curative intent. A subset of these patients was followed up prospectively by an oncologist for toxicity. We estimated survival by the Kaplan-Meier method and compared our results with those of previous trials which utilised conventional radiotherapy.
Result: We studied 131 patients with a median follow-up time of 43 months (range; 3-84). Eleven patients (8.4%) underwent salvage abdominoperineal resection. Grade 3+ acute non-haematological, gastrointestinal, genitourinary and dermatological toxicity were found in 56.2%, 12.3%, 0% and 50.7% of the toxicity subset (n=64). Overall and colostomy-free survival at 5 years were 67.9% and 85.1%, respectively. T-stage predicted shorter overall survival (p=0.02).
Conclusion: IMRT yields a low requirement for abdominoperineal resection, low levels of severe genitourinary and gastrointestinal toxicity and similar long-term survival compared to conventional radiotherapy.

0010: IS THERE A POSTCODE LOTTERY FOR MELANOMA TREATMENT IN THE THAMES VALLEY?

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Aim: Sentinel node biopsy (SNB) is an established investigation for melanoma with potential therapeutic benefit. However, there is variation in practice and not all centres in the UK offer this prognostic intervention. We assessed the geographical variation in referral patterns and patient demographics to a regional cancer centre for patients' undergoing SNB.
Method: We assessed all SNB procedures performed between December 1998 and 2014 at the Oxford University Hospitals. SPSS and FusionMaps were used to plot referral patterns and geomapping of patients to our centre.
Result: Overall 1403 patients underwent SNB in Oxford. Median distance travelled was 37 km (range 0.32–88 km). Median Breslow thickness was 1.7mm (range 0.3-17.0mm). Distance from base hospital was not significantly associated with a difference in Breslow thickness at operation (P=0.61) or increased death (Exp(B)=0.988, p=0.069). Increasing Breslow thickness was significantly correlated with a positive SLNB (Odds ratio of 1.37, P<0.005). Age showed a slight but significant negative correlation (OR 0.99, P=0.042).
Conclusion: These data demonstrate a wide referral pattern for melanoma patients seeking specialist prognostic intervention in the form of SNB within the Thames-valley region. There was no significant difference in outcome based on melanoma mortality and patient postcode, excluding a postcode effect.

0287: EVALUATING THE IMPACT OF CHANGES TO THE AJCC/UICC STAGING SYSTEM FOR DIFFERENTIATED THYROID CANCER (DTC) ON PATIENTS IN SOUTH EAST SCOTLAND

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Aim: To assess the impact changes in DTC staging – implemented from January 2018 - may have on patients presenting to the SE Scotland endocrine MDT.
Method: Data from MDT meetings in NHS Lothian between 2009-2013 was collected, including 7th edition AJCC (American Joint Committee on Cancer) staging. We re-staged patients based on the 8th edition and assessed survival.
Result: 286 patients were diagnosed with DTC between 2009-2013. Median follow-up was 5 years (range 1.9-8.8 years). 85 patients (29.7%) were down-staged when the new classification was applied. Of 55 advanced stage patients, 47 (85%) were down-staged to stage I/II disease; 24 (44%) and 23 (42%) respectively. Re-staging led to a dramatic increase in stage I patients from 190 (66.7%) to 250 (87.7%); despite including down-staged patients, the 5-year survival improved from 98.4% to 99.2%. Only 2 patients whose stage was down-graded subsequently died from their thyroid cancer.
Conclusion: The vast majority of patients are now considered to have stage I disease and correspondingly this group has excellent outcomes.

0553: A COMPARISON OF THE IMPACT OF POSITIVE SURGICAL MARGINS ON BIOCHEMICAL RECURRENCE RATES AFTER RADICAL PROSTATECTOMY IN PATHOLOGICAL T2 AND T3A DISEASE

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Aim: To determine the relative impact of a positive surgical margins (PSM) on biochemical recurrence rates (BCR) in organ confined (T2) vs early extra-prostatic extension (T3a) prostate cancer.
Method: Consecutive patients (2006-2013) undergoing radical prostatectomy with pT2/T3a Nx/N0 disease were included. Cox-regression was then undertaken.
Result: 688 patients were included. 176/688 (27.2%) had PSM, 77/688 (11.2%) had BCR. Median follow up: 5.4 (3.5-7.6) years. BCR rates in pathological subgroups were as follows: T2 GL3+3 no PSM 1/167 (0.6%) vs PSM 2/33 (6.1%); T3a GL3+3 no PSM 0/14 vs PSM 1/14 (7.1%); T2 GL3+4 no PSM: 12/183 (6.6%) vs PSM 12/58 (20.7%); T3a GL3+4 no PSM 8/58 (13.8%) vs PSM 14/46 (30.4%); T2 >GL3+4 no PSM 5/30 (16.7%) vs PSM 2/7 (28.6%); T3a >GL3+4 no PSM 7/20 (35.0%) vs PSM 13/18 (72.2%). Cox-regression adjusting for Gleason grade, number of positive biopsy cores and PSA demonstrated a hazard ratio for BCR with PSM in T2 disease of 3.71 (1.85-7.44) p<0.001 vs T3 disease 2.35 (1.22-4.50) p<0.001.
Conclusion: The relative impact of a PSM in T2 disease is greater than in T3a disease. However absolute recurrence rates are significantly higher in T3a with PSM than in T2 with PSM even within comparable Gleason grades.

