Ulster Medical Society
Junior Doctors’ Prize Evening
5th November 2009
Ulster Medical Society Rooms

Abstracts

Ulster Medical Society
Junior Doctors’ Prize Evening
5th November 2009

Platform Presentations

Successful eradication of Methicillin-resistant Staphylococcus aureus in adults with Cystic Fibrosis

Hoeritzauer AI, Bradley J, Rendall J, Hall V, Goldsmith C, Moore J, Elborn S. Department of Respiratory Medicine, Belfast City Hospital.

People with Cystic Fibrosis have a high risk of MRSA infection. Prevalence has increased from 7% of patients in 2001 to 17.2% of patients in 2005 in the USA (1). It is unclear whether MRSA respiratory infection influences lung function, which antibiotics (if any) should be used to treat MRSA infection and for how long. This study investigates the prevalence and antimicrobial resistance of MRSA isolates in the Northern Ireland adult cystic fibrosis population, lung function changes associated with MRSA positive sputum and antibiotic treatment, antibiotic choices, the length of treatment and the efficacy of treatment.

A retrospective study was carried out on all patients with Cystic Fibrosis (CF) attending the NI Regional adult CF centre, Belfast City Hospital, with a history of MRSA between 1999 and February 2009. Case notes were used to ascertain FEV1 three months prior to infection, at date of initial sputum culture positive MRSA, at the end of antibiotic treatment, and three months post infection. Information on the antibiotics used and duration of treatment were also obtained. Twenty eight adult patients (mean age 25 (7) years) were included in the study. FEV1 (%predicted) at initial positive sputum result was [64(24)]. The majority of infections (82%) were treated with 6 weeks of rifampicin dose 300mg po bd and fusidic acid 500mg po bd and the remainder with combination therapy based on antimicrobial sensitivity and reported side effects. FEV1 (%predicted) showed a small but significant improvement after antibiotics for first MRSA infection only [7(15%), p=0.04, (95% CI 0-13%]. Overall 26 of the 28 patients remained MRSA sputum culture negative for six or more months following antibiotic treatment. 23 patients were treated with rifampicin and fusidic acid, of whom 21 had successful eradication of MRSA. Linezolid was used in 5 infections involving four patients with recurrent MRSA infections and proved ineffective in 4 of these. This study demonstrates that FEV1 improves significantly following antibiotic treatment for first isolation of MRSA from sputum culture in CF. Rifampicin and fusidic acid for six weeks are effective first line agents.

Heart fatty acid binding protein (H-FABP) in combination with the 80-lead body surface map (BSM) improves early detection of acute myocardial infarction

Daly MJ1, McCann CJ1, Owens CG1, Stevenson S3(2), Young IS3(2), Adgey AAJ1

1 The Heart Centre, Royal Victoria Hospital,
2 (a) Department of Epidemiology and Public Health, and (b) Nutrition and Metabolism Group, Centre for Clinical and Population Sciences, Queen's University, Belfast.

Despite modern high sensitivity assays for cardiac troponin T (cTnT) there remains a sub-group of patients who present with ischemic-type chest pain and have a negative cTnT at first medical contact. This group will contain patients at a very early stage of the infarction process. We aim to assess the usefulness of H-FABP in combination with the 80-lead BSM for improving early diagnosis of acute myocardial infarction (AMI). Enrolled were 407 patients (age 62 ± 13 yrs; 70% male). Of these 407, 180 had cTnT < 0.03μg/L at presentation. AMI (peak cTnT ≥ 0.03μg/L) occurred in 52/180 (29%). Of those 180 patients, 27 had ST elevation (STE) on ECG and 104 had STE on BSM. H-FABP elevation (≥5ng/ml) occurred in 95/180, with a significant proportion in the AMI group (42/52 v 53/128, p<0.005). BSM STE was significantly associated with H-FABP elevation (p<0.001). Of those with initial cTnT < 0.03μg/L, the c-statistic distinguishing AMI from non-AMI using H-FABP alone was 0.644 and BSM alone was 0.716. Using the combination of BSM and H-FABP the c-statistic was 0.812 (p<0.001). In patients with acute ischemic-type chest pain who have a normal cTnT at presentation the combination of H-FABP and BSM identifies those with early AMI.

