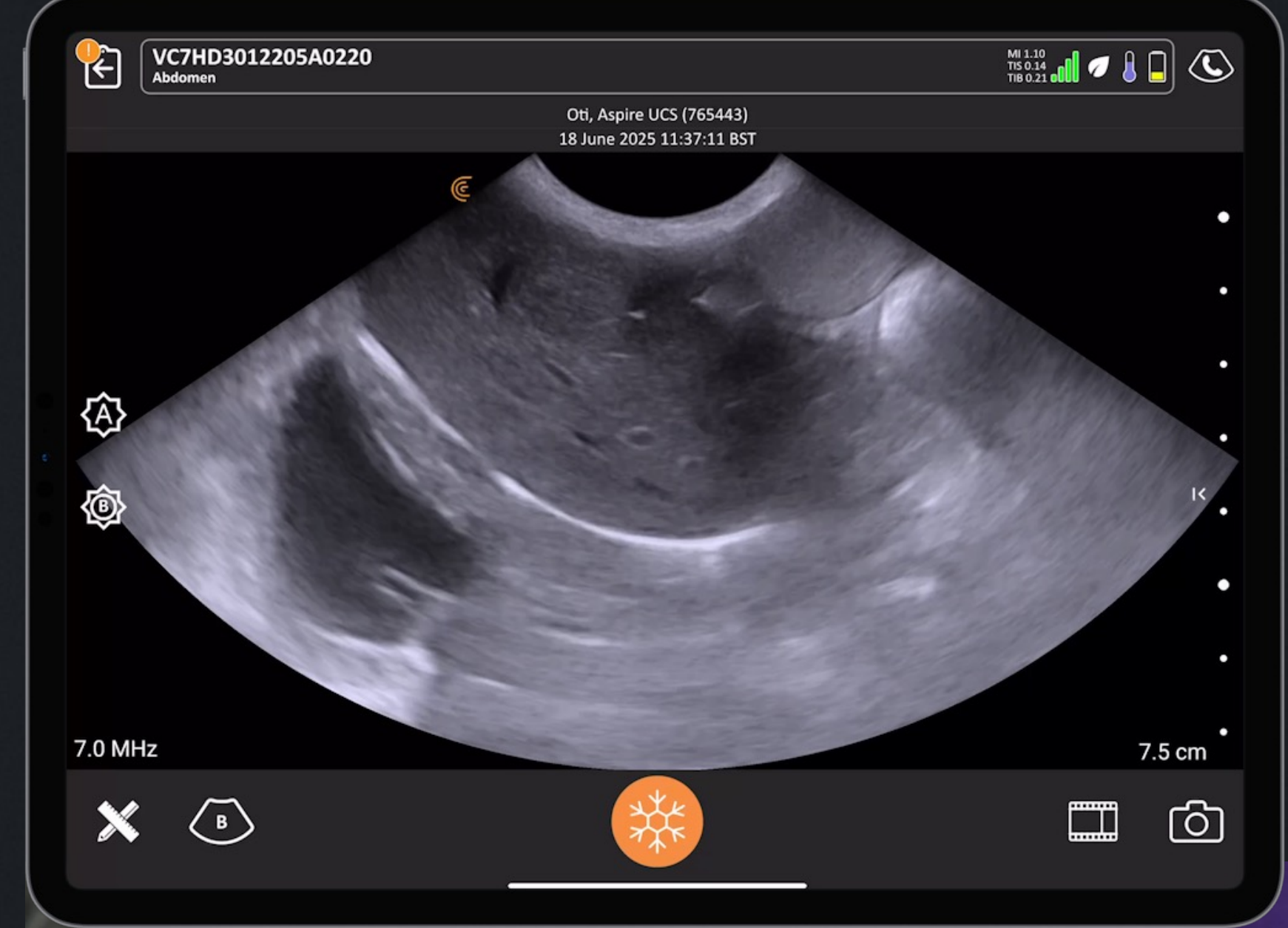




WEBINAR

Small Animal Ultrasound: Mastering the Aspire UCS 8-Step Abdominal Ultrasound Survey Technique™

September 2025



Your Host



Shelley Guenther, CRGS, CRCS

Sonographer | Clinical Marketing Manager



Interactive Poll

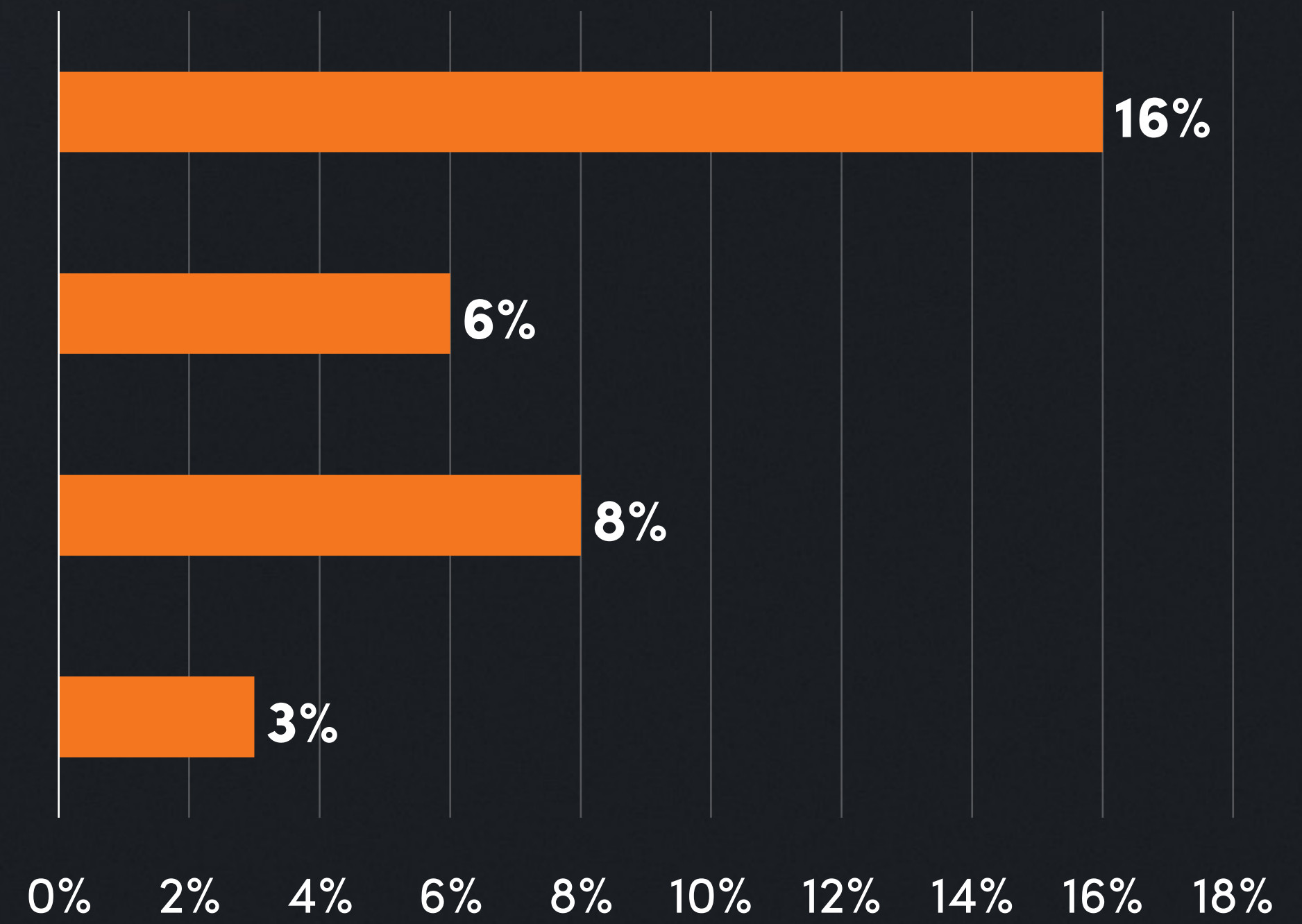
What is the main reason you are not using ultrasound?

Lack of training or confidence

Limited access to equipment

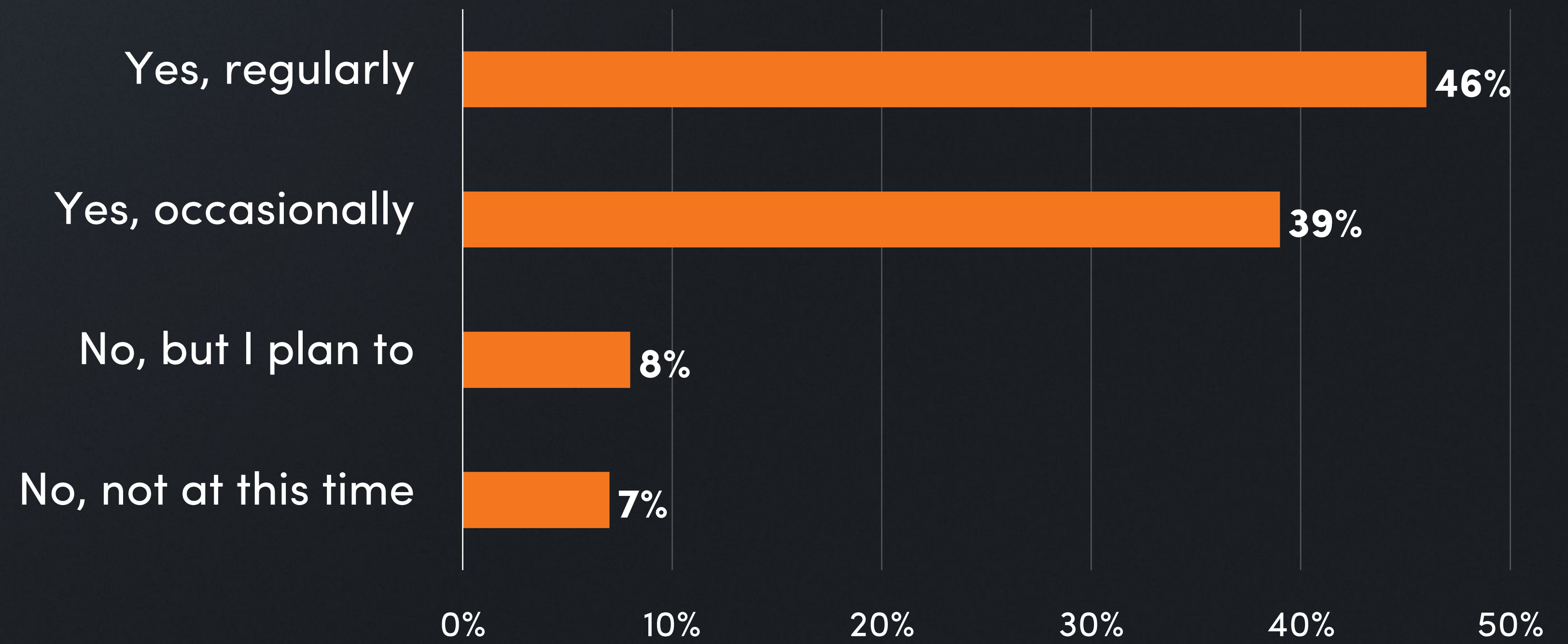
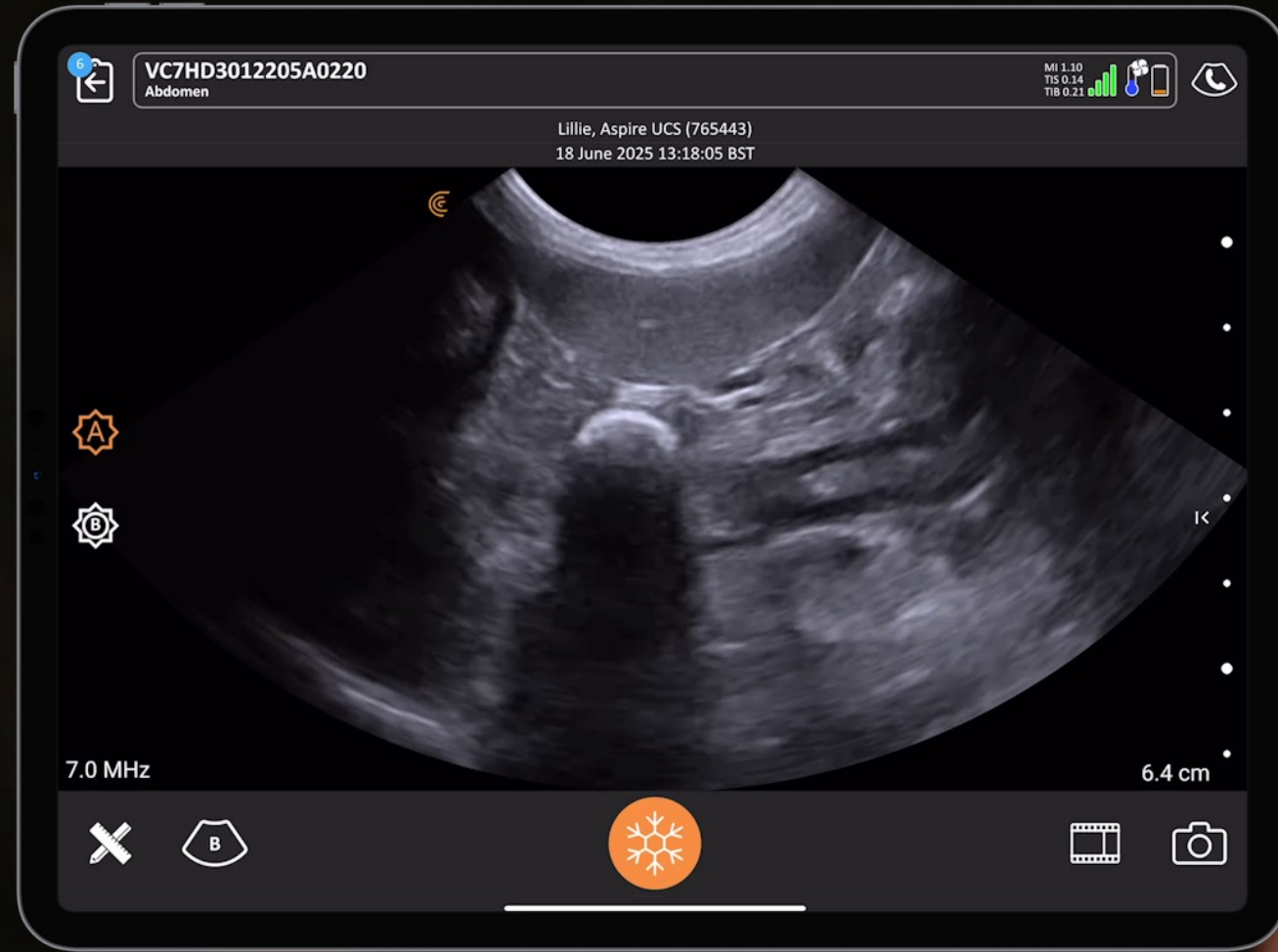
Cost concerns

Not needed in my practice



Interactive Poll

Do you currently use ultrasound in your small animal practice?



Your Expert Speakers



Angie Lloyd-Jones, DCR, DMU

CEO - Aspire UCS



Julie Burnage, DCR, DMU, FETC

COO – Aspire UCS



Ultrasound Consultancy Services



The Aspire UCS 8-Step Abdominal Survey – Building Confidence in Abdominal Ultrasound, One Step at a Time

Part 1 - Steps 1-3



Conventional Way To Teach Abdominal Ultrasound



Teaching by Organ Systems

- *The liver, spleen, gallbladder and biliary tract*
- *The genitourinary tract*
- *The gastrointestinal tract*
- *The tricky bits – pancreas, adrenal glands and lymph nodes*

However, learning by body systems means there is still a need to combine the skills to develop a comprehensive approach to full abdominal survey scanning.

Most vets resort to target scan if they lack confidence, effective training in the ultrasound system controls or scan techniques.

Just like any signature dish you cook – you need all the right ingredients added in the right step-by-step order to get a guaranteed result!



Rationale For A Focal or Target Scan

- *One organ/system assessed*
- *Clinical question requires binary “yes”/”No” answer*
- *‘Non-expert operator’ – “I’m not very sure, therefore limited study*
- *Lack of formal training / mentorship, support and guidance*
- *Triaging unstable or critically ill patients*
- *Extension of physical examination*
- *Time constraints*
- *Sedation is contraindicated*
- *Unable to clip scan site / just part fur*

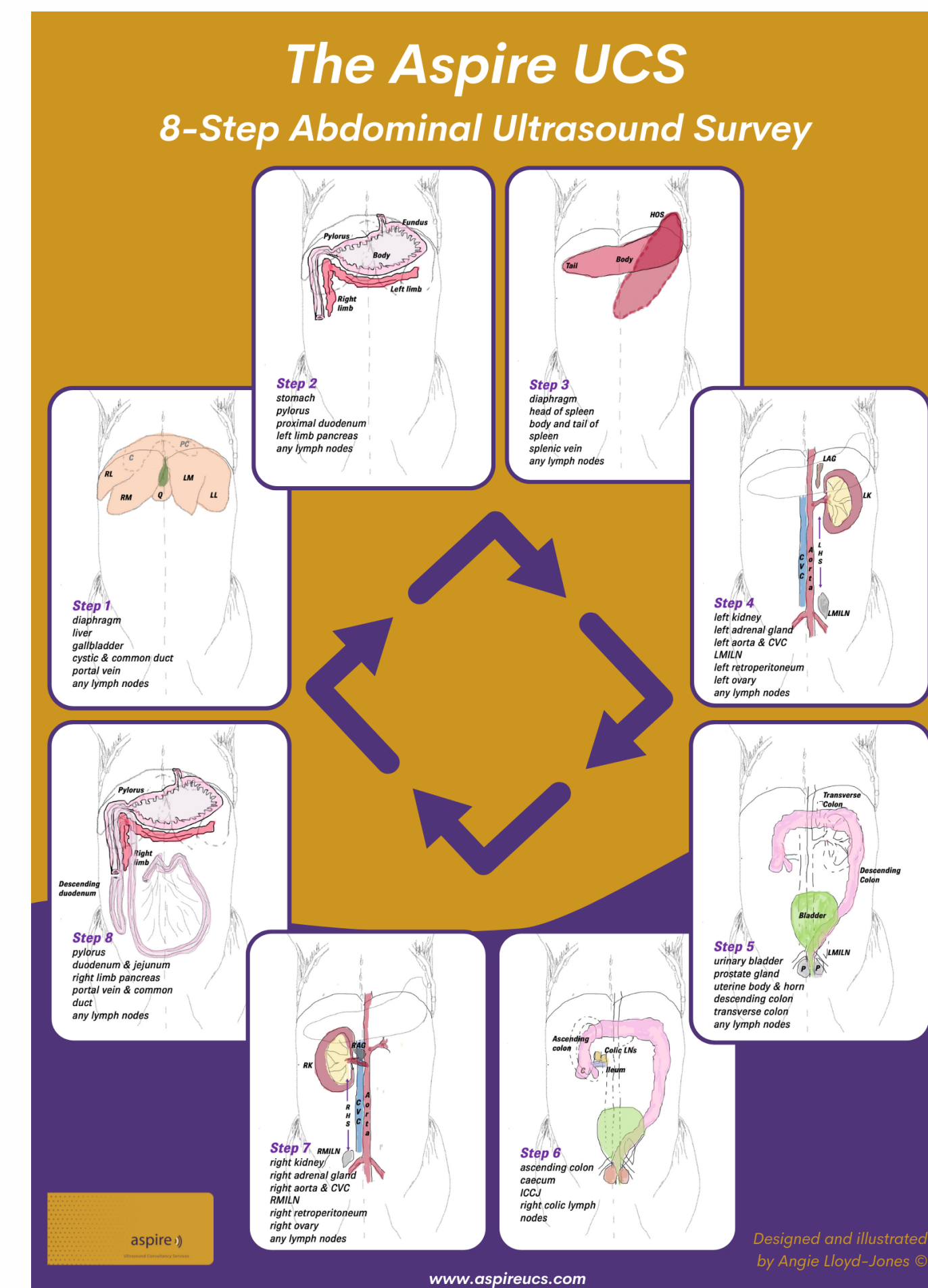


The 8-Step Abdominal Survey



Rationale For A Full Abdominal Survey

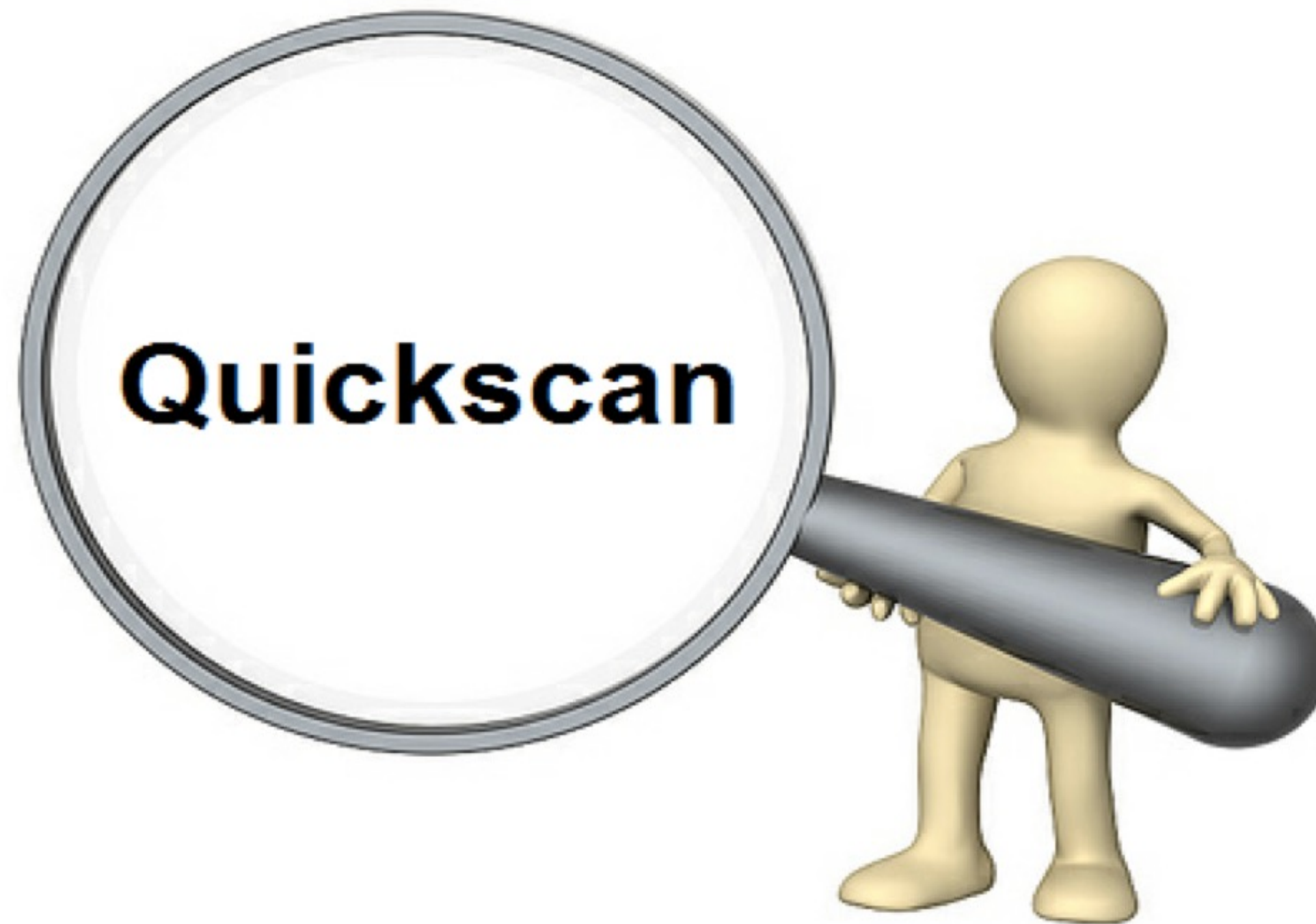
- Comprehensive survey of ALL abdominal structures
- Assists with overall clinical diagnostic impression
- Answers clinical question in a holistic manner
- Make use of higher specification ultrasound equipment – subtle / small pathology
- Sedation justified – better compliance, probe pressure, structure visibility, diagnostic confidence
- Patients clipped providing optimum gel-skin contact for multiple scan approaches
- Identify incidental findings as possible red-herring



A Full Abdominal Survey



What Are We Talking About?



