The 30th Sir Peter Freyer Meeting gratefully acknowledges the support given to the meeting by the following companies:

AstraZeneca Pharmaceuticals (Ireland) Ltd.

Connacht & Court Group

GlaxoSmithKline Limited

Johnson & Johnson Medical

KCI / Ethos Medical Group Ltd

Leo Laboratories Ltd

M.E.D. Surgical Limited

Novartis Oncology

Sanofi Aventis Pharma Ltd

Tyco Healthcare 21

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**Friday, 2nd September 2005**

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<thead>
<tr>
<th>Time</th>
<th>IT125G THEATRE</th>
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<th>IT250 THEATRE</th>
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<tbody>
<tr>
<td>9.00 a.m.</td>
<td>Session 1: Colorectal Papers No. 1-10 Chair: Mr T Ryan &amp; Mr R Waldron</td>
<td>Session 2: Breast / Endocrine Papers No. 11-20 Chair: Mr K Barry &amp; Mr T O’Hanrahan</td>
<td>Session 3: Orthopaedic Trauma Papers No. 21-30 Chair: Mr M O’Sullivan &amp; Mr A Devitt</td>
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<tr>
<td>10.40 a.m.</td>
<td>Coffee and Poster Viewing</td>
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<tr>
<td>11.00 a.m.</td>
<td>Session 4: Vascular Papers No. 31-40 Chair: Mr S Sultan &amp; Mr M Feeley</td>
<td>Session 5: GI Papers No. 41-50 Chair: Mr M McAnena &amp; Mr D Hehir</td>
<td>Session 6: General/Orthopaedic Papers No. 51-60 Chair: Mr J McCabe &amp; Mr W Curtin</td>
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<tr>
<td>12.40 p.m.</td>
<td>Coffee and Poster Viewing</td>
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<tr>
<td>1.30 p.m.</td>
<td>Session 7: Video ‘How I do it’ Chair: Mr D Courtney</td>
<td>Session 8: General Papers No. 61-68 Chair: Mr G Watson &amp; Mr P Gillen</td>
<td>Session 9: Urology Papers No. 69-76 Chair: Mr E Rogers &amp; Mr K Moran</td>
</tr>
<tr>
<td>3.00 p.m.</td>
<td>Session 10: Plenary Session Papers No. 077-088 Chairs: Professor D Bouchier-Hayes &amp; Professor R O’Connell</td>
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<tr>
<td>5.00 p.m.</td>
<td>Sir Peter Freyer Memorial Lecture Dr Richard Reznick presents ‘Surgical training in 35 hours per week: laudable or lunacy?’</td>
<td></td>
<td>ARDILAUN HOUSE HOTEL, TAYLOR’S HILL, GALWAY</td>
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<tr>
<td>7.30 p.m.</td>
<td>Social Programme Sir Peter Freyer Annual Banquet</td>
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**Saturday, 3rd September 2005**

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<thead>
<tr>
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<tbody>
<tr>
<td>10.00 a.m.</td>
<td>Coffee and Poster Viewing</td>
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<tr>
<td>10.30 a.m.</td>
<td>Session 11: Plastics/Minimally Invasive Papers No. 89-95 Chair: Mr P Regan &amp; Mr M Regan</td>
<td>Session 12: Oncology Papers No. 96-102 Chair: Prof P Redmond &amp; Dr P Donnellan</td>
<td>Session 13: Breast Research Papers No. 103-109 Chair: Mr M Stokes &amp; Mr A Hill</td>
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<tr>
<td>11.40 a.m.</td>
<td>Coffee and Poster Viewing</td>
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<tr>
<td>12 noon</td>
<td>State of the Art Lecture Professor Oscar Traynor presents ‘Surgical education for the future: the Irish perspective’</td>
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The Sir Peter Freyer Meeting qualifies for 10 CPD credits
Friday, 2nd September 2005
The IT125G Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr T Ryan & Mr R Waldron

Session 1: Colorectal Session (9.00 – 10.40)

9.00 1. Sulphomucin Expression correlates inversely with Inflammation in the Mucous Gel Layer of the Ileal Pouch
N Bambury, JC Coffey, FM Smith, P Hallihan, WO Kirwan
Dept. of General Surgery, Cork University Hospital, Cork

9.10 2. Routine Splenic Flexure Mobilization is Unnecessary in Anterior Resection
D Brennan, M Moynagh, AE Brannigan, F Gleeson, M Rowland, PR O'Connell
Depts. of Surgery and Gastroenterology, Mater Misericordiae University Hospital, Dept of Paediatrics and Conway Institute, University College Dublin

9.20 3. Thrombomodulin-Expression and its Clinical Significance in Colorectal Carcinoma
AM Hanly, S Brophy, M Redmond, DC Winter, DJ Bouchier-Hayes
Dept. of Surgery and Dept. of Histopathology, Beaumont Hospital, Dublin

9.30 4. Prospective Study on the Management of Patients with Complicated Diverticular Disease
TA Salem, RG Molloy, PJ O'Dwyer
University Dept. of Surgery, Western Infirmary, Glasgow, UK

9.40 5. Symptomatic Left Colonic Diverticular Disease in Younger Patients
SA Hyder, BD George
Dept. of Colorectal Surgery, John Radcliffe Hospital, Oxford, UK

S Ather, G Shetty, C Kendall, T Cook, R Glass, H Barr
Royal Gwent Hospital, Newport, Gloucestershire Royal Hospital & Cranefield University, Gloucestershire UK

10.00 7. A Randomized, Prospective, Double Blind Comparison of Midazolam and Pethidine vs Propofol and Alfentanil for Conscious Sedation in Outpatient Colonoscopy
M Byrne, E Condon, M Slazenger, J Duignan
1. Dept. of Surgery, 2. Dept. of Anesthesia, St Michael's Hospital, Dun Laoghaire, Dublin.

10.10 8. Influence of Patients Age in Treatment with Adjuvant Chemotherapy following Colorectal Cancer Surgery
D O'Mahony, D Beddy, K Bates, Z Martin, C Canning, K Oaikhinan, JB O'Mahony, K Mealy
Dept. of Surgery, Wexford General Hospital, Wexford

10.20 9. Malone Anterior Continence Enema Procedure in Adults: Outcome in an Irish Setting
S Brophy, D McNamara, J Deasy
Dept. of Colorectal Surgery, Beaumont Hospital, Dublin

10.30 10. Mode of Presentation of Colorectal Cancer – Do Elderly Patients still Present with Advanced Disease in 2005?
M Quirke, A Lowery, W Khan, K Barry, R Waldron
Dept. of Surgery, Mayo General Hospital, Castlebar, Co Mayo

10.40 COFFEE

Friday, 2nd September 2005
The IT125 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr K Barry & Mr T O'Hanrahan

Session 2: Breast/Endocrine Session (9.00 – 10.40)

9.00 11. An Audit of the Management of Breast Cancer within a Ten Year Period in a University College Hospital
S Persad, A Manning, R Salman, T Moloney, N O'Brien, R McLaughlin, M Kerin
Dept. of Surgery, University College Hospital Galway

9.10 12. The Addition of ROLL to Fine Wire Localisation of Impalpable Breast Lesions improves Clearance and Overall Cosmesis
M Masood, JC Coffey, A Hanly, A O'Connor, D Walsh, CA Daly, D Evoy, T Castineira, J Wilson, RJK Watson
Symptomatic Breast Care Service, HSE, South Eastern Division

MF Dillon, ADK Hill, CM Quinn, EW McDermott, N O'Higgins
1. Dept. of Surgery, 2. Dept. of Pathology, St Vincent's University Hospital, Dublin, 3. Breastcheck, Merrion unit, National Breast Screening Programme, 4. Conway Institute of Bio molecular & Bio medical Research N
BI O’Daly, PF Ridgway, KJ Sweeney, TC Crotty, DE Evoy, EW McDermott,
ADK Hill, NJ O’Higgins
1. Depts. of Surgery & Pathology, St Vincent’s University Hospital, Elm Park, D4
9.40  15. Analysis of False Negative Mammography in Patients with Symptomatic
Breast Disease
IG Murphy3, MF Dillon1, A O’Doherty4, EW McDermott3, N O’Higgins4, ADK Hill1
1. Dept. of Surgery and, 2. Radiology, St Vincent’s University Hospital, Dublin 4
9.50  16. Clinically Detected Breast Cancer in Women of Screening Age-Group
– Urgent Need for National Breast Cancer Screening
AT Manning, R Salman, TMoloney, DC Donnelly, N O’Brien, MCaughlin, MJ Kerin
Dept. of Surgery, University College Hospital, Galway
10.00  17. Breast Cancer in the South East; An Audit prior to the Introduction of
Screening
TB O’Neill, PF Fitzpatrick, CL Castinero, IWilson, DEvoy, GWatson
Dept. of Surgery, Waterford Regional Hospital, Ardkeen, Waterford
9.10  18. Predictors of Invasive Disease in Breast Cancer when Core Biopsy
Demonstrates DCIS Only
MF Dillon1,4, ADK Hill4, CM Quinn1,2, A O’Doherty1,4, EW McDermott1,
N O’Higgins3
1. Dept. of Surgery, 2. Dept. of Pathology, 3. Dept. of Radiology,
4. Conway Institute of Biomolecular and Biomedical Research,
University College Dublin, 5. Breastcheck, Merrion Unit, Dublin
10.20  19. Sestamibi Scan Directed Minimally Invasive Video Assisted
Parathyroidectomy: An Effective Treatment for Solitary Parathyroid
Adenoma
AD Murphy, DS Quill
Dept. of Surgery, University College Hospital, Galway
10.30  20. A Combination of Minimally Invasive Radioguided Parathyroidectomy and
Intra-Operative PTH Assay Accurately Predicts Resection of Parathyroid
Adenomas
G Murphy, E Myers, M O’Donovan, HP Redmond
Dept. of Surgery, Cork University Hospital, Ireland
10.40  COFFEE

