Minimally invasive oesophagectomy in Wales

David S.Y. Chan, Andrew L. Baker
Wrexham Maelor Hospital
This entry is for: Registrar prize

Background: The uptake of minimally invasive oesophagectomy remains low in the UK. As the only centre in Wales which offers this approach, our aim was to determine the short-term outcomes following endoscopic 2-stage oesophagectomy with stapled intra-thoracic anastomosis.

Methods: Details of 50 consecutive patients [88 per cent (44) male, median age (range) = 66 (42 to 83) years] with operable mid to distal oesophageal and gastro-oesophageal junctional cancer who underwent endoscopic 2-stage oesophagectomy were analysed prospectively between June 2009 to November 2013. Primary outcome measure was overall and disease free survival from diagnosis. Secondary outcome measures were length of hospital stay, morbidity, mortality, lymph node harvest and margin involvement.

Results: Median follow-up was 25 months. Seventy per cent of patients (35) underwent neoadjuvant chemotherapy. Seventy eight per cent of patients had stage II or greater disease. The median length of hospital stay (range) was 10 days (8 to 104). There was a trend towards a decreasing length of stay as experience increased. Overall 30-day operative morbidity was 40 per cent (n=20) and there was no 30, 60, 90-day or in-patient mortality. Anastomotic leak occurred in 6 patients (12 per cent). The median lymph node harvest was 20 (range 7 to 35) nodes. Nine patients (18 per cent) had involvement of the circumferential resection margin (all T3). Overall and disease free 2-year survival rate was 84.2 and 80.9 per cent respectively.

Conclusion: Endoscopic 2-stage oesophagectomy can be performed safely and effectively with good early oncological and surgical outcomes.
Liver resection for colorectal liver metastases in an ageing population: A risk worth taking?

Rees MD, Winson D, Kaposzta Z and Kumar N
Cardiff Liver Unit, University Hospital of Wales, Cardiff
This entry is for: Registrar prize

Introduction
Recent advances in surgical technique, anesthesia and intensive care has greatly reduced morbidity and mortality associated with liver resection for colorectal liver metastases. This could widen the spectrum of candidates suitable for surgical treatment, particularly amongst the elderly population. We assessed the outcomes of the elderly (age 70+) following liver resection for colorectal metastases at our unit and compared these with a younger patient population (age <70).

Method
Patients undergoing liver resection for colorectal liver metastases at our unit from 01/01/03 to 31/12/12 were included for study. Patients were divided into elderly (age 70+) and younger cohorts and analyzed independently. Primary variables assessed were overall and disease free survival, 90 day all cause mortality and morbidity. Secondary variables assessed were patient and tumor demographics, hospital stay, procedure type (major/minor), R1 resection rate, intra-operative blood loss and prescription of adjuvant chemotherapy.

Results
A total of 215 patients were divided into elderly (n=75) and younger (n=140) cohorts. Patient and tumor demographics were similar in both groups, although the younger cohort tended to have more nodal disease at presentation (p=0.008) and also tended to receive more adjuvant chemotherapy (p<0.001). R1 resection rate was 8.8% with no difference seen between either group (p=ns). Perioperative blood loss, hospital stay, 90-day mortality and morbidity were also similar (p=ns). Overall 5-year survival was 43% and similar in both groups as was disease free survival (p=ns).

Conclusion
Mortality, overall and disease free survival was similar in our elderly compared to younger population, although elderly patients tended to receive less adjuvant chemotherapy. Our data supports growing evidence that elderly patients should not be excluded from liver resection for colorectal liver metastases based on chronological age alone.
Defunctioning loop ileostomy in rectal cancer surgery – help or hindrance?
O Rutka, M Ramcharn, GL Williams, KJ Swarnkar
Department of Colorectal Surgery, Royal Gwent Hospital, Newport, UK

Registrar Prize
This entry is for: Registrar prize / Junior prize / Student prize (please delete as appropriate)

Introduction: Defunctioning loop ileostomies are frequently formed during curative rectal cancer surgery. There are still no definitions as to when they should be used or not.

Aim: To analyse incidence of ileostomy formation during anterior resection, outcomes of these operations as well as to audit the rate of reversal of loop ileostomies in a single institution.

Methods: A prospective database of all patients undergoing elective anterior resection for rectal cancer from January 2007 to December 2011 was interrogated. Outcome measures that were analysed were: use of neoadjuvant therapy, length of hospital stay (LOS), complications, anastomotic leak, reversal rate and length of follow up.

Results: 131 patients underwent anterior resection. Fifty five patients (42%) had a loop ileostomy fashioned, of these 55 patients 65% (n=36) had neoadjuvant therapy. Mean LOS for a patient with loop ileostomy was 13 days and for those without 12 days. The morbidity rate for patients with loop ileostomy was higher than in those without (24% vs 19%). There was no significant difference in an anastomotic leak between patients with ileostomy and without (7.3% vs 6.6%). There was one case of 30 day mortality in group without ileostomy and none such in ileostomy group. Out of 55 fashioned ileostomies only 69% (n=38) have been reversed. The most common reasons for non-reversal were pelvic sepsis due to leak, recurrence of disease, patients death and patient being unfit for operation due to other conditions.

Conclusion: Most loop ileostomies are fashioned in patients that have undergone neoadjuvant therapy. Unfortunately, vast numbers of loop ileostomies (31%) are not being reversed. Loop ileostomy does worsen morbidity in some patients. It is still not clear when to omit loop ileostomy in rectal resection, a randomised trial may help shed light on this quandary.
The implications of measuring abdominal aortic aneurysm (AAA) internal wall diameter: is it safe?

Junior Prize

HS. Suttenwood, NC. Tanner, T. Frankel, A. da Silva
Department of Vascular Surgery, Wrexham Maelor Hospital

Introduction: The National Abdominal Aortic Aneurysm Screening Programme (NAAASP) was initiated in April 2009 for all men aged 65. In Wales, since May 2013 the standard of measuring inter to inner wall diameters (ITI) has been adopted, whereas previously many centres were measuring the outer to outer (OTO) wall diameter of the aorta. This could have serious implications when considering whether an aorta is aneurysmal and whether it requires follow up surveillance or surgery.

Aim: To evaluate the discrepancy between measurements of the inner to inner and outer to outer wall diameters of AAA’s on Ultrasound scan (USS) and Computerised Tomography (CT).

Methods: A retrospective study identified 110 consecutive non-screening patients over a 12 months period with both ITI and OTO wall measurements performed by 17 qualified AAA sonographers. There were 27 females and 83 males identified with median age of 78 years [56-92]. 14% with ITI USS had a CT abdominal aorta.

Results:

<table>
<thead>
<tr>
<th>Aortic diameter</th>
<th>ITI measurement</th>
<th>OTO measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-aneurysmal  (&lt;3.0cm)</td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td>Small (3.0-4.4cm)</td>
<td>57%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Medium (4.5-5.4cm)</td>
<td>34%</td>
<td>47%</td>
</tr>
<tr>
<td>Large (≥5.5cm)</td>
<td>0%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

The mean difference between ITI and OTO wall measurements is 3.9mm [range 0.8-9.0mm]. This discrepancy remains constant even in larger AAA’s. However, the mean difference between ITI USS and CT measurement was 6.1mm [range 0.0-16.0mm].