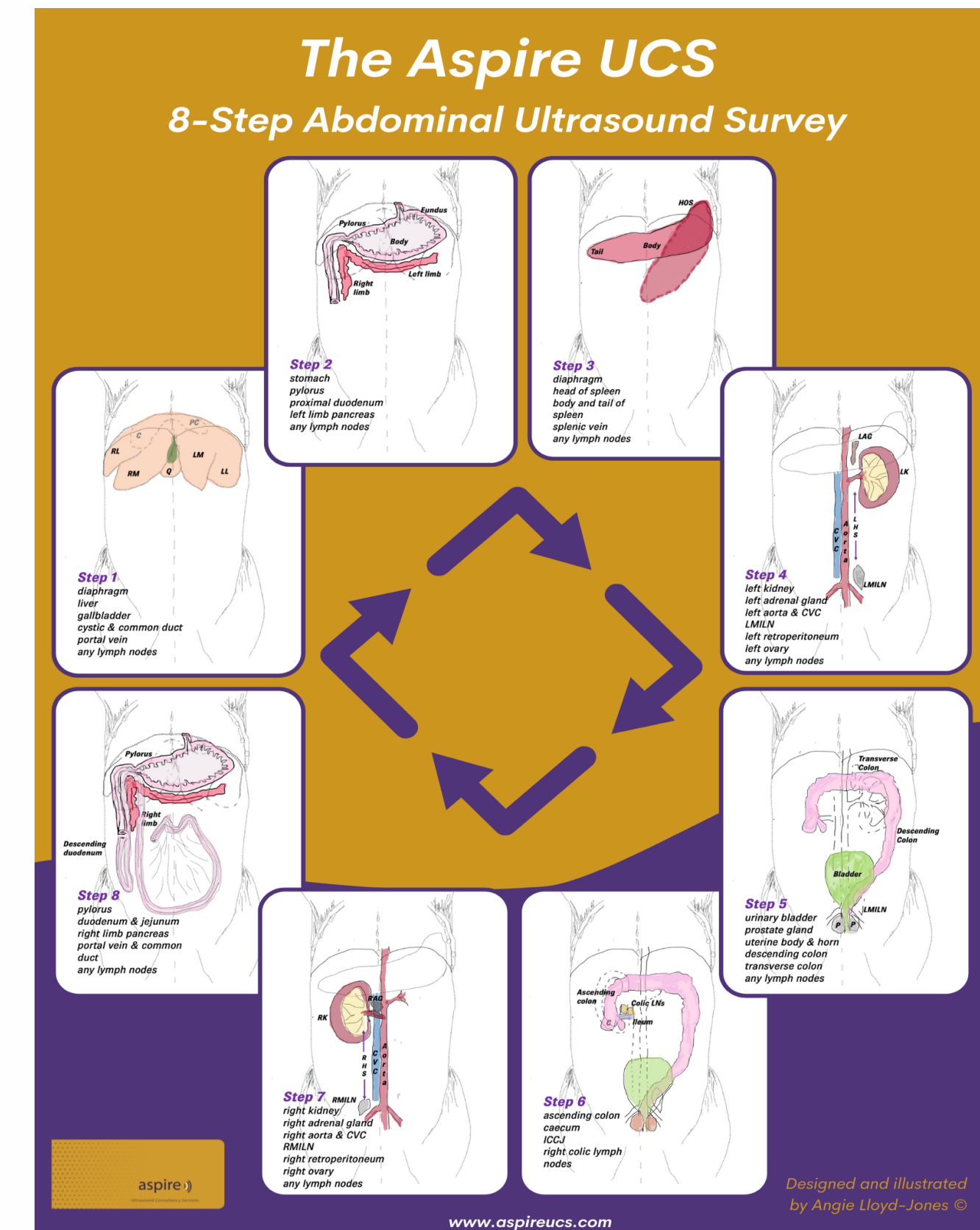
AIMS and OBJECTIVES: *To master manageable, learnable, mini-scan component steps and then bolt them together to build confidence, consistency and competency in abdominal survey scanning*



Why Have A Systematic Approach

Rationale For Our 8-Step Approach?

- Encourages 'Spatial mapping' of structures (build mental 3D model)
- Holistic, methodical approach to assessing abdomen
- Systematic clockwise direction
- Full anatomy assessment ensures thorough survey
- Allows for multiple scan approaches
- Overcome TDP e.g., overlying gas, adiposity, altered patient position
- Endorses a clearly defined scope of practice
- Ethical ultrasound-generated revenue- charge your true value to reflect enhanced skillset





Understanding Your Ultrasound System

Why Is This Essential?

Because:

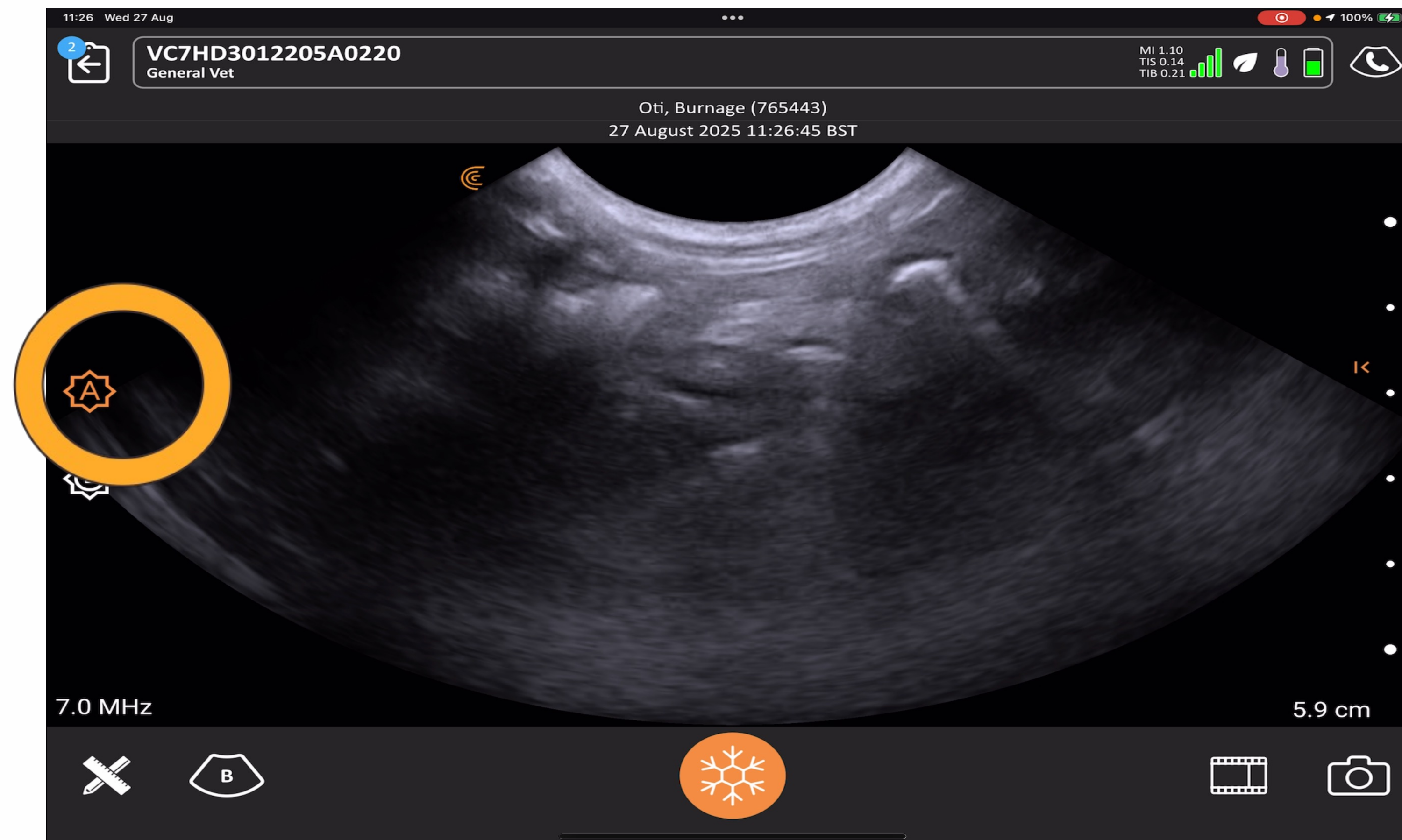
- *Ultrasound is an operator-dependent 'real-time' dynamic assessment*
- *Diagnostic confidence is heavily dependent on image optimisation*
- *Time impacts on patient outcomes*
- *Technical competence is necessary to adapt technique in difficult or challenging clinical situations*
- *Quality images evidence an operator's system skills and endorse ultrasound-based patient management decisions*



Auto-Optimisation Control

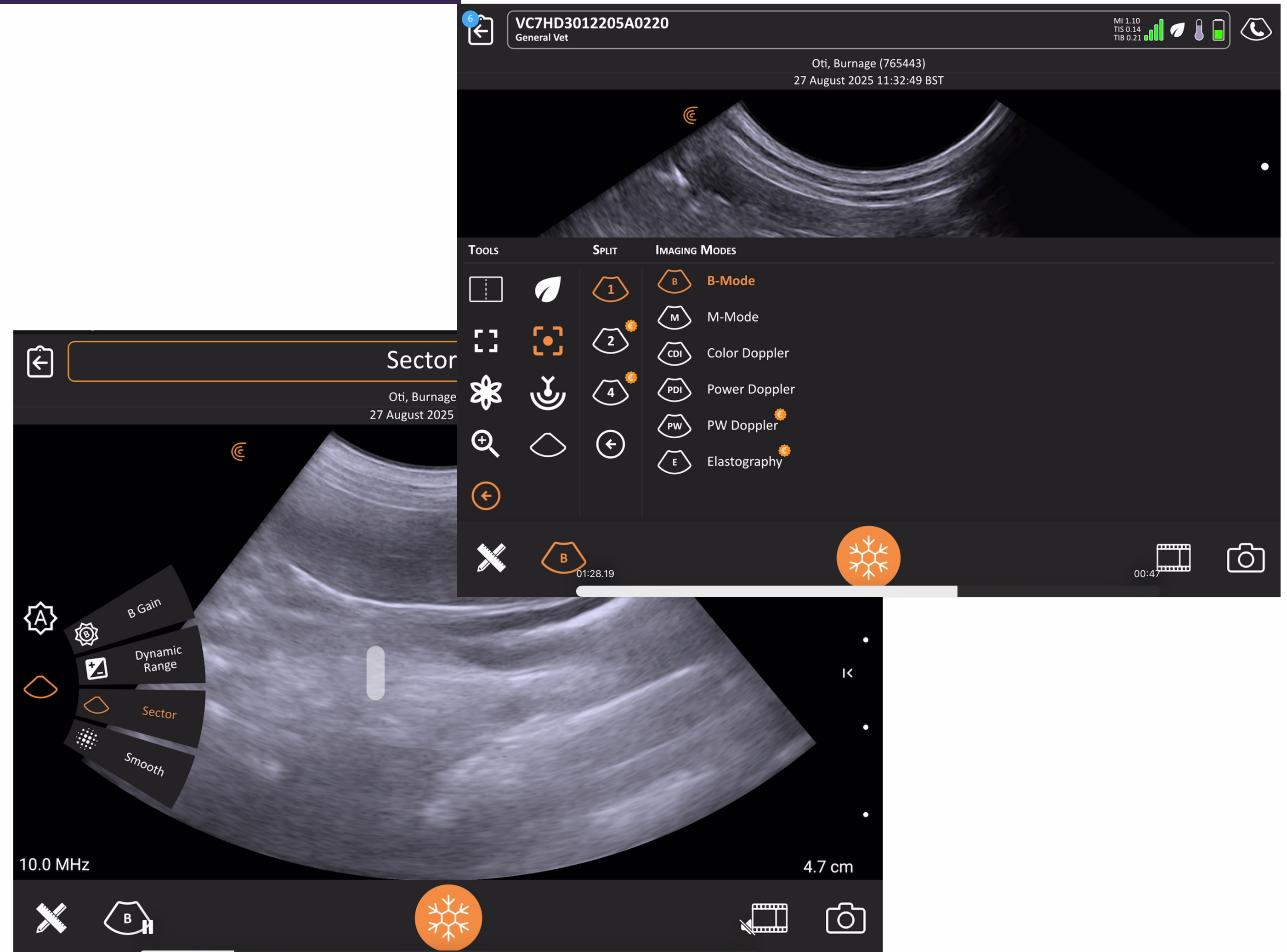


Can't I Just Rely On This?

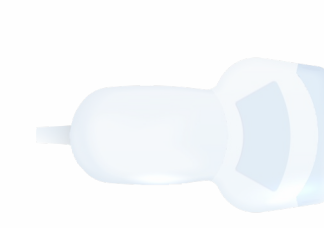


Key Basic Controls

- *Probe and Preset*
- *Patient Demographics*
- *Depth*
- *Overall Gain and Time Gain Compensation*
- *Focus*
- *Dynamic Range*
- *Sector Width*
- *Magnification / Zoom*
- *Annotation & Archive*



Probe and Preset

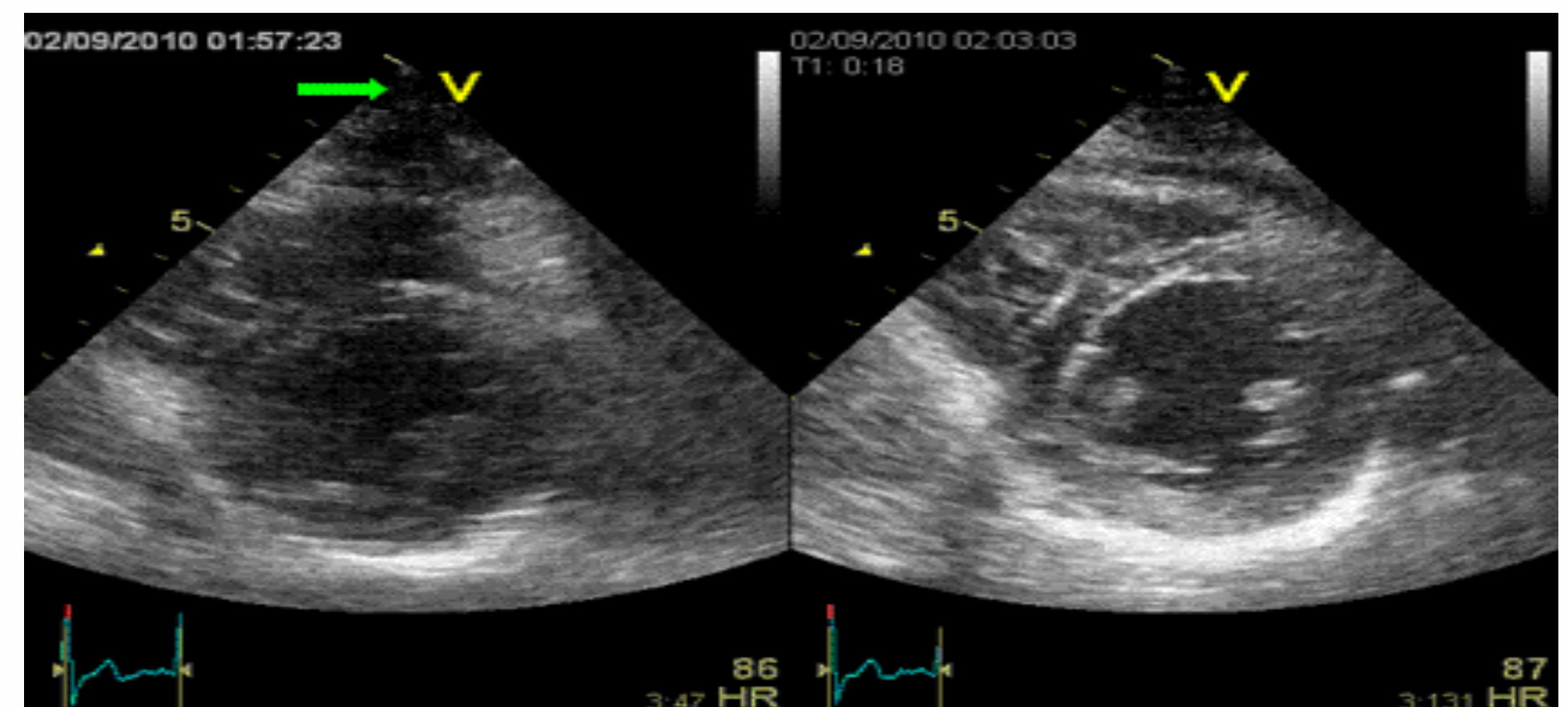
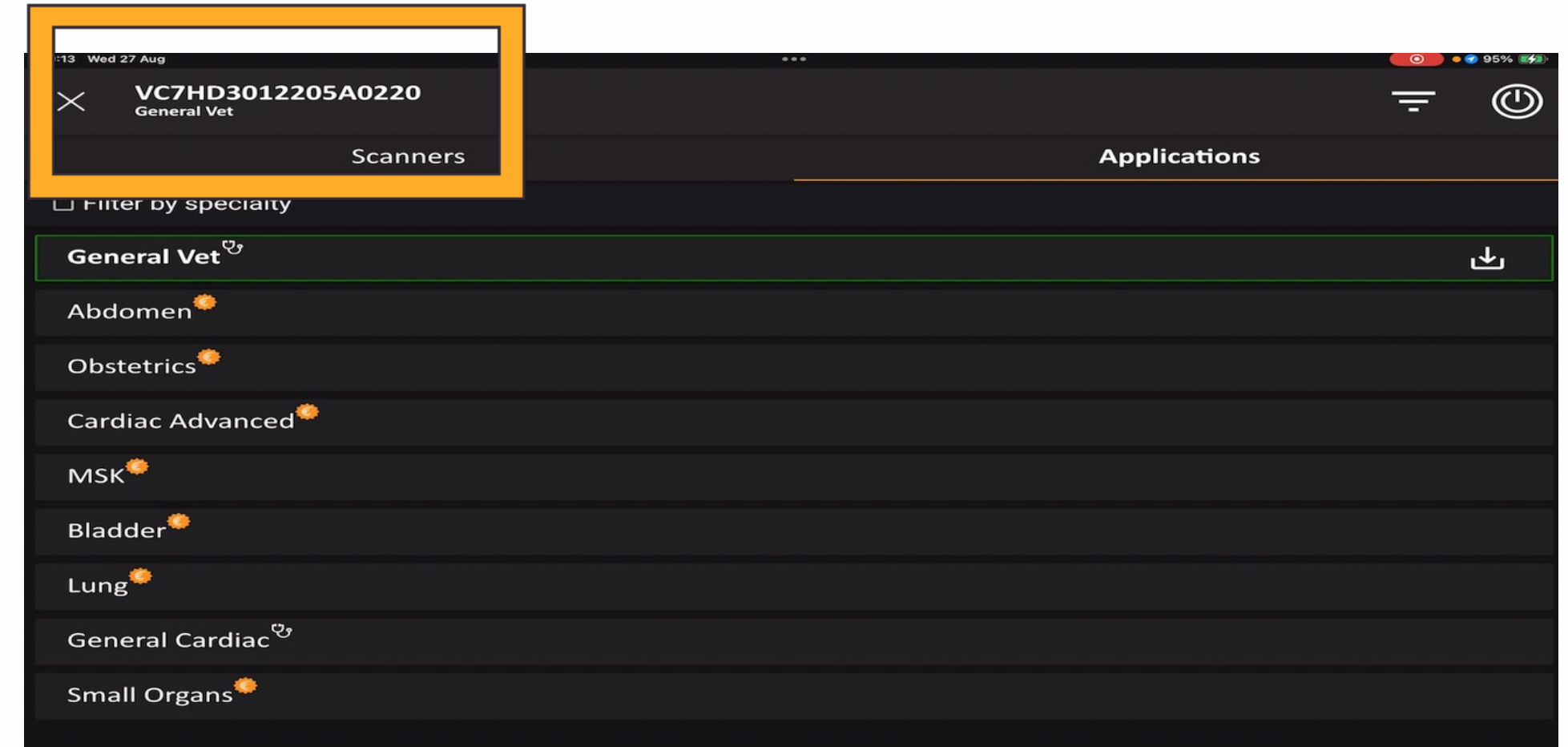


Correct Choice Matters

Probe Footprint and Frequency

Footprint is related to the on-screen image shape and specific scan type/body region. It also accounts for the skin-contact area

High ultrasound transmission frequency gives better axial resolution but poorer beam penetration and vice versa



Probe and Preset



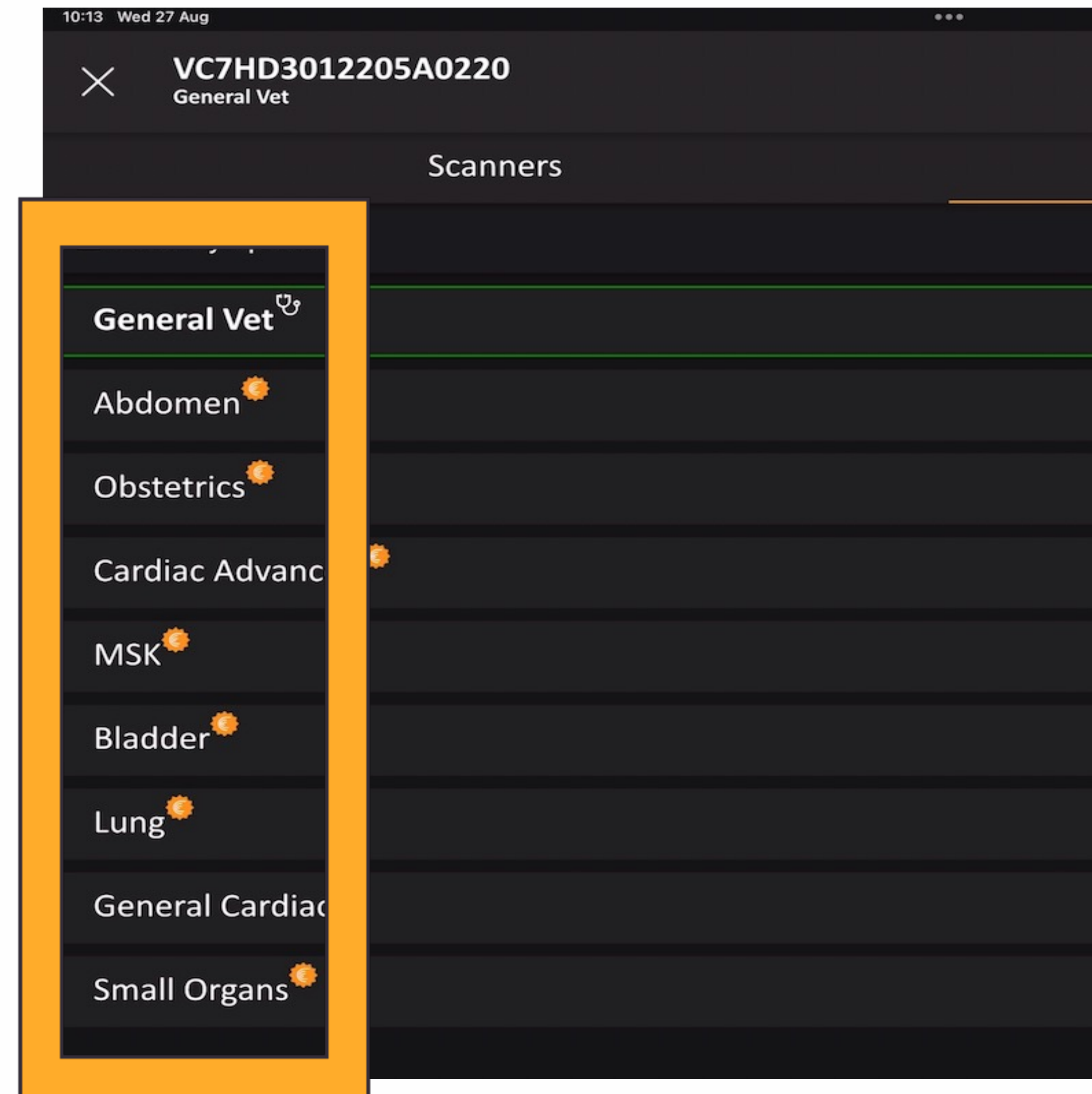
Correct Choice Matters

Preset

- A 'preset' is a **baseline setting** (starting point) used to produce reasonable quality images at the start of any scan
- Select the most appropriate preset for the required scan application
- Confirm correct preset at top of the screen
- Override preset during the scan

A Preset is NOT prescriptive! Why?

