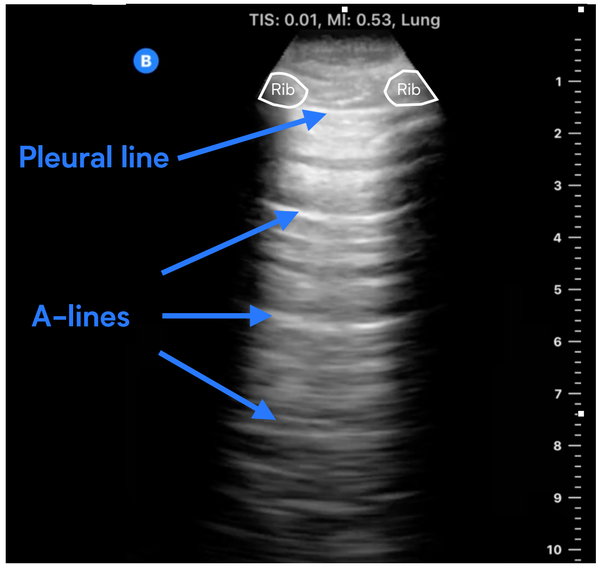
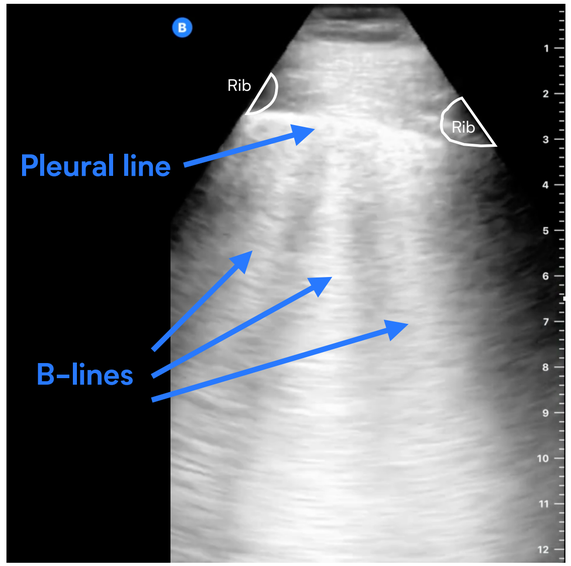
Lung Assessment Pathway



Indication

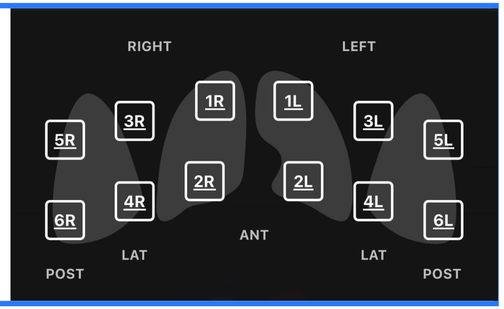
Respiratory symptoms
Screening (part of exam)



Scanning sequence

3-4 Zones per side: 6, 4, 3, (1)
marker towards patient head

Use “lung protocol” in action tab



Diffuse B-lines

CHF (esp w pleural fluid)
Viral

Consider additional CT imaging

All A-lines

Normal

No chest XR needed

Consider central process & CT imaging

Focal B-lines

Early consolidation or contusion

Consider additional CT imaging

Lung Assessment Pathway

Why?

Sensitivity of history, exam, and stethoscope for respiratory disease = 50%

Sensitivity of plain CXR for pna ~65%
50-60% for CHF, COVID

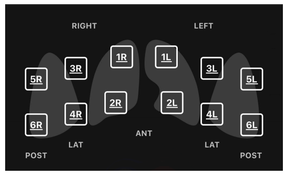
Sensitivity of US for PNA, CHF, and COVID (viral) is **similar to chest CT**

POCUS is performed at the time of patient assessment.
Gives **immediate** imaging info for an **informed decision**

Negative is easy to learn and has value for the majority of patients presenting with respiratory symptoms

Where?

95% of pathology (PNA, CHF, fluid) in posterior lower lobes.
(why you listen in the lower chest)



Start with **zones 6R and 6L** with patient sitting upright (if possible).
Zones 4 to 3 (slide) mid-axillary
Zone 1 anterior below clavicle with patient supine

Probe in **long axis** (sagittal) - **marker toward the head**

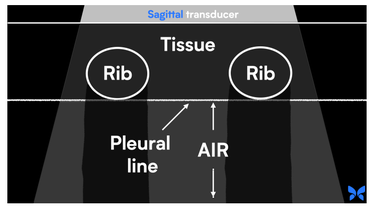
Identify abdomen/base of lung for zones 6 and 4

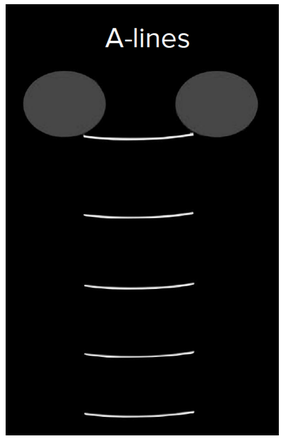
Fan probe (side to side) to maximize image

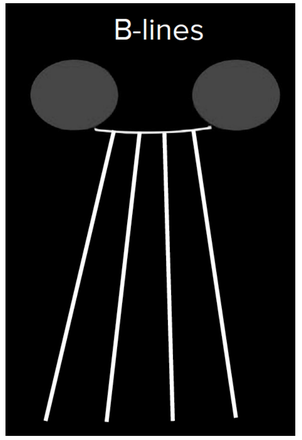
Slide through multiple rub spaces for each 6 second clip

What?

Look for this pattern







A-lines = healthy pleura, air-filled lungs = **normal**

B-lines = healthy pleura, air-filled lungs = **pathology**

Win!

A-lines = **normal**
(No PNA, CHF, fluid, covid)

CXR less sensitive and is **not needed**

Consider non-con chest CT for hilar dz or CT angio for PE

B-lines = **abnormal**
Pattern suggest pathology

Focal B-lines (one zone)?
PNA or contusion

Diffuse B-lines?
More at bases +/-fluid?
CNF

Diffuse patchy B-lines?
Viral

Additional imaging for ANY findings if not confident in interpretation