Higher anti-TNF serum levels are associated with perianal fistula closure in Crohn’s disease patients

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Background: Anti-tumour necrosis factor (anti-TNF) agents are effective agents to treat perianal Crohn’s disease (CD). Recent evidence suggests that CD patients with perianal fistulas need higher serum concentrations of infliximab (IFX) compared with patients without perianal CD in order to achieve disease control.

Conclusions: We report an association between anti-TNF serum concentrations and fistula closure in CD patients. Dose reduction of anti-TNF in CD patients with perianal disease is contraindicated, despite quiescent luminal disease.

Analysis of 1792 gut metagenomes reveals microbial treatment targets for inflammatory bowel disease and irritable bowel syndrome

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Background: Irritable bowel syndrome (IBS) and Inflammatory bowel disease (IBD) are two of the most common gastrointestinal disorders. The gut microbiome—the collection of microorganisms in the gut—presumably plays a large role in both diseases. Therefore, the microbiome holds great promise both as a diagnostic tool and as a target for treatment. However, thus far, functional studies have focused on single organisms whereas low-resolution microbial profiles based on marker genes (16S rRNA) have not been able to sufficiently understand the complex microbial changes in both diseases. In this study, we aim to bridge the gap between functional studies and 16S, by identifying complete species and functional gut microbiome profiles, using high-resolution shotgun metagenomic sequencing.

Conclusions: Using high-resolution microbial sequencing data of patients with IBD and patients with IBS, we identified microbial characteristics that can distinguish between these gastrointestinal diseases. Moreover, our comprehensive analysis identified several targets for microbial therapeutic trials.


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Conclusions: The cumulative incidence of first ever abdominal surgery in Swedish patients with Crohn’s disease has decreased and is lower than previously reported, especially for the most recent calendar periods with a 5- and 10-year cumulative incidence of 13% and 21%, respectively. The need of a second abdominal procedure is, in general, very low compared with previous studies, but with no significant temporal changes in recent years despite a decade with more potent and costly medical treatments available.

The clinical determinants affect gut microbial profile of inflammatory bowel disease patients

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Background: Alterations in gut microbial community of IBD patients still present inconsistency among the published studies and importantly did not completely allow for the unique identification of microbial signatures of CD and UC. We aimed molecularly to profile the intestinal microbiota of phenotypically and genotypically well-characterised Swiss IBD cohort (SIBDC) patients as well as newly recruited IBD patients in Bern as a local replica set including non-IBD subjects.

Conclusions: Our findings revealed that CD and UC are two distinct intestinal disorders at the microbiome level, which could be differentiated based on the microbial profile. A loss of beneficial microorganisms is more associated with CD. However, the observed bacterial dysbiosis in IBD patients is not only associated with disease status itself, it is also directly linked to several clinical parameters associated with the disease trajectory of patients.

Comparative effectiveness of vedolizumab and tumour necrosis factor-antagonist therapy in Crohn’s disease: a multicentre consortium propensity score-matched analysis

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Background: We aimed to compare the effectiveness of vedolizumab (VDZ) to tumour necrosis factor (TNF)-antagonist therapy for Crohn’s disease (CD).

Conclusions: After accounting for measurable disease- and patient-specific characteristics that may affect biological effectiveness, VDZ-treated CD patients had numerically higher 12-month cumulative rates of clinical remission, steroid-free remission, and endoscopic healing than TNF-antagonist-treated patients. CD patients with colonic involvement were significantly more likely to respond to VDZ than to TNF-antagonist therapy. Randomised controlled trial data are needed to confirm these findings. Statistical analyses were conducted at the University of California, San Diego. Research funding was provided in part by Takeda Pharmaceuticals.

Long-term risk of advanced neoplasia after colonic low-grade dysplasia in patients with inflammatory bowel disease: a nationwide cohort study

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Background: Patients with inflammatory bowel disease (IBD) bear an increased colorectal cancer (CRC) risk. This risk is further increased following colonic low-grade dysplasia (LGD). Endoscopic surveillance programs aim to reduce CRC risk by detecting and removing precancerous lesions like LGD. Long-term risk of high-grade dysplasia (HGD) or CRC after LGD is relatively unknown, since most available studies are small and cover a relatively short follow-up period. We established a nationwide cohort of IBD patients with LGD to determine long-term cumulative advanced neoplasia (HGD and/or CRC) incidence, and to identify risk factors for advanced neoplasia development.

Conclusions: In a large nationwide cohort of IBD patients with LGD with median follow-up of almost 10 years, the cumulative incidence of advanced neoplasia was 21.9% after 15 years. Older age at LGD (> 55 years), longer IBD duration (>5 years) before LGD, and male gender were independent risk factors for advanced neoplasia development after initial LGD. These results may aid in risk stratification for endoscopic surveillance after LGD in patients with IBD.

Vedolizumab treatment persistence up to 3 years: post hoc analysis in vedolizumab-naïve patients from the GEMINI LTS study

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Background: Vedolizumab (VDZ) is a gut-selective humanised monoclonal antibody that binds to $\alpha_4\beta_7$ integrin, approved for the treatment of patients with moderate to severe ulcerative colitis (UC) and Crohn’s disease (CD). The objective of this study was to evaluate long-term (3 years’) treatment persistence of VDZ in a de novo cohort from the GEMINI long-term safety (LTS) study; a population without prior VDZ exposure and, thus, more likely to represent patients seen in clinical practice who have not participated in randomised controlled trials.

Conclusions: Nearly two-thirds of patients with UC and more than half with CD persisted with VDZ treatment for 3 years. Rates of VDZ discontinuation due to AEs were low and VDZ treatment persistence rates were higher in patients without prior TNF antagonist failure. These data support the long-term effectiveness and favourable safety profile of VDZ, and suggest improved outcomes of VDZ treatment in TNF antagonist naïve patients.

Long-term safety of adalimumab in patients with moderate-to-severe ulcerative colitis: Interim results of a non-interventional registry, LEGACY

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Background: The safety and efficacy of adalimumab (ADA) in adults with ulcerative colitis (UC) was demonstrated in the ULTRA 1 and ULTRA 2 trials. The post-marketing non-interventional registry, LEGACY, is designed to assess the long-term safety and effectiveness of ADA as used in routine clinical practice in adult patients with moderately to severely active UC.

Conclusions: In patients with moderately to severely active UC, safety was consistent with the known safety profile for ADA and no new safety signals were identified.

