segments were used to classify segments as low or high molecular disease activity (MDA). Agreement between endoscopy/histology and MDA was evaluated by Cohen's kappa coefficient ([]) and% agreement.

Results In segments with BL GHAS activity subscore ≥2, Ep (10–30%) and non-Ep (25–35%) MDA were elevated and correlated to histologic activity. Table 1 shows the effect of FIL on MDA in the intestinal mucosa: significantly fewer low BL MDA segments showed MDA worsening, and significantly more high BL MDA segments showed MDA improvement (pSTAT3 only) with FIL vs. PBO. Agreement for MDA and endoscopy was fair to moderate (κ 0.3–0.5), and for MDA and histology was moderate to good (κ 0.4–0.8).

Conclusions FIL improved JAK1-related MDA within the mucosa of pts with CD. Agreement between MDA and clinical indices was highest with histology.

P118 POSITIVITY THRESHOLDS OF TOTAL INFLIXIMAB AND ADALIMUMAB ANTI-DRUG ANTIBODY ASSAYS AND IMPACT IN CLINICAL PRACTICE

[1]Rachel Nice*, [2,3]Neil Chanchlani, [2,3]Nicholas A Kennedy, [3]Harry D Green, [2,3]Simeng Lin, [2,3]Claire Gordon, [2,3]Desmond Chee, [2,3]Benjamin Hamilton, [3]Claire Bewshea, [2,3]James Goodhand, [2,3]Tariq Ahmad, [1]Timothy McDonald, [1]Mandy Perry. *[1]Exeter Laboratory, RDandE NHS Foundation Trust, Exeter, UK; [2]Department of Gastroenterology, RDandE NHS Foundation Trust, Exeter, UK; [3]Exeter IBD Research Group, University of Exeter, Exeter, UK*

10.1136/gutjnl-2020-bsgcampus.193

Introduction Anti-drug antibodies can affect biopharmaceutical pharmacokinetics by increasing or decreasing drug clearance. Drug-tolerant (total), unlike drug-sensitive (free), antibody assays permit antibodies to be measured in the presence of drug.

We aimed to confirm the positivity threshold of our total anti-tumour necrosis factor (TNF) antibody ELISA assays in healthy volunteers and to use this threshold to report the prevalence of clearing and transient antibodies in patients treated with infliximab and adalimumab.

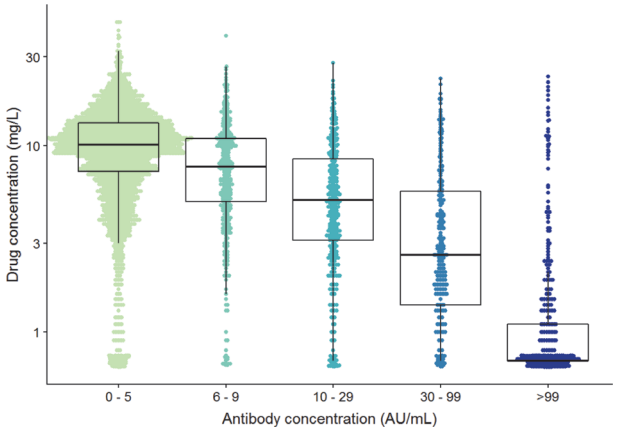
Methods Serum was obtained from 498 anti-TNF-naïve healthy adults recruited to the Exeter 10,000 study and tested for total anti-drug antibodies to infliximab and adalimumab. We used bootstrapping to calculate the 80% one-sided lower confidence interval [CI] of the 99th centile recommended by the FDA to define assay thresholds.

We used paired drug and anti-drug antibody levels derived from our national therapeutic drug monitoring service to report the distribution of clearing (antibody positive, drug negative) vs non-clearing (antibody positive, drug positive) antibodies. In patients with at least two test results, antibodies were classified as transient (single positive test with subsequent negative test) or persistent (at least two positive tests).

Results The 80% one-sided lower CI of the 99th centile titre for total anti-drug antibody to infliximab and adalimumab were 8.7 AU/mL and 5.9 AU/mL, respectively.

Using these thresholds, at the time of last testing, of 7,428 and 4,043 patients treated with infliximab and adalimumab; 21.1% and 8.3% had clearing antibodies and 27.9% and 20.0% had non-clearing antibodies, to infliximab and adalimumab, respectively.

Amongst patients with at least two tests, most developed persistent antibodies. Irrespective of anti-TNF drug, or threshold used, less than 10% patients developed transient antibodies.



