

**December 15th, 2025**

Leuven, Belgium

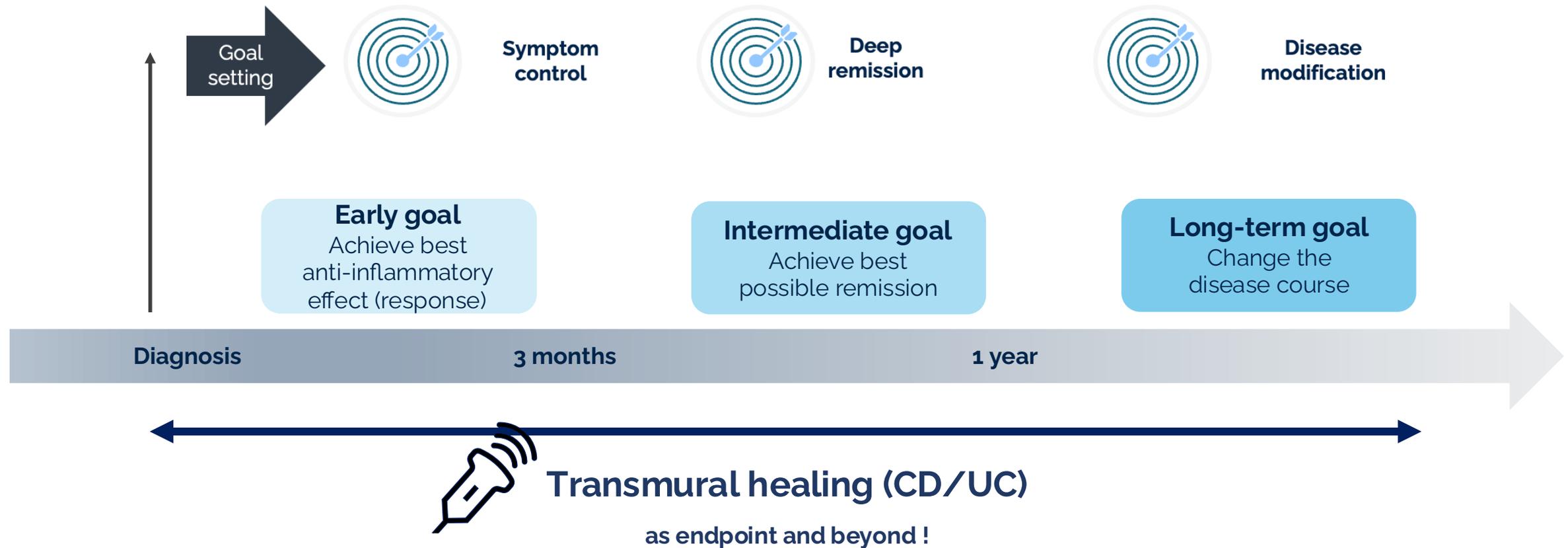


international bowel  
**ULTRASOUND GROUP**

# IUS in disease monitoring, what do we look for?

**Bram Verstockt**

# Monitoring, a key aspect in IBD care



# Inaugural IBUS Industry workshop 2025

- Key features in CD and UC monitoring and how to position IUS in the monitoring strategy
- Standardizing IUS for clinical trials (lessons learned, IUS acquisition, image transfer, central reading)
- Implementing IUS in clinical trials: perspectives from different stakeholders
  - Patient expectations (IFFCA)
  - Regulatory perspectives (EMA)
  - Pharmaceutical industry
- Future of IUS trials (including designs, platforms and AI solutions)
- Roundtable discussions

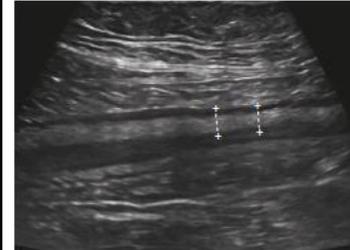
Endoscopy... “just” the mucosa



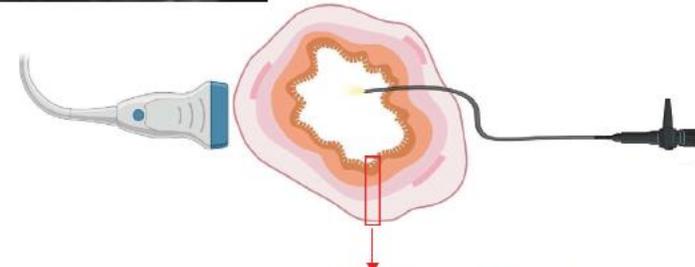
# IUS... a deep dive into the bowel wall



