

# WEBINAR

## 10 Ways Ultrasound is Essential to Every Plastic Surgeon

December 8, 2020



# Introducing



**Dr. Oron Frenkel, MD, MS**

Emergency Physician & POCUS Educator

Chairman, Clarius Medical Advisory Board

# \$16.7B in 2019!

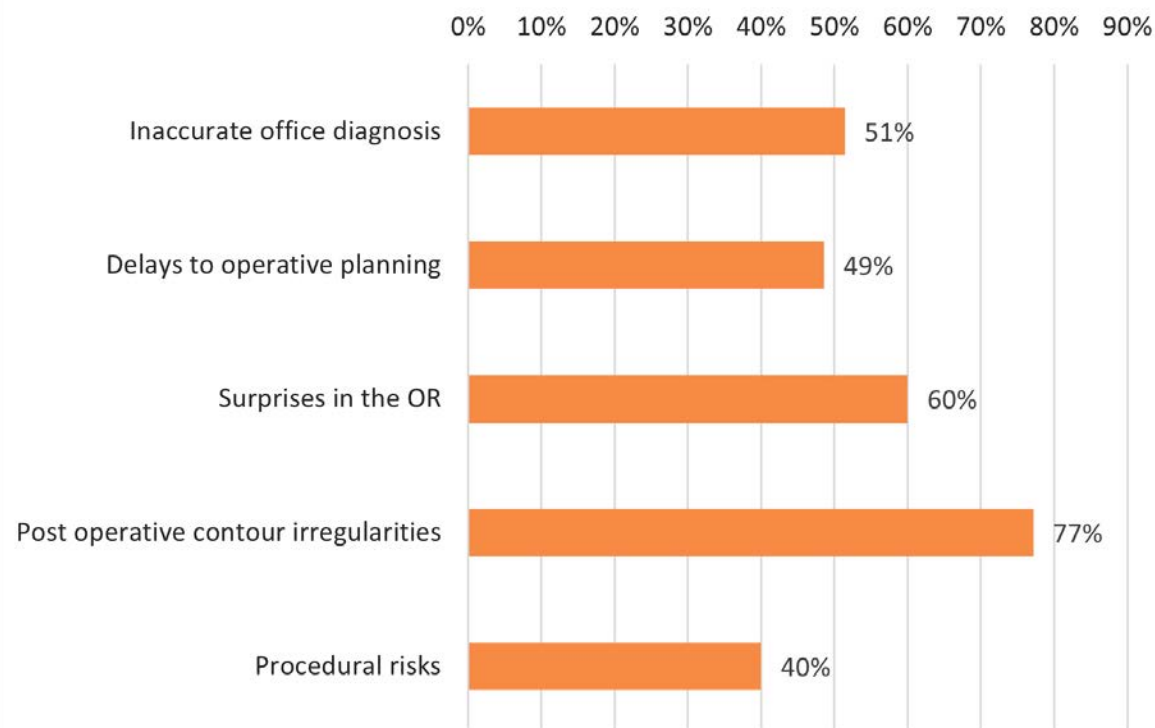


# Challenges with Plastic Surgery



# Poll – Challenges

Challenges you've encountered in your plastic surgery practice.



# Plastic & Reconstructive Surgery



“Ultrasound technology is widely applicable to plastic surgery. Sonograms are highly **accurate**, non-invasive, and well-tolerated by patients. Diagnoses are expedited, improving patient **safety**.”



# Plastic & Reconstructive Surgery

“... Subclinical abdominal defects may be visualized. Ultrasound may be used in the office to evaluate breast implants, masses, and fluid collections. In surgery, this device confirms the level of buttock fat injection.”



# Your Expert Speaker



**Marc Salzman, MD, FACS**

Board-Certified Plastic Surgeon



# Why use HRUS for Implant Surveillance?

- HRUS is readily available in office
- MRI is costly and inconvenient
- HRUS is accurate
- HRUS is cost effective





Food and Drug Administration

Your surgeon or health care provider may also recommend other tests, such as ultrasound or magnetic resonance imaging (MRI). The FDA recommends that people with silicone implants get regular screenings to detect silent ruptures.



# Case 1

## Diagnostic Ultrasound For Breast Implant Surveillance

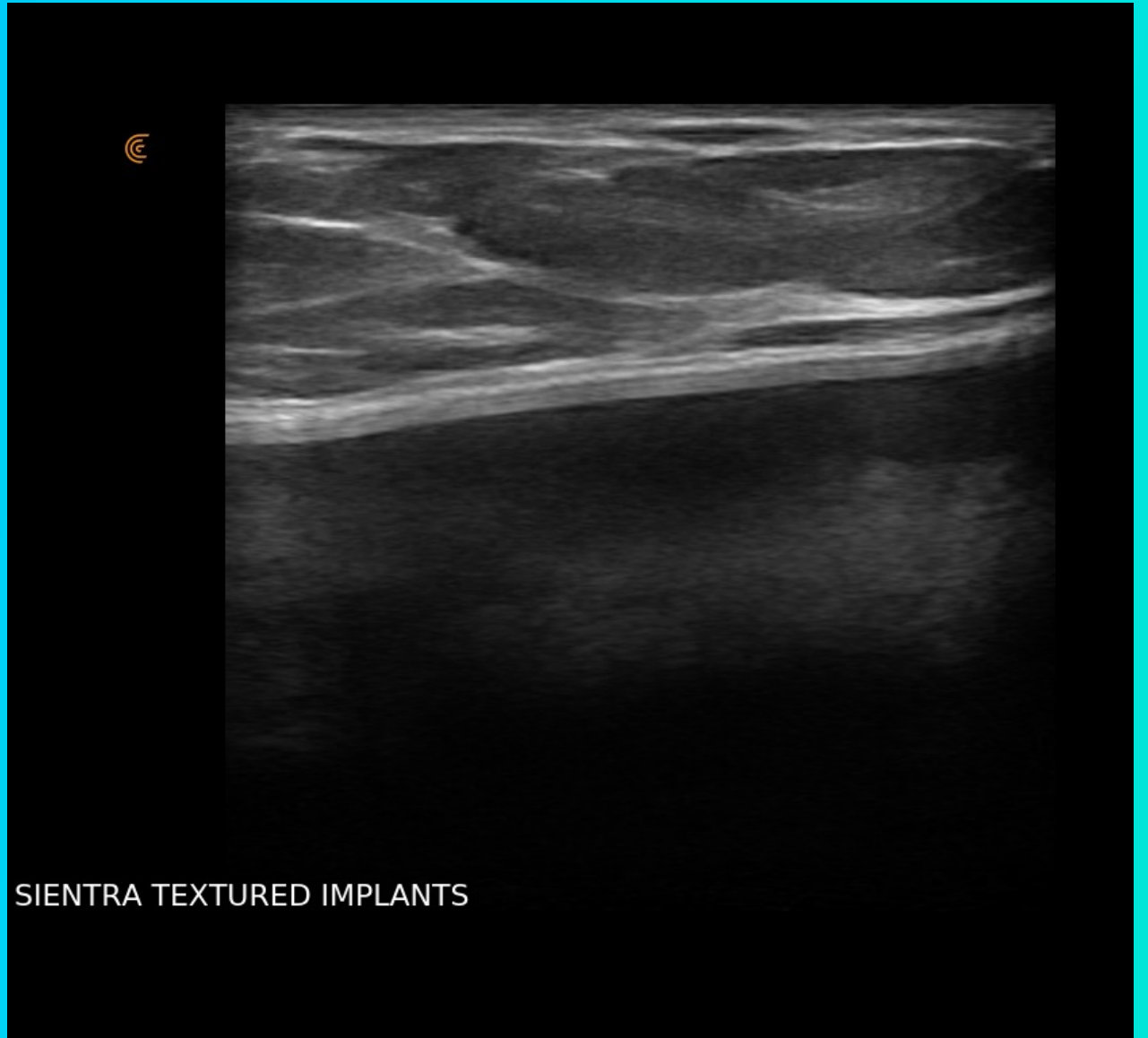


# Breast Implant HRUS Technique

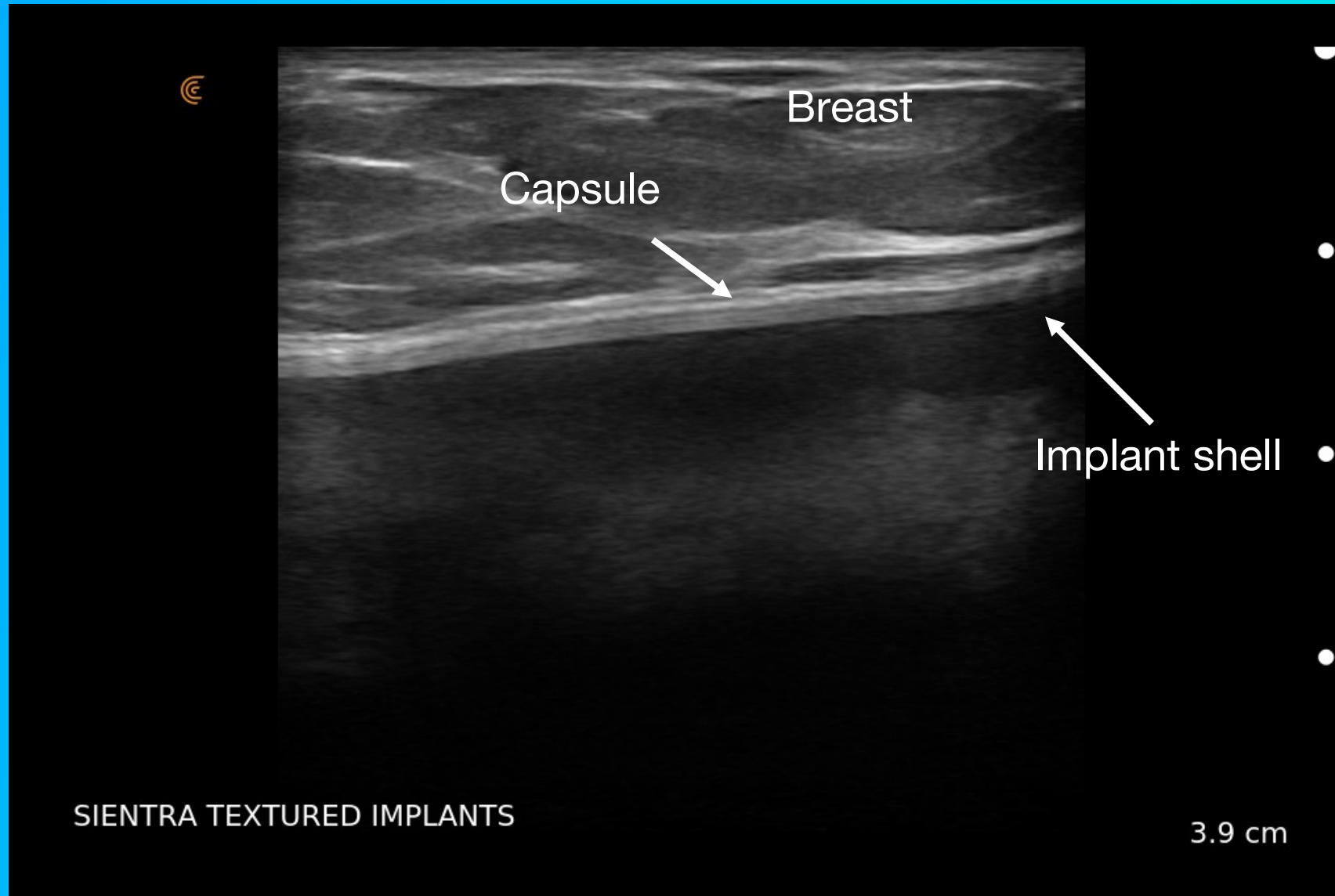
- Image all 4 quadrants
- Nipple to periphery
- Compression videos
- Images are annotated and saved
- Upload or direct insertion into EMR





