seen as very simplistic, often just 'food lists' with little or no personalisation to meet individual needs of the participants (figure 1). Digital online and resources were used to supplement the dietary information received from GP's and GE's, however this required additional interpretation and personalisation and led to negative effects on both the participants social and food-related quality of life.

Conclusion The participants found much of the nutritional information provide by GPS' and GE's to be overly generic and incomplete; in that it was difficult to apply in 'real life'. The findings in this study support the current clinical guidelines proposed by the both by NICE and the BDA that LFD and GFD's should still be considered second-line dietitian-led only interventions.

PWE-125 EFFECT OF TURMERIC ON THE FAECAL VOLATILE ORGANIC METABOLITES IN HEALTHY INDIVIDUALS

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Introduction Inflammatory bowel disease (IBD) affects the gut microbiome and metabolome. Curcumin, from turmeric, may be of benefit in some patients through action on the gut microbiome. Curcumin produces changes to bile acid secretion, and has a variety of direct effects on bacteria. Faeces release Faecal Volatile Organic Metabolites (VOMs), which partly reflect the gut microbiome. The aim of the study was to investigate the effects of turmeric on the VOMs in healthy individuals.

Methods 5 participants were enrolled in a before-during-after pilot study, in which they were asked to take a turmeric-free diet and then to consume 1.6 g of turmeric daily for 5 days. Faecal samples were collected at baseline, after 5 days of turmeric ingestion, and again 5 days after this, and frozen immediately. The samples were analysed by an investigator blinded using gas chromatography mass spectrometry. Analytes were identified using AMDIS software and compared using Metaboanalyst software: ANOVA, PCA, PLSADA, and Heatmap were employed.

Abstract PWE-125 Figure 1 Box plot showing changes in abundance of propanoic acid amongst the comparison groups

Abstract PWE-125 Figure 2 Box plot showing changes in abundance of methyl propionate amongst the comparison groups

Results ANOVA yielded 0 significant features. For most of the VOMs found between the comparison groups, $p > 0.05$. Both PCA and PLSADA failed to show any separation by group. Heatmap analysis did not show any pattern in the abundance of VOMs. VIP scores showed a decrease in the abundance of propanoic acid and methyl propionate in the intervention samples when compared to baseline and post-turmeric consumption. The box plots created from raw data in Figure 1 & 2 demonstrated lower median abundances of intervention samples as compared to comparison groups. The study was underpowered to demonstrate significant change.

Conclusions This pilot study illustrates that two VOMs appears to become less abundant when turmeric is consumed: both appear related to propionibacteria metabolism. Studies in patients with IBD are warranted.

PWE-126 LOW FODMAP DIET EFFECT ON IBS GASTROINTESTINAL MICROBIOME AND METABOLITES AND PREDICTION OF RESPONSE

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Introduction Prebiotic β -galactooligosaccharides (B-GOS) may counteract the microbiome modifying effect of the low FODMAP diet (LFD) in patients with irritable bowel syndrome (IBS). Faecal metabolites may predict why only some patients respond to the LFD paving the way towards more personalised treatment.

The aim of this randomised controlled trial (RCT) was to investigate: a) the impact of the LFD and LFD+1.4 g/d B-GOS compared to Control on the gut microbiome in IBS, and b) if differences in faecal or urinary metabolites predict response to the LFD.

Methods A 3-arm RCT was performed in 69 IBS patients randomised to: Sham diet +Placebo (Control), LFD +Placebo (LFD) or LFD +B GOS. This study investigated global

symptom response (adequate relief), gut microbiome (16S rRNA sequencing), short-chain fatty acids (SCFA, gas liquid chromatography), volatile organic compounds (VOC) (gas chromatography/mass spectrometry) and urine metabolomics (NMR spectroscopy) at baseline (BL) and 4 weeks. Data were analysed by Chi² for dichotomous outcomes and Kruskal-WallisMann-Whitney U tests for continuous variables. Predictive analysis was tested using receiver operator curves (ROC) and orthoganol partial least squared discriminant analysis (OPLS-DA).

Results Response rate (adequate relief) at 4 weeks was greater in the LFD+GOS (67%) and LFD (50%) than the Control group (30%) (p=0.046). The phylum Actinobacteria was lower (p<0.001), specifically *Bifidobacterium* (p=0.002) and *Collin-sella* (p=0.004), in the LFD and LFD+B GOS groups compared to Control at 4 weeks. Prediction of response to the LFD was seen in the LFD group only, with significant separation of BL faecal VOC profiles (AUC=0.854, p=0.045), faecal propionate (AUC=0.848, p=0.009), and urine metabolite profiles (Q²=0.296 vs randomised-0.175). *Roseburia*, *Blautia*, *Lachnospira* and *Faecalibacterium*, were positively but not significantly associated with VOC classes that predicted response when all samples were correlated. Microbiome and VOC showed a significant negative correlation between propionic acid derivatives and *Phascolarctobacterium* (r=-0.85 and-0.81, p<0.05) at BL in the LFD group only although the difference in *Phascolarctobacterium* between responders (1.5%) and non-responders (9.3%) at BL did not reach significance (p=0.055).

