

# Recap - Tips and Tricks to navigate challenging cases and how to continue on the path to proficiency

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# Disclosures

I accepted lecture fees in educational projects from  
Janssen  
MSD  
Takeda



# What difficulties might occur during scanning

Preparation

Body shape

Difficult settings/ machine optimisation

Gas distribution/ bowel distention

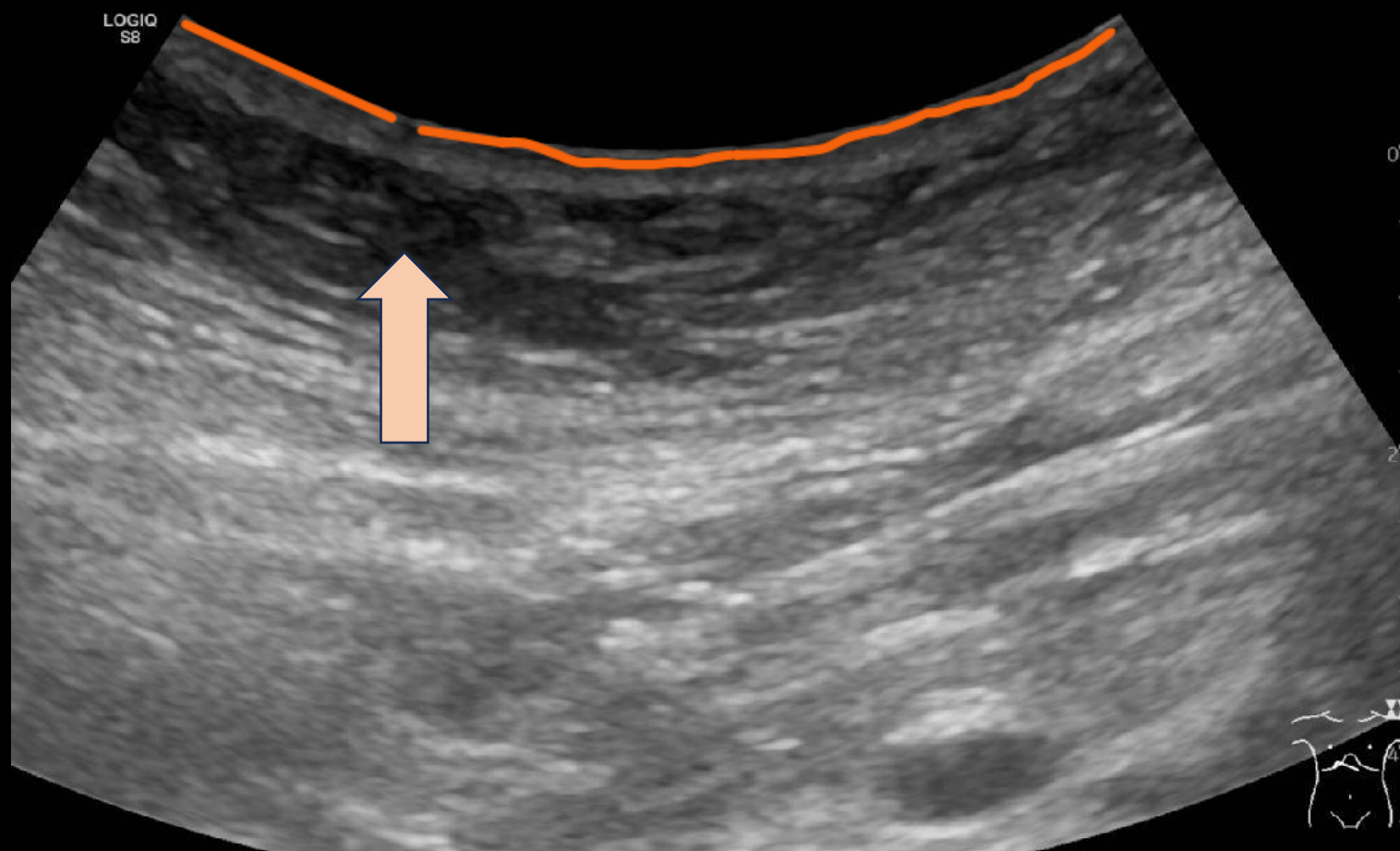
Anatomic variants

Postoperative situations



Preparation

Checking the equipment

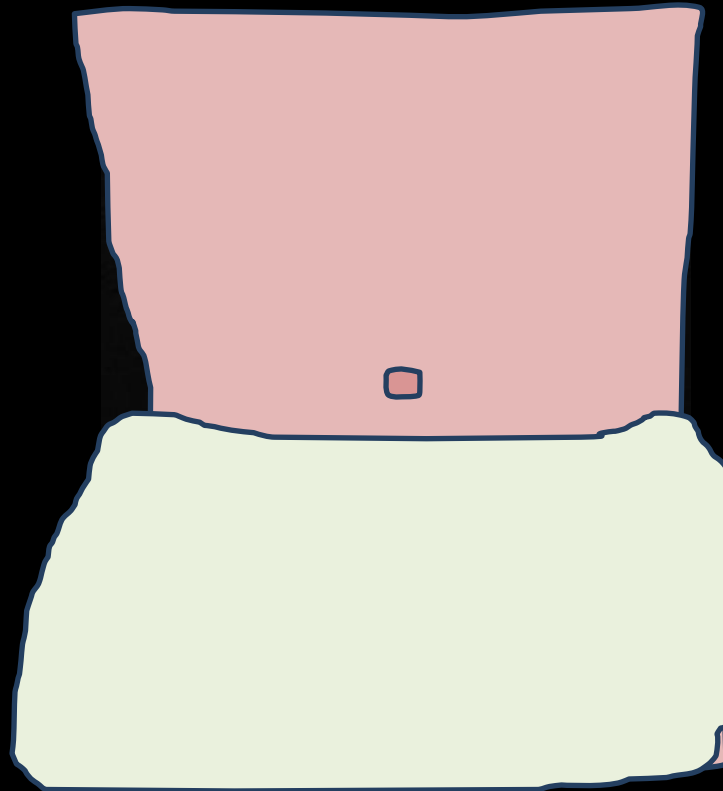


## Preparation



Very  
important:  
A perfect start

# Where are the crucial zones?

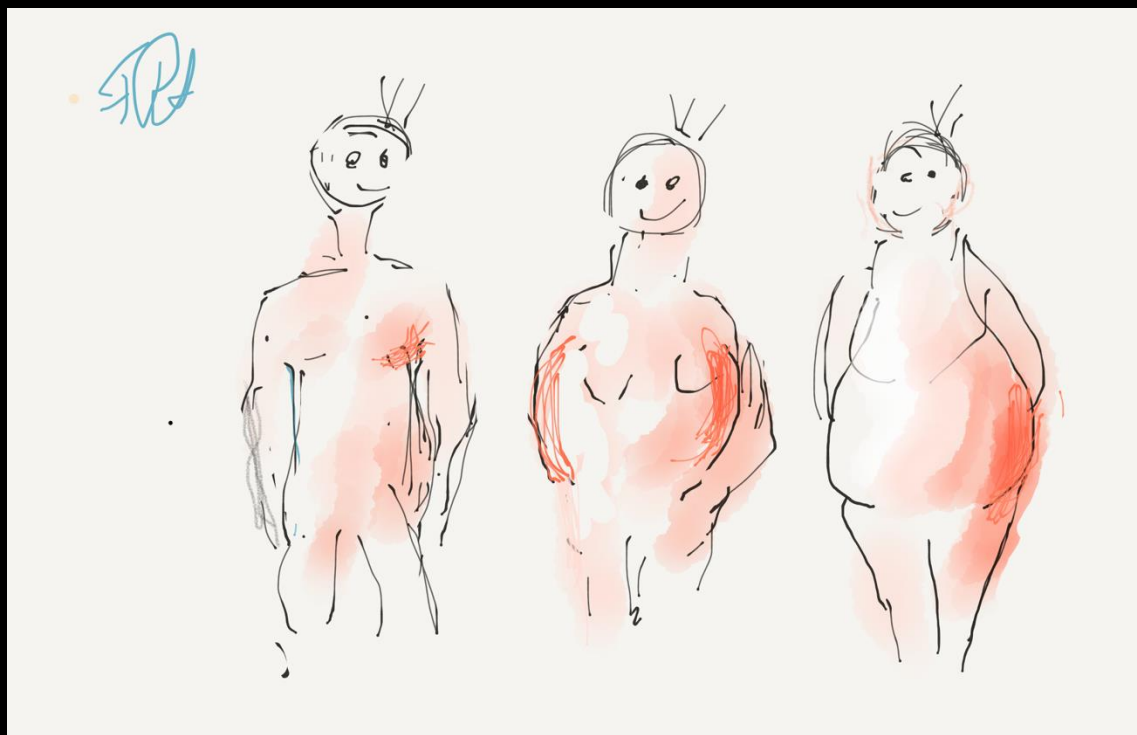




# Corrected position



## Body shape





## Body shape



The inguinal ligament:

entrance gate in the obese

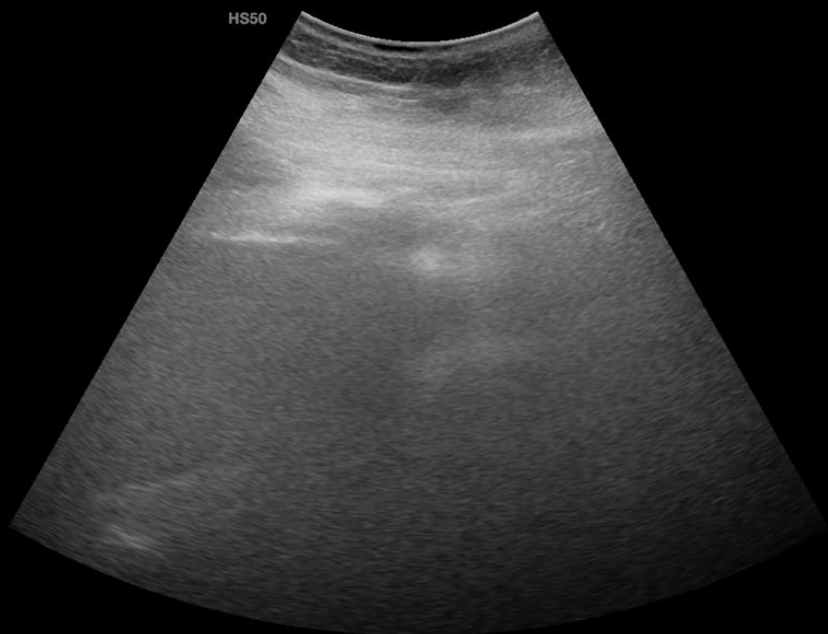
Stay underneath the bowel wall, fat  
and air

