



DVT

Deep venous thrombosis

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Core Applications (2023 ACEP Emergency Ultrasound Guidelines)
15項急診超音波核心應用

陳國智醫師

Aorta

DVT

Trauma

Thoracic/Airway

Cardia/HD assessment

Procedural Guidance

US-guided NB

Testicular

Ocular

Skin & Soft tissue

Hepatobiliary

Urinary tract

Pregnancy

Bowel

MSK

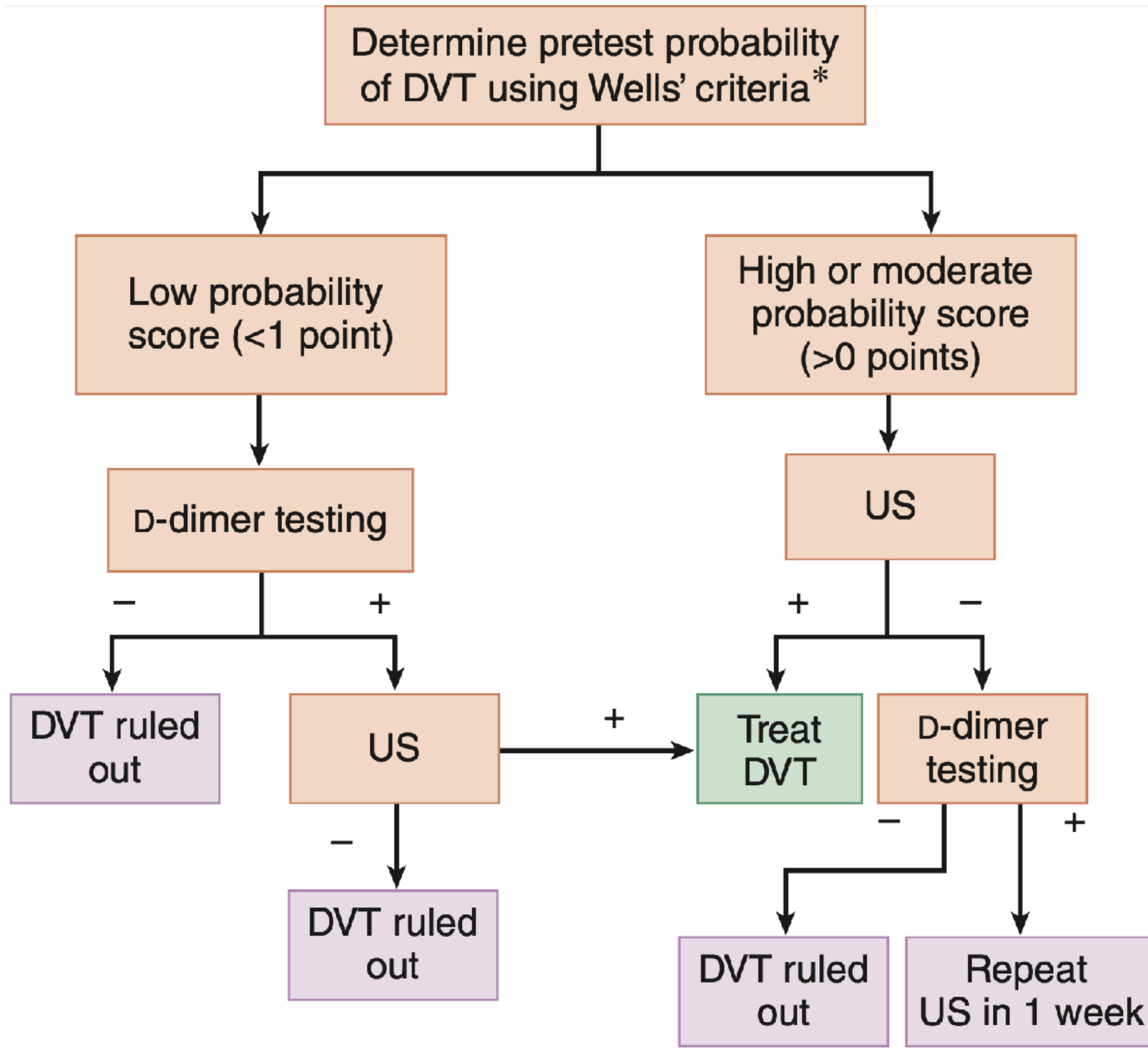
TABLE 56-6 Wells' Score for Deep Vein Thrombosis (DVT)

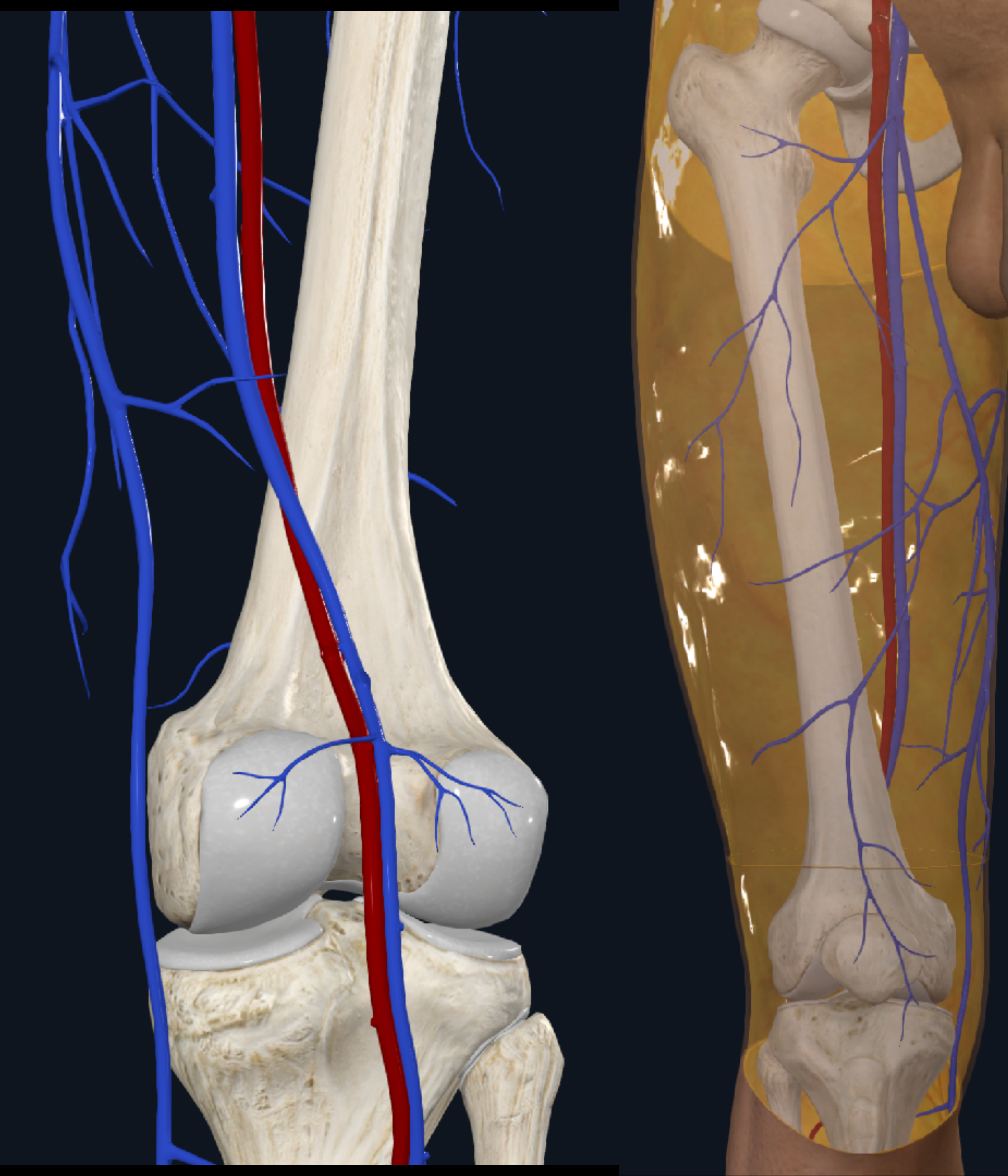
Clinical Feature	Points*
Active cancer (treatment within 6 mo, or palliation)	1
Paralysis, paresis, or immobilization of lower extremity	1
Bedridden for >3 d because of surgery (within 12 wk)	1
Localized tenderness along distribution of deep veins	1
Entire leg swollen	1
Unilateral calf swelling of >3 cm (10 cm below tibial tuberosity)	1
Unilateral pitting edema	1
Collateral superficial veins	1
Alternative diagnosis as likely as or more likely than DVT	−2
Prior history of DVT or pulmonary embolism [†]	1

*Risk score interpretation (probability of DVT) in original Wells DVT model: ≥ 3 points = high risk (75%); 1 or 2 points = moderate risk (17%); < 1 point = low risk (3%).

[†]Only awarded in the modified (dichotomized) Wells DVT model: ≤ 1 point = DVT unlikely; > 1 point = DVT likely.

Source: Adapted from Geersing GJ, Zuithoff NP, Kearon C, et al: Exclusion of deep vein thrombosis





