

**Methods** Fifty-six patients with GI symptoms > 6 months after radical pelvic radiotherapy underwent structured gastroenterological assessment as part of a service evaluation. They were assessed using the following questionnaires: inflammatory bowel disease questionnaire (IBDQ); Vaizey incontinence questionnaire (VIQ); and the Common Terminology Criteria for Adverse Events (CTCAE) pelvic symptom questionnaire. 12 month assessments were compared to the previously reported baseline and 6 month assessments to determine if the improvement in symptoms was sustained. Patient satisfaction with the service was assessed at 12 months by an in-house questionnaire.

**Results** Forty patients (71%) completed the 12 month assessment and 37 (66%) completed the patient satisfaction questionnaire. The initial statistically significant improvement in GI symptoms from baseline to 6 months in parallel to GI evaluation was sustained up to 12 months in all questionnaires (IBDQ  $p = 0.019$ , IBDQB and CTCAE rectum bowel subset  $p < 0.0005$ ) except the VIQ ( $p = 0.098$ ). There was also a clinically significant improvement as defined by an increase in IBDQ score of  $\geq 0.5$  points per question. Median total IBDQ and IBDQB score increased by 25 and 11 points respectively between baseline and 12 months. 97% of patients found the appointments convenient, 97% felt their problems were understood; 86% were satisfied with the outcome and 89% with the service. Dissatisfaction related to communication ( $n = 3$ ), travel ( $n = 2$ ) and ongoing symptoms ( $n = 3$ ).

**Conclusion** The clinically and statistically significant improvement in GI symptoms found in parallel to structured gastroenterological evaluation for chronic GI symptoms following pelvic radiotherapy was sustained over 12 months follow up. These data suggest that structured investigation on the basis of the BSG guidelines can lead to a sustained improvement in symptoms and is acceptable to patients. Further research is essential to optimise patient care.

**Disclosure of Interest** None Declared.

### PTU-187 IS PLASMA CITRULLINE CONCENTRATION A RELIABLE MARKER FOR DIAGNOSIS AND CLINICAL MANAGEMENT OF COELIAC DISEASE ?

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**Introduction** In chronic villous atrophy plasma citrulline concentration (PCC) is decreased at the same severity and extent of mucosal lesions of villous architecture. Marsh-Oberhuber classification is conventionally used for grading villous atrophy in coeliac disease and a correlation with plasma citrulline concentrations has been found in pioneering studies. The Corazza-Villanacci classification gives better inter-observer agreement than Marsh-Oberhuber classification. Our primary aim was to correlate PCC to Corazza-Villanacci classification in coeliac disease. We aimed also to yield information in respect of PCC after one year of gluten free diet.

**Methods** Forty subjects with a diagnosis of acute coeliac disease have been studied. Nine out of forty patients were on gluten challenge diet. All patients underwent OGD with multiple biopsies and a blood test for plasma citrulline concentration at baseline and after one year of gluten free diet (GFD). Routine haematological and biochemical investigations were performed including, IgA tTG, IgA EMA and IgA/G antigliadin, ESR, haemoglobin and haematinics, albumin, liver function tests and creatinine. BMI and clinical symptoms were monitored. Histology was interpreted according to Marsh-Oberhuber and Corazza-Villanacci Classification. Plasma citrulline concentration was analysed by High Performance Liquid Chromatography

**Results** Mean plasma citrulline concentration was lower (15.12  $\mu\text{mol/l}$ ) at baseline, in patients with active coeliac disease, than in the same group of patients after one year of GFD (16.47  $\mu\text{mol/l}$ ) however we did not observe any overall change in citrulline concentration after one year of gluten-free diet. All patients were only partially histopathologically and clinically responsive to one year of GFD. Plasma citrulline concentrations correlated with Villanacci-Corazza classification ( $P = 0.05$ ) in patients on gluten challenge diet. Patients with a score of 2 had lower citrulline values compared to those with a score of 1, on average 4 units. Correlation was not found between plasma citrulline concentrations and Marsh-Oberhuber classification at baseline and after one year of gluten-free diet.

**Conclusion** Plasma citrulline concentration may be considered a reliable marker of severity and extent of small bowel villous atrophy in acute coeliac disease, more data are warranted to determine its role in the long-term management.

