

Sharpening the eyes

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Are we really just using our eyes?



Adjust your eyes



Adjust your machine

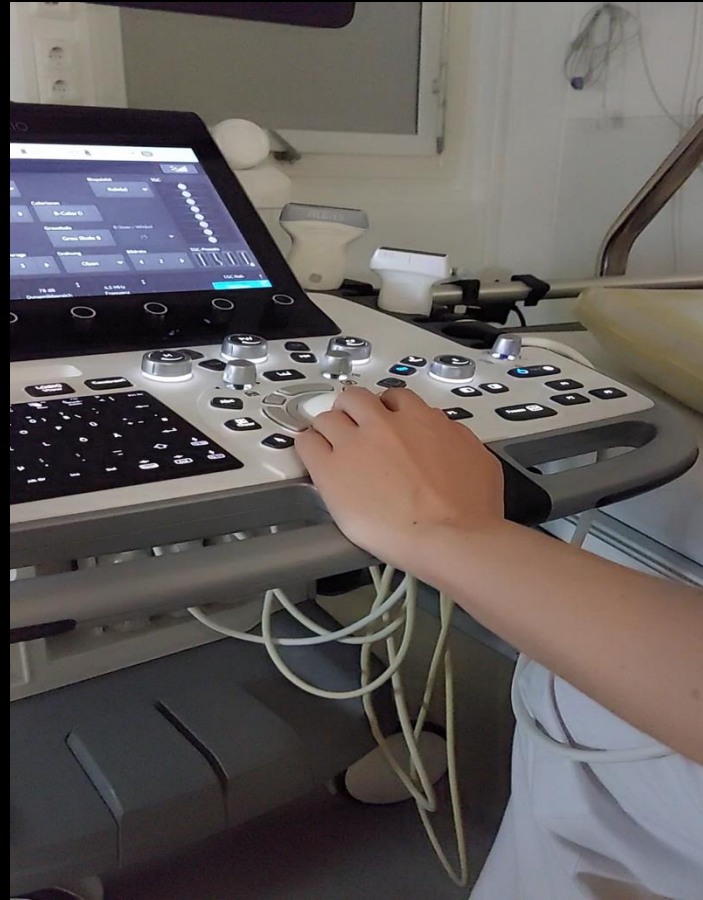


Adjust your scanning technique



Adjust your systematic approach

Adjust your machine



11/11/24

11/11/24

LOGIQ
E10

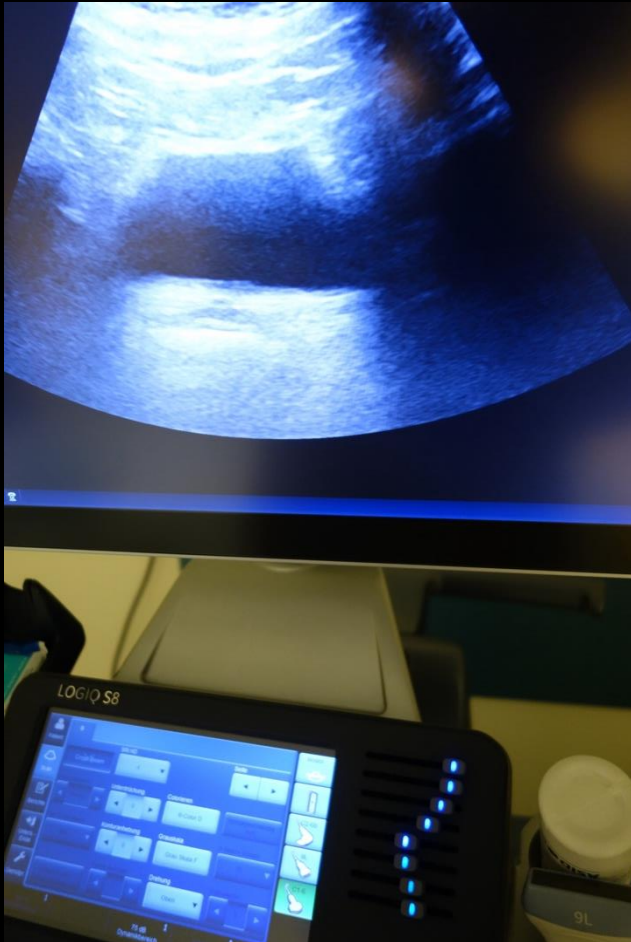
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2

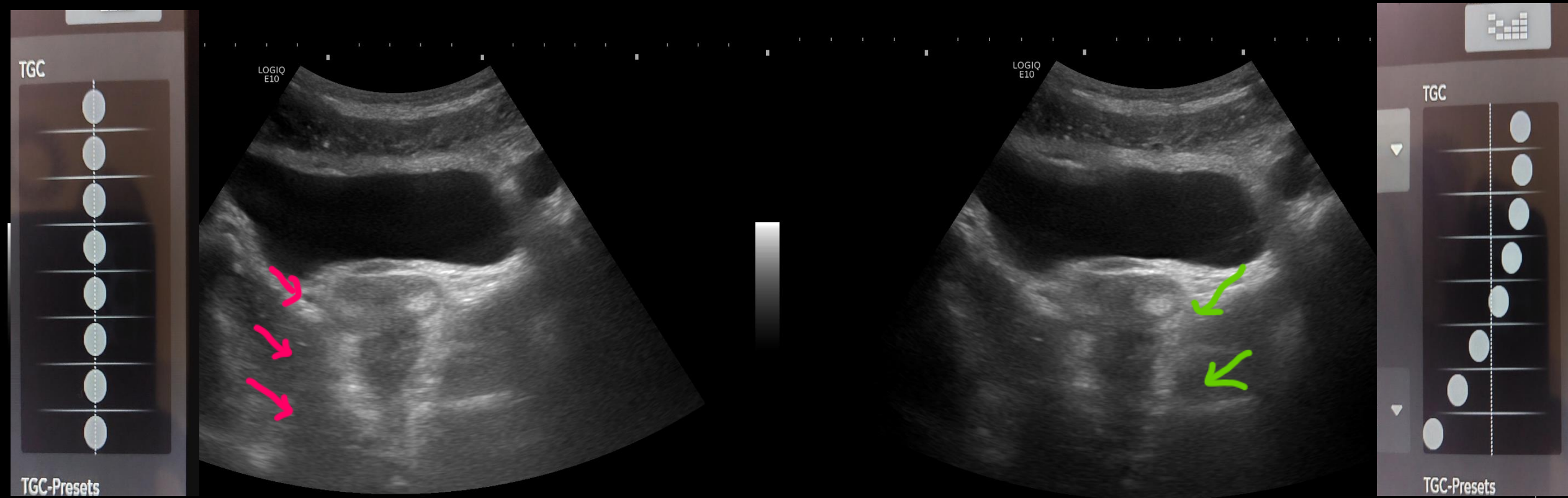
4

L 6

Time gain compensation - TGC



Time gain compensation - TGC



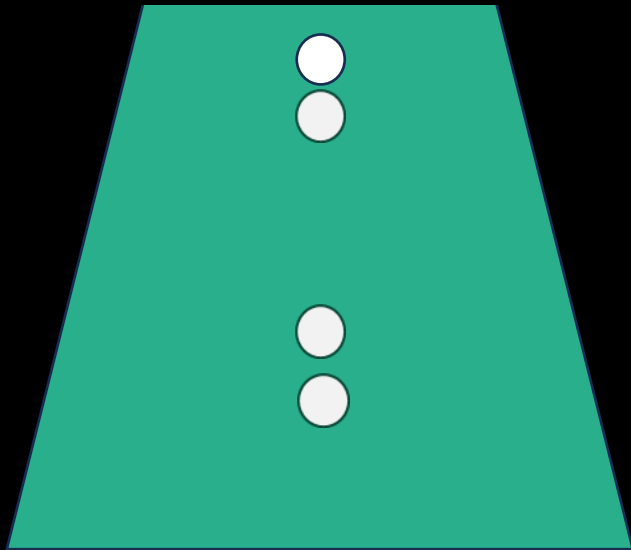
The focus position – obsolete?!