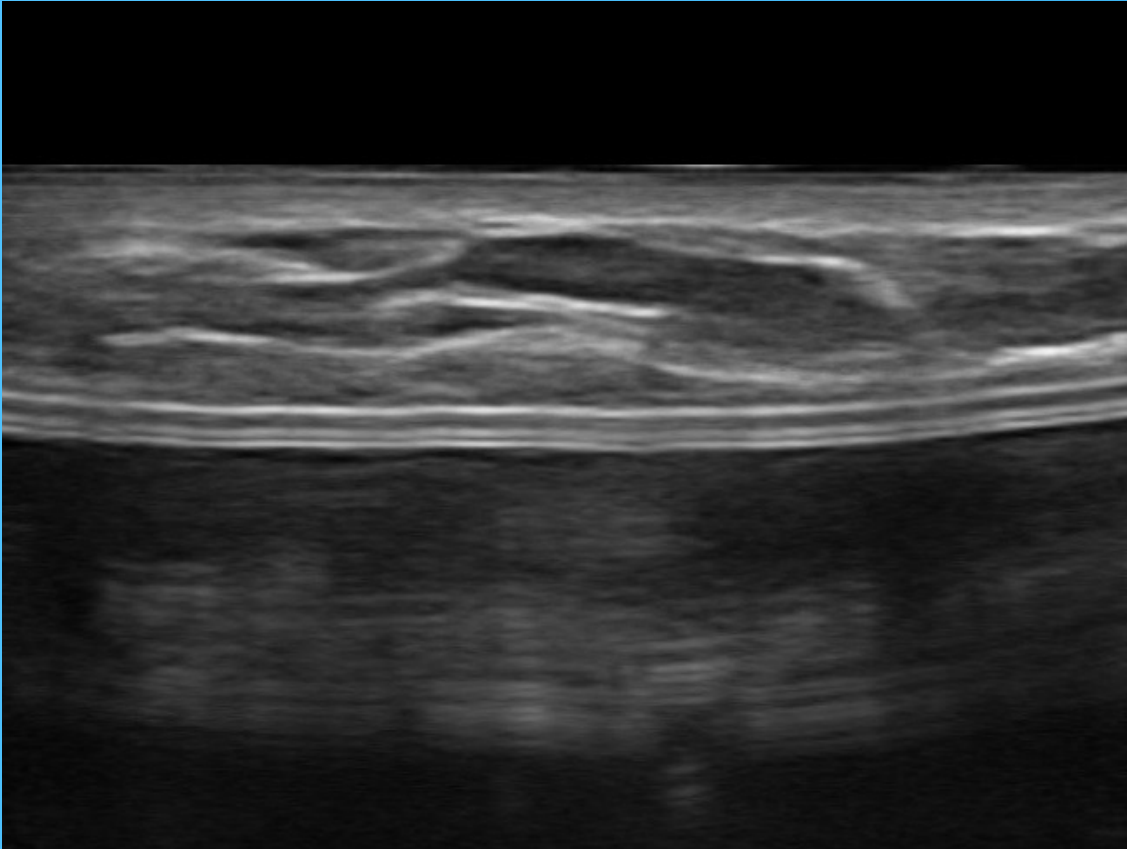


# Normal Breast Textured Implant

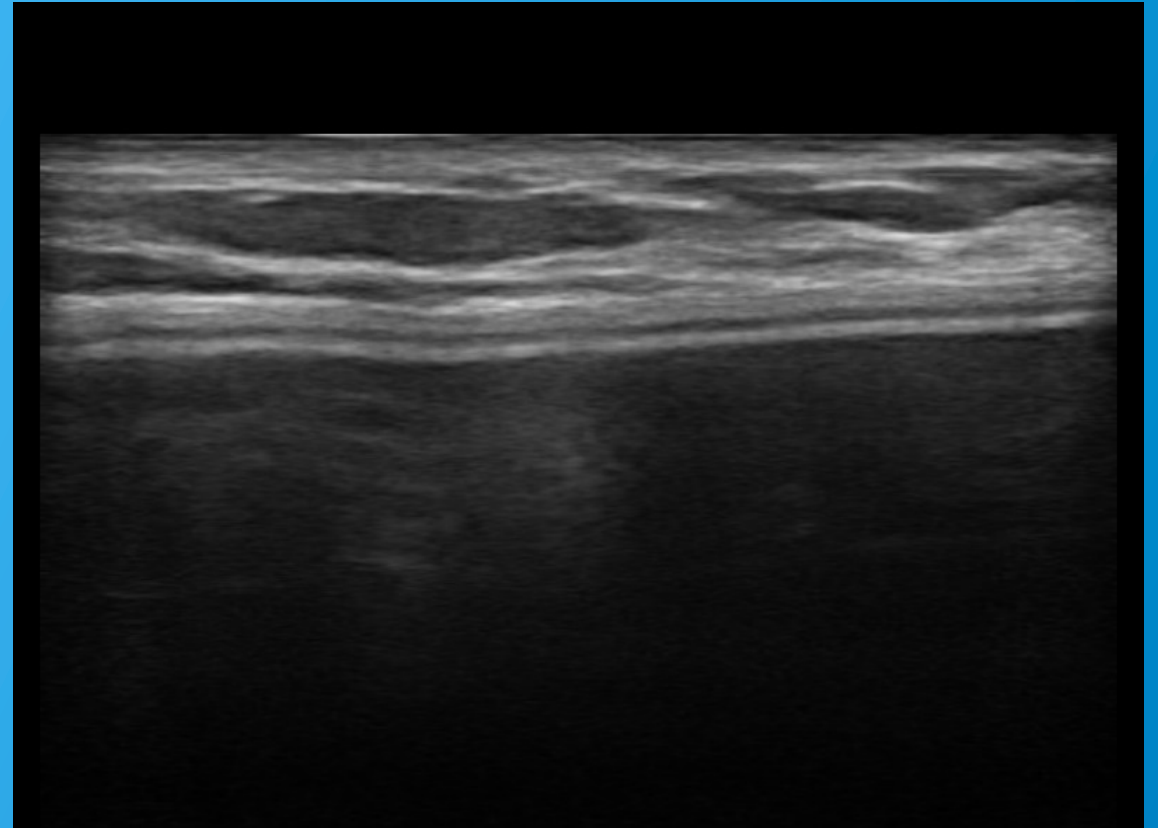




# Compare Allergan Smooth and Textured



Smooth

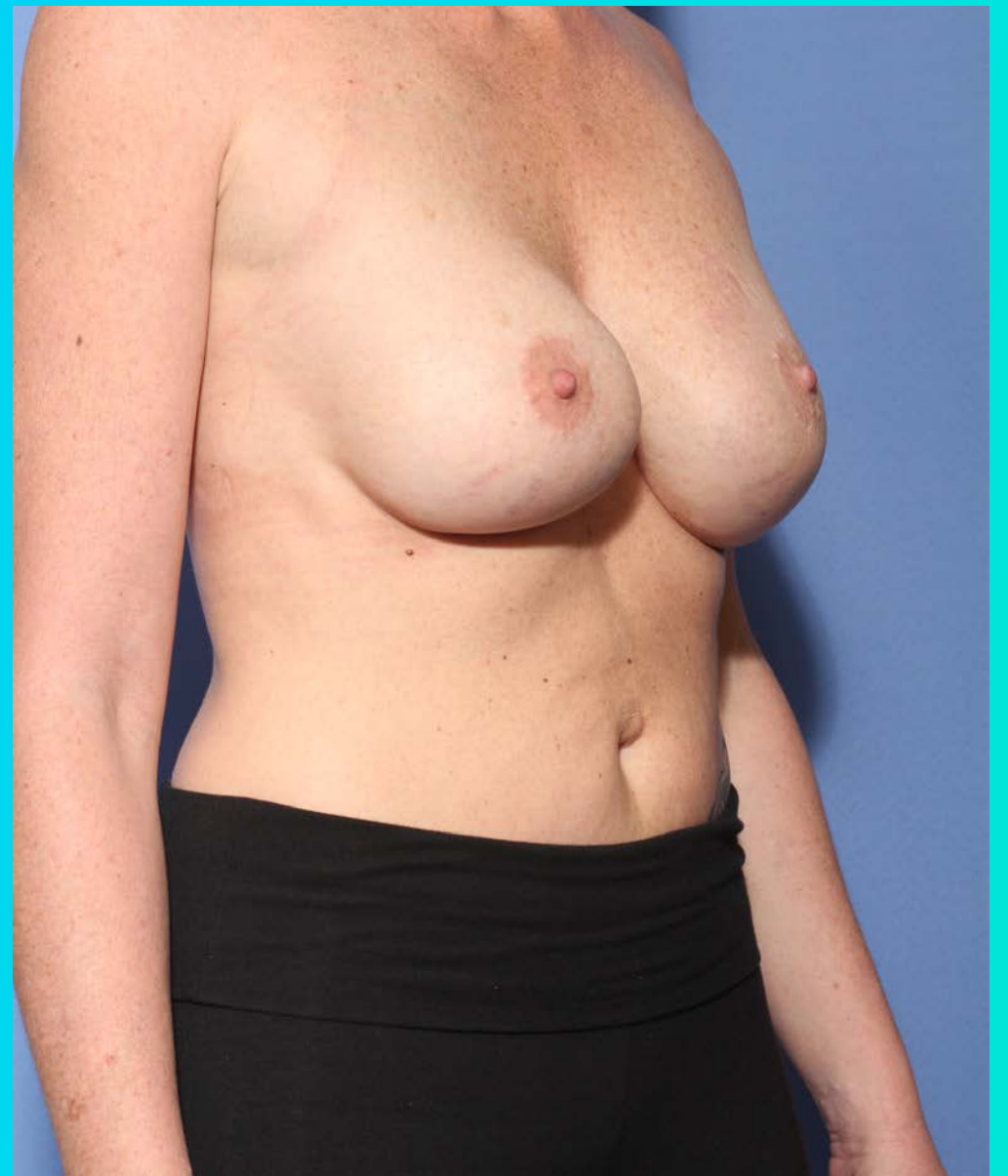


Textured

# History

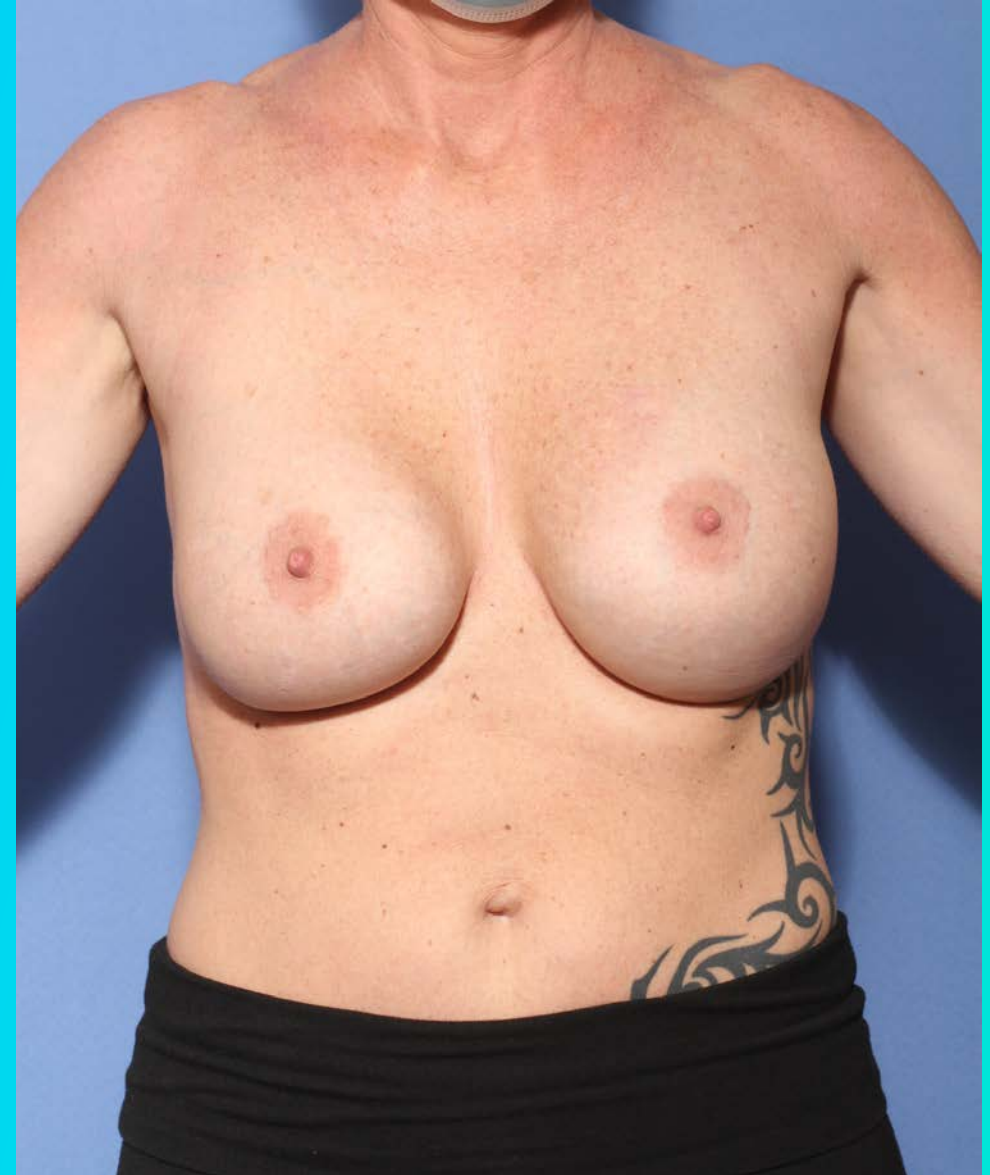
- 46 year old female
- Silicone gel breast implants 8 years ago
- 2 months of distorted look of right breast
- Type of implant is unknown





# Physical Exam

- Grade 1 capsule on both sides
- Vertical elongation of pocket on left
- Asymmetry of size



# Decision Algorithm

Is the Implant Smooth or Textured?

Is the implant broken?

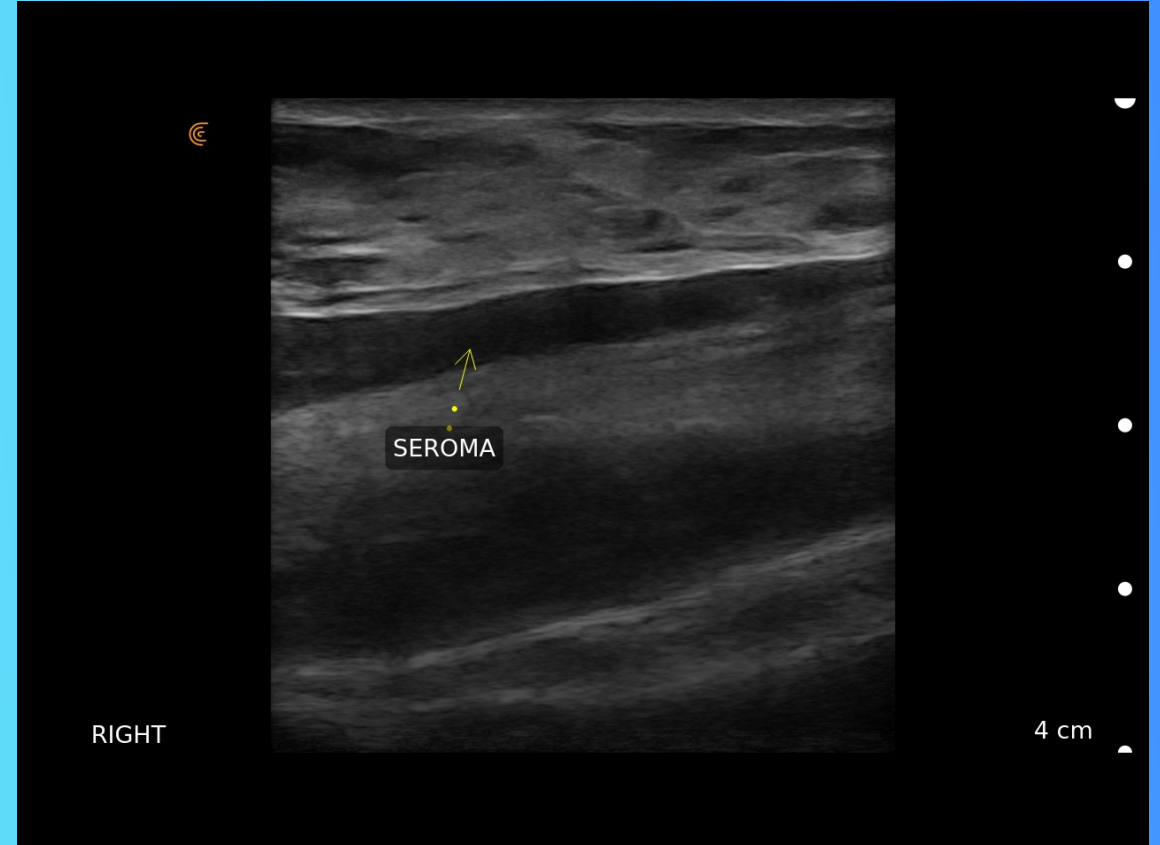
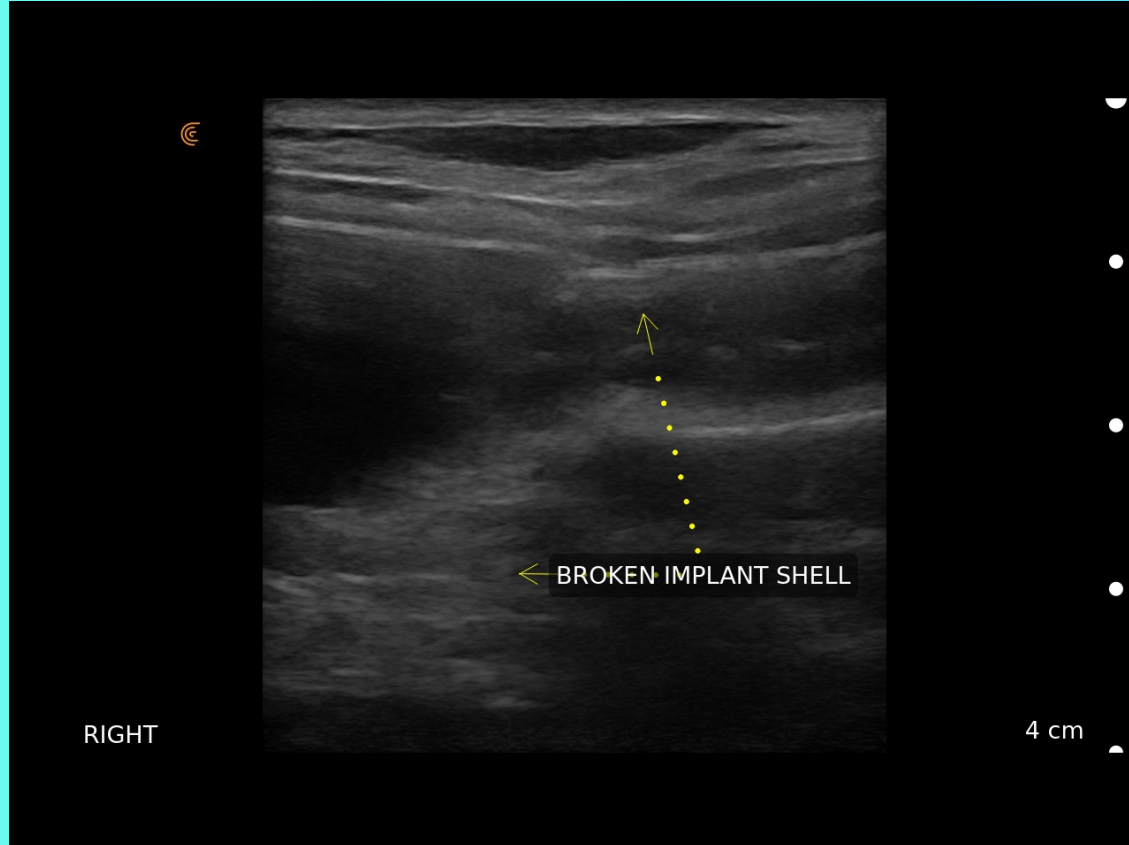
Is there a seroma present?



