

**Abstract P119 Figure 1** Funnel plot of 6-12 month 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.

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

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**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.

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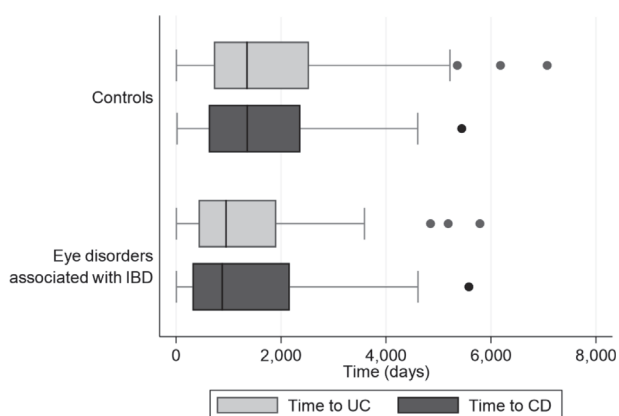
#### RISK OF INFLAMMATORY BOWEL DISEASE IN SUBJECTS PRESENTING WITH EYE-DISORDERS ASSOCIATED WITH INFLAMMATORY BOWEL DISEASE

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**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



**Abstract P121 Figure 1** Time to IBD diagnosis

diagnosis of IBD in cases and controls was compared using the Mann-Whitney U test.

**Results** 36883 subjects (median age 50 (IQR 37–65), 58% female) with a new diagnosis of an eye disorder associated with IBD were matched to 102622 controls between 1995–2018. Uveitis made up 57% of eye disorder cases. 196 (0.53%) IBD cases were diagnosed in eye disorder subjects and 223 (0.02%) in controls. Median time to UC diagnosis was 952 days for subjects with eye disorders and 1351 for controls,  $p=0.170$ . Median time to CD diagnosis was 879 days and 1356 in controls,  $p = 0.013$ . Overall, median time to IBD diagnosis was 905 days compared to 1386 in controls,  $p<0.001$ .

Figure 1 is a boxplot of time to ulcerative colitis (UC) and Crohn's disease (CD) diagnosis for eye disorder subjects compared to controls.

The rate of UC diagnoses in eye disorders was 70% higher than in controls, IRR 1.73 (95%CI 1.32–2.27). The rate of CD diagnoses was more than 3-fold higher in the eye disorder group, 3.55 (2.68–4.71). Overall, eye disorders had a greater than 2-fold rate of IBD diagnoses compared to controls, 2.44 (2.01–2.96). Eye disorder subjects had a 0.53% excess risk of IBD when compared to controls. When subjects coded for loperamide use, diarrhoea, anaemia, weight loss or lower gastrointestinal bleed within 6-months of study start were examined, eye disorder cases had a 1.6% excess IBD risk compared to controls.

**Conclusions** Eye disorders associated with IBD are commonly seen in isolation and health care professionals caring for those with these conditions may not consider IBD, leading to diagnostic delay. The relative risk of later IBD is high in such eye disorders and symptoms suggestive of IBD should be sought and screening investigations such as faecal calprotectin and gastroenterology referral considered.

**P122 SWITCHING FROM ORIGINATOR ADALIMUMAB TO BIOSIMILAR SB5(IMRALDI) – IBD SERVICE ASSESSMENT AND NEEDS**

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**Introduction** Biosimilar versions of adalimumab became available in the UK in late 2018. BSG suggests that automatic

substitution to biosimilars would be inappropriate and patients should be switched to biosimilar if stable or in remission.

**Aim** To review whether biosimilar of Adalimumab(SB5) was inferior to originator drug and assess efficiency of IBD service throughout the process.

**Methods** We reviewed Adalimumab prescriptions from 1/2015 until 12/2018 when the switch to biosimilars was performed. Disease activity was assessed using laboratory parameters (C-reactive protein (CRP) and faecal calprotectin (FC) where available and patient reported outcomes.

**Results** In total 121 Adalimumab prescriptions were issued from 1/2015 until 12/2018. We identified 77 patients that were switched to SB5 Adalimumab. Despite having an automatic substitution being implemented by our pharmacists, none of the patients declined change of treatment due to associated cost savings and only one patient requested to return to the originator following clinical deterioration.

Secondary loss of response 52 wks post switch of treatment occurred in 16.8% (13/77) following change to biosimilar, whereas 12.4% (15/121) patients have experienced secondary loss of response to originator drug prior to transition period ( $p:0.3$ ). 23.3% of patients reported clinical deterioration of symptoms, and 13% (10/77) of pts were changed to second line biosimilar due to side effects (mainly pain at the site of injection).

From patients with baseline biochemical markers available, 25.3% (18/71) of patients had raised CRP and 36% (17/45) of patients had raised calprotectin. Worsening of CRP and faecal calprotectin were noted in 33% and 43% of these respectively. Subtherapeutic Adalimumab levels ( $<5\text{UG/ml}$ ) were identified in 14 patients but non-significant change of Adalimumab levels was seen in patients that had levels performed prior and after the transition period.

In terms of follow up, 28.6% (22/77) of patients were not seen 6 months pre or post transition period, and 35% (27/77) of patients still have not been reviewed 1 year post transition.

**Conclusion** Biosimilar SB5 was not inferior to originator and patient acceptance was very good due to associated cost savings. Whereas switching to a biosimilar should be performed in patients in remission, 25–36% had biochemical markers suggestive of active disease. Follow up of patients was suboptimal due to staffing issues. This indicates the importance of investment of cost savings back into IBD services to optimise their performance.

**P123 ARE WE ADDRESSING THE TOP TEN RESEARCH PRIORITIES IN MANAGEMENT OF IBD IN THE UK?**

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**Introduction** Three years after publication of the top 10 research priorities in Inflammatory Bowel Disease (IBD) based on the James Lind Alliance (JLA) Priority Setting Partnership, the question remains whether this initiative has influenced the research landscape.<sup>1</sup> Therefore, the aim of this study is to create an overview of the current distribution of the research interests of clinical trials, in adults with IBD, ongoing or completed in the United Kingdom (UK) within the last 3 years.