

eFAST Exam

Outline

1. eFAST Scanning Protocol – (pages 2-5)
2. References – (page 6)

Pre-Workshop Instructional Video (8:36)

- <https://www.youtube.com/watch?v=Yg78aU93SZE>

Scan Checklist

| <u>eFAST</u> | |
|------------------------------------|---------------------------------|
| RUQ | Diaphragm |
| | Liver |
| | Right Kidney |
| | Morison's Pouch |
| LUQ | Diaphragm |
| | Spleen |
| | Left Kidney |
| | Spleno-renal Gutter |
| Pelvic View | Bladder long axis |
| | Bladder short axis |
| Subxiphoid Cardiac View | 4 Chamber View of Heart |
| | Pericardium |
| Thorax (Right and Left) | 2 Ribs with Posterior Shadow |
| | Pleural Line |
| | Assess in M-Mode |

eFAST Exam

Case Scenario:

A 38-year-old man comes to the emergency department after falling 15 feet off scaffolding at work. His systolic BP is 90; his heart rate is 125 bpm. He is on a backboard and in a C-spine collar and complains of severe pain in his back and abdomen.

Purpose:

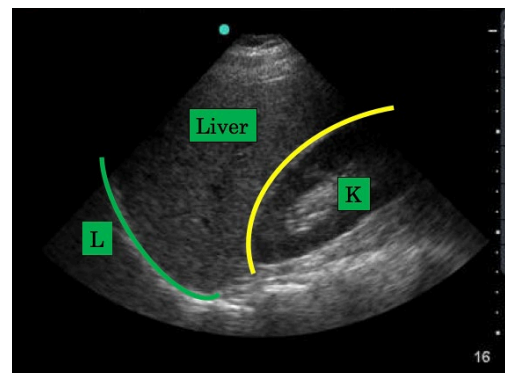
- Evaluate for free fluid (blood) in the abdomen and torso after blunt or penetrating injury
- Evaluate for pericardial effusion
- Evaluate for pneumothorax or hemothorax

US Basics:

- Use the curvilinear or phased array probe – abdominal and cardiac views
- Can use the linear probe to evaluate the lungs for pneumothorax. If using the curvilinear probe, decrease depth to <10 cm
- Free fluid (blood) appears black (anechoic)

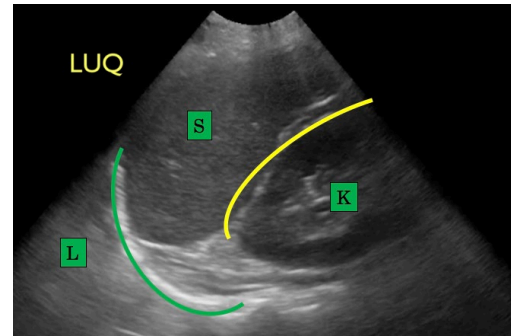
Scanning Technique:

1. RUQ View
 - The most dependent area for fluid to accumulate in the upper peritoneum when a patient is supine is Morison's pouch (between the liver and right kidney)
 - Fluid can be present at the inferior pole of the kidney and liver tip
 - Hemothorax can be detected above the diaphragm
 - Most sensitive view for free fluid on the FAST exam
 - Place the probe in the mid-axillary line at about the 8th to 11th intercostal space (or level of the xiphoid process) indicator pointed cephalad (towards the patient's head)
 - Fan the probe to scan the area for any pathology
 - In view should be the liver, right kidney and diaphragm



2. LUQ View

- Free fluid generally will surround the spleen, accumulate between the spleen and diaphragm, or between the spleen and left kidney (rare)
- Hemothorax can be detected above the diaphragm
- Place the probe in the posterior axillary line at about the 6th to 9th intercostal space (or around the level of the xiphoid process), indicator pointed cephalad
- “knuckles to the bed”
- In view should be the spleen, left kidney and diaphragm

