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WEBINAR

POCUS for Primary Care: Practical Skills for Everyday Practice

November 2025

Your Host

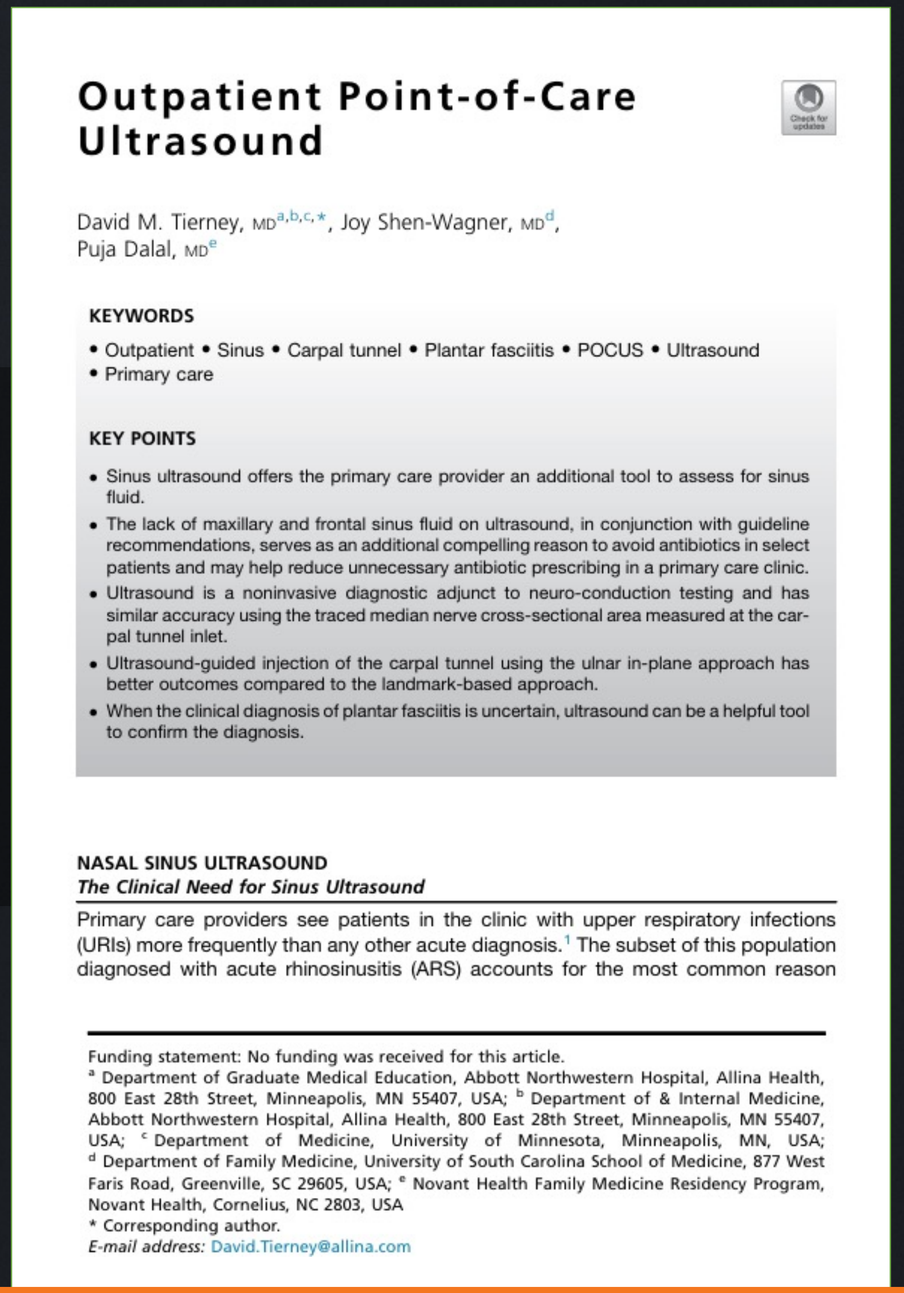
Shelley Guenther, CRGS, CRCS

Sonographer | Clinical Marketing Manager

Outpatient Point-of-Care Ultrasound

> “…there are several additional POCUS applications that are highly applicable to the outpatient setting and should be considered for use by primary care practitioners”

Tierney DM, Shen-Wagner J, Dalal P. Outpatient Point-of-Care Ultrasound. Med Clin North Am. 2025 Jan;109(1):203-216. doi: 10.1016/j.mcna.2024.06.004. Epub 2024 Oct 15. PMID: 39567094



Outpatient Point-of-Care Ultrasound

David M. Tierney, MD[a,b,c,*], Joy Shen-Wagner, MD[d], Puja Dalal, MD[e]

KEYWORDS

• Outpatient • Sinus • Carpal tunnel • Plantar fasciitis • POCUS • Ultrasound • Primary care

KEY POINTS

- Sinus ultrasound offers the primary care provider an additional tool to assess for sinus fluid.
- The lack of maxillary and frontal sinus fluid on ultrasound, in conjunction with guideline recommendations, serves as an additional compelling reason to avoid antibiotics in select patients and may help reduce unnecessary antibiotic prescribing in a primary care clinic.
- Ultrasound is a noninvasive diagnostic adjunct to neuro-conduction testing and has similar accuracy using the traced median nerve cross-sectional area measured at the carpal tunnel inlet.
- Ultrasound-guided injection of the carpal tunnel using the ulnar in-plane approach has better outcomes compared to the landmark-based approach.
- When the clinical diagnosis of plantar fasciitis is uncertain, ultrasound can be a helpful tool to confirm the diagnosis.

NASAL SINUS ULTRASOUND

The Clinical Need for Sinus Ultrasound

Primary care providers see patients in the clinic with upper respiratory infections (URIs) more frequently than any other acute diagnosis.[1] The subset of this population diagnosed with acute rhinosinusitis (ARS) accounts for the most common reason

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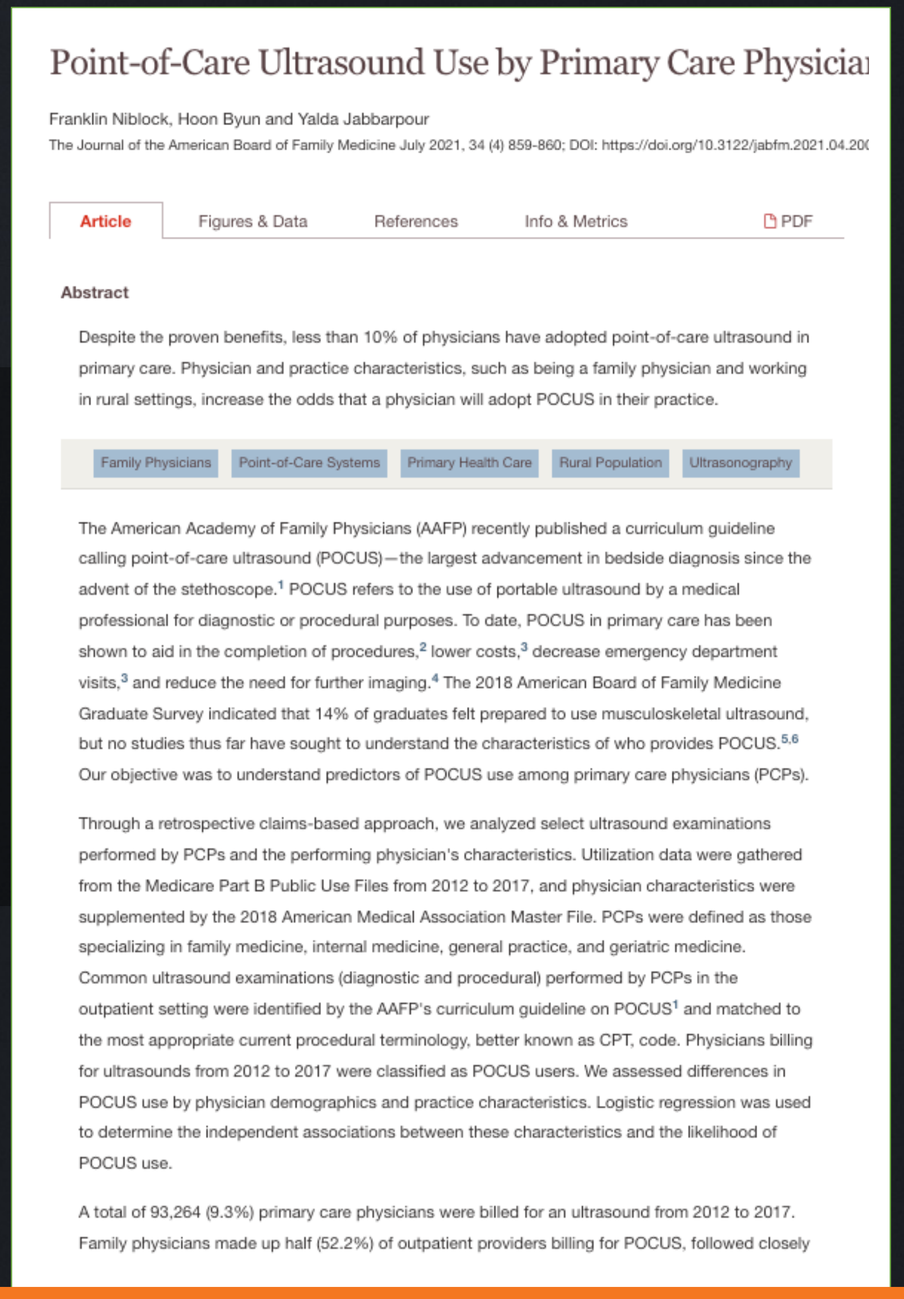
Point-of-Care Ultrasound Use by Primary Care Physicians

> “To date, POCUS in primary care has been shown to aid in the completion of procedures, lower costs, decrease emergency department visits, and reduce the need for further imaging.”

Niblock F, Byun H, Jabbarpour Y. Point-of-Care Ultrasound Use by Primary Care Physicians. J Am Board Fam Med. 2021 Jul-Aug;34(4):859-860. doi: 10.3122/jabfm.2021.04.200619. PMID: 34312281



Point-of-Care Ultrasound Use by Primary Care Physicia

Franklin Niblock, Hoon Byun and Yalda Jabbarpour

The Journal of the American Board of Family Medicine July 2021, 34 (4) 859-860; DOI: https://doi.org/10.3122/jabfm.2021.04.20(

Article | Figures & Data | References | Info & Metrics | PDF

Abstract

Despite the proven benefits, less than 10% of physicians have adopted point-of-care ultrasound in primary care. Physician and practice characteristics, such as being a family physician and working in rural settings, increase the odds that a physician will adopt POCUS in their practice.

Family Physicians | Point-of-Care Systems | Primary Health Care | Rural Population | Ultrasonography

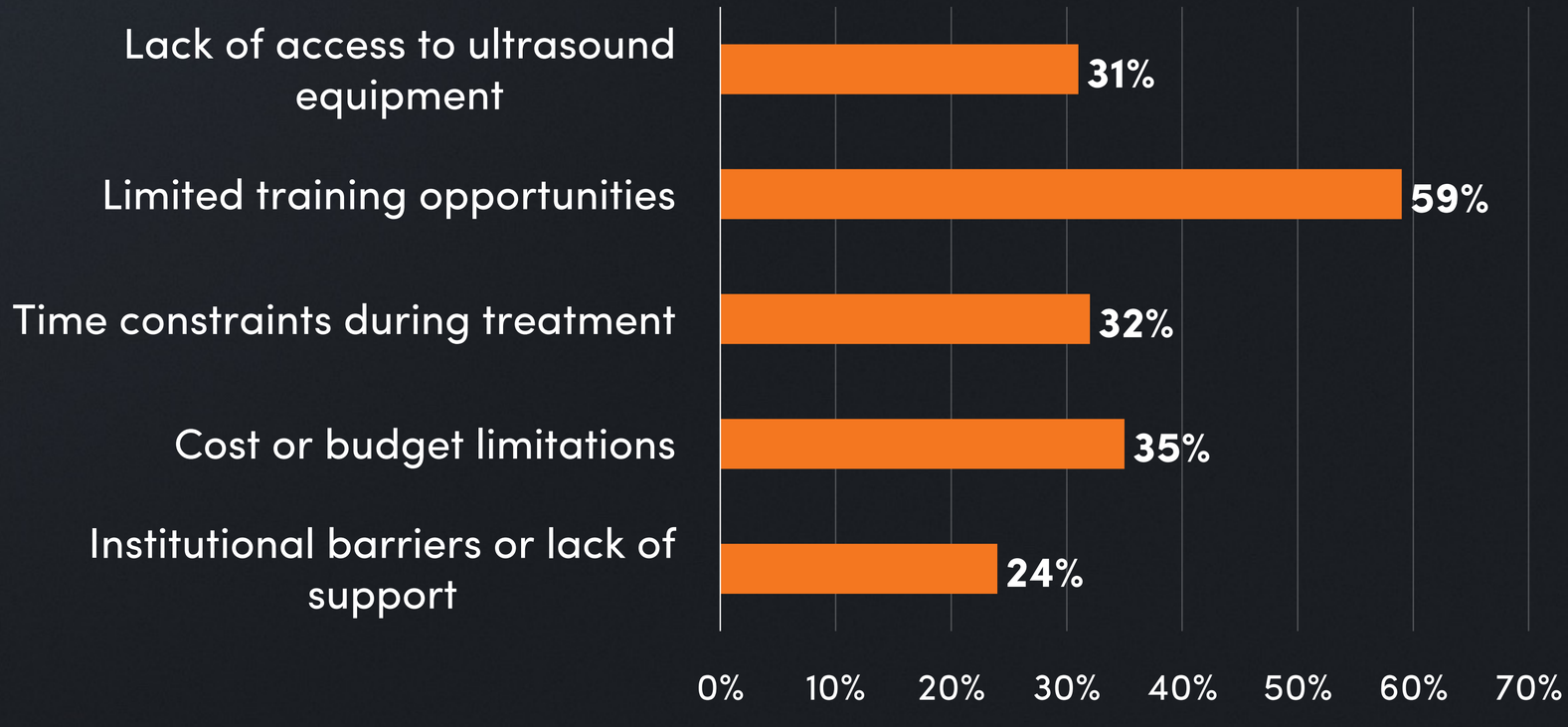
The American Academy of Family Physicians (AAFP) recently published a curriculum guideline calling point-of-care ultrasound (POCUS)—the largest advancement in bedside diagnosis since the advent of the stethoscope.[1] POCUS refers to the use of portable ultrasound by a medical professional for diagnostic or procedural purposes. To date, POCUS in primary care has been shown to aid in the completion of procedures,[2] lower costs,[3] decrease emergency department visits,[3] and reduce the need for further imaging.[4] The 2018 American Board of Family Medicine Graduate Survey indicated that 14% of graduates felt prepared to use musculoskeletal ultrasound, but no studies thus far have sought to understand the characteristics of who provides POCUS.[5,6] Our objective was to understand predictors of POCUS use among primary care physicians (PCPs).

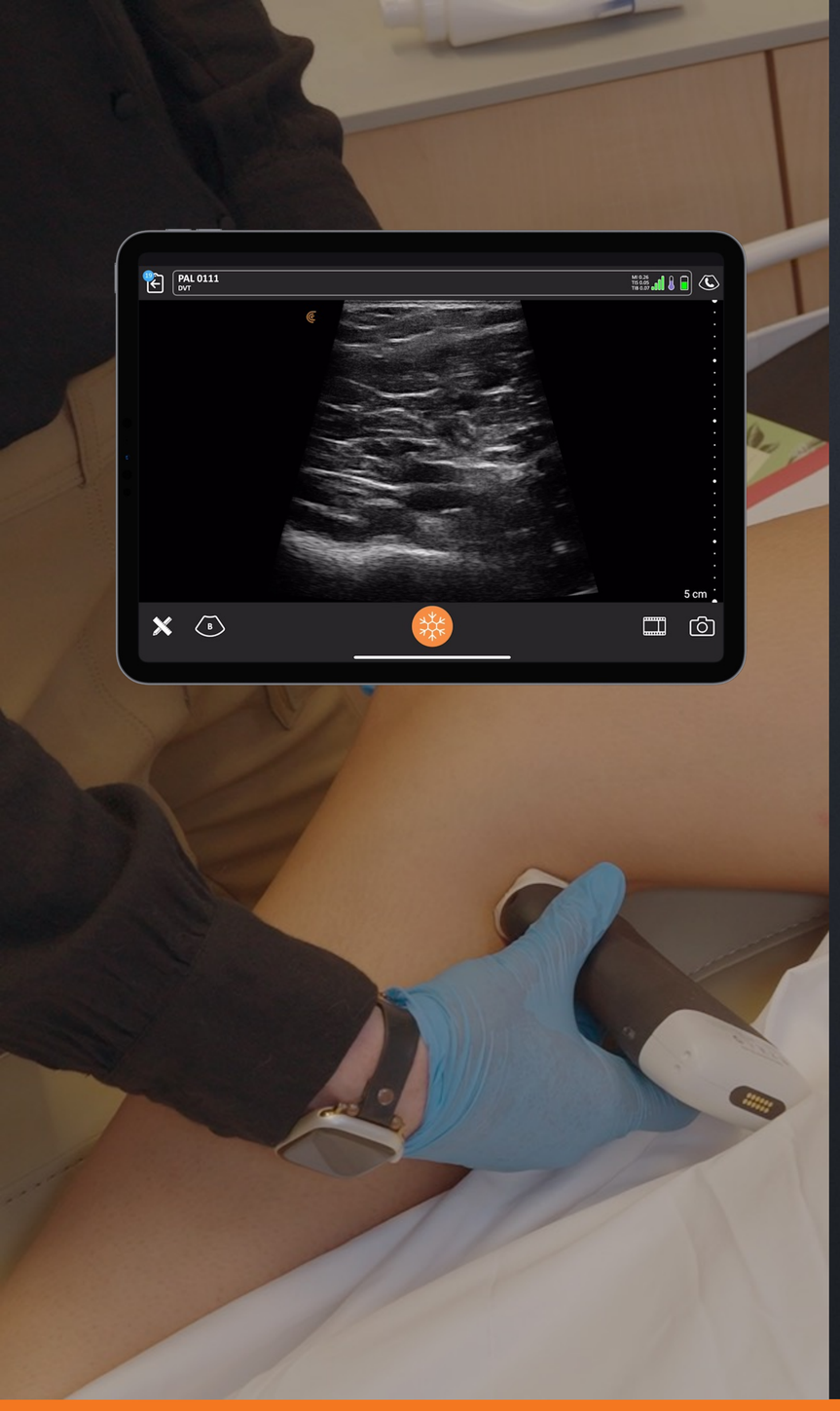
Through a retrospective claims-based approach, we analyzed select ultrasound examinations performed by PCPs and the performing physician's characteristics. Utilization data were gathered from the Medicare Part B Public Use Files from 2012 to 2017, and physician characteristics were supplemented by the 2018 American Medical Association Master File. PCPs were defined as those specializing in family medicine, internal medicine, general practice, and geriatric medicine. Common ultrasound examinations (diagnostic and procedural) performed by PCPs in the outpatient setting were identified by the AAFP's curriculum guideline on POCUS[1] and matched to the most appropriate current procedural terminology, better known as CPT, code. Physicians billing for ultrasounds from 2012 to 2017 were classified as POCUS users. We assessed differences in POCUS use by physician demographics and practice characteristics. Logistic regression was used to determine the independent associations between these characteristics and the likelihood of POCUS use.

A total of 93,264 (9.3%) primary care physicians were billed for an ultrasound from 2012 to 2017. Family physicians made up half (52.2%) of outpatient providers billing for POCUS, followed closely

Interactive Poll

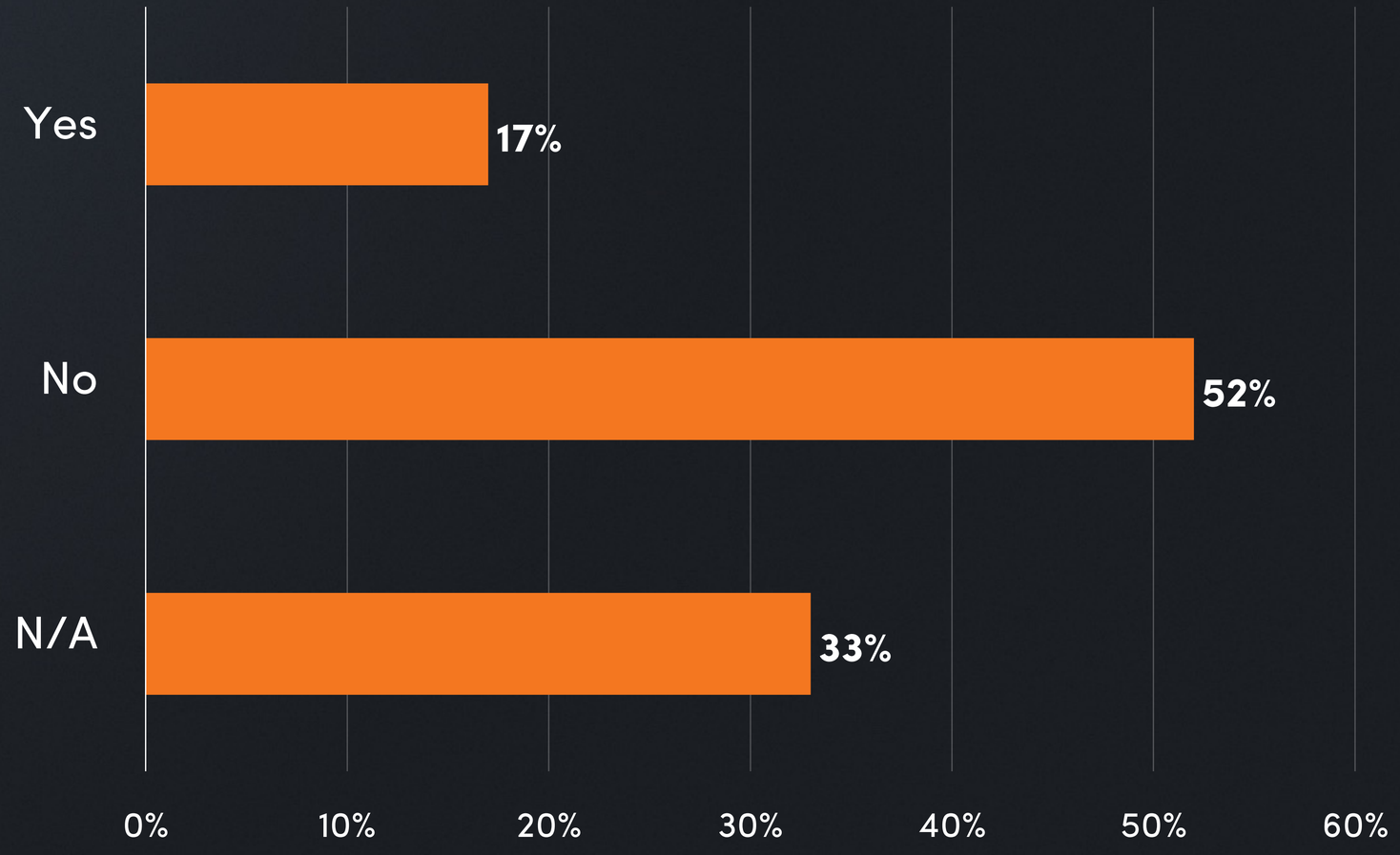
What are the barriers to having a POCUS program at your facility?





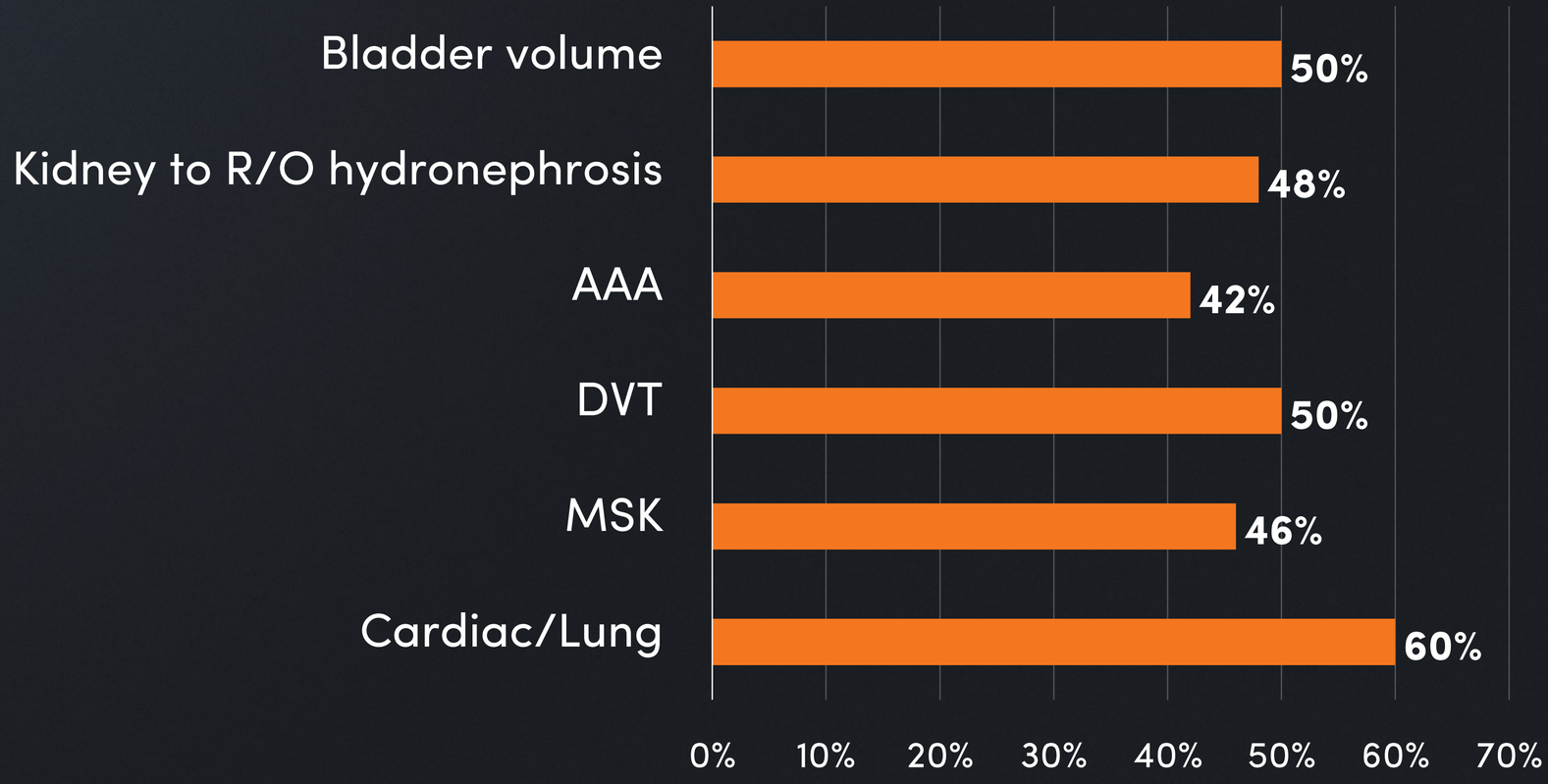
Interactive Poll

Are you billing for POCUS?



