cer (CRC) in patients with ulcerative colitis (UC) was confirmed in multiple studies. In light of this, professional authorities recommend surveillance of CRC in patients with long-standing UC, favoring chromoendoscopy (CE) with targeted biopsies of identified lesions over white light endoscopy (WLE). Narrow-band Imaging (NBI) has been evaluated in several studies, however it is still unclear whether this modality can be considered an equally accurate alternative. The aim of the study was to compare the diagnostic yield of WLE, CE and NBI for detection of neoplasia in UC patients.

**Methods:** We performed a meta-analysis of prospective trials comparing the accuracy of CE, WLE or NBI for detection of neoplasia in patients with IBD. MEDLINE and EMBASE search were performed using the search terms “ulcerative colitis”, “chromoendoscopy”, “narrow band imaging”. We compared the diagnostic accuracy for detection of any neoplasia individual patient examined, as well as per number of neoplastic lesions per patient.

**Results:** The search yielded eleven studies eligible for analysis. Five studies compared CE to WLE. CE (n=361 patients) was found to be superior to WLE (n=358 patients): per-patient analysis odds ratio (OR)-2.05 (95% CI 1.26,3.35; p=0.004; I²=0%); per lesion analysis OR-2.79 (95% CI 2.08,3.73; p<0.00001; I²=22%). In four studies comparing NBI (n=305 patients) to WLE (n=305 patients), no difference was found: Per-patient analysis OR-0.97 (95% CI 0.62,1.53; p=0.91; I²=0%); per lesion analysis OR-0.94 (95% CI 0.63,1.4; p=0.68; I²=0%). Two studies compared CE (n=104 patients) to NBI (n=104 patients) and were not statistically significant different: per-patient analysis OR-1.0 (95% CI 0.51,1.95; p=0.73; I²=0%); per lesion analysis OR-1.29 (95% CI 0.69,2.41; p=0.93; I²=0%).

**Conclusions:** Our results suggest that CE has a superior DY for detection of neoplasia in patients with UC. NBI was not significantly different to either WLE or CE, but due to the low number of studies, further evaluation is needed.

**P625 Ustekinumab use in Crohn’s disease: effectiveness of dose escalation**

A. Greenup, G. Rosenfeld*, B. Bressler
University of British Columbia, Gastroenterology, Vancouver, Canada

**Background:** Efficacy of ustekinumab (UST) in Crohn’s disease (CD) has been demonstrated in clinical trials. In the absence of therapeutic drug monitoring, empirical dose escalation has been considered as a strategy to optimize response in patients with either primary or secondary non-response. Efficacy and safety of UST 90mg subcutaneous (SC) every 4 weeks is not known.

**Methods:** A retrospective, observational study of compassionate use of UST in CD was conducted at a Canadian tertiary centre. A subset of patients in whom dose escalation (90mg SC every 4 weeks) had occurred was identified. Symptomatic response, defined as physician documentation of improvement of CD-associated symptoms and continuation of therapy, following dose escalation was assessed, as was biochemical or endoscopic response if available.

**Results:** Ustekinumab was dose escalated in 16 patients (9 males) of median age 47 (IQR 34–54); disease duration of 12.3 years (IQR 8–18) and location of ileal (4); colonic (4) and ileocolonic (8), with accompanying perianal involvement in 8 patients. All patients were anti-TNF experienced. Fourteen patients had been induced with standard SC dosing (90mg Weeks 0, 1, 2) and 4 with higher SC dosing (270mg Week 0; 180mg Weeks 1 and 2). Dose escalation occurred for primary and secondary nonresponse to UST in 7 and 9 patients respectively. Nineteen percent (3/16) of patients had a response to dose escalation, while 10 patients have ceased therapy. A myopathy developed in one patient and was considered possibly related to UST; dose has been subsequently de-escalated. No additional significant adverse events were reported in the remaining patients who received dose escalated UST.

**Conclusions:** In this subset of real-life experience of UST use in patients with CD, maintenance dose escalation to 90mg every 4 weeks had a modest benefit in achieving a clinical response. This may be suggestive of the mechanism of loss of response to UST being driven by factors other than low bioavailability due to processes such as rapid clearance. Further assessment in larger cohorts as well as the use of therapeutic drug monitoring will be important to evaluate the usefulness of dose escalation for patients on UST.

