

Background

- Small bowel capsule endoscopy (SBCE) has become an important tool in the evaluation of the small bowel in patients with inflammatory bowel disease (IBD).
- Fecal calprotectin is a reliable biomarker for bowel inflammation.
- The goal of this study is to evaluate the relationship between fecal calprotectin and SBCE results.

Methods

- We performed a retrospective review of SBCE from a tertiary-care center's PillCam database from 8/3/2018-8/18/2021.
- Patients undergoing SBCE for the evaluation and diagnosis of IBD were included.
- We then conducted chart review of these patients to investigate prior endoscopic procedures and fecal calprotectin levels.
- Negative fecal calprotectin levels were defined as fecal calprotectin <50 mcg/g.

Results

- 83 patients were included in our analysis.
 - Four patients had SBCE performed 2 separate times, totaling 87 SBCE reviewed.
- 56.6% female with an average age of 41.8 years.
- 23 (27.7%) patients had findings of active IBD on their SBCE.
- 30/60 patients with negative capsule findings had a fecal calprotectin collected within 6 months of SBCE
 - 11/30 (37%) patients had negative fecal calprotectin levels.
- 9/23 patients with positive capsule findings had a fecal calprotectin collected within 6 months of SBCE.
 - 0/9 (0%) of these patients had negative fecal calprotectin levels.
- Patients with negative fecal calprotectin were significantly more likely to have a negative capsule study (p=0.03).
- The most common locations for positive capsule findings in patients with elevated fecal calprotectin were ileum (6, 67%), jejunum (4, 44%), duodenum (2, 22%), stomach (2, 22%), and colon (1, 11%).
- 8/9 (88%) patients with positive capsule findings and elevated fecal calprotectin had a colonoscopy within 6 months of SBCE.
 - 6 (75%) of these patients had evidence of IBD on biopsies taken during those procedures.