HRUS

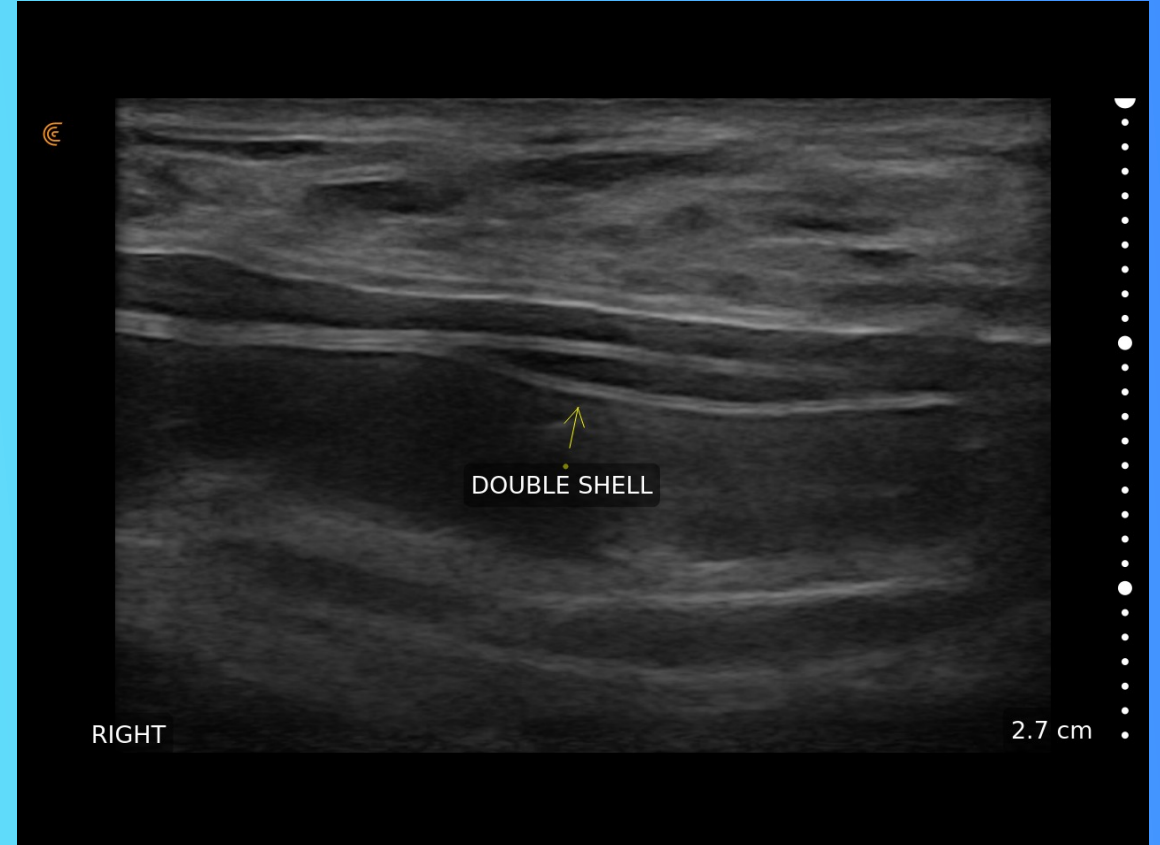


# HRUS Right

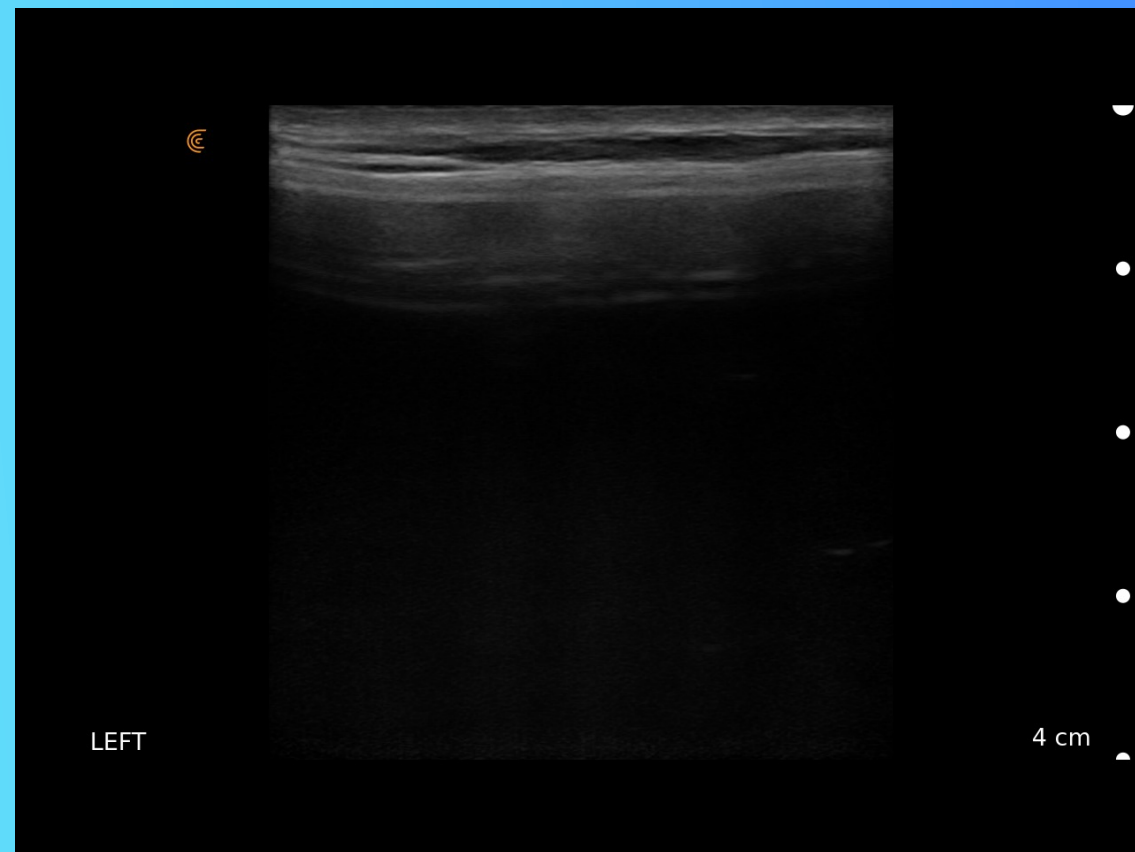
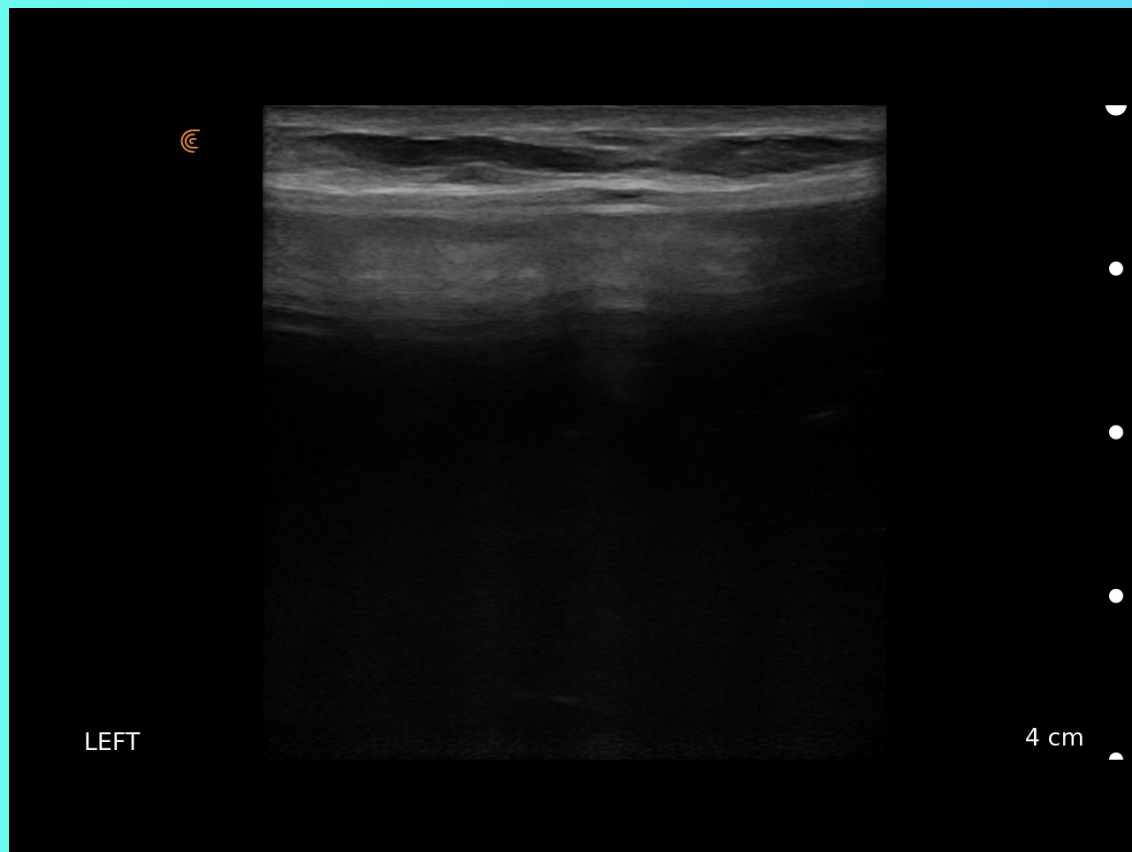




# HRUS Right



# HRUS Left



# OR Plan

- Need to R/O ALCL with 8 year history of textured gel implants with seroma
- Patient wants to be larger
- Right capsulectomy
- Repair bottomed out left breast
- Remove and replace to smooth Gel



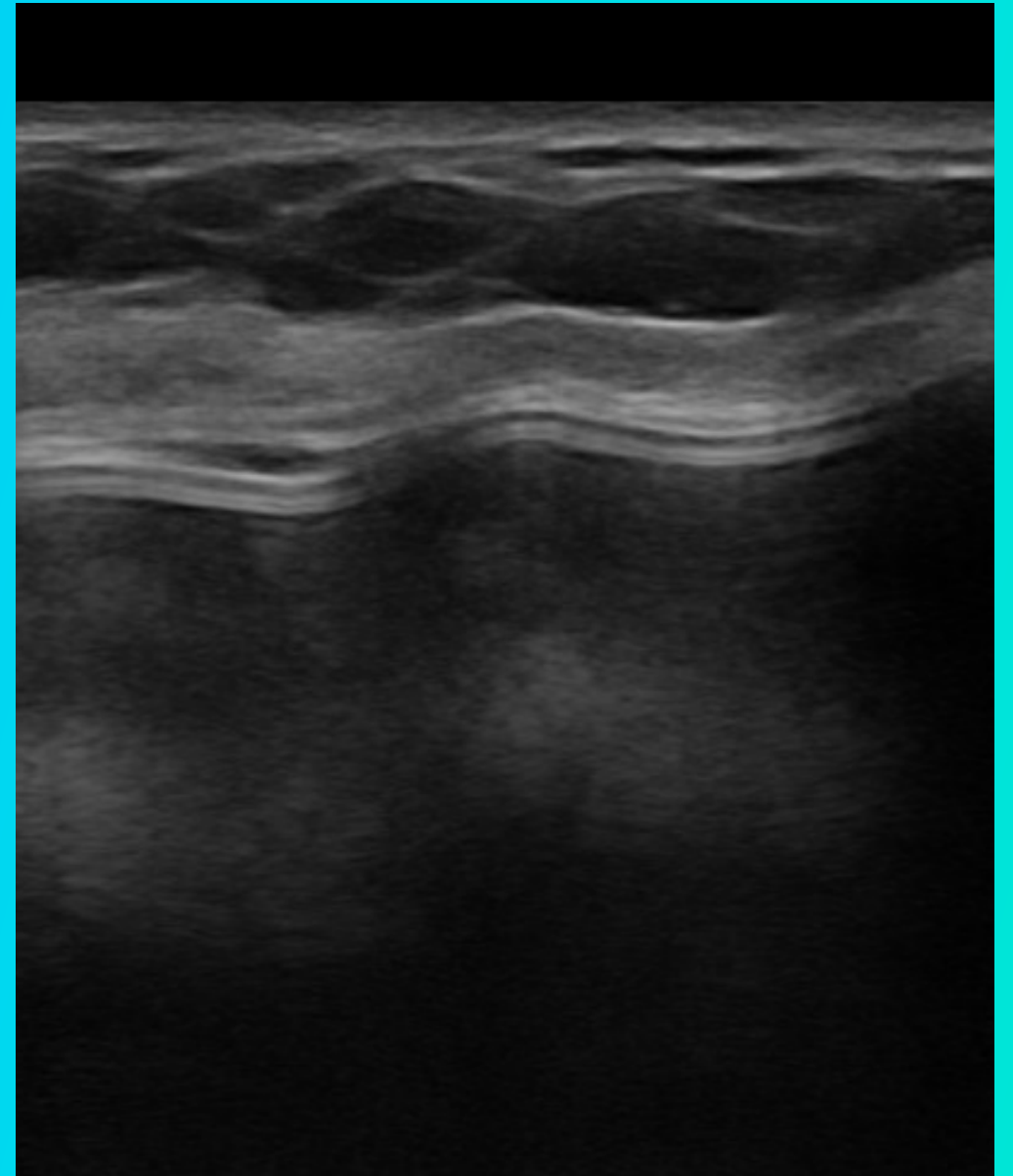
# Operative Procedure

- Right capsulectomy
- Bilateral inferior capsule-fascial flap capsulorrhaphies
- Cephalic and medial capsulotomies
- Replace to larger smooth gel implants



# Post Operative

- Patient decides on Day 4 to remove her own drain
- Seen in office 2 days later
- Is there a seroma on the right?





# Summary

- HRUS allows for immediate day of consult diagnosis for seroma and broken implant
- Appropriate procedure can be scheduled
- When to remove drain can be assessed



