Background A recent systematic review reports an overall prevalence for IBD of 0.3% in Western countries¹ but there are no UK estimates since 2003. We aimed to report current all-age prevalence, healthcare usage and forecast 2028 case-load, for IBD in Lothian.

Methods We conducted an extensive capture-recapture search strategy, manually confirming all diagnoses through electronic patient record (EPR) review, to provide point prevalence estimates for Lothian, Scotland (Population 889,450). Patients were identified from inpatient IBD codes (K50/51/52), IBD pathology codes, IBD biologic prescriptions, primary care mesalazine prescriptions, an existing calprotectin database and a paediatric IBD registry to identify 'possible' IBD cases to 31/08/18.

Eight IBD physicians then manually screened the EPR for all possible cases to identify true cases as per Lennard-Jones/Porto criteria. Prevalence was calculated using postcode, date of diagnosis/death and population estimates from National Records Scotland. We then assessed our IBD cohort for attendance at secondary care, IBD-related admission, IBD-drug usage and projected 2028 Lothian IBD prevalence using autoregressive integrated moving average (ARIMA) modelling.

Results 24,188 possible IBD case records were manually reviewed to exclude non-IBD cases, leaving 10,866 true positives (figure 1A). The point prevalence of IBD in Lothian on 31/8/18 was 0.78% (figure 1A).

43.8% of prevalent cases attended out-patient clinic over the preceding 3 years which was inversely correlated with increasing age (Mean age 46.7 ± 0.3 in follow up versus 54.9 ± 0.3 not in follow up, $p < 0.0001$) (figure 1B). Follow-up was significantly associated with IBD-related admission (OR 5.7 {4.6–6.9}, $p < 0.0001$) and IBD-related admission duration was positively correlated with increasing age ($R^2 = 0.02$, slope = 0.12 {0.09–0.15}, $p < 0.0001$).

ARIMA modelling projects a point prevalence on 01/08/28 of 0.99% (0.94–1.04%) affecting 1.6% (1.5–1.7%) of the >50s who will account for 59% of prevalent IBD.

Conclusions The prevalence of IBD in the UK is 0.78% (1 in 125 individuals). This is much higher than previously reported, and will continue to rise due to compound prevalence, reaching >1.0% by the end of 2028.

REFERENCE

1. Siew Ng, et al. Worldwide incidence and prevalence of inflammatory bowel disease in the 21st century: a systematic review of population-based studies. *Lancet* 2018;390:pp2769–2778.

OWE-05 INTERIM LONG-TERM SAFETY/EFFICACY OF RISANKIZUMAB TREATMENT IN CROHN'S DISEASE PATIENTS FROM THE OPEN-LABEL EXTENSION STUDY

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Introduction Adults with moderate-to-severe Crohn's disease (CD) who responded to risankizumab (RZB) in the phase 2 induction and maintenance study (Feagan, 2017) could enroll in an open-label extension (OLE) study. Interim efficacy and

safety of RZB maintenance treatment from the OLE, up to 2 years, are reported.

Methods Patients (pts) achieving clinical response (decrease from baseline [BL] in CD Activity Index [CDAI] ≥ 100) without remission (CDAI < 150) after wk 26 or clinical response and/or remission after wk 52 of the preceding study received 180 mg s.c. RZB every 8 wks for up to 216 weeks. Pts losing clinical response or remission after completing the preceding study were re-induced with 600 mg i.v. RZB at wk 0, 4, 8. Pts received subsequent 180 mg s.c. RZB maintenance treatment only if they achieved response or remission following re-induction treatment. Ileocolonoscopy was performed yearly. Efficacy data (clinical remission and endoscopic remission [CD Endoscopic Index of Severity (CDEIS) ≤ 4 or CDEIS ≤ 2 for pts with initial isolated ileitis]) are reported up to wk 48. Non-responder imputation (NRI) was used for missing data.

Results A total of 65 pts were enrolled (including 4 who were re-induced). Mean (standard deviation) exposure to RZB was 657.2 (190.73) days. At the data cut-off, 14 (21.5%) pts have discontinued the study. Up to wk 48, clinical remission rates were sustained and the proportion of pts with endoscopic remission increased from BL (table 1). Adverse events (AEs) were reported for 58 (89.2%) pts; 18 (27.7%) pts had serious AEs. AEs occurring in >10% of pts were nasopharyngitis (26.2%), fatigue (16.9%), arthralgia and worsening CD (15.4% each). Four serious infections in 5 pts were perianal abscess (n=1), *Campylobacter* (n=1), viral gastroenteritis (n=2), and peritonitis (n=2). No events of tuberculosis, malignancies or deaths occurred.

Conclusions In this interim analysis, clinical remission and endoscopic remission were sustained in CD pts receiving long-term RZB treatment. The safety profile of RZB was consistent with previously published data (Feagan, 2017).