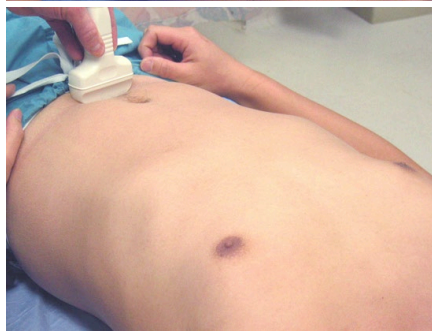
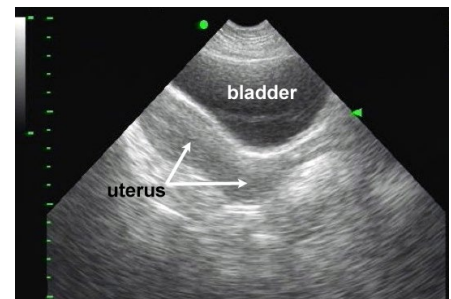


3. Pelvic View

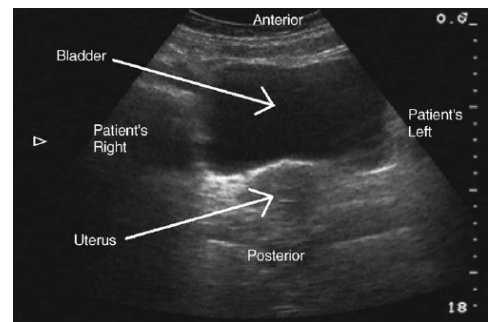
- The most dependent area in the lower peritoneum is posterior to the bladder in males, and the pouch of Douglas (posterior to the uterus) in females
- Remember that the bladder sits in the pelvic cavity and is found just cephalad to the pubic bone
- Scan the pelvis in both transverse and longitudinal planes
- Fan the probe to scan the area for any pathology



Longitudinal

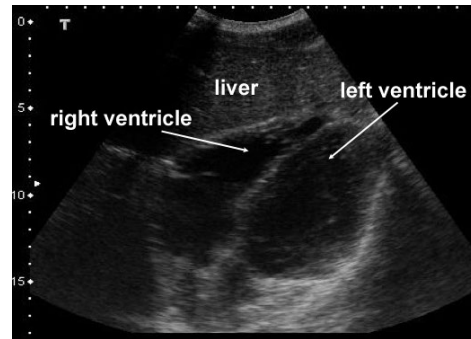


Transverse



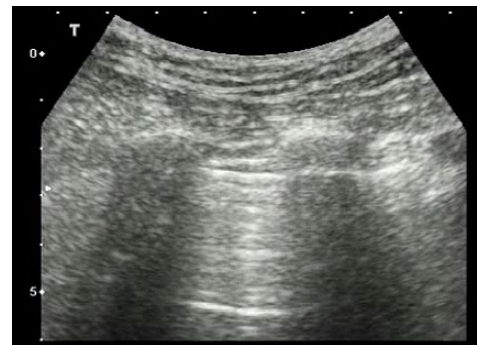
4. Subxiphoid Cardiac View

- Small pericardial effusions are located inferiorly (at the Right Ventricle)
- Larger effusions can fill the entire pericardial sac
- Probe marker is towards the patient's right, placed below the xiphoid process
- Tilt the probe aiming towards the head

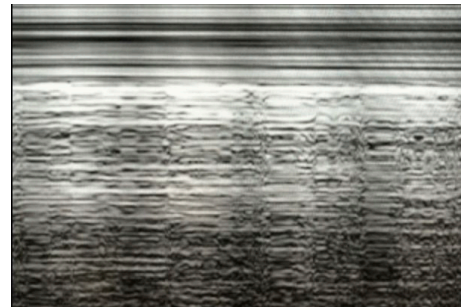
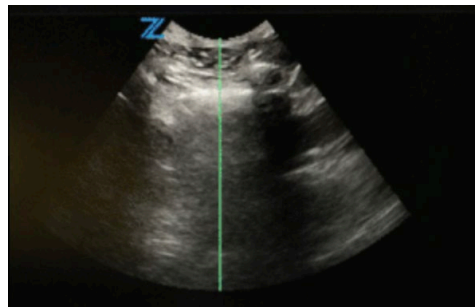