Friday, 2nd September 2005
The IT250 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr M O’Sullivan & Mr A Devitt

Session 3: Orthopaedic Trauma Session (9.00 – 10.40)
9.00  21. Fractured Neck of Femur in Cork City and County 1994-2003 – Changes in
Demographics and Lifetime Hip Fracture Risk
IBrennan, BWhealan, F Falvey, F Shanahan, Mollo YMG, A1McGuinness
1. Dept of Trauma and Orthopaedic Surgery, 2. Dept of Rheumatology and Sports
Medicine, Cork University Hospital
9.10  22. 10 Year Comparative Audit of Patient Transportation Times to a Regional
Orthopaedic Unit
DFitzgerald, K Mulhall, B Lenehan, M O’Sullivan
Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway
9.20  23. Ankle Fractures in the Geriatric Population: Operative or Non-operative Treatment
MVioreanu, SBrophy, SKearns, E Kelly, BHurson, SK O’Rourke, W Quinlan
St Vincent University Hospital Elm Park Dublin
9.30  24. Spinal Injuries in Irish Rugby - a 10 Year Review
MShelly, MTimlin, JSButler, MWalsh, AR Poynton, JM O’Byrne
National Spinal Injuries Unit and Dept. of Orthopaedic Surgery, Mater
Misericordiae University Hospital, Eccle St., Dublin 7
9.40  25. Mean Streets –Patterns of Firearm Injury Presenting to an Irish Acute
General Hospital
RMacNiacail, CHollinsworth, PKeeingle, JMceever, SOFfanagan, PKeogh, PKenny
Dept of Trauma and Orthopaedic Surgery, Dept of Surgery, Dept. of Plastic and
Reconstructive Surgery and Dept. of Emergency Medicine, Connolly Hospital,
Blanchardstown, Dublin 15
NT O’Malley, SMorris, JPMcElwain
Dept of Orthopaedics, AMNCH, Tallaght, Dublin 24
10.00  27. Work Related Injury Presenting to a Regional Orthopaedic Service
JGarvin, TMcCarthy, ADevitt, MO’Sullivan
Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway
10.10  28. Glutamine Preconditioning Protects against Tourniquet-Induced Local and Distant Organ Injury  
CG Murphy, G Chen, DC Winter, DJ Bouchier-Hayes  
Dept. of Surgery, RCSi Research & Education Centre, Beaumont Hospital, D9

D Cawley, J Street, B Lenehan, W Curtin, A Devitt  
Dept. of Orthopaedics, Merlin Park Hospital, Galway

C Egan, A O’Regan, J Last, Zubovic A, Moran R  
1. UCD Anatomy Laboratory; 2. Cappagh National Orthopaedic Hospital, Dublin

10.40  COFFEE

Friday, 2nd September 2005  
The IT125G Theatre, IT Building, NUI Galway

Time Allowed  
7 minutes speaking; 3 minutes discussion

Chairpersons  
Chair: Mr S Sultan & Mr M Feeley

Session 4: Vascular Session (11.00 – 12.40)

11.00  31. Mesenteric Traction during Open Abdominal Aortic Aneurysm Repair may lead to Intestinal I...
Friday, 2nd September 2005
The IT125 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr O McAnena & Mr D Hehir

Session 5: Gastrointestinal Session (11.00 – 12.40)

11.00  41. Surgery Remains the Primary Treatment of Choice for Gastrointestinal Stromal Tumours
CB Peirce, M Doyle, M Aremu, NC Swan, KC Conlon
Dept. of Surgery and Pathology. The Adelaide and Meath Hospital incorporating the National Children’s Hospital, Tallaght, Dublin 24

11.10  42. The Application of Proton Pump Inhibitors in Long Term Use
D Cawley, M Harrison, A Hazlina, G O’Mara
Dept. of Medicine, Roscommon General Hospital

11.20  43. The Impact of MRSA Infection Post-Whipple’s Pancreatectomy: A 10-Year Experience
JS Butler, JP Burke, R Ruddy, MM Hannan, GP McIntee
Dept. of Hepatobiliary Surgery and Dept. of Microbiology, Mater Misericordiae University Hospital, Eccles Street, Dublin 7

11.30  44. Cholangiocarcinoma - A 10 Year Experience in a Specialist Hepatobiliary Unit
T Gallagher, R Kenneally, E Hetti, M Zaman, J Geoghegan
Hepatobiliary unit, St. Vincent’s University Hospital, Elm Park, Dublin 4

11.40  45. Reliability of Symptom Questionnaires in Patients with Gastro-Oesophageal and Laryngopharyngeal Reflux
M Geraghty, P Lawlor, N Ravi, PWN Keeling, PJ Byrne, JV Reynolds
Gastro-intestinal Function Unit, St James’s Hospital, Dublin

11.50  46. An Update on Comparable Roles of Ultrasonography and Magnetic Resonance in the Biliary Tract
HZ Khan, M Tower, FO Cunningham, JP McGrath
Dept. of Gastro-intestinal Surgery and Radiology, Our Lady’s Hospital, Navan, Co. Meath

12.00  47. A Prospective Randomised Trial Evaluating an Anti-Reflux Stent in the Palliative Treatment of Carcinoma of the Lower Third of the Oesophagus
C Power, K Lim, P Byrne, J Moore, T Fitzgerald, NPW Keeling, JV Reynolds
Depts. of Surgery and Gastrointestinal Physiology, Trinity Centre for Health Sciences, St. James's Hospital, Trinity College Dublin, Dublin 8

S Raman, B Piramanayagam, KM Thippeswamy, AP Corfield
The County Hospital, Hereford, United Kingdom

12.20  49. A Technique for Surgical Closure of the Complex Abdomen
G Roche-Nagle, M O’Sullivan, G McGreal, KG O’Sullivan
Dept. of Surgery, Mercy University Hospital, Cork

12.30  50. Raised Faecal Calprotectin Levels in Patients with Right Iliac Fossa Pain – A Non-Invasive Predictor of Acute Appendicitis
C Power, H Al-Suwaidi, KM Muhammad, M Floyd, C. Barry-Kinsella, P Keeling, TN Walsh
Dept. of Surgery, Dept. of Gynaecology, The Royal College of Surgeons in Ireland, James Connolly Memorial Hospital, Blanchardstown, Dublin 15

12.40  LUNCH

Friday, 2nd September 2005
The IT250 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr J McCabe & Mr W Curtin

Session 6: General Orthopaedic Session (11.00 – 12.40)

11.00  51. A Prospective, Randomised, Controlled Trial Comparing Subacromial Bursa Block with Intrascapular Block in Patients undergoing Arthroscopic Subacromial Decompression
A Nisar, MWJ Morris, J Freeman, J Cort, P Rayner, SA Shahane
Chesterfield and North Derbyshire Royal Hospital NHS Trust, Chesterfield, Derbyshire, United Kingdom
11.10  52. Experimental Investigation of Negative Pressure Intrusion Techniques of Acetabular Component Cementation in Total Hip Arthroplasty  
R Mac Niocaill, J Britton, P Kenny, P Prendergast  
Dept. of Orthopaedic Surgery, Cappagh National Orthopaedic Hospital, Finglas, Dublin 11 and Trinity Centre for Bioengineering, Dept. of Mechanical Engineering, Trinity College, Dublin

11.20  53. Risk Factors for Predicting Urinary Catheterisation in the First 24 Hours Post Lower Limb Arthroplasty: A Prospective Study  
G Weekes, GC O’Toole, JF Quinlan, JM O’Byrne  
Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

11.30  54. Quantitative Assessment of Helmet Visor Contamination in Total Hip Arthroplasty  
K Hirpara, T McCarthy, A Devitt, W Curtin, M O’Sullivan  
Dept. of Orthopaedics, Merlin Park Hospital, Galway

11.40  55. Contamination in Cemented Arthroplasty – A 4 Year Follow Up of Deep Wound Contamination  
AM Byrne, SF Morris, P Cargan, T McCarthy, J O’Byrne, W Quinlan  
Dept. of Orthopaedic Surgery and Dept. of Medical Microbiology, Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

11.50  56. Variation in Position of the L4/5 Disc Inter-Space from Tuffier’s Line - Review of 450 Radiographs  
J Walsh, JF Quinlan, K Butt, M Towers, A Devitt  
Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