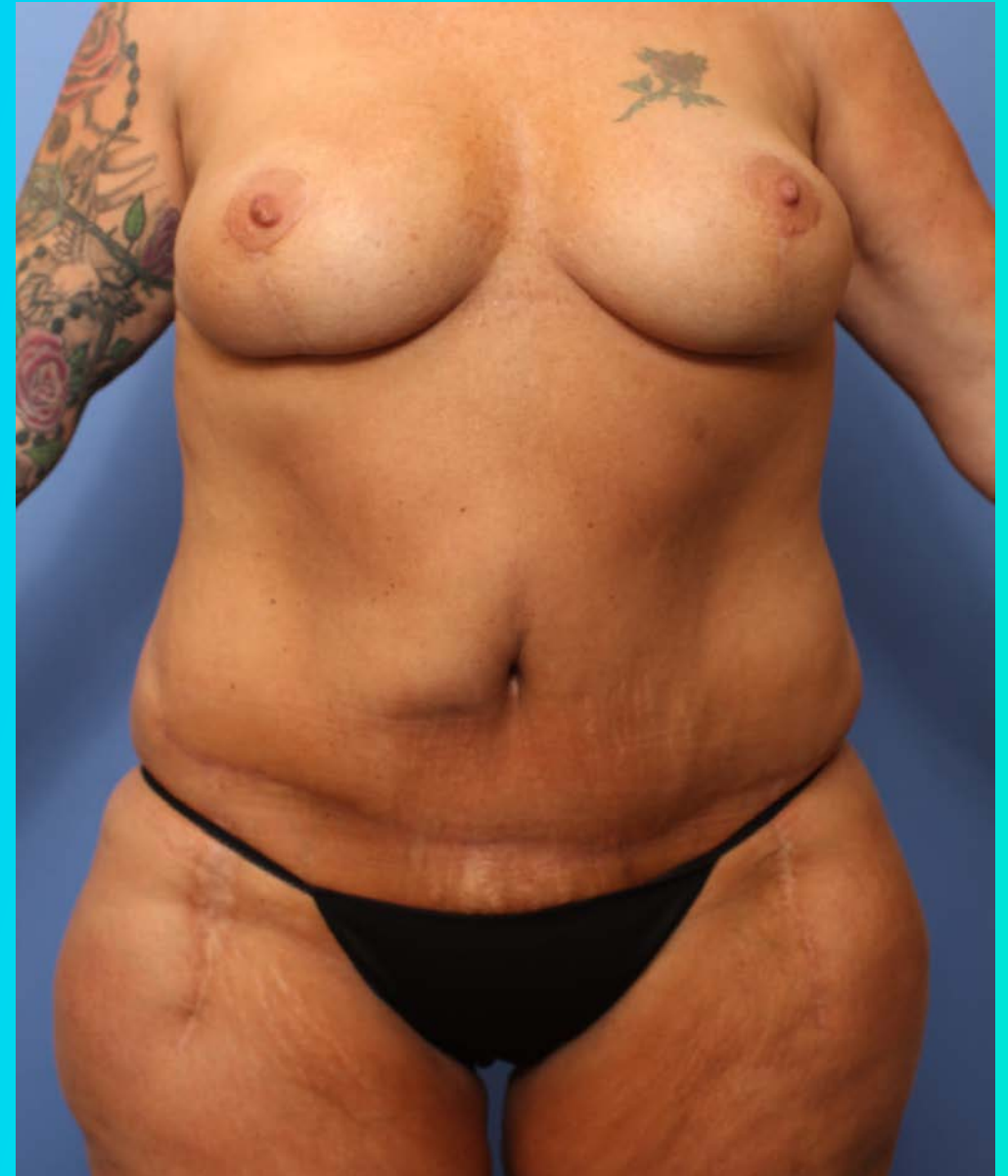


## Case 2

HRUS for treatment of  
Abdominoplasty seroma

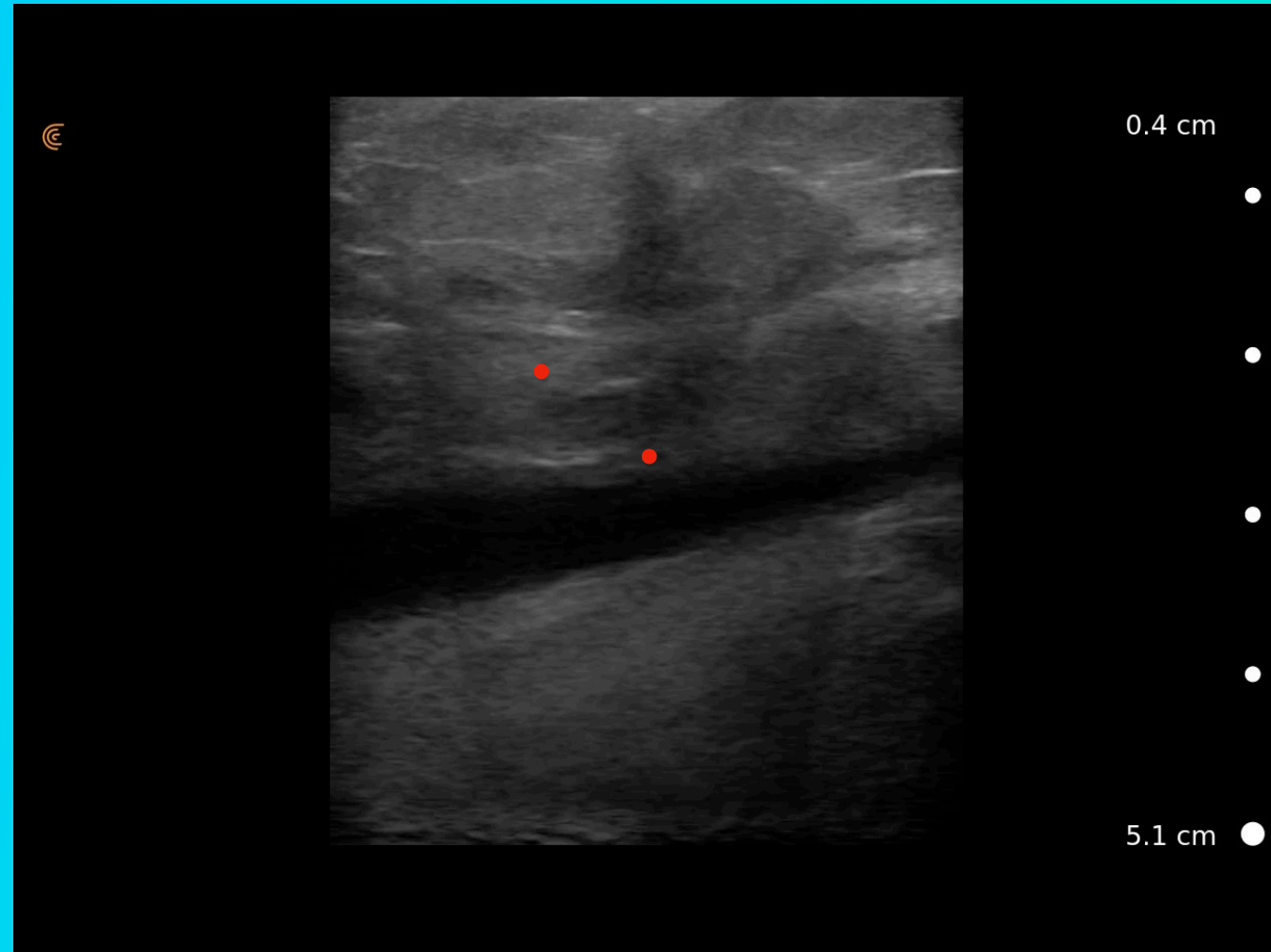
# History

- Persistent contour irregularity after abdominoplasty and mastopexy with implants



# Clinical Course

- Abdominoplasty and mastopexy with implants 7/23/18
- Aspiration seroma 280 cc 9/24/18
- Aspirate 40 cc 10/11/18



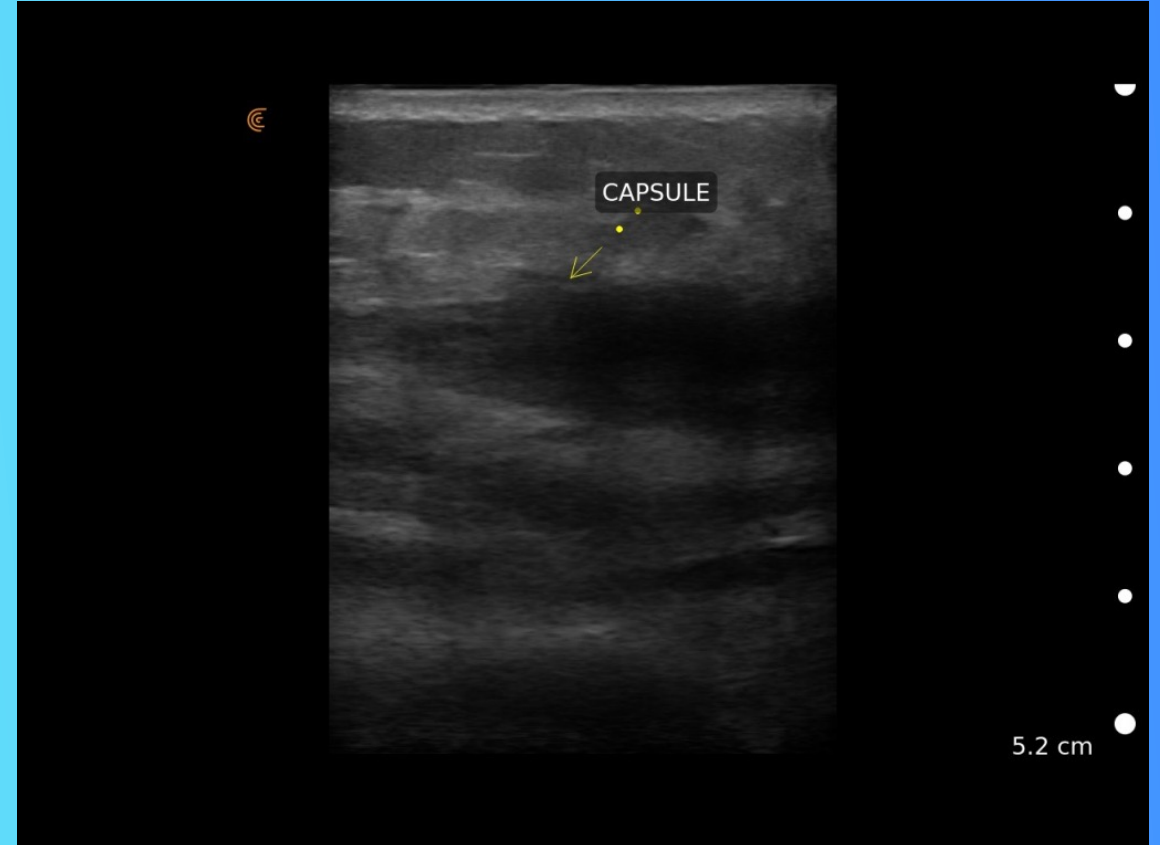
# Clinical Course

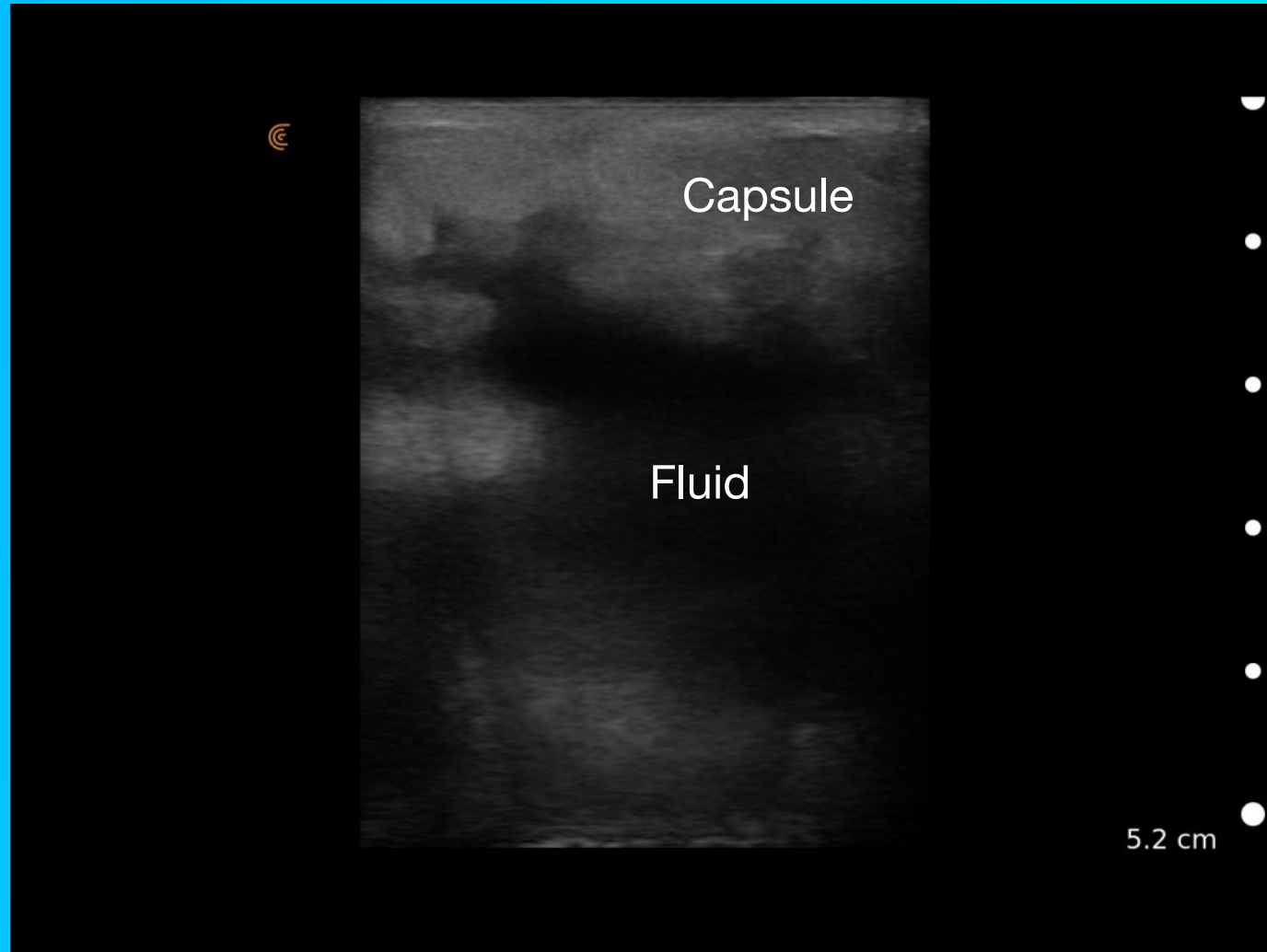
- Seroma re-occurs 1/16/19
- Attempted aspiration unsuccessful
- Patient decides to delay intervention until 5/24/19





# HRUS 5/24/19





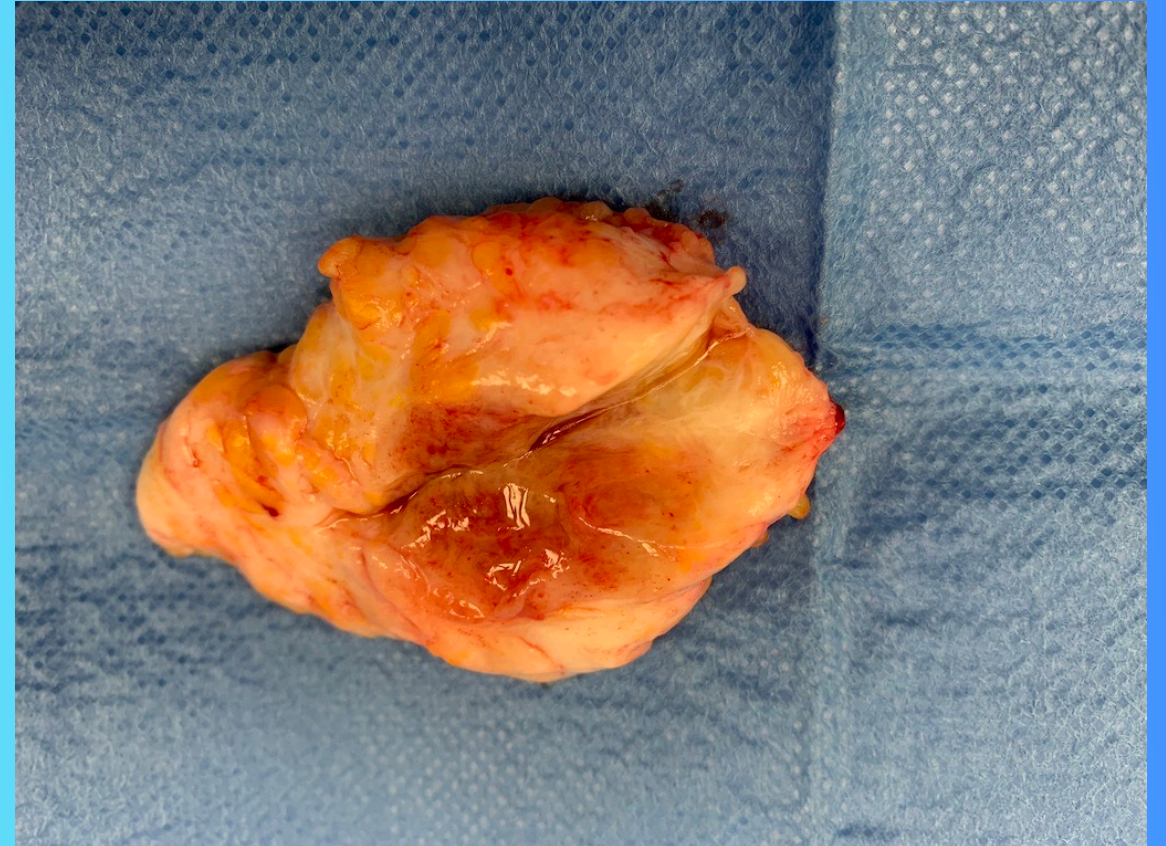
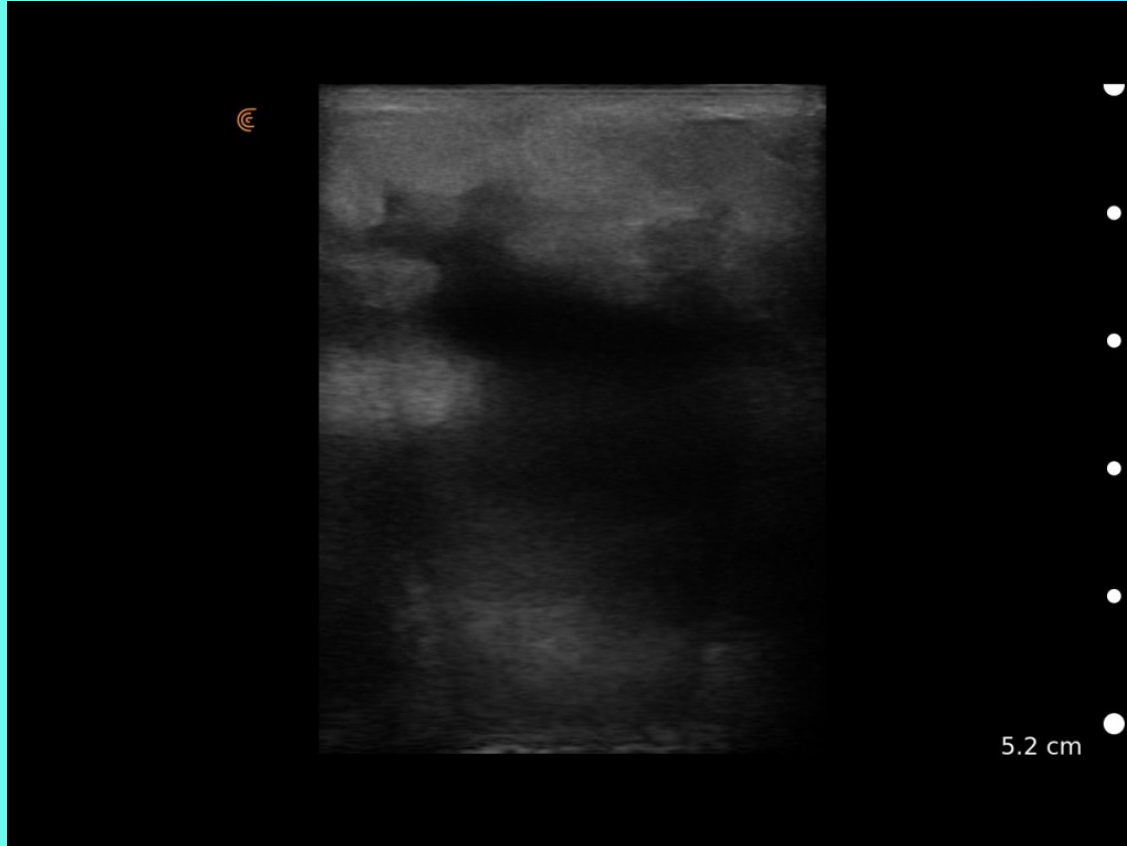
# Clinical Course