5. Anterior Thoracic Views

- Primary goal is to evaluate for a pneumothorax
- Position the probe longitudinal orientation (indicator towards the patient's head), mid-clavicular line, 3-4th intercostal space
- Look for movement at the pleural line between 2 ribs with shadows, indicating sliding of the visceral and parietal pleura
- Evaluation of multiple rib spaces can help determine the size of the pneumothorax
- Assess the contralateral side
- Use of M-mode (motion mode) to confirm the presence ("Seashore sign) or absence ("Barcode sign) of pleural sliding

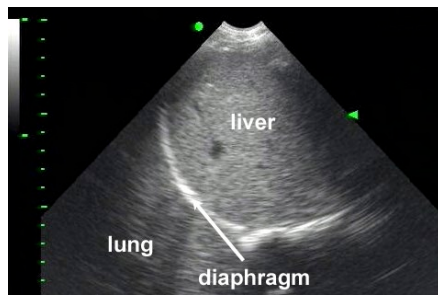


M-Mode

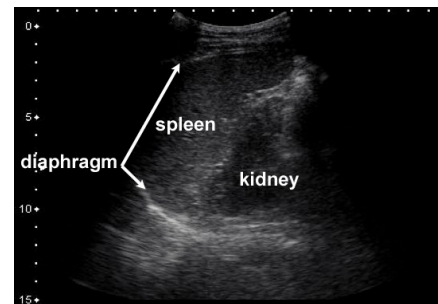


NEGATIVE eFAST

RUQ



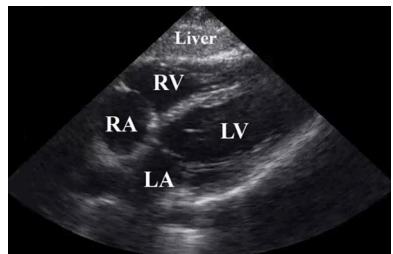
LUQ



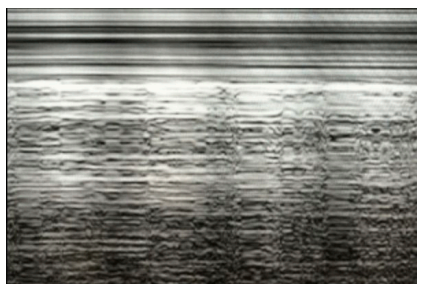
Pelvis



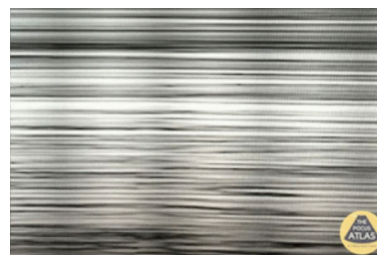
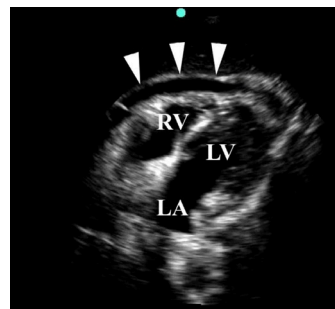
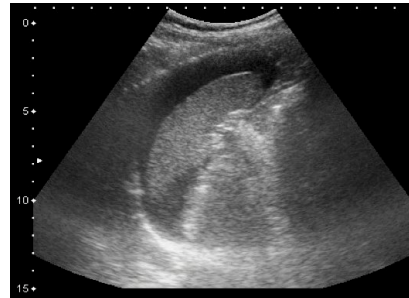
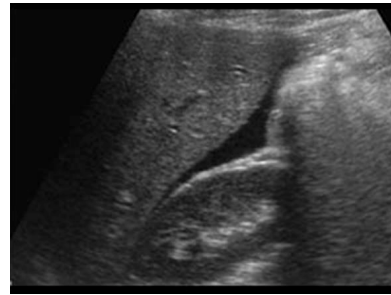
Subxiphoid



Thorax



POSITIVE eFAST



References

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