12.00  57. Evaluating the Quality of ‘Quality of Life’ Studies in Spinal Journals  
S Persad, J Street, B Lenehan, J McCabe  
Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway

12.10  58. Significant Psychological and Functional Improvement following Surgical Treatment of Lumbar Spondylosis  
SA Malik, S Katty, S Morris, FE Dowling, E Fogarty, D Moore  
Dept. of Orthopaedic Surgery, Adelaide & Meath Hospital, Tallaght, Dublin 24

12.20  59. The Weight of a Patients’ Hospital Chart as a Predictive Factor of Post Operative Morbidity following Lumbar Spinal Decompression  
S Persad, J Street, B Lenehan, J McCabe  
Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway

12.30  60. 3-D Motion Analysis of Lumbar Spine Motion in Athletes during Weight Lifting, using the Zebris System.  
J. Walsh, JF Quinlan, D. Fitzpatrick, D. McCormack  
1. Cappagh National Orthopaedic Hospital, Finglas, Dublin 11; 2. Dept. of Engineering, University College Dublin, Belfield, Dublin 4

Friday, 2nd September 2005  
The IT125G Theatre, IT Building, NUI Galway

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## Friday, 2nd September 2005

### Session 8: General Session (1.30 – 2.50)

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<tbody>
<tr>
<td>1.30</td>
<td>61. Operative Workload: a Surgical Trainee’s Experience</td>
<td>A Lowery, M Quirke, F Cafferty, W Khan, PW Eustace, R Waldron</td>
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<td></td>
<td>Dept. of Surgery, Mayo General Hospital, Castlebar, Co. Mayo</td>
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<tr>
<td>1.40</td>
<td>62. Discharge Letters — Pay Attention to the Small Print!</td>
<td>HM Askar, FI Fleming, M Tan, MA Stokes, F Lennon, P Gillen</td>
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<td>Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda</td>
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<td>1.50</td>
<td>63. Precursors of Acute Renal Failure in Patients with Normal Pre-Operative Renal Function</td>
<td>KK Doddakula, H Parissis, F Henry, M Shuhaibar, M Tolan, Y Young, E McGovern</td>
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<td>St. James’s Hospital, Dublin 8</td>
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<tr>
<td>2.00</td>
<td>64. HMGB1 Targeted Immunotherapy provides Unique Protection against the Local and Systemic Effects of Acute Pancreatitis</td>
<td>A O’Callaghan, T Murphy, JH Wang, HP Redmond</td>
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<td></td>
<td>Dept. of Surgery, University College Cork</td>
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<tr>
<td>2.10</td>
<td>65. Vascular Audit using the Possum Scoring Tool: Implementation in a Teaching Hospital</td>
<td>JS Byrne, ET Condon, M Ahmed, D Mehigan, S Sheehan, M Barry</td>
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<td>Dept. of Vascular Surgery, St. Vincent’s University Hospital, Elm Park, D 4</td>
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<td>2.20</td>
<td>66. Back to the Future - A Wireless, Real-Time Patient Information System at the Bedside</td>
<td>P Balfe, M Aremu, K Conlon</td>
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<td>Professional Surgical Unit, Dept. of Surgery, Adelaide and Meath Hospitals incorporating the National Childrens Hospital, Tallaght D24</td>
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<td>2.30</td>
<td>67. European Working Time Directive (EWTD) – Are We Getting Better? The Trainers Perspective</td>
<td>B Piramanayagam, S Raman, PR Shah, A Luhrmann, EV Williams, AP Corder</td>
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<td></td>
<td>The County Hospital, Hereford, United Kingdom</td>
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<td>2.40</td>
<td>68. Handing over of Surgical Patients</td>
<td>A Kumar, AM Bhargava</td>
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<td></td>
<td>Dept. of Surgery, King George Hospital, Ilford, London</td>
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<td>2.50</td>
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### Session 9: Urology Session (1.30 – 2.50)

<table>
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<tr>
<th>Time</th>
<th>Title</th>
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<tbody>
<tr>
<td>1.30</td>
<td>69. Hypoxia Induced Proteins, a Potential Mechanism for Preconditioning in Solid Organ Transplantation</td>
<td>P Daly, A DA Healy, KE Power, NG Docherty, CT Taylor, JM Fitzpatrick, R William, G Watson</td>
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<tr>
<td></td>
<td>1. Dept. of Surgery, Medicine and Therapeutics, Mater Misericordiae Hospital, Dublin</td>
<td>2. Conway InstituteUCD, Dublin 4</td>
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<tr>
<td>1.40</td>
<td>70. Transrectal Prostate Biopsy - Does a Role Exist for Neurovascular Bundle Local Anaesthesia?</td>
<td>DG Lohan, N Gough, CP Meehan, CG Cronin, S Walsh, CI Roche, PA McCarthy</td>
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<td>1. Dept. of Radiology, University College Hospital, Galway</td>
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<tr>
<td>1.50</td>
<td>71. Day Case Prostate Vaporization using High-Powered KTP Laser</td>
<td>C Brady, A Thwaini, G Vrakas, JJ Cook, R Thilagarajah</td>
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<tr>
<td></td>
<td>Dept of Radiology, University College Hospital, Galway</td>
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<tr>
<td>2.00</td>
<td>72. Can a Decreasing PSA be used to Avoid Prostate Biopsy?</td>
<td>D Connolly, T Namibirajan, LJ Murray, A Gavin, PF Keane</td>
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<tr>
<td></td>
<td>1. Dept. of Urology, Belfast City Hospital, 2. Northern Ireland Cancer Registry (NICR), Queen’s University Belfast</td>
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<td>2.10</td>
<td>73. The Consent Concept</td>
<td>PJ Sullivan, SS Connolly, D Fitzgerald, J Cheema, S Jaffrey, H Bredin, M Corcoran</td>
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<tr>
<td></td>
<td>Dept. of Urology, University College Hospital Galway</td>
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<tr>
<td>2.20</td>
<td>74. Apoptosis, Proliferation and Transdifferentiation in HK-2 Cells during Protein Overload and Hypoxia: Effect of Angiotensin II Treatment</td>
<td>OEMG O’Sullivan, NG Docherty, JM Fitzpatrick, RWG Watson</td>
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<td>Dept. of Surgery, Mater Misericordiae University Hospital, Dublin Molecular Medicine Centre, Conway Institute of Biomolecular and Biomedical Research, University College Dublin.</td>
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<td>2.30</td>
<td>75. Presentation, Diagnosis and Management of Prostate Cancer in a Peripheral Hospital – A Twelve Month Analysis</td>
<td>C McManus, S Diver, M Iman, Y Nagandran, E Lee Chang, K Moran</td>
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<td>Dept. of Surgery, Letterkennedy General Hospital, Letterkennedy</td>
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<td>2.40</td>
<td>76. The Role of Hand Held Doppler in Acute Scrotal Pain</td>
<td>K Ahmad, P Hickey, SC Ng, ST Cheema, J Drumm, SA Navi</td>
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<td>Dept. of Surgery, Mid Western Regional Hospital, Limerick</td>
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Friday, 2nd September 2005
The IT250 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Prof D Bouchier-Hayes & Prof R O’Connell

Session 10: Plenary Session (3.00 – 2.50)

3.00  77. Oral Immune Tolerance to Foregut Cancers may be Surmounted By Immunogenenetherapy
I Larkin, M Tangleyn, CC Collins, MG O’Brien, G Casey, D Soden, GC O’Sullivan
Cork Cancer Research Centre & Dept. of Surgery, Mercy University Hospital, Grenville Place, Cork

3.10  78. A Comparison of Open (OR) and Endovascular Abdominal Aortic Aneurysm Repair (EVAR) with best Medical Treatment (BMT). Has the Availability of EVAR Expanded our Indications for Intervention, and improved Survival?
I Davidson, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

3.20  79. Investigation of Progesterone Receptor B (PRB), and Growth Arrest Specific Gene 6, (GAS6), in Breast Cancer
O McCormack, A McCarrn, Wy Chung, F Cooke, B Flynn, E Fox, E Gallagher, A McGoldrick, M Tacke, JA McCann
1. Conway Institute of Biomolecular and Biomedical Research, U.C.D., D4
2. Dept. of Surgery, Mater Misericordiae University Hospital, Dublin
3. Dept. of Surgery, University College Hospital Galway

3.30  80. Novel Titanocene Anti-Cancer Drugs and Their Effects on Apoptosis in Androgen Independent Prostate Cancer Cells
K O’Connor, , M Tacker, PK Rehman, LM Fitzpatrick, R Williams, G Watson
1. Dept. of Surgery, Mater Misericordiae University Hospital, Conway Institute
2. Chemistry Dept., Conway Institute, University College Dublin

3.40  81. Associations and Interactions between the Co-Regulatory Protein SRC-1 and Ets-2 in Breast Cancer
M Mc Ilroy, E Myerso, ADK Hill, LS Young
Conway Institute, University College Dublin, Dept. of Surgery, St Vincent’s University Hospital, Dublin

