post-treatment from 15 cm (3–50) to 6.8 cm (0–33) p = 0.012, as did length of the dominant lesion 6.5 cm (2.5–30) vs 3 cm (0–30) p = 0.001. Lesion bowel wall thickness also improved 7 mm (4–12) vs 5 mm (2–10) p = 0.0006. Disease burden, calculated by total stricture length x bowel wall thickness, also improved. 80 (12–400) vs 32 (0–264) p = 0.001. Improvement in number of skip lesions per-patient was not significant 2 (1–6) vs 1 (0–5) p = 0.2; in 2 cases the number of skip lesions increased. In no cases was the total length of involvement greater; however in 27% (7) cases this was static, and in 11% (3) bowel wall thickness was greater. Total disease burden was greater in 2 patients. Complete radiological remission was demonstrated in 2 patients.

Conclusions: Response of Crohn's disease to ATT is well documented although there is limited evidence on the role of MRE to assess the response to treatment. Small bowel Crohn's disease is difficult to assess endoscopically and the role of biomarkers is less well understood than, for example, in colonic disease. This study supports the utility of MRE in assessment of small bowel Crohn's disease and its response to treatment.

P419 Patient’s awareness of the need for vaccinations whilst on immunosuppressive therapy
M. Widlak1 *, R. Matharu1, A. Eltzeub1, J. Slater1, L. Wood1, S. De Silva1, Royal Hall Hospital, Gastroenterology, Dudley, United Kingdom

Background: With the ever increasing use of immunosuppressive therapy for the management of inflammatory bowel disease (IBD) patients are being exposed to infections which can be prevented by regular influenza and pneumococcal vaccinations administered prior to or during therapy. We aimed to assess our IBD patients’ knowledge and uptake of such vaccines.

Methods: An audit was carried out within our department and patients with IBD were identified from an established data base. Those receiving immunosuppressive therapy were invited to complete a questionnaire. Data gathered included patient demographics, current treatment and awareness of recommended vaccinations.

Results: A cohort of 88 patients on immunosuppressive therapy was analysed; 61% were female and 39% male. Patients ranged between 16–21 years (11%), 22–30 years (18%), 31–50 years (40%), 51–70 years (24%) and above 70 (7%). 59 (67%) patients had Crohn's disease, 26 (29.5%) ulcerative colitis and 3 (3.5%) indeterminate colitis. The majority of patients received immunomodulators, including Azathioprine or Mycophenolate (n=48, 54%). 13 (15%) were treated with biologics alone (Infliximab or Adalimumab), 21 (24%) with combination of biologics and immunomodulators and 6 (7%) received immunomodulators with a reducing dose of steroids. 77% of patients were aware of recommended vaccinations but as many as 23% were not. 42% were aware of the importance of receiving dual vaccinations, 35% were only aware of the need for either the influenza or pneumococcal vaccine, with 23% unaware of the need for either. In this cohort 54 (61%) patients had already had or were planning to have the influenza vaccine this year. Patients between the ages of 31–50 years had the highest awareness of the recommended vaccines (86%), with the majority of uptake of vaccines seen in the 31–50 year group (63%). Unfortunately 39% of patients were not receiving recommended vaccinations with more than half (56%) of patients being unaware of the need to avoid live vaccinations.

Conclusions: Our data suggest that a significant proportion of patients within our cohort are still not receiving vaccinations that were recommended to them. Although 77% were aware of a form of recommended vaccine, 39% were not receiving them. Wider education of our IBD patients as well as their primary care doctors should be implemented to increase awareness and uptake of vaccines to provide adequate protection to this vulnerable group.

P420 Parietal healing in patients with Crohn's disease on maintenance treatment with biologics
A. Rispo1 *, A. Testa1, M. Rea1, G. D. De Palma2, M. Diaferia1, D. Musto1, F. Sasso1, M. Tramontano1, N. Caporaso1, F. Castiglione1. 1University Federico II Of Naples, Gastroenterology, Naples, Italy, 2University Federico II Of Naples, Surgery and Advanced Technologies, Naples, Italy

Background: In the presence of steroid-dependency and prognostic factors of disabling disease such as perianal fistulising complications and extra-intestinal manifestations, Crohn's disease (CD) is usually treated with thiopurines and anti-TNF alpha agents. Mucosal healing (MH) is a crucial treatment end-point in CD patients, as it is a predictor of lower need for steroids, hospitalization and surgery in the long term. Nevertheless, data on parietal healing (PH) following treatment with traditional immunosuppressors and anti-TNF alpha agents are still lacking. This study aimed to explore the rate of PH in CD patients treated with biologics and immunosuppressors and its correlation with clinical remission (CR) and MH.

