

VA ultrasound examinations by nephrologists

Swedish Access Meeting, Nov 13-14, 2025

Jennifer Hanko
Consultant Nephrologist, Belfast
VASBI vice-president

Disclosure

CSL Vifor

Baxter

Covidien

Boehringer Ingelheim

Ultrasound in Vascular Access

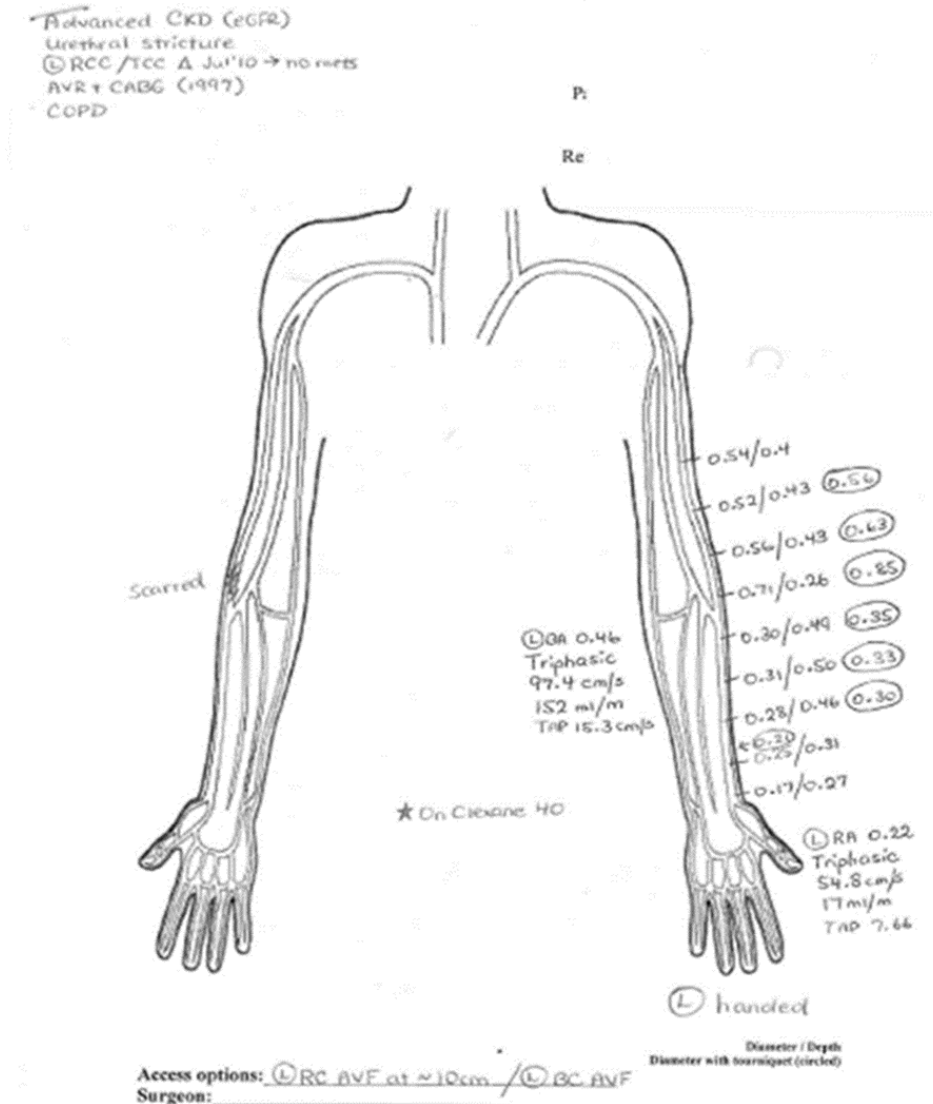
- Planning
 - Vein preservation
 - Mapping
- Follow-up
 - Maturation
 - Diagnosis
 - Surveillance
- Needling

Planning vascular access

- Vein preservation
 - Goal: maximum 2 attempts to achieve functioning access for most
 - Overall prognosis and time to RRT start
 - Patient priorities, e.g. quality of life, plan for homeHD
-
- NOT fistula first
 - **Right access, right patient, right time, right reason**

Case 1: 'Best AVF option': short time to HD start / guarded prognosis

- 77M eGFR 9 with multiple comorbidities
- Creation L BC AVF 13/5/13
- HD start via AVF **29/5/13**
- Used this AVF for 9 years with no complications + no interventions!