Interactive Poll

What are the top 3 POCUS applications you would find most beneficial in your practice?



Your Expert Speaker

Dr. Tatiana Havryliuk

Founder of Hello Sono | Emergency Physician

clarius Ultrasound Anywhere | HelloSono

FREE WEBINAR

POCUS for Primary Care: Practical Skills for Everyday Practice

November 04, 2025 - 2 PM Pacific | 5 PM Eastern | 10 PM British | 11 PM Central EU
(November 05, 2025 - 7 AM Korea | 9 AM Australia Eastern | 11 AM New Zealand)

with Dr. Tatiana Havryliuk

A Little More About Me

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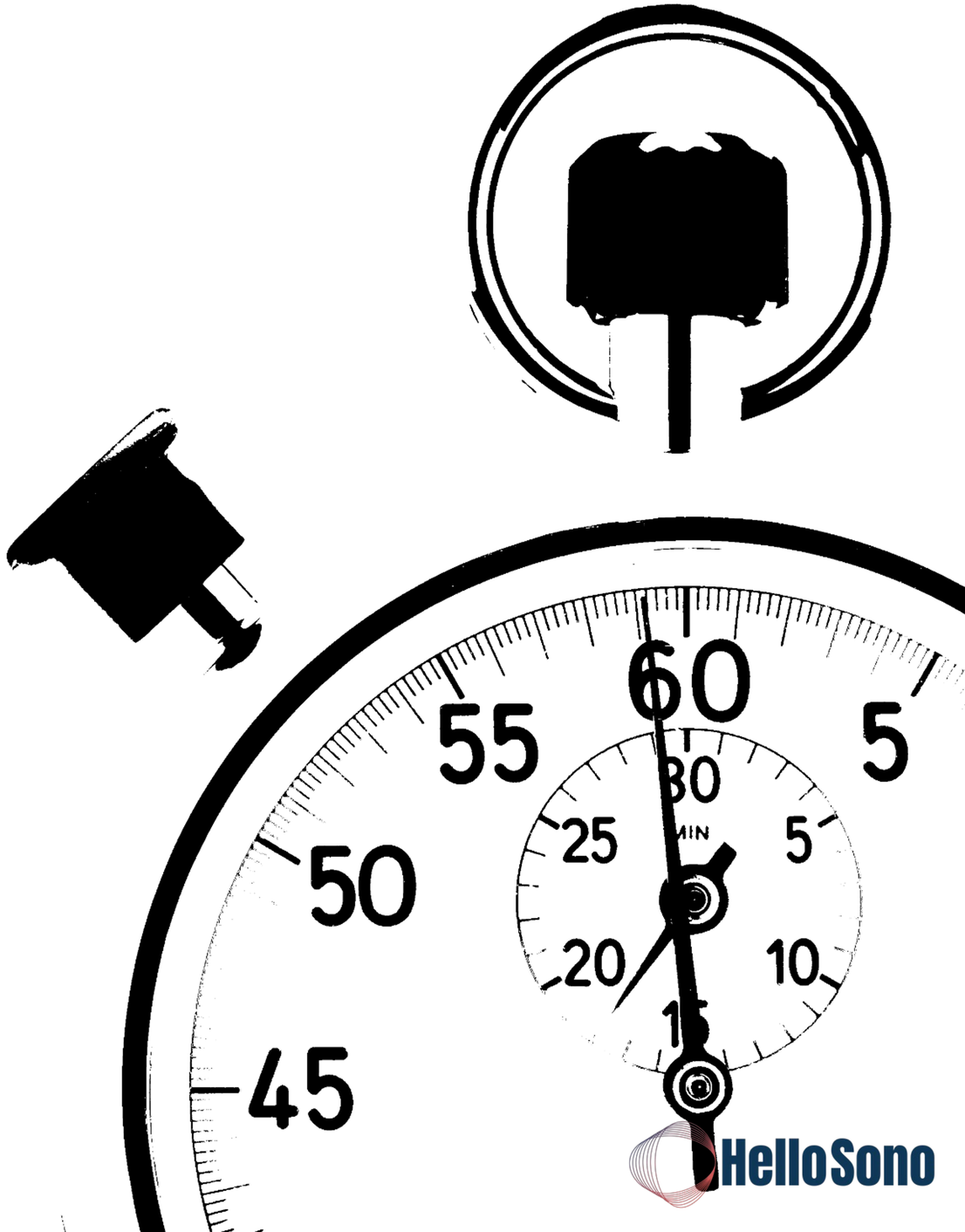
Agenda

- ✓ Why POCUS
- ✓ **Top POCUS applications**
- ✓ Implementation
- ✓ Credentialing
- ✓ ROI
- ✓ Live scanning
- ✓ Q&A



Why POCUS

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Why Now

- Affordable
- Plenty of evidence
- Backed by key organizations

- Fits into value-based care model
- Mitigates radiology tech shortage

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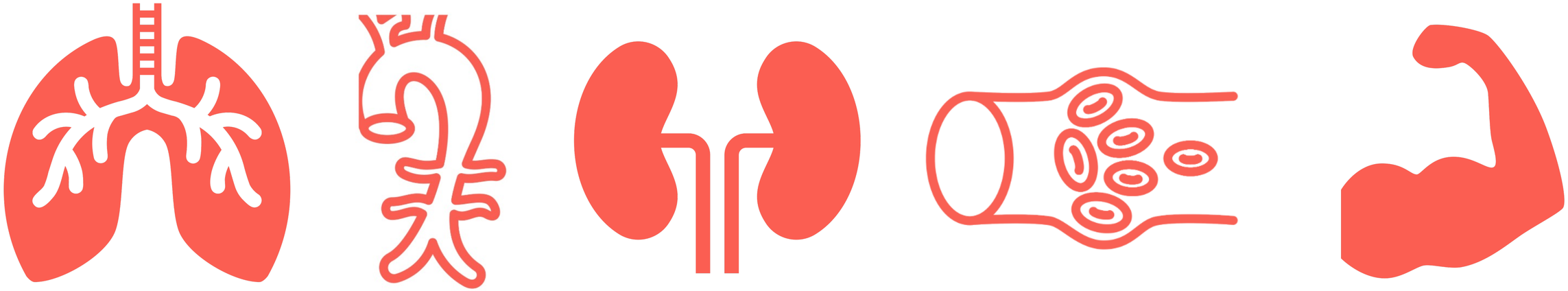
High-Yield Use Cases



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Lung Ultrasound

Indications

- ✓Is there a pneumothorax?
- ✓Is there an effusion?
- ✓Is there pulmonary edema?
- ✓Is there pneumonia?

- ✓Dyspnea
- ✓CHF
- ✓Chest pain
- ✓Fever | cough

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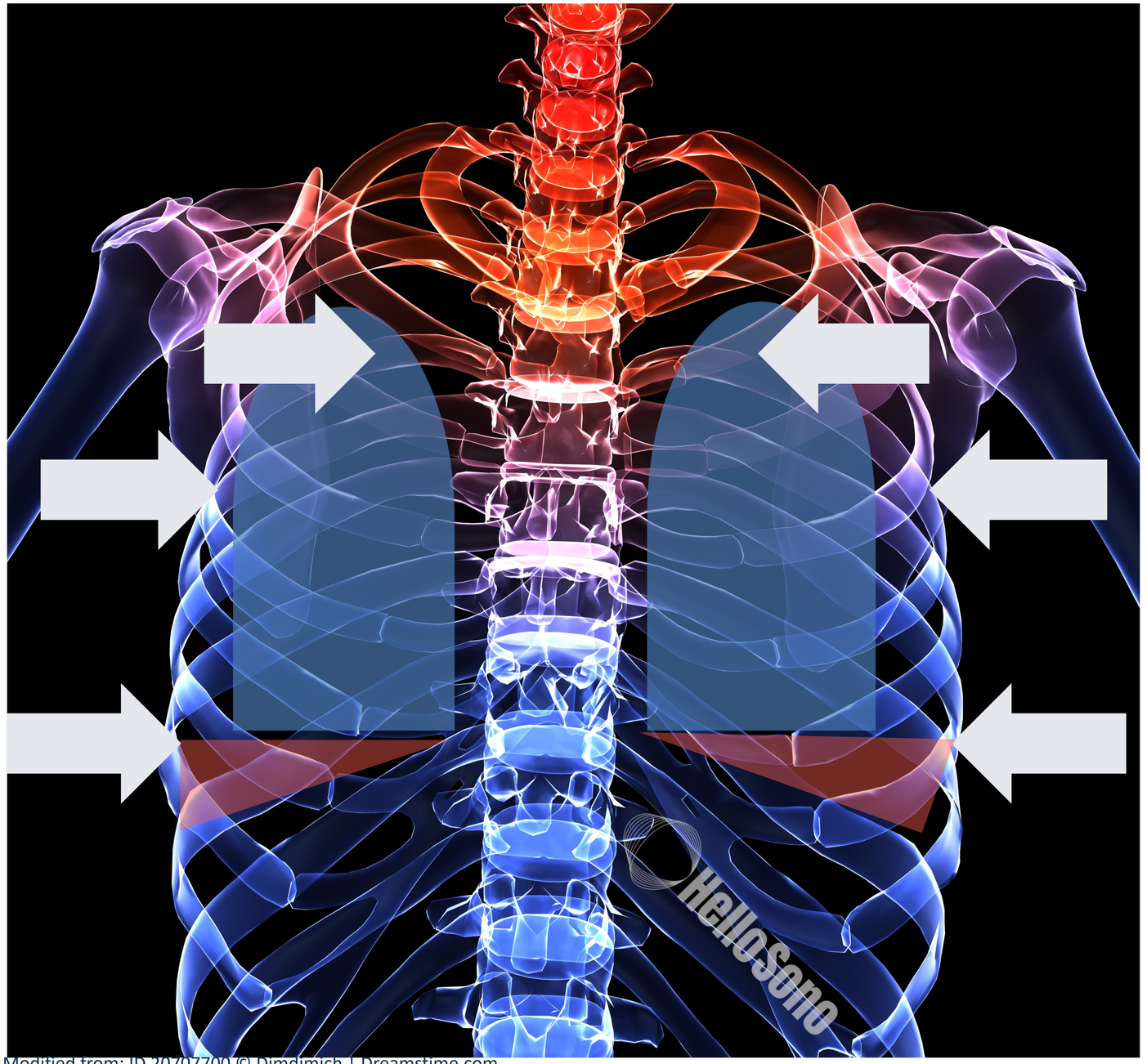
Technique

- ✓Look for artifacts
- ✓Scan in 6 fields



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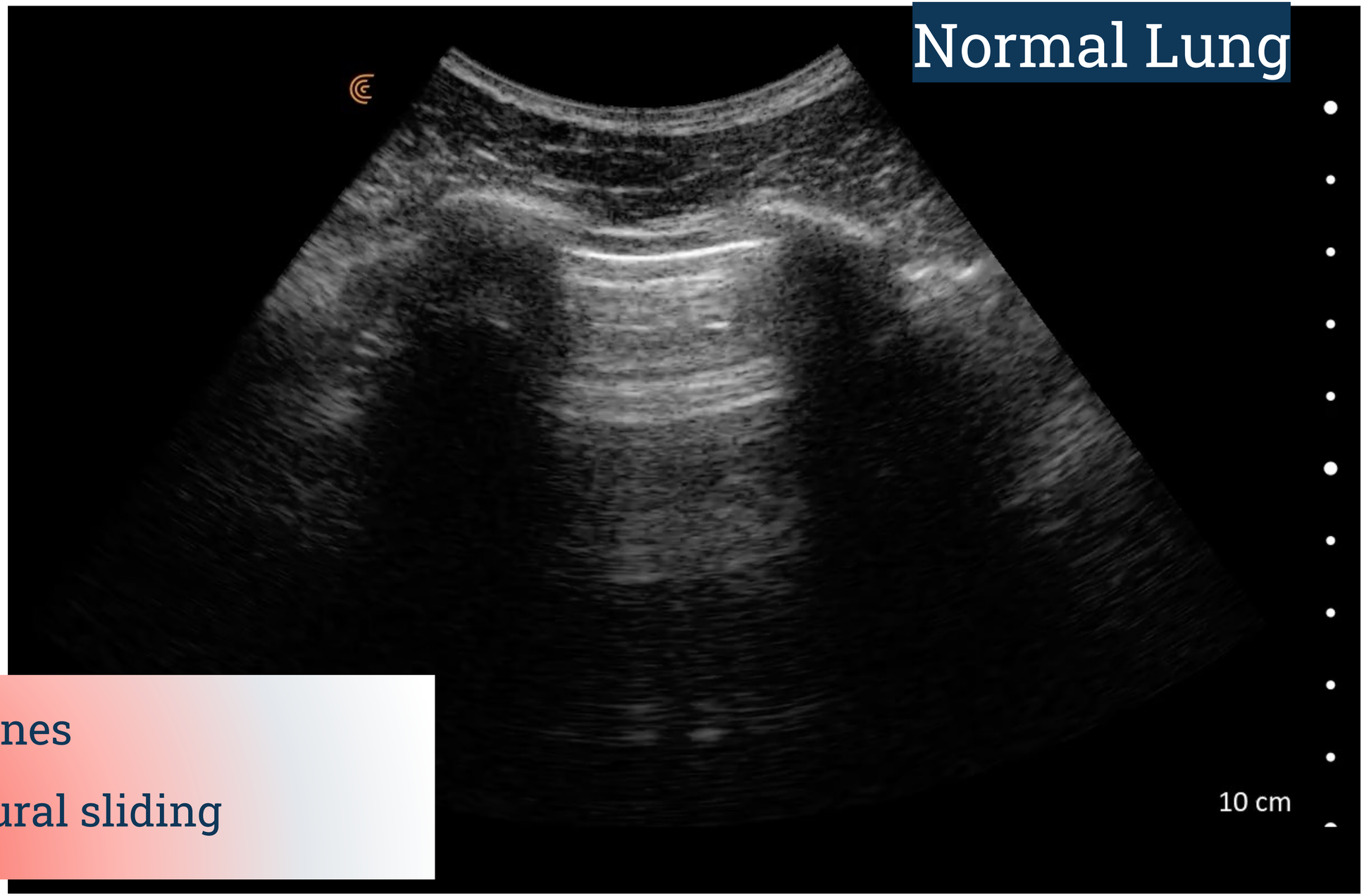
Normal Lung



- ✓ A-lines
- ✓ Pleural sliding

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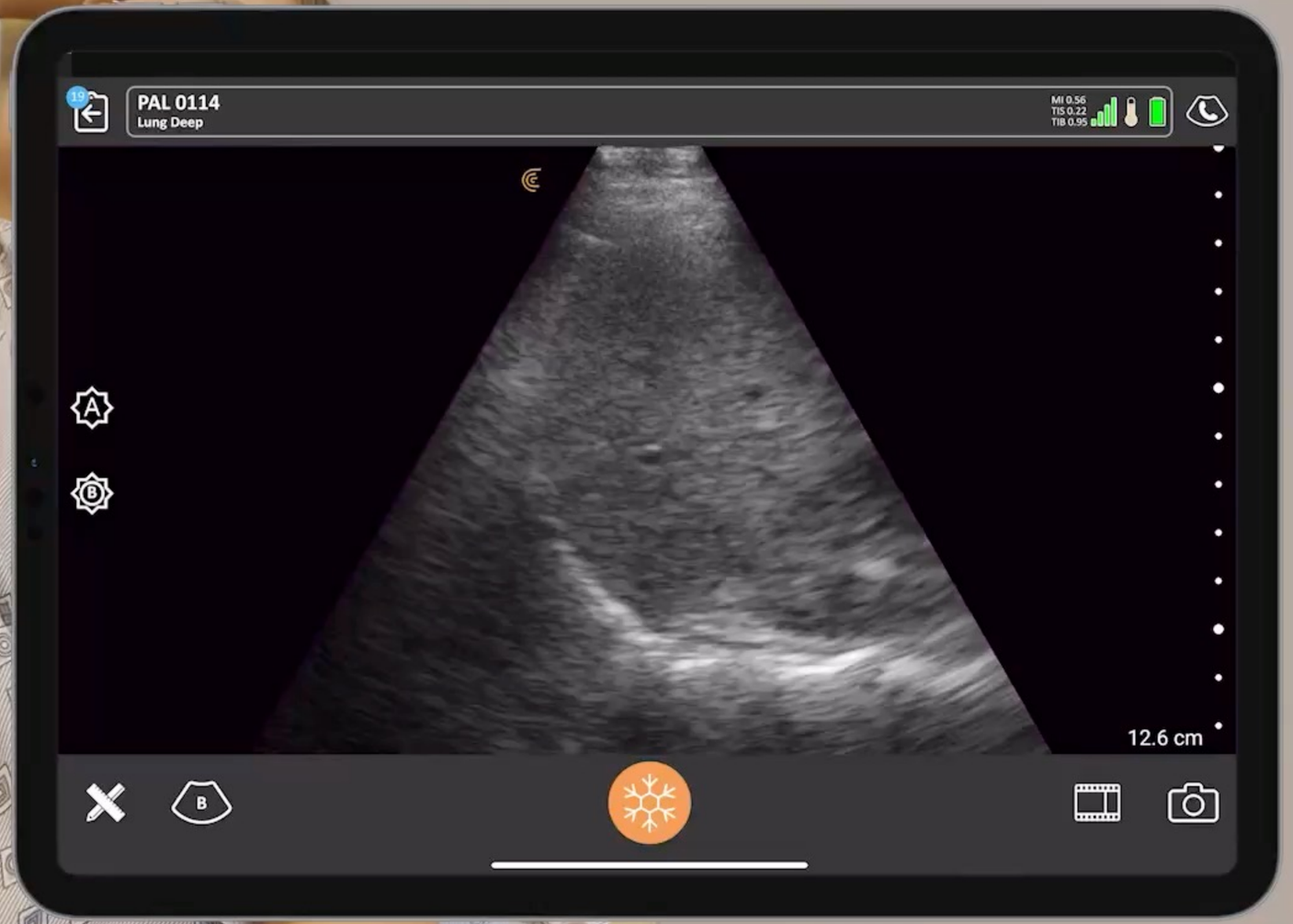
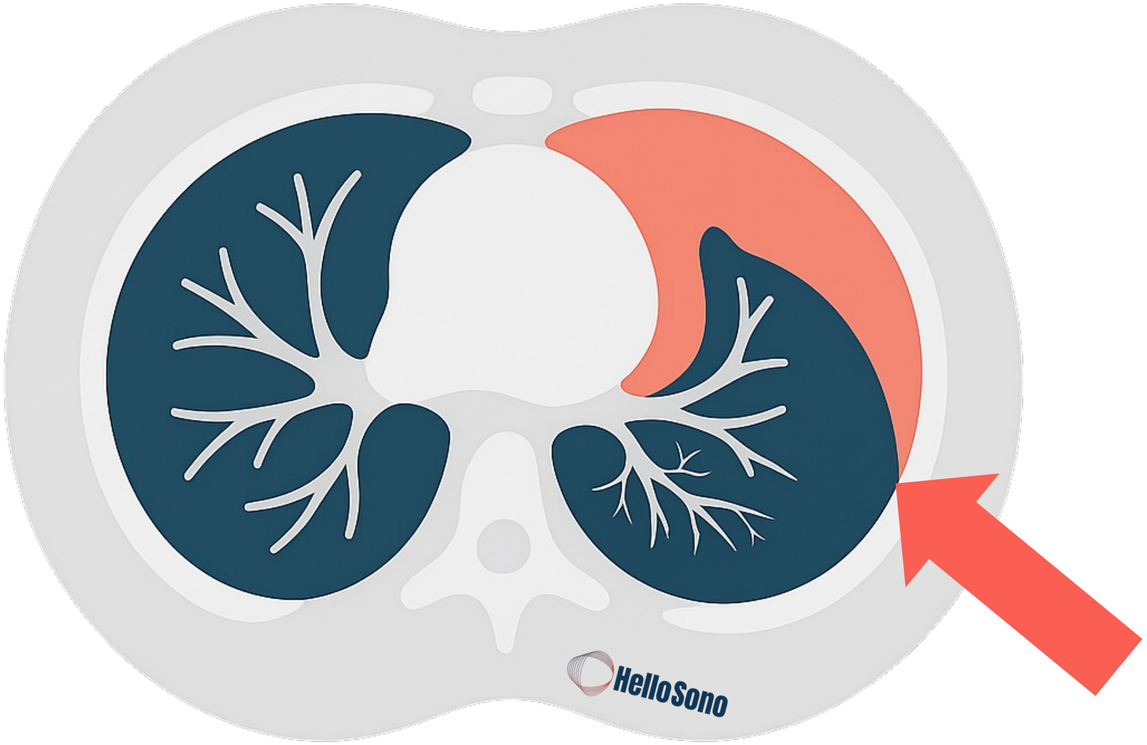
Lung Base



- ✓ Mirror image artifact
- ✓ No spine sign

Pneumothorax



Lung point

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Pulmonary Edema

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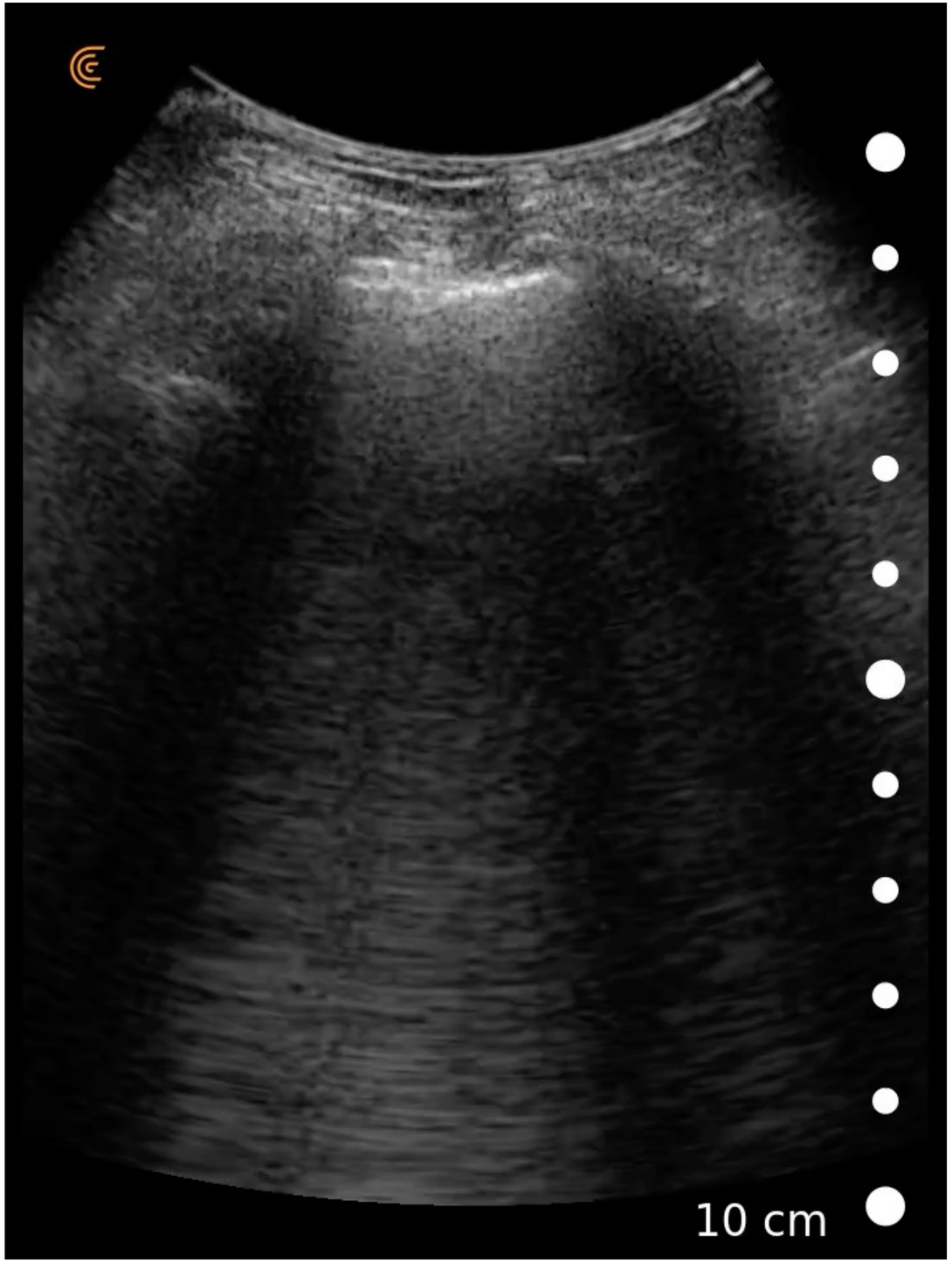

