Results

OPLSDA Models of CD groups vs controls					
Model	n	R2X	Q2	P value CV- ANOVA	Metabolites driving model in CD
1 CD : H	106 (54 : 52)	0.085	0.231	0.014	Hippurate↓ Alanine ↓ Citrate ↓ P-Cresol ↑ PAGn ↑ Dimethylglycine ↓ Leucine ↓ Aspartic acid ↓
2 CDWC : H	128 (74 : 54)	0.100	0.175	0.057	Hippurate↓ Alanine ↓ Citrate ↓ P-Cresol ↑ PAGn ↑ Dimethylglycine ↓
3 CDWC : C	174 (74 : 100)	0.037	0.093	<0.001	Hippurate↓ Alanine ↓ Citrate ↓ P-Cresol ↑ PAGn ↑ Dimethylglycine ↓ Sucrose ↑

OPLSDA analysis showed statistically significant separation between CD patients and controls irrespective of the presence of comorbidities. Model 1 compares CD patients to healthy controls (H). Models 2 and 3 include CD patients with at least one other co-morbidity (CDWC), and Model 3 includes non-CD patients with another co-morbidity in the control group (C).

Univariate analysis showed that the bacterial associated metabolites Hippurate, Citrate, P-Cresol, DMG, and PAGn changed with statistical significance between CD groups and controls irrespective of the presence of co-morbidities.

Conclusions The pattern of change in discriminating metabolites appear to be preserved in models separating CD from controls when patients with co-morbidities are included in the models, and these groups can be significantly separated with multivariate analysis. It is likely the effect of microbial disturbance is still measurable with this technique in a real world cohort.

PTH-113 EFFECT OF ETHNICITY ON THE FAECAL WATER METABOLIC PROFILES IN CROHN'S DISEASE

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Introduction South Asians (SA) with Crohn's disease (CD) display a different disease phenotype and course (Walker, 2011. AJG.), as well as a different urinary metabolic profile (Marchesi, 2008. J. Proteome Res.). Metabolic profiling of faecal water has distinguished CD from controls previously, but only in Caucasian (Cau) cohorts, characterised by a reduction in

short chained fatty acids. In this study, we aimed to compare the metabolic profiles of faecal water in CD patients and healthy controls (H) from Caucasian and South Asian backgrounds.

Methods Samples from 28 CD patients (15 Cau and 13 SA) and 44 healthy controls (20 Cau and 24 SA) were analysed by H¹NMR spectroscopy. Data was assessed using orthogonal partial least squares discriminant analysis (OPLSDA). Hypothesis-led univariate analysis was also performed using metabolites that have been previously shown to distinguish CD from controls (Marchesi, 2008). These metabolites were as follows: Acetate, Butyrate, Propionate, Lactate, Methylamine, Glutamine, Alanine, Taurine, Valine, and 2-Hydroxybutyrate (2-HIB).

Results Multivariate analysis (table 1) demonstrated that the faecal metabolites driving the separation between CD and controls were similar regardless of ethnicity, although statistically significant separation could not be achieved by multivariate analysis in the smallest group (CD v H in Caucasians).

Univariate analysis demonstrated a statistically significant reduction in Butyrate, Acetate, 2-HIB, and Methylamine (p < 0.05) in Cau CD patients compared to controls consistent with previous studies, but only a reduction in 2-HIB and Methylamine were seen with statistical significance in SA patients. When directly comparing Cau and SA patients with CD, Butyrate and 2-HIB were significantly different (p = 0.034 and 0.035 respectively) between these ethnic groups.

Conclusions Despite observing consistent changes in the metabolites driving separation between Caucasian and SA patients compared to controls, univariate analysis reveals differences relating to ethnicity, showing that ethnicity influences

Abstract PTH-113 Table 1

Model	n	R2X	Q2	P value CV- ANOVA	Metabolites driving separation in CD
CD : HC	72	0.145	0.197	<0.001	Acetate ↓ Butyrate ↓ Glutamine ↓ Alanine ↓ Creatine ↓ Tryptophan ↓ 2-HIB ↓ Methylamine ↓
All	(28:44)				
CD : H	35	0.122	0.126	0.117	Acetate ↓ Butyrate ↓ Glutamine ↓ Alanine ↓ Creatine ↓ Tryptophan ↓ 2-HIB ↓ Methylamine ↓
Caucasian	(15:20)				
CD : H	37	0.196	0.290	0.024	Acetate ↓ Butyrate ↓ Glutamine ↓ Alanine ↓ Creatine ↓ Tryptophan ↓ 2-HIB ↓ Methylamine ↓
South Asians	(13:24)				

faecal water metabolic profiles. The effect of ethnicity is likely to be a combination of genetics, diet and environment. Ethnicity therefore must be accounted for as a potential confounder in this type of analysis.