Ultrasound image of the sigmoid of a patient with chronic, therapy-refractory ulcerative colitis

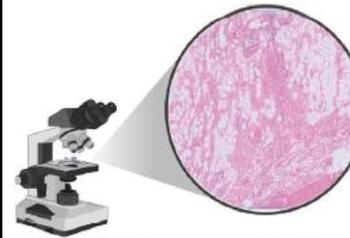


- Ultrasound aspects beyond the mucosa:
- Thickened submucosa
  - Loss of haustrations
  - Mesenteric fibrofatty proliferation
  - Loss of bowel wall stratification
  - Increased bowel wall thickness

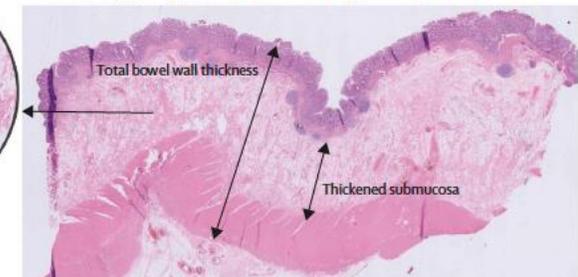


Endoscopy:  
• Mayo endoscopic subscore 3

Transmural biopsy of a patient with chronic, therapy-refractory ulcerative colitis



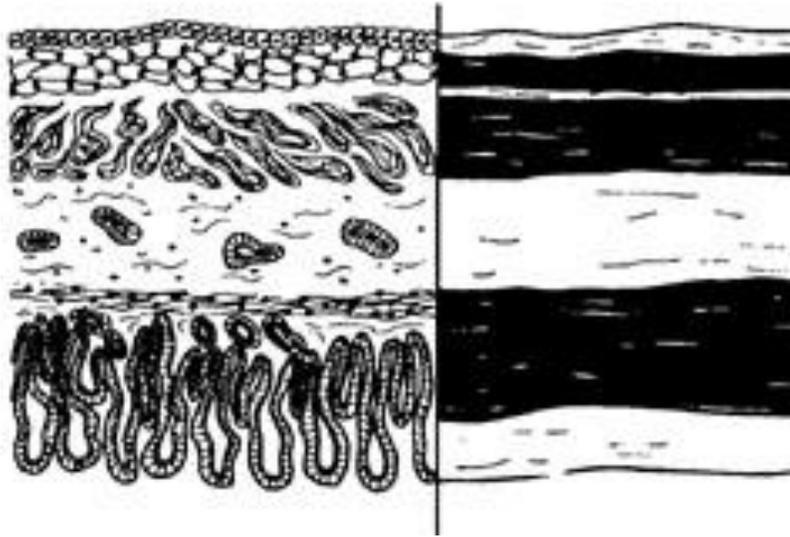
Submucosal fibrosis and increased fat cell deposition



