

point of care

pediatric lung ultrasound

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objectives

- introduction to point of care lung US
- technique
- ultrasound lung basics
- pathology and procedures

stay tuned...

introduction

- numerous applications
- artifacts
- literature



International evidence-based
recommendations for point-of-care
lung ultrasound

Downloaded from www.sciencedirect.com/science/article/pii/S0954682016300000

point of care applications

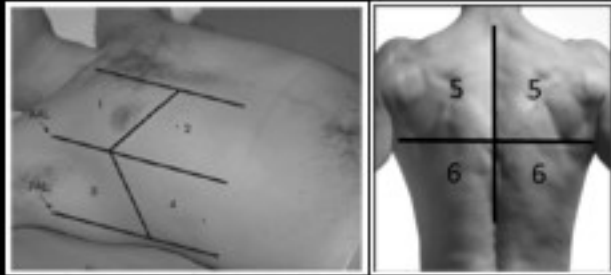
- normal lung
- pneumothorax
- Interstitial syndrome
- consolidation
- pleural effusion

technique

technique

- Linear probe
- Phased (alternate)
- Curvilinear: obese



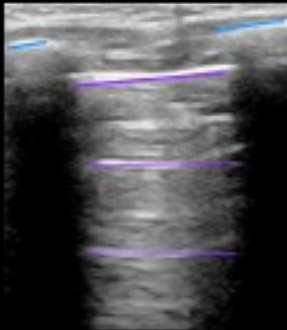


Small text block, likely a caption or reference note.

ultrasound lung basics

normal lung

rib
shadowing

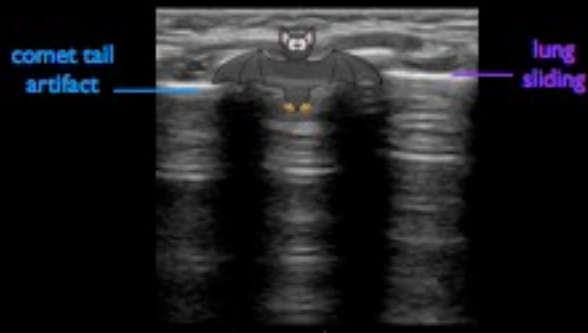


pleura

normal lung



normal lung



A lines

- sound is reverberating
- "bouncing"
- two reflective surfaces

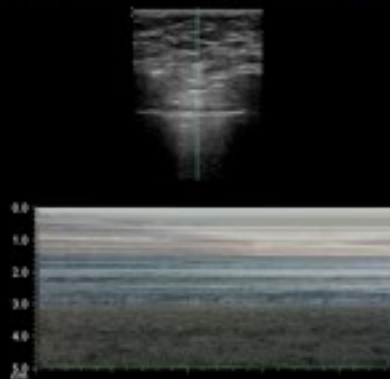


lung sliding

power lung sliding



normal lung: m-mode



comet tail artifacts

B lines

1. comet-tail artifact
2. hyperechoic
3. originates from the pleural line
4. does not fade
5. erases A lines
6. moves with lung sliding

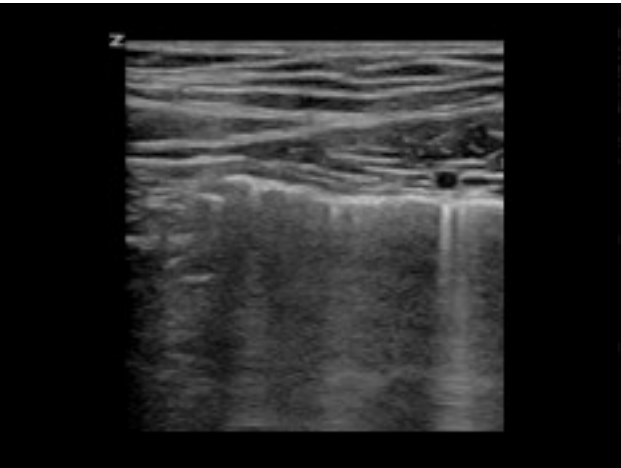


A B-mode ultrasound image of the lung. A bright, curved line at the top represents the pleural line. From this line, a single, very bright, vertical comet-tail artifact (B line) extends downwards, erasing the underlying A lines. The background shows the typical speckled texture of lung tissue.