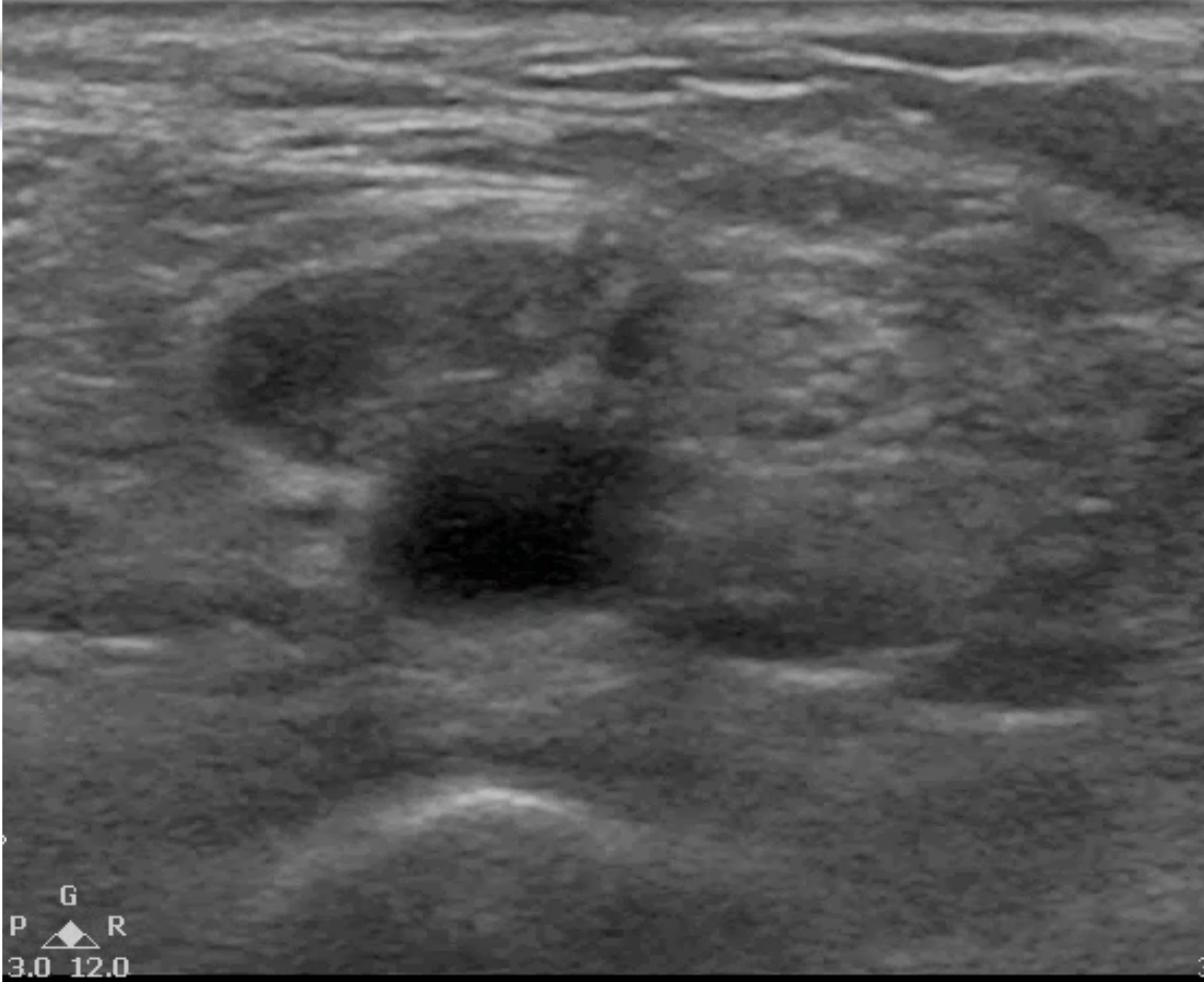
Swelling
Dyspnea
Shock

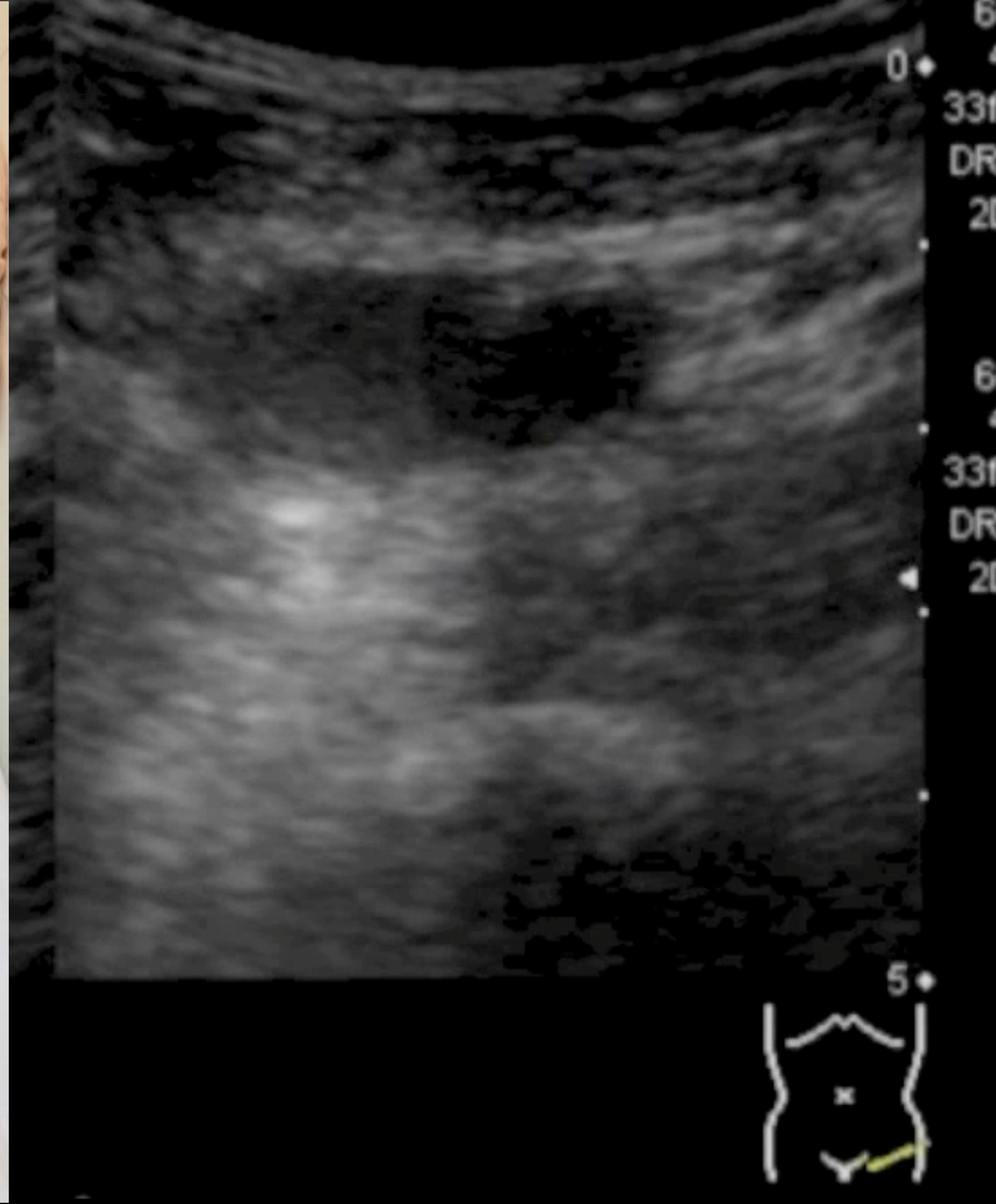
DVT
PE

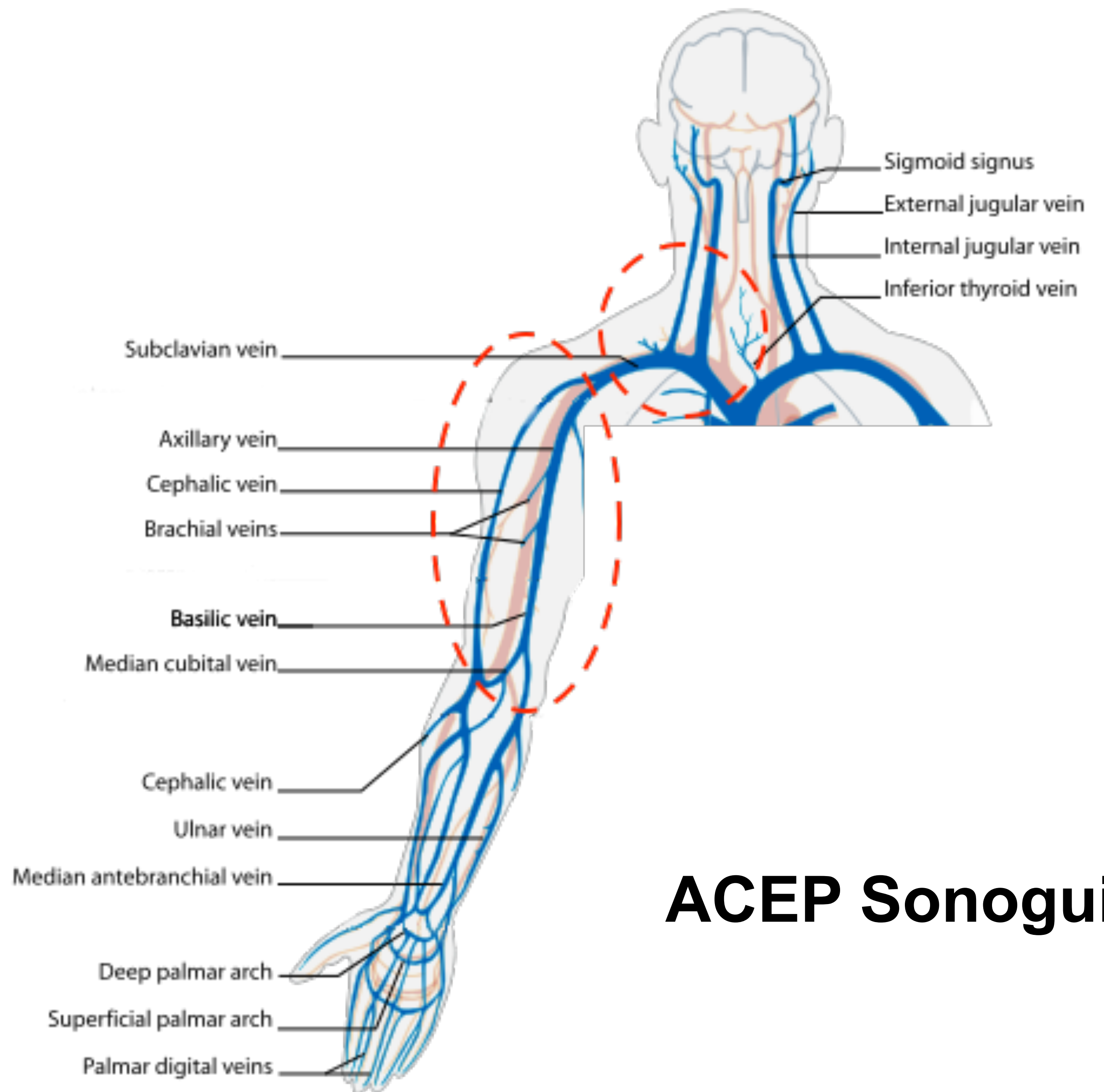
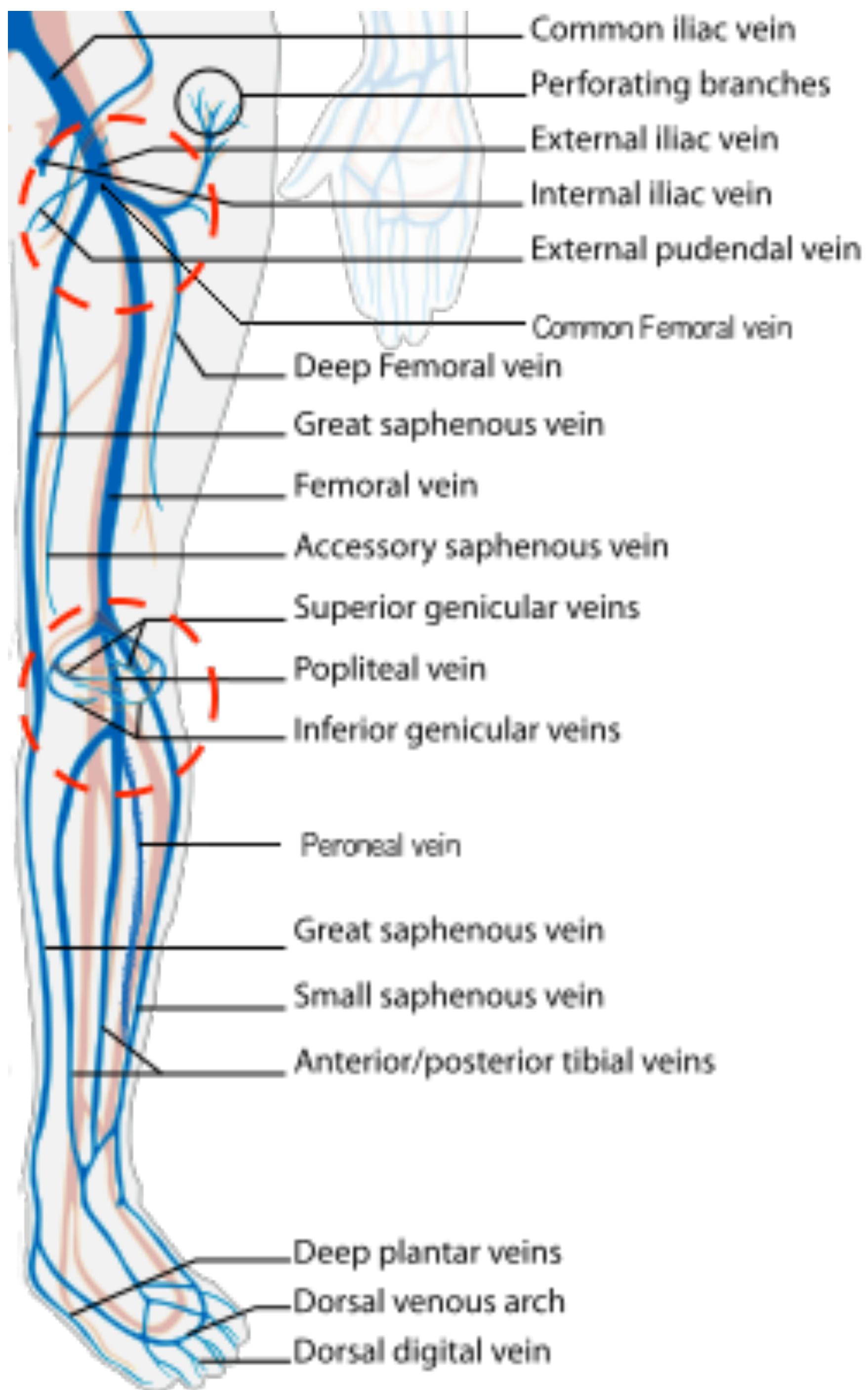
Compression test



無法完全壓扁
血栓 or 壓錯



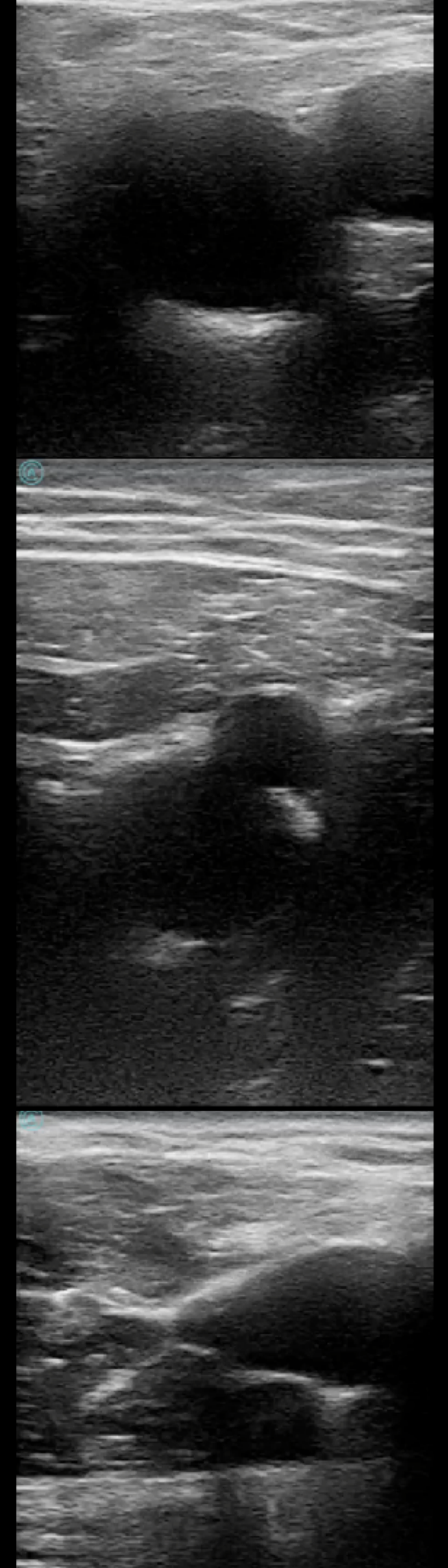
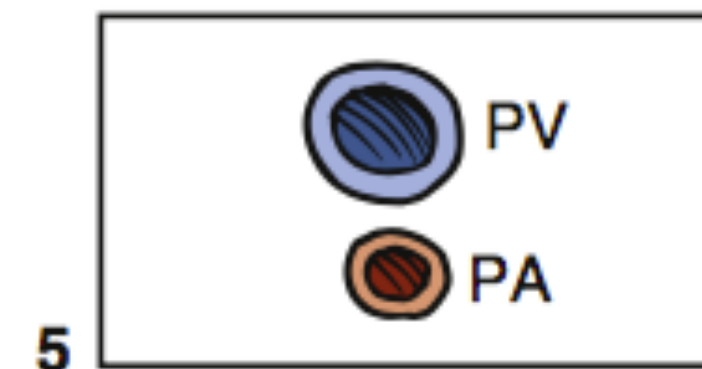
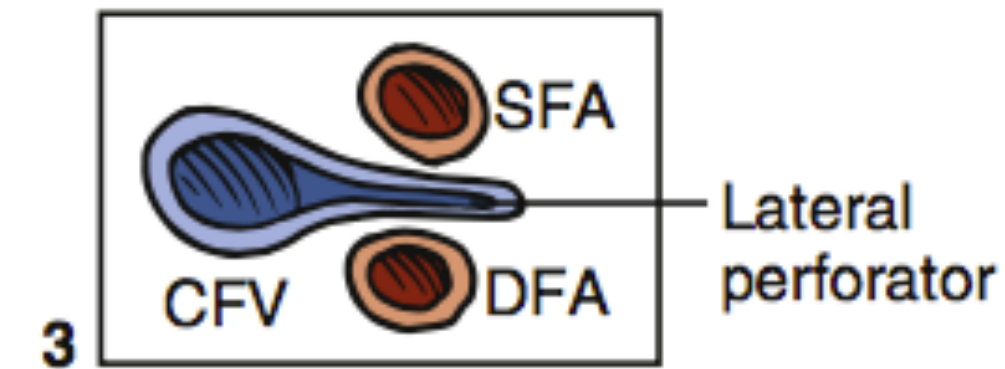
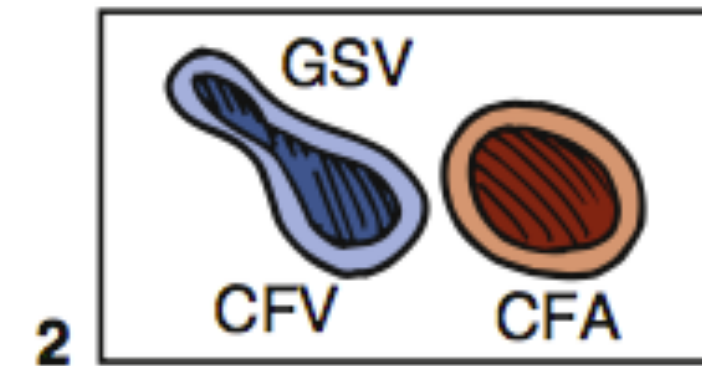
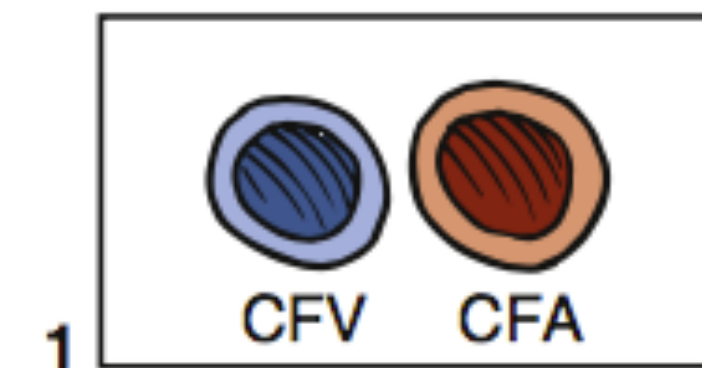
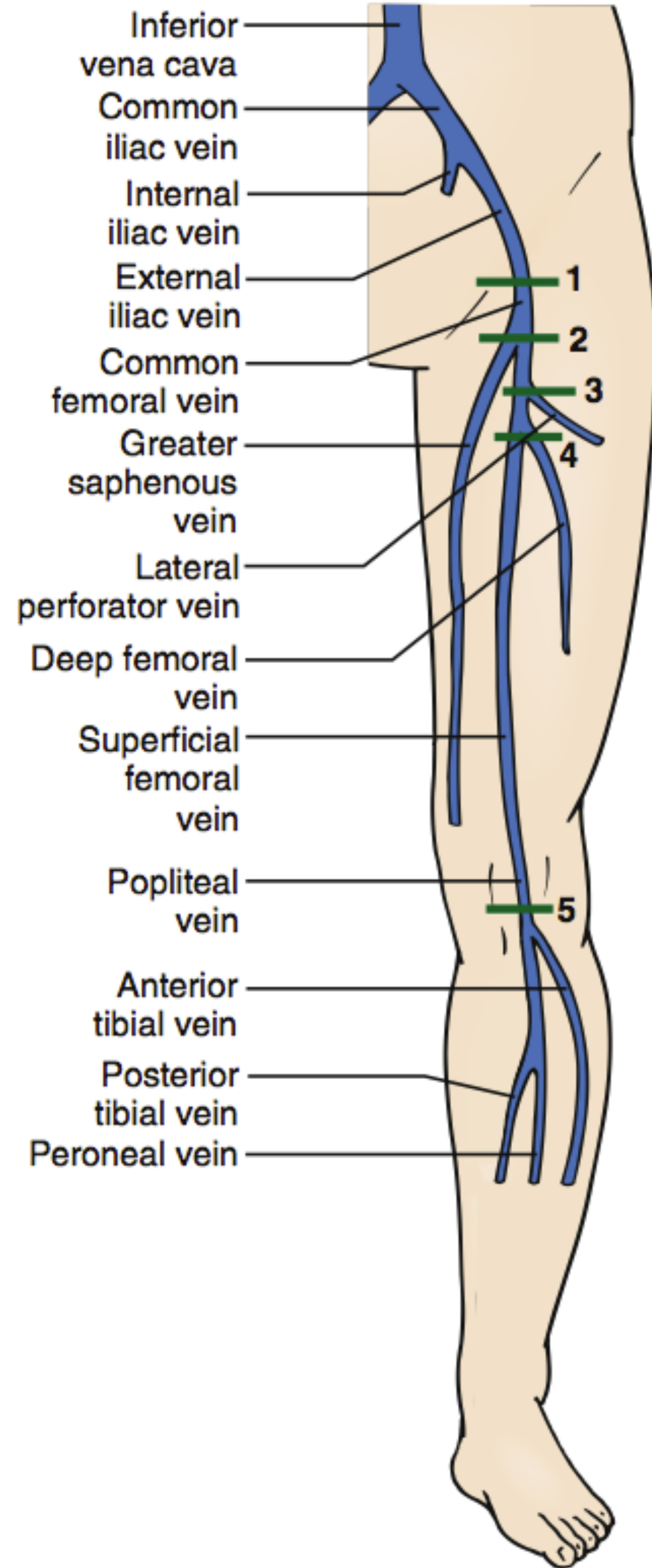