- ✓ B-lines
- ✓ Focal vs. diffuse
- ✓ Track progress

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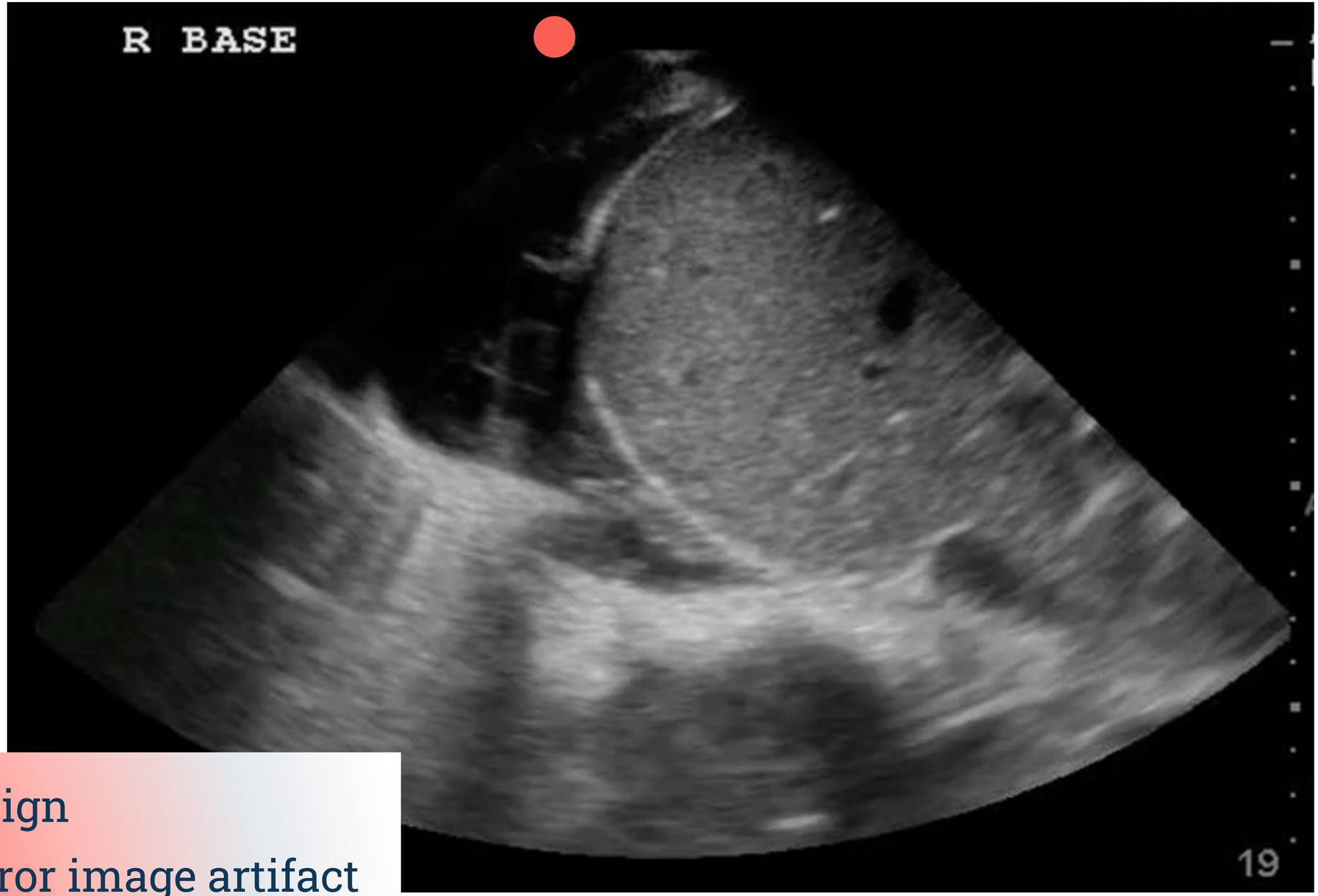
Pleural Effusion



- ✓ Spine sign
- ✓ No mirror image artifact

Pneumonia

Dynamic air bronchograms

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Lung Ultrasound: Impact

- ✓ Avoid radiation.
- ✓ Mitigate X-ray tech shortage problem.
- ✓ Rule out dangerous pathology.
- ✓ Save time & costs for the patient.
- ✓ Start appropriate treatment sooner.
- ✓ Educate the patient.

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Abdominal Aorta Ultrasound

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Indications

Is there AAA?

Is there free fluid?

Is there a dissection?

- ✓ Abdominal | flank pain
- ✓ Hematuria
- ✓ Hypertension | hypotension
- ✓ Pulsatile mass

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Technique

- ✓ Two planes
  - Transverse (4 views)
  - Sagittal (2 views)
- ✓ Identify the vertebral shadow
- ✓ Measure the outer wall to outer wall diameter

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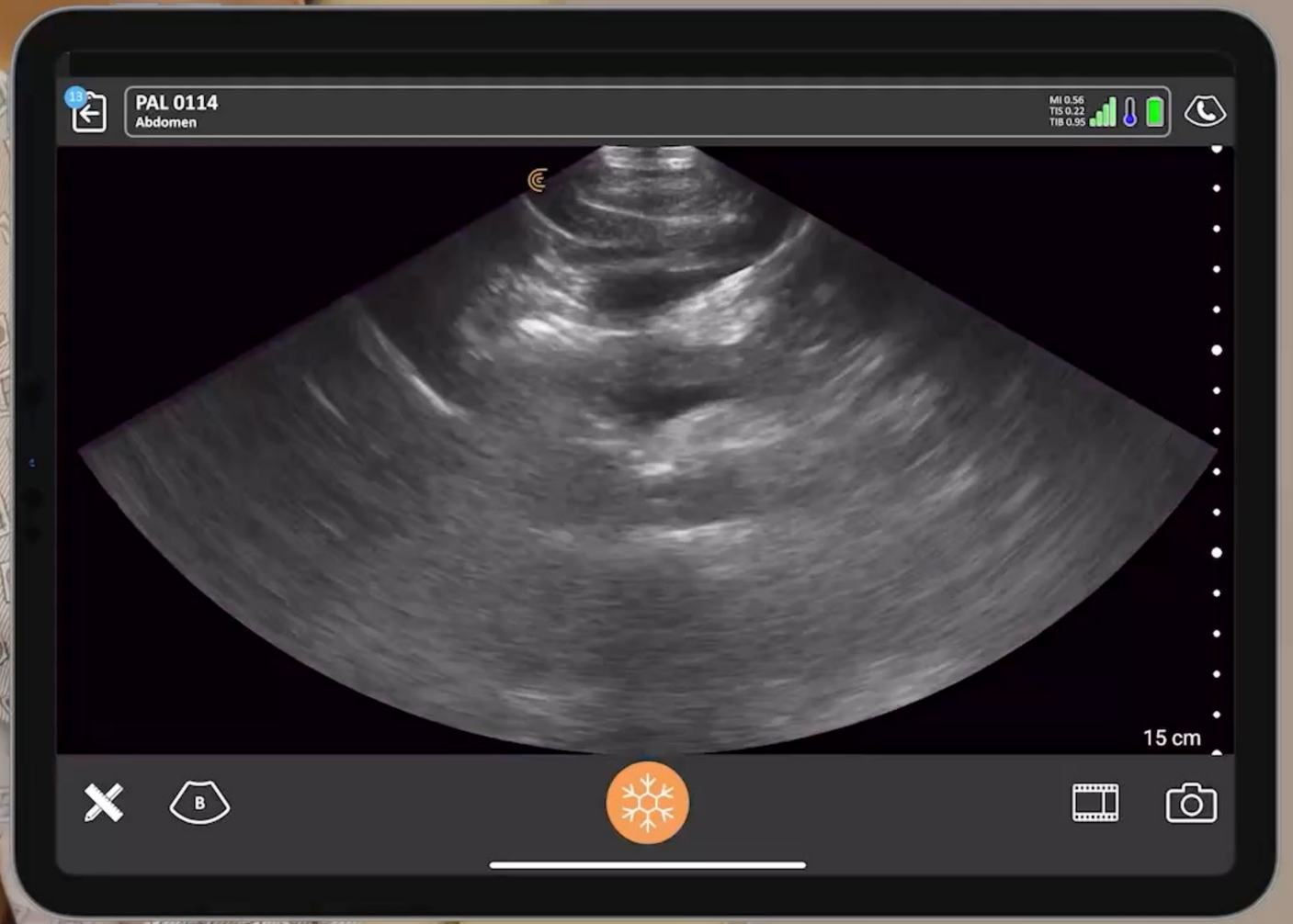
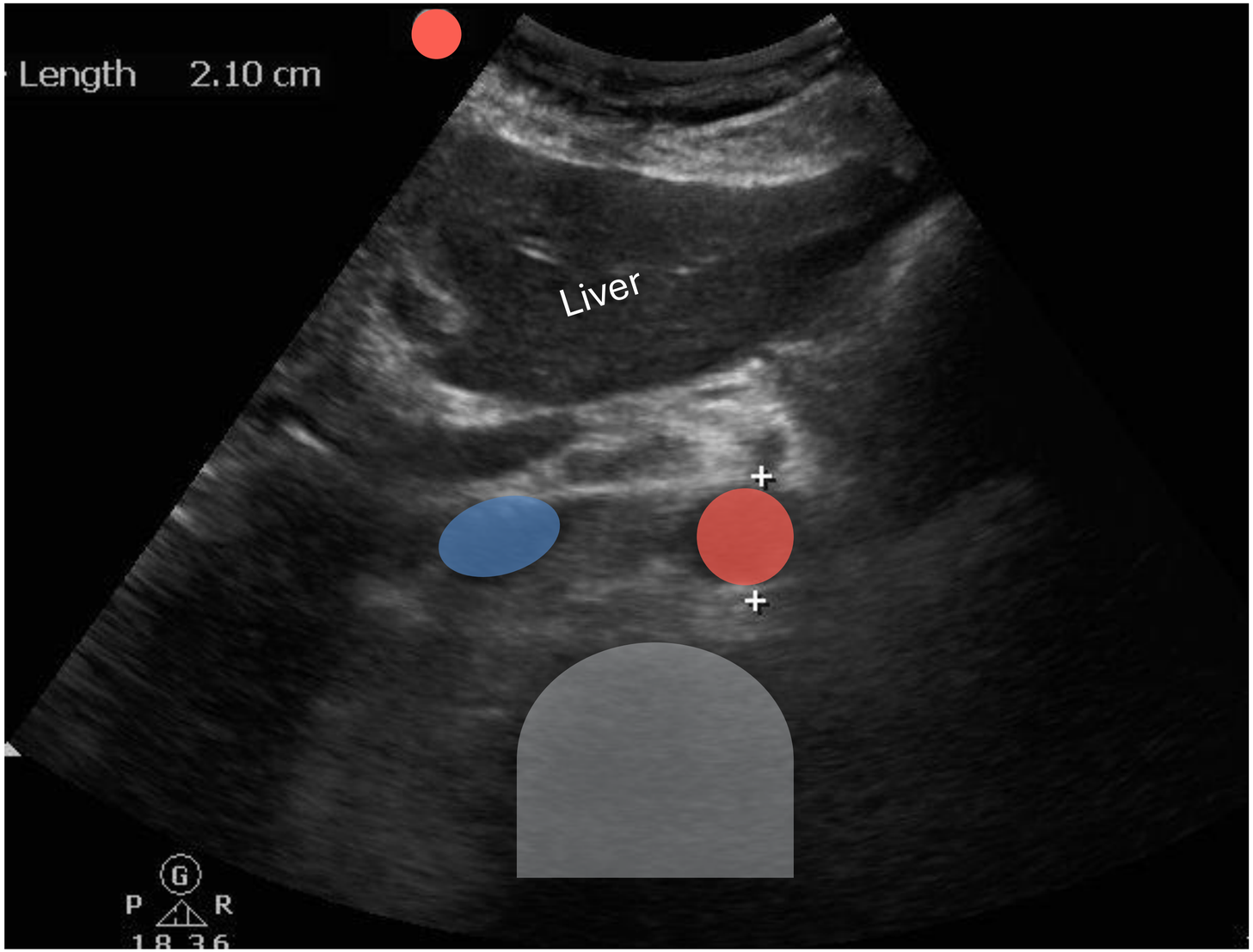
Technique



Transverse

Transverse Aorta

RIGHT



LEFT

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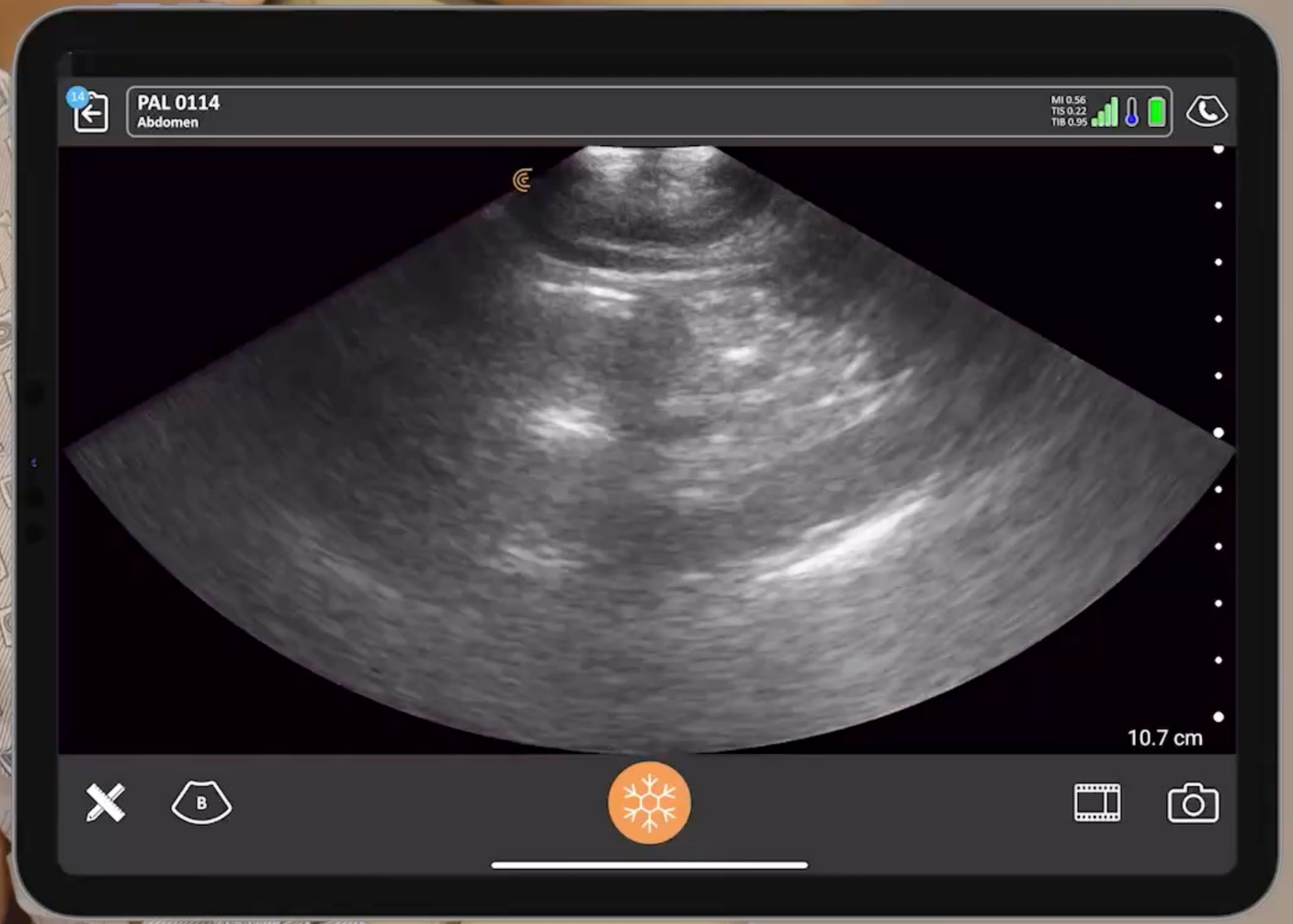
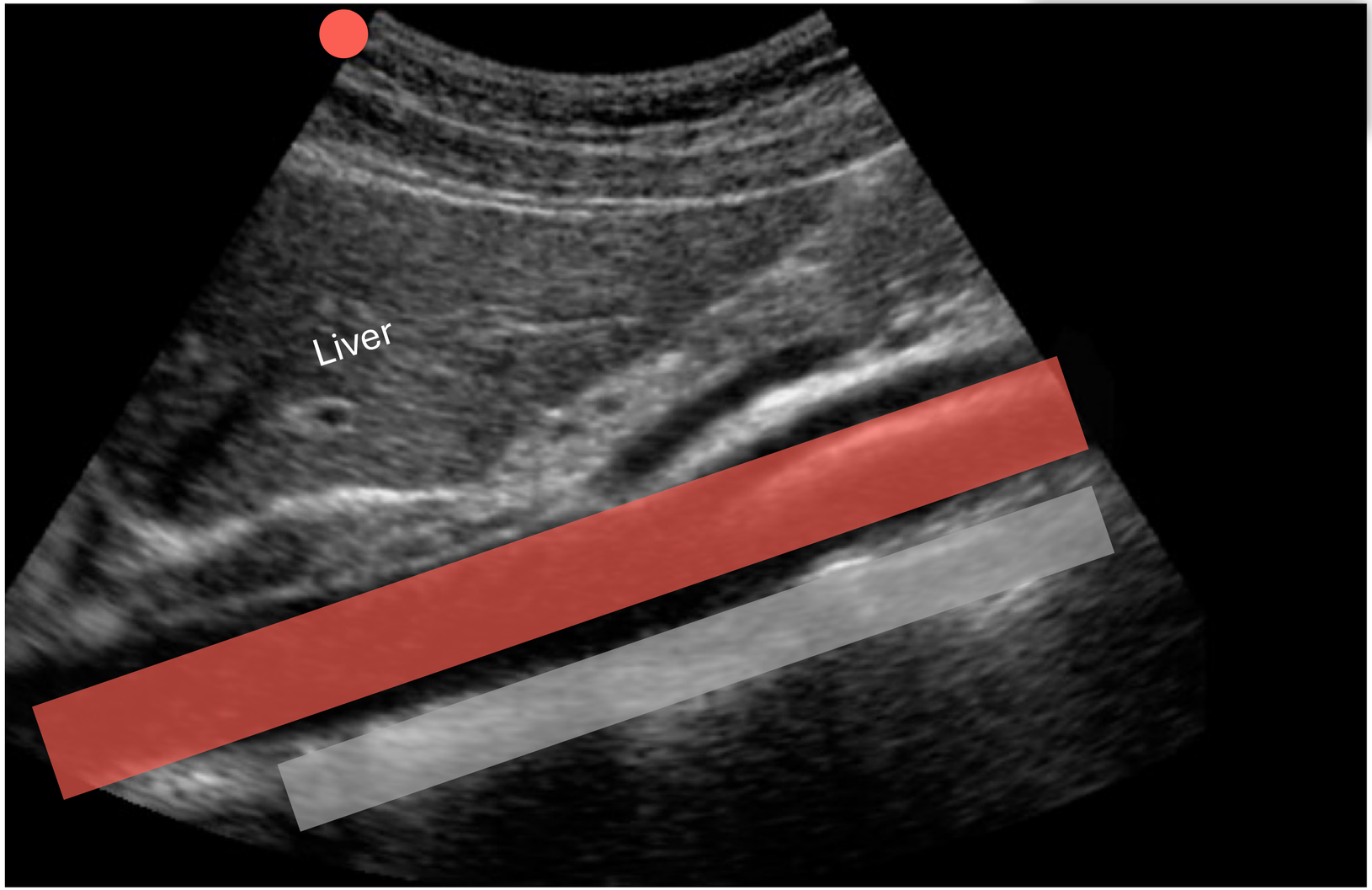
Technique



Sagittal

Sagittal Aorta

ANTERIOR



CEPHALAD

CAUDAL

POSTERIOR

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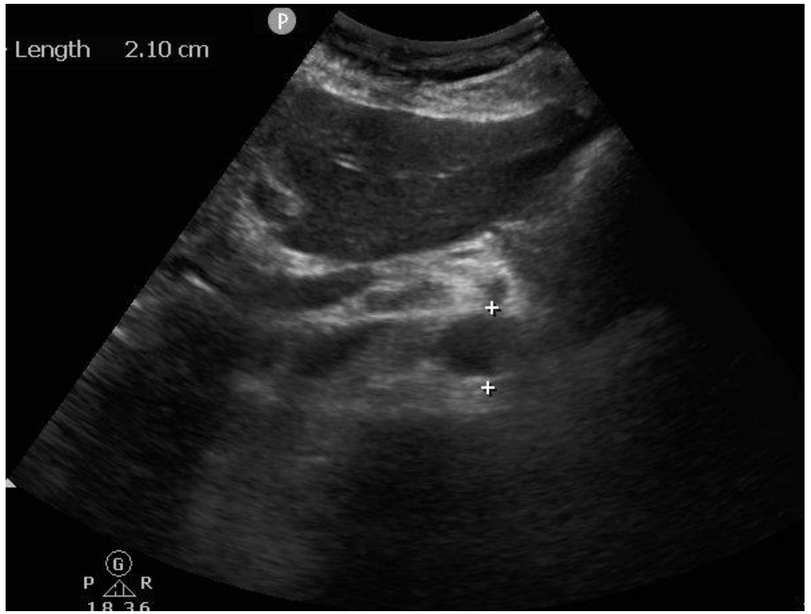
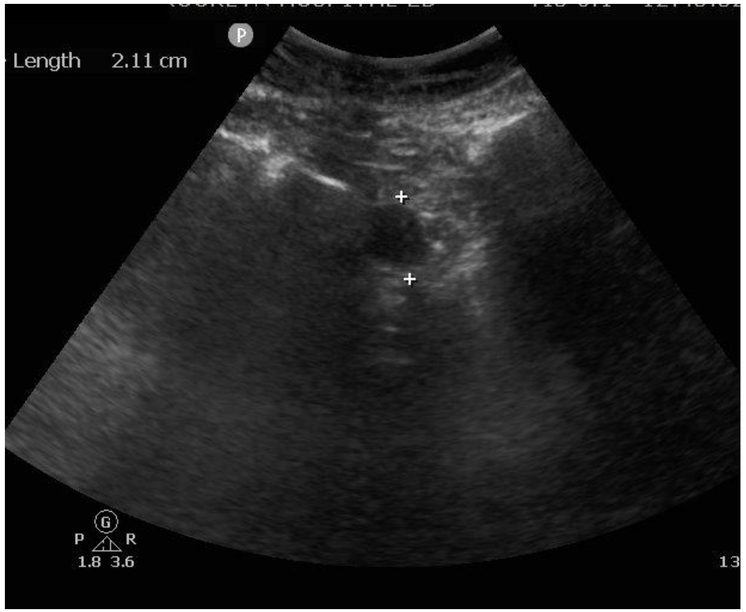
Views



