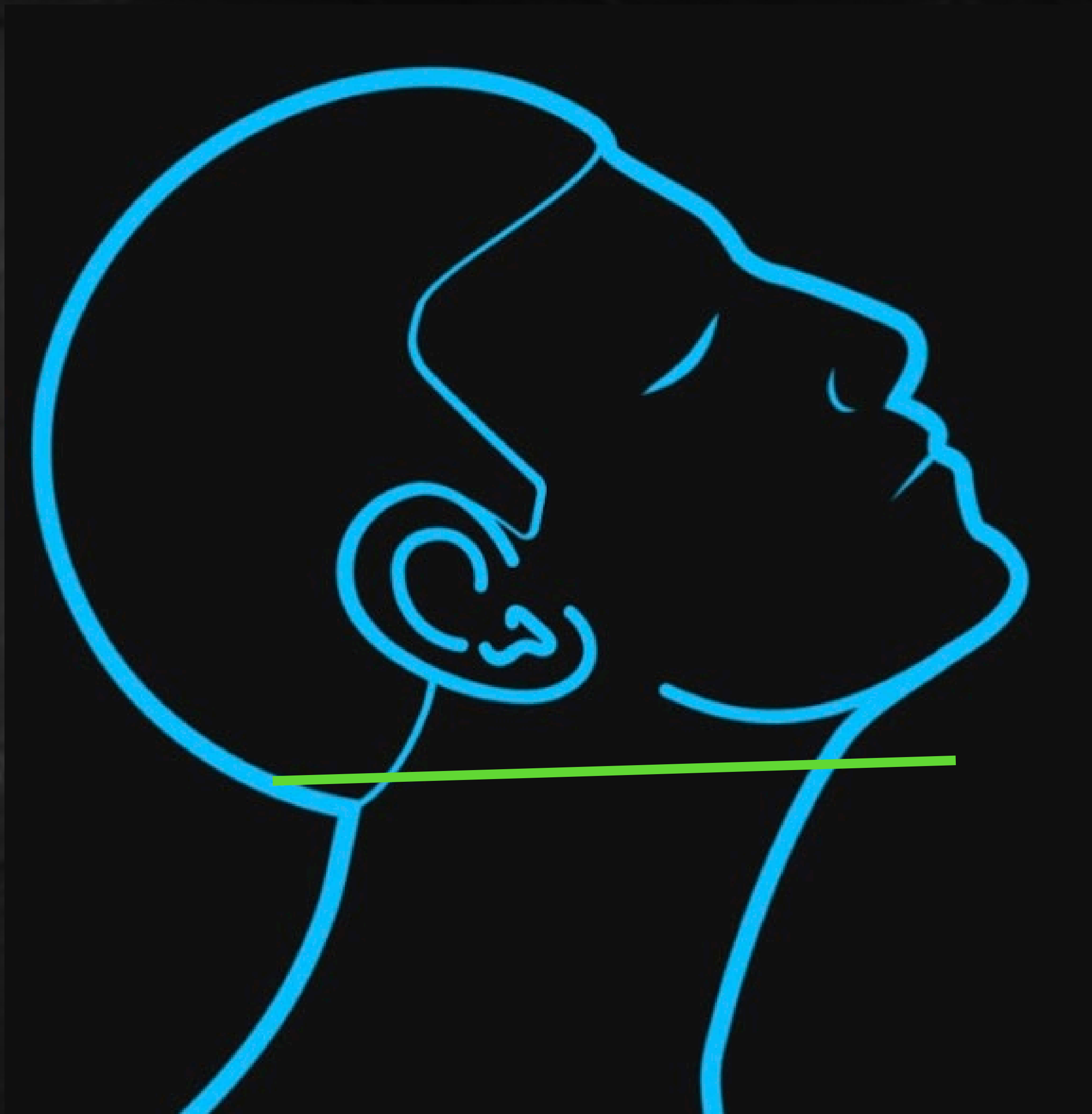


96

L20HD3032209A0782  
Cirugía Plástica



## **2-** Grasa submental





L15\_Dra.Karina Ravera  
Cirugía Plástica



- D 42 0,5555 mm
- D 43 0,3612 mm

0,2 cm

Grasa Preplatismal



D 42



D 43

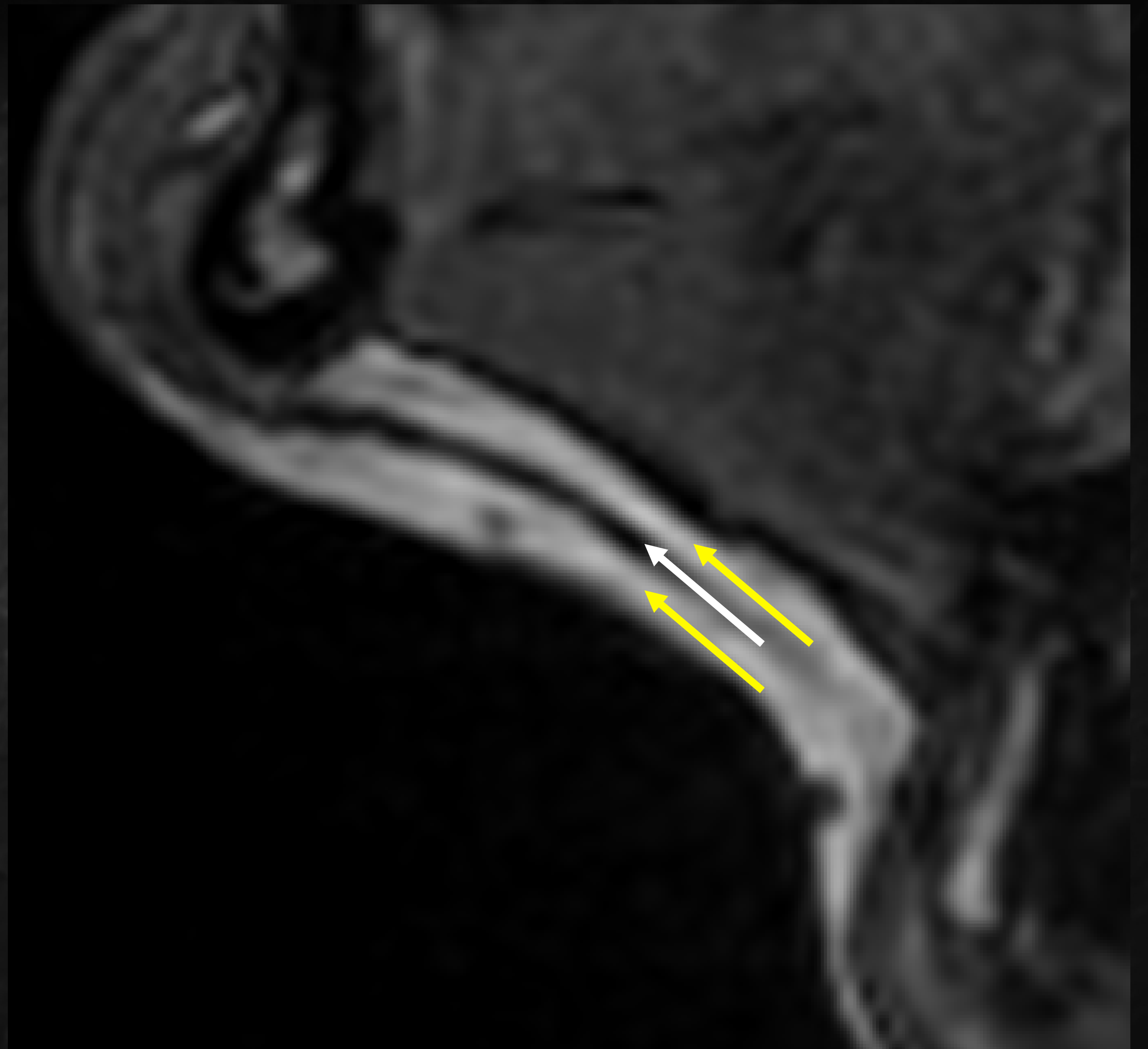
Grasa Retroplatismal

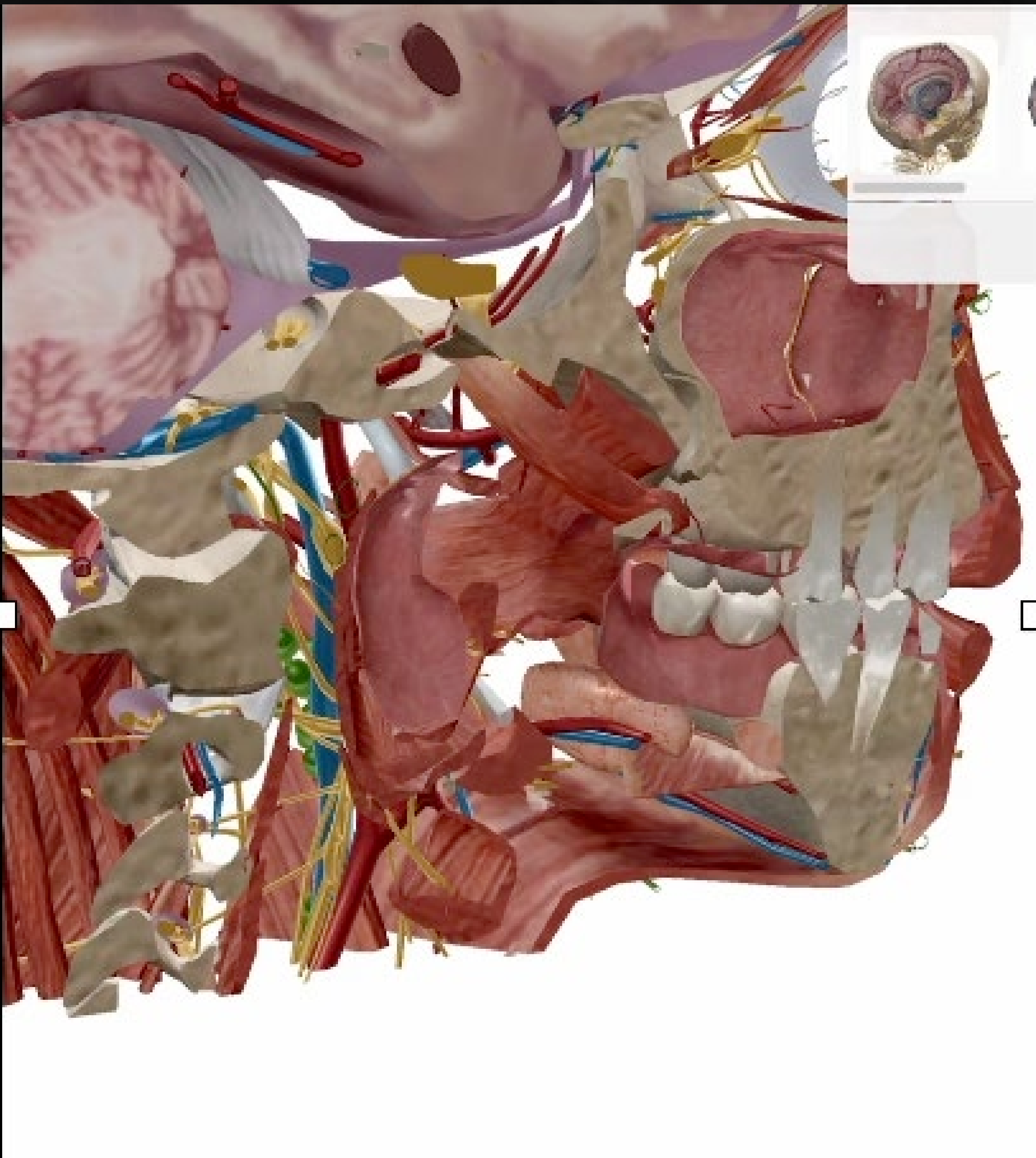


0,7 cm

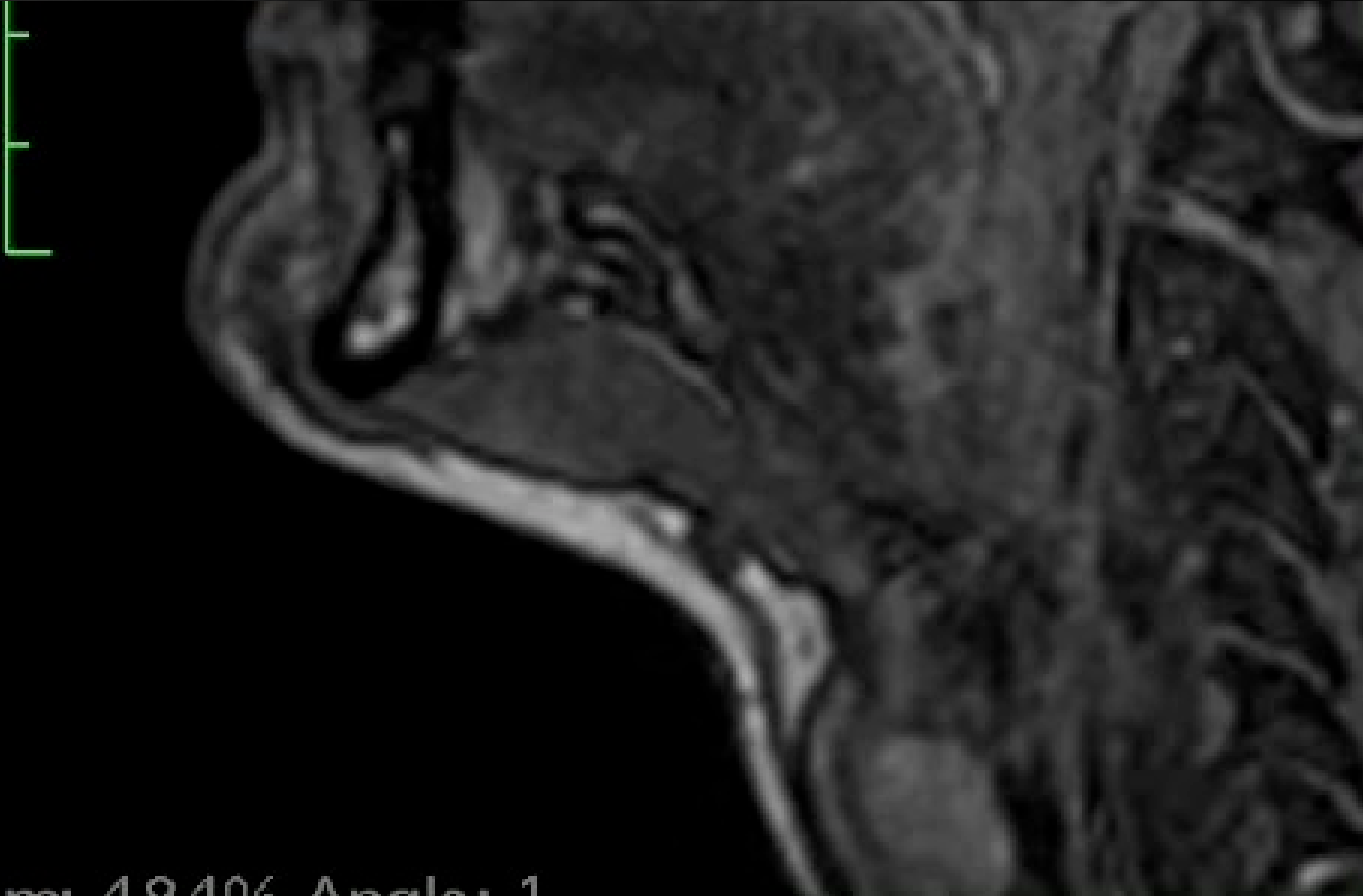


