PoCUS

in PEM

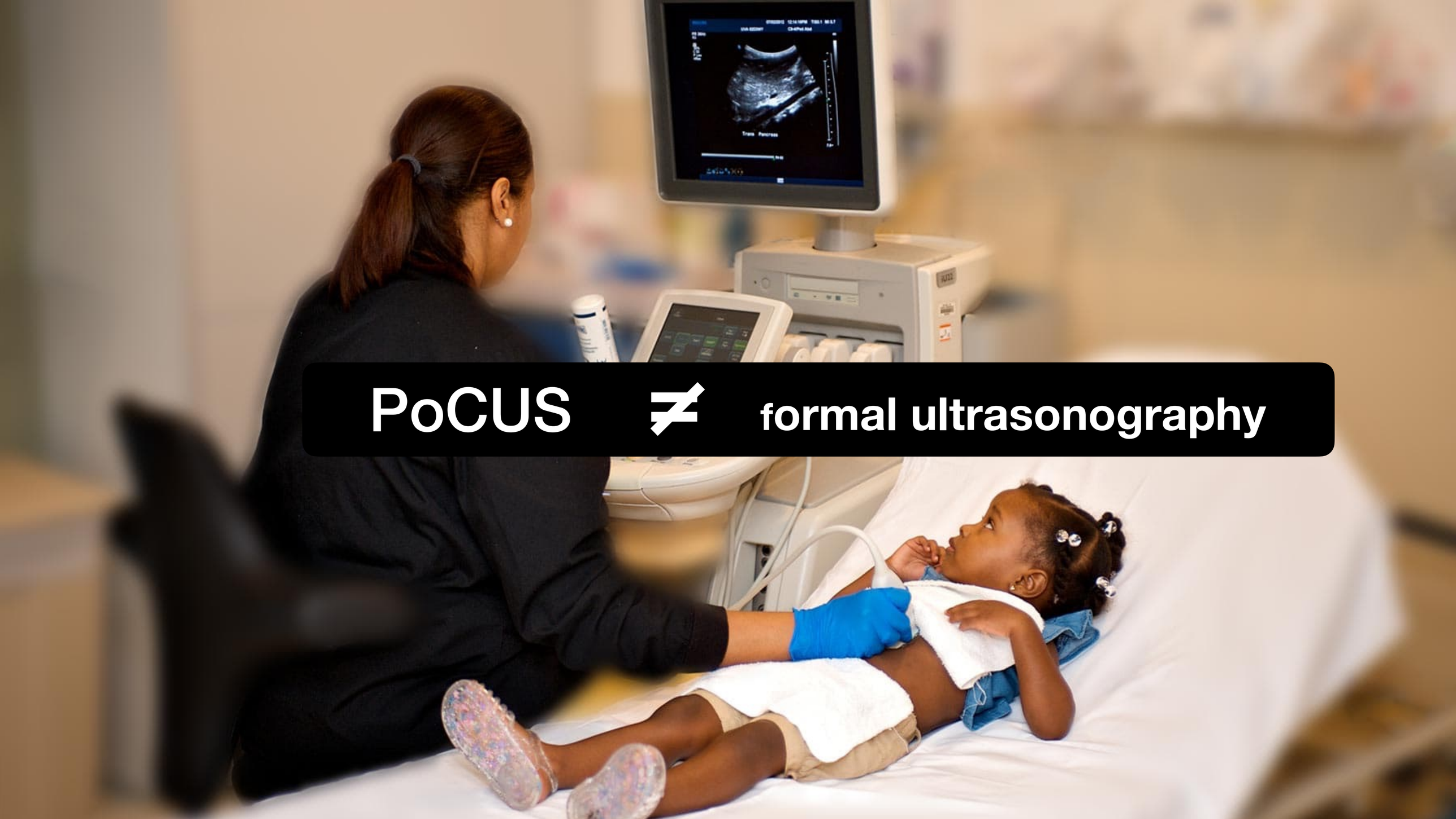
Tammy Baillie-Stanton


ED
EMERGENCY DEPARTMENT
RMMCH caring for you
CASUALTY
AMBULANCE
MV006
HT 84 VL GP
GAUTENG EMERGENCY MEDICAL SERVICES
MULTI PURPOSE VEHICLE
AMBULANCE
MV0025
JK 64 XT GP
NO PARKING ZON
HEC logistics
HK 92 TK GP
RAHIMA MOOSA
MOTHER AND CHILD HOSPITAL

Paediatric Emergency Care South Africa

An intro to PECSA here...

Our Objectives | Our Team | Contact Us


PoCUS ≠ formal ultrasonography

rule a diagnosis in …

not used to rule it out


ED
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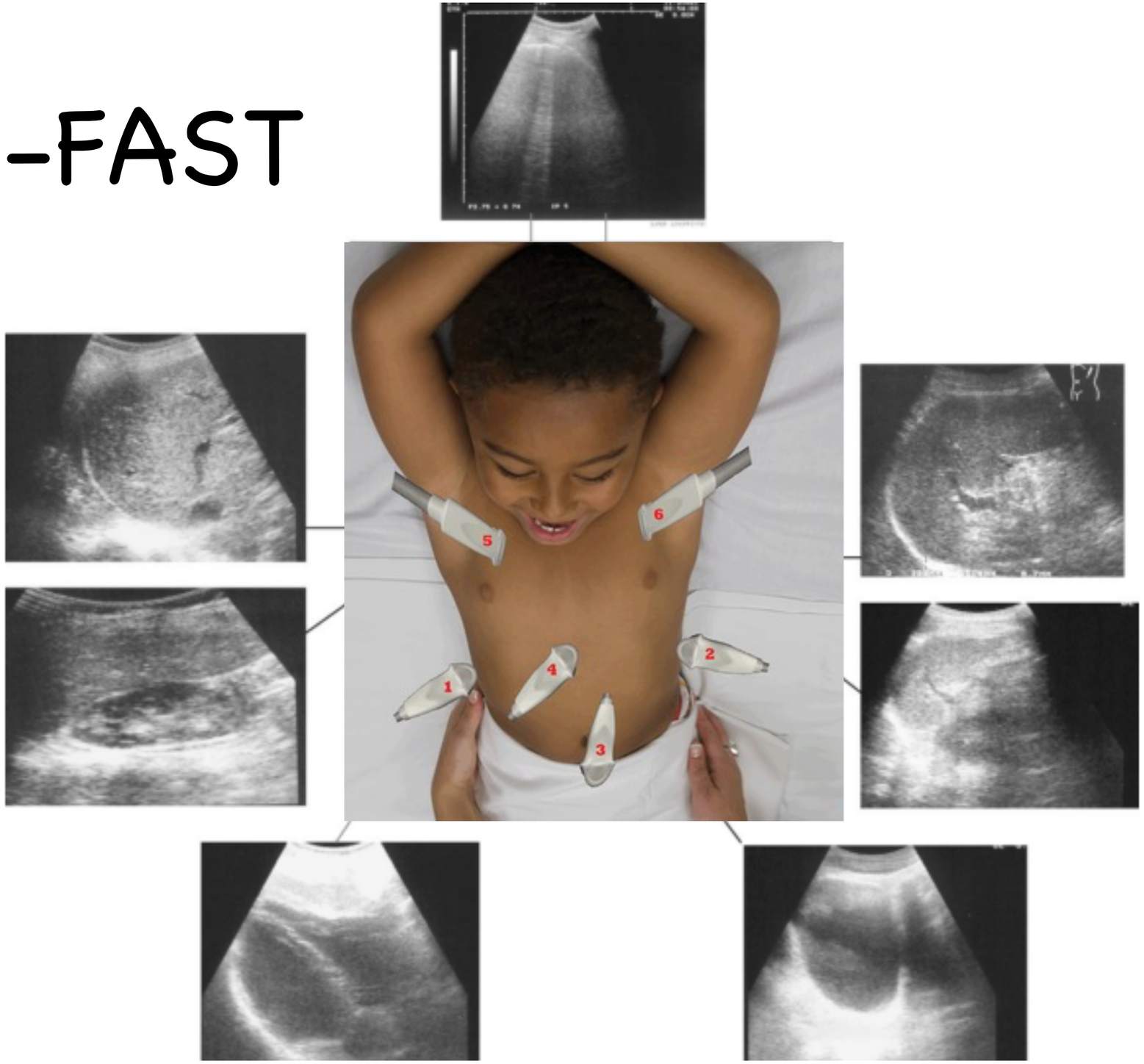
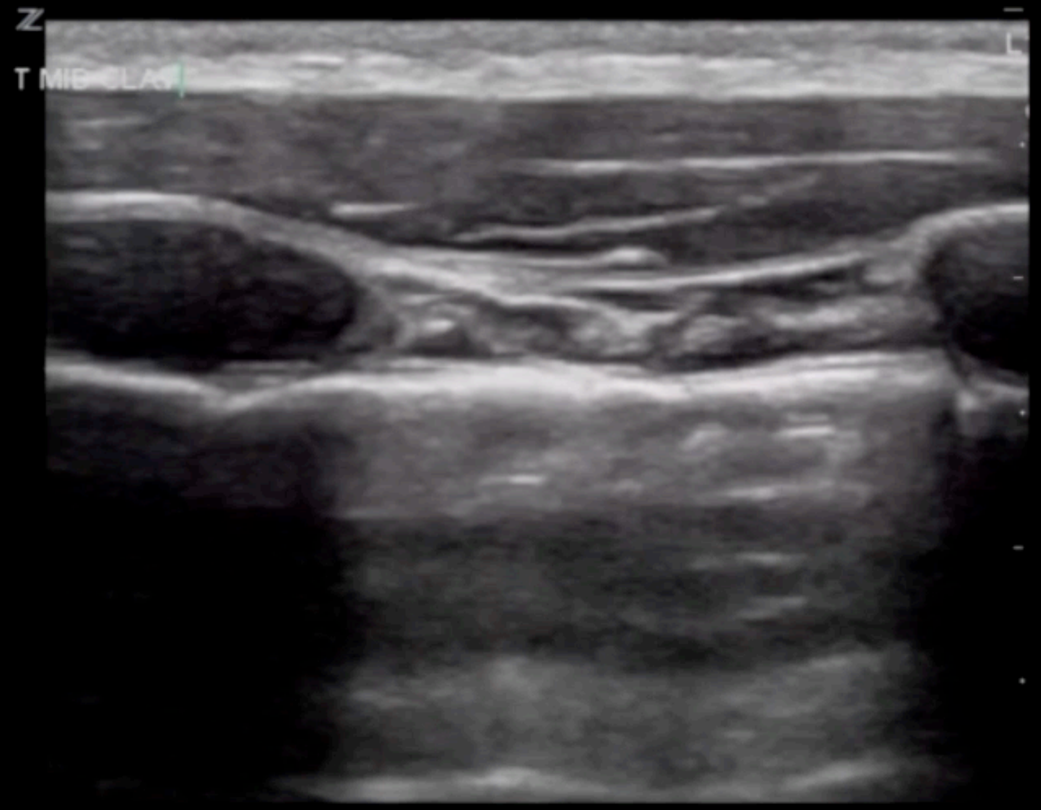
RMMCH caring for you
Abdominal pain