Abstract P118 Figure 1 Relationship between adalimumab drug and anti-drug antibody levels in national TDM cohort

Across both our national TDM cohort and the PANTS study, there were significant associations between anti-drug antibody and drug levels (figure 1). In PANTS, higher anti-drug antibody levels were associated with poorer outcomes at weeks 14 and 54.

Conclusions We report lower positivity thresholds for the IDK-monitor® total anti-TNF antibody ELISA assays than the manufacturer, in particular, for adalimumab. Transient antibody formation is uncommon: most patients develop persistent anti-drug antibodies that lead to drug clearance.

P119 RISK OF FURTHER SURGERY AND ADHERENCE TO COLONOSCOPY GUIDELINES FOLLOWING RIGHT HEMICOLECTOMY FOR CROHN'S DISEASE

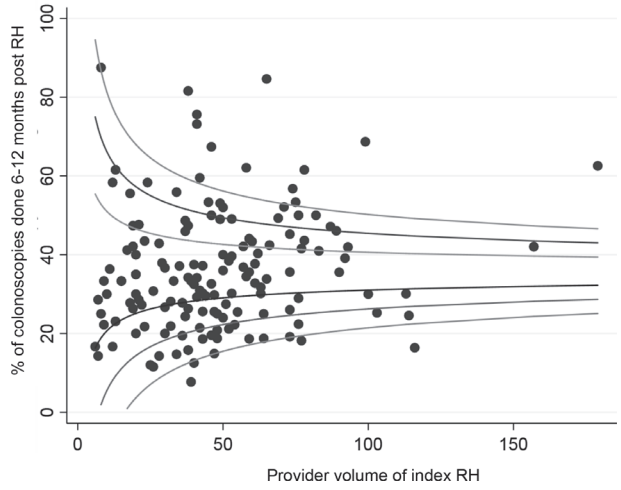
[1]Dominic King*, [2]Benjamin Coupland, [2]Aman Dosanjh, [2]Prashant Patel, [1]Nigel Trudgill. *[1]Sandwell and West Birmingham Hospitals NHS Trust, UK; [2]Informatics Dept University Hospitals Birmingham, UK*

10.1136/gutjnl-2020-bsgcampus.194

Introduction The risk of further surgery following right hemicolectomy (RH) for Crohn's disease (CD) is high (~40%). Recent guidelines advise colonoscopy 6–12 months following RH to reduce the risk of further surgical intervention through medical therapy. We examined the risk of further surgery and use of colonoscopy following index RH.

Methods Hospital Episode Statistics were used to identify subjects with CD and RH between 2007 and 2016 in England. Adherence to post resection colonoscopic assessment guidance and risk of further surgery at the same site were investigated. Cox regression models examined the risk factors associated with further surgery and funnel plots demonstrated the colonoscopy practice of providers.

Results 12,230 CD subjects (55% female, median age 36 (IQR 26–49) years) had a RH during the study period. 1,367 (11%) had further surgery at the anastomotic site during follow up. 40% of Index surgery and 50% of further surgery was performed during an elective admission. 9% (747/8,293) of those with 5 year at follow up had further surgery as and 17% (366/2,163) of those with 10 years at follow up. Age over 54 compared to 18–24 years had a reduced risk of further surgery (adjusted Hazard ratio 0.81 (95%CI 0.67–0.97),



Abstract P119 Figure 1 Funnel plot of 6-12month colonoscopy following RH for Crohn's

p=0.023) as did less deprived quintiles and those who had index RH on an elective admission (0.69 (0.62–0.77), p<0.001). A comorbidity score of >5 was associated with 40% increased further surgery risk (1.41 (1.05–1.89), p=0.023).

51% subjects had a colonoscopy within 2 years of index RH. Recommended 6–12 month colonoscopy assessment increased from 14% in 2007 to 29% in 2016. Overall, unadjusted 6–12 month colonoscopy was 22% however this varied 4-fold between providers. Adjusting for further surgery, illness that might prevent or delay colonoscopy or subject death, 42% of subjects did not undergo a 6–12 month colonoscopy. This fell to 26% if colonoscopy was included.

Figure 1 shows a funnel plot of 6–12 month colonoscopy following right hemicolectomy (RH) for Crohn's disease by provider. Dots represent providers and lines indicate 1, 2 and 3 standard deviations from the mean.

Conclusions Despite novel therapeutics and better understanding of the natural history of CD there remains a high risk of recurrent surgery. Colonoscopy assessment after RH has been increasing over time but there remain large unexplained variations in colonoscopy practice between providers.