3.50  82. Initial PSA Levels and the Long Term Risk of Prostate Cancer
D Connolly, T Nambirajana; L J Murray”, A Gavin, PF Keane
1. Dept. of Urology, Belfast City Hospital, Northern Ireland Cancer Registry, Queen’s University Belfast

4.00  83. Taurolidine Inhibits Colorectal Adenocarcinoma Metastases in Vivo and in Vitro by Inducing Apoptosis
NWD Clarke, JH Wang, HP Redmond
Dept of Academic Surgery, University College Cork, Cork

4.10  84. Downregulation of the HHIP gene in Intraductal Papillary Mucinous Neoplasms of the Pancreas
ST Martin, SR Hustinx, N Sato, CI Yeo, A Maitra, M Goggins
Pancreatic Cancer Early Detection Lab, Dept. of GI Pathology, The Johns Hopkins Medical Institutions, Baltimore, Maryland, USA 21205

4.20  85. Hypertonic Saline Reduces Post-Operative Peritoneal Adhesion Formation
JM Buckley, CJ Shields, DC Winter, A O’Callaghan, WD Kirwan, HP Redmond
Dept. of Surgery, Cork University Hospital, Cork

4.30  86. Combination of SELDI-TOF and Data Mining Provides Early Stage Response Prediction for Rectal Tumours undergoing Multimodal Neoadjuvant Therapy
FM Smith, E Fox, W Gallagher, RB Stephens, EF Caffney, EF Petricoin, LI Liotta, AJ Kennedy, JV Reynolds
1. Dept. of Surgery and the Academic Unit of Clinical and Molecular Oncology St James’s Hospital and Trinity College Dublin
2. Dept. of Pharmacology Conway Institute of Biomolecular and Biomedical Research University College Dublin Belfield, Dublin 4
3. FDA-NCI Clinical Proteomics Program, Laboratory of Pathology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, USA

4.40  87. Thermotolerance-Induced Goblet Cell Activity Confers Protection in Post Operative Gut Barrier Dysfunction
R Ali, T Farrell
Dept. of Anatomy, The Royal College of Surgeons in Ireland

4.50  88. Preconditioning Modulation of Leucocyte and Endothelial Activation in Cardiac Surgery: The Role of an Omega-3 Fatty Acid Infusion
J McGuinness, J Byrne, A Hanly, C Condron, H Chen, JM Redmond, D Boucher-Hayes
Dept. of Surgery, The Royal College of Surgeons in Ireland

5.00  Sir Peter Freyer Memorial Lecture
SURGICAL TRAINING IN 35 HOURS PER WEEK: LAUDABLE OR LUNACY?
Dr Richard Reznick, MD, MEd, FRCSC, FACS
RS McLaughlin Prof & Chair, Dept. of Surgery, University of Toronto

7.30  Sir Peter Freyer Banquet
BANQUET AT ARDILAUN HOUSE HOTEL, GALWAY
Saturday, 3rd September 2005
The IT125G Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Mr P Regan & Mr M Regan

Session 11: Plastics/Minimally Invasive Session (10.30 – 11.40)

10.30  89. A Cluster of Clostridium Difficile Associated Diarrhoea on an Orthopaedic Ward can Lead to High Morbidity and Mortality: A Retrospective Audit and Review
D Lui, S Bahari, P Nicholson, J McElwain
Dept. of Trauma Orthopaedics, Adelaide and Meath Hospital

10.40  90. Upper Dorsal Endoscopic Thoracic Sympathectomy: A Comparison of One and Two Port Ablation Technique in 180 Cases
MO Murphy, J Ghosh, N Kwhaja, AT Halka, DJ Turner, A Vohra, MC Walker
Dept. of Vascular Surgery, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL, UK

10.50  91. Suitability of Laparoscopic Nissen Fundoplication to the Day Care Setting
IZ Khan, M Al-Akash, ON Tucker, K Austin, I Mohammad, DS O’Riordan
The Dept. of Surgery, The Adelaide and Meath Hospital, Tallaght, Dublin 24; Naas General Hospital, Co.Kildare

11.00  92. Long Term Evaluation of Median and Ulnar Nerve Injuries
AT Manning, EM Purcell, A Kelly, PJ Regan, JJ McCann, JL Kelly
Dept. of Plastic Reconstructive & Hand Surgery, University College Hospital Galway

11.10  93. Glycaemic Control plus Arginine Supplementation Attenuates the Impaired Wound Healing in a Diabetes Mellitus Experimental Model
JB O’Sullivan, RP Hanson, FC Chan, B Kneafsey, D Bouchier-Hayes
Dept. of Surgery, Education and Research Centre, The Royal College of Surgeons in Ireland

11.20  94. The Role of Isolated Limb Thermal Preconditioning in Flexor Tendon Healing
C Healy, K Mulhall, E Kay, D Fitzpatrick, D Bouchier-Hayes

11.30  95. Biomechanical Assessment of Skin Suture Techniques in a Porcine Model
M O’Sullivan, EM Purcell, PJ Regan, J McCann, JL Kelly
Dept. of Plastic & Reconstructive Surgery, University College Hospital Galway

11.40  COFFEE

Saturday, 3rd September 2005
The IT250 Theatre, IT Building, NUI Galway

12.00   State Of The Art Lecture

SURGICAL EDUCATION FOR THE FUTURE: THE IRISH PERSPECTIVE
Professor Oscar Traynor, MCh, FRCSI
Prof. of Postgraduate Surgical Education, Royal College of Surgeons in Ireland

Saturday, 3rd September 2005
The IT125 Theatre, IT Building, NUI Galway

Time Allowed
7 minutes speaking; 3 minutes discussion

Chairpersons
Prof P Redmond & Dr P Donnellan

Session 12: Oncology Session (10.30 - 11.40)

10.30  96. Imaging of the Liver after Colorectal Carcinoma Resection: A Waste of Time?
C Canning, Z Martin, S Rajendran, D Beddy, DJ Bates, D O’Mahony, FOfori-Kuma, JB O’Mahony, K Mealy
Dept. of Surgery, Wexford General Hospital, Wexford

10.40  97. Growth Factors Regulation of ETS-2 Protein and C-MYC in Recurrent Breast Cancer
D Alazawi, ADK Hill, NJ O’Higgins, LS Young
Dept. of Surgery, Saint Vincent’s University Hospital and the Conway Institute, University College Dublin

10.50  98. Hypoxia Mediates Invasion of Breast Cancer Cells via Increased Expression of the Chemokine Receptor CCR4
E Faul, JH Wang, HP Redmond
Dept. of Surgery, Cork University Hospital, Cork

11.00  99. Parallel Gene and Protein Expression Analysis of the Immune Response to Major Surgery in Oesophageal Cancer Patients Treated with Surgery Alone or a Multimodality Regimen
JO Murphy, N Miller, A Ryan, N Ravi, JV Reynolds
Dept. of Surgery, St James’s Hospital and Trinity College Dublin

11.40  COFFEE
11.10  100. Analysis of Ex-vivo Staging of Colorectal Carcinoma by Sentinel lymph Node Mapping  
DT McDowell, ET Condon, GC O’Brien, DB McNamara, JM Deasy  
Dept. of Colorectal Surgery, Beaumont Hospital, Dublin 9

11.20  101. Immunohistochemical Detection of lymph Node Micrometastases in Rectal Cancer Does Not Predict Recurrence  
FJ Fleming1, AJ Hayanga1, F Glynn1, H Thakore1, E Kay1, P Gillen1  
1. Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda;  
2. Dept. of Pathology, Beaumont Hospital, Dublin

11.30  102. TH1/TH2 Imbalance in Patients with Malignant Brain Tumours  
D Kamadar1,2, R Kumar1,2, K Hill1, J Greenman1, D O’Brien1  
1. Dept. of Neurosurgery, Hull Royal Hospital, Hull, UK  
2. Dept. of Surgery, University of Hull, Hull, UK

11.40  103. The Combined M30/BCL2 Apoptotic Index – A Novel Prognostic Index for Invasive Ductal Breast Cancer  
A O’Connor, JC Coffey, P Ryan, A Hanly, R Landers, RGX Watson  
Symptomatic Breast Care Service, HSE, South Eastern Division

11.50  104. TH1/TH2 Imbalance in Patients with Malignant Brain Tumours  
D Kamadar1,2, R Kumar1,2, K Hill1, J Greenman1, D O’Brien1  
1. Dept. of Neurosurgery, Hull Royal Hospital, Hull, UK  
2. Dept. of Surgery, University College Hospital, Galway

12.00  105. Tamoxifen Induced ER Activity in Endocrine Resistant Breast Cancer  
CC Davidson1,2, D.Kavanagh1,2, EW McDermott1, N O’Higgins1, ADK Hill1,2, L Young1,2  
1. Dept. of Surgery, St. Vincents University Hospital;  
2. Conway Institute of Biomolecular and Biomedical Research, University College Dublin

12.10  106. Growth Factor Activation of the Mitogen-Activated Protein (MAP) Kinase Pathway increases Breast Coactivator Protein Expression and may Drive Breast Tumourigenesis  
RS Prichard, ADK Hill, EW McDermott, N O’Higgins, L Young  
Dept. of Surgery, St Vincent’s University Hospital and the Conway Institute, University College Dublin