Conclusion: Due to the measurement discrepancies between the different radiological modalities, should the referral size for CT evaluation be lowered to 5cm with ITI USS examination?
Effect of Prucalopride on Management of Chronic Constipation in Our Practice.

Dhruva Rao PK, Lewis M, Haray PN
Prince Charles Hospital, Merthyr Tydfil
This entry is for: Registrar prize

Aim: To assess the effect of prucalopride on the management of patients with chronic constipation in our unit.

Method: Analysis of a prospectively maintained database of all patients started on prucalopride for chronic constipation between April 2011 and April 2013. Cleveland Clinic Constipation Score (CCCS) questionnaires were administered prior to starting treatment with prucalopride and at their first follow-up visit to assess change in CCCS scores in 50 patients.

Results: A total of 118 patients (median age: 47.5 years & 3 males) were started on prucalopride in this period. Of these, 10 pts (8%) had slow transit constipation, 27 (23%) had obstructive defecation syndrome and 26 (22%) had a combination of both. No demonstrable delayed transit or obstructive defecation was demonstrated in 38 (32%) patients. Nearly 75% patients were on 3 laxatives prior to starting prucalopride. The patients were started on 1mg or 2mg according to their age. Median follow-up period is 13 months (range 4-25) and 71% reported a good symptomatic improvement while the remaining third had no response in spite of dose titration. Of those with good response, only 3 patients stopped taking prucalopride (1 due to palpitation despite reduction in dose & 2 others preferred to try colonic irrigation). A third of patients (n=27) who initially responded well, showed decreased efficacy after a median duration of 6 months needing additional occasional laxative (mostly a bulking agent). A further 2 patients continue to use regular bulking agents +/- irrigation in addition to prucalopride.

Of the 50 patients filling in the CCCS questionnaires (15 pts non responders), 32 (64%) reported improved scores with a median improvement of 2 points per item. While 10 (20%) reported no change in CCCS scores, 8 (15%) reported worse scores. Interestingly, while 4 non responders reported improvement in their CCCS, 4 responders reported no improvement and a further 3 responders reported worsening scores.

Conclusion: Prucalopride has improved the management of chronic constipation in two-thirds of patients irrespective of the underlying cause.
Teaching based on adult learning principles is effective at improving clinical note-keeping in medical undergraduates.

D Maclean¹, R Thomas¹, T Boyce¹ and MJ Stechman²
¹Royal Gwent Hospital, ABUHB and ²Institute of Medical Education, Cardiff University School of Medicine.

Aims: Medical note-keeping is a key skill (TD09, GMC) that, historically, is poorly performed in the clinical environment and this can impact upon patient safety. We evaluated the effect of a large-scale learning event based on adult learning principles that involved the use of digital video clips of simulated ward-rounds to teach medical note-writing skills to final year medical students.

Methods: We developed a novel interactive teaching session on medical note-keeping for an entire year group of final year medical students (n=280), based upon Knowles’ assumptions of adult learning (‘need to know, experience (including error), immediate relevance, problem-centered, motivation’).¹ Students watched digital video of three simulated surgical patient-doctor interactions (doctors and actors) and were asked to write appropriate note entries in real time (pre-intervention). A brief teaching session on good note-keeping was delivered and the above process was repeated (post-intervention). A random sample of student scripts were obtained with student consent and the content was objectively scored (0-17) for brevity, patient and clinical data, and structure by two observers who were blinded as to whether the scripts were pre- or post-intervention. Descriptive statistics and non-parametric tests were used to evaluate differences, P<0.05 was assumed to be statistically significant.

Results: Paired (pre and post-intervention) scripts of 50 students were assessed. Pre-intervention 12% of scripts exhibited no formal structure for the clinical record, and 40% of students used the structure provided in the teaching. Post-intervention all students used structured entries and 72% used the recommended structure, P=0.0010 (Chi-squared test). Post-intervention, 84% of students had equal/improved content scores and as a group the cohort demonstrated increased scores for patient and clinical data. The overall median content score (range) increased from 10(3-17) to 12(7-17), P=0.00016 (Mann-Whitney test).

Conclusion: Using educational theory as the basis for this session in combination with authentic simulated doctor-patient interactions, a brief teaching intervention and the opportunity for students to practise medical note-keeping appears to provide significant short-term improvement in this important clinical skill. Further work is required to determine whether this change is reproduced in the workplace.

Fasting times: are we our starving patients? – A single centre experience

Dr Gwyn Dixey, Dr Anokha Oomman, Mr Buddika Jayathilaka
(This entry is for: Junior prize)

Background: Appropriate pre-operative fasting is essential as it helps reduce the incidence of pulmonary aspiration. However, despite official guidelines, patients are frequently fasted much longer than recommended. This is often because of delays and changes in operating room schedules. Prolonged fasting time is not only distressing to the patient but can also cause malnutrition, slow recovery and prolonged hospital stay. The metabolic response to long fasting leads to intensification of the stress response occurring after trauma, which is mainly manifested as increased insulin resistance.

Aim: To assess the pre-operative fasting times of patients undergoing elective/emergency procedures in the department of General surgery at a district general hospital using the AAGBI guidelines as a standard.

Methodology: In this retrospective study we looked at 110 consecutive General Surgical patients who were admitted in a District General Hospital. Notes were classified into elective/emergency procedures. We also noted the total time period patients did not have solid food/water; whilst also noting whether intravenous fluids were prescribed.

Results: In this retrospective study we looked at 110 patients. Out of which 13 were excluded because of incomplete data. There were 86.5% (84/97) elective and 12.4% (12/97) emergency procedures. The mean fasting time for both emergency and elective procedures was 19 hrs and 30 min (solids) and 11 hrs and 5 min (liquids). Mean fasting time for emergency cases 28h 25min (solids) and 14h 50min (clear fluids) whilst in elective cases was 15h 50min (solids) 10hr 7min (clear fluids). Only 26.8% (26/97) patients were prescribed fluids.

Conclusion: This audit shows that the fasting times are much longer than that recommended by the AAGBI guidelines. Information regarding pre-operative fasting should be clearly displayed on posters on all surgical wards. More effort should be made by the surgical team to communicate with nursing staff to inform them if surgery is likely to be delayed or cancelled. Junior doctors who often make the patient nil by mouth should have more training and education regarding the pre-operative fasting guidelines, in order to ensure they understand them completely.
Routine coagulation screening is unnecessary prior to ERCP in non-jaundiced patients; a multi-centre study

S Walker2, K Mellor2, J Nicholls1, RJ Egan1, WT Young2, M Stechman1
1 University Hospital of Wales, Cardiff
2 Princess of Wales Hospital, Bridgend

Aims
Guidelines suggest performing coagulation screening prior to endoscopic retrograde cholangiopancreatography (ERCP). We hypothesise that coagulation is rarely deranged in the absence of biochemical jaundice.