Tilt the probe instead of swiping



## Body shape

domen\*  
2-9AD  
0cm  
4z  
2.3MHz  
43  
106  
6  
90%





## Body shape

The most difficult body  
compositions





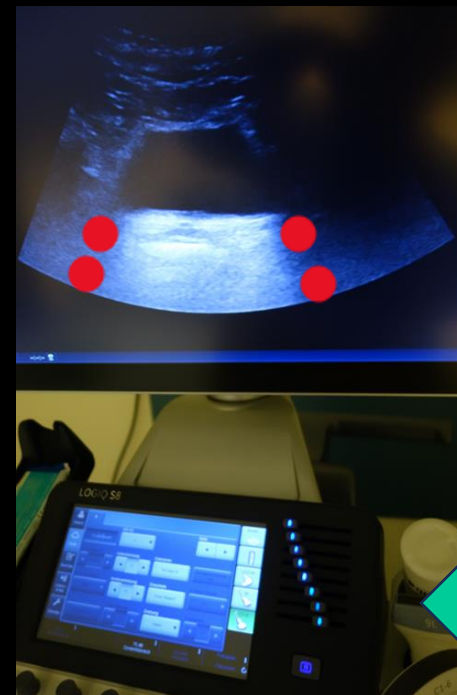
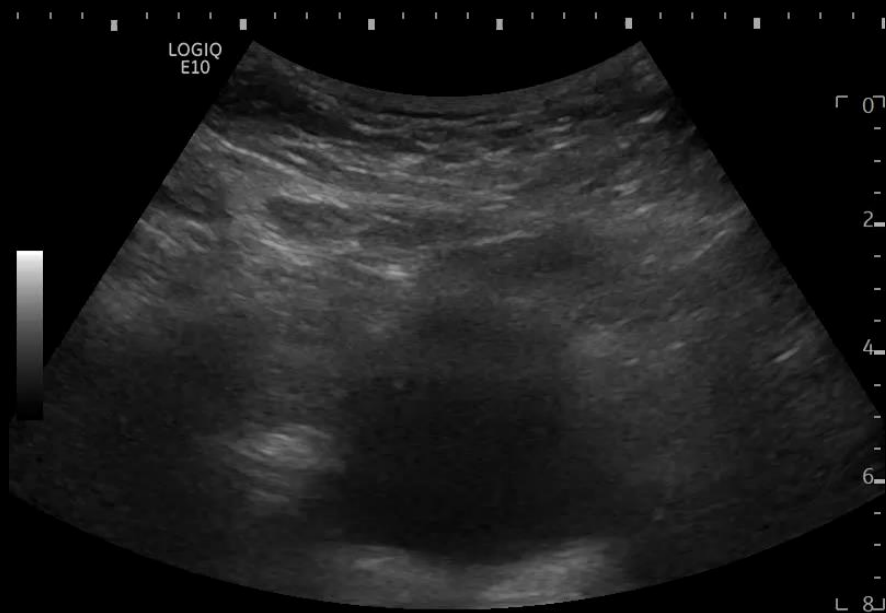
## Difficult settings/ machine optimisation



Reduce  
**TGC**  
level  
underneath  
the bladder



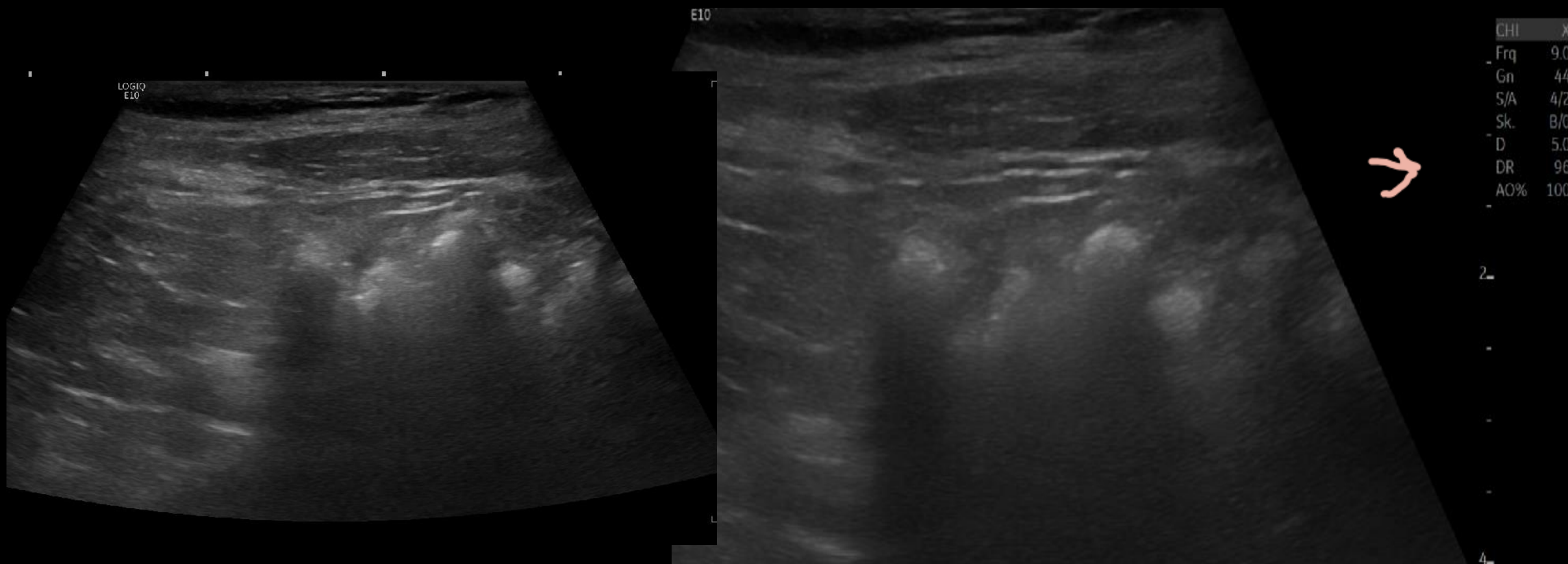
## Difficult settings/ machine optimisation







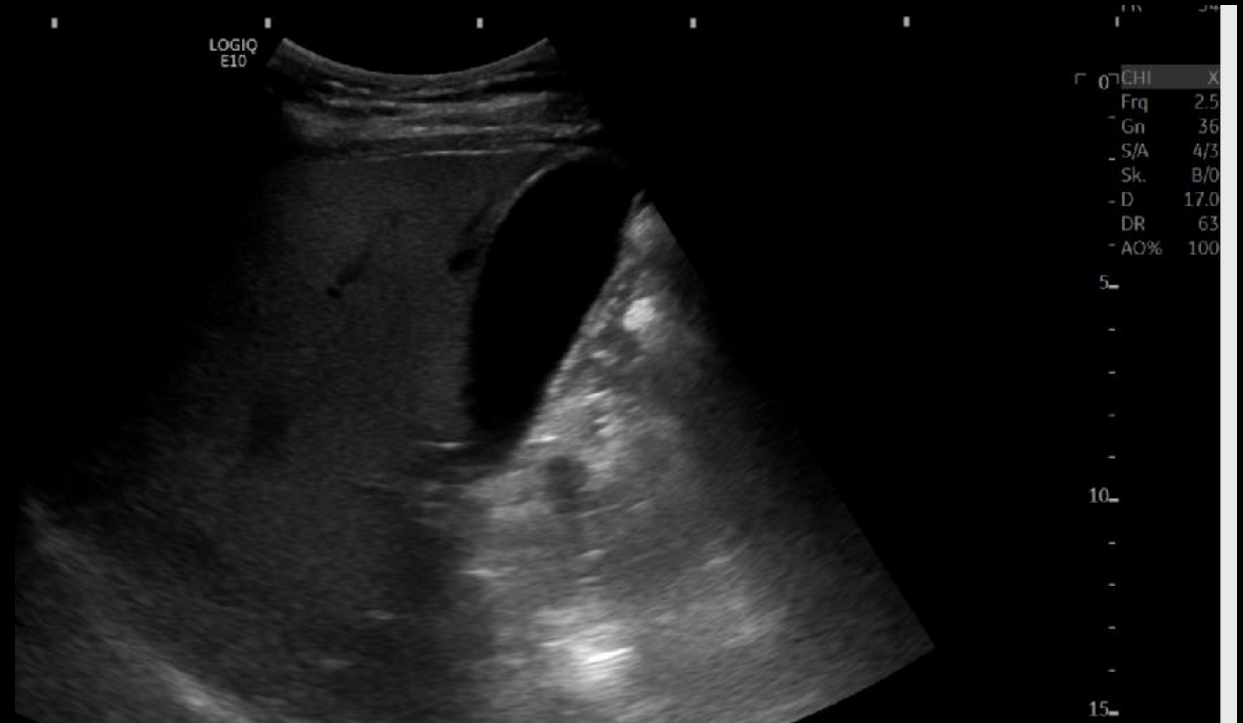
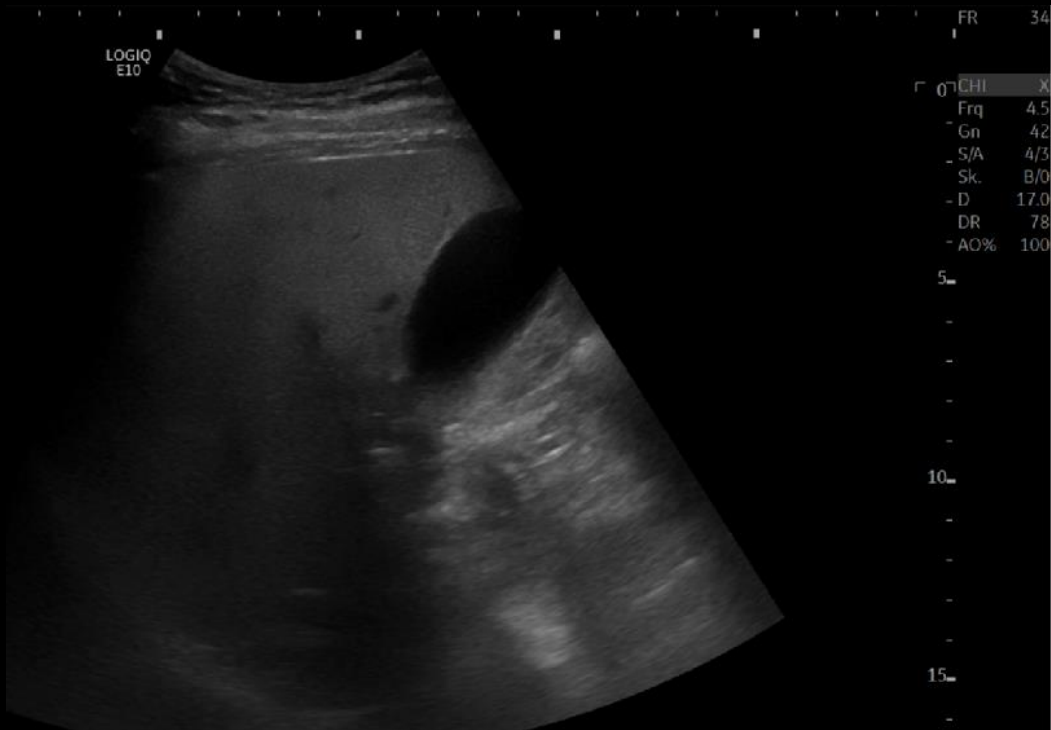
## Difficult settings/ machine optimisation