BRCA1 is a predictive marker of response to chemotherapy in sporadic epithelial ovarian cancer

Carser JE1, Quinn JE1, McCluggage WG2, Maxwell P1, Lioe TF1, Mullan PB1, Gourley C1, Harkin DP1

1 Centre for Cancer Research and Cell Biology, Queens University,
2 Department of Pathology, Royal Victoria Hospital,
3 Department of Pathology, Belfast City Hospital,
4 Edinburgh Cancer Research Centre.

Reduced expression of the BRCA1 tumour suppressor gene
occurs in a substantial proportion of sporadic epithelial ovarian cancers (EOC). Treatment of EOC includes both platinum and taxane chemotherapy, however, no predictive markers exist to guide treatment decisions. A reduction in BRCA1 expression leads to enhanced sensitivity to platinum but relative resistance to taxane based chemotherapy in vitro. We therefore investigated the relationship between BRCA1 protein expression by immunohistochemistry (IHC) and survival in EOC, correlating outcome with chemotherapy received. We identified 292 archival tumour samples from two UK ovarian cancer databases. BRCA1 protein expression was assessed and correlated with overall survival (OS) and response to chemotherapy. Patients with detectable BRCA1 staining had a significantly improved median OS (41.7 v 19.8 months, p=0.0004) and response rates (84.5% v 55.8% p=0.003) following platinum/taxane as compared to platinum only chemotherapy. In contrast, patients with no detectable BRCA1 displayd no differences in median OS (41.5 v 38.9 months p=0.74) or response rates (72.7% v 77.8%, p=0.555) whether treated with platinum/taxane or single agent platinum regimens. This study provides evidence that BRCA1 protein expression is a useful predictive marker of response following chemotherapy in sporadic EOC. Further validation of these findings in independent clinical trial populations is under investigation.

Training basic life support to school children using medical students and teachers in a ‘peer training’ model – results of the ‘ABC for life’ programme.

Connolly M, Toner P, Laverty L, McGrath P, Connolly D, McCluskey DR. Queens University Belfast.

The ‘ABC for life’ programme is a specifically designed course of instruction to teach 10-12 year old children basic life support (BLS) skills in Northern Ireland using a three tier ‘peer training’ model of medical students, primary school teachers and P7 children. Medical students instructed small groups of teachers from WELB, who then taught pupils in their schools. Five pupils from each school were selected randomly and given a questionnaire to assess knowledge of BLS immediately before and after a teacher led training session. 38 teachers were trained (190 pupils). Mean age was 10.7 years and 35.4% were male. Baseline CPR knowledge or change following training were not affected by sex, positive family history of heart disease or previous BLS training. Scores improved markedly following training with a mean increase from 57.2% to 77.7% (t-test, p<0.001). There is good transfer of knowledge down the teaching chain from medical student to teacher to P7 pupil. By using this method, large numbers of children are being taught BLS. 350 schools have currently been trained and received manikins / resources. We are currently researching practical skills using recordable manikins.

Patients’ Perception of Doctors’ Workplace Attire

Loughins L. Department of Emergency Medicine, Royal Victoria Hospital.

