重點式照護超音波

POCUS at home 實作工作坊

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情境演練

- 80 歲林先生，本身慢性腎臟病及慢性肺阻塞疾病病史。
- 發燒 38.5 度一天及上呼吸道症狀，合併呼吸費力

- 聽診明顯喘鳴音，下肢水腫 2+ 並有尿量下降情形
- TPR : 38.0/120/20 ; BP : 120/60 mmHg
- Lab : WBC 12000, CRP = 8

是否合併heart failure

乾的肺 **濕的肺**

- POCUS 可以幫我們看到什麼？ COPD AE ? Lung edema ?

在宅急症情境演練

- 85歲王爺爺，重度失智、大多臥床，平日外看照顧。有鼻胃管，COPD病史、CKD stage3，是OO診所居整個案，有照護Line群組。

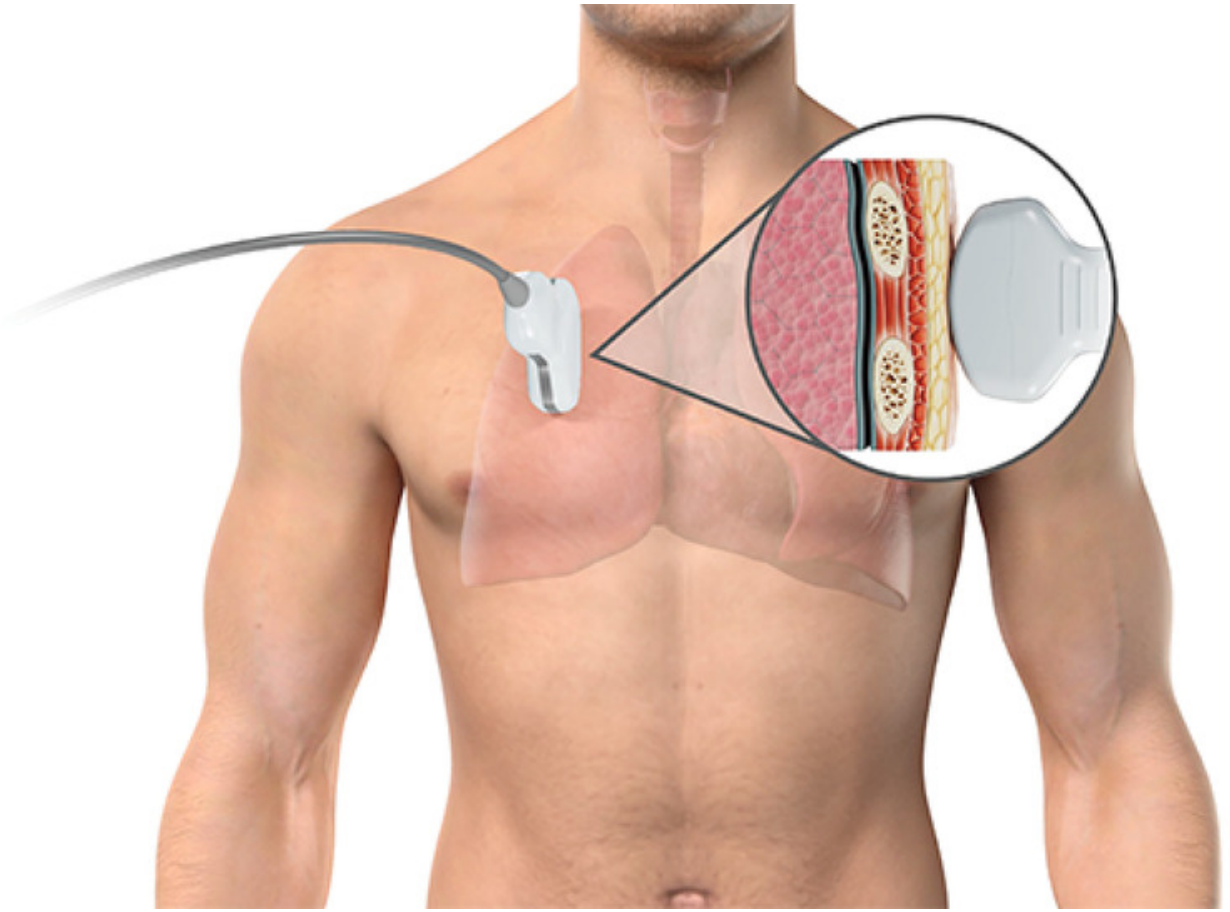
- 同住的60歲兒子在群組裡留言爸爸近日精神較差、消化慢，發燒37.8度、咳嗽有痰音，家中無藍芽的血壓計量102/61mmHg，血氧95%,下腹部明顯鼓脹尿量有明顯變少情形

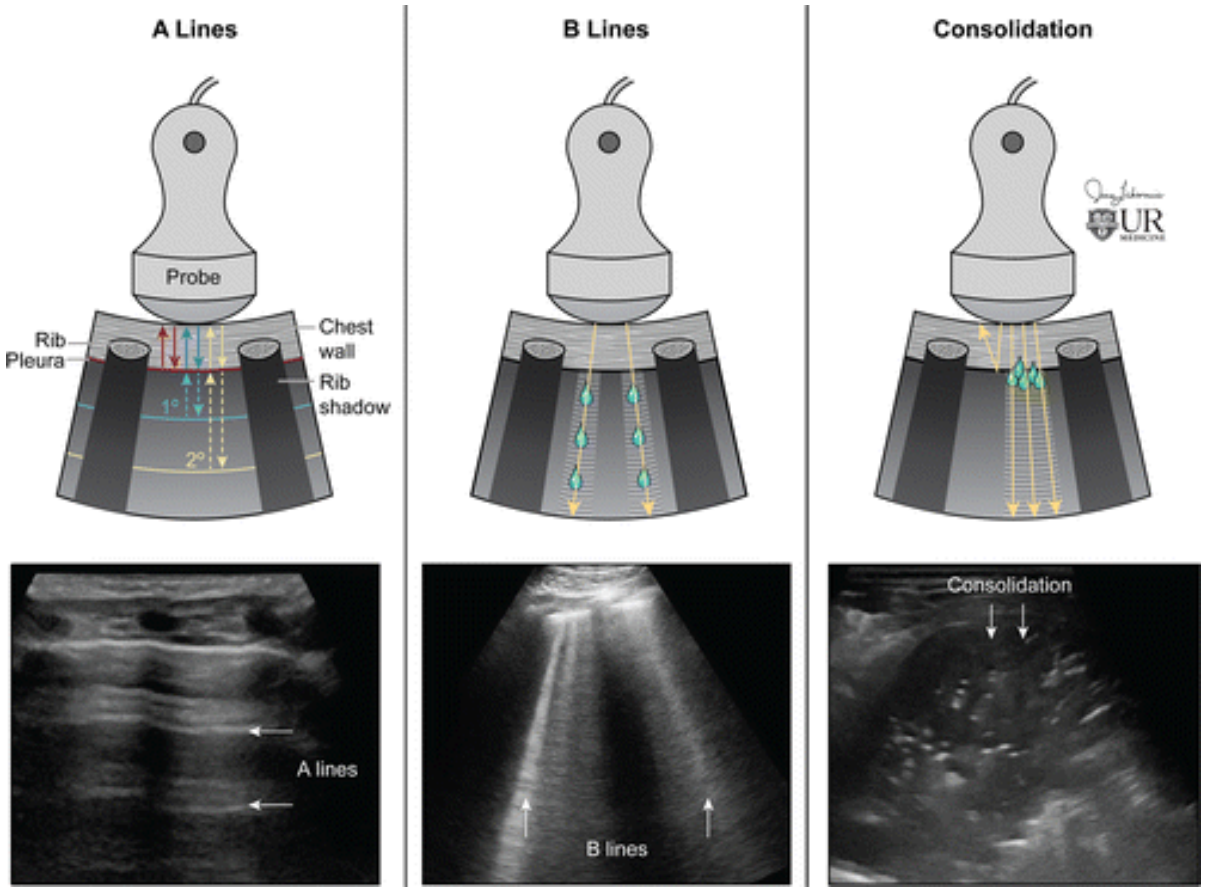
POCUS可以幫我們看到什麼？

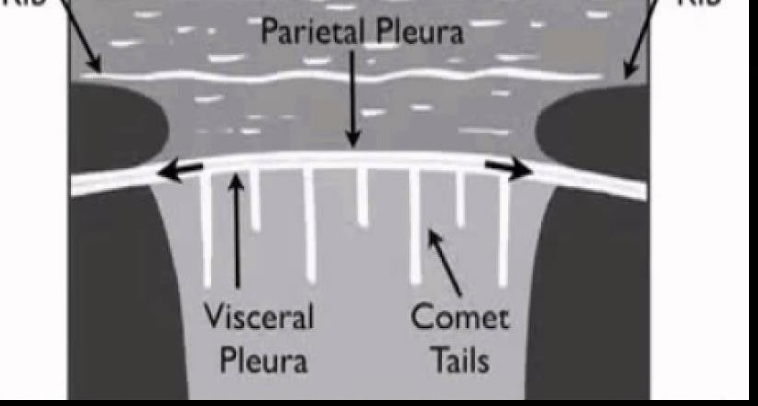
- 醫師初步判定可能有呼吸道感染，要安排臨時訪視，預計抽發炎指數及生化，可能會啟動HaH。請護理師準備POCUS、iProtin、EPOC、iCue、氧療設備及針劑箱出訪。

查看肺炎? 腹腔內感染？休克？
尿量少原因? 真的無尿/急性尿滯留

肺部超音波




A Lines
B Lines
Consolidation
Probe
Rib
Pleura
Chest
wall
Rib
shadow
1°
2°
A lines
B lines
Consolidation



Pectoralis major m.