Axial Resolution

Depending on probe properties

Pulse length

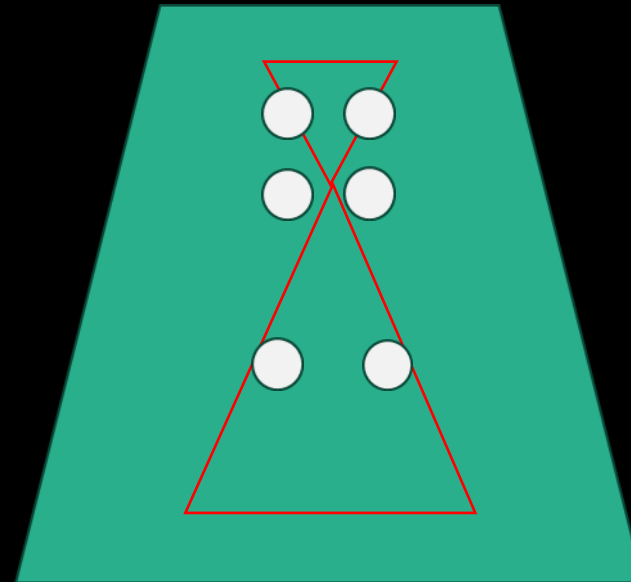
Independent of depth



Lateral resolution

Depending on focus position

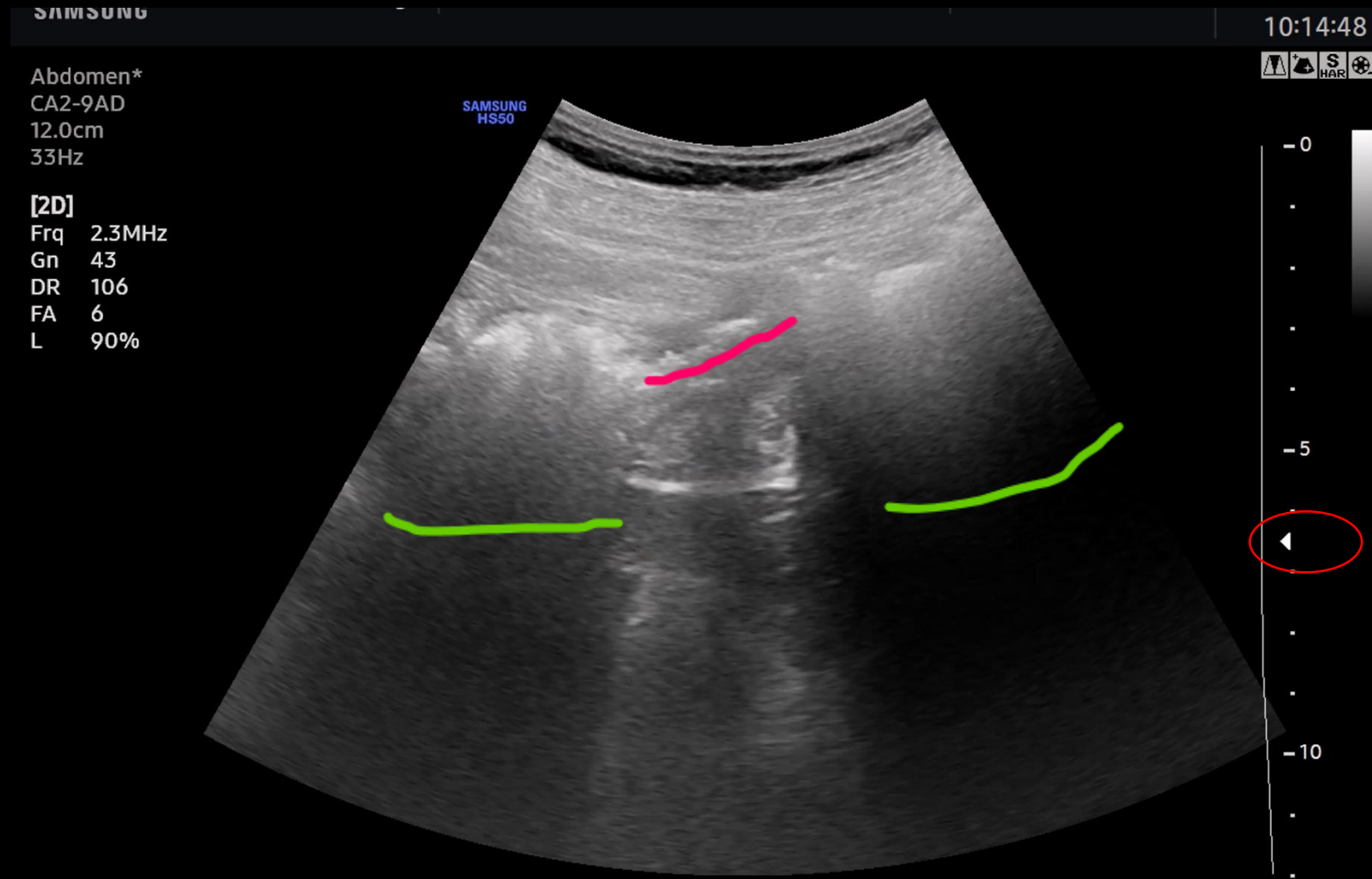
Depth is important



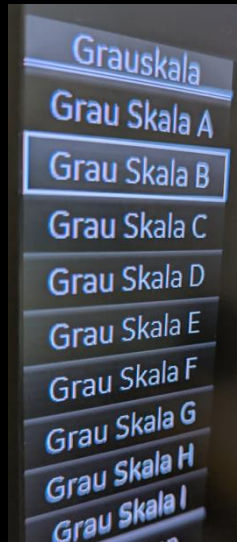
The focus position



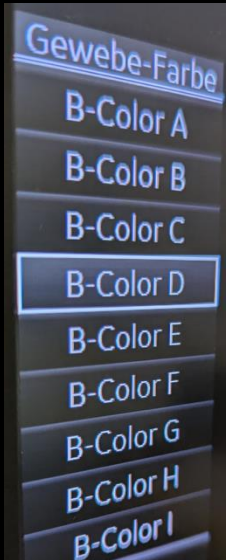
Using the focus position



Adjust the grey scale



Add some colour



Rods



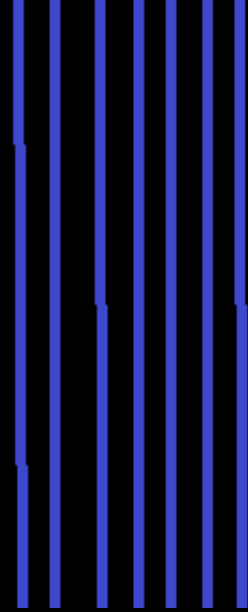
Cones



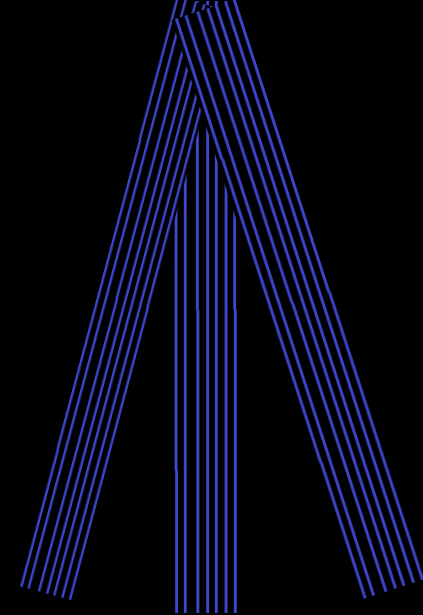
Speckle reduction imaging/ pre-processing