As you move around the patient, you need to scan different tissue types at different depths, with difference ultrasound tissue characteristics

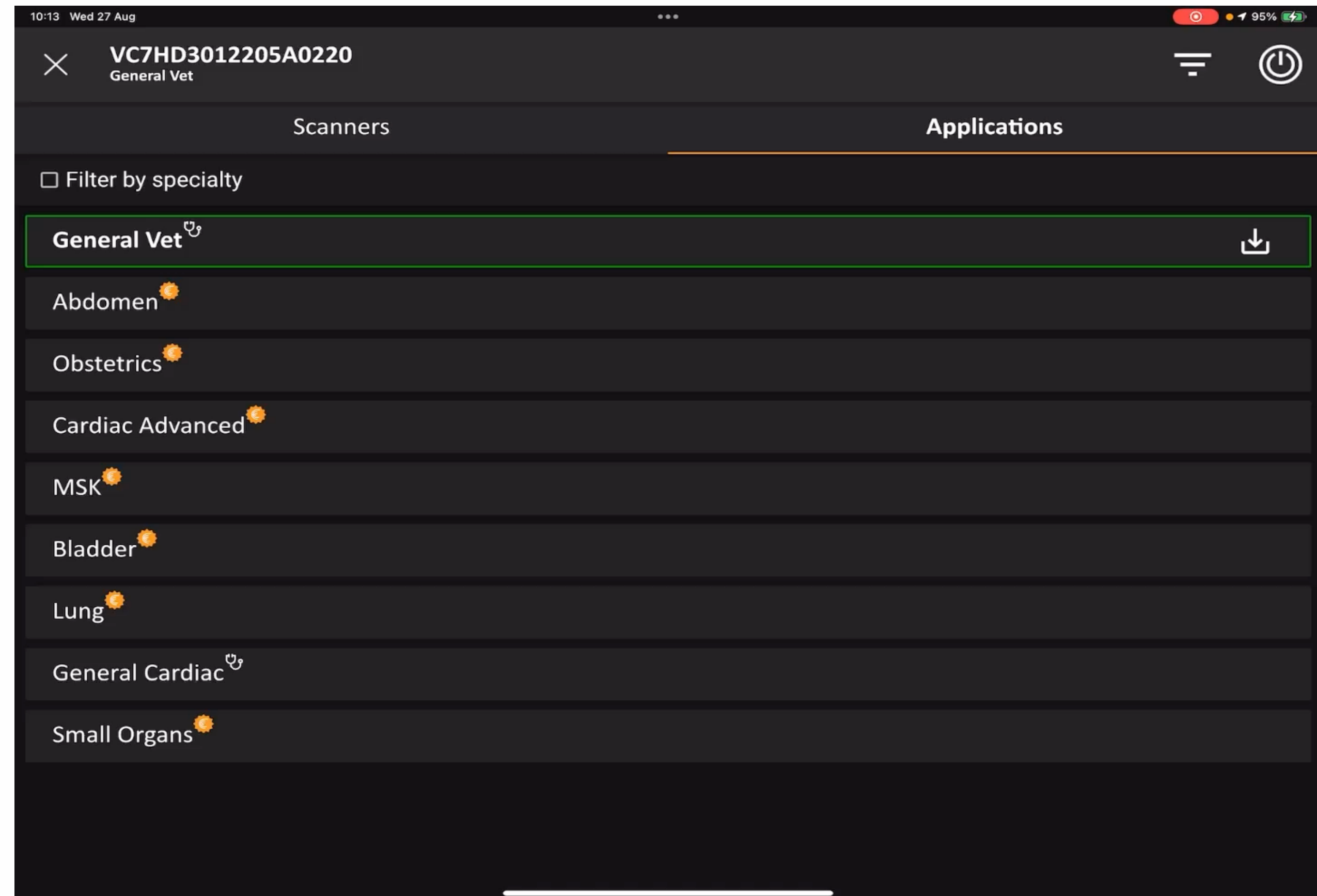


Patient Demographics



Why Enter Patient Details?

- *Identification of images*
- *Links date and time with scan episode*
- *Evidence of scan findings*
- *Serial scanning - compare & contrast*
- *Audit and reflection*
- *Client complaints*
- *Litigation – expert witness*



Depth



Select The Correct Depth

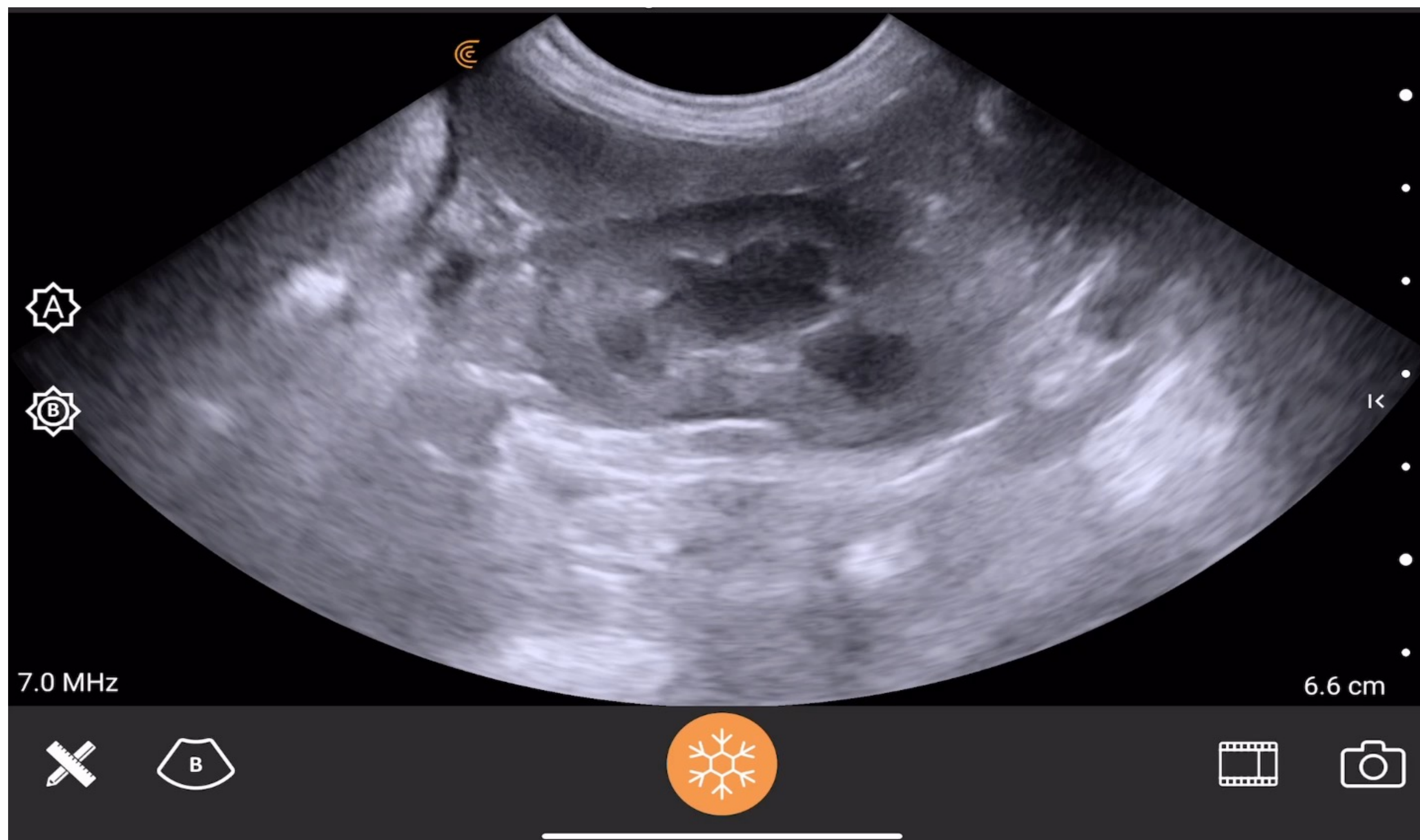
- *Start with greater depth for initial anatomical landmark location*
- *Identify organ/structure/region of interest*
- *Adjust depth to ensure region of interest (ROI) is in the centre of the screen*
- *Depth scale is shown on screen (cm vertical scale)*

ALWAYS ADJUST DEPTH BEFORE ZOOM





Depth



Overall Gain



Correct Use

- *Essential control*
- *Amplifies transmission and return signals*
- *Amplifies ALL signals by same factor regardless of depth*
- *Adjustment affects the whole image*
- *Set initially around 2/3rds to $\frac{3}{4}$ of the full-scale range*

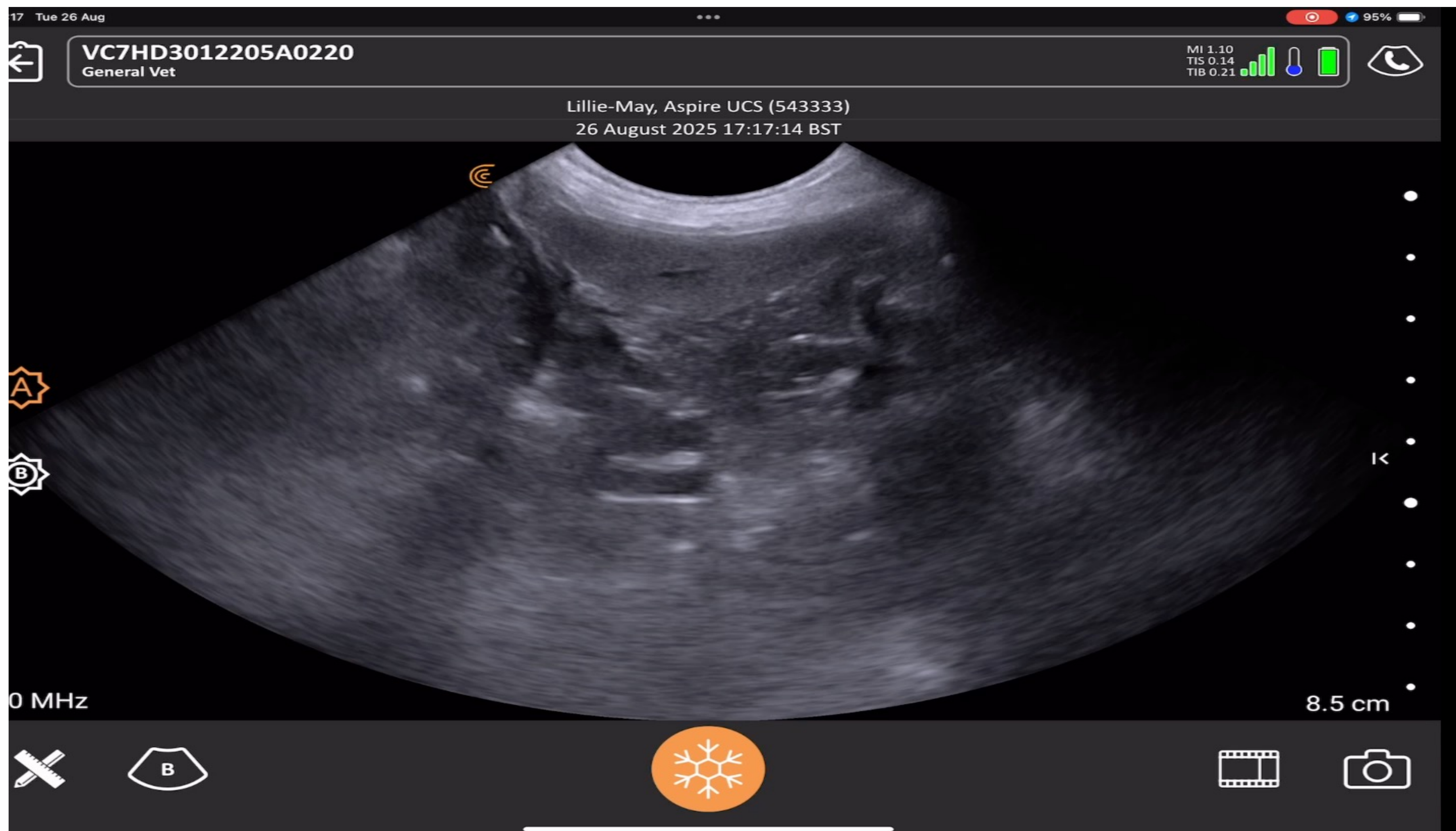
TOO HIGH - over-saturated / bright image

TOO LOW – under-saturated / dark image





Overall Gain



Time Gain Compensation (TGC)



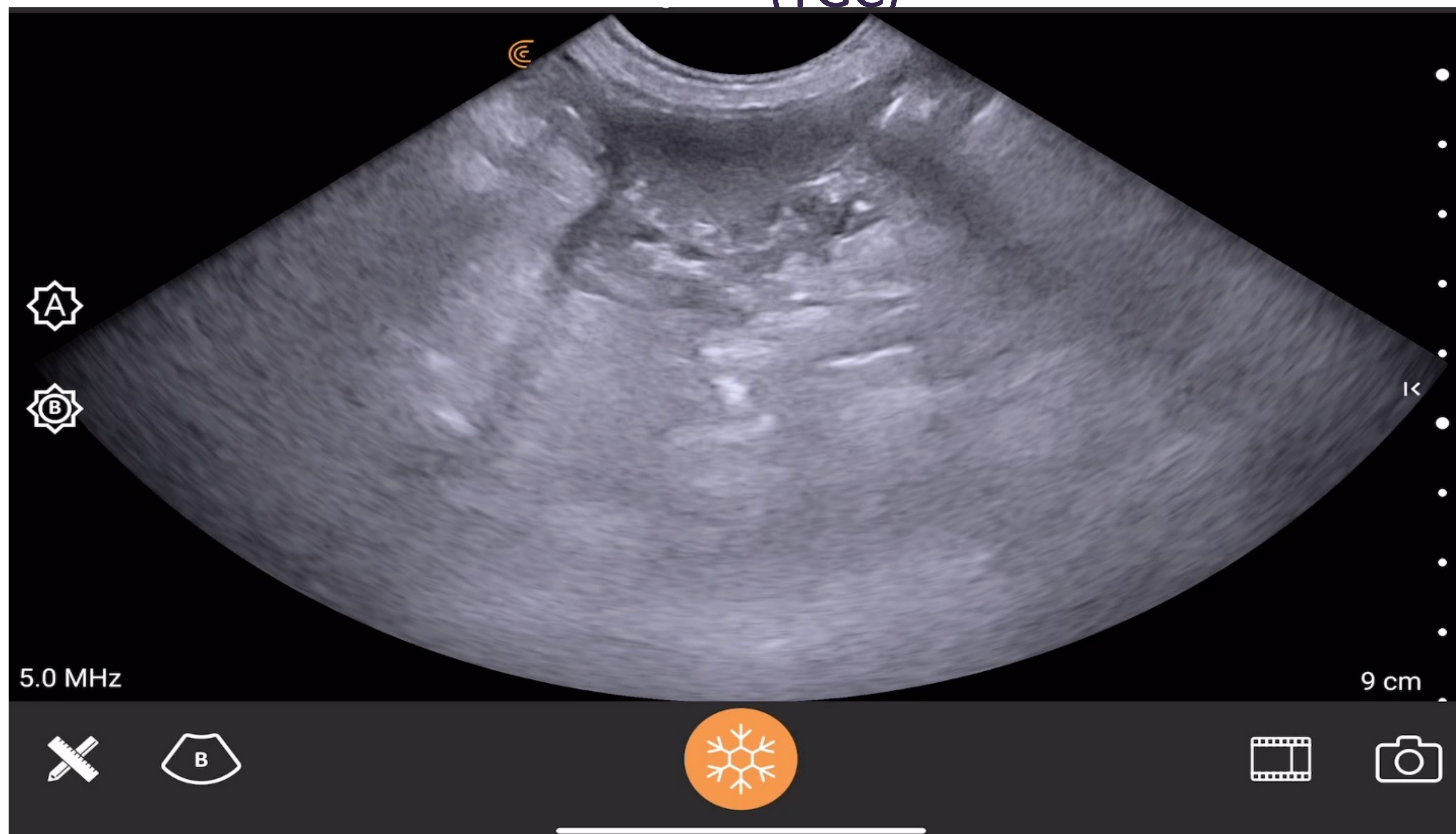
Correct Use

- *Slider controls amplify signals at selected depths*
- *Deeper signals are weaker when received back at probe*
- *Compensates for distance US pulses travel within body*

TGC function is to produce an even grey scale throughout the depth of the image assuming disease-free homogenous tissue (e.g. liver)



Time Gain Compensation (TGC)



Focus



How to Adjust The Focus

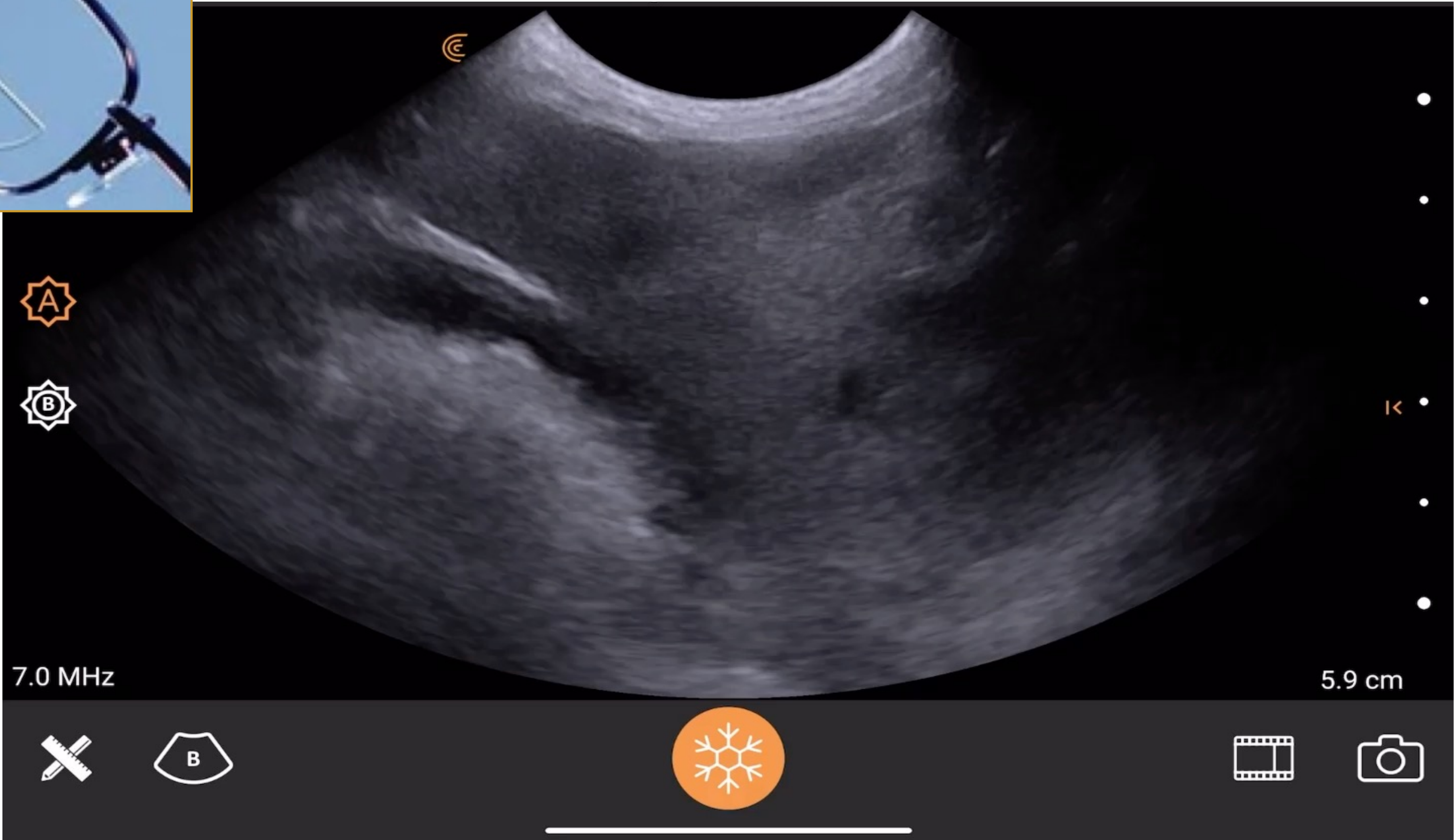
- *Autofocus is part of auto-optimisation option*
- *Select manual focus via 'B-Mode' control selection at bottom of screen*
- *Touch selected depth for focal zone within the image*
- *Focal point is depth on image at which the beam width is electronically narrowed to increase the line density resulting in increased lateral resolution*
- *Focus is displayed as a triangular marker on depth scale*



ENSURE focus is set to the **REGION OF INTEREST**



Focus



Dynamic Range



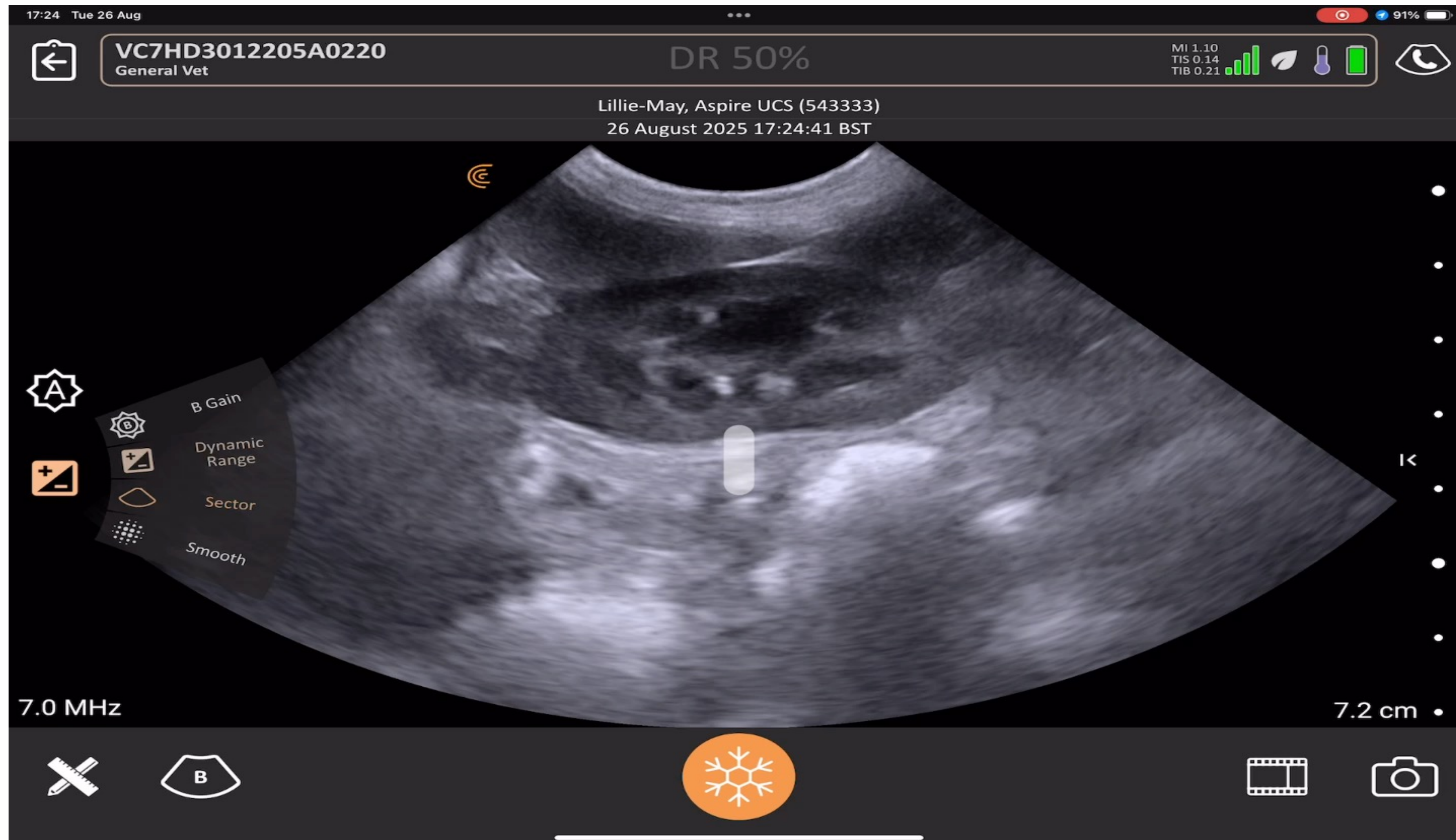
Dynamic Range Impact

- *Dynamic range (DR) controls how many shades of grey appear between black and white on any given image, affecting the image contrast*
- *Choose the correct level of contrast depending on the structure examined*
- **HIGH dynamic range** (more grey shades, softer image) is best for parenchymal structures
- **LOW dynamic range** (fewer greys, higher contrast image) is best for fluid-filled structures, vessels, musculoskeletal and gastrointestinal structures





Dynamic Range



Sector Width



Why Adjust Sector Width

- *Optimal adjustment of the width of the image displayed*
- *For microconvex/phased array/convex probes*
- *Linear probes can have extended field of view / trapezoid function, created by electronic beam steering*

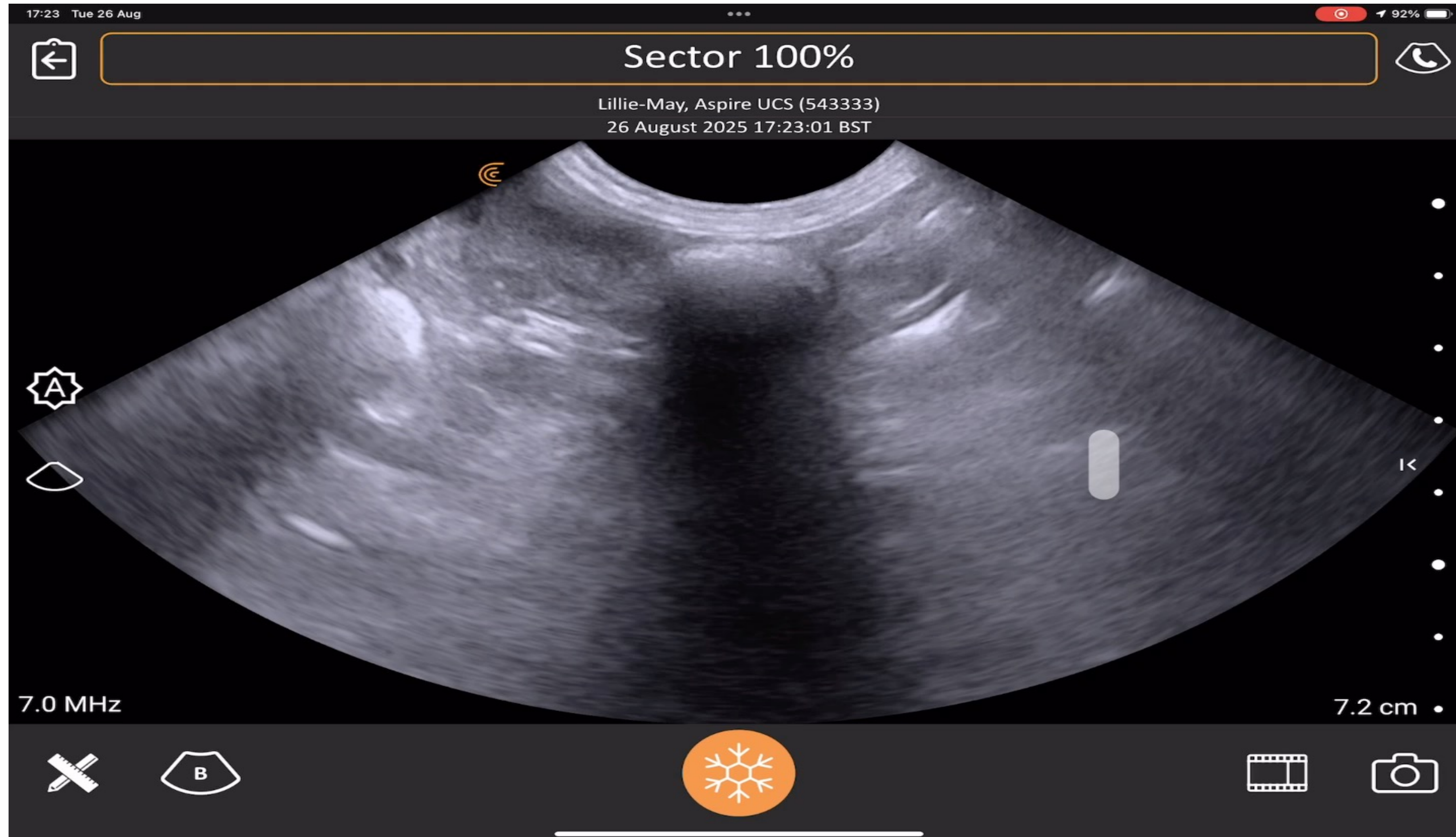
Narrowing the sector width / scan range

- ***Increase the scan line density (scan lines are compressed closer together, increasing lateral resolution)***
- ***Removes extraneous / distracting signals e.g., moving bowel gas***
- ***Increases frame rate (smaller sector refreshed more frequently)***