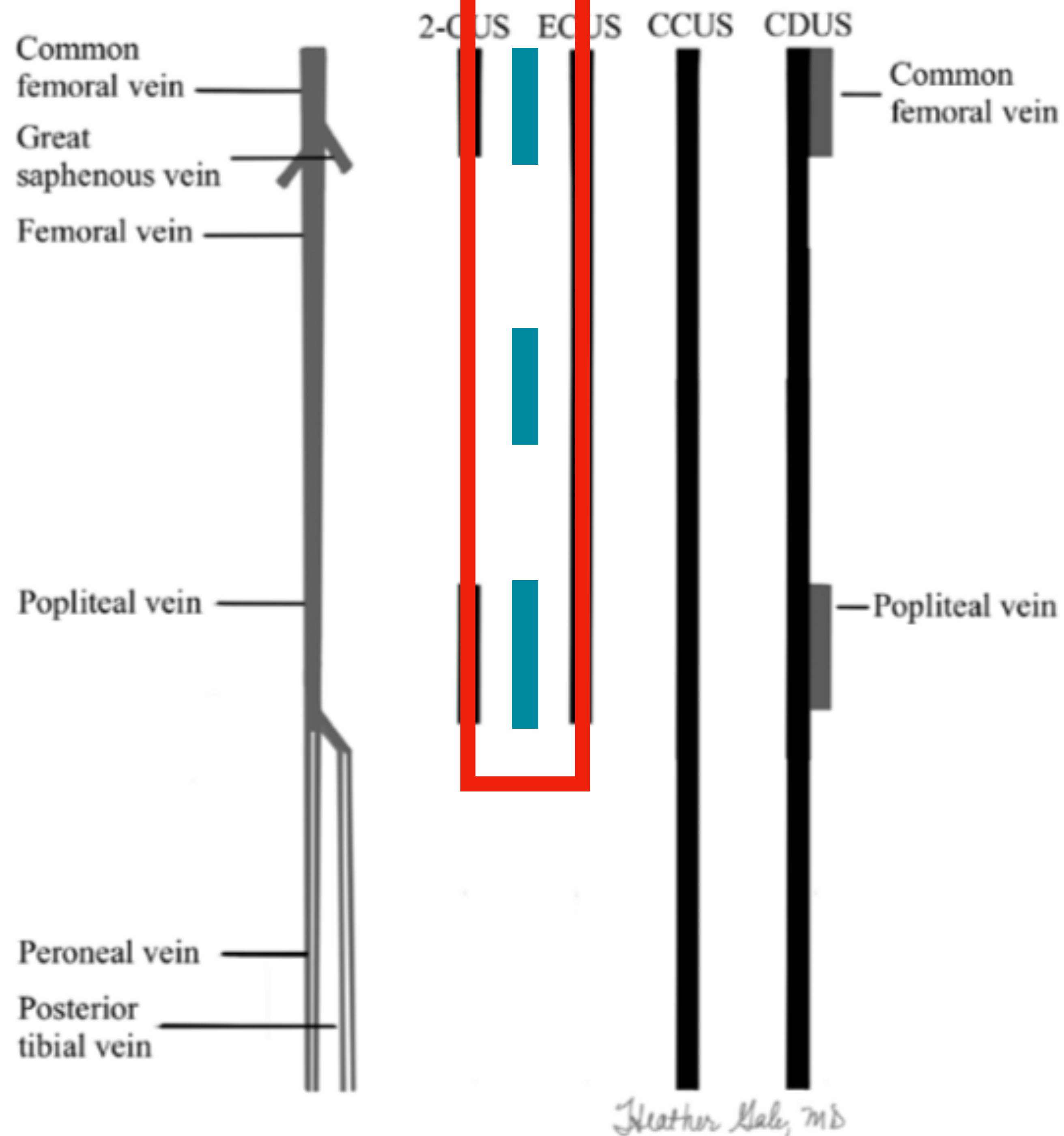


ACEP Sonoguide



Frog Leg

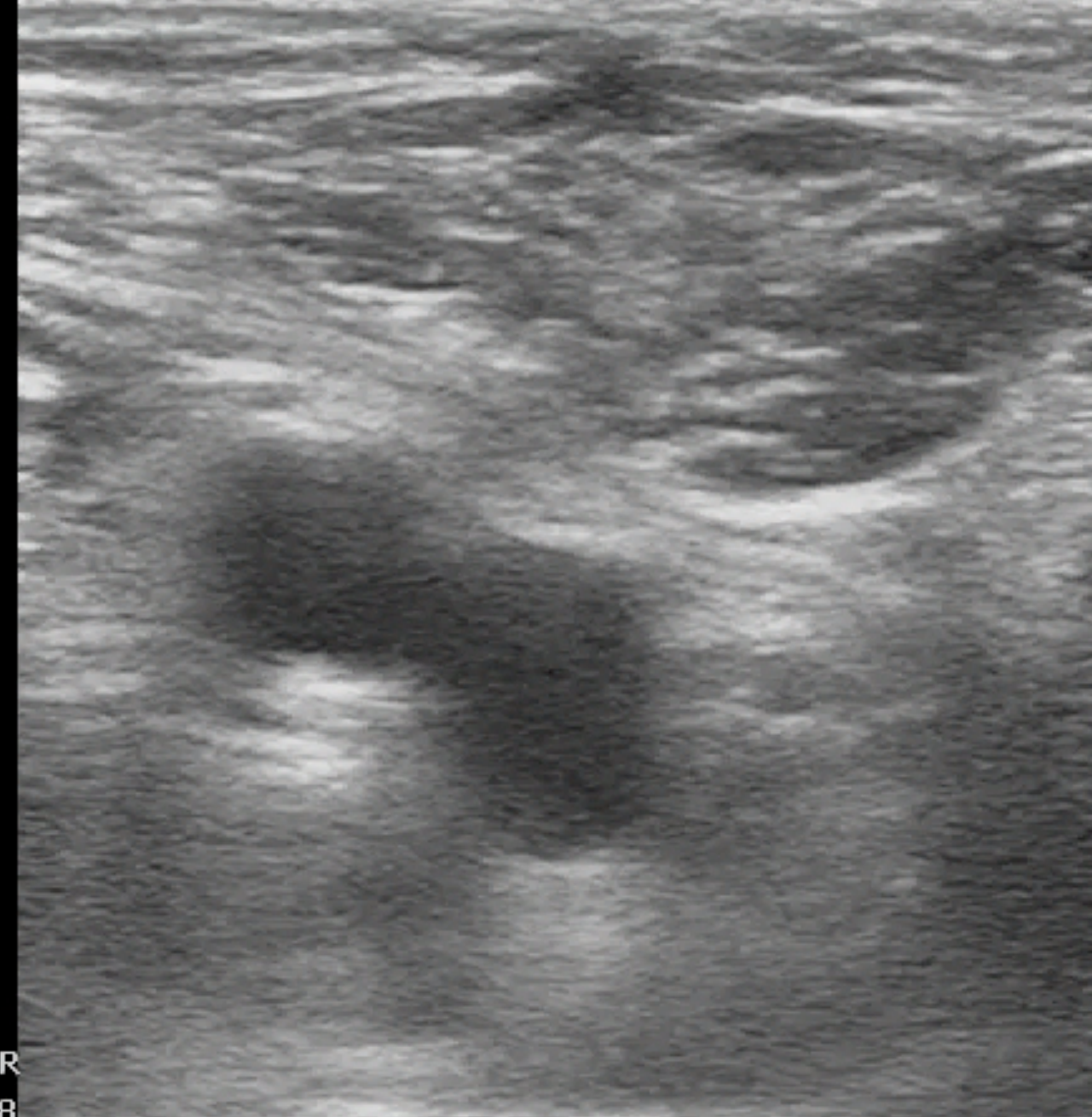




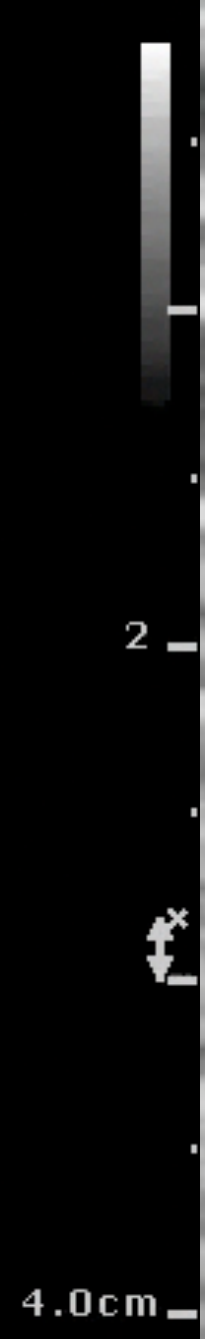
3 regions
Sen 90.57%
Spe 98.52%

2 regions
Sen 82.76%
Spe 98.52%

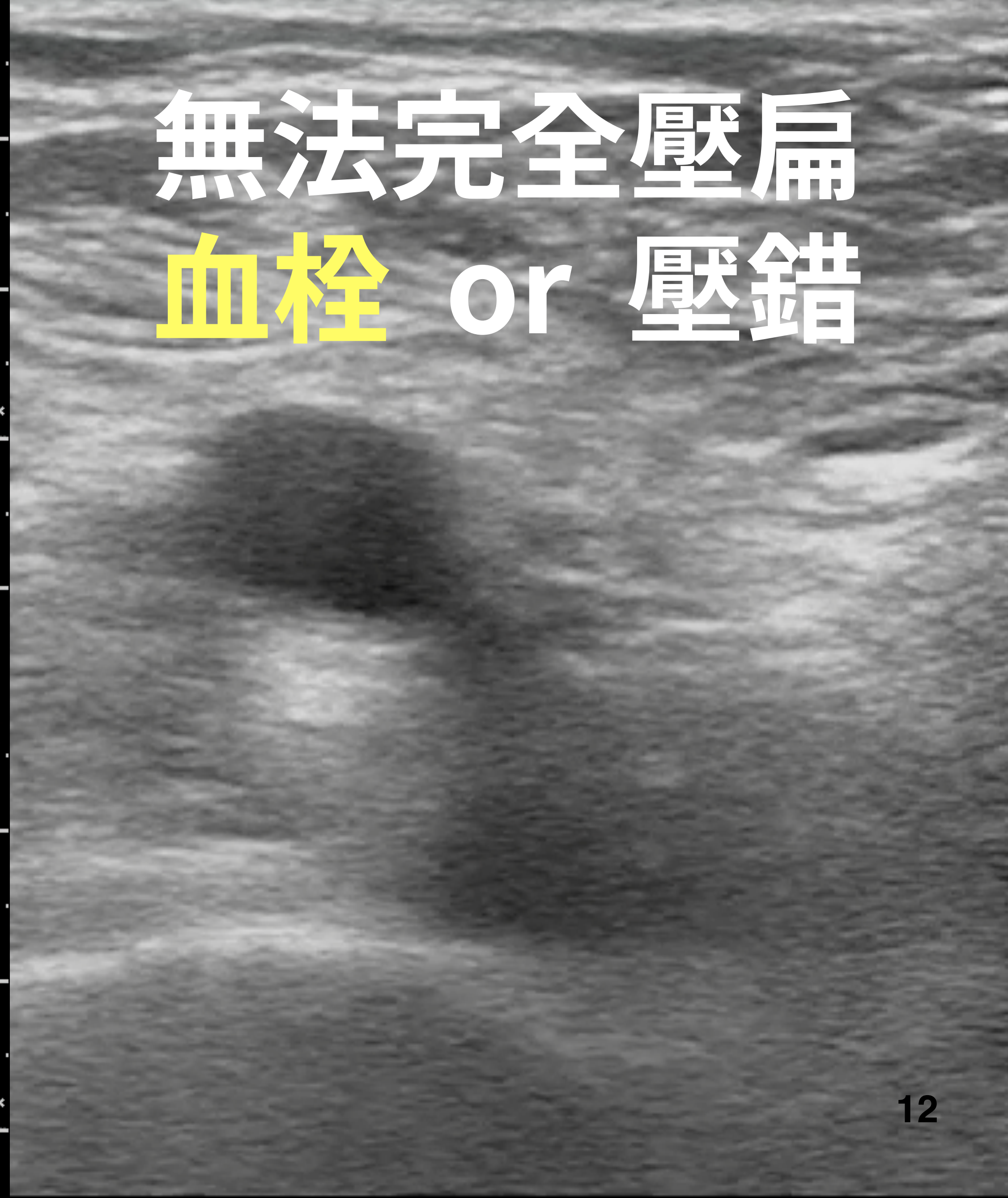
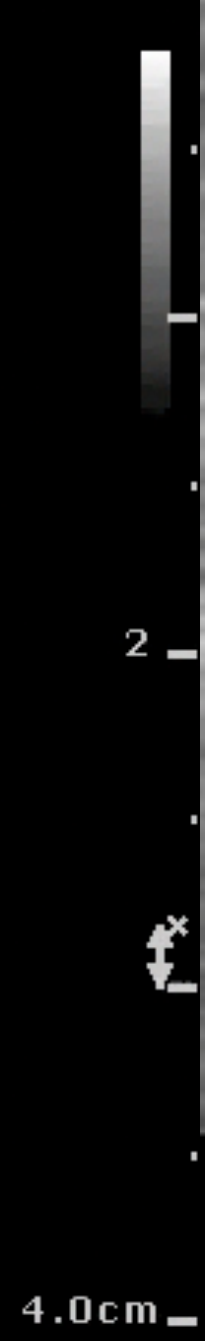
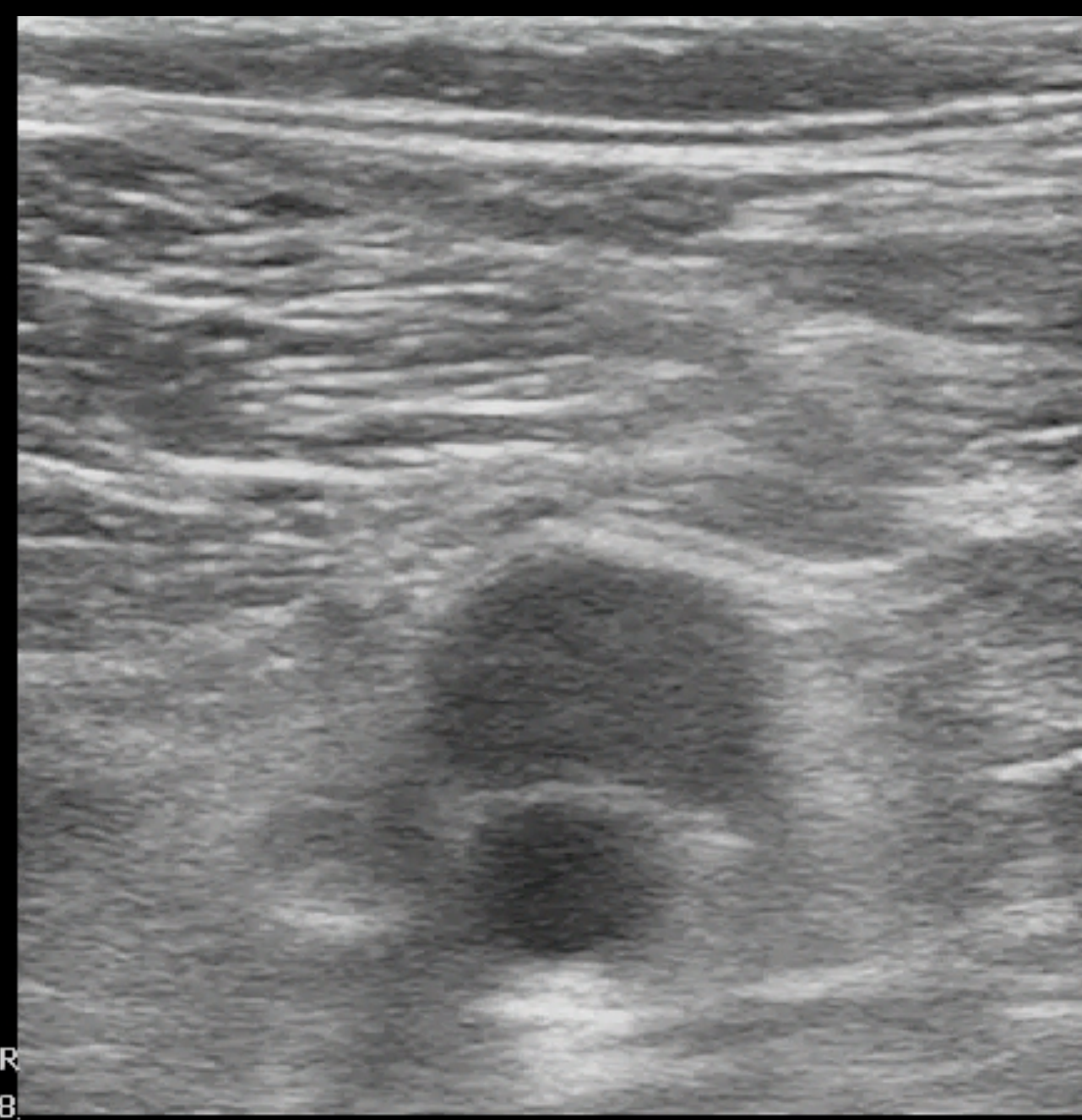
ous
2-3
7 Hz
.0cm
Gen
in 96
41
/3/2