- Pseudo-bursae excised and closed over a small drain





# Compare HRUS Image to Pathology





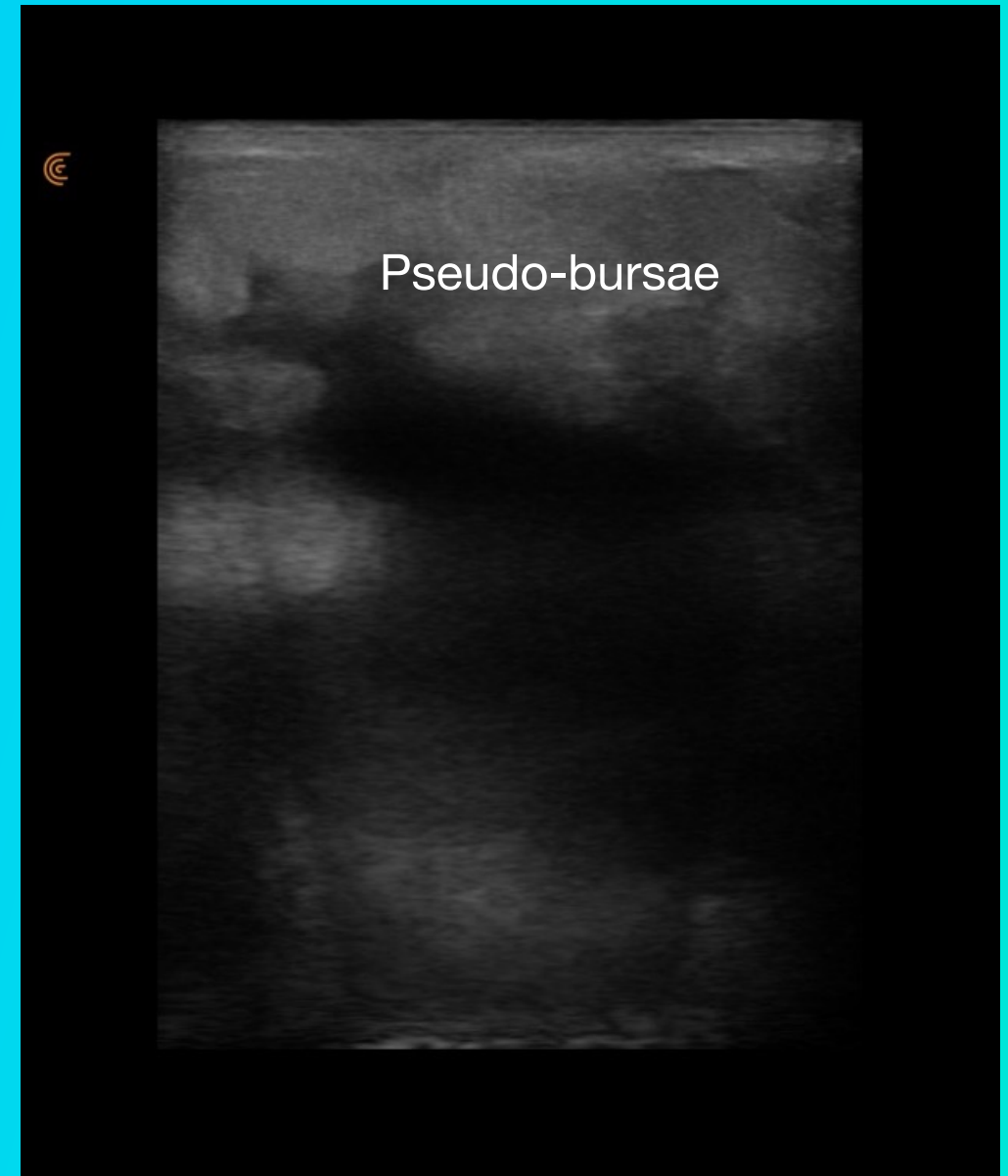
# Pseudo-bursae

- Anechoic center represents fluid
- Occasional lightly echoic lining representing the hyalinized mucosa
- Hyperechoic capsule with loss of normal fat architecture



# Summary

- HRUS can be used to evaluate and treat post abdominoplasty contour irregularities
- Persistent seromas may become pseudo-bursae that necessitate excision



# Case 3

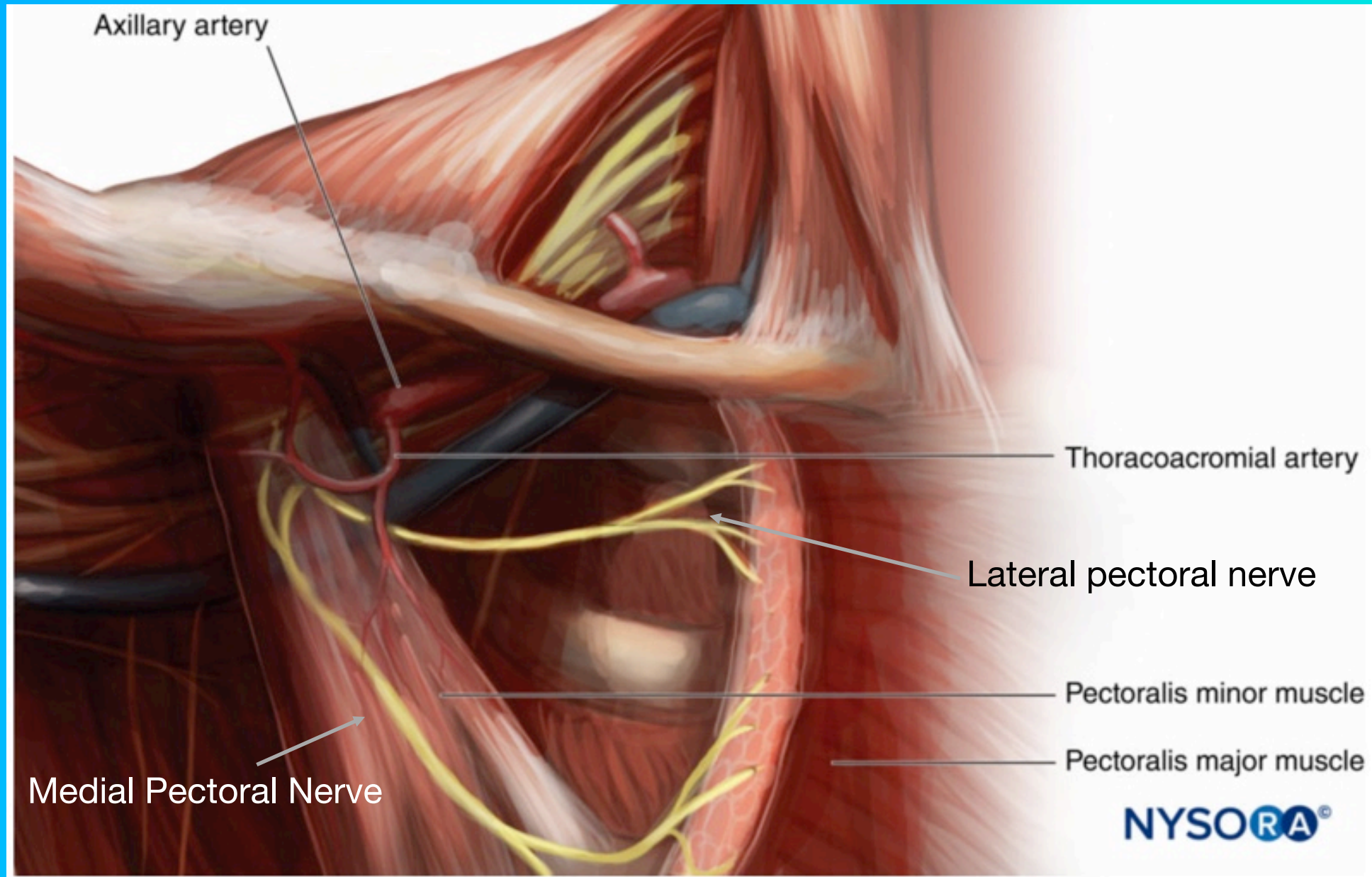
## HRUS Blocks for Plastic Surgeons

# LAP Block

- ✿ Lateral approach pectoralis block
- ✿ Ultrasound guided block of medial and lateral pectoral nerves
- ✿ Used for cosmetic and reconstructive sub-muscular placement of breast implants



## Pecs 1 Block Anatomy



# PECS 1 Block

- Described by Blanco as cranial to caudal just under clavicle
- In plane technique
- Perpendicular to thoraco-acromial artery
- Anesthetic is placed between pectoralis major and minor

# LAP Block

- Just after induction of anesthesia
- Tagaderm® on transducer surface
- 15 cc Ropivacaine per side
- Blocks lateral and medial pectoral nerves

