Kansas ACP
Point of Care Ultrasound Workshop

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Disclosures

- I have no financial disclosures for this presentation
Goals of the Workshop

- To learn what point of care ultrasound is and how it differs from traditional ultrasound imaging
- To learn methods to become proficient in point of care ultrasound
- To discuss a few basic ultrasound principles
- To participate in the hands on POCUS skill sessions
What is POCUS?

- Clinician performed ultrasound at the bedside

- Focused studies:
  - Designed to answer a specific question
  - Or perform a procedure
  - Can be performed in minutes
  - Can provide timely information for medical decisions

- Ultrasound is a safe imaging modality
Applications for POCUS

- Cardiac
- Critical care/volume status
- Trauma
- Lung (edema, pneumothorax)
- AAA
- Biliary
- Renal/Bladder
- OB/GYN
- Gastrointestinal
- DVT
- Musculoskeletal
- Cellulitis v. Abscess
- Ocular

- Procedural
  - Paracentesis
  - Thoracentesis
  - Vascular access
    - Central
    - Peripheral
  - Abscess drainage
  - Lumbar puncture
  - Arthrocentesis
Methods to Learn POCUS

- Undergraduate Medical Education
  - Part of Curriculum
  - POCUS rotation
  - Radiology Rotation
  - ICU Rotation/Cardiology Rotation

- Internal Medicine Residency Training:
  - 2013 study in J Grad Med Ed:
    - 25% of programs have formal POCUS curriculum
    - 25% more planning to develop curriculum

- Self-directed learning
Methods to Learn POCUS

- Attending Physician
  - Basic ultrasound training program:
    - ACP offers 2-day course
  - Online/In-person CME training (many resources)

- Find a mentor

- Review radiology US images

- SCAN OFTEN
Basic Ultrasound Principles

- Pulse-echo principle:
  - A brief sound pulse is generated and transmitted into the body
  - The transducer then spends time listening for echoes (sound returning to the transducer)
    - Determines depth of object on the display
    - Determines the brightness of the pixel on the greyscale image
Knobology
Transducers

Higher frequency: superficial structures, more detail
Lower frequency: deeper structures, less detail
References

- www.sonosite.com