Aims: This study aims to establish the risk factors present in a cohort of patients with grade 3 anal intraepithelial neoplasia (AIN3) and the rate of progression to anal squamous cell carcinoma (SCC).
Methods: Patients with a histological diagnosis of AIN3 in Cardiff and Vale NHS trust between 2007 and 2012 were reviewed.
Results: 26 patients were identified with a mean follow up of 3 years. 11 (42%) presented with SCC on a background of AIN3, 15 (58%) with AIN3. 73% of patients were current or ex smokers. Of patients presenting with AIN3, 7 (47%) reported previous anogenital warts and 3 (20%) were HIV positive. 6 women (35%) had concurrent genital intraepithelial neoplasia (4 cervical, 1 vulval, 1 vaginal). 1 patient (4%) was immunosuppressed after a renal-allograft. 10 patients underwent chemo-radiotherapy for SCC, with no recurrence of AIN3 whilst 1 died of metastatic disease. 60% of AIN3 patients were disease free at the time of the study after local excision. The rate of progression of AIN3 to SCC was 20% despite on-going surveillance and treatment.
Conclusion: The cohort demonstrated known risk factors for AIN3 and showed a rate of progression to SCC higher than previously reported.

0588: FACTORS PREDICTIVE OF WOUND INFECTION IN A COLORECTAL UNIT. A CASE-CONTROL STUDY

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Aim: Identifying factors predictive of post-operative wound infection in those undergoing surgery on a colorectal unit.
Method: Patients with wound infections or dehiscence were identified using a prospectively collated database over one year. Patients were randomly matched to other colorectal control patients. Preoperative and operative factors were compared between groups using conditional logistic regression.
Results: 56 wound infections were identified in 647 operations (8.6% infection rate). The median age was 61 and 48% were women. 25% were obese. 57% were emergency operations, 88% of patients with wound infections had open or laparoscopic-converted to open operations. 40% of operations were ASA grades (III/ IV). Analysis showed obese patients undergoing open surgery had the highest risk of wound infections (odds ratios 4.8, 4.5 respectively). Patients with cancer had lower risks of infection (odds ratio 0.4). Median post-operative stays for wound infection patients were double those without infection.
Conclusion: Open surgery in obese patients has the highest risk of wound infections and doubles post-operative stays. More thought is needed in preventing wound infections in this patient group. Changing our practice for obese patients may begin solving the problem, for example considering altered wound closing methods, double dosing antibiotics or using topical antibiotic solutions.

0614: THE ROLE OF ENDORECTAL ULTRASOUND IN THE MANAGEMENT OF RECTAL LESIONS IN A TERTIARY CENTRE

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Aims: Endorectal ultrasound (ERUS) is a useful adjunct in staging rectal lesions. In early rectal cancer, determination of T stage has a vital role in determining radical or local excision. Our aim was to assess the accuracy of ERUS in identifying mucosal/submucosal lesions and thus their suitability for transanal endoscopic microsurgery (TEMs).
Methods: Patients undergoing ERUS were identified from a prospective database at a tertiary Colorectal centre over a 25-month period.
Colonoscopic and ERUS findings with clinical data were analysed in relation to choice of surgical procedure and histopathology. Our primary outcome measure was T stage measured on ERUS in correlation to staging of the resected specimen.
Results: Sixty-seven patients underwent ERUS. A total of 43 patients not receiving neo-adjuvant therapy were included for whom post-resection histopathology was available. TEMs was performed in 34 and total mesorectal excision in 9. ERUS was accurate in 29 of the 43 patients (67%). Identification of $\geq$T2 lesions had a sensitivity of 100% and a specificity 64%.
Conclusions: In our experience, ERUS is valuable in confirming clinical suspicion in addition to other modalities that a lesion is confined to the submucosa and therefore suitable for TEMS; however rectal lesions tend to be overstaged.

0622: MANAGEMENT OF COMPLEX RECURRENT PERINEAL HERNIAS – A CASE SERIES

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Aims: With the advent of cylindrical abdomino-perineal excision of rectum (APER), perineal hernias are increasingly common. We present a case series of patients with perineal hernias following APER, including our management and a review of other strategies.
Methods: The casenotes of patients over a 48-month period were reviewed. The type of surgery, length of time until hernia presentation and management plan was recorded.
Results: Eleven patients out of 38 (28.9%) that underwent APER (5 open, 6 laparoscopic) were diagnosed with perineal hernias during follow-up. The median length of time until diagnosis was 18 months (range 6-27 months). Eight of these patients were asymptomatic or had minimal discomfort and were managed conservatively. Three patients underwent surgical reconstruction (biological mesh or gracilis flap) for symptomatic hernias. Despite reconstructive efforts, one patient had further recurrence posterior to their flap, with extension into the adductor compartment of the thigh, requiring further repair.
Conclusions: Debate exists regarding the optimal operative technique in managing these hernias, however no consensus exists. Symptomatic perineal hernias can be severely debilitating and require operative repair, despite which, secondary recurrences can still occur. We suggest that surgical options should be discussed and carried out with the input of a Plastic surgeon.