Methods
All ERCP procedures performed at two centres during a 16 month period were assessed. For each patient demographic data, pre-procedure bilirubin, prothrombin time (PT), diagnosis and bleeding complications were recorded. Exclusion criteria were; incomplete records, anti-coagulation therapy or inherited coagulopathy.

Results
The cohort was divided into jaundiced (n=419) and non-jaundiced (n=374) groups for analysis. Seven per cent (n=28) of jaundiced patients had a significantly prolonged PT (>16.8 seconds = INR ≥1.5). One non-jaundiced patient had significantly prolonged PT, whilst 5.9 per cent (n=22) had a mildly raised PT (above normal range); none of these had bleeding complications. A significant difference in PT between groups was seen (mean ±SD jaundiced 13.0 ±6.3 vs. non-jaundiced 11.0 ±1.2 seconds; p<0.001 t-test). The diagnosis, ERCP procedures, and bleeding complications were equivalent between groups and centres. The approximate cost of coagulation tests in the non-jaundiced cohort was £7,500.

Conclusions
Patients with normal bilirubin levels rarely have deranged coagulation suggestive of acquired coagulopathy. A negative bleeding history and normal liver function tests makes coagulation screening an unnecessary and expensive investigation.
Rectal Cancer Management – An Audit.

Dhruva Rao PK, Peiris SPM, Arif S, Davies RA, Masoud AG, Haray PN.
Prince Charles Hospital, Merthyr Tydfil
This entry is for: Registrar prize

Aim:
To assess the outcome of treatment of rectal cancers diagnosed at a Welsh DGH, between Jan 2008 & Jan 2011.

Methods:
All patients with rectal cancers (tumours ≤15cm from anal verge) discussed at our Multi-disciplinary team (MDT) were identified from CaNISC and cross referenced & validated with the prospective in-hospital database. For the purpose of analysis, we classified all palpable rectal tumours (<6 cm from anal verge) as lower rectal cancers (LRC) and the remaining as upper rectal cancers (URC).

Results:
A total of 139 patients [Median age 67 yrs (Range 45-89), M: F ratio of 1.7:1] were diagnosed with rectal cancer. 6 patients were palliative. The remaining 133 patients were staged as suitable for potentially curative resections. Three (2%) patients had resectable metastases at diagnosis. Of the 133 potentially curative patients, 72 (54%) were URC & 61 (46%) were LRC. In this group, 19 (14%) had threatened margins on preoperative staging (4 due to lymph node) requiring neo-adjuvant therapy (NAT). All URCs patients underwent Anterior Resections. Of the 61 with LRCs, 29 had total mesorectal excision and coloanal anastomosis + Ileostomy (TME+I), 1 patient had a TME Hartmann’s procedure and 27 had abdomino-perineal Excision (APER). 4 patients had TME without covering stoma. Of the patients receiving NAT, 8 went on to have APER while 7 had TME+I. 92% of resections were attempted laparoscopically with a conversion rate of 5%. Median post-operative length of stay was 5 days. CRM was positive in 9 (6.7%) patients with MRI predicting this in 5 patients. Median LN Harvest was 12. Median follow-up was 44 months (0-67). The 90 day mortality was 2 (1.5%). Disease related mortality over the follow-up period was 9 (6.7%). However, overall mortality during this period was 22.5%. Local recurrence was noted in 4 (3%) patients. Metachronous distant metastases occurred in 18 (13.5%) patients. Major complications occurred in 8 (6%) patients [Anastomotic leak, pelvic haemorrhage and small bowel obstruction = 2 patients each and one patient each with wound dehiscence and intra-abdominal collection.]

Conclusion:
This audit demonstrates that our unit has a high utilization of the laparoscopic approach to rectal cancer surgery with our outcomes being comparable to other published results.
Emergency Laparoscopic Common Bile Duct Exploration and Primary Closure: A 10 year review from a single DGH

David S.Y. Chan, Paresh A. Jain, Adam Khalifa, Rhodri Hughes, Andrew L. Baker.
Wrexham Maelor Hospital
This entry is for: Registrar prize

**Aims:** To compare the outcomes following elective and emergency laparoscopic common bile duct exploration (LCBDE) for choledocholithiasis.

**Methods:** Two hundred and fifteen consecutive patients [57 male; median age 65 years (14-92); 94 emergency; 198 primary closure] who underwent LCBDE for choledocholithiasis between August 2003 and August 2013 were analysed retrospectively. Outcome measures include CBD clearance rate, conversion, morbidity, mortality and length of hospital stay.

<table>
<thead>
<tr>
<th></th>
<th>Elective</th>
<th>Emergency</th>
<th>(p) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number</td>
<td>121</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Median age, years (range)</td>
<td>70 (14-90)</td>
<td>61 (21-92)</td>
<td>0.014</td>
</tr>
<tr>
<td>Male:Female (%)</td>
<td>30:91 (25:75)</td>
<td>27:67 (29:71)</td>
<td>0.492</td>
</tr>
<tr>
<td>Conversion to open (%)</td>
<td>5 (4.1)</td>
<td>6 (6.4)</td>
<td>0.549</td>
</tr>
<tr>
<td>Successful CBD clearance (%)</td>
<td>116 (95.9)</td>
<td>90 (95.7)</td>
<td>0.557</td>
</tr>
<tr>
<td>Operating time, minutes (range)</td>
<td>99 (31-256)</td>
<td>103 (55-253)</td>
<td>0.132</td>
</tr>
<tr>
<td>Primary closure (%)</td>
<td>112 (92.6)</td>
<td>86 (91.5)</td>
<td>0.772</td>
</tr>
<tr>
<td>Morbidity (%)</td>
<td>8 (6.7)</td>
<td>5 (5.3)</td>
<td>0.693</td>
</tr>
<tr>
<td>Bile leak (%)</td>
<td>4 (3.3)</td>
<td>3 (3.2)</td>
<td>0.963</td>
</tr>
<tr>
<td>Bleeding (%)</td>
<td>2 (1.7)</td>
<td>1 (1.1)</td>
<td>0.715</td>
</tr>
<tr>
<td>Chest sepsis (%)</td>
<td>2 (1.7)</td>
<td>1 (1.1)</td>
<td>0.715</td>
</tr>
<tr>
<td>Mortality (%)</td>
<td>0 (0)</td>
<td>2 (2.1)</td>
<td>0.107</td>
</tr>
<tr>
<td>Median length of stay, days (range)</td>
<td>3 (1-17)</td>
<td>3 (1-20)</td>
<td>0.632</td>
</tr>
</tbody>
</table>

**Conclusion:** LCBDE with primary closure can be performed safely and effectively in the emergency setting.
Hospital compliance with UK guidelines for the Management of Gallstone Pancreatitis

Ms K. Ausel, Dr. B. Shittu, Mr. Parekh, Mr. Nur, Cons., Withybush General Hospital

This entry is for: Registrar prize

Aim: To determine if the required standards of the UK guideline for the management of acute pancreatitis 2005 are met.

Method: Retrospective analysis of data for the period of 2007-Jan 2012, based on medical records and computerized system Myrdin. The data included: demographics, scoring, supportive Investigations, admission in HDU/ITU, Antibiotics, time of performed Cholecystectomy and Readmissions.

