Method: Hospital standardised mortality rates were obtained from the 2010 Dr Foster Hospital Guide. The MEDLINE database of biomedical citations was queried to establish the number of citations credited to each NHS Trust and constituent hospitals from 2006–2010. Admissions totals for NHS Trusts for 2009–2010 were obtained from Hospital Episode Statistics Online. The number of citations per admission was calculated and used as an indicator of academic output as this reflects the workload of the Trust.

Results: Spearman’s rank analysis was performed to identify any correlation between citations per admission and the inverse of four types of mortality rates: high-risk conditions r=0.20 (p=0.01); low risk conditions r=−0.06 (p=0.46); deaths after surgery r=0.193 (p=0.019); overall mortality 0.291 (p<0.01).

Conclusion: The results of this preliminary study demonstrate a statistically significant correlation between academic output and mortality rates. However, it should be noted that the correlation coefficients are small, but the findings of this study encourage further debate.

0540 RETROSPECTIVE OBSERVATIONAL STUDY OF RECURRENT FOOD BOLUS IMPACTION OF THE OESOPHAGUS
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Background: Oesophageal food bolus impaction (FB) is usually a one-off event, but recurrence is recognised.

Aims: To establish the recurrence rate of FB and to identify demographic/ pathological features associated with FB recurrence.

Methods: Retrospective case note review of patients (≥16years) admitted to the hospital with FB between 2002 and 2007. Patient demographics, comorbidities, interventions, radiological investigations and results were recorded. Statistical analysis was performed using SPSS 13.

Results: 99 patients fulfilled the inclusion criteria (65 males and 34 females; median ages 59 and 71.5, IQR 47–74 and 53–81 years respectively). 22 patients died before presentation with FB and the time of this study being conducted (mean follow up 34 months +/-17). 2 patients had recurrences but died before this study. For all other patients without recurrences the mean follow up was 68 months +/-20. Logistic regression demonstrated that only hiatus hernia demonstrated a statistical significance in its association with FB recurrence (OR 4.77 95% CI 1.15–19.82, p=0.032). All other variables (oesophageal pathologies, age and gender of patients) were not statistically significant (all p>0.35).

Conclusion: The recurrence rate of FB of the oesophagus was 9%. Hiatus hernia was the only oesophageal pathology associated with recurrence of FB.

0541 AUDIT OF FLEXOR POLLICIS LONGUS RUPTURE RATE AFTER REPAIR ’08 – ’10
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Background: In 2005, Wythenshawe Hospital Hand Surgery Plastic Unit altered the management for patients with a Flexor Pollicis Longus (FPL) rupture from a 2 strands repair to a 4 strands modified Kessler repair.

Purpose: To identify if the new regime has a better rupture rate, and to what extent it affects the functional outcomes.

Methods: A review was undertaken of an historical cohort of 49 patients, who underwent 100% FPL repair in Zone T1 or T2 from 2008 to 2010, comparing to 2003 to 2005 with 130 patients. Total Active Motion is calculated for Strickland Grading (SG) in order to compare the functional outcomes.

Results: The audit has a standard deviation of 2 to 82 years of age with equal gender representation. There was only 1 rupture (2%) after repair in the year 2008 to 2010, but with a higher percentage of delay in surgery. SG shows that functional outcome was poorer in 2008 to 2010.

Discussion: 4 strands repair shows a significant reduction in rupture rate but trading off the functional outcome. However, the poorer SG could be a reflection of higher delay in surgery as delay beyond 48 hours greatly increases adhesion in the area which could affect post-operative functional outcomes.

0542 IMAGING THE UK SURGICAL EMERGENCY
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Aims: Surgeons place heavy demands on radiologists for abdominal imaging, and radiology departments can struggle to meet these. Trainees in specialties such as O&G, receive formal diagnostic ultrasound training. We investigated radiological experience and opinions regarding introducing such training into surgical curricula.

Methods: Electronic survey distributed to national/regional surgical mailing lists and websites. Questions investigated radiological ability and training of those participating in surgical on-calls.

Results: 141 surgeons responded, including 97 general surgical trainees. 26% were formally trained in interpreting plain films, 12% in diagnostic ultrasound in trauma and 3% in CT reporting. 87% of trainees are present in meetings where radiologists present imaging, 87% felt that more formal radiological teaching should be offered. 63% had used ultrasound to place central lines, 54% to assess bladder volume, and 20% to aspirate breast abscesses. 96% of surgical trainees “often” or “always” review emergency abdominal CT images of their patients. When reviewing these 22% feel confident to diagnose appendicitis, 92% AAA, 76% free air and 57% free pelvic fluid.

Conclusions: There is support for surgical trainees undertaking extended radiological roles. Such training may improve quality of care and provide an efficient and timely pathway for acutely ill surgical patients.