Follow-up

EXAMINE!!!

- Look, listen, feel, elevate the arm

Assess dialysis parameters

- Pump speeds, pressures, postHD bleeding, recirculation, clearance

Examination + HD parameters = 90% of information

Ultrasound should confirm what you suspect, provide objective measurements and aid communication with wider team

Follow-up to see 'if you were right': successful cannulation, fistulogram images / report



Case 2: follow-up, planning, needling

65M

- ESRD >20 years
- Home HD since Oct 2022

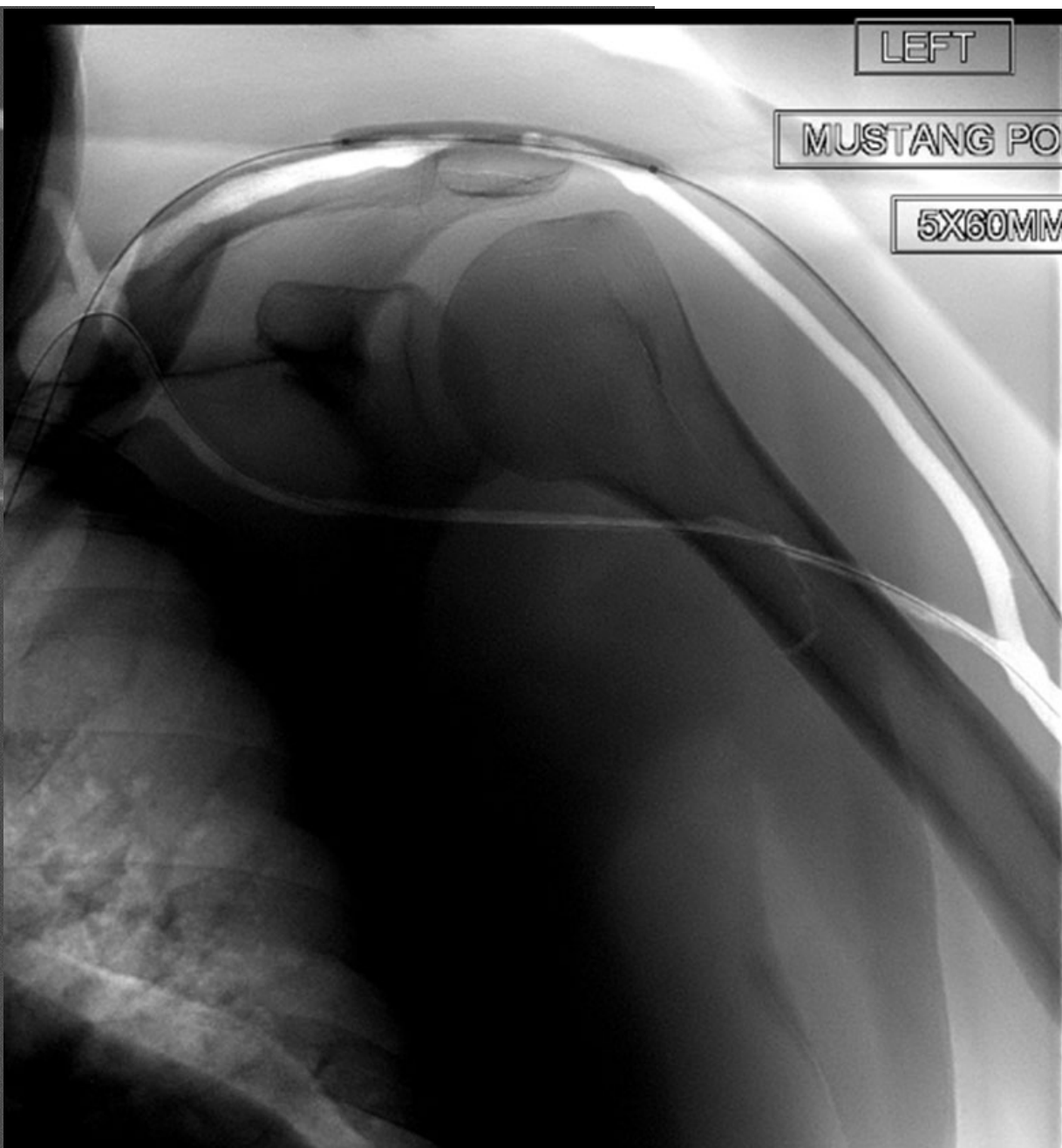
HD access

- RIJ TL
- L BC AVF Oct 2022
- RIJ TL removed 1/6/23

Prolonged postHD bleeding

Angioplasties 19/6/23 + 4/10/23





LEFT

MUSTANG POB

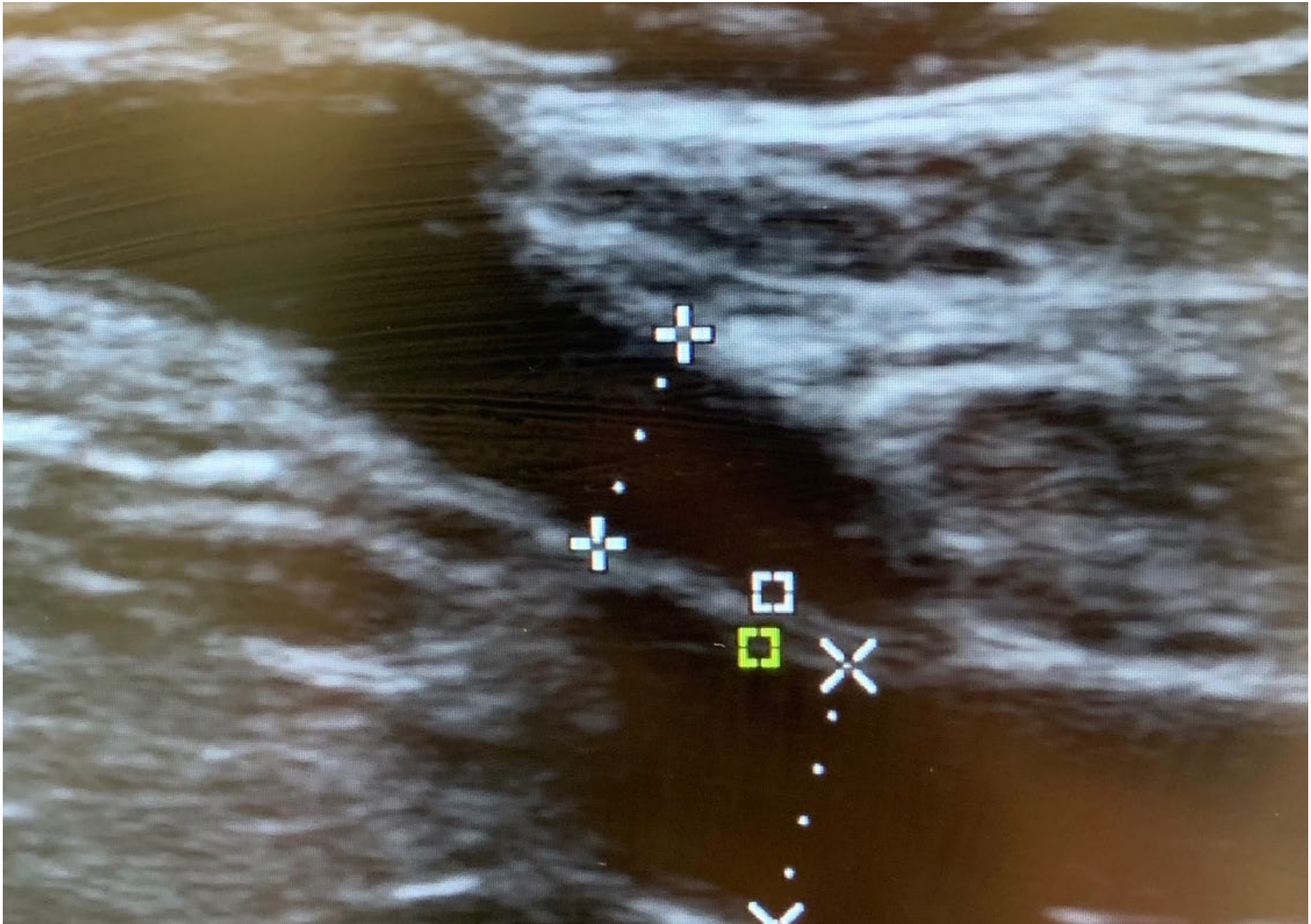
5X60MM

Partial thrombosis 17/11/23: Now what??