X: 78 px Y: 124 px Value: 1231.00  
X: 12.34 mm Y: -53.83 mm Z: -9.55 mm









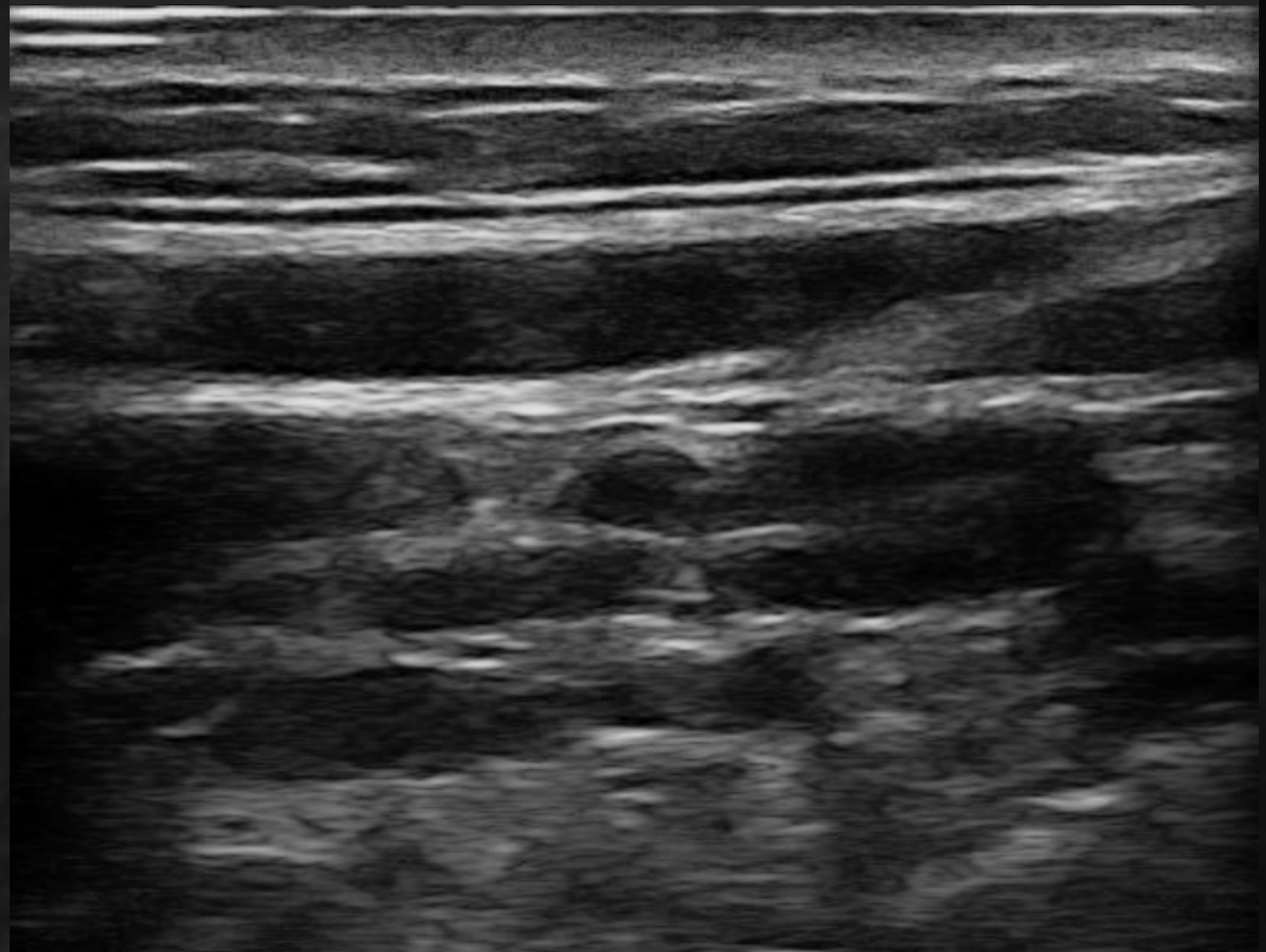
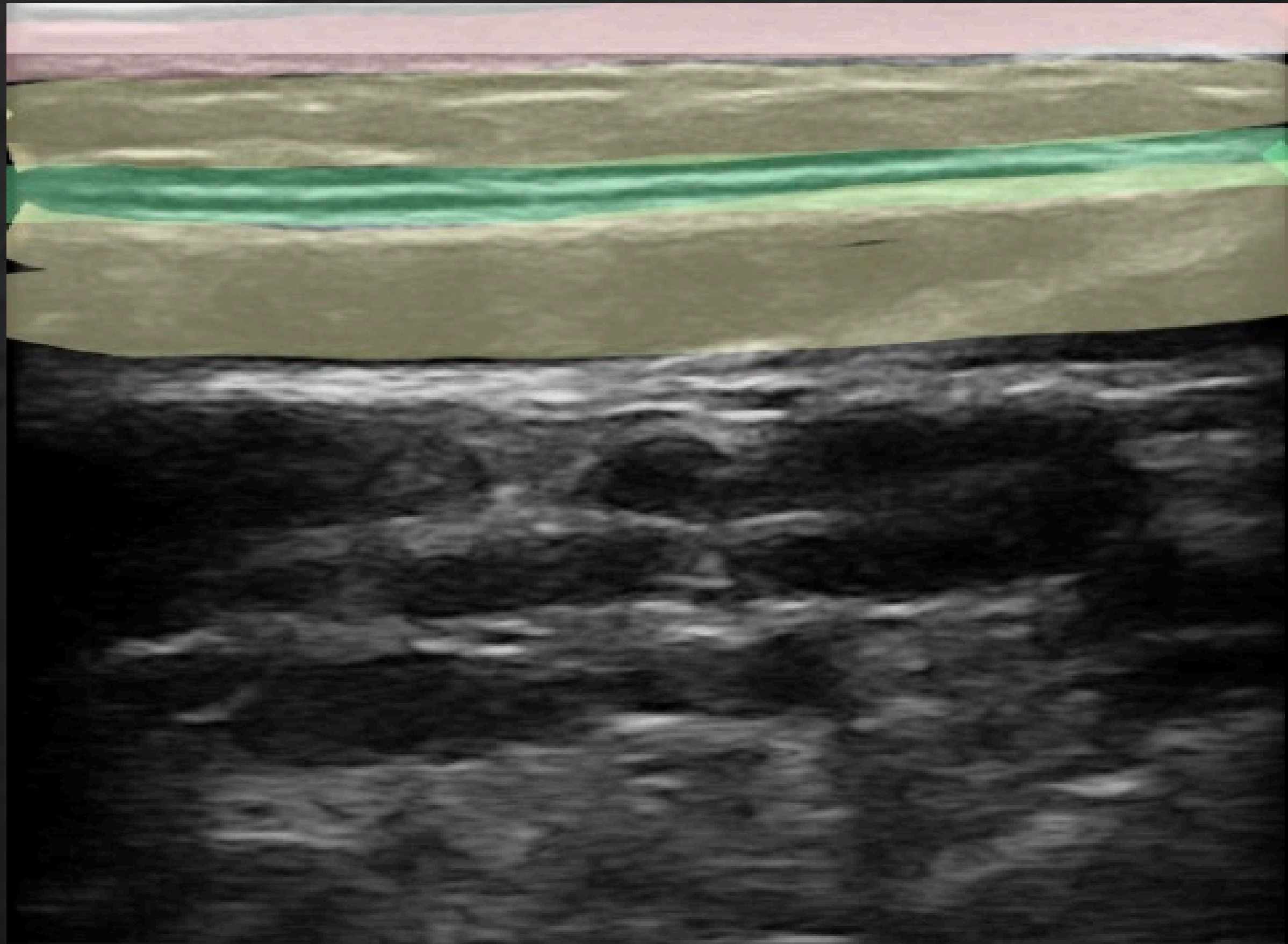
ms: 4040% Angle: 1

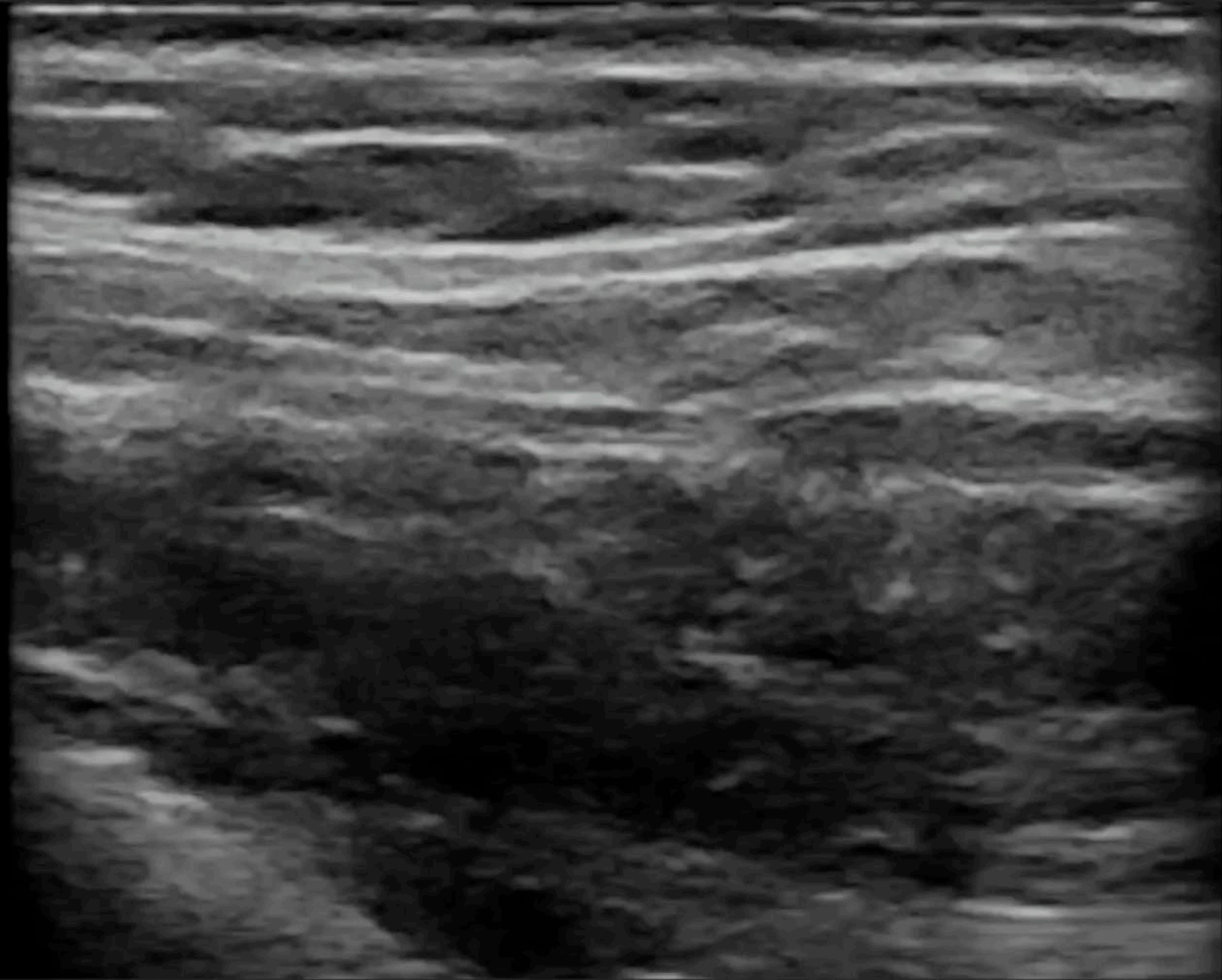
## Lower eyelid blepharoplasty combined with ultrasound-guided percutaneous diode laser lipolysis: evaluating effectiveness with long-term outcome

