colonoscopy. Further analysis of the reasons resulting in gender differences in CIR and the impact on morbidity and mortality due to missed pathology would be desirable.

Competing interests None declared.

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PMO-189 ANALYSIS OF FACTORS PREDICTIVE OF DEPTH OF INSERTION DURING DOUBLE BALLOON ENTEROSCOPY

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Introduction For many decades the small bowel (SB) has represented a blind area for endoscopists, until the recent introduction of double balloon enteroscopy (DBE) allowing SB investigation and therapy. At times achieving deep insertion can be particularly challenging. The aim of this study was to determine factors that might influence depth of insertion during DBE.

Methods We retrospectively analysed 569 cases referred to our institute, a UK tertiary referral centre for DBE from February 2005 to October 2011. The maximum depth of insertion (MDI) was measured as described by May *et al.* History of abdomino-pelvic surgery, route of insertion, type of enteroscope, age, sedation or GA used and gender were considered influencing factors (IFs). Procedures were then divided into several subgroups according to the numbers IFs identified.

Results Out of 569 procedures reviewed, 399 cases were selected for this study (F:M=159:240, mean age: 56 years). The mean MDI was 212 cm. 274 procedures were approached via the oral route, P5 and T5 enteroscopes were used in 189 and 210 procedures respectively and 146 patients had a history of abdomino-pelvic surgery. MDI was significantly affected by history of surgery (p

Conclusion Our findings suggest that the MDI is significantly influenced by a history of abdomino-pelvic surgery, route of insertion and type of enteroscope used. Moreover the MDI tends to decrease if more than one factor is present. Based on these results, an estimation of likely insertion depth can be made prior to DBE and an appropriate strategy to achieve a successful outcome considered.

Competing interests A Murino: Grant/Research Support from: Research Grant in deep enteroscopy released by Imotec/Fujinon, M Nakamura: None declared, E Despott: None declared, C Fraser: None declared.

PMO-190 INVESTIGATING THE PREVALENCE AND CAUSE OF IRON DEFICIENCY IN A FAECAL OCCULT BLOOD POSITIVE, COLONOSCOPY NEGATIVE PATIENTS FROM THE UK COLORECTAL CANCER SCREENING PROGRAMME

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Introduction Faecal occult blood test (FOBT) is a simple test, which detects small amounts of blood released from the gastrointestinal tract. Recently it has been adopted as discriminator test for the BCSP in the UK. A colonoscopy is strongly recommended when FOBT results test positive. At present there are no plans for further investigation of the source of blood loss in patients who have had a negative colonoscopy. The aim of this study was to identify the proportion of UK colorectal cancer screening patients with a positive FOBT and negative colonoscopy affected by iron deficiency (ID) or iron deficiency anaemia (IDA) and then to detect any source of blood loss in the upper GI tract or small bowel.

Methods 100 patients with a positive FOBT referred for a BCSP were prospectively enrolled in the study between January 2008 and September 2010. A full blood count and ferritin were acquired after a negative colonoscopy. Patients with identified ID or IDA were invited to have an oesophagogastroduodenoscopy (OGD) and small bowel capsule endoscopy (SBCE).

Results 100 patients (male: 70, female: 30) with a positive FOBT referred to our tertiary centre had a negative colonoscopy. 19 patients were excluded due to vegetarianism. Of the remaining 81 patients, 1 had ID and 3 had IDA (4.9%) and therefore underwent OGD and SBCE. In 2/4 patients both procedures were normal. Three superficial gastric antral ulcers and a few gastric erosions were diagnosed respectively in the other two patients (2.4%), while their SBCEs were negative. Both patients had a history of aspirin or NSAID usage.

Conclusion In this cohort of FOBT positive and colonoscopy negative patients from the UK BCSP, we found that the prevalence of ID and IDA was 4.9%. Of these four patients only 2 (2.4%) had positive findings when further investigated, but these could be explained by medication. If these patients are excluded from the analysis then OGD and SBCE post negative colonoscopy in FOBT positive patients cannot be recommended.