**P626 Ustekinumab for the treatment of perianal fistulas in patients with Crohn’s disease**

1McGill University Health Centre, Department of Gastroenterology, Montreal, Canada; 2Jewish General Hospital, Department of Gastroenterology, Montreal, Canada; 3Sheba Medical Center Tel Hashomer and Sackler School of Medicine, Tel Aviv University, Department of Gastroenterology, Tel Aviv, Israel

**Background:** Ustekinumab (UST), an interleukin-12/23p40 inhibitor, is effective in Crohn’s disease (CD). Little is known on its efficacy in perianal fistulizing disease. To date, perianal outcomes using UST have been reported in only 18 patients. We report on the efficacy of UST on perianal fistulizing disease in CD. We also describe UST trough concentration, clinical, biomarker and endoscopic response in CD patients with perianal fistulas.

**Methods:** Anti-TNF refractory CD patients treated with UST (2013–2015) at the McGill University Health Centre were recruited. All patients were induced with UST 90mg SC at week 0, 1, 2 then maintained with UST 90mg SC every 4 or 8 weeks. At 6 months 77.4% were receiving UST every 4 weeks. The primary endpoint was >50% reduction from baseline in the number of draining fistulas. The secondary endpoint was closure of all fistulas. Outcomes were assessed for longitudinal patients and cross sectional patients ≥6 months. A combined cohort was analyzed at ≥6 months, when available. UST and UST antibody concentrations were assessed using a liquid phase assay (HMSA, Prometheus Laboratories, San Diego, CA, USA).

**Results:** Sixty-two patients were recruited. 17 patients had a history of perianal fistulizing disease. 6 patients had actively draining fistulas prior to initiating UST. At ≥6 months, 66% (4/6) of patients had a >50% reduction from baseline in the number of draining fistulas, and 33% (2/6) patients had closure of all fistulas. At ≥6 months, of the 6 patients who had active fistulas at commencement of UST, 3/6 (50%) attained clinical response while 2/6 (33%) attained clinical remission as determined by HBI assessment (HBI<5). 2/6 (33%) achieved steroid free clinical remission. Endoscopic response was attained in 3/6 (50%) patients while 2/6 (33%) attained endoscopic remission. Mean UST trough concentration at ≥ week 26 was 4.85 ug/ml. In those with >50% reduction in draining fistulas (n=4) mean UST trough concentrations were 5.0 ug/ml compared to 4.6 ug/ml in those without (n=2).

**Conclusions:** UST was effective in achieving reduction in perianal fistulas in a small series of anti-TNF refractory CD patients. Given the limited information on this subject, this series adds to the exist-
ing data on response of perianal fistulas with UST. However, larger studies are required to confirm these findings.

P627
Surrogate markers of mucosal healing in Crohn’s disease patients in clinical remission under biological/immunomodulator treatment

S. Siakavellas*, A. Kostas, C. Kosmidis, M. Gizis, G. Papatheodoridis, G. Bamias
National & Kapodistrian University of Athens, Academic Dpt. of Gastroenterology, Athens, Greece

Background: Mucosal healing is a desired endpoint in both clinical trials and “real-life” practice as it has been associated with better outcomes in patients with IBD. Lower GI endoscopy is required to determine the presence or absence of mucosal healing. Our aim was to assess specific biomarkers that could accurately predict (either alone or in combination) the presence of mucosal healing in Crohn’s disease (CD) patients under long-term anti-TNF and/or immunomodulator treatment.

Methods: Eligible patients were those with CD who were on clinical remission for at least 6 months under stable treatment with anti-TNF and/or immunomodulators. Prior to endoscopy all patients were subjected to thorough workup every two months with recordings of Harvey-Bradshaw index score and selected laboratory tests that included fecal calprotectin and serological inflammatory markers. After the end of this 6 month period, colonoscopy was performed and mucosal healing was determined as present [complete (no inflammatory lesions) or partial (minimal inflammatory lesions)] or absent. The predictive value of several clinical and laboratory markers for the presence of mucosal healing was investigated.

Results: Twenty-three patients have been recruited so far (Male=9; Age: 40.8±14.3, 19–70, mean ± SD, range, in years). Fourteen patients (60.8%) achieved mucosal healing as evidenced by lower gastrointestinal endoscopy. Patients in the “no healing” group had significantly higher fecal calprotectin values when compared to patients with mucosal healing at 2 months prior to endoscopy (“no healing” group 554 μg/g; 235–1800 (median, interquartile range) vs. mucosal healing group 83, 33–330.5, p=0.012), 4 months prior to endoscopy (“no healing”, 600, 338–600 vs. mucosal healing 134, 22.5–272, p=0.009), as well as at 6 months prior to endoscopy respectively (“no healing”, 265.0, 142–482.5 vs. mucosal healing 64, 13.8–199, p=0.039). No significant differences between the two groups were observed regarding CRP levels. Moreover, higher amylase values were found in the “no healing group” in comparison to the healed mucosa group at 6 months prior to endoscopy (91.1 IU/L ± 24.8 vs. 63.1±27.2, mean ± SD, p=0.02). Finally, smokers had less often mucosal healing (p<0.0001) and higher CRP and fecal calprotectin values as well, than non-smokers.

