outcomes and markers of disease activity in VDZ treated patients.

Methods All VDZ DLs performed since introduction of testing at our unit in December 2018 were retrospectively identified. Target DLs of >30 µg/ml during induction (≤ 14 weeks since treatment initiation (TI)) and >10 µg/ml in maintenance (>14 wks after TI) were agreed based on available published data. Dose information, timing of DL, lab results and disease activity scores were obtained from electronic patient records and paired with the DL dose. Calprotectin was included if recorded within 3 months of DL. Patients were classified as in remission or mild, moderate or severe active disease according to partial Mayo Score for ulcerative colitis and Harvey Bradshaw Index for Crohn's disease. Sub-analysis was undertaken according to timing of testing in relation to TI.

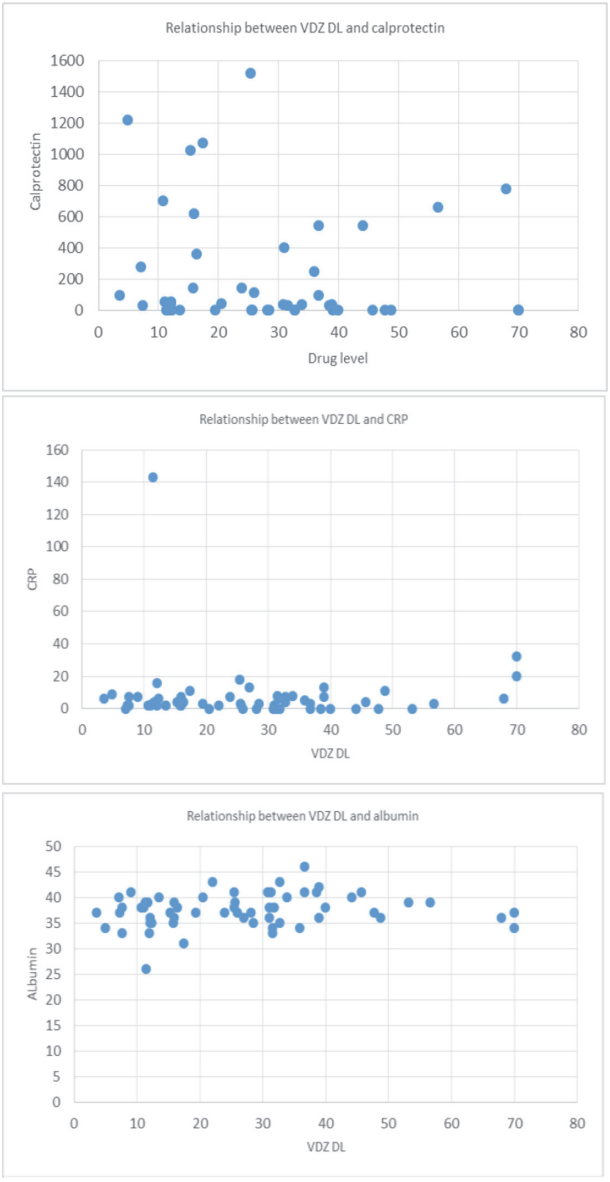
Results 60 pre-dose trough VDZ levels were identified from 41 patients. Median VDZ level was 25.7 µg/ml (<3.5->70). Median time from TI to first VDL DL was 36 weeks (4.6–184). No relationship was identified between VDZ levels and biochemical markers of disease (figure 1).

14(23.3%) TDM were performed during induction. 6/14 (42.8%) had subtherapeutic DLs; 3 in remission, 1 mild, 2 severe disease. The remaining 8/14(57.1%) had therapeutic DL; 3 mild, 3 moderate, 1 severe disease, 1 unclear.

46(76.7%) TDM were performed during maintenance. 5/46 (10.9%) had subtherapeutic DLs; 3 remission, 1 moderate, 1 unclear. The remaining 40/46(86.9%) had therapeutic DLs; 16 remission, 11 mild, 10 moderate, 3 severe disease, 1 unclear.

For both sub analysis groups, no relationship between disease state and drug level was observed.

Conclusion The results from this small cohort do not suggest a relationship between serum VDZ levels and clinical outcomes. Further research in larger cohorts is needed to confirm or refute these findings.



Abstract P154 Figure 1

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P155 88000 FAECAL CALPROTECTIN MEASUREMENTS OVER 15 YEARS: INSIGHTS GAINED FROM THE EDINBURGH FAECAL CALPROTECTIN REGISTER

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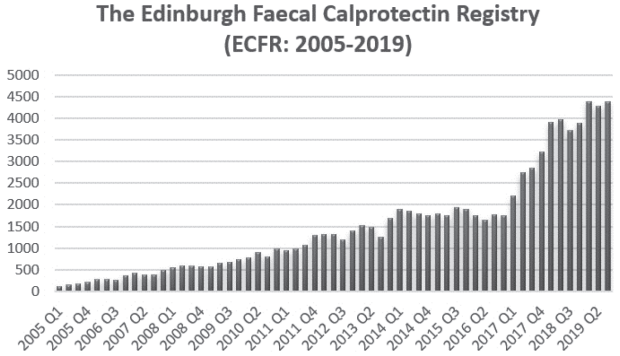
Introduction Faecal calprotectin (FC) is a reliable biomarker for intestinal inflammation. Our tertiary centre has used FC a) as a screening test for distinguishing between inflammatory bowel disease (IBD) and irritable bowel syndrome (IBS) and b) for non-invasive assessment of mucosal healing and disease activity in IBD. The FC testing service was established in the Clinical Biochemistry Lab in Edinburgh in Q1 2005 and has expanded massively over time. The same FC ELISA has been used throughout. We aimed to assess the temporal use of the Edinburgh Faecal Calprotectin Register (EFCR).