# Block Basic Set-up



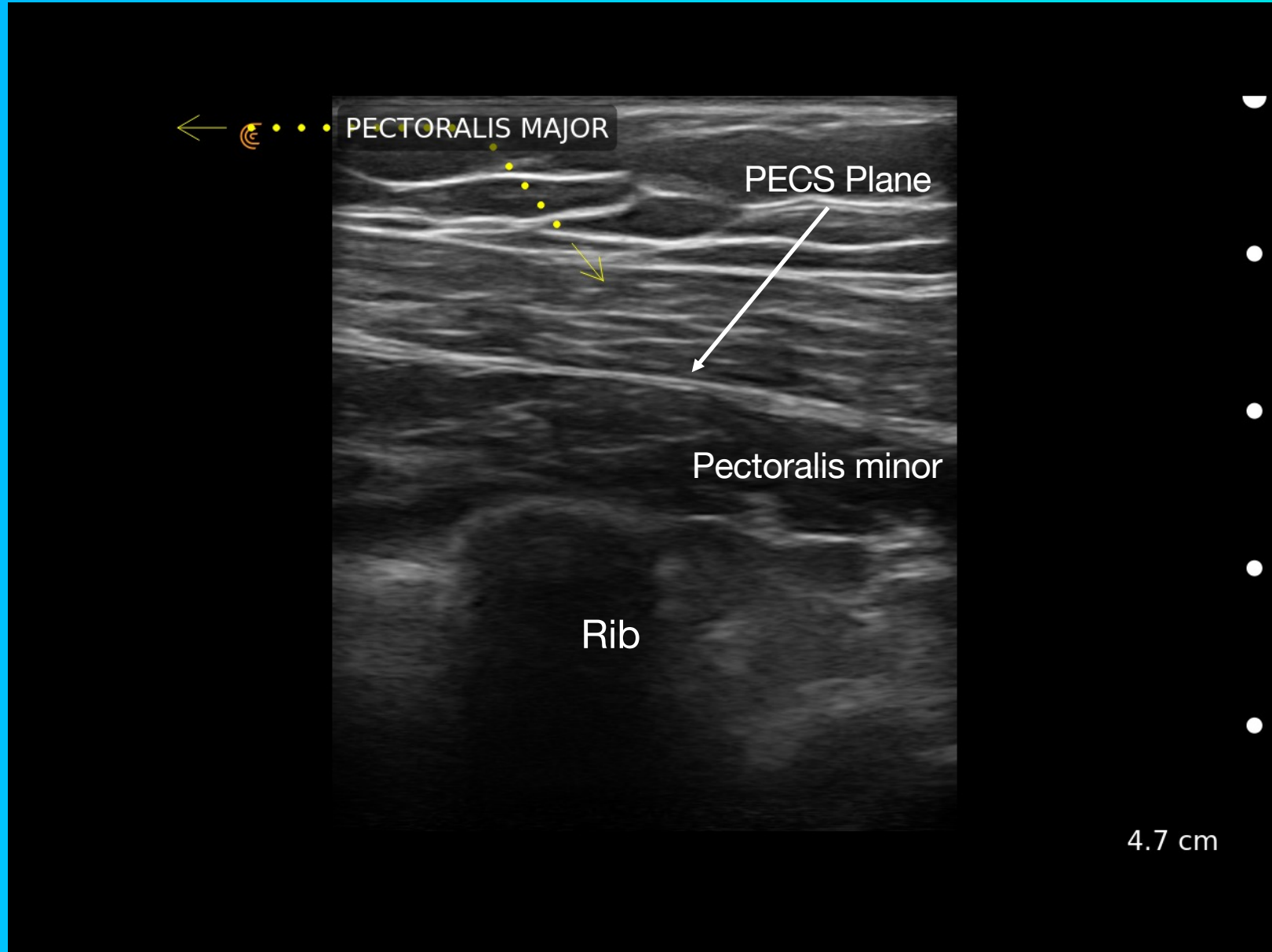


# SonoBlock® Needle

Reflectors on needle allow  
visualization at angles up to 60°

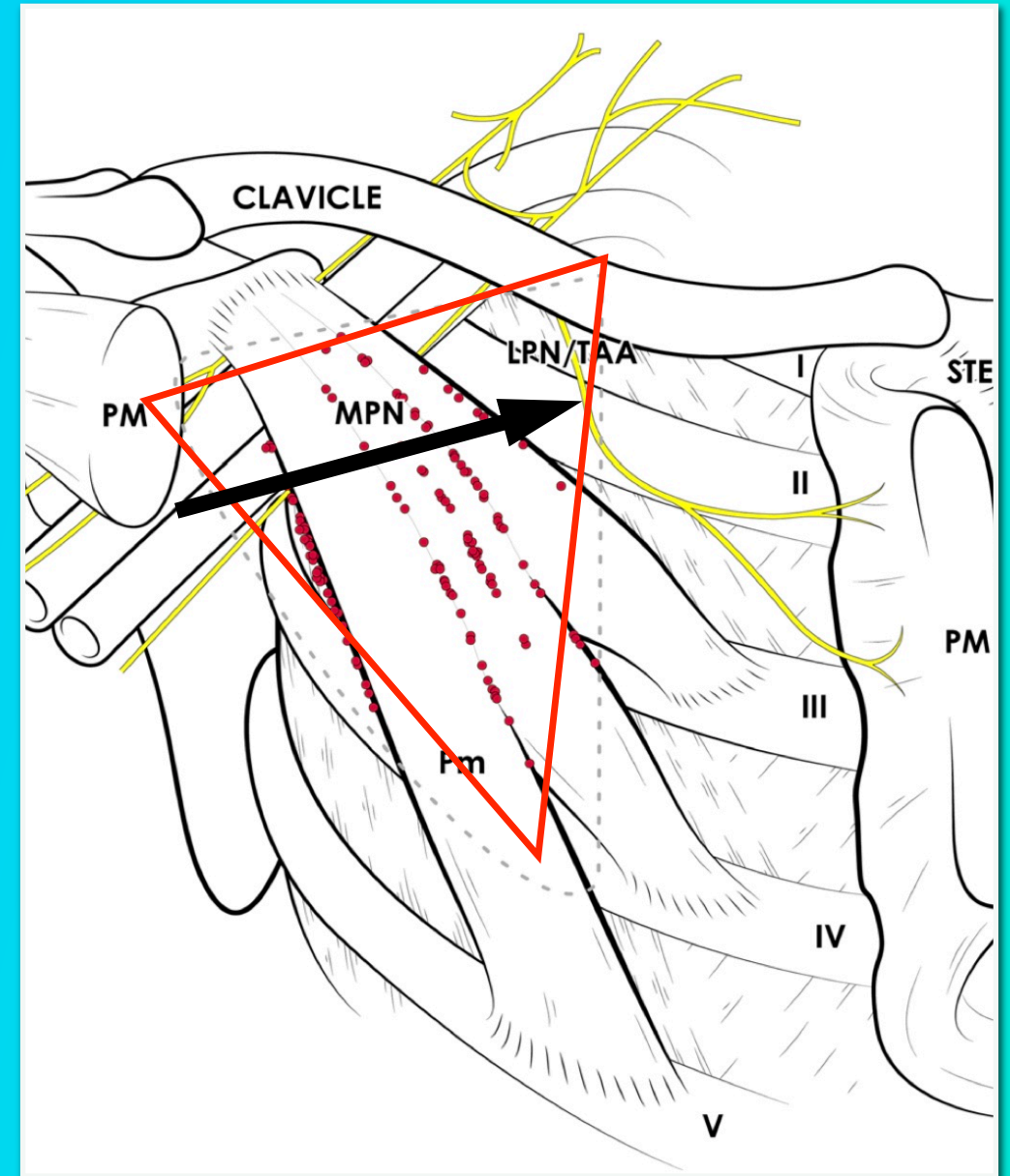


# Normal Chest Wall Anatomy

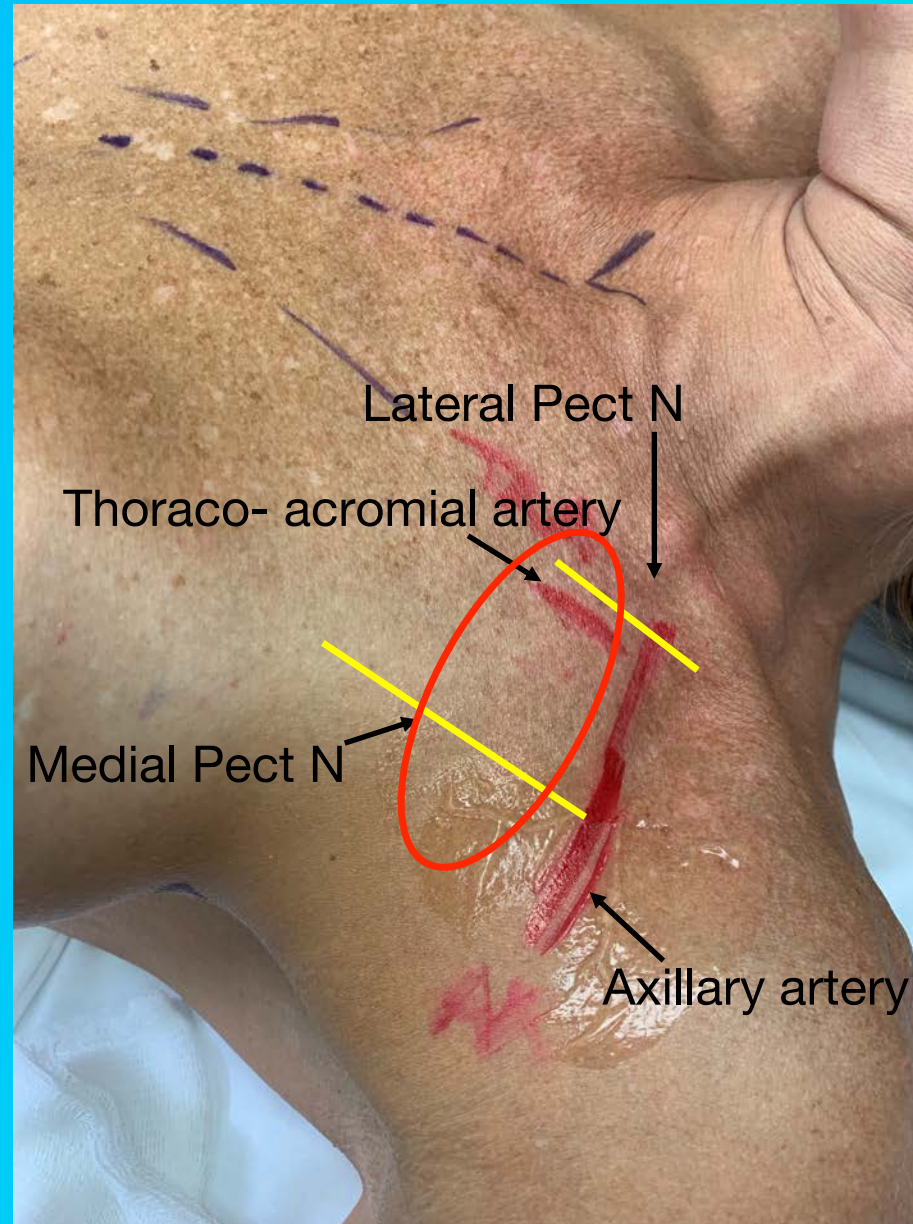


# LAP Block

- Block from lateral edge of pec major to Lateral pectoral nerve
- Lateral pectoral nerve runs with TAA



# LAP Block Anatomy



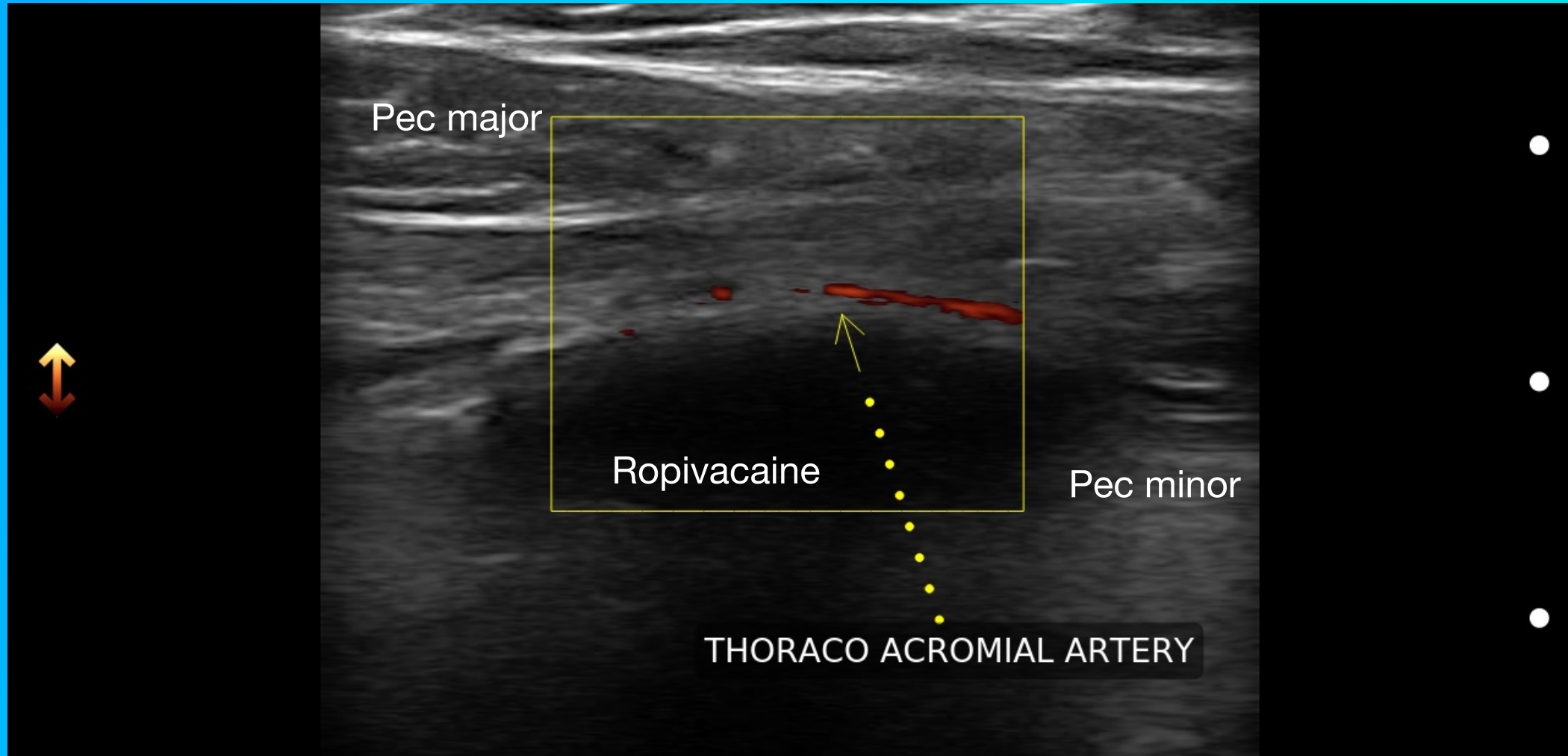


# Find Axillary Artery





# Thoraco-Acromial Artery



# Approach to LAP Block

Depress space just below lateral  
border of pectorals major

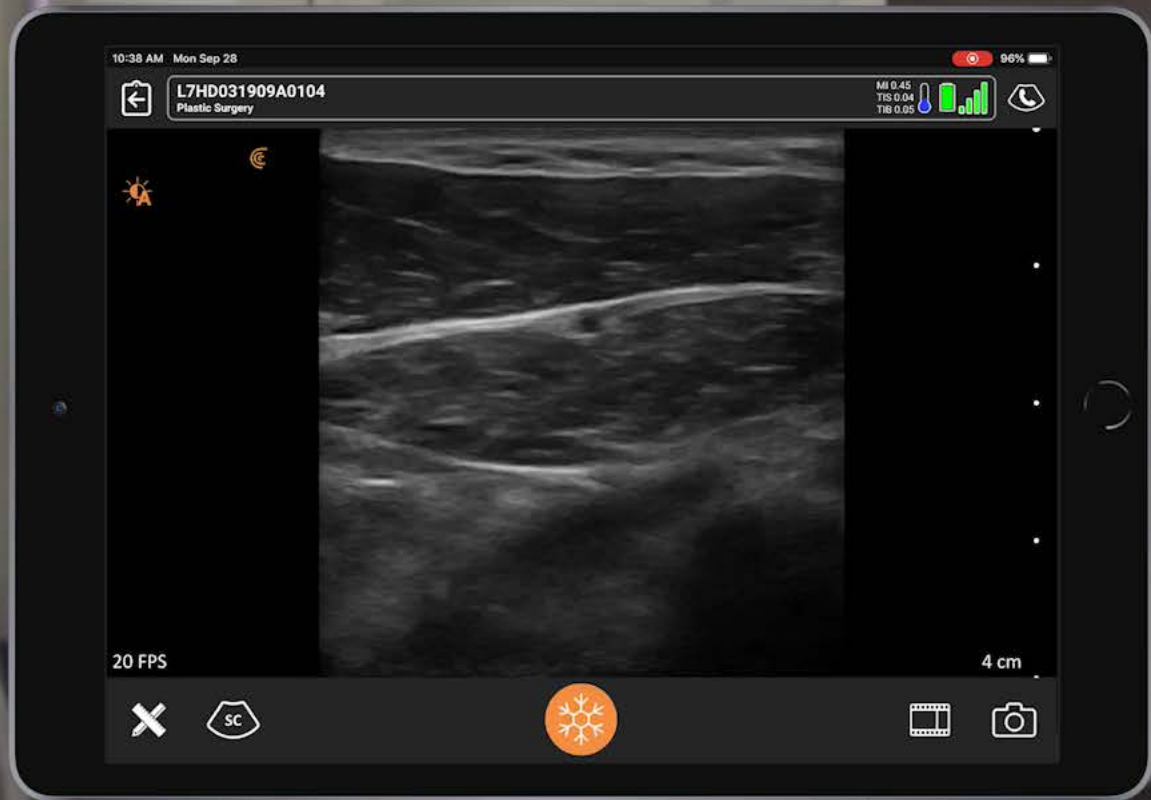


# Approach to LAP Block

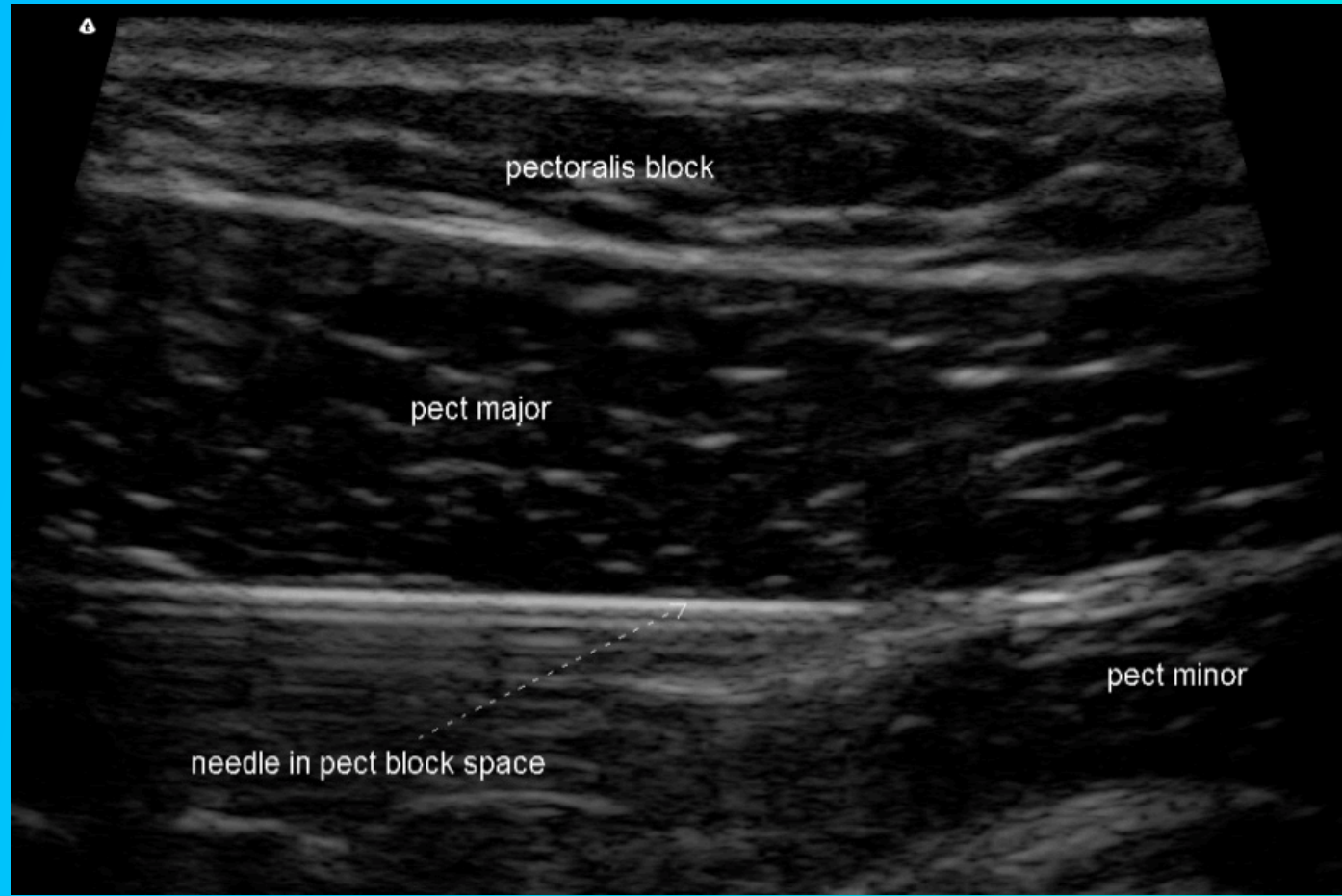
Orient long axis of transducer  
parallel to needle