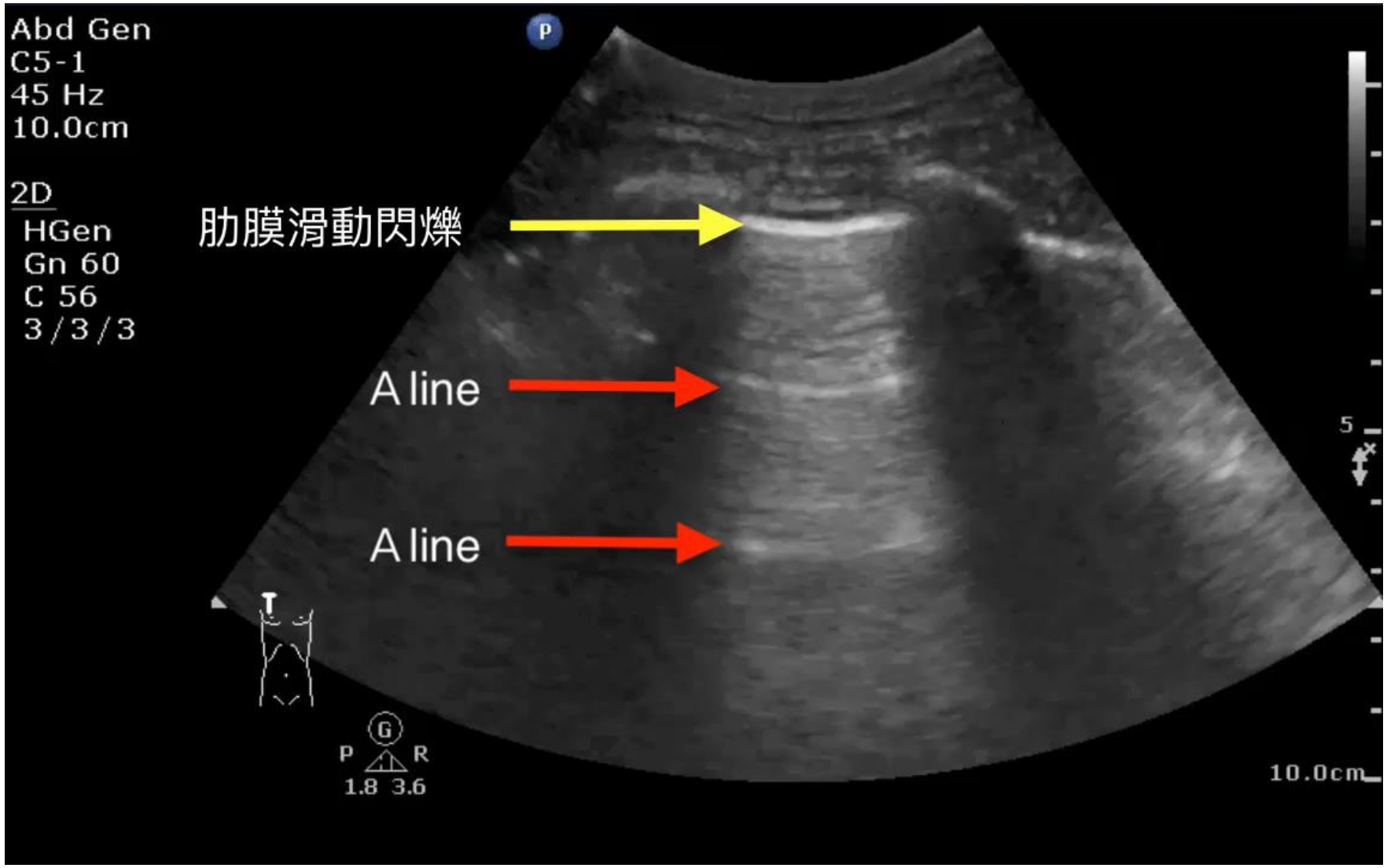
Rib

Rib

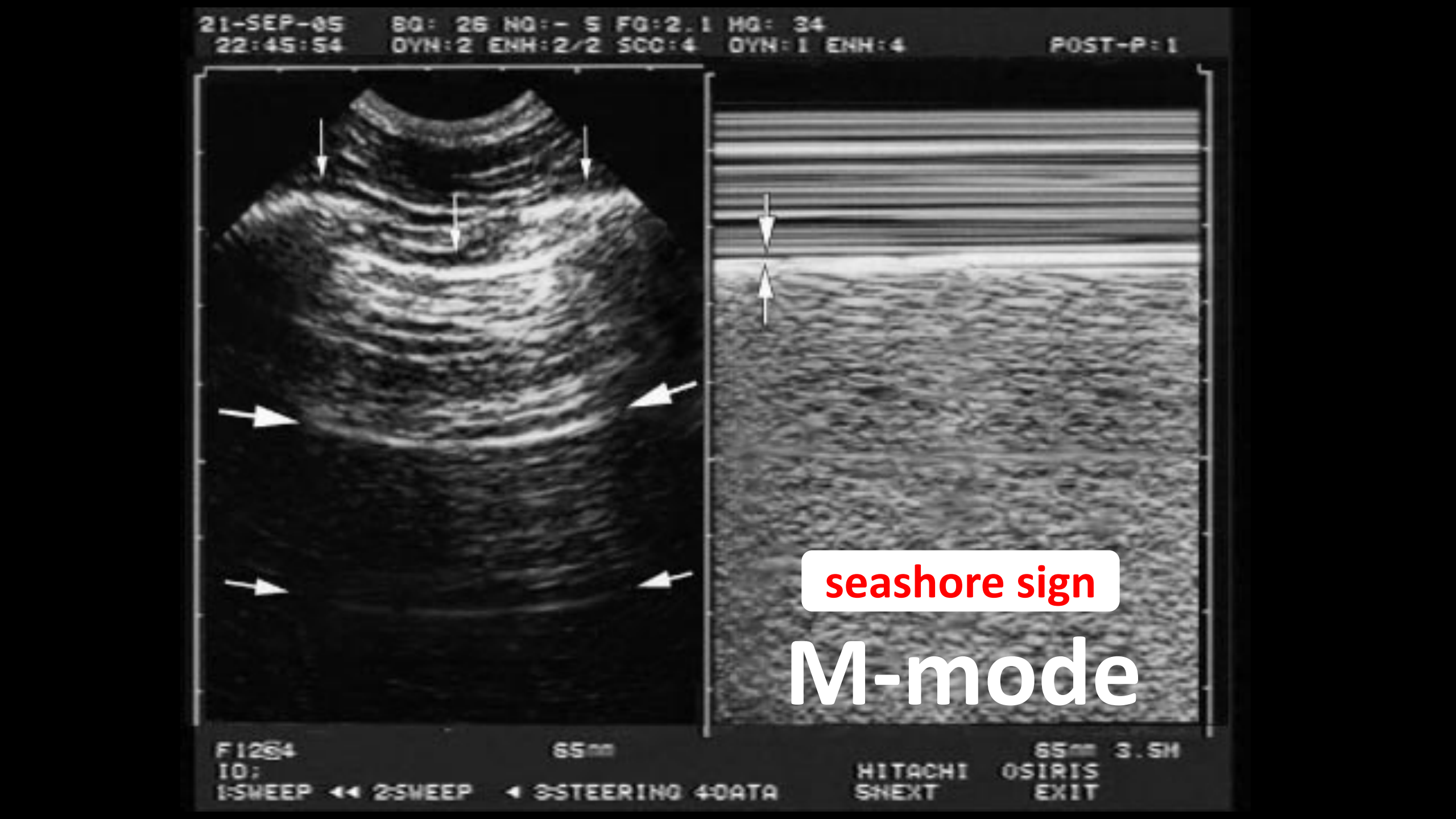
Pleural line

Lung

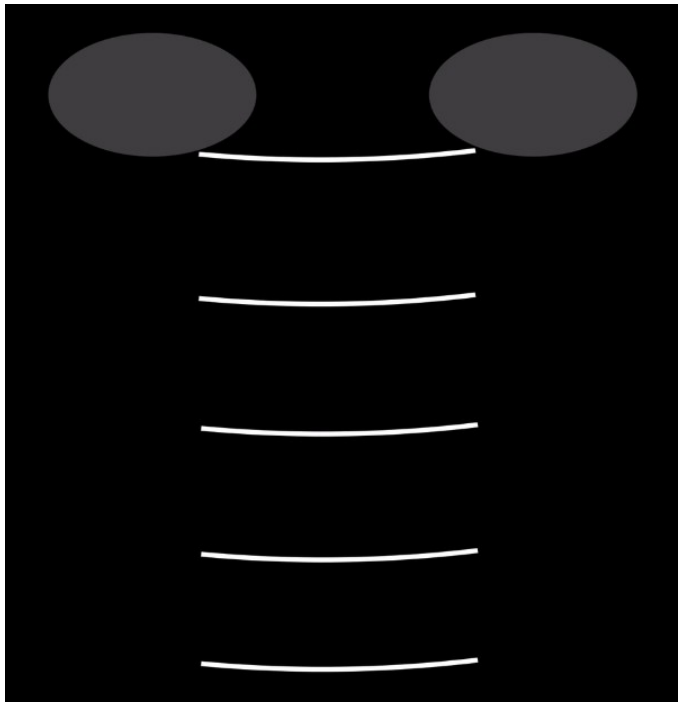
Bat Sign



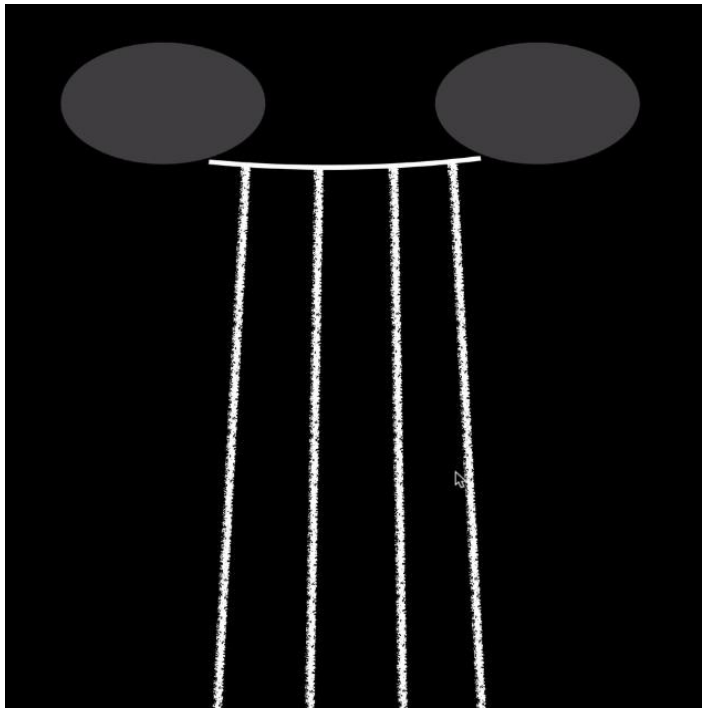
肺部滑動/肋膜滑動Lung sliding


21-SEP-05
22:45:54
BG: 26 NG:- 5 FG:2.1 HG: 34
DYN:2 ENH:2/2 SCC:4 DYN:1 ENH:4
POST-P:1
seashore sign
M-mode
F12/64
65mm
65mm 3.5M
HITACHI OSIRIS
1:SWEEP 2:SWEEP 3:STEERING 4:DATA
5:NEXT EXIT