e-FAST

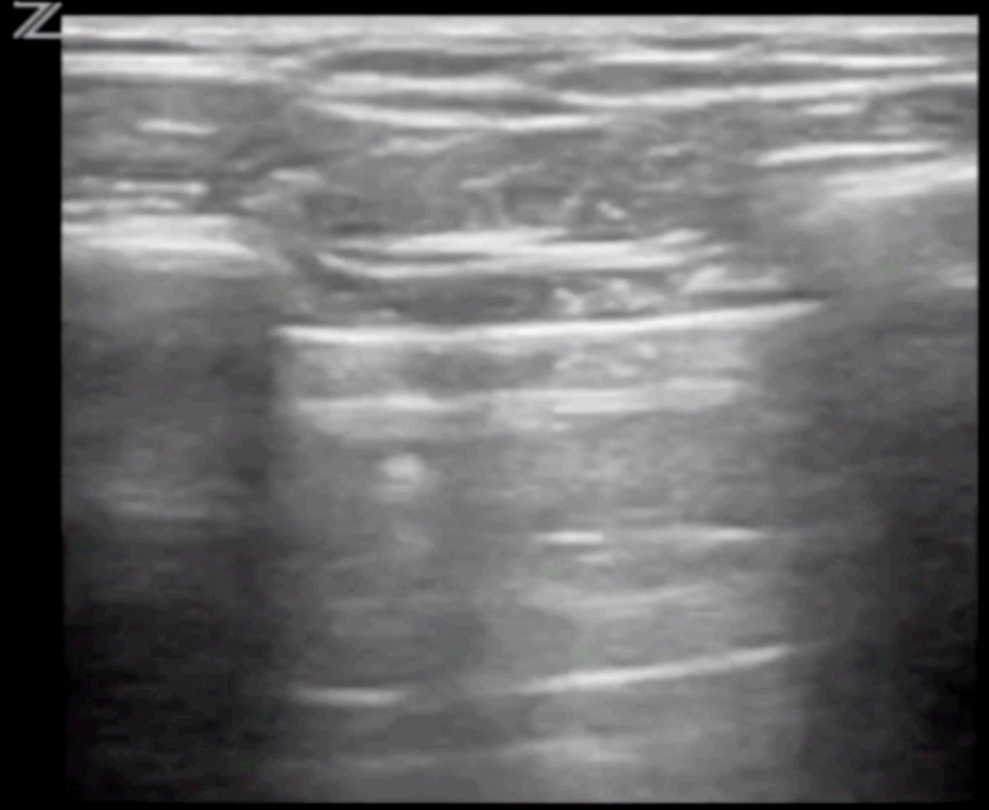


Sliding Vs. No Sliding

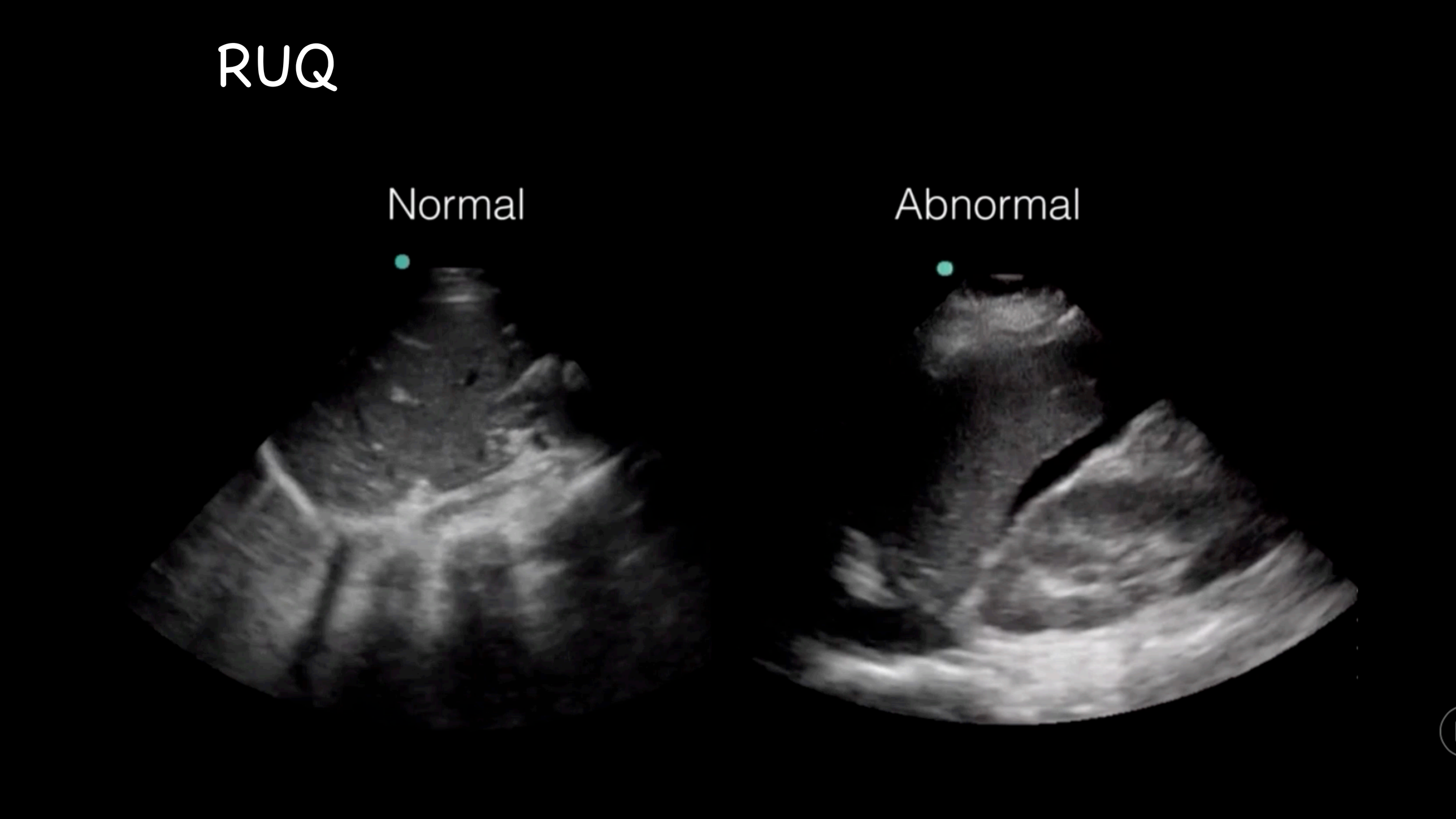
Normal



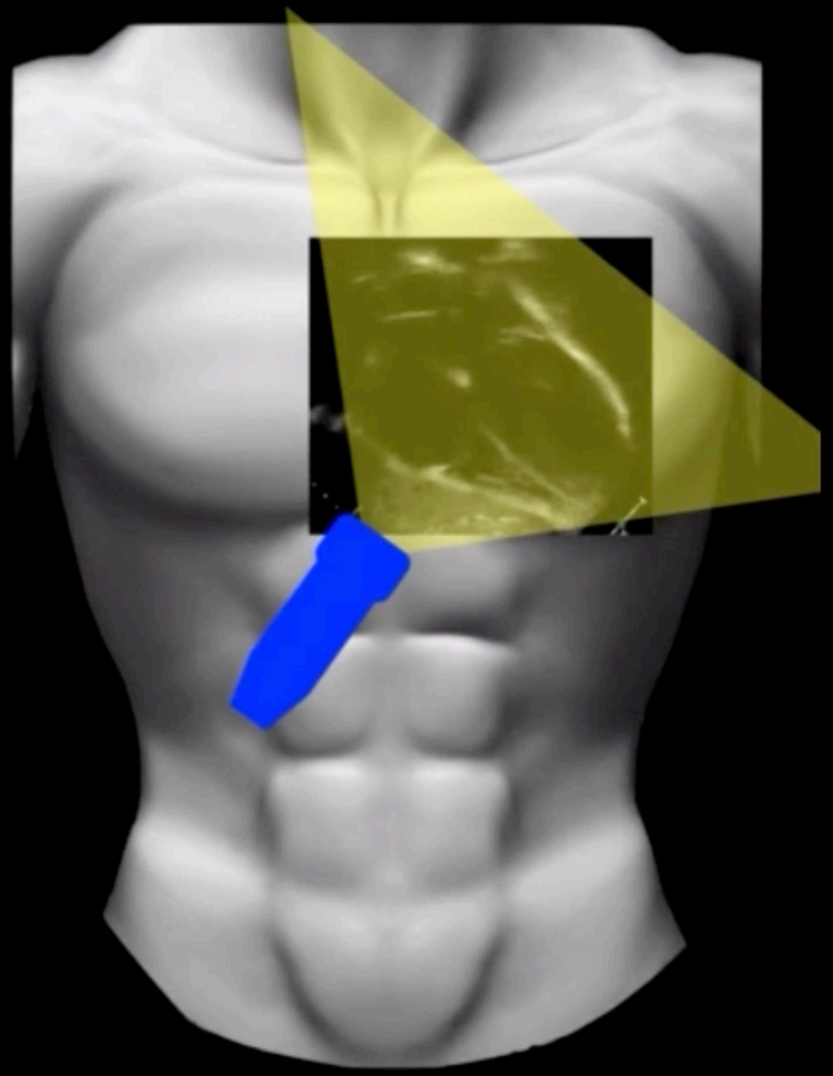
Abnormal



RUQ

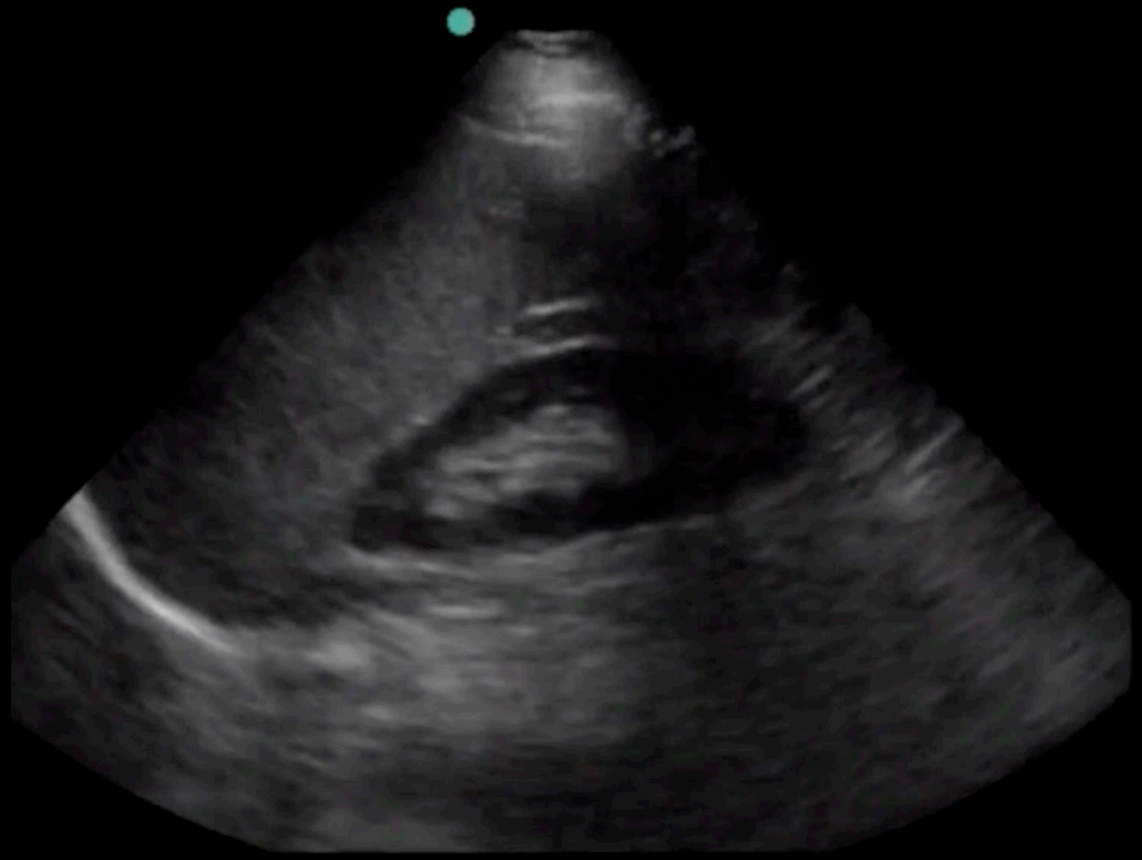


Cardiac views - subxiphoid



LUQ

Normal

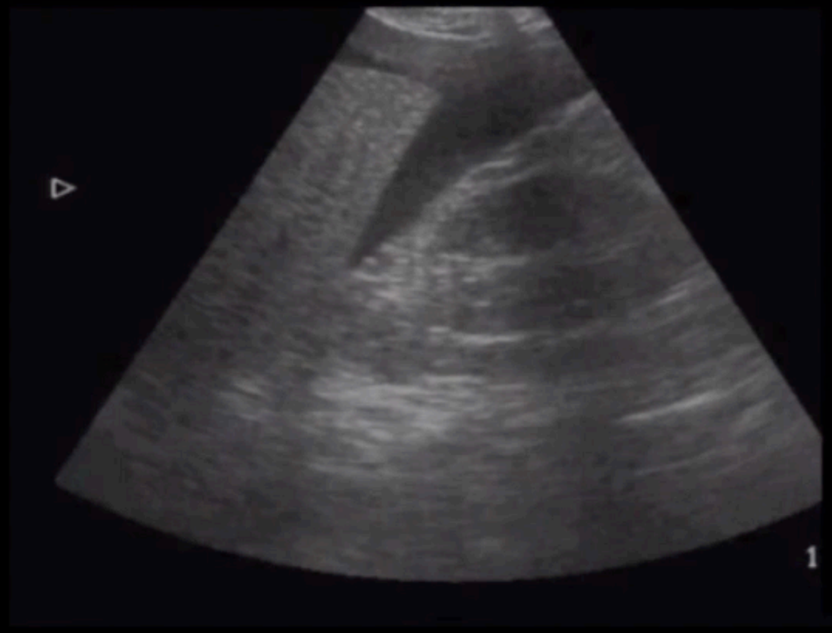


Abnormal

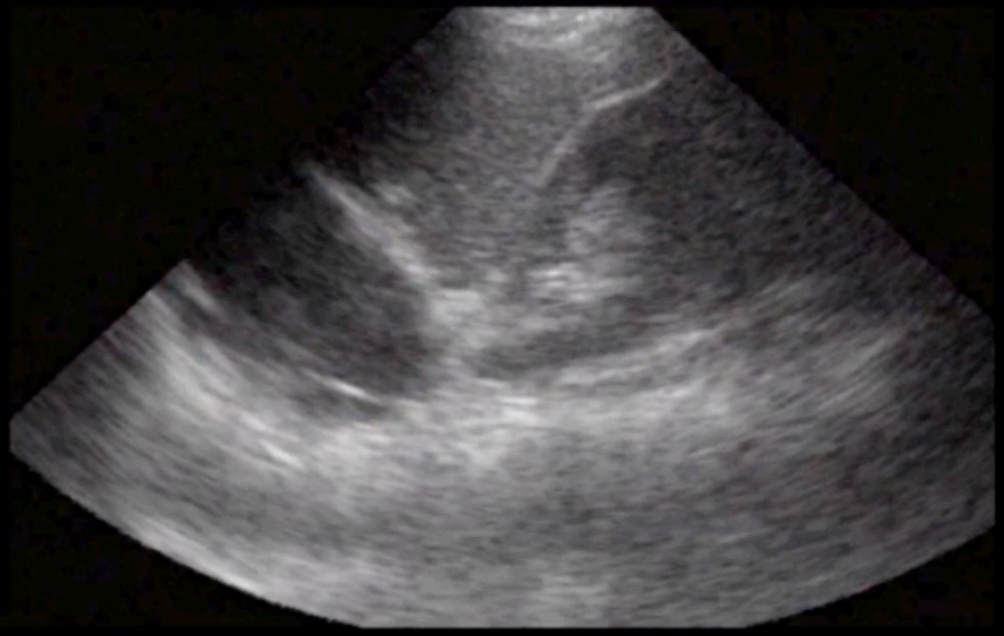
LUQ

Splenorenal Free Fluid Vs. Normal Fluid in the Stomach

Splenorenal Free Fluid



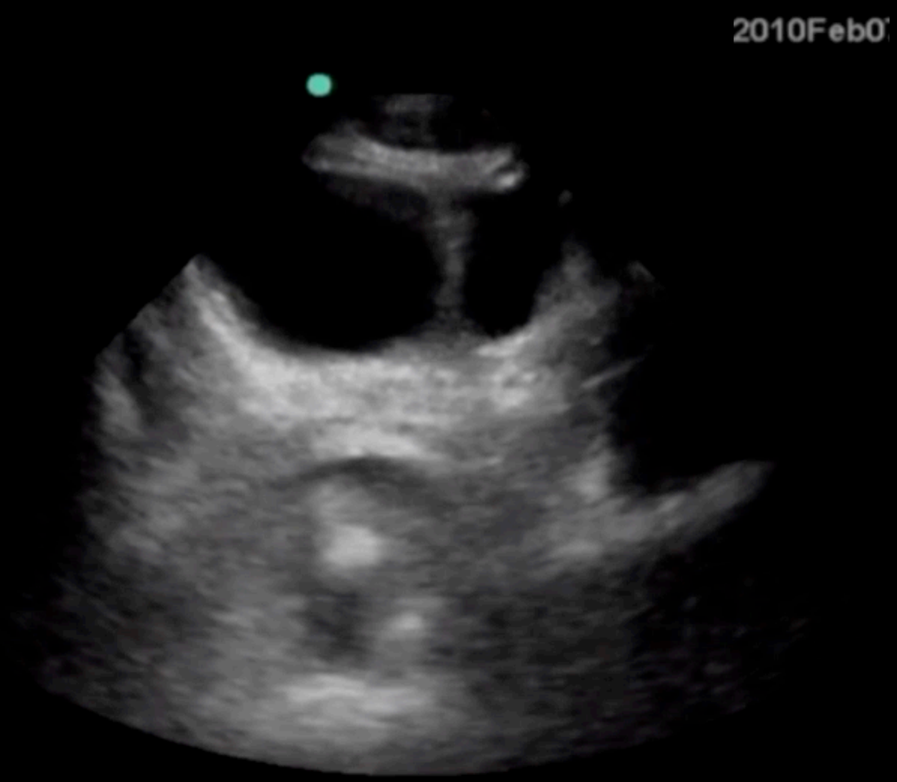
Fluid in Stomach



Pelvic views - transverse

Normal

Abnormal



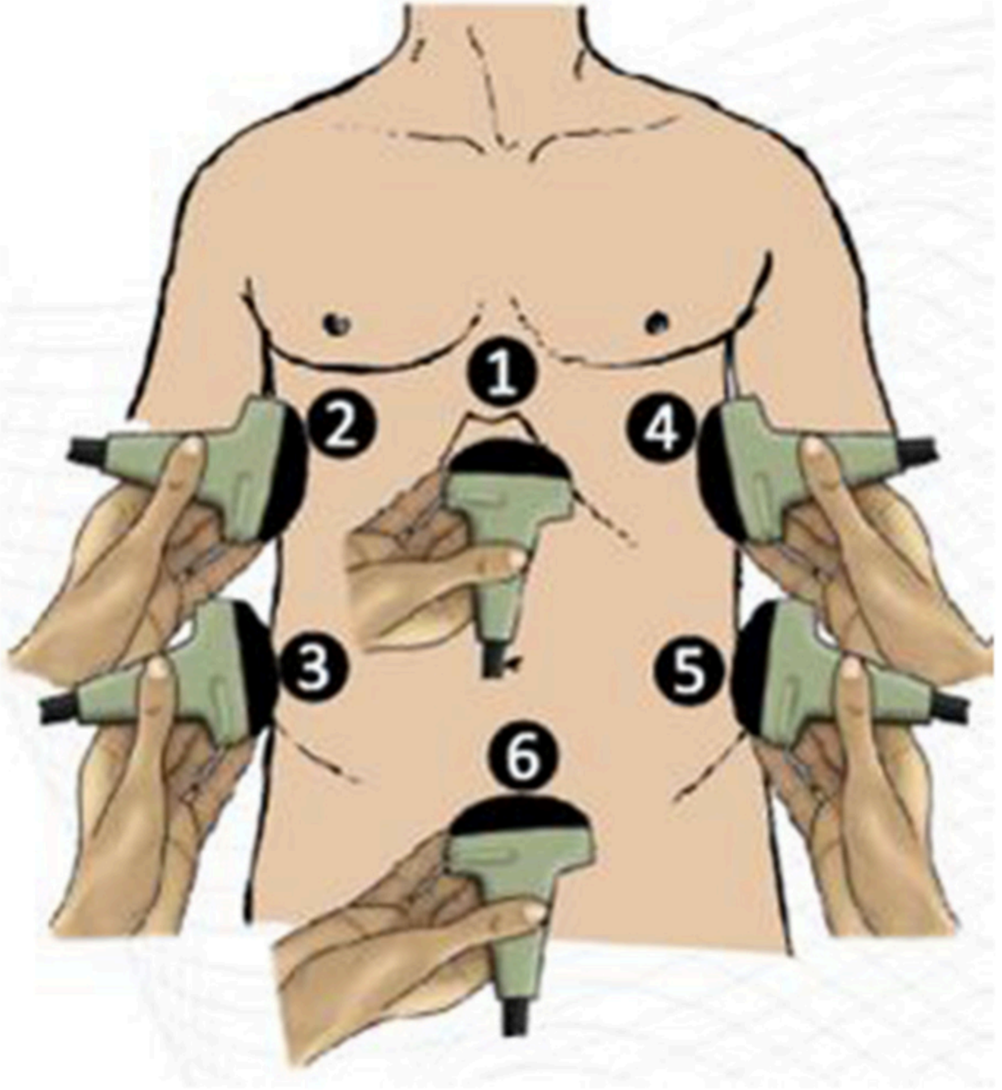


Figure 1 Schematic drawing of the ultrasound probe positions during the FASH examination.

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Utility of Point-of-Care Ultrasound in Children with Pulmonary Tuberculosis

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Abstract