0729: ACUTE KIDNEY INJURY AFTER OESOPHAGEAL CANCER SURGERY: INCIDENCE, RISK FACTORS, AND IMPACT ON ONCOLOGIC OUTCOMES

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Aim: To study the incidence of acute kidney injury (AKI) after oesophageal cancer surgery, and determine independent risk factors for postoperative renal impairment.
Method: Consecutive patients undergoing potentially curative surgery for oesophageal cancer from 2006-2016 were studied. AKI was defined according to AKIN criteria. Complications were recorded prospectively and comprehensive complications index (CCI) determined. Multivariate linear and logistic regression was performed to determine factors independently predictive of postoperative AKI.
Result: 661 patients underwent surgery with a CCI of 21.3±19.7 and an in-hospital mortality of 1.4%. Postoperative AKI occurred in 174 (26.3%) patients, with AKIN 1, 2 and 3 in 122 (18.5%), 41 (6.2%) and 11 (1.7%), respectively. Preoperatively, body weight (P=0.02, OR1.03 [95%CI 1.00–1.06]) and age (P=0.01, OR1.06 [1.01–1.11]) independently predicted postoperative AKI risk. After surgery, while CCI was predictive of AKI on univariable analysis (P<0.001 OR1.03 [1.02–1.04]), atrial fibrillation (P=0.001 OR3.25 [1.57–6.72]) and prolonged intubation (P=0.016 OR3.61 [1.28–10.21]) were independently associated with AKI on multivariable logistic regression. Postoperative AKI did not impact survival outcome on univariable or multivariable analysis.
Conclusion: Major AKI is rare after oesophageal cancer surgery, with risk independently associated with increasing age, obesity and metabolic syndrome, as well as postoperative morbidity.

SARS RESEARCH & ACADEMIC PRIZE

0686: PROSTATE CANCER PROGRESSION: ASPIRIN CAUSES CELL CYCLE QUIESCENCE IN PROSTATE CANCER CELLS

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Aim: Experimental studies have suggested that the antitumor properties of aspirin are attributed to its direct inhibition of cyclooxygenase-2 (COX-2) activity. However, other studies have also suggested that non-COX pathways could be of importance. We studied the effect of aspirin, and its active metabolite sodium salicylate on prostate cancer cell proliferation and cell cycle analysis.
Method: We exposed PNT2 (normal prostate), DU145 (prostatic brain metastasis), PC3 (prostatic bone metastasis) to six physiologically relevant doses (0- 10mM) of aspirin and sodium salicylate. After treatment, proportion of cells in G0/G1, S, and G2/M phases of the cell cycle were quantitated by fluorescence-activated cell sorting.
Result: Our results indicate that aspirin inhibite cell cycle progression in prostate cancer cell. We observed a G0/G1 cell arrest in both PC3 and DU145 with each aspirin treatment as the highest proportion of cells were in G0/G1.The active metabolite, sodium salicylate also indicated a G0/G1 cell arrest in both PC3 and DU145.
Conclusion: This study provides evidence that aspirin inhibits cell cycle progression in prostate cancer cells, which suggests that aspirin may be relevant to prostate cancer progression.

0730: PREDICTING EXCESSIVE POST-OPERATIVE BLOOD LOSS IN CARDIAC SURGICAL PATIENTS USING PLATELET MICROVESICLES

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Aim: Post-operative bleeding represents an important complication for patients undergoing cardiac surgery. Platelet microvesicles (PMVs) are procoagulant intercellular communicators; with PMV counts and phenotypes being associated with bleeding. Therefore, we evaluated PMVs potential to predict post-operative bleeding in cardiac surgical patients.
Method: 25 patients undergoing cardiac surgery had blood taken pre- and post-heparin administration. PMV counts and phenotypes in platelet-poor plasma were analysed using flow cytometry. Phenotypes were determined using the antibodies for CD41a, CD42b, CD61, CD62P, and lactadherin for phospatidylserine quantification. PMV counts were compared to post-operative blood loss and demographics.
Result: CD42b+ PMV counts significantly decreased post-heparin administration ($p=0.002$). The decrease in CD41a+ PMV counts were significantly associated with 12-hour post-operative bleeding ($r=-0.511$, $p=0.011$). ROC analysis using change in CD41a+ PMV count between pre- and post-heparin, and gender, showed an association with excessive post-operative bleeding (*Area under the Curve = 0.821, SE = 0.090, p = 0.045*), with a specificity of 71% and sensitivity of 75%.
Conclusion: We have demonstrated a preliminary method for predicting excessive post-operative bleeding in patients undergoing cardiac surgery, based on the decrease in their CD41a+ PMVs and their gender. A larger study is required to confirm findings and refine risk thresholds.