肺部超音波假影

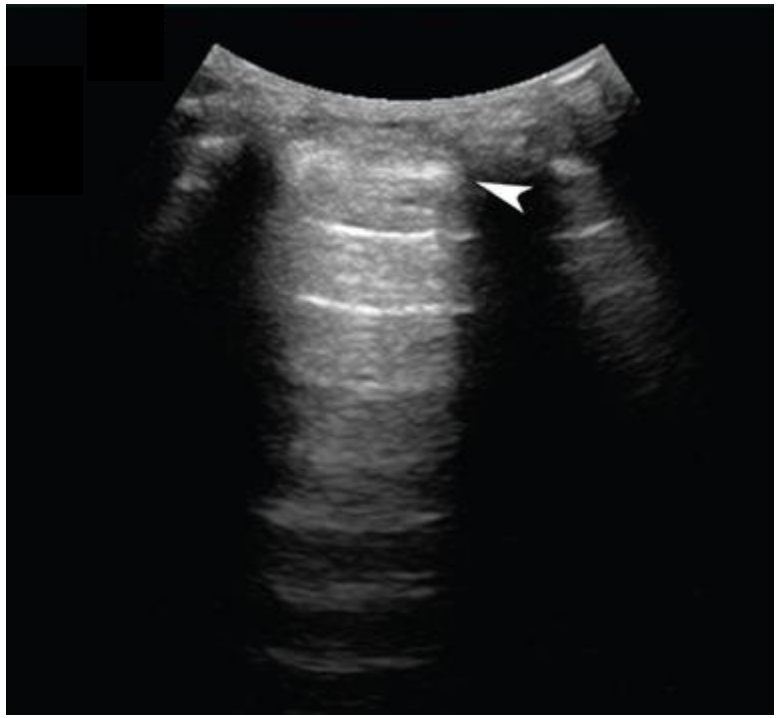


A Lines

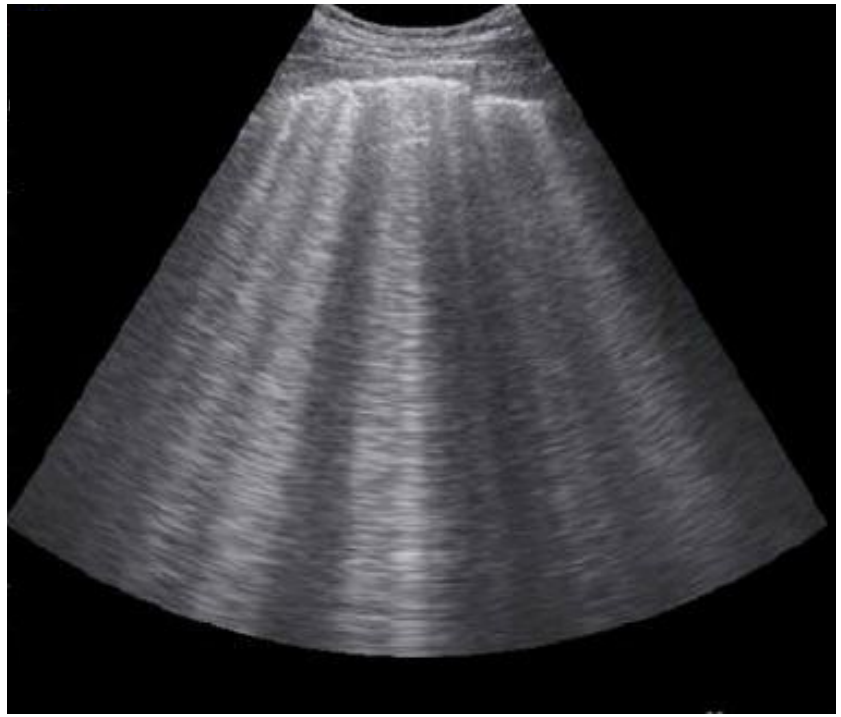


B Lines

肺部超音波假影

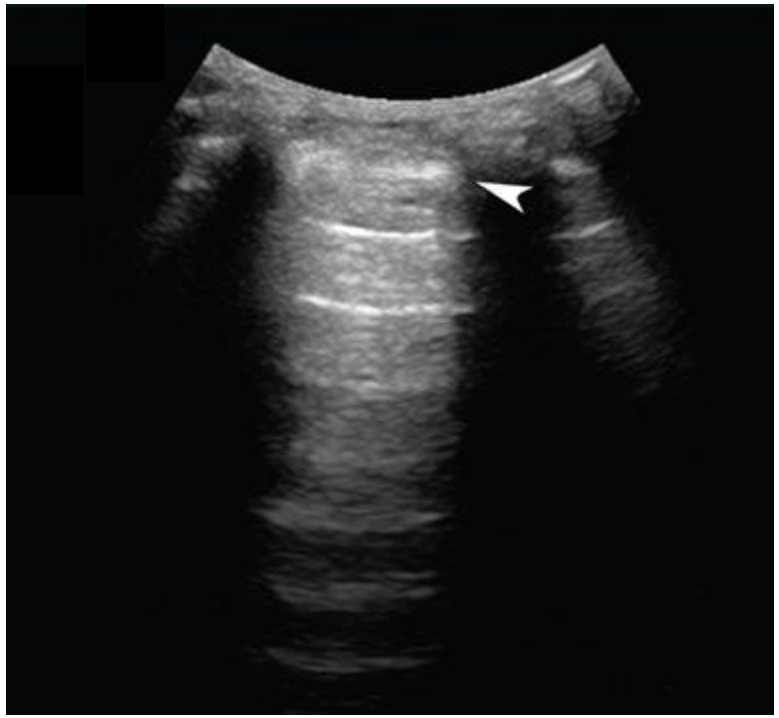


A Lines

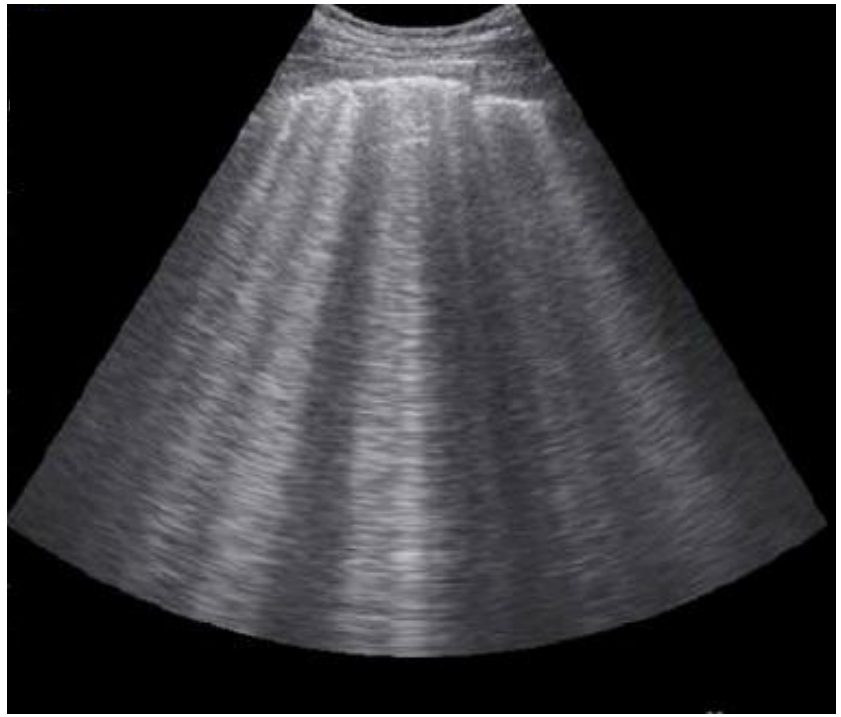


B Lines

假影意義

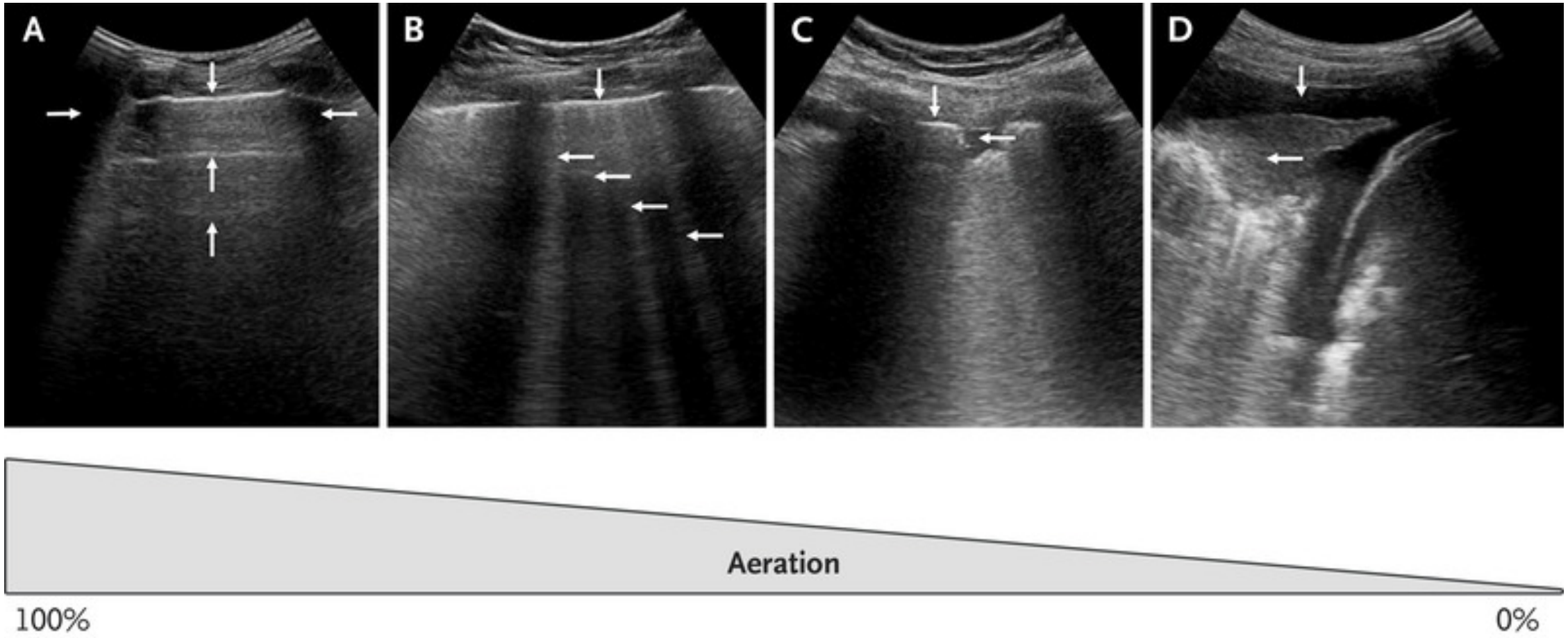


相對正常、乾的肺

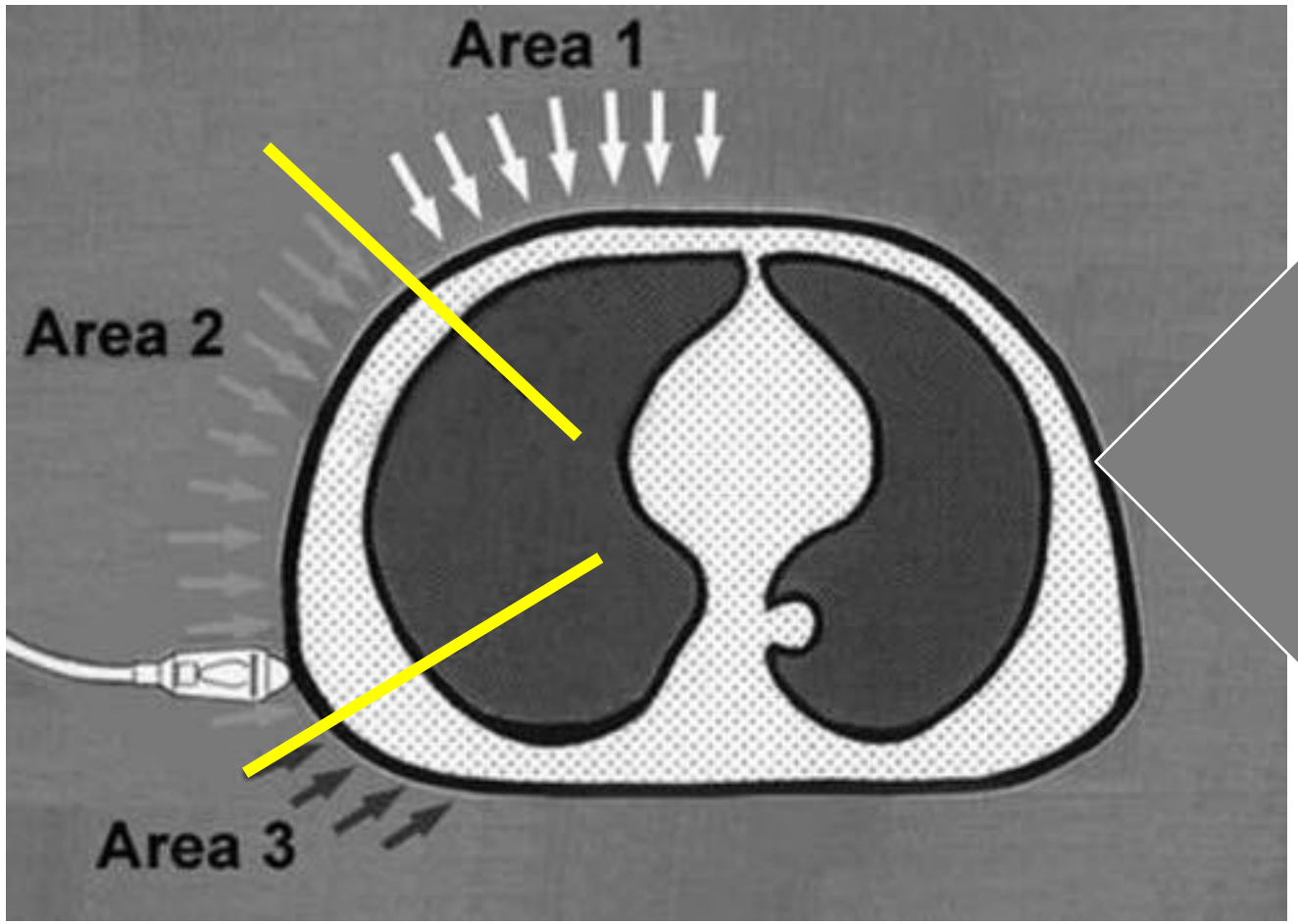


間質積水、濕的肺

肺部超音波



