

# Guidelines on the Use of Faecal Calprotectin within NHS GGC

## Introduction

- Calprotectin is a calcium and zinc-binding protein within the cytosol of neutrophils
- FC is a sensitive but non-specific marker of inflammation within the GI tract
- Many diverse pathologies can cause elevation including IBD, infective gastroenteritis, colon cancer, peptic ulcer disease, NSAID enteropathy etc.
- **An elevated FC is NOT diagnostic of Inflammatory Bowel Disease (IBD)**

## Indications for testing FC

### A) Differentiation of IBD from irritable bowel syndrome (IBS)

- FC has been shown to accurately identify patients with functional disorders owing to the high negative predictive value (NPV) of a normal FC in this setting
- A normal FC can help support a diagnosis of IBS in the correct clinical context
- Studies in GG&C patients suggest that, **in adult patients aged 16-50 years old and without alarm features, FC values <200µg/g are rarely associated with IBD or other significant luminal pathology**
- **Older adults (>40y) with new onset bowel symptoms are still best investigated by colonoscopy** as FC may be within the normal range in selected cases of advanced polyps and colon cancer
- **Please refer to GGC testing and referral protocol**

### B) Follow up of IBD patients

#### i) Assessment of disease activity

- FC levels correlate well with colonoscopic appearances and histology in IBD
- FC is a superior surrogate marker to CRP &/or ESR in this setting
- FC levels in small bowel Crohn's disease tend to be lower than in colonic disease

#### ii) Relapse prediction

- Elevated FC in 'clinical remission' has been shown to confer a higher rate of clinical relapse within one year
- In ulcerative colitis (UC) in remission, FC usually returns to within the normal range whereas this is not normally the case for Crohn's disease (CD).
- FC level check in CD patients in 'clinical remission' forms a useful baseline value to gauge whether or not future new symptoms are inflammatory in nature when rechecked

#### iii) Assessment of treatment efficacy

- FC levels have been shown to correlate with symptom improvement and endoscopic / histologic scores in IBD patients treated with steroids, immunosuppressants and biological agents

#### iv) Prediction of post surgical relapse in CD

- FC levels correlate with endoscopic / histologic scores in post-operative CD patients

### Note that FC testing should **NOT** be undertaken in the following scenarios

- Colonic cancer or polyp screening – sensitivity of FC is poor
- In patients with a short duration of symptoms (<4/52)
- As the initial investigation in those with bloody diarrhoea – FC invariably elevated & lower GI endoscopy indicated provided stool cultures are negative
- In those patients >40y with altered bowel habit and no prior GI diagnosis – lower GI endoscopy appropriate

## GGC Faecal Calprotectin Testing and Referral Protocol – IBS or IBD?

