Increased vascularity of colorectal neoplasia creates bleeding detected by Fecal Occult Blood tests (FOBt). As bleeding is sporadic & unevenly distributed within stools, multiple testing may be required. UK bowel cancer screening programme (BCSP) kits contain 6 windows & subjects returning 5 or 6 positive results are termed “Abnormal” & referred to colonoscopy. If 1–4 windows are positive, the result is initially “Unclear” & 2 further kits are submitted, further positivity leads to colonoscopy (“Weak positive”). If no further blood is detected, subjects are deemed “Normal” & retested in 2 years.

**Aim** to study FOBt positivity in detail & whether particular patterns are associated with neoplasia rates that indicate the screening algorithm should be changed.

**Methods** We selected all subjects from one hub completing 2 screening episodes between 2007–9. Each episode included up to 3 kits and 18 windows. 95 possible combinations were identified. The number of positive windows compared to the total in a given episode was expressed as a “positivity ratio”, ranging from 0–100%. Each combination leading to colonoscopy was analysed. Abnormal (83–100% positivity) & Unclear (11–83% positivity) groups were matched to neoplasia detection rates. Subjects with cancer detected in episode 2 following an Unclear result in episode 1, had their episode 1 pattern analysed.

**Results** FOBt from 284,387 subjects resulted in 4,000 colonoscopies, diagnosing 286 cancers. The overall cancer rate was 7.1% & adenoma rate 39.9%. The cancer rate was 21.3% in the Abnormal group and 5.8% in the Weak positive group. Cancer detection increased from 1.9–24.5% in linear correlation with increasing positivity of windows, ranging from 11–83% of windows positive. Equivalent percentage positivity rates may or may not lead to colonoscopy depending on the particular pattern. A combination of 4 positive windows in kit 1 followed by 2 normal kits (4NN) equates to a positivity rate of 22% & is currently categorised in the Normal group & doesn’t lead to colonoscopy. Other combinations with 22% window positivity do lead to colonoscopy & a cancer detection rate of 5%. There were 260 subjects with a 4NN combination in episode 1 not leading to colonoscopy & 5 of these subsequently had cancers detected following different combinations in episode 2.

**Conclusion** This study demonstrates higher ratios of positive windows; detect higher rates of cancer. At present, in the UK some subjects with 11% positive windows proceed to colonoscopy, while others with a rate of 22% (all at kit 1) do not. Based on these findings, further work examining the entire BCSP population, including the costs & benefits of changing the algorithm is in progress.

**Disclosure of Interest** None Declared
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 [Claven-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 – 206 (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), vs 8 days (IQR 7–12); p < 0.0005.

Minor [C-D I/II] complications were significantly reduced with laparoscopy (52.8% vs 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 – 51.5% 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.

**Disclosure of Interest** None Declared.

**REFERENCE**


**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