掃描範圍



Area 1 : 前區

sternum, clavicle, and anterior axillary line

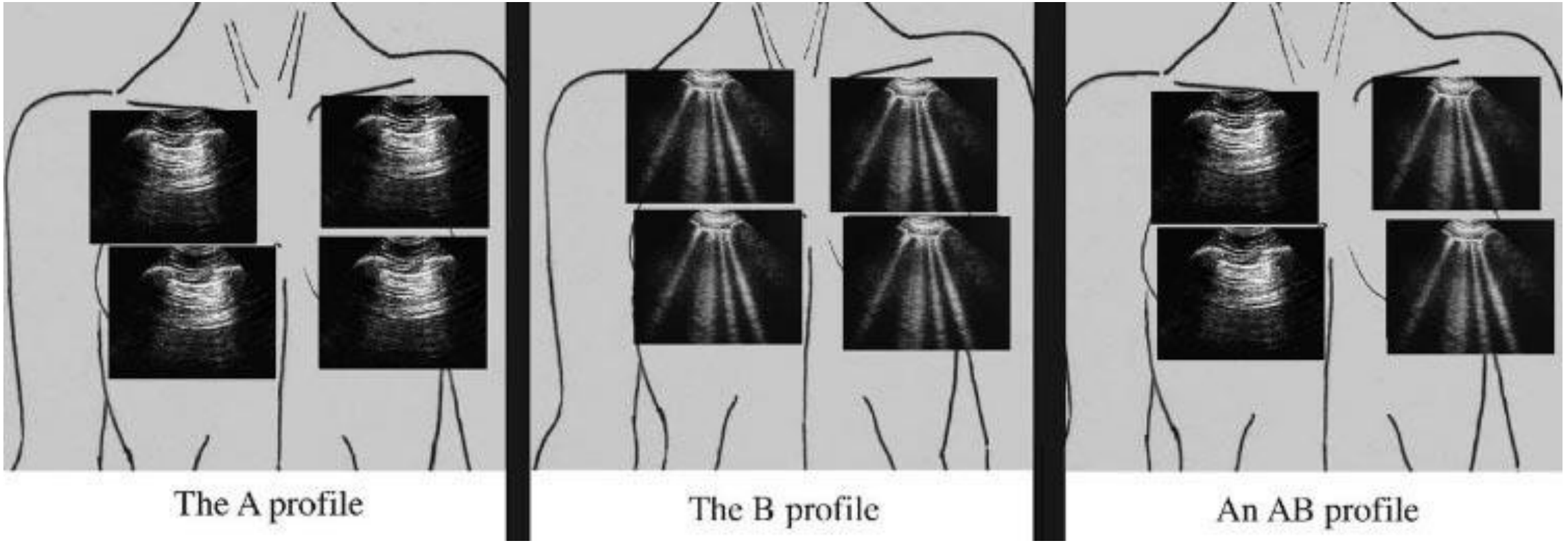
Area 2 : 側區

anterior and posterior axillary lines

Area 3 : 後區

posterior axillary line and vertebral column

肺部超音波：呼吸喘評估

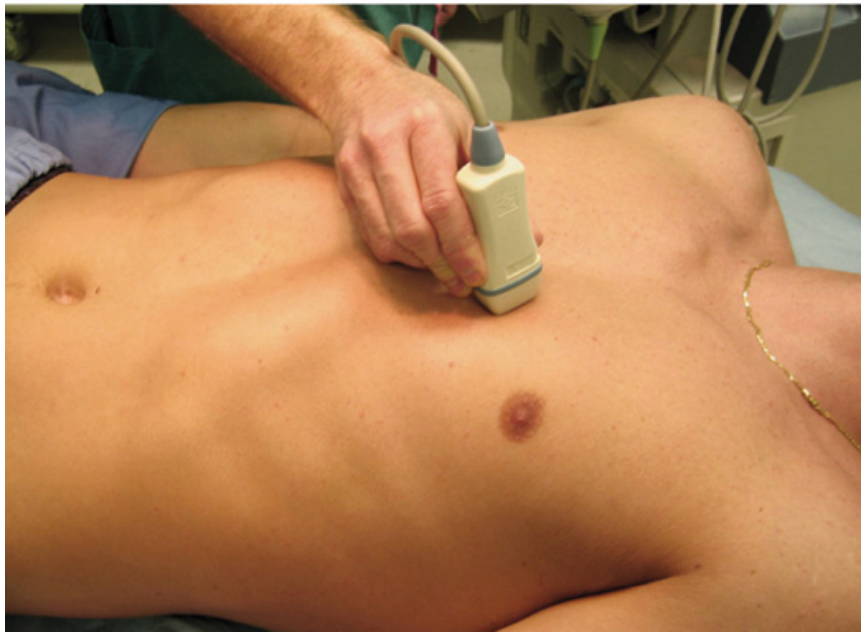


A profile :
COPD / 肺栓塞 / 後葉肺炎

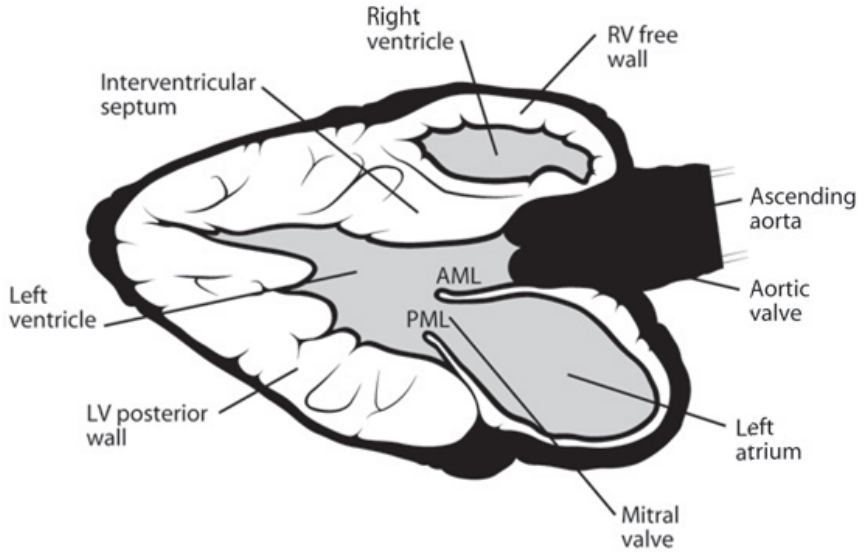