- Angular/ spatial compounding
- Spatial filtering
- Frequency compounding

Compounding



Standard probe

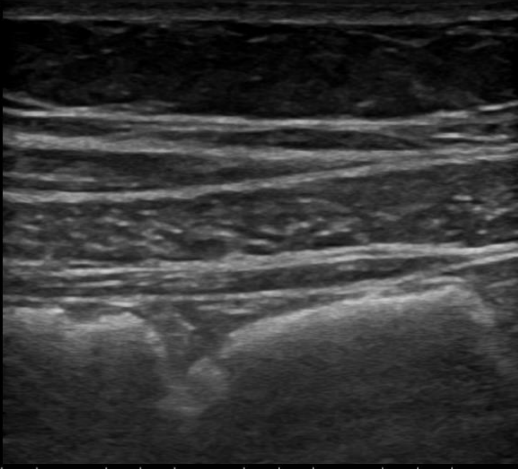


Spatial compounding

Compounding

compounding turned on

LOGIQ
E10



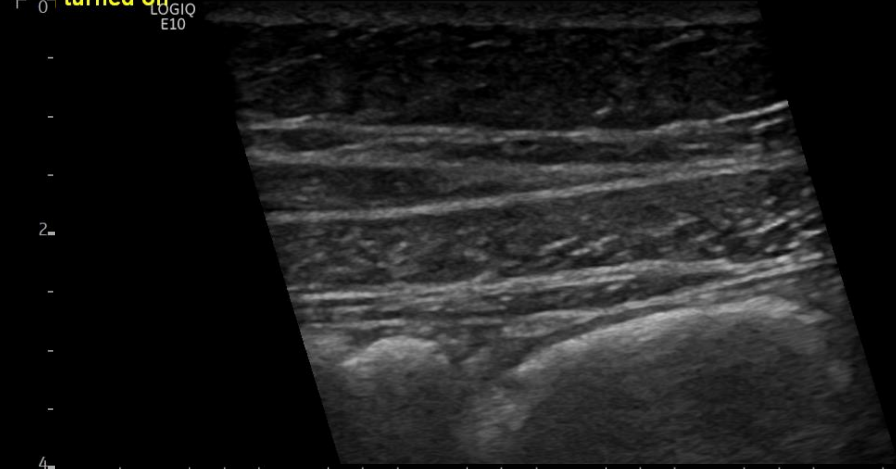