**Presets: Dynamic range**



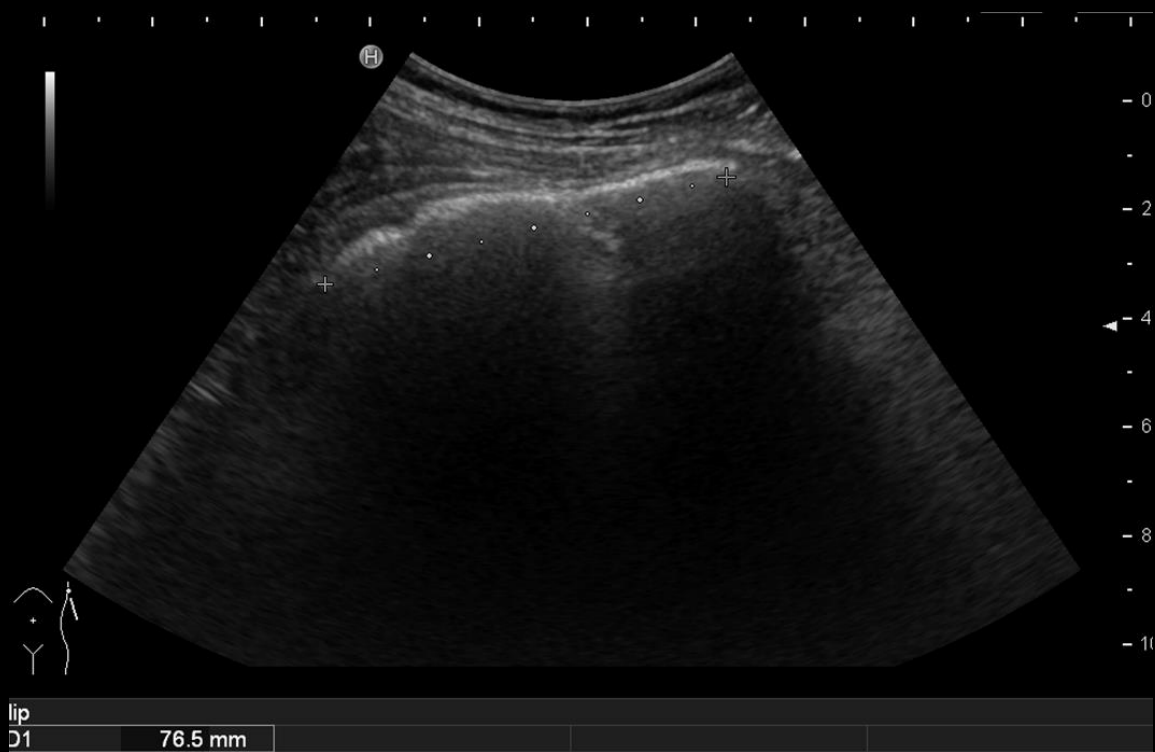
## Difficult settings/ machine optimisation



**Presets:**  
**Penetration**



## Gas distribution/ bowel distention





Stay underneath!!

Gas distribution/ bowel distention



# Compression



international bowel  
**ULTRASOUND GROUP**

Gas distribution/ bowel distention





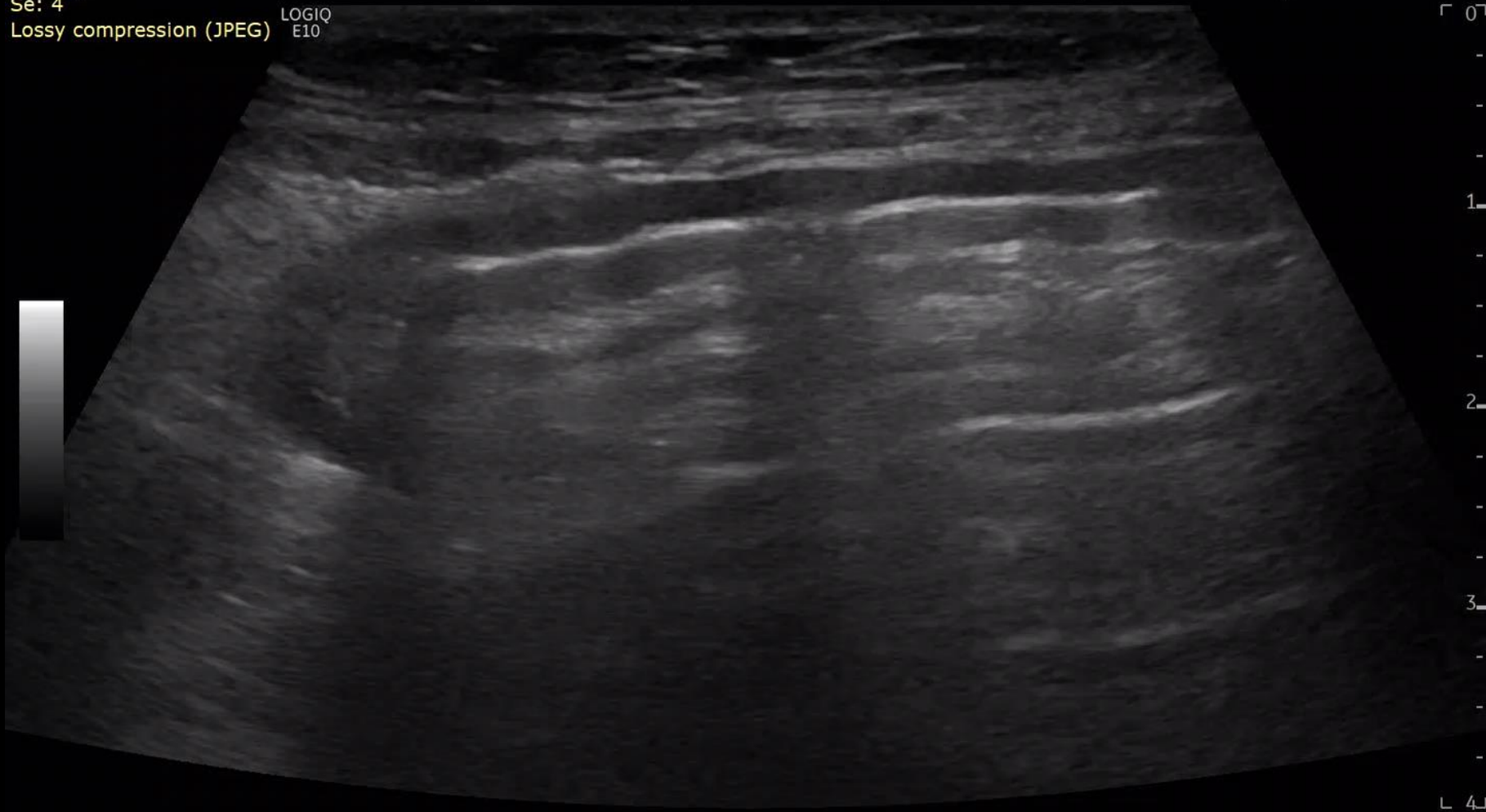
## Gas distribution/ bowel distention

Im: 1/476

Se: 4

Lossy compression (JPEG)