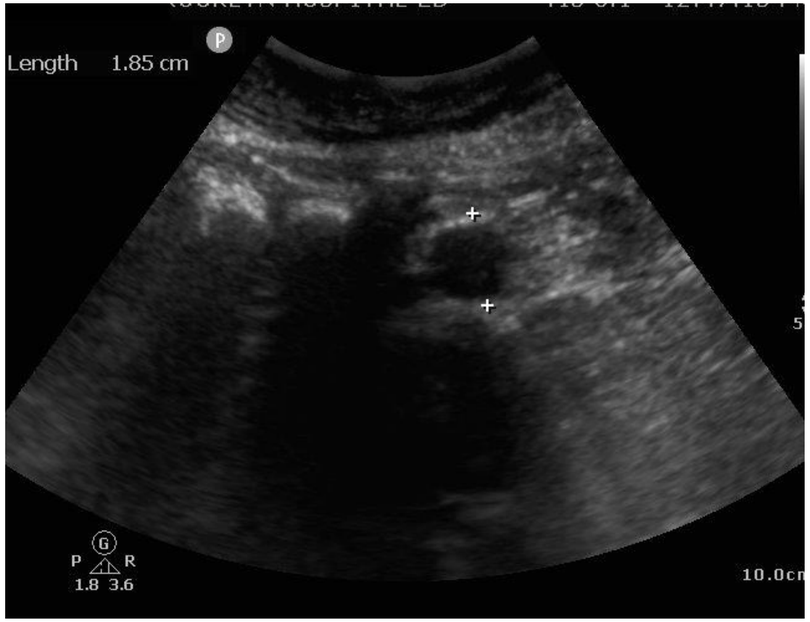
Proximal Aorta TV

<3cm



Mid Aorta TV

<3cm



Distal Aorta TV

<3cm

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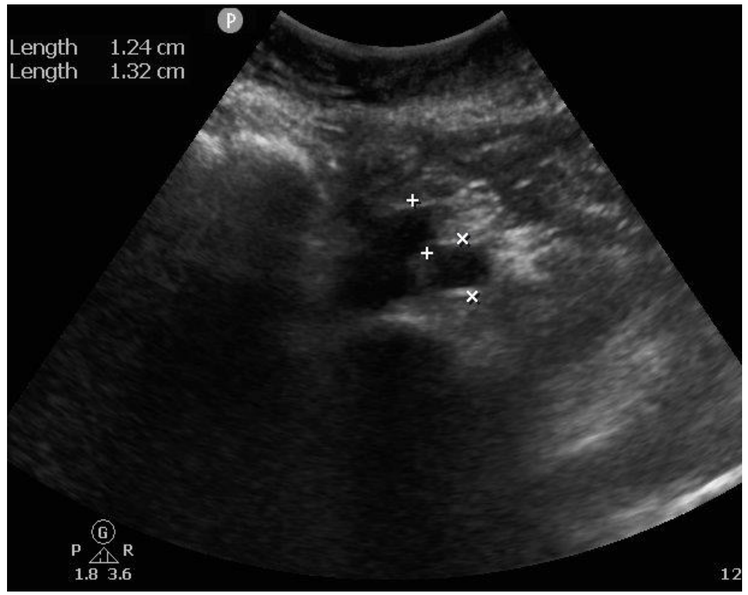
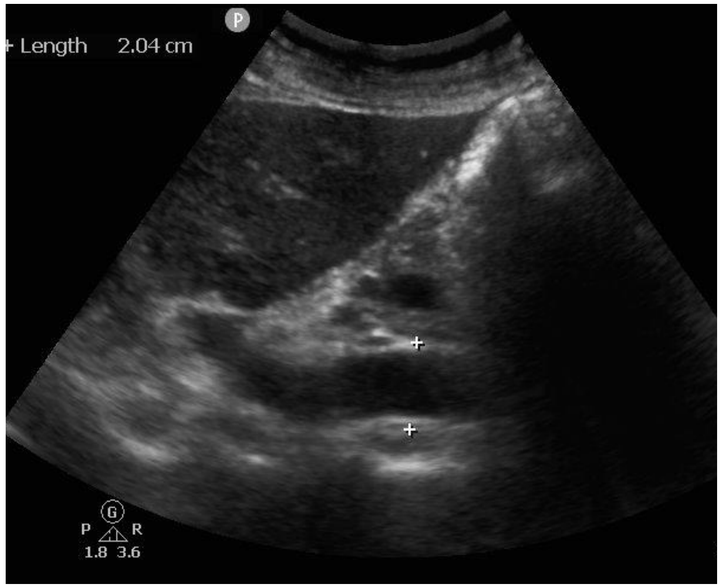
Views



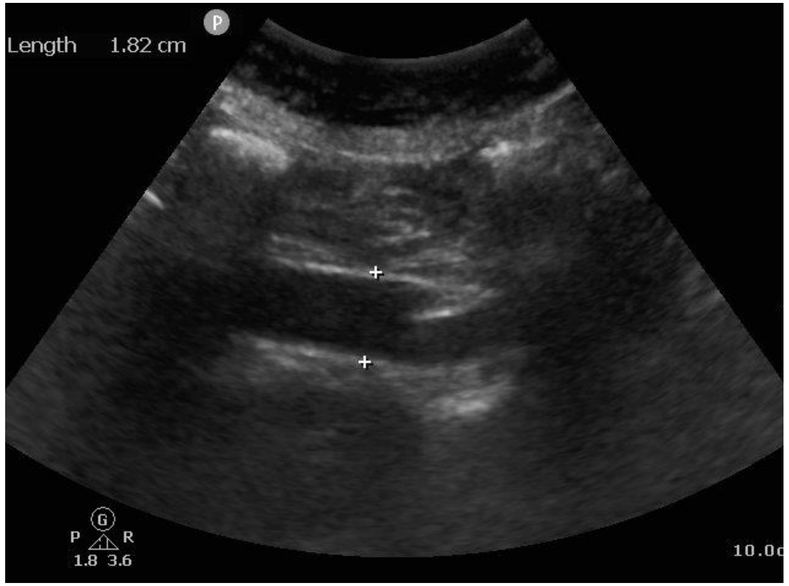
Iliac Bifurcation

<1.5cm



Suprarenal SG

<3cm



Infrarenal SG

<3cm

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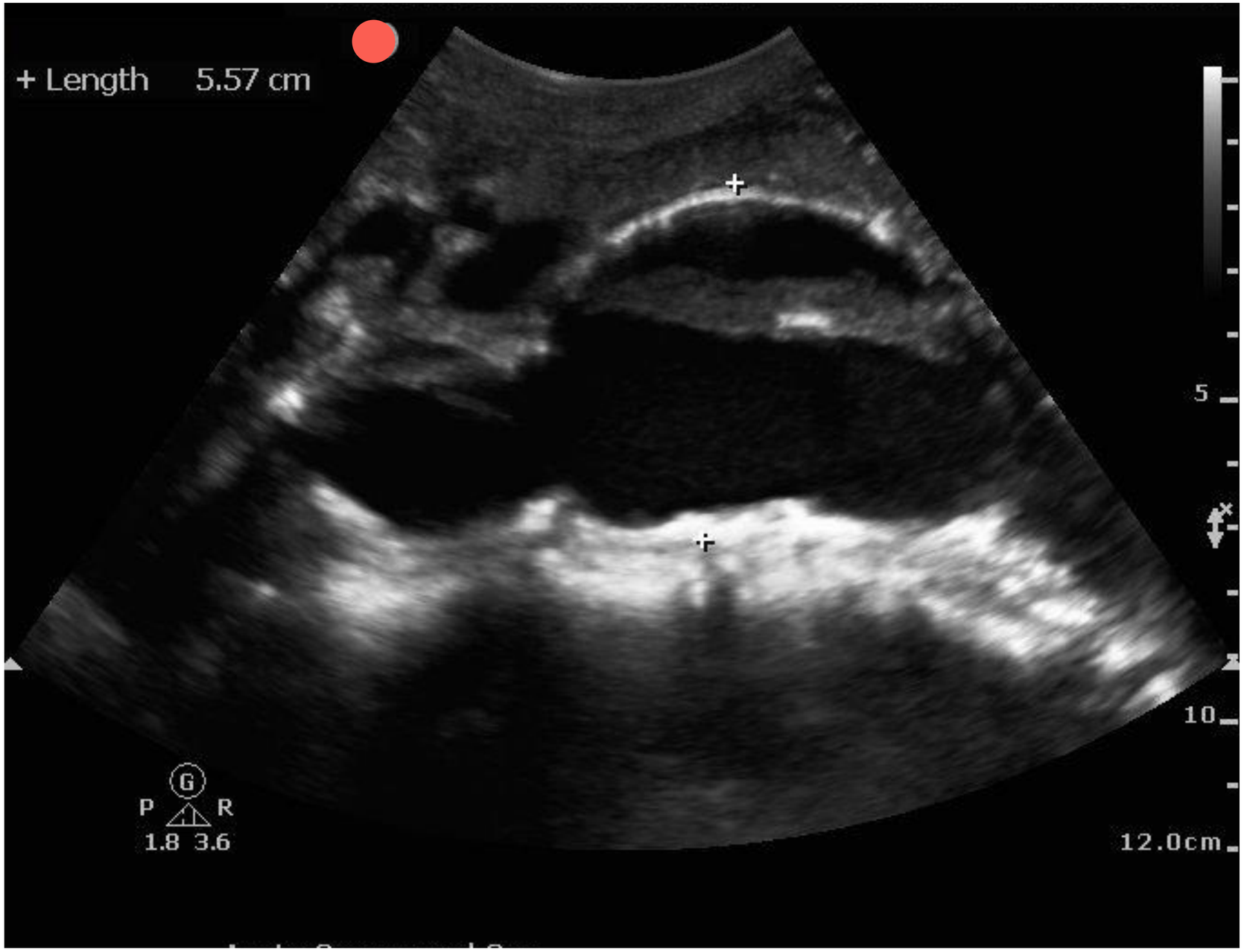

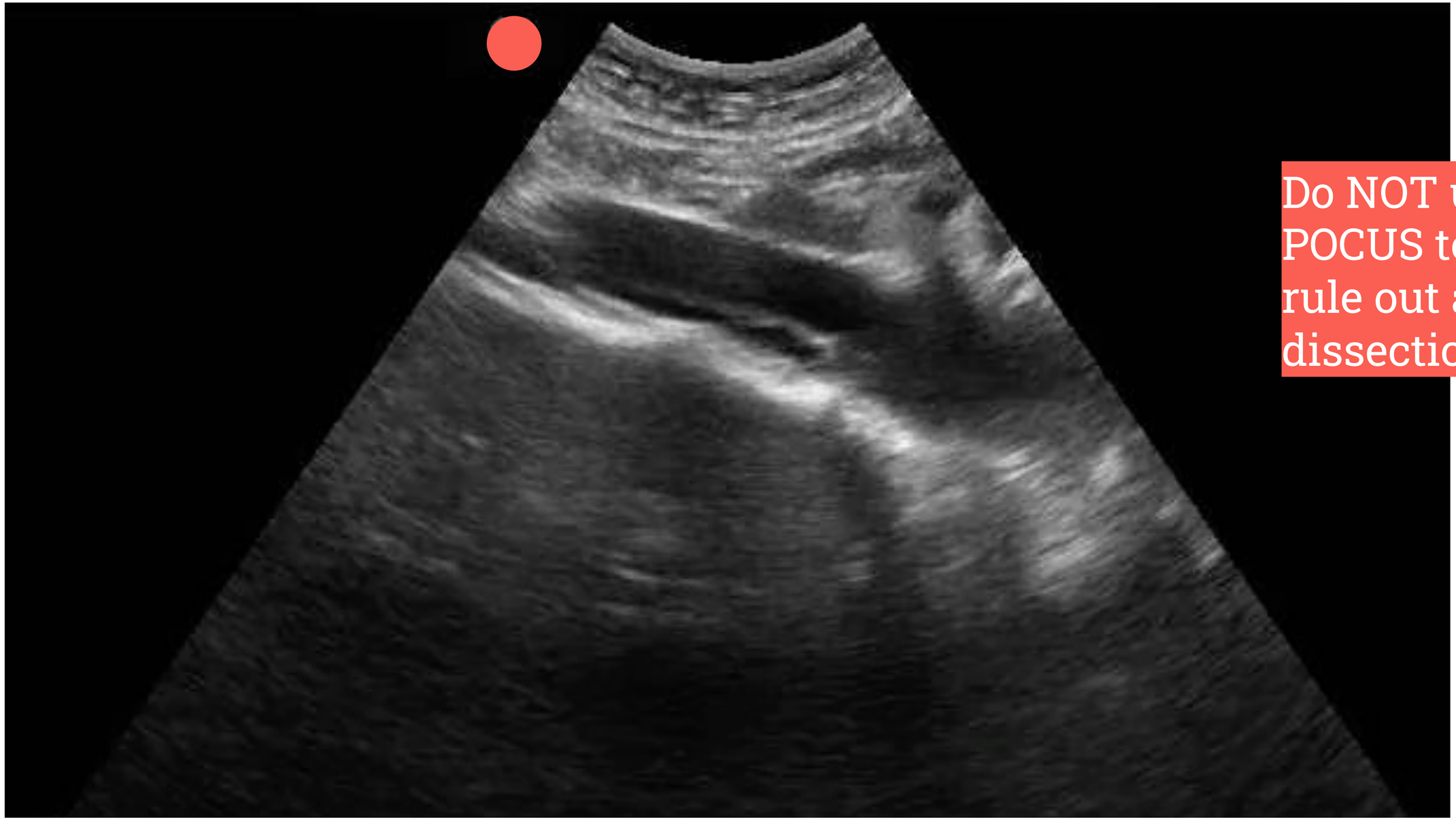

Do NOT use POCUS to rule out a dissection!

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Bladder & Renal Ultrasound

Indications

- ✓ Flank pain/Abdominal pain
- ✓ Hematuria
- ✓ Inability to urinate

COMMON MIMIC: AAA & aortic dissection

✓Is there urinary retention?

✓Is there hydronephrosis?

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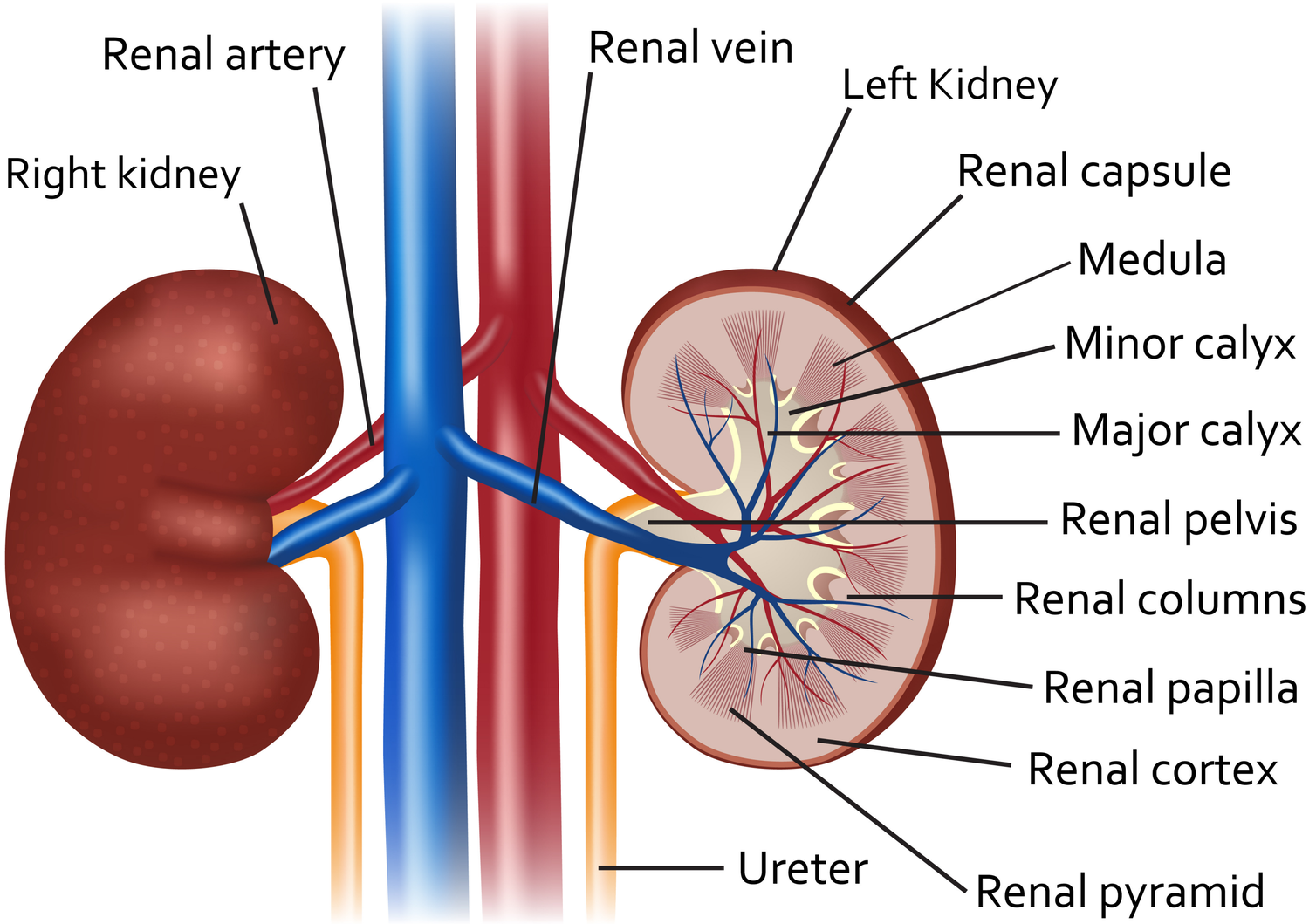
Normal Anatomy



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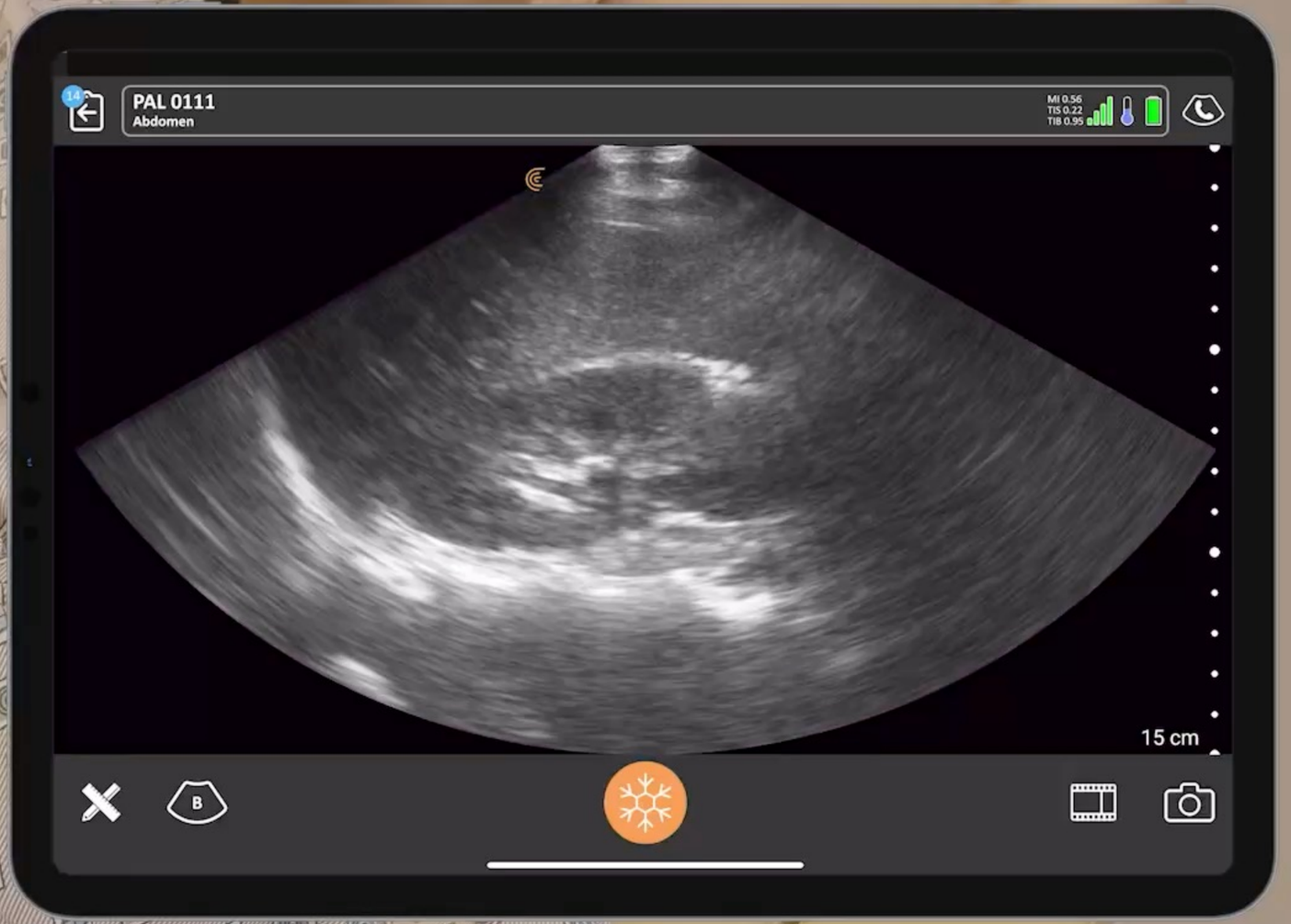
Technique

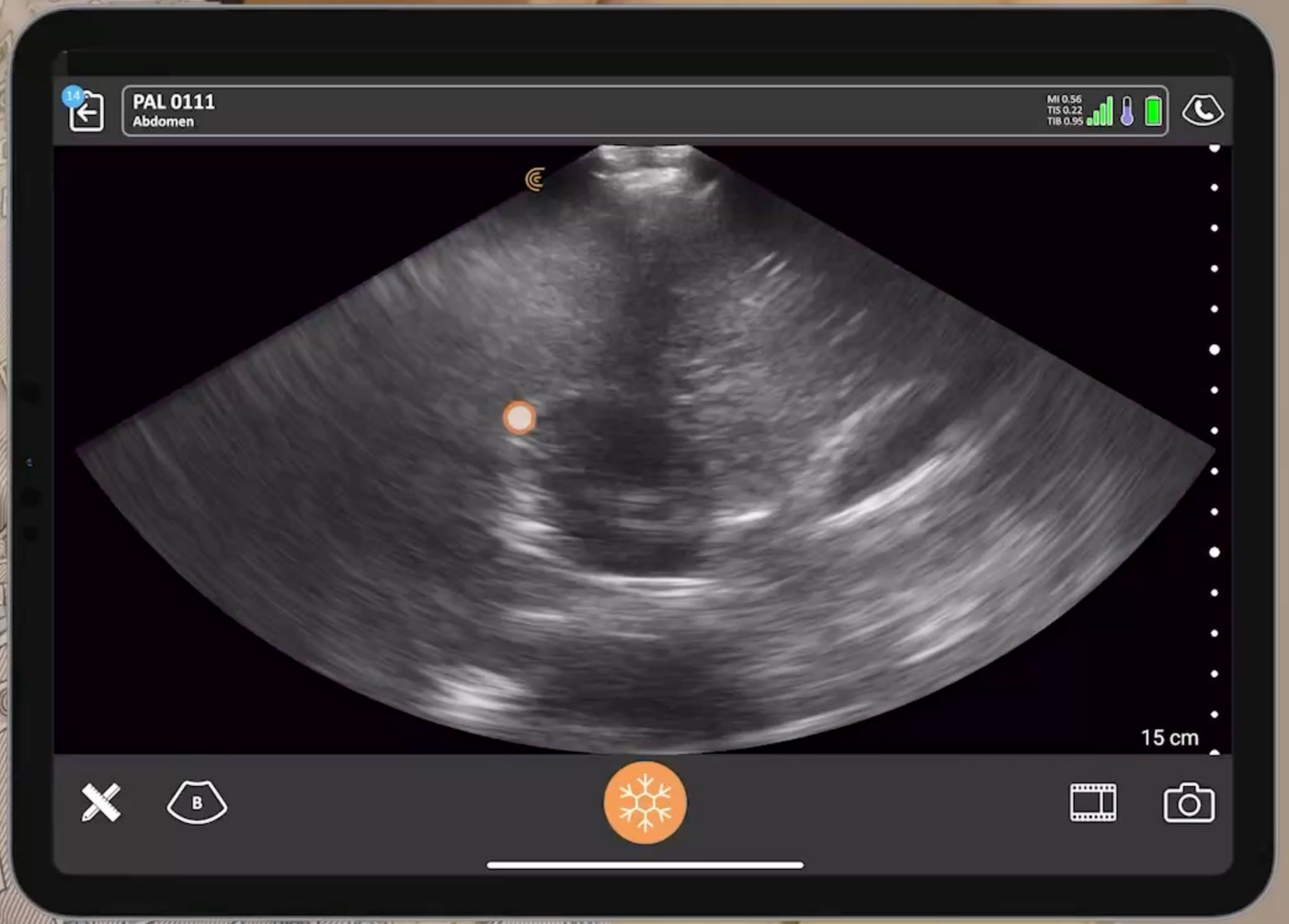
- ✓View in 2 planes.
- ✓Measure the width, depth, and height of the bladder.

