EMERGENCY ULTRASOUND
REQUIRED IMAGES
GUIDE

UNIVERSITY OF CINCINNATI
EMERGENCY MEDICINE
A single diagnostic image of rule in emergent pathology is always acceptable.
For example...
AORTA

Measure outer wall to outer wall at each location. A clip and still of each is recommended.
Add color Doppler to potential hydronephrosis to ensure it is not a vessel. Eval for ureteral jets if any hydronephrosis is seen.
BILIARY

Short axis

Long axis

Common bile duct

Multiple images of each view is recommended
Evaluate gallbladder neck fully
Use color Doppler to ensure identification of CBD
EARLY PREGNANCY - TRANSABDOMINAL

Uterus transverse | Uterus saggital
EARLY PREGNANCY - TRANSVAGINAL

Uterus transverse
Uterus sagittal
INTRAUTERINE PREGNANCY VISUALIZED

Fetal heart rate

Crown rump length
FAST

Three components to a FAST exam:
Abdomen
Cardiac
Thoracic

Include each component as clinically indicated.
FAST - ABDOMEN

RUQ
- Include: Hepatorenal space
- Subdiaphragmatic space
- Inferior edge of the liver

LUQ
- Include: Splenorenal space
- Subdiaphragmatic space
- Left paracolic gutter

Pelvis

Transverse

Sagittal
FAST - THORACIC

Anterior chest

Right

Left

Lateral inferior chest, coronal view

Right

Left

Visualize diaphragm and spine.

These can be obtained concurrent with abdominal RUQ and LUQ views.
FAST - CARDIAC

Obtain any one of these

- PSTL
- AP4/5
- Subxiphoid
Obtain clips demonstrating compression of the vein. Another option is to utilize dual mode and obtain side-by-side still images of each site uncompressed and compressed.
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- Common femoral vein
- Femoral vein and deep femoral vein
- Sapheno-femoral junction
- Popliteal vein
- Popliteal trifurcation
If evaluating only for pneumothorax bilateral anterior chest clips are sufficient. M-mode can also be utilized.

If evaluating only for pleural effusion bilateral lateral inferior chest views that demonstrate the diaphragm are sufficient.

If evaluating for parenchymal disease 10 zones should be assessed: Right and left anterior superior, anterior inferior, lateral superior, posterior inferior, lateral inferior.
BLADDER VOLUME

Transverse plane - width and height

Saggital plane - length
OCULAR - REQUIRED

- Always Label Left/Right Eye
- Label nasal/Temporal on images

Transverse Sweep Through the Globe

Longitudinal Sweep through the globe
OCULAR - SUGGESTED

Dynamic Images

Optic Nerve Measurement

- Optic nerve at 6 O’Clock
- Measure 3mm down from retina
- Measure width across ON
- Normal is < 5mm

Scan the contralateral side
Transverse sweep through the structure of interest

Longitudinal sweep through structure of interest
SOFT TISSUE

Transverse sweep through the structure of interest

Longitudinal sweep through structure of interest
Required:
Single still image of the vessel to be accessed

Suggested:
Image of wire or IV in vessel