Sector Width



Zoom or Magnification



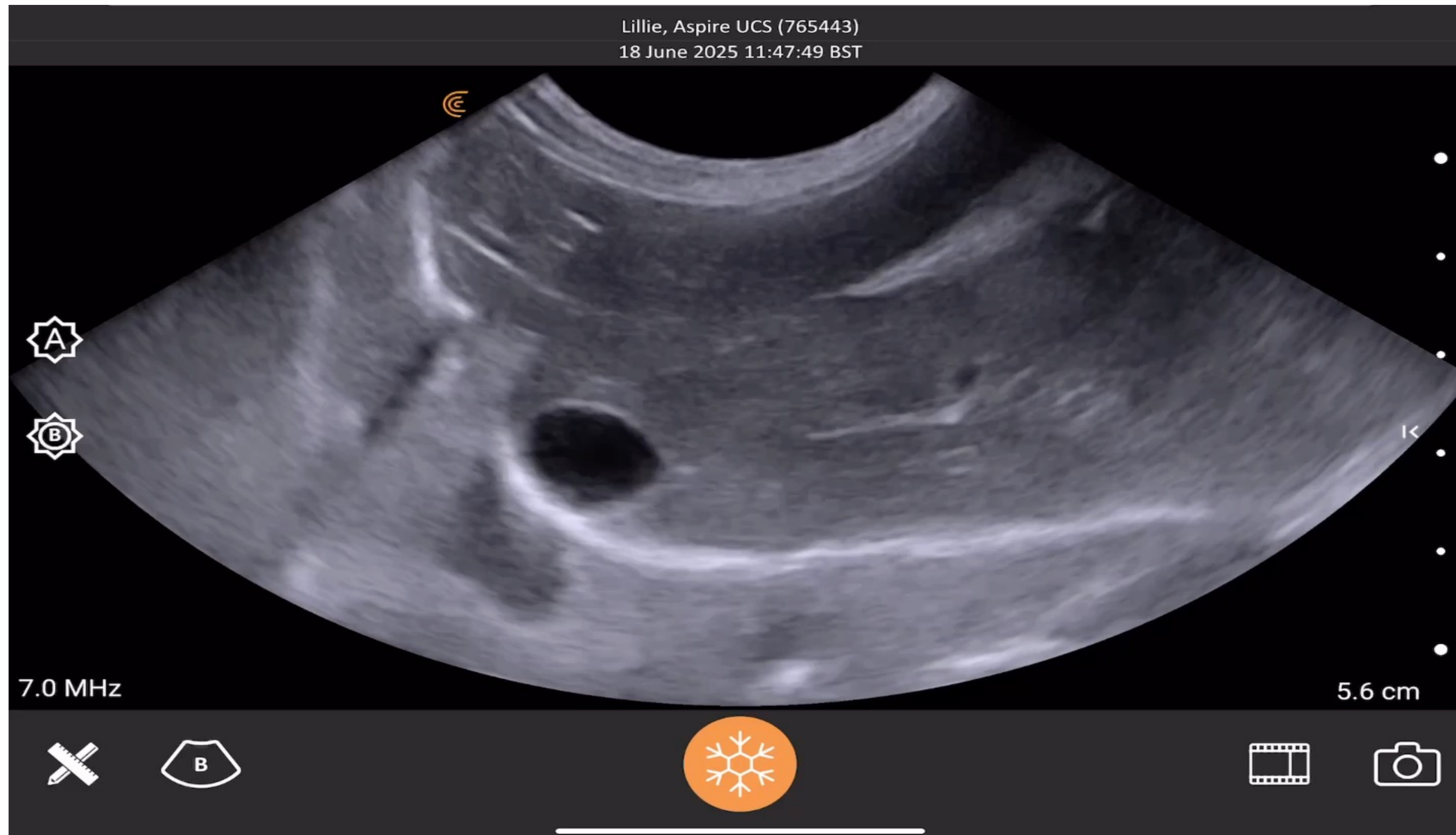
Using The Zoom Control

- *Magnification or zoom is different to depth control*
- *Two ways to magnify/zoom an image*
- **Live image – WRITE ZOOM** – *whole image memory is used – helps to maintain image resolution*
- **Frozen image – READ ZOOM** – *post processing function – resolution may be compromised due to over-zooming and pixelation*





Magnification and Zoom





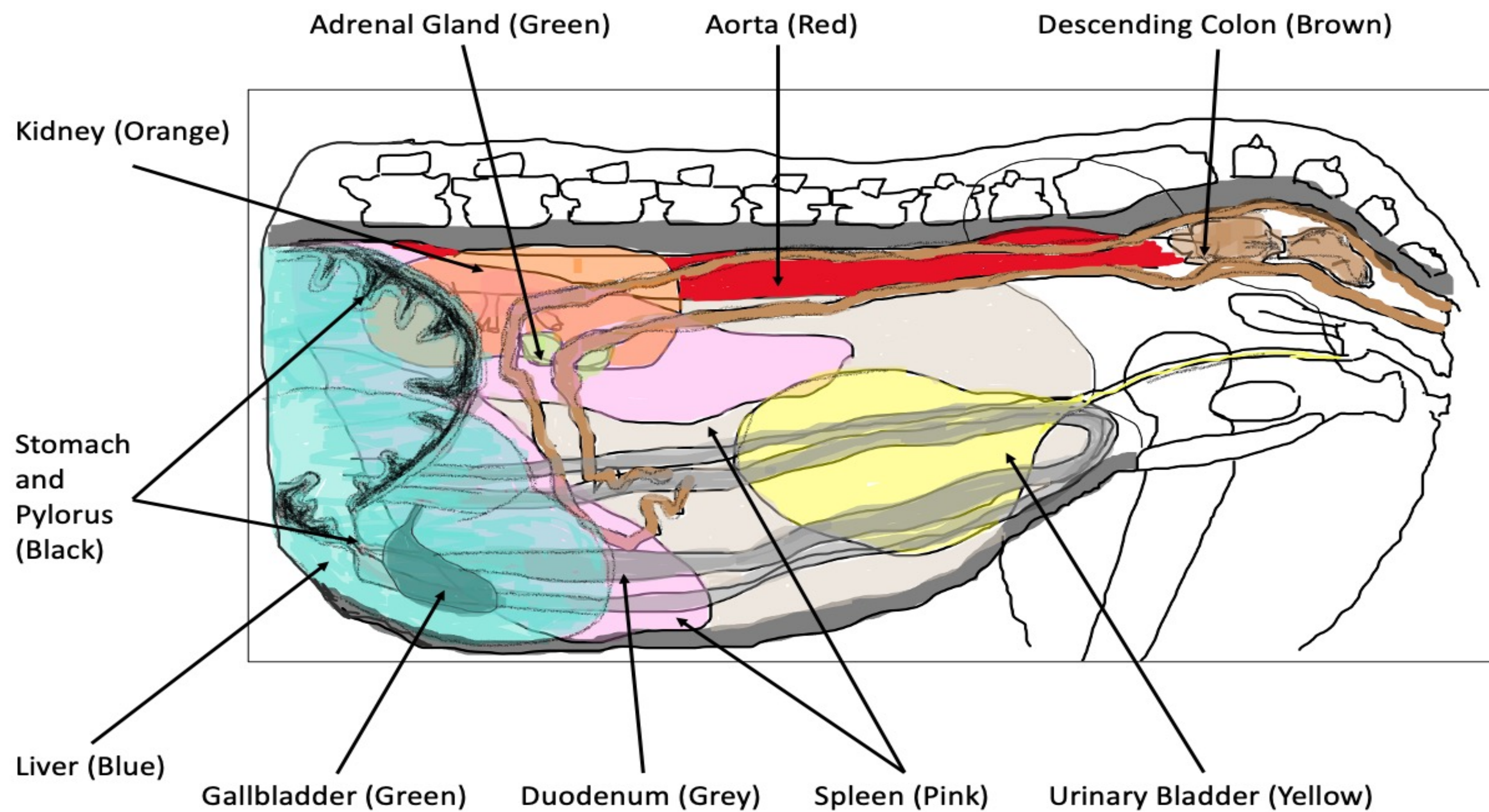
Back to That 8-Step Survey

What You Know Already Before Starting to Scan

- *In-depth clinical knowledge veterinary medicine*
- *Anatomy and pathophysiology*
- *Reflective practice from own veterinary experience*
- *Patient's presenting signs and symptoms*
- *Clinical examination e.g., rebounding, guarding, mass etc*
- *Previous medical history / current medication, lab test results*
- *Previous diagnostic imaging – review for clues, compare & contrast findings, assess disease status*



Anatomical Relations





Know Your Normals

NORMAL ultrasound appearances

- Textbooks
- Online course / learning material
- YouTube Videos
- Watching others

*By appreciating what is a **NORMAL** or a **NORMAL VARIANT**, you will become competent and confident to recognise what is **ABNORMAL***

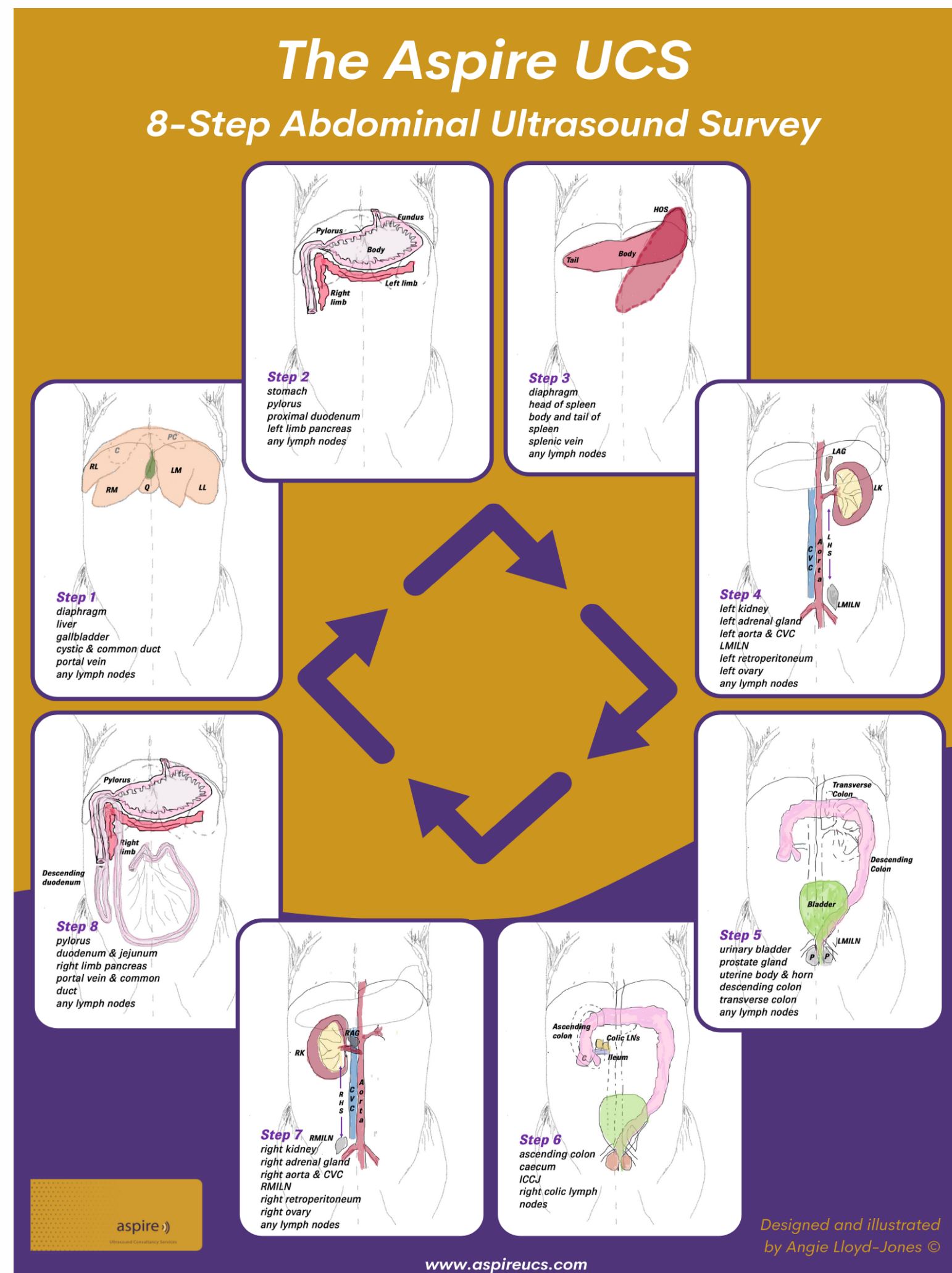
Remember:

- *No one expects you to be an ultrasound expert*
- *Work within your scope of practice*
- *If in doubt refer on to specialist*





Why Adopt A Systematic Approach?



BENEFITS TO THE OPERATOR

- *Standardised ultrasound technique*
- *Consistence at recognising organs and structures*
- *Methodical approach – minimises clinical risk*
- *Efficient time management (sedation / anaesthesia)*
- *Enhances image optimisation skills*
- *Facilitates thorough/holistic approach to patient care*

The 8-Step Abdominal Survey Step 1



What To Include In Step 1

- **Diaphragm**
- **Liver**
- **Gallbladder**
- **Common Duct**
- **Portal Vein**
- **Any Lymph Nodes**

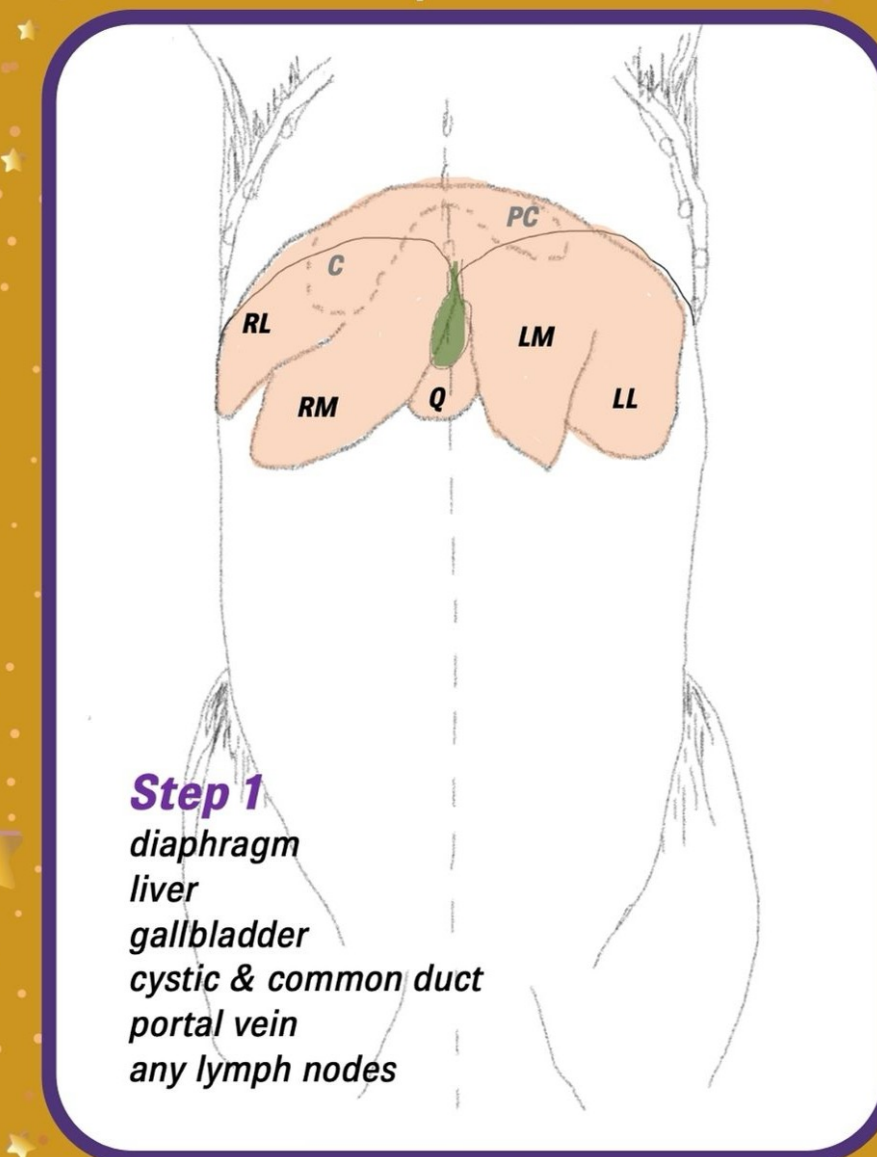
ALWAYS store annotated representative images of each structure assessed to corroborate technique and ultrasound findings (even normal findings)

Scan Approach

1. **Ventral approach primarily with patient in right lateral recumbency position**
2. **Right underside approach (Portal Vein and Common Duct)**
3. **Right lateral approach with patient in left lateral recumbency (Portal Vein)**

The Aspire 8-Step Abdominal Ultrasound Survey

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Step 1
diaphragm
liver
gallbladder
cystic & common duct
portal vein
any lymph nodes

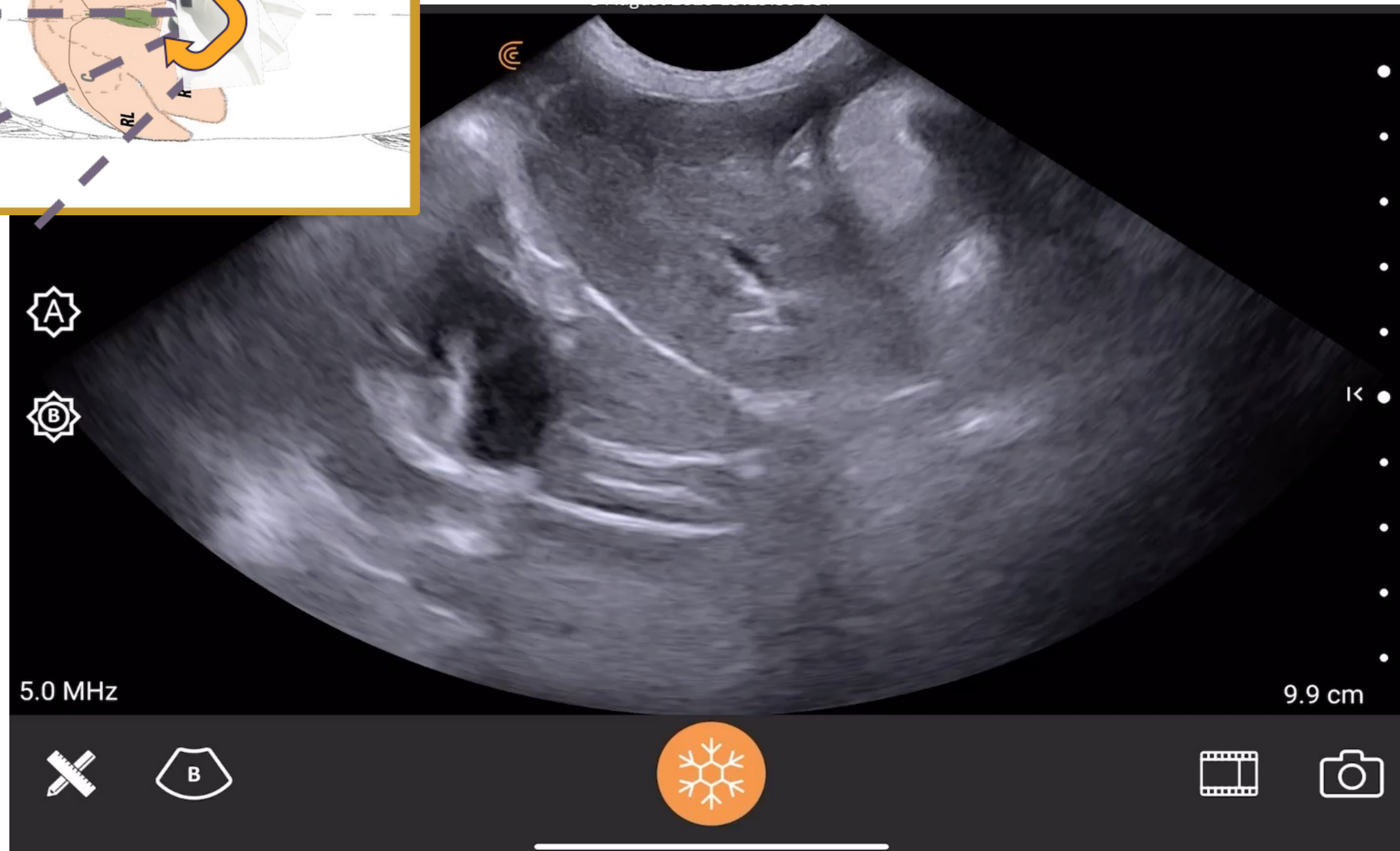
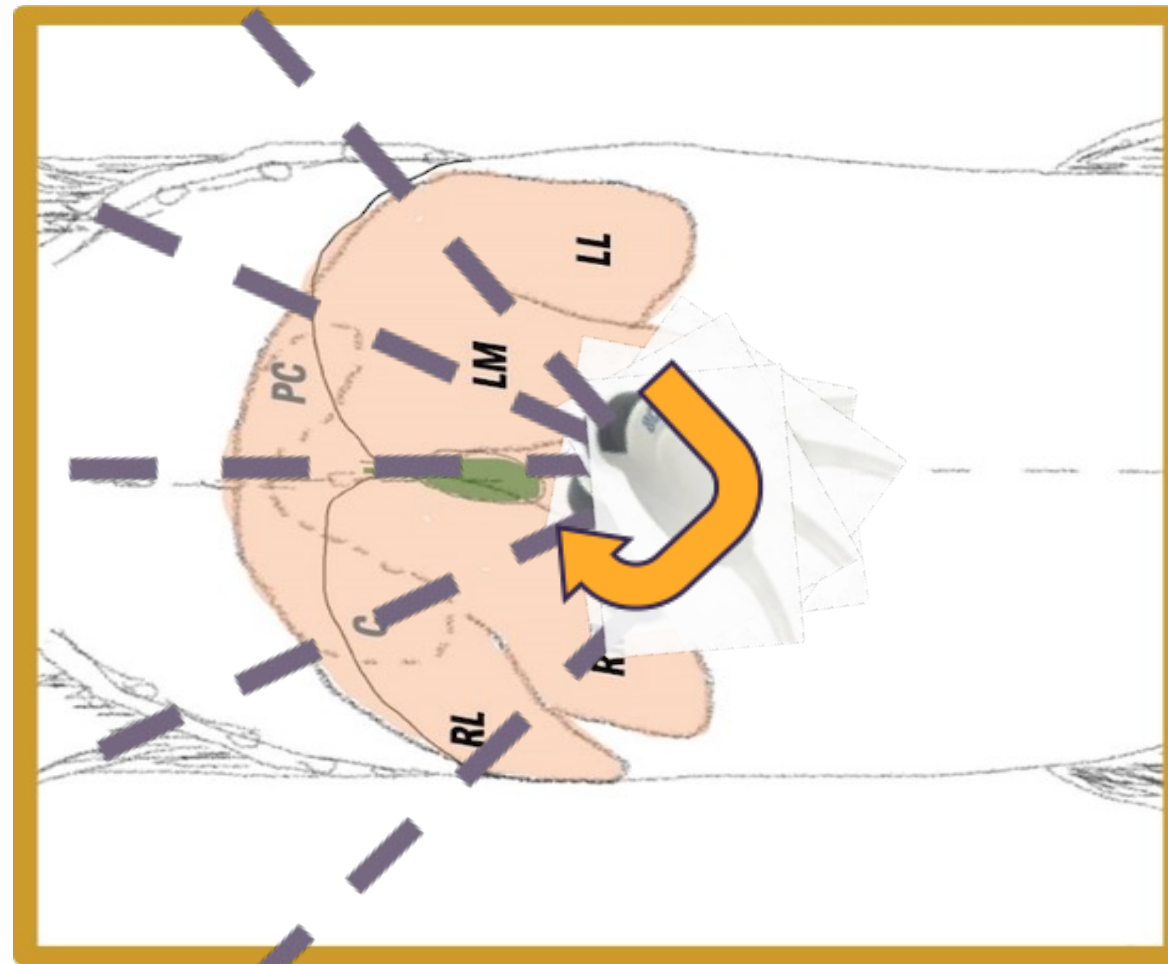
Step 1

