

**VENOUS
ANGIOPLASTY FOR
AVF UNDER
DUPLIX-SCAN**

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DISCLOSURE OF INTEREST

- I do not have any potential conflict of interest for this talk...

... except that I'm vascular physician and thus working with ultrasound every day, all day long

3 MOST FREQUENTLY ASKED QUESTIONS

1 - ARE YOU CRAZY ?





- Wide range of
 - Balloons (flexible/High pressure)
 - Catheters
 - Stents
- Emergency tools
 - Covered stents
 - Aspiration catheter
 - Coils
- X-Room



2 – WHAT DOES IT LOOK LIKE ?

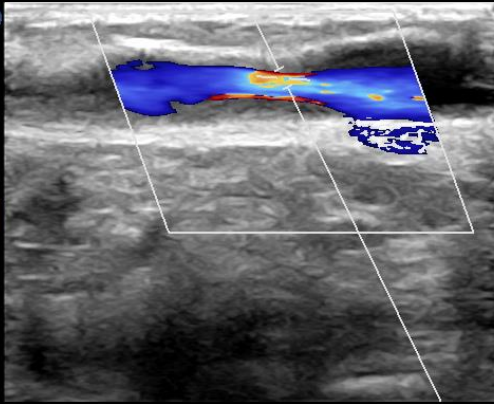
AMI
L12-3
24Hz

60°

2D
77%
R Dyn 56
P Bas
HGén

Coul
51%
12500Hz
FP 562Hz
5.0MHz
DP
56%
FP 200Hz
VE 1.5mm
3.5MHz
0.6cm

Sténose



ITm0.3 IM 0.4

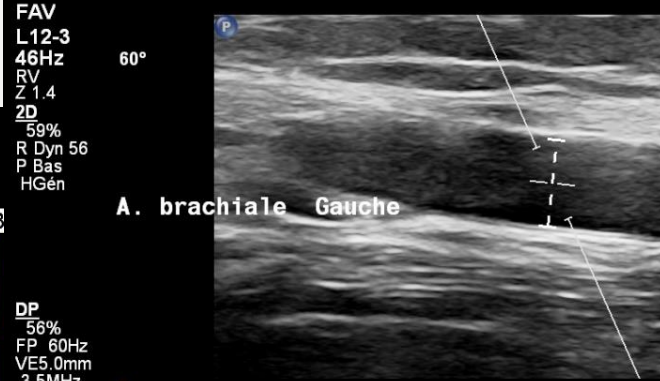
VSM -744 cm/s
VTD -441 cm/s
IR 0.41

M3 M3
+96.3
-96.3
cm/s

DP
56%
FP 60Hz
VE 5.0mm
3.5MHz
1.4cm

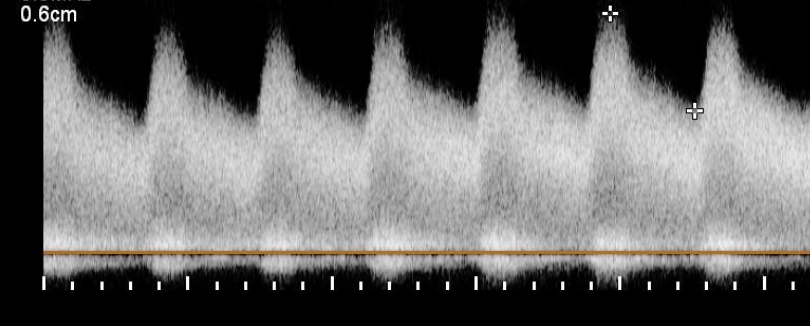
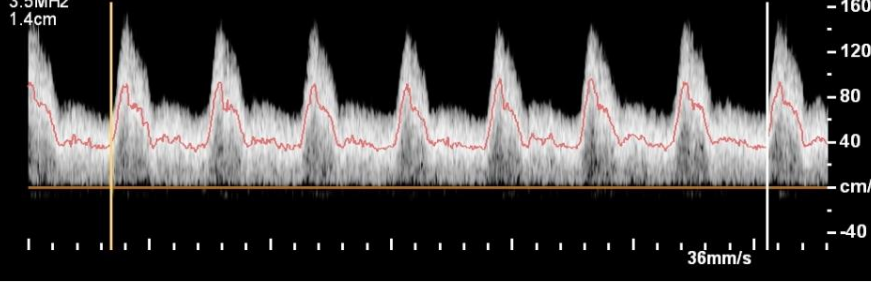
3.0cm

-8.0
-6.0
-4.0



A. brachiale Gauche

ITm0.1 IM 0.3
M3
Dist 0.563 cm
VMM 51.3 cm/s
Débit 765 cc/min
Surf 0.249 cm²



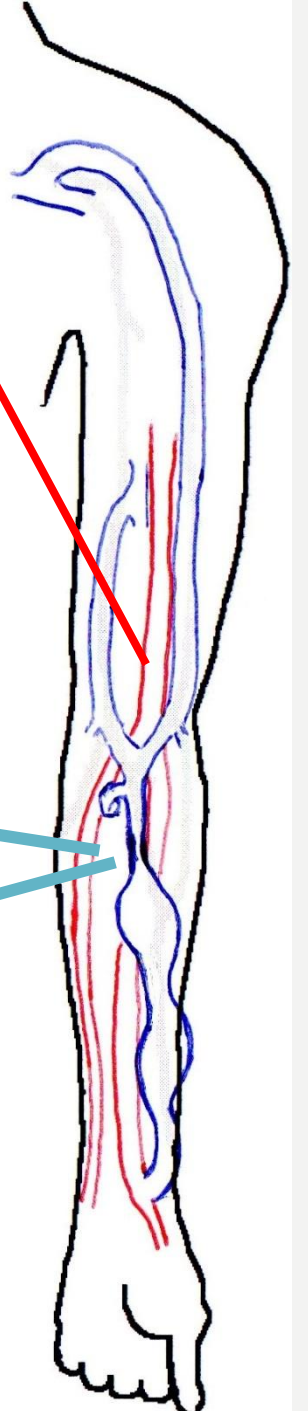
FAV
L12-3
46Hz
RV
2D
59%
R Dyn 56
P Bas
HGén

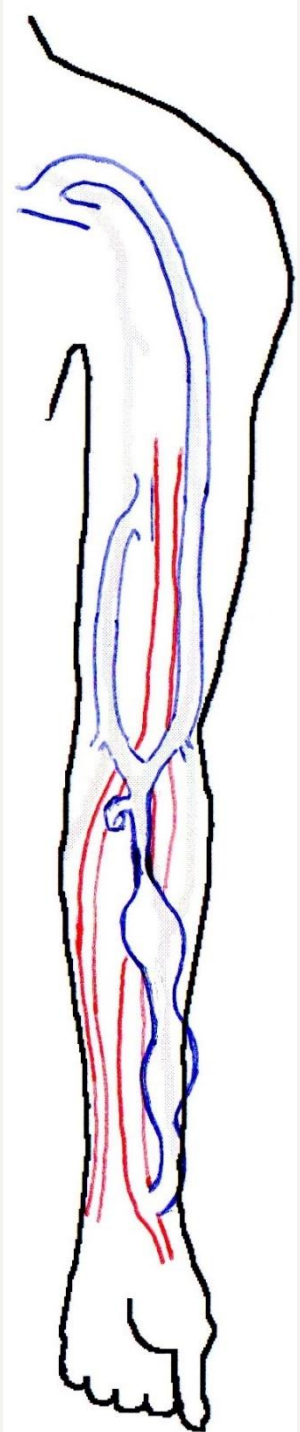
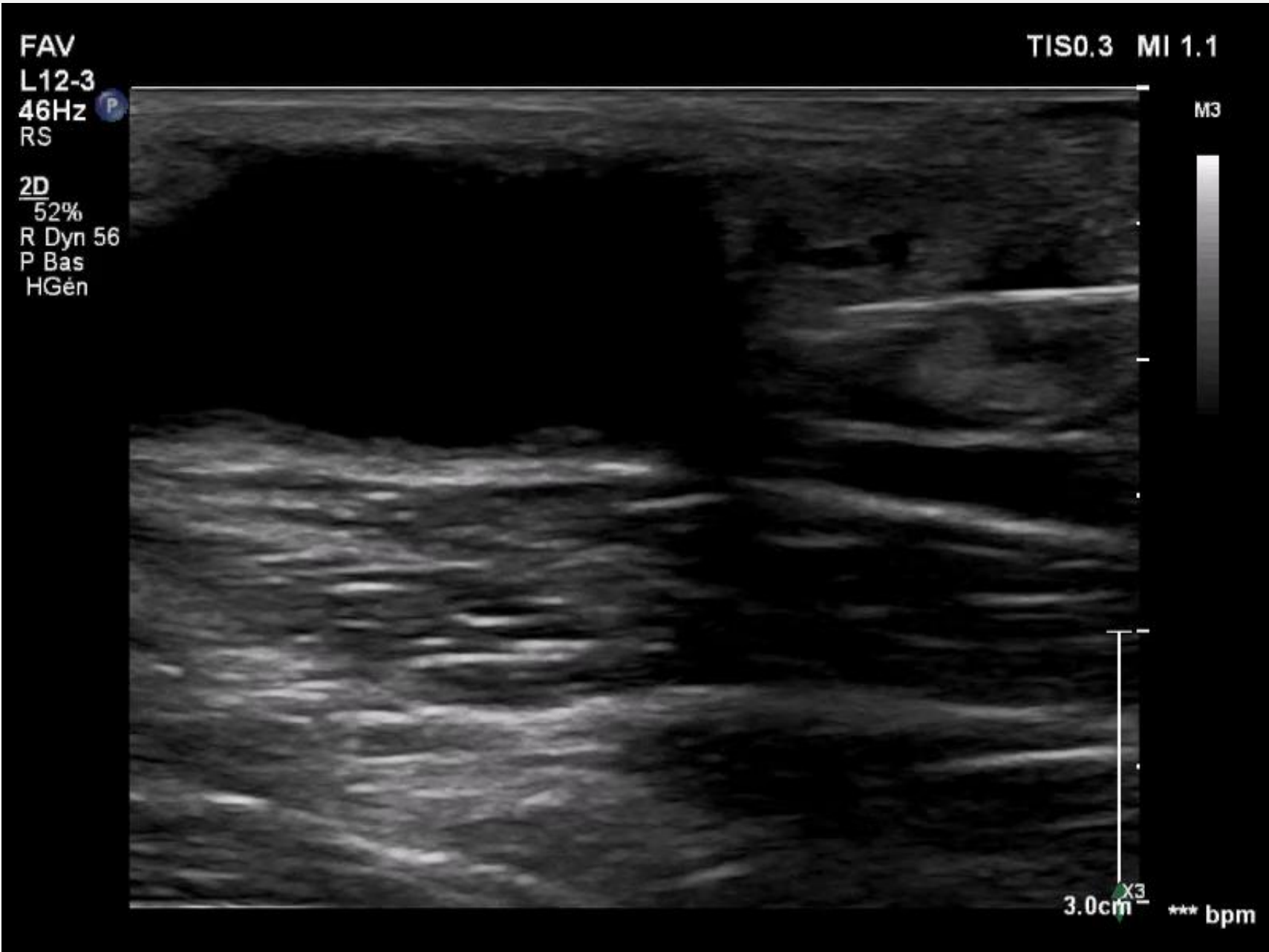
3