Methods This was a retrospective study of data regarding all FC measurements performed between Q1 2005 until September 2019. All data was extracted from the ECFR database. FC testing was requested either as part of a screening process for gastrointestinal symptoms or as part of monitoring in patients with IBD. FC was measured using a standard enzyme-linked immunosorbent assay technique (Calpro AS, Lysaker, Norway). All assays were performed using the same protocol in the Department of Clinical Biochemistry at the Western General Hospital (Edinburgh, UK). We analysed this data for prominent trends concerning the use of the FC testing service over time. We matched this data to our rigorously validated Lothian IBD cohort (LIBDR) to assess the use of FC measurement in our current IBD population.[1]

Results In total 88365 FC measurements for 42256 patients were included in the analysis (figure 1). 19432, (22%) were performed for IBD monitoring, 25334 (28.6%) were performed to screen primary care referrals for GI symptoms. In particular the impact on opening up the testing directly to primary care doctors is clearly demonstrated from Q1 2017 onwards. The Biochemistry lab currently runs 1500 samples per month at a cost of approximately 25 GBP per assay.



Abstract P155 Figure 1

The FC registry was merged with the prevalent cases in the LIBDR (N=7051). 5291 (75%) of these have had at least one FC measurement at any time point (median 4 FC assays per patient). Over the last 5 years, those patients under active follow-up (defined as 1 clinic appointment in secondary care between 1/1/14 and 1/8/18) had an average of 2 FC results per year.

Conclusions The Edinburgh FC Registry demonstrates the increasing demand over time for FC measurements in diagnosing IBD with the impact of primary care test clearly shown. In established IBD the time trends analysis demonstrates the deployment of treat-to-target in the clinic over almost a decade.

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P156 THE INFLAMMATORY BOWEL DISEASE (IBD) BIORESOURCE: FOCUS ON THE INCEPTION COHORT

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Introduction The IBD BioResource was established by the UK IBD Genetics Consortium and the NIHR BioResource in 2016 to expedite the clinical translation of recent genetics advances. It aimed to recruit >25,000 patients across hospitals UK-wide and comprises two cohorts: the Main cohort which focuses on patients with established IBD, and the Inception cohort which is dedicated to patients newly diagnosed with IBD. The Main cohort has recruited >32,000 patients so far. Owing to the detailed sampling of the Inception cohort and lack of confounding by medication or disease chronicity, it offers a unique resource to undertake 'omics' studies and enable research into determinants, predictors and biomarkers of IBD disease course and treatment response

Methods The Inception goal is to enrol 1,000 individuals who are new to their IBD diagnosis. Both clinical and self-reported phenotype data are collected, alongside detailed samples including whole blood for serum, plasma, DNA and RNA, stool and biopsy tissue. Samples are obtained following consent and then subsequently at first remission and first flare. Clinical data is recorded at all sample collection time-points and at 12, 24 and 36 months post diagnosis.

Results Inception has been up and running fully since March 2018 and >60 hospital sites have been trained to identify and recruit patients to this cohort. Recruitment has reached ~35% of the 1,000 patient target with the panel currently consisting of 40% Crohn's, 49% ulcerative colitis and 11% as IBDU or under further investigation. Of the patients recruited 34% have returned a baseline stool sample and 16% have had a biopsy collected at the time of diagnosis. Of all the patients recruited 23% have gone on to have samples collected at first remission and 3% at first flare. There is 92% clinical data entry at baseline. Due to the complexity of this cohort, recruitment to Inception has been challenging. Issues include staff time and capacity at recruiting sites, identifying recruitment paths and recruiting patients at the right time, capturing patients at remission and flare, involvement of clinicians to aid with the interpretation and capture of the required clinical information and patient compliance with the longitudinal protocol.

Conclusion Progress with the Inception cohort of the IBD BioResource continues and recruitment is gaining momentum. The use of this valuable resource must be the next phase of its life and the lessons and skills learnt along the way transferred to benefit the set-up of other complex and large scale common disease cohorts.

P157 RAMAN SPECTROSCOPY CAN DIFFERENTIATE MUCOSAL HEALING FROM NON-HEALING IN INFLAMMATORY BOWEL DISEASE

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Introduction Mucosal healing (MH) is a key treatment target in the management of inflammatory bowel disease (IBD), and is defined in endoscopic terms by the newly published PICaSSO score. Raman Spectroscopy is based on the scattering of inelastic light giving spectra that are highly specific for individual molecules. Our aim was to establish if Raman Spectroscopy is able to accurately differentiate between inflammation and MH.

Methods Biopsies were taken for *ex vivo* Raman Spectroscopy analysis alongside biopsies for histological analysis from IBD patients undergoing optical diagnosis endoscopic assessment. MH was defined as: PICaSSO score ≤3 and UCEIS ≤1 and RHI score of ≤3 in UC and SES-CD score ≤2 and modified Riley score of 0 in CD.

For spectral analysis we used artificial neural networks and a supervised learning model to build predictive modelling.

Results A total of 57 patients (29 UC/28 CD) were included giving 5700 Raman Spectra. Spectral differences were seen between MH and active inflammation. MH was associated with decreases at 1001 cm^{-1} and 1249 cm^{-1} in UC and CD and increases at 1304 cm^{-1} in UC and CD. The trained neural network was able to differentiate MH from active inflammation with a sensitivity, specificity, PPV, NPV and accuracy in