Calprotectin is a protein released into the gastrointestinal tract when it is inflamed, such as in inflammatory bowel disease (IBD; Crohn’s disease and ulcerative colitis). It is a stable protein, so can be detected in the stool by laboratory assay. Elevated levels of faecal calprotectin are found in IBD. By contrast, in functional disorders of the gastrointestinal tract, such as the irritable bowel syndrome (IBS) faecal calprotectin levels are normal.

Clinically, it is often very difficult to be able to distinguish IBS from IBD based on symptoms, signs and blood tests. Here, faecal calprotectin can be used as a biomarker to support your assessment. NICE have approved this. [http://www.NICE.org.uk/dg11](http://www.NICE.org.uk/dg11)

We have developed a care pathway for the use of faecal calprotectin in primary care. No biomarker test is 100% accurate but we have shown this care pathway to be effective and safe in supporting your clinical decision making.

**Who should I request a faecal calprotectin on?**
Faecal calprotectin should be considered in:
- patients aged 18-60 years
- patients who present with lower gastrointestinal symptoms in whom you suspect IBS or IBD
- patients where there is diagnostic uncertainty.

**When do I request a faecal calprotectin?**
Faecal calprotectin should be requested alongside or after any other tests you consider to be clinically appropriate such as:
- FBC, urea and electrolytes, C-reactive protein, calcium
- Coeliac screen
- Thyroid function
- Stool culture and *C difficile* request.

**When should I not request a faecal calprotectin?**
When colorectal cancer is suspected or when there is diagnostic certainty. [https://www.NICE.org.uk/guidance/ng12](https://www.NICE.org.uk/guidance/ng12)

**How long will the test take to come back from the laboratory?**
The assay is run several times per week. You will receive the result electronically within 5 days.
What should I do with the faecal calprotectin result?

1. Faecal calprotectin <100mcg/g
   - IBS is 98% likely
   - treat as IBS and review in six weeks
   - or consider urological and gynaecological diagnoses
   - at review if still symptomatic
     - aged <50 years and the faecal calprotectin is <50mcg/g
       - treat with second line IBS therapy before considering routine gastroenterology referral
     - aged ≥50 years or the faecal calprotectin is ≥50mcg/g
       - refer to gastroenterology routinely

2. Faecal calprotectin ≥100mcg/g
   - repeat the test within 2 weeks

3. Repeat faecal calprotectin <100mcg/g
   - IBS is 98% likely, see above

4. Repeat faecal calprotectin 100-250mcg/g
   - IBD is 12% likely
   - refer to gastroenterology routinely

5. Repeat faecal calprotectin >250mcg/g
   - IBD 46% likelihood
   - refer urgently to gastroenterology for straight to test colonoscopy

If you have any further questions
Please feel free to contact Dr James Turvill, Consultant Gastroenterologist, York Teaching Hospital NHS Foundation Trust, Wigginton Road, York, YO31 8HE Tel: 01904 725816
New presentation with lower gastrointestinal symptoms: cancer not suspected preliminary Lx -ve IBS or IBD likely

Faecal calprotectin (FC)

FC<100
98% IBS certainty

Treat as IBS (NICE guidance) or consider non enteric disease

Symptoms managed locally

FC<50 and aged <50 years consider second line therapy for IBS before referral >99% IBS certainty

Remains symptomatic

FC≥50 or aged ≥50 years refer routinely to gastroenterology 81% IBS likelihood

FC≥100 repeat FC

FC<100
98% IBS certainty

FC≥100
33% IBD likelihood

FC 100-250 refer to gastroenterology routinely 12% IBD likelihood

FC>250 refer to gastroenterology urgently >46% IBD likelihood

Exclusion criteria:
Cancer suspected (NICE guideline NG12. https://www.nice.org.uk/guidance/ng12)

Inclusion criteria:
- Adult 18-60 years
- New lower gastrointestinal symptoms
- Normal or negative initial workup (FBC, U&E, Cr, TFT, CRP, Ca, coeliac screen)
- Stool culture / C. difficile screen as appropriate.