Dist 3.04 cm



3.0cm





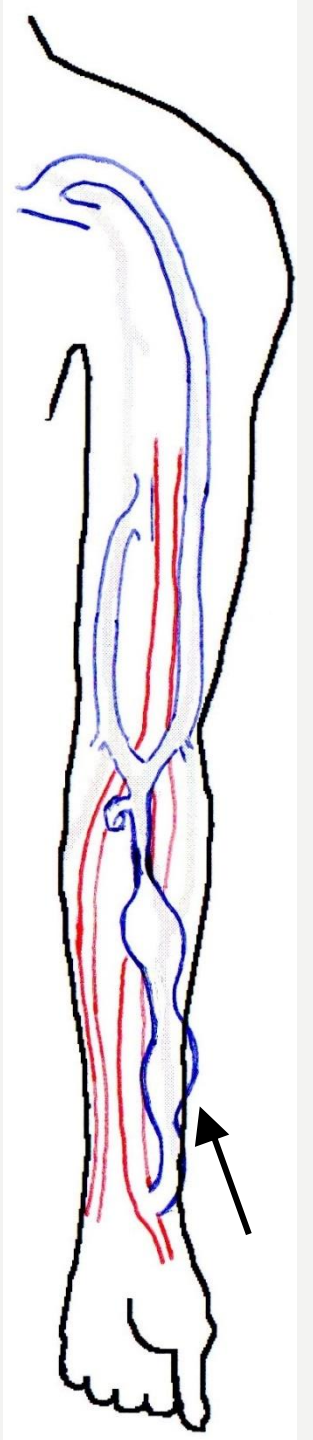
FAV
L12-3
46Hz P
RS

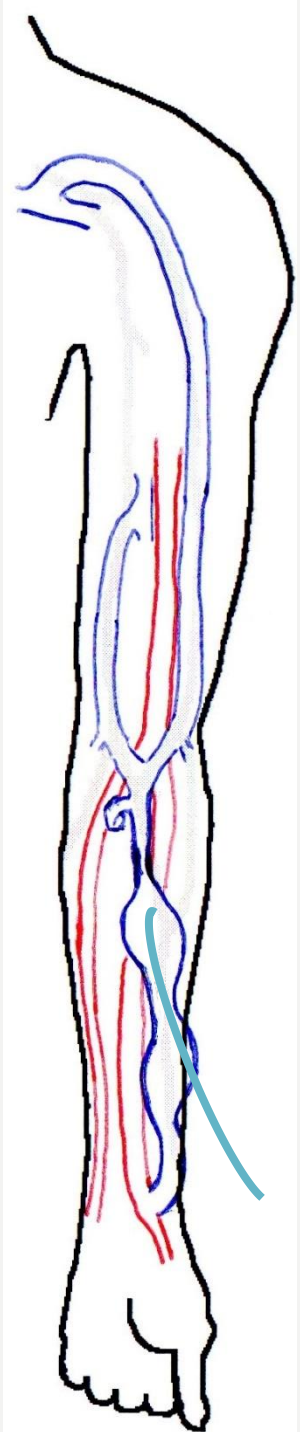
2D
52%
R Dyn 56
P Bas
HGén

TISO.3 MI 1.1

M3

3.0cm X3 *** bpm



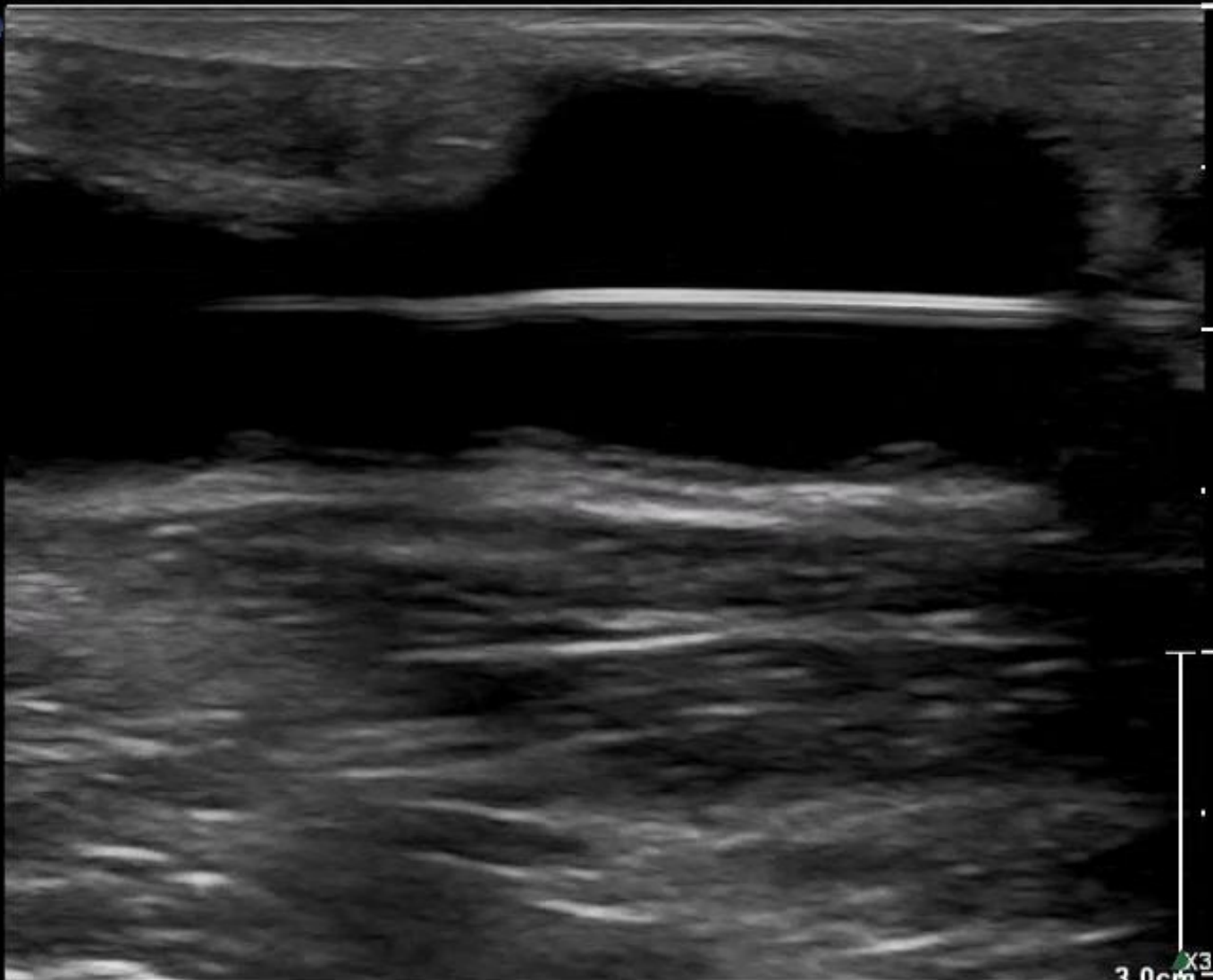


FAV
L12-3
46Hz P
RS

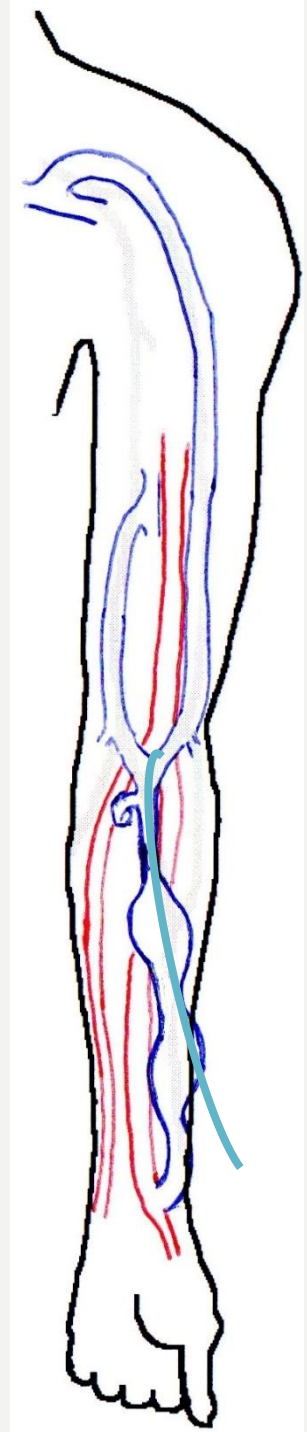
2D
55%
R Dyn 56
P Bas
HGen

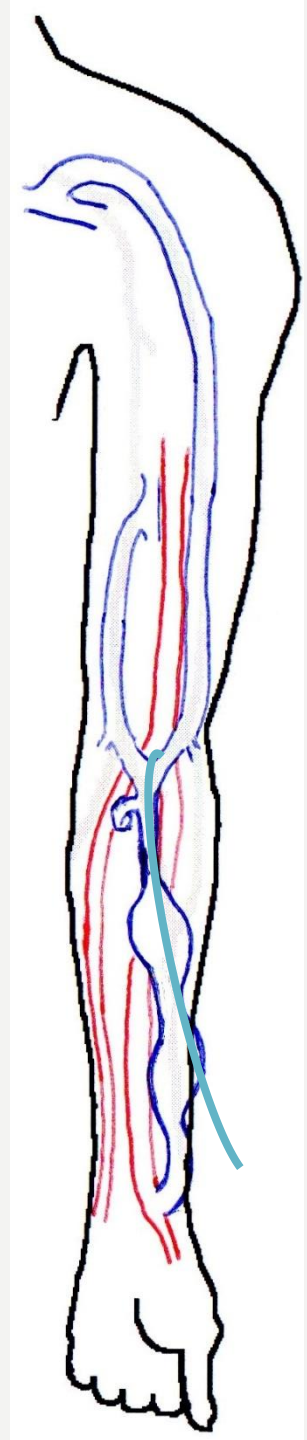
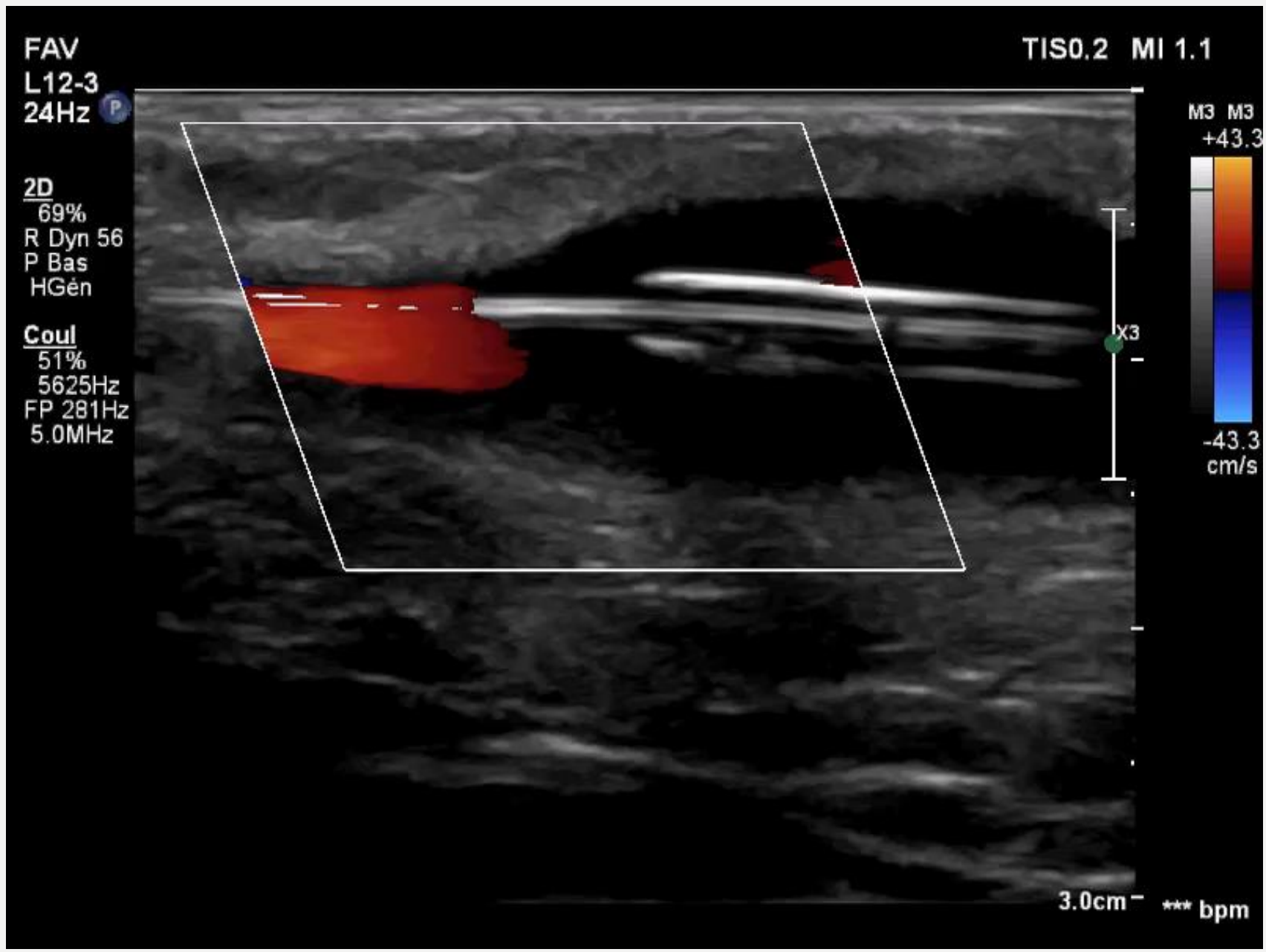
TISO.3 MI 1.1