**Disclosure of Interest** None Declared.

### PTU-188 REPEAT VIDEO CAPSULE ENDOSCOPY- IS IT WORTH IT?

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**Introduction** Few studies have reported on the yield of repeat capsule endoscopy (CE) in the same patient; data regarding this diagnostic strategy are limited.<sup>1,2</sup> The aims of this work were to assess the indications for repeat capsule and to determine the diagnostic yield of repeat capsule in our trust.

**Methods** A retrospective review of all patients who underwent CE at South Tyneside District Hospital between August 2004 and October 2012 was conducted. Patients who underwent a repeat CE were identified and divided into one of four subgroups. Findings were classified as positive or negative; positive findings were taken as presence on report of ulcers, tumours, strictures, polyps, blood or angioectasia.

**Results** A total of 1083 studies were performed, 83 were repeat studies. 7 patients were noted to have greater than 2 repeats.

#### Indications

Group 1 Gastric retention or technical failure (N = 16)

Group 2 Surveillance (N = 7)

Group 3 Poor views (as commented on by reporting physician on report) or incomplete (not seen to enter the colon) on initial study (N = 31)

Group 4 Ongoing symptoms/assessment of disease extent/unclear findings on initial VCE (N = 36) (7 cases are reported in both group 3 and 4)

**Yield** Overall yield, excluding gastric retention was 38% for the first study and 46% for 2<sup>nd</sup> study, of those with an initial negative study (42 patients), 21% of these had a positive repeat. (those with poor views had been given bowel preparation, those with an incomplete capsule study had a capsule recording time of 8–9 hours on both studies).

Positive findings

#### Abstract PTU-188 Table

Group	Positive findings 1 <sup>st</sup> study	Positive findings 2 <sup>nd</sup> study
1	N/A	5/16 (31%)
2	4/7 (57%)	4/7 (57%)
3	3/31 (10%)	10/31 (32%)
4	16/36 (44%)	17/36 (47%)

Subgroup analysis group 4:

- Ongoing symptoms with consistent with ?Crohn's or known Crohn's the yield remains the same on 1<sup>st</sup> and 2<sup>nd</sup> capsule 4/9 (44%).

- Ongoing IDA/GI bleeding show an increased yield with 8/17 (47%) having a positive 1<sup>st</sup> study and 10/17 (59%) a positive 2<sup>nd</sup> study.

21 had a repeat despite a positive 1<sup>st</sup> study (excluding surveillance), 71% had positive repeat with resulting change in management in 73%. 9/15 done for ongoing symptoms, 6/15 for incomplete/poor views.

**Conclusion** Limited data exist regarding the yield of repeat CE, it is suggested by the literature that yield of a repeat study is better in those with GI bleeding/anaemia. Our results suggest that the group with the highest yield (3 fold increase) on repeat are those with poor views or an incomplete initial study. There is an improvement in yield with 2<sup>nd</sup> study for those with ongoing symptoms of IDA or GI bleeding in keeping with previous literature.

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## PTU-189 ACCURACY OF SIMTOMAX RAPID COELIAC SCREENING TEST COMPARED WITH ELISA TTG ASSAY AND DUODENAL BIOPSY

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**Introduction** Point-of-care testing kits are now available for coeliac disease (CD). Simtomax® is a rapid screening test which detects IgA deficiency as well as IgA and IgG antibodies to deamidated gliadin peptide (DGP). We evaluated the performance of the Simtomax® rapid screening test for CD against routine lab ELISA tTG testing and histologically confirmed CD.

**Methods** A retrospective study of 191 patients who underwent CD serological testing at the Royal Liverpool University Hospital was carried out. Electronic casenotes were interrogated to identify serology, endoscopy and histology results. The saved serum was tested using the Simtomax® test kit as per the manufacturer's instructions. Any Simtomax® test that was incongruous with ELISA or biopsy results was re-tested. Sensitivity, specificity, positive predictive values (PPV) and negative predictive values (NPV) were calculated for Simtomax® and compared to histology and tTG ELISA.