Results: 170 notes of acute pancreatitis reviewed. Inclusion criteria was Gallstone Pancreatitis, 69 cases (39.8%) had been analysed and 104 (62.2%) had been excluded. The demographic showed prevalence of Female patients 39 (56,5%) over Male 30 (43,5%), average age of 63 years (range 21-97 years). Time of Cholecystectomy was compared with the time provided in Guidelines. 21 Patients (30,3%) who did not have surgery had been excluded. From 48 (69,7%) - 5 patients (10,4%) had Cholecystectomy within Guideline Target time of <2 weeks. 10 (20,8%) Patients within internal WGH Cholecystectomy Target of <6 weeks. The Glasgow Severity score was used in 30 (43,5%) patients and in 14 cases was incomplete. Missing parameters were: LDH 40,23%, followed by pO2 and Glucose, 19,54% and 17,24% respectively. A small difference was between Calcium 11,49% and Albumin 10,34%, and Urea only in 1,15% . Radiological investigations: primary investigation was an USS, in 34 (49,3%) Patients done within 24 hours; in 8 (11,6%) < 48 hours; in 3 (4,3%) < 72 hours and in another 3 (4,3%) in >72 hours. The percent of Antibiotics use was growing with the progression of Severity Score. Finally, the readmission rate. From 69 Patients, 4 excluded; no readmission in 43 (66,2%) cases, 22 (33,8%) had several that resulted in 33 readmissions. The causes: Pancreatitis in 23 (69,7%), Cholecystitis in 6 (18,2%), biliary colic in 3 (9%) and obstructive jaundice in 1 (3%) of cases.

Outcome: The majority of patients were female of, in average, 63 years. The Audit revealed incomplete assessment because of failing Scoring parameters and high percentage of antibiotics use, that indicated necessity of Antibiotics guideline. The correct diagnosis was done in time. The time of cholecystectomy was too long that caused readmissions with different complications of Gallstone diseases.
No more barium enemas! An audit of 400 CT colonograms with 3 year follow up.

Departments of Radiology & Surgery, Royal Gwent Hospital, Newport.

Introduction: The SIGGAR trials indicate that CT colonography is more sensitive than barium enema and suggest that the test provides a similarly sensitive and less invasive alternative to colonoscopy. Our hospital is the first in Wales to regularly perform CT colonograms instead of barium enemas since 2009. Current NICE guidelines suggest that CT colonogram is indicated if there is change in bowel habit, blood in stools, abdominal pain and unexplained weight loss.

Aim: The aim of this audit was to assess the effectiveness of CT colonograms for diagnosis of colonic lesions. Secondly, we looked at whether NICE guidelines were being followed with regards indication for colonogram.

Method: Retrospective data was collected from 421 colonograms performed in 2010 and their follow up over the subsequent three years.

Results: A total of 421 patients underwent a CT colonogram; 41/421 were significant polyps, 10/421 suspicious of cancer and 12/421 bowel thickening. Most showed no GI pathology. The total number of CT colonogram requests which followed the NICE guidelines was 276/421 (66%) and 145/421 (34%) did not adhere to guidelines. 120/421 (27%) were referred for CT colonogram due to anaemia. Of these, 5 were diagnosed with large polyps, 4 with cancer and 32 were found to have other pathologies. 234 (56%) CT colonograms reported extra colonic findings. Of the 201 CT colonograms reported as normal, only 89 had follow up colonoscopy. Of those normal colonograms, 10 patients were found to have other GI pathology. No cancers were missed over a follow up period of 3 years in patients with normal colonograms in 2010.

Conclusion: Our findings confirmed that CT colonogram is an effective tool for diagnosing colonic lesions, even polyps smaller than 5mm. In addition, it is able to frequently show various other intra-abdominal pathologies. A three year follow up confirms that no colonic lesions were missed. A small number of CT colonograms are being requested for indications not listed by the NICE guidelines. CT colonograms are here to stay, the barium enema has been well and truly replaced.
Is there an optimum method of skin closure following laparoscopic surgery?

Wilcox C, Whitehurst L, Davies Ll, Brown J, Blackshaw G
University Hospital of Wales, Cardiff

**Introduction:** Laparoscopic surgery is now widely adopted across a number of surgical disciplines, with early hospital discharge and lower follow-up requirements being major advantages. Trocar wounds are therefore not always monitored by surgeons, and skin closure technique is largely based upon individual preference. We have conducted a systematic review to investigate optimum skin closure following laparoscopic surgery.

**Methods:** Literature searches were performed on the PubMed, Embase, Scopus and Cochrane Library databases to identify relevant English language articles published since 1980. Search words included combinations of ‘laparoscopic skin closure’ + ‘glue, adhesive, suture, clips, strips’. Animal studies were excluded.

**Results:** Eight randomised clinical trials were identified, investigating varying combinations of glue, adhesive strips and sutures (but not clips). Meta-analysis was not appropriate as there was much heterogeneity with regard study design and primary outcome measures. The studies were generally of poor quality with confounding (only 2 accounted for patient co-morbidities) and bias (power calculations were provided for 6 studies, but only achieved in 3), with a median Jadad score of 2 (range 1-3). Only one paper compared suture technique and reported higher complication rates and poorer cosmesis with subcuticular sutures compared with transcutaneous sutures. Seven papers investigated glue. Closure times were faster with glue compared with sutures (5 of 7 papers). Improved cosmesis was reported with glue compared with sutures in 1 paper, poorer cosmesis reported in 1 paper and no cosmetic difference in 5 papers. Complication rates were comparable for glue compared with sutures in 6 papers, while 1 paper reported less pain following suture. Two papers reported on costs: 1 reported lower costs with glue compared to suture and the other reported higher costs for glue compared with suture and adhesive strips.

**Conclusions:** This review has failed to identify the optimum method of skin closure following laparoscopic surgery. It highlights the need for a well-designed, high power, multi-arm randomised clinical trial with appropriate cost analysis to end this debate.
Paediatric Surgical Training in Wales – the Trainees Perspective

Hanratty D, Evans T, Pollitt J, Prince Charles Hospital Merthyr Tydfil

This entry is for: Registrar prize

**Introduction:** General Paediatric Surgery (GPS) has traditionally been provided by General Surgeons, however over recent years there has been a shift to subspecialisation and few new Consultant General Surgeons are trained in GPS. A review into the provision of GPS has shown that the majority of Consultant Surgeons who undertake GPS are nearing retirement and many trusts will soon encounter problems with providing a GPS service. The vast majority of Emergency GPS is still completed by General Surgeons in DGHs, however the majority of new Consultants will not have an elective GPS practice, may have very little training in GPS, yet be expected to manage emergency GPS cases. This has been acknowledged by the ASGBI and in their recent publication, ‘Issues in Professional Practice – General Paediatric Surgery,’ state that Trainees who have been identified as having the delicate tissue handling skills and competence in communication with children and their families should be identified and trained appropriately to fill the impending shortfall.

**Methods:** We undertook a survey to look at Higher Surgical Trainees opinions on their training in GPS and their self assessed competence in managing different GPS cases.