B profile : 肺水腫
較排除肺栓塞、氣胸

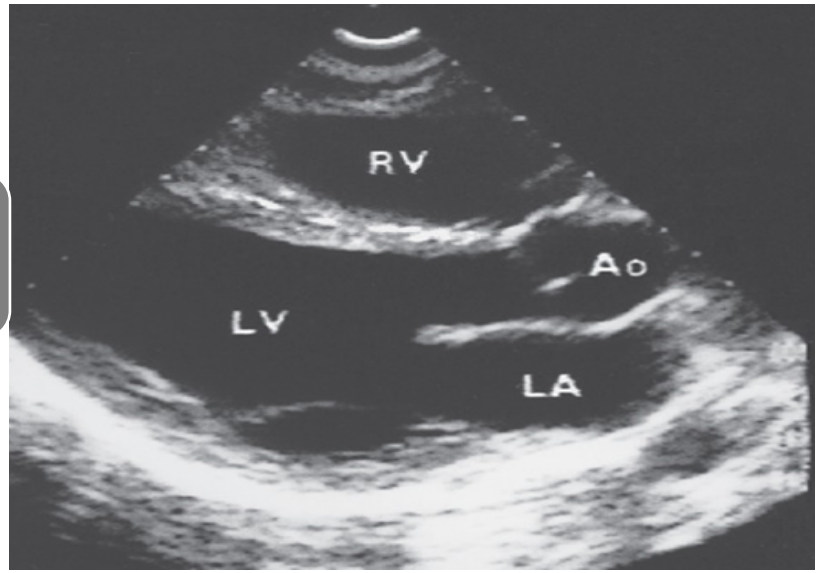
A/B profile :
較懷疑肺炎

Parasternal Long-Axis View(看eyeballing)



3rd or 4th intercostal space

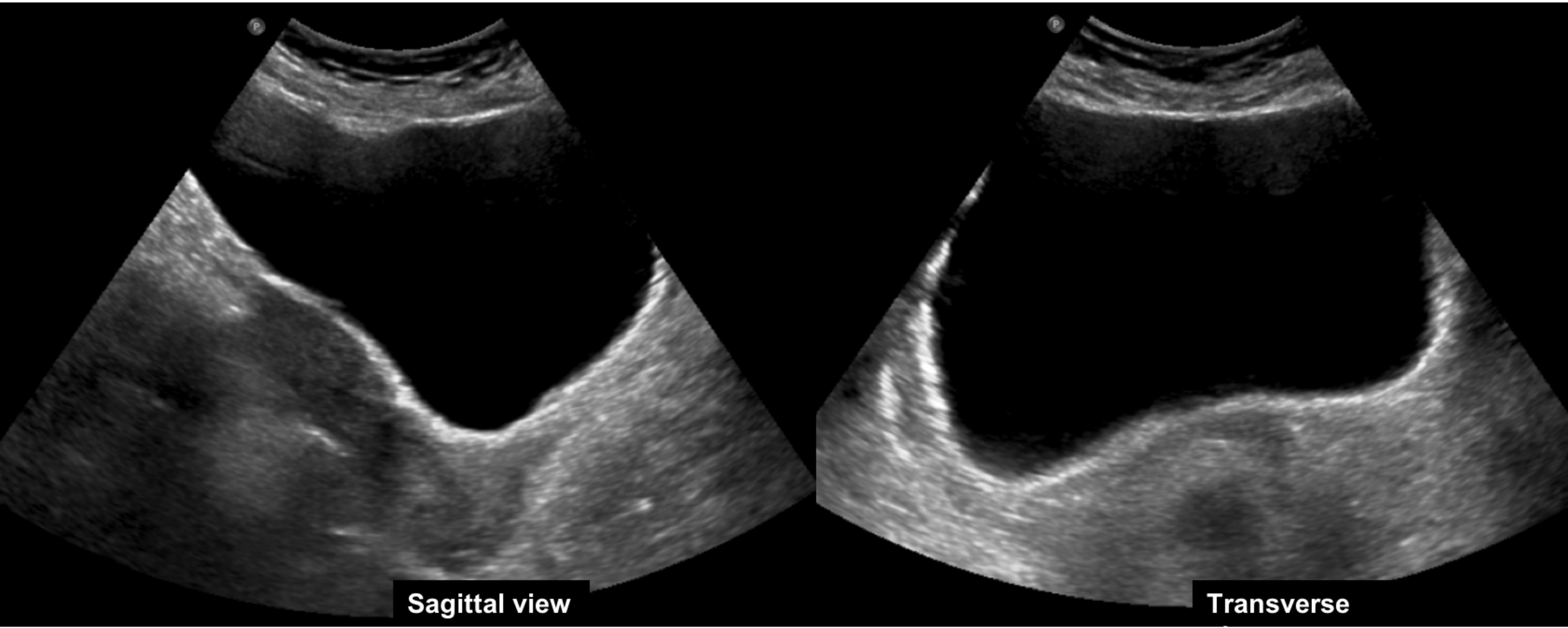


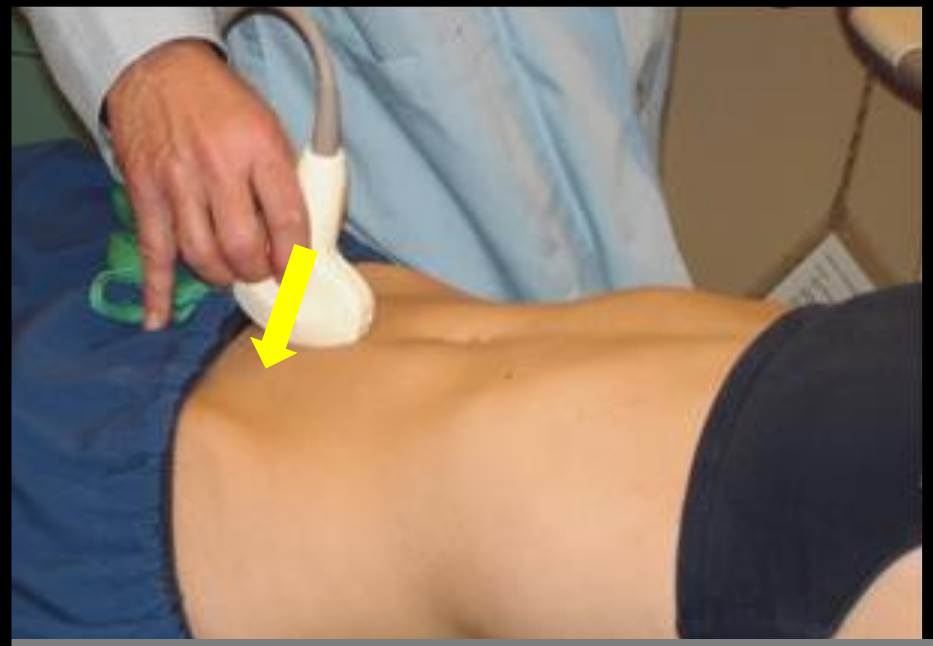


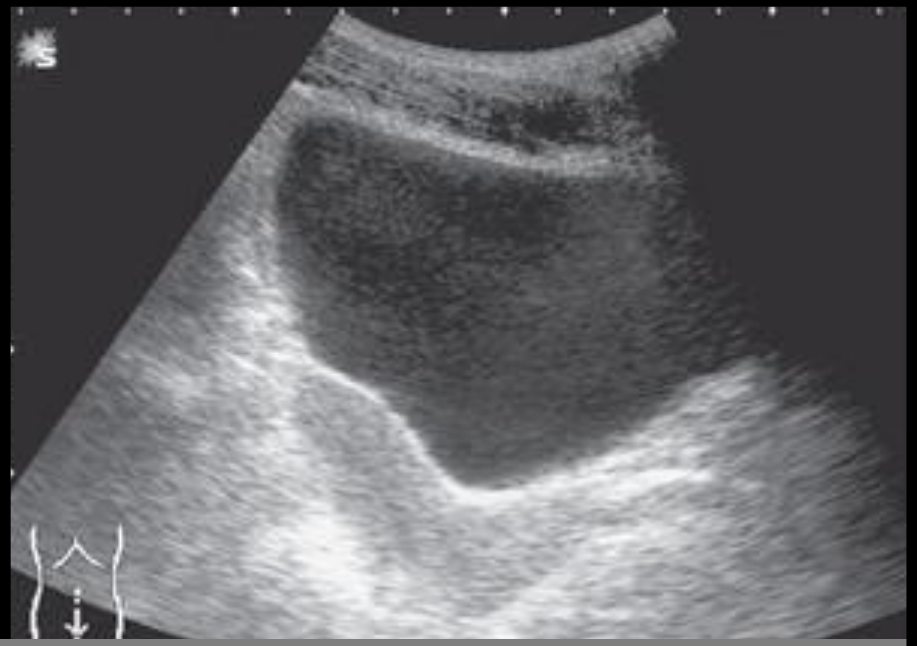
看二尖瓣開合程度
若距離心室中隔遠
可能心收縮功能差
>7mm EF<30%

泌尿系統超音波(K-U-B)