Conclusions: Fecal calprotectin is a better predictor of mucosal healing than CRP in patients with CD in clinical remission. Its use in clinical practice may improve patient management by allowing the identification of patients at higher risk for disease flare, who may require closer follow up and earlier endoscopy.

Funding: The present work has been funded by a grant from the Hellenic Society of Gastroenterology to Dr. Bamias.

P628
Anti-TNF therapy in refractory pouchitis and Crohn’s disease-like complications of the pouch after ileal pouch-anal anastomosis following colectomy for ulcerative colitis: a systematic review and meta-analysis

M. Huguet1, B. Pereira2, M. Goutte1,3, F. Goutorbe1,4, C. Allimant1, M. Reymond1, G. Bommelaer1,3, A. Buisson*1,3
1University Hospital Estang, Gastroenterology Department, Clermont-Ferrand, France; 2University Hospital, Biostatistics Unit, DRCI, Clermont-Ferrand, France; 3UMR 1071 Inserm/Université d’Auvergne; USC-INRA 2018, Microbes, Intestine, Inflammation and Susceptibility of the host, Clermont-Ferrand, France; 4Hospital of Bayonne, Gastroenterology Department, Bayonne, France

Background: Pouchitis and secondary Crohn’s disease (CD)-like complication of the pouch are the most common complications after ileal pouch-anal anastomosis following colectomy for ulcerative colitis. Data about the effectiveness of anti-TNF agents in these two entities remains sparse.

We aimed to perform a systematic review and meta-analysis to evaluate the efficacy of anti-TNF therapy in differentiating patients with chronic refractory pouchitis and CD-like complications.

Methods: Systematic literature search was performed in MEDLINE and from international meetings abstracts. The search process, selection of manuscripts, and data extraction were performed independently by two physicians according to PRISMA statements. Prevalence and 95% confidence interval (CI) were estimated using random-effects models assuming between and within study variability. Statistical heterogeneity between results was assessed by examining forest plots, I² and F and sensitivity analyses were conducted.

CD-like complications of the pouch were defined as the presence of non-anastomotic fistula and/or non-anastomotic stenosis and/or pre-pouch ileitis. Chronic refractory pouchitis was defined as inflammation limited to the pouch.

The short term and the long term responses were evaluated at 8 weeks and 12 months, respectively.

Results: We identified 21 articles and three abstracts including 313 patients treated either with infliximab (IFX) (n=194) or adalimumab (ADA) (n=119) for inflammatory complications of the pouch. The rate of complete response (CR) after anti-TNF induction therapy for inflammatory complications of the pouch was 0.51 (95% CI [0.39–0.64]; F²=0.56). The rate of short-term CR was 0.57 (95% CI [0.38–0.75]; F²=0.36) for IFX-treated patients compared to 0.38 (95% CI [0.08–0.72]; F²=0.50) for ADA-treated patients (p=0.20).

The long-term rate of CR in patients treated with anti-TNF therapy was 0.52 (95% CI [0.39–0.65]; F²=0.59), with 0.59 (95% CI [0.43–0.72]; F²=0.30) for IFX-treated patients compared to 0.30 (95% CI [0.15–0.46]; F²=0.00) for ADA-treated patients (p=0.19).

The rate of CR after anti-TNF induction therapy seemed to be higher for CD-like complications of the pouch 0.64 (95% CI [0.5–0.77]; F²=0.18), compared to refractory pouchitis 0.10 (95% CI [0.08–0.35]; F²=0.00) (p=0.06). The rate of long-term CR in patients treated with anti-TNF was 0.57 (95% CI [0.43–0.71]; F²=0.32) for CD-like complications of the pouch compared to refractory pouchitis 0.37 (95% CI [0.14–0.62]; F²=0.47) (p=0.57).

Conclusions: Despite wide heterogeneity of the data, anti-TNF agents have a clear trend to have higher and faster efficacy in CD-like complications of the pouch compared to refractory pouchitis, highlighting the need to differentiate these two entities in clinical practice.