Material and methods: From July 2011 to February 2012, 46 patients with suspected or established Crohn's disease underwent small bowel MRI on a 3T scanner. According to radiological findings and disease behaviour phenotype (as proposed in the Montreal classification), patients were divided into 5 classes: 1. absence of disease; 2. disease activity (presence of one of following findings: mucosal abnormalities, submucosal edema, mucosal enhancement); 3. presence of substenosis without obstruction a. active disease b. inactive disease; 4. presence of stenosis with obstruction a. active disease b. inactive disease; 5. extramural involvement (fistulas and/or abscess). Data were correlated with endoscopical findings, CDAI, CRP and ESR.
Results: A significant correlation (r=0.88, p<0.001) was registered between endoscopical findings and MR score. A good correlation of MRI-CSI was observed with CDAI (r=0.59, p<0.01); correlation was superimposable (r=0.59, p<0.01) if subgroups were divided into active/non active disease. A moderate correlation of MR-CSI was observed with ESR (0.49, p=0.001) and CRP (0.47, p=0.001). Correlation appears higher if subgroups were divided into active/non active disease (0.66 and 0.59 respectively).
Conclusions: MR-CSI is a quick, manageable score, easy to apply in daily practice; furthermore, MR can be used in the evaluation of CD as an alternative to ileocolonoscopy.

P.01.11

THE FALL OF ESTROGEN RECEPTORS EXPRESSION IN LONG-LASTING ULCERATIVE-ASSOCIATED CARCINOMA

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Background and aim: Colo-rectal carcinoma (CRC) is the most important cause of death in Inflammatory Bowel Diseases (IBD). Long lasting disease is one of the negative prognostic factors for CRC in IBD. The relationship between cancer progression and ERs expression has been diffusely investigated: ERs exhibit tissue specific expression in some tumors. We have, previously, observed, in intestinal adenomatous polyp samples likewise in Familial Adenomatous Polyposis (FAP), a significant reduction in ER-beta expression compared to normal colonic mucosa. Furthermore, in long-lasting pancolitis with low-grade dysplasia, ER-beta level showed a clear trend to decrease without changes in ER-alpha expression. Our primary endpoint was to identify ER-beta/alpha expression in long lasting pancolitis in each stage as far carcinoma; secondary endpoint was to investigate simultaneously apoptosis and cell proliferation.
Material and methods: Twenty patients, affected by long lasting pancolitis in clinical remission were retrospectively enrolled. Disease history was >10 years in all. Five normal colon samples were taken as controls. Samples were divided into three groups: eight UC without (UC) and five with low-grade dysplasia (UC-dysplasia) and eight with carcinoma (UC-carcinoma). ER-beta and ER-alpha expression, Ki-67 and Tunel were evaluated by immunohystochemical methods.
Results: ER-beta, ER-alpha expression and their ratio, assessed in normal mucosa, in UC and in UC-dysplasia, did not show significant changes while UC-carcinoma revealed a fall of ER-beta expression (p<0.01) and ER-beta/ER-alpha ratio (p<0.05) (table 1). Simultaneously, apoptosis and Tunel/Ki-67 ratio demonstrated a statistically significant progressive increase from UC to UC-carcinoma through UC-dysplasia (p<0.05).

Table 1. Kruskal-Wallis rank test plus Mann-Whitney subanalysis

	Normal (n=5)	RCU (n=8)	Dysplasia (n=5)	Carcinoma (n=8)
ER-beta	35±3.3	26.4±15.3	31.2±1.7	22.38±6.84
ER-alpha	21.5±1.9	23.4±6.2	25.5±1.0	49.73±16.43
Tunel	16.7±1.7	17.0±4.4	22.7±0.9	77.08±14.31
Ki-67	24.5±4.8	39.6±10.7	65.2±8.8	62.1±12.80
Beta/Alpha	1.6±0.2	1.2±0.7	1.2±0.1	0.5±0.21
Tunel/Ki67	0.7±0.1	0.4±0.2	0.5±0.3	1.27±0.25

Conclusions: Our experience assessed modifications of ERs expression, apoptosis and cell proliferation in dysplasia-carcinoma sequence in the course of UC. We observed a dramatic fall of ER-beta, ER-beta/ER-alpha and a progressive increase of apoptosis in progressive steps from long-lasting UC to UC-carcinoma. As observed in adenoma model, the ER-beta drop could be a biomarker of dysplasia progression and a relevant point in the study of carcinogenesis in the course of UC.