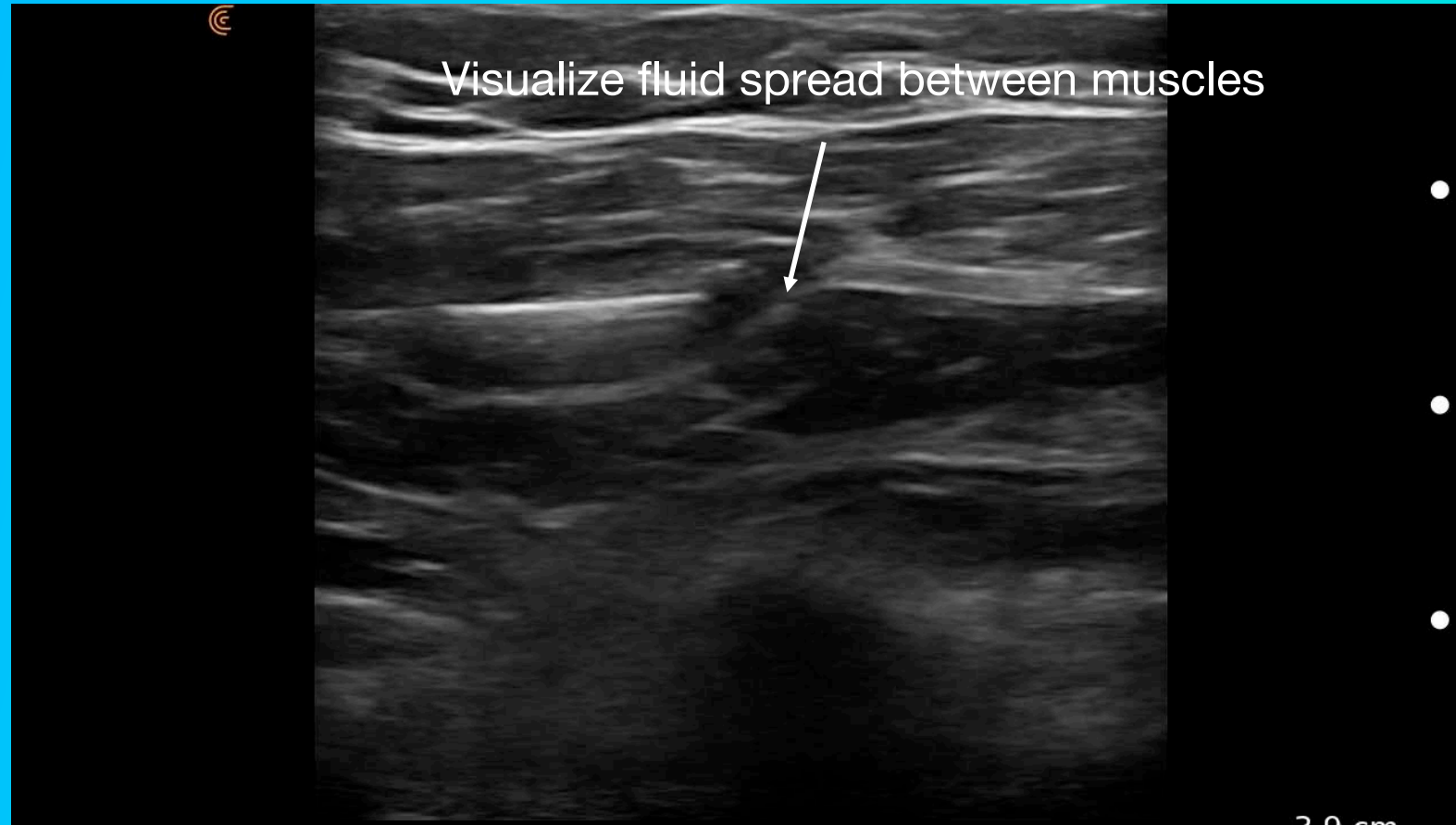


# Needle Visualization

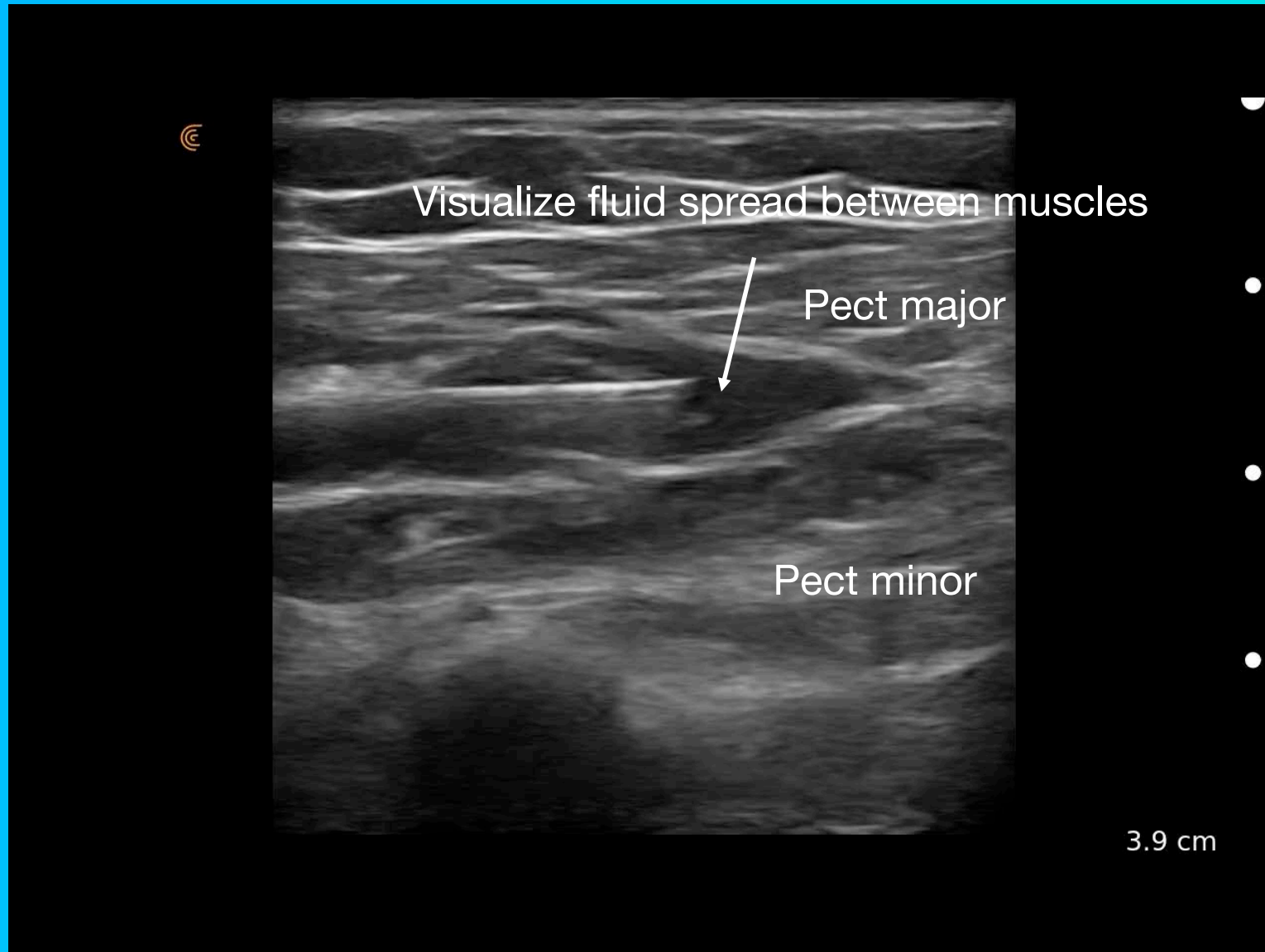




# Saline 2cc Test Dose



# Ropivacaine 15 cc

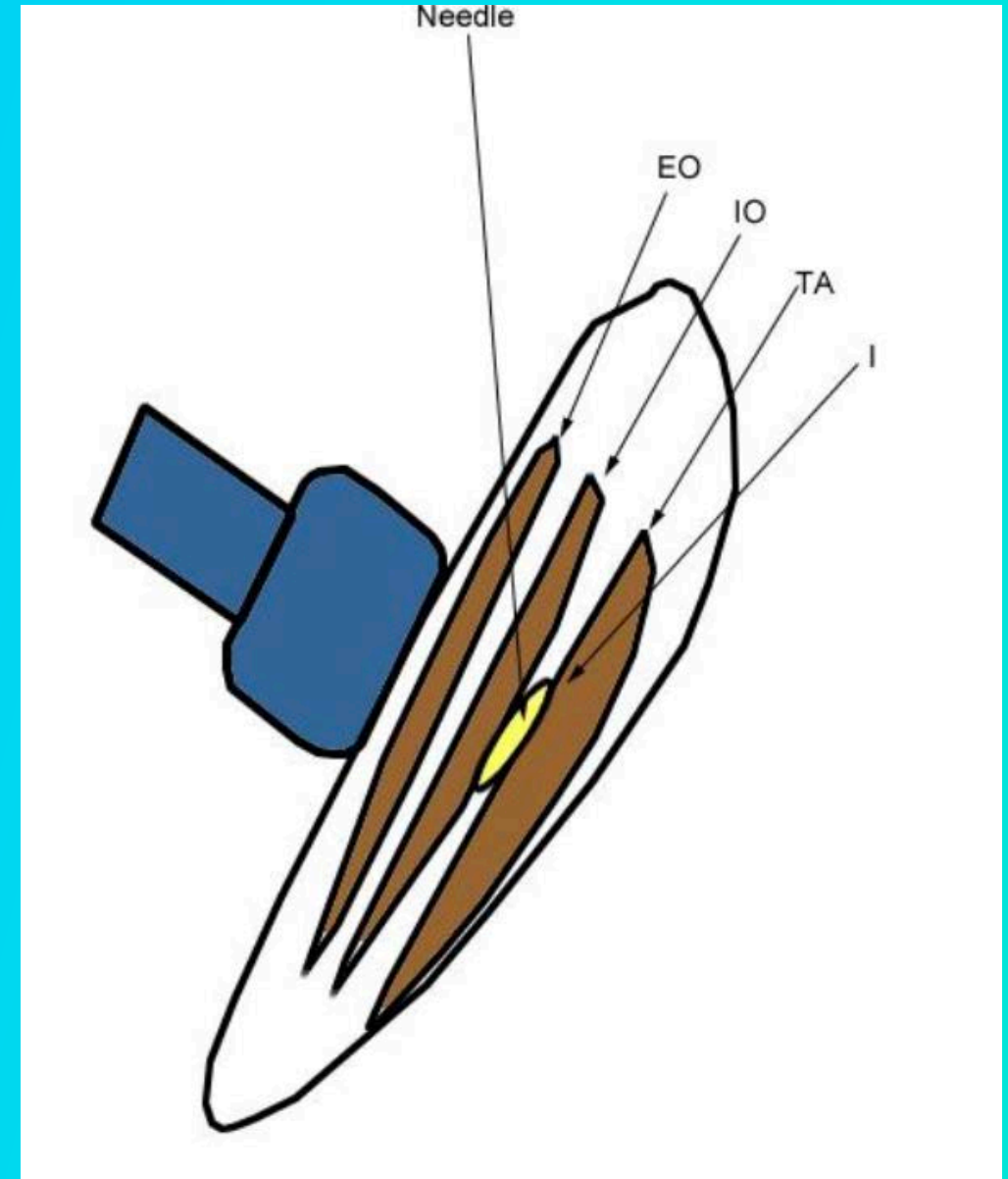


# My Observations

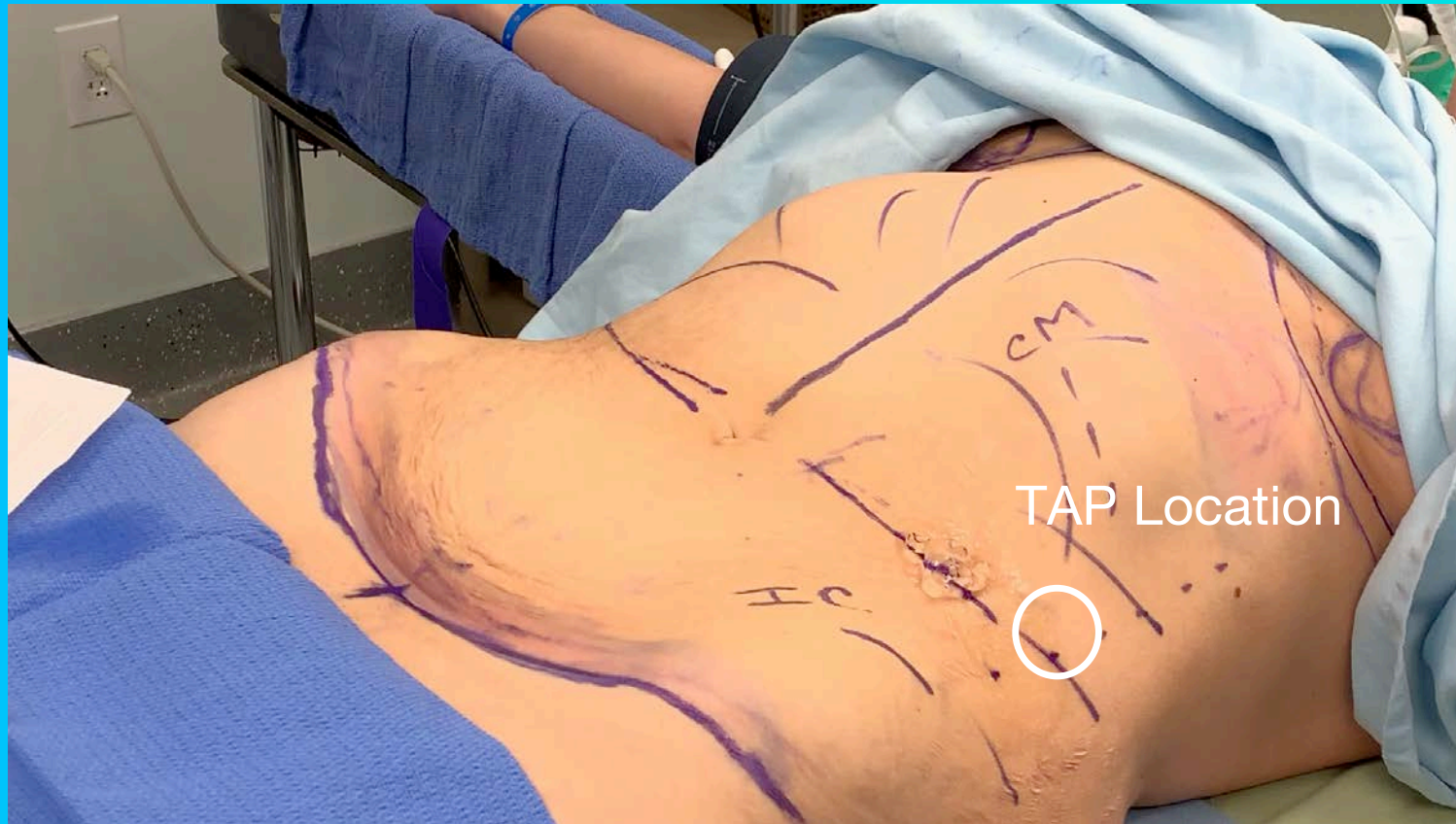
- ✿ Less Pectoralis spasm
- ✿ Fewer “high riding” implants
- ✿ Less narcotic use in PACU
- ✿ Less time in PACU

# Transversus Abdominal Plane Block

- Anesthetic is placed in fascial plane between transversalis and internal abdominal oblique