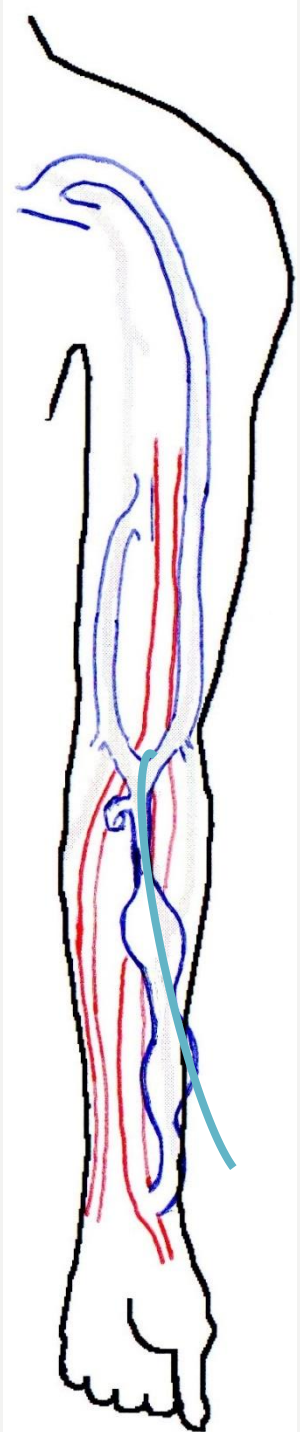
M3

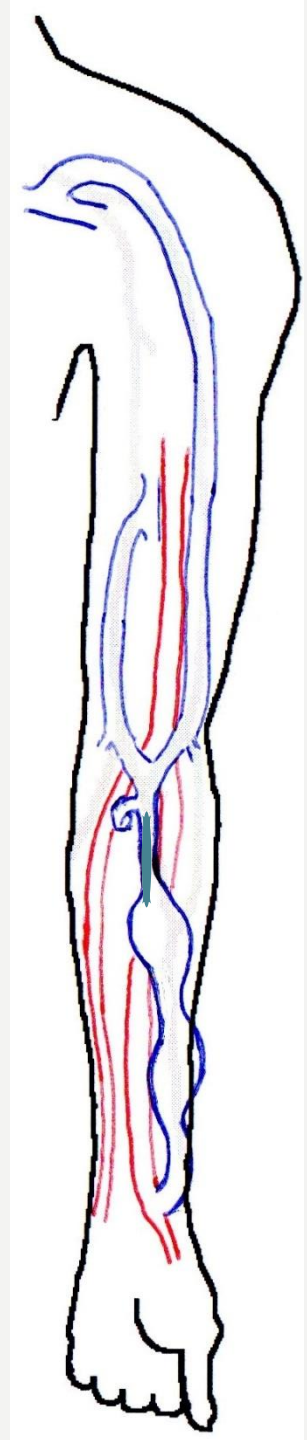


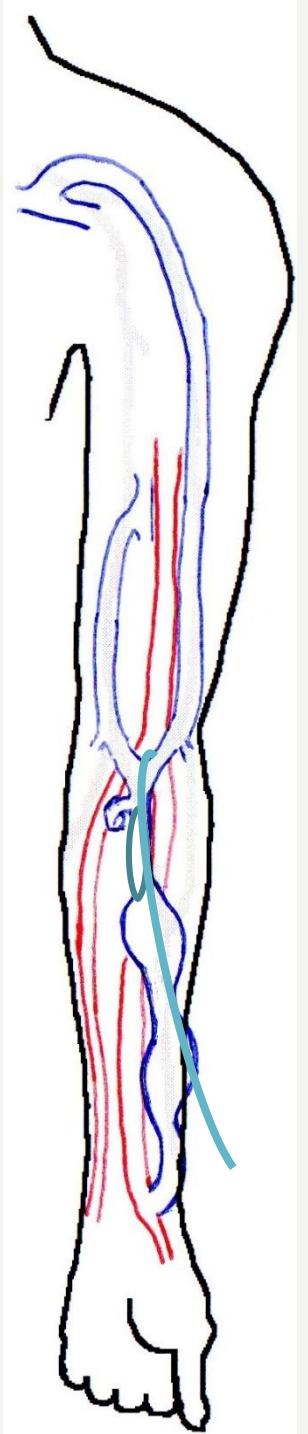
3.0cm X3 *** bpm











FAV
L12-3
46Hz P
RV

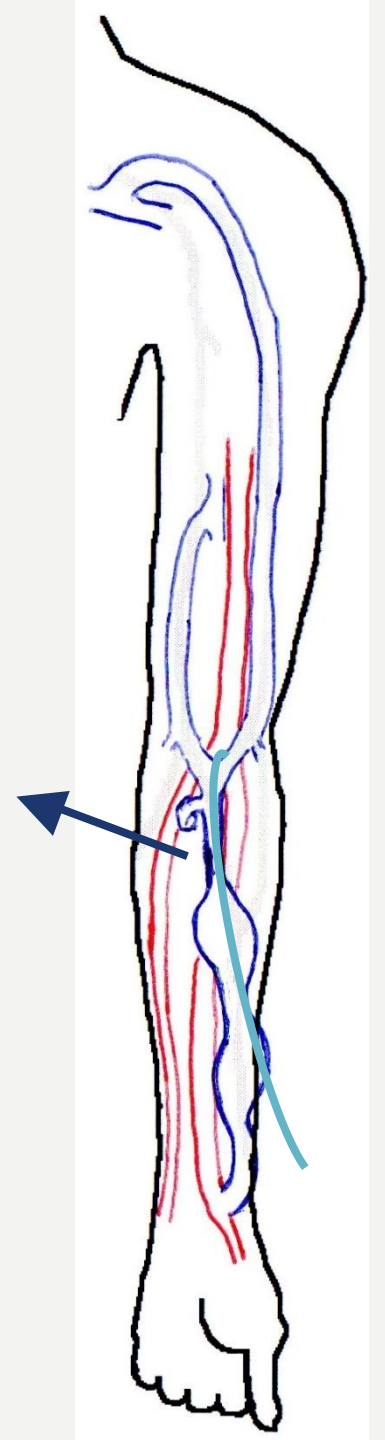
2D
55%
R Dyn 56
P Bas
HGén

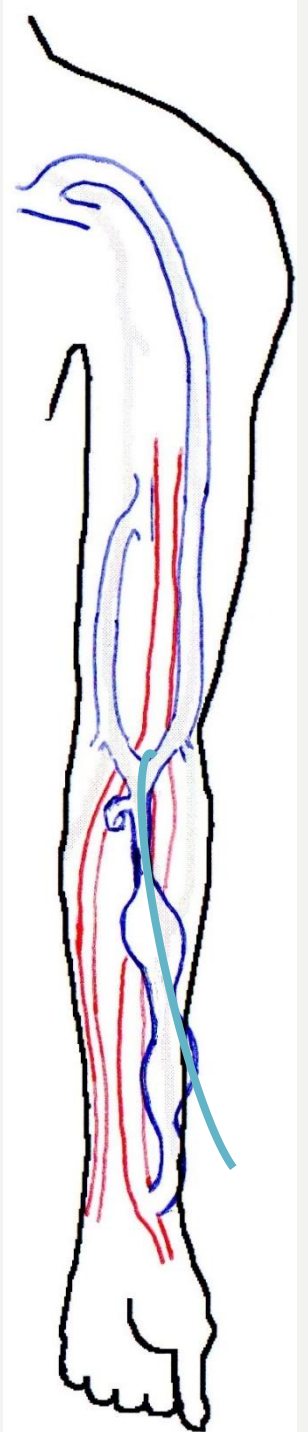
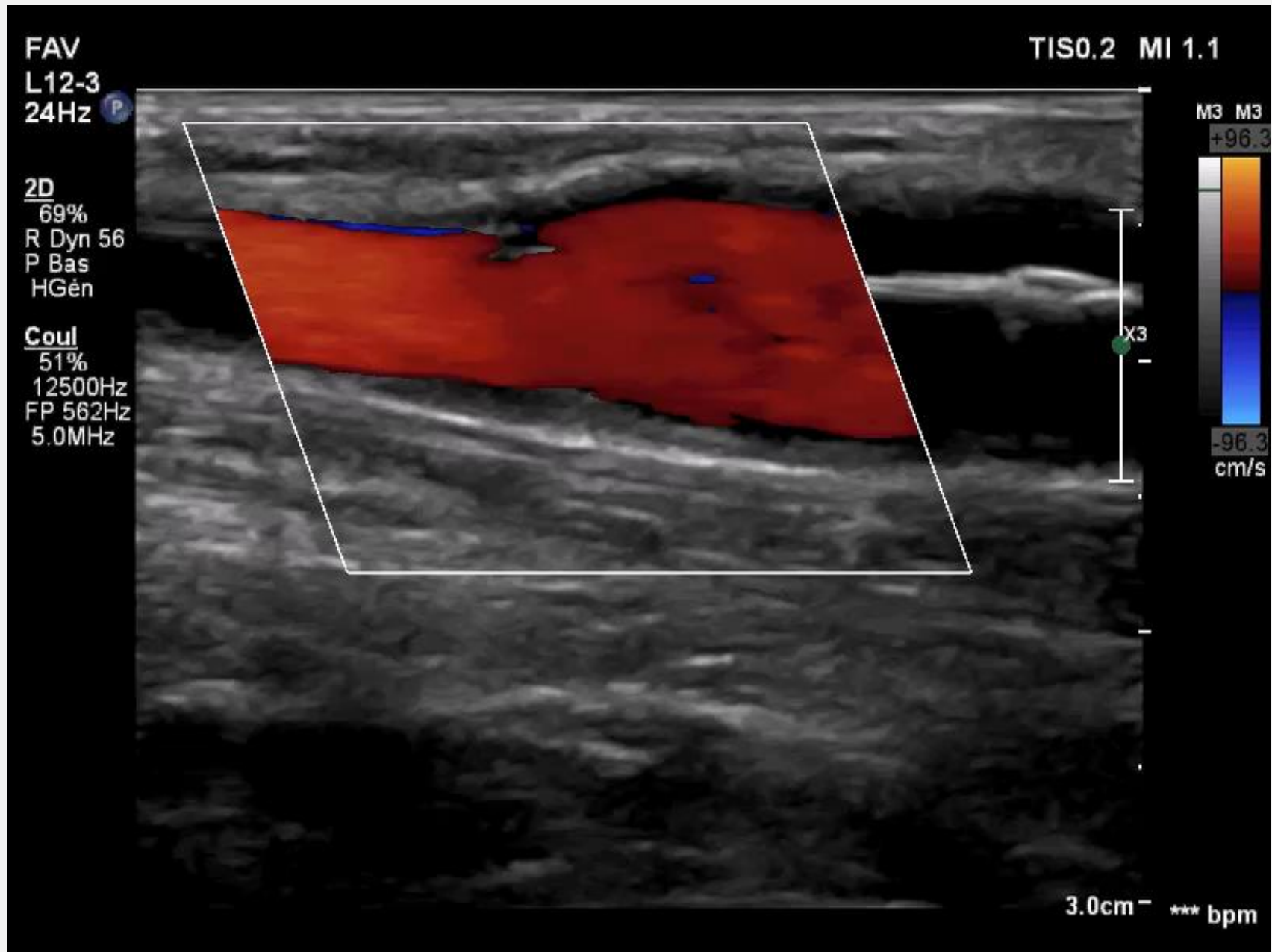
ITm0.2 IM 1.3