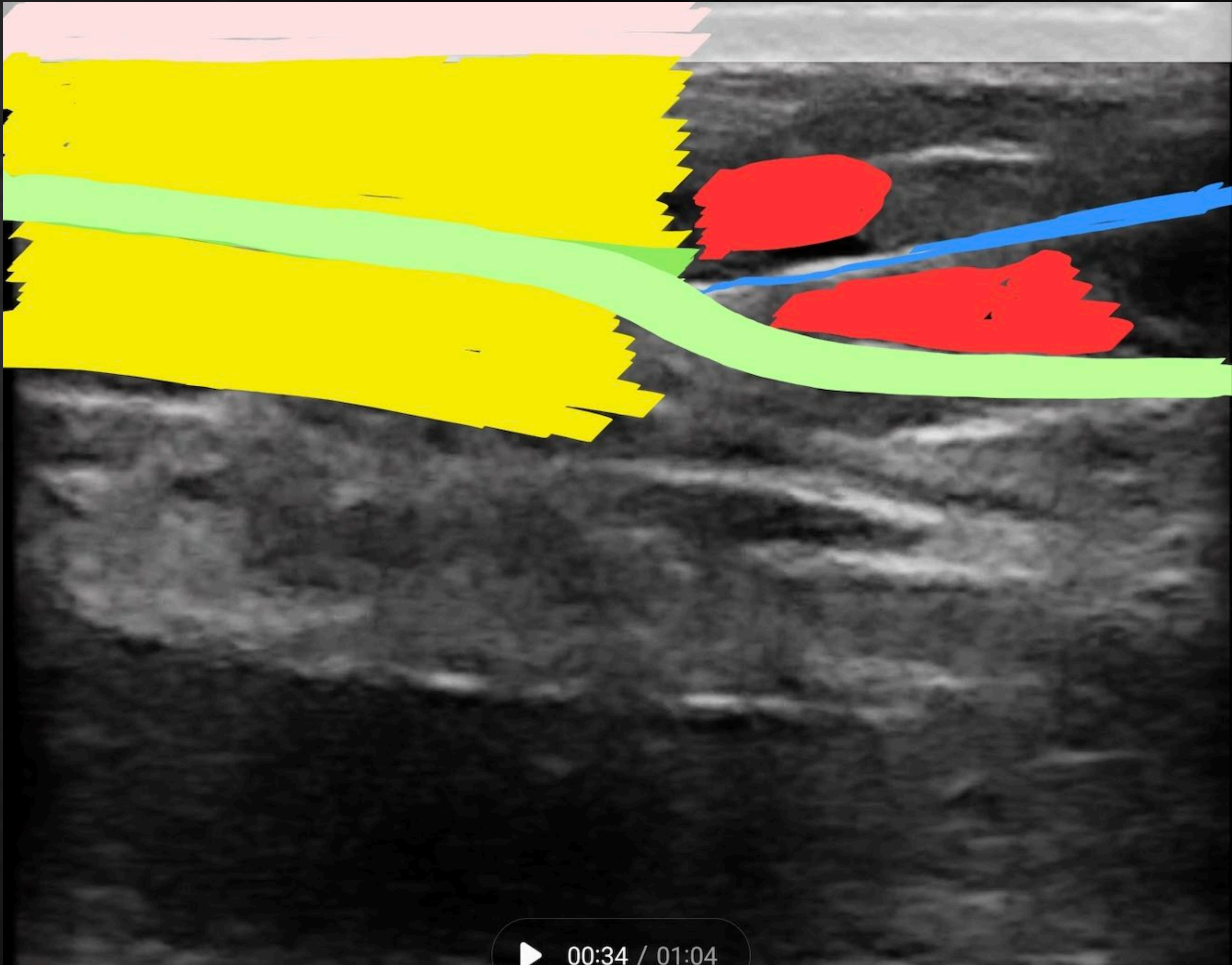
[Dong Yeon Kim](#), [Hye Ju Han](#), [Bo Seong Sohn](#) & [Hyung-Sup Shim](#) 



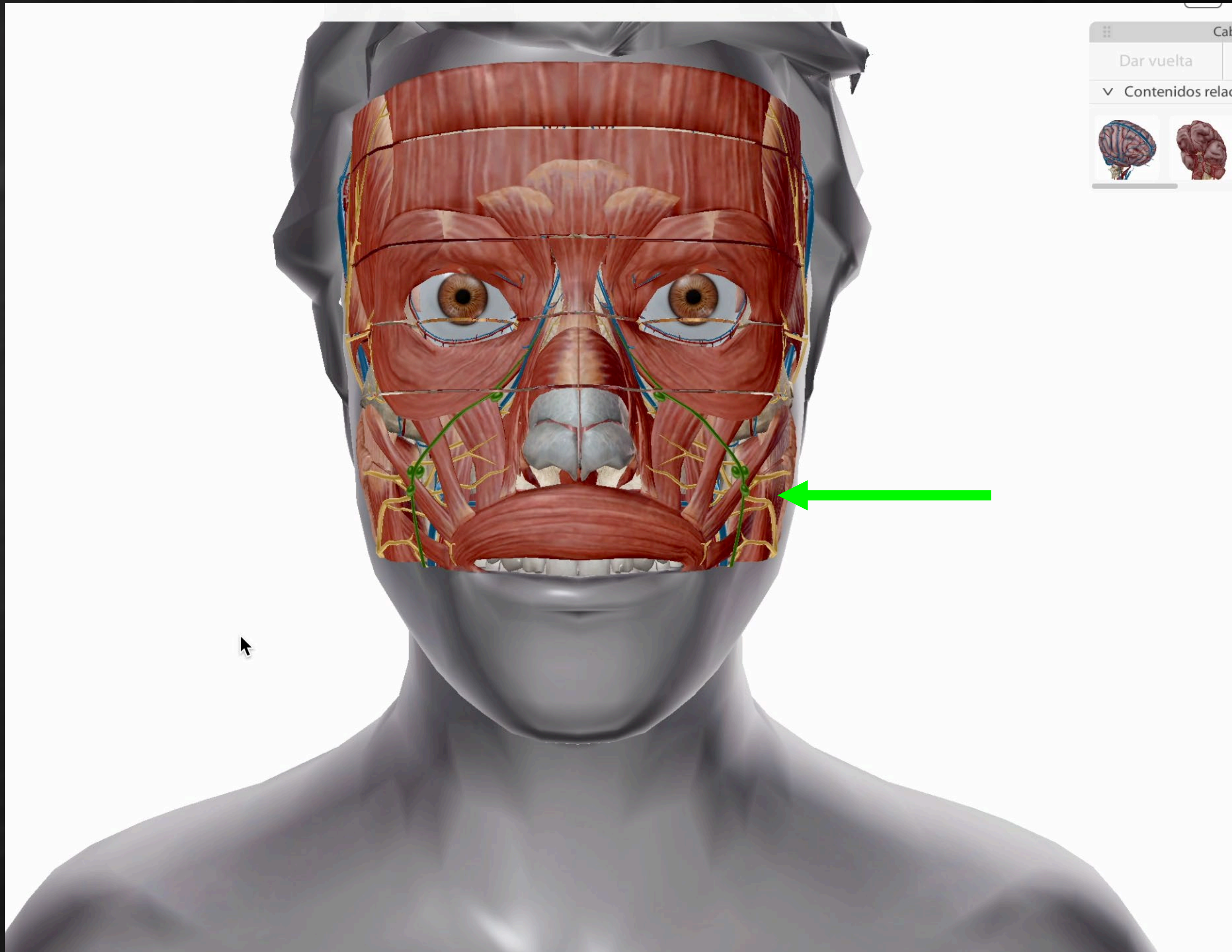
Kim, D.Y., Han, H.J., Sohn, B.S. *et al.* Lower eyelid blepharoplasty combined with ultrasound-guided percutaneous diode laser lipolysis: evaluating effectiveness with long-term outcome. *Lasers Med Sci* **38**, 78 (2023). <https://doi.org/10.1007/s10103-023-03739-9>

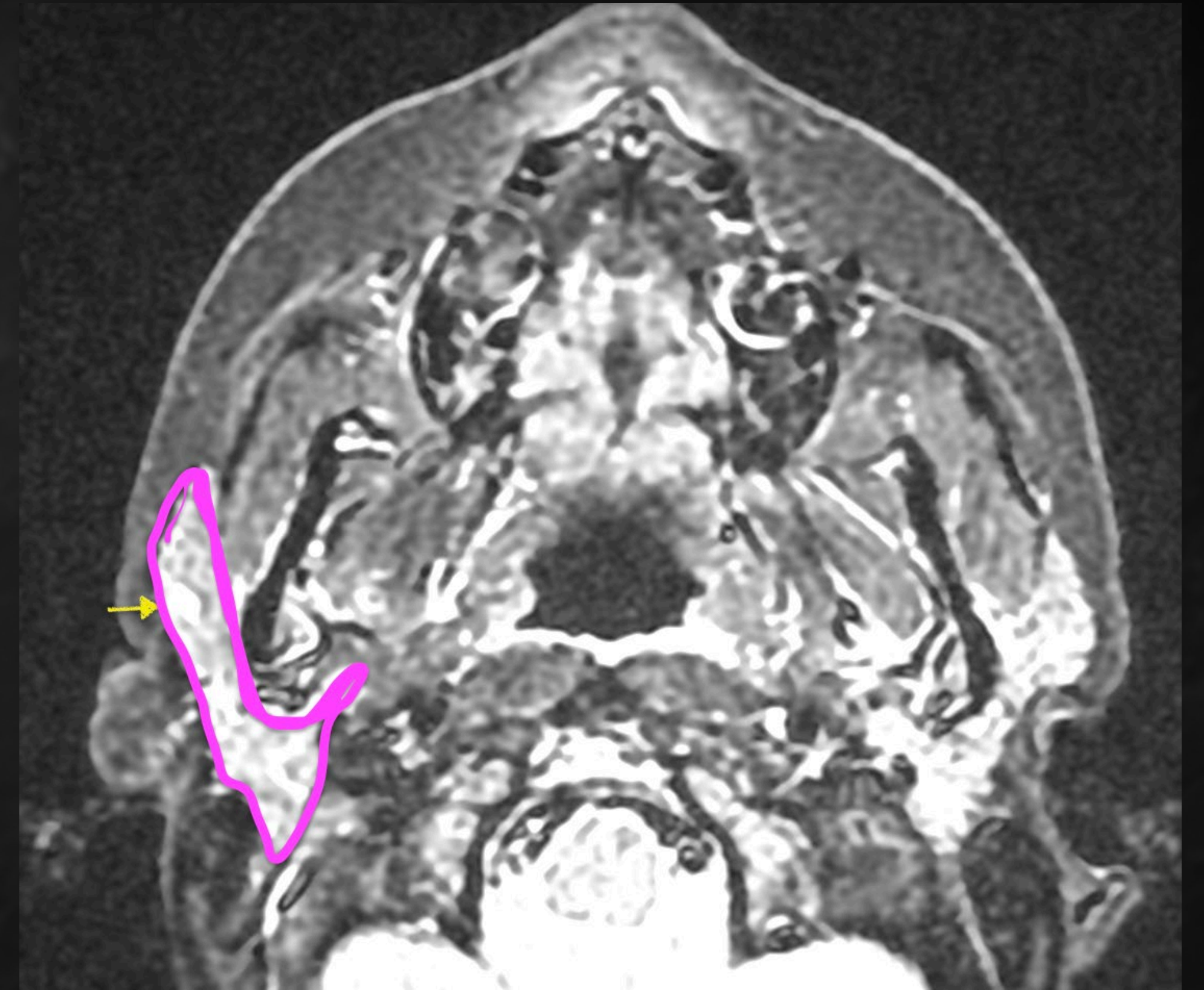
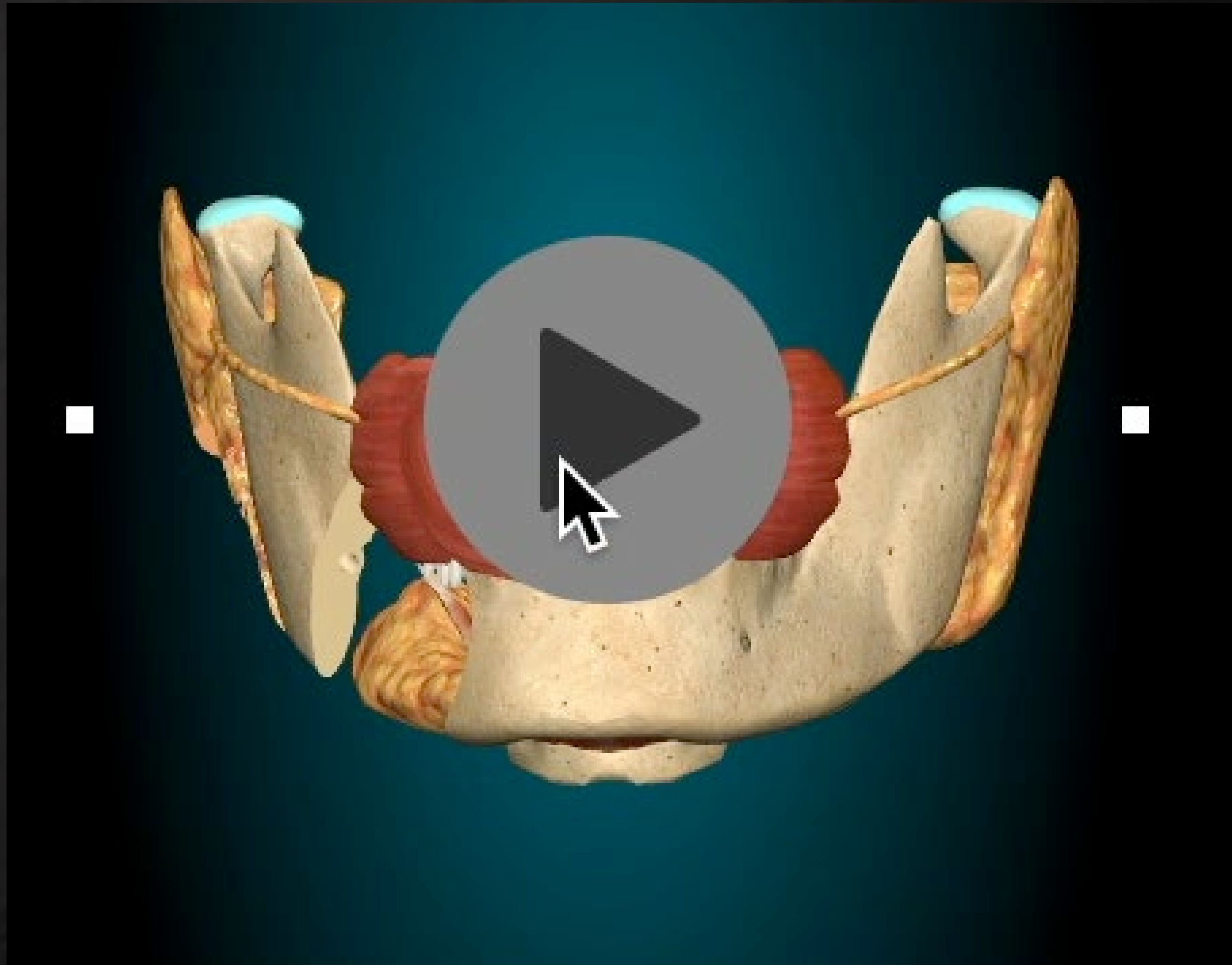