0775: A RISK SCORE TO PREDICT POST-OPERATIVE ACUTE KIDNEY INJURY IN PATIENTS UNDERGOING MAJOR GASTROINTESTINAL SURGERY: A NATIONAL PROSPECTIVE OBSERVATIONAL COHORT STUDY AND EXTERNAL VALIDATION

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Aim: To prospectively develop and externally validate a pragmatic, prognostic model to stratify patients according to risk of developing AKI after major gastrointestinal surgery.
Method: The prospective derivation cohort included consecutive adults undergoing elective or emergency gastrointestinal resection, liver resection, or reversal of stoma. The primary outcome was AKI incidence within 7 days of surgery. Internal model validation was carried out by bootstrap validation and external validation was performed in patients undergoing major abdominal surgery drawn from the International Surgical Outcomes Study.
Result: The derivation dataset included 4544 patients across 173 centres. The overall AKI incidence was 14.2% (646/4544) and mortality was 1.9% (84/4455). Six variables were selected for inclusion in the prognostic model: age, sex, American Society of Anaesthesiologists grade, pre-operative estimated glomerular filtration rate, planned open surgery, and pre-operative angiotensin converting enzyme inhibitor or angiotensin receptor blocker use. Internal validation demonstrated good model discrimination (c-statistic 0.65). External validation of the model demonstrated good discrimination (c-statistic 0.79, 95% CI 0.77-0.80). Within the validation cohort sensitivity at the 'high-risk' threshold was 56.8% and the negative predictive value was 99.0%.
Conclusion: Our prognostic model is externally validated and can reliably identify patients at high risk of post-operative AKI based on variables available prior to surgery.

0862: MEDICALLY EXPULSIVE THERAPY (MET) HAS NO BENEFIT IN IMPROVING SPONTANEOUS STONE PASSAGE (SSP) IN PATIENTS PRESENTING WITH ACUTE URETERIC COLIC: RESULTS FROM THE MIMIC STUDY

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Aim: There is conflicting evidence on the role of MET in SSP in patients with acute ureteric colic. We undertook a multi-centre international cohort study in 71 centres to assess whether MET use improved rates of SSP.
Method: Multivariable mixed-effects logistic-regression models were created, fitted for MET use, Age, Gender, Stone size and Stone position. To explore the effect of stone size and stone position on whether MET use had an effect on SSP, an interaction term was fitted between these variables.
Result: Of the 4181 patients admitted with acute ureteric colic, 2516 had a confirmed outcome after being discharged with conservative management and were included in the multivariable analysis. The unadjusted odds ratio for the association of MET use with SSP from univariable analysis was 1.250 (95%CI, 1.041, 1.501). However, following a multivariable mixed effects logistic regression there was no association of MET use with SSP in any subgroup irrespective of stone size or stone position. The overall OR for MET use was 0.861 (95%CI 0.521, 1.424).
Conclusion: Our data shows that in patients with acute ureteric colic who are suitable for initial conservative management, MET use has no benefit in spontaneous stone passage, regardless of stone size or stone position.

0923: THE ROLE OF NOVEL PROTEASE PAMR1 IN TENDINOPATHY

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Aim: The aetiology of tendinopathy is unclear. Several proteases involved in degradation and remodelling of the extracellular matrix(ECM) of tendon have been studied in their involvement in tendinopathy. Many of these proteases alter nuclear and protein expression in tendinopathy. This study explores the expression of previously unstudied protease PAMR1(peptidase domain containing associated with muscle regeneration 1) in tendinopathy.
Method: The expression of PAMR1 mRNA in the achilles tendon samples from 3 patients with achilles tendinopathy was compared to the expression in the achilles tendons of normal patients, N=3. We also assessed PAMR1 expression in normal hamstring tenocytes and assessed expression with and without stimulation of transforming growth factor-beta-1(TGFb1).
Result: There was a 2.42 fold change in PAMR1 expression in pathological Achilles when compared to normal Achilles, p=0.12. In normal hamstring tenocytes, TGFb1 supresses the expression of PAMR1 in tenocytes by a factor of 2.32 (p=0.001) and 1.98 (p=0.001) with stimulation at 6 hours and 24 hours respectively as compared to untreated level of expression.
Conclusion: From in-vitro stimulation, we can hypothesise that PAMR1 expression is linked to TGFβ1 activation and subsequent signalling. PAMR1 expression is potentially upregulated in tendinopathy.