Technique



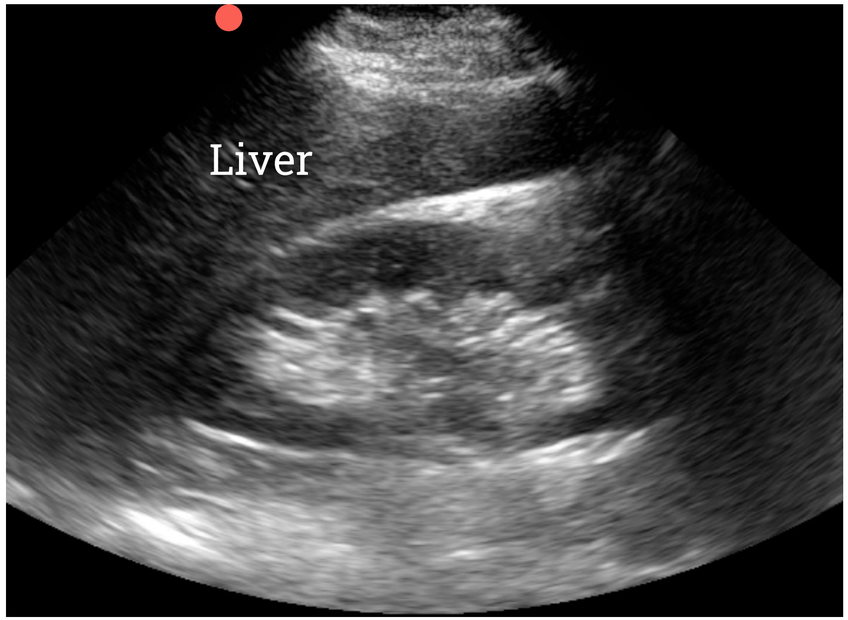
Coronal

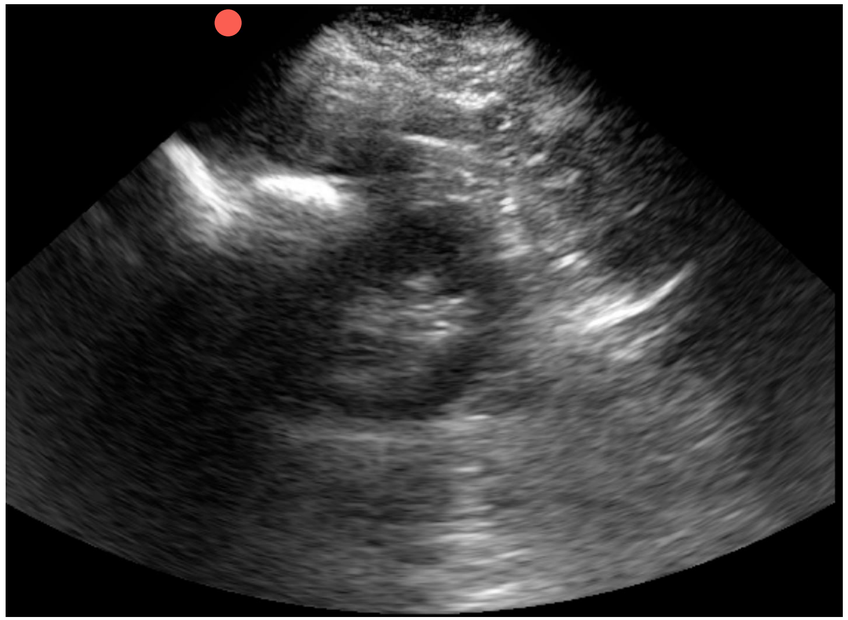
Technique



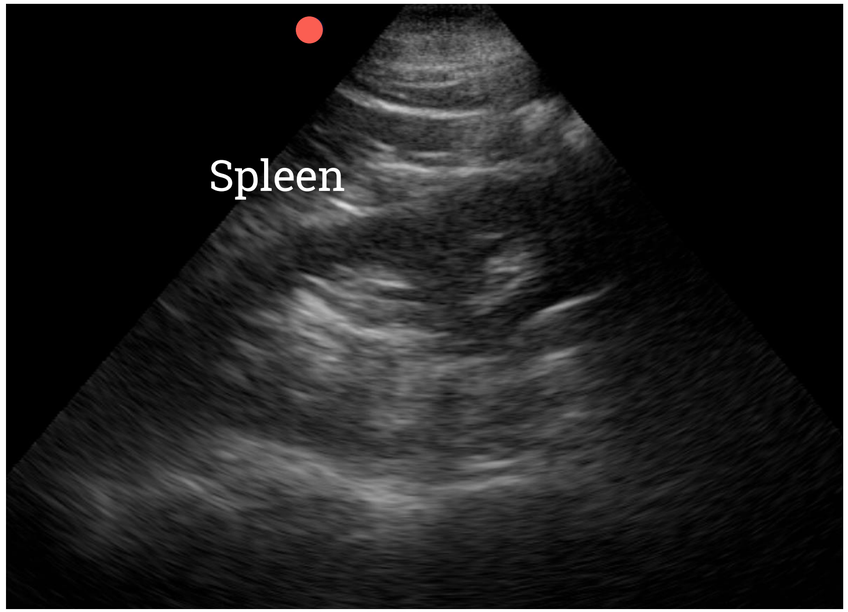
Transverse

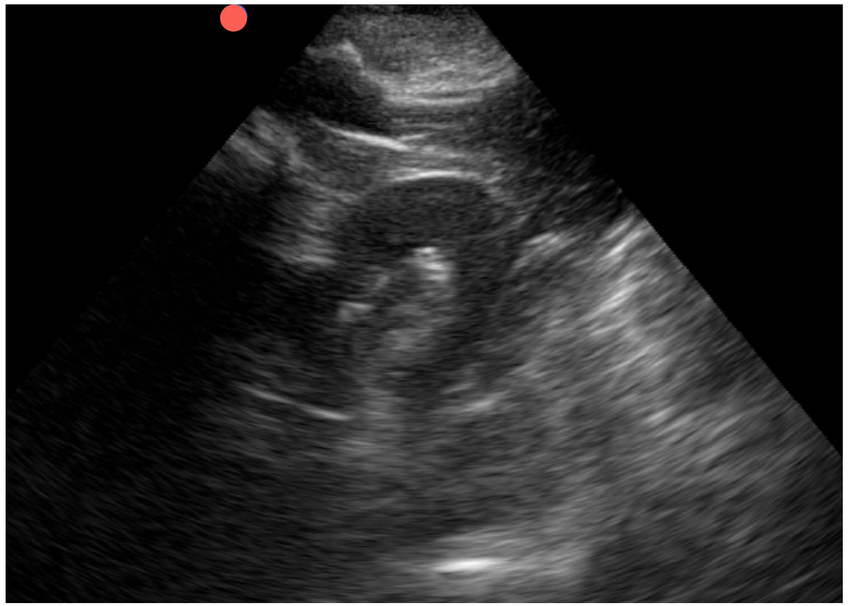
Right Kidney





Left Kidney





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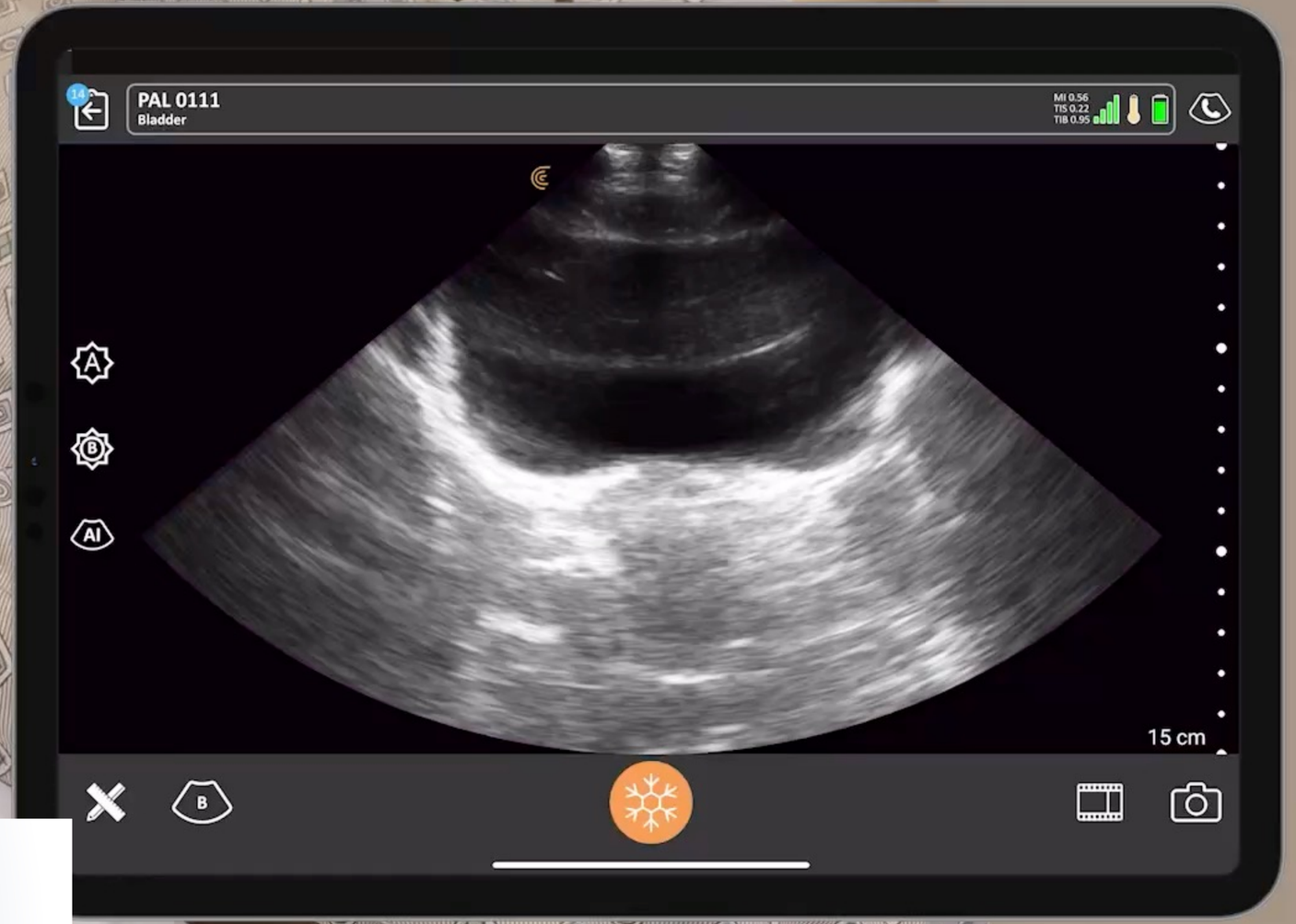
Technique



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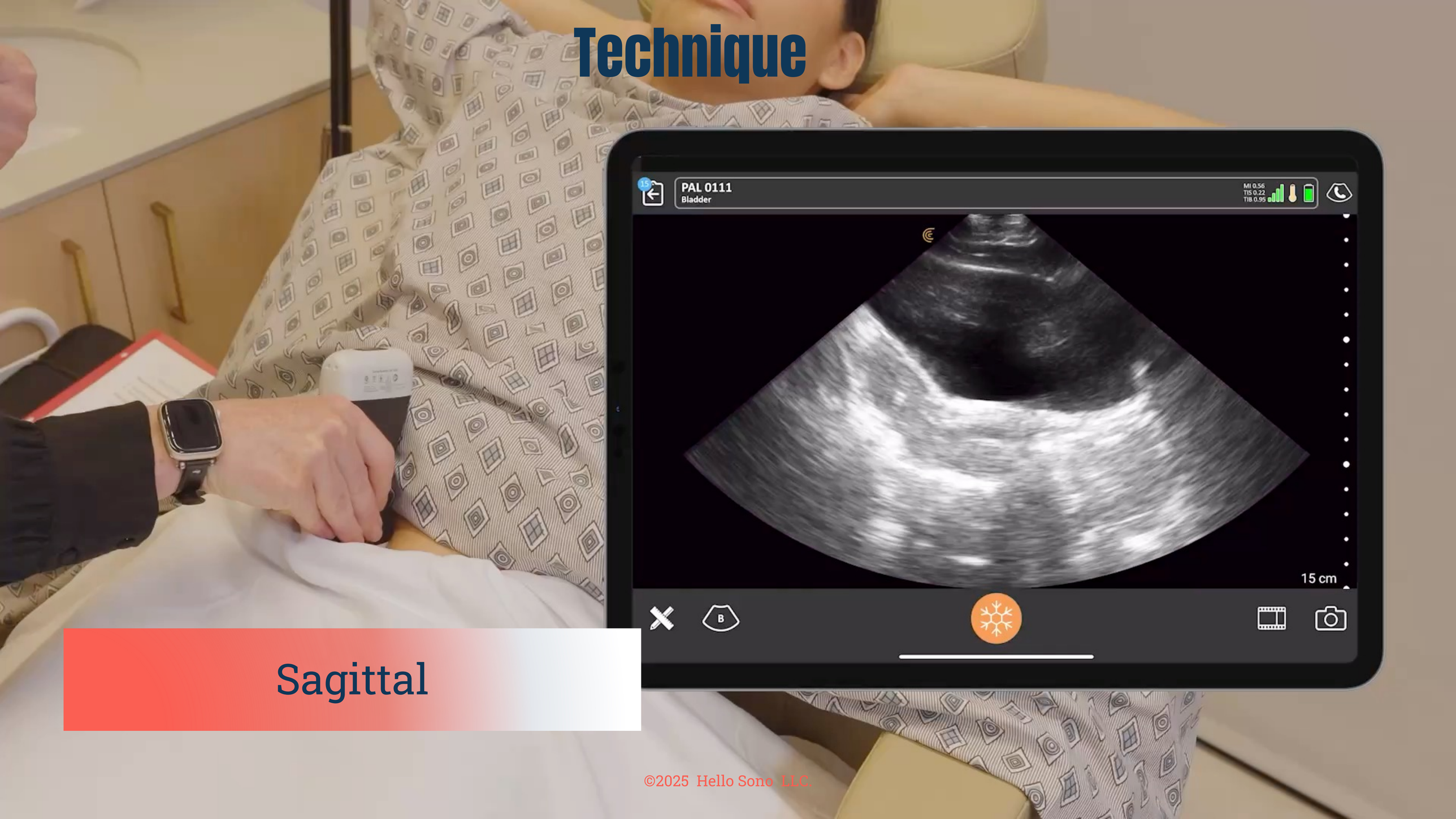
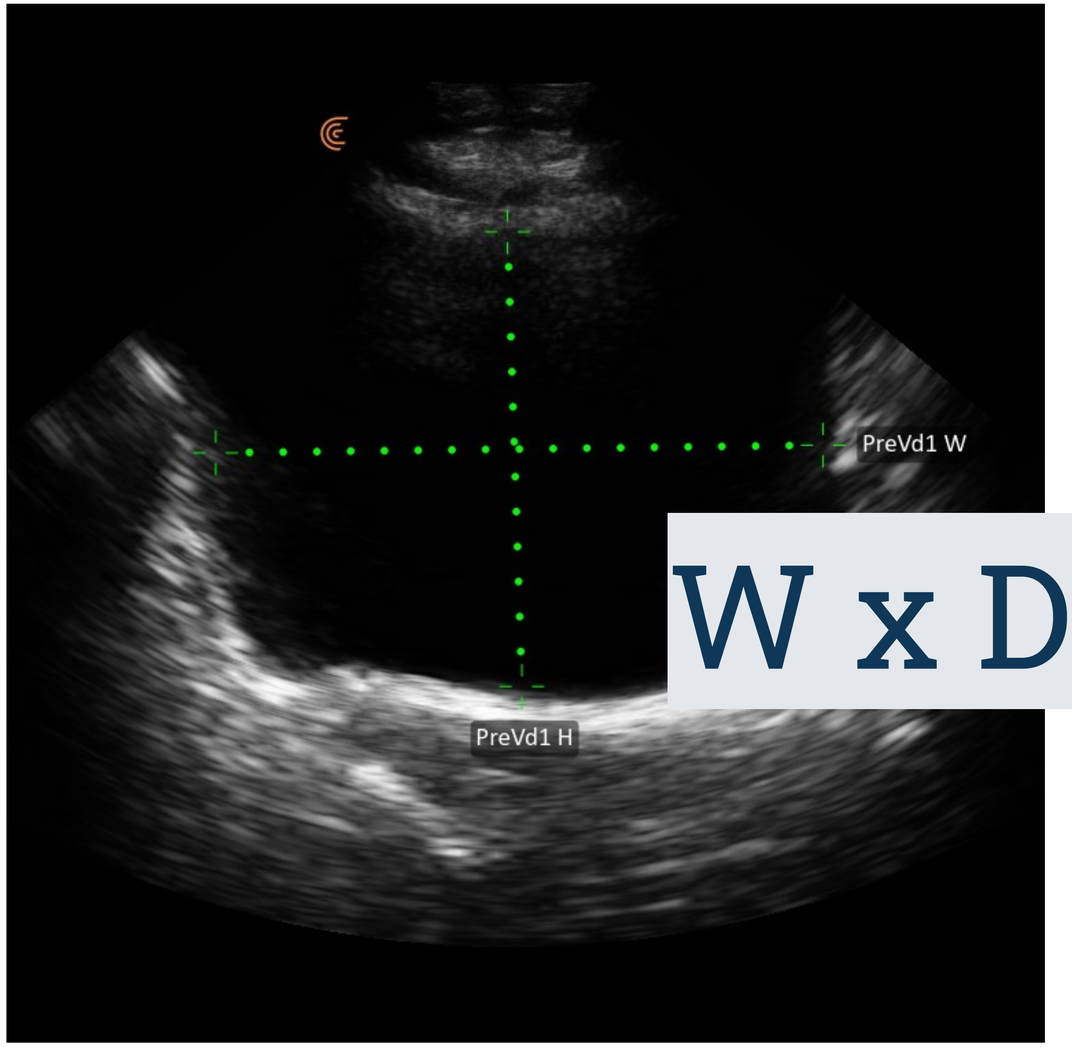
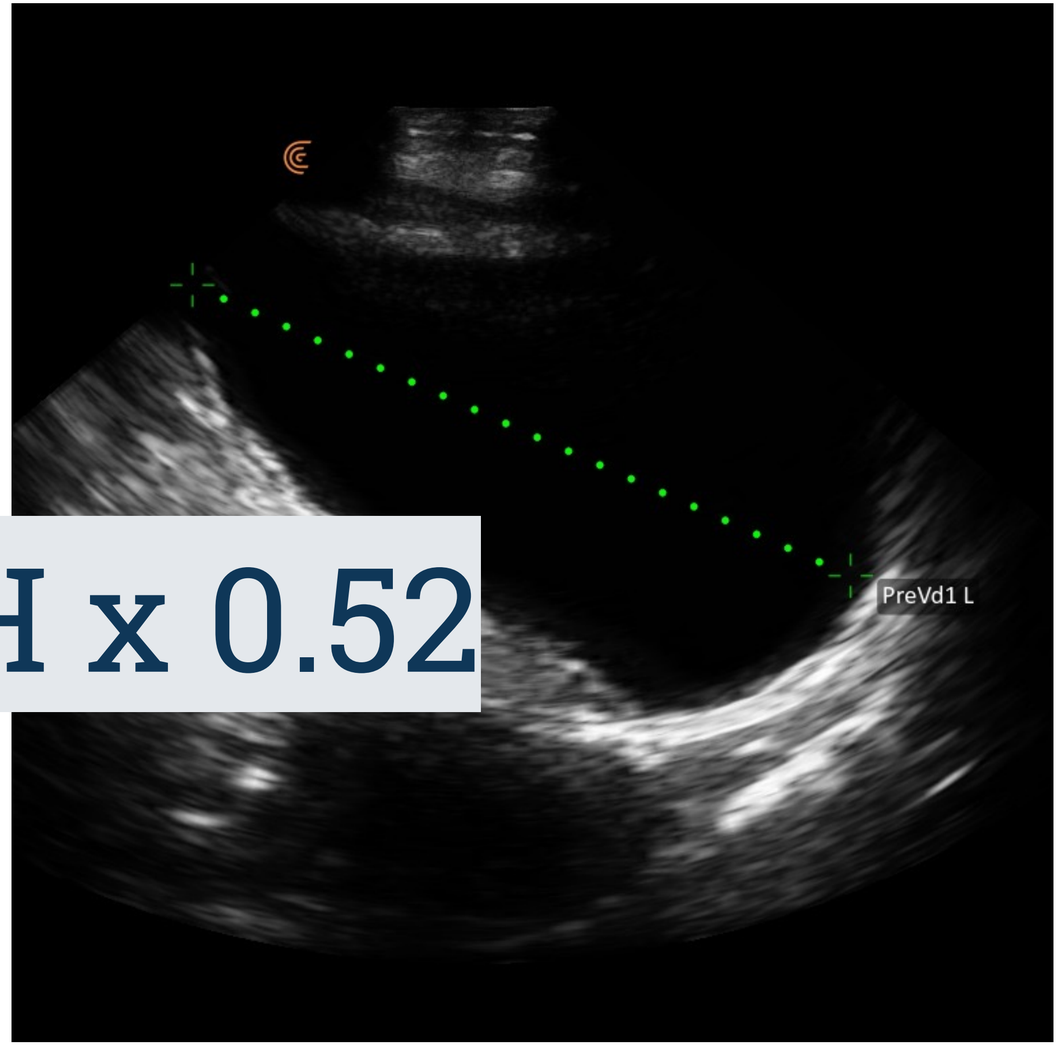


Sagittal

Bladder Volume



W x D x H x 0.52



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Hydronephrosis

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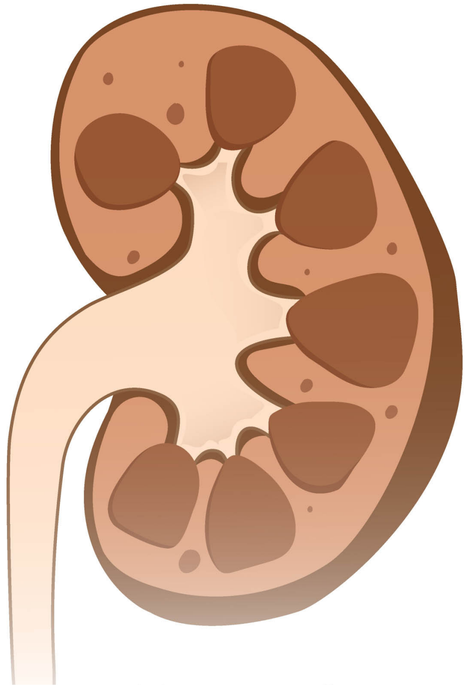
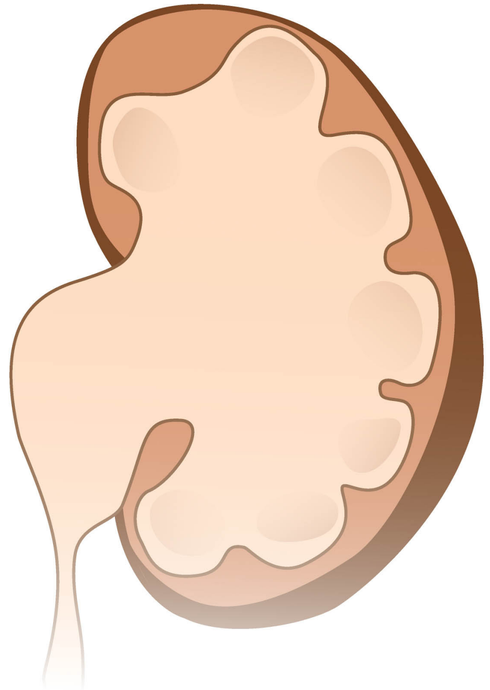


Mild

Moderate



Severe

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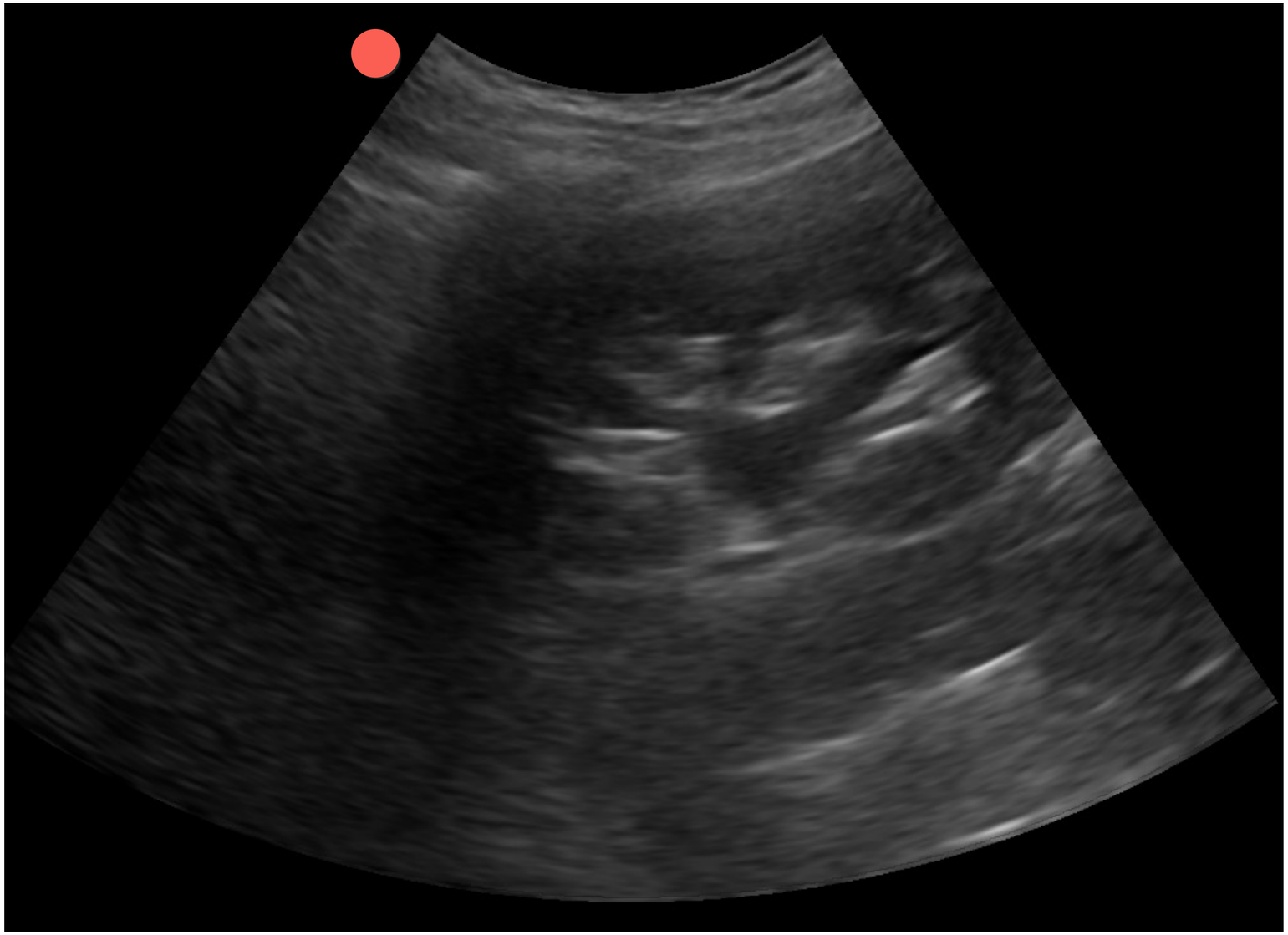
Mild Hydronephrosis