0547 CORRELATION ANALYSIS OF STAIR CLIMBING TEST, ANAEROBIC THRESHOLD IN CARDIOPULMONARY EXERCISE TESTING & LENGTH OF HOSPITAL STAY IN PATIENTS UNDERGOING REPAIR OF ABDOMINAL AORTIC ANEURYSM (AAA)
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Background: Various parameters are used for evaluation of patients undergoing major vascular surgery. This study analyses the correlation amongst stair climbing test, anaerobic threshold (AT) in cardiopulmonary exercise testing (CPET) & length of hospital stay in patients undergoing Abdominal Aortic Aneurysm (AAA) repair.

Methods: An analysis of prospectively collected data of patients undergoing elective AAA repair. 30 patients [26men, median age 75 years(IQR: 68–78)] were included. All patients underwent pre-operative assessments and were followed up post-operatively for morbidity & mortality. Nonparametric analysis (Spearman rank correlation) was performed for using SPSS v16.0.

Results: Median hospital stay was 7 days(IQR:5–12), post operative complications were observed in 10%(n=3) and mortality rate was 7%(n=2).

Correlation analysis: There was a strong correlation between stair climbing & AT in CPET (r=0.592,P=0.001). However, AT in CPET did not show any significant correlation with length of hospital stay (r=0.353, P=0.779).

Conclusion: Stair climbing correlates with AT in CPET in patients undergoing intervention for AAA. Further studies are required to evaluate whether this inexpensive clinical test can be used as a predictor of morbidity and mortality in patients undergoing AAA repair.

0548 ROLE OF PRE-OPERATIVE CARDIOPULMONARY EXERCISE TESTING IN EVALUATION OF OUTCOMES IN PATIENTS UNDERGOING REPAIR OF ABDOMINAL AORTIC ANEURYSM
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Background: Pre operative risk assessment is important in patients undergoing repair of Abdominal Aortic Aneurysm (AAA). The aim of this
study was to assess the role of Anaerobic Threshold (AT) in cardiopulmonary exercise testing (CPET) as an independent predictor of outcomes in patients undergoing repair of AAA.

**Methods:** An analysis of a prospectively collected data of elective AAA patients. Peri-operative parameters & outcomes were recorded. Primary endpoint was 30 day mortality. Intergroup analysis (alive vs. dead) was performed using SPSSv16.0.

**Results:** 30 patients [26men, median age 75years (IQR: 68-78)] were included in the study. Median Anaerobic threshold was 12.67ml/min/kg (IQR: 8.6-16.42). Median hospital stay was 7 days (IQR: 5-12), post operative complications were observed in 10 % (n=3) and mortality rate was 7 % (n=2).

**Inter-group Analysis:** There was a significant difference (P=0.042) between the two groups in the AT [median AT, Alive: 12.76ml/min/kg (range; 5.52-22.37), Dead: 6.67ml/min/kg (range; 6.08-7.26)]. However, there was no statistically significant difference between the two groups for basic demographics, co-morbidities and pre-operative medications.

**Conclusion:** Anaerobic threshold in cardiopulmonary exercise testing may be used as an independent predictor of morbidity & mortality in patients undergoing repair of Abdominal Aortic Aneurysm.

0549: A CASE CONTROL STUDY OF IDENTIFICATION OF RISK FACTORS AFFECTING PERI-OPERATIVE MORTALITY IN PATIENTS UNDERGOING OPEN REPAIR OF ABDOMINAL AORTIC ANEURYSM

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**Introduction:** Pre operative risk assessment is important in patients undergoing major vascular surgery. The aim of this study was to identify factors influencing 30 day mortality in patients undergoing Abdominal Aortic Aneurysm (AAA) repair. Further studies are required to validate its role as an independent predictor of morbidity & mortality in patients undergoing repair of Abdominal Aortic Aneurysm.

**Methods:** A retrospective case control study was performed. List of patients who underwent elective open AAA repair between January 2005 and December 2009 was obtained from departmental database. All patients with 30 day mortality were included and matched in 1:3 ratio, with alive patients. Peri-operative parameters & outcomes were recorded for all patients. Statistical analysis was performed using SPSSv16.0.

**Results:** 20 patients [19male; mean age: 74(SD:6.33)] with 30 day mortality were identified and matched to 60 live consecutive controls [52male; mean age:73(SD: 6.11)]. Risk factors associated with 30 day mortality were: Previous MI [OR:3.33 (95%CI:0.91-11.70)]; Diabetes [OR:3.5 (95% CI:0.89-13.26)]; Chronic renal failure [OR:19.67(95% CI:1.19-945)] Pre-operative investigations associated with mortality were: Abnormal ECG [OR:4.45(95%CI:1.29-15.20)]; Raised creatinine [OR:4.85(95% CI:1.15-20.30)]; AAA AP diameter on CT scan; median 6.25cm(IQR: 5.8-6.8) compared to control 5.6cm (IQR:5.5-6.2).[P=0.009]; Peri-operatively, supra-renal clamping, had a significant associated mortality [OR: 4.33(95% CI:1.14-16.12)].