無法完全壓扁
血栓 or 壓錯

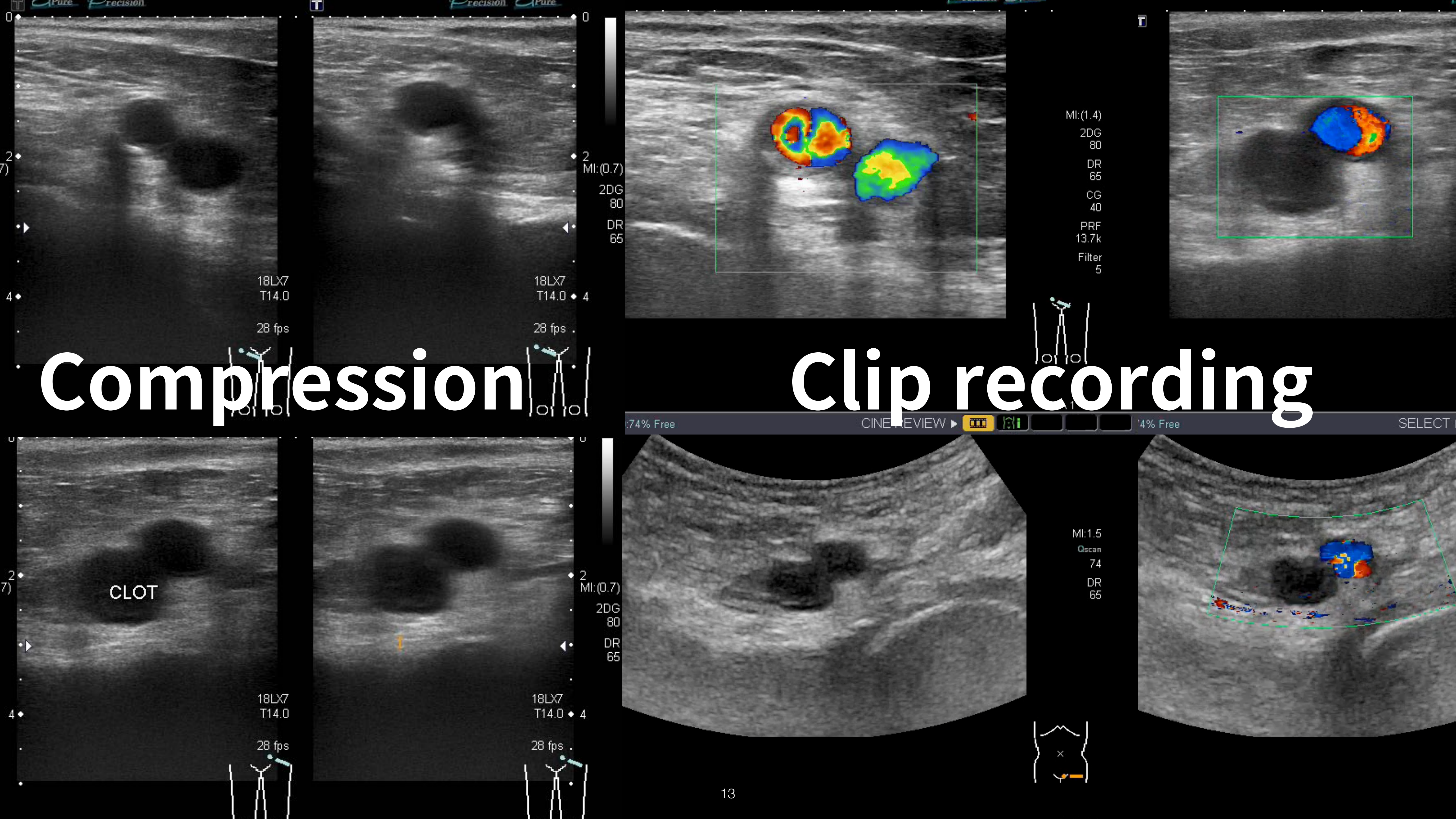


ous
2-3
7 Hz
.0cm
Gen
in 96
41
/3/2



12

4.0c



Compression

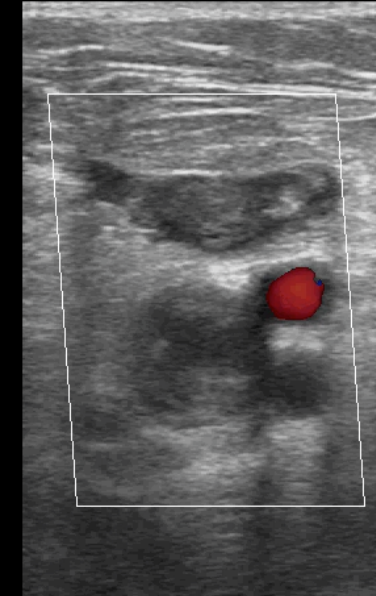
Clip recording

CLOT



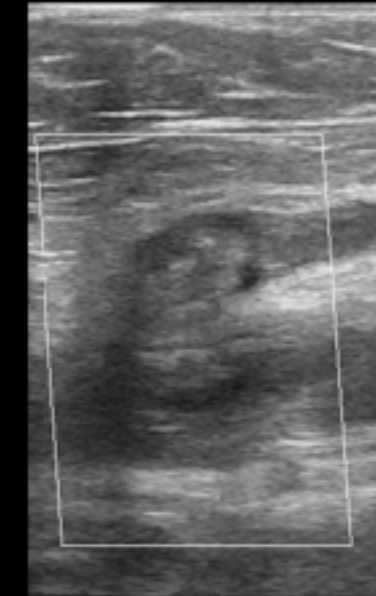
Technical details:
Venous
L12-3
17 Hz
6.0cm
2D
HGen
Gn 82
C 41
3/3/2
Color
5.0 MHz
Gn 55
3/7/4
Filtr Low

Orientation: P (Proximal), R (Right), 4.4 8.8



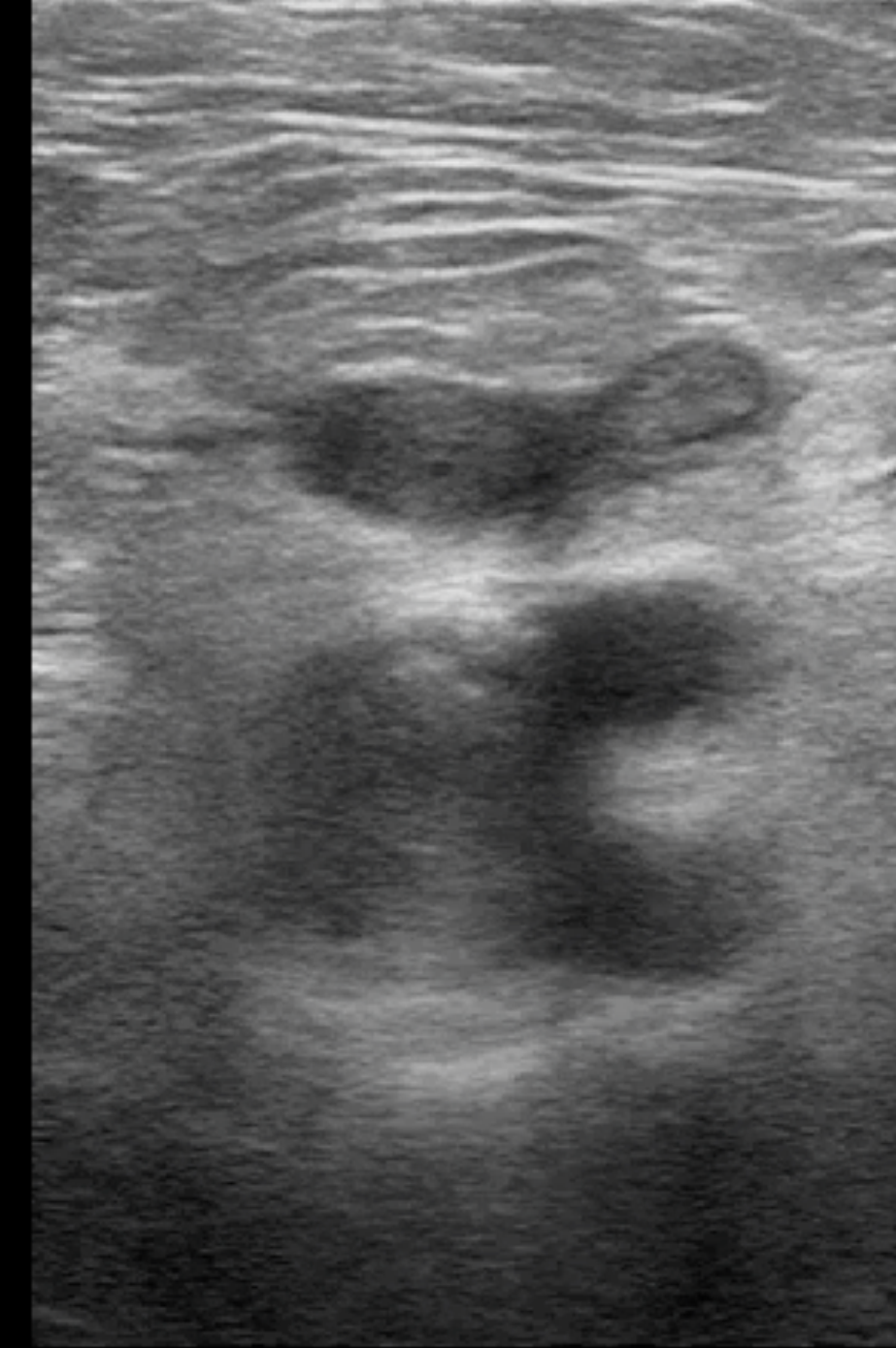
Technical details:
+Venous
L12-3
17 Hz
6.0cm
2D
HGen
Gn 82
C 41
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Color
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Filtr Low

Orientation: P (Proximal), R (Right), 4.4 8.8



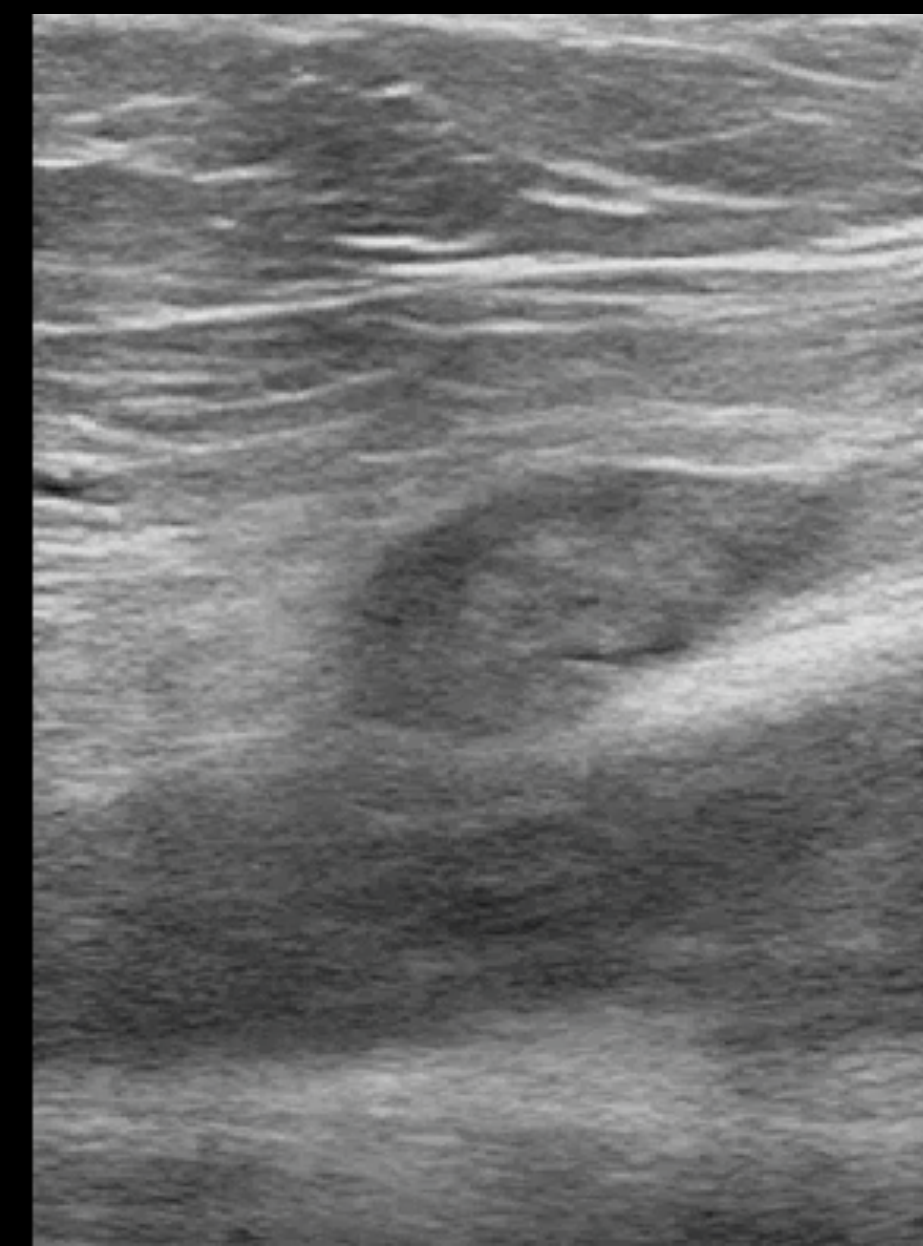
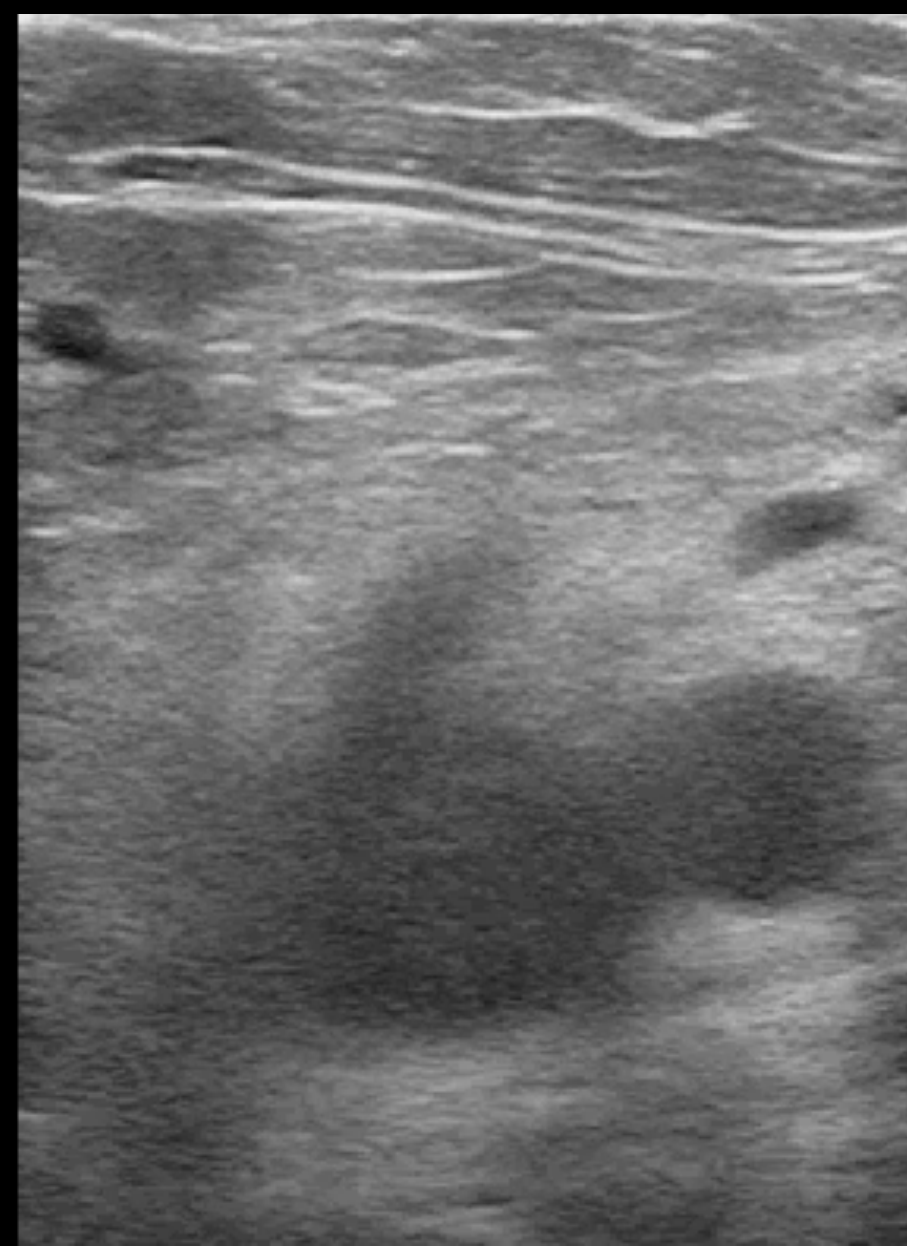
Technical details:
+Venous
L12-3
17 Hz
6.0cm
2D
HGen
Gn 82
C 41
3/3/2
Color
5.0 MHz
Gn 55
3/7/4
Filtr Low