掃描重點： Sagittal View。Transverse view, 頂恥骨做Rocking。Tilting

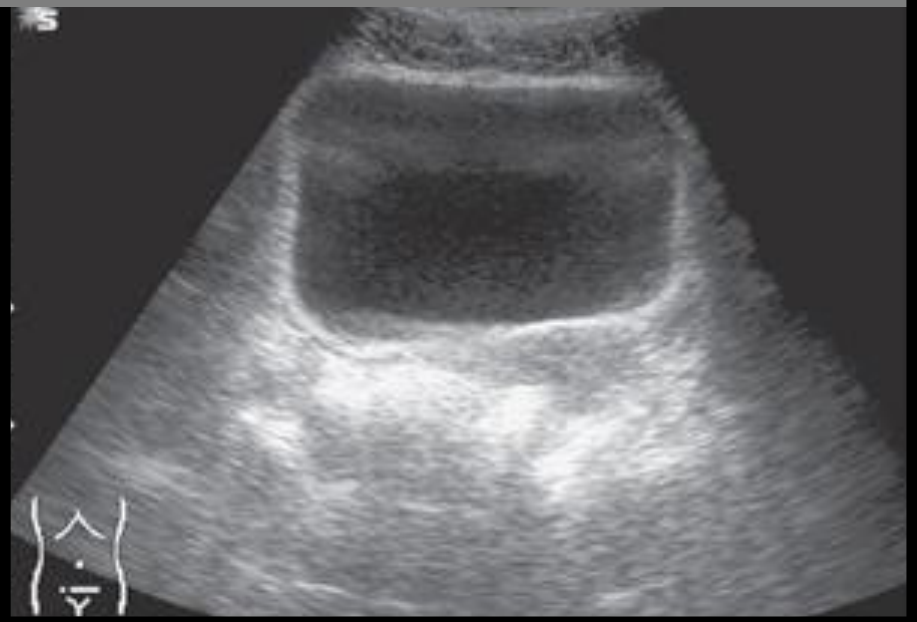




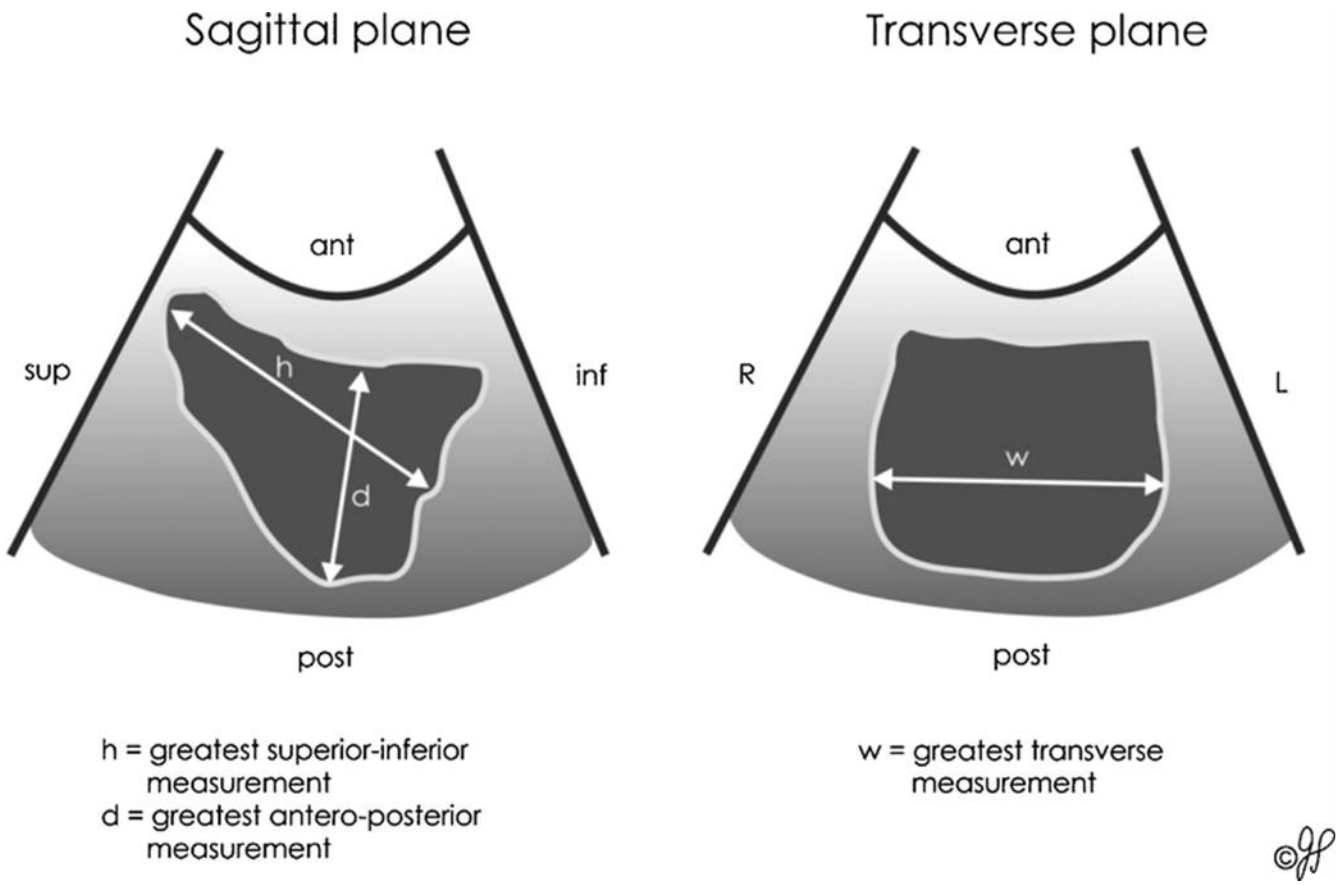


掃描重點：兩個面向 (S/T view)

