Introduction *C.difficile* infection (CDI) is the most serious cause of hospital-acquired diarrhoea. Factors predicting outcome are unclear. We have assessed possible biomarkers of failure to respond to metronidazole in a prospective series of 43 inpatients with CDI.
Methods At diagnosis (T^1) and after 3 days (T^2) of metronidazole 400mg tds po (n = 33) or 500mg tds iv (n = 10), we assessed haemoglobin, white cell count (WCC), platelet count, C-reactive protein (CRP), creatinine, albumin, pulse, BP, temperature, stool frequency and Bristol score. Cure was defined as formed stool on 2 consecutive days within 7 days of starting metronidazole; failure was clinical deterioration needing treatment with vancomycin, colectomy and/or death within 28 days. Positive and negative predictive values (PPV, NPV) for failure of metronidazole were calculated.
Results 17 patients failed metronidazole: 7 needed vancomycin and 10 died. Regardless of outcome, there were significant falls in CRP, pulse, stool frequency between T^1 and T^2; however, neither WCC and Bristol stool score did not fall in treatment failures (Table). The other measures did not change in either group (data not shown). PPV for treatment failure of increases in WCC and CRP (as separate variables) between T^1 and T^2 were 67% and 57%, with NPV 75% and 65% (accuracies 72% and 63%), respectively. However, PPV and NPV for treatment failure of increases in both WCC and CRP between T^1 and T^2 were 100% and 62% (accuracy 75%).

Table. Mean (SEM); *p < 0.05, **p < 0.001 from T^1

Abstract PTH-010 Table 1

		WCC	CRP	Pulse	Stool frequency	Bristol score
Cured	T^1	13.2 (1.5)	113 (20.8)	95 (5.0)	3.6 (0.3)	6.3 (0.2)
	T^2	10.6 (1.1)**	61 (13.7)**	84 (4.0)*	2.3 (0.2)**	5.1 (0.2)**
Failed	T^1	9.3 (0.9)	102 (19.9)	100 (6.1)	3.5 (0.2)	6.5 (0.2)
	T^2	9.5 (1.0)	66 (14.5)*	91 (5.0)*	2.5 (0.3)*	5.6 (0.5)

Conclusion No single measure predicted failure to respond to metronidazole. However, all patients showing a rise in both WCC *and* CRP after 3 days of metronidazole failed treatment (PPV 100%). This simple predictive combination needs confirmation in a validation cohort, but should alert clinicians to the need for prompt escalation of therapy
Disclosure of Interest None Declared.

PTH-011 POLYPECTOMY MAY LEAD TO INADEQUATE SURVEILLANCE OF PATIENTS WITH A FAMILY HISTORY OF COLORECTAL CANCER

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Introduction Surveillance colonoscopy and polypectomy in those with a family history of colorectal cancer (CRC) may prevent malignant transformation of adenomatous polyps yet would then attenuate the apparent strength of familial aggregation. This study compares UK and US surveillance recommendations and considers the effect of polypectomy on family history.
Methods We performed a 'proof of principle' study of patients undergoing colonoscopy for 'family history' and polypectomy for large adenomas (= > 1cm) at our trust over an 18-month period. UK and US Surveillance recommendations for a hypothetical first degree relative (FDR) of each patient were calculated. Surveillance recommendations for FDRs were re-calculated assuming that polypectomy had not been performed in our patients and CRC had developed.
Results 14 patients were included with median age 50 years. UK guidelines recommended no screening or once-off colonoscopy for 9/14 FDRs of our sample, while US guidelines recommended at least 5 yearly colonoscopy for all FDRs. The *hypothetical* development of *CRC* in our patients resulted in increased surveillance recommendations for 12/14 hypothetical FDRs under UK guidelines but for only 3/14 FDRs under US guidelines.
Conclusion In those with a family history of CRC, surveillance colonoscopy and polypectomy may attenuate the apparent level of risk to those patients' first degree relatives. US guidelines, which consider CRC and advanced adenomatous polyps as equal familial risk factors, recommend more aggressive surveillance in the kindred of our study sample, yet may be considered excessive. Under UK guidelines CRC risk may be underestimated and recommended surveillance inadequate.
Disclosure of Interest None Declared.