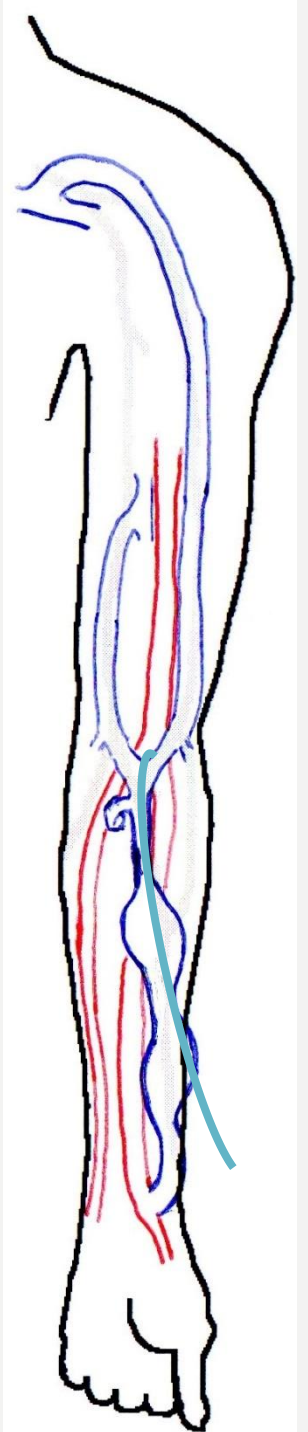
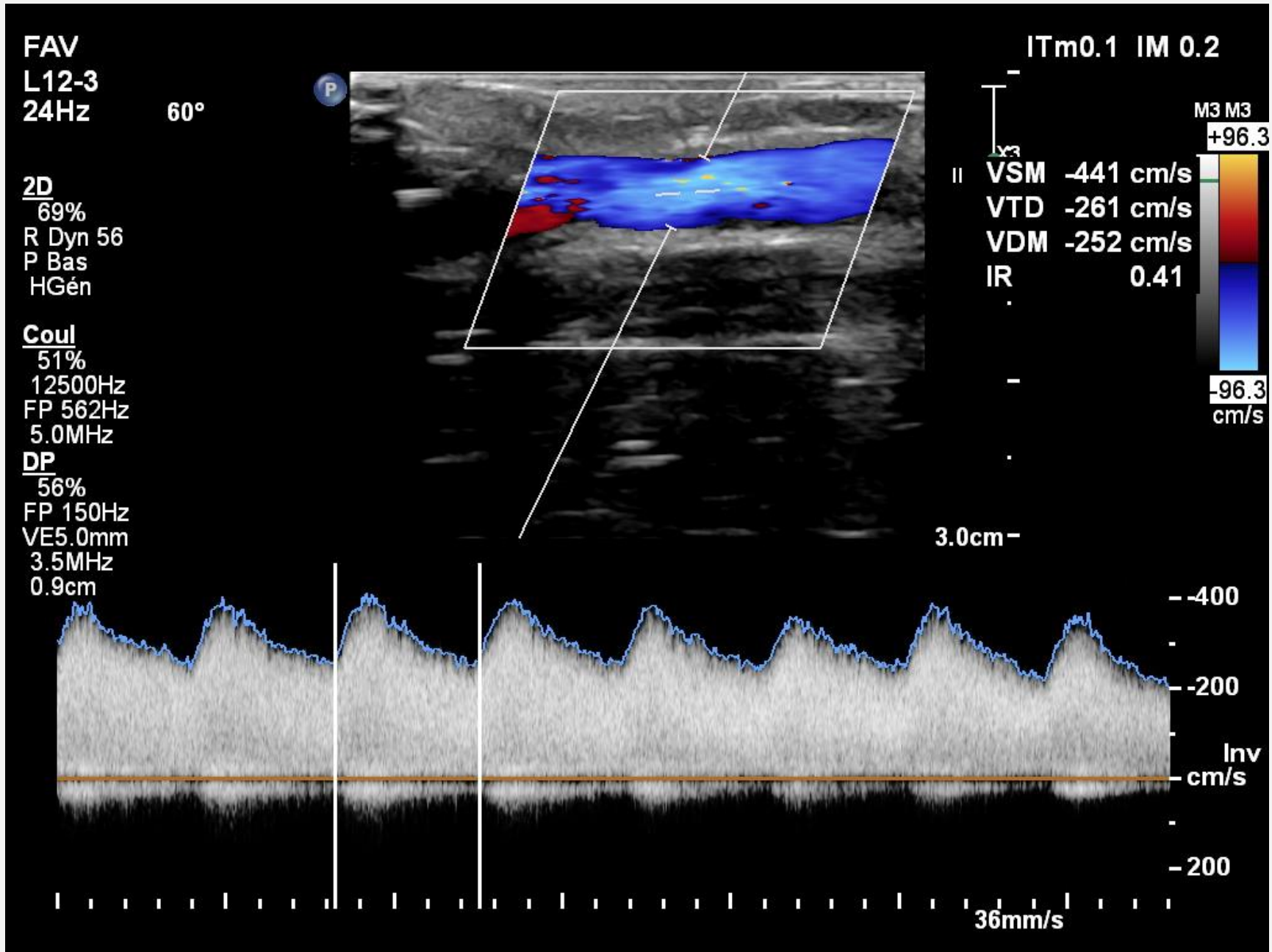
M3

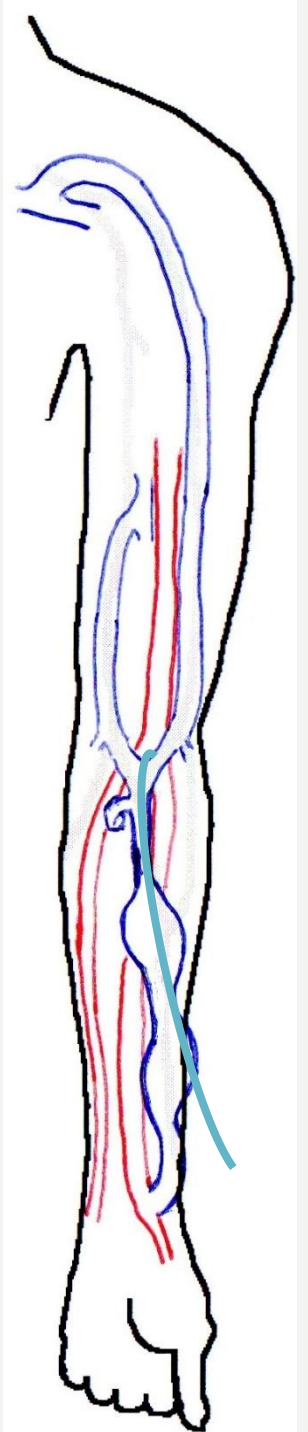
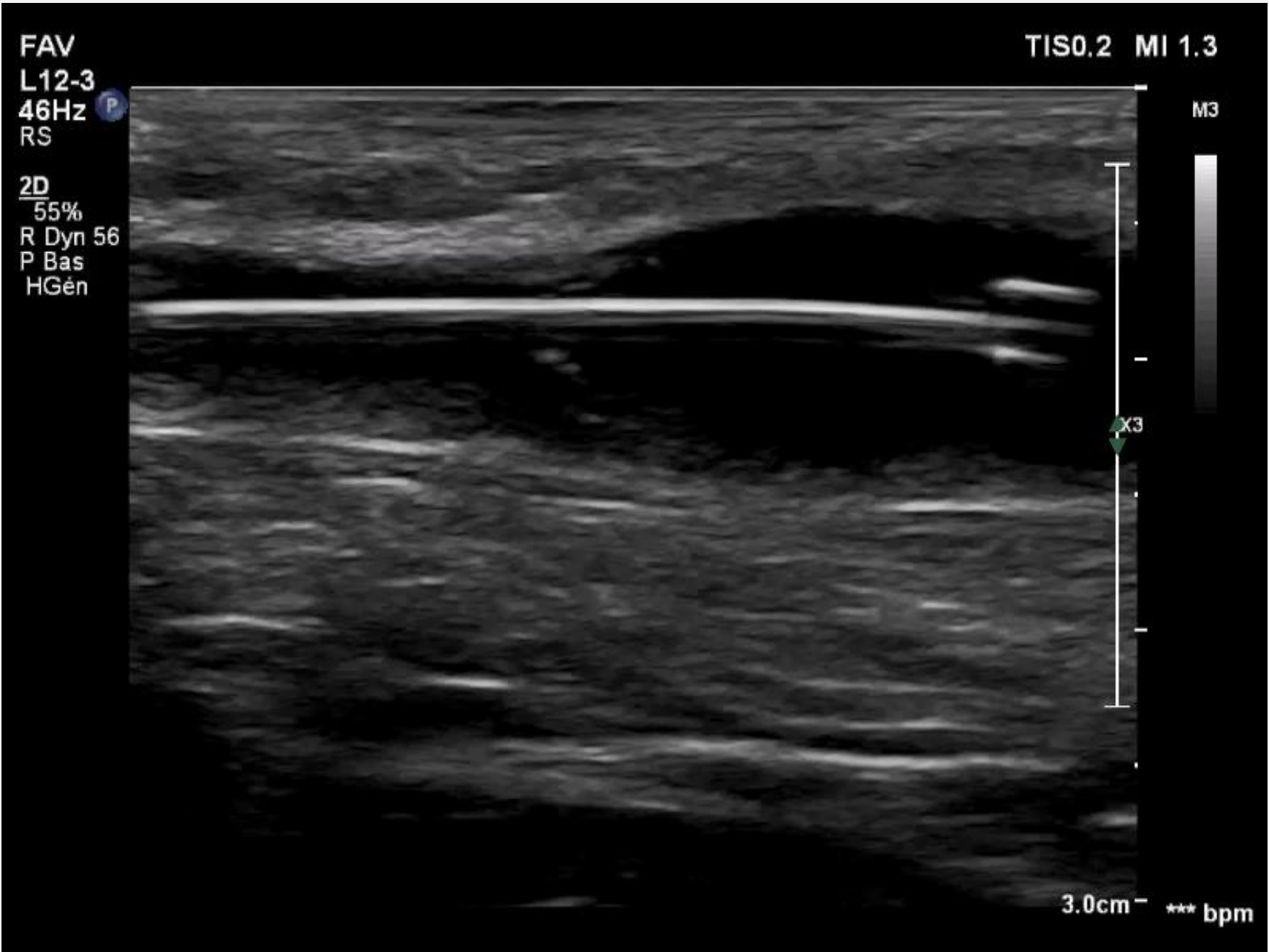
✦ Dist 0.412 cm