The DHSS at present enforce a dress code policy for healthcare professionals and have introduced plans for a single uniform for doctors. Their current dress code policy advises short sleeves and no loose clothing as this is expected to reduce the number of hospital acquired infections. There is very little scientific evidence to justify the guidance. With little clinical evidence to support the introduction of uniforms into the workplace, patient opinion should be considered an important factor. This study aims to demonstrate how doctors’ attire affects inpatient perception of infection control, professionalism, clinical ability and accessibility. Data was collected in June and July 2009 in the Ulster Hospital surgical wards and statistics analysed using SPSS. A Surgical SHO was photographed in three sets of clothing – traditional shirt and tie, policy advised clothing and surgical scrubs. A set questionnaire was given to participants with four questions – How would you rate the pictured doctor’s ability to PREVENT the spread of infection, their clinical ability, their professionalism and accessibility? 194 patients scored the photographs out of 10 for each question. The results were analysed using the Friedman test and Wilcoxon signed ranks test – each question had highly significant results. Scrubs scored significantly higher than the policy advised clothing and traditional shirt and tie for perceived prevention of spread of infection. The traditional shirt and tie scored significantly higher with regards to professionalism, clinical ability and accessibility. With no clinical evidence to indicate that work wear is related to the number of hospital acquired infections, and patients otherwise significantly preferring the traditional shirt and tie, it seems there is no indication for introduction of uniforms into the workplace, or in fact a dress code policy at all.

Wavelet transform analysis of blood velocity waveforms may identify very early microvascular disease in type 1 diabetes mellitus

Hamilton, PK1, McCann, A2, Agnew, C2, McGivern, RC2 and McVeigh, GE1.

1 Department of Therapeutics and Pharmacology, Queen’s University Belfast,
2 Northern Ireland Regional Medical Physics Agency.

Diabetic microvascular disease markedly increases the risk of a future cardiovascular event. Current techniques for identifying microvascular disease rely on identification of structural abnormalities of retinal vessels or the detection of albuminuria. The ability to detect dysfunction at an even earlier stage would permit preventative treatment of those at highest risk. Blood velocity waveforms are composed of incident waves generated by cardiac contraction and reflected waves from downstream vessels. The wavelet transform is a mathematical tool that facilitates the comprehensive analysis of waveforms. Its utility remains unknown for the study of blood flow waveforms. 39 subjects with well controlled type 1 diabetes (median age 33 years) and 39 well matched control subjects (median age 30 years) were studied. Maximum blood velocity waveforms were recorded from the common carotid, ophthalmic, central retinal and interlobular arteries using Doppler ultrasound. Wavelet analysis of waveforms identified abnormalities in all vascular territories. These were not apparent when traditional waveform analysis parameters were used. Significant correlations were present between measures of urinary albumin excretion and wavelet-derived indices from the interlobular renal arteries. Wavelet analysis of blood flow velocity waveforms is a powerful technique which appears to be capable of detecting microvascular
disease at a pre-clinical stage.

**POSTER PRESENTATIONS**

**Radiation exposure during EVAR is significant and not influenced by aortic neck morphology**

Jones C¹, Badger SA¹, Boyd CS², Soong CV¹

¹ Department of Vascular Surgery, Belfast City Hospital, Belfast Health and Social Care Trust,

² Department of Radiology, Belfast City Hospital, Belfast Health and Social Care Trust.

Endovascular aneurysm repair (EVAR) is a routine vascular procedure, with widely recognised benefits, but exposes patients to significant radiation. The aim was to assess exposure and determine the influence of neck morphology. All EVAR procedures in a prospective database were included. Neck measurements, sac diameter, radiation dose, screening time and contrast volume were recorded, along with subsequent radiation. Results are expressed as mean (±standard deviation). 320 elective procedures performed. Radiation exposure during EVAR is significant and not influenced by aortic neck morphology. This study demonstrates the utility of microarray expression data analyzed by pathway and Gene Set Enrichment Analysis (GSEA). A candidate gene approach was used to select individual genes from these pathways for incorporation into siRNA screens. Significant pathways involved in these panels of genes were compared with the results of the GSEA to produce a final ranked gene list of pathways. This list included genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells. Significant pathways involved in these panels of genes were compared with the results of the GSEA to produce a final ranked gene list of pathways. This list included genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells. Significant pathways involved in these panels of genes were compared with the results of the GSEA to produce a final ranked gene list of pathways. This list included genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells. Significant pathways involved in these panels of genes were compared with the results of the GSEA to produce a final ranked gene list of pathways. This list included genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells.