PTH-012 THE IMPACT OF A DEDICATED MDT ON THE MANAGEMENT OF EARLY RECTAL CANCER

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Introduction The management of significant rectal neoplasms and early rectal cancers (ERCa) is vitally dependent on accurate pretreatment assessment and consideration of all therapeutic options. This study analyses the impact of a formal specialist ERCaMDT on investigation and management of ERCa.
Methods Patients with a final diagnosis of pT1 rectal cancer at our unit were identified for two 12-month periods (2006/2011). Data on investigations and therapeutic interventions were collected from prospectively recorded clinical data.
Results 19 patients from 2006 and 24 patients from 2011 were included. In 2006, 21% (n = 4) patients had undergone polypectomy of an unrecognised polyp cancer with 3 positive resection margins. 3 had MRI, none had trans-rectal ultrasound (TRUS) post-procedure with no use of Transanal Endoscopic Microsurgery (TEMS) to assess margin clearance; three undergoing radical resection. In 2011, 17% (n = 4) underwent 'inadvertent' polypectomy but 75% (n = 3) had both MRI and TRUS, with TEMS being used twice to confirm R0 polypectomy. In 2006, 60% (n = 9) lesions undergoing surgical excision had pre-operative MRI and 27% (n = 4) had pre-operative TRUS. Local excision (8 TEMS, 1 per-anal) was used in 60% (n = 9). In 2011, 75% (n = 15) lesions undergoing surgical excision underwent MRI and 85% (n = 17) TRUS. TEMS was initial treatment in 90% (n = 18). 2 patients underwent subsequent resection for adverse pathology and patient choice respectively.
Conclusion We demonstrate an improvement in the investigation of ERCa with implementation of an ERCaMDT and show an decrease in resectional surgery. Where suspicious rectal lesions are encountered, clinicians should be encouraged not to biopsy, and arrange staging via ERCaMDT prior to endoscopic or surgical therapy.
Disclosure of Interest None Declared.

PTH-013 MISSED OPPORTUNITIES FOR COLORECTAL CANCER DIAGNOSIS AND IMPACT ON MEDIUM-TERM SURVIVAL

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Introduction Delays to diagnosis of colorectal cancer (CRC) may impact upon patient outcome. There is an accepted false-negative rate for all endoscopic or radiological investigations, yet clinicians may be falsely reassured by negative findings. This study identifies cases of CRC diagnosed late after negative investigations and determines outcome in this cohort.
Methods A retrospective comparative cohort study was performed. Cases of CRC over a 12-month period were identified. Radiological

and endoscopic investigations performed up to 5 years previously were reviewed. Episodes of negative investigations were considered 'missed' opportunities for diagnosis. Clinical outcomes were compared using chi-squared test and Kaplan-Meier survival curves.

Results 396 colorectal cancers were identified with 214 (54%) males and median age 72. Of these, 29 (7%) patients had undergone negative investigations including colonoscopy (n = 8), flexible sigmoidoscopy (n = 7), barium enema (n = 7) and CT for abdominal symptoms (n = 20) ('missed' group) within the previous 5 years, median 817 days prior to diagnosis. Age, mode of presentation, tumour site, pT and pN stage were comparable between groups. Metastases at presentation were more common in the 'missed' group (28% *vs.* 14%, p = 0.046) and survival at median follow-up of 416 days was significantly reduced (66% *vs.* 88%, p = 0.0004).

Conclusion A small proportion (7%) of patients with colorectal cancer has undergone previous negative abdominal or colonic investigation. Such episodes may represent missed opportunities for diagnosis and survival is significantly reduced in such patients. The recognition that endoscopic and radiological investigations may miss lesions should encourage repeat or alternative interval investigations where concerning symptoms exist.

Disclosure of Interest None Declared.

PTH-014 TWO WEEK WAIT SYMPTOMS ARE PREVALENT IN BOWEL CANCER SCREENING PATIENTS WITH A POSITIVE FAECAL OCCULT BLOOD TEST BUT DO NOT PREDICT CANCER

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Introduction Studies have reported a high prevalence of lower gastrointestinal (LGI) symptoms in bowel cancer screening (BCSP) patients. However, symptoms are often vague and without characterisation their significance is unclear. This study investigates the prevalence and characteristics of lower gastrointestinal symptoms in screening patients and aims to determine the relevance of two week wait (2ww) symptoms in this cohort.

Methods A prospective cohort study was performed. BCSP patients presenting for colonoscopy over a 7-month period were included. Data on symptom prevalence, frequency and duration was collected and assessed against 2-week wait criteria. Associations between symptom prevalence and outcome were investigated using the two-tailed χ^2 test.