Methods: Between April 2008 and June 2012 we performed an observational longitudinal study evaluating PH, CR and MH in all CD patients attending our clinic who would complete 2 years of maintenance treatment with biologics or thiopurines in the course of the study. Steroid-free CR was defined in accordance with ECCO guidelines. MH was assessed using SES-CD, while PH was recorded using bowel sonography (BS). All patients underwent endoscopy and bowel sonography before starting treatment and 2 years later.

Results: The study included 66 CD patients treated with biologics and 67 patients receiving thiopurines. After 2 years of treatment, PH was present in 17 patients on biologics and only 3 patients treated with thiopurines (25% vs 4%; p < 0.01; O.R.=6.2). CR was achieved in 37 patients on biologics and in 34 patients on thiopurines (59.7% vs 53%; p=n.s.) while MH was more frequent in patients treated with anti-TNF alpha agents – even though this difference did not reach statistical significance (38% vs 25%; p=n.s.). The mean SES-CD score and the bowel wall thickness (BWT) measured through BS decreased significantly only in patients treated with biologics (SES-CD 11.1 vs 8.9 +2.7; p = 0.001; BWT at BS 6.0 vs 4.0 +0.9; p < 0.01).

Conclusions: Parietal healing can be achieved in approximately 25% of patients with Crohn's disease treated with anti-TNF alpha agents. Further studies are needed to define the potential role of parietal healing as long-term prognostic factor.

P421 Prevalence of steroid dependence and resistance in inflammatory bowel disease patients: treatment options as steroid-sparing agents in a single centre
C. Cassieri1, A. De Carolis1, R. Pica1 *, E. V. Avallone1, M. Zippili1, C. Corrado1, E. S. Corazziari1, P. Vernia1, P. Paoluzi1. 1Sapienza University, Internal Medicine and Medical Specialties, “Gastroenterology Unit”, Rome, Italy

Background: Corticosteroids (CS) have been used to treat active inflammatory bowel disease (IBD) for nearly 50 years. IBD patients are CS-dependent in 17–36% and refractory in 12–20%. Aim of the study has been to investigate the prevalence of CS dependence or resistance in a single centre series of Italian IBD patients, as well as the treatment options as CS-sparing agents in ulcerative colitis (UC) and Crohn’s disease (CD).

Methods: Computerized data of consecutive IBD patients, first referred to our Centre, from 1990 to 2010, were retrospectively evaluated. CS dependence or resistance was
defined according to European Crohn’s and Colitis Organisation (ECCO) guidelines.

Results: One thousand three hundred and twenty-six consecutive patients were studied, 729 (55%) were male and 597 (45%) female. Of this 781 (58.9%) were affected by UC (mean age at diagnosis 36.8±15.6 SD years) and 545 (41.1%) by CD (mean age at diagnosis 42.6±14.3 SD years). Three hundred and thirty-three (25.1%) patients were CS dependent (164 UC vs 169 CD, 21% and 31% respectively, p<0.0001); 38 (2.9%) patients were CS-resistant (19 UC vs 19 CD, 2.4% and 3.5% respectively). Of this 63 patients with a follow-up <12 months were excluded from the study. Three hundred and eight patients (146 UC, 162 CD) were evaluated for treatment options as CS-sparing agents (mean follow-up of 72.4±59.9 SD months, range 12-323 months). One hundred and ninety-one patients were treated with Azathioprine (85 UC vs 106 CD), 32 underwent surgery (6 UC vs 26 CD, p=0.0006), 16 were treated with anti TNF-α agents (8 UC vs 8 CD), 13 with Cyclosporine (2 UC vs 11 CD, p=0.0220), 4 with Methotrexate (3 UC vs 1 CD), 9 UC patients were treated with leucocytapheresis. Forty-three patients (33 UC vs 10 CD, p<0.0001) refused other therapeutic options and continued on CS.

Conclusions: The prevalence of CS-dependence was significantly higher in CD than in UC. Cyclosporine and surgery were significantly used in CD than UC. AZA was the more prescribed treatment to avoid a long-term use of CS. Interestingly that a higher number of patients refused treatment options to sparing CS.

P422
Outpatient anal exploration and fistula treatment in Crohn’s disease patients with peri-anal disease. Study of feasibility
R. Scaramuzzo1 *, E. Iaculli2, C. Fiorani1, L. Biancone1, T. Giorgia1, D.C. Sara1, A. Gaspari1, G. Sica1, Tor Vergata, Italy, Guy’s and St Thomas’ Hospital, Surgery, London, United Kingdom, 2Tor Vergata Roma, Italy

Background: One third of Crohn’s disease (CD) patients present fistula in ano. Peri-anal disease (PD) in CD patients can be clinically asymptomatic or extremely severe. Gold standard in the diagnosis of symptomatic PAD in CD is the exploration of the anal canal and distal rectum under anesthesia (EUA). This procedure is generally offered as a day case surgery. Giving the shortage of resources, it is not always possible to proceed as planned, and an incorrect timing may well represent a relevant issue in the clinical management of these patients.