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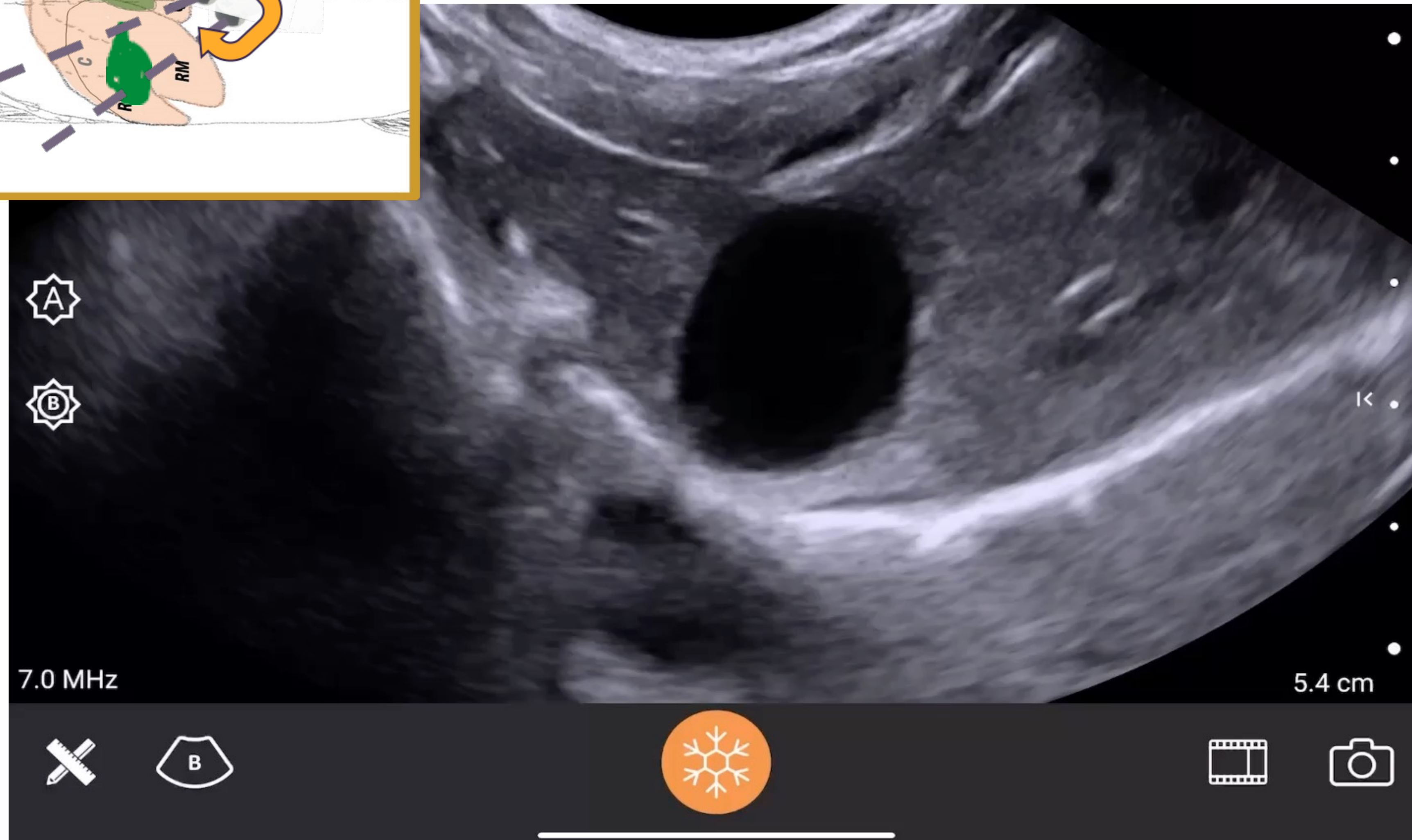
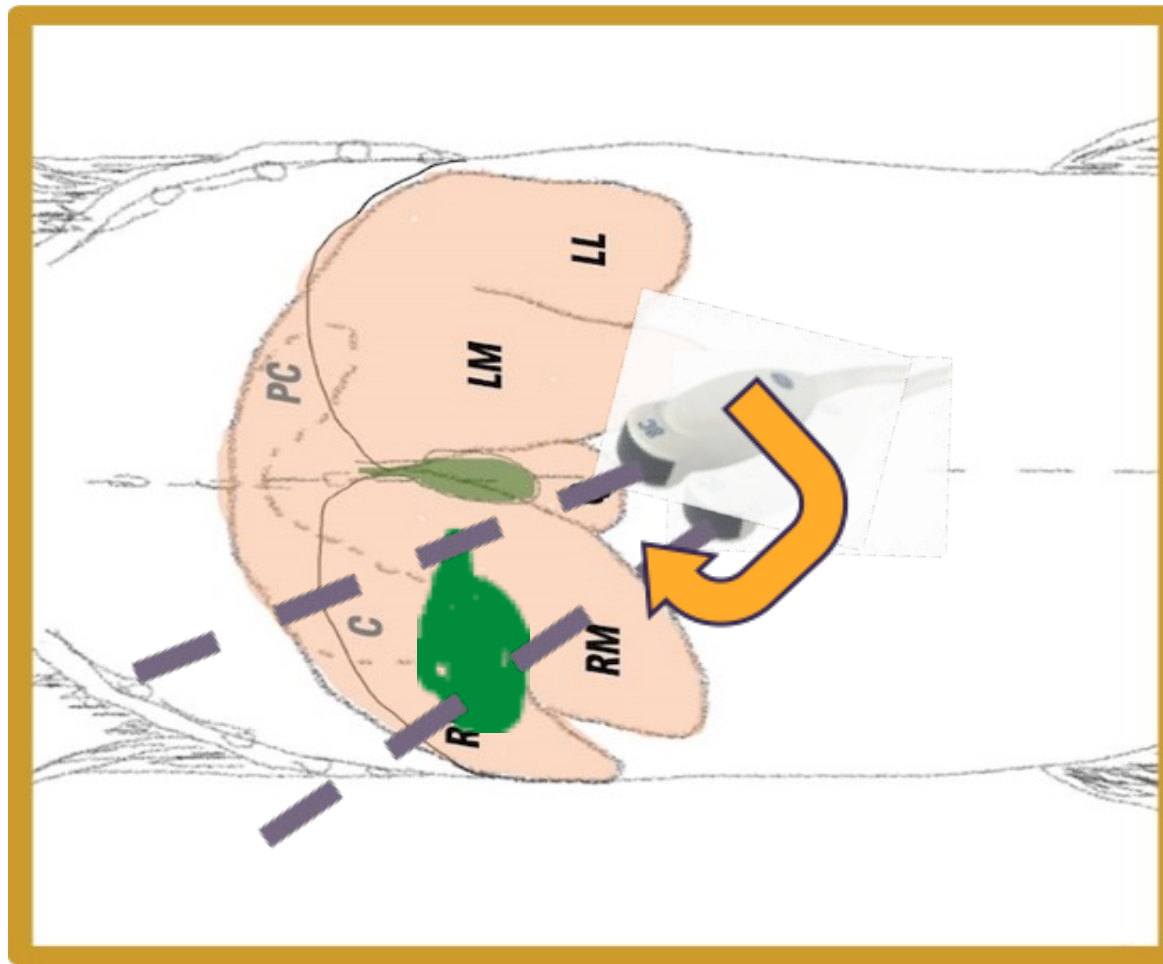


Step 1 Technique – The Liver



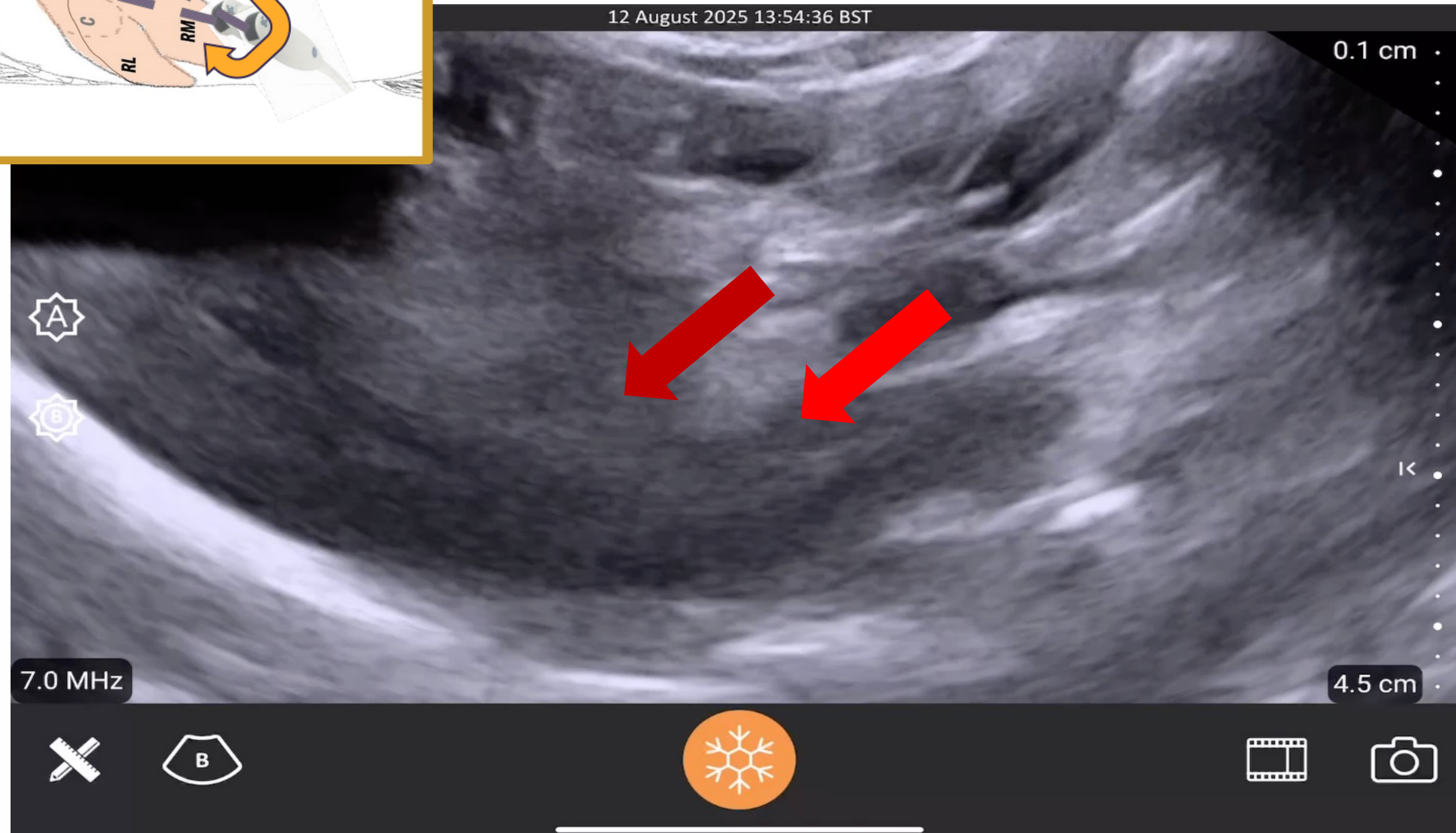
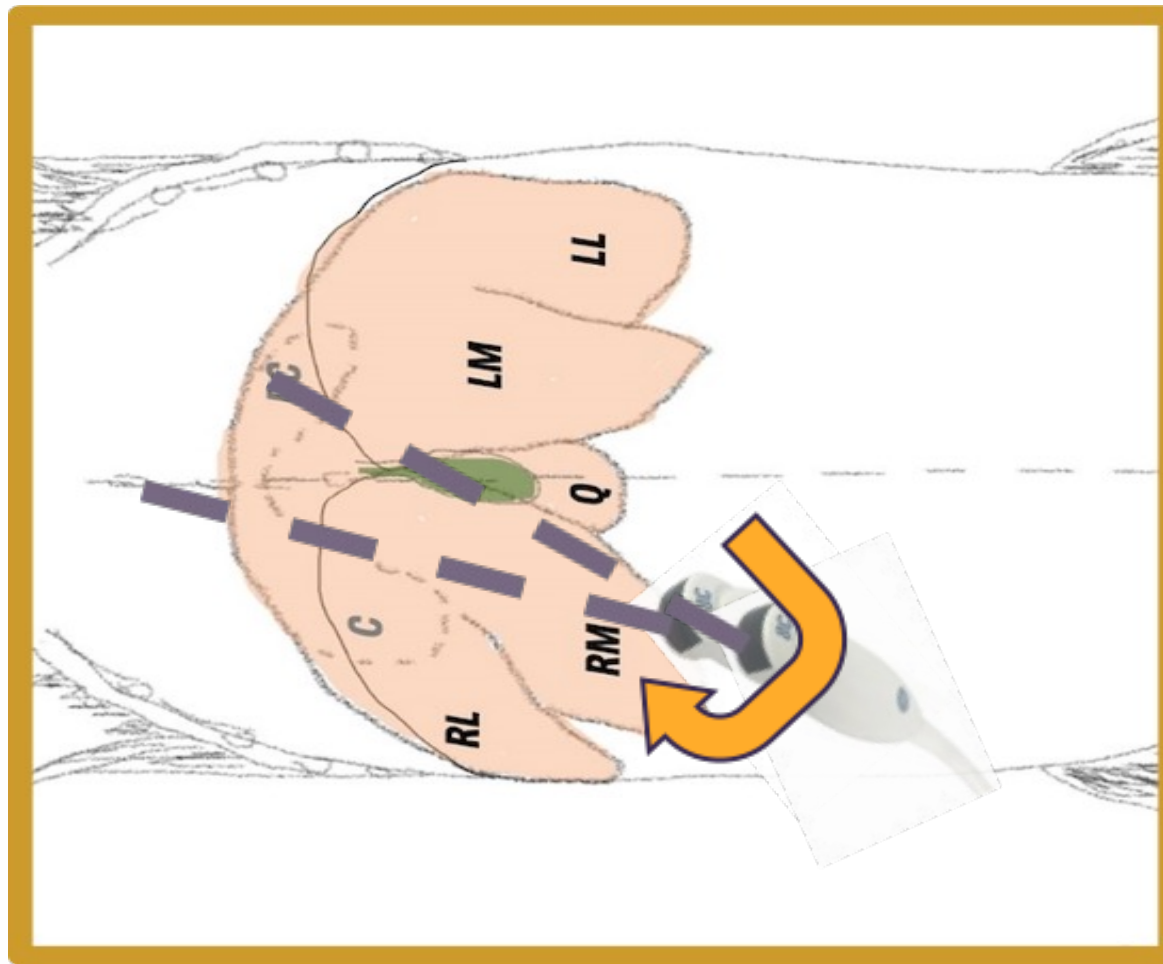


Step 1 Technique – The Gallbladder



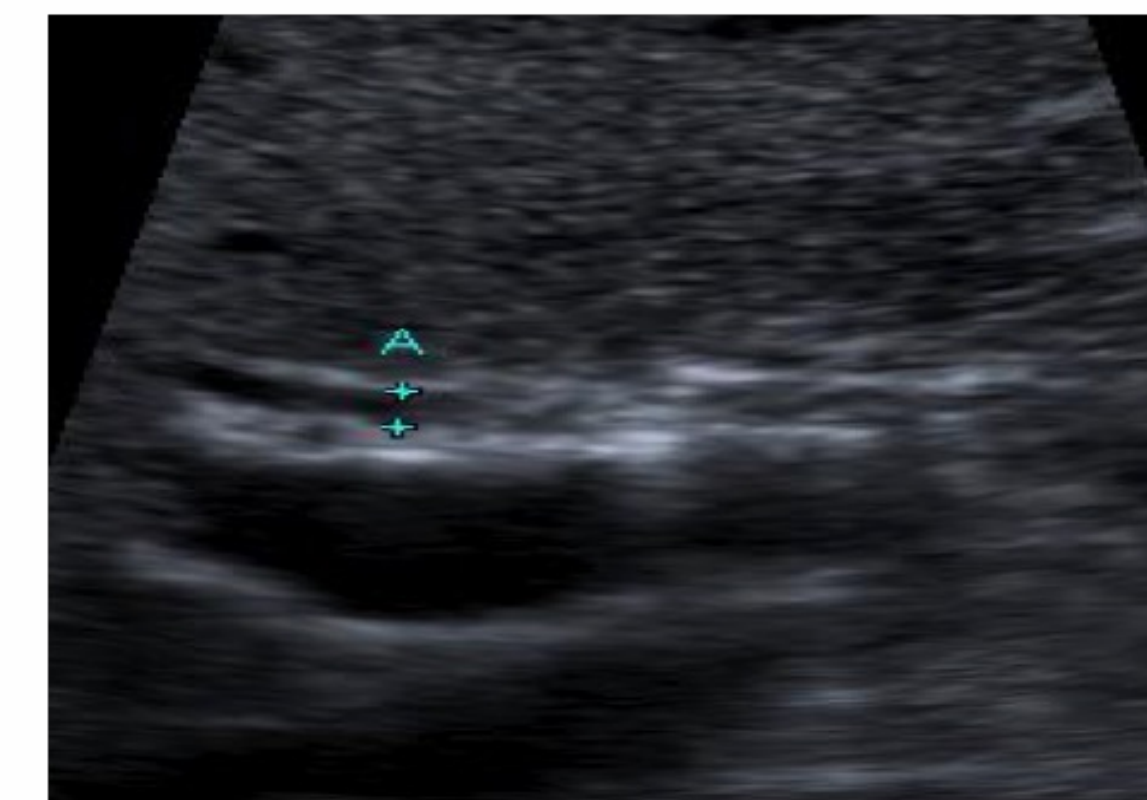
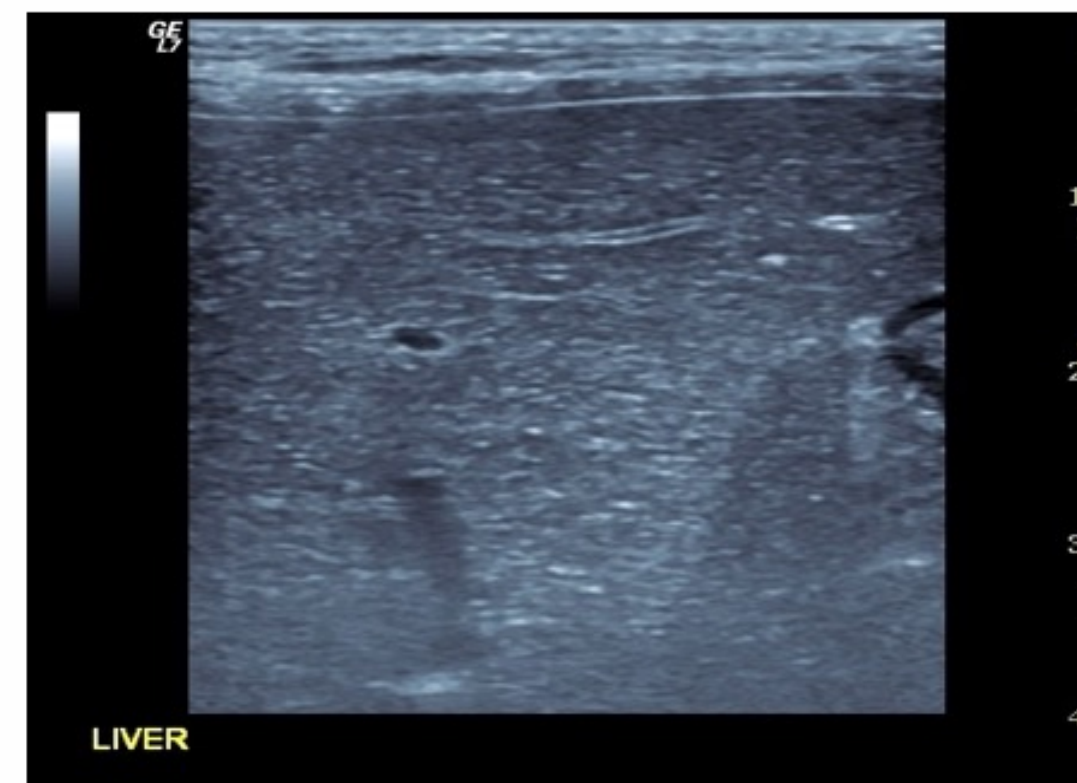
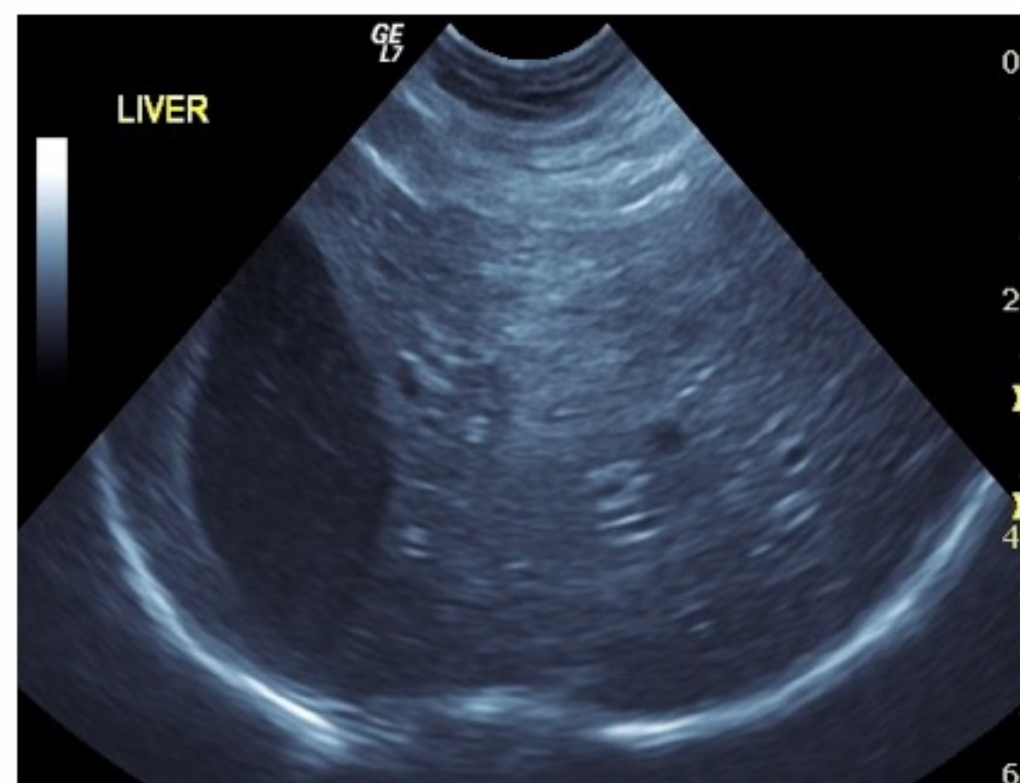
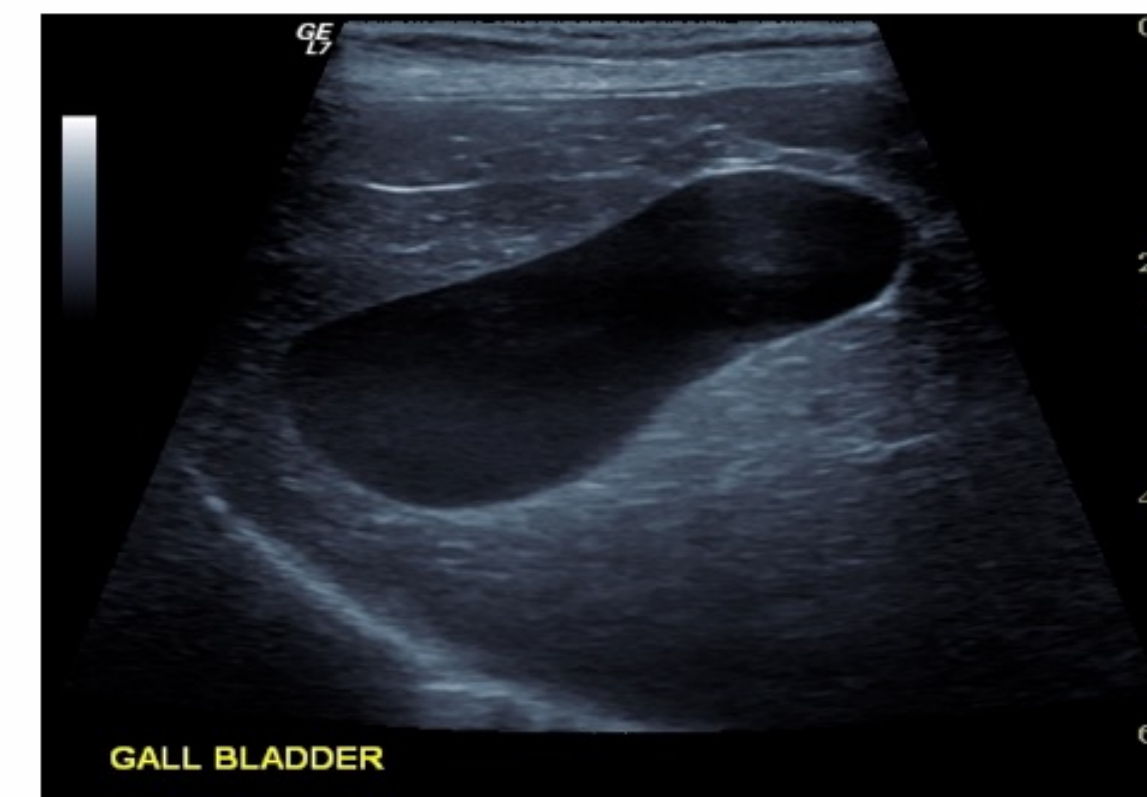
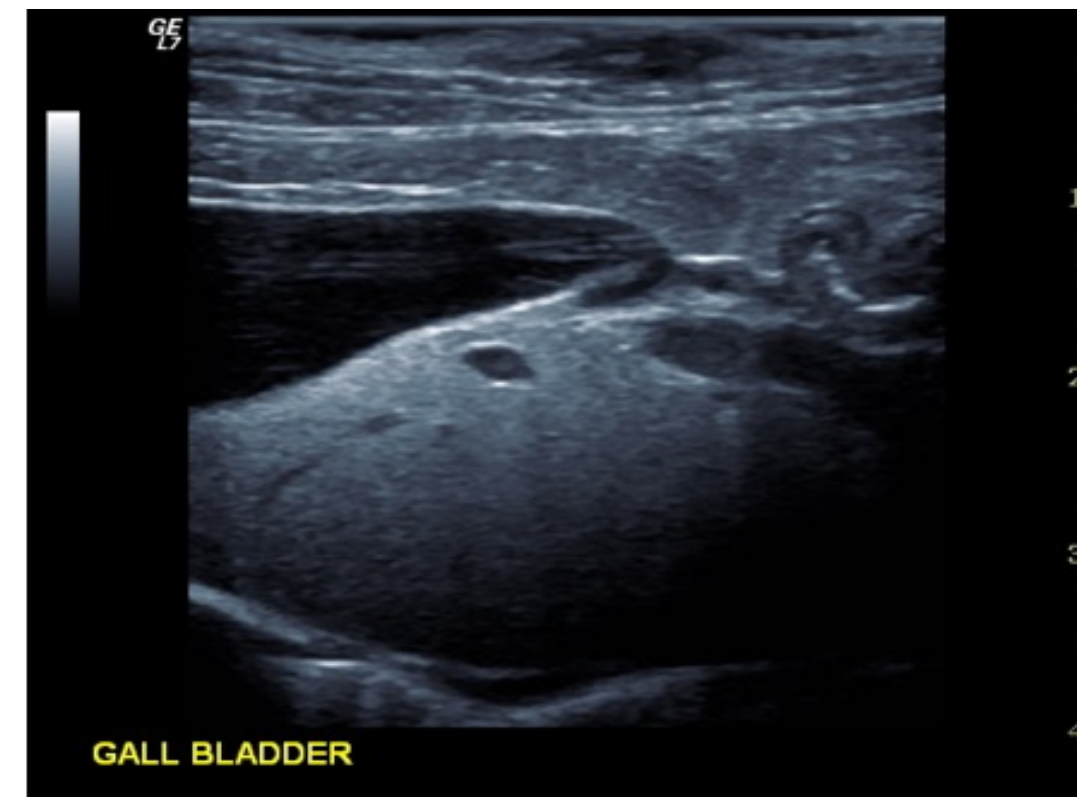