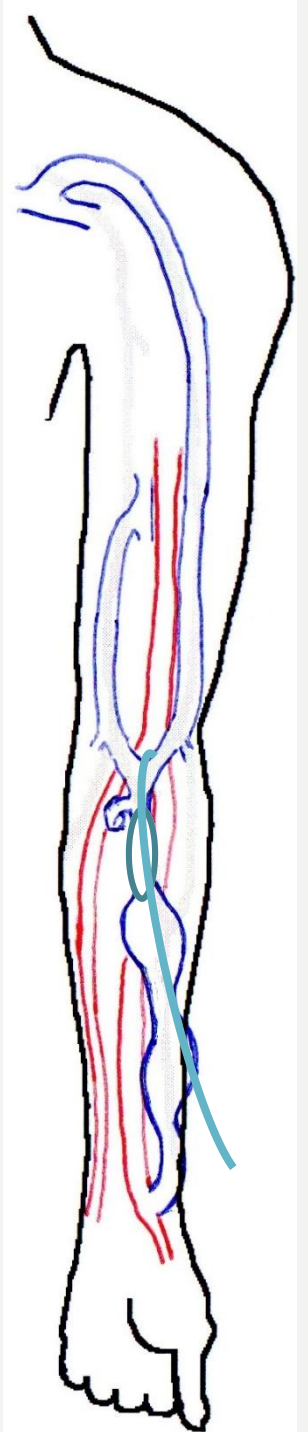
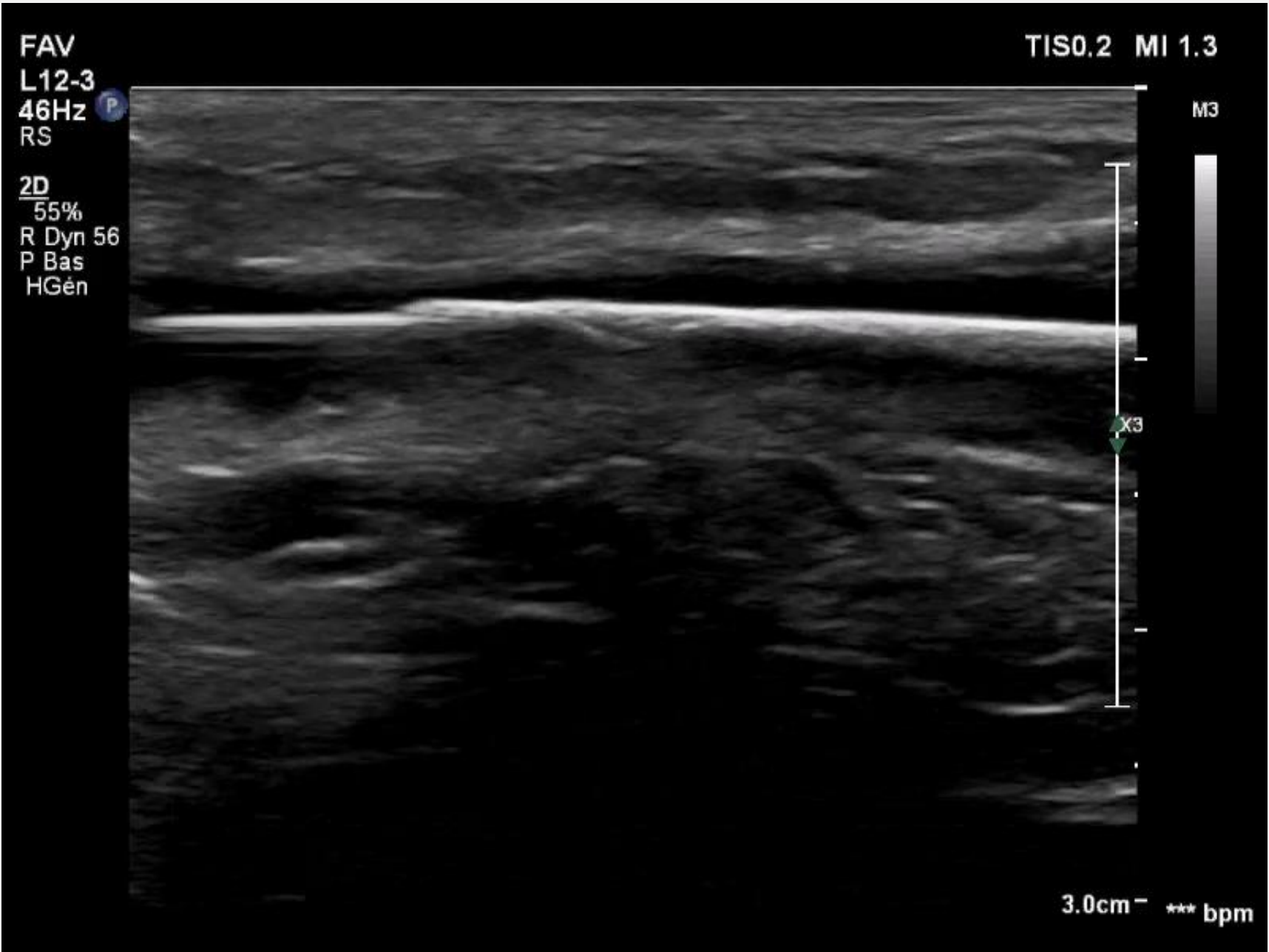
3.0cm

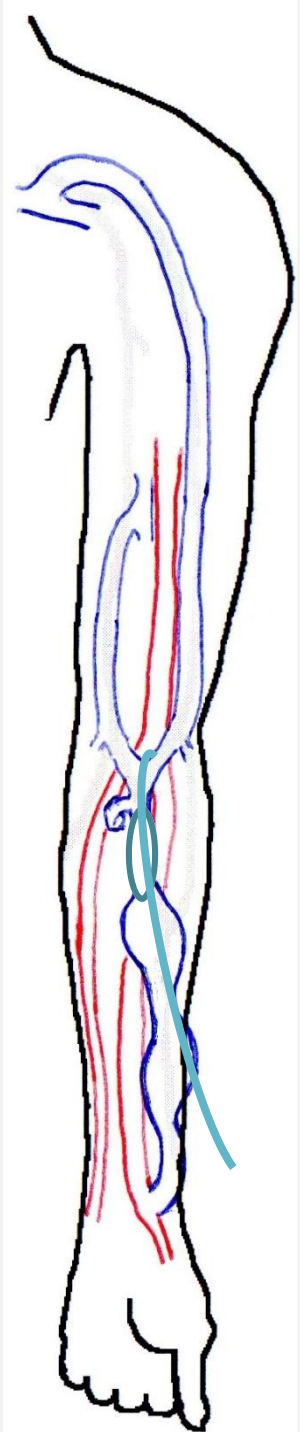


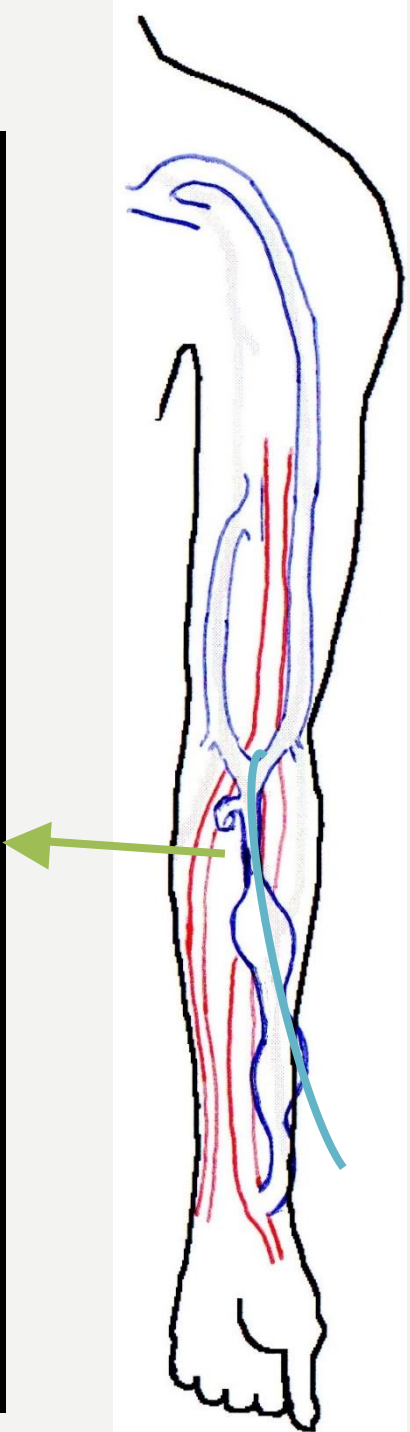
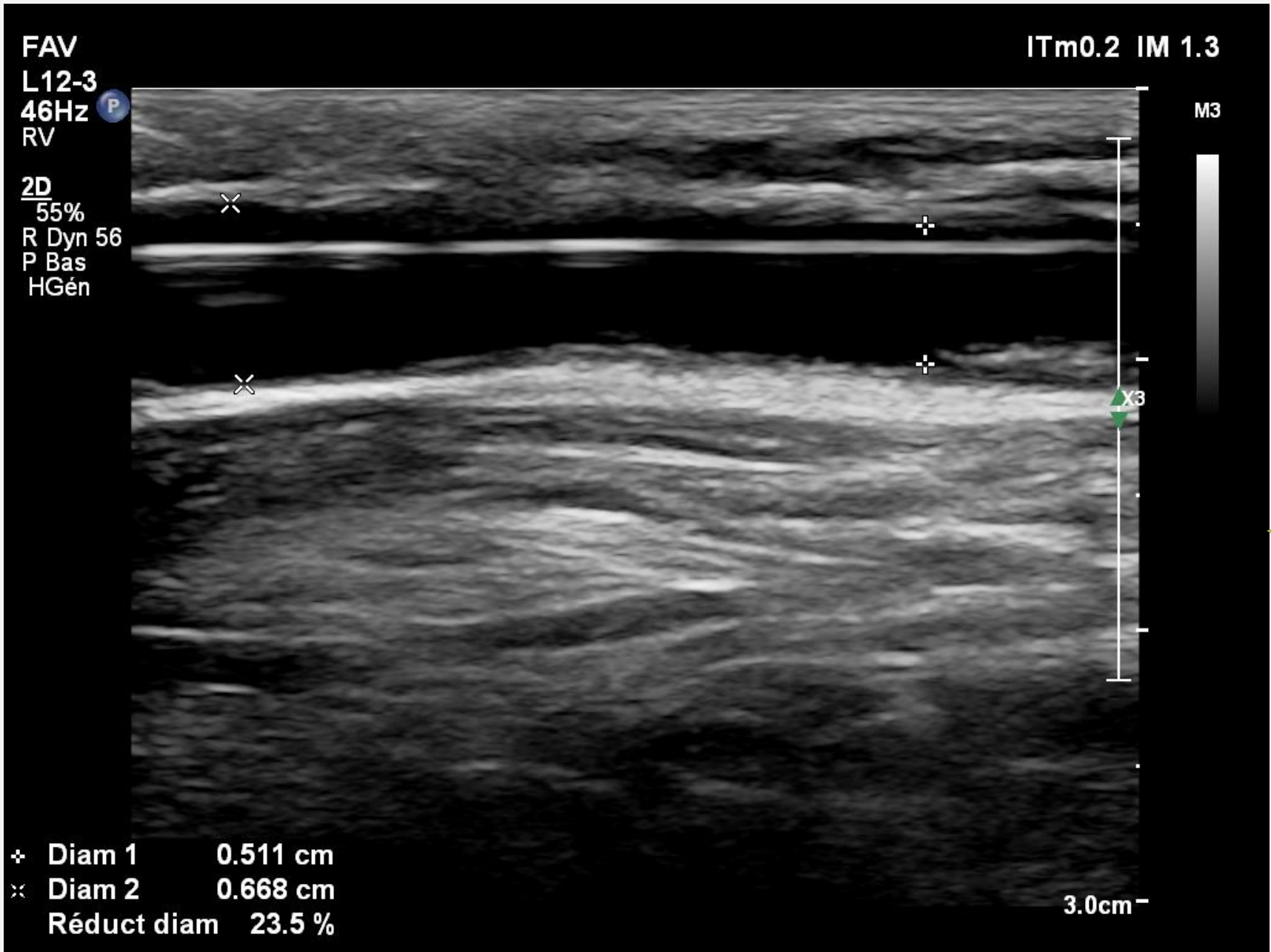