12.20  107. The Combined M30/BCL2 Apoptotic Index – A Novel Prognostic Index for Invasive Ductal Breast Cancer  
A O’Connor, JC Coffey, P Ryan, A Hanly, R Landers, RGX Watson  
Symptomatic Breast Care Service, HSE, South Eastern Division

12.30  108. Mammographic Screening Of A Referral Population  
S Walsh, R Salman, R McLaughlin, MJ Kerin  
Dept. of Surgery, University College Hospital, Galway

Saturday, 3rd September 2005  
The IT250 Theatre, IT Building, NUI Galway

Time Allowed  
7 minutes speaking; 3 minutes discussion

Chairpersons  
Mr M Stokes & Mr A Hill

Session 13: Breast Research Session (10.30 - 11.40)

10.30  109. MYC Signalling in Survivin Regulation in Breast Tumour Progression  
N Cosgrave1, A Hill1, L Young1  
1. Dept. of Surgery, Conway Institute, University College Dublin;  
2. St. Vincents University Hospital, Dublin

10.40  110. The Psychosocial and Demographic Correlates of Post-Mastectomy Breast Reconstruction  
L McCann1, C Curran1, C Lee1, W Lee1, JC Walsh1, PJ Regan1, MJ Kerin2  
1. Dept. of Psychology, National University of Ireland, Galway  
2. Dept. of Surgery, University College Hospital, Galway  
3. Dept. of Plastic Surgery, University College Hospital, Galway

10.50  111. Tamoxifen Induced ER Activity in Endocrine Resistant Breast Cancer  
CC Davidson1,2, D.Kavanagh1,2, EW McDermott1, N O’Higgins1, ADK Hill1,2, L Young1,2  
1. Dept. of Surgery, St. Vincents University Hospital;  
2. Conway Institute of Biomolecular and Biomedical Research, University College Dublin

11.00  112. The Combined M30/BCL2 Apoptotic Index – A Novel Prognostic Index for Invasive Ductal Breast Cancer  
A O’Connor, JC Coffey, P Ryan, A Hanly, R Landers, RGX Watson  
Symptomatic Breast Care Service, HSE, South Eastern Division

11.10  113. Mammographic Screening Of A Referral Population  
S Walsh, R Salman, R McLaughlin, MJ Kerin  
Dept. of Surgery, University College Hospital, Galway

Saturday, 3rd September 2005  
The IT250 Theatre, IT Building, NUI Galway

Time Allowed  
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Chairpersons  
Mr M Stokes & Mr A Hill

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L McCann1, C Curran1, C Lee1, W Lee1, JC Walsh1, PJ Regan1, MJ Kerin2  
1. Dept. of Psychology, National University of Ireland, Galway  
2. Dept. of Surgery, University College Hospital, Galway  
3. Dept. of Plastic Surgery, University College Hospital, Galway

10.50  111. Tamoxifen Induced ER Activity in Endocrine Resistant Breast Cancer  
CC Davidson1,2, D.Kavanagh1,2, EW McDermott1, N O’Higgins1, ADK Hill1,2, L Young1,2  
1. Dept. of Surgery, St. Vincents University Hospital;  
2. Conway Institute of Biomolecular and Biomedical Research, University College Dublin

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A O’Connor, JC Coffey, P Ryan, A Hanly, R Landers, RGX Watson  
Symptomatic Breast Care Service, HSE, South Eastern Division

11.10  113. Mammographic Screening Of A Referral Population  
S Walsh, R Salman, R McLaughlin, MJ Kerin  
Dept. of Surgery, University College Hospital, Galway
11.30  109. A Molecular Analysis of the Relationship between Hormone Receptor and Mammoglobolin in Breast Cancer
E Hennessy, C Curran, MJ Kerin
National Breast Cancer Research Institute, Dept. of Surgery, University College Hospital Galway

11.40  COFFEE

Saturday, 3rd September 2005
The IT250 Theatre, IT Building, NUI Galway

12.00  State Of The Art Lecture
SURGICAL EDUCATION FOR THE FUTURE: THE IRISH PERSPECTIVE
Professor Oscar Traynor, MCh, FRCSI
Prof. of Postgraduate Surgical Education, Royal College of Surgeons in Ireland

Poster Abstracts

UROLOGY
Poster 1. An Analysis of the Use of a Memokath® Prostatic Stent for Obstructive Uropathy
P Daly, K O’Connor, T Pasha, E Rogers
Mercy University Hospital, Granville Place, Cork

Poster 2. PCNL by Numbers: A 7-Year Analysis of Percutaneous Nephrolithotomy in Practice
CP Meehan, C Cronin, N Gough, PA McCarthy
Dept. of Radiology, University College Hospital, Galway

Poster 3. Is Digital Rectal Examination (DRE) Necessary in the Early Detection of Prostate Cancer?
MR Quinlan, S Teachan, D Mulvin, DM Quinlan
Dept. of Urology, St. Vincent’s University Hospital, Elm Park, Dublin 4

GASTROINTESTINAL
Poster 4. Internal Hernia through the Foramen of Winslow associated with Rupture of Lesser Omentum
O Mabadeje, S Durrani, S Mahmood
Dept. of Surgery, Mid-Western Regional Hospital, Nenagh, Co. Tipperary

COLORECTAL
Poster 5. Sequential MRI Scans in Multimodality Management of Rectal Cancer Predict Nodal Pathology but are Poor Predictors of Change in T Stage
FM Smith, S Sookhai, D Tuite, E Carton, RB Stephens, M Keoghan, C Muldoon, MJ Kennedy, JV Reynolds
1. Dept. of Surgery and the Academic Unit of Clinical and Molecular Oncology St James’s Hospital and Trinity College Dublin, Ireland
2. Dept. of Radiology, St James’s Hospital, Dublin
3. Dept. of Histopathology, St James’s Hospital, Dublin

Poster 6. The Role of Laparoscopic Loop Stoma Formation
CLJ Beirne, F Cooke, MF Khan, M Regan
Dept. of Surgery, University College Hospital Galway

Poster 7. Impact of Urbanisation on Colorectal Cancer Presentation over a Twenty Year Period in Ireland
J Bhangu, FI Fleming, F Lennon, MA Stokes, P Gillen
Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda, Co Louth,

Poster 8. Do we Still Need to Perform Lateral Anal Sphincterotomy for Anal Fissure?
SA Hyder, BD George
Dept. of colorectal surgery, John Radcliffe Hospital, Oxford, UK

Poster 9. Patient-Administered versus Physician Administered Scores for Assessment of Faecal Incontinence
S Brophy, J Deasy, D McNamara
Dept. of Colorectal Surgery, Beaumont Hospital, Dublin 9

MINIMALLY INVASIVE
Poster 10. Regional Abdominal Field Infiltration for Abdominal Wall Anaesthesia
R Ali, J McDonnell, T Farrell
Dept. of Anatomy, RCSI and Dept. of Anaesthetics, Adelaide and Meath Hospital

BREAST
Poster 11. Complementary Role for CA 15-3 with Bone Scanning in the Assessment of Metastatic Breast Carcinoma
BI O’Daly, ADK Hill, D Kavanagh, FI Fleming, D Evoy, EW McDermott, MJ Duffy, N O’Higgins
Dept. of Surgery, St. Vincent’s University Hospital, Elm Park, Dublin 4

Poster 12. The Diagnostic Accuracy of Core Biopsy for Ductal Carcinoma in situ
MF Dillon, ADK Hill, CM Quinn, EW McDermott, N O’Higgins
1. Depts. of Surgery and, 2. Pathology, St Vincent’s University Hospital, Dublin, 3. Ireland Breastcheck, Merrion Unit, National Breast Screening Programme; 4. Conway Institute of Biomolecular and Biomedical Research, UCD
Poster 13. An Analysis of the Rate of Positive Histological Yield from Completion Mastectomy
SM Potter-Beirne, E Walsh, B Elahi, M Stokes
Dept. of Breast Surgery, Mater Misericordiae Hospital, Eccles Street, Dublin 7

Poster 14. Removal of Multiple Sentinel Lymph Nodes: Defining the “Correct” Node
BJ O’Daly, D Kavanagh, ADK Hill, E Myers, TB Crotty, C Quinn, A O’Doherty, CD Collins, E W McDermott, NJ O’Higgins
1. Depts. of Surgery, 2. Pathology and, 3. Radiology, St Vincent’s University Hospital, Elm Park, Dublin 4 and Conway Institute of Biomolecular & Biomedical Research, University College Dublin, Belfield, Dublin 4.