Step 1 Technique – The Main Portal Branch





Step 1- Normal Ultrasound Characteristics



The 8-Step Abdominal Survey Step 2

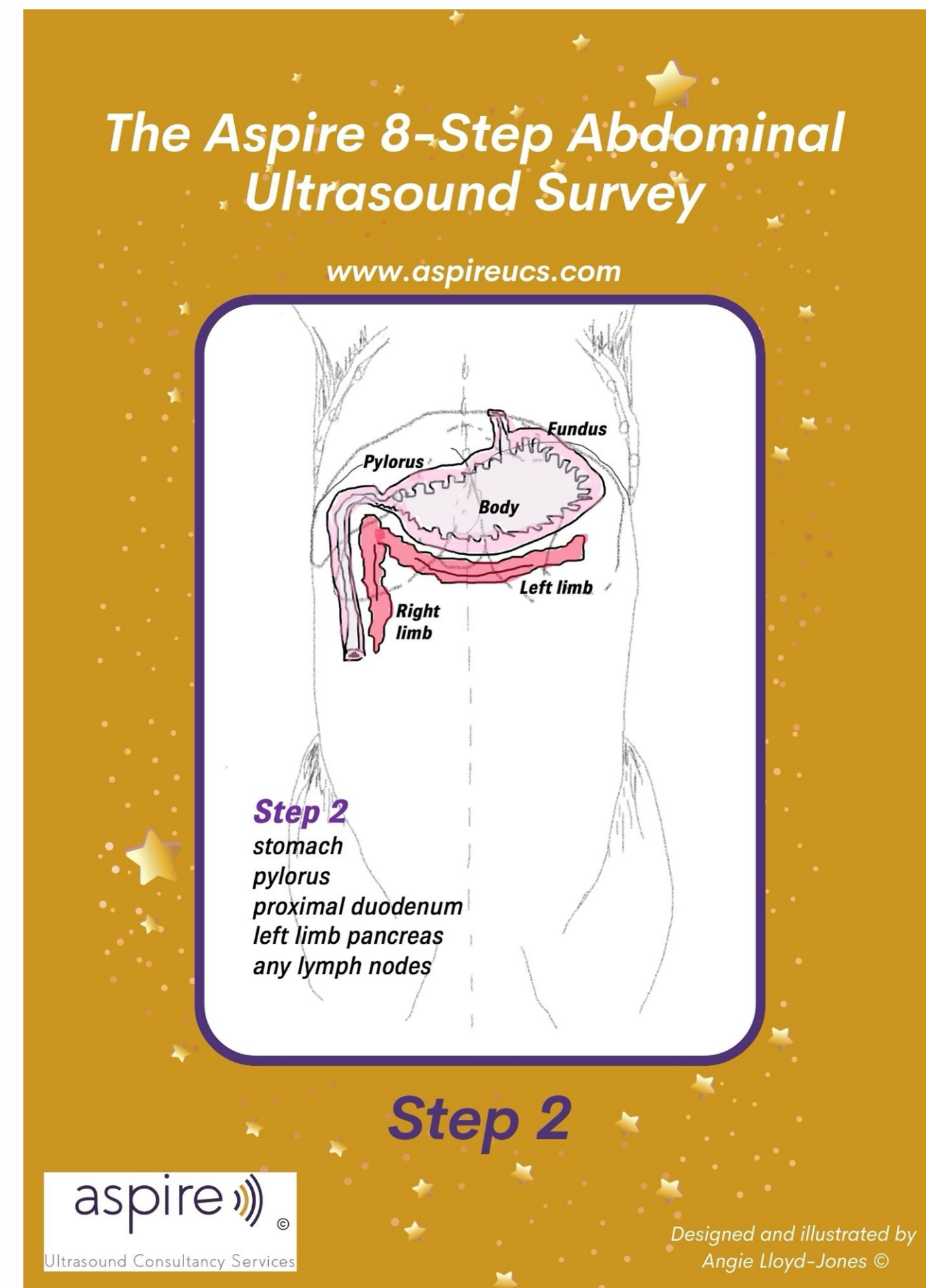


What To Include In Step 2

- ***Stomach and Pylorus***
- ***Proximal Duodenum***
- ***Left Pancreatic Limb***
- ***Any Lymph Nodes***

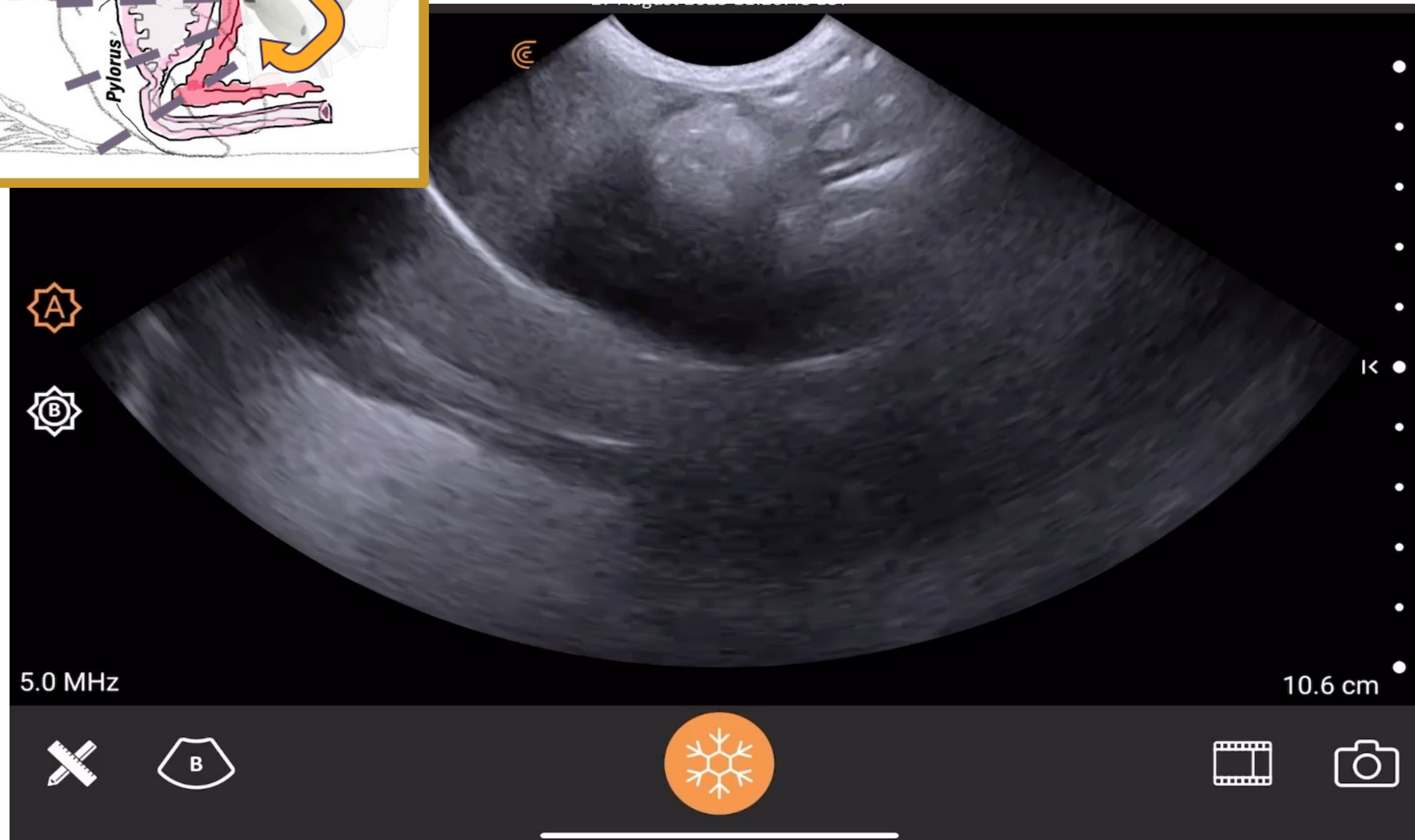
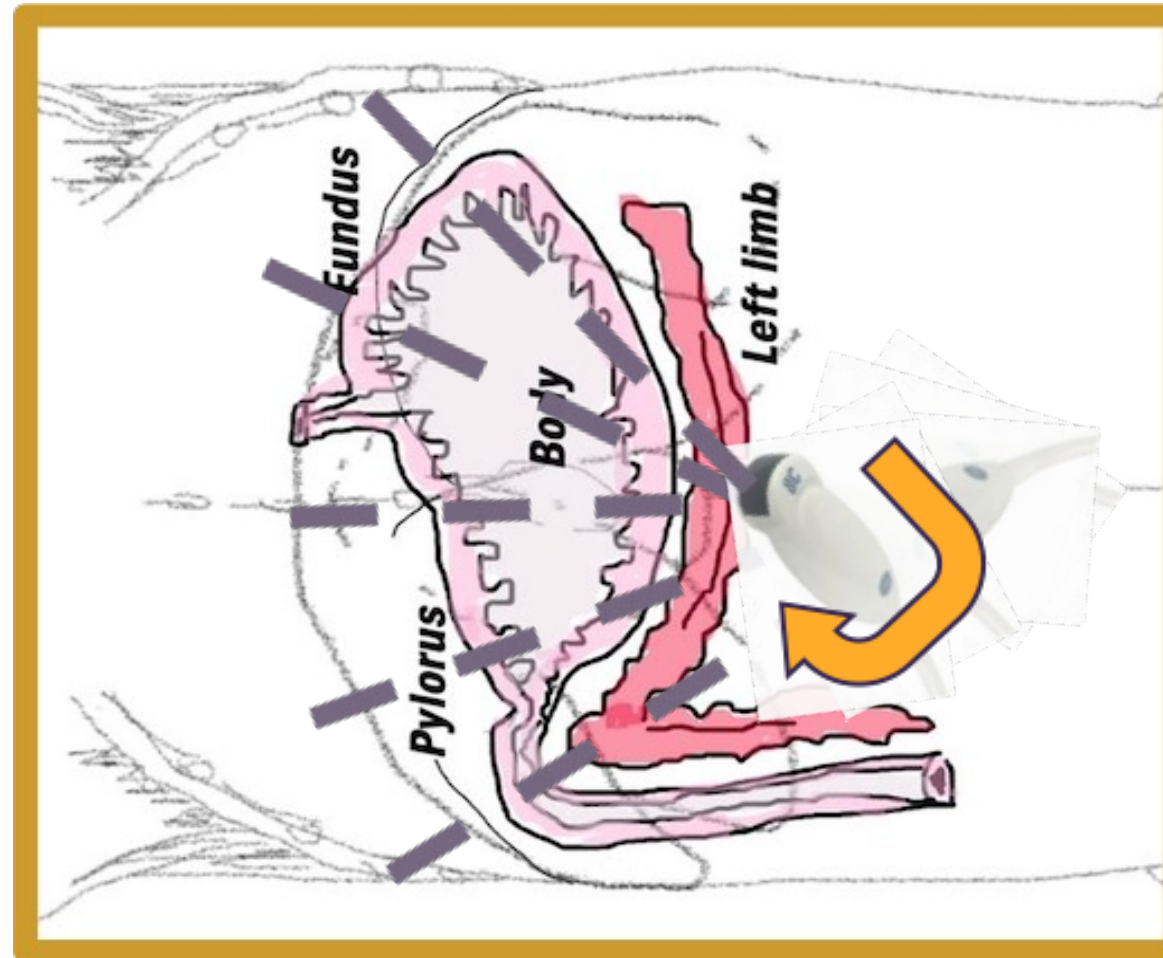
Scan Approach

1. *Ventral approach with patient in right lateral recumbency position*
2. *Right underside approach (Pylorus)*
3. *Right lateral approach with patient in left lateral recumbency (Pylorus)*





Step 2 Technique – The Stomach



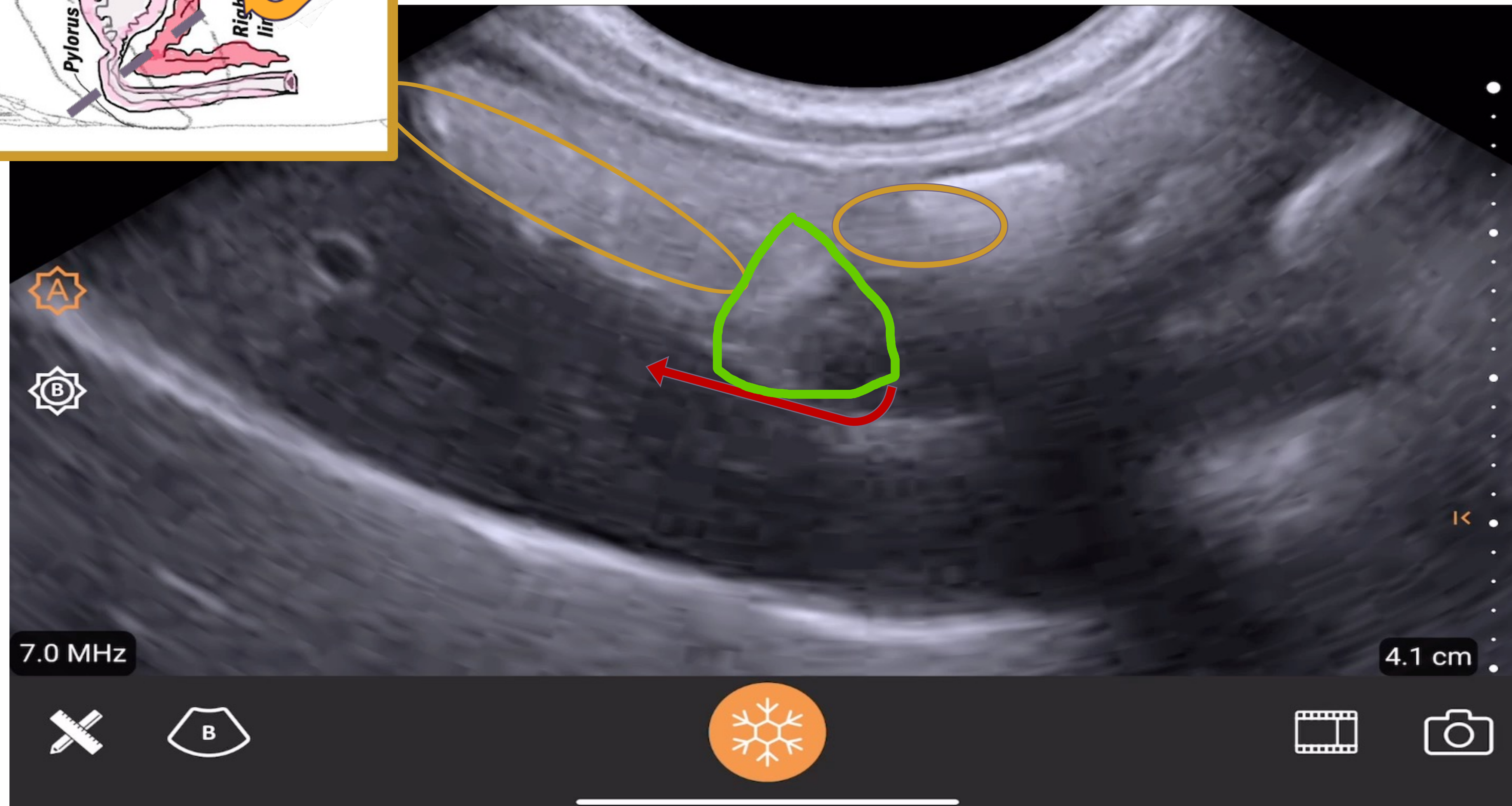
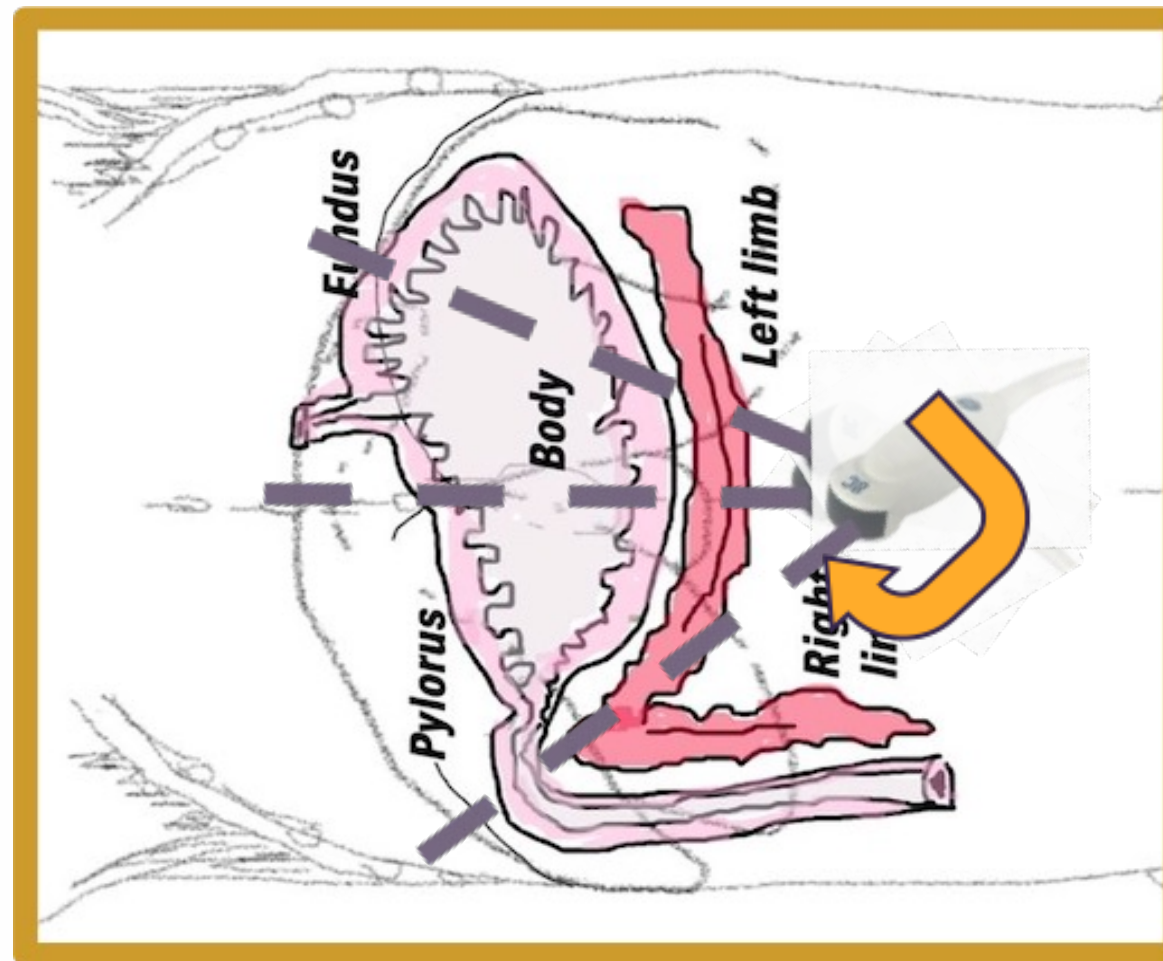


Spot The Pancreas!