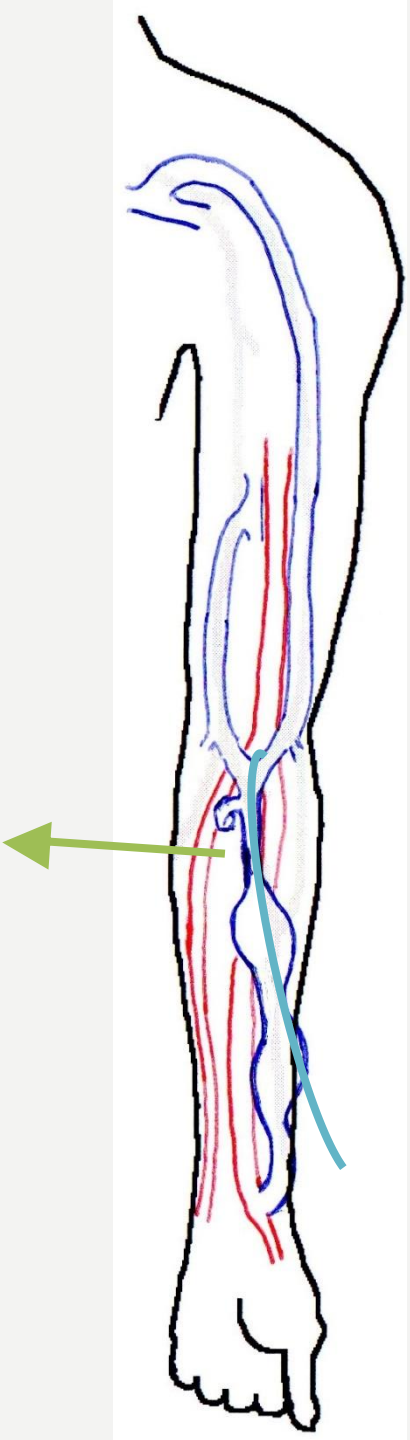
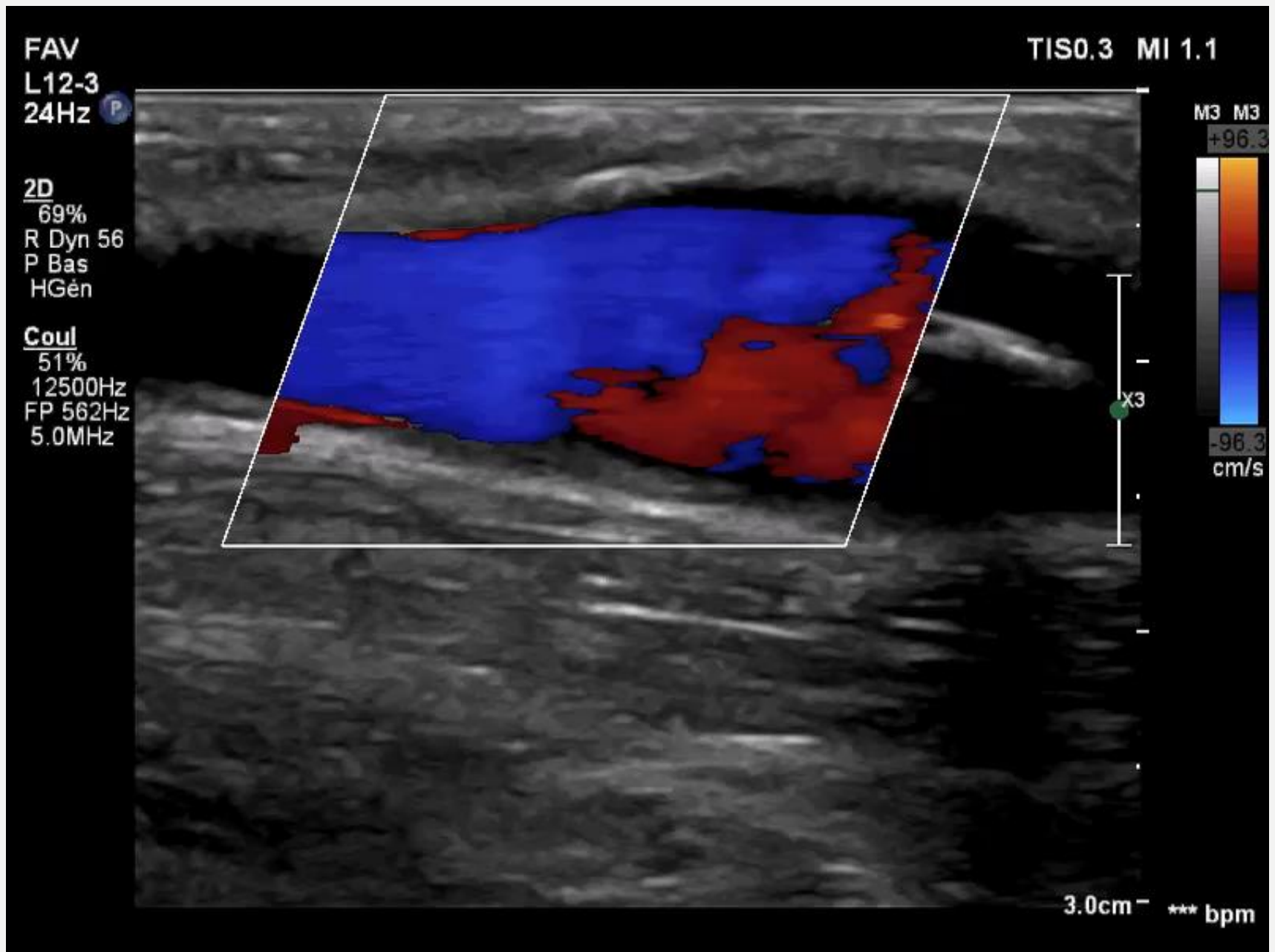


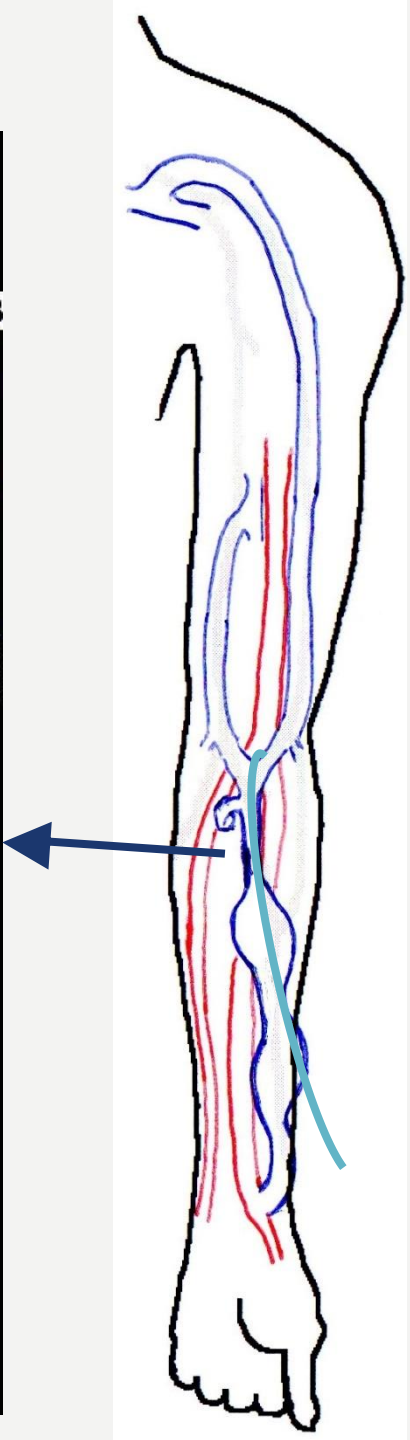
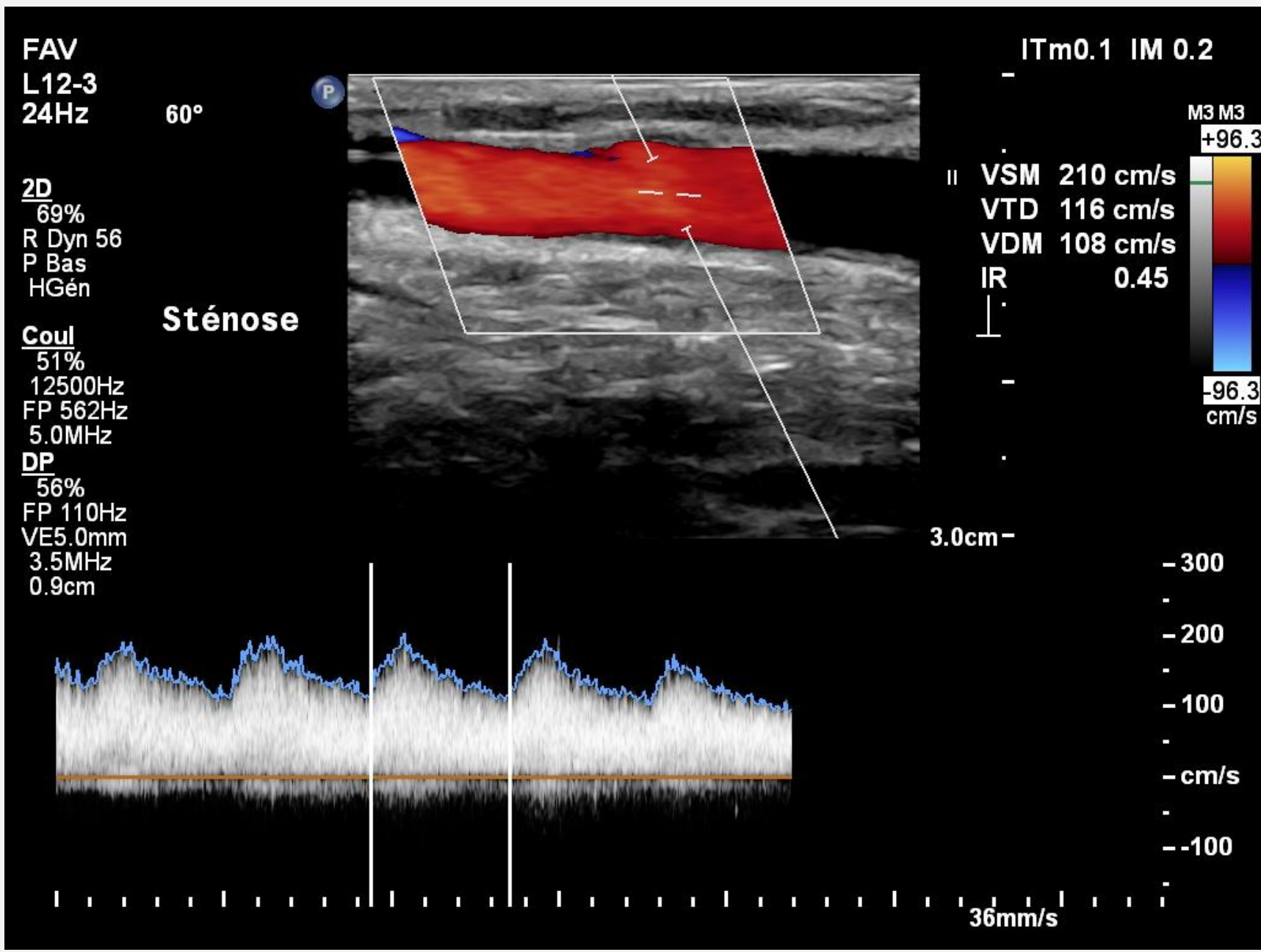


