A careful collaborative approach to developing the new technique was undertaken during the first two years in this high volume centre. Data were collected prospectively on a dedicated database. Study endpoints included post-operative length of stay, 30 day morbidity [Clavien-Dindo classification (C-D)], readmission, reoperation, pouch function & failure.

Results There were no significant differences in patient age, sex, BMI or previous abdominal surgery between the two groups. Conversion rate was 9%; Median operative time was significantly shorter for open surgery – 208 (IQR 178–255) versus 285 minutes (IQR 255–325); $p < 0.0005$. The duration of laparoscopic surgery decreased significantly during the study period.

Laparoscopy significantly reduced length of stay: median 6 days (IQR 4.25–8), v 8 days (IQR 7–12); $p < 0.0005$.

Minor [C-D I/II] complications were significantly reduced with laparoscopy (32.8% v 50.4%; OR 0.48 [95%CI 0.27–0.87]). Complications [all grades] were reduced non-significantly after laparoscopic surgery. There were no significant differences in total complications – 51.3% after laparoscopy versus 61.5%; OR 0.66 [95%CI 0.37–1.17], anastomotic leak rate, major morbidity, 30 day readmission, reoperation and stoma closure rates.

Pouch failure has occurred in 14 patients (7.7%) overall, however there were 12 (11%) in the open group with only 2 (2.6%) in the laparoscopic group, although this is not statistically significant ($P = 0.172$). No significant difference was seen in pouch dysfunction rates.

Conclusion Laparoscopic restorative proctocolectomy significantly reduces length of stay and minor morbidity and can be offered to an increasing proportion of restorative proctocolectomy patients. A careful collaborative developmental process has occurred in a high volume centre to achieve these results.

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REFERENCE

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OC-085 PREDICTING LOCAL OR SYSTEMIC RECURRENCE AFTER CURATIVE RESECTION FOR COLORECTAL CANCER: THE ROLE OF ELASTICA STAINS TO OPTIMISE DETECTION OF VENOUS INVASION

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Introduction Following colorectal cancer resection, high-risk tumour pathology guides provision of adjuvant therapy and follow-up. Currently, routinely assessed features include local invasion, nodal status, venous invasion (VI), serosal invasion, differentiation and margin status. It was recently reported that elastica tissue stains increase frequency of detection of VI to > 50%, reducing interobserver variation, increasing its prognostic value (Roxburgh 2010, Kirsch 2013). Given recurrence is either local, systemic or both, we sought to examine the role of routinely assessed pathological criteria including VI (detected using elastica) in determining recurrence following resection for colorectal cancer.

Methods From an institutional database 555 patients undergoing curative resection between 1997–2009 were identified with recurrence and follow-up data available. Pathology data was taken from reports issued at the time. VI was assessed prospectively with routine elastica staining for 417 patients and retrospectively in 138. Analysis was performed with binary logistic regression. Due to a

high number of comparisons, to enter the multivariate model a significance level of < 0.01 was used.

Results Of 555 patients, 141 (25%) developed recurrence. Frequency of VI detection was 54%. On logistic regression, elastica detected VI, T stage, lymph node involvement, serosal involvement, margin involvement, tumour perforation, peri-tumoural inflammation (Klintrup grade) and tumour necrosis were predictors of recurrence (any site, all $P < 0.05$). Differentiation was not. On multivariate analysis VI (OR 3.27, $P < 0.001$), lymph node involvement (OR 2.34, $P = 0.005$), serosal invasion (OR 2.38, $P = 0.005$), Klintrup grade (OR 0.68, $P = 0.037$) were independently predictors of recurrence. Most recurrence was systemic (75%). The same features predicted systemic recurrence as did overall recurrence but on multivariate analysis, only VI (OR 2.90, $P = 0.004$), lymph node involvement (OR 2.27, $P = 0.012$) and necrosis (OR 1.63, $P = 0.013$) were independent predictors of systemic recurrence. In the 35 cases of local recurrence VI, T stage, lymph node involvement, serosal involvement and margin involvement were significantly related ($P < 0.05$). On multivariate analysis, only VI (OR 2.28, $P = 0.057$) and T stage (OR 2.53, $P = 0.003$) were independent predictors.

Conclusion Whilst several pathological features predict local and systemic recurrence after surgery, VI detected at increased frequency (54%) with elastica stains was the only consistent, independent predictor of recurrence, at least as important as nodal spread. These results support implementation of routine measures such as elastica staining to optimise reporting of VI.

Disclosure of Interest None Declared

OC-086 SURVIVAL BENEFIT OF FDG-PET ORIENTED SURGERY FOR RECURRENT COLORECTAL CANCER

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Introduction Pivotal treatment for localised recurrent colorectal cancer is surgical resection. Fluorine-18 fluorodeoxyglucose positron emission tomography (FDG-PET) has been accepted as an effective tool to identify disease localizations for patients with known or suspected recurrent colorectal cancer.

This study is to analyse the survival benefit of FDG-PET on the diagnosis and indication of surgical intervention for

Methods Consecutive 61 patients, with known or suspected recurrence of colorectal cancer based on elevation of tumour markers or abnormal findings on the follow-up CT image, underwent FDG-PET for 85 times between December 2003 and September 2009. Patients were aged between 39 and 94 years (median 66); 35 were male, 22 were Duke's A or B stage, and 31 had a history of colon cancer. The average period between operation and first FDG-PET was 24 months (range 4–114). Of 61 cases 50 had elevated serum CEA or CA19–9 (82.0%). For each case the diagnosis of FDG-PET image was compared with that of CT image and the final diagnosis.

Results Recurrence developed 2 times in average (range 1–6).