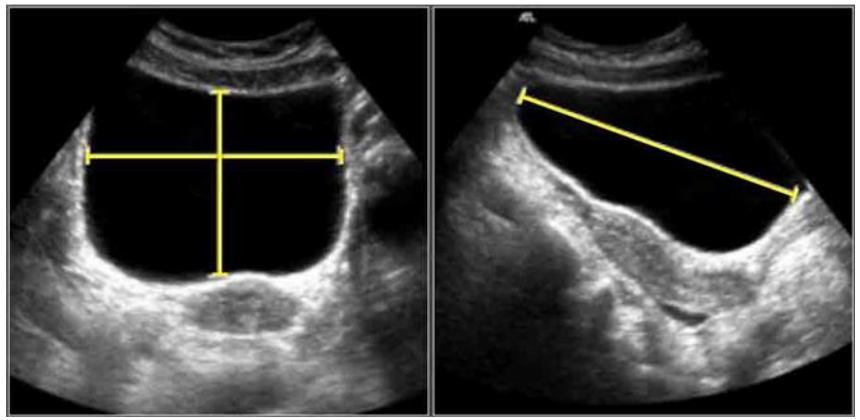
膀胱位置



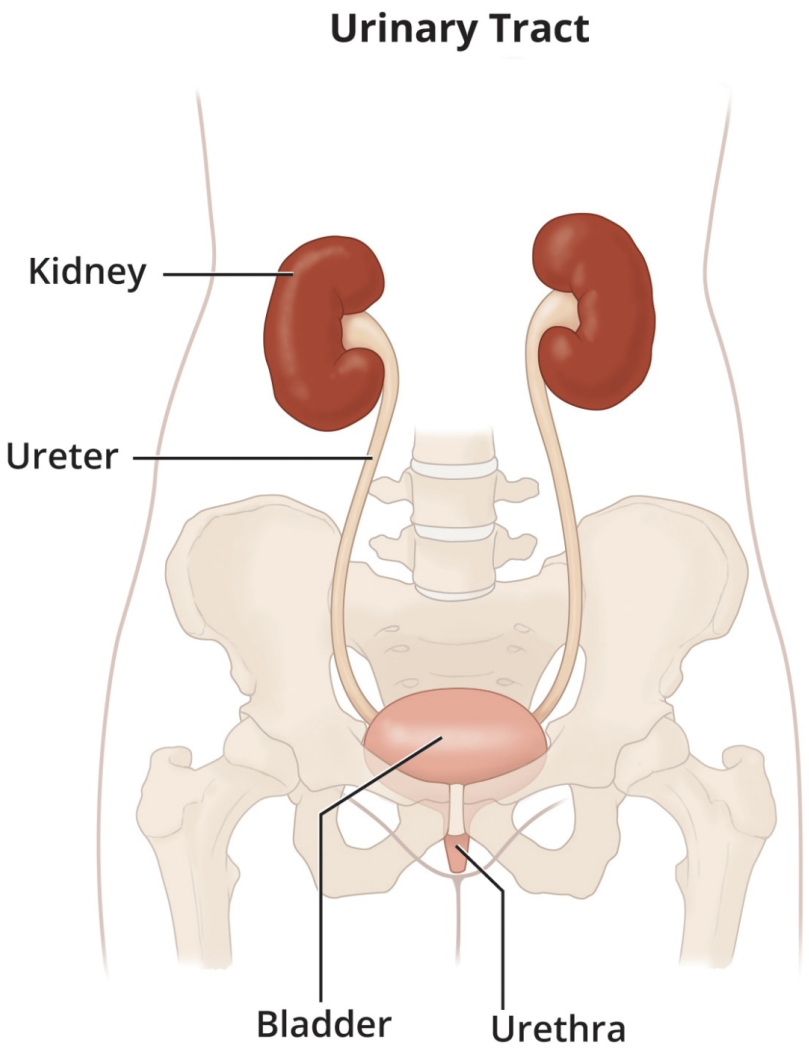
估計膀胱餘尿量

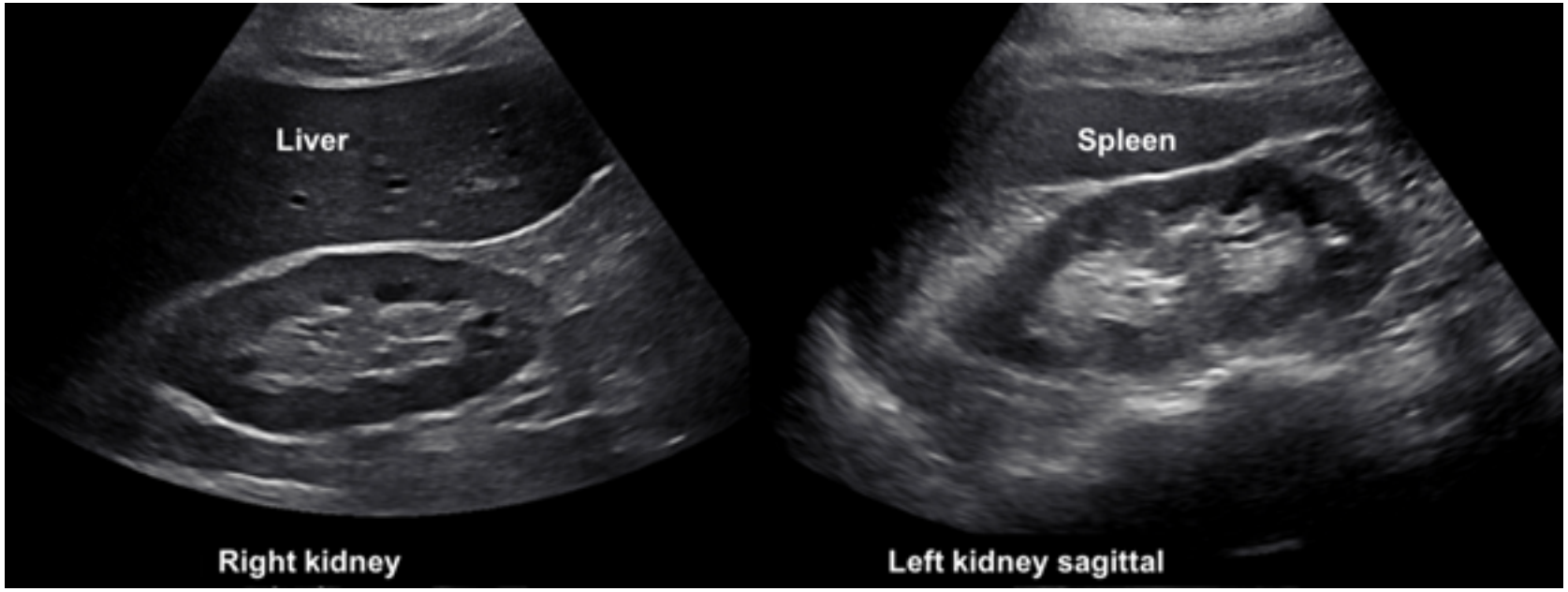


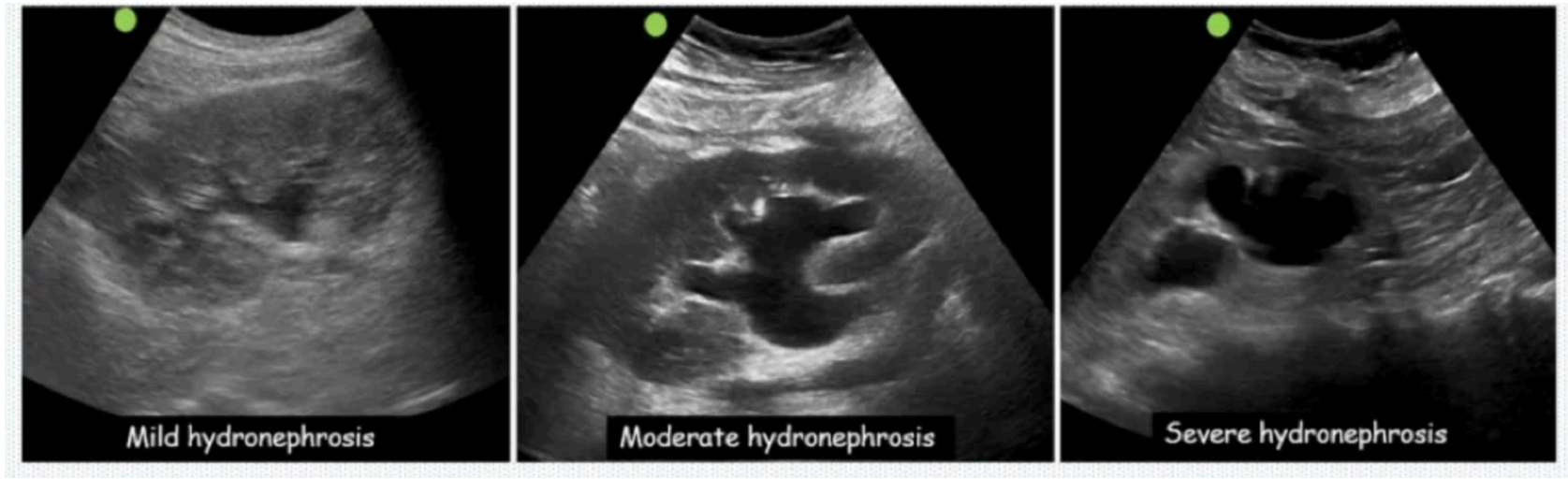
0.75 * W * L * H



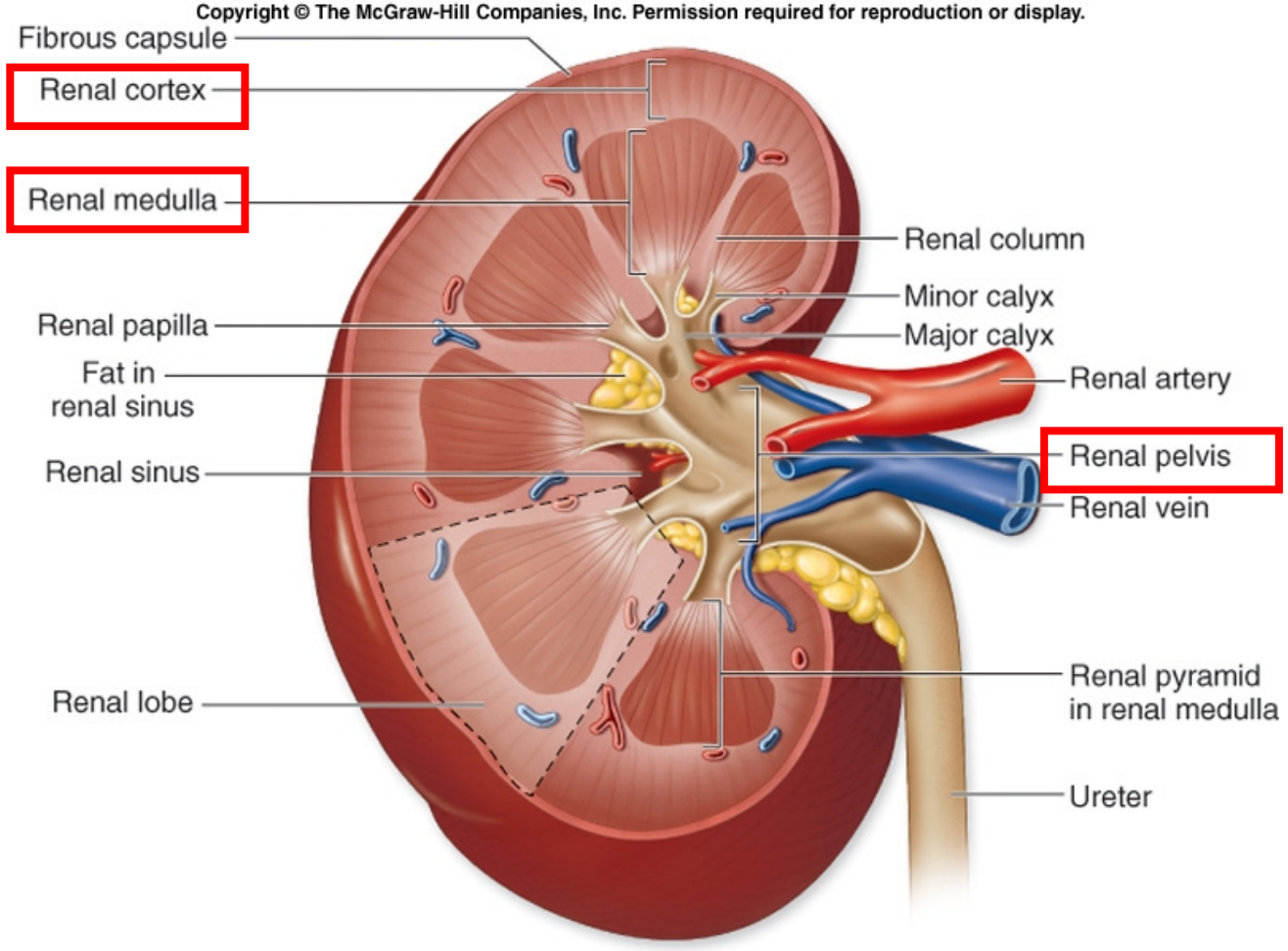
Check Kidney



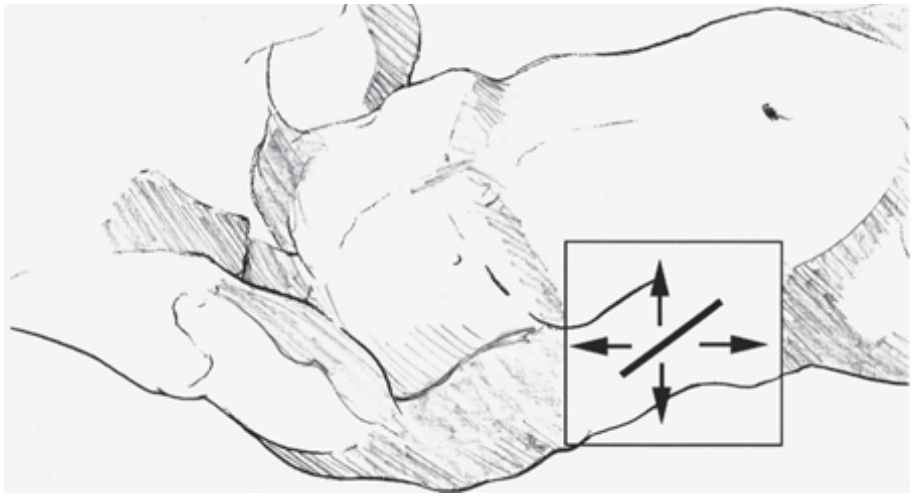




Anatomy of GU system



Right kidney, coronal section

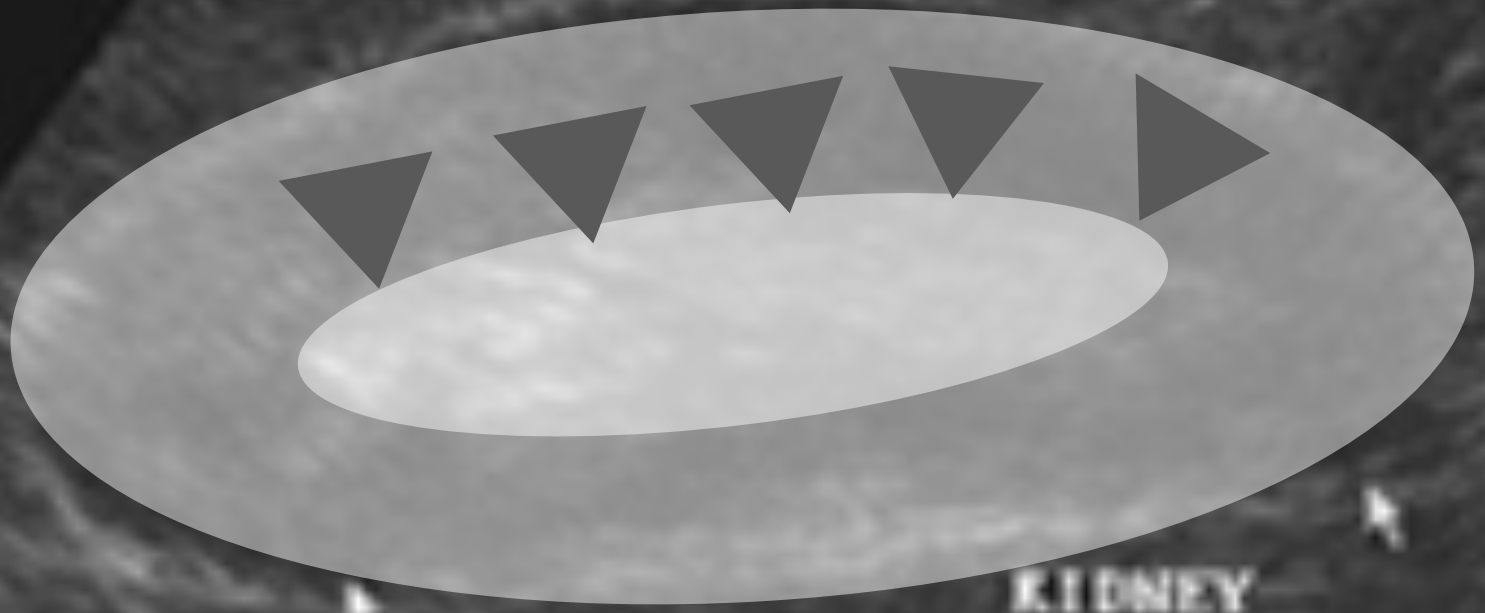


Skill:

1. **both the longitudinal and transverse planes**
2. **Bilateral scanning**

9–12 cm in length

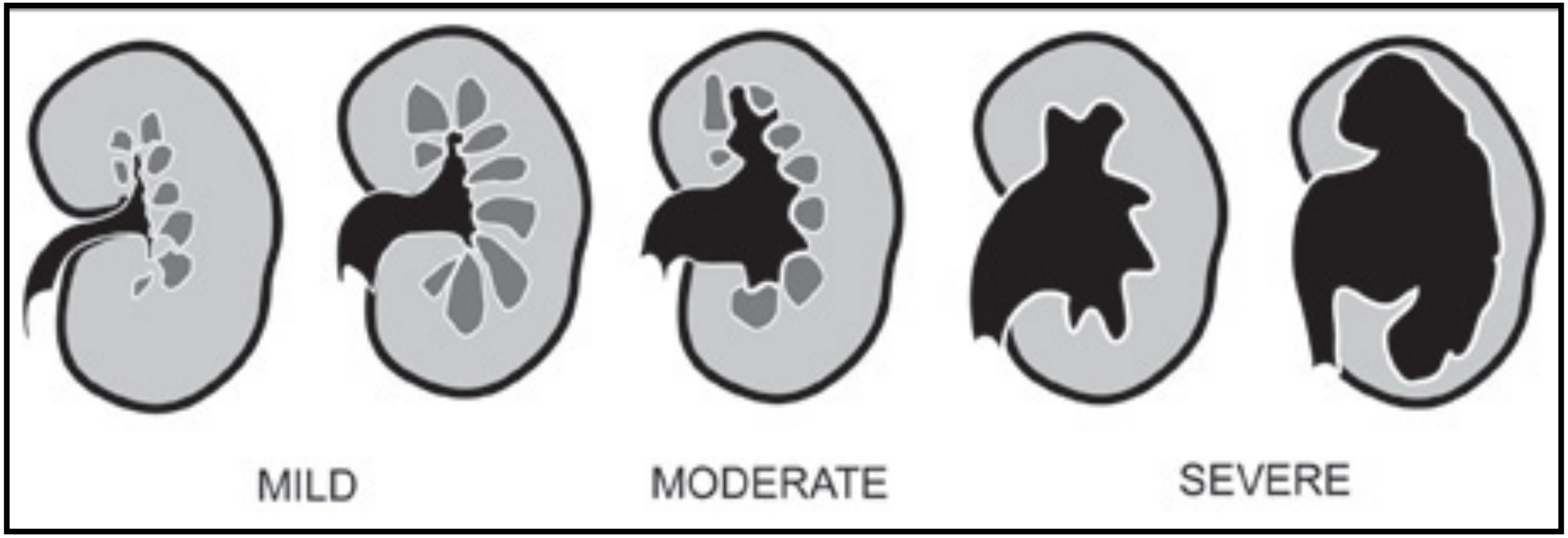
Outer cortex : medium-level echoes
(less echogenic to normal liver texture)

