included endoscopic remission as defined by complete absence of ulceration in CD and Mayo endoscopic subscore ≤1 in UC; and normalisation of radiological appearance on CT/MR enterography.

Results: Fifty-three patients (28 CD, 25 UC) were included in this study, with 64.2% (34/53) anti-TNF-experienced.

Characteristics	CD (n=28)	UC (n=25)
Age, y		
Mean age at diagnosis (SD)	28.1 (19.2)	32.0 (22.1)
Smoking, n (%)		
Never	28 (100)	21 (84.0)
Ex-smoker	0 (0)	2 (8.0)
Active smoker	0 (0)	2 (8.0)
Duration of disease at initiation of vedolizumab, y (SD)	8.4 (8.5)	6.1 (5.7)
Montreal disease location, n (%)		
L1: Ileal	10 (35.7)	
L2: Colonic	6 (21.4)	
L3: Ileocolonic	10 (35.7)	
L4: Upper GI	1 (3.6)	
E1: Proctitis		2 (8.0)
E2: Left-sided colitis		6 (24.0)
E3: Pancolitis		17 (68.0)
Montreal disease behaviour, n (%)		
B1: Inflammatory	8 (28.6)	
B2: Stricturing	6 (21.4)	
B3: Penetrating	14 (50.0)	
Perianal disease	15 (53.6)	
Previous bowel surgery, n (%)	10 (35.7)	1 (4.0)
Previous anti-TNF therapy, n (%)		
Anti-TNF naïve	11 (39.3)	8 (32.0)
1 anti-TNF agent	13 (46.4)	13 (52.0)
2 anti-TNF agents	4 (14.3)	3 (12.0)
3 anti-TNF agents	0 (0)	1 (4.0)
Concomitant therapy, n (%)		
Immunomodulator	14 (50.0)	10 (40.0)
Corticosteroids	11 (39.3)	13 (52.0)
Disease activity		
Mean Harvey Bradshaw index (SD)	2.6 (2.9)	
Mean Partial Mayo score (SD)		3.6 (2.4)

Table 1. Baseline characteristics.

In CD, SFCR at Weeks 14, 24 and 54 was 39.3% (11/28), 30.0% (6/20), and 42.9% (6/14), respectively. Endoscopic remission was achieved in 30.8% (4/13) of patients at a median treatment duration of 37 weeks, and radiological remission in 22.2% (2/9) at a median treatment duration of 48 weeks. In UC, SFCR at Weeks 14, 24, and 54 was 68.0% (17/25), 66.7% (14/21), and 80.0% (8/10), respectively. Endoscopic remission was achieved in 35.3% (6/17) of UC patients at a median treatment duration of 31 weeks. Thirteen patients (6 UC, 7 CD) discontinued treatment, as depicted in the Kaplan–Meier survival analysis (Figure 1).

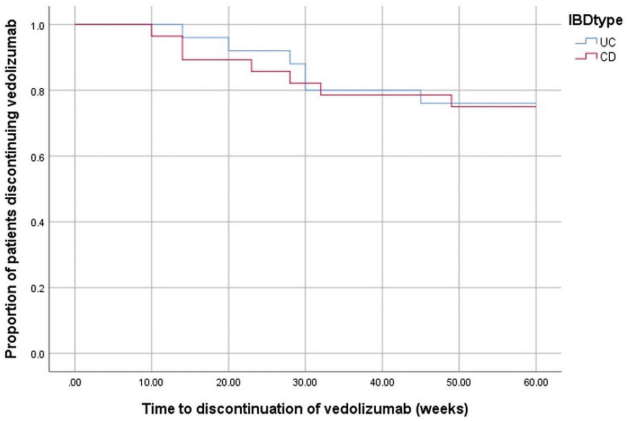


Figure 1. Kaplan–Meier survival curve of vedolizumab discontinuation.

Thirty-one adverse events occurred in 25/53 patients (47.2%); 5 (9.4%) were serious adverse events necessitating hospitalisation. Infections were the most common adverse event (37.7%, 20/53), with the majority being upper respiratory tract infections (24.5%, 13/53). Five patients (9.4%) developed gastrointestinal infections; 2 had *Clostridium difficile* colitis, 2 *Campylobacter jejuni* gastroenteritis, and 1 *Salmonella* gastroenteritis. Two patients (3.8%) experienced self-limiting infusion reactions. No malignancies or deaths occurred in our cohort.

Conclusions: The real-world experience with vedolizumab in Singapore supports its efficacy and safety in the treatment of IBD, especially in patients with UC.