**Results:** 26 trainees responded to the questionnaire. Four (15%) trainees surveyed had undergone a specific period of training in Paediatric Surgery. Only 54% felt confident in managing Emergency GPS cases in a DGH setting. Only 35% felt that the current exposure to acute paediatric surgical admissions is adequate to undertake a DGH surgical intake. 92% felt that a specified period of Paediatric Surgical training should be included in the training programme. Only three trainees had undergone a paediatric life support course. The median youngest age that trainees felt competent to perform an appendicectomy or testicular exploration was 5 years, and laparotomy was 8 years.

**Discussion:** The future of GPS provision is concerning. The majority of Consultant General Surgeons who offer this service are retiring and this survey suggests that the vast majority of trainees have not undergone any formal GPS training or feel competent in managing a DGH surgical intake. With the South Wales plan, paediatric services will only be provided in a few centres. It is imperative that we train our future surgeons in GPS so that both emergency and elective GPS can be continued in these centres by General Surgeons.
<table>
<thead>
<tr>
<th>Clinical incident reporting and developing a duty of candour in the NHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davies Ll, Gaudete A, Evans H, Williams A, Woodward A</td>
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<td>Royal Glamorgan Hospital, Llantrisant</td>
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</table>

**Introduction**

Following the Mid Staffordshire public enquiry the failings of the NHS have been in the public spotlight as never before. The Francis report has made a number of recommendations to try to improve patient safety including improved reporting of adverse incidents along with developing a duty of candour. Whilst there are systems currently in place for reporting clinical incidents, these are often underutilised and many incidents go unreported. In the future there may be an obligation to report all incidents. This study aimed to quantify the clinical incidents which often go unreported in an attempt to improve the culture of openness.

**Methods**

Data were collected prospectively for four weeks by all the members of one team including junior doctors and the consultant. All adverse incidents irrespective of their nature were identified and recorded involving any patient encounter on the wards, in outpatients, in endoscopy and in theatre.

**Results**

The total patient turnover was 270 patients (48 emergency patients/ward referrals, 28 elective admissions, 14 endoscopy cases and 180 outpatients). 22 adverse incidents were recorded (8%) with 3 resulting in harm (approximately 1%) No mortality resulted from these events. There were a range of types of incident but the ones resulting in harm were all a result of diagnostic problems. Extrapolating these results to the rest of the surgical firms would indicate a total of 154 adverse incidents to report per month with a rate of patient harm amounting to 21 per month.

**Conclusion**

This study has highlighted that a significant number of adverse incidents go unreported each month and this has significant implications for the wider NHS. Clinical incident reporting is going to assume much greater significance in the future and in order to improve patient safety will require a culture of much more openness and feedback amongst clinicians.
Changing trends in the management of appendicitis – a ten year study

Williams A, Griffiths A, Shinkwin M, T Visser & A Rasheed
Royal Gwent Hospital, Newport, Gwent
This entry is for: Junior prize

Introduction: Appendicitis is the most common cause of the acute abdomen and is always a diagnostic challenge. Traditionally it has been considered to be a clinical diagnosis with no available test being diagnostic. Over the past decade, laparoscopy has been increasingly used both as a diagnostic tool and a therapeutic procedure and it might be expected that such an intervention may reduce the negative appendicectomy rate. This study analysed the use of laparoscopy in suspected appendicitis with particular emphasis on the negative appendicetomy rate and compared this to the more traditional procedure of open appendicectomy.

Method: A retrospective analysis of all appendicectomies was undertaken in one Health Board over a ten year period. Data were obtained from the theatre, pathology and radiology databases to assess type of surgery, histology of appendicectomy specimens and findings of preoperative imaging.

Results: Data was obtained on 831 patients who underwent appendicectomy during the 10 year period. Of these 383 underwent open appendicectomy and 448 underwent laparoscopic appendicectomy. The negative appendicectomy rate for the open group was 27% (170/619) and for the laparoscopic appendicectomy group was 16% (98/622). There was no difference in the percentage of patients undergoing pre-operative imaging in either group (14% laparoscopic vs 10% open).

Conclusion: This study has demonstrated a significant increase in the use of laparoscopy in the diagnosis and management of suspected appendicitis over the past ten years. This has been associated with a nearly 50% reduction in the negative appendicectomy rate.
Totally implantable vascular access devices- a 6 year service evaluation in a tertiary vascular centre.

L. Hopkins, L. Chutter, R. Whiston. University Hospital of Wales, Cardiff
This entry is for the Junior prize.

Introduction:
Totally implantable vascular access devices (TIVADs) are used in a variety of chronic diseases for the delivery of intravenous medication. There have been several studies demonstrating long-term follow-up. This allows comparison of catheter-patency and complications.

Methods:
A retrospective review of all TIVADs inserted by a single surgeon between February 2008 and February 2014 using electronic patient records and PACS. TIVAD survival or patency and complications were recorded. All devices were inserted using an open venous cut-down technique, under fluoroscopic control.

Results:
A total of 89 TIVADs inserted in 77 patients were reviewed. Median age at insertion was 28 (range 16-74). Median survival was 1,112 days (range 2-2,498 days). In total there were 53,671 days of catheter patency. No significant difference in catheter patency was detected between patients with different conditions. There were no immediate intrathoracic complications (pneumothorax, haemothorax). There were 3 early and 24 late complications. These were: blockage/ occlusion (11 TIVADs; median age 295 days), infection (8 TIVADs; median age 354 days), device malfunction (3 TIVADs; median age 588 days), palpitations (3 TIVADs; median age 175 days), pain (2 TIVADs). Overall the incidence of complications was 0.50 per 1000 catheter days.

Discussion:
This evaluation has demonstrated comparable outcomes at our centre compared with others. TIVADs are a safe, effective method for delivering intra-venous therapies to patients with chronic conditions. Complications of blockage/ occlusion, infection are the most common and typically occur after 30 days. The use of an open insertion technique prevents immediate intrathoracic complications.
## How accurately are fluids prescribed? Do we adhere to NICE guidance?

**Stimpson A, Chugani S, Asher A, Morgan R. Glan Clwyd Hospital, BCUHB**

**Senior Prize**

### Introduction:
NICE guidelines state that all patients should receive a daily 24 hour prescription plan, with indications for review in the medical notes. A key aspect is adequate electrolyte replacement and targeted use of 5% dextrose to prevent starvation ketosis. This audit assessed adherence to these guidelines.

### Method:
Patients prescribed iv fluids in the Surgical Assessment Unit were prospectively assessed over a one week period.

### Results:
A total of 24 patients were assessed. There was 100% compliance with the criteria regarding the prescription of IV fluids on the drug chart. Ongoing plans for fluids, and mechanisms for review, were not documented in any of the patients medical notes. 11 patients required on going fluid replacement therapy for various conditions (e.g small bowel obstruction); only 1 (a diabetic patient on a sliding scale) received the recommended 50-100g of dextrose. Only 2 received adequate Na, K and Cl. 4 received Na in excess of their combined maintenance and replacement needs. 9 received inadequate K.