Poster 15. Development and Validation of a Novel Clinical Score that Aids in Screening High Risk Patients with Mastalgia
A O’Connor, A Hanley, JC Coffey, RGK Watson
Symptomatic Breast Care Service, HSE, south Eastern Division

Poster 16. RABC for the Future
D Toomey, RA Cahill, J Rothwell, J Geraghty
Dept. of Surgery, AMNCH, Dublin

Poster 17. Biphasic Growth Patterns in Cystosarcoma Phyllodes does not Confer more Aggressive Tumour Biology
BJ O’Daly, PF Ridgway, T Crotty, P McCarthy, K J Sweeney, D Evoy, EW McDermott, ADK Hill, NJ O’Higgins
1. Depts. of Surgery & Pathology, St Vincent’s University Hospital, Elm Park, Dublin 4

Poster 18. Delays in Breast Cancer Diagnosis: Does a Structured Care Pathway Influence Outcomes?
B Piramanayagam, S Raman, AP Corder
The County Hospital, Hereford, United Kingdom

Poster 19. Unifocal versus Multifocal Breast Cancer: Size really Matters
B O’Daly, KJ Sweeney, PF Ridgway, D Kavanagh, D Evoy, E McDermott, ADK Hill, N O’Higgins
Dept. of Surgery, St Vincent’s University Hospital, Dublin 4

Poster 20. Breast Cancer Pregnancy - Implication for Diagnosis and Management
K Tasneem, K Sweeney, MJ Kerin
Dept. of Surgery, University College Hospital Galway

Poster 21. Prospective Evaluation of Pain Score in Local Anaesthetic Procedures
WHC Tiong, T Ismael, W Lee, PJ Regan, J McCann, JI Kelly
Dept. of Plastic, Reconstructive and Hand Surgery, University College Hospital Galway

Poster 22. Experience of Nipple-Areolar Complex Tattooing in St. Vincent’s University Hospital
D O’Keeffe, M Murray, M O’Donnell
Dept. of Plastic & Reconstructive Surgery, St. Vincent’s University Hospital, D4

Poster 23. The Way Things Were - A Comparison of Prospective and Retrospective Measures of Quality of Life
E Fitzgerald, J O’Riordan, TM Feeley, S Tierney
Adelaide & Meath Hospital, Incorporating the National Children’s Hospital, Tallaght, Dublin 24

Poster 24. Post-traumatic and Post-surgical Mucormycosis in a Young and Immunocompetent Host: A case report
WHC Tiong, T Ismael, J McCann
Dept. of Plastic, Reconstructive and Hand Surgery, Uni. College Hospital Galway

Poster 25. Scandinavian Total Ankle Replacement (STAR) and Triple Ankle Arthrodesis – A Comparative Outcome Study
G Colgan, AJ Butt, D Barton
Dept. of Orthopaedics, AMNCH, Tallaght, Dublin 24

Poster 26. Experience with the Use of the Angle Bore Socket in Patients with an Increased Risk of Dislocation Following Total Hip Replacement
J Walsh, C Hurson, D Powell, K Symott, W Quinlan
Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

Poster 27. Use of Modular Tumour Endoprosthesis in Children with Solid Bone Tumours of Lower Extremity
A Zubovic, M Cavanagh, B Hurson
Cappagh National Orthopaedic Hospital, Dublin

Poster 28. Retrospective Review of Late Presenting DDH in Ireland for 2004
M Murphy, D McCormack, F McManus
Children’s University Hospital, Temple Street, Dublin 1

Poster 29. Prediction of Blood Transfusion Requirement in Hip and Knee Arthroplasty
S Guerin, C Collins, H Kapoor, I McLean, D Collins, G Mullan
St. Mary’s Orthopaedic Hospital, Cork and Dumfries Royal Infirmary, Scotland

Poster 30. Thin Versus Ultra-Thin Dacron Patching during Carotid Endarterectomy (CEA): Mid-Term Results of a Double-Blinded Randomized Trial
EI Andrews, B Mahendran, N Hynes, A Jawad, S Tawfik, A Ishtiaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway
Poster 31. In Vivo Attenuation of Myointimal Hyperplasia using Transforming Growth Factor Beta3 in an Interposition Graft Model
MO Murphy, J Ghosh, MS Baguneid, N Khwaja, AT HaIka, N Turner, CM Kiely, MW Ferguson, MG Walker
Dept. of Vascular Surgery, Manchester Royal Infirmary and UK Centre for Tissue Engineering, University of Manchester, UK

Poster 32. Alteration in Serum Metalloproteinases in Patients with Venous Ulceration undergoing Compression Therapy
SC FitzGerald SC, D Bouchier-Hayes
Dept. of Surgery, Research and Education Building, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin

Poster 33. Abdominal Aortic Aneurysm (AAA) Repair in Octogenarians versus Younger Patients in a Tertiary Referral Centre: 5-Year Survival Rate of Non Operative AAA
N Hynes, NP Khoi, BI Manning, B Mahendran, EJ Andrews, A Jawad, A Ishfaaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway

Poster 34. Distaflo versus Gortex Grafts: A Prospective Comparative Analysis in Infrainguinal Supragenicular Critical Limb Ischaemia
A Jawad, N Hynes, B Mahendran, S Tawfik, E Andrews, A Ishfaaq, D Courtney, D Quill, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

Poster 35. Open AAA Repair using Continuous Auto-Transfusion System (CATS): A Seven Year Experience
W Tawfik, N Hynes, B Mahendran, SE Tawfik, A Jawad, A Ishfaaq, E Andrews, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

Poster 36. Homocysteine Levels, Cardiovascular Risk Factors and Complication Rates in Vascular Surgery and Endovascular Surgery: Is There a Correlation?
D Cawley, C O’Sullivan, N Hynes, B Mahendran, J Asad, E Andrews, S Tawfik, A Ishfaaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway

Poster 37. Inferior Vena Cava Filters – Indication, Safety and Long Term Results
MAhmed, E Condon, D Mehigan, S Sheehan, MC Barry
Dept. of Vascular Surgery St Vincent’s University Hospital Elm Park Dublin

Poster 38. Materialise’s Interactive Medical Imaging Control System (MIMICS) and Finite Element Analysis (FEA) in Predicting Abdominal Aortic Aneurysm (AAA) Rupture – A Prospective Study in Tertiary Referral Centre
H O’Grady, EJ Andrews, N Hynes, B Mahendran, Y El Hediny, A Jawad, A Ishfaaq, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

Poster 39. How to Pioneer a Vascular Biobank. An Initial Experience
PA Sloane, S Sultan
The Western Vascular BioBank, The Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital, Galway

Poster 40. Early Appendectomy or Conservative Treatment with Interval Appendectomy: Trends for Management of Appendiceal Mass in West-Midlands
T Sircar, J Shabbir
City Hospital, Birmingham, UK

Poster 41. Management of Childhood Head Injury in the General Hospital Setting
A Mohammad, A Molloy, AZS Janjua, K Barry
Dept. of Surgery, Mayo General Hospital, Castlebar

Poster 42. A Review of Colonoscopy in a County Hospital
V Anota, R Salih, L Mc Mullen, O Clinton
Dept of Surgery, County Hospital, Roscommon

Poster 43. PEG Tube Insertion-Enhanced Need for Greater Selectivity in Patient Referral?
R Khan, JC Coffey, S Siddique, JB O’Connor
Dept of General Surgery, Waterford Regional hospital, Waterford

Poster 44. Retrospective Study on Inguinal Hernia Repair
J Lughovvja, R Salih, L McMullen, O Clinton
County Hospital, Roscommon

ONCOLOGY
Poster 45. Trigeminal Schwannomas: Different Skull Base Approaches in Three Cases
C Lim, K Aquilina, C O’Riordan, MH Kamei, J Cahill, M G O’Sullivan
Dept. of Neurosurgery, Cork University Hospital, Cork

Poster 46. Tamoxifen as a Novel Chemotherapeutic Agent in Anaplastic Thyroid Cancer
JP O’Neill, C Condon, AM Byrne, E Kay, M Walsh, D Bouchier-Hayes
The Royal College of Surgeons in Ireland, Dept. of Surgery & Otolaryngology, The Education and Research Building, Beaumont Hospital, Beaumont, D9

Poster 47. Altered Cadherin Expression in Response to Hypoxia in Colorectal Cancer
S Brophy, D McNamara, J Deasy, E Kaye, D Bouchier-Hayes
Dept. of Surgery and Dept. of Pathology, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin 9
**Poster 48. Thyroid Autoimmunity and Malignancy**

B O’Daly, D Kavanagh, CG Brennarr, F Fleming, EWM McDermott, ADK Hill, NJ O’Higgins, PPA Smyth

1. Dept. of Surgery, St Vincent’s University Hospital, Elm Park, Dublin 4
2. Conway Institute of Biomolecular and Biomedical Research, University College Dublin, Belfield, Dublin 4

**Poster 49. How useful is Fine Needle Aspiration Cytology (FNAC) in the Assessment of the Thyroid Nodule?**

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**Poster 50. Thyroid Carcinoma Presenting in a Younger Population than 10 Years Ago**

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**Session 1: Colorectal Session**

1. **Sulphomucin expression correlates inversely with inflammation in the mucous gel layer of the ileal pouch**

   **Aims**

   The mucous gel layer (MGL) of the ileal pouch forms a critical component of the innate immune response and to date, no studies have formally evaluated it. We aimed to definitively characterise the MGL of pouches fashioned for ulcerative colitis (UC), and familial adenomatous polyposis (FAP).