Safety of adalimumab in children and adolescents with moderate-to-severe Crohn’s disease: interim results of the CAPE registry

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Background: The 3-year safety and efficacy data of adalimumab (ADA) in children and adolescents with moderately to severely active Crohn’s disease (CD) enrolled in the IMAgINE 1 trial (N = 192; ADA exposure, 151.8 patient-years [PYs]) were previously reported (Faubion, et al. IBD 2017). ADA long-term safety and effectiveness is currently being assessed in the postmarketing observational registry, CAPE. Interim safety data are reported herein.

Conclusions: The safety of ADA observed in CAPE was comparable to its known benefit risk profile in children and adolescents with moderately to severely active CD, and no new safety signals were identified. Longer observation periods are needed to ascertain a more accurate risk of uncommon AEs.

Thiopurine monotherapy still has a place in the treatment of patients with mild-to-moderate Crohn’s disease in the biological era

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Background: For more than half a century, thiopurines have been the first-line maintenance therapy in patients with Crohn’s disease (CD). With the increasing availability of biological drugs, thiopurines are often considered less potent, though in mild-to-moderate disease they may be a valid, safe and less expensive alternative. Genetic determinants including HLA, TPMT and NUDT15 have been associated with response and/or side effects to thiopurines. We here report outcome of thiopurine monotherapy in CD patients, and evaluated genetic associations with response.

Conclusions: In this large retrospective series, thiopurine monotherapy could safely maintain clinical response in up to 35.5% of patients after one year, similar to previous prospective data observed during the SONIC-trial. We identified a genetic marker associated with response to thiopurines, which needs validation in an independent cohort before its clinical use can be evaluated.

Tacrolimus suppositories as induction therapy for refractory ulcerative proctitis: a randomised controlled trial
Background: The treatment of 5-ASA refractory ulcerative proctitis (UP) remains challenging. Previous studies have shown that topical tacrolimus is effective for the treatment of refractory UP. However, the efficacy of tacrolimus as induction therapy compared with topical corticosteroids is unknown.

Conclusions: In patients with 5-ASA refractory UP efficacy of topical tacrolimus was not statistically different compared with beclomethasone for inducing combined clinical and endoscopic remission, despite the observation of a higher rate of endoscopic remission after topical TSP. No differences were observed in clinical and endoscopic response rates. Fewer adverse effects were observed in the BSP-treated patients. Overall, our results demonstrate that tacrolimus suppositories could be considered as an alternative induction strategy for refractory UP (ZonMw Grant 836011003).

Tofacitinib for the treatment of ulcerative colitis: up to 4.4 years of safety data from global clinical trials

Background: Tofacitinib is an oral, small-molecule Janus kinase inhibitor that is being investigated for ulcerative colitis (UC). The safety and efficacy of tofacitinib for the treatment of moderate to severe UC was evaluated in OCTAVE induction and maintenance Phase (P) 3, randomised, placebo-controlled studies. Long-term safety and efficacy of tofacitinib for UC are being evaluated in an ongoing, open-label, long-term extension (OLE) study. We present an updated integrated analysis of the safety profile of tofacitinib observed during the UC global clinical development programme, with tofacitinib exposure up to 4.4 years.

Conclusions: Tofacitinib treatment in patients with UC was associated with dose-dependent risk of HZ. These results show an overall manageable safety profile of tofacitinib 5 and 10 mg BID in the UC programme, generally similar to that previously reported in the tofacitinib rheumatoid arthritis programme and to that of other UC therapies including biologics.

References
Treatment and long-term outcomes of paediatric patients with penetrating Crohn’s disease

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Background: Penetrating phenotype and young age at diagnosis are two risk factors of complicated course in Crohn’s disease (CD). Currently, only few data are available regarding the treatment and the evolution of penetrating CD in children. The aim of our study was to describe the clinical management and to evaluate the long-term outcomes of children with penetrating CD.

Conclusions: Half of the children with penetrating CD had an early intestinal resection for B3 treatment. This early surgery significantly decreased the risk of B3 recurrence and intestinal resection during follow-up.

Ustekinumab for Crohn’s disease: a nationwide real-life observational cohort study (ICC case series)

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Background: Ustekinumab (UST) targets the p40 unit of interleukin-12 and interleukin-23 and is approved for treatment of Crohn’s disease (CD). The majority of CD patients included in the registration trials are highly selected patients from referral centres, satisfying strict inclusion/exclusion criteria and following detailed protocols that do not accurately reflect routine care. We therefore designed a nationwide cohort (ICC case series) of UST-treated CD patients in order to systematically assess real-life effectiveness and safety.

Conclusions: Our nation-wide real-life data on UST showed that 45% of CD patients achieved clinical remission at 12 weeks accompanied by a reduction in inflammatory markers. Two serious adverse events required discontinuation of therapy and four severe infections resulting in hospital admission were reported.
Postoperative anti-TNF therapy is associated with a significant reduction of both endoscopic and clinical recurrence following surgery for ileocolonic Crohn’s disease: results of a prospective nationwide cohort conducted by the GETAID chirurgie group


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Background: Postoperative recurrence rate following surgery for ileocolonic Crohn’s disease (CD) can be up to 60%. Predictive factors of postoperative recurrence remain controversial and have never been evaluated in a large prospective cohort study, leading difficulties regarding patients’ risk stratification and indication of postoperative prophylactic treatments.

Conclusions: Postoperative prophylactic anti-TNF therapy significantly decreases both endoscopic and clinical recurrence rates following surgery for ileocolonic Crohn disease. This study suggest that upfront surgery followed by postoperative anti-TNF therapy is probably the best therapeutic approach for complex Crohn disease (B3 disease behaviour) with low recurrence rate after surgery.

Combination therapy with anti-TNF and immunosuppressive therapies is the most effective medication to prevent and treat endoscopic postoperative recurrence in patients with Crohn’s disease

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Background: Anti-TNF agents are considered the most effective medications to prevent and to treat endoscopic postoperative recur- rence (POR) in Crohn’s disease (CD). We assessed the impact of prior anti-
TNF exposure, prior primary non-response to anti-TNF before surgery and concomitant use of immunosuppressive therapy on the efficacy of anti-TNF to prevent endoscopic or clinical POR.

**Conclusions:** Anti-TNF agents are the most effective therapy to prevent and to treat endoscopic POR in CD. Concomitant use of immunosuppressive therapy should be preferred in patients with prior exposure to anti-TNF or to treat endoscopic POR.

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**Impact of concomitant immunomodulator use on vedolizumab effectiveness: a multicentre consortium propensity score-matched analysis**

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**Background:** We compared the effectiveness of vedolizumab (VDZ) for Crohn’s disease (CD) and ulcerative colitis (UC) when used alone vs. in combination with an immunomodulator (IM).