### Conclusion:
There was a reluctance to prescribe 5% dextrose for the non-diabetic patient, potentially resulting in starvation ketosis in catabolic patients. There was inadequate prescription of K and over-prescription of Na. We recommend more use of 5% dextrose, with K supplementation, especially in patients not requiring correction of hyponatraemia, or isotonic fluid resuscitation. Documentation of ongoing plans for fluid therapy, and plans for review, should be made in patients notes, and by suitably experienced doctors.
Comparison of short term outcomes between new laparoscopic incisional hernia repair service and most recent published data¹.

M Shinkwin, H Jayamanne, V Chamary

Introduction: Incisional hernia is a serious complication after abdominal surgery and not uncommon, effecting up 23%. It can be both an early and late complication of surgery. Laparoscopic incisional hernia repair was first introduced in the 1990s as an alternative to the established open repair technique.

Aim: To review this trust outcomes (operating time, length of stay, small bowel injury, recurrence and wound infection) when introducing a laparoscopic incisional hernia repair service to the outcomes of recently published randomized controlled trial (RCT).

Method: Data of the outcomes above was gathered from the ORMIS and CWS databases of 110 patient consecutive who underwent elective incisional hernia repair between 01/2009 and 12/2012 in our health board. All surgeons where included.

Results: The mean operating time for a laparoscopic repair was 136 minutes vs 106 minutes for open repair. The mean length of stay was 3.7 days (mode=2) for laparoscopic repair vs a mean of 5.2 days (mode = 4) for open repair. Incidence of small bowel injury was 6.4%. At one year the recurrence rate in the laparoscopic group was 6% and 2% in the open group. Wound infection was 1.6% in the laparoscopic group vs 10% in the open group.

Discussion: Our length of operation data showed a similar pattern to the RCT data with both having a time delta of 30 minutes. The data showed our average length of stay to be shorter with the laparoscopic group which is a better outcome than the RCT, this did not show any difference in length of stay between the two approaches. Our small bowel injury rate of 6.4% was comparative to the RCT’s rate of 6.3%, further inspection of the our data showed that no small bowel injury during the final two years of the time audited. Our wound infection rate was superior to the RCT for the laparoscopic group with 1.6% vs 4%. Our recurrence rates are not directly comparable as the published figures in the RCT are at 35 months where our data is only for one year. However the Kaplin-Meier graph published in the RCT would show that at one year the difference is similar between the two groups. In conclusion this audit has shown it is possible to introduction a safe new service of laparoscopic incisional hernia repair into a health board and achieve good outcomes.

General Paediatric Surgical Outcomes – One General Surgeons Data

Hanratty D, Evans T, Pollitt J, Prince Charles Hospital

Introduction General Paediatric Surgery (GPS) is the management of commonly occurring, non-specialist, surgical conditions that arise in children. It has traditionally been a service provided by General Surgeons or Urologists with a special interest in Paediatric Surgery. In recent years there has been a decline in General Surgical Trainees being trained in GPS and therefore few new consultants have the expertise to provide the GPS service which is currently dominated by General Surgeons who are approaching retirement. The Children’s Surgical Forum has advised against the occasional practice of GPS and to regularly undergo appraisal of outcomes.

Methods A retrospective review was completed of all the GPS operations completed by one Consultant Surgeon over their first 3 ½ years of practice. Complications rates were compared with published literature.

Results There were a total of 207 GPS operations, 30 emergencies and 177 elective. These included 36 circumcisions, 34 orchidopexies, 22 inguinal herniotomies, 26 ligation of PPVs, 11 appendicectomies, 8 ventral hernia repairs and 5 umbilical hernia repairs. Of these there were 3 morbidities. One post op wound infection following a circumcision, one testicular ascent following an orchidopexy requiring a redo and one post op bleed following a circumcision which did not require surgery.

Discussion These results have shown that good outcomes comparable with published literature can be provided by appropriately trained General Surgeons in a DGH setting. With the combination of fewer General Surgical trainees undergoing GPS training along with the reconfiguration of Paediatric services within South Wales, there will undoubtedly be a change in the provision of GPS. In Scotland, there has already been a complete transfer of GPS services to Specialist Paediatric Surgeons. In order for General Surgeons to continue with GPS provision, it is of paramount importance that we provide evidence that our outcomes are good, managed clinical networks are in place and trainees are identified and appropriately trained to replace current GPS surgeons.
Patient satisfaction at Cardiff Liver Unit: Improving the standard of tertiary based cancer care

Michael Rees, Sian Thomas, Zsolt Kaposztas, Nagappan Kumar
Cardiff Liver Unit, University Hospital of Wales, Cardiff
This entry is for: Registrar prize

Introduction
Recording patient experience and satisfaction remains a standard in the provision of cancer services. With the recent trend towards increased patient choice within the NHS and tightening financial constraints, improving patient perception of current services is paramount. We recorded patient satisfaction in those undergoing liver resection for colorectal liver metastases at a busy centre receiving tertiary referrals from across Wales.

Method
We sent the modified Patient satisfaction questionnaires, designed originally by the Basingstoke Liver unit, to all patients undergoing surgery between 01/02/13 to 31/01/13 at least 1 month after their discharge from hospital. The survey covered various aspects of patient care from initial referral, outpatient attendance and inpatient care during hospital stay. Results were analyzed using SPSS version 20.

Results
A total of 99 patients were sent a questionnaire of who 57 responded (response rate 57%). 91% (n=51) of patients had the reason for referral to the liver unit explained prior to their attendance. Fifty-nine percent (n=33) of patients were seen on time in the clinic and 93% (n=53) felt that they were given sufficient information regarding their diagnosis and treatment during their appointment. Fifty six patients (98%) felt fully involved in the decision making process but only 39% of patients (n=22) were given both verbal and printed information about their treatment at clinic. 83% of patients felt they were given sufficient information regarding what to expect after discharge from hospital and 90% of patients rated their overall hospital experience as good or excellent.

Conclusion
Overall patient satisfaction appeared to be good with regards to most aspects of care. Attention has been drawn to the variation in waiting time for initial consultation, the provision of both verbal and written information following pre-operative consultation has been made a standard and clinic structure has been modified in order to allow adequate time for the counseling of new patients.
Operative reports at emergency inguinal hernioplasty may not be comprehensive enough to avoid later litigation.

M Mohamud, F Parkinson, AJ Beamish, GL Williams, BM Stephenson
Department of Surgery, Royal Gwent Hospital, Newport, Wales, UK
This entry is for: Junior prize

**Background:** Chronic groin pain (CGP) after inguinal hernia repair is a multi-factorial problem of variable incidence. Litigation for testicular injury and CGP accounts for up to 40% of claims with settlements averaging over €85,000.

**Methods:** We scrutinised computerised surgeon-typed reports (ORMIS) of all emergency inguinal hernia repairs in a single DGH during 2013. We specifically sought clear description of spermatic cord handling and inguinal canal nerves.

**Results:** All repairs (n= 27; all male; mean age 65; range: 25-93 years) were performed by surgeons in training using an open approach. The consent form uniformly described CGP as a possible complication.