Background—Point-of-care ultrasound (POCUS) detects extra-pulmonary tuberculosis (EPTB) in HIV-infected adults but has not been evaluated in children despite their higher risk of EPTB. This study's aims were to investigate feasibility of POCUS for EPTB in children, frequency of POCUS findings suggestive of EPTB, and time to sonographic resolution of findings with treatment.

Methods—This prospective South African cohort study enrolled children with suspected PTB. POCUS for pleural, pericardial or ascitic effusion, abdominal lymphadenopathy, or splenic or hepatic micro-abscesses was performed and repeated at 1, 3 and 6 months of TB treatment. Prevalence of POCUS findings and their association with HIV-infection was investigated in children with confirmed PTB (microbiologically proven), unconfirmed PTB (clinically diagnosed), or unlikely TB (respiratory disease that improved during follow-up without TB treatment).

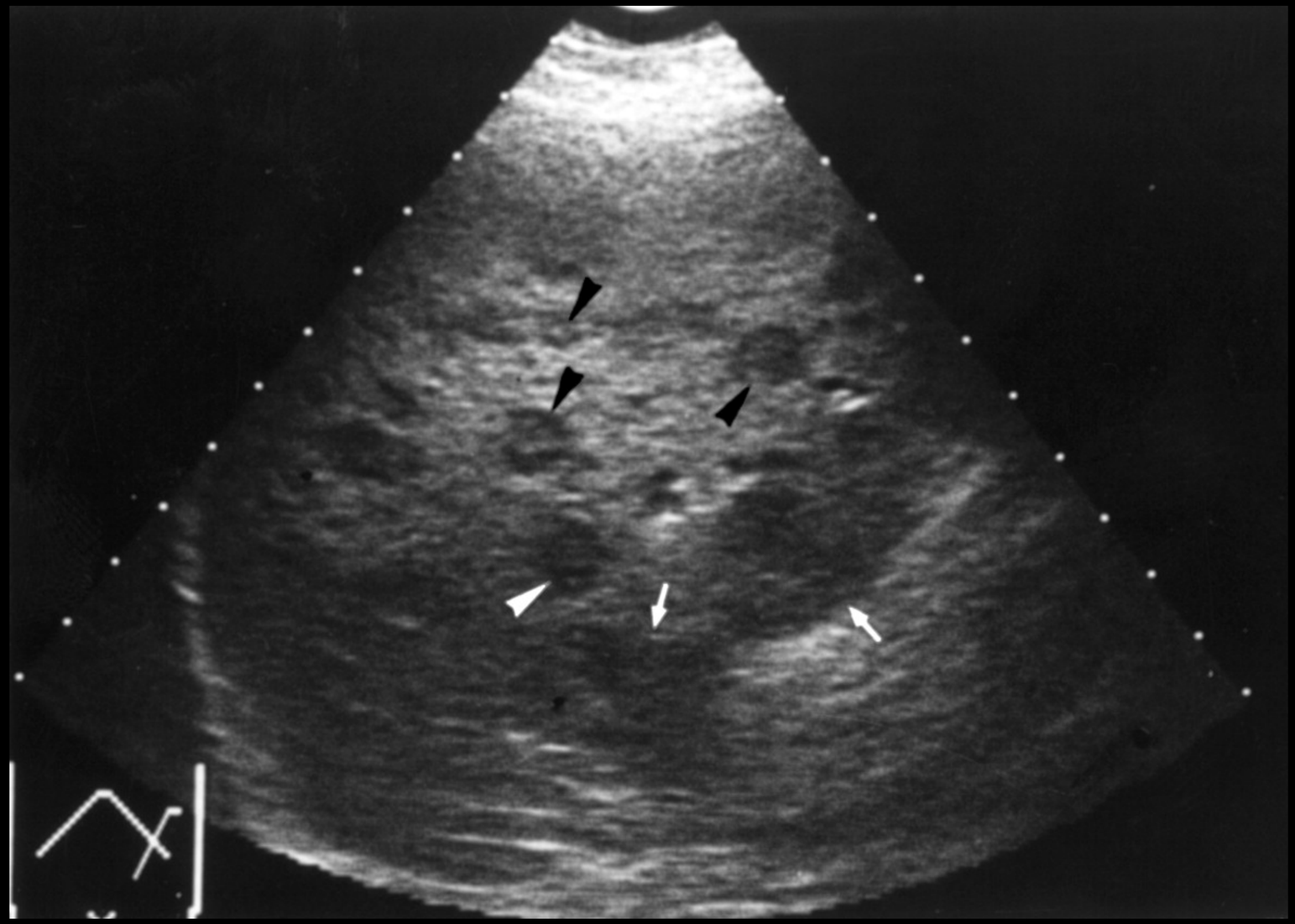
Results—Of 232 children [median age 37 months (IQR 18;74)], 39(17%) were HIV-infected. Children with confirmed or unconfirmed PTB had a higher prevalence of POCUS findings than children with unlikely TB [18/58(31%) and 36/119(30%) versus 8/55(15%), p=0.04 and p=0.03, respectively]. Pleural effusion [n=30(13%)] or abdominal lymphadenopathy [n=28(12%)] were the most common findings; splenic micro-abscesses [n=12(5%)] were strongly associated with confirmed PTB. Children co-infected with HIV and TB were more likely than HIV-uninfected children with TB to have abdominal lymphadenopathy [37% versus 10%, p<0.001] or splenic micro-abscesses [23% versus 3%, p<0.001]. Most ultrasound findings resolved by 3 months with appropriate TB treatment.

Conclusions—POCUS for EPTB in children with PTB is feasible. The high prevalence of findings suggests that POCUS can contribute to timely diagnosis of childhood TB and to monitoring treatment response.