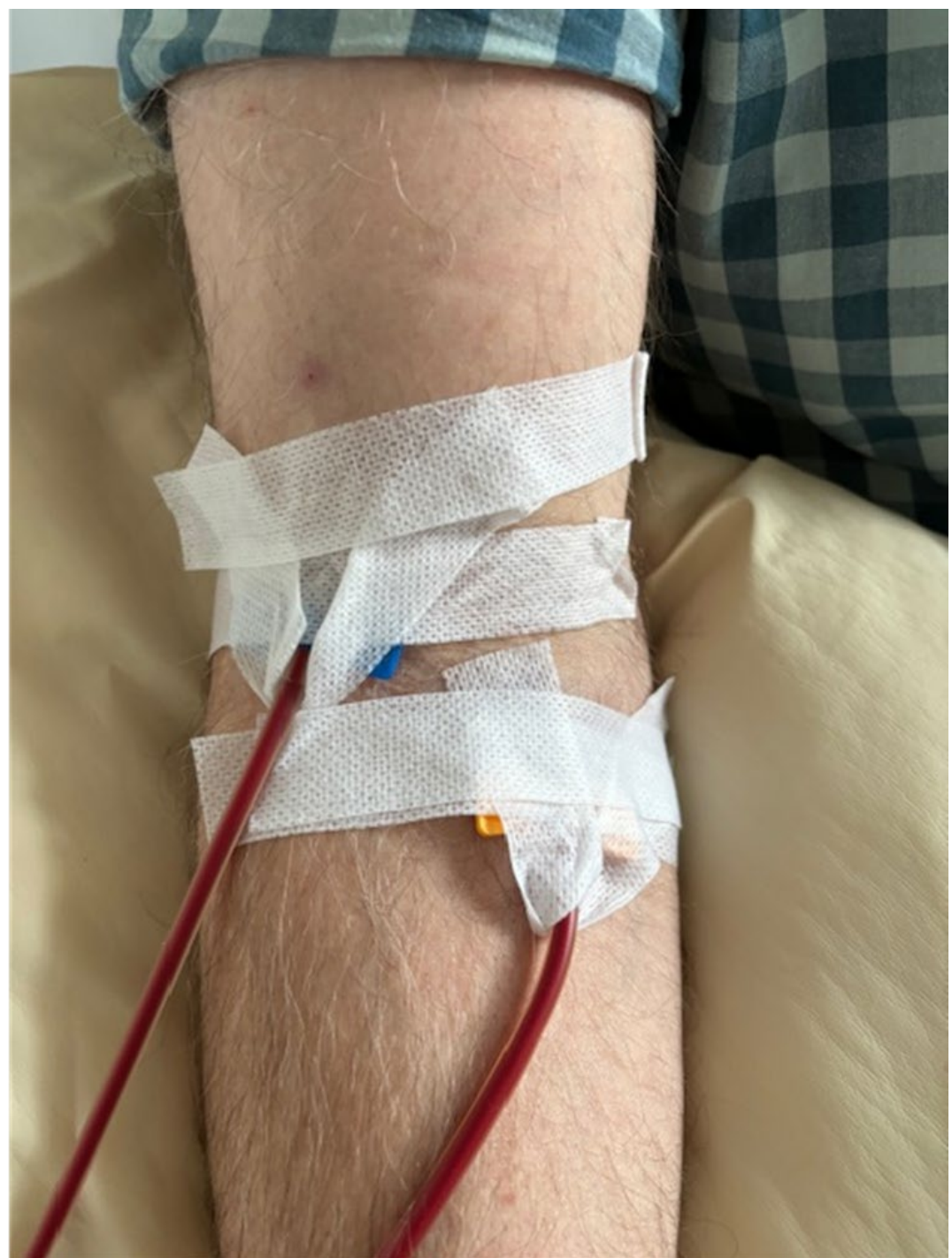
- RIJ tunnelled line
- New right brachiocephalic AVF (vessel diameters good at ACF)
- Other