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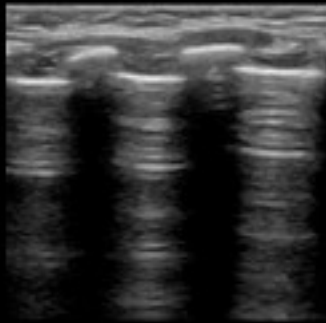
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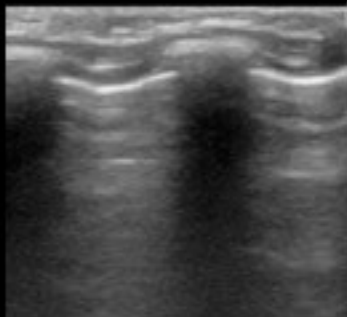
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normal lung

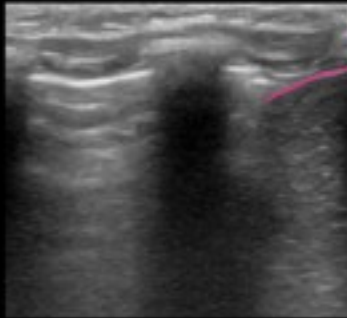
normal lung



normal lung



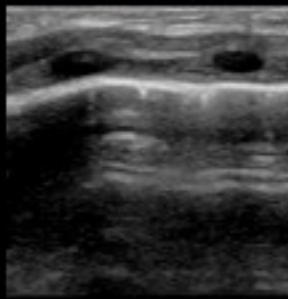
normal lung



diaphragm

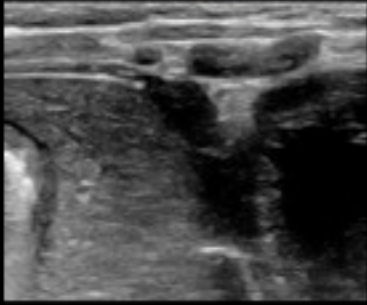
normal lung

neonate



don't forget...

thymus



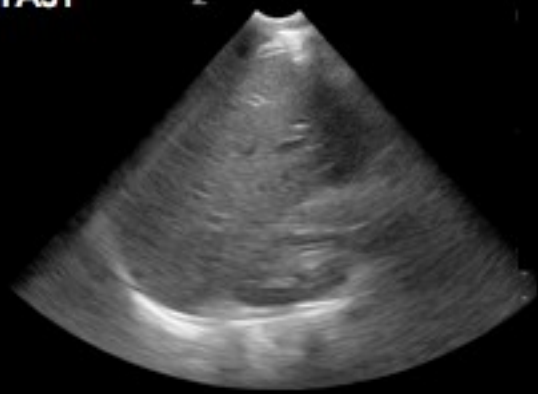
<http://www.anatomyatlases.com/atlases/thymus.jpg>

remember the lung when...

- FAST exam
- parasternal long (PSL) view of the heart
- interrogating the inferior vena cava (IVC)

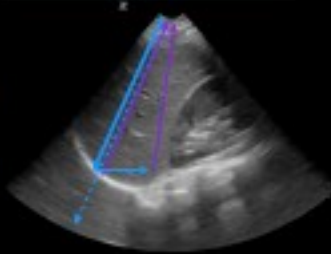
FAST

z



mirror artifact

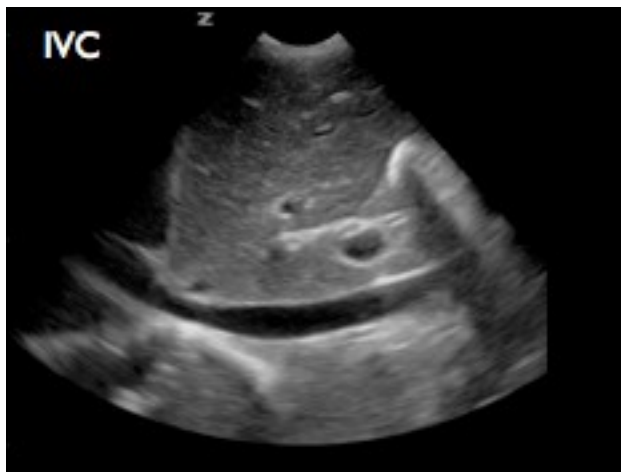
- type of reverberation
- highly reflective surfaces
- US reflected & refracted



z







conclusion

- POC ultrasound is useful for lung evaluation
- evaluate the lung in unconventional views
- understanding artifacts is key
- have fun and scan often!



A small image of a bowl of soup with the word 'SUCCESS' written on it.