0632: COLORECTAL CANCER PATIENTS: REVIEW OF MANAGEMENT PRE AND POST IMPLEMENTATION OF FOLLOW-UP GUIDELINES IN A DISTRICT GENERAL HOSPITAL

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Aims: Bowel cancer is the third most common cancer in England. With early diagnosis and advances in management, survival rates at five years have improved to 90%. In our district general hospital, post-surgical follow-up occurs in specialist colorectal cancer clinics involving an intensive regimen which include CEA checks and CT scans. This audit's aim was to evaluate management of all patients pre and post-implementation of the follow-up protocol based on the Sussex Cancer Network guidelines.
Methods: An audit was performed pre and post-implementation of the protocol (implemented in June 2012). Patients were identified for inclusion via the clinic appointment systems and investigation results were reviewed via the hospital's clinical results online system.
Results: In total, 400 new patients were identified for inclusion. The results are: 1) 43.75% of the post-implementation group had CEAs done at 3 months compared to 13.33% of the pre-implementation group, 2) 61.54% of the post-implementation group had CEAs done at 6 months compared to 6.17% of the pre-implementation group, 3) 71.25% of the post-implementation group had a CT scan at 6 months compared to 3.34% of the pre-implementation group.
Conclusions: These results show improvements in the follow-up management of the colorectal patients since the implementation of the colorectal cancer follow-up guidelines in our district general hospital.

0643: COLORECTAL CANCER YIELD IN PATIENTS WITH A PREVIOUS NEGATIVE BOWEL CANCER SCREENING PROGRAMME (BCSP) COLONOSCOPY

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Introduction: Patients with a positive faecal occult blood test invited for screening colonoscopy may have undergone previous colonoscopy. Excluding such patients from a repeat colonoscopy may reduce waiting lists and avoid invasive investigations. We investigate the prevalence of previous colonoscopy in BCSP patients and consider the need for repeat colonoscopy.
Methods: All patients undergoing BCSP colonoscopy over a 30-month period at our unit were identified and cross-referenced against the preceding 3-years. New diagnoses of colorectal cancer were identified and cancer yield in those with and without recent colonoscopy compared using the chi-squared test.

Results: 1419 BCSP colonoscopies (1339 patients) were performed. 109 were repeats with median interval to repeat 378 days. Indication for prior colonoscopy included prior BCSP invitation (n=90), polyp surveillance (n=6) and symptoms (n=13). Colorectal cancer was identified in 111 patients, though none had had previous colonoscopy. Cancer yield in first time BCSP colonoscopy was greater than in repeated colonoscopy (8%vs 0% p=0.002).
Conclusion: Cancer yield is reduced in BCSP patients with a recent negative colonoscopy. Excluding such patients would reduce pressure on endoscopy units and the morbidity of the procedure but increases the risk of missing pathology. To inform national guidance larger studies would be needed.

0666: HAND-SEWN ANASTOMOSIS INCURS HIGHER RISK OF LEAK FOLLOWING REVERSAL OF ILEOSTOMY COMPARED TO STAPLED TECHNIQUE

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Aim: To investigate the anastomotic leak-rate following reversal of ileostomy operations in a single centre.
Methods: A retrospective database of reversal of ileostomy operations between January 2007 and December 2010 was compiled. Technique and materials used in anastomosis construction, patient demographic, and pathological data was collected. Data was analysed to determine the anastomotic leak-rate and factors influencing risk of leak.
Results: 123 operations were identified. 5 anastomotic leaks were identified (leak-rate 4.07%). Hand-sewn (n=4/30, 13.33%) versus stapled technique (n=1/93, 1.08%) significantly incresed risk of leak, p=0.0125. No other factors influenced risk of leak. All leaks required laparotomy, there was no mortality.
Conclusions: A hand-sewn versus stapled anastomosis significantly increases the risk of leak following reversal of ileostomy.

0674: LAPAROSCOPIC TECHNIQUE REDUCES DURATION OF HOSPITAL ADMISSION FOLLOWING ANTERIOR RESECTION

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Aim: To investigate short-term outcomes following laparoscopic versus open anterior resection.
Methods: A retrospective database of anterior resections between January 2007 and December 2010 was compiled. Data for surgical approach, materials and methods used in construction of anastomosis, anastomotic leak, and duration of postoperative admission was collected & analyed.
Results: 173 anterior resections were identified. 10 leaks were identified but no significant factor was identified as influencing risk of leak. Mean duration of hospital stay was significantly lower following laparoscopic (7 days, SD±5.4) and laparoscopic-converted (10 days, SD±6.8) operations compared to open procedure (16 days, SD±25.0), 1-way ANOVA p=<0.0001.
Conclusions: Laparoscopic technique reduces duration of hospital admission following anterior resection compared to open technique.