LOGIQ  
E10



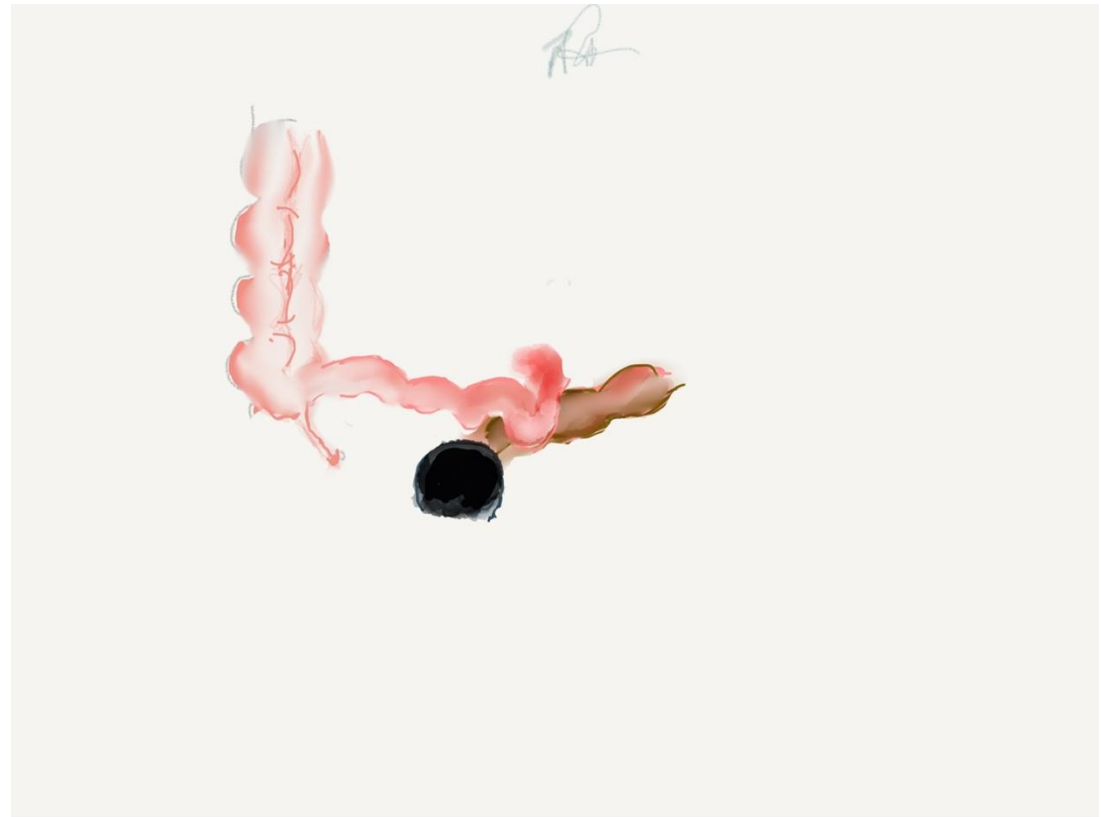
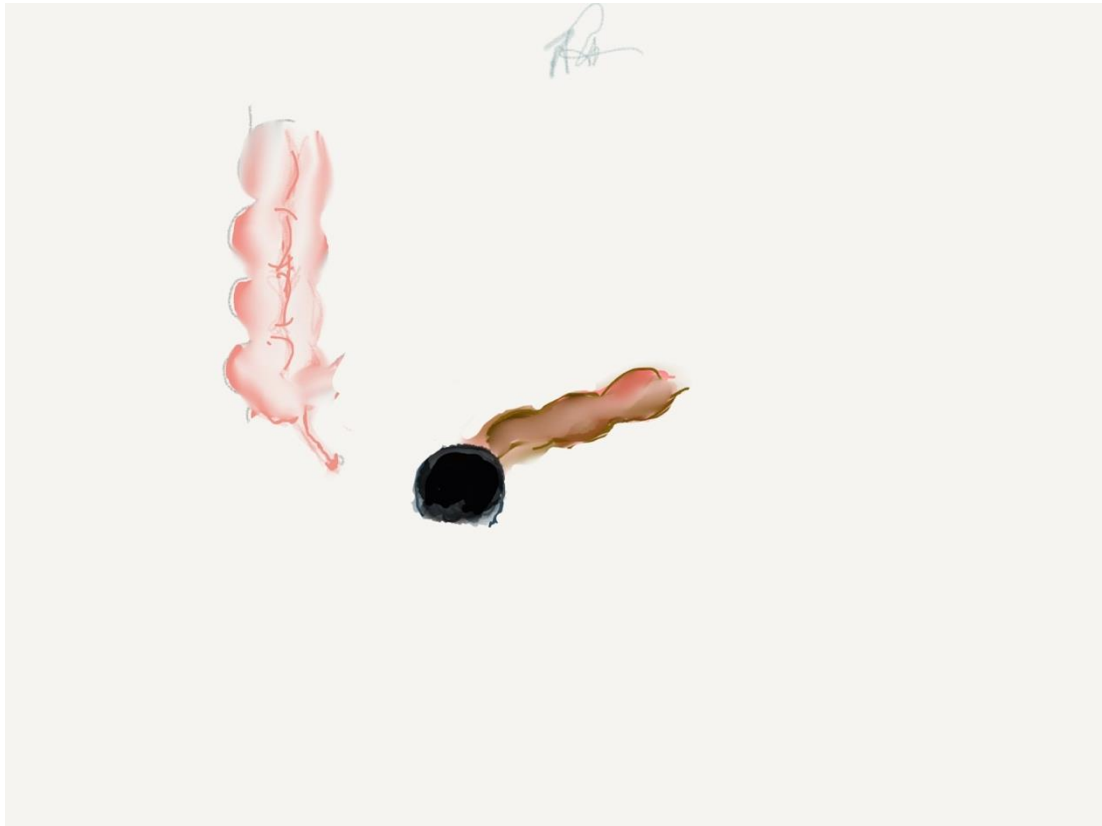
WL: 128 WW: 256 [D]