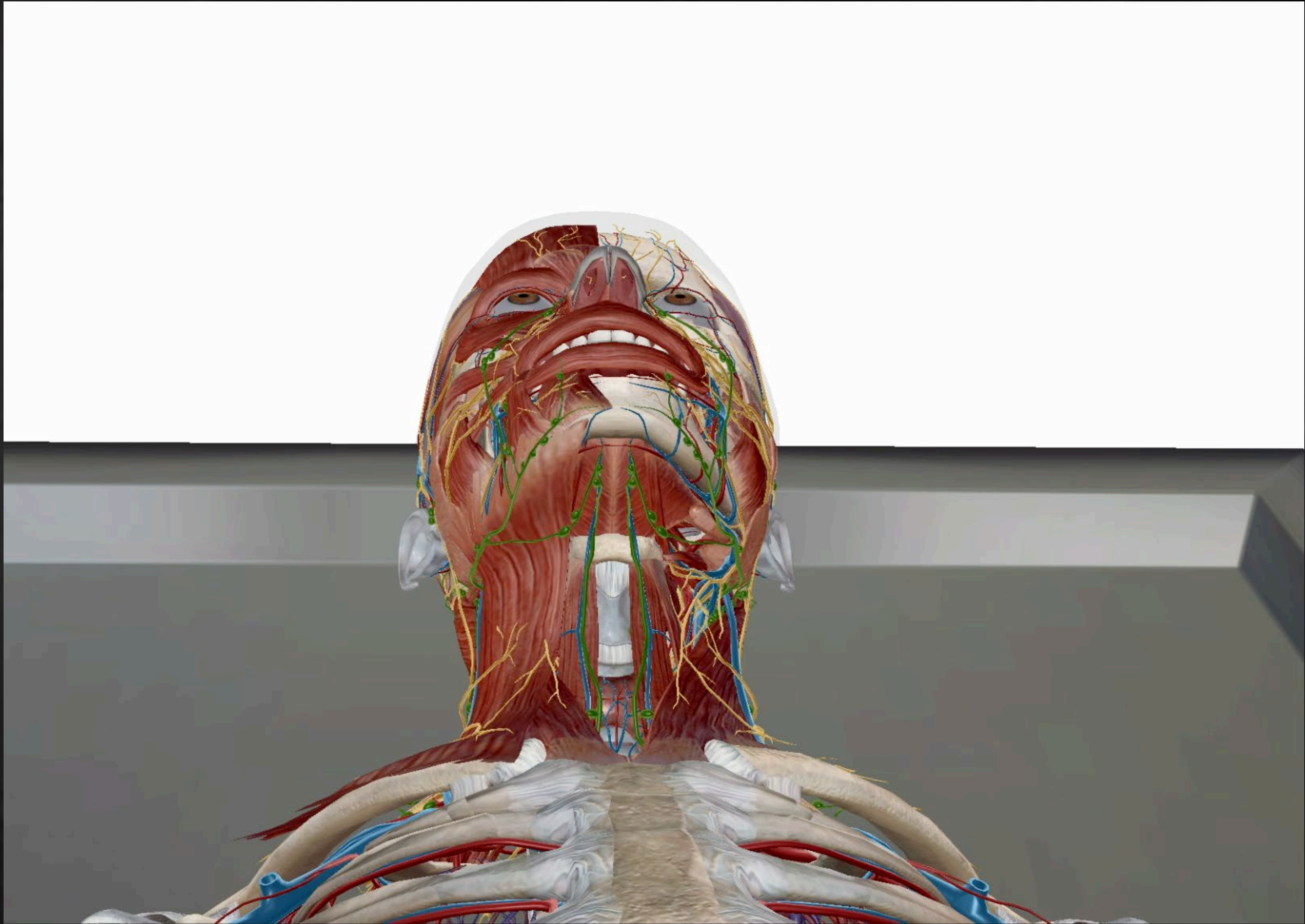


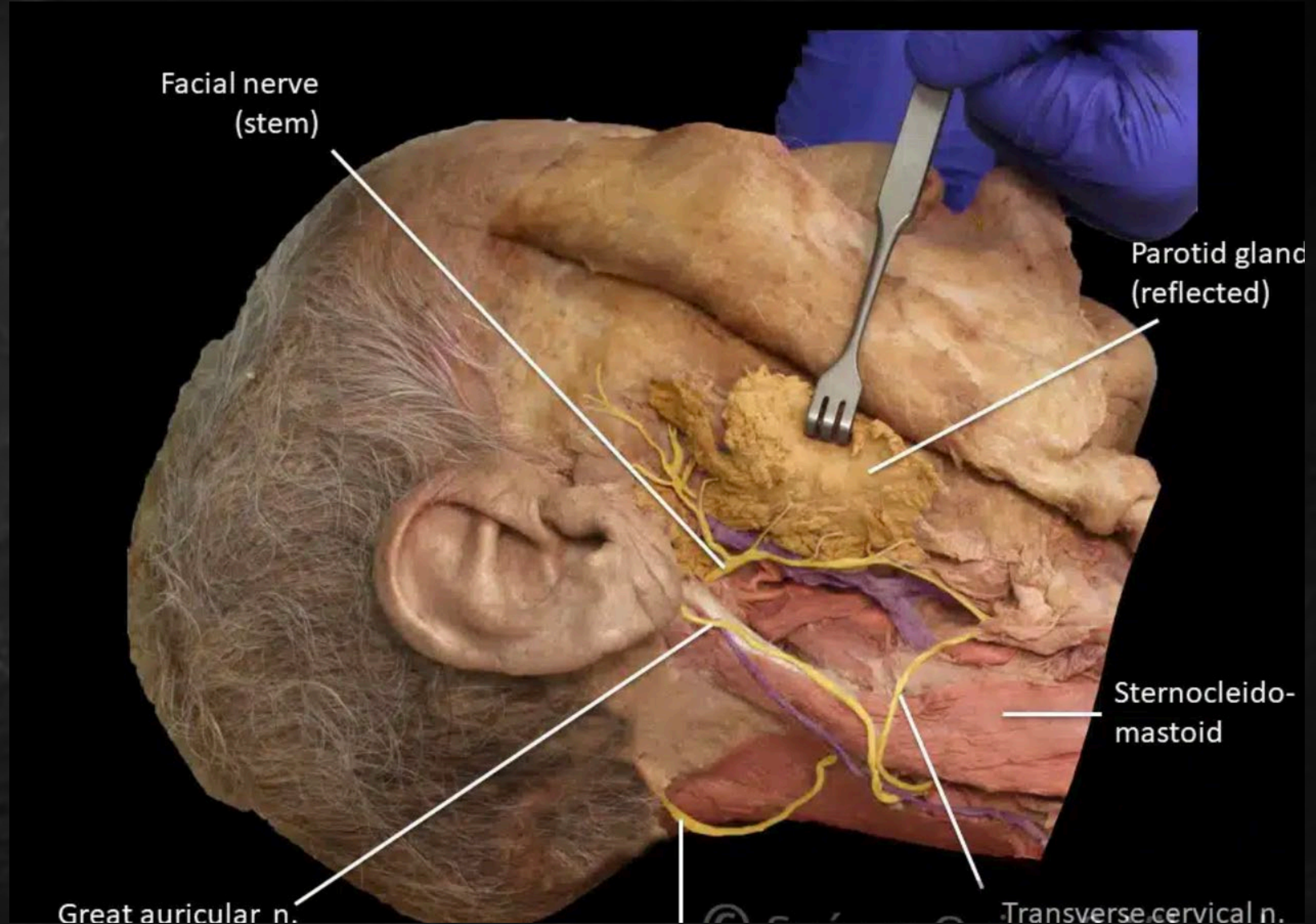
## **3-** Glándula Parótida











# The Volumetric effect of Botulinum Toxin Type A Injection on Parotid Gland: A Prospective Randomized Controlled Trial

Woo Shik Jeong<sup>1</sup>, Dae Won Hong<sup>1</sup>, Tae Joo Ahn<sup>2</sup>, Hyun Ho Han<sup>1</sup>

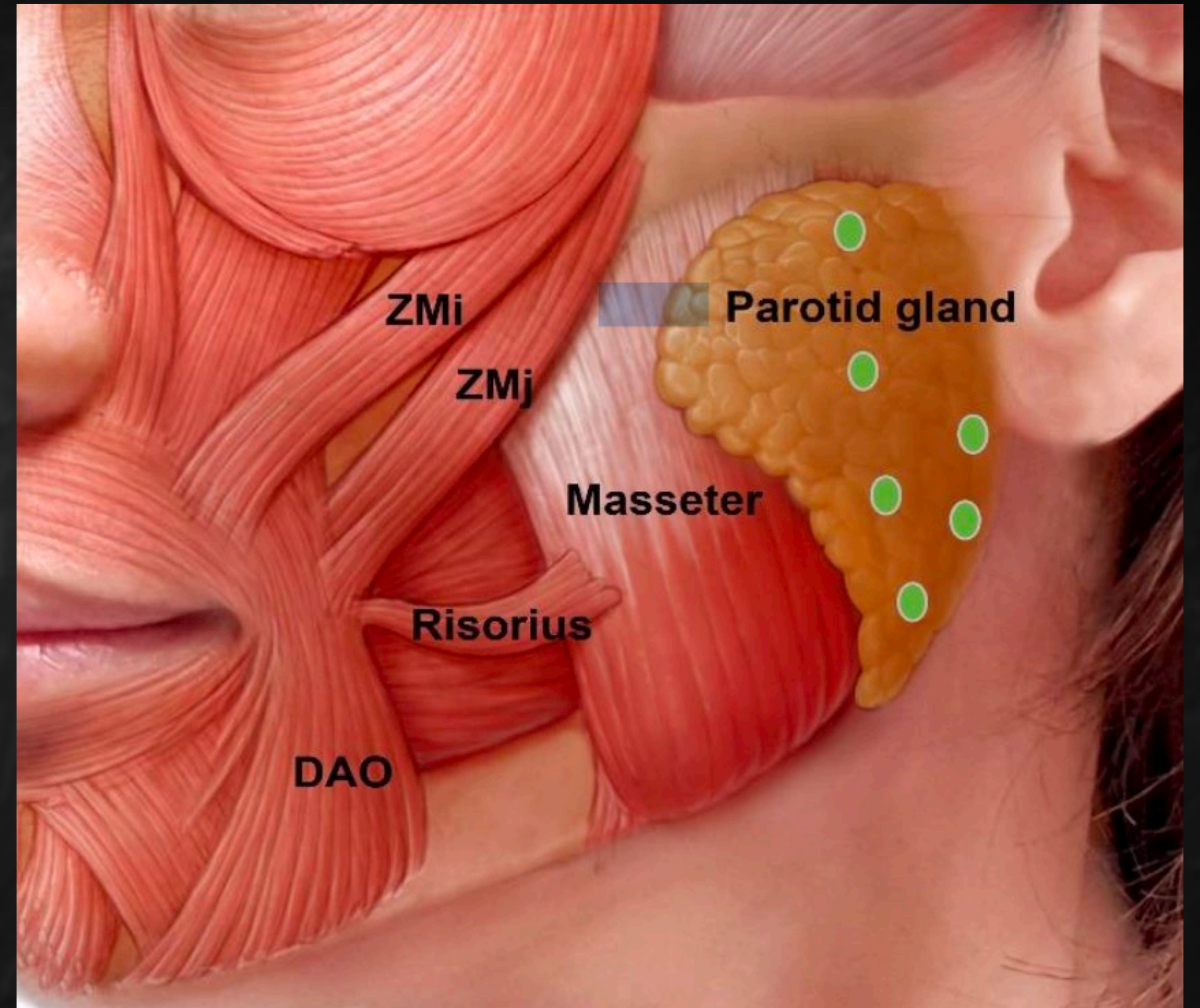
**Results:** A total of thirty patients were enrolled in this study. Ten patients in the high-dose, eight in the low-dose group, and nine in the control group completed the clinical trial. There were significant changes in each high and low dose groups compared to the control group ( $p < 0.001$ ,  $p < 0.001$ ), and in interaction of time and group ( $p < 0.001$ ). The volume recovery after three months was found with 7.6% in the high-dose group and 4.8% in the low-dose group.