**How accurate is PET scanning in the detection of colorectal hepatic metastases?**

Jones C¹, Badger S¹, McCoubrey A¹, McKie L¹, Taylor M¹, Diamond T¹, Lynch T²

¹ Department of Hepatobiliary Surgery, Mater Hospital, Belfast Health and Social Care Trust,

² Department of Radiology, Belfast City Hospital, Belfast Health and Social Care Trust.

Liver metastases occur in approximately 50% of colorectal cancer patients, for which Positron Emission Tomography (PET), first introduced in Belfast in 2002, is an essential pre-operative investigation. The study aim was to compare the characteristics of hepatic metastases on PET with histology. A retrospective review of all colorectal hepatic metastases patients who underwent surgical intervention from August 2002 to December 2008, was performed. Patient demographics, colorectal staging, number of metastases and their maximum diameter from both PET and pathology reports, were recorded. Values are expressed as mean (±SD).

141 patients were identified (28 excluded – no PET). The maximum diameter on PET (4.2cm±2.6) was similar to pathology (4.8cm±3.6; p=0.39), with significant correlation (r=0.72, p<0.0001). The number of lesions on PET (1.6±1.0) was similar to pathology (1.7±1.3; p=0.43) with significant correlation (r=0.80, p<0.0001). Overall, PET accurately predicted the number of lesions in 76 out of 113 patients (67.3%). Mean SUV max was 9.22 (±4.39), with no correlation to lesion diameter (r=0.25, p=0.045), but significantly increased with decreasing differentiation (p=0.01). PET scanning accurately detected the number and size of lesions, with radiological evidence of poorer differentiation. Further studies of non-surgical patients are required to assess its overall accuracy.

**Pathways of Oxaliplatin/5-Fluorouracil Resistance in Colorectal Cancer**

Turkington R, Allen W, Stevenson L, Coyle V, Jithesh P, Proutski I, Fenning C, Stewart G, Longley D, Johnston P.

Centre for Cancer Research and Cell Biology, Queen’s University of Belfast.

The development of drug resistance limits the effectiveness of current chemotherapeutic agents used to treat colorectal cancer and the discovery of these underlying mechanisms of resistance is a priority. Transcriptional profiling of pre-treatment metastatic colorectal cancer liver biopsies and HCT116 parental, oxaliplatin and 5-Fluorouracil resistant cell lines was performed using the Affymetrix HGU133 Plus 2.0 array and Almac Diagnostics Colorectal Cancer Disease Specific Array (DSA). Pathway analysis of the microarray data was performed using Metacore and Gene Set Enrichment Analysis (GSEA) was employed. Data analysis identified panels of in vitro and clinical genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells. Significant pathways involved in these panels of genes were compared with the results of the GSEA to produce a final ranked gene list of pathways. This list included genes whose expression is acutely altered in the parental setting following drug treatment and also basally deregulated in the resistant cells.

**Therapeutic Impact of Radiation Exposure in Acute Surgical Patients**

Fitzmaurice GJ¹, Mone F¹, Brown R¹, Cranley B¹, Conlon EF², Todd RA², O’Donnell ME¹/³

¹ Department of General Surgery, Daisy Hill Hospital,

² Department of Radiology, Daisy Hill Hospital,

³ Faculty of Life and Health Sciences, University of Ulster.