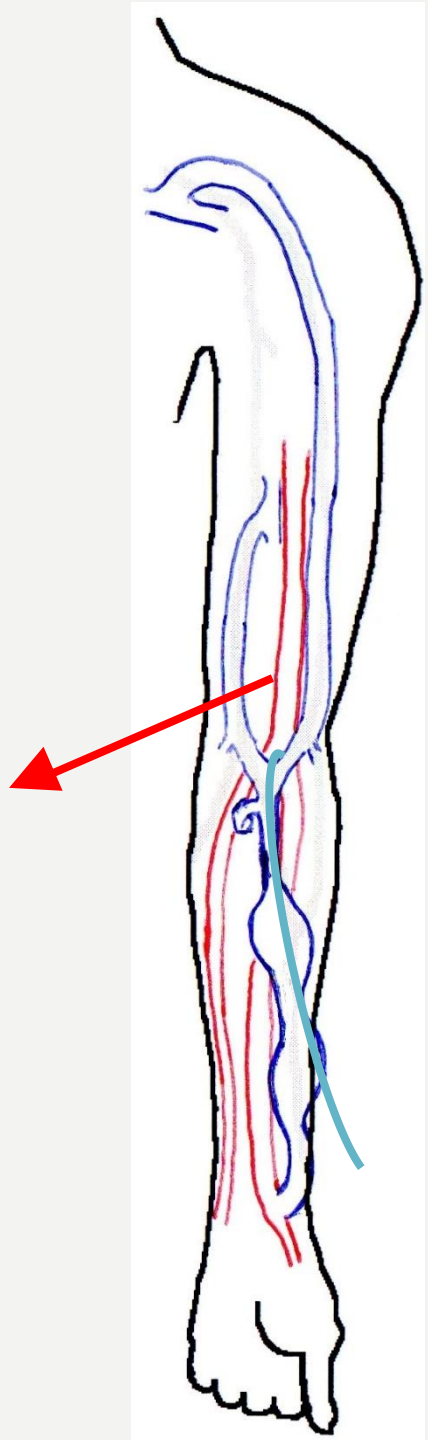
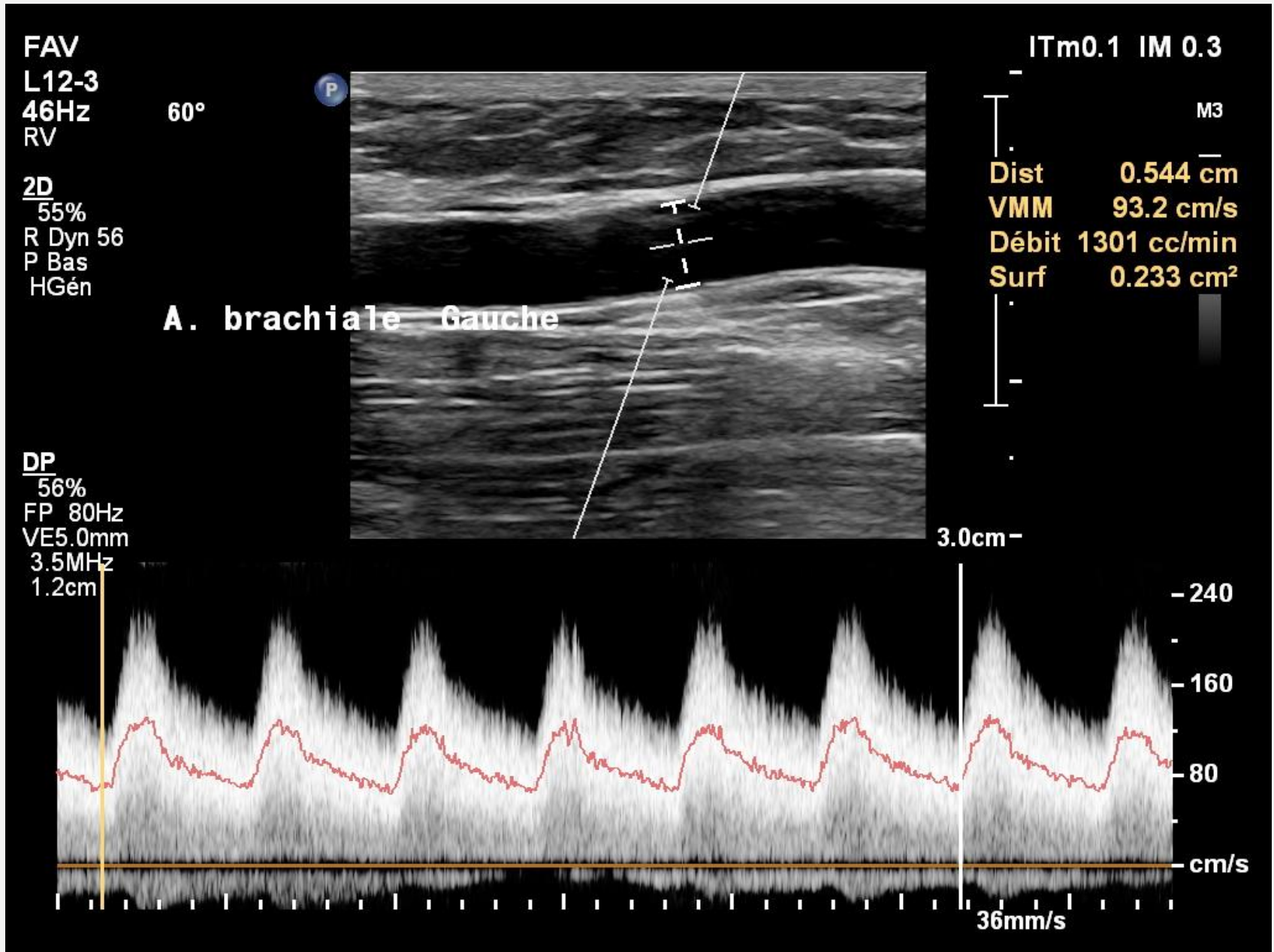




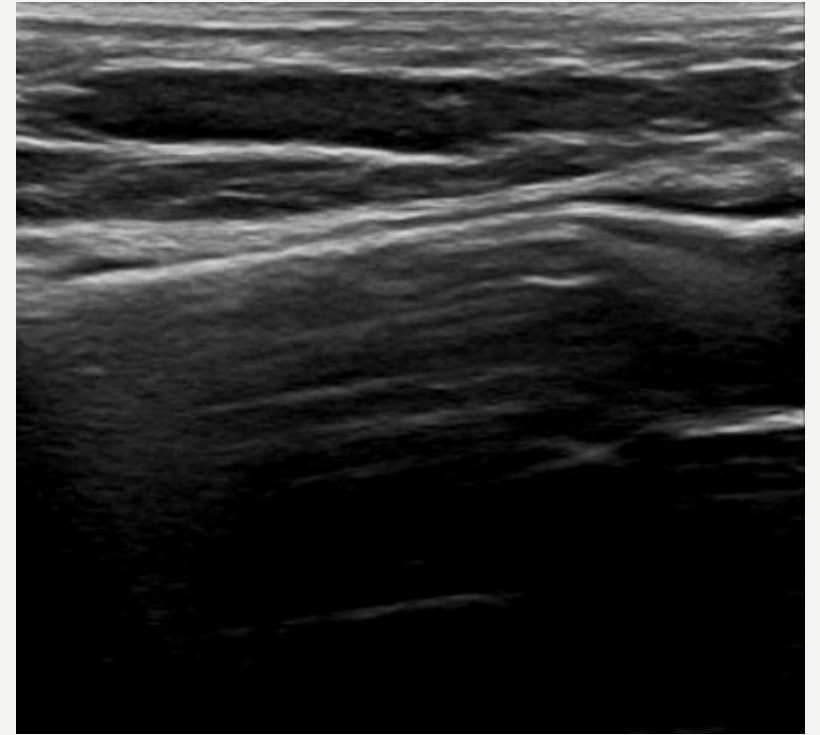
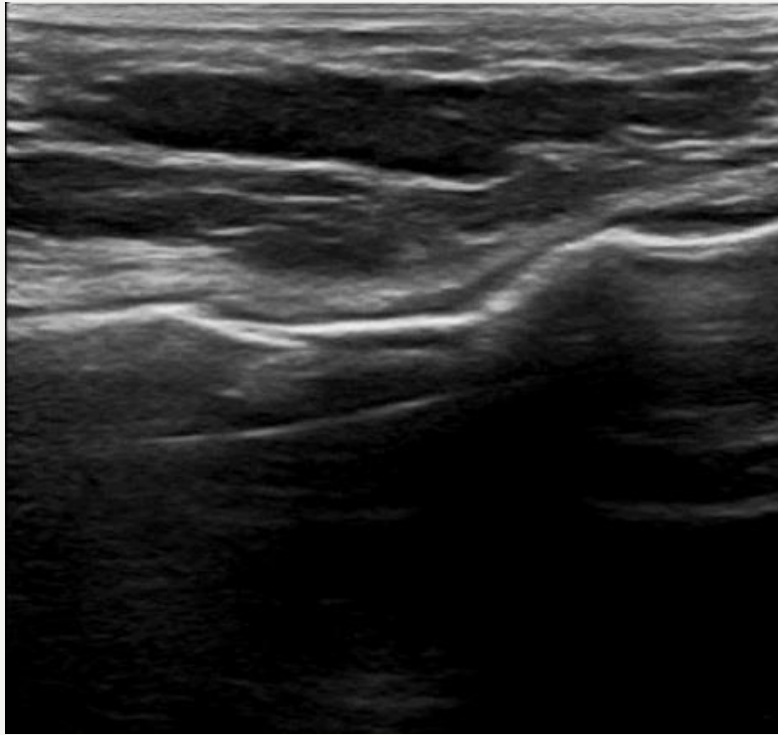








HOURGLASS SIGN



3 – AND WHAT ABOUT COMPLICATIONS ?

