POCUS for Beginners

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POCUS for Beginners – ACP 2024 Boston

Resources Handout

**Ultrasound Basics**

*Indications*
- To assess etiology of undifferentiated shock, dyspnea, or chest pain
- To assess response to treatment
- Should be combined with history and physical examination
- Remember for every exam: Probe, Presets, Patient Position

**Selected Resource for Physical Examination diagnostic performance:**

**POCUS JVD**
- **Probe(s):** linear probe, **Preset:** Venous, **Superficial,** **Position:** Patient upright or angled
- Using light pressure on the probe, identify the internal jugular in the longitudinal plane by finding the internal jugular in the transverse plane and then rotating the probe so the indicator is cranial
- Acquire an image in which the internal jugular narrows into a “paintbrush” appearance
- The height where the internal jugular tapers correlates with jugular venous distention

**Selected Resources:**

**Pulmonary POCUS**
- **Indicated for dyspnea or respiratory failure**
- **Probe(s):** Any, but body or curved, **Preset:** Lung, **Position:** Patient upright or supine
- Anchor hand on skin. Ensure perpendicularity to pleural. **Indicator is cranial**
- Identify Anchoring anatomy: **Rib, Pleura Rib**
- Put together pattern of A, B, and C into clinical picture

**Selected Resources:**
Pleural Ultrasound for Effusion

- **Indicated** for dyspnea or respiratory failure
- **Probe(s):** Phased or curved, **Preset:** Abdomen, **Position:** Patient upright or supine
- Anchor hand on skin. Place at Zone 4 / Base of lung. **Indicator is cranial**
- Identify Anchoring anatomy: Diaphragm, Liver or Spleen, Lung
- Identify Lung Curtain or Effusion
- Look for Loculations

Selected Resources:


Pulling it all together

- POCUS requires knowledge of **Indications, Image Acquisition, Image Interpretation, and Clinical Integration**
- Diagnostic performance in isolation is superior to physical exam and chest radiograph, but the strength of POCUS is that it is **never used in isolation of other clinical findings**
- People serious about POCUS **save their images for portfolio review**
- Combining multiple POCUS exams is essential for high quality information

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<table>
<thead>
<tr>
<th>JVD</th>
<th>Lungs</th>
<th>Pleura</th>
<th>Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A lines</td>
<td>Lung Curtain</td>
<td>Normal COPD</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Asthma</td>
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<tr>
<td>+</td>
<td>B lines</td>
<td>+/- Effusion</td>
<td>CHF</td>
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<tr>
<td>+</td>
<td>A lines</td>
<td>Lung Curtain</td>
<td>DVT PE</td>
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<td>Tamponade</td>
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<tr>
<td>-</td>
<td>A / B</td>
<td>+/- Effusion</td>
<td>Pneumonia</td>
</tr>
<tr>
<td>-/+</td>
<td>A lines / Consolidation</td>
<td>Large Effusion</td>
<td>Pleural effusion</td>
</tr>
</tbody>
</table>
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Example of combining multiple examination

Selected Resources: