Results: 76 patients underwent lung resection in the year prior to the ERP and 80 patients in the following year. Median age was 72 years (IQR 64-77) and 69 years (IQR 64-75) before and after programme commencement, respectively (p = 0.120). The proportion of patients undergoing VATS resection was 55.3% and 66.3% in the consecutive years (p = 0.160). LOS for all approaches prior to and following the introduction of ERP was 6 days (IQR 4-8) versus 5 days (IQR 3-8), respectively (p = 0.126). The non-significant reduction in LOS was observed in both open and VATS cases. Overall, the reduction in LOS represented a cost reduction of £26880 (14%).

Conclusion: The benefits of a thoracic surgery ERP may be difficult to measure in terms of hard end-points due to the staged nature of ERP implementation. A trend towards reduced LOS was observed following the introduction of the thoracic surgery ERP.

0308: A PROGNOSTIC INDICATOR IN RECTAL CANCER SURGERY: LYMPH NODE RATIO IN NEO-ADJUVANT CHEMO-RADIOTHERAPY (CRTx)
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Aim: This study aims to identify which variables – lymph node yield (LNY), LN ratio (LNR) and LN involvement (LNI)- are significant predictors of overall survival (OS) in patients who had neo-adjuvant CRTx for rectal cancer.

Methods: This is a retrospective study of patients who had surgical resection for rectal cancers from January 2006-December 2011 in TTHH (Singapore). LNY, LNI and LNR from histopathology are recorded. Correlation and multiple regression analyses were conducted to examine relationship between OS (<3-year follow-up) and potential predictors (LNY, LNI, and LNR).

Results: A total of 200 patients were included, of which 80 had neo-adjuvant CRTx. A reduction in mean LNY and LNI were found in the neo-adjuvant group (from 23.4 ± 15.0, p = 0.01 and 3.45 ± 1.86, p = 0.163 respectively). There was no reduction in mean LNR (both 0.11). OS is negatively and significantly correlated with LNI (p = 0.019) and LNR (p = 0.011). The stepwise multiple regression model showed LNR as best predictor of survival (R2 = 0.072, F (1, 71) = 5.495, p < 0.05).

Conclusion: Neo-adjuvant CRTx reduces LNY and LNI but not LNR. LNI and LNR are inversely related to OS. LNR is the single best predictor of prognosis for patients who had neo-adjuvant CRTx for rectal cancer.

0339: A COMPARISON OF TWO DIGITAL MAMMOGRAPHY SYSTEMS AT BREAST TEST WALES – WHAT DOES IT MEAN FOR SURGEONS?
G. Devonish, T. Evans 1, B. Burlton, D. Bailey, K. Gower-Thomas. Breast Test Wales, UK

Aim: The Welsh breast screening service converted to wholly digital technology in 2012. This study aims to compare the performance of the two digital mammography technologies used (Sectra/Philips and Hologic); specifically number, type, size and grade of tumour identified?

Methods: A retrospective study of a prospectively collected database of 50,000 consecutive screening episodes; clients aged 49-88 (mean 61.9). All tumours were de

0532: PATTERNS OF MELANOMA RECURRENCE FOLLOWING A NEGATIVE SENTINEL LYMPH NODE BIOPSY
E. O’Connell 1, P. O’Leary, Z. Khan, K. Fogarty, P. Redmond. Cork University Hospital, Ireland

Aim: Sentinel lymph node (SLN) status is a recognised prognostic indicator in melanoma. However, in the setting of a negative SLN there remains a high risk of disease recurrence. We aimed to analyse the predictors and patterns of recurrence in patients with a negative SLN biopsy.

Methods: Review of a prospectively maintained melanoma database. Patients with a negative sentinel lymph node were identified and we performed statistical analysis on their demographics, tumour histology characteristics and follow-up data.

Results: Of 164 patients studied, 40 (23%) had a recurrence of melanoma at a median of 39.5 months following diagnosis (range 1–92 months). Distant...
metastases were the most common form of disease recurrence (40% of all recurrences). 70% of recurrences occurred in those with primary tumour thickness >2.1 mm. Tumour depth was an independent predictor of recurrence on multivariate analysis. Median survival of 6 months was seen following disease recurrence (range 1–126 months).

Conclusion: In the setting of a negative SLN there remains a risk of melanoma recurrence. Distant metastases were the most common form of recurrence. Disease recurrence occurred more frequently in those with thick primary tumours. Recurrences occurred at long intervals from diagnosis indicating the need to consider prolonged patient follow-up.

0676: P53 CAN BE STABILISED BY A COMBINATION OF NUTLIN-3 AND IRRADIATION IN HUMAN PAPILLOMAVIRUS-POSITIVE OROPHARYNGEAL CARCINOMA CELLS, WITH NO APPARENT EFFECT ON CELL GROWTH OR CLONOGENIC SURVIVAL

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Aim: Transformation with high-risk human papillomaviruses (HPV) is responsible for the recent increase in incidence of oropharyngeal squamous cell carcinoma. HPV E6 protein efficiently degrades p53, which is a critical tumour suppressor.