To examine the use of radiological investigations in acute surgical patients and assess whether a guideline-based radiation exposure risk/benefit analysis can aid in the choice of investigation used. A prospective observational study was completed from April to July 2008 for all acute surgical admissions and the use of radiological investigations was then evaluated against The Royal College of Radiologists (RCR) guidelines. 380 acute surgical admissions (M=174,
F=185, Children=21) were assessed and 734 radiological investigations performed (mean = 1.93 investigations/patient). 680 (92.6%) were warranted which included 142 CT scans (19.3%), 129 chest x-rays (17.6%), and 85 abdominal x-rays (11.6%). Clinically, radiological imaging complemented surgical management in 326 patients (85.8%). The average radiation dose was 4.18 millisievert (mSv) per patient or 626 days of background radiation exposure. CT imaging was responsible for the majority of radiation exposure, with a total of 1,310 mSv (82.6%) being attributed to CT imaging in 20.8% of acute admissions. Subgroup analysis demonstrated that 92.8% of the CT scans performed were appropriate.

Radiation exposure was generally low for the majority of acute surgical admissions. However, we recommend carefully evaluating CT imaging requests particularly in patients with clinically confirmed pathologies and in younger women.

**Fahr’s disease – a case series from the Irish Traveller Community**

McKinley JJ1, Carr AS1, McKee S2, Morrison P2, Forbes RB3, McDonnell GV1

1. Department of Neurology, Royal Victoria Hospital,
2. Department of Medical Genetics, Belfast City Hospital,
3. Department of Neurology, Craigavon Area Hospital.

Fahr's disease (or idiopathic basal ganglia calcification) is a rare neurodegenerative condition characterised by pyramidal and extrapyramidal signs, cognitive dysfunction, neuropsychiatric manifestations with basal ganglia and extrastriate calcinosis radiologically. Although genetic linkage studies to the IBGC1 locus on chromosome 14q have been carried out, no specific gene has been identified in this condition. We describe an extensive Fahr’s disease kindred in a consanguineous family from the Irish Traveller Community. Index cases presented aged 30 and 40 with depression, buccolingual dyskinesia, dystarthritis, blepharospasm and segmental dystonic posturing. Examination revealed evidence of hypokinetic and hyperkinetic movement disorders with associated cognitive and psychiatric dysfunction. Imaging demonstrated bilateral striatopallidodentate calcification in all the affected patients. Investigations revealed no abnormality of calcium or iron metabolism nor intracranial vascular pathology. A third similarly symptomatic case and a number of possibly pre- or sub-symptomatic cases were identified on further examination of this kindred. Clinical, para-clinical and radiological data is presented. This is one of the largest kindreds with Fahr’s disease described to date, suggesting an autosomal dominant inheritance with variable penetrance.

**The epidemiology of congenital myasthenic syndromes in Northern Ireland**

Carr AS1, Cardwell C2, O'Reilly D2, McCarron P2, McConville J1,3

1. Neurology Department, Royal Victoria Hospital,
2. Department of epidemiology and medical statistics, Queens University Belfast,
3. Department of Neurology, Ulster Hospital.

Congenital myasthenic syndromes (CMS) are a heterogeneous group of disorders due to inherited abnormalities in neuromuscular transmission. To date information on the frequency of these conditions comes from specialist centre case series reports. Population based data is lacking. Cases were ascertained from systematic review of patients attending the regional neuromuscular clinic over the past 30 years and from those identified and excluded from an epidemiological study of autoimmune myasthenia gravis in the area. Cases were confirmed clinically, genetically and with neuropsychiological examination. 14 cases of CMS were identified in the region giving a prevalence rate of 8.2 per million (95%C.I.:6.0, 10.4) and an estimated incidence of 0.2 (95%C.I.: 0.06, 0.62) per million person-years. Age at diagnosis: 0-60 years (mean: 15.2 years); 4 females, 10 males. Dok-7 syndromes were the most common (43.9%) followed by slow channel (21.4%) and acetylcholine receptor deficiency syndromes (14.3%). One case was fatal: mortality rate 0.1 (95%C.I.: 0.01, 0.71) per million person years. All treated cases responded well to specific treatments with functional improvement. This data suggests that CMS is relatively common among the heritable neuromuscular disorders. Their treatability makes recognition and genetic diagnosis vital.