P635

Carriage of the HLA-DQA1*05 allele is associated with a high risk of loss of response to infliximab in patients with inflammatory bowel disease

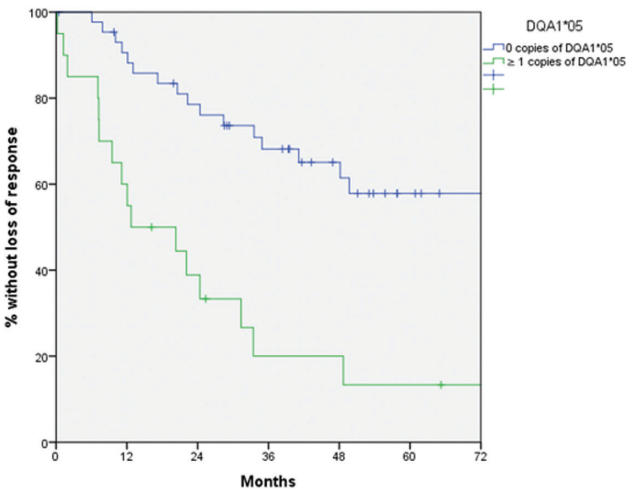
J. Guardiola*[1,2], L. Rodriguez Alonso[1], E. Santacana[3], A. Padró[4], K. Serra[1], N. Padullés[3], A. Ruiz-Cerulla[1], P. Gilabert[1], C. Arajol[1], G. Ibañez-Sanz[1], B. Camps[1], J. Orobitg[1], A. Serracarbasa[1], L. de la Peña[1], A. Berrozpe[1], F. Rodriguez Moranta[1]

[1]Hospital Universitari de Bellvitge, Gastroenterology, L'Hospitalet de Llobregat, Spain, [2]Universitat de Barcelona, Barcelona, Spain, [3]Hospital Universitari de Bellvitge, Pharmacy, L'Hospitalet de Llobregat, Spain, [4]Hospital Universitari de Bellvitge, Clinical Genetics Laboratory, L'Hospitalet de Llobregat, Spain

Background: Loss of response (LOR) to tumour necrosis factor antagonists occurs in up to 50% of patients with inflammatory bowel disease (IBD). Immunogenicity is a common cause of loss of response in patients due to the formation of antibodies directed against the drug. The ability to predict which patients are likely to lose response would allow therapies to be tailored to the patient's characteristics. In a recent study from the PANTS consortium, the HLA-DQA1*05 allele identified patients at increased risk of immunogenicity (Sazonovs A *et al*. JCC 2018; 12(S1): S009–010). The aim of our work was to know whether carriage of a HLA-DQA1*05 allele is associated with secondary loss of response to infliximab (IFX) in patients with IBD.

Methods: This is a retrospective cohort study from a prospectively maintained data base. Patients were included if they had achieved response to IFX. LOR was defined as recurrence or worsening of IBD-related symptoms that required a change or intensification in treatment, hospitalisation or surgery. Independent predictors of LOR were identified using univariate and multi-variable Cox proportional hazard regression.

Results: We included 64 patients (44 Crohn's disease, 20 ulcerative colitis) followed up to LOR (50%) or a mean of 56 months. Thirty-one per cent were carriers of an HLA-QA1*05 allele. On univariate analysis, body mass index (BMI) (HR 0.9, 95% CI 0.8–0.9, $p = 0.038$) and HLA-DQA1*05 carriage (HR 4, 95% IC 1.9–8.1, $p < 0.001$) were associated with LOR. On multi-variate analysis, after adjusting for immunomodulator use and BMI, only the carriage of an HLA-DQA1*05 allele was associated with LOR (HR 3.5, 95% CI 1.6–7.5, $p = 0.002$) (image 1).



Conclusions: HLA-DQA1*05 carriage is frequent in Spanish IBD population and it is associated with a marked increase in the risk of LOR to IFX. Testing for HLA-DQA1*05 could allow treatment to be tailored according to the risk of LOR.

P636

Impact of anti-TNF treatment on extra-intestinal manifestations in patients with inflammatory bowel disease: real-world data in Germany

D. Bettenworth*[1], W.-J. Lee[2], R. S. Clark[2], S. Rath[3], M. Yang[4], A. Bensimon[4], S. Vavricka[5]
[1]*University Hospital Munster, Department of Medicine B - Gastroenterology and Hepatology, Munster, Germany,* [2]*AbbVie Inc., North Chicago, United States,* [3]*AbbVie Deutschland GmbH & Co. KG, Ludwigshafen, Germany,* [4]*Analysis Group, Inc., Boston, USA,* [5]*Triemli Hospital, Zentrum fur Gastroenterologie und Hepatologie, Department of Medicine, Division of Gastroenterology, Zurich, Switzerland*

Background: Extra-intestinal manifestations (EIMs), common among patients with inflammatory bowel disease (IBD), can occur as an extension of immune responses from the gastrointestinal tract or as autoimmune diseases independent of IBD. Chronic inflammation is also linked to increased risk of cardiovascular (CV) problems. This study evaluated the real-world EIM rate for patients with IBD in Germany and the rate of EIM resolution after treatment with tumour necrosis factor inhibitors (TNFi), a drug class with systemic anti-inflammatory effect.