Abstract OWE-05 Table 1 Pts in the OLE achieving clinical remission and endoscopic remission by visit

	Clinical remission n (%) ^a	Endoscopic remission ^b n (%) ^a
Wk 0 ^c	48 (73.8)	27 (41.5)
Wk 8	47 (72.3)	
Wk 16	46 (70.8)	
Wk 32	48 (73.8)	
Wk 48	45 (69.2)	35 (53.8)

All pts had ≥ 48 wks observation at the data cut-off ^aN=65 ^bData from central reading ^cVisits in OLE

REFERENCES

1. Feagan BG, et al. *Lancet* 2017;29;389(10080):1699–1709.
2. Feagan BG, et al. *Gastroenterology* 2017;152(5):S1310.

OWE-37 CD4 T-CELL HLA-U PSEUDOGENE AT BASELINE PREDICTS CLINICAL REMISSION TO ANTI-TNF AGENTS IN ULCERATIVE COLITIS

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Introduction Anti-tumour necrosis factor (TNF) agents are used to treat UC but response is variable. Apart from

concurrent immunomodulatory therapy and there are no clear predictors of efficacy. Analysis of transcriptome from peripheral blood CD4 and CD8 T-cells has been shown to predict disease outcome in inflammatory bowel diseases (IBD) but this strategy has not been tested to predict response to biological therapy. We investigated the utility of baseline CD4 and CD8 transcriptome in predicting response to anti-TNF agents in UC.

Methods Patients who were commenced on any anti-TNF therapy for ambulant UC were included in this single centre cohort study. Clinical response and remission was defined using full or partial Mayo score at week 14. RNA was extracted from peripheral blood CD-4 and CD-8 populations and subjected to transcriptome analysis using human Clariom D analysis. Transcriptome Analysis Console (TAC) 4.0 from ThermoFisher Scientific was used to analyse Expression Array feature intensity (CEL) files. The analysis was carried out with the Clariom_D_Human NetAffx Library. Statistical analysis to detect differential expressed genes was carried out with default settings of TAC, except that the use of FDR p-values was set from false to true.

Results Ten patients with UC with a median age of 35 (range 19–69) and median Mayo score of 8 (range 2–12) were included. Three (30%) had pancolitis and 6 (60%) of patients were on concomitant immunomodulators. At week 14, six (60%) and 4 (40%) patients achieved clinical response and remission respectively. Of the 135,750 genes tested, differential expression was noted in over 900 genes between responders and non-responders at a P value of <0.05 . However, there was only one differentially expressed gene in the CD4 cell population in patients who achieved clinical remission with an FDR P-val < 0.05 . There was a 25.87 fold higher expression of the major histocompatibility complex, class I, U (pseudogene) in patients who failed to achieve remission. Similarly, HLA-U pseudogene expression at baseline was higher in patients with lack of clinical response (12 fold vs 7 fold, $P<0.01$). Receiver operating characteristic (ROC) analysis for HLA-U pseudogene predicted clinical remission with $>95\%$ sensitivity and specificity ($P<0.0001$, figure 1).

Abstract OWE-37 Figure 1 ROC curve of HLA-U pseudogene to predict clinical remission to anti-TNF agents at week 14

Conclusions CD4 transcriptome analysis at baseline identified differentially expressed genes in patients with lack of clinical remission. This has potential utility as a novel non-invasive biomarker of response to anti-TNF therapy in UC. Our findings require further validation in a larger cohort.

OWE-38 INFLIXIMAB INDUCTION REGIMES IN STEROID REFRACTORY ACUTE SEVERE COLITIS: MULTI-CENTRE STUDY WITH PROPENSITY SCORE ANALYSIS

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Background While infliximab is used as rescue therapy for steroid refractory acute severe colitis (ASUC), between 30 and 40% of patients do not respond and undergo colectomy. Accelerated induction regimes of infliximab have been proposed to improve response rates. We aimed to evaluate colectomy rates in steroid refractory ASUC patients receiving standard induction (SI) vs. accelerated induction (AI) of infliximab.

Methods Data collected on hospitalised patients receiving rescue therapy for steroid refractory ASUC. The choice of rescue therapy was at the discretion of the treating clinician. Accelerated induction (AI) was defined as receiving second dose of infliximab within 8 days of first rescue therapy or receiving front loading dose of 10 mg/kg. Our primary outcome was the short-term (in-patient, 30 days and 90 days) colectomy rate. Secondary outcomes were 12-month colectomy rates, length of hospital stay (LOS), and complication rates. We used a propensity score analysis with optimal calliper matching using a priori defined high-risk covariates at the start of rescue therapy (albumin, CRP, CRP-albumin ratio, haemoglobin nadir and pancolitis) to reduce potential provider selection bias.

Results A total of 131 patients receiving infliximab rescue therapy were included, of whom 102 patients received SI and 29 received AI. There was no difference in age, duration of diagnosis, age at rescue therapy, Montreal class or use of steroids, 5ASAs or thiopurines prior to index admission. In the unmatched overall cohort, there was no difference in colectomy during index admission (13% vs. 20%, $p = 0.26$), 30-day colectomy (18% vs. 20%, $p = 0.45$), 90-day colectomy (20% vs. 24%, $p = 0.38$) or 6 month colectomy (25% vs. 27%, $p = 0.49$). The LOS was shorter in the SI group (14.87 ± 8.1 days vs. 19.31 ± 5.8 days, $p = 0.007$). In patients who underwent colectomy, there were no differences in complications or serious infection rates. In the propensity score-matched cohort of 52 patients, there was no difference in overall colectomy rates between SI and AI groups (57% vs. 31%, $p = 0.09$), but the index admission colectomy (53% vs. 23%, $p = 0.045$) and 30-day colectomy (57% vs. 27%, $p = 0.048$) rates were higher in those receiving SI. There was no significant difference in LOS between SI and AI groups (23.6 ± 4.3 vs. 18.2 ± 7.1 days, $p = 0.09$) or in overall complication and infection rates but there was a mortality in AI group.

Conclusion In this retrospective cohort study, there was no difference in overall colectomy rates in ASUC patients