crossbeam on

LOGIQ
E10



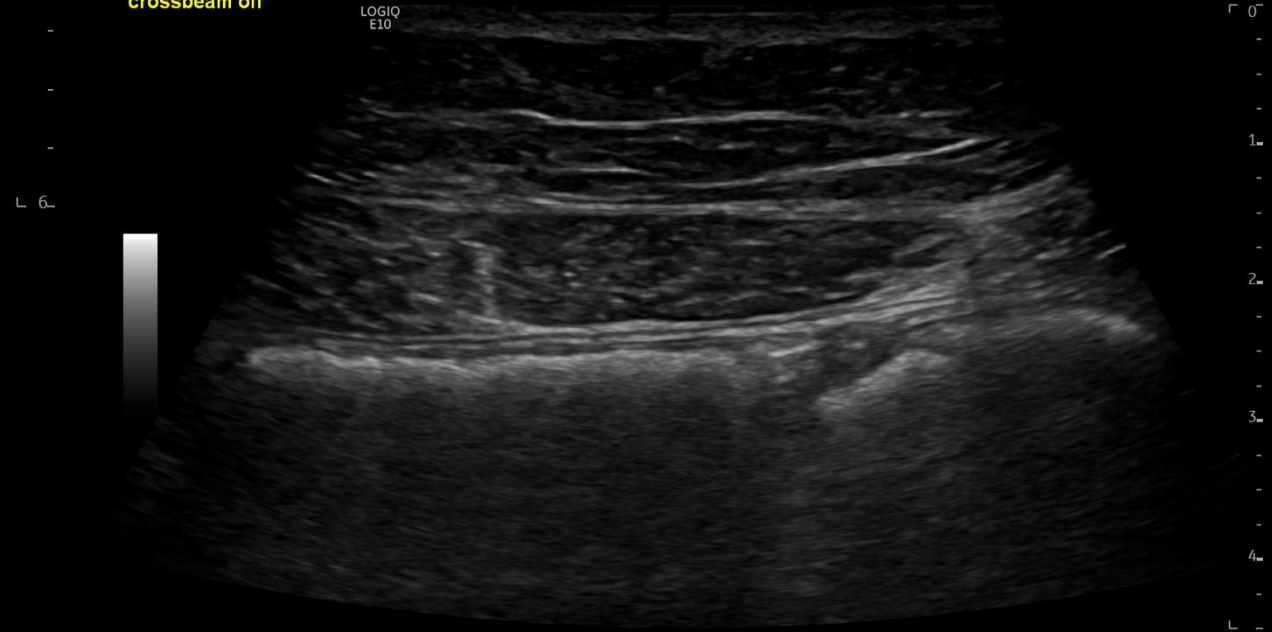
turned off

LOGIQ
E10



crossbeam off

LOGIQ
E10

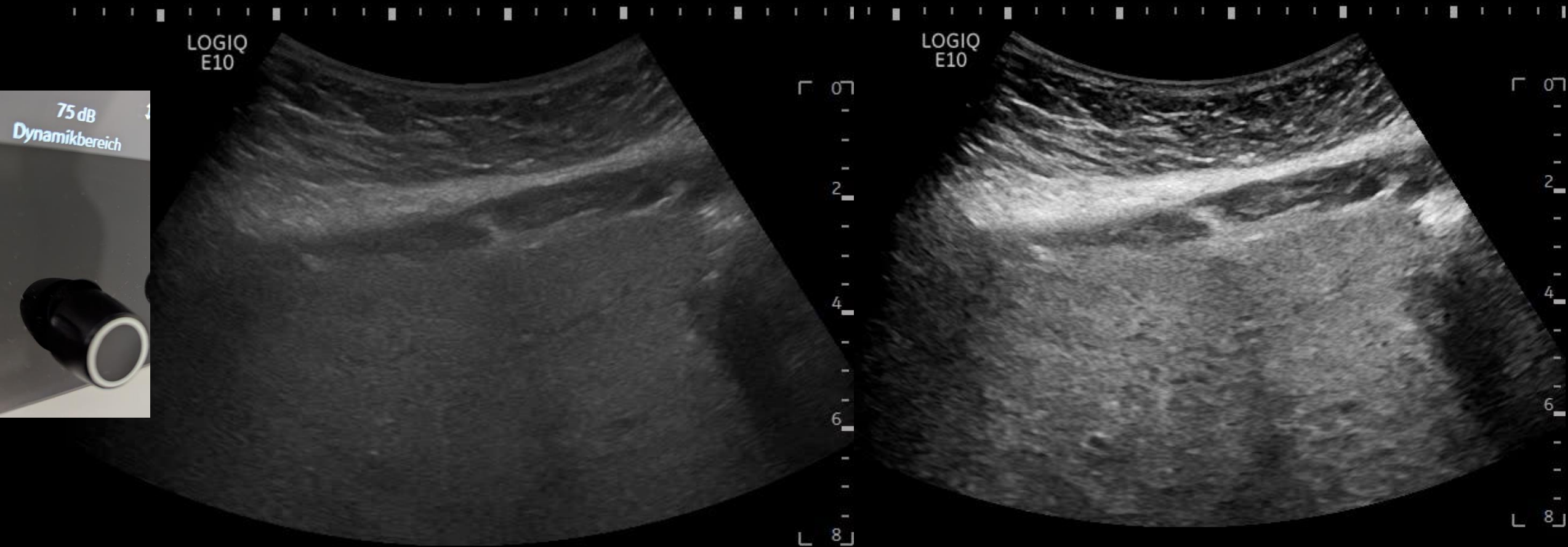


Speckle reduction imaging

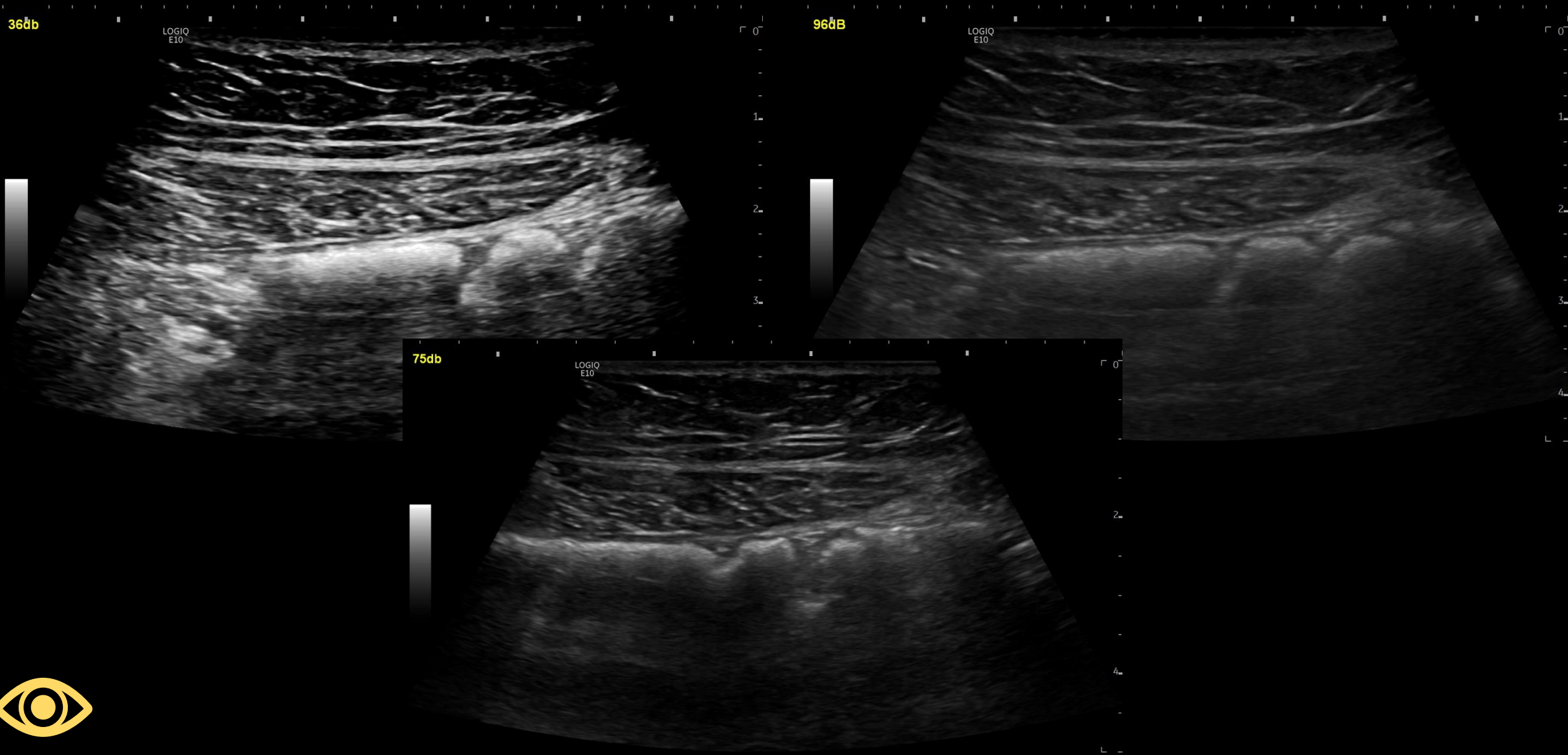


Dynamic range