PTH-114 THE IMPACT OF IBD RELATED FATIGUE ON HEALTH-RELATED QUALITY OF LIFE: A LITERATURE REVIEW

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Introduction Fatigue is a frequently reported symptom of inflammatory bowel disease (IBD) by patients in active disease and in remission. Fatigue related to chronic conditions reduces health-related quality of life (HRQoL) but has not been systematically reviewed in IBD.

Methods Four databases (CINAHL, EMBASE, PsycINFO, Medline) were systematically searched (September 2018) utilising combined search terms related to 'Fatigue', 'IBD & 'HRQoL'. Searches were restricted to 'human', 'adult', 'primary research' & 'English language'. A time limit of 5 years (2013–2018) was set, in order to include only the most up to date studies. The search yielded 76 publications decreasing to 53 after duplicate removal. 34 studies were removed at abstract. Reviewers read 19 full text papers of which 8 were removed as they were irrelevant to the study aim. Two authors independently screened studies, extracted data and conducted quality appraisal. All discrepancies were resolved by discussion. A narrative review synthesis was conducted to analyse the data.

Results 11 publications were reviewed, 5 qualitative and 6 cross-sectional surveys presented data from 2823 adults with IBD. Studies revealed experience of fatigue was significantly related to three HRQoL areas; symptom acceptance, psychosocial factors such as social isolation, and decreased physical activity. Patients reporting higher levels of IBD fatigue had lower levels of symptom acceptance in terms of 'management' and 'adjustment'. Higher anxiety and depression were strongly linked to higher fatigue and reduced HRQoL. Higher levels

of social support were associated with higher HRQoL, reduced physical activity was linked to higher fatigue levels, lowering HRQoL, but also as an intervention to reduce fatigue and improve HRQoL. Seven studies were of high quality. Appraisal revealed methodological shortcomings in a number of studies. Most frequent limitations were the use of multiple, un-validated, measures, comparison of results without appropriate statistical adjustment, failure to specify the level of disease activity of participants and assessment of both fatigue and HRQoL using the same tool.

Conclusions Depressive symptoms, anxiety, poor symptom management & lack of social support are associated with greater severity of fatigue in IBD. Results from this review support the application of a psychosocial or exercise intervention for fatigue management. Perceptions of control and social support were associated with lower fatigue level and higher HRQoL. Further research is required to explore psychosocial variable in relation to IBD fatigue, with use of validated fatigue and HRQoL measures; and clearer characterisation of disease activity.

PTH-115 VARIATION IN ASSESSMENT OF OUTCOMES FOR IBD IN ROUTINE CLINICAL PRACTICE: AN ETHNOGRAPHIC STUDY

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Introduction Several global initiatives are seeking to standardise outcome assessment for IBD in clinical trials (Core Outcome Sets) and routine care (e.g. ICHOM). The UK IBD Biologics Audit found inconsistent use of clinical disease activity indices among UK clinicians. We aimed to explore variability in outcome assessment in routine practice, evaluating the range of individual outcomes elicited and extent of standardisation and quantification.

Methods Ethnographic observations of 52 IBD clinic consultations by 17 IBD clinicians (8 consultants, 7 IBD nurses and 2 trainees) across four acute hospitals in the North West region of England. Consultations were observed, audio-recorded,

Abstract PTH-115 Table 1 Ten most common outcomes elicited, n (%)

All IBD patients n=52		Crohn's disease n=29		Ulcerative colitis or IBDU n=23	
General well-being	52 (100)	General well-being	29 (100)	General well-being	23 (100)
Abdominal pain	44 (85)	Abdominal pain	25 (86)	Stool frequency	21 (91)
Stool frequency	41 (89)*	Stool frequency	20 (87)*	Blood in stool	19 (83)
Blood with stool	35 (67)	Stool consistency	18 (62)	Abdominal pain	19 (83)
Stool consistency	33 (63)	Blood with stool	16 (55)	Stool consistency	15 (65)
Body weight	27 (52)	Appetite	16 (55)	Mucus	11 (48)
Appetite	25 (48)	Body weight	16 (55)	Body weight	11 (48)
Extra-intestinal	25 (48)	Extra-intestinal	16 (55)	Extra-intestinal	9 (39)
Mucus	22 (42)	Energy levels	14 (48)	Appetite	9 (39)
Energy levels	19 (37)	Mucus	11 (38)	Urgency	8 (35)

*Patients with stoma excluded (n=6)