Orientation: P (Proximal), R (Right), 4.4 8.8



Orientation: P (Proximal), R (Right), 4.4 8.8

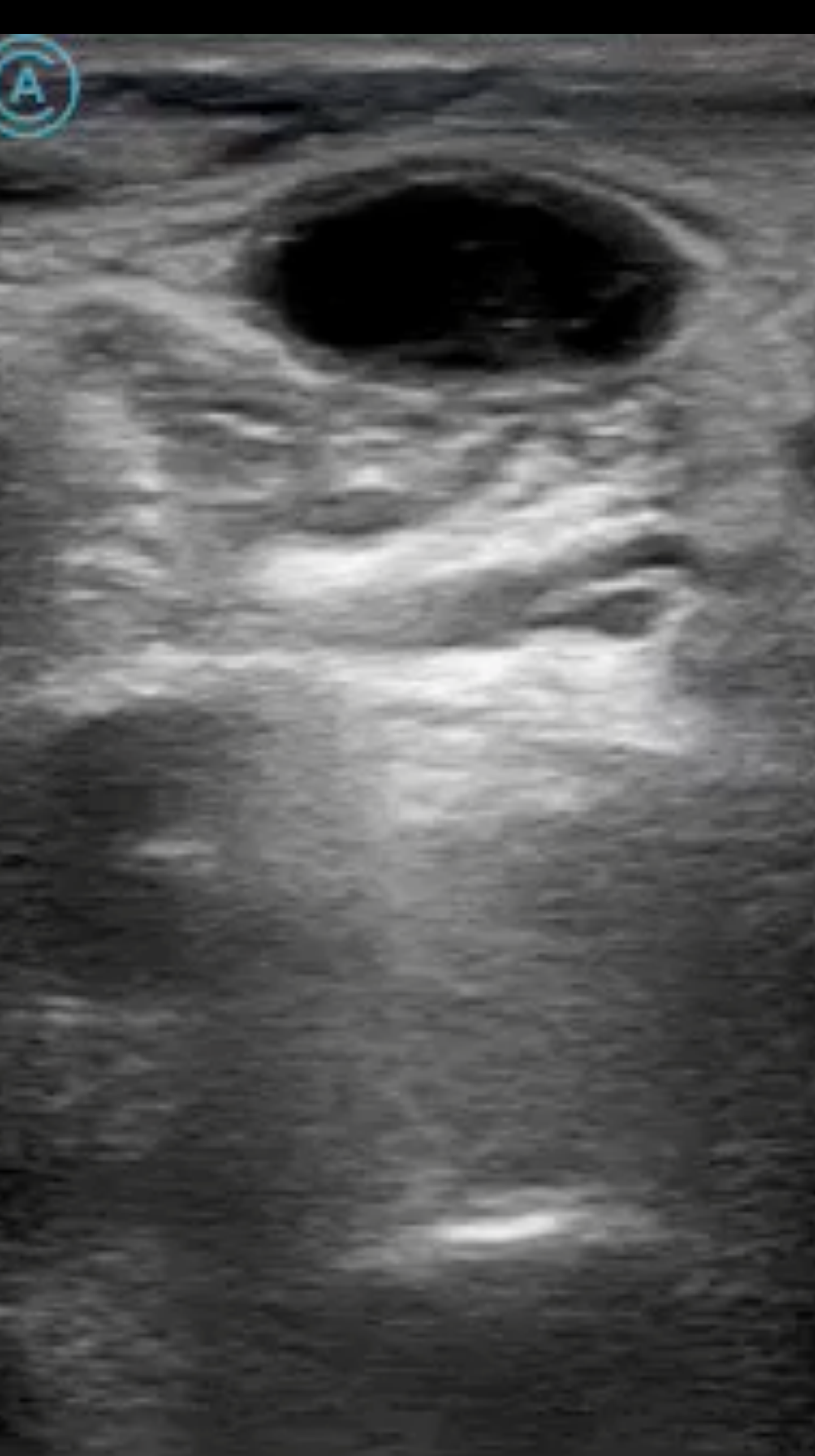
Orientation: P (Proximal), R (Right), 4.4 8.8



DVT or Lymph node ?