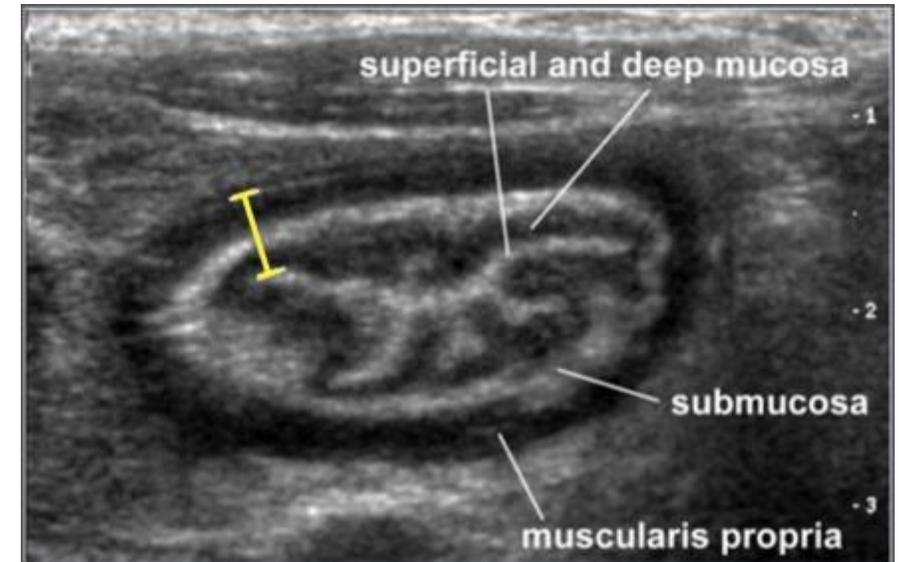
- Histopathology:
- Thickened muscularis mucosae
  - Submucosal fibrosis
  - Muscular remodelling and fibrotic shifts
  - Increased fat cell deposition

# Basic principles of IUS monitoring

## What to look for?



*Connective tissue*  
*Longitudinal muscularis propria*  
*Serosa / Adventitia*  
*Circular muscularis propria*  
  
*Submucosa*  
*Muscularis mucosa*  
*Deep mucosa*  
*Superficial mucosa*



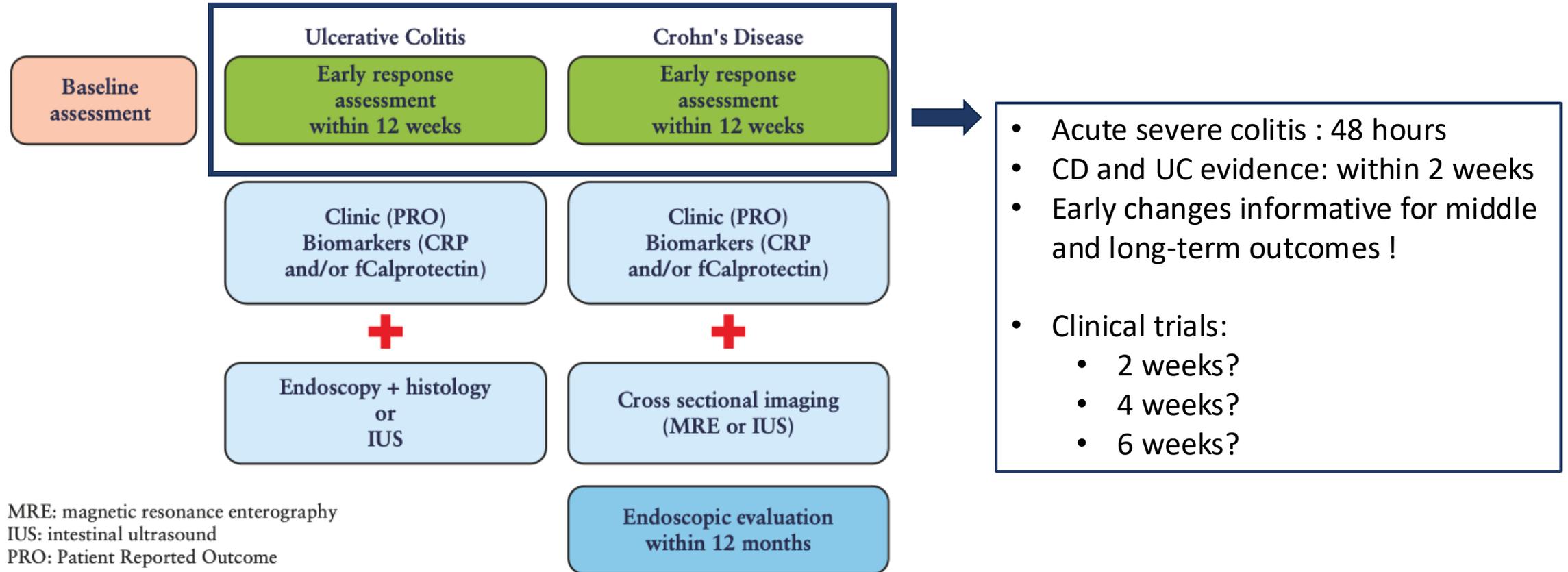
# IUS based monitoring in daily clinical practice and how to inform clinical trials?