P.01.12

VACCINATION STATUS IN INFLAMMATORY BOWEL DISEASE PATIENTS

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Background and aim: Patients affected by inflammatory bowel disease (IBD) are often treated with an immunosuppressive therapy. Whilst the use of immunomodulator treatment has led to improved disease outcomes, patients are at risk of opportunistic infections. Some of these infections can be prevented by appropriate vaccinations. The recent European ECCO guidelines on the management and prevention of opportunistic infections in patients with IBD provide clinicians with guidance on the preventions of opportunistic infections.
Material and methods: We assess our IBD patients who have been appropriately vaccinated and their compliance with the vaccination after they have been informed to follow our specific recommendations. At the time 0 they were given a specific questionnaire. The questions included diagnosis, age, medications and immunisations history. Serological Test testing for hepatitis A and B and varicella were performed and the patients whose tests were negative were told they should get vaccinated. After six months, time 1, they were given the same questionnaire.
Results: We reviewed 192 IBD patients, whose average age was 51 (range 19–82), 94 males, 98 females. 72 (37%) patients reported current use of immunosuppressive treatment (steroids, azathioprine, anti-TNF alpha, methotrexate). 114 (59%) patients were found to have antibodies against hepatitis A (102 previously infected, 12 vaccinated), 89 (46%) against hepatitis B (18 previously infected, 71 vaccinated), 66 (34%) against varicella (64 previously infected, 2 vaccinated). 11 were found out to have been vaccinated against pneumococcus and 14 against meningococcus. Also only 33 patients had influenza immunisation on a yearly basis. At time 1, when they were given the second questionnaire, patients had been vaccinated against: hepatitis A (12 patients), hepatitis B (24 patients), pneumococcus (12), meningococcus (14), varicella (1).
Conclusions: Our IBD patients had inadeguate knowledge both of the effects which a viral or a bacterial infection could have on their disease, and of the increased risk from immunosuppressant treatment. We found that our patients were inadeguately vaccinated as judged against the recent ECCO guidelines. Although patients have been informed about the risks of infections and have been recommended to get vaccinated, most of them and particularly the ones who are about to start an immunosuppressive therapy tend to be skeptical about getting vaccinated.

P.01.13

CLINICAL SIGNIFICANCE OF CYTOMEGALOVIRUS (CMV) INFECTION IN INFLAMMATORY BOWEL DISEASE

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Background and aim: The role of CMV in exacerbation of inflammatory bowel disease (IBD) remains a topic of ongoing debate. The aims of this study were to evaluate: the correlation between the presence of CMV in the colon, the clinical activity of the disease and the colonic extent of ulcerative colitis; the role of CMV infection in steroid-dipendent/refractory patients; the role of immunosuppressive therapies in CMV reactivation.
Material and methods: We retrospectively evaluated 44 IBD patients (30 ulcerative colitis, UC; 13 Crohn's disease, CD; 1 pouchitis) that, from 2009

to 2011, were investigated about the presence of CMV on biopsy specimens of colon. In each patient we recorded: clinical activity; endoscopic extent; steroid-dipendent/refractory status and ongoing therapies. PCR amplification technique was used for detecting CMV-DNA in colonic tissue. Clinical severity of IBD was assessed according to Mayo Scoring Index for UC and Harvey-Bradshaw Index for CD.
Results: The presence of CMV-DNA in colonic biopsies was detected in 14 out of 44 patients (13 UC; 1 CD), with an overall prevalence of 32%. 7 out of 14 CMV+ patients (50%) and 4 out of 30 CMV- patients (13%), showed clinically severe disease ($P<0.05$). 28 patients were resistant/dependent to steroids. CMV was detected in 12 out of these 28 patients (43%), and in 2 out of the 16 (13%) patients steroid-responsive ($P<0.05$). Considering the colonic extent of UC, among the 13 CMV+ patients: 2 had a rectosigmoiditis (16%), 5 had a left-sided colitis (38%) and 6 had a colitis extending beyond the left colonic flexure. Among the 17 CMV- patients: 5 had a rectosigmoiditis (28%), 4 had a left-sided colitis (25%) and 8 had a colitis extending beyond the left colonic flexure (47%). No significant statistical difference was found between these two groups. 16 out of 44 patients were under immunosuppressive treatment. Among these 16, 6 were CMV+ (38%) and 10 was CMV- (62%); among the other 28 patients, 8 was CMV+ (28%) and 20 was CMV- (72%). No significant statistical difference was found between these two groups.
Conclusions: CMV appears to play a role in a subgroup of patients with severe or steroid-refractory IBD. It is not clear whether the virus causes steroid dependence/refractory or a prolonged steroid use reactivates a latent viral infection. No correlation was found between the extent of UC, the immunosuppressive therapy and the presence of CMV-DNA in colonic tissue.