P120 RISK OF INFLAMMATORY BOWEL DISEASE IN SUBJECTS WITH DERMATOLOGICAL DISORDERS ASSOCIATED WITH INFLAMMATORY BOWEL DISEASE

[1]Dominic King*, [2]Joht Chandan, [2]Tom Thomas, [2]Nij Bhala, [2]Krish Narantharan, [2]Nicola Adderley, [2]Raoul Reulen, [1]Nigel Trudgill. [1]*Sandwell and West Birmingham Hospitals NHS Trust, UK*; [2]*University of Birmingham, UK*

10.1136/gutjnl-2020-bsgcampus.195

Introduction Skin diseases including erythema nodosum (EN), pyoderma gangrenosum (PG), Sweet's syndrome (SS) and aphthous stomatitis (AS) can occur with inflammatory bowel disease (IBD). We examined the risk of later developing IBD in these skin disorders and the time to IBD diagnosis.

Methods A large UK primary care database was examined between 1995–2018. Cases of EN (excluding sulfasalazine history), PG and all skin disorders associated with IBD combined were matched to controls on age, sex and GP registration. Pre-existing IBD cases were excluded. Subjects were followed until a diagnosis of ulcerative colitis (UC) or Crohn's disease (CD) and incident rate ratio (IRR) modelled, adjusting for age, sex, body mass index, comorbidity, deprivation level and smoking status. The time to a later diagnosis of IBD in cases and controls was compared using the Mann-Whitney U test.

Results 5,349 EN cases (median age 36 (IQR 23–51), 78% female) were matched to 21,100 controls. Median time to UC diagnosis was reduced in EN compared to control subjects (224 and 1,856 days respectively p<0.001). The rate of UC was not significantly increased in EN subjects compared to controls (IRR 1.67 (95%CI 0.87–3.24) p=0.13). Median time to CD diagnosis in EN cases was 114 days compared to 1,136 in controls p<0.001. The rate of CD in EN was 12-fold that of controls (12.76 (7.62–21.38) p<0.001). EN subjects had a 1.2% excess risk of IBD compared to controls.

863 PG cases (age 57 (39–73), 40% male) were matched to 3,404 controls. Few IBD diagnoses were made during the study period (16 in PG cases and 6 in controls). Time to IBD diagnosis in PG cases was reduced compared to controls p=0.047. The rate of IBD was 13-fold that of controls (13.21 (5.07–34.41) p<0.001). PG subjects had a 1.8% excess risk of IBD.

When skin disorders combined (EN, PG, SS and AS) were examined, 7,340 cases (median age 36 (23–50), female 74%) were matched to 21,764 controls. 133 cases of IBD were observed in the skin disorder group compared to 53 in controls. The rate of UC was more than 3-fold higher in the skin disorder group (3.63 (2.17–6.08) p<0.001). The rate of CD was 11-fold higher in the skin disorder group (11.21 (7.30–17.20) p<0.001). Skin disorder subjects had a 1.6% excess risk of IBD. When those with anaemia, weight loss, lower gastrointestinal bleeding, diarrhoea or loperamide use within 6-months of diagnosis were examined an 8.3% excess risk was seen.

Conclusions Skin disorders associated with IBD are not unique to IBD and clinicians who diagnose these conditions may not consider IBD leading to a delayed diagnosis. The relative risk of IBD is high in such skin disorders and symptoms suggestive of IBD should be sought, and screening investigations and gastroenterology referral considered.

P121 RISK OF INFLAMMATORY BOWEL DISEASE IN SUBJECTS PRESENTING WITH EYE-DISORDERS ASSOCIATED WITH INFLAMMATORY BOWEL DISEASE

[1]Dominic King*, [2]Joht Chandan, [2]Tom Thomas, [2]Nij Bhala, [2]Krish Narantharan, [2]Nicola Adderley, [2]Raoul Reulen, [1]Nigel Trudgill. [1]*Sandwell and West Birmingham Hospitals NHS Trust, UK*; [2]*University of Birmingham, UK*

10.1136/gutjnl-2020-bsgcampus.196

Introduction A number of eye diseases including uveitis and episcleritis/scleritis may occur in association with inflammatory bowel disease (IBD). We have examined the risk of later developing IBD in such eye conditions and the time to diagnosis.

Methods The Health Improvement Network, a large UK primary care database was examined. Cases of eye disorders associated with IBD were matched to controls on age, sex and GP registration. Subjects were followed until a diagnosis of ulcerative colitis (UC) or Crohn's disease (CD), and the incident rate ratio (IRR) was modelled, adjusting for age, sex, body mass index, comorbidity, deprivation level and smoking status. Pre-existing IBD was excluded. The time to a later