Results Symptom and outcome data was collected in 397 patients. LGI symptoms were reported by 282 (71%) patients and 37 patients (9%) were found to have colorectal cancer (CRC). Symptom prevalence was comparable between those with or without CRC (65% *vs.*72%, p = 0.473). Meanwhile, 2ww symptoms were reported in 148 (37%) of all patients. 2ww symptom prevalence was comparable in those with and without cancer (38% *vs.* 39%, p = 0.915).

Conclusion This study demonstrates that while 2ww symptoms are highly prevalent in a FOB positive cohort, they do not predict a finding of colorectal cancer. These findings suggest that 2ww symptoms could not be used to prioritise investigation in this cohort while in those patients referred with 2ww symptoms, additional FOB testing would offer little predictive utility. Further efforts to increase public awareness of cancer symptoms are required, whilst false reassurance from a negative result should be discouraged.

Disclosure of Interest None Declared.

PTH-015 PROSPECTIVE COMPARISON OF FICE AND I-SCAN FOR IN-VIVO CHARACTERISATION OF SMALL COLONIC POLYPS

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Introduction In-vivo characterisation of small colonic polyps has been reported using several technologies but with few prospective comparisons between them. We aimed to compare the accuracy of Flexible Spectral Imaging Colour Enhancement (FICE) and i-Scan in the assessment of polyps < 10mm. In addition the relationship between accuracy of white light assessment (WL) and resolution of endoscope was assessed.

Methods Patients undergoing screening colonoscopy through the UK BCSP were prospectively recruited. All procedures were performed by a single endoscopist with extensive experience in in-vivo diagnosis. For the FICE group Fujinon 410,000 pixel CCD and 650,000 pixel CCD colonoscopes were used with an EPX 4400 processor. For the i-Scan group Pentax 1.2 Megapixel colonoscopes were used with an EPKi processor. All polyps < 10mm were assessed sequentially using white light endoscopy (WL) and either FICE or i-Scan before resection. Predicted histology was recorded with both modalities and compared to the final histopathological diagnosis. In-vivo characterisation accuracy was analysed based on the resolution of the endoscopes used; standard definition - SD (410K pixel), high definition – HD (650K pixel) and HD+ (1.2M pixel).

Results In the FICE group 293 polyps of mean size 4.7mm were assessed in 170 patients. In the i-Scan group 209 polyps of mean size 4.3mm were assessed in 84 patients. There was no significant difference in WL accuracy between SD and HD endoscopes (70% vs 72.7%, p = 0.606), however accuracy was significantly higher with the HD+ 1.2megapixel CCD endoscopes (93.3%) compared to both the SD (70.0%, p = 0.0001) and HD (72.7%, p = 0.0001) endoscopes. Sensitivity was significantly greater with FICE using an HD endoscope compared to an SD endoscope (92.6% vs 83.3%, p = 0.048). Overall accuracy was significantly greater with HD+ i-Scan (94.7%) than SD FICE (82.7%, p = 0.0003) and HD FICE (88.8%, p = 0.0439). The use of FICE improved accuracy from 70.0% with WL to 82.7% (p = 0.014) and from 72.7% with WL to 88.8% (p < 0.001) for SD and HD endoscopes respectively. Only a minor gain over WL was seen with addition of iScan (93.3% to 94.7%, p = 0.68).

Abstract PTH-015 Table 1

	Sensitivity %	Specificity %	Accuracy %
SD WL	76.0	59.3	70.0
HD WL	75.8	66.7	72.7
HD+ WL	95.5	89.3	93.3
SD FICE	83.3	81.5	82.7
HD FICE	92.6	81.3	88.8
HD+ i-Scan	97.0	90.7	94.7

Conclusion

1. Only a small, non-significant gain in WL accuracy is seen between a 410K pixel SD endoscope and a 650K pixel HD endoscope. However diagnostic accuracy with WL improves significantly with a 1.2 megapixel endoscope.
2. FICE significantly improves accuracy when used with an SD or HD endoscope but the very high WL accuracy of a 1.2 megapixel endoscope allows no significant additional improvement with i-Scan.

Disclosure of Interest None Declared.

PTH-016 DEFECATING SCINTIGRAPHIC PHOTOGRAPHY AT ST GEORGE'S HOSPITAL: REVIEW OF FINDINGS AND CORRELATION WITH PATIENT SYMPTOMS

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