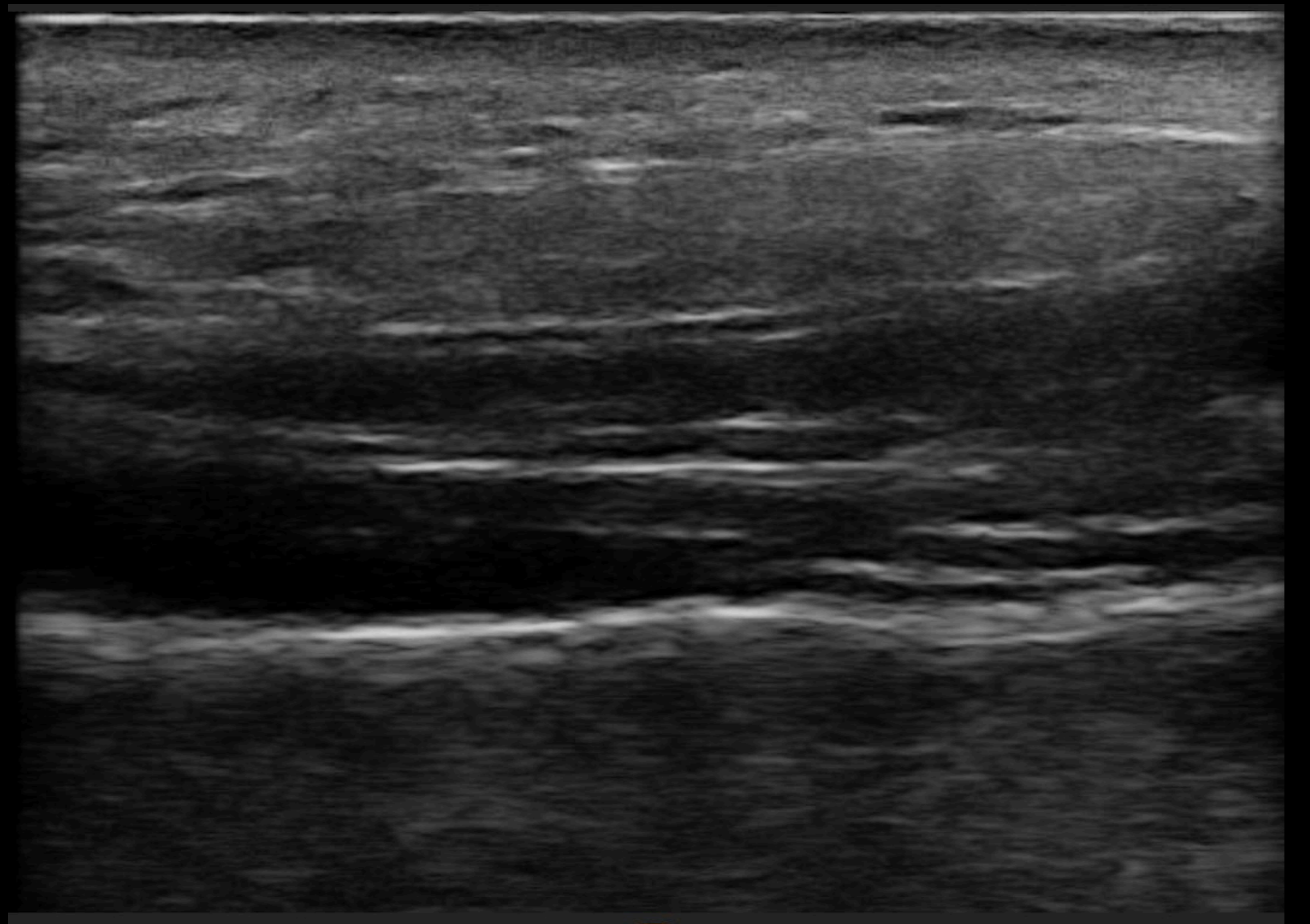
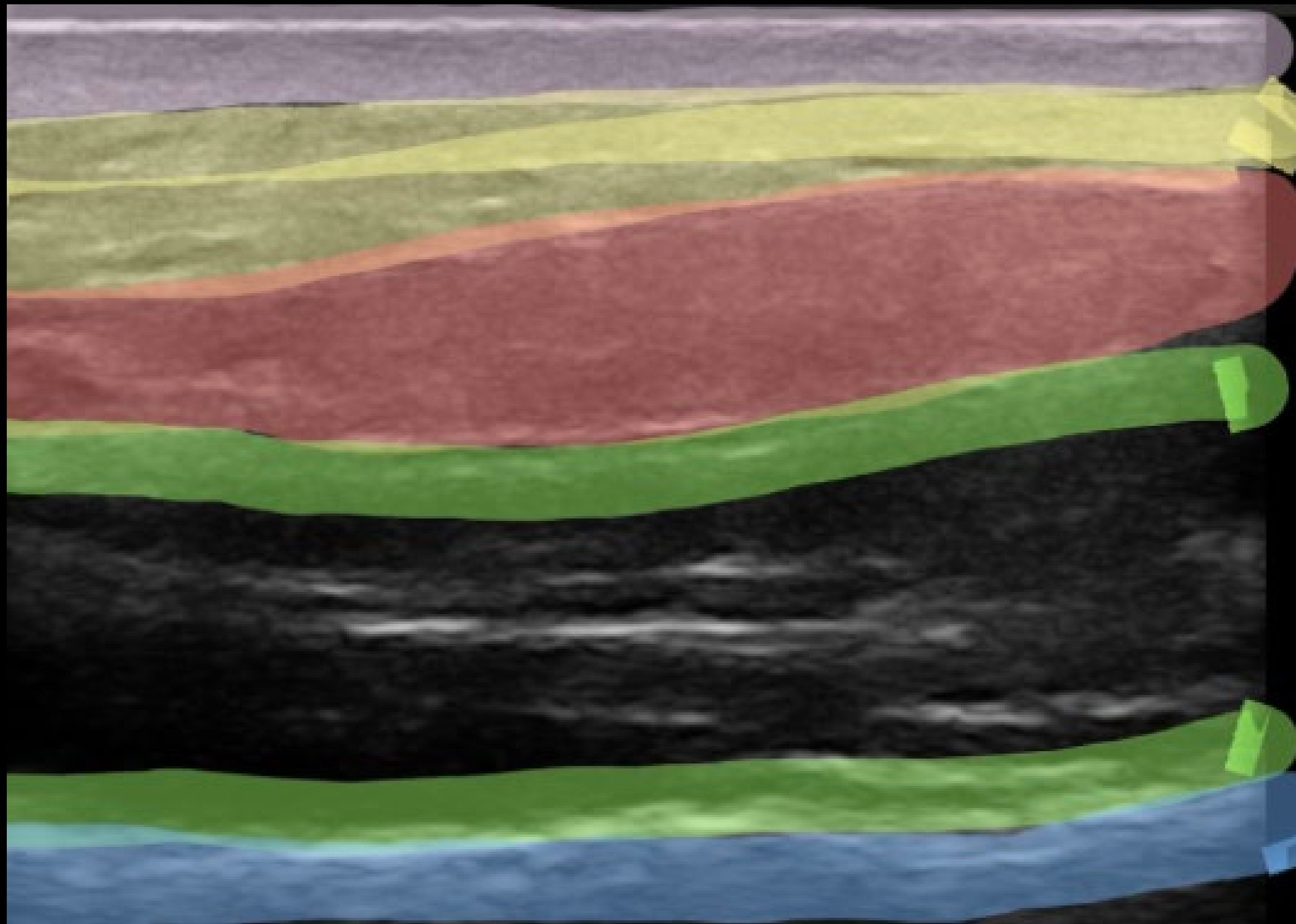
**Conclusion:** BTX-A injection into parotid glands can be an effective treatment option in managing salivary gland enlargement for lower face contouring.