– adjusts the number of gray shades displayed on the screen



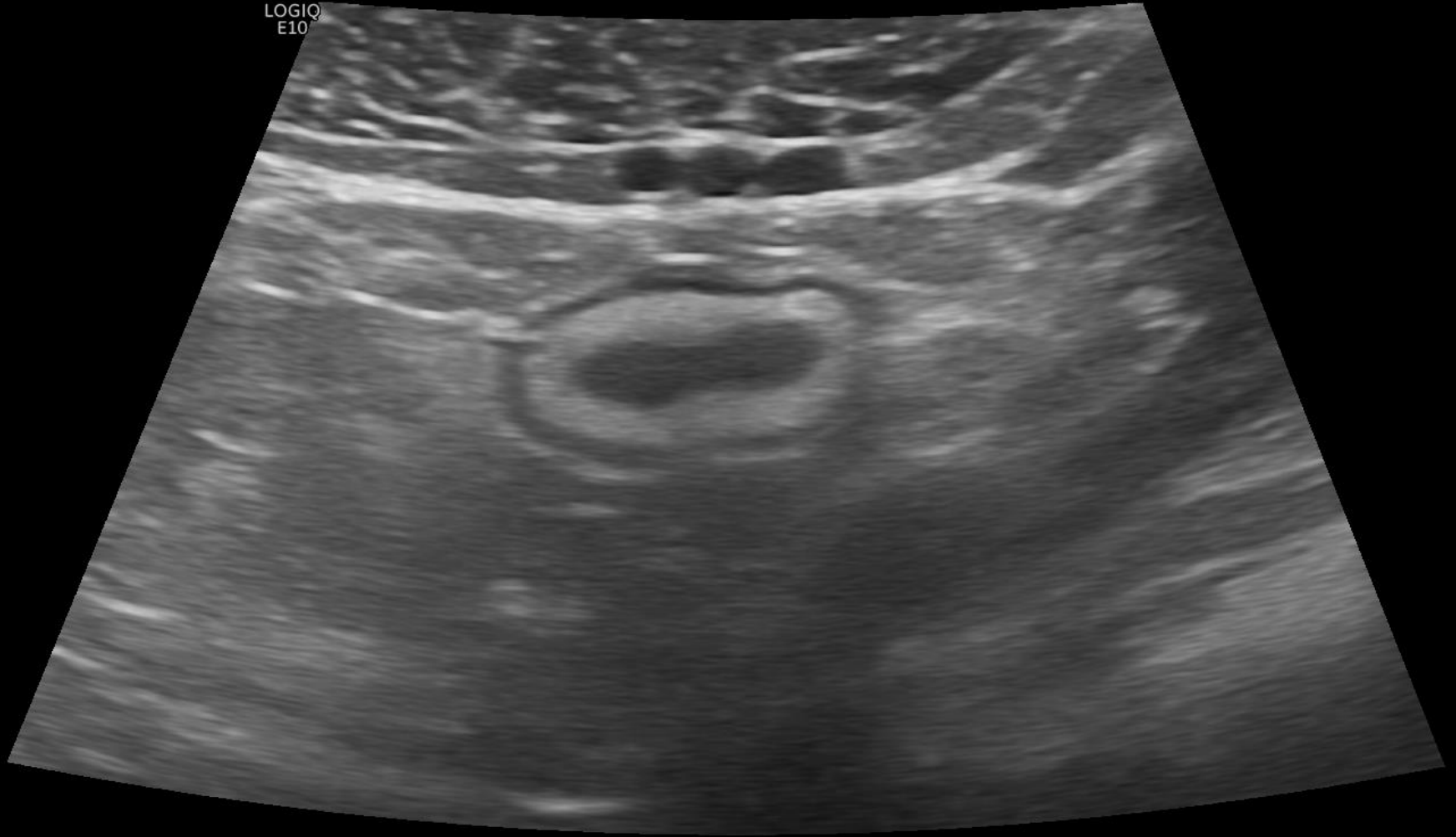
wide dynamic range vs low dynamic range



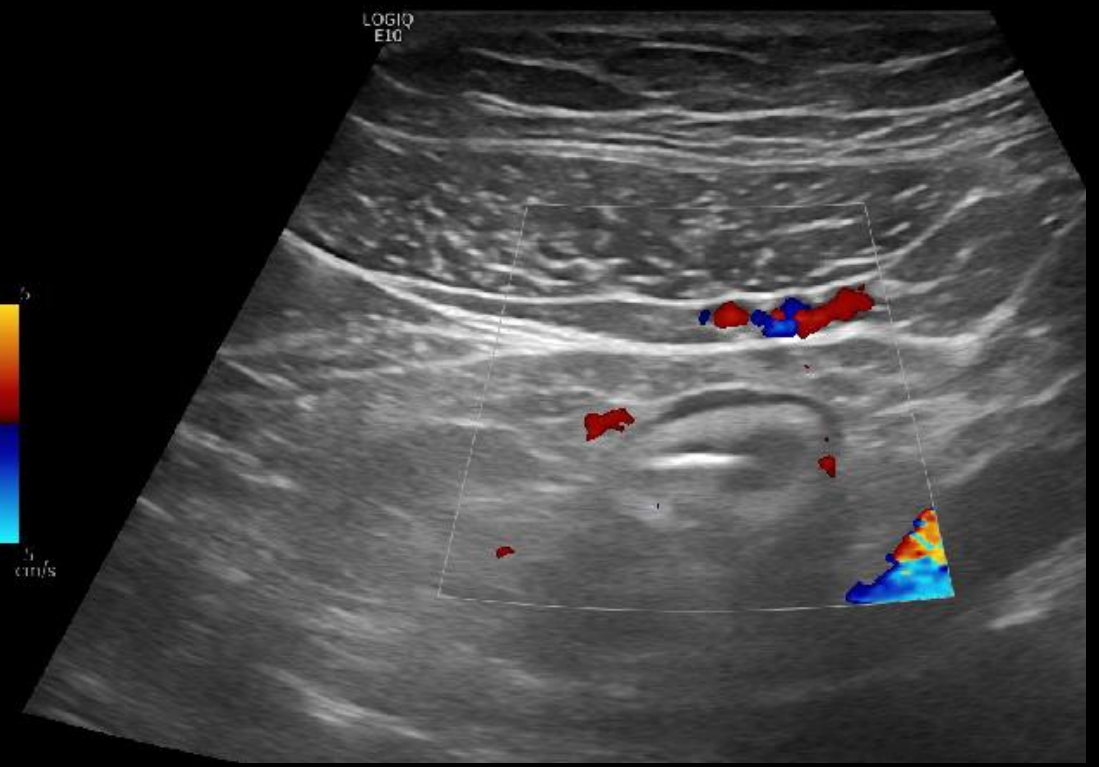
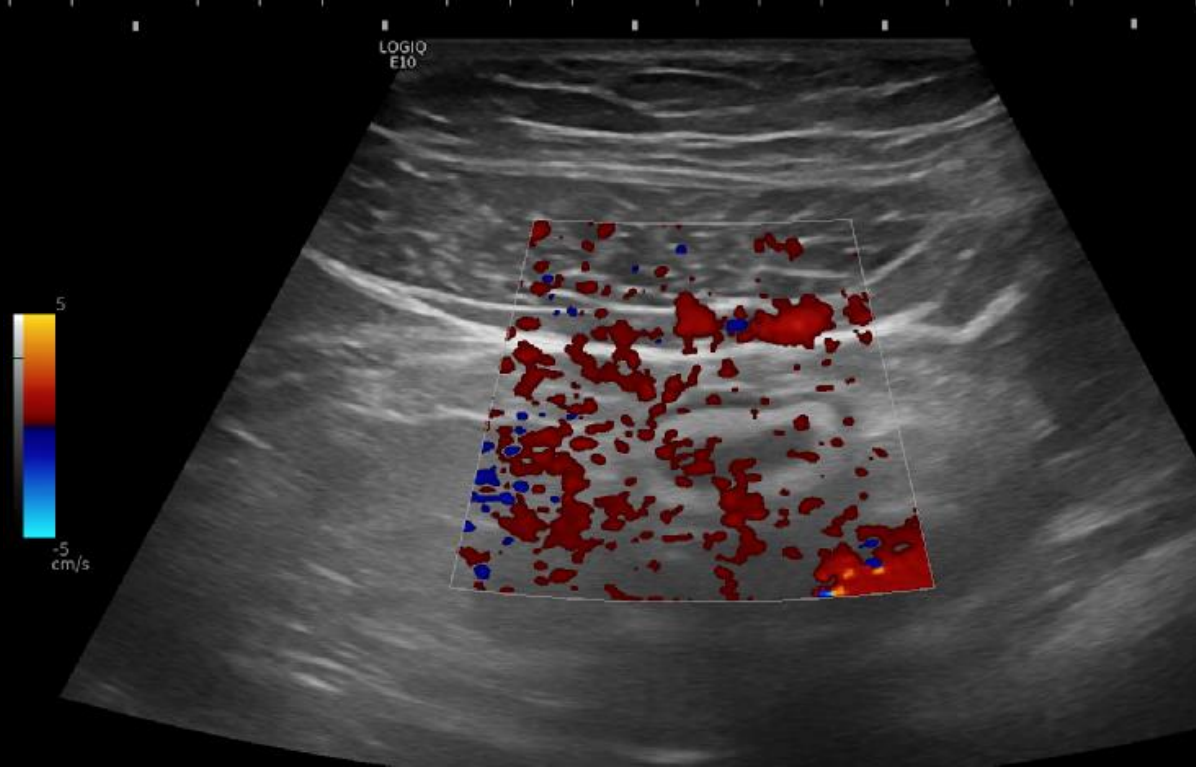
Zooming
resolutio