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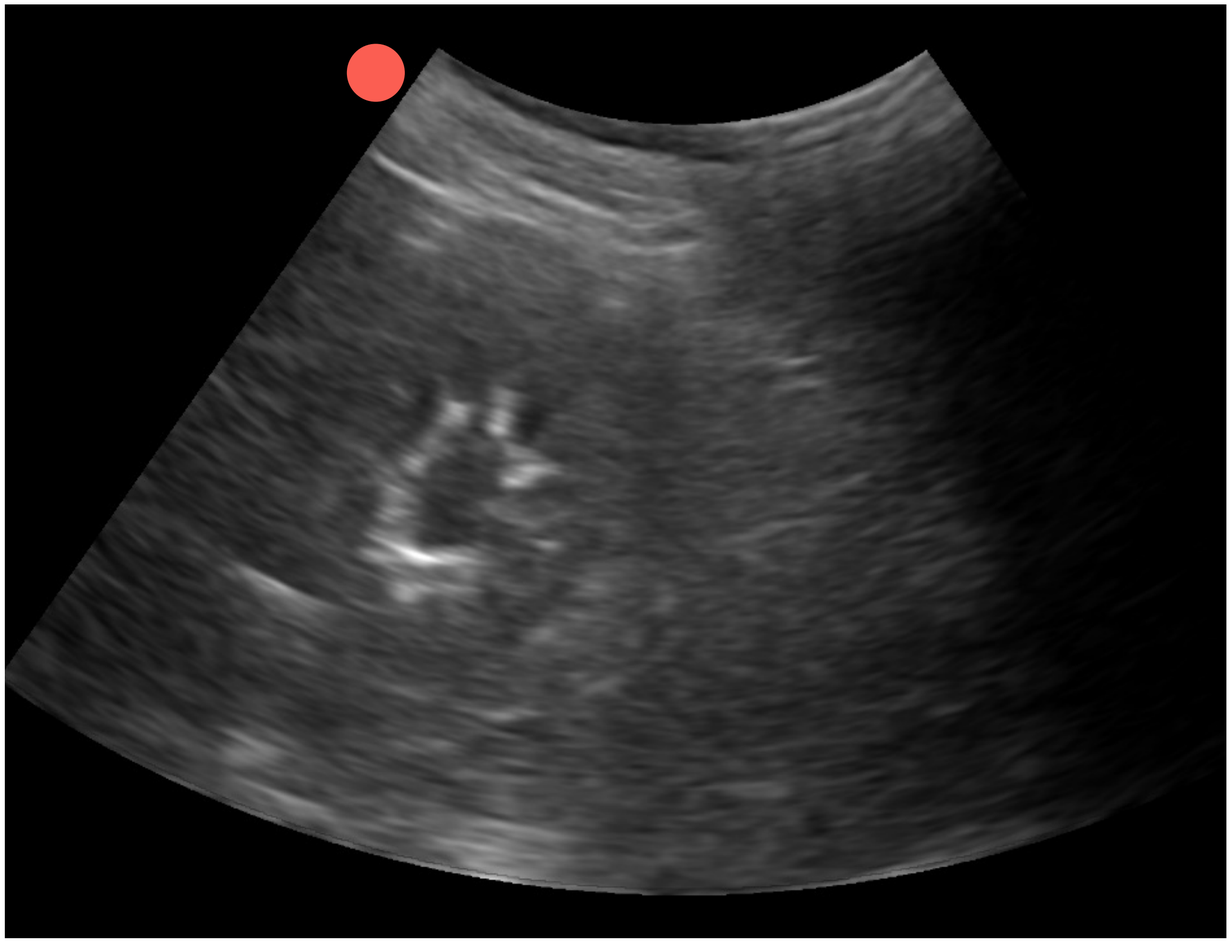

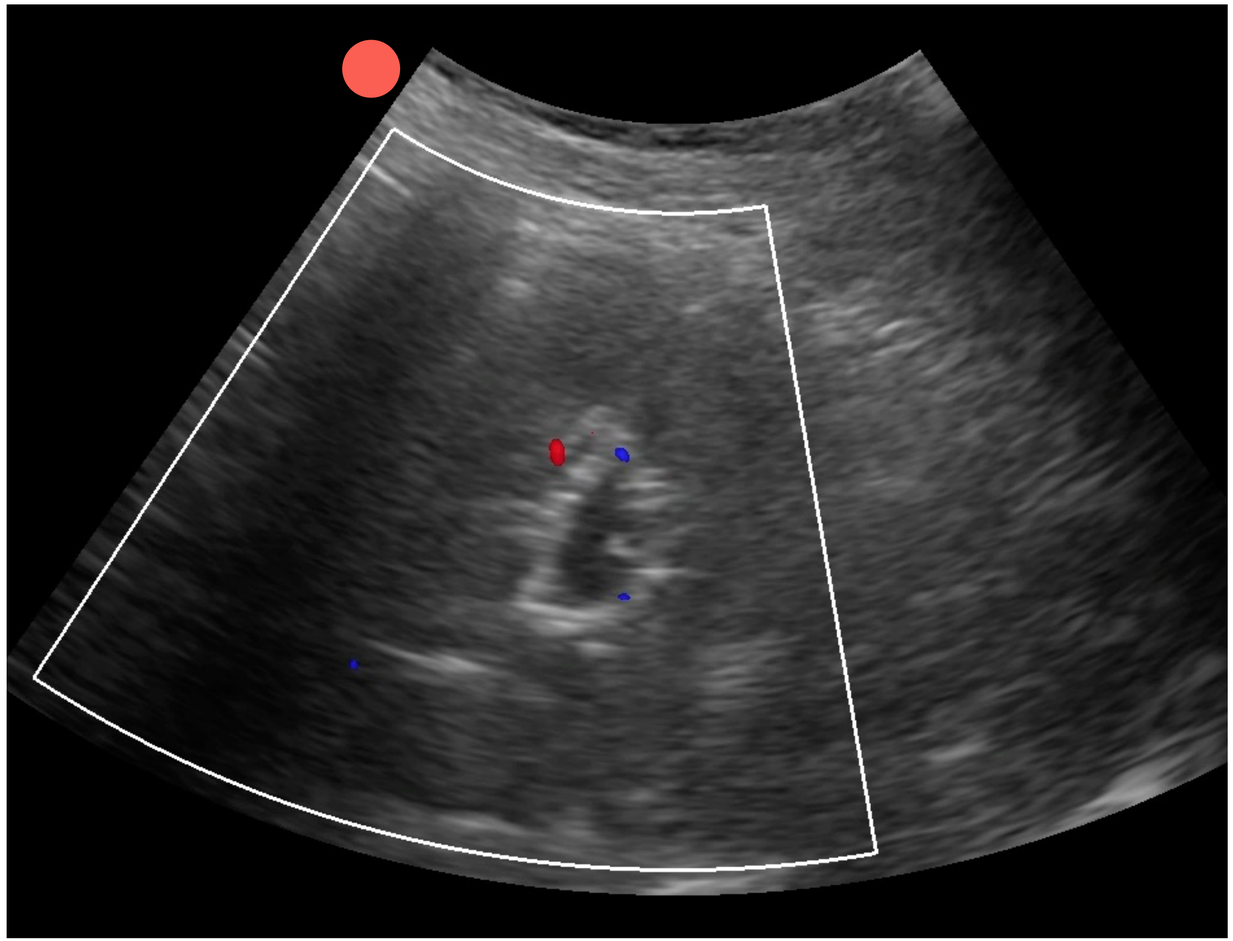

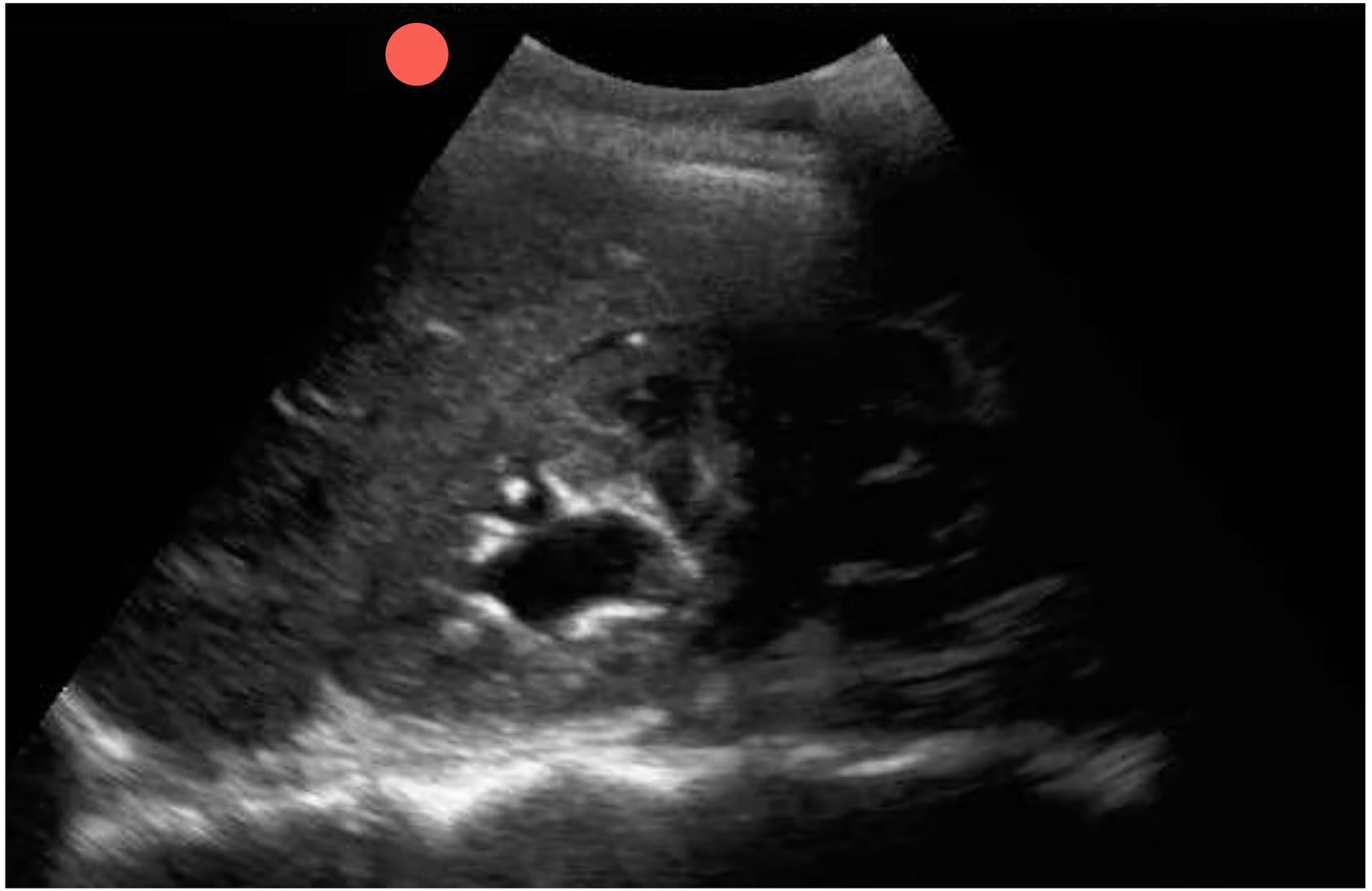

Moderate Hydronephrosis & Stones

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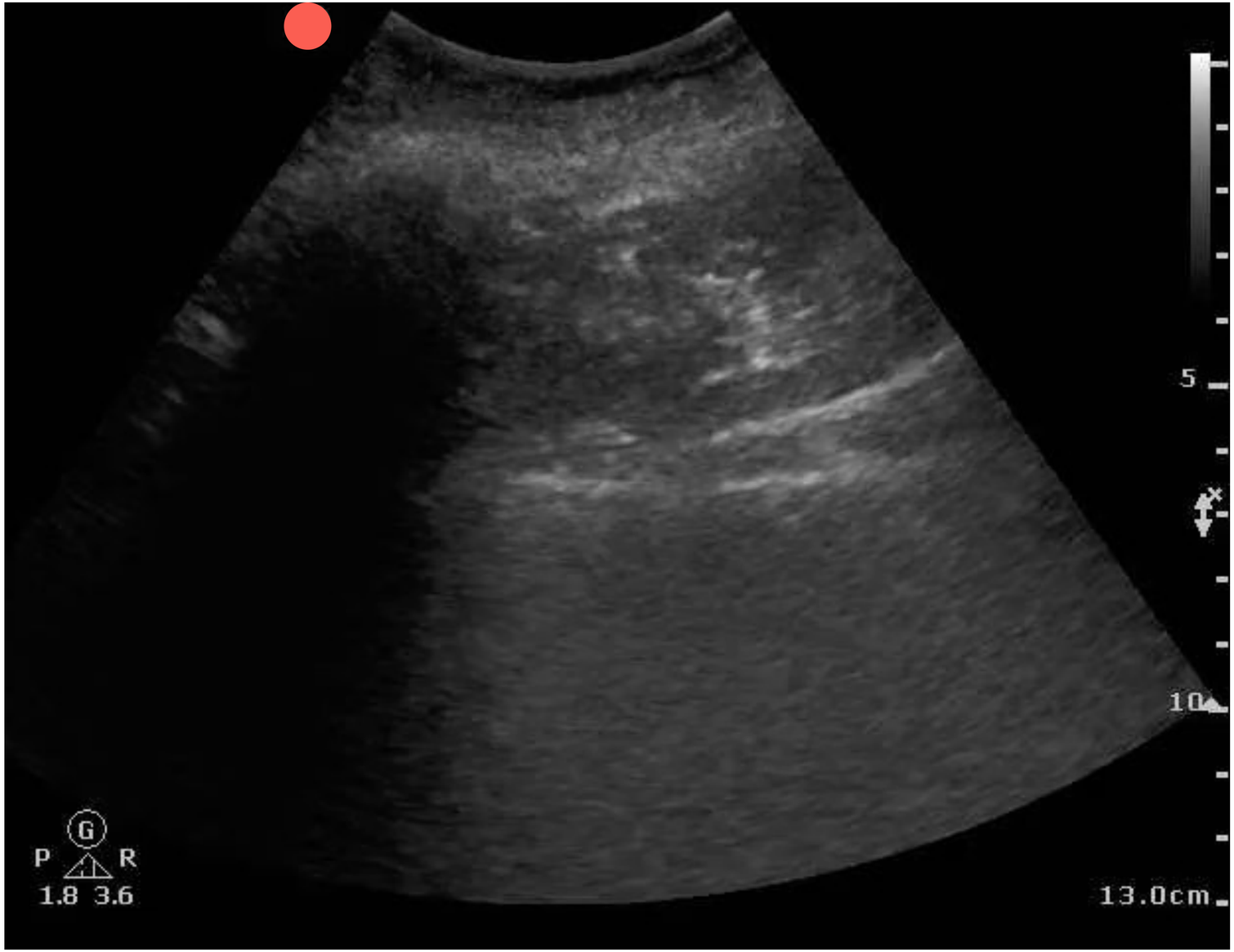
Severe Hydronephrosis



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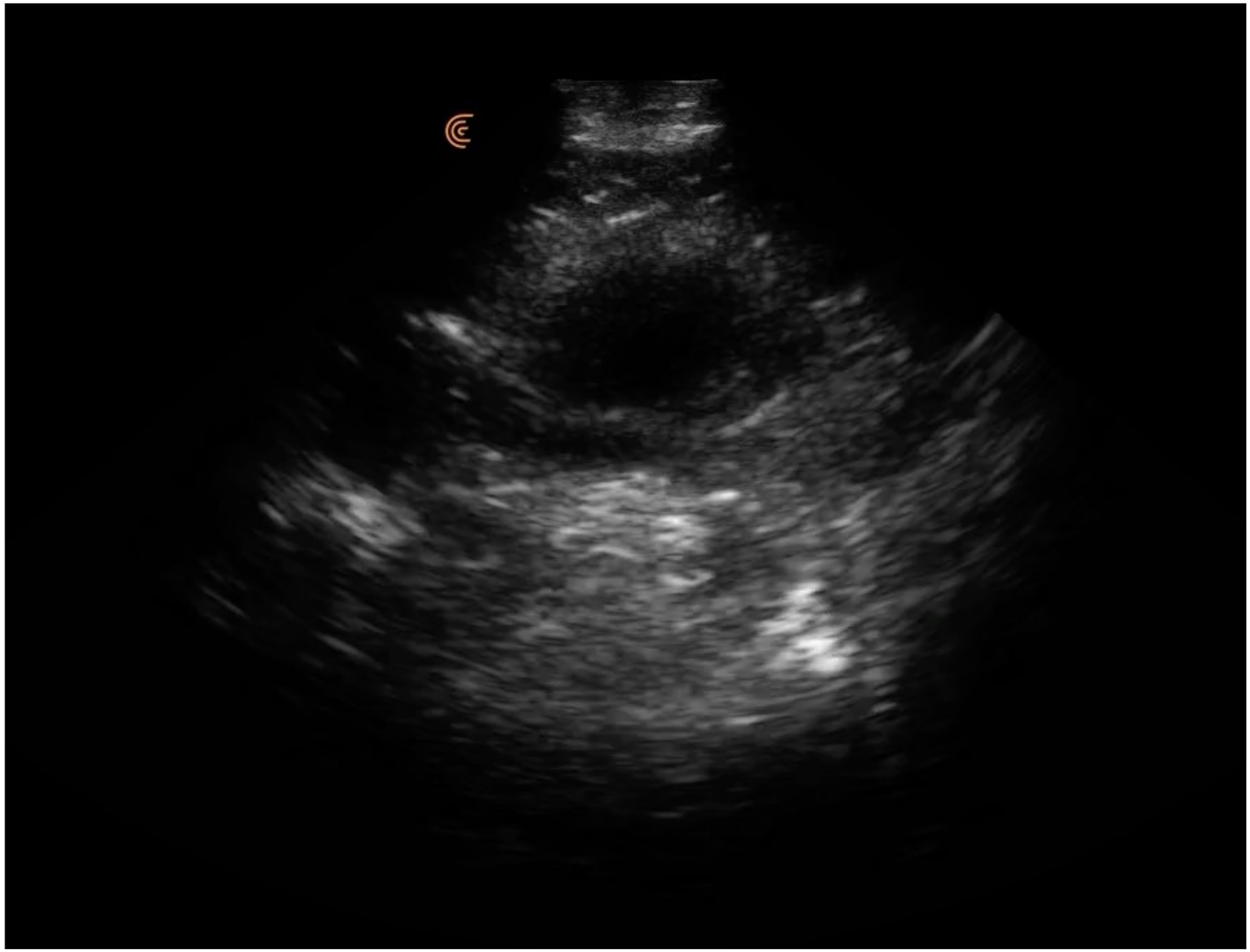
Urinary Retention



PVD >150 mL

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Bladder & Renal Ultrasound: Impact

- ✓ Improve diagnostic accuracy.
- ✓ Insert urinary catheter when indicated.
- ✓ Avoid CT.
- ✓ Save time & costs for the patient.

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Lower Extremity Vascular Ultrasound

Indications

Is there a clot?

- ✓Leg swelling
- ✓Leg pain
- ✓Shortness of breath/PE

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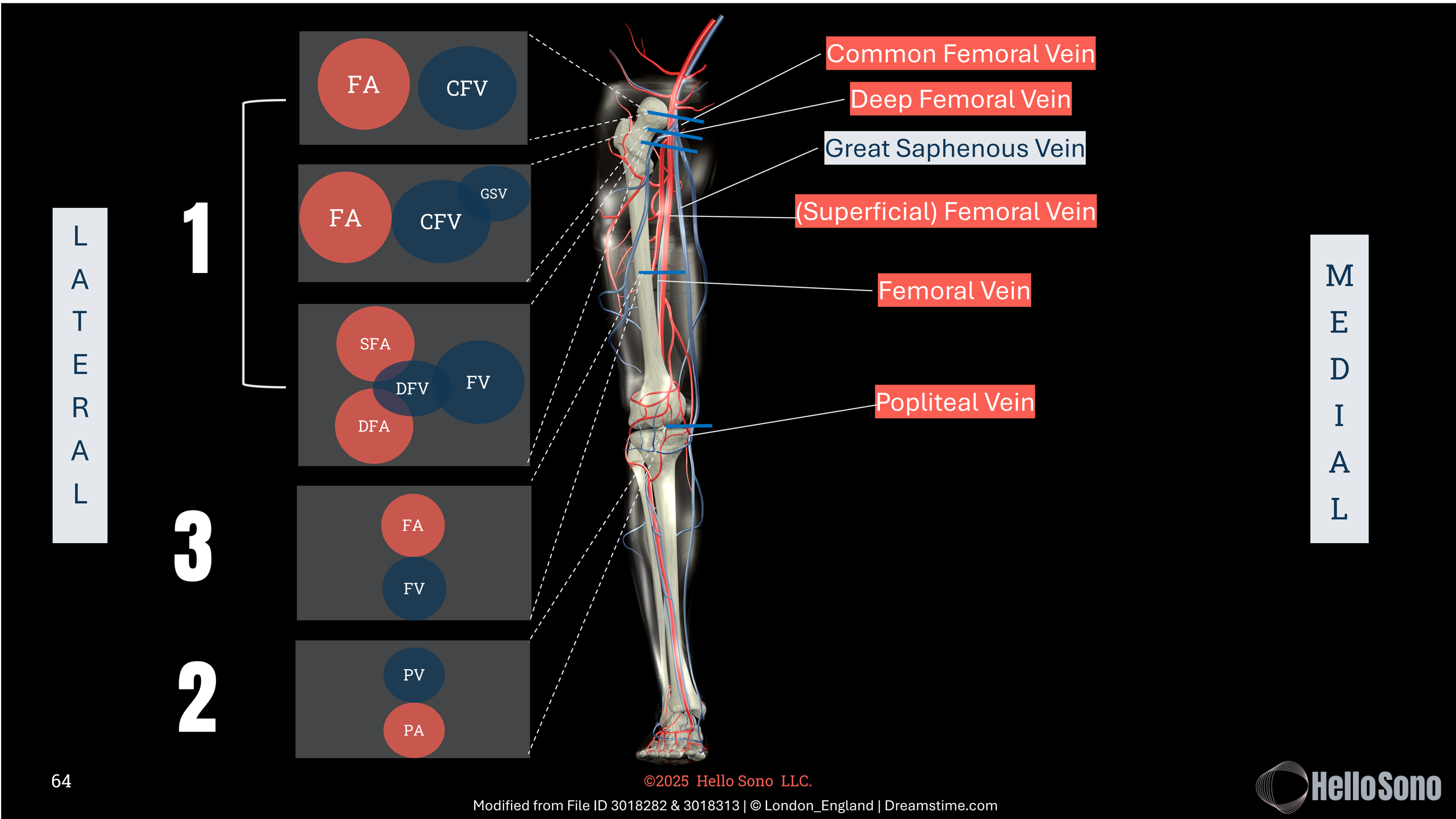
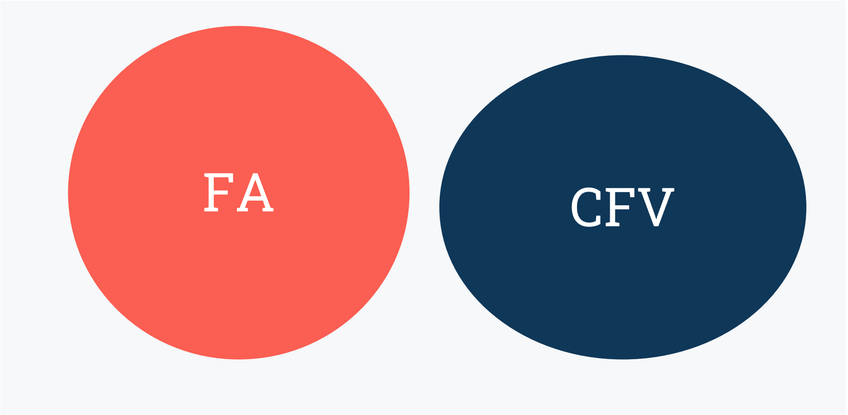
Technique

- ✓ Transverse views with compression
- ✓ From CFV to below PV
- ✓ Externally rotate the leg



Normal RLE Study: CFV



LATERAL

MEDIAL

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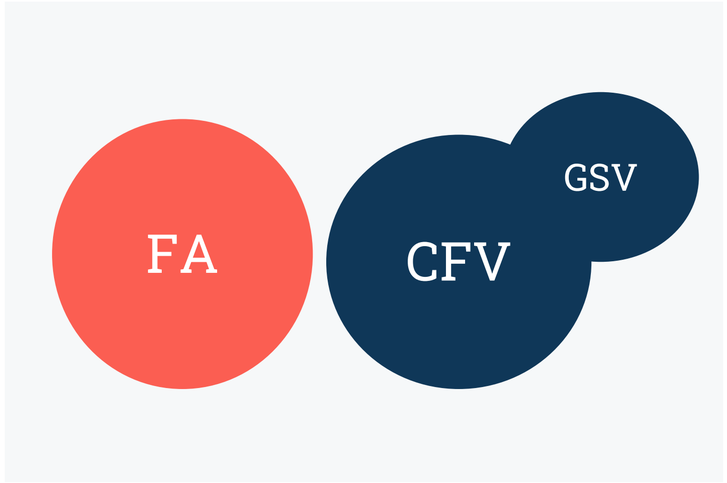
Normal RLE Study: SFJ



