Pleural Ultrasound

I. **Patient Preparation**

a. None

II. **Equipment**

a. Performed with real-time scanner using a sector or curved linear transducer with frequencies ranging from 8 MHz to 12 MHz, higher frequencies often necessary for children and infants. On occasion, large patients may require a lower frequency of 5 MHz.

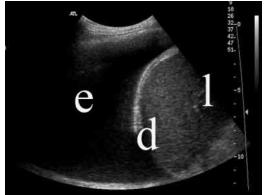
III. **Procedure Protocol**

- a. Assess for the presence of a pleural fluid collection, which can be dependent or loculated. Assess the entire thorax from the apex to the base.
- b. Different patient positions (e.g., supine, oblique, prone, decubitus, standing, sitting) should be documented if needed.
- c. Pleura
- 1. Image the pleura in Sagittal and Transverse planes.
- 2. Measure the depth of the pleural fluid collection.
- 3. Ultrasound feature may differentiate between a transudative and an exudative effusion, which can help narrow down the differentials for the cause of effusion.
- 4. Transudate pleural effusion is always anechoic in nature
- 5. An exudative pleural effusion may show the following features: 1. May be anechoic or echogenic, [1]2. May show septations within sign. May show debris or other particulate matter within stp. 4. May show loculations 5. May have associated pleural thickening [pleura >3mm] [5]6. May have associated pleural nodules 7. May have associated lung parenchymal lesions.



Septations

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7. Simple effusion