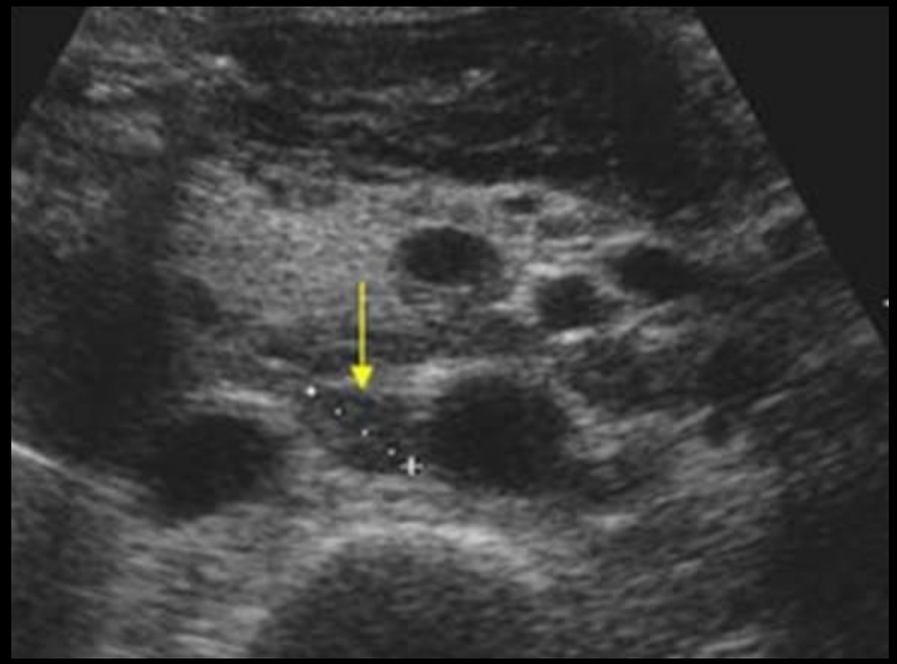
Keywords

tuberculosis; ultrasound; children; extra-pulmonary; point-of-care

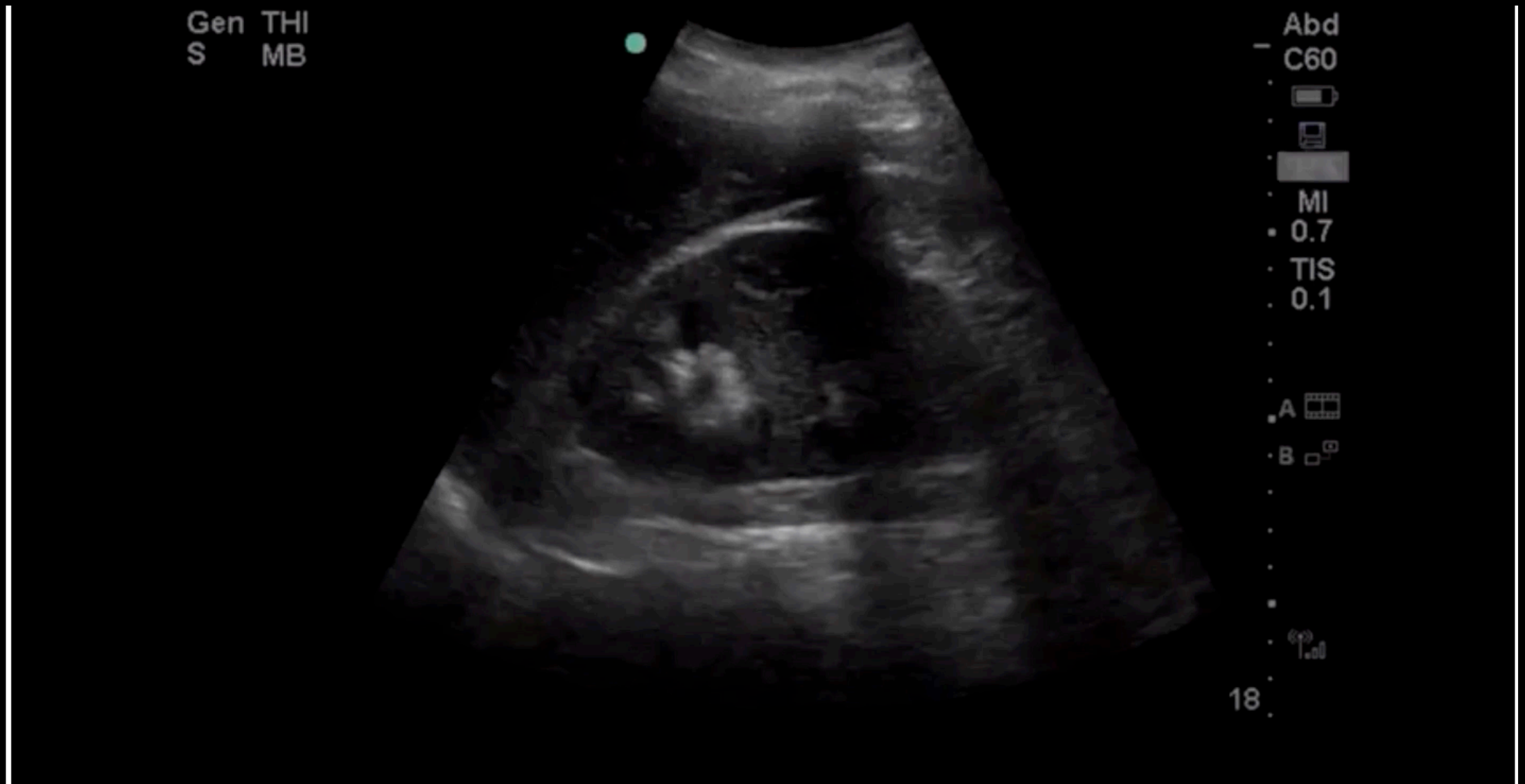
Splenic micro-abscesses



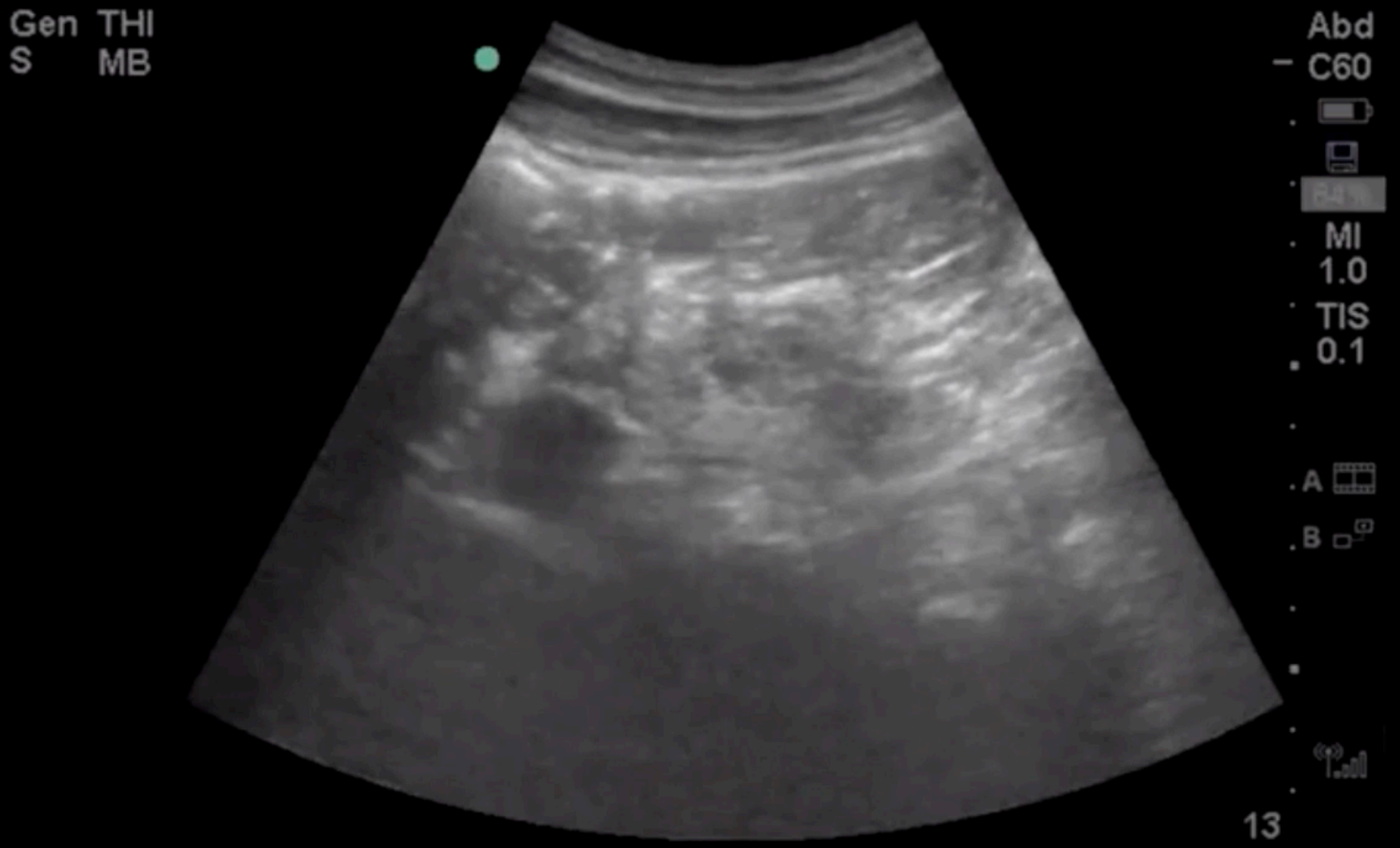
Lymph nodes



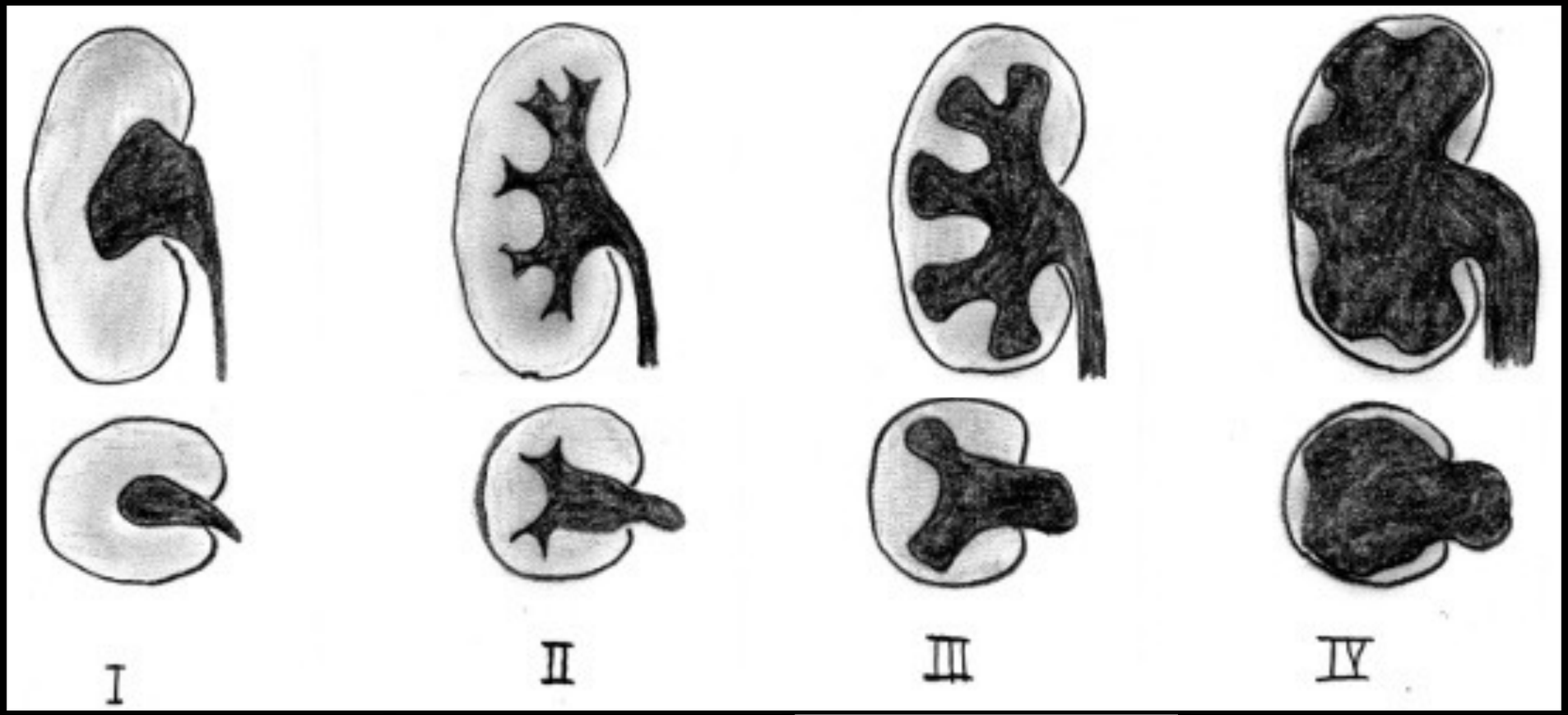
Kidney - saggital view

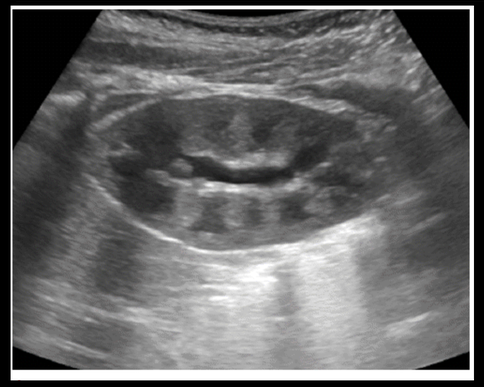


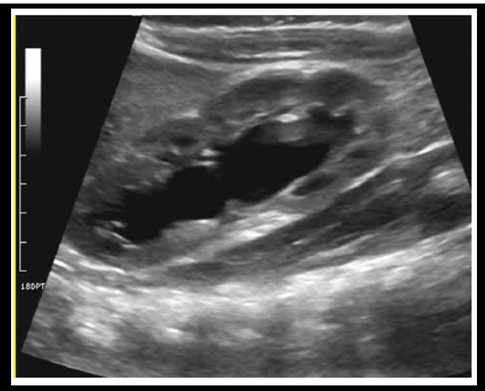
Kidney - transverse view

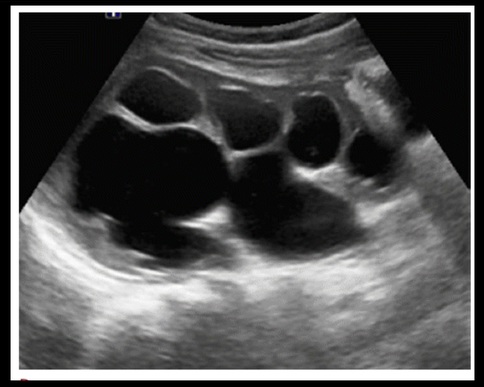


Hydronephrosis

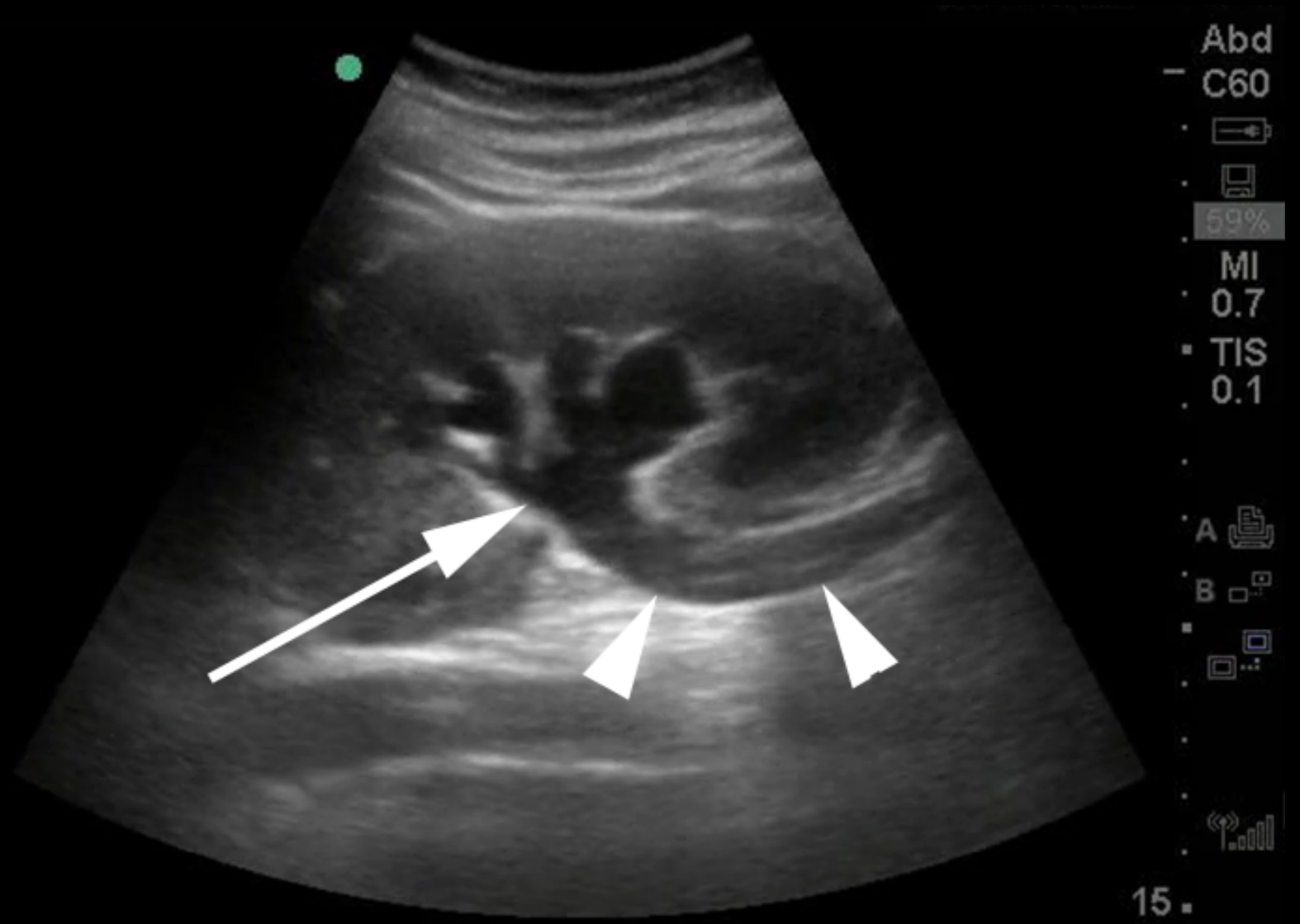




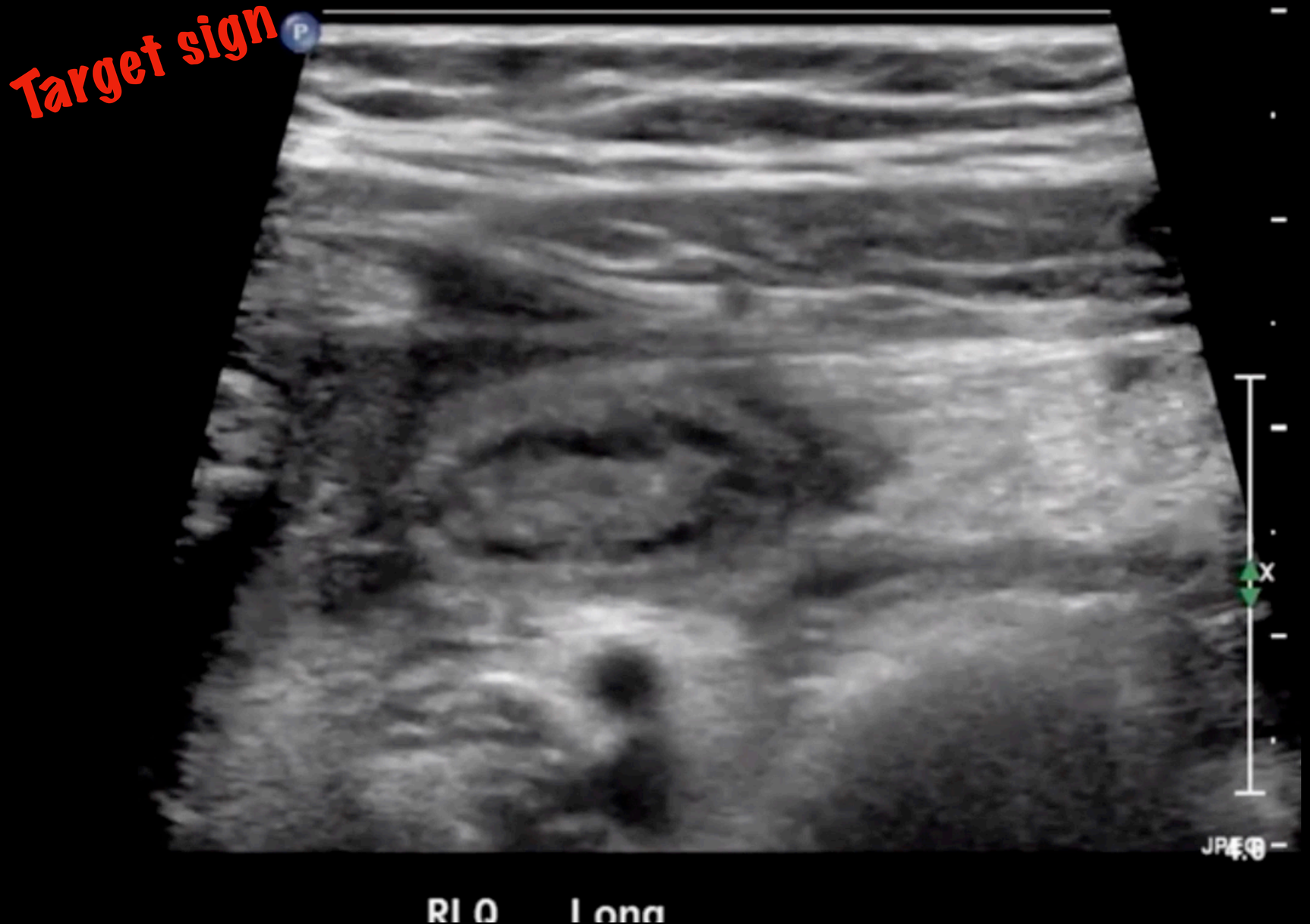




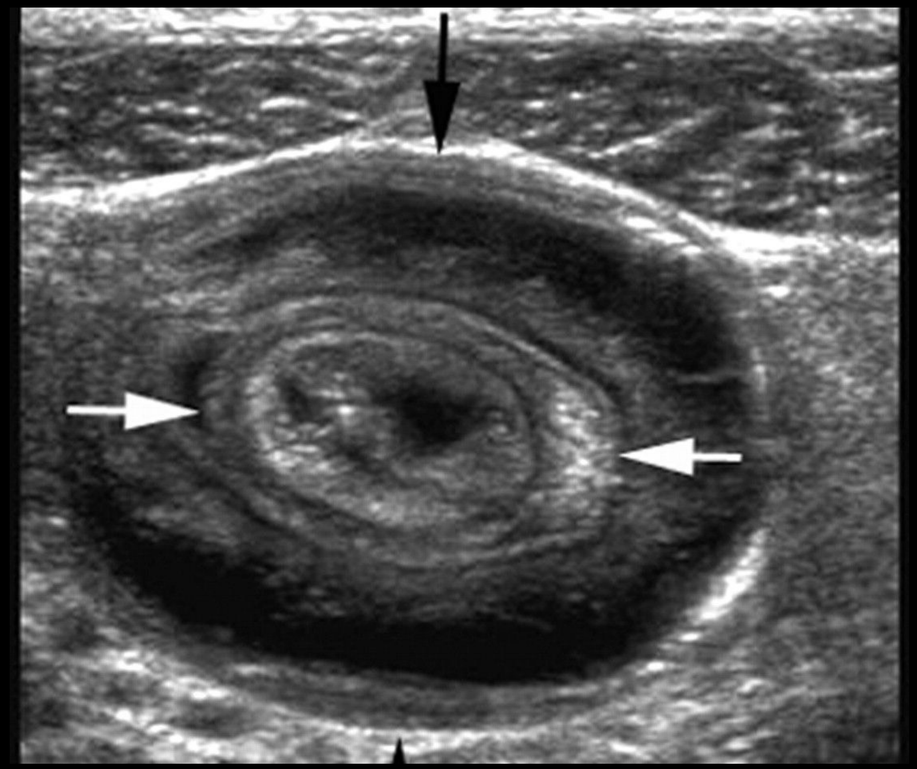