**Conclusions:** After accounting for measurable disease and patient specific characteristics that may impact biologic effectiveness and concomitant IM use, we observed significantly higher rates of clinical remission for CD and steroid-free remission for UC. Randomised controlled trial data are needed to assess the impact of concomitant IM use for VDZ. Statistical analyses conducted at University of California, San Diego. Research funded in part by Takeda.

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**Treatment discontinuation, flares and hospitalisations among biologic-naïve patients with IBD over the first year of treatment: a comparative effectiveness study of vedolizumab vs. infliximab**

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**Background:** Current in ammatory bowel disease (IBD) treat- ment guidelines recommend the gut-selective anti-integrin antibody vedolizumab (VDZ) for treatment of patients with moderately to severely active disease who have had an inadequate response with, lost response to, or were intolerant to a tumour necrosis factor antagonist such as in iximab (IFX). We evaluated clinical outcomes of VDZ vs. IFX over the rst year of treatment to assess their effec- tiveness as initial therapy.
Conclusions: A year after initiating treatment, clinical outcomes were similar for biologic-naïve patients on VDZ as for IFX, although numerically lower rates of all-cause hospitalisation and IBD surgery were seen with VDZ. Data suggest clinical benefits to using VDZ as a first-line treatment option.

Achieving biochemical remission with adalimumab therapy using therapeutic drug monitoring: Results of a large prospective Crohn’s disease cohort


Background: Adalimumab (ADA) is a well-established treatment for Crohn’s disease (CD). Despite this limited data are available regarding the relationship of serum ADA levels, and antibodies to ADA (ATA) with clinical outcomes.

Conclusions: Higher ADA levels were independently associated with biochemical remission; levels of >8.9 μg/ml, higher than previously suggested, might be an appropriate target in the maintenance treatment of CD.

Paediatric Crohn’s disease patients in remission have a reduced skeletal muscle protein balance after feeding

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Background: Sarcopenia is common in active Crohn’s disease (CD) and still prevalent in remission. This can lead to fatigue, physical inactivity and poor quality of life. The aetiology is unclear. Low levels of physical activity, inability to respond to anabolic stimuli such as food (anabolic resistance, AR) and insulin resistance (IR) could all be implicated in the failure of CD patients in remission to re-build muscle mass. We aimed to investigate the association between sarcopenia and AR and IR, and the role of physical activity in age, gender matched children with CD.

Conclusions: The inability to sustain a positive protein balance post-prandially could provide an explanation for the reduced muscle mass seen in CD patients in remission. This could be contributing to fatigue and poor muscle function. Pharmacological interventions to reduce protein breakdown and a high-protein diet to improve the anabolic response to food could both be investigated as potential treatments.

Faecalibacterium prausnitzii produces butyrate to maintainTh17/Treg balance and to ameliorate colorectal colitis by inhibiting histone deacetylase 1

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Background: Inammmatory bowel disease (IBD)-associated dysbiosis is characterised by a loss of Faecilabacterium prausnitzii, whose super- natant exerts an anti-inammmatory effect. However, the anti-in ammatory substances in F. prausnitzii supernatant and the mechanism in ameliorating colitis in IBD have not yet been fully investigated.

Conclusions: It is butyrate, instead of other substances produced by F. prausnitzii, that maintains Th17/Treg balance and exerts significant anti-inflammatory effects in colorectal colitis rodents, by inhibiting HDAC1 to promote Foxp3 and block the IL-6/STAT3/IL-17 downstream pathway. F. prausnitzii could be an option for further investigation for IBD treatment. Targeting the butyrate-HDAC1-T cell axis offers an effective novel approach in the treatment of inflammatory disease.

Lower incidence of herpes zoster in vedolizumab-treated vs. tofacitinib-treated patients with ulcerative colitis

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Background: Patients (patients) with in ammatory bowel disease (IBD) have an increased risk of herpes zoster (HZ) compared with healthy controls.1 Systemic immunosuppression with immunomodu- lators or anti-tumour necrosis factor (TNF) therapy are independ- ent risk factors for HZ in IBD patients.1 In patients receiving higher doses of tofacitinib (TOFA), a non-selective Janus kinase (JAK) inhibitor, HZ rates in patients with ulcerative colitis (UC),2, rheu- matoid arthritis,3 and psoriasis4 were higher than placebo (PBO). Vedolizumab (VDZ), a humanised monoclonal antibody with a gut- selective mechanism of action (MOA),5,6 may be associated with a lower risk of HZ infection compared with immunosuppressants. This retrospective post hoc analysis compared the risk of HZ infec- tion with VDZ and TOFA in UC patients.

Conclusions: In these analyses, the decreased risk of HZ for VDZ relative to TOFA is possibly due to the absence of systemic immuno- suppression conferred by the gut-selective MOA of VDZ. Limitations include restricted data from two different studies, small samples, the inability to access individual data, and the heterogeneity of the VDZ combined ITT and non-ITT groups. This study and medical writing assistance (Gina Moore, MS, inVentiv Medical Communications) were supported by Takeda.

References

Faecal calprotectin as a non-invasive treatment target to predict mucosal healing and histological remission in asymptomatic ulcerative colitis

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**Background:** During the recent years, the impact of mucosal healing (MH) and histological remission (HR) has been the target of treatment for ulcerative colitis (UC). Both purpose require an invasive endoscopic procedure, therefore a non-invasive biomarker, as surrogate for MH and HR, like fecal calprotectin (FCP) can be very useful. The aim of this study is to analyse the diagnostic accuracy of FCP to predict MH and HR in UC.

**Conclusions:** FCP is a clinically relevant biomarker that has demonstrated an high accuracy to predict both MH and HR in UC patients. FCP levels lower than 90.3 mg/kg presuppose achievement of an optimal treatment target of HR and therefore this could avoid conducting unnecessary colonoscopies.

Is Epstein–Barr virus infection associated with the pathogenesis of microscopic colitis?

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**Background:** Epstein–Barr virus (EBV) has been associated with inflammation in the colon, particularly in patients with inflammatory bowel diseases, even if its potential impact on pathophysiology and course of the disease is still unclear. Conversely, no data are available on the association between EBV and microscopic colitis (MC). We aimed to compare the frequency of colonic EBV infection in patients with MC, ulcerative colitis (UC), and irritable bowel syndrome (IBS).