## Anatomic variants



# Mistaking the small bowel for the sigmoid





Abdomen\*  
CA2-9AD  
8.0cm  
47Hz

[2D]  
Frq 2.3MHz  
Gn 43  
DR 106  
FA 6  
L 90%

HS50



-0

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←

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-5

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10



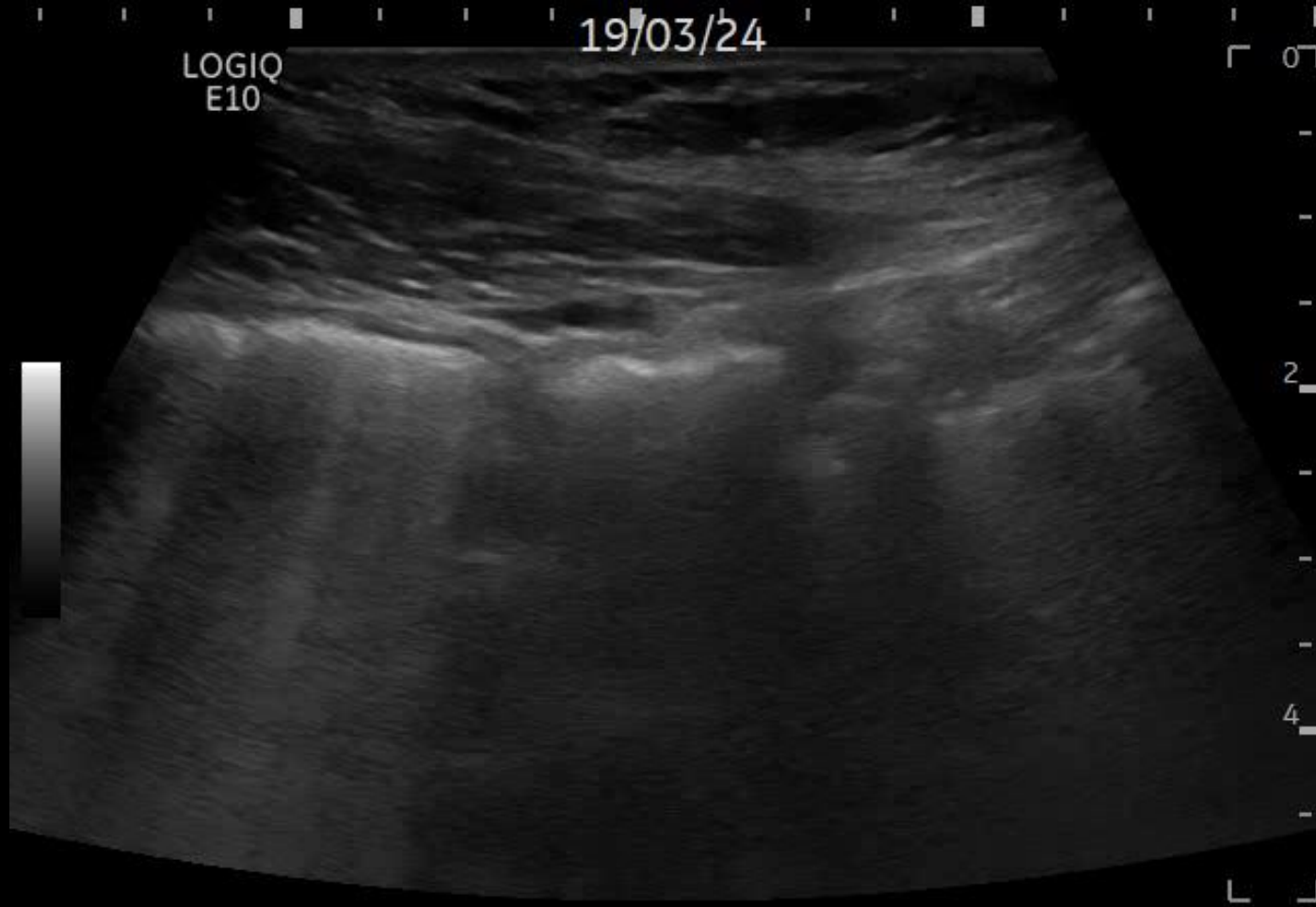


# Small bowel ventral of the sigmoid





# Same patient with graded compression



# Mistaking the sigmoid for the TI

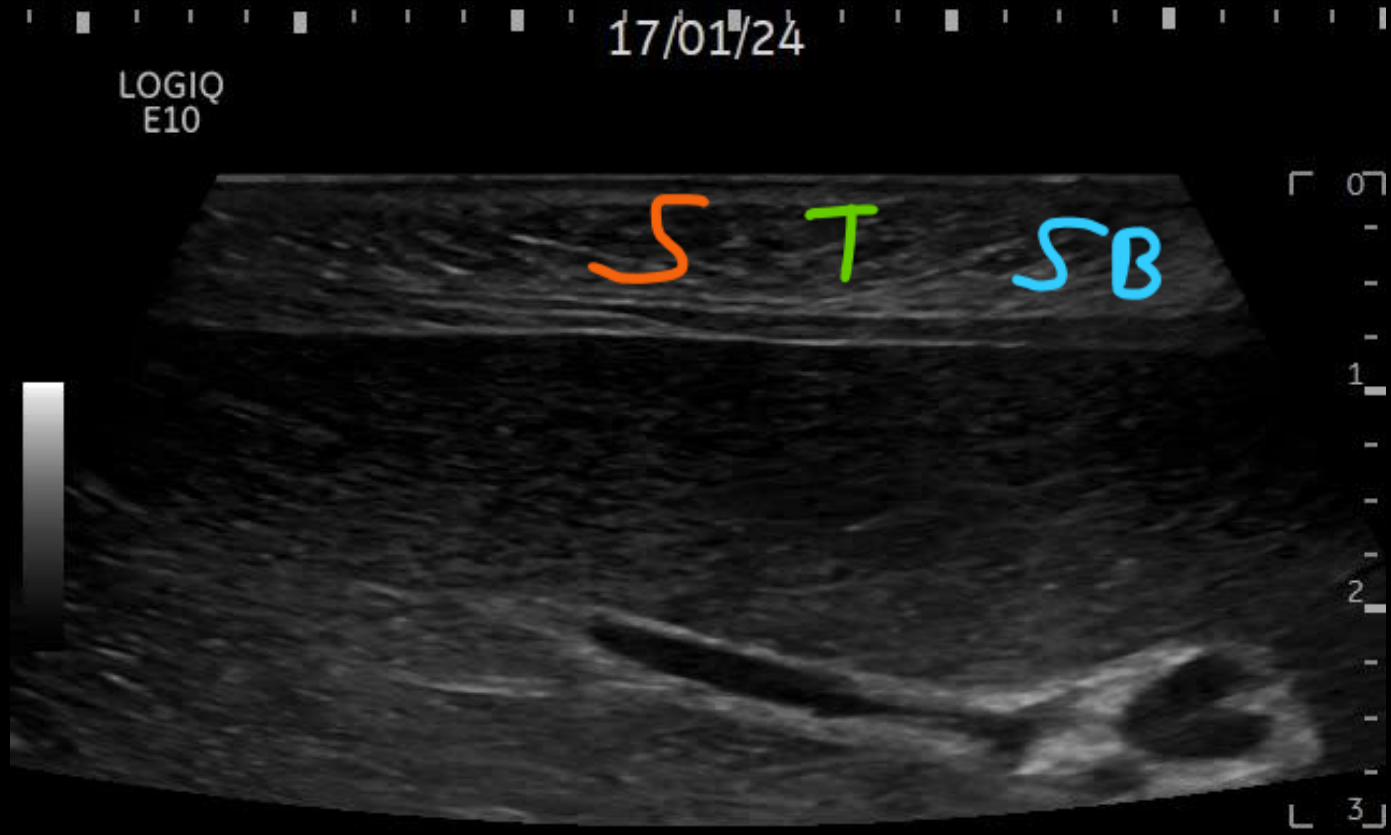






# Variants of the transverse colon position





# Finding the transverse colon, starting at the liver



international bowel  
ULTRASOUND GROUP





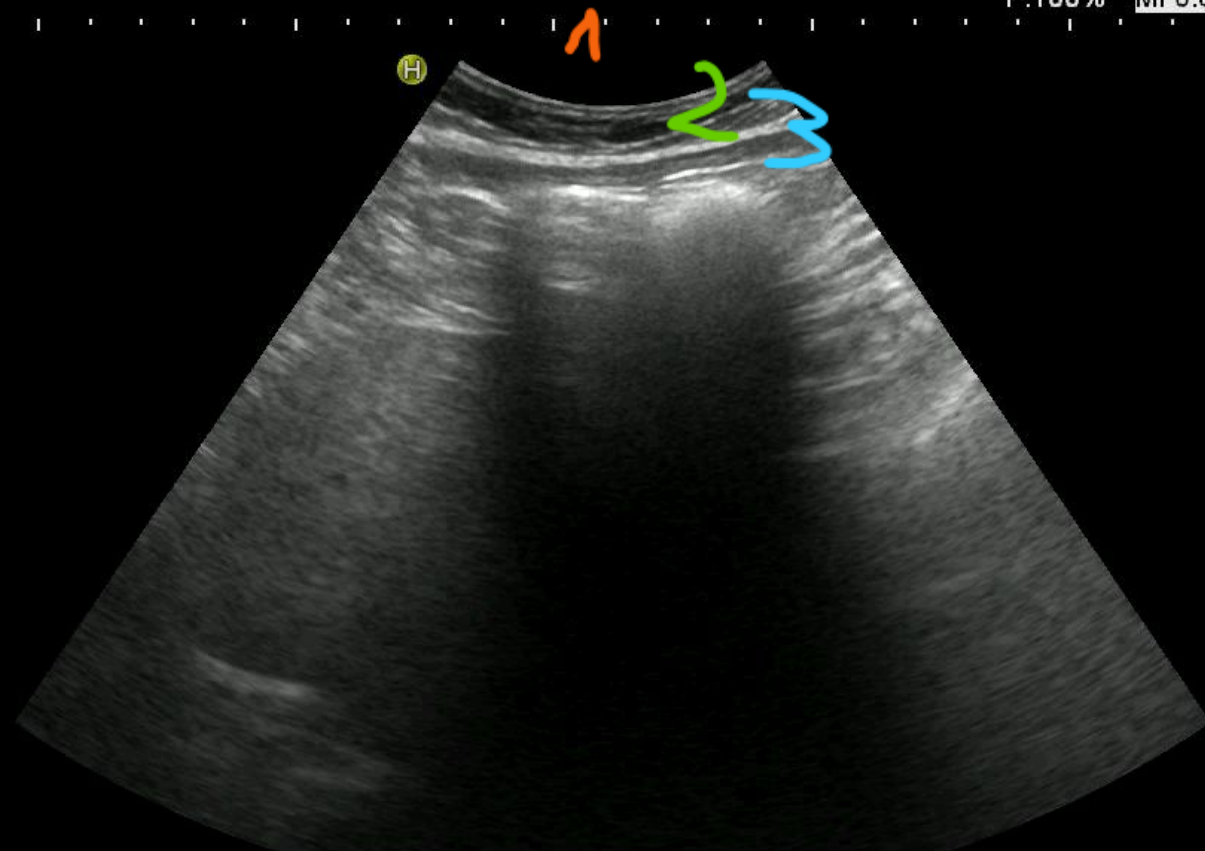
HITACHI

Abdomen.

P:100%

MI 0.8

TIS<0.4



- 0  
.  
.  
.  
- 5  
.  
.  
- 10  
.  
.  
.

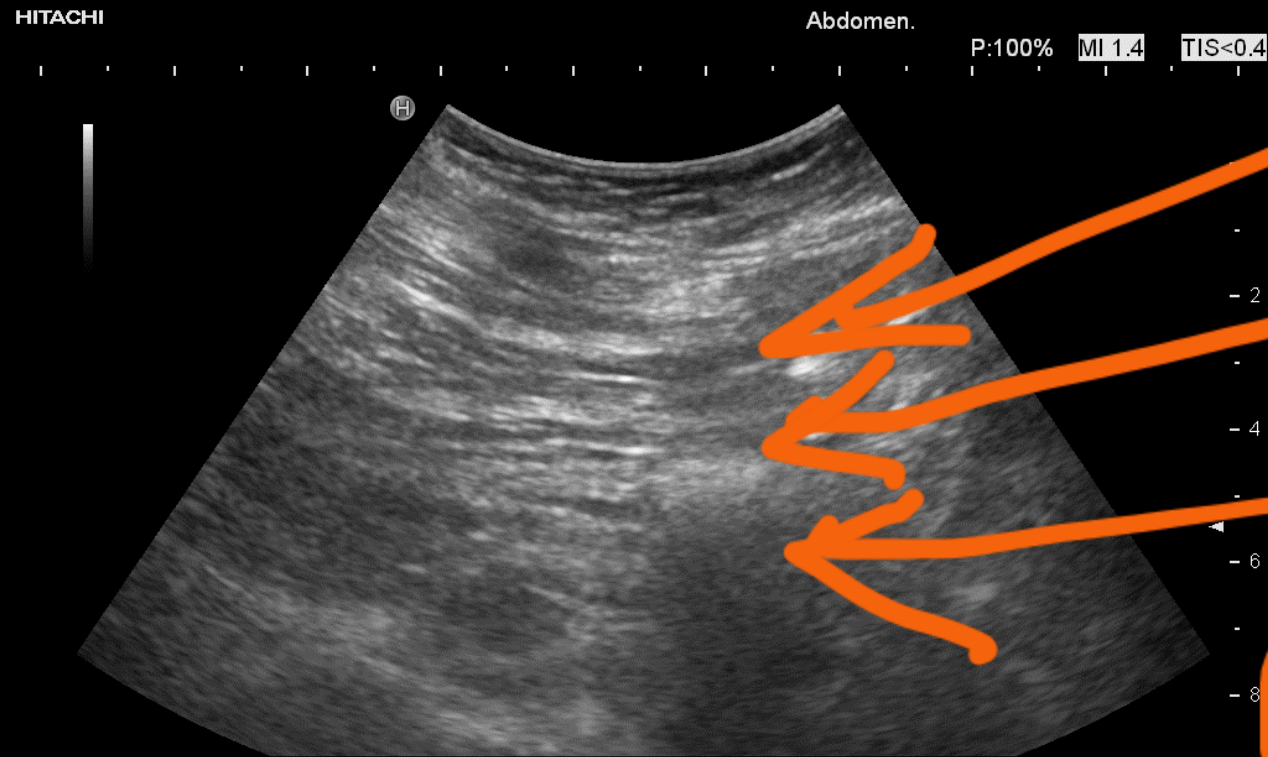
FR:22  
C715

BG:23 DR:75  
HdTHI-R



Always check on motility!  
Follow the structures  
Never judge a still image alone