Of 61 patients five were identified recurrence by FDG-PET solely and indicated operation for 7 times. One of four shows disease-free survival for 70 months after common iliac replacement operation.

FDG-PET showed one false – positive and three false – negative findings. Totally, the sensitivity of FDG-PET was 93.3% and its accuracy was 91.8%, whereas those of CT were 85.0% and 83.6%, respectively.

Of 61 patients 19 had diffused disease spread by FDG-PET findings and were judged as contraindication of operation and the other 42 with localised disease spread received operation for 90 times (liver 28, lung 14, local 37, local with distant meta 5, etc.). Cumulative 1-year and 3-year survival ratios of operation cases after first recurrence were 95% and 80%, whereas, those of contraindication

cases were 60% and 25%, respectively. At present, the median survival period after recurrence of operation cases was longer than that of contraindication cases (37 months v.s. 13 months). Our results suggested that one FDG-PET oriented operation roughly corresponded to one year survival benefit with restart.

Conclusion Conclusion: FDG-PET could identify malignant lesions at earlier stage, and was an effective modality to evaluate not only disease spread but distant metastasis for recurrence of colorectal cancer. In this study, we first concretely demonstrated that FDG-PET oriented surgical indication had survival benefit for recurrent colorectal cancer.

Disclosure of Interest None Declared

OC-087 SCREEN-DETECTED COLORECTAL CANCERS ARE ASSOCIATED WITH AN IMPROVED OUTCOME WHEN COMPARED WITH INTERVAL CANCERS WHEN MATCHED FOR STAGE

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Introduction Colorectal cancers detected through the NHS Bowel Cancer Screening Programme (BCSP) have been shown to have a more favourable outcome compared to non-screen detected cancers. The aim of this study was to identify whether this was solely due to the earlier stage shift of these cancers, or whether there were other factors involved.

Methods A combination of a regional colorectal cancer registry (Northern Colorectal Cancer Audit Group) and the BCSP database were used to identify screen detected cancers and interval cancers (diagnosed after a negative faecal occult blood test, before the next screening round). All cancers were diagnosed between April 2007 and March 2010, within the North East of England. For each Duke's stage, patient demographics, tumour characteristics, and survival rates were compared between the screen detected and interval cancer groups.

Results 322 screen detected cancers were compared against 192 interval cancers.

Significant differences highlighted in bold, $p < 0.05$. Mean follow-up 32 months.

Conclusion With equivalent patient demographics and tumour characteristics, the improved survival of screen detected cancers over interval cancers for Stages C and D suggest that there may be a biological difference in the cancers in each group. Although lead-time bias may have a role, this may be related to a tumours propensity to bleed and therefore may reflect detection through current screening tests.

Disclosure of Interest None Declared

Abstract OC-087 Table

	Dukes' Stage A		Dukes' Stage B		Dukes' Stage C		Dukes' Stage D	
	Screen	Interval	Screen	Interval	Screen	Interval	Screen	Interval
Gender	No Difference		No Difference		More Men	More Women	No Difference	
Deprivation Level	No Difference		No Difference		No Difference		No Difference	
ASA Grade	No Difference		No Difference		No Difference		No Difference	
T Stage	No Difference		More T3	More T4	No Difference		No Difference	
N Stage	N/A		N/A		More N1	More N2	No Difference	
Tumour Site	No Difference		No Difference		More Left-Sided	More Right-Sided	No Difference	
Survival Rate	No Difference		No Difference		Better	Worse	Better	Worse

OC-088 PROSPECTIVE PILOT STUDY TO INVESTIGATE TRANSCUTANEOUS SACRAL NERVE STIMULATION FOR FAECAL INCONTINENCE

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Introduction Sacral nerve stimulation (SNS) is an effective treatment for faecal incontinence (FI). However it is expensive, it requires two operations and has a risk of infection, implant migration and pain. Transcutaneous SNS is non-invasive and cheap. Only one small study has previously reported its use for FI. The aim of this study is to further assess the efficacy of transcutaneous SNS for FI.

Methods Recruited patients self-administered transcutaneous SNS for 12 hours a day, over four weeks. A two week bowel diary was kept for the final two weeks and compared to baseline. St Marks FI scores, a visual analogue scale assessing satisfaction with bowel habit, Rockwood FI QOL scores and SF-36 QOL scores were obtained.

Results Ten patients were recruited. Two achieved complete continence. There were significant reductions in the frequency of FI episodes per week, 9.5 (7.5) to 3 (7.38); $p = 0.03$, and in the frequency of defecation per week, 25.5 (19.5) to 14.5 (14.9); $p = 0.007$. There was a significant improvement in the ability to defer defecation (1(1.25) to 4.5 (4.5) minutes, $p = 0.02$). There was a significant improvement in the St Marks FI score, 20 (5.25) to 14.5 (8.0); $p = 0.01$. There was a significant improvement in the bowel habit satisfaction visual analogue scale 8.5 (20) to 45 (33); $p = 0.008$. There were no significant changes in the Rockwood FI QOL score, or in the SF-36 QOL score. No complications were reported.

Conclusion Transcutaneous SNS appears to be an effective and safe treatment for FI.

Disclosure of Interest None Declared

Pathology free papers

OC-089 EPIGENETIC CONTROL OF GI INFLAMMATION VIA THE METHYL-BINDING PROTEIN MBD2

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Introduction Methyl-CpG binding protein domain protein-2 (Mbd2) is a transcriptional co-repressor that binds to methylated DNA. Mbd2 can recruit a nucleosome remodelling complex which contains chromatin remodelling and histone deacetylase properties. Mbd2 deficient mice are viable and fertile. However, they display a dysregulated immune phenotype with an aberrant T cell cytokine response and susceptibility to intestinal helminth infection (1). This immunological phenotype has not been explored in the GI tract.