   **Methods**

   Following ethical approval and informed consent, ileal pouch mucosal biopsies were harvested from patients with a background of UC (n=18) or FAP (n=10). Sulpho- and sialomucin levels were evaluated by staining with high iron diamine and alcian blue respectively. Expression levels were correlated with underlying mucosal inflammation and morphology. Expression levels were correlated with colonisation by a panel of six anaerobic bacterial species. Statistical analysis was performed using Sigmasat.

   **Results**

   Sulphomucin expression was increased in the UC pouch (P=0.001 vs. FAP pouch). Typically, sulphomucin expression was regionalised or confined to individual cells. In the UC pouch MGL, sulphomucin expression correlated inversely with increasing total as well as acute mucosal inflammatory scores (r=-0.7). Of note, no clear trend was apparent when MGL sulphomucin content was correlated with bacterial colonisation.

   **Conclusions**

   Mucous gel production is a tightly regulated phenomenon that accurately reflects underlying inflammatory events. Specifically, sulphomucin production occurs mainly in the UC pouch, is regionalised, and correlates inversely with underlying inflammation.

2. **Routine Splenic Flexure mobilization is unnecessary in anterior resection**

   **Background**

   Splenic flexure mobilization (SFM) is widely considered to be an essential component of anterior resection (AR) for rectal cancer. It was our hypothesis that selective SFM would reduce operative times without increasing morbidity or effecting cure.

   **Methods**

   100 consecutive patients with rectal cancer (mean 8cm from anal verge (range 4-15cm)) who underwent AR for cure between 1996 and 2002 had SFM only as required to achieve a tension free anastomosis. Operative time, post-operative morbidity, hospital stay, pathological findings and recurrence rates were addressed.

   **Results**

   There were no clinic-pathological differences between those who had SFM (n=26) and those who did not (n=74). Mean operative time in the SFM group was longer, 167 min (range 130-200) versus 120 min (range 95-180) in the non mobilized group (P = 0.023). Mean length of specimen resected was longer in the SFM group, 98cm (range 27-40) versus 18cm (range 13-32) (P=0.001). Anostomatic complications (4%), peri-operative mortality (2%), post op morbidity (32%), length of hospital stay (median 12 days), lymph node harvest (mean 9) and local recurrence (3%, median follow up 38 months (range 24-60)) and survival probability did not differ between the two groups.

   **Conclusion**

   Routine SFM is not required for safe anterior resection in patients with rectal cancer. Avoiding SFM results in shorter operative times and does not increase post-operative morbidity, anastomotic leakage or local recurrence.
**Thrombomodulin expression and its clinical significance in colorectal carcinoma**

**Aims**
Thrombomodulin (TM) is an endothelial receptor that exhibits anti-coagulant, anti-fibrinolytic, and anti-inflammatory activity by inhibiting thrombin and cellular adhesion. Growing evidence indicates that TM plays a role in tumour behaviour and prognosis. We investigated TM expression in primary colorectal lesions, and examined the correlation of TM expression with both histological and clinical outcomes.

**Methods**
Immunostaining was performed on formalin-fixed, paraffin-embedded tissue sections. We examined TM expression in the primary lesions of 200 patients with colorectal carcinoma. Expression of TM was evaluated quantitatively by two independent pathologists. The grade, localisation and intensity of thrombomodulin expression was determined.

**Results**
Of the 200 primary tumours 195 (97.5%) stained positively for TM. 55 (27.2%) showed cytoplasmic tumour staining. TM expression showed no correlation with tumour grade, stage, or site. Importantly, 86% of TM negative tumours were poorly differentiated and 91% of TM positive tumours were well differentiated (p<0.001). The 5 year survival rates of patients with positive and negative TM expression were 77% and 41% respectively. Patients who were TM expression negative showed a poorer survival rate than those with positive TM expression (p<0.001), supporting the theory that TM expression is protective against metastasis.

**Conclusion**
This study provides further evidence that as well as having anti-coagulant and anti-inflammatory properties, TM plays a key role in tumour biology and prognosis.

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**Prospective study on the management of patients with complicated diverticular disease**

**Aims**
Diverticular disease is a common condition with high morbidity and mortality related to its complications. The aim of this study was to assess the predictive role of acute diverticulitis in the development of further complications from diverticular disease.

**Methods**
Prospective assessment of all patients with complicated diverticulitis over a year period in a large teaching hospital. All patients had documented evidence of their diagnosis by radiological, endoscopic or histopathological techniques when feasible.

**Results**
Seventy-seven patients with complicated diverticular disease were identified. There were 53 females and 24 males with a median age of 76 years (range 30-97). Complications included acute diverticulitis (37), fistula (12), perforation (8), bleeding (7), abscess (7), and stricture (6). Only eight had two or more previous documented episodes of diverticulitis. Twenty-five underwent surgery, three died (peritonitis (2), abscess (1)) and five had a complication (anastomotic dehiscence (1), adhesive obstruction (1), incontinence hernia (2) and pneumonia (3)). Three of 37 patients with acute diverticulitis (8%) had two or more admissions but none underwent surgery or developed further complications. Two were performed during acute admission in 14/37 patients with acute diverticulitis. The majority of patients with fistula (9/12), perforation (7/8), bleeding (6/7) and abscess (5/7) had no previous episode of diverticulitis while most patients with stricture (4/6) had previous documented episodes.

**Conclusion**
In our patient population acute diverticulitis is not a good predictor of further complications from diverticular disease as only a minority of patients with perforation, fistula, abscess and bleeding had previous documented episodes of diverticulitis.

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**Symptomatic left colonic diverticular disease in younger patients**

**Aims**
The aim of this study was to assess the incidence and virulence of symptomatic diverticular disease in younger patients.

**Methods**
A retrospective review of the medical notes of the patients admitted during the period January 1994 to December 2003 were performed. Patients 45 years of age or younger with diverticulitis were included in this study. Inclusion criteria were confirmation of diverticulitis by colonoscopy, radiologically or peroperatively.

**Results**
A total of 165 patients were admitted in our Dept with symptomatic diverticular disease during this period. Age ranges between 21-40 years. Out of these, 34 (20%) patients were under the age of 45 years. Twenty-four were female and 10 male. Nine (27%) had perforated disease requiring Hartman’s procedure or Anterior Resection with on table lavage. Five (15%) had colovesical fistula needing definite surgery. Four (12%) patients had sealed perforation confirmed on CT scan, initially treated conservatively and had sigmoid colectomy/Anterior resection on a later date. Two (6%) presented with diverticular stricture/abscess. Eight (24%) had elective sigmoid colectomy for recurrent attacks of diverticulitis requiring multiple hospital admissions, confirmed by radiological examination, left iliac fossa pain, raised white cell count or pyrexia. Six (19%) patients with single episode of diverticulitis, either refused surgery or were not offered one. A total of 28 (82%) patients required surgery.

**Conclusions**
In this study, we conclude that the initial presentation of the diverticular disease in young patients is usually more aggressive requiring emergency/definite surgery in majority of the patients.

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**Raman Spectroscopy A new tool for the early diagnosis of Colorectal Cancer**

**Objective**
Traditionally identification of many diseases and cancers in the gastrointestinal tract is by visual inspection at endoscopy. But by the time cancer is visible it is usually advanced and invasive. Raman spectroscopy is a non-invasive optical diagnostic technique that enables the detection of biochemical changes that are noted in premalignancy and malignancy. Our aim was to test the use of this technique on colon tissue.

**Method**
Biopsy specimens were collected from patients during routine colonoscopy. Raman spectra were measured on 92 homogenous samples, from 53 patients, after histopathological assessment of the specimens by three pathologists. A spectral diagnostic model was constructed with 851 spectra using multivariate analysis techniques. The spectral model was tested with 164 spectra measured from 10 homogenous samples.
Influence of patients age in treatment with adjuvant chemotherapy following colorectal cancer surgery

**Aims**
Survival following surgical resection of Dukes B and C stage cancers of the colon and rectum is improved in patients receiving adjuvant chemotherapy, however, many elderly patients are deemed unsuitable for treatment. This study assessed the use of adjuvant chemotherapy in elderly patients following colorectal cancer surgery.

**Methods**
Prospective data of patients undergoing colorectal cancer surgery between January 2000 and January 2005 was collected using the South Eastern Health Board surgical audit system. Data collected included tumour stage, adjuvant treatment, patient co-morbidities and compliance.

**Results**
Over five years 248 patients underwent resection for colorectal cancer. Suitability for adjuvant chemotherapy was considered by a consultant surgeon and oncologist in 191 patients with Dukes B and C stage tumours. Patients 80 years and older with Dukes B tumours and 70 years and older with Dukes C tumours received significantly less adjuvant chemotherapy (Table). Fewer co-morbid medical conditions were observed in patients less than 70 years. Advanced age and associated co-morbidities most frequently influenced the decision to use adjuvant chemotherapy. Comparable side effects and cessation of adjuvant chemotherapy were observed in all age groups and stages.

**Conclusions**
Fewer elderly patients received adjuvant chemotherapy despite having treatment side effects similar to younger patients. Wider use of adjuvant chemotherapy in elderly patients with Dukes B and C stage cancers may be appropriate if selection is not biased by age.