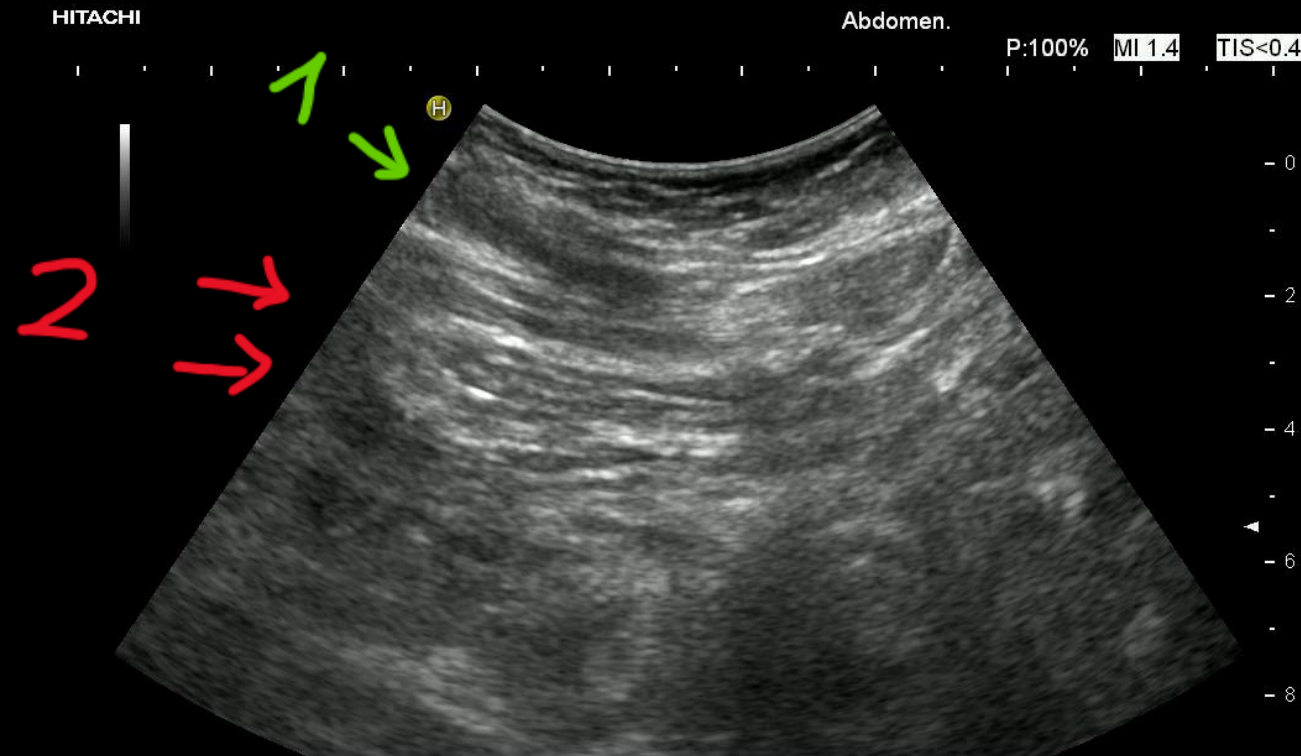
# False interpretation



IS  
this  
bowel?

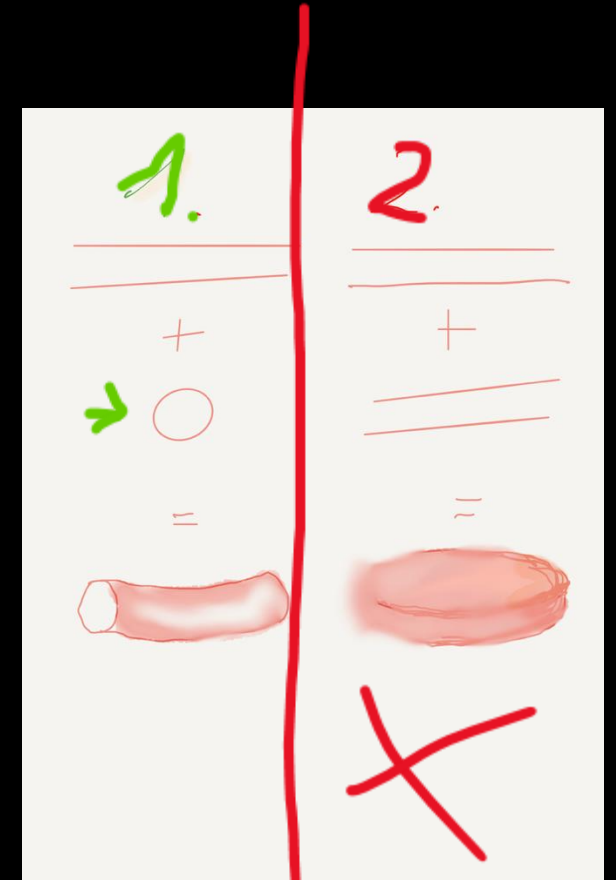


# How to avoid this : turn the probe!



FR:25  
C715

BG:15 DR:75  
HdTHI-R



Mesenteric stratification, due to  
prolonged steroid therapy?  
Sclerosing mesenteritis?

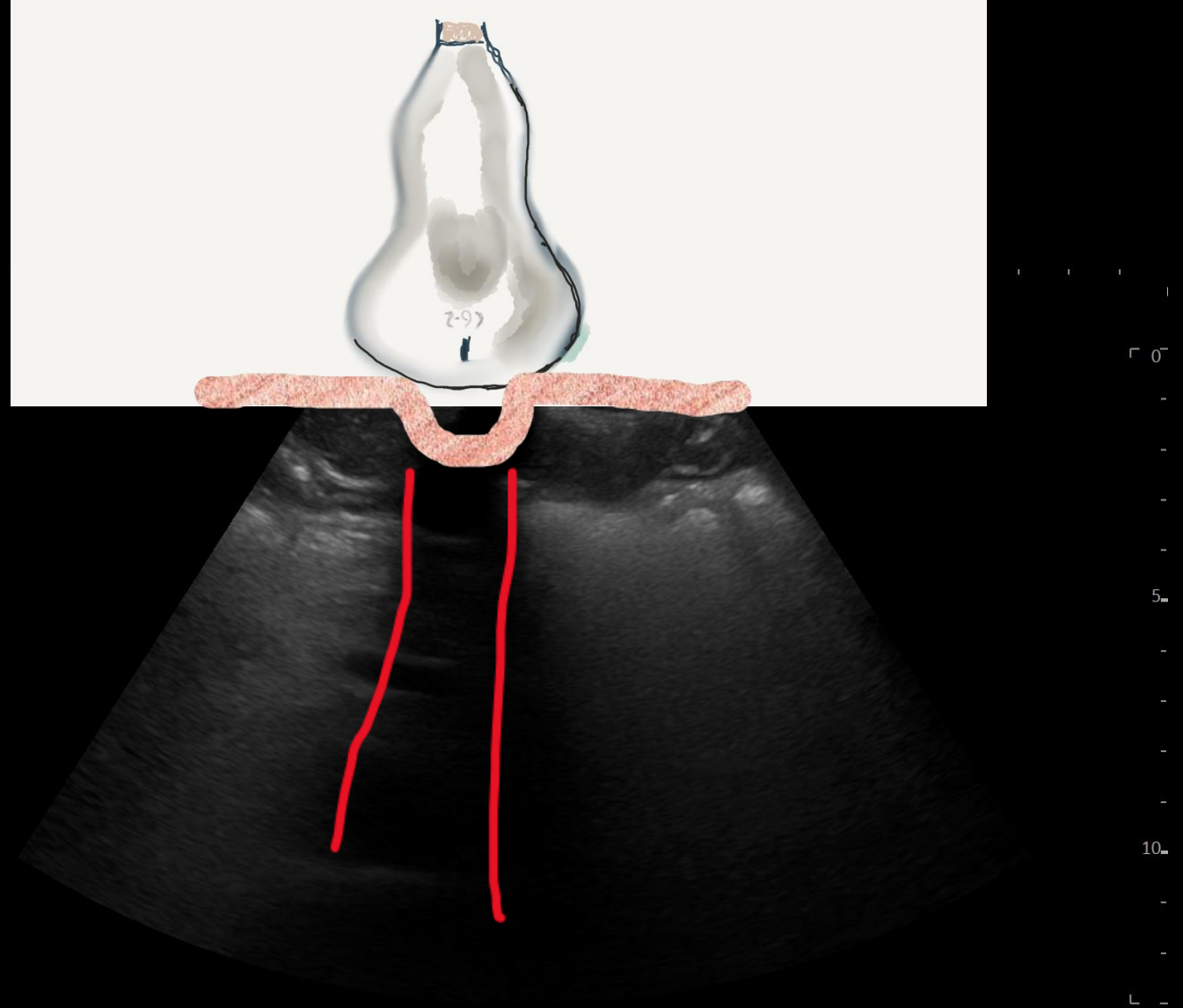
# How to avoid this

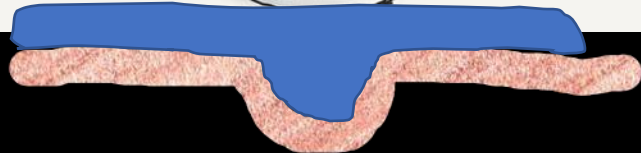
- Always turn the probe for proper identification of the bowel!
- Bowel has to be round in one dimension



