recurrence of symptoms (HBI > 4) leading to hospitalisation or therapeutic intensification after exclusion of other causes of recurrent symptoms.

Results: Overall, 316 patients were included (median follow-up 31 months (range 16.0–45.3)); mean CD duration = 11.7 ± 10.8 years, 50.6% female, 11.7% smokers, 22.8% with perianal lesions and 37.6% with prior intestinal resection. The Montreal classification was: L1 = 33.8%, L2 = 5.7% and L3 = 58.5%, and B1 = 6.3%, B2 = 48.1% and B3 = 45.6%. The rate of endoscopic POR at 6m was 35.8% (i0 = 50.9%, i1 = 13.3%, i2a = 7.0%, i2b = 13.3%, i3 = 8.2%, i4 = 7.3%). In multivariate analysis, >2 anti-TNF prior to surgery (OR = 3.4 [1.2–9.8], p = 0.026), resection length >30 cm (OR = 1.8 [1.1–3.0], p = 0.025) and surgery for refractoriness to medical therapy (OR = 8.6 [1.3–50.5], p = 0.017) were risk factors of endoscopic POR, while female gender (OR = 0.5 [0.3–0.8], p = 0.006), CD duration >10 years (OR = 0.5 [0.3–0.9], p = 0.049) and combination therapy with anti-TNF and immunosuppressive therapies (IS) (OR = 0.4 [0.2–0.8], p = 0.009) decreased this risk. The rate of clinical POR was 9.3% at 1 year and 24.4% at 2 years. In multivariate analysis, prior intestinal resection (HR = 1.6 [1.1–2.4], p = 0.041), >3 biologics before surgery (HR = 2.7 [1.6–6.5], p = 0.031) and RI≥i2 (HR = 2.5 [1.6–3.9], p < 0.0001) were associated with higher risk of clinical POR. Lower risk for clinical POR was found for CD duration >10 years (HR = 0.6 [0.4–0.9], p = 0.037) and post-op combination therapy (anti-TNF + IS) (HR = 0.5 [0.3–0.9], p = 0.028). In patients who did not receive anti-TNF to prevent endoscopic POR and who experienced endoscopic POR (RI ≥ i2) at 6m, starting combination therapy decreased the risk of clinical POR (HR = 0.4 [0.1–0.9], p < 0.05).

Conclusions: In our referral centre, the prevalence of endoscopic POR was lower than historical reporting, suggesting the positive impact of biological therapy. Combination therapy was the most effective approach to prevent and to treat endoscopic POR. This study also provided external validation of the RI (Figure 1).

Figure 1. Kaplan Meier curve showing the value of the Rutgeerts’ index to predict clinical postoperative recurrence in Crohn’s disease despite the large use of biologics and a therapeutic intensification based on early endoscopic findings.

P186

Outcomes of maintenance ustekinumab therapy for Crohn’s disease based on inflammatory burden: A post-hoc analysis of the UNITI trials

S. Ghosh1, B. Sattin2, V. Tornatore3, C. Gasink4, L.-L. Gao5, S. Sloan6, P. Rutgeerts7, B. Sands8, S. Hanauer9, B. Feagan10
1University of Birmingham, Birmingham, UK, 2Janssen Inc., Toronto, Canada, 3Janssen-Cilag, Cologno Monzese MI, Italy, 4University Hospital Gasthuisberg, Department of Gastroenterology, Leuven, Belgium, 5Janssen Scientific Affairs, LLC, Horsham, USA, 6University Hospital Gasthuisberg, Department of Gastroenterology, Leuven, Belgium, 7Icahn School of Medicine at Mount Sinai, New York, USA, 8Northwestern University Feinberg School Of Medicine, Chicago, USA, 9University of Western Ontario and Robarts Research Institute, London, Canada

Background: Patient inflammatory burden has been postulated to predict response to anti-inflammatory therapies. Ustekinumab (UST) is the only approved anti-IL-12/23 mAb for the treatment of Crohn’s disease (CD) and the PBO-controlled UNITI registration trials present an opportunity to test this hypothesis. We evaluated clinical outcomes to 90 mg q8 and q12wk SC treatment strategies based on inflammatory biomarkers C-reactive protein (CRP) and fecal calprotectin (fCal).