**Triple A syndrome: Multiple evolving clinical features.**

Wallace IR1, Hunter SJ1, Koehler K2, Huebner A2, Carson D3.

1. Royal Centre for Endocrinology and Diabetes, Royal Victoria Hospital,
2. Children’s Hospital, Technical University Dresden,
3. Royal Belfast Hospital for Sick Children.

Triple A syndrome is a rare autosomal recessive disorder characterised by primary adrenal insufficiency, alacrima and achalasia. Neuropsychiatric features may also be present. Various combinations of these features may be present which evolve over time. Triple A syndrome is caused by mutations in the AAAS gene, whose function is incompletely understood. An 8 year old girl presented with a hypoglycaemic seizure following an overnight fast. Examination revealed palmar skin crease pigmentation. A Synacthen test confirmed primary adrenal insufficiency (basal cortisol 174 nmol/l, stimulated cortisol 173 nmol/l (NR >500nmol/l), ACTH 2980 ng/l (NR <55 ng/l)). Mineralocorticoid replacement was discontinued due to normal electrolytes, renin and aldosterone concentrations. Alacrima was noted at age 9 years. Barium meal demonstrates delayed oesophago-gastric transit in keeping with achalasia. Neurological examination is unremarkable. Genetic testing revealed a homozygous mutation (1144_1147delTCTG) in exon 12 of AAAS gene which causes a frameshift with a premature stop codon (p.Ser382ArgfsX33). We present a rare case of isolated glucocorticoid deficiency due to Triple A syndrome. Marked variability in clinical features is noted even within same kindreds. Diagnosis allows screening and symptomatic treatment for the subsequent development of associated features and reduces the risk of presentation with potentially life-threatening adrenal failure.

**Outcomes of individuals with acute lymphoblastic leukaemia treated according to the UKALL 12 protocol in Ireland.**

Crawford AM, McConville C, Cuthbert RJJ, McMullin MF, Department of Haematology, Belfast City Hospital.
Acute Lymphoblastic Leukaemia in adults is a disorder which poses important challenges with 5 year survival rate in adults of only 30-40%. There are currently no official guidelines on the treatment of ALL. In Northern Ireland, all patients with ALL were enrolled in the UKALL 12 Trial or treated according to its protocol. To assess the outcomes of patients treated for ALL in Belfast City Hospital in comparison to the preliminary results of the UKALL 12 Trial. Retrospective, proforma based case note review of a sample of 33 patients in Belfast City Hospital, including those who were ineligible to be enrolled in the UKALL 12 trial but were treated according to its protocol. The results of this analysis revealed that patients in this sample performed at least as well as the initial UKALL 12 Trial results. 97% of the sample from BCH achieved remission and 100% survived remission induction, in comparison to the 91% in the preliminary UKALL 12 results who achieved remission and 95% of patients who survived its induction. 5 year survival in our sample was 70%, in comparison to 38% in the UKALL preliminary results. These results are encouraging; difference in standards could be partly attributable to difference in sample size, and also due to difficulty in obtaining some patients’ notes.

Carotid Body Tumours – A Northern Ireland Experience

O’Neill S1, O’Donnell ME1,2, George R1, Wallace W1, Harkin DW1, Lee B1, Blair PH1.

1 Department of Vascular and Endovascular Surgery, Royal Victoria Hospital, 2 Faculty of Life and Health Sciences, University of Ulster, and 3 Department of Vascular and Endovascular Surgery, Belfast City Hospital, Northern Ireland, United Kingdom.