**Conclusions:** This study shows for the first time that EBV infection is almost always detectable in patients with MC. The high frequency of EBERs+ cells observed in MC suggests that EBV may act deeper than as an innocent bystander, as it could play a causative role in the pathogenesis of the disease. Further studies are necessary to confirm this association and to clarify the role of EBV in MC and, more generally, in colonic inflammation.

Post-inflammatory polyps do not predict colorectal neoplasia in patients with inflammatory bowel disease: a multinational retrospective cohort study

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**Background:** Patients with inflammatory bowel disease (IBD) who have post-inflammatory polyps (PIPs) are considered to be at higher risk of colorectal neoplasia (CRN). Using limited evidence from older, case–control studies, European gastroenterological societies proposed increasing the frequency of surveillance colonoscopies in patients with PIPs from every 5 to every 2–3 years in absence of

**Conclusions:** PIPs were associated with greater severity and extent of colonic inflammation, and higher rates of colectomy, but did not independently predict the development of CRN. These findings suggest that intervals for CRN surveillance should not be shortened solely based on presence of PIPs.

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**Developing a colorectal cancer risk prediction tool for patients with ulcerative colitis and low-grade dysplasia**

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**Background:** The natural history and prognosis of low-grade dysplasia (LGD) in ulcerative colitis (UC) is uncertain which makes communication to patients of their colorectal cancer (CRC) risk and management options (colectomy vs. enhanced colonoscopic surveil- lance) very challenging. An extensive analysis of the significant risk factors and outcomes of 172 UC patients with histologically diagnosed LGD between January 1993 and December 2012 from the IBD surveillance database at St Mark’s Hospital has been reported by our team.\(^1\) Using these data our objective was to develop a novel patient-friendly online CRC risk prediction tool, Ulcerative Colitis Cancer Risk Estimator (UC-CaRE), which can be used to aid in shared decision-making when LGD is diagnosed in UC.

**Methods:** The model requires user input of the seven variables found to be significantly associated with HGD/CRC development (\(p < 0.002\)) in the univariate Cox proportional hazards model analyses in the St Mark’s dataset\(^1\): macroscopic shape of the LGD lesion, largest lesion size, presence of stricture, metachronous lesions found during follow-up, a previous diagnosis of “inde nite for dysplasia”, multifocality of LGD, and exposure to chromoendoscopy during follow-up. These variables were used in a nal multivariate Cox proportional hazards model to obtain hazard ratios for each relative to baseline risk. From this we obtained an estimated linear predictor coef cient that we then apply in our prognostic tool UC-CaRE which computes the predicted future risk of cancer occurrence over a 10 year period. **Results:** The UC-CaRE tool is easily accessible online using the fol- lowing web-link: http://www.uc-care.uk/ and provides the user with the patient’s predicted cumulative HGD and/or CRC risk both
Abstract P127 – Figure. An example downloaded colorectal cancer risk prediction report for a UC patient with a high-risk low-grade dysplasia lesion.

quantitatively, in terms of percentage chance at yearly follow-up times up until 10 years, and visually with the aid of a Paling chart of 100 patients with the same risk, coloured according to how many of the total may develop a neoplasm in 1, 5, and 10 years. The resultant risk report can be downloaded onto computer or smartphone device for the user's reference.

Conclusions: We have formulated a novel online tool that could be used in the clinic or at the bedside to aid personalised CRC risk stratification, patient education and challenging management decision-making for UC patients diagnosed with LGD. We are now in the process of externally validating our tool using independent patient cohorts from two other UK tertiary referral centres.

References

Fatigue most frequently reported reason for work productivity loss in inflammatory bowel disease patients

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Background: Work productivity loss is associated with disease activity in inflammatory bowel disease (IBD) patients. However, patients in clinical remission experience more work limitations than healthy controls. We aimed to explore potential differences in type of problems that lead to IBD-related absenteeism and presenteeism in patients with active vs. inactive disease.

Conclusions: Absenteeism and presenteeism are significantly more common in IBD patients with active disease. Presenteeism is also frequently reported in patients with inactive disease. The most reported reason for absenteeism and presenteeism was fatigue for patients with and without disease activity.

Home based faecal calprotectin testing: a Canadian user performance evaluation study of IBDoc®

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Background: Fecal Calprotectin (FC) is a stool biomarker that has previously been shown to be sensitive and specific for mucosal inflammation in patients with inflammatory bowel disease (IBD). The test is limited by the requirement for patients to collect and return stool samples. A previous study showed a sample return rate of 78%. The objective was to determine the usability of IBDoc®, a home based FC test, designed to allow patients to independently determine their FC levels without the need to return a stool sample to a laboratory or doctor’s office and thereby improve test adherence.

Conclusions: The FC measurements produced by patients using the IBDoc® were strongly correlated with the standard FC ELISA measurements. The majority of patients found the IBDoc® home kit easy to use and a product that they would likely to use in the future. Further studies are needed to determine whether patients adopt the device for use beyond the clinical trial setting and to assess its impact on patient care for IBD.

Real-world use of faecal calprotectin testing in patients with inflammatory bowel disease

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Background: Endoscopy is commonly used for diagnosis and management of patients with inflammatory bowel disease (IBD); however, it is costly, invasive and has known risks of complications. Faecal calprotectin
(FC) is a non-invasive biomarker of intestinal inflammation and is highly correlated with endoscopic disease activity. The use of FC testing is not well understood in IBD in a real-world setting.

Conclusions: Implementation of FC testing has been limited in US clinical practice. Patients with FC testing had reduced endoscopy use over time vs. patients who never received FC testing.

Infliximab therapy for inflammatory pouch pathology: a multi-centre retrospective study

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Background: Restorative proctocolectomy (RPC) with ileal pouch-anal anastomosis is considered the procedure of choice in patients with ulcerative colitis (UC) refractory to medical therapy. Subsequent inflammation of the pouch is a common complication and in some cases fails to respond to antibiotics, the mainstay of treatment. In such cases, corticosteroid, immunomodulatory or biologic treatments are often considered. However, our understanding of the efficacy of anti-tumour necrosis factor (anti-TNF) medications for both Crohn’s like complications and chronic refractory pouchitis are based on studies that include relatively small numbers of patients.

Conclusions: The use of in iximab is associated with a high incidence of primary non-response or pouch failure. Once escalation to in iximab medication for pouch-related problems is considered, patients should be carefully counselled about a high incidence of failure and therefore alternatives, including surgery should be discussed.

Infliximab trough levels during maintenance are predictive for infliximab efficacy in paediatric patients with inflammatory bowel disease

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Background: The role of therapeutic drug monitoring during maintenance treatment in paediatric inflammatory bowel disease (IBD) is poorly studied. The aim was to determine whether in iximab (IFX) trough levels (TL) correlate with long-term remission in children receiving maintenance IFX.