Methods: Nutlin-3 is a small molecule inhibitor of MDM2, an essential regulator of p53. Using oropharyngeal carcinoma cell lines, we examined their sensitivity to X-irradiation and Nutlin-3 using MTT and clonogenic assays. We used western blotting to analyse protein expression.

Results: HPV-negative cell lines exhibited Nutlin-3-related growth- or radiosensitivity according to their respective p53-MDM2 statuses. This accords with our previous work (Araya et al 2010). In contrast, HPV-positive cell lines displayed no growth- or radiosensitivity to Nutlin-3, suggesting that p53 activity cannot be rescued by inhibition of MDM2. Interestingly, western blot analysis revealed significant stabilisation of p53 five hours after treatment, with a concurrent increase in expression of MDM2. p53 protein levels subsequently fell at a similar rate to HPV-negative cells.

Conclusion: While p53 levels are stabilised by a combination of MDM2 inhibition and irradiation in HPV-positive cells, this appears to have no overall effect on growth or clonogenic survival. These results may suggest that liberation of p53 is not a viable treatment strategy in HPV-positive cancers.

Posters of Distinction

0006: THE EFFECT OF ORTHOPAEDIC SURGERY ON THE INTRINSIC PROPERTIES OF SURGICAL GLOVES

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Aim: Surgical gloves function as a mechanical barrier that reduces transmission of body fluids and pathogens from hospital personnel to patients and vice versa. The effectiveness of this barrier is dependent upon the integrity of the glove.

Methods: A total of 20 unused sterile surgical gloves (neoprene and latex) were exposed to cement over 30 s, 1, 5, 12-minute intervals. Following each time point, the palmar surface and fingertips of each glove was analysed using the scanning electron microscope (SEM), and were tested for changes in contact angle and tensile properties.

Results: Exposure to cement caused a significant increase in both the neoprene and latex glove porosities at 12 min but no significant further changes at any later time points. The latex gloves had a greater increase in pore diameter than the neoprene gloves. Exposure to cement for 12 min duration significantly decreased the tensile strength of both latex and neoprene gloves.

Conclusion: This study provides evidence that exposure to cement, a common orthopaedic material, can disrupt the intrinsic properties of the surgical gloves worn in the operating theatre. This can lead to micro or macro perforations putting both the patient and operating room personnel at risk of contamination.

0018: TEMPORAL VARIATION IN MAJOR TRAUMA ADMISSIONS: IS THERE A TRAUMA SEASON?

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Aim: Trauma is a significant cause of morbidity and mortality in the United Kingdom (UK). Since the inception of the trauma networks, little is known of the temporal pattern of trauma admissions.

Methods: Trauma Audit and Research Network data from two large Major Trauma Centres (MTCs) in the South East of England was collated, Brighton & Sussex University hospitals (BSUH) and St George’s hospital (SGH) between 1st of April 2011 and 31st March 2013. The number of admissions and the Injury Severity Score (ISS) by time of admission, weekday versus weekend and by season were analysed.

Results: There were n = 1223 admissions at BSUH and n = 1241 admissions at SGH. There was significant variation by time of admission; more admissions in the weekend versus weekdays (BSUH p < 0.001) and evenings (SGH p < 0.001). There were proportionally more admissions on the weekend versus weekdays (BSUH p < 0.001, SGH p < 0.028). There was significant seasonal variation in admissions at BSUH (p < 0.001) with more admissions in summer and autumn. No significant seasonal variation was observed at SGH (p = 0.543).

Conclusion: The temporal patterns observed were different for each MTC with important implications for resource planning of trauma care. This study identified differing needs for different MTCs and resource planning should be individualised to the network.

0289: VARIATIONS IN NON-TECHNICAL SKILLS IN EMERGENCY AND ELECTIVE THEATRES – A PROSPECTIVE STUDY

J. O’Kelly*, B. Ip, A. Paisley. NHS Lothian, UK

Aim: To assess the non-technical skills of surgeons in emergency versus elective theatre settings. To evaluate the use and compliance to the ‘sterile cockpit’ during critical situations.

Methods: 9 emergency and 8 elective procedures were observed at a large teaching hospital. The non-technical skills of the primary operator were assessed during the pre-list brief and throughout each operation. A standardised NOTSS checklist was used to document positive and negative behaviours against four behavioural categories. Critical periods were noted, and whether the operator opened the ‘sterile cockpit’, recognised by theatre staff, and what the noise in the theatre during that time was.

Results: Positive behaviours are less prevalent in the emergency setting (Emergency 68.3dB P = 0.1399). Communication is poorer in the emergency setting, particularly the theatre brief and communication. The sterile field is rarely opened formally but there is no difference in noise levels between the settings.

0380: SYSTEMATIC REVIEW AND META-ANALYSIS OF OUTCOME FOLLOWING TRAINEE VERSUS EXPERT PERFORMED APPENDICECTOMY

P. Singh 1, A. Bhangu, M. Kelly, P. Tekkis. The Royal Marsden Hospital, UK

Aim: Appendicectomy is one of the most commonly performed operations in general surgery, being predominantly performed by surgical trainees. The aim of this study was to compare outcomes following trainee and expert performed appendicectomy.

Methods: Systematic searches identified studies comparing outcomes following trainee and expert/consultant appendicectomy. The primary