expression of TSLP and its receptor (TSLP-R) in the duodenal mucosa of patients affected by RCD.

**Methods** Duodenal biopsies were collected from 12 RCD patients, 16 uncomplicated CD patients before and after 12 months of gluten-free diet, and 14 control subjects. The gene expression of TSLP and TSLP-R was evaluated on biopsy homogenates by quantitative RT-PCR, and the data were normalised for cytokeratin 18 expression. The protein expression of TSLP and TSLP-R was studied on biopsy homogenates by immunoprecipitation and on biopsy sections by confocal microscopy.

**Results** *In vivo* mucosal TSLP expression was significantly reduced both at the mRNA and protein levels in the duodenum of RCD and untreated CD patients compared to treated CD patients and controls, without differences between RCD and untreated CD patients and between treated CD patients and controls. TSLP transcript down-regulation in untreated CD mucosa was confirmed after normalisation for cytokeratin 18. TSLP-R was expressed in the duodenal mucosa both at the gene and the protein level, without significant differences between RCD, untreated and treated CD patients and control subjects. Confocal microscopy analysis confirmed these findings.

**Conclusion** TSLP expression is primarily reduced in the duodenal mucosa of RCD patients. Further studies are needed to clarify the influence of TSLP reduction on the process of immunosurveillance in RCD.

**Disclosure of Interest** None Declared.

## PTH-118 ADHERENCE TO DUODENAL BIOPSY GUIDELINES INCREASES THE DETECTION OF COELIAC DISEASE: A MULTICENTRE UK STUDY

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**Introduction** Coeliac disease (CD) is a common autoimmune condition affecting 1% of the adult population. However large numbers of patients remain undiagnosed which may have significant health consequences. Guidelines suggest that at least 4 duodenal biopsies should be taken to rule out CD. A previous US study showed that biopsy guidelines were only followed in 35% of cases. The aim of the present study was to see whether guidelines were being followed in the UK and if adherence to the guidelines improved detection of CD.

**Methods** Endoscopy and histology reports were retrospectively reviewed for all patients who had a duodenal biopsy in a 3 month period between November 2012 and January 2013 from 4 UK hospitals. Indications for biopsy, role of the endoscopist, number of duodenal biopsies received by histopathology and the final diagnosis were recorded. The presence of villous atrophy was required for CD diagnosis. Patients were excluded if they had known CD. The difference between a double and single bite biopsy technique was also assessed.

**Results** 1423 patients underwent duodenal biopsy for possible CD across the 4 sites in the study period. 97 (6.8%) of these were diagnosed with CD. Guidelines to take at least 4 biopsies were met in 40% of patients and the median number of duodenal biopsies taken for all patients was 3. CD diagnosis was more likely guidelines were followed (10.1 vs. 4.6% $p < 0.0001$). The median number of biopsies was greater in patients diagnosed with CD (4 vs. 3) $p < 0.0001$. Gastroenterologists and nurse endoscopists were more likely than surgeons to follow guidelines (41.8% vs 51.2% vs 18.2% $p < 0.0001$) and took a higher median number of biopsies (3 vs. 4 vs. 2 $p < 0.0001$). As a result gastroenterologists and nurse endoscopists made a diagnosis of CD in more cases than surgeons (7.1 vs. 6.7% vs. 3.0% p 0.1). All presenting characteristics (other than positive serology in which guidelines were followed in 65%) were associated with poor adherence to guidelines. 12.4% of newly diagnosed CD patients had at least 1 non-diagnostic gastroscopy in the 5 years prior to diagnosis. Changing biopsy technique to single bites resulted in improvement of median D2 biopsies from 3 to 4. (p 0.02).

**Conclusion** We have shown that 12.4% of patients with CD had a previous gastroscopy 5 years prior to their diagnosis. Taking 4 duodenal biopsies results in increased detection of CD. We are the first investigators to demonstrate variation in biopsy rates based on the speciality of the endoscopist and biopsy technique. Furthermore this variability has a direct relationship with the detection rate of CD. Education of all groups of clinicians in duodenal biopsy techniques may result in more patients receiving a prompt diagnosis of CD.

**Disclosure of Interest** None Declared.

## PTH-119 HIGH DEFINITION (HD) ENDOSCOPY WITH I-SCAN FOR THE DETECTION OF MARKERS OF COELIAC DISEASE: A FEASIBILITY STUDY

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**Introduction** Coeliac disease (CD) remains underdiagnosed. Previous studies have shown that up to 13% of patients with CD have undergone a previous gastroscopy where the opportunity to take duodenal biopsies and make a diagnosis had been missed. Clinicians may rely on the presence of endoscopic markers of CD to guide biopsy however these have been shown to lack the required sensitivity. A routine duodenal biopsy approach may solve this problem but this is time consuming and expensive. Methods to improve the macroscopic detection of CD at endoscopy to guide biopsy would seem advantageous. A single trial on I-Scan, a commercially available digital enhancement technique, has shown promising results in identifying markers of villous atrophy. However this was an uncontrolled, unblinded trial in high prevalence population (35% CD). We aimed to assess the utility of I-Scan in a lower prevalence population in a randomised controlled trial.

**Methods** Patients on a single coeliac enriched endoscopy list were randomised into 2 groups. Group 1 standard HD white light endoscopy (WLE) and group 2 WLE plus I-Scan. The presence of endoscopic markers of CD, scalloping, mosaic pattern, nodularity, loss of duodenal folds or increased vascularity was noted throughout the duodenum. All patients received 4 biopsies from the second part of the duodenum and at least 1 biopsy from the bulb. Coeliac serology was taken at the time of endoscopy. Macroscopic markers of CD are compared to the presence of villous atrophy on histology as the gold standard. 3, 10-point likert scales for pain, discomfort and distress were used to assess tolerability.