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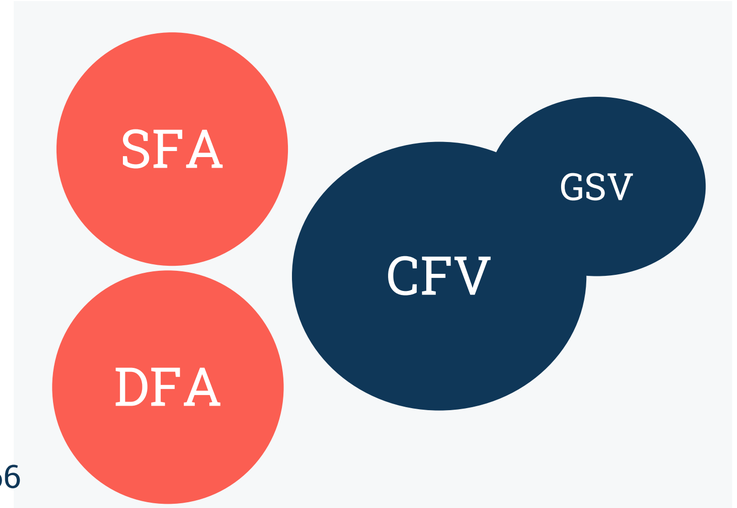

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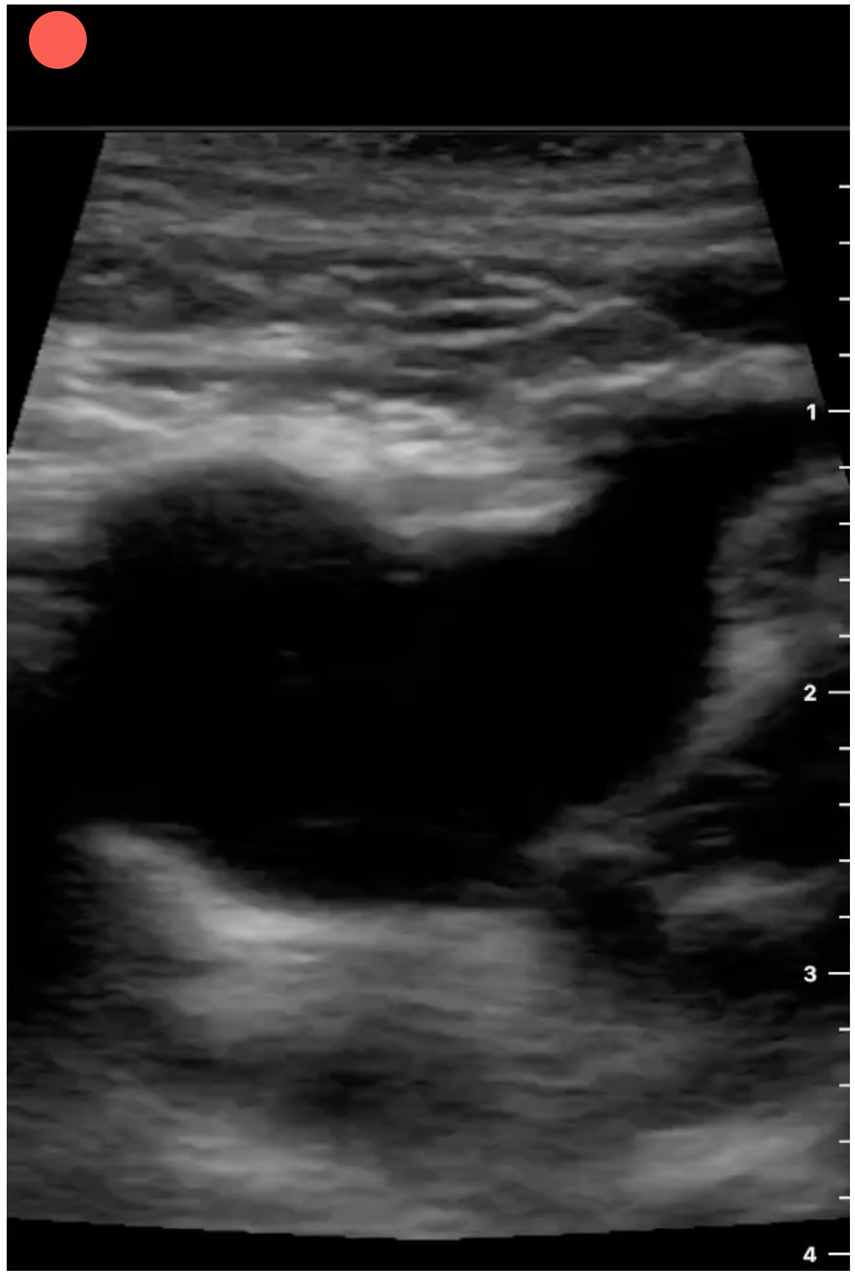

MEDIAL

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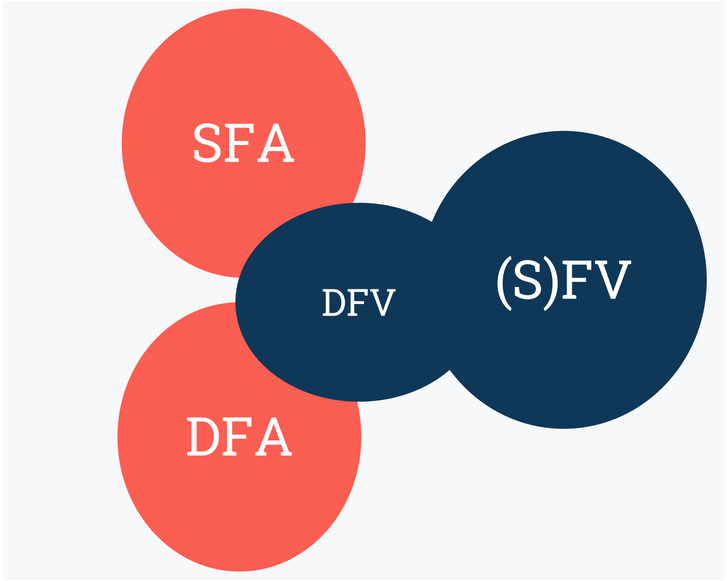
Normal RLE Study: Confluence of Deep & Superficial FV



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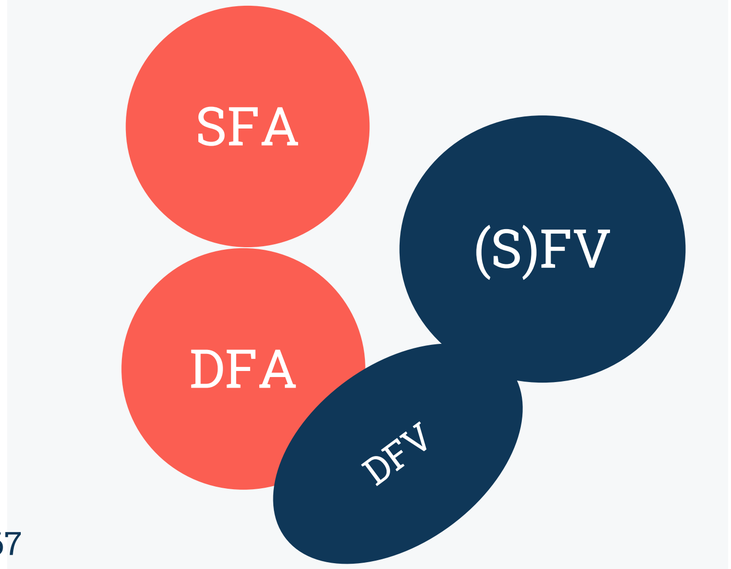

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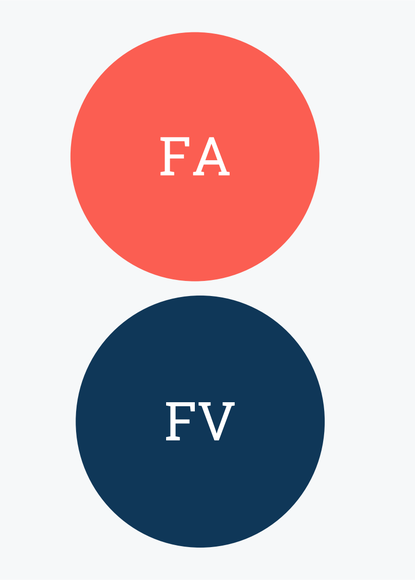
Normal RLE Study: FV



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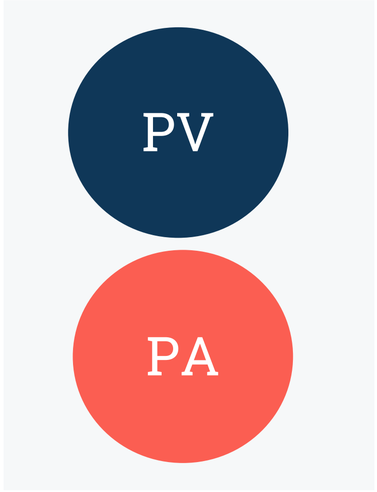
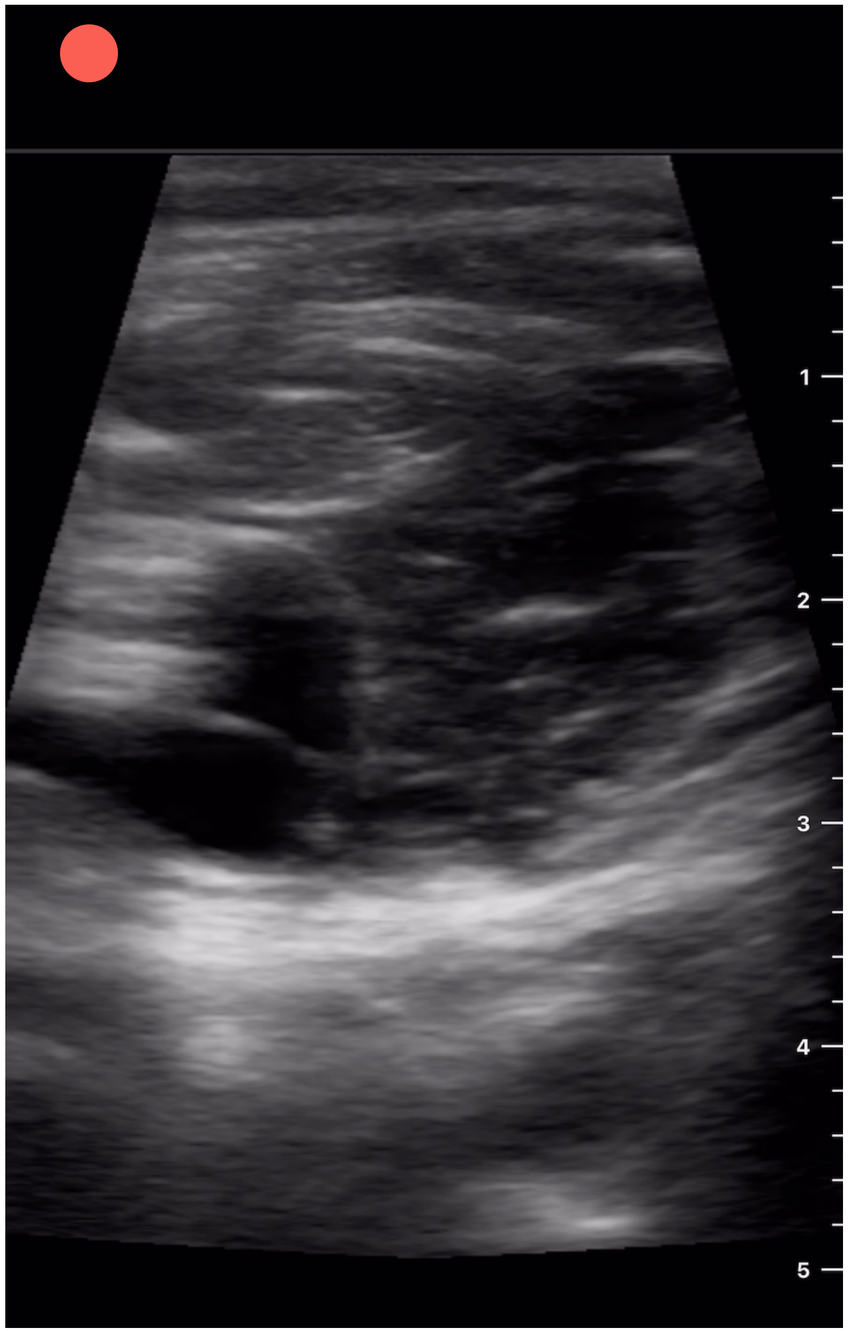
Normal RLE Study: PV



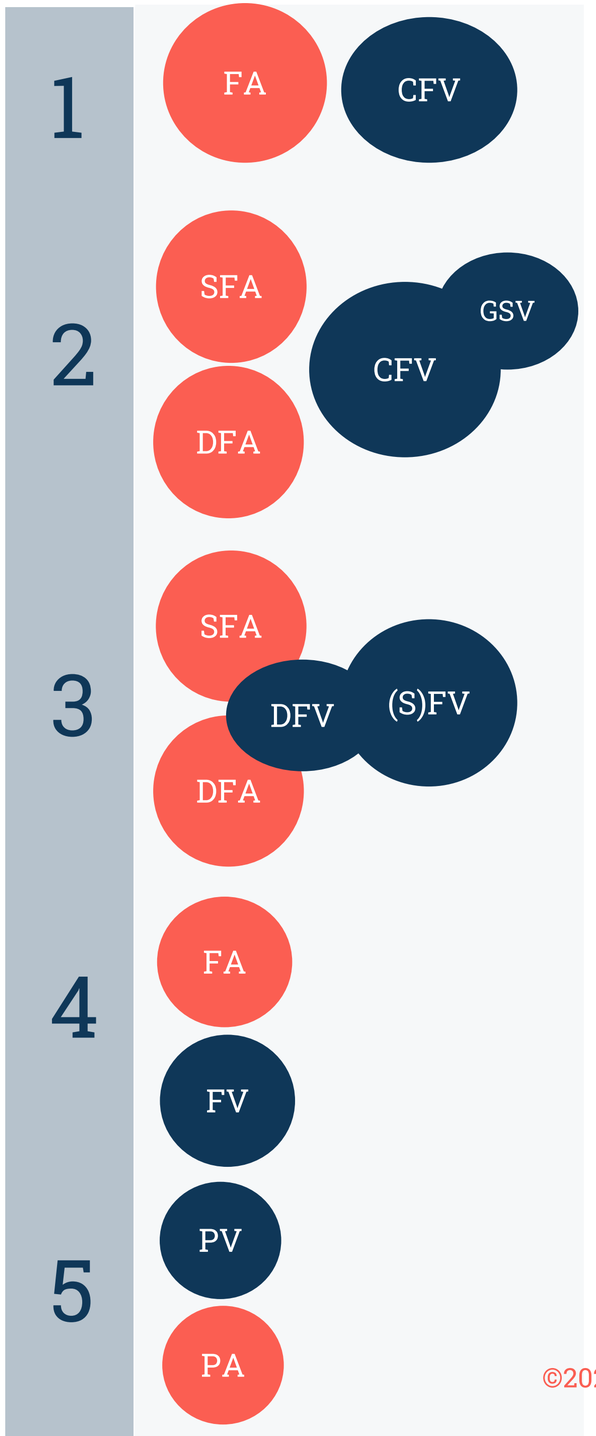
LATERAL*



MEDIAL

*Patient supine and probe marker behind the knee with probe marker pointed to patient's right.

RLE Views



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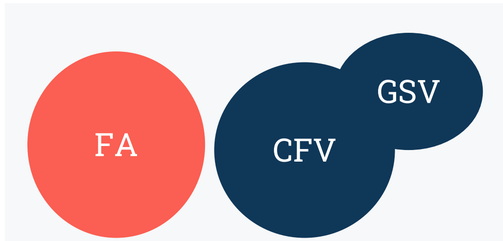

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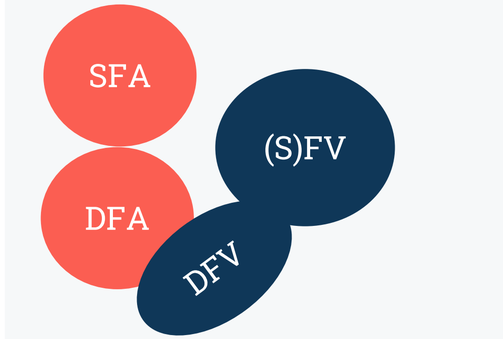

LLE:
mirror image

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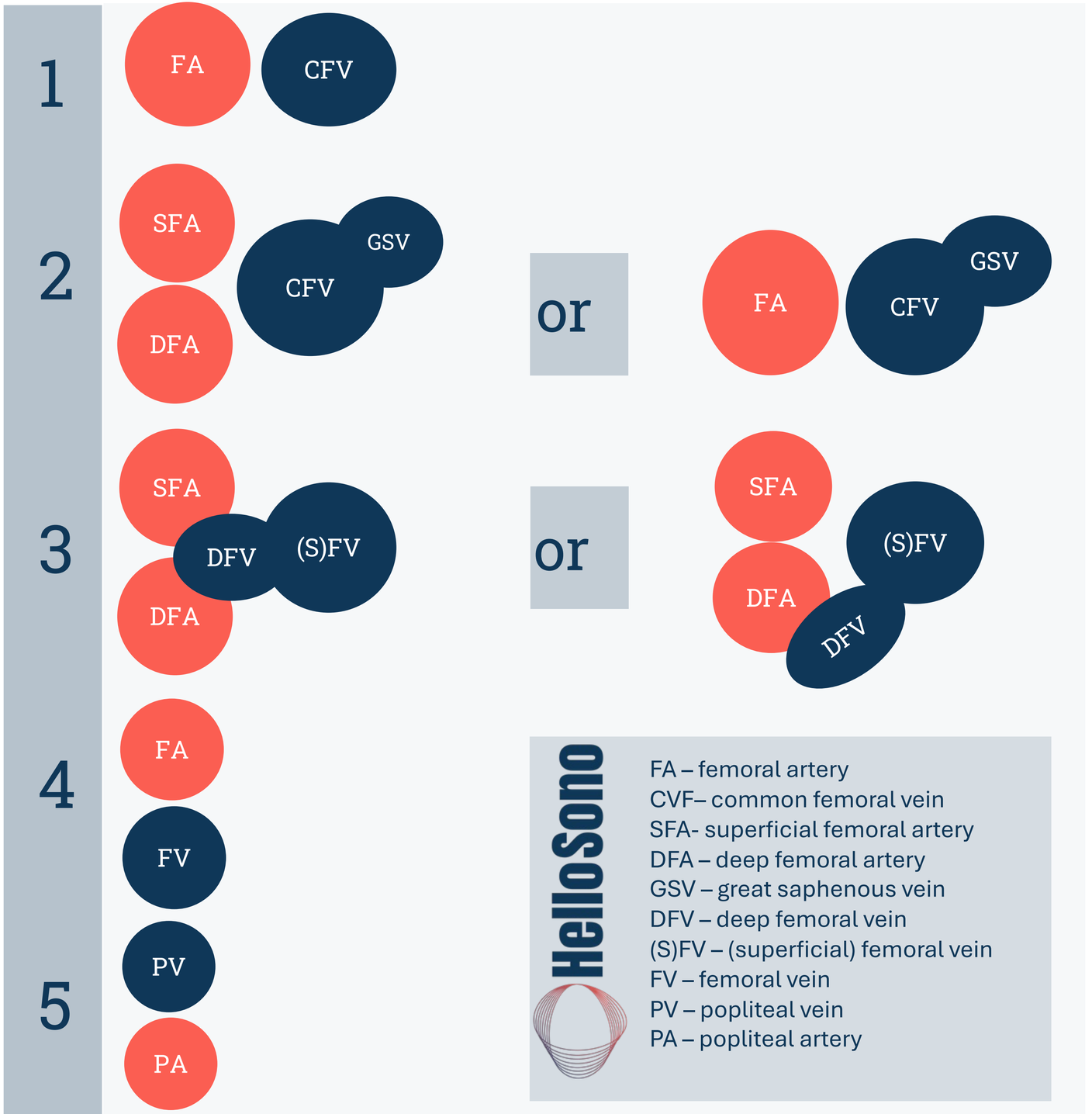
RLE Views



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LLE DVT

MEDIAL

LATERAL

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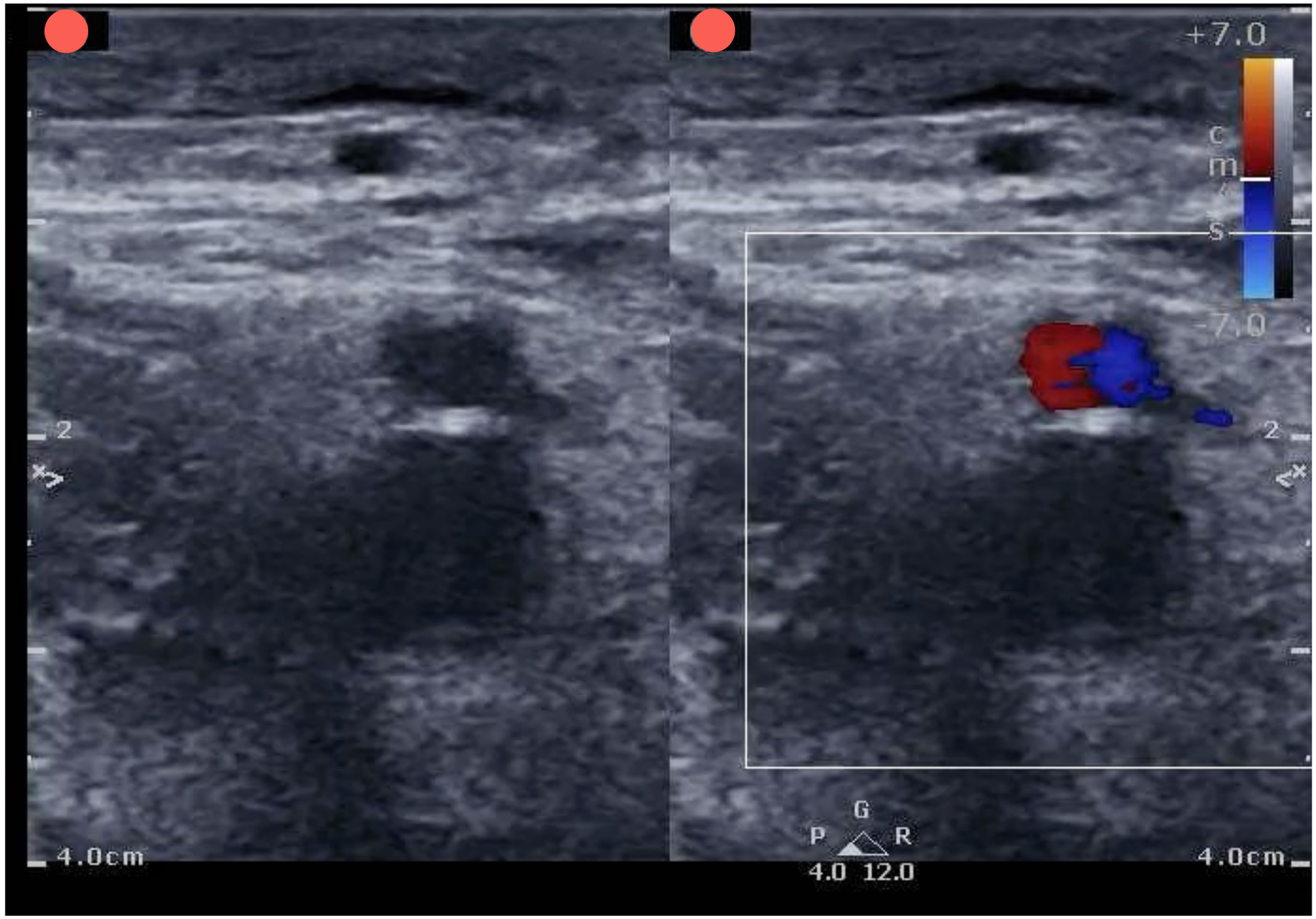
LLE DVT

MEDIAL



LATERAL

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DVT Ultrasound: Impact

- ✓ Save time & costs for the patient.
- ✓ Start appropriate treatment sooner.
- ✓ Reassure.
- ✓ Avoid devastating outcomes.