The majority (23/27; 85%) were primary hernias with well-described operative findings in all cases. Cord handling was documented in 19 patients (70%) and two underwent orchidectomy. The repair was augmented with prosthetic mesh in the majority of cases (89%) but the ilio-inguinal nerve status was described in only two patients. No report mentioned ‘seeking but not finding’ nerves.

**Conclusion:** Surgeons in training seem to disregard documenting the status of nerves at urgent repair. Lawyers can be forgiven for arguing negligence ("post hoc, propter hoc") if records omit observations on structures prone to ‘inadvertent' damage. This should be emphasised to all trainees.
Using simulation to develop complex skills (radiology requesting) in C21 undergraduate medical students: can they identify their learning needs?

R Thomas¹, D Maclean¹, C Thomas², M Stechman², T Boyce¹
¹Royal Gwent Hospital, ABUHB and ²Cardiff University School of Medicine

Background:
Completion of investigation requests, particularly concise documentation of relevant information to justify performing and aid interpretation of investigations is a challenging skill for Foundation doctors. We developed a learning session for Harmonisation students to address this need.

Subjects and methods:
An interactive teaching session was delivered to all final year medical students, using clinical scenarios for which they completed and prioritised investigation requests, followed by discussion of the principles of the tasks. Half of the students subsequently undertook a Junior Assistantship placement embedded in a clinical team. An online survey was sent to these students on completion of the placement, and a review group conducted with recently qualified doctors to assess the value of the learning session.

Results:
A discussion group with 14 FY1 doctors found that all 14 reported the session would have been very useful (rated ≥8/10 on a Likert scale) for them prior to starting their Foundation posts, and that the learning session was an appropriate format in which to cover the topic. 50 of 140 (36%) students replied to the survey; unlike the F1 doctors, only 34% found the session very useful. 94% had completed investigation request forms during their placement, 58% at least 5 times. 76% reported that their confidence with this task had increased as a result of the session.

Conclusion:
The ability to complete investigation requests with appropriate concise information to justify the procedure and interpret its findings is a skill that newly qualified doctors find difficult. A Harmonisation learning session to address this difficulty was felt by F1 doctors to be very valuable, but was rated less highly by students, suggesting they are not always able to appreciate what skills they will need as F1 doctors. Involvement of near-peer tutors (Foundation doctors) in delivery of further sessions may resolve this issue.
Genetic referral of early-onset Colorectal Cancer: Must do better

Authors: J Gough*, HG Jones*, W Jones*, A Murray*, M Davies*, M Evans*, D Harris*, J Beynon*
Departments of Colorectal Surgery* and Cancer Genetics#, Singleton Hospital, Swansea.
This entry is for: Junior prize

Introduction
Up to 15% of all colorectal cancers (CRC) are thought to have a genetic predisposition. Lynch syndrome is an autosomal dominant genetic disorder characterised by a markedly elevated cancer risk due to mutations in one of the DNA mismatch repair (MMR) genes. These genes exhibit microsatellite instability (MSI) which is the hallmark for DNA MMR gene deficiency. The National Institute of Health and Clinical Excellence (NICE) and British Society of Gastroenterology (BSG) have composed guidelines for genetic assessment. Any patient who develops CRC at a young age (<45) should be offered tumour MSI and immuno-histochemistry testing.

The aim of this study is to review whether guidelines for genetic referral are complied with in-patients who are diagnosed with CRC under the age of 45.

Methods: A single centre retrospective cohort study of patients under the age of 45 having surgery for colorectal cancer was undertaken. Clinical data was collected from a prospectively maintained cancer registry and corroborated with a prospective cancer genetics database.

Results: Between 2002 and 2013, there were 63 patients who had CRC resections under the age of 45. Of these patients only 46 of them (73%) had been referred for genetic testing. Of the patients that were referred to genetics 8 (17%) were never offered genetic testing. From the 38 patients who were investigated, 8 were found to have abnormal results. 5 patients were confirmed as Lynch syndrome, 1 confirmed FAP and 2 had abnormal tumour tests where Lynch syndrome couldn’t be ruled out. In summary, out of the 38 patients who were assessed, 8 (21%) were found to have genetic abnormalities.

Conclusion: There is a need for increased awareness of guidelines for genetics referral in CRC and increased compliance with their recommendations.
INTRODUCTION & AUDIT OF A NEW WEEKEND SURGICAL HANDOVER PRO-FORMA

Authors: Gibson, R; Ward, A & Williams, G (Royal Gwent Hospital)

AIMS
Current practice of handover lacks structure, whilst European Working Time laws places emphasis on safe and efficient handover to ensure continuity of care. Royal College of Surgeons in England (RCSEng) recommend the inclusion of several criteria to meet these standards. Aims of this study were to introduce a new standardised handover pro-forma to improve transfer of information (TOI) & patient safety.

METHODS
Stage 1: Handover from weekday to weekend surgical teams was audited across 5 weeks at RGH using criteria derived from RCSEng guidelines (N=125). Questionnaires were administered to junior doctors (n=14). Areas lacking consistency were identified and a new standardised handover pro-forma developed in accordance with RCSEng guidelines. Stage 2: Re-audit performed (N=112).

RESULTS
86% of junior doctors felt handover needed improvement and 93% felt a pro-forma would benefit patient safety. There was significant improvement in TOI where the pro-forma had been used, although compliance was only 57% (n=64). This included recording management plan (95% from 56%, p=0.0), patient identifiers (100% from 92%, p=0.02), reason for investigation/review (92% from 71%, p=0.0) and background details (98% from 67%, p=0.0). TOI was improved where the pro-forma had not been used in stage 2, however this was inferior to where it was.

CONCLUSIONS
Previous surgical handover lacked consistency and did not meet RCSEng recommendations. TOI was significantly improved after the introduction of the pro-forma. Despite poor compliance, use of the proforma led to significantly improved outcomes. The results support the effect of peer influence & education/feedback as well as introduction of a standardised handover pro-forma.
Recent trends in thyroid surgery in Wales

David S.Y. Chan, Onyebuchi E. Okosieme
Prince Charles Hospital
This entry is for: Registrar prize

Introduction: Surgery represents an important option in the management of benign and malignant disorders of the thyroid gland. Total thyroidectomy offers immediate cure without the risk of recurrence and is associated with few adverse effects in experienced hands. In Wales there have been no nationwide analyses of thyroid surgery trends. Such analyses may provide useful clues to thyroid disease trends and will provide baseline data on the surgical management of thyroid disease in the region. Our objective was to analyse trends in thyroid surgery in Wales over a recent 12-year period.

Methods: Details of patients who underwent thyroid surgery across Wales from 1999 to 2010 were analysed from the Patient Episodes Database for Wales [n=6570, 83% (5429) female, 86% (5634) benign thyroid disease]. We determined age-adjusted thyroidectomy rates from the European standard population and a Poisson regression model was fitted to assess temporal trends. Joinpoint regression was used to calculate annual percentage change (APC) in thyroidectomy rates.

