slightly lower than target in IDA (43%) and suspected CD (40%) indications, reflecting that better selection of cases can increase CE diagnostic yield. A standardized approach to audit CE is necessary and should follow KPI as a standard for comparison.

**PTH-5 ‘CUT-OFF’ VALUES OF IGA-TTG IN NON-BIOPSY DIAGNOSTIC PATHWAYS FOR COELIAC DISEASE NEED TO BE ASSAY-SPECIFIC**

Richard Vaughan*, Francesca Melindo, Benjamin Corney, Hannah Williams, Alice Bone, James Berrill. Royal Glamorgan Hospital, Llantrisant, UK

10.1136/gutjnl-2021-BSG.284

**Introduction** The British Society of Gastroenterology (BSG) interim guidelines (June 2020) on making a non-biopsy diagnosis of coeliac disease included an IgA anti-tissue transglutaminase (TTG) level ≥10 x upper limit of normal (ULN) in the pathway. However this was only recommended for an ELISA-based assay. It advised that local TTG assay reliability needs correlating to pathology as part of any local audit.

Since June 2019, our health board switched from an ELISA based assay to a chemiluminescence based assay for TTG measurement. This study aims to compare the two distinct assays, and propose an appropriate ‘cut-off’ level for the chemiluminescence assay.

**Method** In this retrospective, observational study across two sites, all elevated TTG results in adult patients from January 2018 to December 2019 were identified from biochemistry records. Patients already known to have coeliac disease were excluded from analysis. In patients with multiple elevated TTG results only the earliest result was included. Data was collected on patient demographics, waiting times, and duodenal biopsy results. Prior to June 2019 an ELISA based assay was used with TTG results <10 U/ml considered negative. Since June 2019 a chemiluminescence assay (Bioflash) was employed, with TTG results <20 U/ml reported as negative.

**Results** In total, 192 elevated TTG results were included in the analysis. One hundred and nine patients had duodenal biopsies performed, 73 patients were not referred or declined investigation, and 10 patients were still waiting for duodenal biopsy at the time of analysis in May 2021. The median waiting time for these 10 patients still awaiting biopsy was 456 days.

Using the ELISA based assay, 96% patients (n=27) with TTG > 10 x ULN had positive duodenal biopsies, whereas positive biopsies were only present in 56% patients (n=9) with TTG between 5 – 10 x ULN.

Using the Chemiluminescence assay, 90% patients (n=21) with TTG > 10 x ULN had positive duodenal biopsies, however positive biopsies were also present in 89% patients (n=9) with TTG between 5 – 10 x ULN.

**Discussion** These results support the BSG guidance for non-biopsy diagnosis of coeliac disease using a pathway that includes TTG > 10 x ULN measured by an ELISA assay. However for the chemiluminescence assay (Bioflash) it appears that a TTG level ≥ 5 x ULN may be a more appropriate ‘cut-off’ level to use in the pathway. Further work is required to confirm this as the numbers in this study are small. This study also shows the long time periods that patients in some centres are waiting for their duodenal biopsies, likely exacerbated by the COVID pandemic, and thus the importance of establishing a non-biopsy protocol where appropriate.

**PTH-6 UTILITY OF A HOME HYDROGEN BREATH TESTING PATHWAY FOR DIAGNOSIS OF SMALL INTESTINAL BACTERIAL OVERGROWTH**


10.1136/gutjnl-2021-BSG.285

**Introduction** Small Intestinal bacterial overgrowth (SIBO) can lead to persistent diarrhoea, bloating and abdominal pain in patients. Hydrogen Breath testing (HBT) is the first line investigation but since the COVID-19 pandemic its utility has been limited as it is considered an aerosol generating procedure. We piloted a new testing pathway at a London teaching hospital in which HBT kits were sent out for patients to perform the test at home and sent back for analysis.

**Aims & Methods** Patients on our HBT waiting list between April 2019 to November 2020 were contacted and assessed for symptomology, validity for home testing and consent for participation. 39 tests were mailed out to patients and data was collected on the response rate, number of positive results, alongside a patient satisfaction survey.

**Results** A total of 108 patients (M 42; F 66) were identified to be on the waiting list for a hydrogen breath test. 8 patients were removed due to symptom improvement, being discharged from clinic or due to cancellation of request. All 100 patients were contacted with 91 responding. 88 (96.7%) agreed to undergo the home testing for SIBO. 86.4% (76/88) reported to still be symptomatic with 13.6% (12/88) reporting no longer having symptoms.

39 home testing kits were sent and 14 (36%) kits were returned over a 2 month period.

10 (26%) were hydrogen breath test positive. (Figure 1).

The average score given for ease of use for the home kit was 3.7/5. 10/14 (71%) of the patients accessed the video link and 4.3/5 said they would recommend this testing method to others.

A follow up call was undertaken to ascertain the poor response rate from patients and common feedback included difficulty in understanding instructions, restrictive diet required prior to testing and time constraints.

**Conclusions** The initial results from our pilot study show promise and suggest that home testing is a realistic, viable and cost-effective first line option for the management of SIBO in the post covid era.