Review

# Cosmetic Treatment Using Botulinum Toxin in the Oral and Maxillofacial Area: A Narrative Review of Esthetic Techniques

Sung Ok Hong

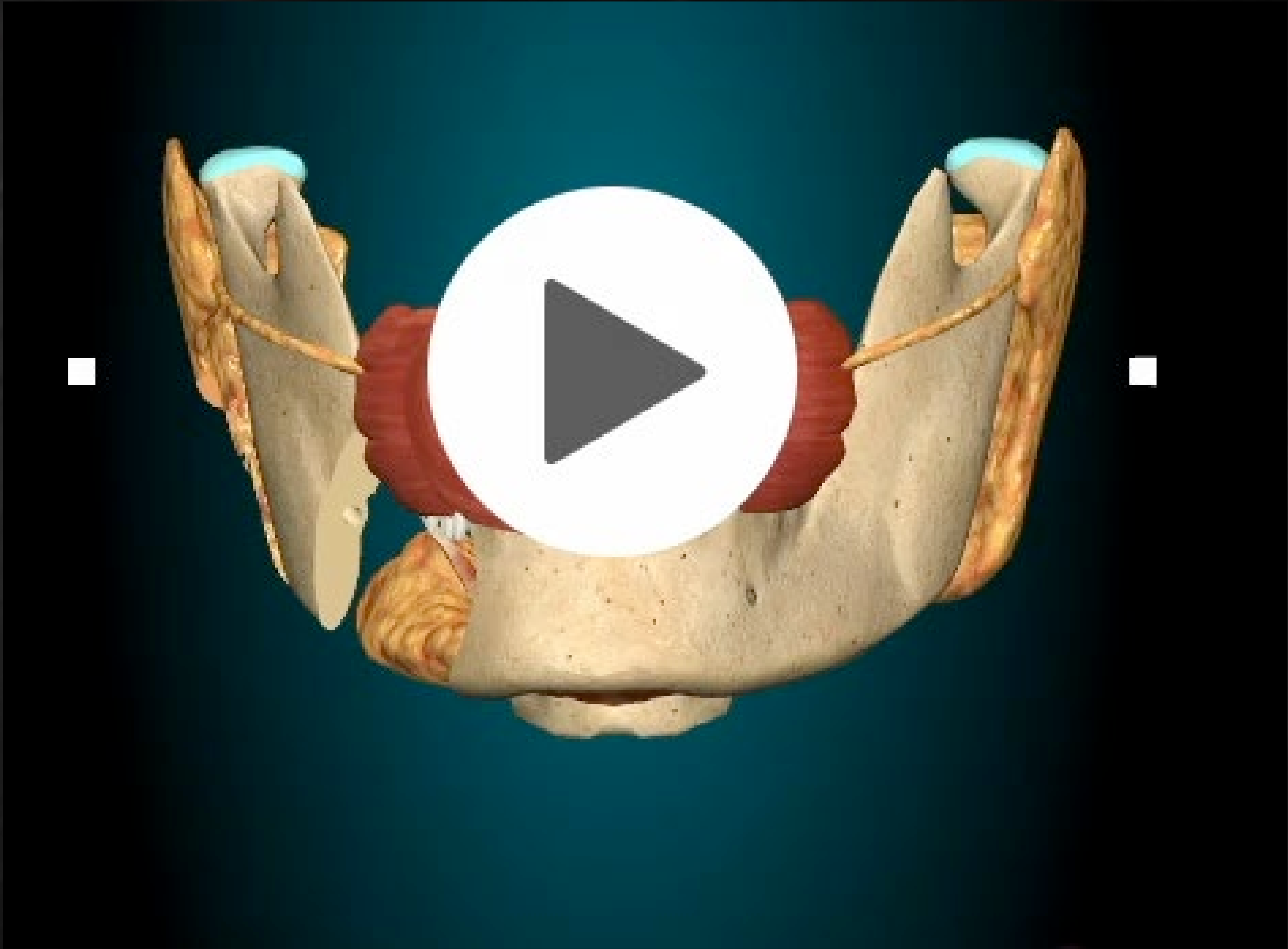




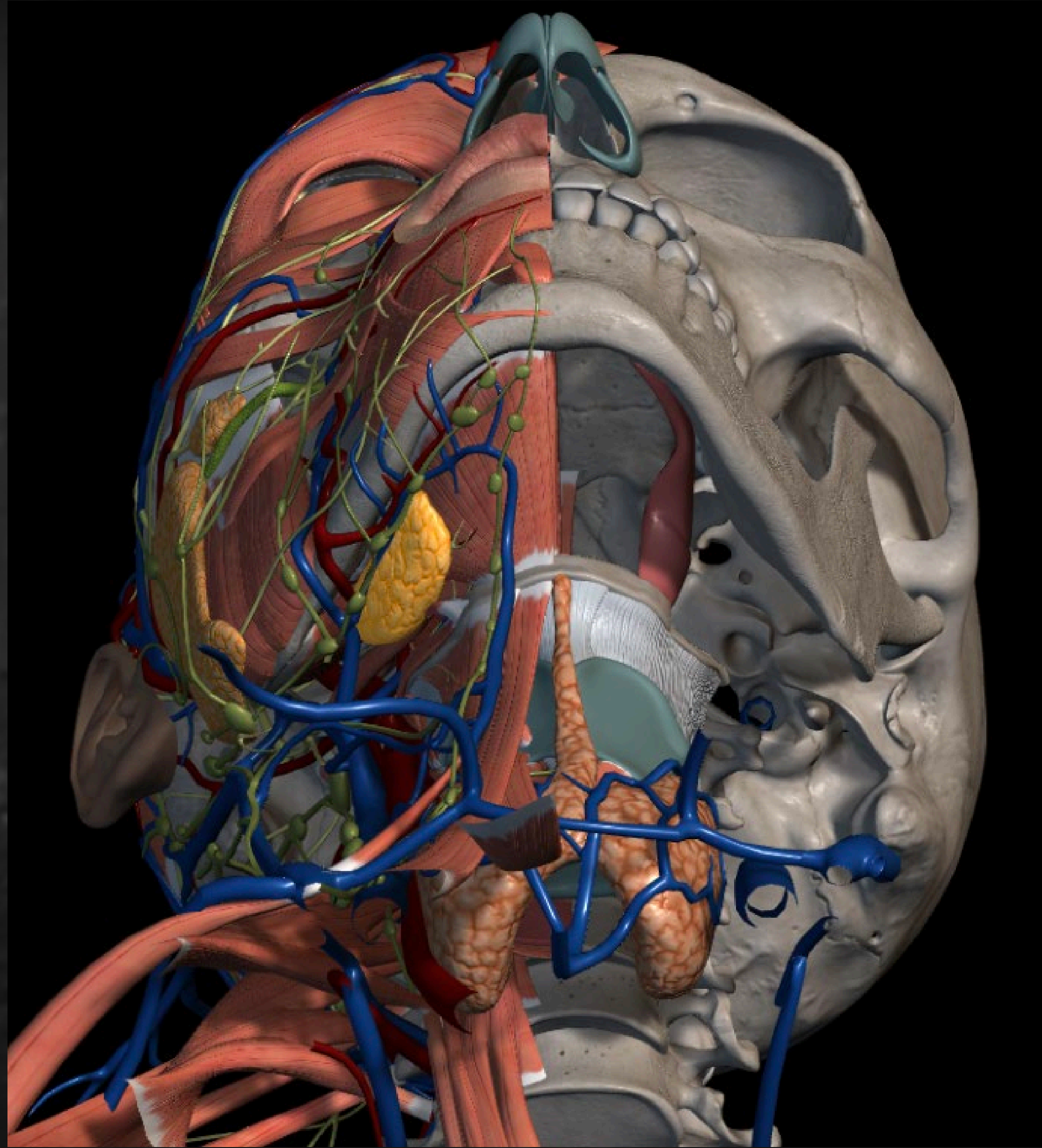


 **clarius** **Ultrasound**

## **4-** Glándula Submaxilares o Submandibulares

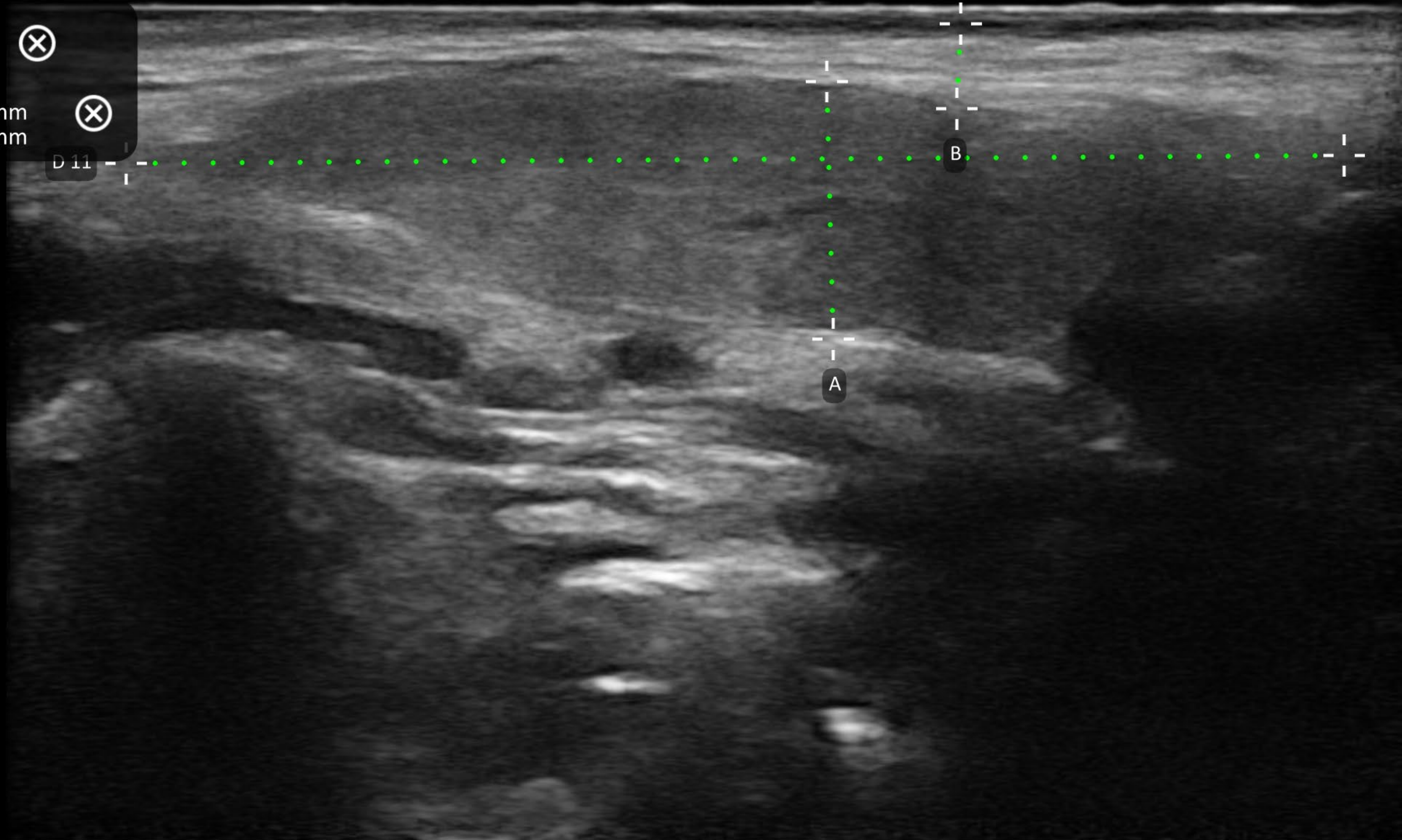






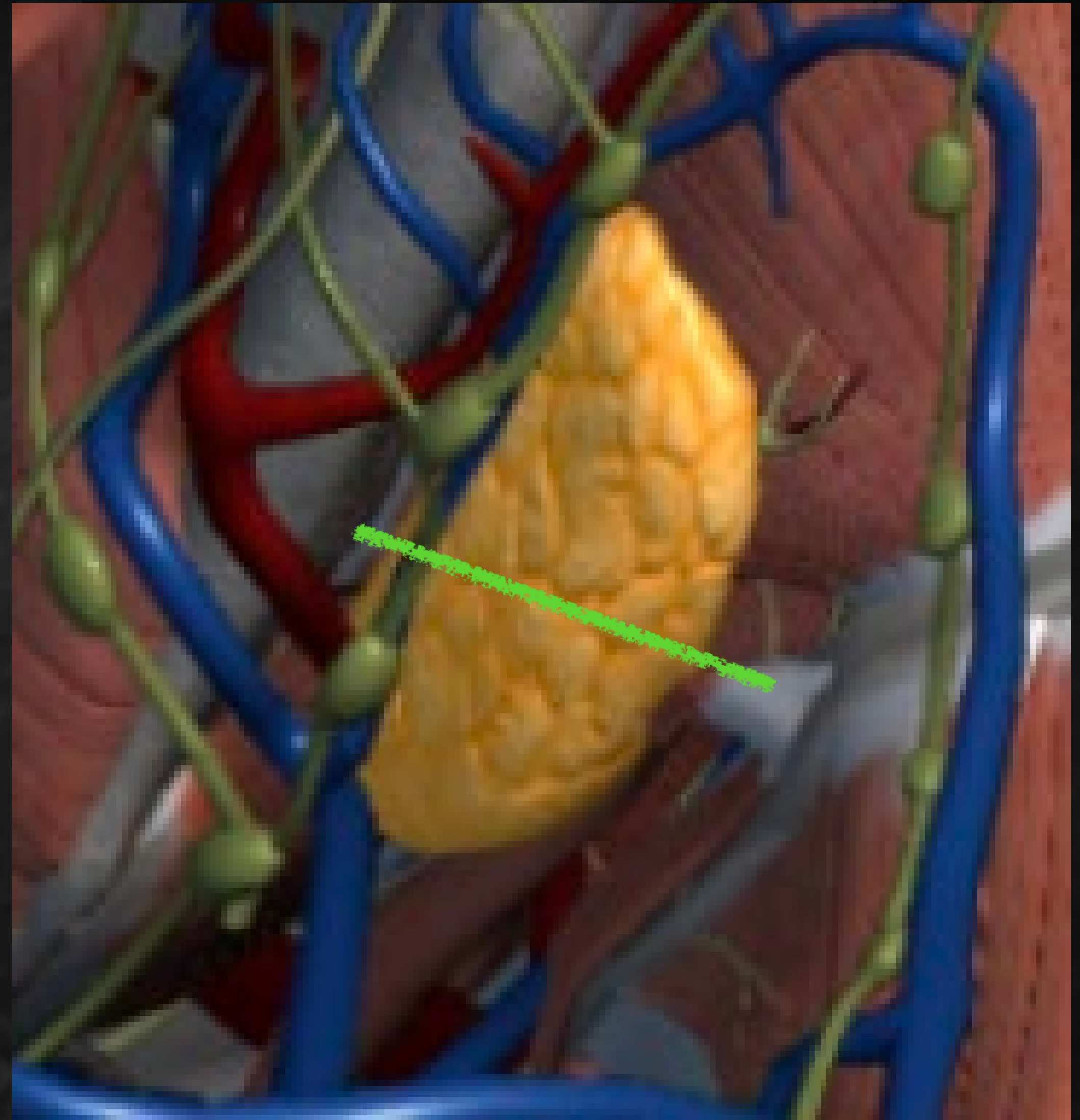
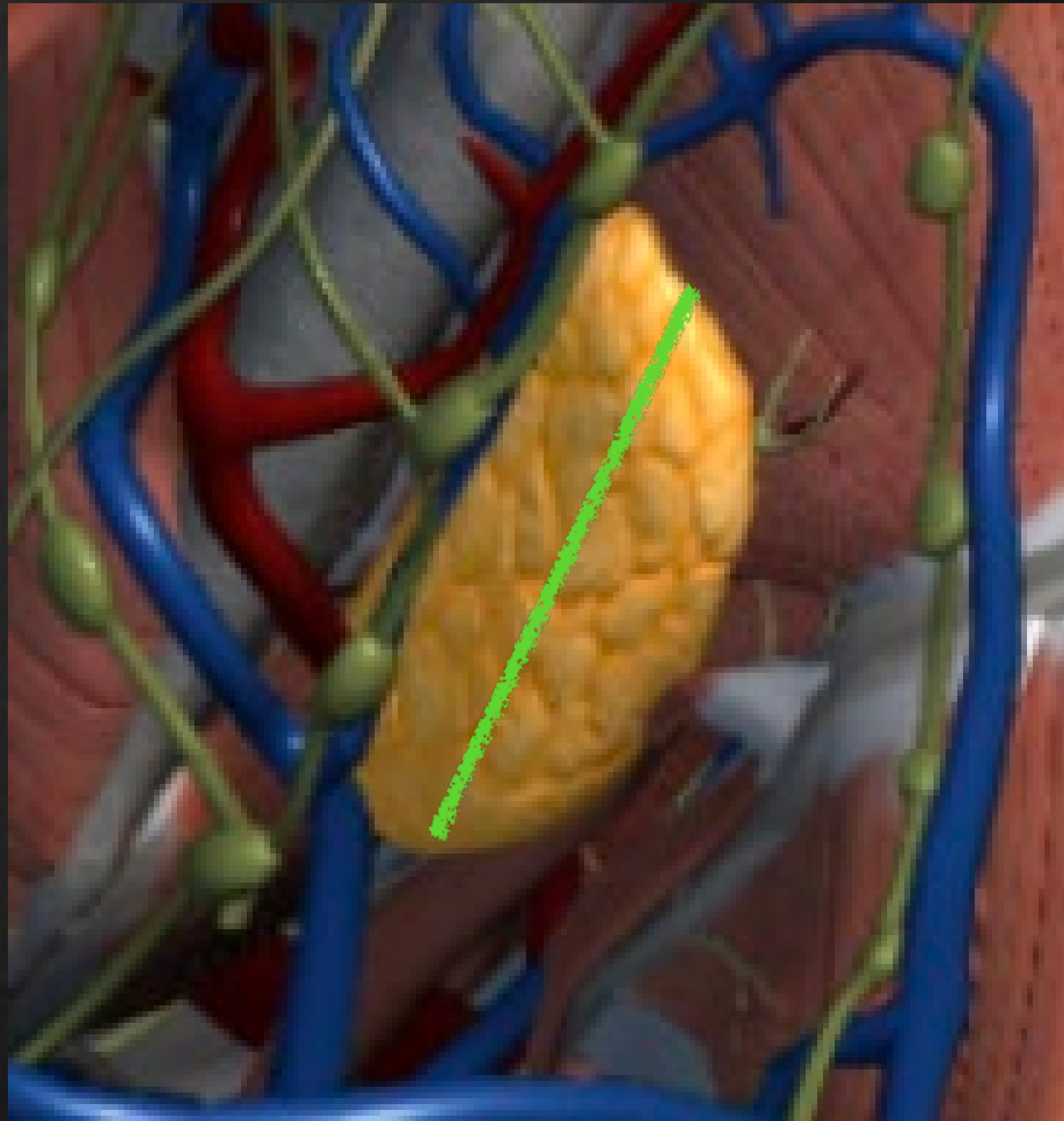
D 11 43,3 mm ✕  
D 12 -- ✕  
A 9,154 mm ✕  
B 3,019 mm ✕