## Postoperative situations

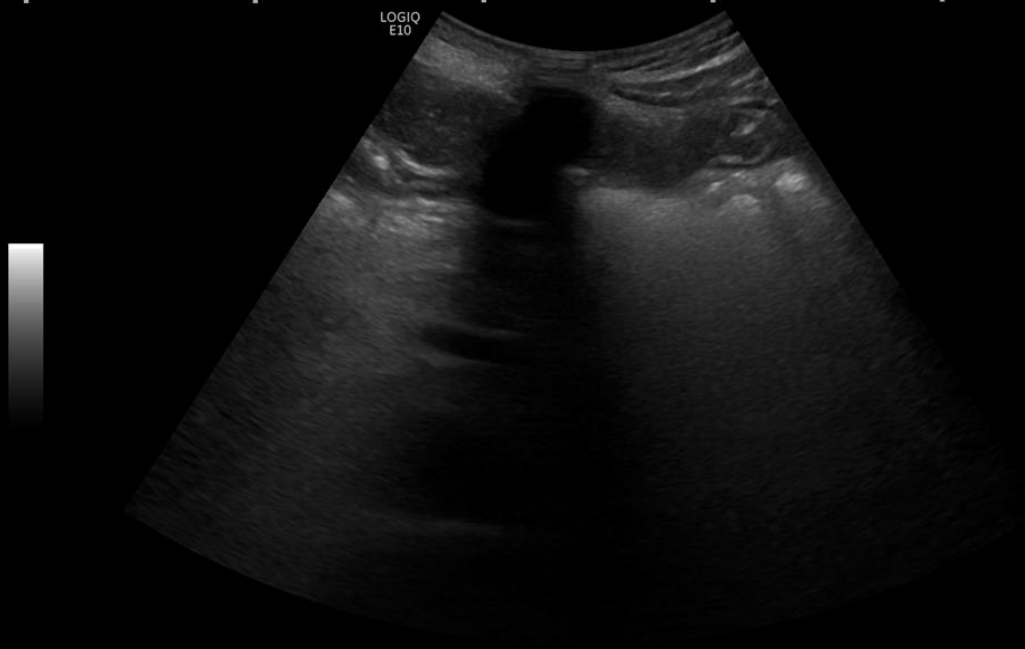
Avoid problem  
„air shadowing





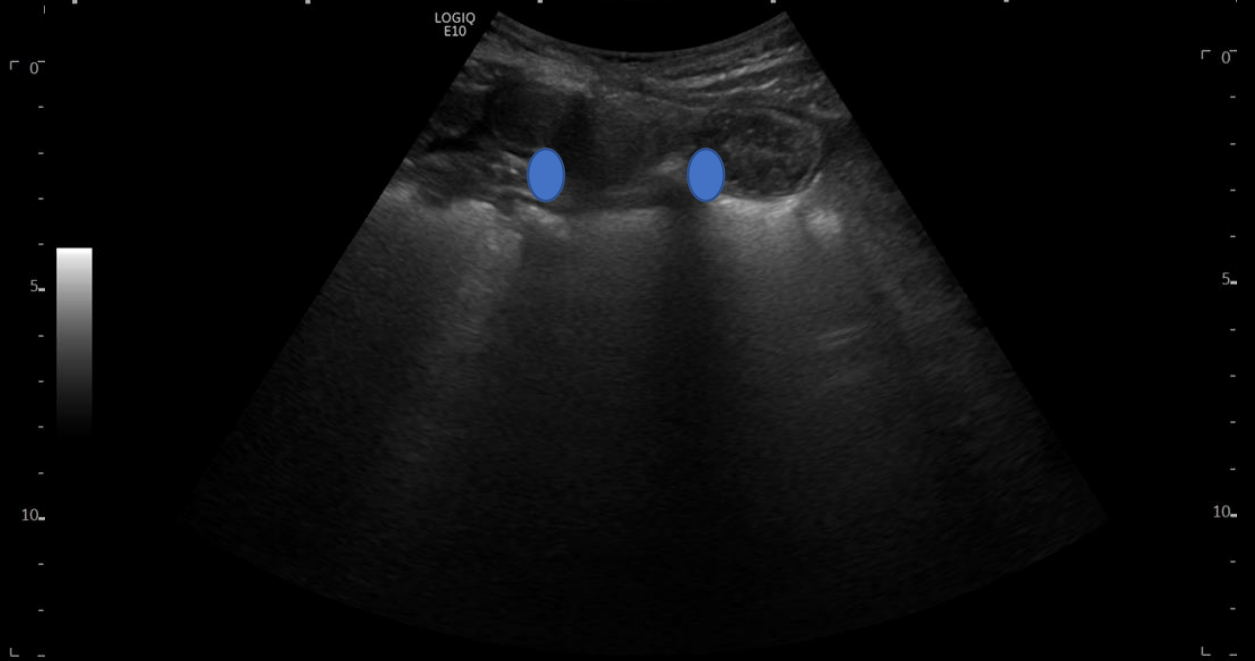
06/04/22

LOGIO  
E10

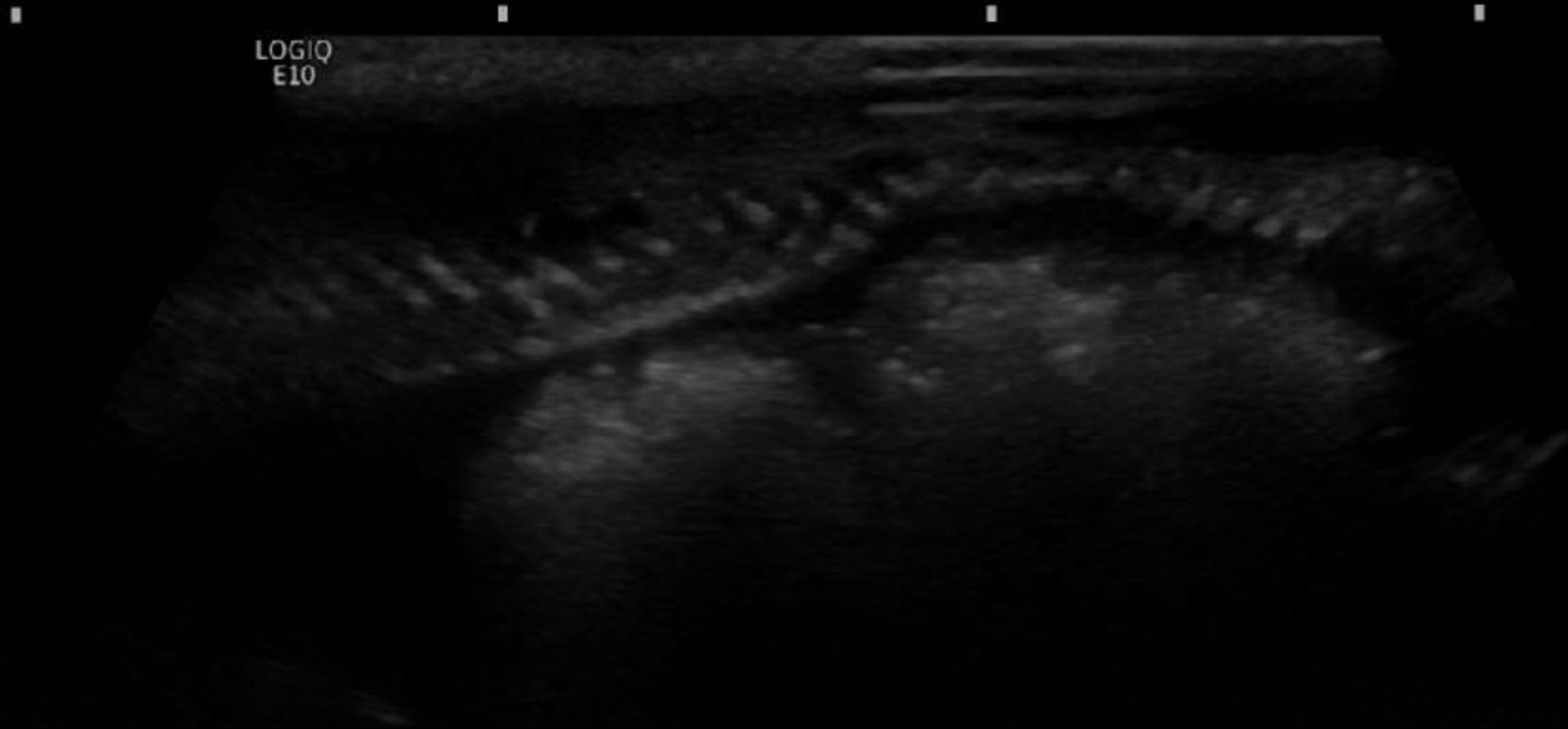


06/04/22

LOGIO  
E10



# Funny shape of the sigmoid in the left lower abdomen?



Sublay-mesh after surgical hernia procedure



# Postoperative situations

**You could tilt the probe or**

**Have towels and extra bag ready**

**Perhaps ask for assistance**

**Cover probe**

**Cover your hand**

**Remove the bag**

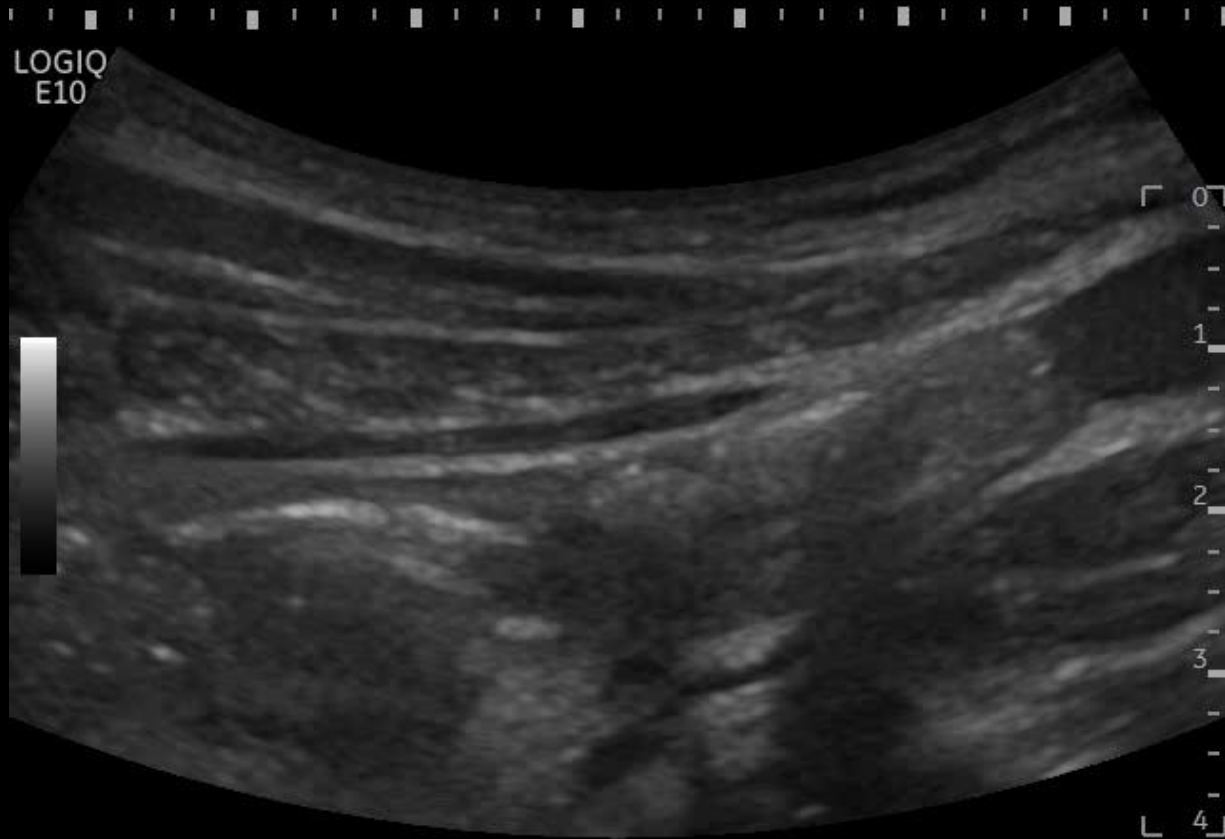
**Put the probe on the opening**





How to find the anastomosis?

## Postoperative situations



Start left

follow the large bowel  
until

**active peristalsis is  
visible close to the still  
colon**

Try to visualize the insertion with  
the high resolution probe

# What about your ultrasound career?

## Identify:

-Aims      Where do I want to be and why

Who has benefits: Hospital, yourself, patients?

-Obstacles      Better off with colonoscopy? Other colleagues?

-Support      Is my superior/ employment on my side?

-Timeline and resources

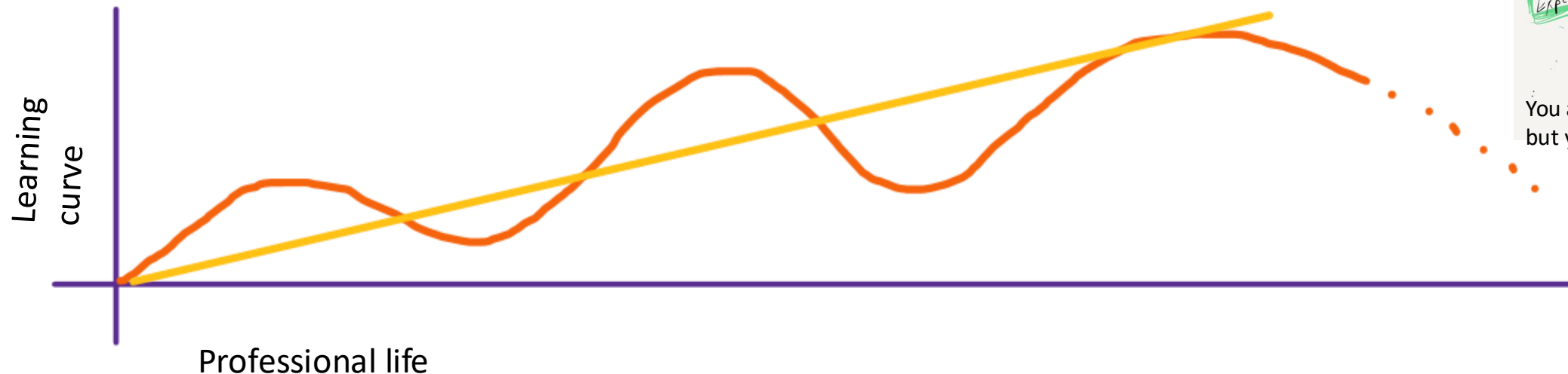
## Physicians' ways to become an expert

You are not an expert, and you know it