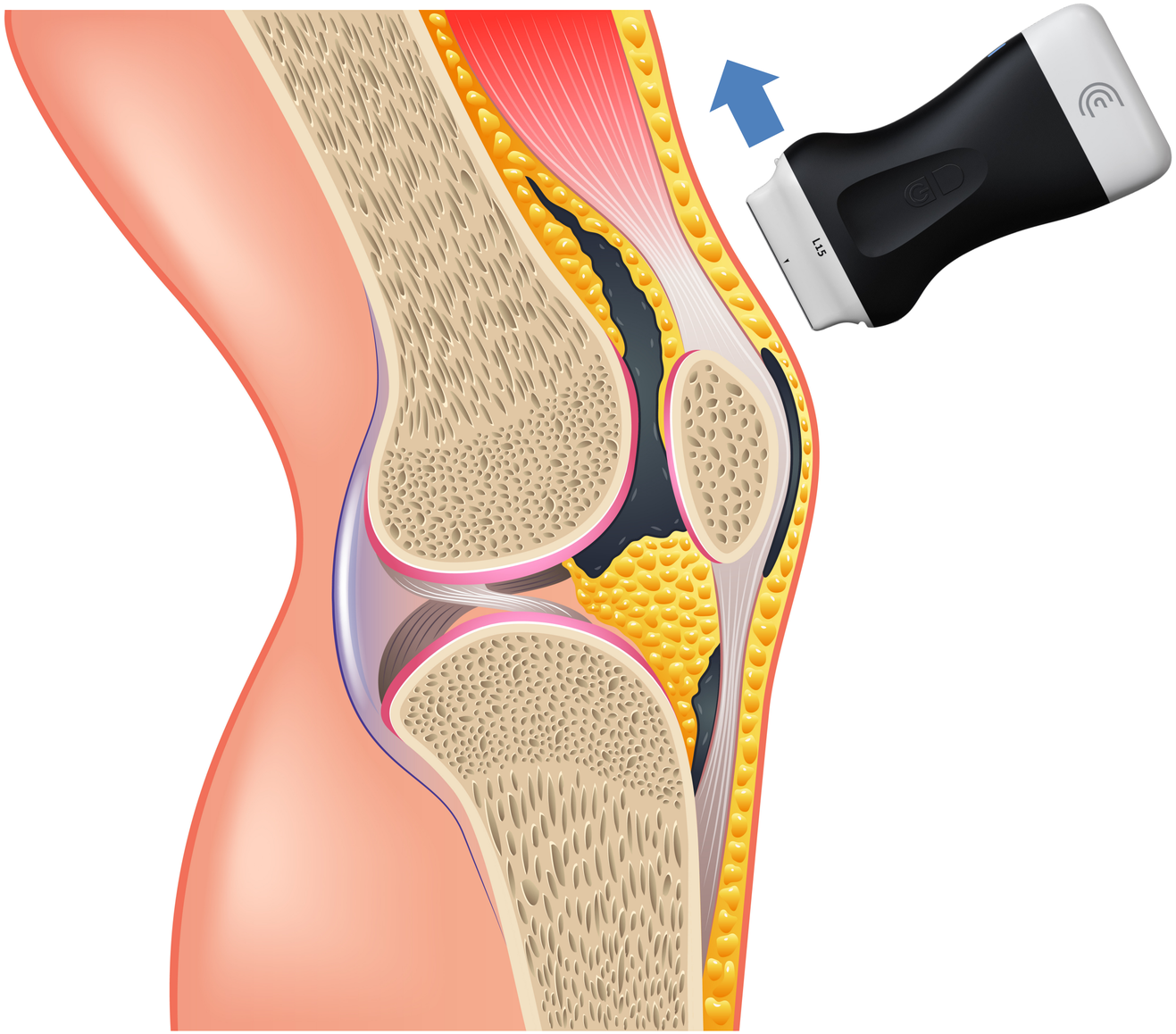
MSK Ultrasound

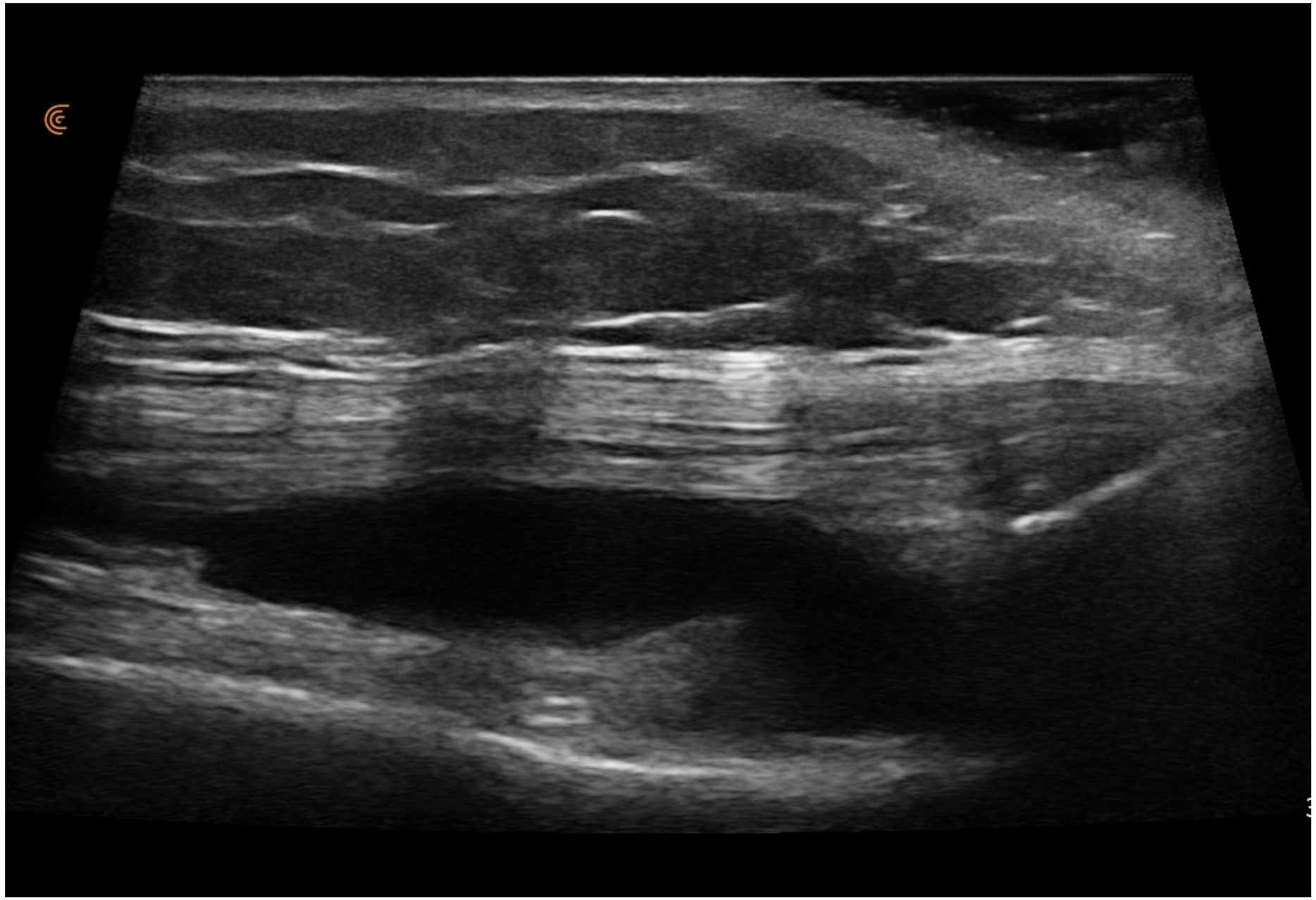
Indications

- ✓Joint pain or swelling
- ✓Tendon injury

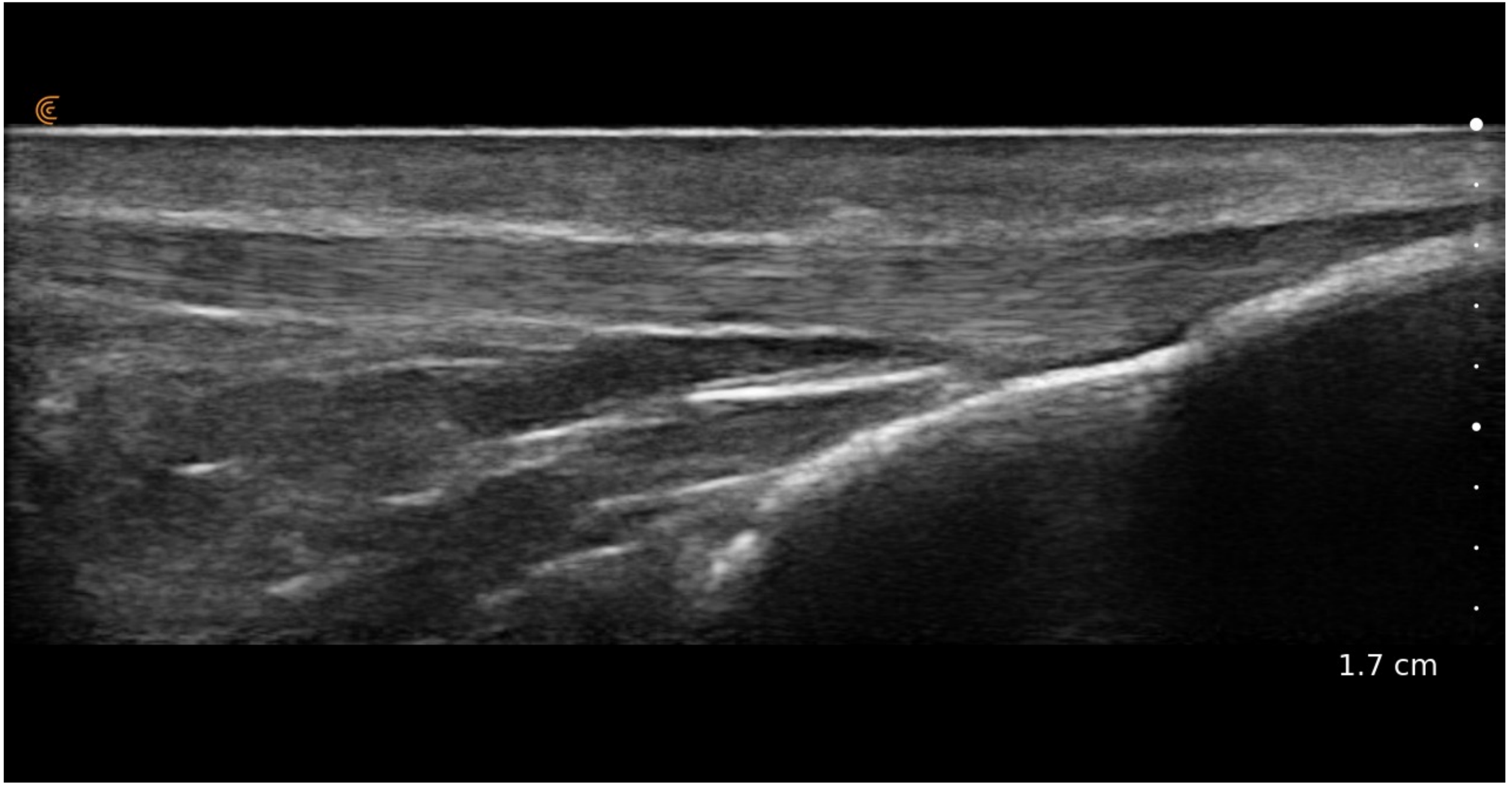
- ✓Is there a joint effusion?
- ✓Is there a tendon tear or inflammation?

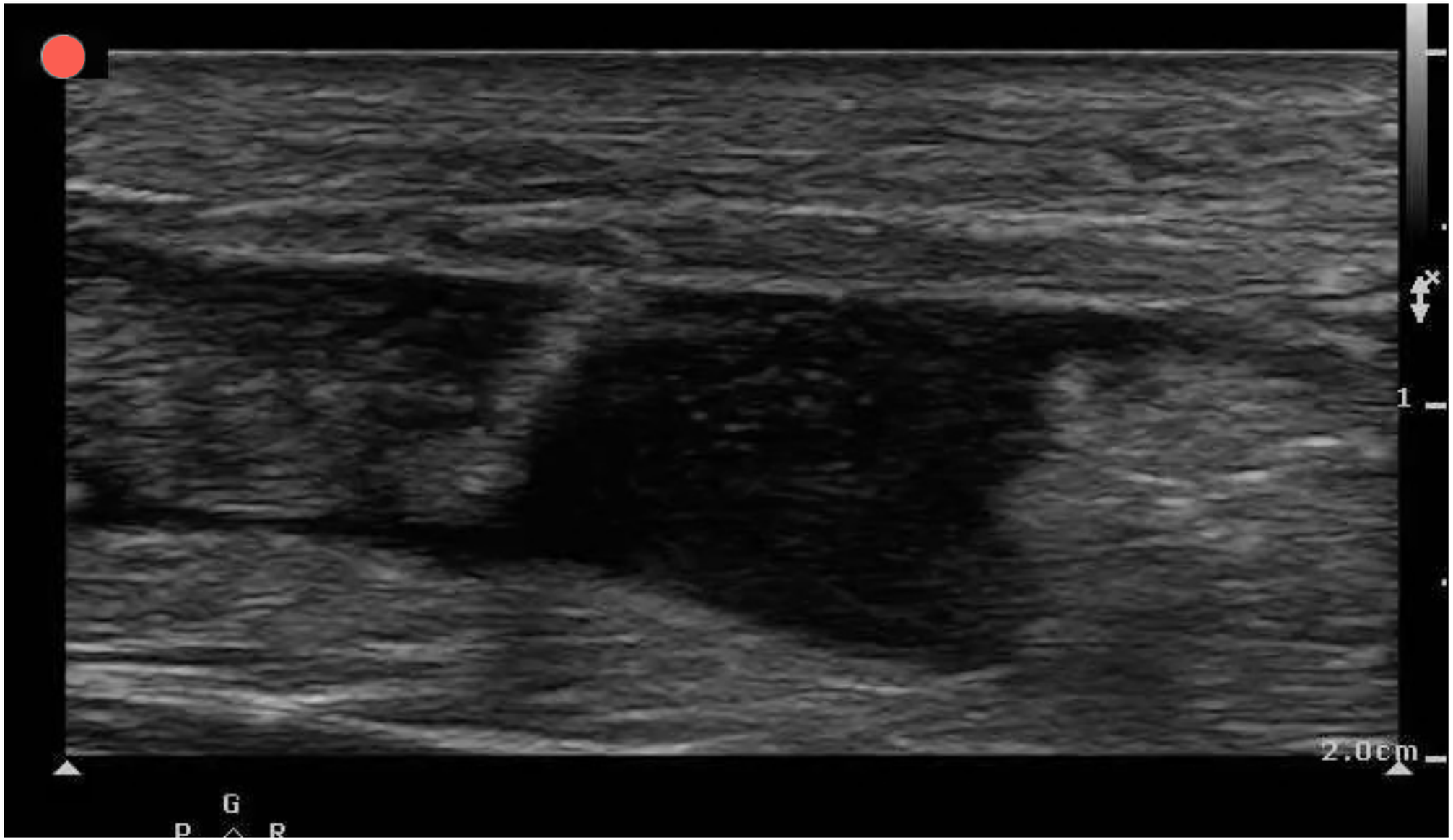
Joint Effusions





Tendon Evaluation





MSK Ultrasound: Impact

- ✓ Avoid radiation.
- ✓ Save time & costs for the patient.
- ✓ Increase safety of procedures.
- ✓ Improve diagnostic accuracy.

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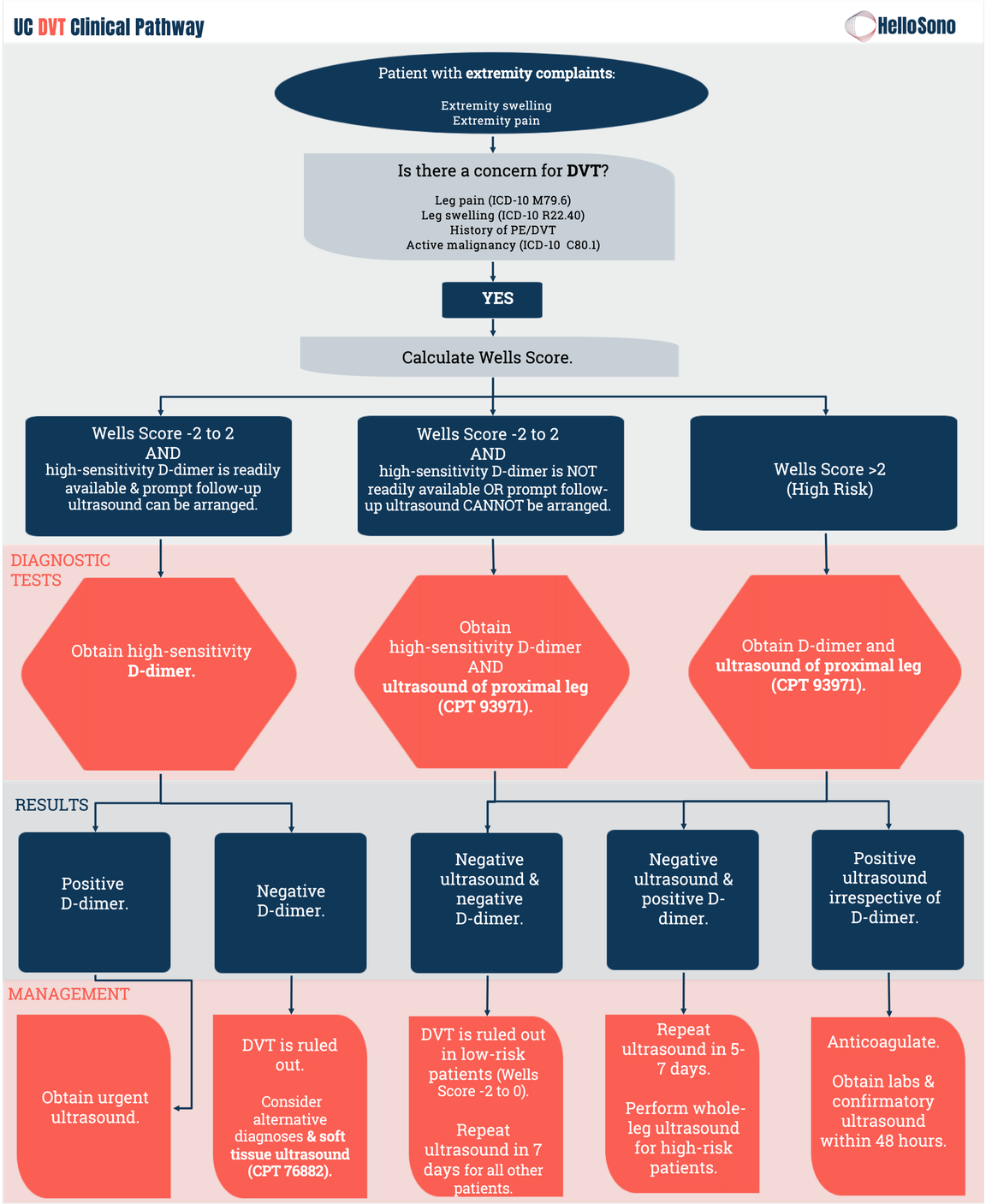
Implementation

- ✓ People
- ✓Devices
- ✓Workflow
- ✓Protocols & clinical pathways
- ✓Credentialing
- ✓QA & data



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Provider Credentialing

- ✓ Didactics
- ✓Supervised scanning
- ✓Assessment
- ✓Maintenance

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What’s the ROI?

Direct Billing

Increased E/M Code Complexity

Safer & Better Care

Efficiency

Loyalty

Differentiator

Expanded Services

Cost Savings

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Estimated POCUS Use & Billable Amounts

One Primary Care Clinic

10 POCUS exams/week

Physician-performed exams:

$30K - 90K ANNUALLY

APP-performed exams:

$25K - 76K ANNUALLY

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2025 POCUS ROI CALCULATOR

FOR PRIMARY CARE & URGENT CARE PRACTICES

Empowering clinicians with POCUS.

Key Takeaways

- ✓ POCUS is a powerful tool in primary care.
- ✓ Achieving credentialing standards is important and takes time.
- ✓ POCUS saves costs & drives revenue.

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WEBINAR | December 2

Business Case for POCUS

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hellosono.com/links

Live Demonstration

Patrick Villaruel

Clarius Clinical Specialist

Pre-Register

Poll

POCUS for Primary Care: Improving Accuracy and Outcomes in MSK Injections

Dr. Oron Frenkel

Wednesday February 11th, 2026
11AM Pacific | 2PM Eastern

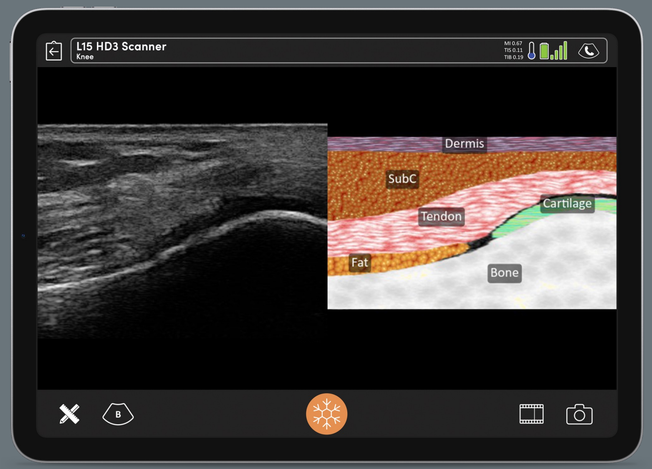
www.clarius.com/webinars

What additional information would you like?

Interactive Poll

www.clarius.com/primary-care
www.clarius.com/demo
www.clarius.com/classroom

CLARIUS Intelligence for Primary Care

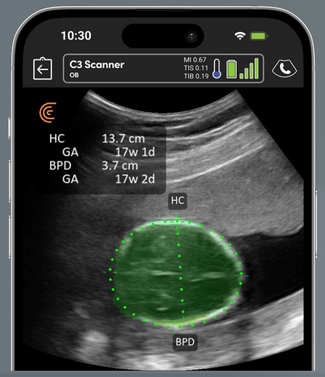


T-Mode™ for Primary Care

Applies distinctive colors, patterns and labels to the ultrasound. Quickly learn and recognize anatomy in the head & neck and identify layers of the shoulder and knee.

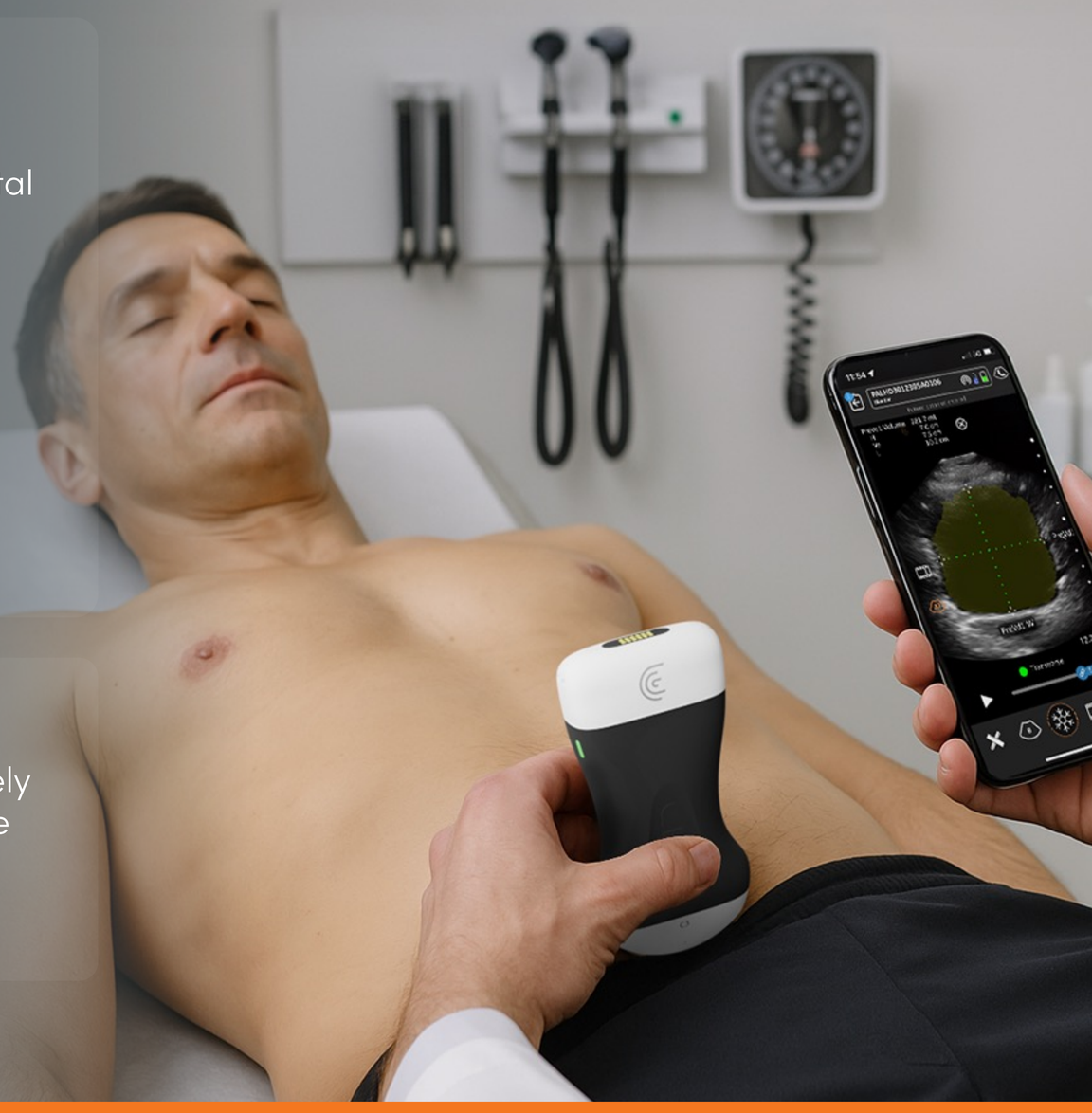
Bladder AI / OB AI

Visualize and automatically measure bladder volume or fetal anatomy with confidence.



Voice Controls

Maintain sterility and focus solely on your patient with hands-free ultrasound operation, streamlining your workflow.



Questions

Dr. Tatiana Havryliuk

Founder of Hello Sono | Emergency Physician

Shelley Guenther, CRGS, CRCS

Sonographer | Clinical Marketing Manager

clarius

See the difference.
Be the difference.

Thank you!