Methods: In UNITI 1 (anti-TNF therapy failures) and UNITI 2 (conventional therapy failures), patients were randomised to PBO, UST 130 mg IV, or UST -6 mg/kg IV. At 8 weeks, all responders to IV induction therapy participated in IM-UNITI and were randomised to SC maintenance treatment with PBO, UST 90 mg q8wks, or UST 90 mg q12wks. Clinical endpoints were assessed after 44 weeks of maintenance therapy. Results were stratified by inflammatory burden based on CRP and fCal. For CRP, inflammatory burden categories used were ≤5, >5 and ≤10, and >10 mg/l.

For fCal, inflammatory burden categories used were ≤250 and >250 mg/kg.

Results: When patients were stratified by inflammatory burden at baseline (BL) of induction (i.e. before IV dose), CRP thresholds discriminated patients in the 90 mg q12wk group into those more or less likely to achieve clinical endpoints at wk44 of maintenance. This finding is also supported by fCal stratification at BL of induction (i.e. before IV dose). Stratification at BL of maintenance provides greater distinction between UST doses. Maintenance week44 results stratified by CRP are shown in Figure 1. They suggest that a CRP >10 mg/l at maintenance BL (i.e., before first SC dose) discriminates a high inflammatory burden population that benefited from UST 90 mg SC q8wk dosing vs. q12wk dosing. Response and remission rates were similar between UST SC q8wk and q12wk dosing in patients with maintenance BL CRP ≤5mg/l and between 5and10 mg/l. Similar effects were seen at maintenance wk44 endpoints using fCal (Figure 2). Those with a higher inflammatory burden (fCal ≥250 mg/kg) at maintenance BL more clearly separated from PBO in q8wk group (56.4% vs. 33.8% remission, p = 0.002) vs. q12wk group (46.1% vs. 33.8% remission, p = 0.065).

Conclusions: CD patients with low inflammatory burden based on biomarkers CRP and fCal at BL and/or at initiation of maintenance therapy can benefit from q8 or q12wk maintenance dosing with UST, while those with high inflammatory burden are likely to need q8wk to maintain benefit.

Figure 1. Clinical endpoints at week 44 of IM-UNITI, stratified by baseline CRP
P187
Correlation between the Lemann Index and the Inflammatory Bowel Disease-Disability Index in Crohn’s disease

C. Farré*, M. Azahar, M. Nachury, J. Branche, R. Gérard, P. Wilk, P. Desreumaux, O. Eros², B. Pariente²

¹Gastroenterology Department, Lille, France, ²Department of Digestive Diagnostic and Interventional Radiology, Lille, France

Background: Crohn’s disease (CD) is a chronic progressive destructive disease resulting in cumulative structural bowel damage, which may predict long-term disability. The Lemann Index (LI) has been developed to measure CD-related bowel damage, including surgical resection and The presence of stricturing and penetrating lesions; it could range from 0 to 140. The Inflammatory Bowel Disease-Disability Index (IBD-DI) has recently been validated to assess disability in a patient with IBD; it could range from 0 to 100. The aim of the study was to measure bowel damage by using the LI and disability by using the IBD-DI in a cohort of CD patients and to evaluate the correlation between the two indices.

Methods: We performed a prospective study in the tertiary referral centre in Lille, from September 2016 to November 2016, including all consecutive CD outpatients. Bowel damage was assessed by the LI calculated according to the published protocol and disability by the IBD-DI questionnaire. Factors associated with LI and IBD-DI levels were identified by a median comparison test or means of bivariate analyses of variance. The correlation between the two indices was determined by a Spearman correlation test.