Conclusions: In this paediatric IBD cohort treated with IFX maintenance, children who demonstrated clinical and/or endoscopic remission had significantly higher IFX TL. Our data support the value of proactive drug monitoring in children to improve long-term outcome.
Azathioprine metabolite (6-TGN) levels within a defined therapeutic range are associated with lower faecal calprotectin in Crohn’s disease

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Background: Azathioprine/6-mercaptopurine (AZA/6-MP) are first-line immunosuppressants for the treatment of Crohn’s disease. While recent studies have reported a positive association of their active metabolite 6-thioguanine (6-TGN) with clinical outcomes, 6-TGN levels have not been correlated with surrogate markers of mucosal healing, which is an increasingly recognised therapeutic goal. We therefore asked whether 6-TGN levels within a defined therapeutic range are associated with lower fecal calprotectin (FC) in Crohn’s disease.

Conclusions: In our retrospective analysis on Crohn’s disease patients receiving thiopurine monotherapy, 6-TGN levels within a defined range (250–450 pmol/8 × 10⁸ red blood cells) were associated with significantly lower fecal calprotectin levels as a surrogate marker for mucosal healing. A treat-to target concept directed by 6-TGN levels to reach mucosal healing in Crohn’s disease appears promising, but requires prospective studies.

Sleep fragmentation measured by wearable device is an indicator of clinical disease activity in inflammatory bowel disease

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Background: Wearable activity monitors allow individuals to track physical characteristics, including sleep patterns. Sleep dysfunction in inflammatory bowel disease (IBD) is associated with inflammatory activity and risk for clinical disease relapse. Passive measurement of sleep by a wearable device can identify patterns of sleep dysfunction. We investigated whether remotely measured sleep quality by a wearable device is associated with clinical disease activity.

Conclusions: Worse sleep fragmentation measured by a wearable activity tracking device is associated with increased odds of clinical disease activity in IBD. Changes in sleep fragmentation patterns may have utility in a remote patient monitoring system as an early indicator of clinical disease activity.

Clinical course for patients stopping treatment with biological compounds

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Background: In the context of step-up therapy for treatment of inflammatory bowel disease, treatment with biological compounds, in most situations, represent the last treatment option, before surgery. If so, what will happen to patients that, of any reason, has to stop treatment with biologics? The aim of the presented study was to examine the clinical course for patients stopping biologic therapy.
Conclusions: Our results show that surgery is not the given consequence of stopping treatment with a biologic compound. Only slightly more than half of the patients, 53%, stopping treatment, of other reasons than achieved remission, went on to surgery. Surprisingly, the proportion of patients in remission increased after stopping biologic therapy in our study, this might be explained by optimising medical therapy with much the same drugs that was used, or could have been used, before starting biologic therapy.

Natural history of Crohn’s disease postoperative recurrence in a referral centre in the era of biologics and therapeutic intensification based on early endoscopic findings

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Background: We assessed the prevalence and the risk factors of endoscopic and clinical postoperative recurrence (POR) in the era of biologics and therapeutic intensification based on early endoscopic findings in Crohn’s disease (CD).

Methods: From a prospectively maintained database, we consecutively enrolled all CD patients who underwent intestinal resection and anastomosis between 2011 and 2016 with colonoscopy at 6 months (6m) and follow-up >6 months. Endoscopic POR was defined as Rutgeerts’ Index (RI) ≥i2. Clinical POR was defined as recurrence of symptoms (HBI > 4) leading to hospitalisation or therapeutic intensification after exclusion of other causes of recur rent 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 = 35.8 %, 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 [1.5–50.5], 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 [1.1–6.5], 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: 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.
Despite surveillance and increased use of biologics and immunosuppressives colorectal cancer detection in IBD patients remains unchanged over the past ten years

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Background: Inflammatory bowel disease (IBD) is considered a risk factor for colorectal cancer (CRC). Patients with IBD are at higher risk of CRC compared with normal population and therefore undergo surveillance colonoscopy according to national guidelines which have changed over the past 10 years. Globally, the cumulative risk has generally reduced over the years and it is likely due to better management of IBD and robust surveillance practices. We aimed to study impact and outcomes of surveillance in our IBD patients with changing surveillance guidelines.

Conclusions: In our cohort of patients, male gender and UC were associated with higher risk of CRC. Our data show high interval cancer risk highlighting that WLE with random biopsies are likely to miss early dysplastic lesions. There was no change in detection rate of CRC in IBD patients over 10-year period. Unless surveil-
lance techniques and protocols are rigorously optimised, the risk of interval CRC should be kept in mind when implementing guidelines regarding surveillance frequency.

**Crohn’s disease: What can we expect from the course of the disease?**

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**Background:** Crohn’s disease is a chronic and progressive disease that changes its behaviour over time. Transmural inflammation in Crohn’s disease (CD) leads to stricturing or penetrating complications. The aims of this study were to evaluate the frequency of the long-term progression of CD phenotypes and need for surgery and to determine the main factors associated with this evolution. **Methods:** Retrospective study was conducted with prospective follow-up. Patients included had a minimum follow-up of 12 months. Medical records were reviewed. Montreal classification was assessed at the moment of the diagnosis and at the end of the follow-up period.

**Conclusions:** In our cohort, we observed behaviour progression in about one-sixth of patients. The most frequent change in behaviour was to stricturing pattern. Stricture and penetrating behaviour, higher number of hospitalisations in the first year of diagnosis, smoking status, age at diagnosis <16, and Ileocolic localisation were factors associated with an unfavourable clinical evolution.

**Daily aspirin use does not impact clinical outcomes in patients with inflammatory bowel disease**


**Background:** Aspirin is a non-steroidal anti-inflammatory drug (NSAID) which is recommended for primary or secondary prevention of coronary artery disease (CAD). Although several studies have associated the use of other NSAIDS with disease ares in patients with inflammatory bowel disease (IBD), little is known about the impact of daily aspirin use on clinical outcomes in patients with IBD. **Methods:** We conducted a retrospective analysis of a prospectively collected registry of patients with IBD from May 2008 to June 2015. Patients in the registry with daily aspirin use were matched 1:4 to controls by age, sex, disease, disease location and presence of cardiac comorbidity. Patients with at least 18 months of follow-up were included in the analysis. The primary outcomes of interest were an IBD-related hospitalisation, IBD-related surgery, and requiring

**Conclusions:** Aspirin use did not impact clinical outcomes in patients with IBD. Although the effect of aspirin use on mucosal inflammation was not directly assessed in this study, these findings support the safety of daily aspirin use in this population.