Results: An increase in thyroidectomy rates was observed for malignant disease [APC 4.5, 95% confidence interval (CI) 1.6-7.5] while surgery rates for benign disease declined over the period (APC -3.2, 95% CI -5.1- -1.3). The use of total thyroidectomy rose from 17% (599/3501) in 1999-2004 to 30% (912/3069) in 2005-2010 (p<0.001). Total thyroidectomies were performed in a higher proportion of males than females [26% (291/1141) vs. 22% (1220/5429), p=0.03] and in a greater percentage of patients with malignant disease than benign [36% (337/936) vs. 21% (1174/5634), p<0.001]. General surgeons undertook 83% of thyroid surgery but with a growing involvement of ENT surgeons. Significant regional disparities were seen in the type of surgery offered to patients with benign thyroid disease.

Conclusion: The use of total thyroidectomy for benign and malignant thyroid disease has risen in Wales. The increase in surgeries performed for malignancy would support a rising incidence of thyroid cancer in the region. Regional disparities in choice of surgery for benign disease require further exploration.
Management of the Axilla in locally advanced Breast Cancer: Predictors of Lymph Node Metastasis

M. Rees, H. Vaughan-Williams, R.Kokelaar, P.Pietrzsak, L.Da Silva and S.Goyal
Breast Centre, University Hospital Llandough, Cardiff
This entry is for: Registrar prize

Introduction
Management of the axilla in patients with locally advanced breast cancer remains controversial. Although recent trials suggest the presence of micrometastases found at sentinel lymph node biopsy (SLNB) does not necessitate ANC, this has yet to be adopted as common practice throughout the UK. We assessed the management of breast cancer patients within a single centre to identify risk factors predictive of Lymph node metastasis at SLNB and further nodal disease at found at ANC.

Methods: All patients undergoing breast cancer surgery involving staging with SLNB between Jan 2009 and Dec 2011 was analysed. Variables assessed were: patient age, tumour type, tumour grade, tumour size, vascular invasion, sentinel lymph nodes retrieved, sentinel lymph nodes involved, ER and HER2 status and further nodal disease at ANC. Primary outcomes were factors predictive of a sentinel lymph node metastasis at index procedure. Secondary outcomes were factors predictive of further lymph node metastases at subsequent ANC. Statistical multivariate analysis was performed using SPSS version 20.

Results: 456 female patients (age 29-90) were assessed. 70 patients (15.4%) had at least one positive sentinel lymph node at SLNB, of whom 17 (24.2%) had micrometastases only compared with the remainder who had at least one macrometastasis. 60 patients (85.7%) proceeded to ANC of which 18 (30%) had further nodal disease. All patients with further nodes involved at ANC had evidence of macrometastases at SLNB. On multivariate analysis factors predictive of a positive SLNB were tumour size (p<0.01) and presence of vascular invasion (p<0.001). The only factor predictive of further nodal disease at ANC was the presence of macrometastasis at SLNB (p=0.036).

Conclusions
Macrometastasis at SLNB were the only factor predictive of further involvement at ANC. No patients with micrometastases alone had further nodal involvement. Our data supports recent evidence that micrometastases alone at SLNB does not necessitate further surgical treatment in the form of ANC.
**Anal Melanoma; a case series.**

**Jones HG, Egan R, Davies M, Evans MD, Williams N, Harris D, Beynon J** (Singleton Hospital, Swansea)

**Study objective:**
Malignant melanoma of the anal mucosa is a rare and aggressive cancer. There is very little evidence in the literature regarding the optimal investigation and treatment of this condition, and surgical options can range from local excision to abdomino-perineal excision (APE). This case series aims to analyze the investigation, treatment, pathology and outcomes for all patients presenting with anal melanoma to a tertiary colorectal unit over a 13-year period.

**Methods and procedures:**
Electronic records for all patients coded with anal melanoma through the pathology system were analyzed. This coding system was initiated in 2000, giving 13 years of data and potential follow-up. Data was collected on patient demographics, radiological investigations, local and systemic therapies, pathological reports and mortality and morbidity.

**Results of study:**
Nine patients were diagnosed with anal melanoma over the study period. There were six men, and 3 women, with a median age of 65 years (IQR 48 – 73). All nine patients had a CT scan of the thorax and abdomen pre-operatively, but only 5 had local staging (endoscopic ultrasound (EUS) or magnetic resonance imaging (MRI)). Two patients presented as histological surprise after local excision of anal lesions. Two patients were known to have systemic metastases at the time of presentation, whilst a further five patients developed systemic disease post-operatively, and one had local recurrence of the disease. Five patients (56%) had a local excision of the anal melanoma, whilst four (44%) had an APE and formation of a stoma. Five pathology reports stated the depth of tumour invasion, with a median of 9mm (IQR 4.7-18mm), with an average curcumferential margin of 27mm. Two patients had neoadjuvant radiotherapy before proceeding to surgery, and three patients had adjuvant immunotherapy (Interferon, Ipilimumab or Vemarafenib). The mortality rate was 67% with a median survival of just 329 days post-op (IQR 142-724). There was no significant difference in mortality or recurrence free survival between those that had local excision and those that had APE.

**Conclusion:**
Anal melanoma is an extremely aggressive cancer with very poor prognosis. There is no consensus regarding the best treatment pathway for these patients, and no clinical guidelines on the subject. In our series of nine patients, over two-thirds of patients had died within 1 year of their surgery, no matter what combination of surgical procedure, radiotherapy or chemotherapy was given. Further research into this poorly understood disease is needed in order to better understand and treat this condition.
**Does an Enhanced Recovery Programme Add Value to Laparoscopic Colorectal Resections?**

**Dhruva Rao PK, Howells S, Lewis M, Haray PN**  
Prince Charles Hospital, Merthyr Tydfil  
*This entry is for: Registrar prize / Junior prize /Student prize (please delete as appropriate)*

**Aim:** To assess the impact of Enhanced Recovery Programme (ERP) in our unit where nearly 90% of elective colorectal resections are performed laparoscopically.

**Methods:** Analysis of a prospectively maintained database of all patients undergoing colorectal resections between Jan 2008 to December 2012. The ERP programme was introduced in Aug 2010. The primary outcome measure was post-operative length of stay (pLOS) which was analysed on intention to treat basis.

**Results:** A total of 506 patients underwent major colorectal resections (benign and malignant indications) in the study period. Prior to introduction of ERP, 224 patients (Median age 69 years) had major colorectal resections with 188 (84%) attempted laparoscopic resections (Conversion rate 10%). Since the implementation of the ERAS programme in Aug 2010, 282 patients (median age 71 years) have undergone major colorectal resections. Of these, 256 (91%) of patients had attempted laparoscopic resection (conversion rate = 7%). In total 27 patients were assessed as unsuitable for ERP and 35% of patients were withdrawn from ERP. The median pLOS in the Laparoscopic group was 6 days pre ERP and 5 days on ERP. The median pLOS for Open group was 9 days pre ERP and 6 days on ERP. The patients who had a conversion behaved similar to Open group. Although not statistically significant, there is a definite trend in reduction of pLOS with the introduction of ERP in both, the laparoscopic resection and the open resection, groups.

**Conclusion:** The incorporation of ERP principles can further reduce length of stay even in units undertaking the majority of their resections using minimally invasive techniques. Limitations: Overall quality of the patient experience has not been presented in this abstract; this will be addressed in future studies.