**Results** All 191 patients underwent ELISA testing. Twenty six (13.6%) patients had positive ELISA testing; of these the Simtomax® test was positive in 20 patients and negative in 6. One hundred and sixty five (86.4%) patients had negative ELISA testing; of these Simtomax® was negative in 164 patients and positive in 1. Using ELISA as the gold standard the sensitivity of the Simtomax test was 77% (95% CI 56–90%), specificity 99% (96–99%), PPV 95% (76–99%) and NPV 96% (92–99%). Forty four patients underwent gastroscopy and duodenal biopsy. 15 patients had histological evidence of CD, of these Simtomax® test was positive in 11 patients and negative in 4; tTG ELISA was positive in all (median titre 58, range 7.8 to 80). Twenty nine patients had negative histology; of these all 29 Simtomax® tests were negative; tTG was negative in all except one patient. Using duodenal biopsy as the gold standard the sensitivity of Simtomax® was 73% (95% CI 45% > 91%), specificity 100% (85% > 100%), PPV 100% (68% > 100%) and NPV 88% (71% > 69%). No patients in the group were identified as having IgA deficiency by standard assay or Simtomax® testing. No false negative or false positive result was altered by re-testing.

## Abstract PTU-189 Table 1 Simtomax® vs ELISA tTG and Duodenal Biopsy

	ELISA tTG Positive	ELISA tTG Negative	Duodenal Biopsy Positive	Duodenal Biopsy Negative
Simtomax® Positive	20	1 <sup>†</sup>	11	0
Simtomax® Negative	6 <sup>*</sup>	164	4	29

\*Positive histology 4, negative histology 1, duodenal biopsy not performed 1.

<sup>†</sup>Duodenal biopsy not performed

**Conclusion** The Simtomax® testing kit has good specificity but is limited by its low sensitivity. The findings of our pilot study argue against using Simtomax® testing to screen for CD. Further large scale studies correlating tTG and Simtomax® to histology are indicated.

**Disclosure of Interest** None Declared.

## PTU-190 SMALL BOWEL CAPSULE ENDOSCOPY IN PATIENTS WITH UNEXPLAINED ANAEMIA/GASTROINTESTINAL BLEEDING AND CHRONIC KIDNEY DISEASE

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**Introduction** The use of small-bowel capsule endoscopy (SBCE) has revolutionised investigating the small-bowel. However, there are only few reports <sup>1,2</sup> on the Diagnostic Yield (DY) of SBCE in patients (pts) with chronic kidney disease (CKD) and unexplained anaemia and/or obscure gastrointestinal bleeding (OGIB).

**Methods** Retrospective study; our SBCE database was searched (March 2005 to August 2012) for pts with estimated glomerular filtration rate (eGFR) < 60 ml/min/1.73 m<sup>2</sup>. Subsequently, electronic case notes of pts with low eGFR who underwent SBCE for anaemia and/or OGIB were retrieved and abstracted. A mean eGFR value -for up to 5 years prior to SBCE- was calculated for each case. Severity of CKD was defined according to Renal Association recommendations as: stage 3 (eGFR: 30–59); stage 4 (eGFR: 15–29); and stage 5 (eGFR < 15 or on dialysis). Numerical values were expressed as mean ± SD or median (range).

**Results** In the aforementioned period, 69 pts with eGFR < 60 were referred for SBCE. 65/69 (92.8%) had CKD stage 3 (eGFR 49 ± 7.9) and 4/69 (7.2%) stage 4 (n = 3) or 5 (n = 1). 51/65 (78.5%) of stage 3 CKD pts were referred for SBCE due to unexplained iron deficiency anaemia and/or OGIB [43 (66.1%) & 8 (12.3%), respectively]. 25/51 (49%) had normal SBCE, while 17/51 (33.3%) had angioectasias; other findings were active bleeding (n = 2), non-specific fold oedema (n = 2), ileal erosions (n = 1), adenocarcinoma (n = 1) and inconclusive/videos not available (n = 3). All pts (n = 4) with CKD 4 or 5 were referred due to unexplained anaemia. 3/4 (75%) had angioectasias and 1 normal SBCE. Faecal calprotectin (FC) was measured in 12 pts with CKD stage 3 and unexplained anaemia prior to SBCE; No sinister pathology or significant small-bowel inflammation was found in this subgroup.

**Conclusion** SBCE has limited DY in CKD pts referred for investigation of unexplained anaemia. The most common finding is angioectasias, while sinister small-bowel pathology is rare. Furthermore, FC measurement prior to SBCE -in this cohort of pts- is not associated with increased of DY.

**Disclosure of Interest** None Declared.

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