**Non-alcoholic fatty liver disease in inflammatory bowel disease: Prevalence and risk factors**

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Background: Non-alcoholic fatty liver disease (NAFLD) is common in inflammatory bowel diseases (IBD). Herein, NAFLD prevalence and risk factors in a large IBD cohort were evaluated and compared with that of a non-IBD sample.

Conclusions: NAFLD is more common and occurs at a younger age in IBD than in non-IBD subjects. However, further investigation is required to ascertain possible NAFLD pathogenic IBD-related factors other than conventional/metabolic ones.

Infliximab or adalimumab: Which should be used first for Crohn’s disease? A multicentre retrospective observational study

Background: We have debated which of the anti-TNF agents we should use first for the biologic-naïve Crohn’s disease (CD) patients; infliximab (IFX) or adalimumab (ADA). There are few multicentre studies to compare the efficacy between those agents. The aim of this study was to clarify the long-term efficacy of those agents in the treatment of CD patients.

Conclusions: In this retrospective, multicentre, observational study, similar long-term efficacy was observed in biologics-naïve CD patients between IFX first and ADA first. The efficacy of combination with an immunomodulator was observed in patients with IFX first, but not observed in patients with ADA first.

Colectomy-free survival and factors associated with it in children with ulcerative colitis managed in a tertiary IBD centre in the UK

Background: There are only limited data available about long-term outcome of children with ulcerative colitis. Colectomy-free survival is an important outcome for children with ulcerative colitis. The aim of this study was to review the outcome of colectomy-free survival and associated factors in patients with ulcerative colitis managed in our centre.
Methods: We have performed a retrospective analysis of all patients diagnosed with ulcerative colitis in our hospital from January 2010 to December 2015. The clinical, laboratory, endoscopy data and medical and surgical treatment were analysed.

Conclusions: Only a small proportion (8%) patients needed colectomy in our cohort of patients with UC and the need for steroid use at 3 months and 12 months after diagnosis and longer interval to start biologics were associated with colectomy.

Preoperative serum vedolizumab levels do not predict postoperative outcomes in inflammatory bowel disease (IBD)

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Background: It is unknown whether patients with IBD undergoing abdominal surgery after biologic drug exposure are at increased risk of postoperative complications. Prior studies on the association of preoperative vedolizumab (VEDO) therapy use and postoperative outcomes in IBD have been conflicting. Serum levels of anti-TNF drugs are a surrogate for biologic effect on inflammatory mechanisms and have been correlated with postoperative outcomes. In a similar fashion, we sought to clarify associations between serum VEDO levels and postoperative outcomes in IBD.

Conclusions: This study showed that the presence and magnitude of serum VEDO levels do not adversely influence postoperative outcomes in IBD patients. Contrary to other studies, there appears to be no deleterious effect of preoperative VEDO use in IBD patients requiring surgery.

Cannabis induces clinical and endoscopic improvement in moderately active ulcerative colitis (UC)

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Background: Cannabis is frequently used by patients with UC, although it was never investigated in a controlled trial. We aimed to assess the effects of Cannabis in moderately active UC in a randomised placebo controlled trial.

Conclusions: Tetrahydrocannabinol-rich cannabis is safe and can induce clinical as well as endoscopic improvement in moderately active UC.

Vedolizumab therapy results in reduced hospitalisation and steroid use over 1-year: Results from the Scottish vedolizumab consortium

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Background: Whilst the GEMINI trials and an increasing body of real-world data have demonstrated the effectiveness and safety of vedolizumab (VDZ) in IBD, there are limited available data about the effect on hospitalisations and steroid use. Our aim was to address this in a large real-world cohort of IBD patients from across Scotland.

Conclusions: VDZ is associated with reduced hospitalisation and steroid use. Steroid free remission rates, mucosal healing and safety profile were in keeping with the published literature.

Treatment naïve newly diagnosed patients with Crohn's disease have microbial dysbiosis correlated with disease activity and faecal calprotectin—results from a prospective inception cohort

Background: Microbial dysbiosis is believed to play a role in Crohn's disease (CD). Most data are derived from CD patients under medications, an exposure that might impact microbial composition. Our aim was to assess microbial dysbiosis in patients with newly diagnosed CD and correlate it with disease activity.

Conclusions: Microbial dysbiosis in treatment naïve newly diagnosed CD patients was associated with disease activity as reflected by PGA and faecal calprotectin. Longitudinal assessment may reveal specific early dysbiosis patterns as predictive biomarkers for disease ares.

5-ASA prescription trends over time in inflammatory bowel disease 1996 to 2015—A UK population-based study

Background: 5-Aminosalicylates (5-ASA) are commonly prescribed for inflammatory bowel disease (IBD). Whilst they are effective in mild–moderate ulcerative colitis (UC), evidence for their benefit in Crohn’s disease (CD) is controversial. Few data are available on the evolution of 5-ASA prescriptions over time, from a population level.

Conclusions: 5-ASA remains a highly used treatment for UC and CD in the UK. Almost one-third of IBD patients had a prolonged use of 5-ASA. Despite lack of strong evidence for their benefit in CD, half of patients
are still prescribed 5-ASA for CD, indicating a disparity between evidence base and clinical prescribing practice.

**Figure 1.** Prevalence of 5-ASA prescriptions among patients with ulcerative colitis and Crohn’s disease from 1996 to 2015.

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**Does medical acceleration improve long-term outcomes in ulcerative colitis patients who are in clinical remission but have endoscopic mucosal inflammation?**


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**Background:** Discrepancies between clinical symptoms and mucosal inflammation have been reported in up to 50% of patients with ulcerative colitis (UC). However, there are no guidelines and only limited information for appropriate treatment manipulation in these patients. We aimed to evaluate long-term outcomes according to treatment strategies and determine predictive factors for disease relapse in UC patients who are in clinical remission (CR) but still have endoscopic inflammation.

**Results:** The mean patient age was 43.5 years, and 53.9% of the included patients were male. The mean disease duration was 89.9 months. During a mean follow-up of 34 months, 90 patients (44%) experienced disease relapse. The cumulative relapse-free rate did not differ by treatment strategy (maintenance of current
therapy vs. dose elevation or step-up therapy). Multivariate analysis revealed that left-side colitis or pancolitis at diagnosis (OR, 2.10; 95% CI 1.04–4.27; \( p = 0.040 \)) and number of extraintestinal manifestations \( \geq 2 \) (OR, 5.62; 95% CI 1.10–28.68; \( p = 0.038 \)) were independent predictive factors for disease relapse. **Conclusions:** The current medical acceleration treatment strategy did not have a significant influence on the long-term outcomes of UC patients in CR but with active mucosal inflammation. Disease extent at diagnosis and extraintestinal manifestations were independently predictive of disease relapse.