LOGIQ
E10

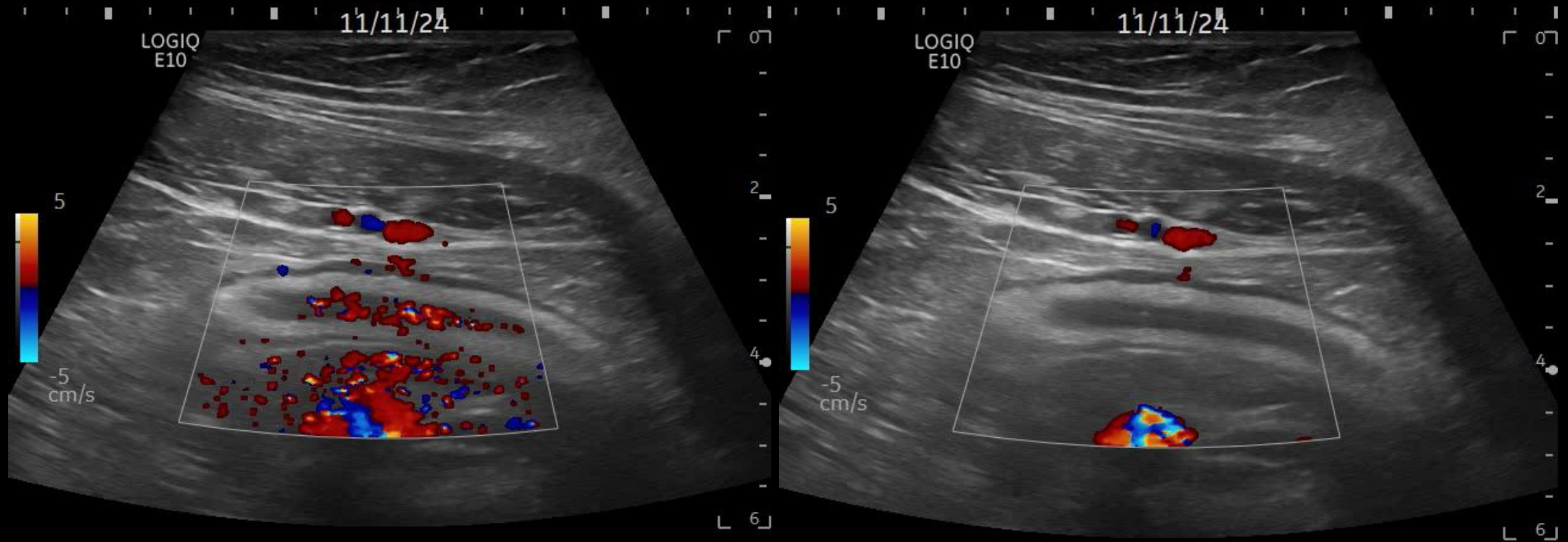
11/11/24
11/11/24



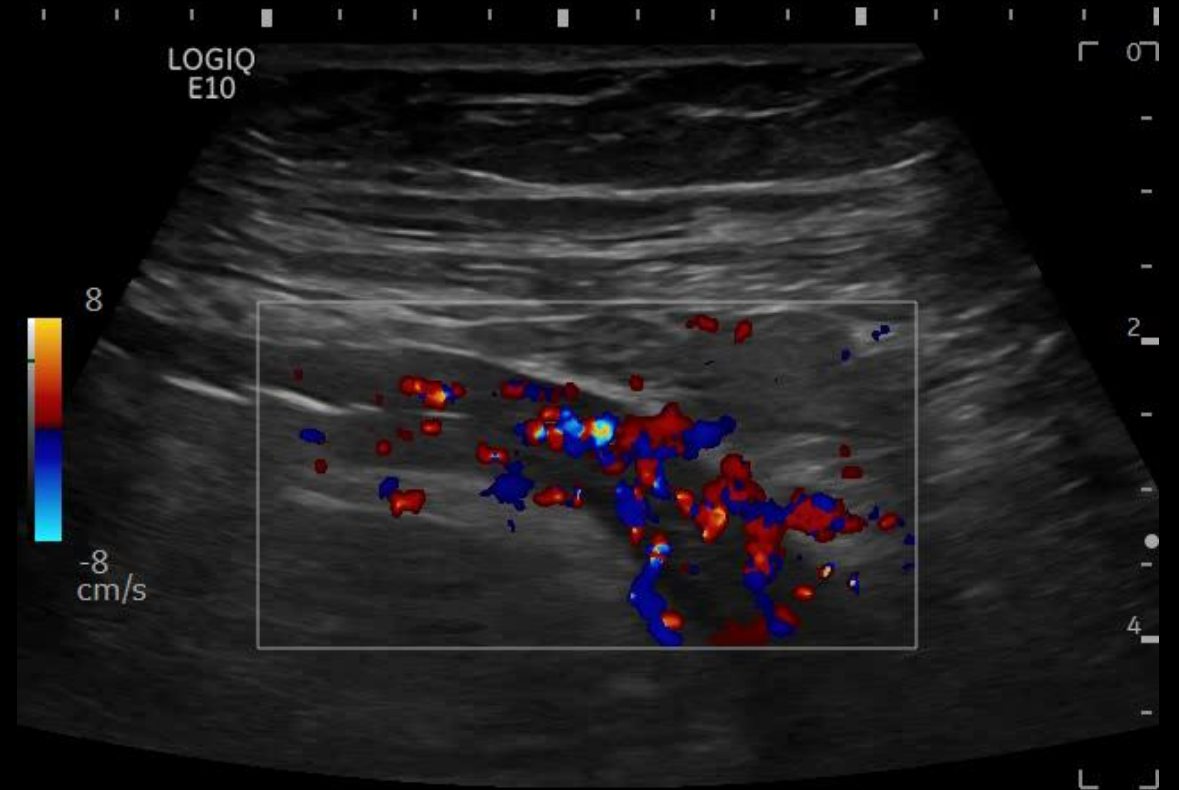
The colour doppler - gain



The colour doppler - gain



The colour doppler - artifacts



Ask the patient to hold their breath

The colour doppler – the angle



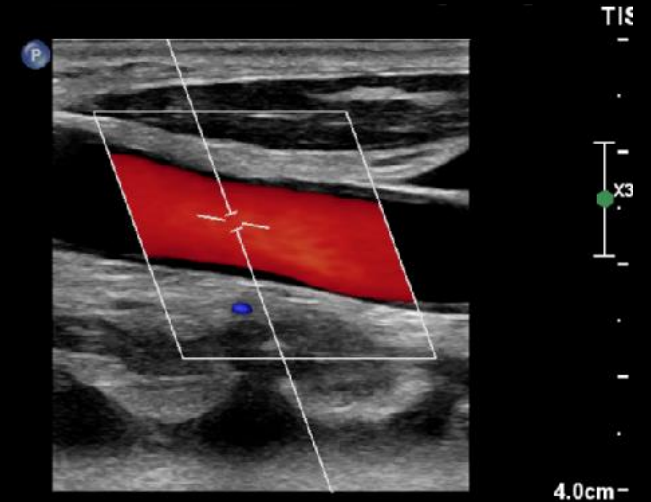
Carotis
L12-3ERGO
21Hz 60°

2D
49%
Dyn. Bereich 56
P Min.
HAllg

FD
51%
2909Hz
WF 130Hz
4.0MHz

PW
38%
WF 60Hz
DV1.5mm
3.5MHz
1.7cm

ACC 11 |

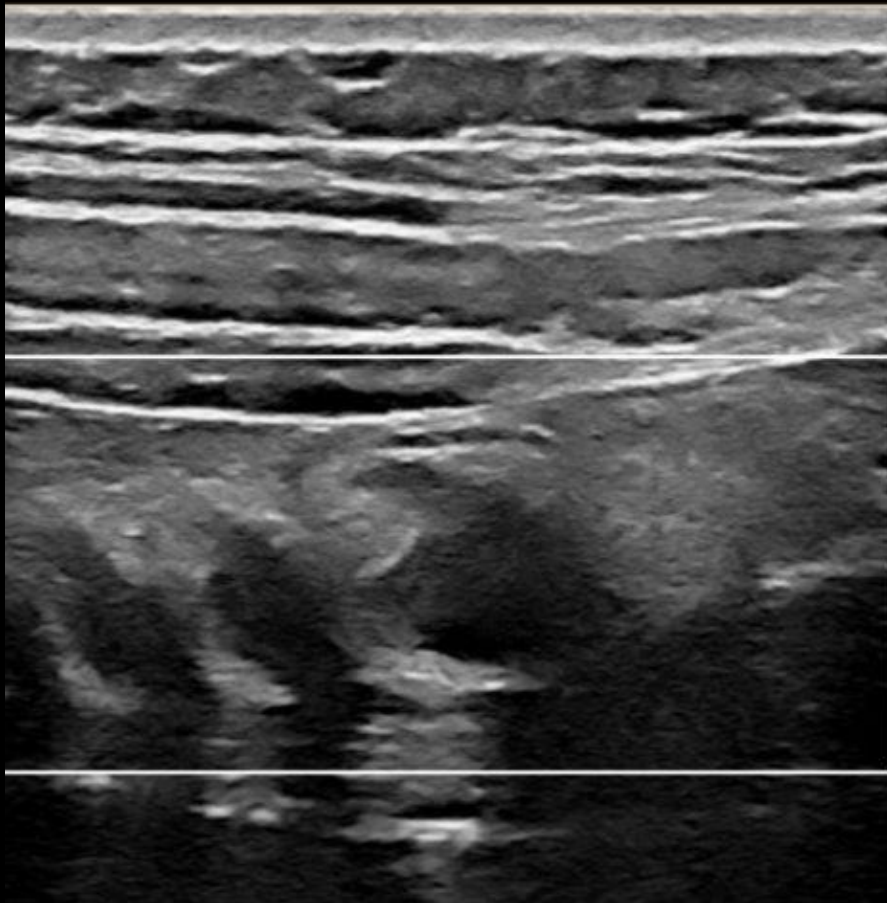


The colour doppler – the angle

L18-4
6Hz

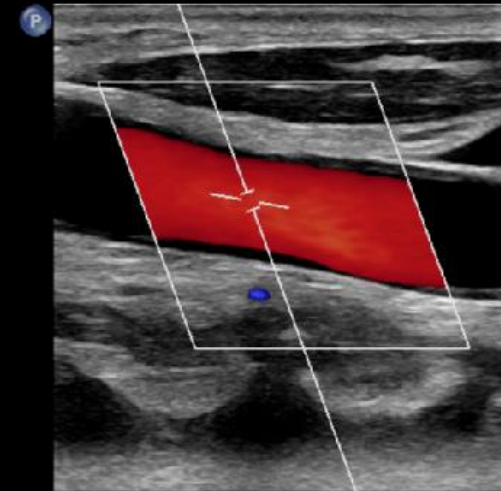
2D
62%
Dyn R 60
P Low
HPen

AS 0/0
CF
56%
1299Hz
WF 155Hz
5.0MHz
FV Med



11B0.2 MI 0.6
Carotis
L12-5 **TRGO**
21Hz 60°
2D
49%
Dyn. Bereich 56
P Min.
HAllg
FD
51%
2909Hz
WF 130Hz
4.0MHz
PW
38%
WF 60Hz
DV1.5mm
3.5MHz
1.7cm

