

TIP SHEET: .USLUNG (CPT 76604)

Indication: Trauma ultrasound when there is suspicion of hemothorax; Musculoskeletal ultrasound for the localization, presence and approximate measurement of abnormal fluid collections, joint effusion, or foreign body

Questions to ask yourself?

A lines visualized: YES or NO (SIDE: LEFT or RIGHT or BILATERAL)

B lines visualized (give type): YES or NO (SIDE: LEFT or RIGHT or BILATERAL)

Lung Sliding: PRESENT or ABSENT (SIDE: LEFT or RIGHT or BILATERAL)

Tissue-like Sign: PRESENT or ABSENT

Shred Sign: PRESENT or ABSENT

Quad Sign: PRESENT or ABSENT

Sinusoid Sign: PRESENT or ABSENT

PLAPS index to estimate fluid amount:

0.3 cm = 15-30 mL

1 cm = 75-150 mL

2 cm = 300-600 mL

3.5 cm = 1500 to 2500 mL

Images to obtain:

Probe: Low Frequency Phased Array (abdominal or cardiac probe) + High Frequency Linear Array probe for pneumothorax

LUNG1 – Bat Sign showing A lines

LUNG2 – B lines if present

LUNG3 – M mode to show Lung sliding

LUNG4 – Tissue-like sign if present

LUNG5 – Shred sign if present

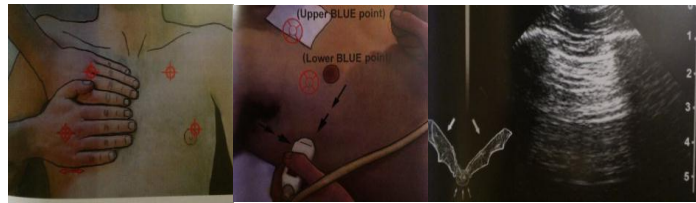
LUNG6 – Quad sign with PLAPS index

LUNG7 – M-mode image of Sinusoid sign if present

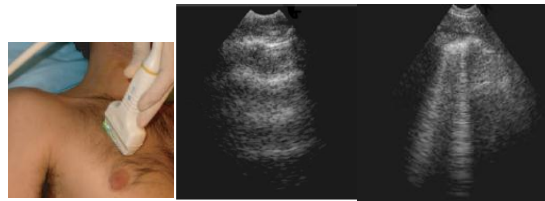
Scanning Tips:

No A lines or B lines? Try scanning in different parts of the lung using the BLUE points or try fanning in the upper or lower BLUE point location

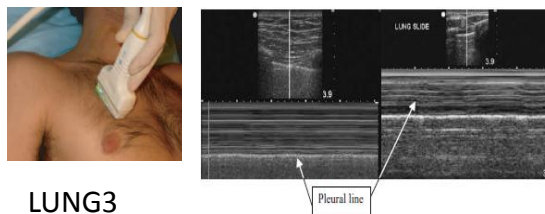
Unclear image? Sometimes patients with pneumothorax have subcutaneous air and can obscure view, try to obtain in different spots



BLUE Hands and BLUE points – Bat Sign



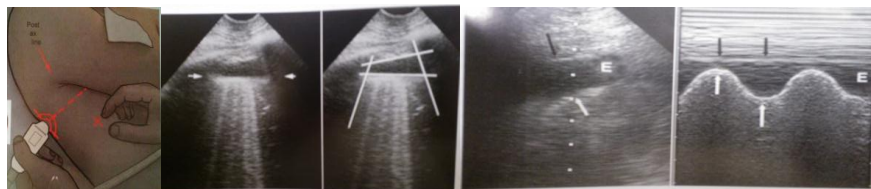
LUNG 1 & 2 A lines B lines



LUNG3



LUNG 4 & 5 – Shred sign and Tissue like sign



LUNG6 & 7 – PLAPS point – Quad Sign and Sinusoid sign

Difficult to get PLAPS point? Try using wedge to have patient positioned slightly in left or right lateral decubitus position, attempt to depress bed with fist of your hand holding probe to get better perpendicular angle

Can't see pleural line? If unable to locate anything might have subcutaneous air, try different lung positions.

Can't see above diaphragm? Try positioning more posterior and slide probe up towards head