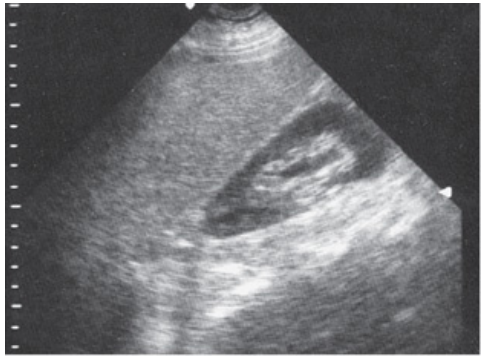


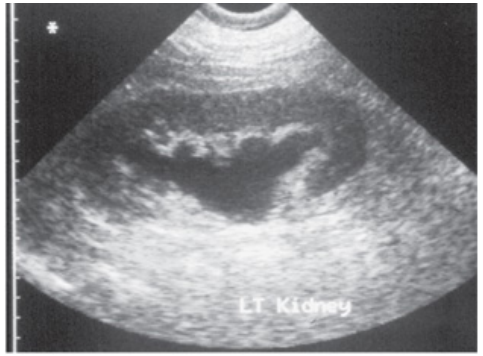
Inner renal sinus : hyperechoic

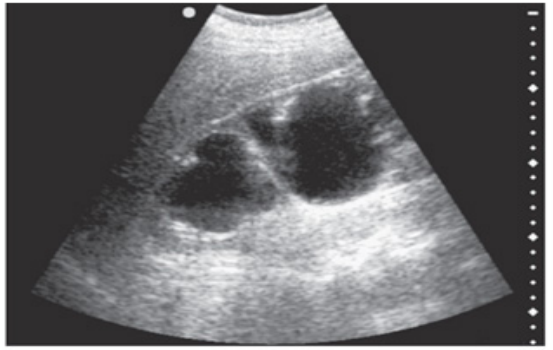
Medullary pyramids :anechoic to hypoechoic structures
(triangular shape)

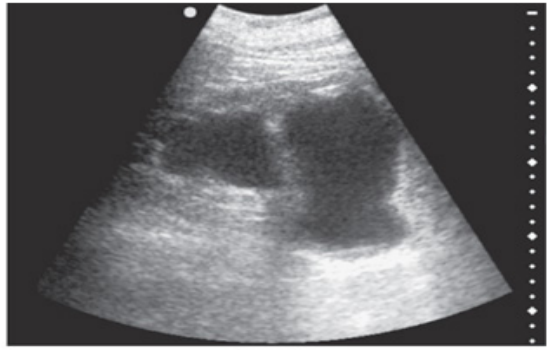
Obstructive uropathy











Checklist

Lung ultrasound(肺積水,乾的肺,氣胸)

Ribs, Pleural line, A-line, B-line, Bat-sign, Lung sliding,

M-Mode: Seashore sign

heart ultrasound(心衰竭可能性)

Wall motion/Eye balling/EPSS

Kidney-Bladder (急性尿滯留,腎積水)

Kidney: Renal Cortex/Medulla/Pelvis

Bladder: Transverse View, Sagittal View, Bladder wall