ACC 1i



TIS
x3
4.0cm



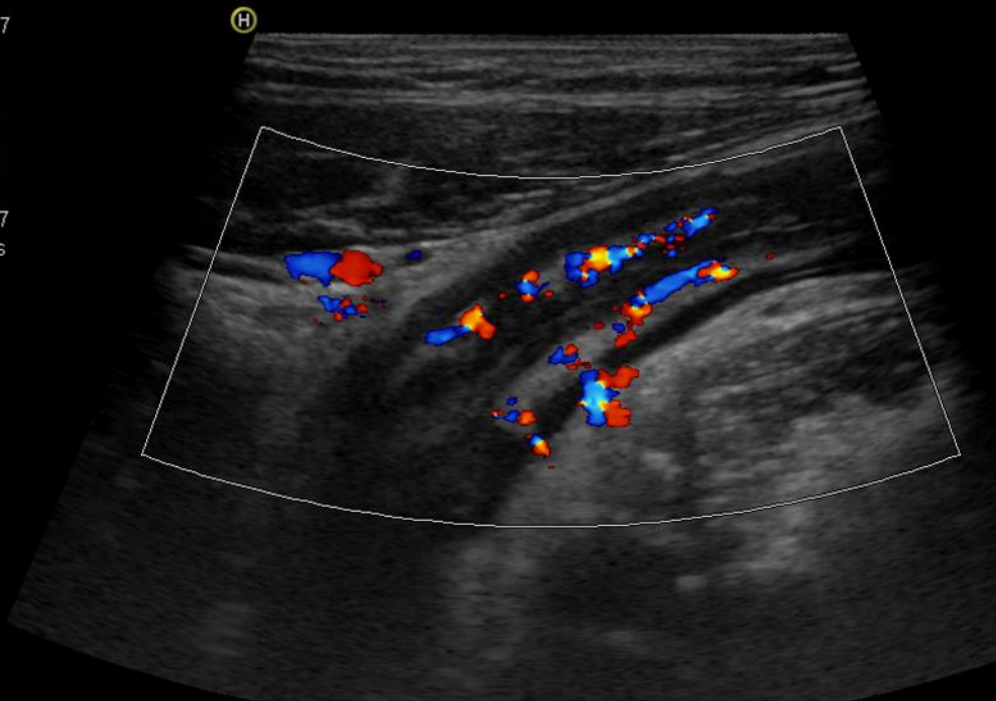
The colour doppler – placing the box

HITACHI

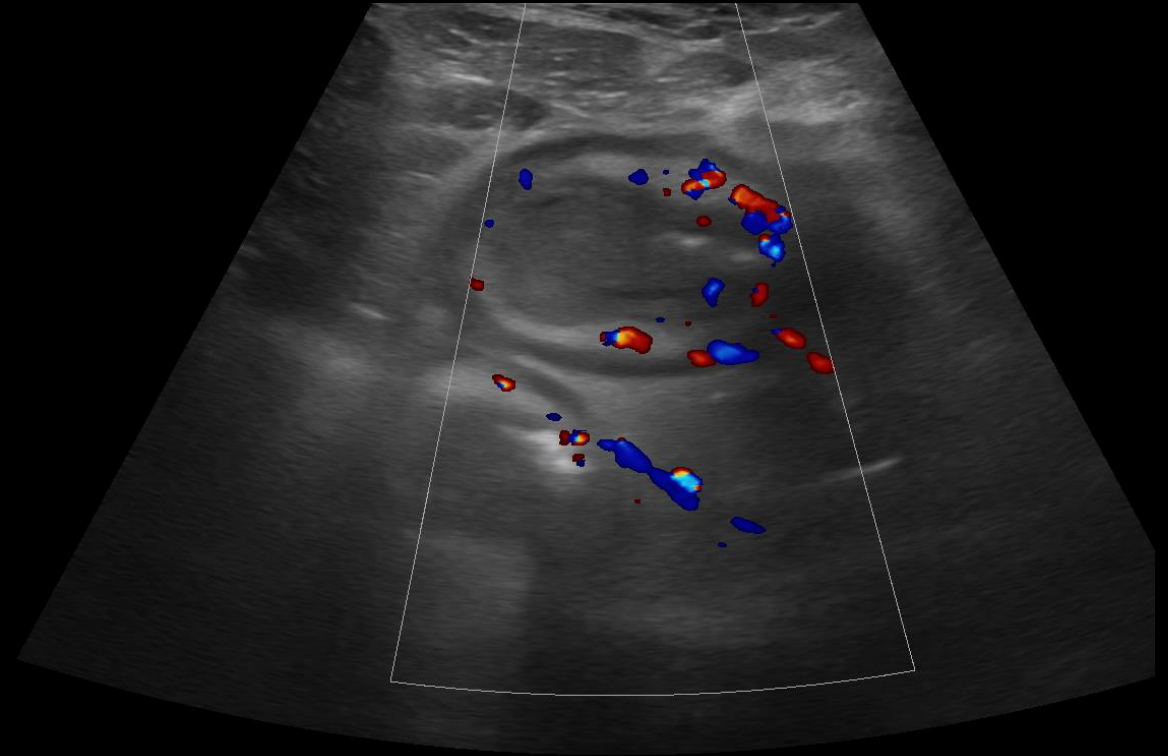
Darm

P:100% MI 1.

+4.97
-4.97
cm/s

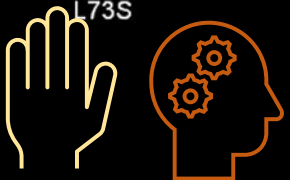


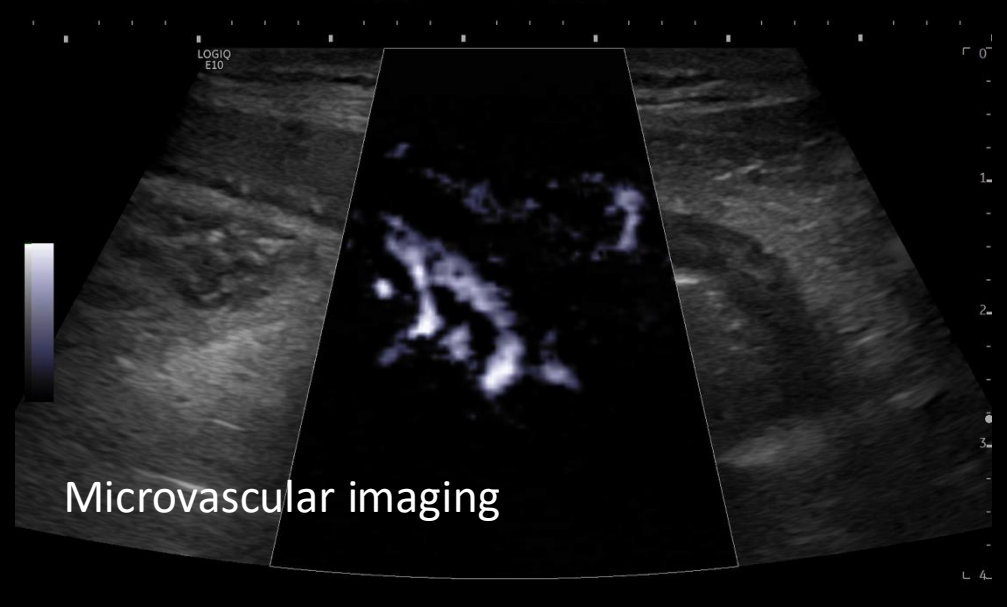
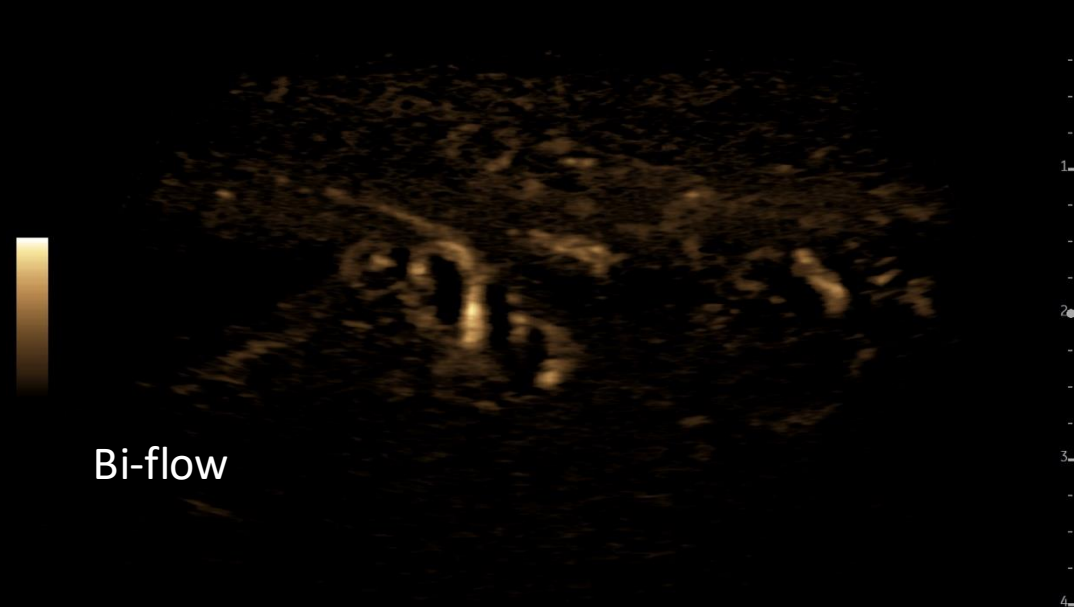
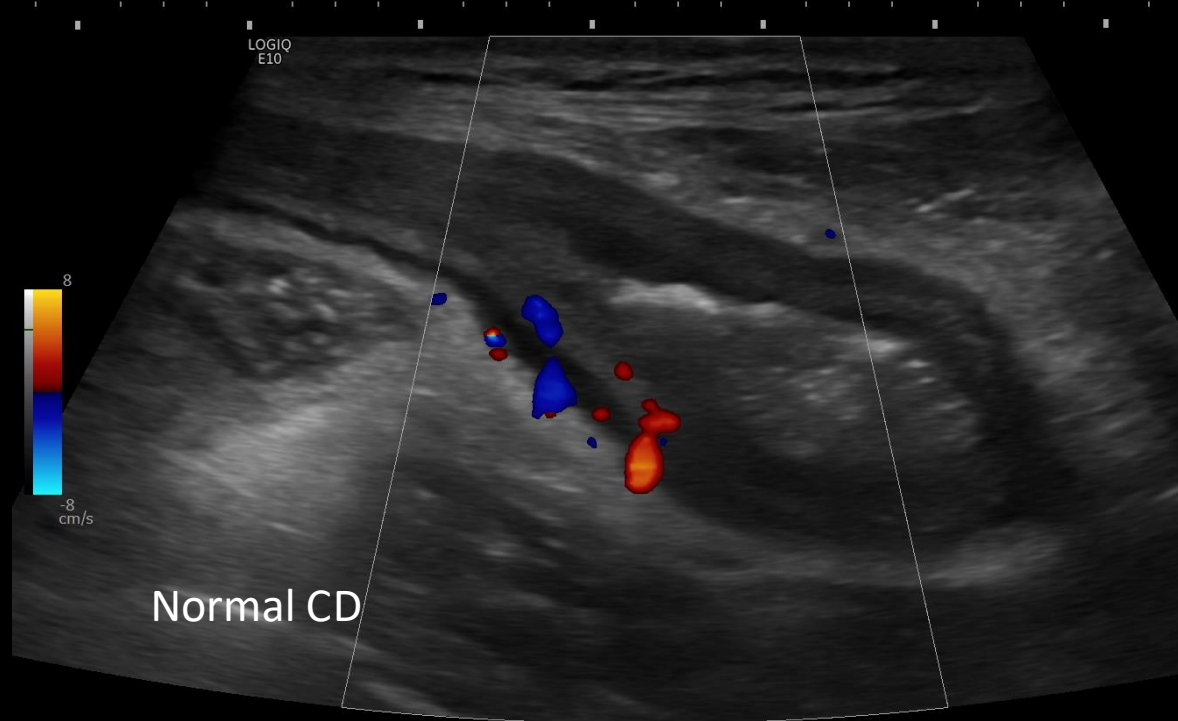
10
-10
cm/s