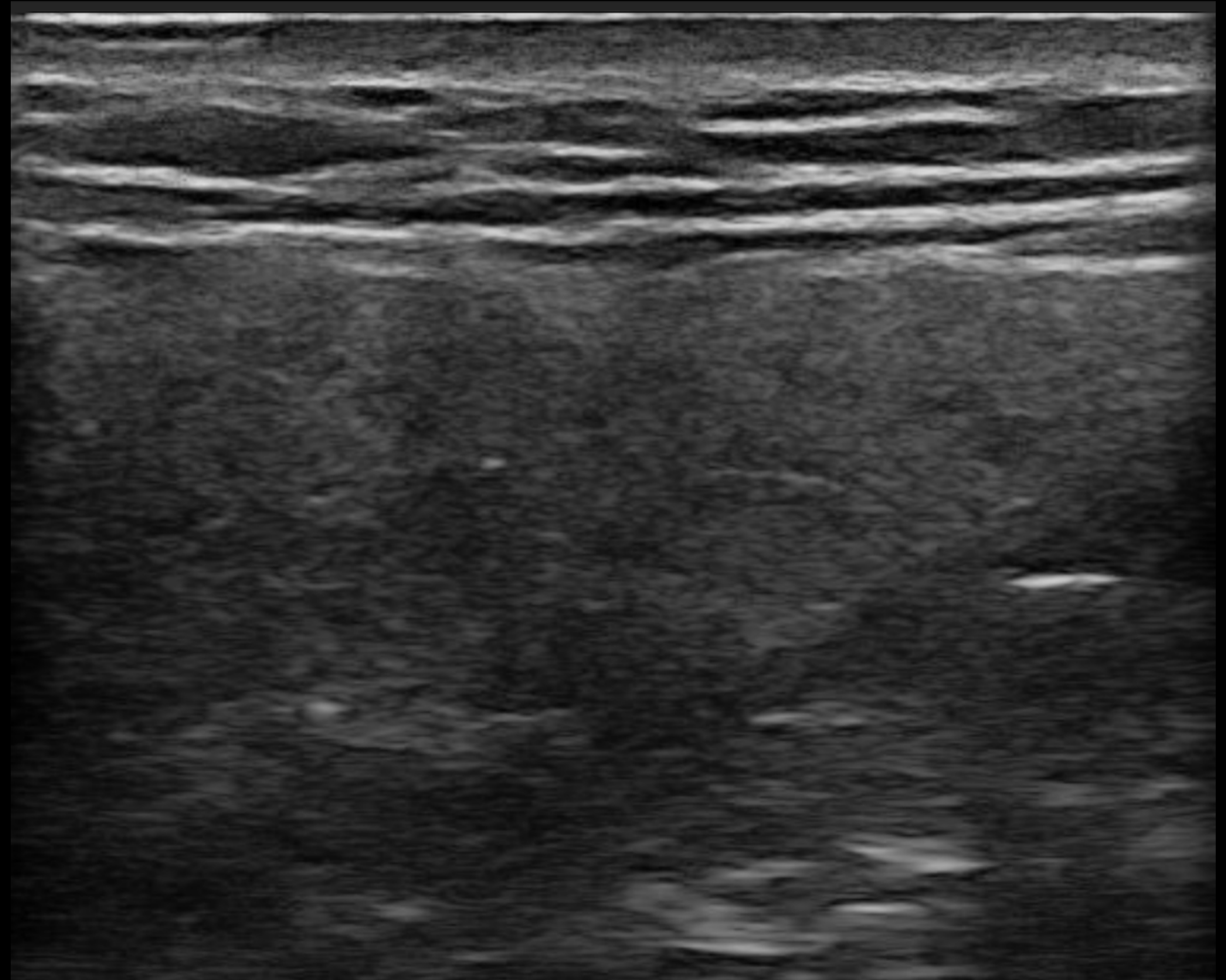
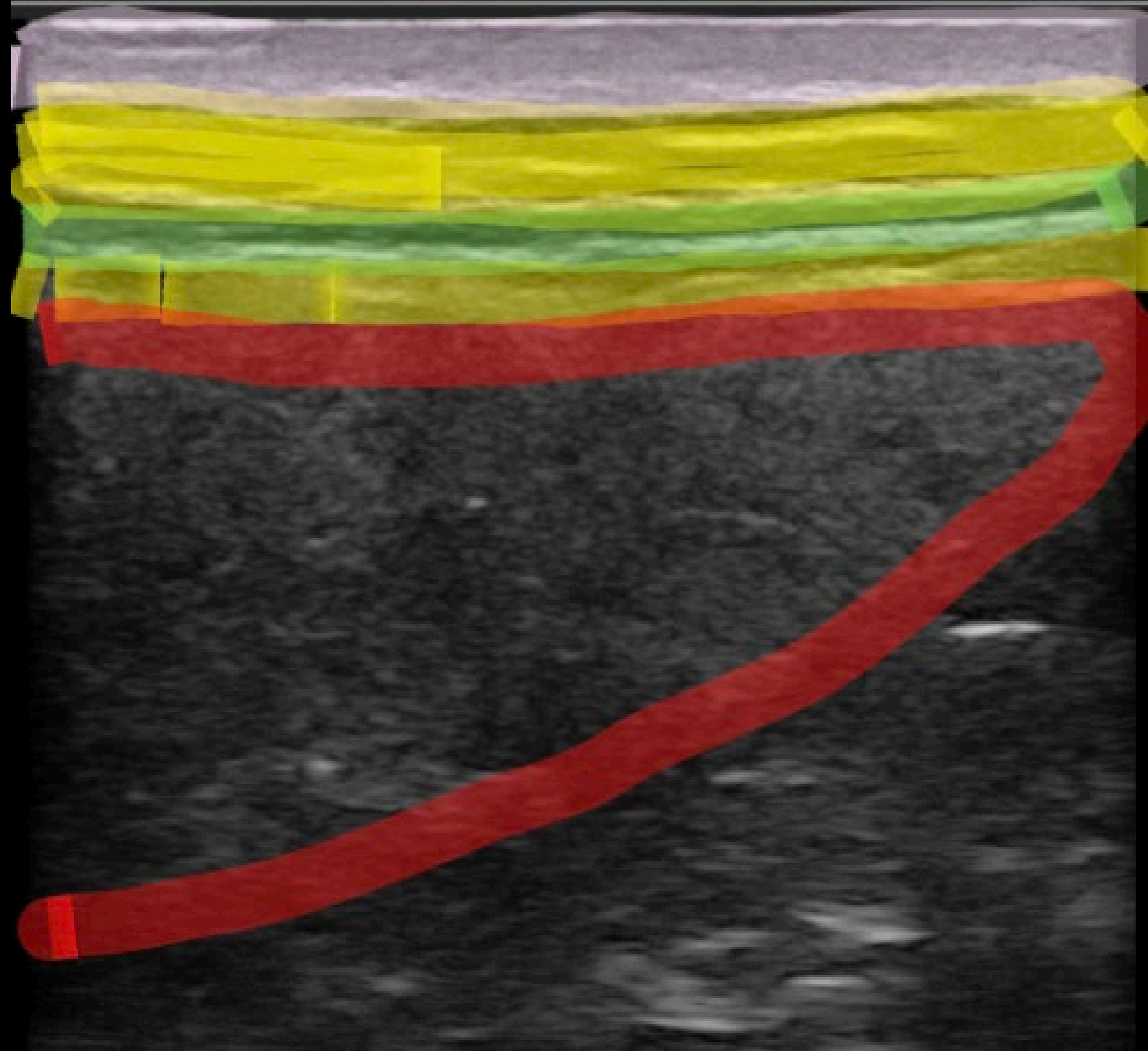
D 11