**Higher adalimumab maintenance regimens are more effective than standard maintenance doses in Crohn’s disease patients who have failed infliximab**

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**Background:** Many Crohn’s disease (CD) patients who are treated with anti-TNF therapies experience a loss of response (LOR) over time and require dose escalation. The efficacy and safety of treating CD patients with higher maintenance regimens of adalimumab following induction remains unknown.

**Conclusions:** Higher dose maintenance regimens were more effective than the standard adalimumab maintenance protocol with better short-term and long-term clinical outcomes.

**Pre-operative vedolizumab treatment and postoperative complications in patients with inflammatory bowel disease: A systematic review and meta-analysis**

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**Background:** Vedolizumab is a gut-selective monoclonal antibody approved for the treatment of Crohn’s disease (CD) and ulcerative colitis (UC) in North America and Europe. While vedolizumab has generally been shown to have a favourable safety profile, its impact on postoperative outcomes remains unclear as several recent studies have reported conflicting results. This systematic review and meta-analysis was performed to assess the impact of pre-operative vedolizumab treatment on the rate of postoperative complications in patients with inflammatory bowel disease (IBD) undergoing major abdominal surgery.

**Conclusions:** Pre-operative vedolizumab treatment in IBD patients does not appear to be associated with an increased risk of postoperative infectious or total overall postoperative complications compared with either pre-operative anti-TNF therapy or no biologic therapy. Prospective studies which include perioperative drug level monitoring are needed to confirm these findings.

**Biological interventions for induction and maintenance of mucosal healing in ulcerative colitis: A Cochrane systematic review**

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Background: The number of biologics for ulcerative colitis (UC) is rapidly expanding and mucosal healing (MH) is a salient endpoint against which to gauge their efficacy. In this Cochrane review, we synthesised the randomised controlled trial (RCT) data on biologics for inducing and maintaining MH in UC.

Conclusions: Moderate-to-high quality evidence supports the efficacy of IFX, ADA, GOL and VDZ for inducing MH in moderate-to-severe UC. The existing evidence is insufficient to assess their ability to maintain MH achieved during induction. However, all four are associated with higher rates of MH at 1 year than PBO when all randomised patients, irrespective of MH status at the end of induction, are considered.

A comparison of thiopurines vs. anti-TNF-α therapy in steroid-dependent ulcerative colitis

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Background: As up to 20% of ulcerative colitis (UC) patients were reported to become steroid-dependent during their clinical course, the steroid-dependence is a clinically important problem. Although immunomodulators (IM) such as thiopurines (azathioprine or 6-mer-captothiopurine) are recommended in steroid-dependent UC by several guidelines including the European Crohn’s and Colitis Organisation guideline, the occurrence of thiopurines-related adverse events has been reported relatively high (15–20%). Anti-tumour necrosis factor (TNF)-α therapy has proven effective for the induction and maintenance of remission in UC. Most studies of these therapies for UC included patients with both steroid-refractory and steroid-dependent, therefore, it is unclear which therapy is more effective in steroid-dependent UC. Aims of this study were to compare the effectiveness and safety of thiopurines with anti-TNF-α therapy in steroid-dependent UC.

Conclusions: We observed similar effectiveness of thiopurine and anti-TNF-α for maintenance of remission in patients with steroid-dependent UC. Anti-TNF-α therapy had less adverse events than thiopurine.

Impact of anti-TNF-alfa therapy on colectomy rates and indications for surgery in Ulcerative Colitis: Comparison of two patient cohorts from 2005 to 2007 and 2014 to 2016

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Background: Biological therapy, especially in ixiximab, has been demonstrated to be effective in inducing and maintaining clinical and endoscopic remission in ulcerative colitis (UC). However, there are very little data available on the effect of increasing use of iniximab on indications for colectomy in UC and data on the impact of biological therapy on surgery in UC is inconsistent. Therefore, we assessed the impact of biological therapy on colectomy rates and indications for surgery in ulcerative colitis at Helsinki University Hospital catchment area in Finland in two different patient cohorts, during two time periods 2005–2007 and 2014–2016.

Conclusions: Colectomy rate has significantly decreased in patients with ulcerative colitis in line with increased use of biologics. However, introduction of biological therapy has not had any significant impact on indications for colectomy, not even in patients with chronic active disease.
Factors influencing outcomes from surgery for Crohn’s disease: A perspective from a district hospital

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Background: Crohn’s disease has always posed a challenge to surgeons especially in the light of newer biological agents and immunosuppression. Although medical management of Crohn’s disease has changed in the recent years, it is unclear whether surgical management during the various stages of the disease has an impact. We present our series with the aim of evaluating the effect of various factors on outcomes from surgical intervention for Crohn’s disease.

Conclusions: Surgery remains an important component of the multimodality treatment of IBD, required in 70–80% of patients with Crohn’s disease. The use of pre-operative steroids and immunosuppressants did not appear to increase our rate of complications. In our series, there was a 20–30% symptomatic recurrence rate in the first year after surgery, with a 10% increase in each subsequent year. These recurrence rates were influenced by the use of Infli ximab and azathioprine along with steroids in the post-operative phase.

Incidence risk of colorectal cancer, non-melanoma skin cancers and non-Hodgkin lymphoma in Japanese patients with ulcerative colitis based on large-scale claims database

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Background: Patients with ulcerative colitis (UC) have been reported about not only a higher incidence of colorectal cancer (CRC) compared with general population, but also increased risks of non-melanoma skin cancers (NMSC) and non-Hodgkin lymphoma (NHL) associated with immunosuppressive drugs such as thiopurines in Caucasians. However, there is no such study in Asian patients with UC based on large-scale real-world data, except for one questionnaire survey which reported similar incidence of lymphoma in Japanese patients treated with thiopurines. Therefore, we conducted an exploratory analysis of the overall incidence risks of malignancies in Japanese UC patients, and also UC patients who used thiopurines and anti-tumour necrosis factor (TNF) agents, using large-scale claims database.

