Results All cases considered not IgG4-RD in the MDM (n=52) similarly did not meet ACR/EULAR criteria. Of those considered definite IgG4-RD (n=63) in the MDM, only half (33;52%) met ACR/EULAR criteria. In those with definite HPB involvement (n=48) in the MDM, just over half (27;56%) met ACR-EULAR criteria. Most of the IgG4-HPB patients not meeting ACR/EULAR criteria scored insufficient diagnostic points (n=17) due to reliance on pancreatic imaging characteristics; diffuse swelling and pseudocapsule, with no points awarded for cholangiopathy without pancreatic involvement, atrophy, or focal enlargement of the gland. Small and unrepresentative biopsies were an additional challenge. Specific exclusions were absence of glucocorticoid response in advanced (fibrotic) cholangiopathy, and Crohn's disease or ulcerative colitis in isolated HPB involvement.

Conclusions The ACR-EULAR classification demonstrated excellent specificity (100%) and will be an invaluable tool for clinical trials. Disparity between diagnosis according to our IgG4-RD MDM and the ACR/EULAR criteria are explained by specific pancreatic imaging characteristics, absence of cholangiopathy/hepatopathy as a unique entity, and the necessity for steroid responsiveness even if presenting with advanced cholangiopathy.

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P258 IS REPEATING FAECAL ELASTASE WORTHWHILE?

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Background Faecal elastase-1 (FE1) is the only widely available test for pancreatic exocrine insufficiency (PEI). However, FE1 is thought to misclassify approximately 10% of patients. False negatives delay treatment with pancreatic enzyme replacement therapy (PERT). False positives expose patients to unnecessary intervention, and the NHS to unnecessary costs. We studied the practice of repeating FE1 at our trust, its impact on being treated, and the predictors of reclassification of PEI diagnosis on repeat testing.

Methods We carried out a retrospective study at a London teaching hospital. All outpatients investigated with FE1 between 2012 and 2018 were identified. Demographic and clinical information was retrieved from the electronic medical record. PEI was defined as FE1 <200 μg/g. Where FE1 had been repeated, any change to PEI diagnosis was recorded. Univariable logistic regression was used to explore the dependence of having FE1 repeated and reclassification of PEI diagnosis on age, sex, ethnicity, presenting symptoms, comorbidities, and the initial FE1 result (grouped into FE1<100 μg/g, 100–199 μg/g, 200–299 μg/g and ≥300 μg/g). Exposure variables with significant associations ($p<0.05$) in the univariable analysis were incorporated into a multivariable logistic regression model. Univariable logistic regression was used to explore the association between having more than one positive FE1 result and being prescribed PERT. Firth's method of penalized likelihood was used to reduce bias in cases of complete separation. Complete case analysis was used where any data were missing.

Results 1027 patients were included; mean age 53 years; 42.5% male; 54.5% white ethnicity. In total, 124 patients (12.1%) had their FE1 repeated. The median time to repeat FE1 was 5.4 months. 39 patients (31.5%) had their PEI status reclassified on repeat FE1; 28 patients from PEI to no PEI, and 11 from no PEI to PEI. On univariable analysis, diabetes mellitus, chronic pancreatitis and initial FE1 result were associated with having FE1 repeated. In the multivariable analysis, only initial FE1 result remained a significant predictor of having FE1 repeated (FE1 <100 μg/g: OR 4.66, 95% CI 2.76–7.87; FE1 100–199 μg/g: OR 7.26, 95% CI 4.21–12.5; FE1 200–299 μg/g: OR 3.53, 95% CI 1.88–6.61; all $p<0.001$). Initial FE1 100–200 μg/g was the only significant predictor of reclassification of PEI diagnosis on repeat testing (OR 6.91, 95% CI 2.39–19.95; $p=0.007$). Patients with more than one positive FE1 result were almost four times more likely to receive PERT than patients with a single positive result (OR 3.82, 95% CI 1.5–9.75; $p=0.005$).

Conclusions False positive and false negative FE1 results are common, and clinicians might be reluctant to prescribe PERT after one positive result. We recommend repeating FE1 routinely in all patients with FE1 <300 μg/g.

P259 ABNORMAL PANCREATIC IMAGING AND NUTRITION BIOCHEMISTRY PREDICT RESPONSE TO PANCREATIC ENZYME REPLACEMENT THERAPY

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Background Pancreatic enzyme replacement therapy (PERT) is a safe and effective treatment for pancreatic exocrine insufficiency (PEI). Approximately 80% of patients report symptomatic improvement with treatment, however the predictors of clinical response are unknown. We examined the investigation and management of patients with PEI at our trust, and studied the associations with clinical response to PERT.

Methods We carried out a retrospective study at a London teaching hospital. All outpatients diagnosed with PEI, defined as FE1<200 μg/g, between 2012 and 2018 were identified. Demographic and clinical information was retrieved from the electronic medical record. Patients with a positive followed by a negative FE1 were excluded. We noted the proportion of patients investigated with pancreatic imaging and nutritional blood tests within 6 months of diagnosis. Nutritional blood tests were defined as ≥3 of serum ferritin, folate, vitamin B12, vitamin D, magnesium and albumin. In addition, we noted the proportion of patients prescribed PERT, the initial dose, referral to dietetics and clinical response to treatment. Binary logistic regression was used to study the dependence of clinical response to PERT on PEI severity, initial dose prescribed, referral to dietetics, abnormal pancreatic imaging and abnormal nutritional blood tests. Complete case analysis was used where data were missing.

Results 182 patients were diagnosed with PEI; 60.4% severe (FE1<100 μg/g); mean age 56.4 years; 51.1% male; 47.8% white ethnicity. 149 patients (81.9%) underwent pancreatic imaging, with ultrasound (23.5%), CT (60.4%), MRI (15.4%) or EUS (0.7%). Poor views of the pancreas were reported in