Results: 130 CD patients were consecutively included. The mean of LI was 11.9 ± 14.1 and ranged from 0 to 72.5. The LI significantly increased with disease duration: median value of 0.9 (IQR, 0.3–2.2) for disease duration < 2 years, 1.6 (IQR, 0.3–10.8) for disease duration ≥2 and <10 years and 16.5 (IQR, 9.1–23.4) for disease duration ≥10 years. Anal location and exposition to anti TNF were associated with higher LI levels (p < 0.005). Among patients exposed to anti TNF, the LI was lower in patients who were exposed in the first two years of the disease (p = 0.015). The others factors associated with bowel damage were: previous intestinal resection, clinical and biological disease activity and exposition to immunosuppressants (p < 0.005). The mean of IBD-DI was 28.8 ± 6.3 and ranged from 0 to 71. The factors associated with disability were: female gender, anal location, extradigestive manifestations, clinical and biological disease activity and exposition to anti TNF (p < 0.005). No significant correlation was found between LI and IBD-DI (p = 0.12; CI 95% −0.05–0.29; p = 0.15). Only a correlation between the anus LI and the IBD-DI was observed; p = 0.20 (CI 95% 0.003–0.36; p = 0.02).

Conclusions: Bowel damage but not disability increased with disease duration. Importantly, early introduction of anti TNF treatment prevented bowel damage progression. CD anal location was associated with high levels of LI and IBD-DI underlying the necessity to introduce early and intensive treatments in this CD population. No correlation was observed between the LI and the IBD-DI.

P188
Do you see what I see? An assessment of recognition and description of endoscopic inflammation by gastroenterology trainees and staff physicians

L. Hart†, M. Chavannes‡, W. Afif‡, P.L. Lakatos†, A. Bitton†, B. Bressler‡, T. Bessissow†

†McGill University, Gastroenterology, Montreal, Canada, ‡University of British Columbia, Department of Gastroenterology, Vancouver, Canada

Background: Proficiency in endoscopy goes beyond technical competence; gastroenterologists should be able to accurately describe endoscopic findings and integrate them into management plans. The aim is to determine whether trainees and staff are describing inflammatory bowel disease (IBD) lesions in a similar manner, using available scoring systems and severity assessment measures.

Methods: This cross-sectional questionnaire-based study recruited Gastroenterology trainees and staff across Canada (Mar-Oct 2017). Using 20 ileocolonoscopy images of single bowel segments, participants were asked to describe IBD inflammatory burden based physician severity rating, (PSR: healed, mild, moderate, severe), and then using the Mayo endoscopic score, MES (ulcerative colitis, UC) or the simple endoscopic score, SES-CD (Crohn’s disease, CD). Images were selected based on agreement by 3 IBD experts, who had rated them separately a priori, blinded to each other’s answers. Classic endoscopic findings of varying severity were presented (9 UC, 11 CD). Based on interpretation of endoscopic appearance, 10/20 images included a question on management. We examined inter-observer agreement among trainees and staff, compared trainees to staff, and determined accuracy of response by comparing both groups to the expert raters.

Results: 175 physicians participated: 129 staff and 46 trainees. For UC and CD, there was moderate inter-rater agreement using physician severity rating (K = 0.51 and 0.5 for staff, K = 0.46 and 0.41 for trainees). In UC, there was moderate inter-rater agreement for MES for staff and trainees: K = 0.47 and 0.44; in CD, the inter-rater agreement for SES-CD was only fair: K = 0.31 and 0.28 respectively. Compared with the experts, the mean accuracy score for UC was 72% for staff and 74% for trainees (p = 0.34); the mean score for CD was 77% and 63% respectively (p < 0.01). PSR accuracy scores were significantly higher than MES and SES-CD for staff (p < 0.01), but PSR and MES were equally accurate for trainees (p = 0.43). Trainees and staff better identified healed bowel/severe disease (>75% accuracy for both) than mild or moderate disease (<65% accuracy, p < 0.05). There was a high agreement with experts on management (>80%), though trainees consistently scored lower than staff (p < 0.01).