Competing interests None declared.

PMO-191 MISSED UPPER GASTROINTESTINAL CANCER AT ENDOSCOPY: CAN PERFORMANCE BE IMPROVED BY SPECIALISTS?

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Introduction Upper gastrointestinal (UGI) cancer continues to have a very poor prognosis; it tends to present late and at an advanced stage. The best hope for long term survival therefore remains early diagnosis with radical treatment. There has been increasing interest recently in measuring the accuracy of UGI endoscopy in diagnosing cancer. Depending on the population studied published missed rates vary between 3% and 20%. We hypothesised that concentrating the practice of UGI endoscopy into specialist hands would reduce the rate of missed diagnosis.

Methods This is a historical cohort study. In 2001 our institution employed an UGI nurse endoscopist and concentrated the practise of UGI endoscopy into her hands and those of the only UGI surgeon in the hospital. Rates of missed cancer diagnosis were calculated for the 7 years up to and subsequent to 2001 by cross-referencing the regional electronic endoscopy reporting system and the regional UGI cancer registry. As in other similar studies, we defined a definitely missed cancer as one diagnosed within 1 year of previous endoscopy and a possibly missed cancer as one diagnosed between 1 and 3 years of previous endoscopy. Missed diagnoses were sub-classified as being due to endoscopist error, pathologist error or follow-up error.

Results From 1994 to 2001 a total of 13 589 UGI endoscopies were performed—of a total of 305 UGI cancers diagnosed in this time 30 (10%) were missed (22 (7%) definitely missed and 8 (3%) possibly missed). From 2002 to 2009 a total of 16 503 UGI endoscopies were performed—of a total of 344 UGI cancers diagnosed in this time 20 (6%) were missed (11 (3.2%) definitely missed and 9 (2.6%) possibly missed). There was a statistically significant ($p<0.05$) difference between definite miss rates but between total miss rates. The

difference observed between groups was mostly explained by reductions in pathology errors and follow-up errors and not by improvements in endoscopist performance.

Conclusion Missed diagnosis rates at our institution are within the ranges reported in other studies of Western populations. Performance was not significantly improved by concentrating the practice of UGI endoscopy into specialist hands.

Competing interests None declared.

PMO-192 A RETROSPECTIVE COMPARISON OF THE PERFORMANCE OF OLYMPUS Q SERIES COLONOSCOPES AND PENTAX HILINE AT SCREENING COLONOSCOPY

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Introduction There is a small rate of interval cancer after colonoscopy partly due to incomplete lesion detection during the procedure. Some studies have shown superior lesion detection with improved endoscopic image quality and enhancement[1 2] with one suggesting a 50% increase in polyp detection with Pentax HiLine (PH) over Olympus Lucera series (OL) colonoscopes. We have compared the performance of these two systems.

Methods All complete bowel cancer screening colonoscopies performed by a single endoscopist between 18 March 2010 and 27 September 2011 in faecal occult blood test positive patients (n=483) were analysed for insertion/withdrawal time, patient comfort/sedation doses and lesion detection (total polyps, adenomas, advanced, right sided). Comparisons were made between OL (white light) and PH (white light high definition on insertion, i-scan 1 on withdrawal). Differences between groups were analysed using either the Mann–Whitney U test or χ^2 test.

Results Completion rates were similar (OL 413/425; 97.2% and PH 55/58; 94.9%, p=0.24). The two groups were matched for age and sex. Adenoma detection rates were comparable (49% vs 56%, p=0.38). There was no significant difference in terms of mean insertion time, withdrawal time in normal colonoscopies, total numbers of polyps, adenomas, proximal adenomas or advanced adenomas (>1 cm, villous, with high grade dysplasia or containing cancer). The sample size gave an 88% power to detect the higher polyp detection rate detected previously.[2] There was a small statistically significant increase in nurse reported patient discomfort with PH (0.5 vs 1, p<0.0001—none=0, minimal=1, mild=2, moderate=3, severe=4) with higher requirements for Midazolam and similar Fentanyl doses.