Carotid body tumours (CBTs) are rare vascular neoplasms originating in paraganglionic cells of the carotid bifurcation. Symptomatology often relates to an overall pressure effect while their rich vascularity and invasive nature contribute to technical difficulties during removal and associated comorbidity. The aim of this study was to review all patients diagnosed with CBTs by our institutions and compare our experience with all published evidence. We completed a retrospective review of all patients who had CBTs managed in our institutions between 1987 and 2009. Patient demographics, clinical symptomatology, investigative modality, therapeutic intervention, pathological analysis and long-term outcomes were assessed. Twenty-nine patients were identified with 33 CBTs and 3 glomus intravagale tumours (GITs). 6 patients had bilateral CBTs (21%), one patient had a synchronous GIT while 4 familial cases (15%) were identified. There were 14 men and 15 women with a mean age of 49 years (range 16-85). Surgery was not performed in 3 patients. 26 patients underwent a total 30 operative procedures for the resection of 28 CBTs and 3 GITs. Pre-operative embolisation was performed in 2 patients (7%). Conventional operative treatment included subadventitial tumour excision. A vascular shunt was inserted to facilitate vascular reconstruction in 6 (19%) cases. Five patients (16%) required en-bloc resection of the carotid bifurcation with continuity restored with an interposition vein graft. For access the external carotid artery (ECA) was ligated in a further 4 patients (13%) with the ECA being utilised for reconstruction of the internal carotid artery in one patient. Shamblin classification demonstrated 6 grade I, 5 grade II, 9 grade III and 12 unclassified tumours. Mean tumour size was 3.72cm (range 1.8-8.0cm). No peri-operative mortalities were recorded. Immediate complications included peri-operative stroke secondary to an occluded vein graft (n=1), tracheostomy (n=2), emergency haematoma drainage (n=2), transient and permanent cranial nerve damage (n=9 & 10) and Horner’s syndrome (n=1). Late complications included pseudoaneurysm of vein graft with subsequent stoke (n=1) and an asymptomatic vein graft occlusion (n=1). Post-operative radiotherapy was required in 3 patients. There were two malignant tumours and there was one case of tumour recurrence and death secondary to pulmonary metastases at 4-years. Two other patients died of unrelated causes. Other patients remain well with no evidence of recurrence (mean follow up of 1801 days, range 159 -9208 days). Management of carotid body tumours remains within the remit of the vascular surgeon who uniquely possess the operative skills to manage these technically challenging tumours. Our experience is comparable with other modern case series reports where surgical intervention conferred a long-term survival advantage.

Mortality within 30 days in patients over 70 years receiving chemotherapy: a single institution retrospective analysis.

Goody RB1, Calderwood J1, Choong ES1, Law SJM2, Mazdai G1, McAleer JJA1, Hanna GG1,2

1 Department of Clinical Oncology, Cancer Centre, Belfast City Hospital, 2 Northern Centre for Cancer Care, The Freeman Hospital.

Life expectancy in western populations is increasing, as is incidence of malignancy in older persons. As most chemotherapy trials routinely exclude those over 70, information on complications and outcomes is sparse. We examine mortality rates in patients over 70 within 30 days of administration of chemotherapy in routine clinical practice. We retrospectively reviewed case notes of patients over 70 at date of first chemotherapy cycle, receiving chemotherapy at the Northern Ireland Cancer Centre during 2006. Baseline demographics, patient characteristics, treatment received, treatment-related complications, death within 30 days of chemotherapy and overall survival were recorded. Actuarial Survival was estimated using the Kaplan-Meier method. 284 patients were identified, median age 74 years (range 70-88). The most frequent tumour sites were colorectum (25.0%), lung (22.2%) and ovary (12.0%). Median survival was 17.7 months for all patients (95% C.I. 14.4-20.9), 12.1 months for palliative patients (95% C.I. 9.7-14.5), n=184 and had not been reached for those receiving radical or adjuvant chemotherapy (n=102). Mortality within 30 days was 3.5% (n=10). All deaths occurred in those receiving palliative chemotherapy (5.4% of all palliative patients). One death was treatment related. There was no excessive mortality in patients aged over 80. Our results compare favourably with previously published non-clinical trial outcome data for similar age-groups. Further investigation is required into assessment and management of elderly patients receiving chemotherapy.