LN echogenic hilum
Solitary versus Tubular

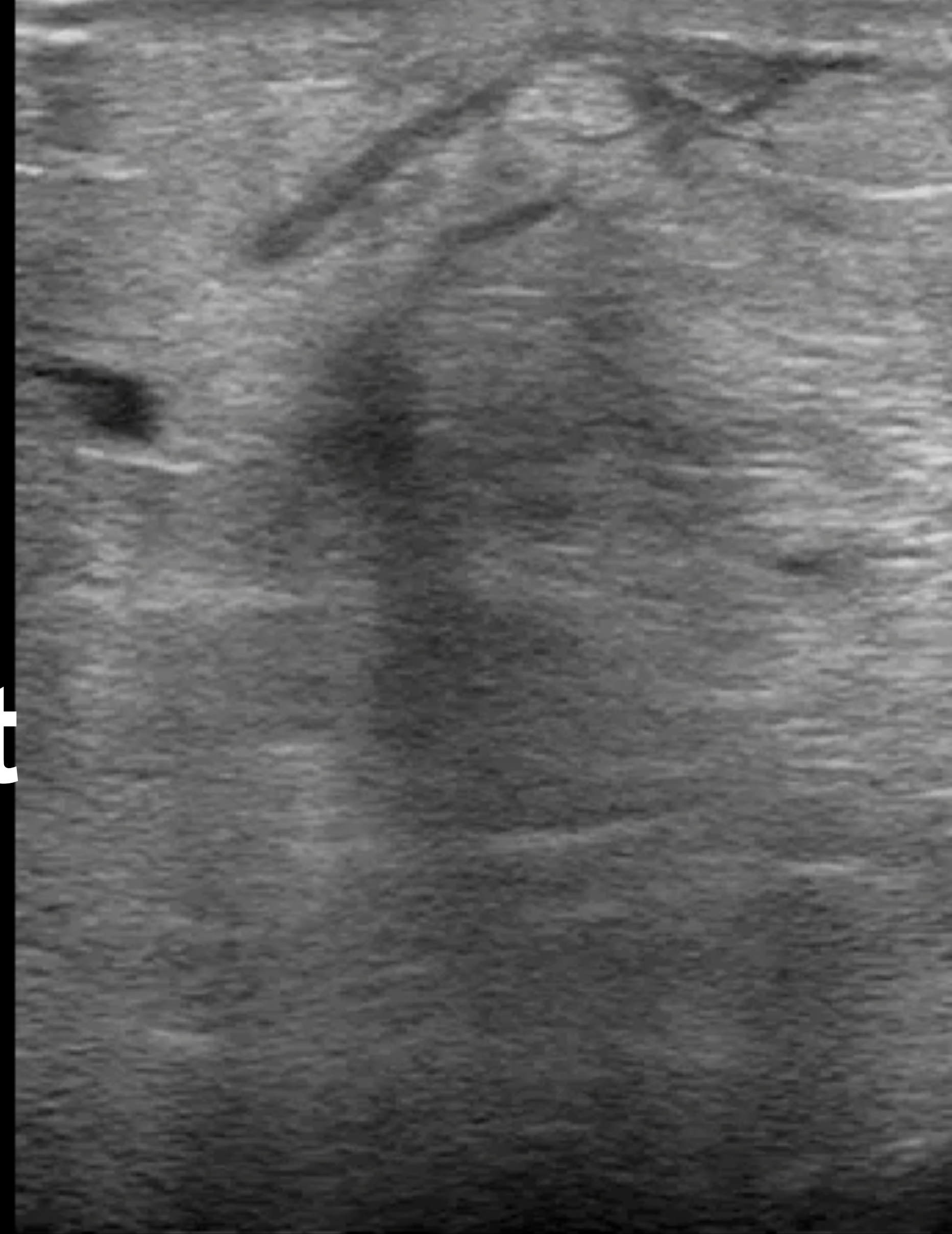




Arterial
L12-3
34 Hz
5.0cm

2D
HGen
Gn 78
C 41
3/3/2

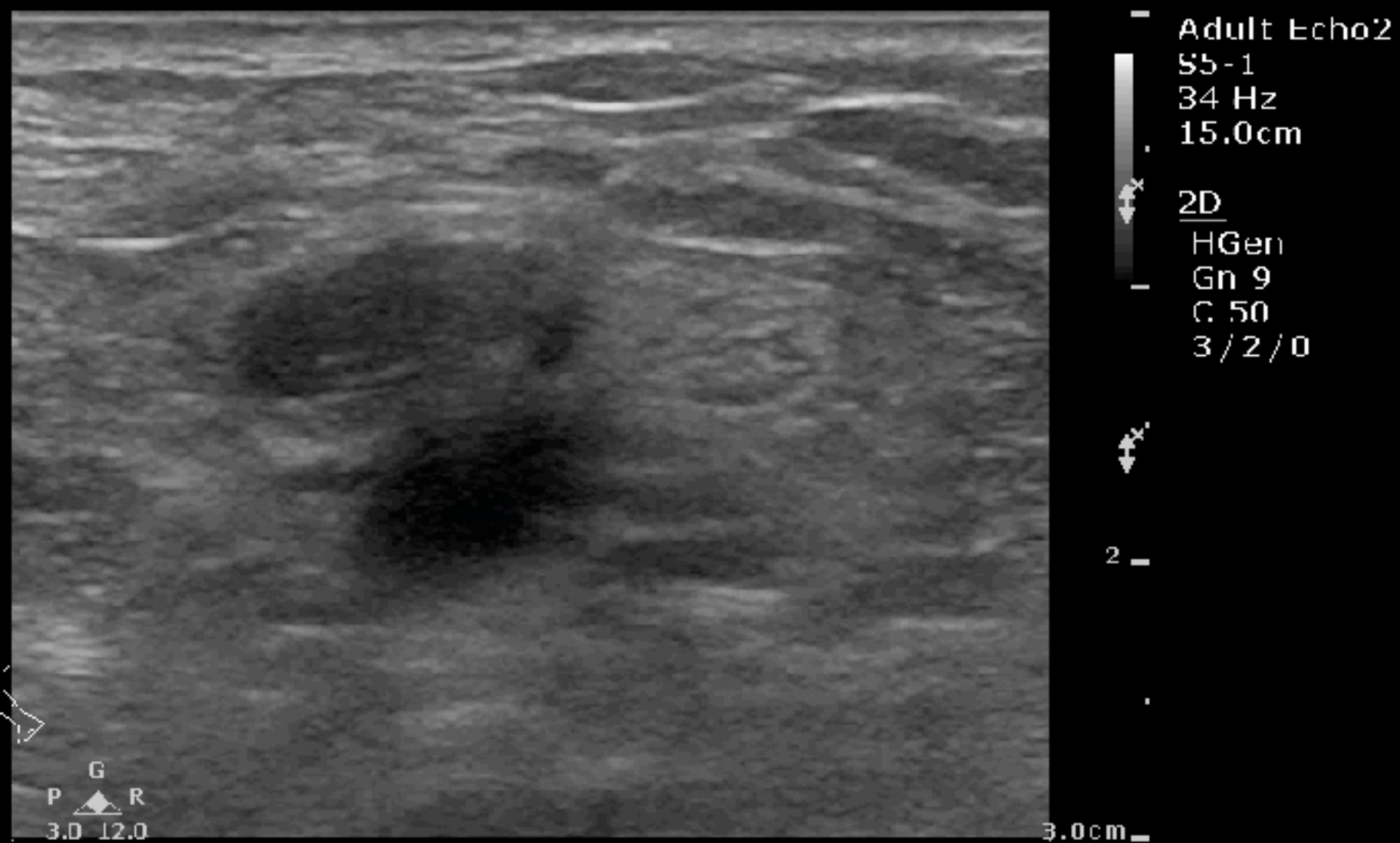
Baker's cyst



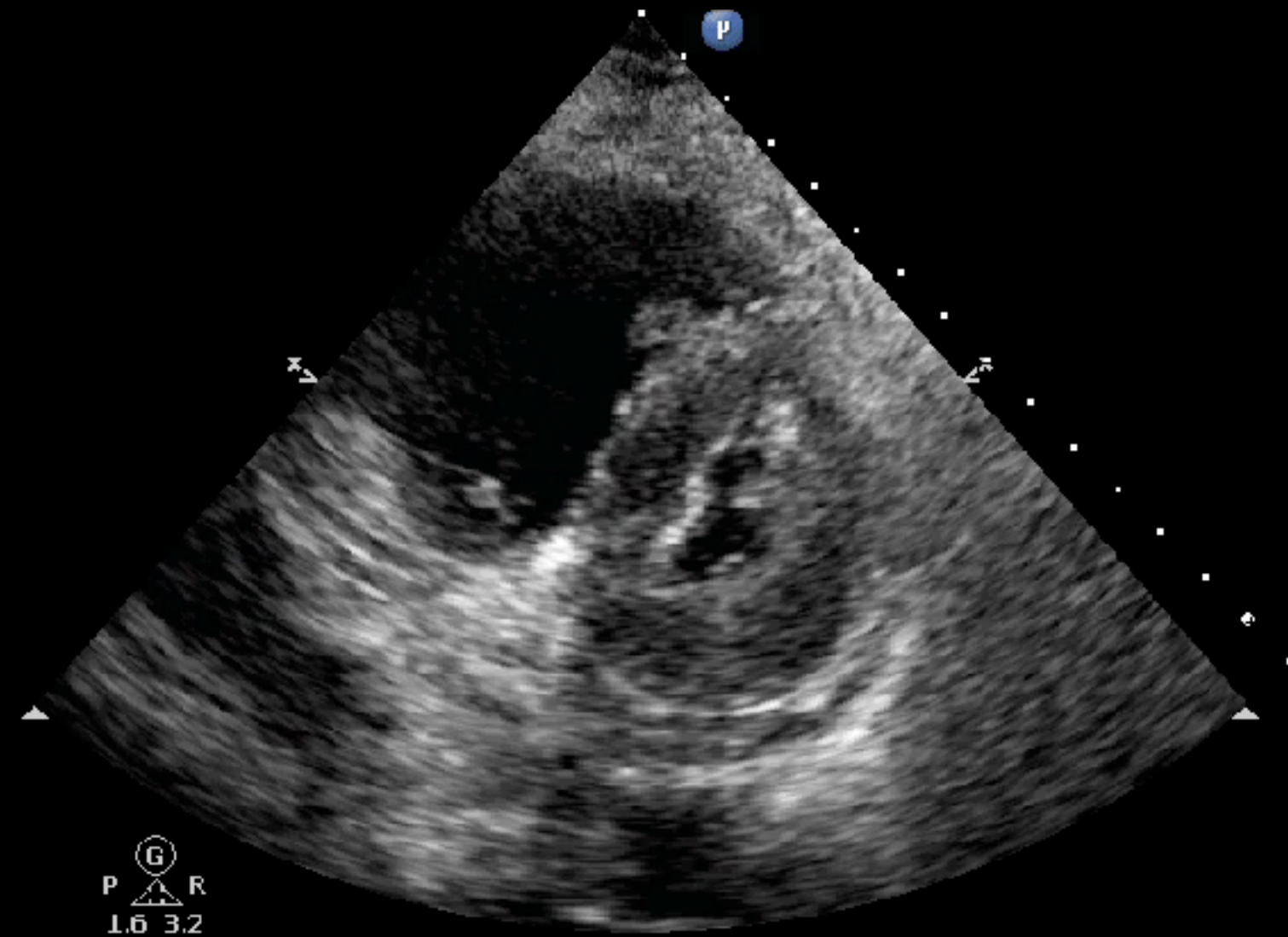
懷疑PE時的POCUS:DHL

CTA仍是最重要的檢查

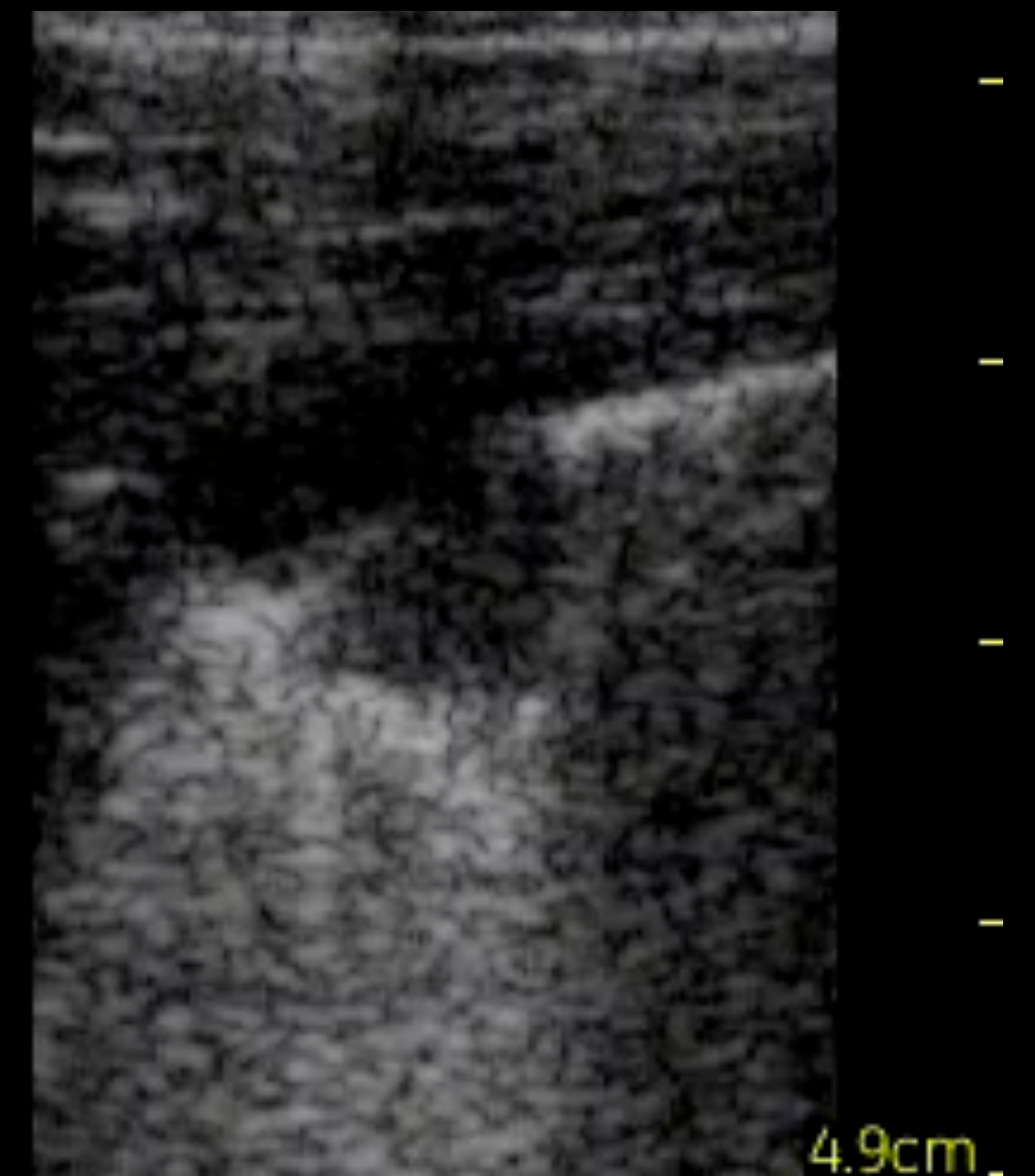
Deep Vein

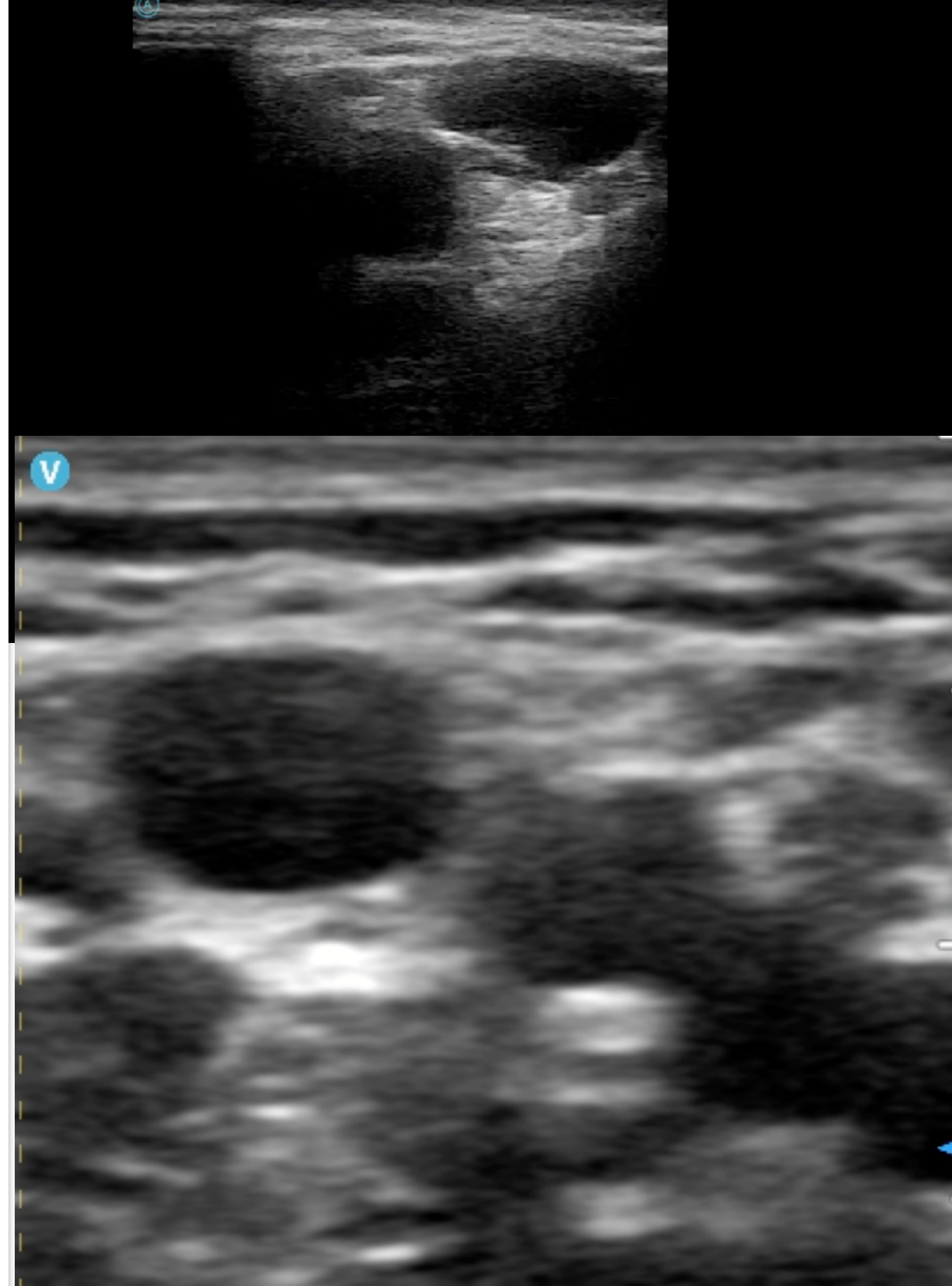
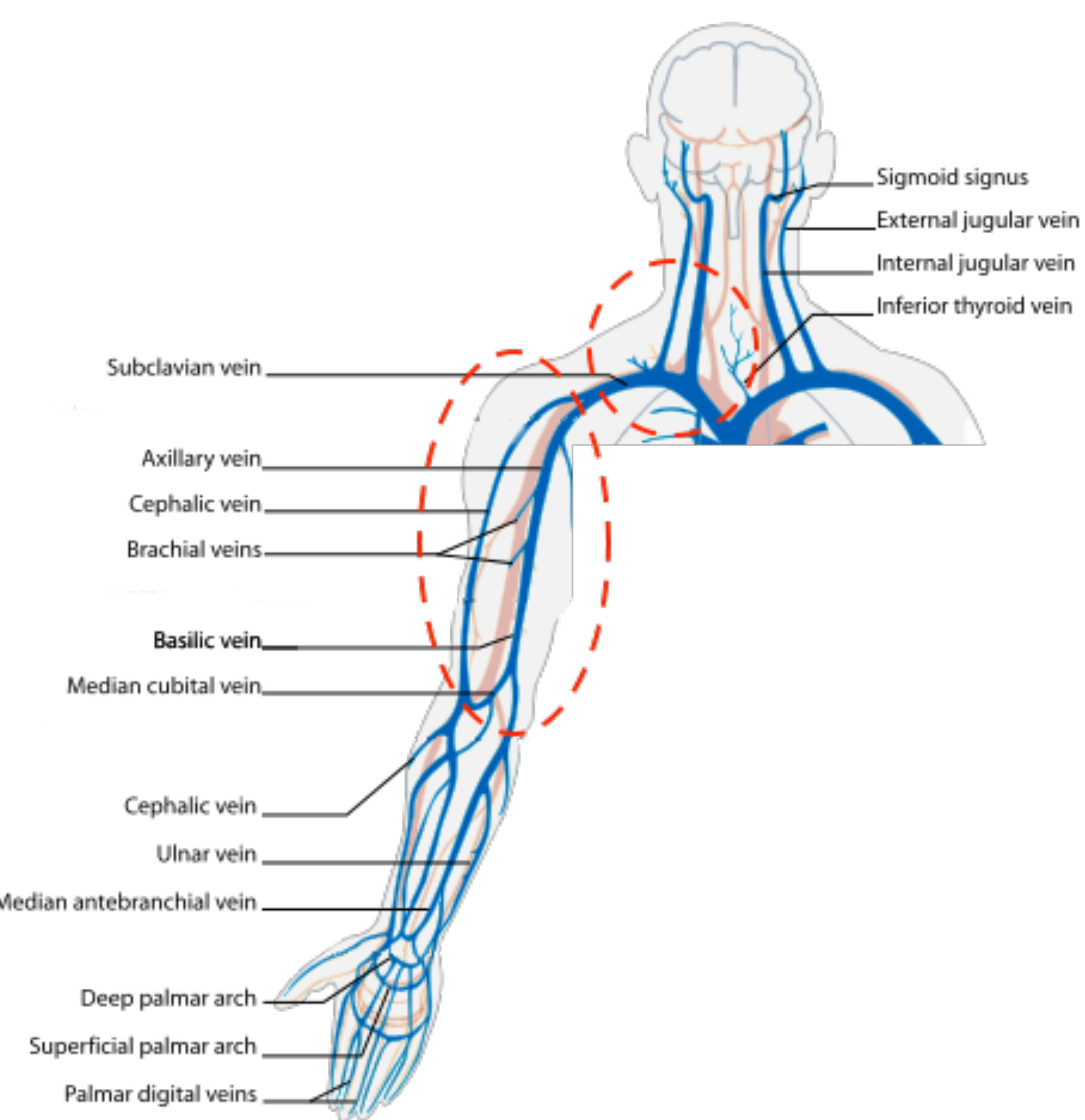