Conclusion In this uncontrolled single endoscopist series in a homogenous group of patients, there did not appear to be a significant benefit of one system over the other in terms of procedure duration or lesion recognition. PH colonoscopes did appear to lead to a slight increase in patient discomfort and sedation requirements. A randomised controlled trial is required to establish the relative performances of these systems.

Abstract PMO-192 Table 1

	Mean (SD)		
	Pentax	Olympus lucera	p Value
Fentanyl dose (μg)	61.4 (18.5)	57.5 (18.0)	0.13
Midazolam dose (mg)	2.4 (0.7)	2.1 (0.6)	0.035
Comfort score	1.0 (0.6)	0.5 (0.6)	<0.0001
Insertion time (min)	11.6 (7.5)	11.1 (6.6)	0.93
Withdrawal time* (min)	14.7 (8.0)	15.6 (8.2)	0.20
Total polyps	1.6 (1.7)	1.4 (2.0)	0.19
Total/proximal adenomas	1.1 (1.3)/0.4 (0.7)	1.0 (1.5)/0.4 (0.9)	0.28/0.74
Advanced adenomas	0.3 (0.5)	0.4 (0.7)	0.64

*In normal colonoscopies.

Competing interests None declared.

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PMO-193 OUTCOME OF NON-COMPLIANCE WITH A PROGRAMME OF VARICEAL SCLEROTHERAPY IN A DGH

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Introduction Bleeding from oesophageal varices is a serious medical emergency which can be prevented by endoscopic variceal ligation either as primary or secondary prophylaxis. We aimed to establish the degree of compliance with scheduled endoscopic therapy, the reasons for non-compliance and the clinical consequences.

Methods We examined the medical notes and endoscopy reports of 50 cirrhotic patients with oesophageal varices who underwent endoscopic band ligation at the Great Western Hospital over the last 3 years. We categorised the patients into two groups: those whose were followed up in accordance with BSG guidelines on the scheduling of oesophageal sclerotherapy and those whose follow-up fell short of these standards. We assessed the incidence of variceal haemorrhage in the two groups and investigated the reasons of inappropriate follow-up.

Results 50 patients underwent 229 endoscopy procedures for varices during the 3-year period. Of these, 45 endoscopies were performed outside the recommended time schedule: 25 were booked incorrectly; 12 were booked correctly but experienced a delay; 8 were both booked incorrectly and further delayed. 20 patients died (none from haemorrhage). Of the 18 out of 50 patients who were followed up appropriately none experienced re-bleeding. Among the group who were non-compliant with the recommended scheduled for whatever reason (45 delayed procedures in 32 patients) three patients underwent five admissions for GI bleeding during follow-up. Secondary prophylaxis after a first variceal haemorrhage was performed in 18 patients of who 9 were non-compliant with guidelines; 6 of these were due to non-attendance and 3 due to delays in booking due to pressure on appointments.

Conclusion There is a clear difference in outcomes between those whose variceal bleed is followed up in a timely way with repeat endoscopy as per BSG guidelines and those who, for whatever reason, are non-compliant with the guidelines. Emphasis must be placed on correct booking procedures and efforts made to contact patients about imminent appointments to minimise morbidity and mortality from variceal rebleeding.

Competing interests None declared.

PMO-194 POLYPOID LESIONS IN THE UGI TRACT IN PATIENTS WITH PORTAL HYPERTENSION; EUS BEFORE YOU BIOPSY!

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Introduction The universal use of upper gastrointestinal (UGI) endoscopy in patients with portal hypertension in combination with increasing number of patients with liver disease has resulted in the detection of indeterminate upper GI lesions, other than obvious varices. Many of these lesions are found incidentally and biopsying them presents a dilemma for the endoscopists, as this may lead to serious complications. The aim of this retrospective study was to