You are not an expert, but you think you are

You are an expert, but you still doubt it

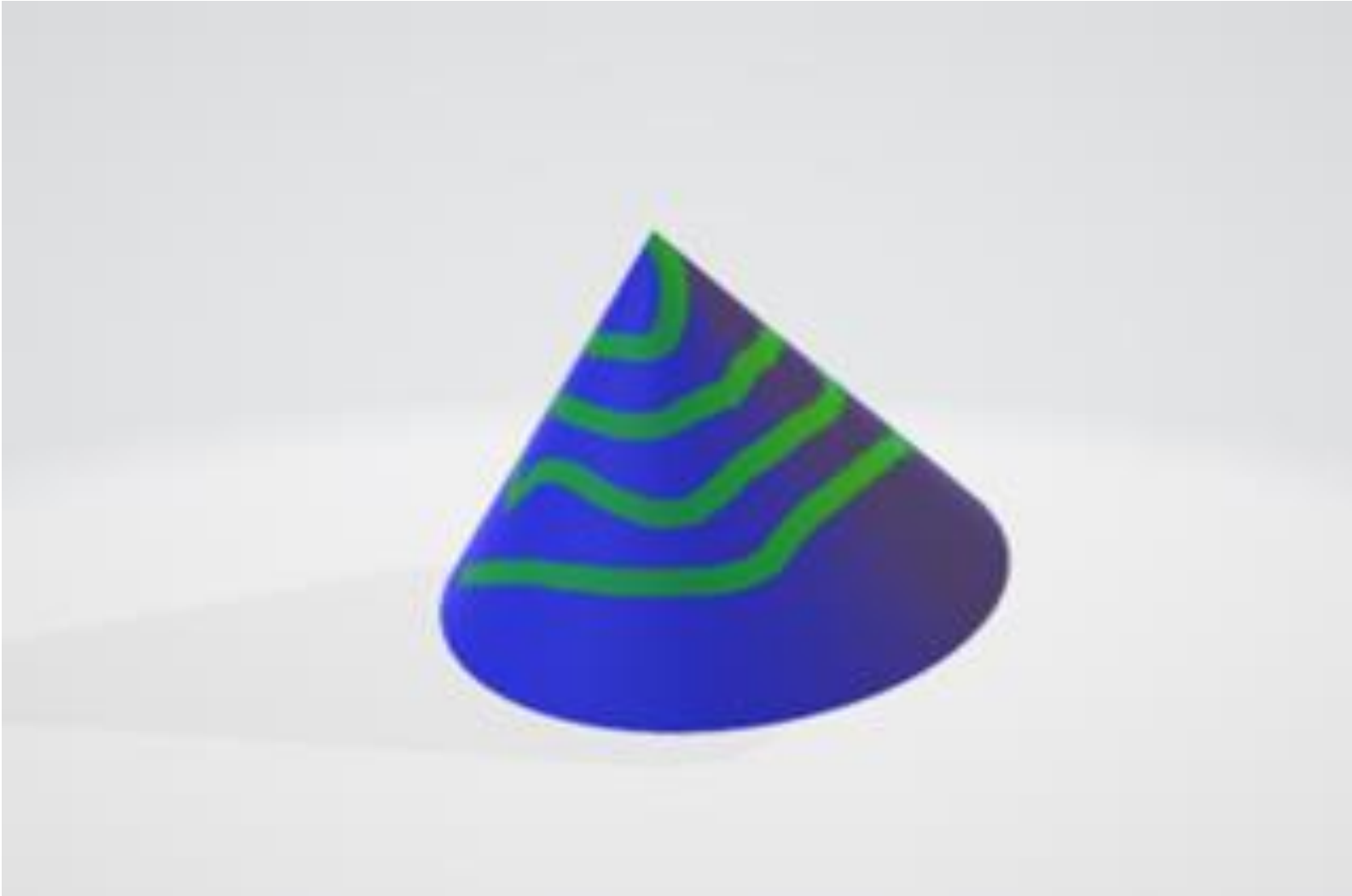
You are an expert, and you know it (and could still be mistaken, as a human being)



# Lifelong learning is a cycle ?



**It is a spiral,  
uphill**





# Do numbers matter?

Minimum requirements for **abdominal ultrasound** in Germany

GP 300

GE 500

(compare colonoscopy 200-300)

Rad 700-1000

DEGUM Level 1 800 last 2 years

Level 2 6000 4 years\*

Level 3 10000 6 years\*

\*additional requirements like exam,  
teaching experience, trials

IBUS

Minimum 80 ?

IBUS XP Access Minimum 300

**More important goal :  
Level of competency  
and skills**

**Evaluation of learning**



# How to continue the path of proficiency?

Repeat, perform (a lot)

Record

Review your recordings after some time, focusing on quality

Compare (with other imaging and findings)

Conduct follow-ups, (considering patients' history and surgical outcomes)

Cultivate your natural scepticism and curiosity ( Against the overconfidence-effect )

Be aware of your uncertainties and think about sharing them

Welcome assistance and guidance from all sources

Acknowledge and learn from your mistakes



# Lüneburg

# IUS-Team



23.07.2025



Dr.F.Petersen

