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The Nottingham Hip Fracture Score (NHFS) is a pre-operative scoring system originally developed to assess the risk of mortality at 30 days after hip fracture. We performed an independent validation of the NHFS in a South Manchester population, aiming to define levels of high and low-risk within the NHFS. We assessed its ability to predict length of stay, 90-day mortality, and probability of return to pre-fracture residence (PFR). Observed and predicted 30-day mortality was compared for each level of the NHFS. In the 1037 hip fractures included in the study, the NHFS was found to reliably predict 30-day mortality and is responsive to change for up to 90 days after hip fracture. We divided our cohort into low (NHFS 0 to 3), medium (4 to 6) and high (7 to 9) risk groups. Low-risk patients were found to have a significantly shorter length of stay (15 days vs 28 days,  $p < 0.001$ ) and a higher probability of return to PFR (0.97 vs 0.89,  $p < 0.001$ ) than the medium risk group. We have validated this outcome score in our population in South Manchester and have proposed a model of risk stratification, which could be a useful tool for discharge planning.

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#### 0060: THE ROLE OF TISSUE FIBROSIS ON STIFFNESS OF THE DIGIT

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**Introduction:** The stiff finger represents significant morbidity to patients and a menace to hand surgeons that can arise from any trivial trauma or inflammatory disease processes. Our understanding of this problem remains without a unifying pathogenesis nor an effective solution.

**Aims:** We sought to study the pathogenesis of the stiff finger and hand by developing a mouse model of hand fibrosis, as well as examine macrophage recruitment in relation to fibrotic signaling and tissue stiffness.

**Methods:** Our research strategy involved inducing digit stiffness in the mouse using a cast immobilisation model (N=16). Macrophage recruitment was assessed by F4/80 immunohistochemistry and changes in matrix stiffness were assessed by atomic force microscopy. Fibrosis PCR arrays were used to provisionally examine these pro-fibrotic pathways.

**Results:** Macrophage recruitment was more extensive in the cast immobilised tissues. Furthermore, their localisation corresponded to notable morphological and immunohistochemical changes in the matrix of subcutaneous tissue and tendon. Multiple fibrotic markers were elevated and may indicate a specific macrophage-activated phenotype involved in the fibrotic process.

**Conclusion:** This study has identified a new model for digital and hand fibrosis that can be used to investigate novel therapeutics in reducing stiffness of the finger after immobilisation which may relate to aggressive macrophage biology.

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## Basic science including anatomy

#### 0886: CLINICOPATHOLOGICAL AND GENETIC CHARACTERISTICS OF GASTRO-INTESTINAL STROMAL TUMOURS (GISTS)

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**Introduction:** The risk of progressive disease from GISTs can be informed by key clinicopathological characteristics. Mutational analyses can also predict response to targeted molecular therapy.

**Aim:** To assess the clinicopathological and genetic characteristics of GISTs in the past 5 years.

**Method:** The APEX pathological database held at Aberdeen Royal Infirmary was searched using the SNOMED code M89363 (GIST) between January 2009 and May 2014. 54 results were found of which 9 were

excluded. The prognostic index was calculated according to the Royal College of Pathologists grading system.

**Result:** The male: female ratio was 1: 1 with a median age of 67 years. Tumours were most commonly found in the stomach (60%) and were largely pure spindle cell type (82%). All tumours were positive for CD117 and DOG-1 immunohistochemistry. 7 patients underwent mutational analyses: 5 had mutations of c-kit, all of which were at exon 11, 1 PDGFRA at exon 12 and 1 case where no mutations were detected in the analyses performed.

**Discussion:** Mutational analyses were not consistently performed on all appropriate specimens. This could offer an opportunity for re-audit following departmental education.

**Conclusion:** The clinicopathological findings were largely in keeping with national data for GISTs.

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#### 1199: THE SCOPE FOR EXTRA-CURRICULAR ANATOMY COURSES IN IMPROVING MEDICAL STUDENTS' KNOWLEDGE AND CONFIDENCE IN CLINICAL ANATOMY

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**Introduction:** The emphasis on anatomy teaching has decreased in UK medical schools, despite its paramount importance in clinical practice. Furthermore, the level and style of anatomy teaching has substantial inter-institutional variance.

**Method:** A seven-week anatomical course was conducted at Warwick Medical School. Junior doctors ranging from FY1 to CT2 taught thirty-five medical students. The students undertook a pre-course questionnaire and twenty multiple choice questions (MCQ) relevant to anatomy. A post course questionnaire and MCQ on completing the course. Demonstrators completed a similar pre-course questionnaire.

**Result:** Thirty-five students and fourteen demonstrators completed the pre-course questionnaire. The pre-course questionnaire showed 54% of medical students rated their knowledge in anatomy as 'poor' on a 5 point scale. 21% of demonstrators felt they had covered an adequate amount of anatomy at medical school. 45% of medical students strongly agreed and 55% of medical students agreed their confidence of clinical anatomy improved directly related to the course. The mean MCQ percentage improved by 16.1% further to participating in the anatomical course.

**Conclusion:** Data extracted from the student pre-course questionnaire highlighted a lack of confidence in anatomy. The results show a promising role for extra-curricular classes in improving students confidence and attainment in anatomy.

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#### 1362: ENDOSCOPIC AND MINIMAL INVASIVE SURGERIES FOR SELLAR AND PARASELLAR TUMORS: CADAVERIC DATA

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**Objective:** Aim of this study is to assess assumed advantage of the pure endoscopic to endoscopic assisted or Microscopic supraorbital key hole approach. The idea is to measure visibility and accessibility to avoid the surgical complications.

**Material:** We will perform eight dissections on eight cadaver heads. This dissections integrated an operating microscope, endoscope, and neuro-navigation. Comparison was made between visibility and accessibility of sellar and parasellar region in both approaches.

**Result:** Our measurements of the formalin fixed heads including each side; the mean  $\pm$  SD from the bone margin to anterior communicating artery =  $68.56 \pm 6.00$ , to ipsilateral internal carotid artery =  $74.24 \pm 7.76$ , to contralateral internal carotid artery =  $82.85 \pm 7.50$ , to basilar