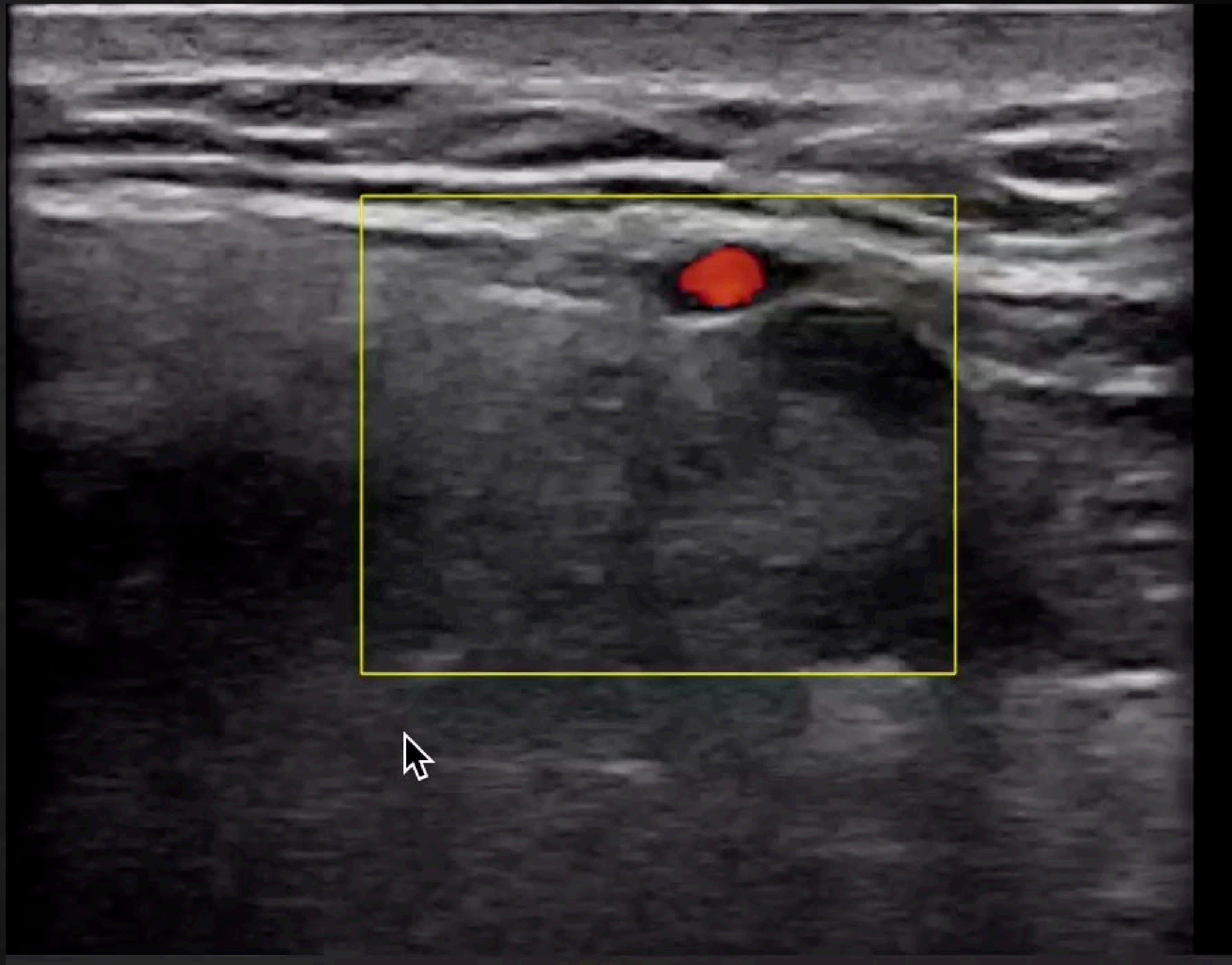


3 cm

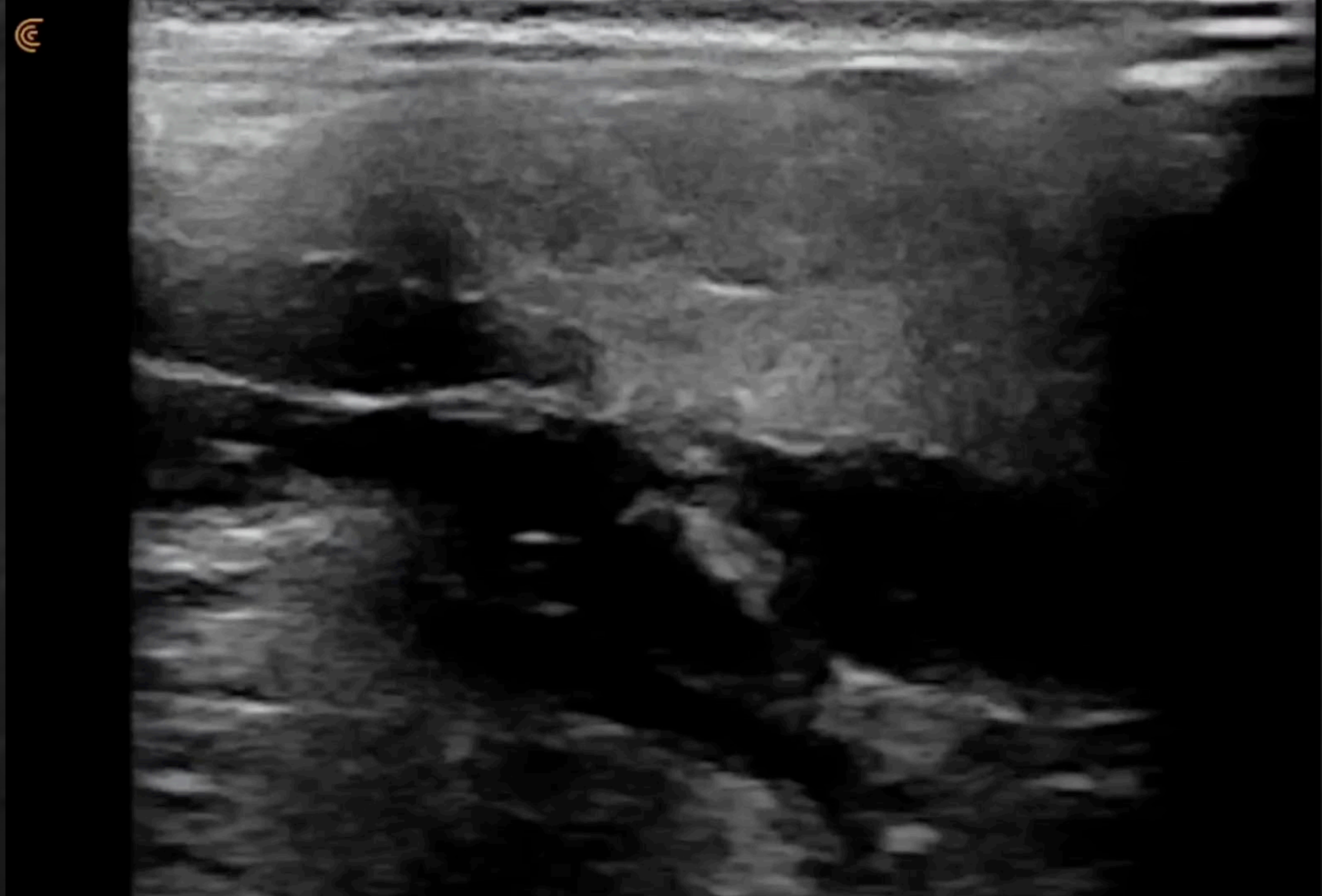






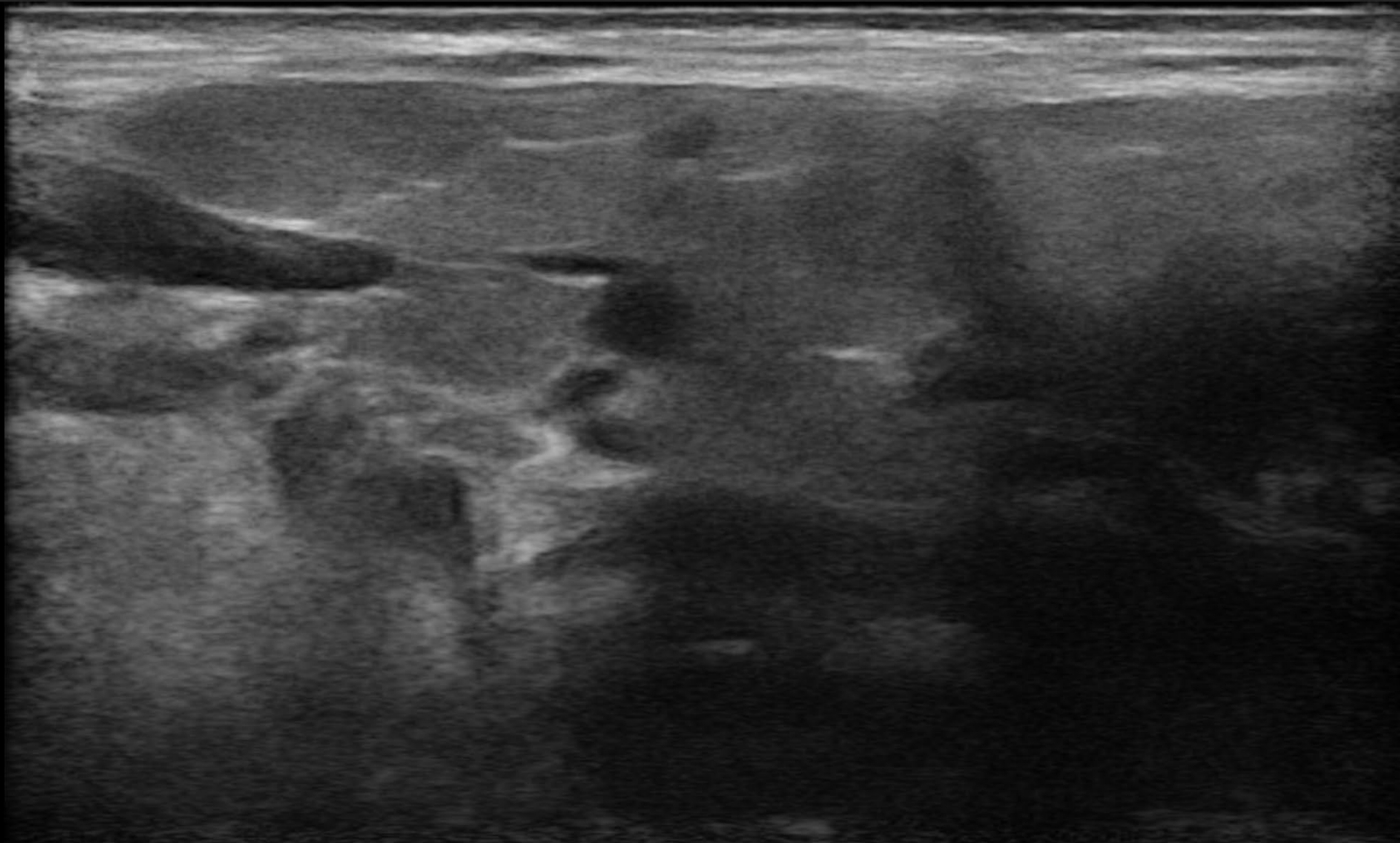








L15\_Dra.Karina Ravera  
MSK



3 cm



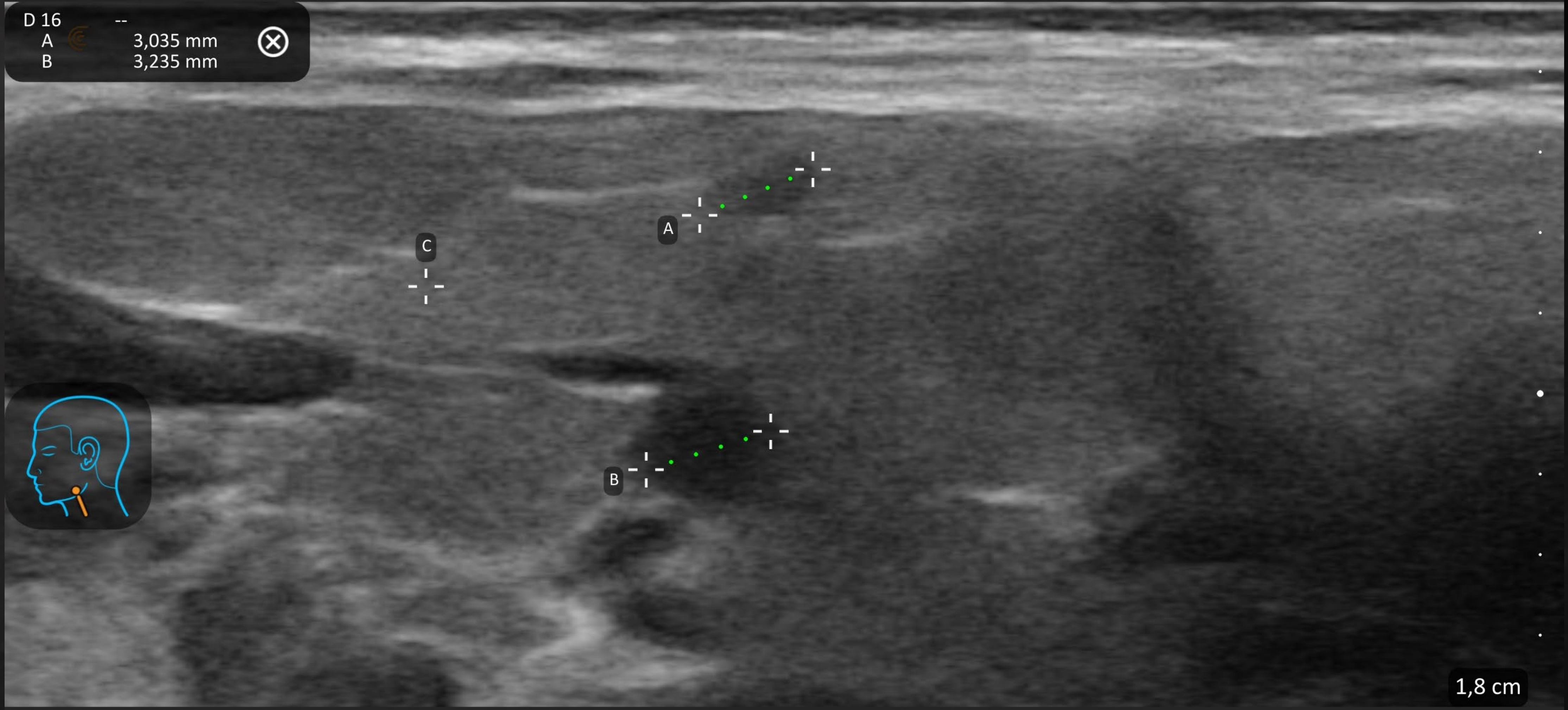


16

L15\_Dra.Karina Ravera  
MSK



D 16 --  
A 3,035 mm  
B 3,235 mm



## Conclusiones

**La guía ultrasonográfica en tiempo real de múltiples tratamientos cervicofaciales mínimamente invasivos nos aseguran resultados eficaces y con mínimo riesgo de complicaciones y efectos adversos asociados a dichos procedimientos.**

**Además, podemos realizar valoraciones muy precisas.**

**Pre y post-tratamiento a los fines de cuantificar los resultados y realizar el seguimiento de los pacientes.**





UltraSkinUS

ULTRASOUND BASIC & ADVANCED TRAINING

**Muchas gracias**

*[cursosdraravera@gmail.com](mailto:cursosdraravera@gmail.com)*

Dra Karina Ravera  
Radióloga  
Medicina Estética

# Demostración en directo



***Shelley* Guenther, CRGS,  
CRCS**

Responsable de Marketing Clínico



¿Qué le gustaría saber?

Encuesta



# Clarius L20 HD3

- 30% Màs pequeño & Màs asequible
- Inalàmbrico
- Imagen de alta definición
- Aplicación fácil para su iOS o Android
- Paquete de Estética Avanzada
- Almacenamiento en la nube Clarius
- Clarius Live Telemedicina
- Usuarios ilimitados

# *Preguntas?*



*Dra. Karina Ravera*

---



*Shelley Guenther*

---



*Jeronimo Maluenda  
Doñate*

---



¡Gracias!