**Conclusions:** Pre-operative assessment and optimisation should be performed to reduce 30 day mortality after open AAA repair.

0550: NEW ONSET ATRIAL FIBRILLATION AFTER CARDIAC SURGERY: ROLE AND EFFICACY OF DC CARDIOVERSION

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**Aim:** Atrial fibrillation (AF) affects 1/3 of patients after cardiac surgery and is often treated with DC cardioversion (DCCV). However, little is published on DCCV in this setting. We investigated the role and efficacy of DCCV in treating AF after cardiac surgery.

**Methods:** Patients who received DCCV after cardiac surgery over 4 years were identified. A pre-determined dataset was collected from patient records and analysed using SPSSv16. Results were considered significant at 5%.

**Results:** We identified 254 patients (mean age 71). Median onset of AF was post-operative day 3. All patients received medical treatment for AF. DCCV was successful in 85%. 87% remained in sinus rhythm at discharge. A greater proportion of patients on digoxin (97%) were restored to sinus in comparison to those on amiodarone (82%). Patients cardioverted with one shock were more likely to stay in sinus than those needing more shocks (Odds Ratio 6.09). No adverse events were attributed to DCCV. At follow-up, 88% of successful DCCV remained in sinus.

**Conclusions:** DCCV is effective in reverting AF to sinus rhythm after cardiac surgery, and up till follow-up. Successful DCCV avoids the need for anticoagulation. We recommend early DCCV for the treatment of AF after cardiac surgery.

0554: LAPAROSCOPIC MANAGEMENT OF SYMPTOMATIC DUODENAL DIVERTICULUM BY DISTAL GASTRECTOMY AND GASTROJEJENOLOGY FORMATION


**Introduction:** The incidence of duodenal diverticulum (DD) ranges from 6 to 23%; the majority are asymptomatic and thus identified incidentally. Approximately 25% are symptomatic; presentation is usually non specific, including intractable abdominal discomfort, recurrent vomiting, steatorrhea and or weight loss. Associated complications of DD include pancreatitis, jaundice, duodenal obstruction, bleeding and or perforation. Surgical treatments within the literature include diverticulectomy, duodenal resection, and diverticular inversion.

**Material:** This report outlines the management of two cases of DD presenting with similar symptoms. Both cases underwent laparoscopic intervention; the first receiving an initial Polya gastrojejunostomy; symptom persistence called for revision surgery and conversion of Polya to Roux eny with subsequent distal gastrectomy. The second case underwent Polya and distal gastric transection.

**Results:** Both cases progressed well post operatively; no direct complications occurred as a result of the bypass surgery and follow up revealed full resolution of the initial presenting symptoms.

**Conclusion:** DD can be successfully and safely treated via laparoscopic gastrectomy or gastric transection with gastrojejunostomy formation; reducing the complications and high mortality that follows more definitive DD excision. Associated morbidity including duodenal strictureing and damage to the ampulla of Vater with subsequent altered bile drainage are further minimized by leaving the DD insitu.

0555: READMISSION RATES WITH GALLSTONE COMPLICATIONS PRIOR TO CHOLECYSTECTOMY

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**Introduction:** Laparoscopic cholecystectomy is one of the most commonly performed operations in the UK. Patients can be admitted numerous times with gallstone complications prior to cholecystectomy. A review of practice at a district general hospital was performed.

**Methods:** The prospectively collected hospital database was reviewed, all emergency admissions with gallstone complications were analysed in the 5 years prior to cholecystectomy. These were divided into two group’s pre and post waiting list.

**Results:** There were 497 patients who had an elective cholecystectomy between October 2009 and September 2010. There were 384 (77.3%) females and 113 (22.7%) males. The mean number of days on the waiting list was 68.17 days. In total there were 228 admissions with gallstone related problems prior to definitive surgery. Prior to being put on the waiting list there were 198 admissions, after being listed for cholecystectomy there were a further 30 admissions, 95 % of these admissions were in the 12 months prior to cholecystectomy. Admissions consisted of biliary colic (127), pancreatitis (40), cholecystitis (44), cholangitis (4), jaundice (6), dysfunctional gallbladder (1), CBD stone (4), biliary sepsis (2).

**Conclusion:** There is a high incidence of complications for patients being delayed for cholecystectomy.