Ellipsys



EndoAVF 7/12/23



Case 3

62F

eGFR 10

L BC AVF 10 days prior



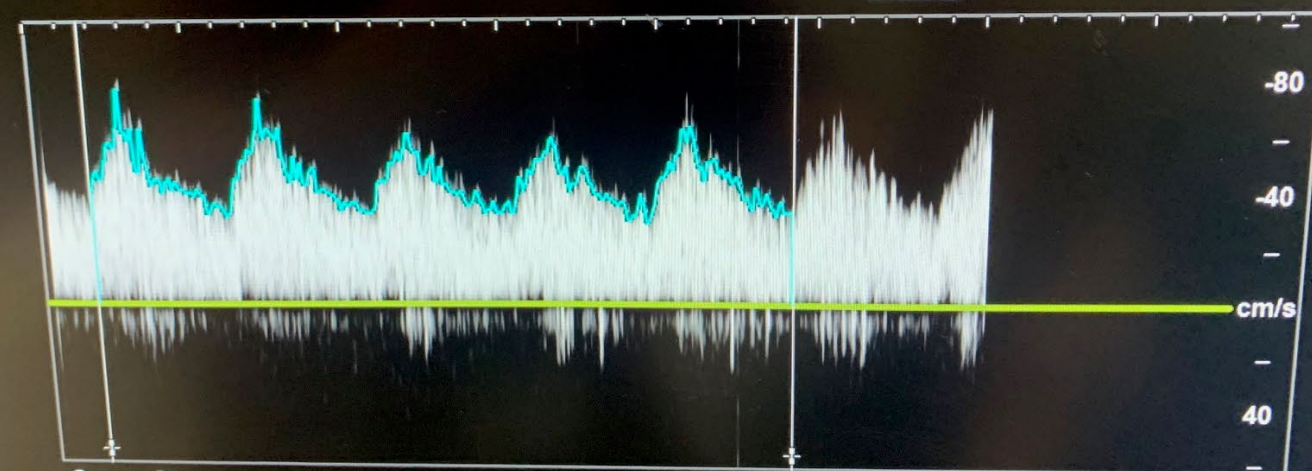
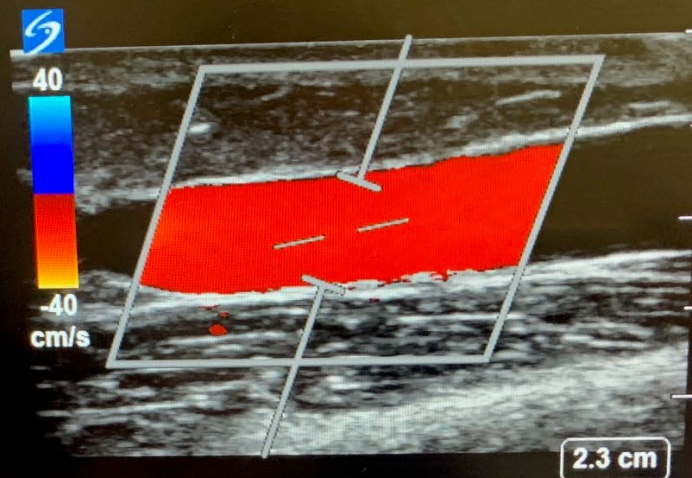
9 Feb 2023 / 11:46