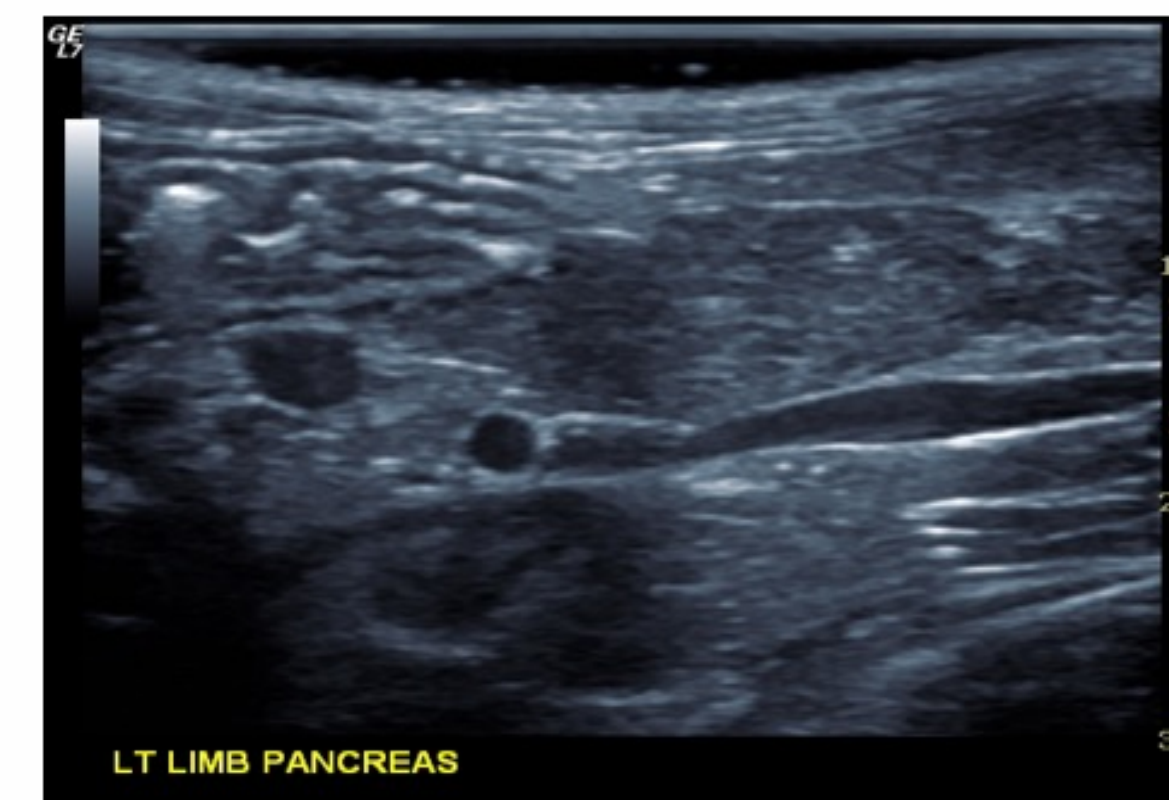
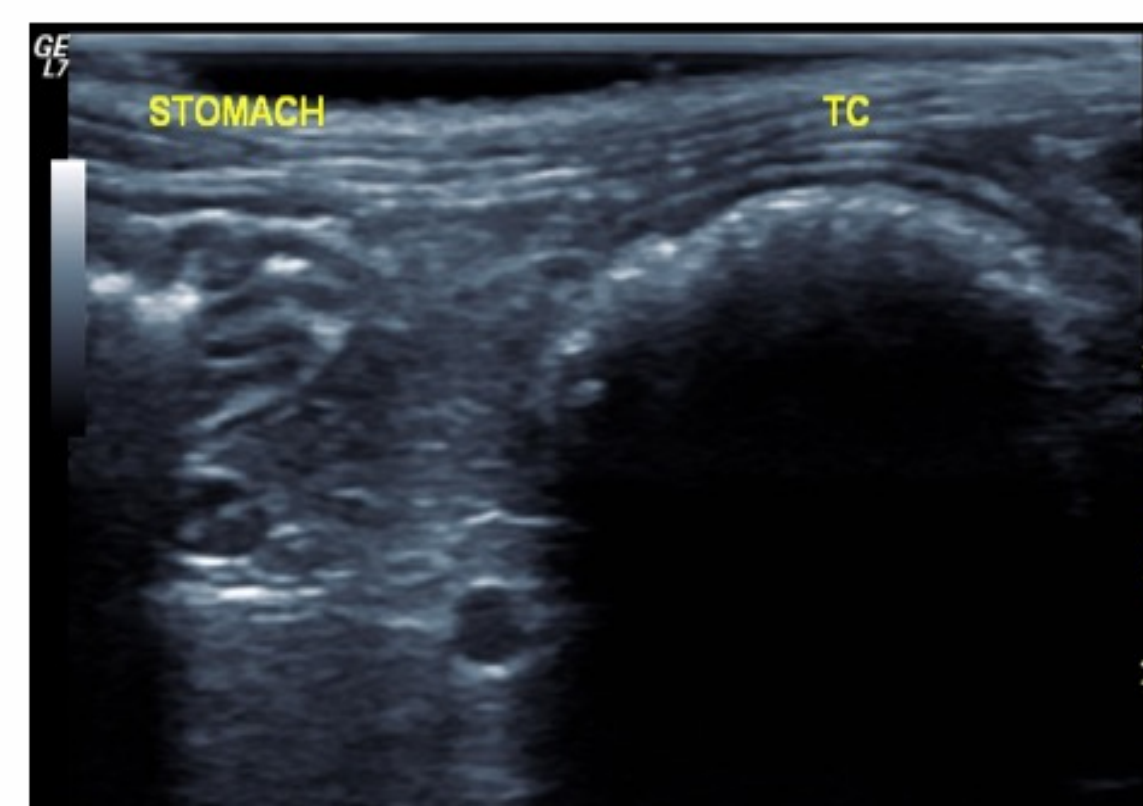
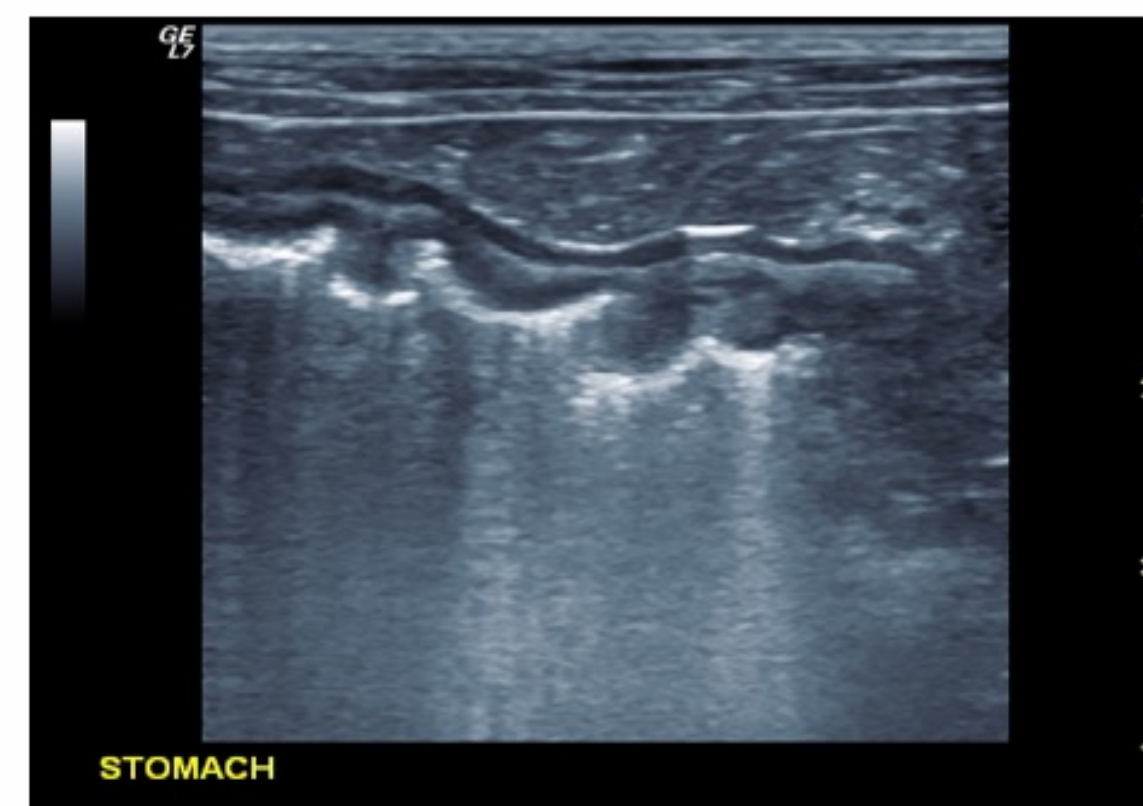
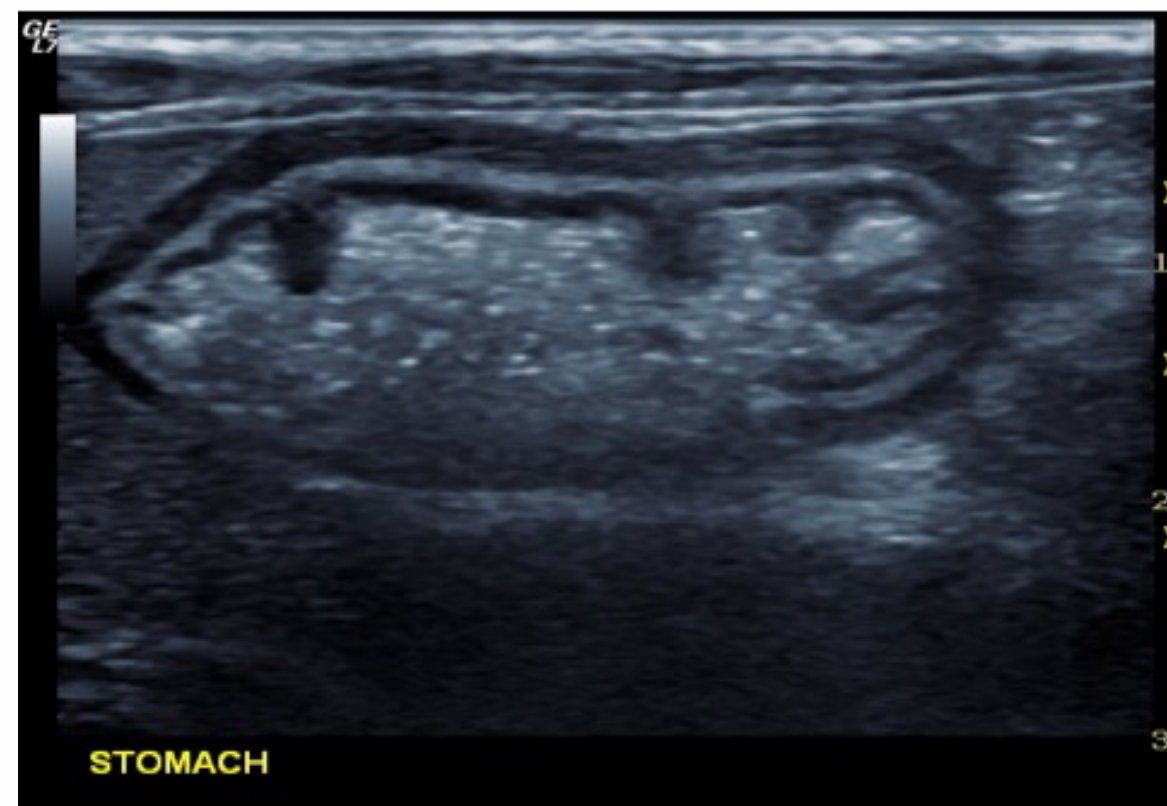


Step 2 Technique – The Left Pancreatic Limb





Step 2 - Normal Ultrasound Characteristics



The 8-Step Abdominal Survey Step 3



What To Include In Step 3

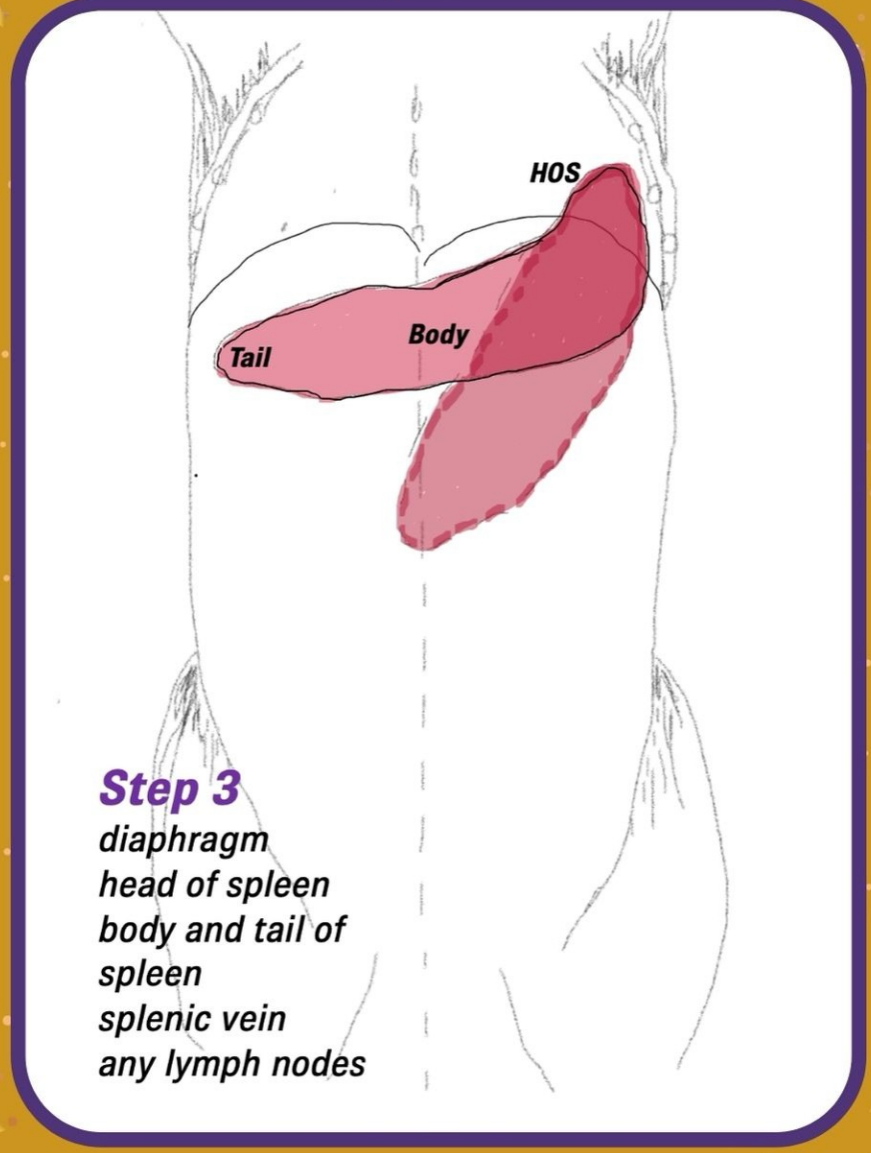
- **Diaphragm**
- **Head of Spleen**
- **Body and Tail of Spleen**
- **Splenic Vessels**
- **Any Lymph Nodes**

Scan Approach

1. *Horizontal, left sub-costal ventral approach (head of spleen) with patient in right lateral recumbency position*
2. *Left lateral approach (body and tail of spleen)*
3. *Ventral approach (body subject to splenic position)*


The Aspire 8-Step Abdominal Ultrasound Survey

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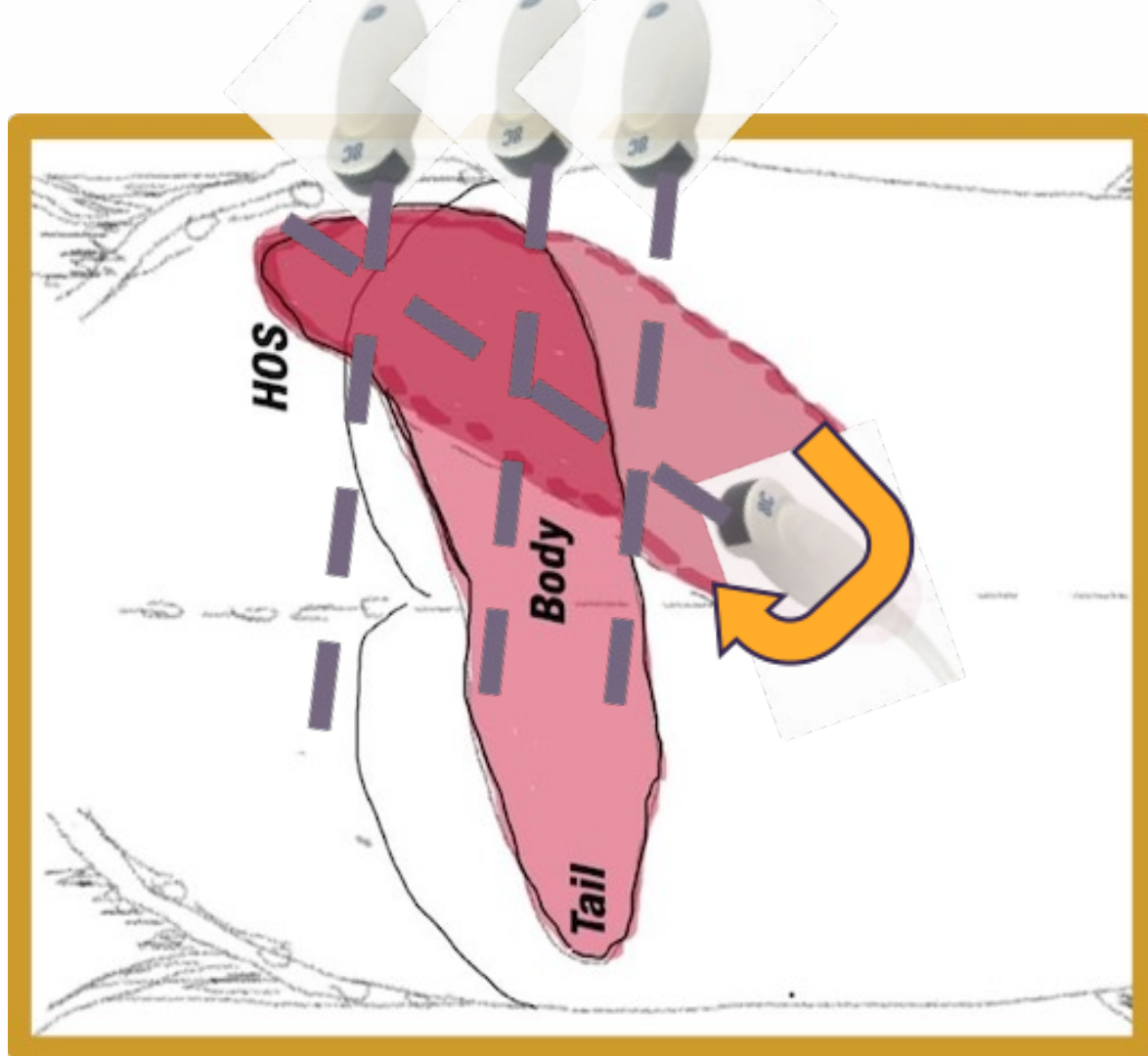


Step 3
diaphragm
head of spleen
body and tail of spleen
splenic vein
any lymph nodes

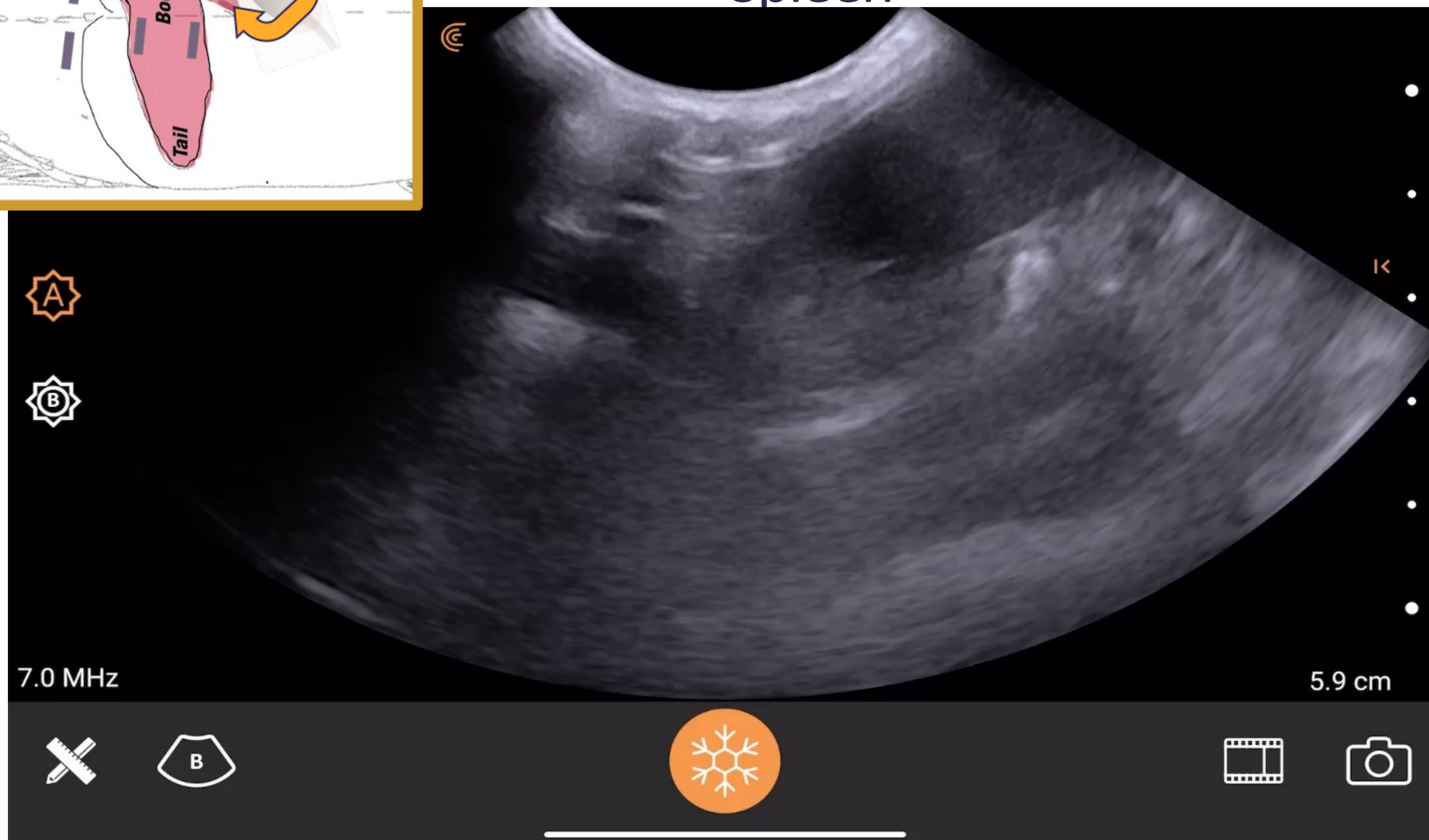
Step 3

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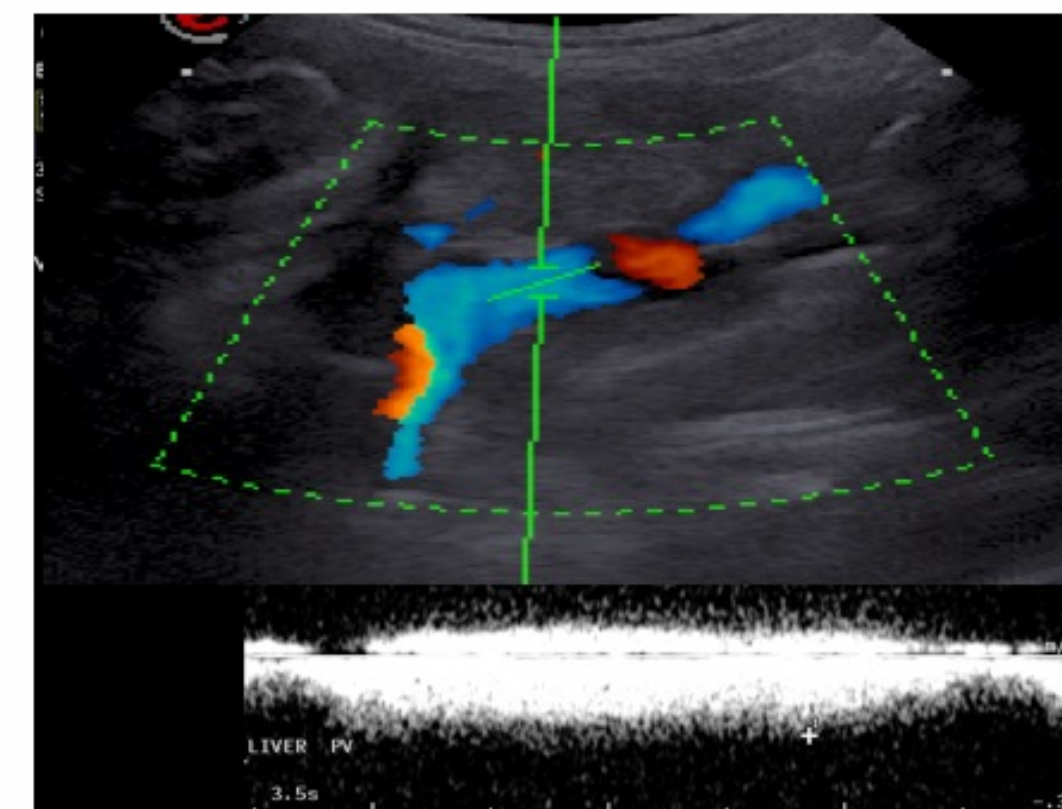
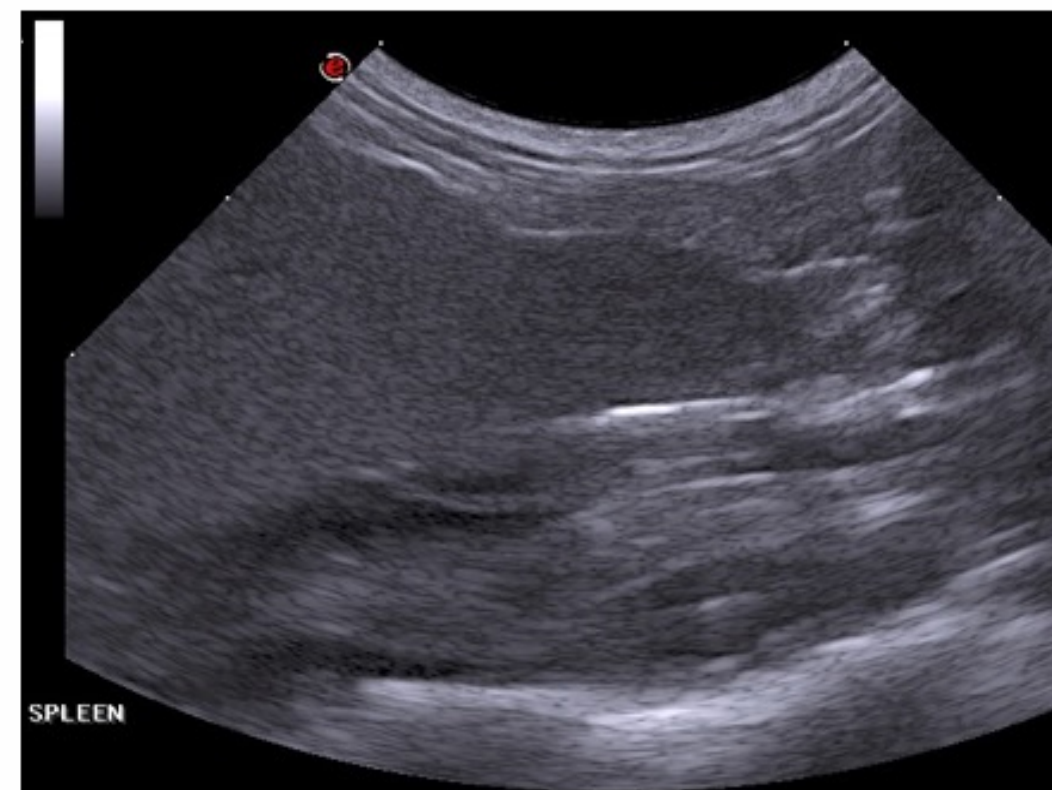
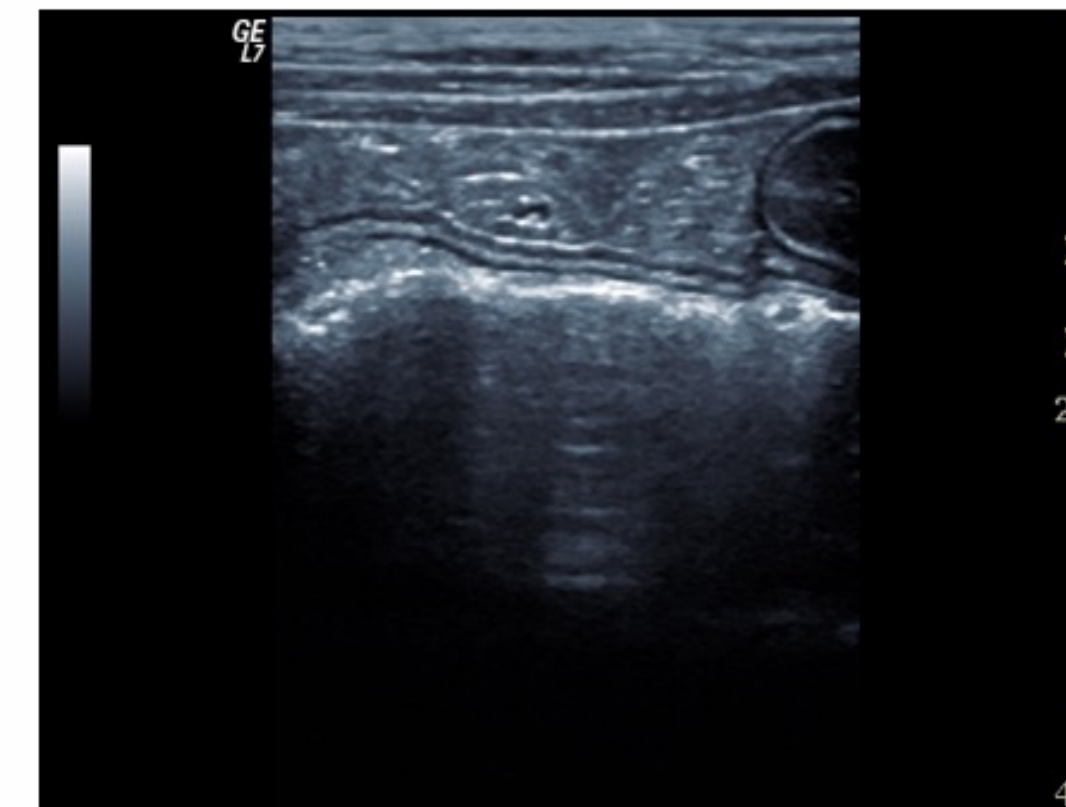


