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**Introduction** Although current guidelines recommend Small-Bowel Capsule Endoscopy (SBCE) for the evaluation of patients with obscure gastrointestinal bleeding (OGIB), its role in investigating patients with iron deficiency anaemia (IDA) alone is still unclear.

**Aim** To evaluate the diagnostic yield (DY) of SBCE in patients with IDA by means of a systematic review of studies reporting this data.

**Methods** A recursive literature search (sources: Medline and Embase) of studies reporting DY of SBCE in patients with IDA was undertaken (November 2011). The search was restricted to fully reported papers in English, published between January 2001 and November 2011, including adult patients and clearly reporting DY for IDA patients. Studies were selected and evaluated separately by two of the authors. Data on DY were extracted, pooled, and analysed. Any discrepancy in papers selection or in data extraction was solved by consensus. The QUADAS tool was used to assess the study for methodological quality. Statistical analysis was performed with STATA version 12.0.

**Results** A total of 27 (7 prospective, 20 retrospective; total of 1943 patients) studies was selected for final review and analysis. Five studies (including 316 patients) were specifically designed to evaluate only IDA patients; in the remaining 22 studies, the patients with IDA represented a subgroup of patients undergoing SBCE. Overall, the 27 studies were of poor to moderate quality. The overall pooled DY, estimated by applying the random effect model ( $I^2$ : 77.7%), was 48.2% (95% CI 43.1 to 53.4%) while it was 53.4% (95% CI 34.7 to 72.0%) and 47.2 % (95% CI 42.1 to 52.2%) for studies focusing and not focusing on IDA patients, respectively.

**Conclusion** Although the studies evaluating the DY of SBCE in IDA are of poor to moderate quality and heterogeneous, the estimated DY is about 50% and seems to be comparable with that observed in patients with OGIB.

**Competing interests** None declared.

#### PTU-146 DUAL ENERGY X-RAY ABSORPTIOMETRY (DEXA) SCANS IN COELIAC DISEASE (CD): ARE BSG GUIDELINES FOLLOWED?

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**Introduction** Patients with CD have a higher incidence of osteopenia or osteoporosis due to reduced bone mineral density (BMD). However, significant improvement in BMD and calcium absorption is seen after introduction of gluten-free diet (GFD). The BSG recommend (with poor evidence) that DEXA scan should only be performed after introduction of GFD in patients with high risk (two or more of the following: age >70, low BMI, weight loss more than 10 kg and those with persistent symptoms on GFD for a year or non-compliance with diet). The aim of this study was to look at our practice of DEXA scanning in CD patients and assess whether BSG guidelines were followed and whether the timing of DEXA scans made any difference to outcome.

**Methods** We reviewed all 82 patients from our coeliac database who were diagnosed between April 1985 and November 2011 at a district general hospital in North London (Chase Farm Hospital). 14 patients were excluded from the study as medical notes were missing or they were lost to follow-up. Two patients did not have DEXA scan. Data were analysed retrospectively by review of medical and electronic records. Patient demographics, BMI, history of weight loss, age at diagnosis, date of DEXA scan and results were recorded. We used the standard WHO definition for osteoporosis

(T score < -2.5), osteopenia (T score between -1 and -2.5) and normal (T score > -1).

**Results** The mean patient age was 54 (range 19–93) with 52 females. The mean time interval between diagnosis and DEXA was 2 years and 10 months (range 0 month–33 years) with a median of 8 months. 37 patients (56%) had DEXA scan within a year of diagnosis of which 16 (43%) were normal, and the rest had osteopenia (24%) or osteoporosis (32%). Of the remaining patients (45%), nine had normal DEXA, five had osteopenia and 11 had osteoporosis. Comparing these two groups of patients the timing of DEXA scan (1 year of diagnosis) was not statistically significant in terms of outcome (p value=1.0000). However 80% of patients over the age of 70 years had osteoporosis. There was no record of BMI, history of weight loss or other risk factors for osteoporosis prior to DEXA request.