D sign

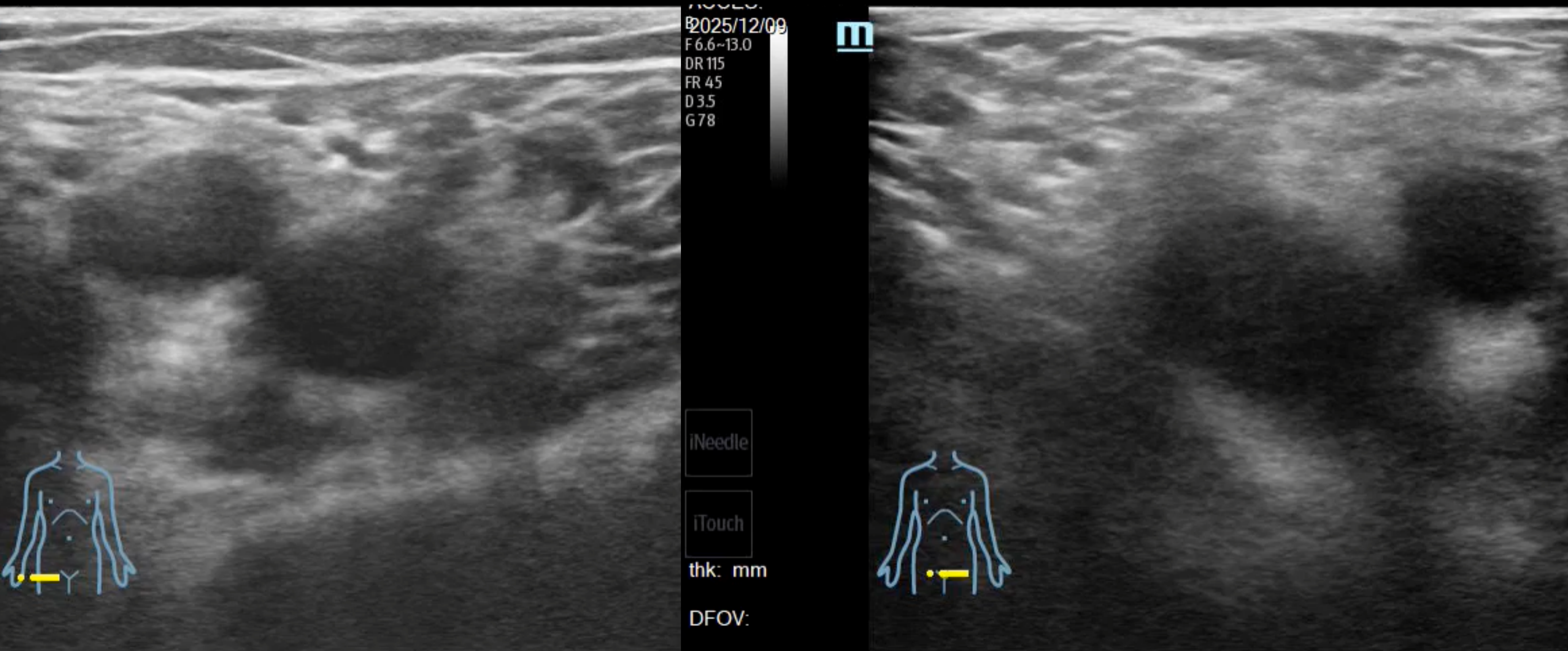


Wedged

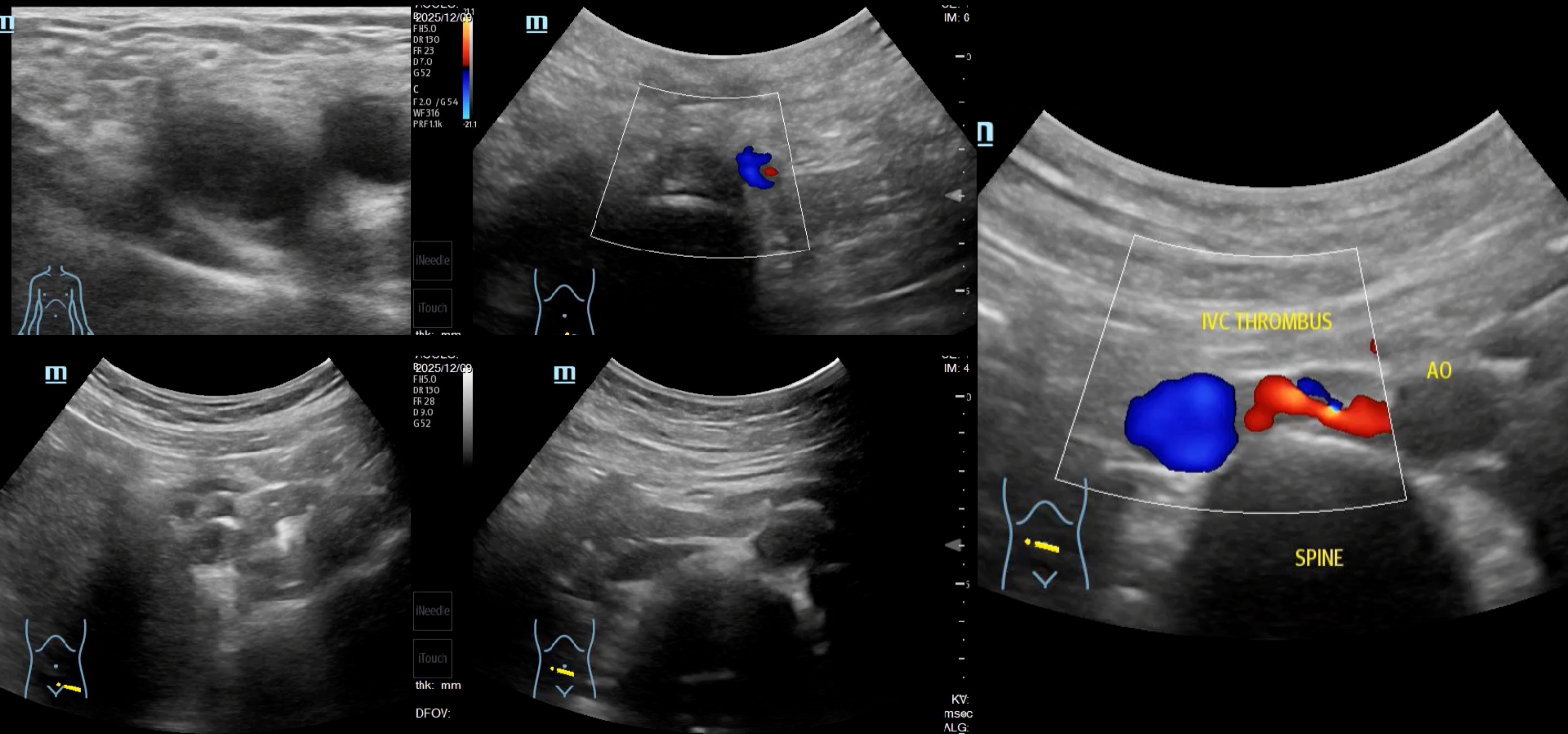




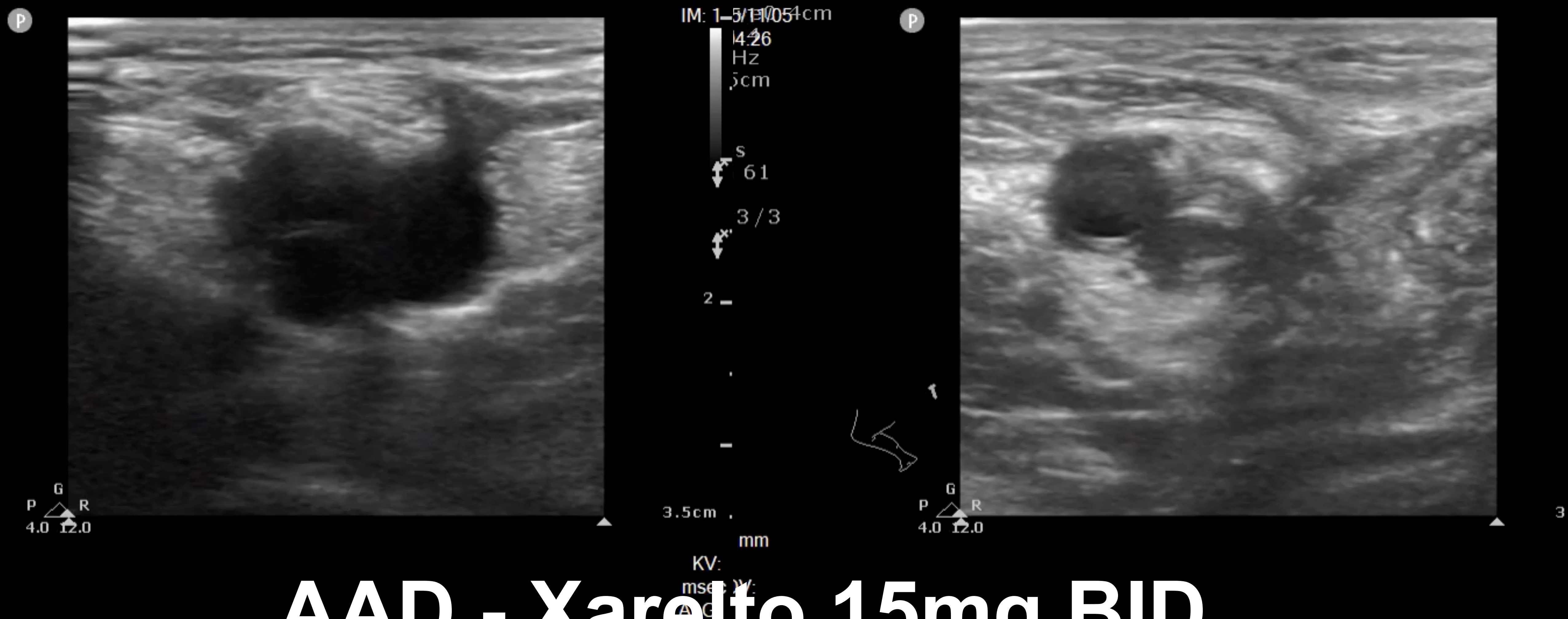
39F, GA 9wk, Left leg swelling 2wks



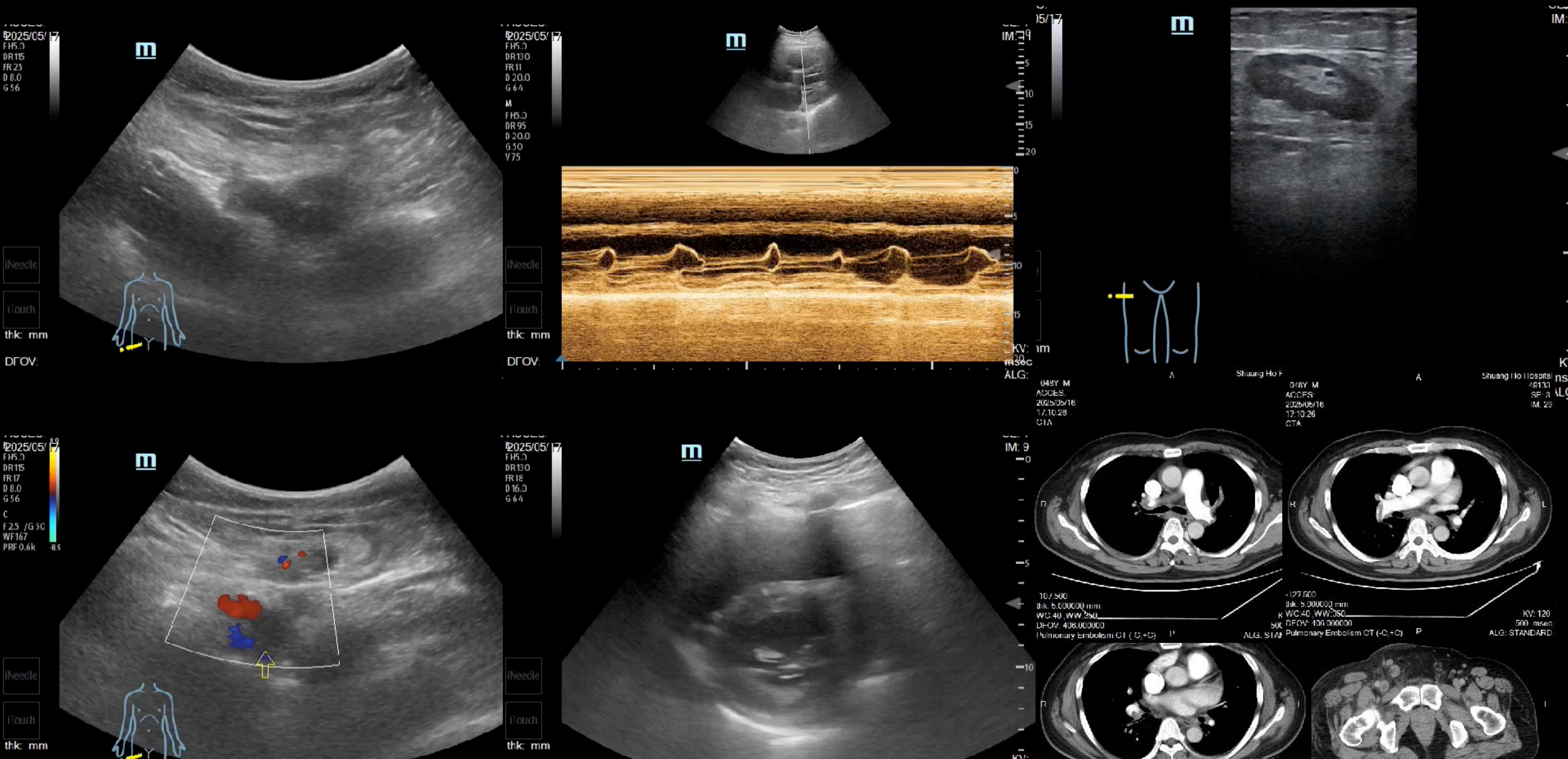
39F, GA 9wk, Left leg swelling 2wks



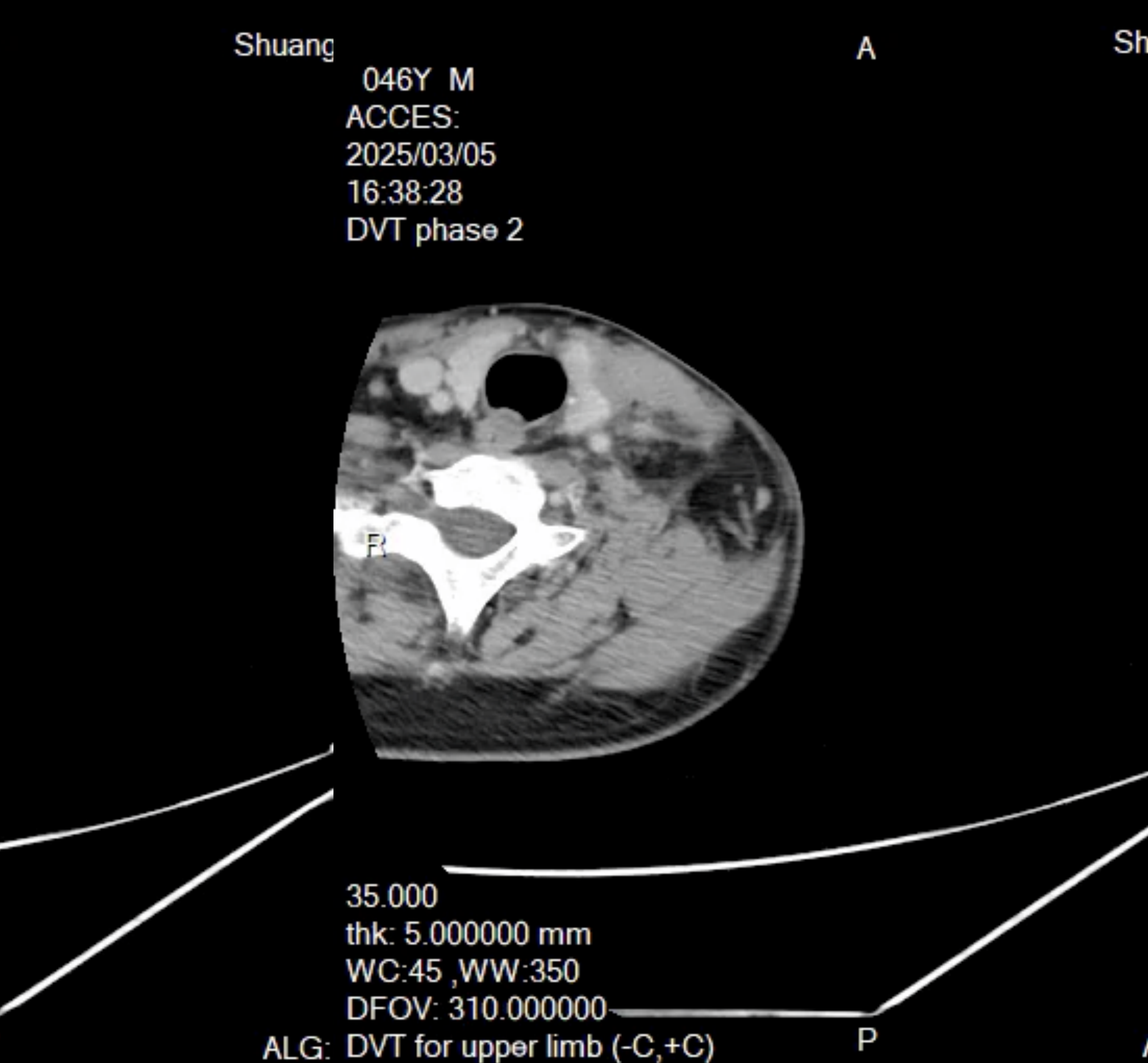
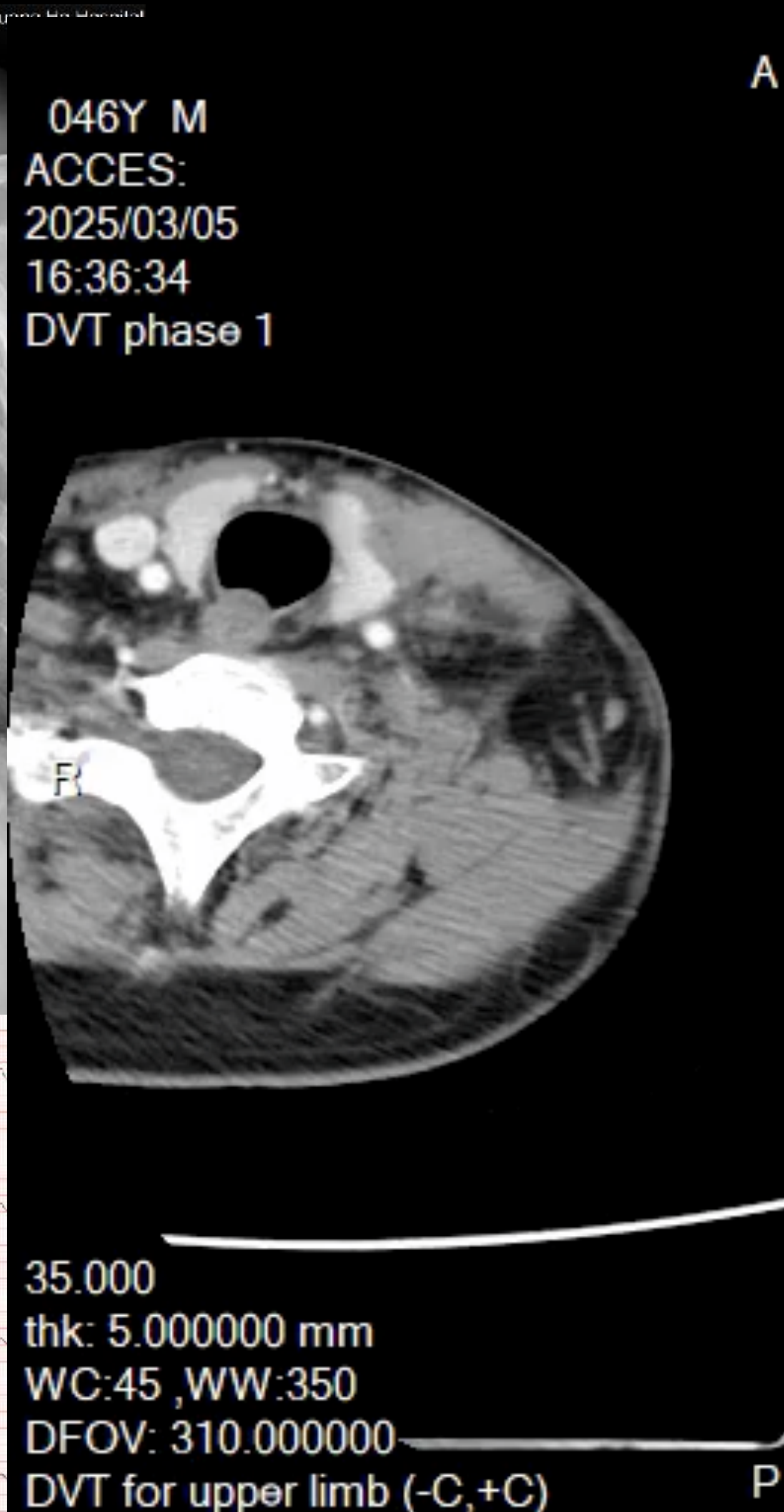
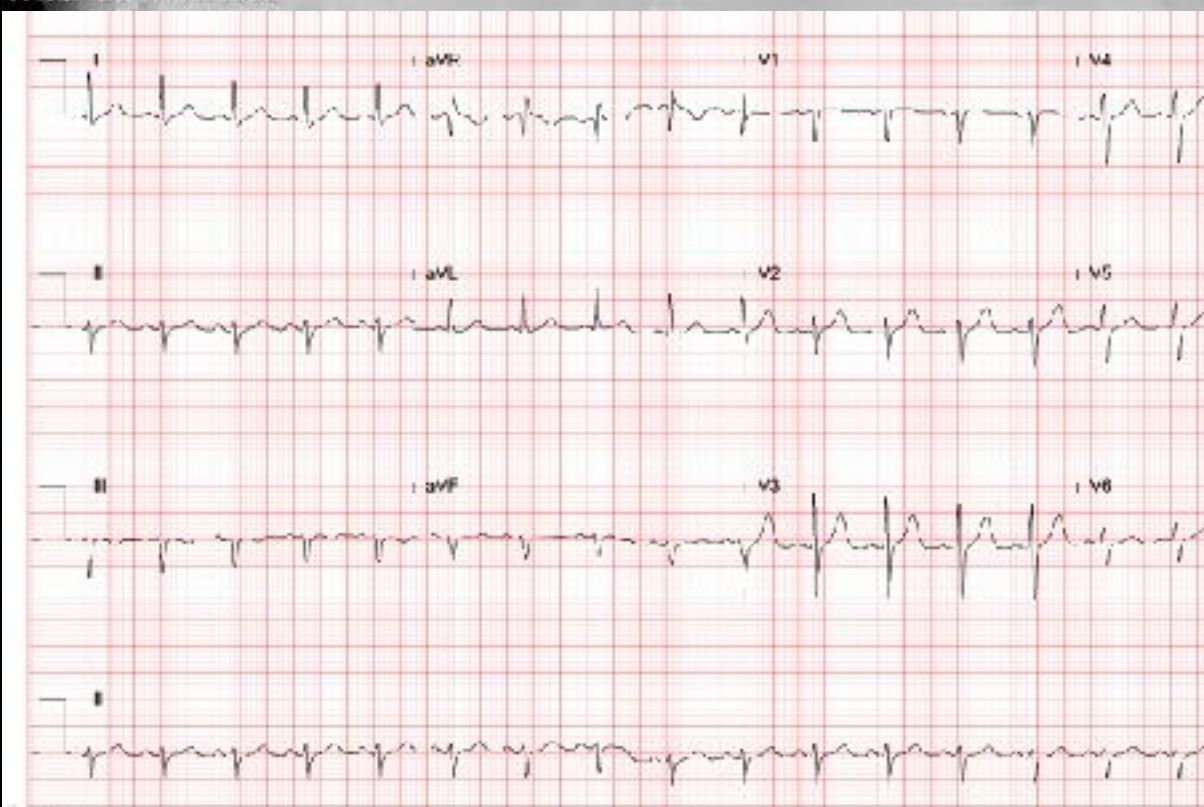
63M, right leg strain, right leg swelling