Step 3 Technique – The Spleen



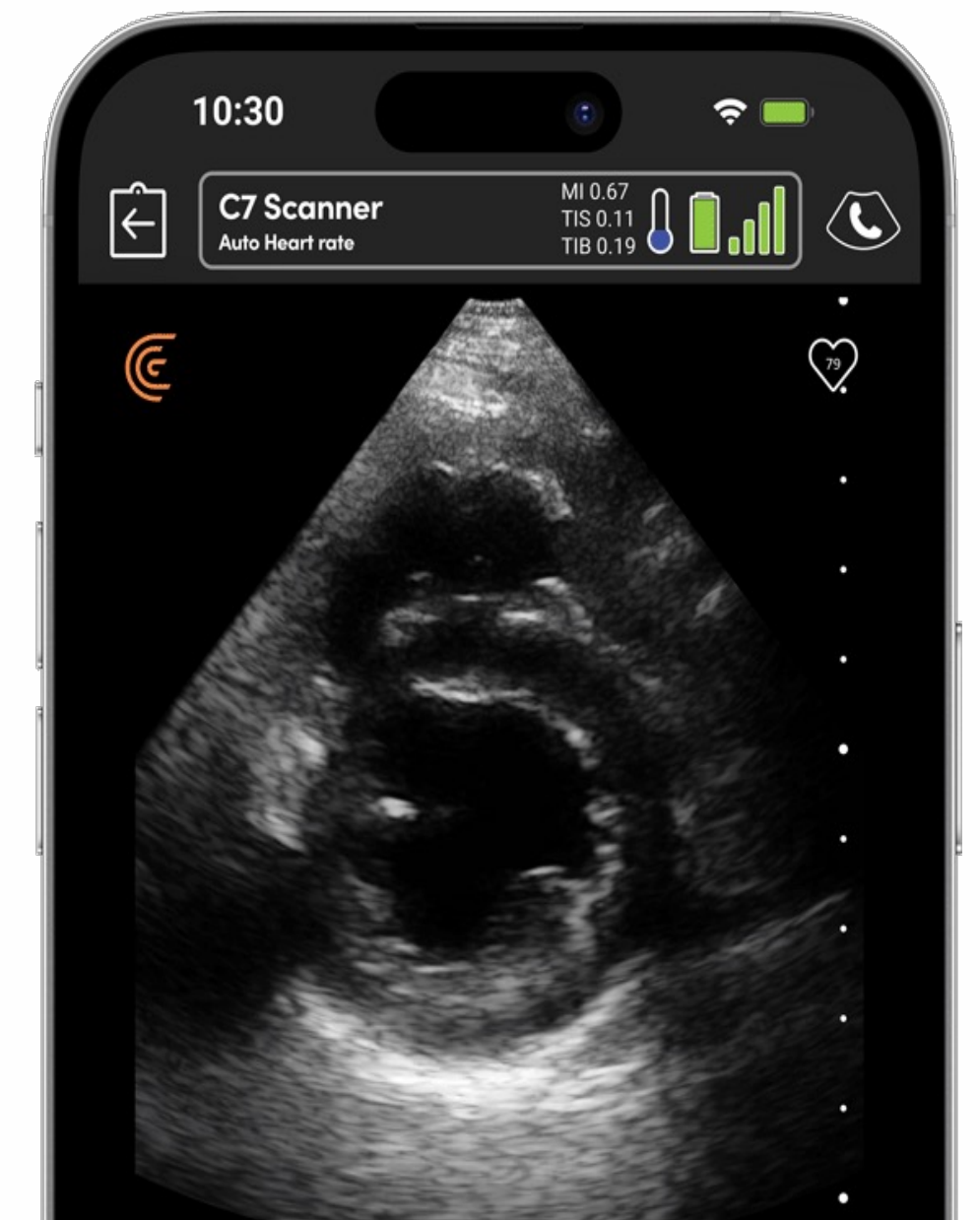


Step 3- Normal Ultrasound Characteristics





- The Aspire UCS ***'Sonographer on Your Shoulder':*** Abdominal Ultrasound Training and Mentorship Programme
- ***Proven Success at Increasing Ultrasound Confidence, Competence, Consistency and Generating Increased Revenue***

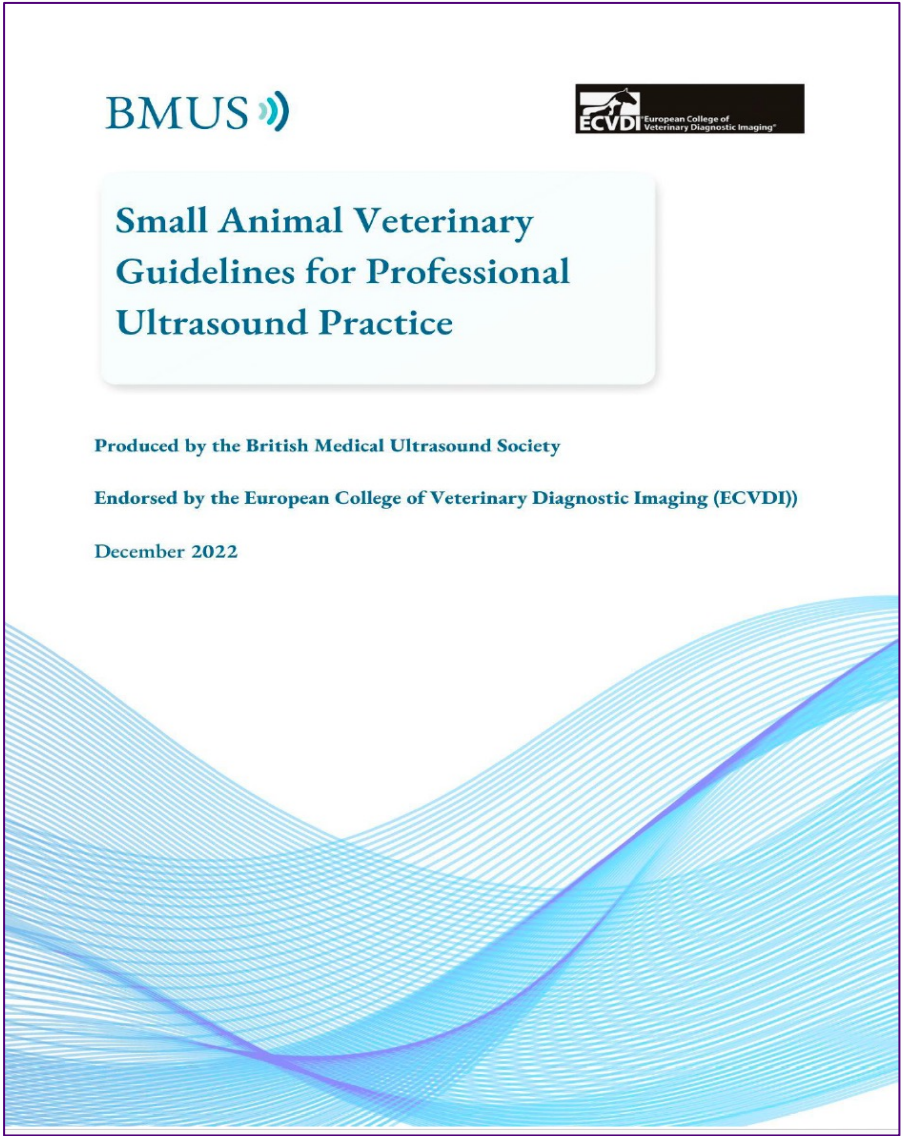




Contact Us



For further information on our individual training packages and associated costs, email:

-  info@aspireucs.com
-  <https://www.aspireucs.com/>
-  <https://shorturl.at/S4KIT>
-  <https://shorturl.at/L0NZH>
-  <https://shorturl.at/15HAM>





aspire ultrasound consultancy services limited

5.0 ★★★★★ 107 Google reviews ⓘ

The 'Lillie' Canine Ultrasound Phantom Training Kit



Animal Veterinary Ultrasound Training Solutions





july 2021

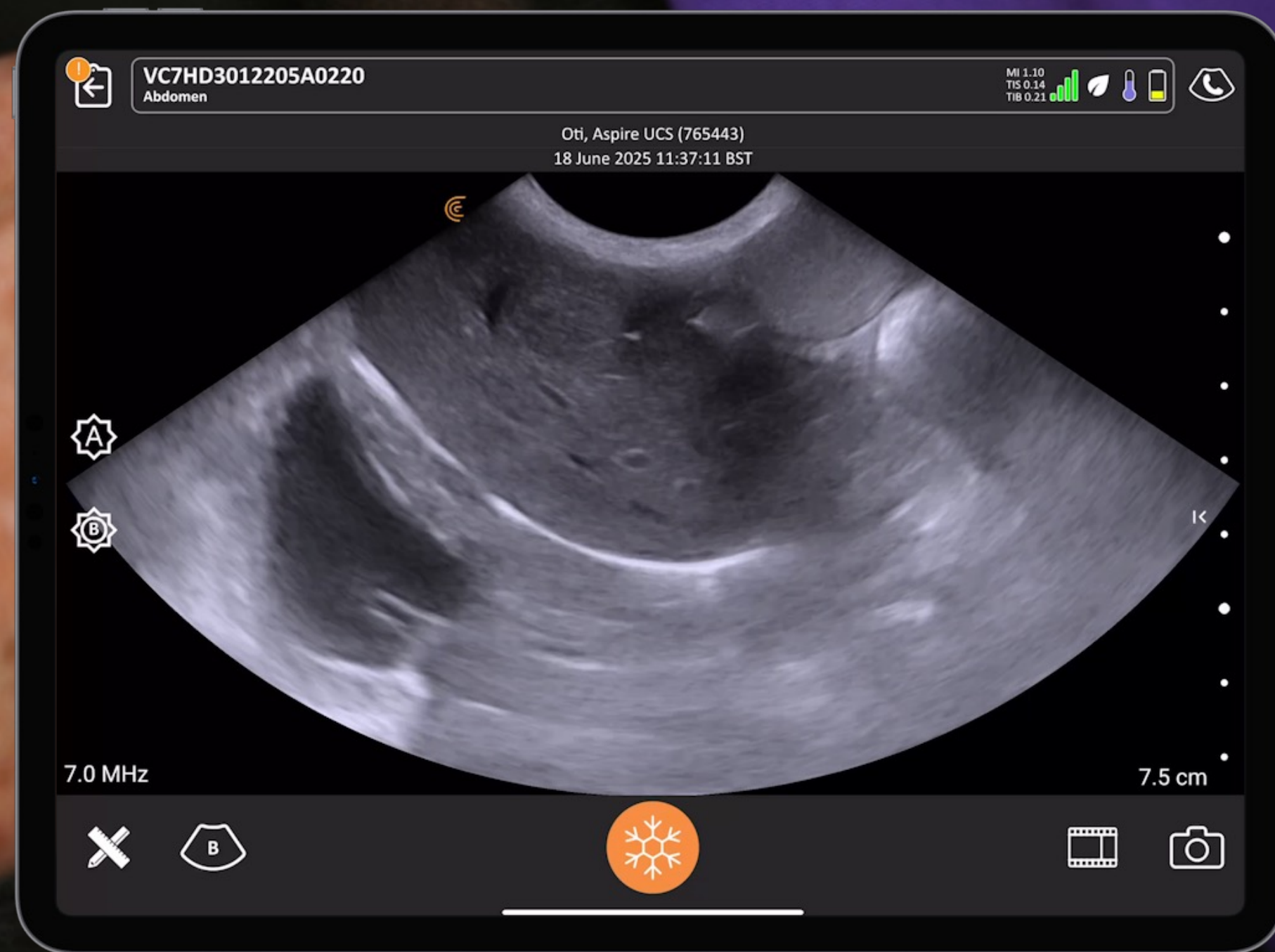
aspire

Live Demonstration



Shelley Guenther, CRGS, CRCS

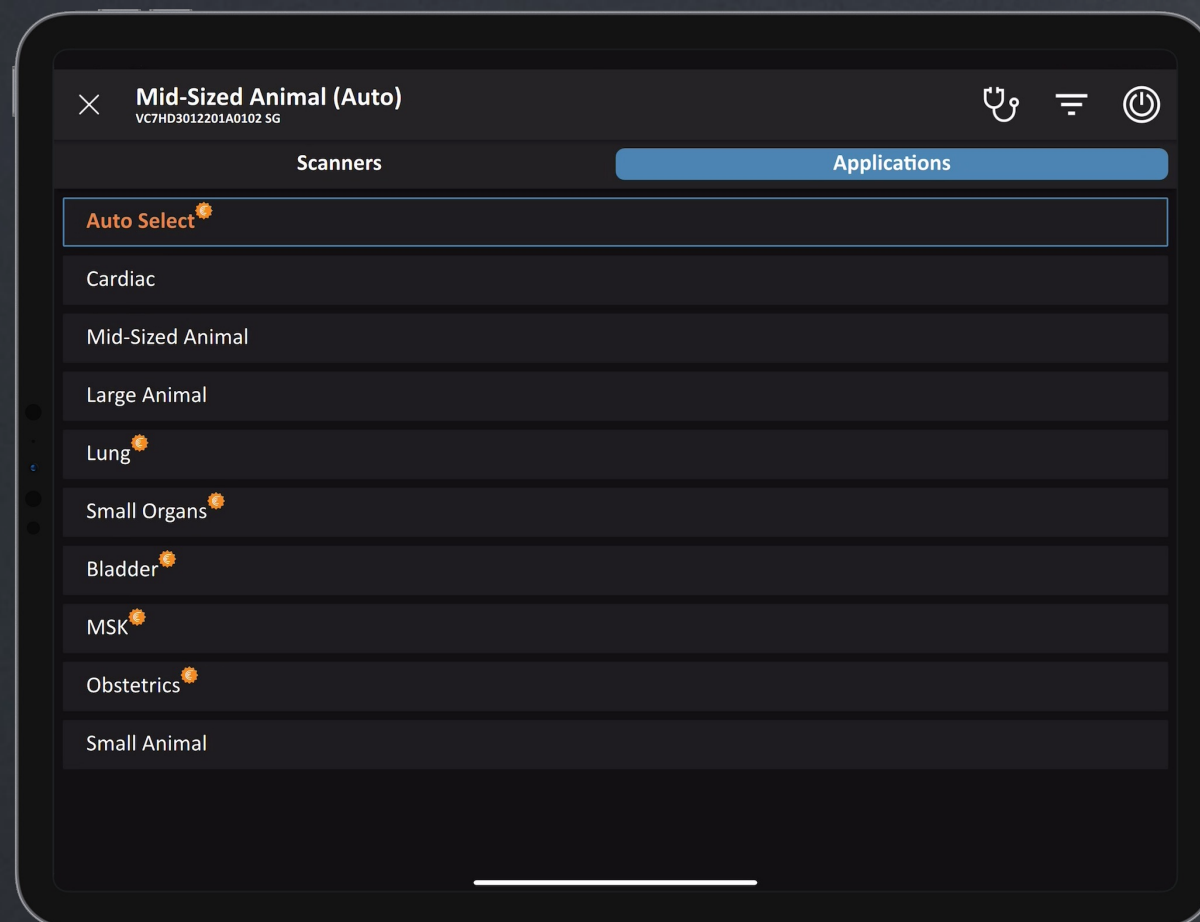
Sonographer | Clinical Marketing Manager



What additional
information would
you like?

Interactive Poll

Advancing MSK with CLARIUS Intelligence ✨

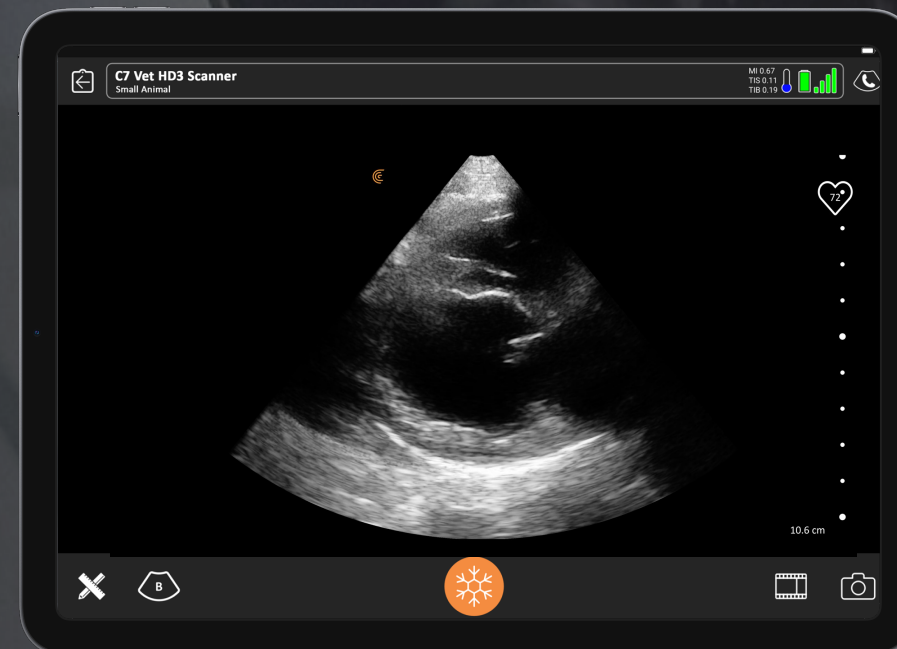


Auto Preset AI for VET (Coming October 2025)

Displays layered anatomy to enhance visualization of tendons, cartilage, and joint spaces. It's especially useful for assessing the rotator cuff in

Auto Heart Rate

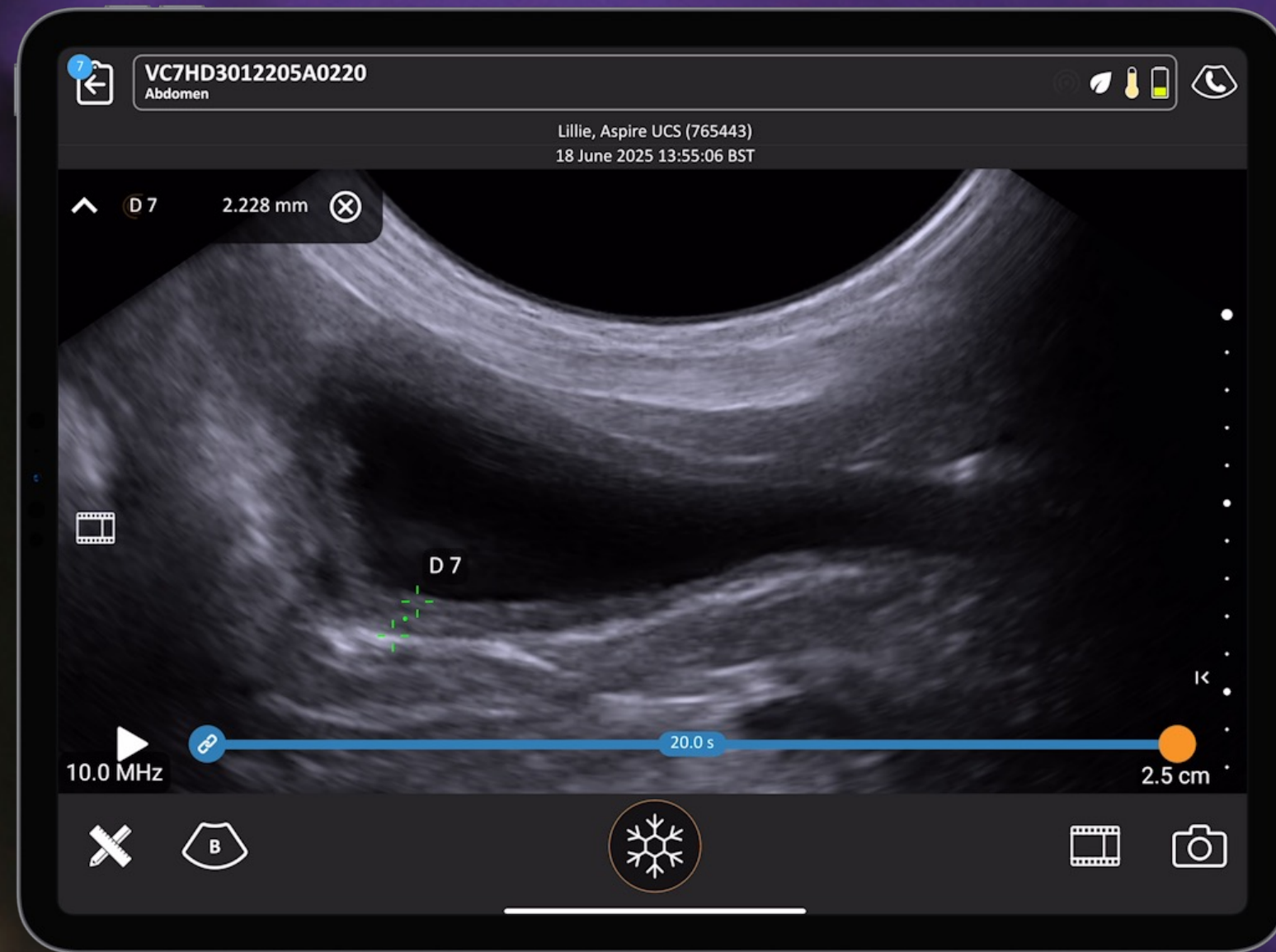
Instantly display heart rate in real-time – no ECG or manual measurements required.



Voice Controls

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





Pre-Register

Poll

Aspire UCS – 8 Step Protocol – Part 2: Steps 4–8

Angie Lloyd-Jones and Julie Burnage

January 28, 2026
2PM Pacific | 5PM Eastern

www.clarius.com/webinars

Questions



Angie Lloyd-Jones

CEO – Aspire UCS



Julie Burnage

COO – Aspire UCS



Shelley Guenther

Sonographer,
Clinical Marketing Manager



See the difference.
Be the difference.

Thank you!