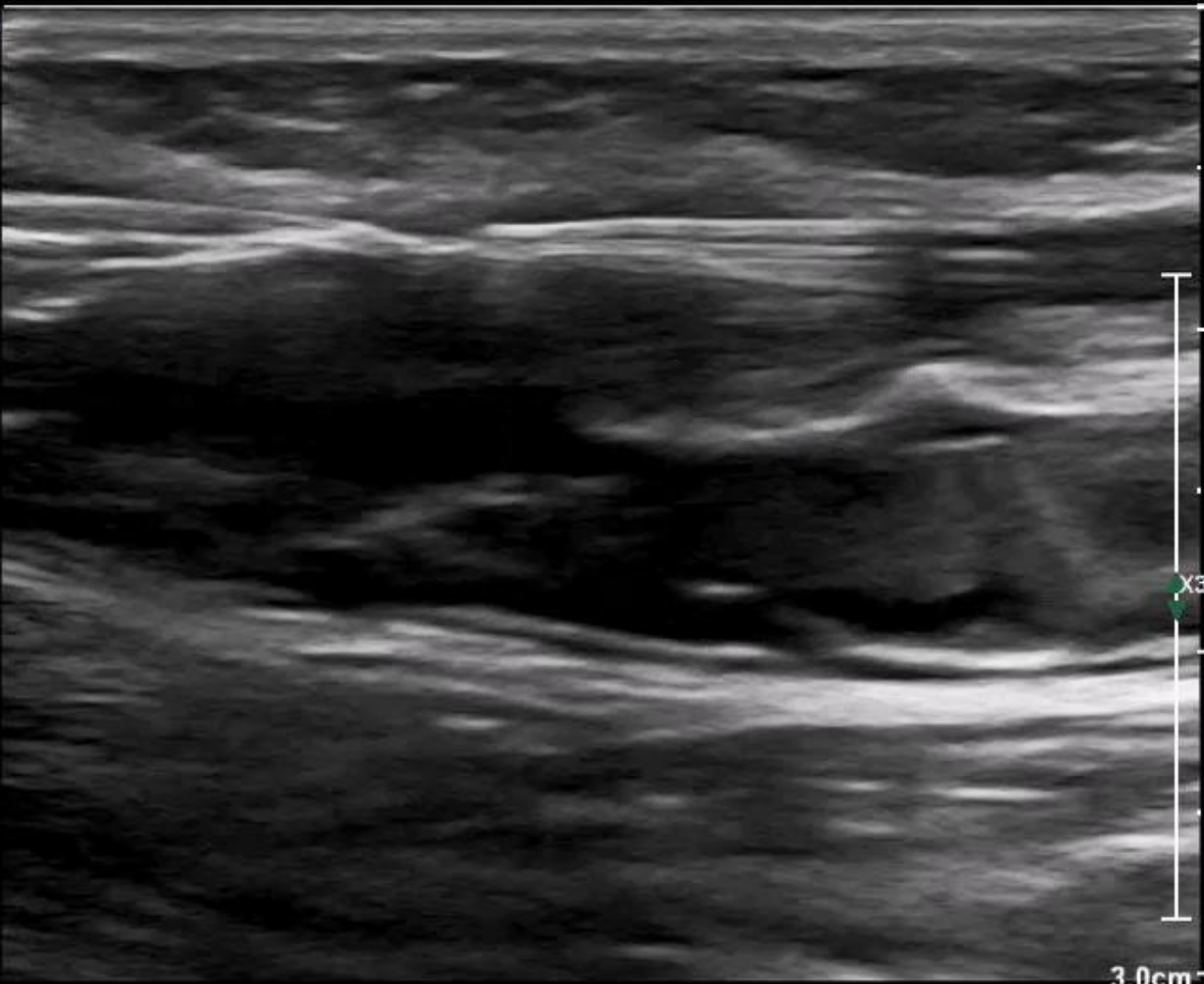
RUPTURE : WALL HEMATOMA



FAV
L12-3
46Hz P
RS

TIS0.2 MI 1.3

2D
59%
R Dyn 56
P Bas
HGén



M3



X3

3.0cm *** bpm

THE ICEBERG



THE ICEBERG



RUPTURE : HEMATOMA

Tip of the iceberg

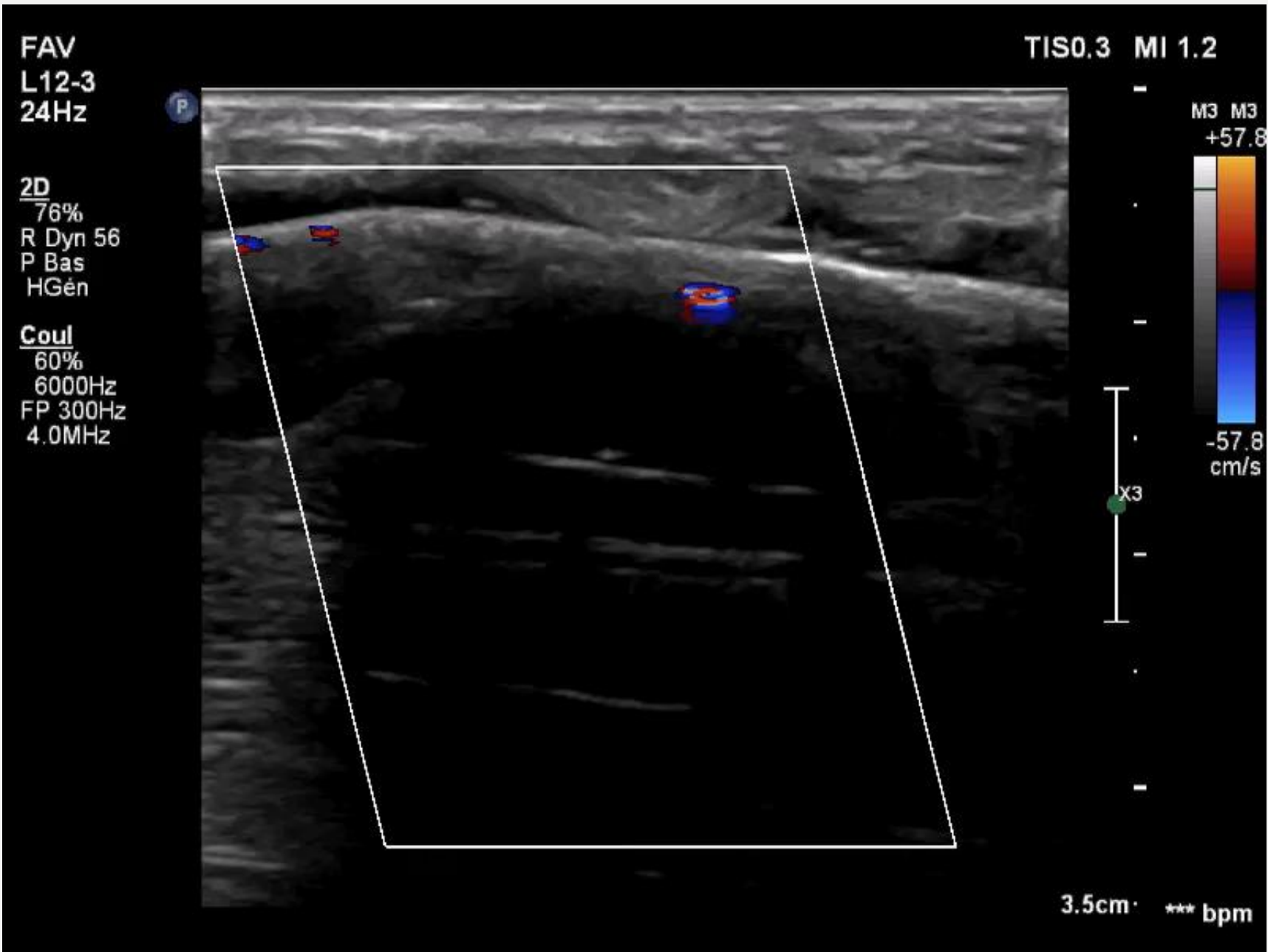


Submerged part



RUPTURE : FALSE ANEURYSM



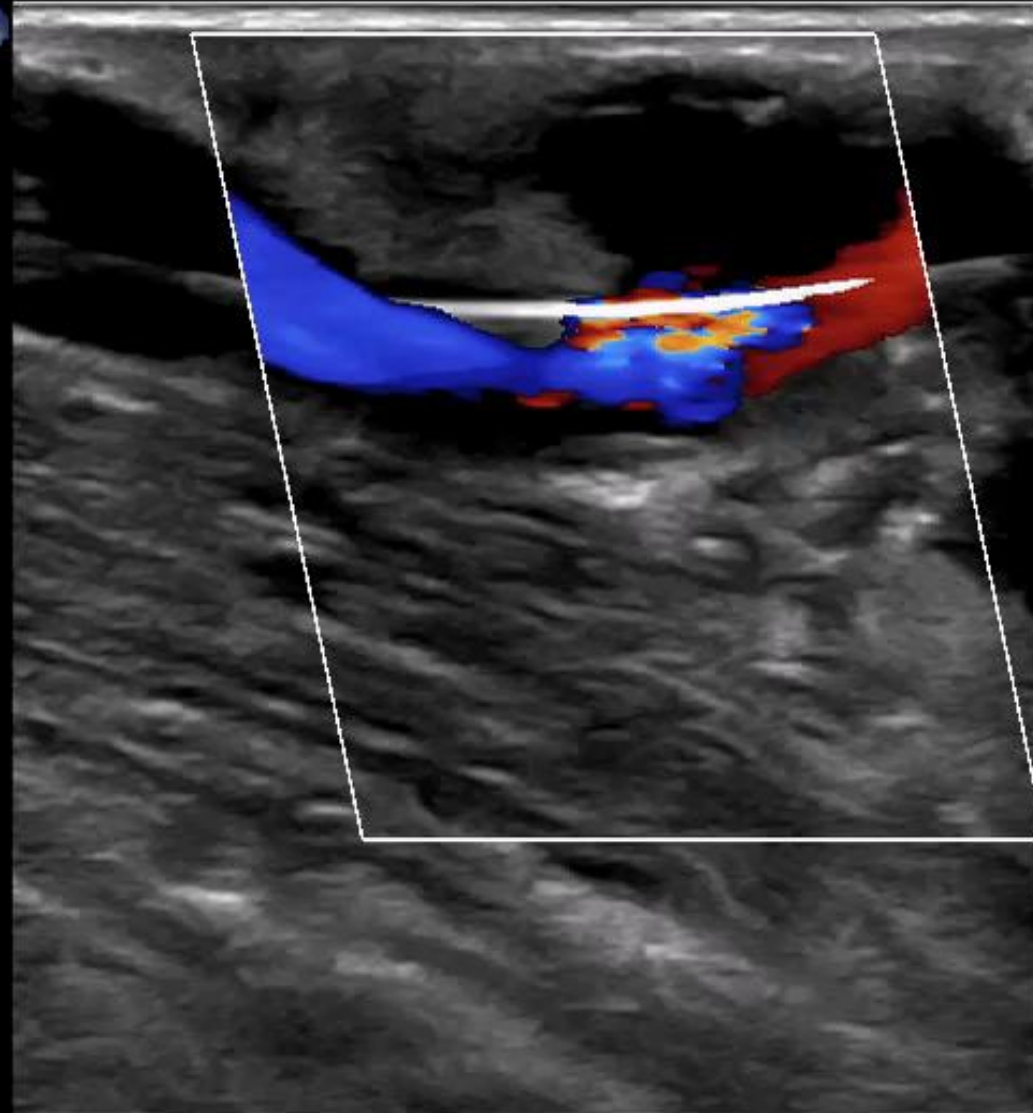


FAV
L12-3
22Hz

2D
77%
R Dyn 56
P Bas
HGén

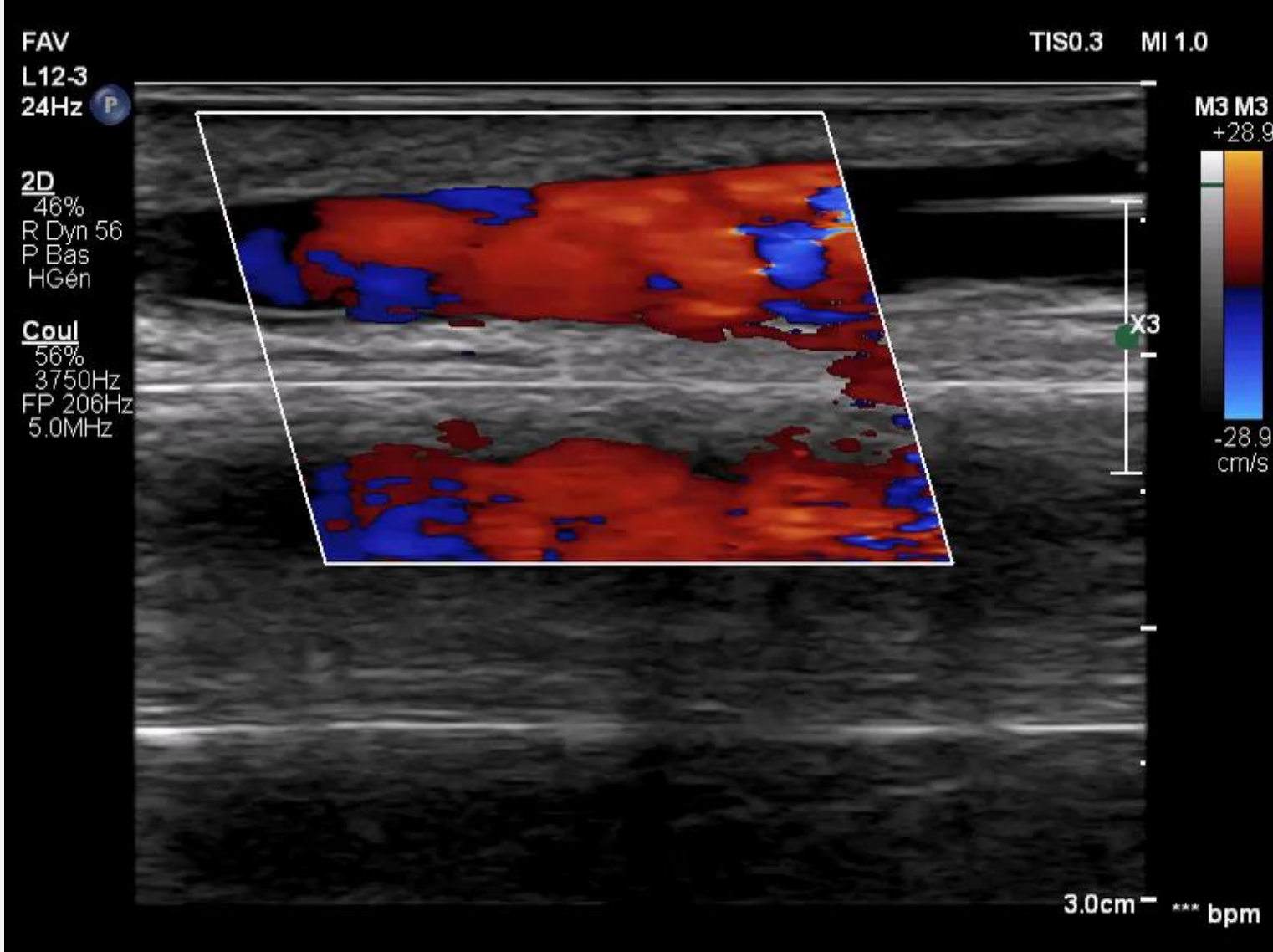
Coul
36%
12000Hz
FP 540Hz
4.0MHz

TISO.3 MI 1.2



4.0cm *** bpm

THROMBOSIS





TAKE HOME MESSAGE

Duplex-scan is safe imaging to treat AVF as well as to diagnose and treat angioplasty's complications

Ultrasound guidance :

You can do it : all the venous side, stenting

You can't do it : proximal deep vein obstruction

You can do it but it might be much more difficult to manage complications
: cephalic arch, radial artery