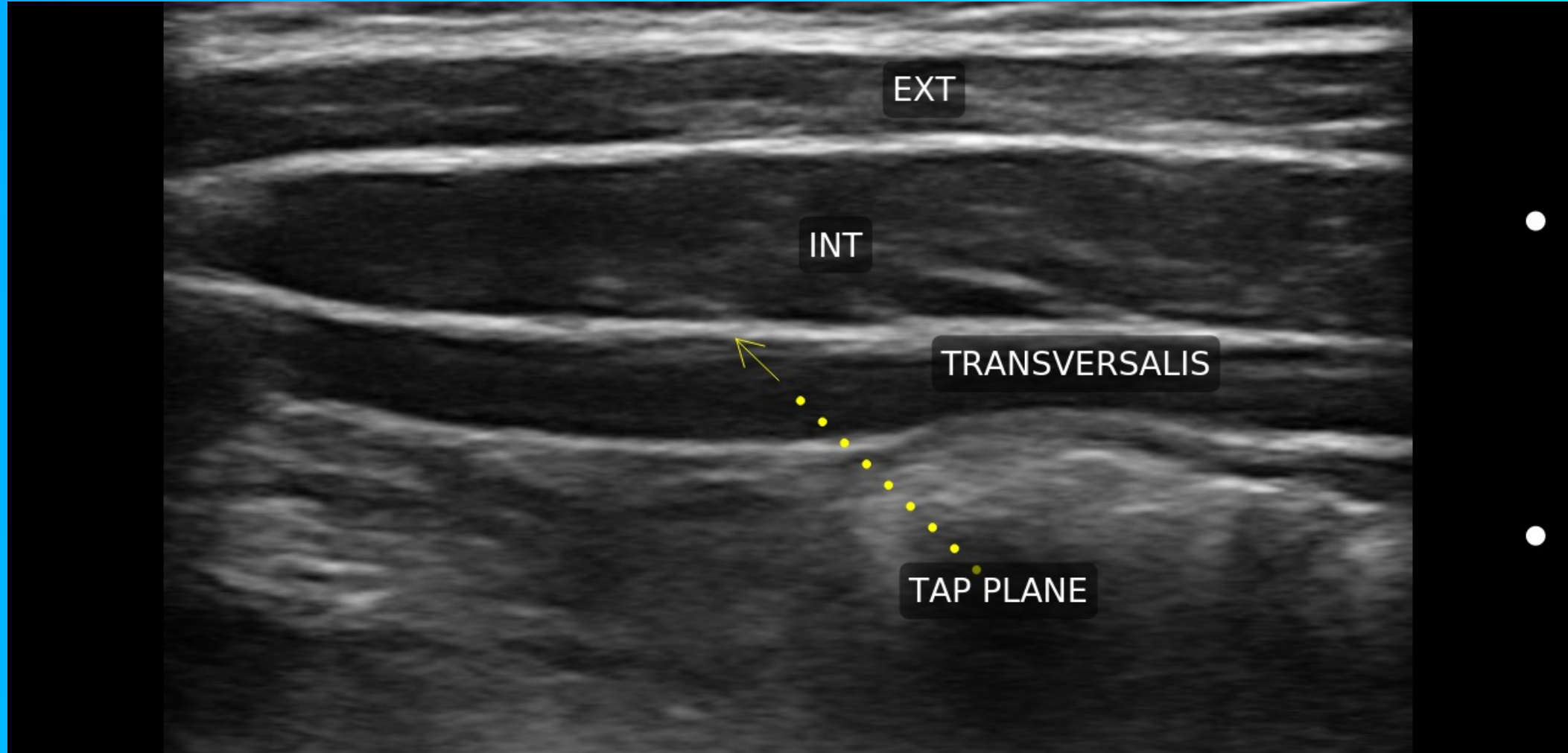


# TAP Block





# Anatomy TAP block

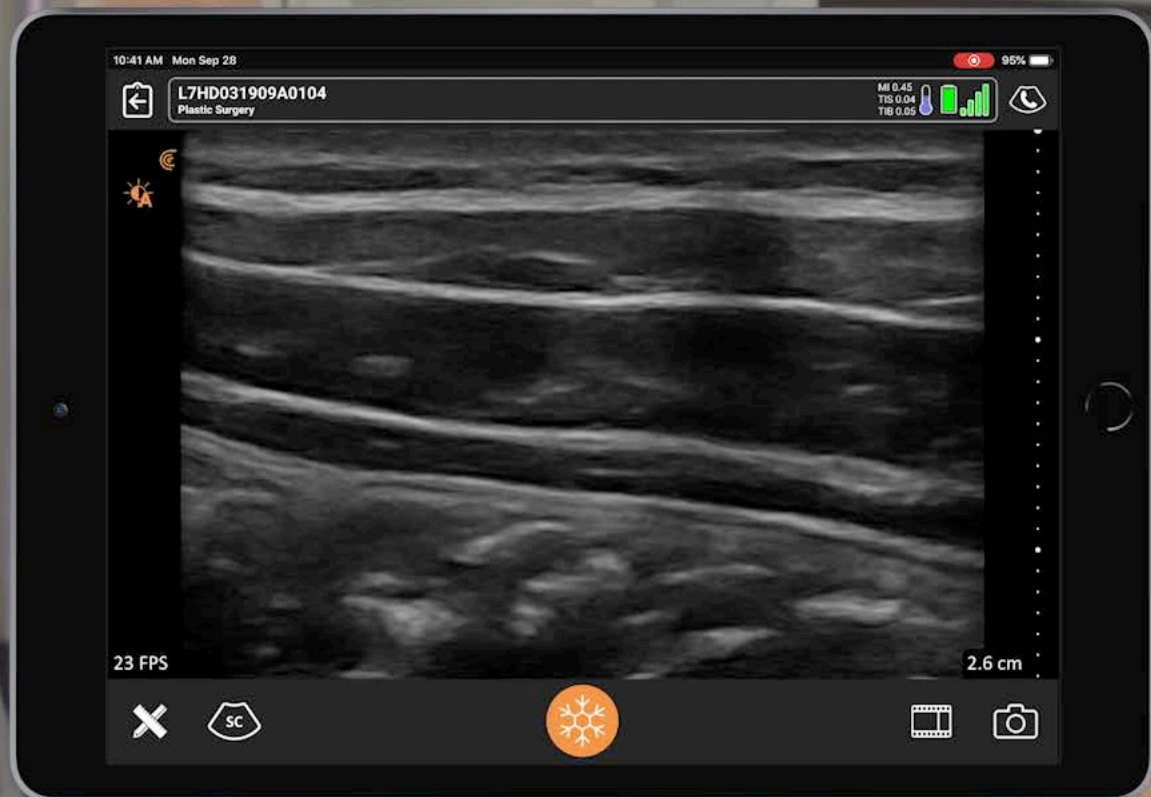




# LIVE DEMONSTRATION

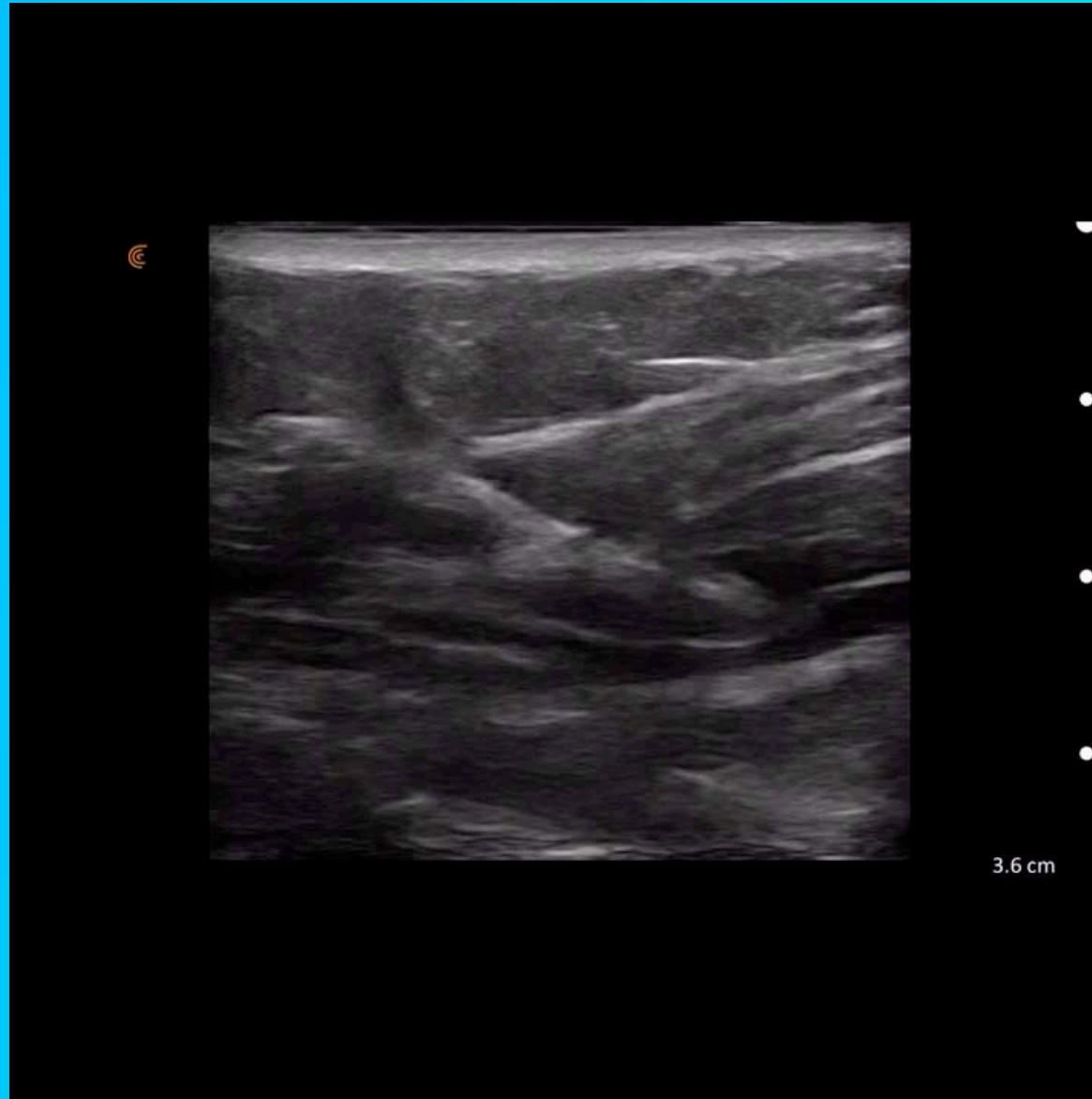
## TAP BLOCK



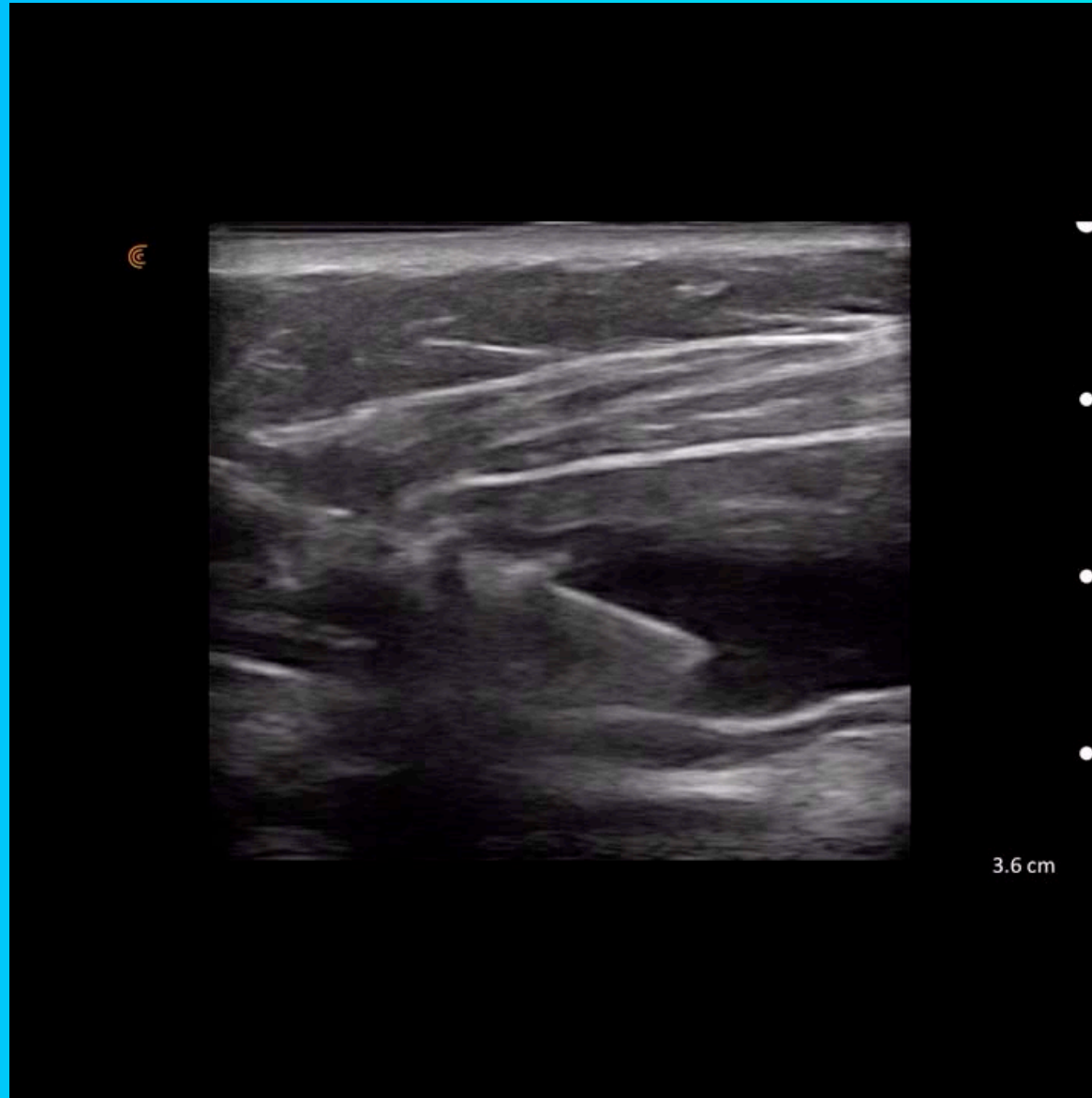




# Needle Entering TAP



# Exparel® Entering TAP



# Summary

- LAP and TAP blocks can add patient comfort and an easier recovery for placement of breast implants and abdominoplasty



# 10 Ways Ultrasound is Essential to Every Plastic Surgeon



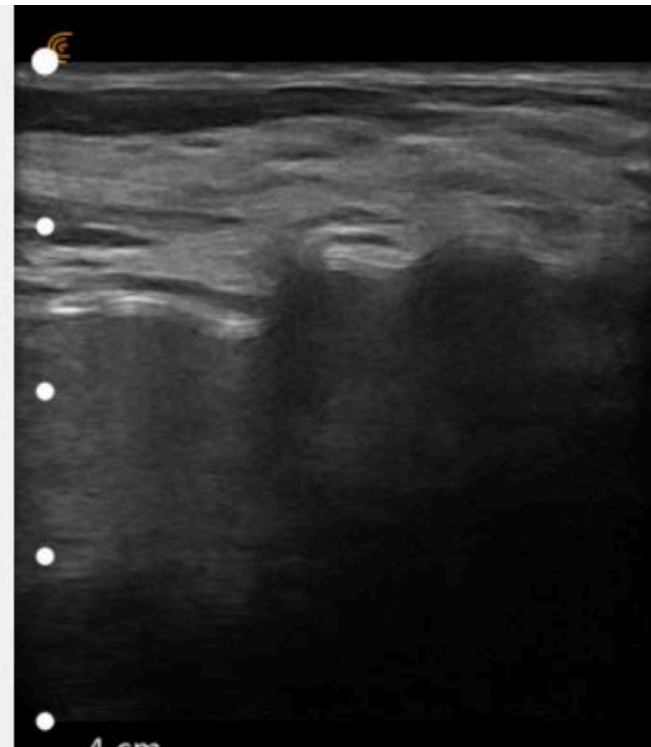
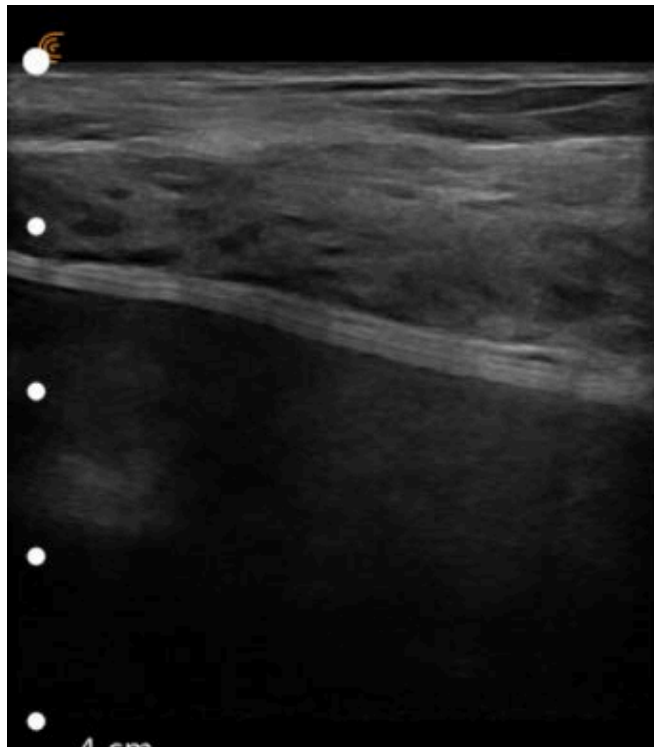
# 10 Ways Ultrasound is Essential

1. Make a confident diagnosis in one patient visit.
2. Save time and money with wireless ultrasound.
3. Perform on the spot ALCL work ups in real-time.
4. Eliminate surprises in the OR, improving safety.
5. Improve patient confidence and peace of mind.

# 10 Ways Ultrasound is Essential

6. Ensure greater success with face fillers.
7. Reduce pain with nerve blocks.
8. Guide injection procedures to reduce risk.
9. Use a handheld that's easy and affordable.
10. It's always fun to use ultrasound.

# ROI!



## Dr. Antoni Roldan

Tres Torres Clinic & Cima Hospital

“Clarius is a powerful and amazing tool that delivers confidence to the surgeon. I don't need to just imagine what is going on beneath the skin. I can see it clearly in great detail. My patients also like to watch the exam as I scan.”





# Clarius HD

Wireless Handheld  
High-Definition Image  
Plastic Surgery Presets  
Easy & Affordable  
No Subscription  
Free Clarius Cloud  
Unlimited Users



# Poll

What additional  
information would you  
like?



# Poll: Pre-Register

**NEXT FREE WEBINAR**

**Dermal Filler Safety:**

**How to Map Facial Vascular  
Anatomy in 2 Minutes Using  
Ultrasound**



Dr. Steven F. Weiner, MD  
Head & Neck Surgeon



# Questions?



Dr. Oron Frenkel



Dr. Marc Salzman





Thank you!