Volume Flow

VF' 973ml/min

✦ TAP -46.0cm/s

VTI -207.9cm

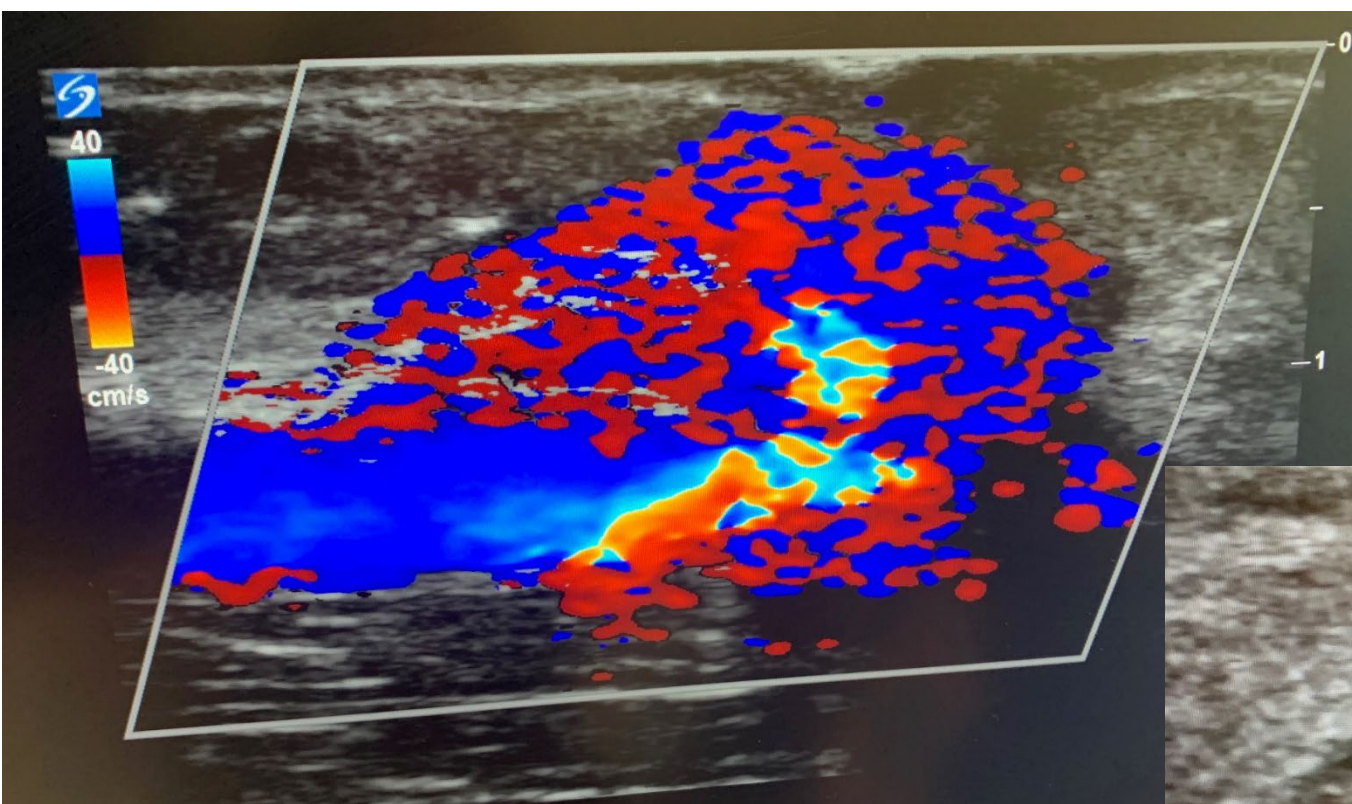


RENAL

SonoSite

HFL38xp/13-6 Arterial
MI: 0.4 TIS: 0.2

PW: G: 50 6mm, -60° 5208Hz -20°
Color: G: 50 High 6250Hz -20°
2D: G: 50 Res DR: 0



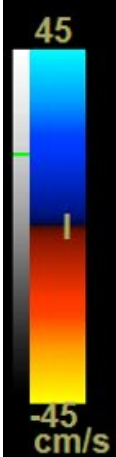
Case 4 (K Steiner + J Hanko)