0726: THE ROLE OF 'NEUTROPHIL-TO-LYMPHOCYTE RATIO' IN PREDICTING OUTCOMES OF PATIENTS WITH LOCALLY ADVANCE RECTAL CANCERS

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Aims: To study the role of pre-treatment 'neutrophil-to-lymphocyte ratio (NLR)' as a new predictive marker in management of patients with locally advance rectal cancer(LARC).
Methods: We undertook a retrospective review of all consecutive patients with LARC who underwent curative treatment at Mount Vernon Cancer Centre between 1998-2008. Patients with incomplete data were excluded. We analysed the role of NLR in predicting (i) clinical staging, (ii) response to neoadjuvant chemoradiotherapy, and (ii) long-term prognosis. Statistical significance is set at p <0.05.
Results: A total of 225 patients (M:F=2:1;Age(mean;range)=64:30-89 years) were included. The NLR increased proportionally with higher clinical T-stage (F (2,200) =9.5, p <0.001) and held predictive value (p 0.001;CI 0.1,0.4). There was significant tumour down-staging (cTNM vs ypTNM; T-stage = Z -6.8,p <0.001, N-stage = Z -6.3,p <0.001), but NLR had no role in predicting response (OR 0.86, p 0.13). For long-term outcomes, NLR is associated with high death rate in univariate analysis (t 2.16, p 0.03) but not in multivariate regression analysis (local recurrence-OR 1.17, p 0.18; distant metastasis – OR 1.14 p 0.12;death rate - OR 0.97, p 0.75).
Conclusion: Pre-treatment NLR may have a role in predicting preclinical staging and high death rate in patients with LARC.

0746: ALTERATION IN ENTEROENDOCRINE CELL POPULATION IN EARLY COLONIC NEOPLASIA

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Aims: Although enteroendocrine cells (EECs) play a critical role in regulating gastrointestinal physiology their role in colorectal carcinogenesis is under-investigated. EECs express receptors for short-chain fatty acids (SCFAs), the bacterial fermentation products of dietary fibre, including butyrate. We investigated the association of EEC expression with faecal SCFA levels in normal and neoplastic colonic epithelium.
Methods: Endoscopic biopsies from normal and adenoma patient groups were taken at the morphologically normal mid-sigmoid and at the adenoma and its contralateral field (where present). Immunohistochemical staining was performed for EEC markers: chromogranin-A (CgA), GLP-1 and somatostatin. Stool samples were collected for SCFA analysis.
Results: CgA expression was observed in a small number of singly dispersed cells, accounting for up to 1.4% of those in normal crypts. In mid-sigmoid sections the CgA+ fraction was significantly higher in low butyrate groups (1.82%) than in high ones (1.11%) (P = 0.037). Within the contralateral field the CgA+ fraction was reduced overall, but association with butyrate levels was lost.
Conclusions: The EEC population is reduced in the vicinity of colonic neoplasia, suggesting a field effect. Numbers also decreased with increasing SCFA concentrations at sites distant to the neoplasm. EECs may therefore play a role in early colorectal carcinogenesis.

0763: HOW EFFECTIVE IS A NOVEL BOWEL MANAGEMENT PROGRAMME, INCLUDING BIOFEEDBACK, FOR THE MEDIUM-TERM MANAGEMENT OF PATIENTS WITH FAECAL INCONTINENCE?

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Introduction: There has long been conflicting evidence on the efficacy of biofeedback when used in faecal incontinence (FI). This study evaluated the effectiveness of biofeedback in patients with FI within a novel bowel management programme.
Methods: Prospective data was collected from 2009 -2012 of 200 consecutive patients who underwent a 3-stage nurse specialist-led bowel management programme. Outcomes were assessed using bowel diaries, Likert scale and Wexner/SF-36 scores with patients being discharged if satisfied with symptom improvement (primary endpoint). All discharged patients received telephone follow-up.
Results: 58 patients met the primary endpoint and were discharged at stage 1, 97% still met the primary endpoint at mean follow-up of 20 months. 65/72 stage 2 patients met the primary endpoint, with improvements in defecations/day [mean baseline: 3.8 (1-20) vs. post-biofeedback: 1.8 (1-6) P<0.001], deferment time (mins) [mean baseline: 5.2 (0.5-60) vs. post-biofeedback: 12.0 (2-60) P<0.002] and incontinent episodes/week [mean baseline: 3.6 (0-35) vs. post-biofeedback: 0.4 (0-7) P<0.001]. There were significant improvements in SF-36, Likert/Wexner scores. 88% of stage 2 patients still met the primary endpoint at mean follow-up of 18 months. 70 patients moved onto stage 3 with 7% requiring surgery.
Conclusion: Biofeedback has a significant role in the medium-term management of FI.

0769: ANTERIOR RESECTION SYNDROME- EFFECTIVE SHORT-TERM MANAGEMENT VIA A NOVEL BOWEL MANAGEMENT PROGRAMME

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