**Conclusion** Our practice of DEXA scan did not adhere to the BSG guidelines. There was great variability in timing of DEXA scans in CD patients. There was marked absence of record keeping in terms of BMI, history of weight loss and other risk factors to guide DEXA requests. A large proportion of patients (80%) with CD over age of 70 had osteoporosis. The timing of the DEXA scan did not significantly affect the T score. The lack of adherence to guidance could be because of its poor evidence base and also there is no clear recommendation on repeat DEXA scanning following initial assessment. We would recommend clearer guidance on the assessment of osteoporosis in CD.

**Competing interests** None declared.

#### PTU-147 STRUCTURED GASTROENTEROLOGICAL EVALUATION AND IMPROVED OUTCOMES FOR PATIENTS WITH CHRONIC GASTROINTESTINAL SYMPTOMS FOLLOWING PELVIC RADIOTHERAPY

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**Introduction** 17 000 patients are treated with radical pelvic radiotherapy per year in the UK. 50% will develop chronic gastrointestinal (GI) symptoms that adversely affect quality-of-life, which have been shown to persist at the same level of severity for at least 3 years following treatment. Despite this, fewer than 20% are referred to a gastroenterologist. We aimed to determine if structured gastroenterological evaluation improves symptoms this patient group.

**Methods** 60 patients with GI symptoms  $\geq 6$  months after radical pelvic radiotherapy were identified from oncology clinics. Those requiring urgent investigation via the 2-week wait pathway were excluded. They were assessed at baseline using patient-reported symptom-based questionnaires: inflammatory bowel disease questionnaire (IBDQ); Vaizey incontinence questionnaire (VIQ); and the Common Terminology Criteria for Adverse Events (CTCAE) pelvis questionnaire. Participants were then referred to and managed by gastroenterologists using an algorithmic approach, which involves the identification of all GI symptoms and investigation for all potential causes for these symptoms. Further assessments were made at 3 and 6 months using the questionnaires.

**Results** 20 men and 36 women were included, with a median age of 58.5 years (range 26.9–81.8). Median time from radiotherapy to baseline gastroenterological assessment was 3.0 years (range 0.6–18.7). Median IBDQ score improved from 168 at baseline to 195

at 6 months ( $p=0.014$ ). Median IBDQ bowel subset score improved from 41 at baseline to 50 at 6 months ( $p<0.0005$ ). Significant improvement was also found in the median VIQ score from 11 at baseline to 8 at 6 months ( $p<0.0005$ ). The median CTCAE rectum bowel mean score for men improved from 1.4 at baseline to 0.9 at 6 months and for women from 1.4 at baseline to 1.3 at 6 months. Pooling male and female data, the CTCAE mean score significantly improved comparing baseline with 6 month scores ( $p=0.001$ ).

**Conclusion** GI symptom questionnaire scores significantly improved from baseline to 6 months. This suggests that structured gastroenterological evaluation using an algorithmic approach may improve GI symptoms in this patient group, although a controlled study is necessary to confirm this.

**Competing interests** None declared.

#### PTU-148 DOES INVESTIGATING CHRONIC GASTROINTESTINAL SYMPTOMS FOLLOWING PELVIC RADIOTHERAPY IDENTIFY TREATABLE DIAGNOSES?

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**Introduction** 17 000 patients are treated with radical pelvic radiotherapy per year in the UK. Although 50% develop significant chronic gastrointestinal (GI) symptoms, <20% are referred for gastroenterological evaluation. We aimed to determine the causes of GI symptoms in this patient group.

**Methods** 60 patients with GI symptoms  $\geq 6$  months after radical pelvic radiotherapy were identified from oncology clinics. Those requiring urgent investigation via the 2-week wait pathway were excluded. Baseline characteristics including demographic data, cancer treatment details and symptoms were collected. Patients were referred for gastroenterological evaluation using an algorithmic approach, which involves the identification of all GI symptoms and investigation for all potential causes for the individual symptoms. Details of investigations and diagnoses were collected.