In a prospective longitudinal study we aimed to assess the feasibility of an outpatient assessment and treatment of symptomatic PAD in CD patients.

Methods: All CD patients under regular follow-up at our Inflammatory Bowel Disease referral center, presenting with symptomatic PAD, were offered surgical consultation. Data of patients seen between February 2010 until April 2011 were collected for the purpose of the study. All clinical information, including previous EUA and/or records from Magnetic Resonance Imaging and endoscopic ultrasound were reviewed. Outpatient anal canal exploration (OE) and treatment was undertaken during the specialist surgical consultation. Fistula were classified according to Park’s classification; type of outpatient treatment and compliance were recorded and pain was assessed by VAS scale at the time of the procedure. Patients were followed up in the surgical clinic for 12 months.

Results: During the study period, 26 CD patients with symptomatic PAD were referred to the surgical outpatient clinic. All the 26 non selected patients were offered surgical exploration. Compliance was excellent as none refused the proposed treatment. It was possible to perform a full OE in 23 (88%) patients. In tab 1 are reported details of procedure and findings. In 23 patients (88%) it was possible to complete OE of the anal canal and distal rectum. Out of these 23 patients in 20 (87%) a surgical procedure was undertaken (77% of the grand total).

Conclusions: From this preliminary experience, OE and fistula treatment in CD appears to be feasible in referral centers, with results comparable with most EUA series.

P423
Our experience with single incision laparoscopic surgery in inflammatory bowel disease patients
M. Marti-Gallostra1 *, E. Espin1, F. Valtríbera1, J.L. Sanchez-García1, L.M. Jiménez-Gómez1, V. Robles1, N. Boruet2, M. Arregui-Carrasco1, Hospital Universitary de la Vall d’Hebron, Colorectal surgery, Barcelona, Spain, 2Hospital Universitary de la Vall d’Hebron, Gastroenterology, Barcelona, Spain

Background: To present our experience with single incision laparoscopic surgery in patients with inflammatory bowel disease.

Methods: A total of 13 cases were operated in Hospital Vall d’Hebron between February 2010 to November 2012. Surgical procedures included total colectomy with ileorectal anastomosis, ileocecal resection and restore bowel continuity with ileorectal anastomosis after an emergency total colectomy. Intraoperative and postoperative data are analyzed.

Results: Twelve cases of thirteen were performed for Crohn’s disease and one for indeterminate colitis. The mean age was 38 years (range, 26 to 49), the mean body mass index was 21.84 (range, 17.9 to 27.2), mean operative time was 152 minutes (range, 90 to 310), mean blood loss was 95 mL (range, 25 to 300), mean incision length was 3.75 cm (range, 2.5 to 8). Average follow-up was 14.2 months with 2 reported postoperative complications and 2 incisional hernias.

Conclusions: In experienced hands, single port laparoscopic surgery appears to be feasible and safe for the surgical treatment of selected patients with IBD. However, evidence from prospective randomized trials is required in order to clarify whether there is a further benefit apart from the avoidance of additional trocar incisions.

P424
Oral tacrolimus for the treatment of refractory inflammatory bowel disease in the biologic era
L. Thin1, K. Murray2, I. Lawrance3 *. 1Centre for Inflammatory Bowel Diseases, Fremantle Hospital, Fremantle, Australia, 2Centre for Applied Statistics, University of Western Australia, Crawley, Australia, 3Centre for Inflammatory Bowel Diseases, Fremantle Hospital, University of Western Australia, Fremantle, Australia

Background: Inflammatory bowel disease patients who are refractory to standard therapies frequently require surgery. The long-term efficacy of tacrolimus in patients who fail standard immunosuppressive and anti-TNF alpha therapy is unknown.

Methods: 35 patients (11 CD and 24 UC) with medication-resistant disease were treated with oral tacrolimus and reviewed retrospectively. Patients were commenced on tacrolimus 0.1 mg/kg/day, with a trough level targeted between 8–12 ng/mL. Clinical response or remission, at 30-days, 90-days and 1-year were assessed. The overall risk of requiring surgery and predictive factors were also assessed.

Results: All patients had failed a thiopurine, 5 (14%) had also failed methotrexate while 90% had a primary or secondary non-response, or an incomplete response, to an anti-TNF alpha agent. The proportion that achieved a clinical response at 30 days, 90 days and 1 year was 65.7%, 60% and 31.4% respectively, while the corresponding proportions in remission were 40%, 37.1% and 22.9%. The cumulative risk of requiring