Conclusions: This study tried to rst assess the risks of malignancies in Japanese patients with UC based on large-scale real-world data. Risks of malignancies were found to be higher in UC patients than the general population, while no signifi cant difference was shown between the overall UC patients and UC patients on thiopurines and/or anti-TNF agents. It suggests that racial differences should be included in the individualised risk-benefit consideration for UC management. It should also be noticed that the part of claims data is yet to be fully validated and further analysis adjusting more factors with longer observation period is needed.

Long-term outcomes in biologic-treated perianal Crohn’s fistula

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Background: Recent consensus group guidelines on management of perianal Crohn’s disease recommend biologic therapy, with anti-biotics and immunomodulatory agents as adjunctive treatments. However, on this gold standard regime, only a third of patients remain in clinical remission at 1 year on maintenance treatment. The aim of this study was to review long-term outcomes of patients treated with biological therapy for perianal Crohn’s stula at our institution.

Conclusions: There is often a considerable delay between presentation with a stula and anti-TNF therapy induction, the effect of which is currently unknown. Fewer than 20% of patients achieve radiological healing despite long-term treatment with anti-TNF agents. The majority of patients’ stula recur and 13% ultimately undergo proctectomy.

References

Vedolizumab can induce clinical remission in patients with chronic antibiotic-refractory pouchitis: A retrospective single-centre experience

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Background: Chronic antibiotic-refractory pouchitis affects up to 15% of patients with ulcerative colitis (UC) following colectomy with ileal pouch-anal anastomosis (IPAA). Therapy with anti-TNF agents has demonstrated efficacy in retrospective series, whereas data on vedolizumab (VDZ) therapy are scarce. We here report efficacy data of VDZ in patients with chronic antibiotic-refractory pouchitis.

Conclusions: In this case series, VDZ was efficacious and safe to induce clinical remission in patients with chronic antibiotic-refractory pouchitis. Final confirmation is expected via an ongoing phase IV, placebo-controlled randomised controlled trial (NCT02790138).

Transfer of care of adolescent IBD patients without longitudinal transition: Lesson from 10-year experiences

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Background: Inflammatory bowel diseases (IBD-Crohn’s disease [CD], ulcerative colitis [UC]) are usually diagnosed in adolescence or young adulthood. Transfer, which is a planned movement of patient and their
medical records from one provider to another, is the nal, single event of a transition process. Only a few data
are available from real life about the outcome of transfer and transition of care in IBD. Our aim was to
retrospectively evaluate the results of the transfer of our IBD patients from paediatric to adult care without
longitudinal transition.

Conclusions: Our results revealed that one-third of the paediatric patients have been transferred to adult care
in active stage of disease. Fifty-eight per cent of young patients required corticosteroids and 17% required surgery
shortly after transferring to the adult care. Every fifth patient needed biological therapy to be initiated after the
transfer. Our results revealed that the transfer of the patients in this vulnerable age is associated with a higher
risk of adverse outcome. Longitudinal transition may have a potential to decrease the need for therapeutic
change and the relatively high rate of surgery.

Treatment of established post-operative recurrence of Crohn’s disease with anti-TNF agents: Preliminary data of a multicentre, nationwide study

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Background: Thiopurines are the treatment of choice for the prevention of postoperative recurrence (POR) in
Crohn’s disease (CD) in high-risk patients, whereas those at low risk should be monitored and treated only in
case POR occurs. Endoscopic assessment of POR is recommended within the rst year following surgery in all
patients. With this strategy, more than 50% of patients will develop POR within 6–12 months after surgery. In
patients with established POR, anti-TNF agents may be of bene t, but scarce data on this are available.
**Conclusions:** Anti-TNF therapy constitutes a good option for the treatment of established POR as it achieves endoscopic and clinical improvement in a great proportion of patients. Infliximab seems to be superior to adalimumab in reverting endoscopic lesions in the short-term.

**Thiopurines vs. anti-TNFα for the prevention of postoperative recurrence in Crohn’s disease—a meta-analysis**

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**Background:** Anti-TNFα and thiopurine treatment both reduce the risk of endoscopic recurrence (ER) in postoperative Crohn’s disease (CD) patients. As studies comparing the efficacy of thiopurines and anti-TNFα have shown conflicting results, international guidelines do not express a preference for one of both therapies in postoperative CD patients. We aimed to conduct a meta-analysis of available prospective trials.

**Conclusions:** Meta-analysis of available published data suggests that anti-TNFα is superior to thiopurines in the prevention of postoperative ER. However, for a reliable preference in optimal postoperative treatment strategy, individual patient data analysis is required to account for confounding factors (e.g. prior medication, therapy optimisation) and risk factors associated with postoperative CD recurrence.

**Home-based vedolizumab infusions: A suitable alternative to routine hospital infusions**

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**Background:** Vedolizumab maintenance treatment for patients with inflammatory bowel disease (IBD) consists of intravenous infusions that are often given at 8-week intervals in an outpatient setting in the hospital. We aimed to evaluate whether home-based infusions offer a useful and safe alternative for the care of IBD patients.

**Conclusions:** Home-based Vedolizumab infusions are a safe alternative for hospital infusions and the satisfaction was the same for both home-care and in-hospital infusions. Patient expectations for satisfaction and time-efficiency were met or exceeded. Home infusions signally reduces sick leave from work by patients and the self-reported expenses are lower for the individual patient. The general healthcare costs are also lower in the home-care setting.
The impact of thiopurine drugs on the natural history and surgical outcome of ulcerative colitis: A cohort study

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**Background:** Thiopurines are used as maintenance therapy in ulcerative colitis, but whether these drugs influence the natural history of the disease is unknown. We aimed to assess the effect of thiopurines in terms of colectomy, hospital admission, progression in disease extent and anti-TNF therapy within 10 years.

**Conclusions:** Based on the novel approach of comparing patients tolerant and intolerant to thiopurines, we, for the first time, reveal that thiopurines have a profound beneficial impact of the natural history and long-term colectomy rates of ulcerative colitis.

Dietary interventions may modify intestinal inflammation via altering microbial composition—a cross-over trial

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**Background:** Diet may play a role in the pathophysiology of inflammatory bowel diseases (IBD) via several mechanisms including altering the gut microbiome. Here we evaluated the short-term effect of two dietary regimens, Mediterranean diet (MED) and the specific carbohydrate diet (SCD) on clinical parameters, inflammatory markers and gut microbial composition of IBD patients after pouch surgery.

**Conclusions:** In this cross-over trial two unindustrialised dietary interventions (MED and SCD) rapidly improved clinical and metabolic parameters in patients with IBD. However, effect of SCD on inflammatory markers was ambiguous and may be related to increased abundance of Enterobacteriaceae, previously shown to be associated with a high-fat diet.