Hydroureter



Appendicitis

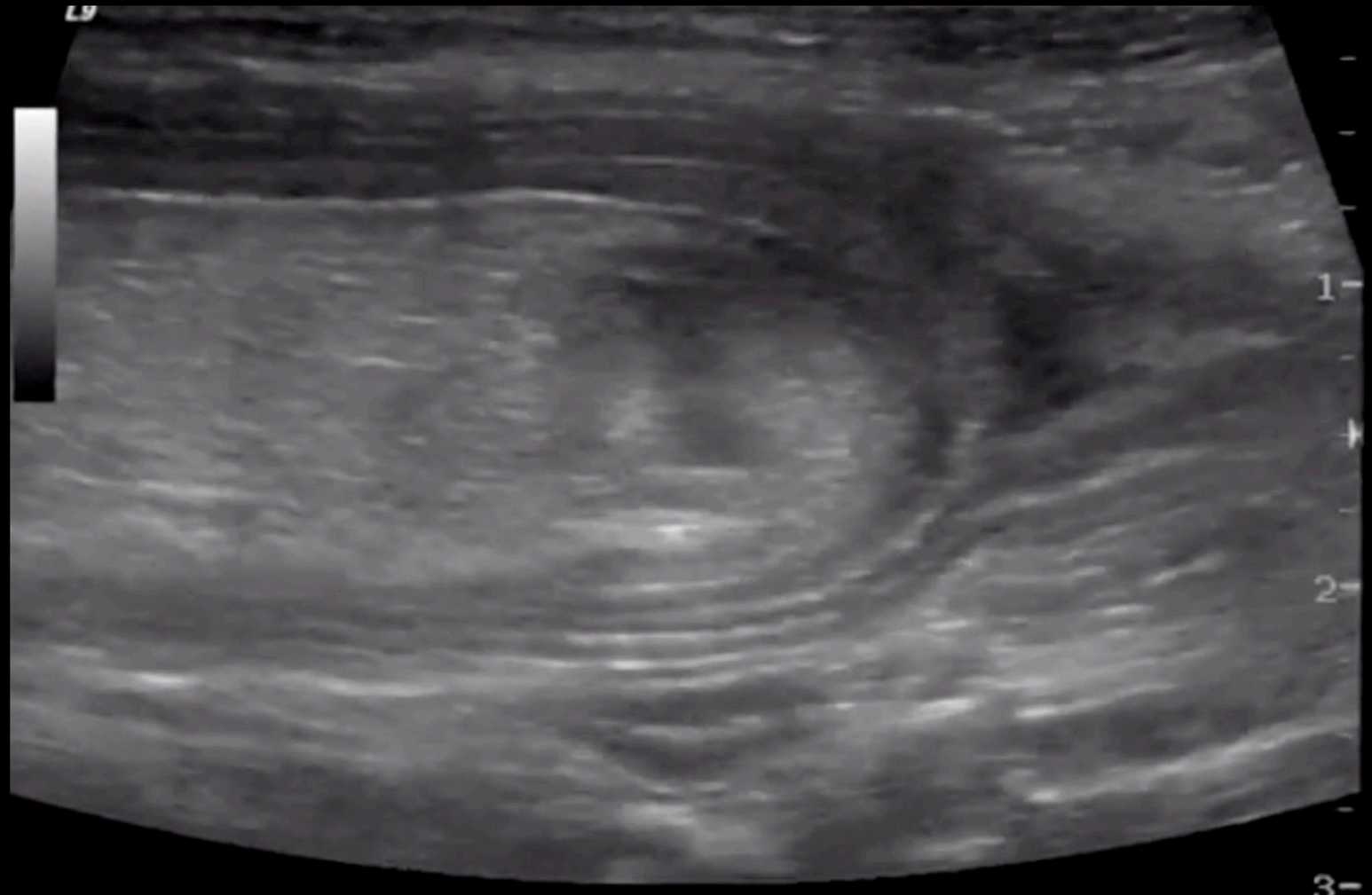


Intussusception



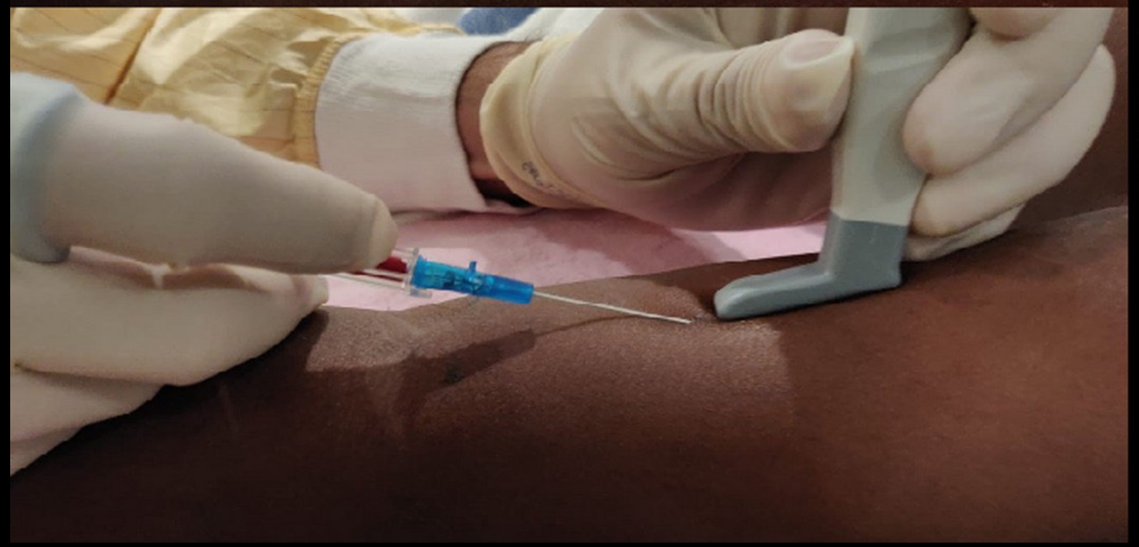
Doughnut sign

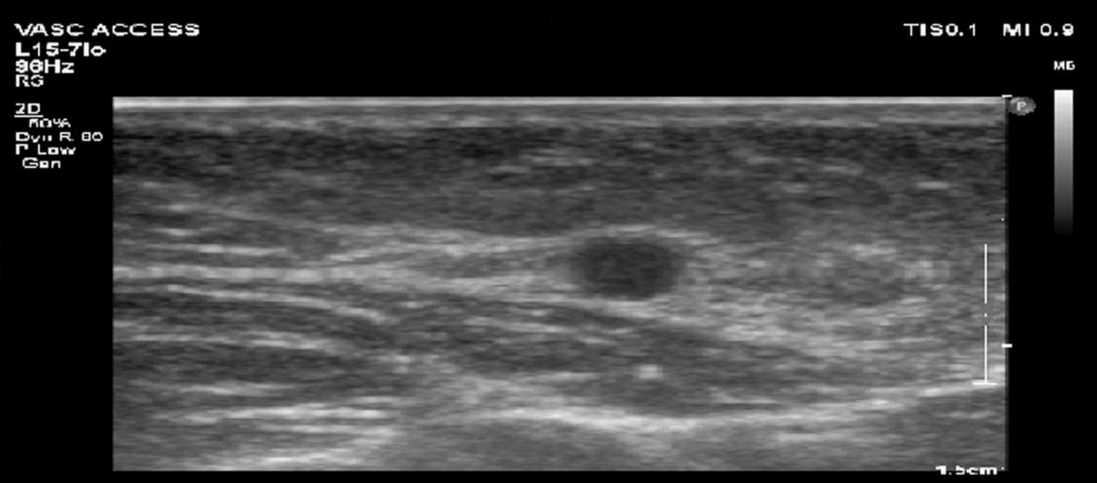
Intussusception

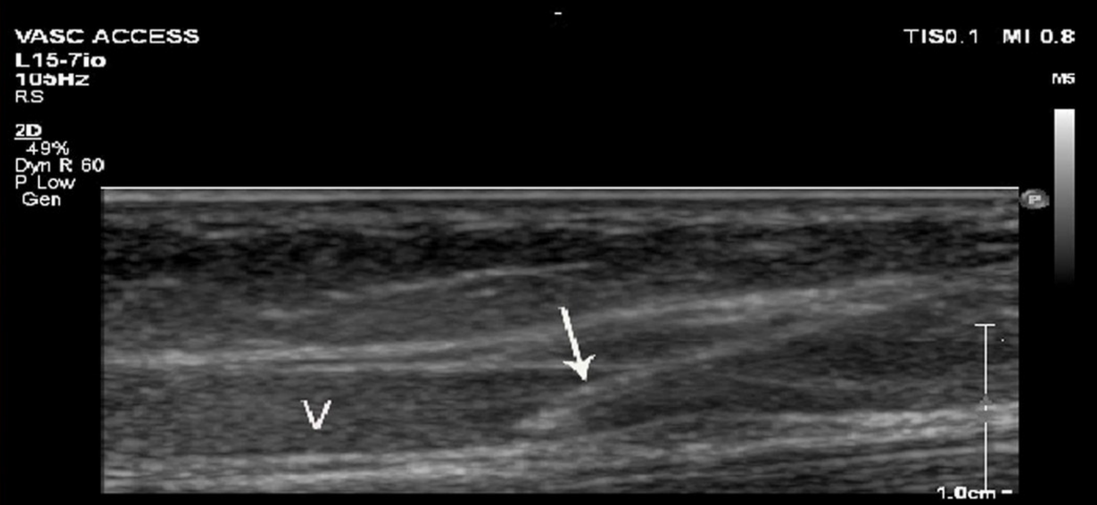


Spectacle view

Venous access







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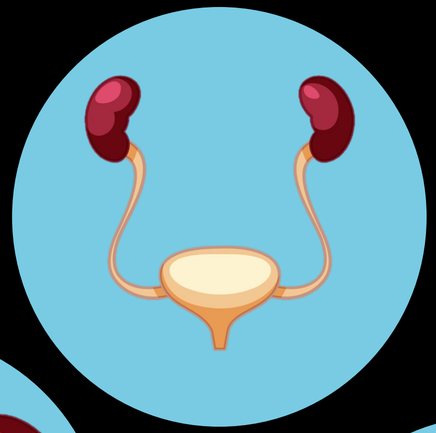
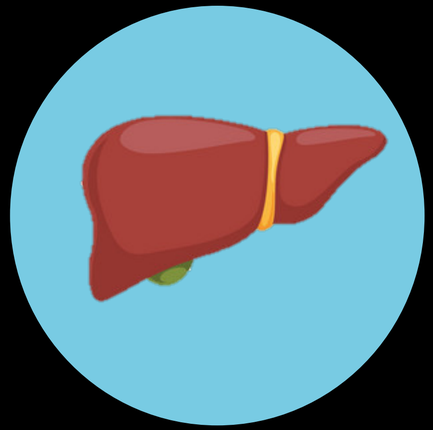

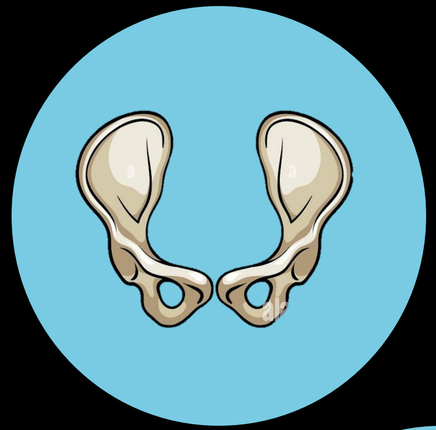
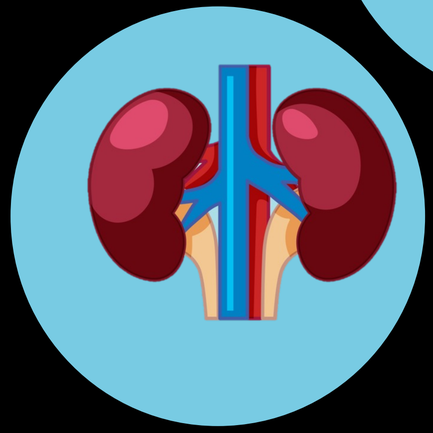
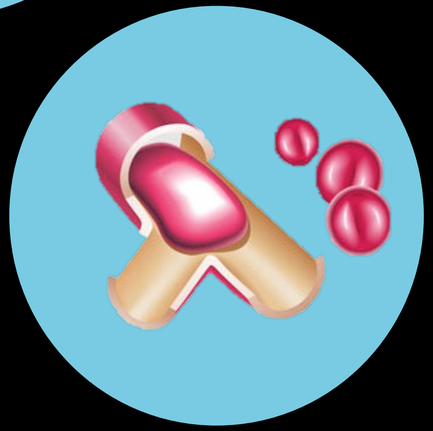
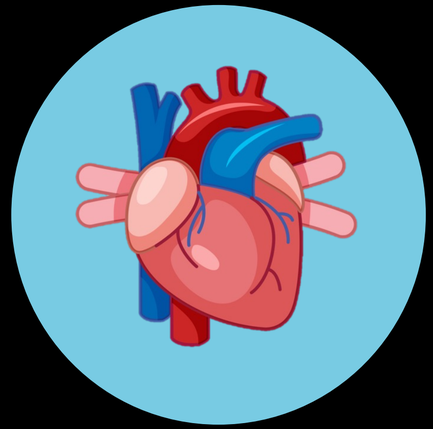
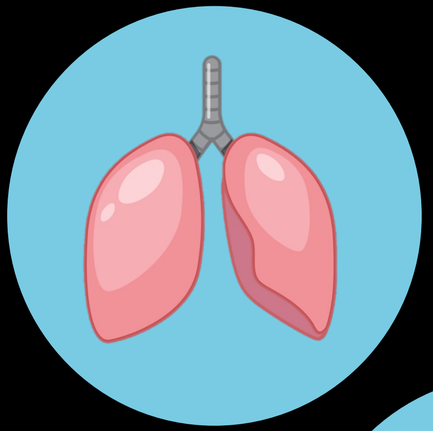