Methods: This retrospective study used anonymous healthcare claims data from the InGef database on individuals with statutory health insurance in Germany between 2011 and 2017. Adult patients with ≥2 diagnosis claims for Crohn's disease (CD) or ulcerative colitis (UC), ≥2 claims for a TNFi approved for IBD, and continuous enrolment for at least 12 months before and 15 months after the index treatment of the TNFi were identified. Prevalence rates for all EIMs were assessed for the 12-month baseline period prior to the index TNFi treatment. Subcategories of EIMs in musculoskeletal disorders (MSDs) and in CV events were also assessed. Among patients with any EIMs during baseline, rates of EIM resolution were assessed based on absence of EIM diagnoses over a 1-year period (month 3 to 15) after treatment with TNFi. The first 3 months of observation were not included in the analysis to allow time for treatment effect on EIMs.

Results: A total of 1658 IBD patients with TNFi were identified (CD, 67%; UC, 33%); 50% were female and mean age was 39 years. The majority of patients were treated with systemic corticosteroids (71%) and approximately half were on thiopurines (47%) or 5-aminosalicylic acid (54%) prior to the index TNFi. In the baseline period, over one-third patients (35%) had at least one type of EIM (CD: 34%; UC: 38%), 16% had ≥1 MSD (CD: 15%; UC: 17%) and 4% had ≥1 CV event (CD: 3%; UC: 7%). Among those with EIMs during baseline, resolution of at least one pre-existing EIM was found in 49% patients after TNFi treatment. Resolution rates were 42% for MSDs and 39% for CV events (table).

Table. Resolution of EIMs among patients with any EIM during baseline period (using 3-month buffer period and 12-month follow-up period).

Population at risk / EIM type	EIM resolution rate during 12-month follow-up window[a]		
IBD population with the specified EIM at baseline	*N*	*n*	*(%)*
Any EIM (resolution of ≥1 pre-existing EIM type)	581	285	(49.1%)
Musculoskeletal diseases[b]	259	110	(42.5%)
Cardiovascular events[c]	69	27	(39.1%)
CD population with the specified EIM at baseline	*N*	*n*	*(%)*
Any EIM (resolution of ≥1 pre-existing EIM type)	373	184	(49.3%)
Musculoskeletal diseases[b]	168	74	(44.0%)
Cardiovascular events[c]	33	13	(39.4%)
UC population with the specified EIM at baseline	*N*	*n*	*(%)*
Any EIM (resolution of ≥1 pre-existing EIM type)	208	101	(48.6%)
Musculoskeletal diseases[b]	91	36	(39.6%)
Cardiovascular events[c]	36	14	(38.9%)

CV: cardiovascular; EIM: extraintestinal manifestantion; IBD, irritable bowel disease; TNF: tumor necrosis factor.
[a]EIM resolution was assessed based on the presence/absence of diagnoses for the specified EIM type during the 12-month period starting 3 months after the index date and ending 15 months after the index date.
[b]EIMs in musculoskeletal diseases include diagnoses of arthropathy, peripheral arthritis, and ankylosing spondylitis.
[c]EIMs in cardiovascular events include diagnoses of acute myocardial infarction (AMI) / unstable angina pectoris, acute coronary syndrome, cardiac arrest, sudden cardiac death, cerebrovascular accident, venous thrombosis, arterial thromboembolism, pulmonary embolism, and procedure of surgical revascularization and percutaneous revascularization.

Conclusions: At least one-third of IBD patients experienced one or more EIM prior to a TNFi treatment. With the systemic anti-inflammatory effect, TNFi appear to be effective in resolving EIMs in nearly half of the affected patients, including those impacted by MSDs and CV events.

P637

MMP-2 and -8 degraded and citrullinated-vimentin (VICM) correlates to disease activity in inflammatory bowel diseases

L. Godskesen[1], M. Lindholm[2], J. Høg Mortensen*[2], A. Krag[1], T. Manon-Jensen[2], M. Karsdal[2], J. Kjeldsen[1]
[1]*Odense University Hospital, Department of Medical Gastroenterology, Odense, Denmark,* [2]*Nordic Bioscience, Biomarkers and Research, Herlev, Denmark*

Background: Vimentin is a type III intermediate filament protein that stabilises cell architecture, but might be more active involved in intestinal inflammation during Crohn's disease (CD) and ulcerative colitis (UC). In lamina propria vimentin is found fibroblast and myofibroblasts, but are also produced by activated macrophages in inflammatory diseases. Protein fragments from vimentin turnover can be measured by competitive enzyme-linked immunosorbent assay (ELISA) targeting MMP-2 and -8 degraded and citrullinated-vimentin (VICM) and thereby maybe act as a serological biomarker of intestinal inflammation. The aim of this study was to evaluate how VICM correlates to clinical and endoscopic disease activity in CD and UC.

Methods: We included 63 CD patients, 107 UC patients and 20 healthy controls in a prospective biomarker evaluation study. Thirty-five per cent ($n = 24$) of CD patients and 49% ($n = 52$) of UC patients had active disease. We recorded Harvey–Bradshaw Index (HBI) or Simple Clinical Colitis Activity Index (SCCAI), and measured VICM, C-reactive protein (CRP), and faecal calprotectin (FC). Seventeen CD and 63 UC patients underwent sigmoidoscopy or colonoscopy