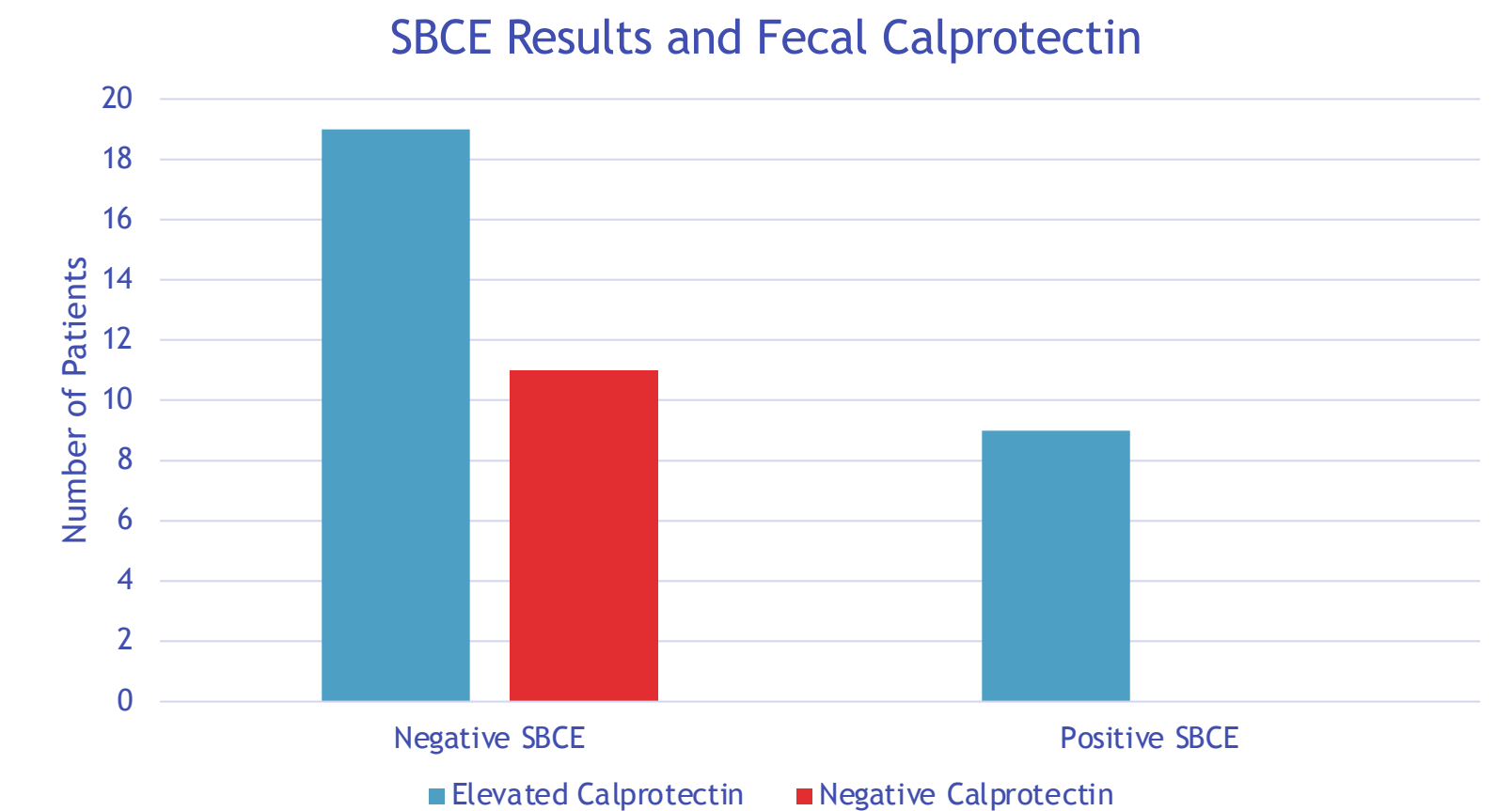


Figure 1: Relationship Between SBCE Results and Fecal Calprotectin

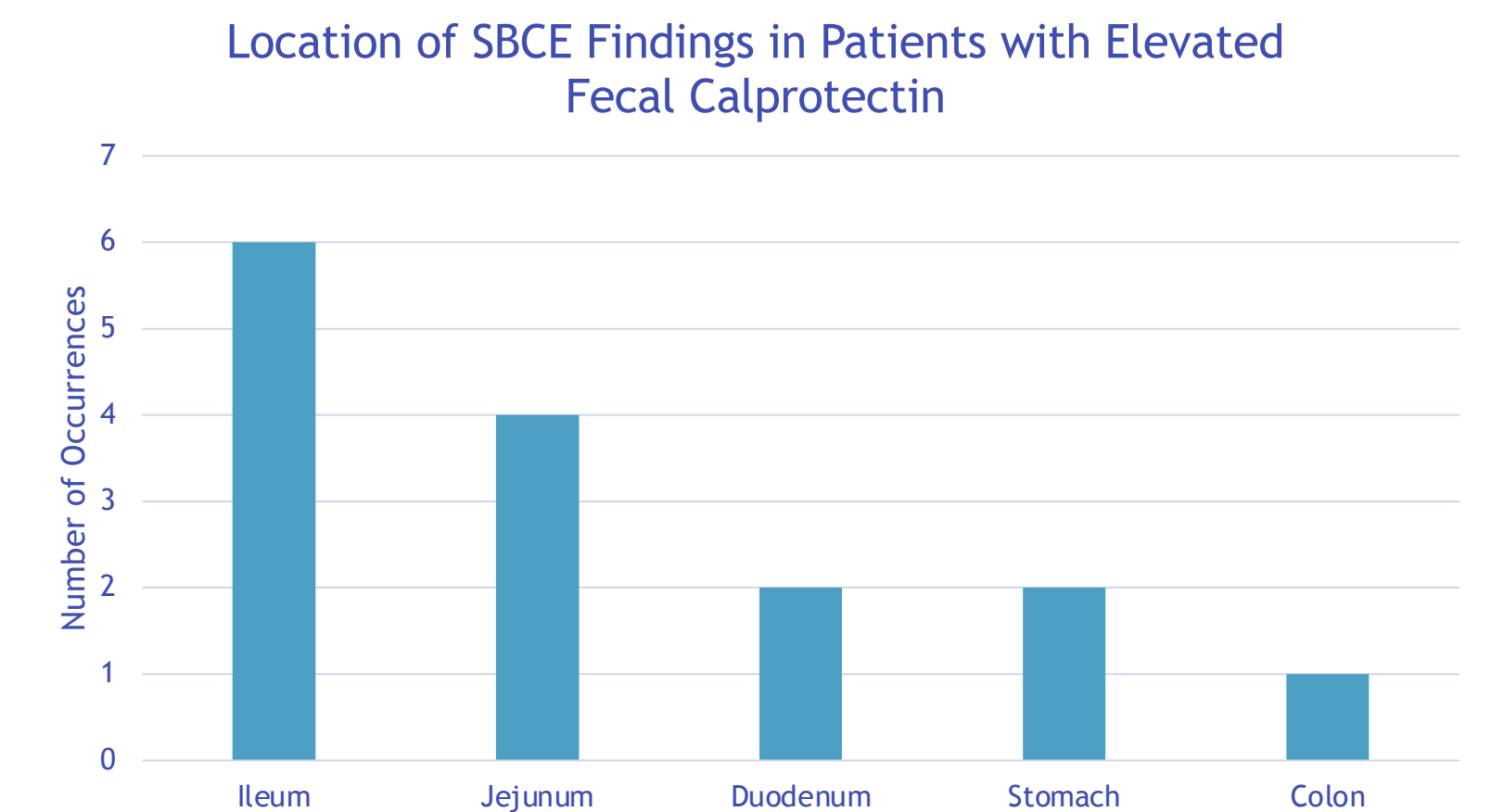


Figure 2: Location of Active IBD on SBCE in Patients with Elevated Fecal Calprotectin

Discussion

- Patients with negative fecal calprotectin levels are significantly more likely to have negative SBCE results.
- The most common location of pathology seen on SBCE in patients with elevated fecal calprotectin was the ileum.