May 2023 – difficulty needling



LOGIQ
E9

LOGIQ
E9



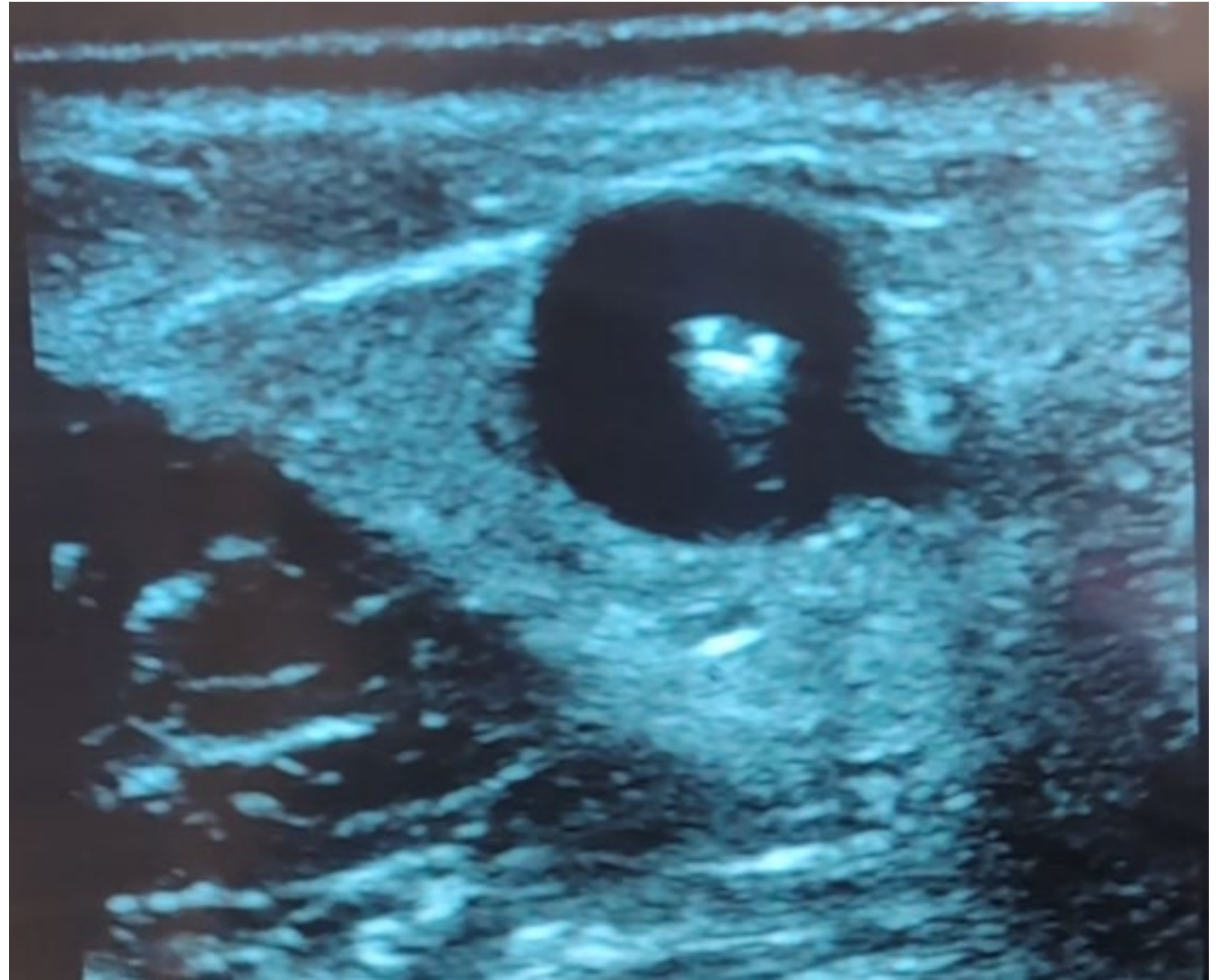
RIGHT GRAFT STENT

Case 5: cannulation



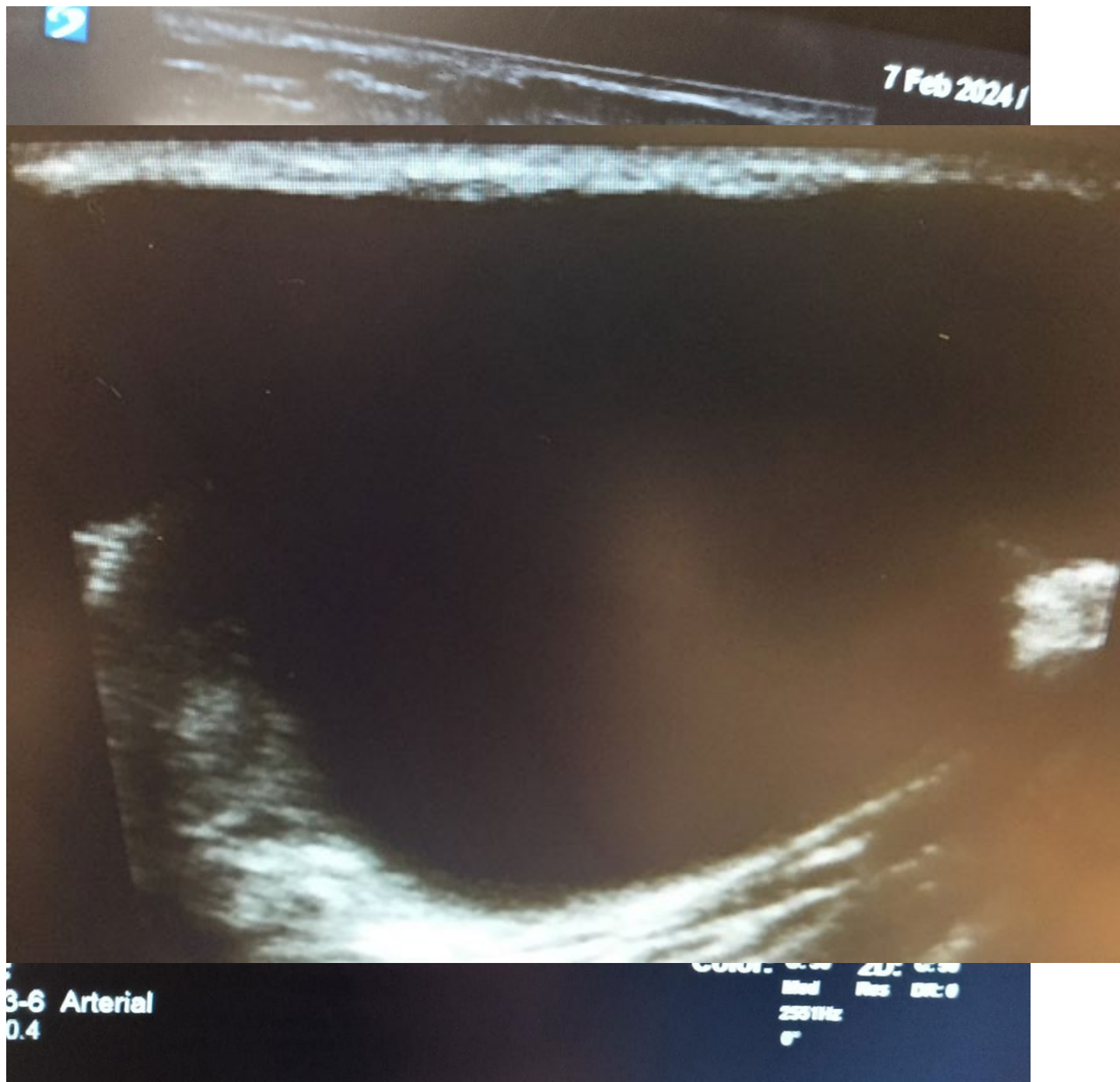


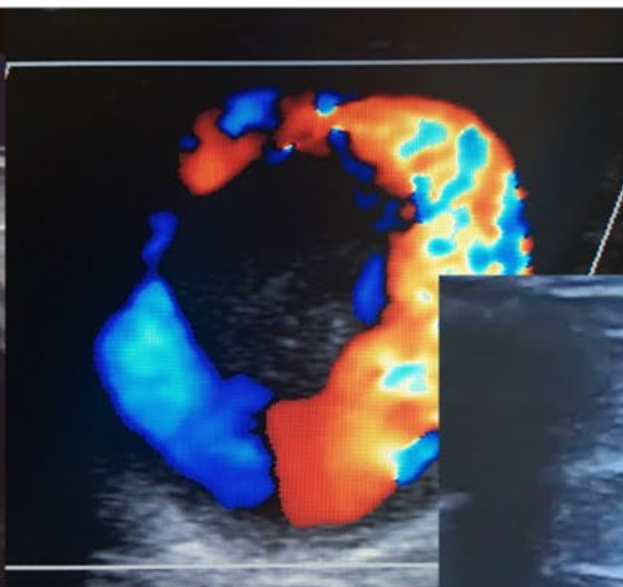
Marking helps but not always exact – use your skills



Needle in centre of vessel

Complications: a few pictures







Ultrasound in Vascular Access

- Planning
 - Vein preservation
 - Mapping
- Follow-up
 - Maturation
 - Diagnosis
 - Surveillance
- Needling