Conclusions The LFD +B GOS improves symptoms in IBS compared to Control but the LFD significantly reduces Actinobacteria and addition of 1.4 g/d of prebiotic B-GOS does not overcome this effect. Faecal VOCs and SCFAs and urine metabolomes may predict clinical response to the LFD, and specific bacterial groups correlate with predictive metabolites. Larger studies are required to validate these algorithms to develop personalised nutrition in IBS.

Colon and Anorectum

OTU-021 EFFECT OF THE TWO-WEEK WAIT REFERRAL PATHWAY ON COLORECTAL CANCER DETECTION: SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction In 2000 the two-week-wait (TWW) suspected cancer pathway was launched; national TWW performance data is lacking. This systematic review is the first to comprehensively evaluate the latest evidence on cancer detection through the TWW for suspected lower gastrointestinal malignancy.

Method This systematic review is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses [PRISMA] 2009 statement. Cochrane, EMBASE, Medline via Pubmed, NHS Evidence, Trip and the British Library Catalogue were searched, plus references were hand-searched. Disagreements were resolved via consensus. Meta-analysis of pooled cancer conversions rates with 95% confidence intervals were calculated using a random effects model in R studio.

Results 95 full papers and 28 conference abstracts were reviewed. 77.5% full papers reported cancer conversion rate, corresponding weighted mean was calculated with a cancer conversion rate of 7.7% (6.9–8.5 C.I.). A forest plot of full-text paper results is shown in figure 1.

Abstract OTU-021 Table 1

Author, Year	Conversion rate [95% CI]
Aljarabah, 2009	0.100 [0.063–0.144]
Allgar, 2006	0.110 [0.082–0.141]
Aslam, 2017	0.069 [0.065–0.073]
Banerjee, 2017	0.068 [0.048–0.091]
Barwick, 2004	0.100 [0.056–0.155]
Beggs, 2011	0.073 [0.047–0.104]
Bhangu, 2010	0.060 [0.049–0.072]
Borowski, 2016	0.058 [0.053–0.063]
Chohan, 2004	0.138 [0.108–0.171]
Courtney, 2013	0.055 [0.050–0.060]
Debnath, 2002	0.089 [0.056–0.129]
Eccersley, 2003	0.150 [0.100–0.207]
Flashman, 2004	0.094 [0.076–0.113]
Hall, 2015, Peacock, 2013	0.064 [0.052–0.078]
John, 2008	0.110 [0.055–0.180]
Khong, 2015	0.055 [0.046–0.065]
Leung, 2010	0.081 [0.066–0.098]
Maruthachalam, 2005	0.081 [0.061–0.104]
Mukherjee, 2010	0.051 [0.035–0.070]
Padwick, 2013	0.053 [0.040–0.069]
Patel, 2014	0.072 [0.054–0.092]
Rai, 2007	0.100 [0.082–0.119]
Rai, 2007	0.060 [0.032–0.096]
Rai, 2008	0.108 [0.082–0.137]
Rao, 2005	0.044 [0.024–0.069]
Shaw, 2009	0.090 [0.078–0.102]
Smith, 2007	0.063 [0.054–0.072]
Sorelli, 2014	0.060 [0.008–0.147]
Spencer, 2004	0.103 [0.068–0.145]
Vaughan–Shaw, 2013	0.078 [0.068–0.088]
RE Model	0.077 [0.069–0.085]

Conclusion The pooled cancer conversion rate via TWW is similar to the cancer detection rate in the asymptomatic Bowel Cancer Screening Population (latest figure 8%) and is not having its intended impact on cancer diagnosis. Re-evaluation of the referral criteria needs consideration, focusing on symptoms with higher PPV in cancer.

OTU-022 GWAS OF MICROSCOPIC COLITIS IN THE UK BIOBANK CONFIRMS ASSOCIATION WITHIN THE HLA REGION

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Introduction The pathogenesis of microscopic colitis is poorly elucidated: it reportedly involves immune responses to luminal factors in genetically predisposed individuals. Previous genetic studies reported associations with HLA risk alleles in collagenous but not lymphocytic colitis. Non-steroidal anti-inflammatory drugs (NSAIDs), proton-pump inhibitors (PPIs) and