## ECCO-ESGAR-ESP-IBUS Guideline on Diagnostics and Monitoring of Patients with Inflammatory Bowel Disease: Part 1

Part 1: initial diagnosis, monitoring of known inflammatory bowel disease, detection of complications

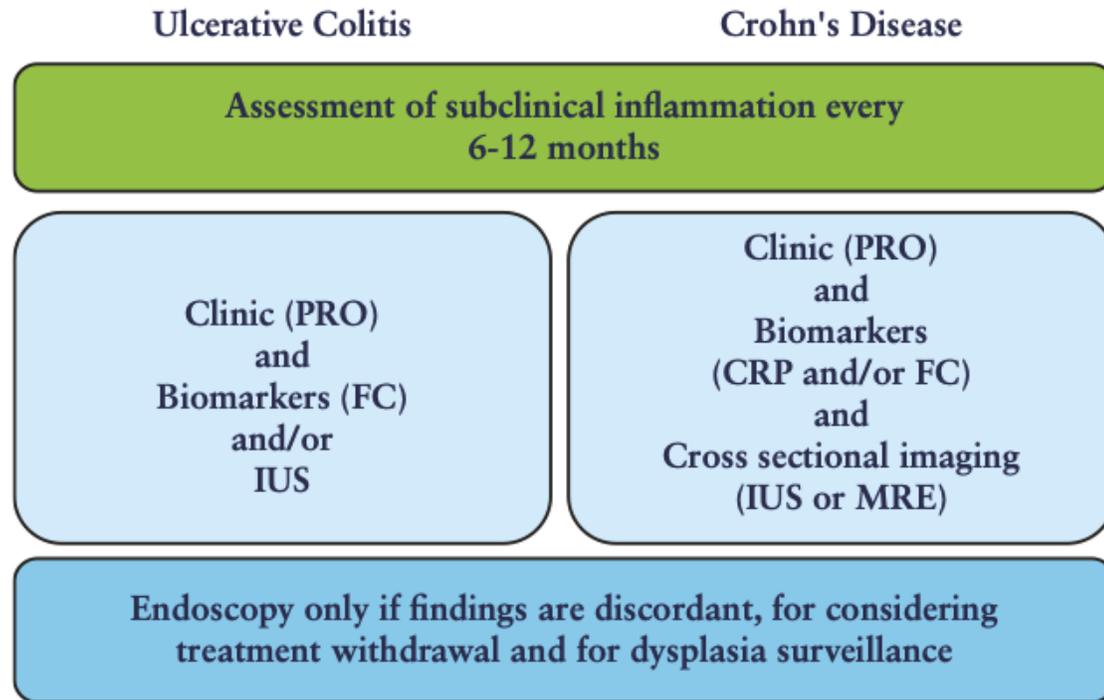
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# IUS based monitoring in daily clinical practice and how to inform clinical trials?



MRE: magnetic resonance enterography  
IUS: intestinal ultrasound  
PRO: Patient Reported Outcome

# IUS based monitoring in daily clinical practice and how to inform clinical trials?



MRE: magnetic resonance enterography  
IUS: intestinal ultrasound  
PRO: Patient Reported Outcome  
fCalpro fecal calprotectin  
CRP: C-reactive protein

# Conclusion and open questions

- Overwhelming evidence on the importance of IUS in non-invasive monitoring (ECCO-IBUS-ESGAR guidelines > STRIDE III ?)
- Key parameters have been defined, but might be optimised (role for AI ?)
- Need for standardisation and reporting, including scores (?)
- Need for standardised endpoint definitions within a regulatory framework
- Differences between Crohn's disease and ulcerative colitis !?