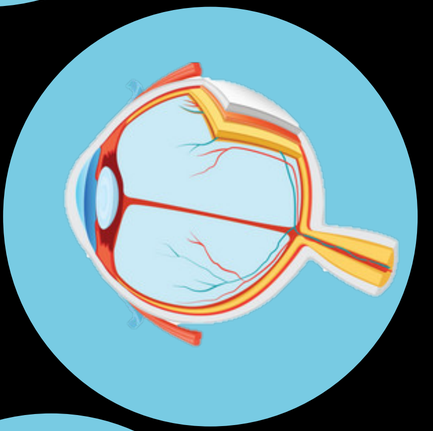
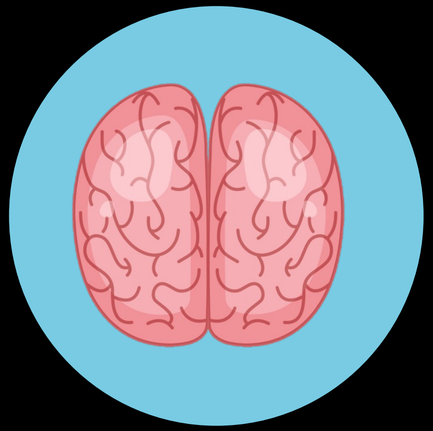

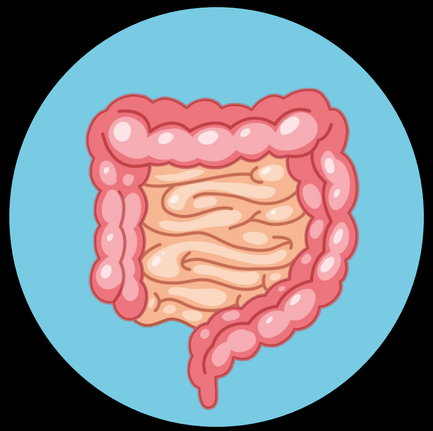
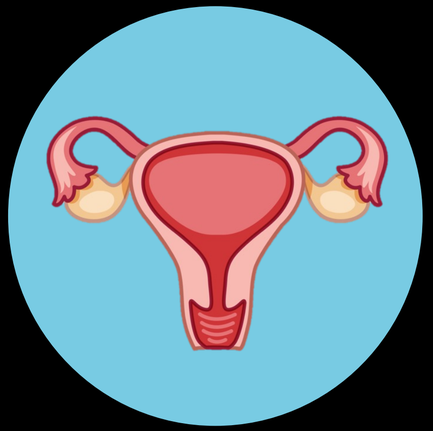


core ePoCUS Course

Book your seat

Who should attend | Why they should attend

All health care practitioners wanting to learn the basic skills of point of care ultrasound and start their PoCUS journey, especially those practicing medicine in emergency settings.

Course Information

The core ePoCUS curriculum focuses on ultrasound skills that are deemed essential for all health care providers working in an emergency setting or dealing with emergencies on a regular basis , and includes 7 core modules and applications to be covered in the course:

1. Module 1: Introduction and Principles of PoCUS
2. Module 2: Image Acquisition and Optimisation
3. Module 3: The extended Focused Assessment with Sonar in Trauma (eFAST)
4. Module 4: Basic Lung Ultrasound Assessment
5. Module 5: Aorta Ultrasound Assessment
6. Module 6: Basic Cardiac Ultrasound assessment including Limited Compression ultrasound for DVT
7. Module 7: Ultrasound guided vascular access

Tammy Baillie Stanton

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