A review of breast cancer in women under 40-years of age in Northern Ireland

O’Donnell ME1,3, McAree B1, Spence A1, Lioe TF2, McManus DT2, Spence RAJ1,3,4.
There are few studies examining breast cancer in women under the age of 40-years, particularly in Western European populations. Such tumours are reported to be more aggressive, possibly due to a different pathophysiology compared to older patients. We performed a retrospective review of all women less than 40-years of age, diagnosed or treated with breast cancer, from June 2001 to June 2007 to assess pathophysiological factors that may influence clinical outcome and prognosis. All clinical records were reviewed for data regarding patient demographics, clinical presentation, pre-operative investigations, surgical and pathological findings, treatment and outcome. 58 women (mean age 34.9 years, range 27–39 years) were identified. One patient was excluded as her data was incomplete due to treatment outside Northern Ireland. 98.2% (n=56) patients presented directly to our symptomatic clinic following concern upon self-examination. 89.5% (n=51) patients had a palpable lump on clinical examination. 71.9% (n=41) patients had no family history while 10.5% (n=6) had an affected first degree relative. Mammography was less sensitive than ultrasound (64.3% vs. 82.4%) while fine needle aspiration cytology was 92.5% sensitive for malignancy. 29 (50.9%) patients underwent histological examination. 89.5% (n=51) patients had a palpable lump on examination. 10.5% (n=6) had an affected first degree relative.

Previous studies have reported a conflicting relationship between the effect of live and televised sporting events on attendance rates to emergency departments (ED). The objectives of this study were to investigate the relationship of major sporting events on emergency department attendance rates and to determine the potential effects of such events on service provision. A retrospective analysis of ED attendances to a district general hospital (DGH) and subsequent admissions over a 24-hour period following live and televised sporting activities was performed over a 5-year period. Data was compiled from the hospital’s emergency record books including number of attendances, patient demographics, clinical complaint and outcome. Review patients were excluded. Analysis of sporting events was compiled for live local, regional and national events as well as world-wide televised sporting broadcasts. 137668 (80445 male) patients attended from April 2002 to July 2007. Mean attendance rate per day was 80 patients (Male=47). 6.9 patient episodes per day were related to participation in a sporting activity or a consequence of a sporting injury. Mean admission rate was 13.6 patients per day. Major sporting events during the study period included; Soccer: 4 FA Cup and 1 World Cup (WC) finals; Rugby: 47 Six Nations, 25 Six Nations games involving Ireland, 1 WC Final, 2 WC semi-finals, 2 WC quarter-finals and 4 WC games involving Ireland; and Gaelic Football (GAA): 5 All-Ireland finals, 11 semi-finals, 11 quarter-finals and 5 provincial finals. There was no correlation identified between any of these sporting events and total emergency department attendance, sporting injury and non-sporting injury rates (p>0.05). However, multimodal logistic regression demonstrated that FA Cup final (p=0.001), Rugby Six Nations (p=0.019), Rugby WC games involving Ireland (p=0.003), GAA All-Ireland semi- and quarter-finals (p=0.016 & p=0.016) were predictors of patient admission rates. This study suggests that live or televised sporting events do not significantly affect ED attendances to a DGH. However, some events appeared to be predictors of patient admission rates. Although it may be beneficial to consider the effect of sporting events on service stratification during these periods, the overall effect is probably minimal and should not create a major concern for future service provision despite the implementation of the European Working Time Directive.

### The Effect of Sporting Events on Emergency Department Attendance Rates in a District General Hospital in Northern Ireland

McGreevy A1, Millar L1, Murphy B1, Davison GW2, Brown R1, O’Donnell ME1,3.

1 Department of General Surgery Daisy Hill Hospital, 2 Sport and Exercise Sciences Research Institute, 3 Faculty of Life and Health Sciences, University of Ulster.