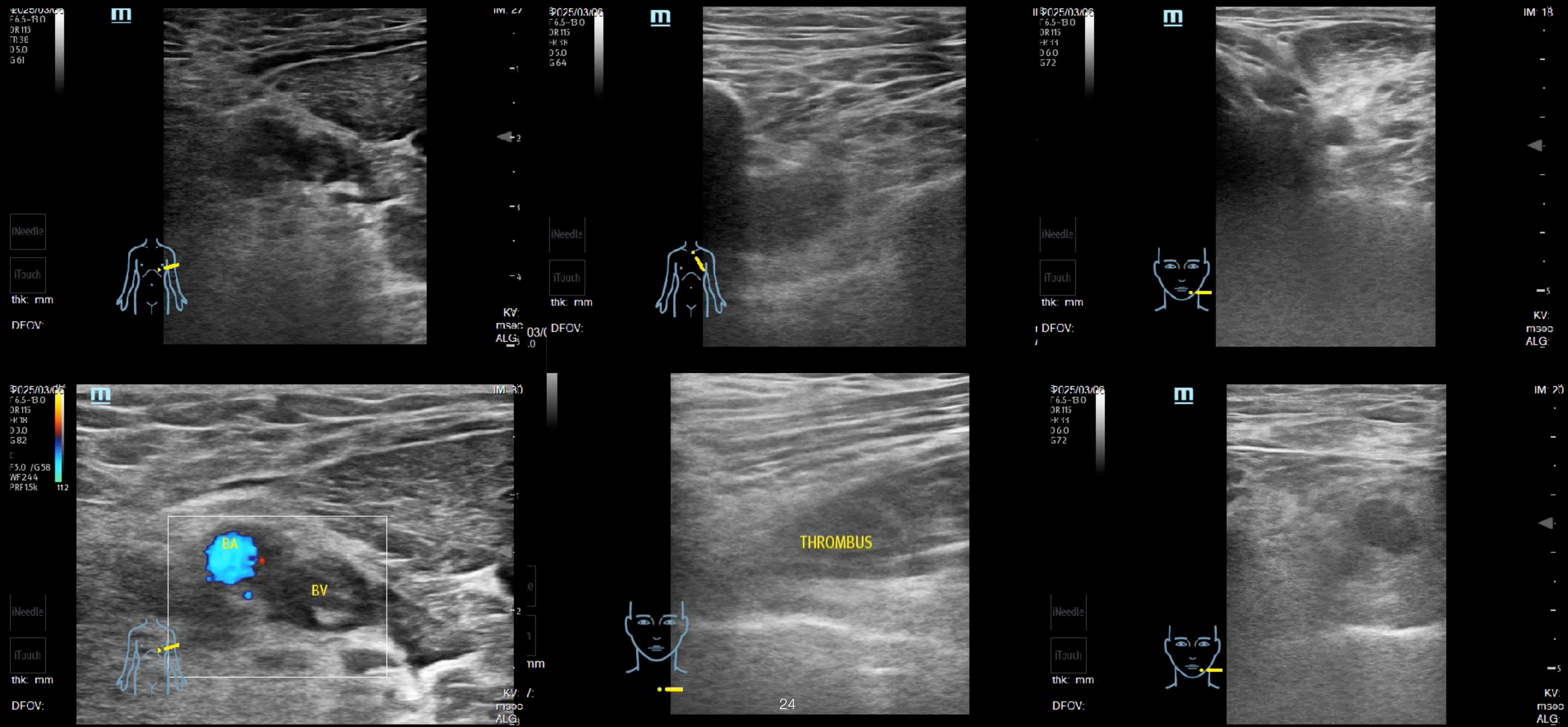
48M, Hx of DVT, R leg swelling



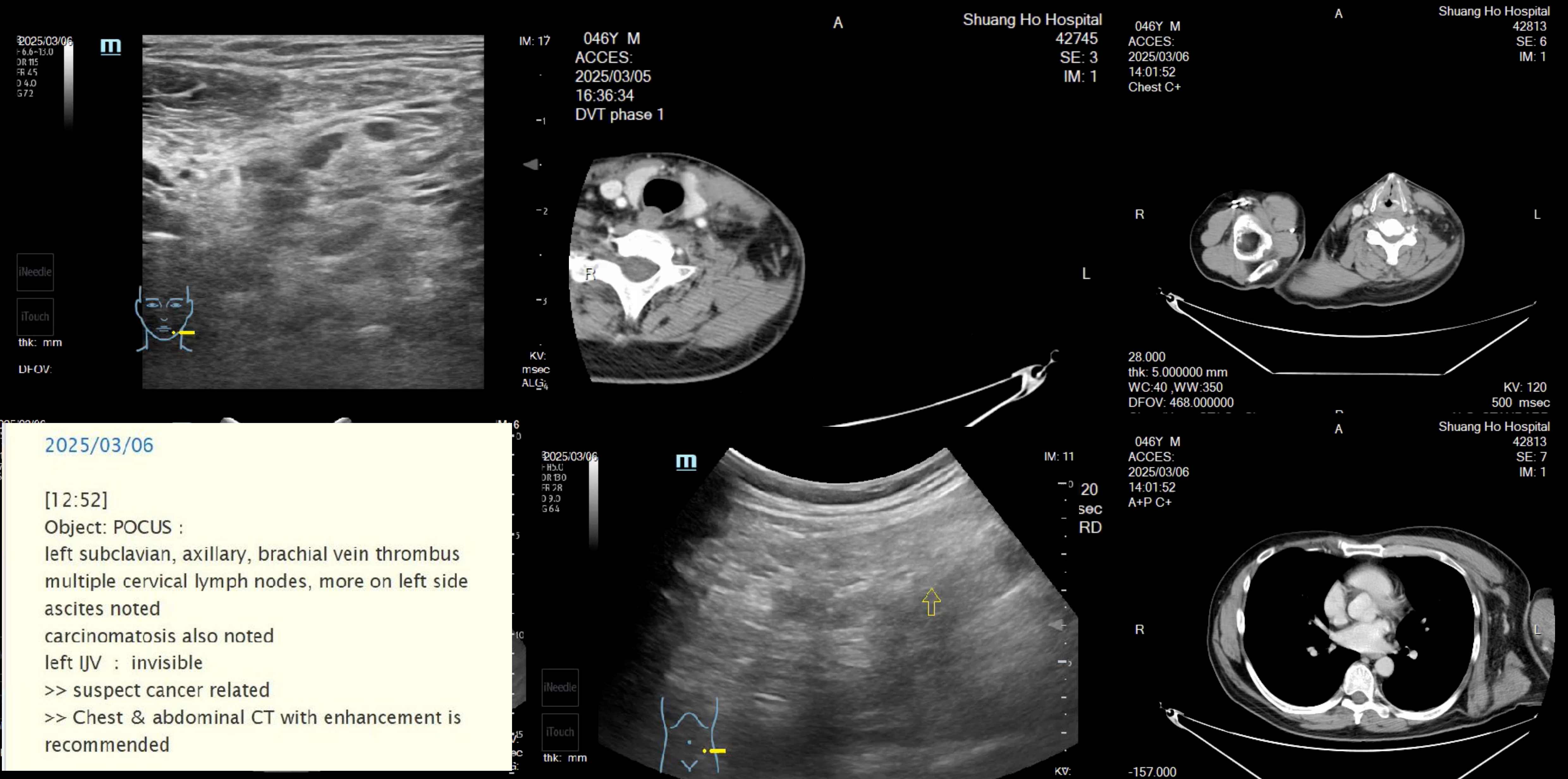
46M, left arm swelling for 2 wks



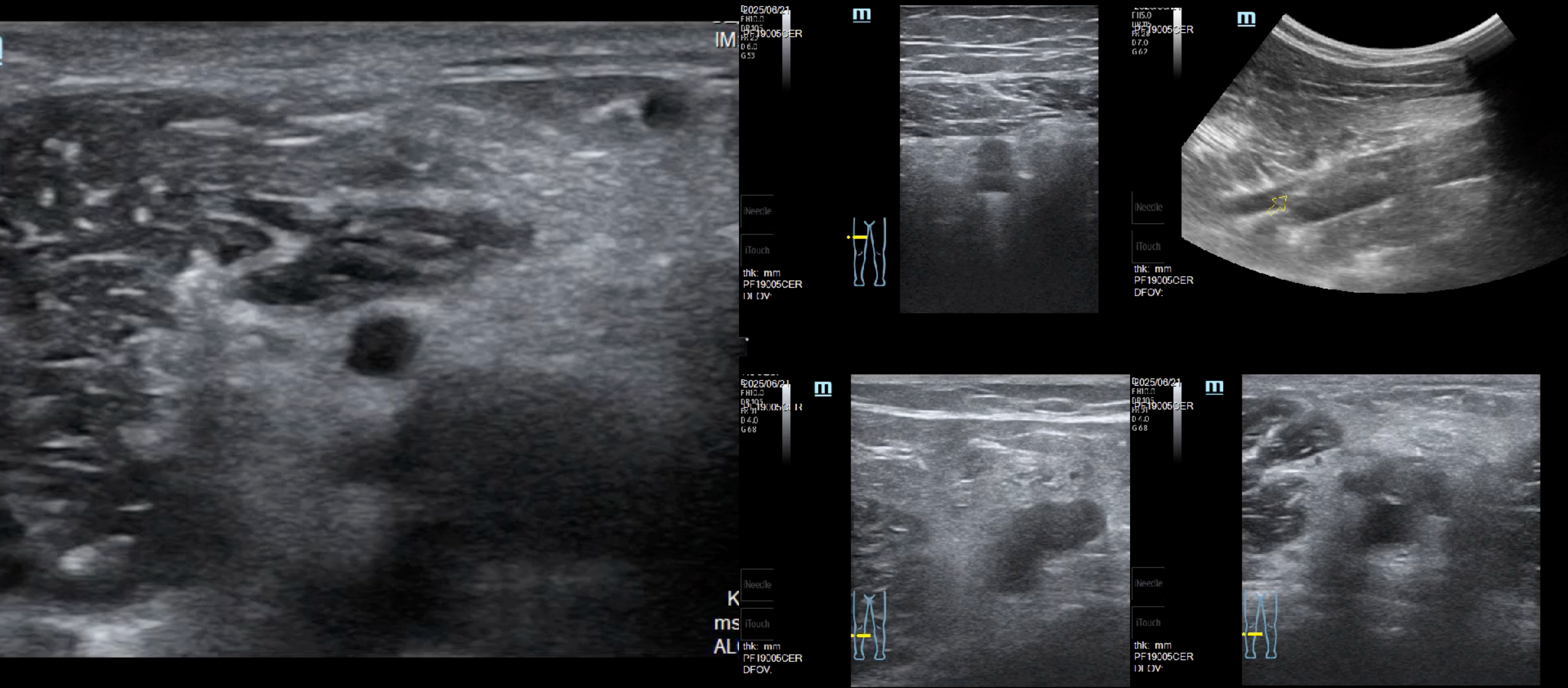
46M, left arm swelling DVT



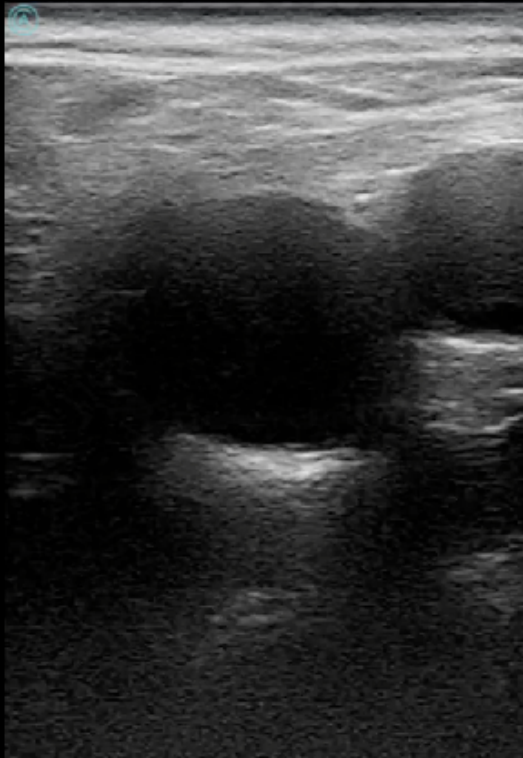
Patho: methothelioma



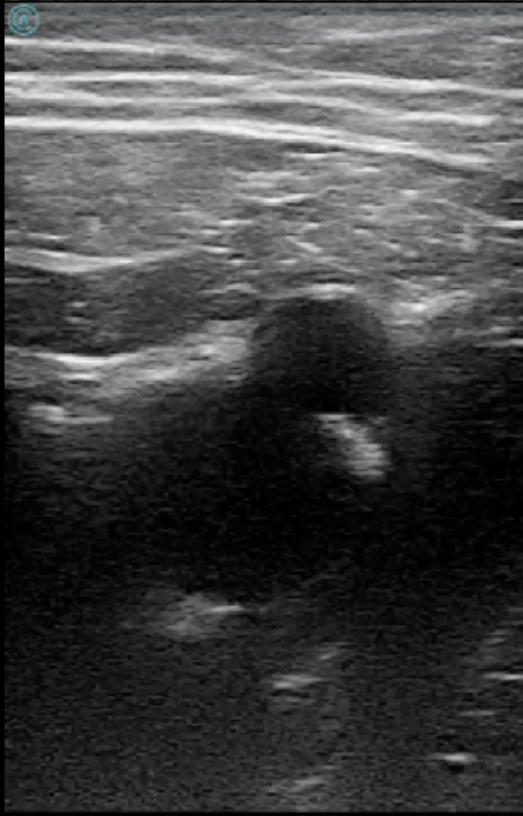
41M, right calf pain for 2 days



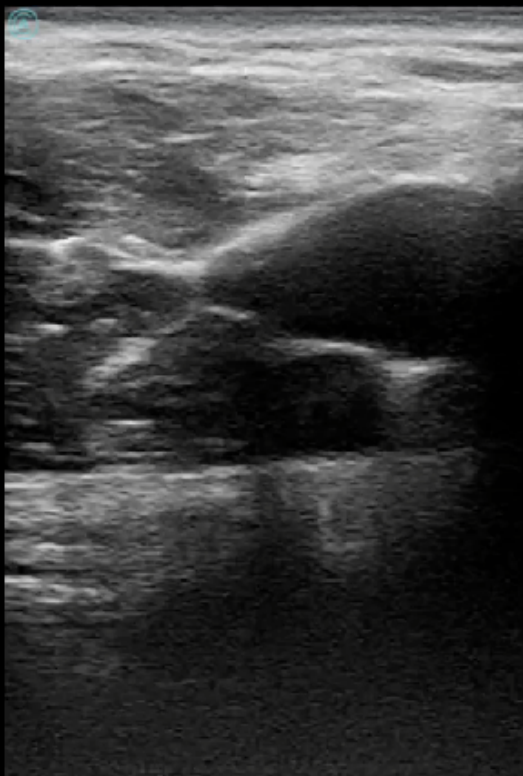
Take Home Message



CFV



SFV



PV



BraV
BasV
AxilV
SubcV

無法完全壓扁
血栓 or 壓錯

POCUS only for
acute proximal DVT