**Results** 20 men and 36 women with primary gynaecological (31), urological (17) or lower GI (8) tumours were included, with a median age of 58.5 years (range 26.9–81.8). As part of their cancer treatment 15 patients also had brachytherapy, 28 had chemotherapy and 25 had surgery. Patients presented with multiple GI symptoms (median 8, range 4–16) including frequency (46), urgency (52), loose stool (50), faecal incontinence (40), flatulence (43), bloating/distension (38) and rectal bleeding (29). The median number of investigations per patient was 9 (range 1–17), including routine blood tests (47), coeliac screen (39), breath tests for small bowel bacterial overgrowth (21) and lactose intolerance (16), SeHCAT scans (27) and upper (27) and lower (38) GI endoscopy. Common diagnoses include radiation proctopathy (22) and bile acid mabsorption (12). Some diagnoses are unrelated to previous radiotherapy, for example, diverticulosis (9) and colonic polyps (8). No cause was found for symptoms in seven patients. 25 patients have 2 or more GI diagnoses.

**Conclusion** Gastroenterological evaluation identifies significant and potentially treatable diagnoses in patients who develop chronic GI symptoms following pelvic radiotherapy. Some findings are incidental and some are unrelated to previous cancer treatment. GI symptoms in these patients have historically been considered “untreatable”. These data suggest that structured gastro-

enterological assessment has the potential to improve outcome by identifying these diagnoses and facilitating focussed treatment.

**Competing interests** None declared.

#### PTU-149 CAMBRIDGE-MIAMI RISK ASSESSMENT FOR INTESTINAL TRANSPLANTATION

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**Introduction** The Cambridge-Miami (CaMi) preoperative risk assessment score has been previously validated in a small cohort and accurately predicted the survival after intestinal transplantation. We undertook a further validation in a larger cohort of patients.

**Methods** Co-morbidity and lost venous access are used as putative preoperative risk factors, each scored 0–3 for severity. Patients (72 adults (M:F, 33:39) received an isolated intestinal graft (27), or a cluster graft including intestine (45).

**Results** Mean (SD) survival was 1501 (1444) days. The Kaplan–Meier analysis of survival revealed a significant inverse association between survival and CaMi score [logrank test for trend,  $p<0.0001$ ]. Patients were grouped into CaMi scores of 0 and 1, 2 and 3, 4 and 5, 6 and above, and HR [95% CIs] for death (compared to group 0+1) was found to increase as the CaMi score increased; 1.945 [0.7622 to 5.816], 5.075 [3.314 to 36.17] and 13.77 [463.3 to 120100] respectively and was significantly greater than group 0+1 at group 4 +5 ( $p<0.0001$ ).

**Conclusion** The ability to predict survival from the CaMi score might allow better patient selection, and identify patients for earlier transplantation.

**Competing interests** None declared.

#### PTU-150 QUALITY OF LIFE BEFORE AND AFTER INTESTINAL TRANSPLANTATION

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**Introduction** Survival following intestinal transplantation has substantially improved over the last decade and if this trend continues quality of life (QOL) may be considered as a major indication for transplantation. It is important to establish if QOL can be enhanced by transplantation and whether some aspects are more inclined to improve than others.

**Methods** QOL was assessed using Short form 36 (SF36) in a cohort of consecutive patients who had either been assessed for, undergone or, were awaiting transplantation. Data were scored using validated criteria for different QOL functions. The statistical package SPSS (IBM) was used to analyse the data.

**Results** 62 data sets were available, 26 pre-transplant and 36 post-transplant. Grouped data showed significantly better physical function ( $p=0.03^*$ ), social functioning ( $p=0.01^*$ ), general health ( $p=0.006^*$ ) and emotional role limitation ( $p=0.02^*$ ) in the