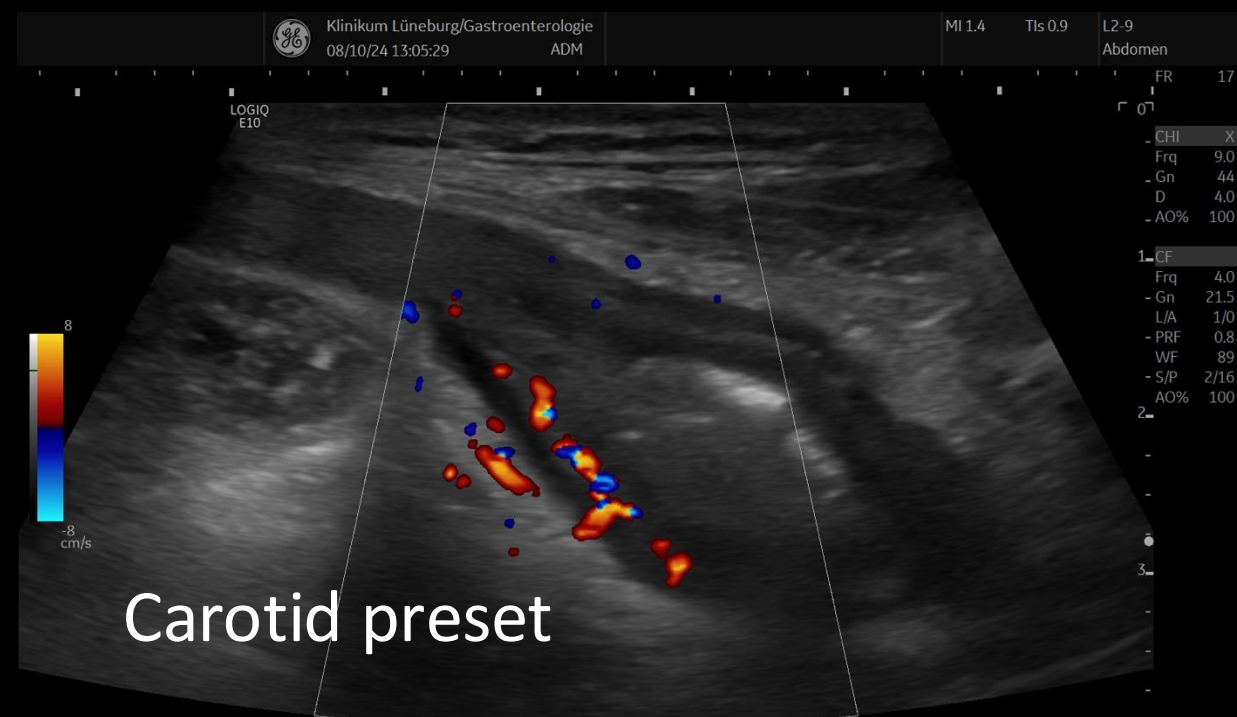
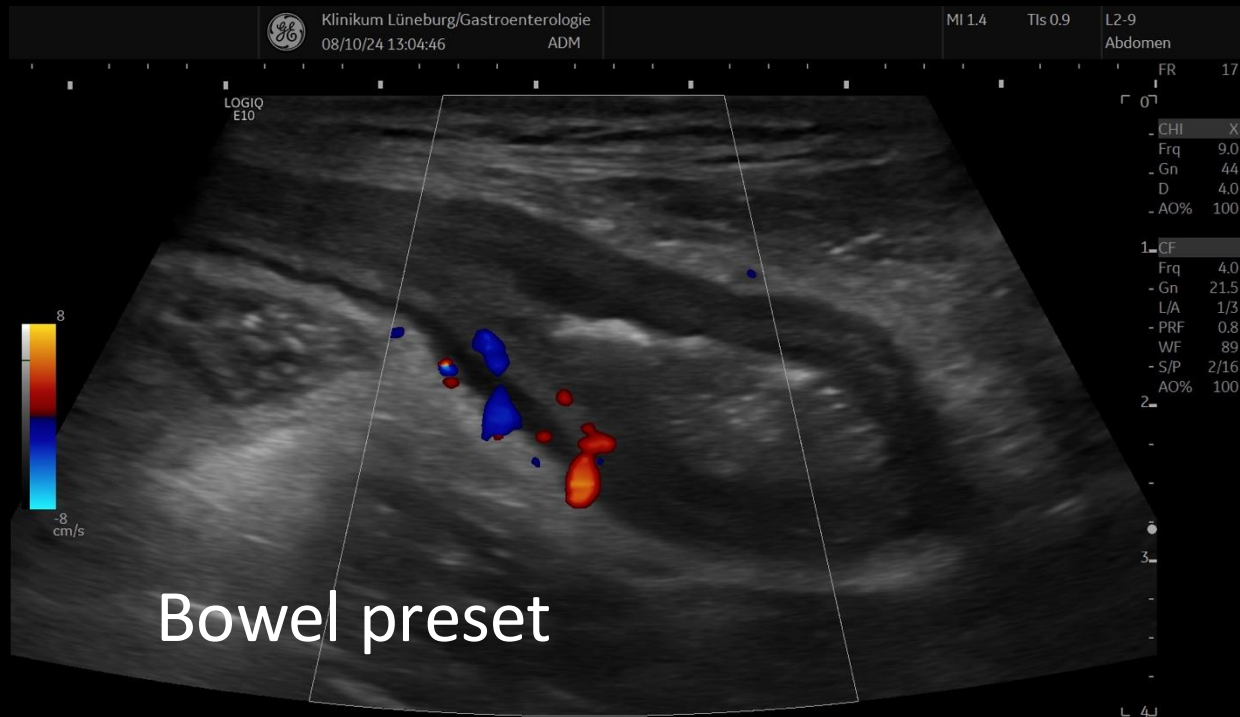
FR:11
L73S

BG:18 DR:80 CG:41 CF:M
HdTHI-P 1k7.5MHz





Colour doppler - presets



Make sure you have the same preset every time!

I hope I could inspire you to fiddle with your settings and get to know the machine behind the pictures!