P.01.14

ULCERATIVE COLITIS IN REMISSION AND NEUROSENSORIAL HEARING LOSS (NSHL)

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Background and aim: Extra Intestinal Manifestations of Inflammatory Bowel Disease (IBD) involve 20–40% of all affected patients, but, at this moment, Neurosensorial Hearing Loss (NSHL) is little considered as extra-intestinal manifestations of IBD.
Material and methods: We studied 47 Ulcerative Colitis (UC) patients (27 males and 20 Females). We documented the patients's age, chronology of UC, severity of UC according to Mayo Scoring System, medical therapy, surgical treatment, family history of hearing loss, exposure to ototoxic medication, symptoms relative to hearing loss, vertigo, tinnitus. Every patient was subjected to Otoscopy and Audiometric Study by determing the PTA (Pure Tone Audiometry) thresholds levels from 500 Hz to 8000Hz.
Results: The Mean Age of UC patients was 37.5 year. 20 were affected by Pancolitis (11 males and 9 females), 20 by Left Colitis (11 males and 9 females) and 7 by Proctitis (5 males and 2 females). All patients were in remission (Mayo Score below 6- range 0–12). All patients were in Mesalazine therapy (1600–4000 mg/day) except 4 (3 males and 1 female) in Azathioprine therapy. In 1 female (2.1%), affected by Ulcerative Pancolitis and Gangrenosum Pyoderma in Azathioprine therapy, a bilateral Neurosensorial Hearing Loss (NSHL) was identified.
Conclusions: Neurosensorial Hearing Loss (NSHL) should be considered an immunologic extra-intestinal manifestation of IBD, particularly in Ulcerative Colitis also in remission but new studies are warranted.

P.01.15

EVALUATION OF CROHN'S DISEASE ACTIVITY BY DIFFUSION-WEIGHTED MAGNETIC RESONANCE IMAGING (MRI)

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Background and aim: A new application of MRI is the use of MR sequences DWI (Diffusion Weighted Imaging). These are characterized by a high resolution of contrast that allows to differentiate inflamed small bowel by normal bowel. The diffusion of water is the result of Brownian motion. Using the natural sensitivity of MRI to motion, is possible to measure the ADC (Apparent Diffusion Coefficient), a quantitative parameter of this phenomenon. In active Crohn's Disease (CD) the high viscosity and cellularity of inflamed tissue may reduce the extracellular space, so restricting the diffusion of water. The aims of this study were: to evaluate in patients with CD the diagnostic capability of DWI sequences in the detection of small bowel inflammation with the measurement of ADC and to verify the correlation between findings of DWI sequences (both qualitative and quantitative) and the Harvey-Bradshaw Index (HBI).
Material and methods: A retrospective search of our database was performed. We reviewed 14 patients with CD of terminal ileum (TI) who underwent MR enterography (including dynamic contrast enhanced MRI and DWI) between February 2010 and April 2012. Inclusion criteria were: histologic diagnosis of small bowel CD, HBI calculated within 1 month and colonoscopy performed within 2 months of MR examination. Conventional MRI findings of TI were recorded together with a semiquantitative evaluation of signal intensity in DWI sequences using a 3-point scale. Regions of interest were drawn over TI and normal ileum to calculate ADC.
Results: Among conventional MR findings, mural thickening and increased enhancement were present in all patients; ADC values differed significantly between actively inflamed TI and normal ileum [$(1.19\pm0.22)\times10^{-3}$ mm^2/s versus $(3.69\pm0.42)\times10^{-3}$ mm^2/s; $P<0.00001$]; the presence of a strong correlation between DWI images and HBI was demonstrated (r of Pearson=0.67; p=0.009); we did not find a significant correlation between ADC value of TI and HBI.
Conclusions: Our study confirms that DWI sequences are useful in distinguishing bowel segments with active inflammation from normal loops in patients with CD. The inflamed intestinal wall is characterized by restriction of diffusion and the ADC value of the segments with active disease is significantly lower than normal. The partial correlation between DWI sequences and HBI may show the usefulness of DWI-MRI in the evaluation of disease activity in CD.

P.01.16

ADALIMUMAB IS MORE EFFECTIVE THAN AZATHIOPRINE AND MESALAMINE AT PREVENTING POSTOPERATIVE RECURRENCE OF CROHN'S DISEASE – A RANDOMIZED TRIAL

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Background and aim: Postsurgical recurrence of Crohn's disease (CD) is very frequent and to date only Infliximab has been shown to be useful at preventing it. The efficacy of Adalimumab (ADA) is poorly known. We evaluated whether the administration of ADA after resective intestinal surgery reduces postoperative CD recurrence.
Material and methods: We randomly assigned 51 patients with CD who had undergone ileocolonic resection to receive after 2 weeks from surgery. ADA at the dose of 160/80/40 mg eow, azathioprine (AZA) at 2mg/kg day-1 or mesalamine (MESA) at 3g/day and they were followed up for 2 years. Patients underwent endoscopy and magnetic resonance imaging at 12 and 24 months, physical examination and blood tests every 2 months. The primary end point was the proportion of patients with endoscopic and clinical recurrence based on Rutgeerts score (endoscopic remission was defined by a score of i0 or i1 and recurrence by a score of i2, i3, or i4) and clinical recurrence grading scale (clinical recurrence was defined as a score of 2 or greater on a scale where 1 indicates absent, 2 mild, 3 moderate and 4 severe symptoms), respectively. Secondary end point was the assessment of quality of life by means of a previously validated questionnaire (inflammatory bowel disease questionnaire,