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MALONE ANTERIOR CONTINENCE ENEMA PROCEDURE IN ADULTS: OUTCOME IN AN IRISH SETTING

**Introduction**
The anterior continence enema (ACE) is a novel method of treating faecal incontinence and chronic constipation, which involves the formation of a continent catheterisable stoma connected to the caecum through which enemas are flushed to aid evacuation. We present the first report of this procedure in an Irish setting.

**Methods**
Medical notes of all patients who underwent an ACE procedure in Beaumont Hospital were reviewed and underlying disease, indication, procedure performed, outcome and complications were recorded.

**Results**
Four patients underwent an ACE procedure. They ranged in age from 25 to 52 and two patients were male. Spina bifida was the underlying disease in three patients and colonic inertia in one. Isolated faecal incontinence was the indication for surgery in one patient, while the remainder had mixed faecal incontinence and constipation. An appendicoceacocostomy was formed in two patients. Both of these patients stopped using the anterior continence enema within six months due to lack of effect. One proceeded to an anterior resection and end colostomy with satisfactory outcome. A catheterisable stoma was constructed from transverse colon in the other two patients. At follow-up of four years, both were continent at the stoma site and rectally. One patient required stoma revision due to prolapse.

**Discussion**
This is the first report of ACE procedures in Ireland. Transverse colonic conduit was more successful than appendicoceacocostomy and good outcome was achieved in carefully selected patients.
Mode of Presentation of Colorectal Cancer – Do Elderly Patients still Present with Advanced Disease in 2005?

We analysed all patients requiring major colorectal surgery in one service over six months. The association between mode of admission relative to age, symptom duration, tumour stage, length of ICU stay, presence of stoma and outcome were assessed.

Forty-four patients presented for colorectal surgery over six months. Thirty-one were elective and 13 emergency. Sixty-eight percent presenting as emergency and 32% as elective. Sixty-one percent of elective patients (8/13) had colorectal cancer whilst 68% presenting as emergency had colorectal cancer. Two patients with colorectal cancer presented with advanced disease and did not have resection. Two patients with colorectal cancer presented with advanced disease despite the availability of colonoscopic services. Two patients with colorectal cancer presented with advanced disease and did not have resection. Fifty per cent of elective patients were aged over sixty-five years, versus 90% of emergency patients (18/20). Only 37.5% of elective patients over sixty-five years, versus 90% of emergency patients had colorectal cancer whilst 68% presenting as emergency had colorectal cancer. Two patients with colorectal cancer presented with advanced disease and did not have resection.

We conclude that the majority of elderly patients continue to present as emergencies with advanced level of disease despite the availability of colonoscopic services. Patient awareness and education is critical in this patient population.

An audit of the management of breast cancer within a ten year period in a University College Hospital

Aim
To review how the diagnosis and management of breast cancer has changed over a ten year period in a University College Hospital.

Methods
100 consecutive breast cancer cases diagnosed in 1994/1995 were identified from the database of the breast cancer unit. Details such as mode of presentation, method of diagnosis, investigations, adjuvant neo-adjuvant therapy and operative intervention were identified from the patient records. This was compared to a similar group of patients diagnosed in 2004/2005.

Results
Comparison of these 2 groups has suggested that the method of choice for diagnosis of breast cancer has changed towards less invasive and radiological assisted procedures rather than open surgical biopsy. Also, operative intervention trends are more towards breast sparing surgery, with reconstruction being more available to those undergoing mastectomy. With oestrogen and progesterone receptor status being routinely checked now, hormonal therapy is more selective and appropriate.

Conclusion
The management of breast cancer has changed significantly over a ten year period with more options available to the patient.

The addition of ROLL to fine wire localisation of impalpable breast lesions improves clearance and overall cosmetics

Techniques that facilitate localisation and excision of impalpable breast lesions are increasing in importance. While fine wire localisation (FWL) remains the gold standard in this regard, radioguided localisation (ROLL) is gaining in acceptance.

Aims
We hypothesized that the addition of ROLL to FWL would lead to benefits in the excision of impalpable breast lesions.

Methods
In a prospective cohort-based comparative trial overall outcome was determined for patients who underwent lesion excision with FWL and ROLL, in the interval from 2001 to the present. Outcome parameters included operative time, complication and clearance rates, and patient satisfaction. Statistical analysis was performed using Sigmastat® with P<0.05 taken as significant.

Results
Sixty-five localisation procedures (15 were FWL alone and 25 were FWL and ROLL) during the interval. The mean specimen volume (p=0.04), diameter (p=0.002) and number (p=0.005) were significantly reduced in patients who underwent FWL plus ROLL versus FWL alone. Significantly, there was reduced incidence of positive margins (5% in the FWL + ROLL group versus 26% in the FWL alone group). Overall, patient satisfaction was equal in both groups, and while postoperative pain scores tended to be reduced in the FWL + ROLL group this was not found to be statistically significant (p=0.04).

Conclusions
The addition of ROLL to fine wire localisation of impalpable breast lesions, maintains patient satisfaction and reduces the incidence of involved margins in resected specimens. ROLL, as an adjunct, thus represents a more effective technique for the localisation and excision of impalpable breast lesions.
Aims
The definition of a clear margin in breast conservation surgery is uncertain. The purpose of this study was to correlate the tumour-margin distance of the excision specimen with the presence of residual tumour at re-operation, and also to analyse predictors of positive margins and of residual disease.

Methods
All patients undergoing breast conservation surgery for invasive disease from 1999-2003 were reviewed. Pathological characteristics and the precise tumour distance from the radial margin were recorded. A radial margin was compromised if invasive or (ductal) in-situ carcinoma was ≤5mm from the margin.

Results
612 patients underwent breast conservation for invasive disease. Of the 161 patients who had re-operation for compromised margins 87 (54%) had residual disease. Residual disease following re-excision was present in 58% (56/96), 56% (9/16), and 59% (22/38) of those with tumour-margin distances ≤1mm, 1-2mm, and 2-5mm respectively. There was a progressive decline in residual disease for each millimetre until a rate of 22% for tumour-margin distances of ≥4mm and ≥5mm was reached. Pathological size (p=0.004), extensive intraductal component (p=0.002), referral from a symptomatic clinic (p=0.02) and the absence of a preoperative diagnosis by core biopsy (p=0.0001) were predictive of positive margins. Only young age (<45yrs) was predictive of finding residual disease on re-operation (p=0.02).

Conclusion
45% of those that had tumour at a distance of ≥5mm from the radial margin had residual disease on re-operation. Our results support a policy of requiring ≥5mm margin in patients undergoing breast conserving surgery for invasive disease.

An assessment of adequate margin status in breast conservation surgery

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Clinicalpathological factors in surgical strategy for cystosarcoma phylloides

Cystosarcoma Phyllodes (CSP) is often clinically diagnosed as a Fibroadenoma (FA) with resultant additional surgical interventions required to clear margins. We reviewed our clinicopathologic perioperative evaluation of CSP to identify factors that may impact on surgical strategy.

Aim
To identify factors that may impact on surgical outcomes for CSP.

Methods
All patients historically coded CSP between 1993-2004 were reviewed. Fifty three cases were identified. Three were excluded based on subsequent review concerning alternate diagnoses. Perioperative demographic, clinical (including mode of presentation) radiological and pathological presentations were investigated.

Results
Eighty-six percent presented to the symptomatic clinic – urgent need for national breast cancer screening

The median age was 50.25 years (range 21-75). Eighty-six percent presented to the symptomatic clinic, and 14% were incidental radiological findings. The mean size of the tumours was 4.2cm (range 1.6-26). A mean of 1.54 operations were carried out to clear margins initially. Fine needle aspiration was carried out in 42%, coded suspicious in only a third. Core needle biopsy in 72% defined CSP in 19% and raised the possibility in a further 39%. Seventy-six percent had imaging which was coded benign core biopsy. Spatial correlation was moderate (r=0.01; Spearman).

Conclusions
We conclude that where there is clinical suspicion, CSP should be considered even in the presence of a benign core biopsy.

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Analysis of false negative mammography in patients with symptomatic breast disease

Aim
False negative mammograms may result in a delay in diagnosis and has implications for patient care. This study sought to identify characteristics of symptomatic patients with false negative mammograms and to analyse the reasons contributing to a missed diagnosis on mammography.

Methods
984 symptomatic breast cancer patients with true positive preoperative mammograms were compared with 124 patients with false negative mammograms. The clinical presentation, diagnostic method and pathology were analysed in both groups. False negative mammograms were reviewed by a specialist breast radiologist.

Results
Patients with false negative mammograms were more likely to present with nipple discharge (p=0.002) and with smaller tumours (p<0.001). Their tumours were more frequently located outside the upper outer quadrant (p=0.002). Retrospective review of false negative mammograms re-categorised 42% of these mammograms as suspicious. The most commonly misinterpreted lesion in this symptomatic population was architectural distortion, asymmetrical density and 31% of false negative mammograms were of moderate or marked density. Adjacent ultrasound (n=25) raised the level of suspicion in 92% of cases where this was performed. A preoperative histological diagnosis of breast cancer was significantly reduced in the false negative group compared to controls (65% vs 83%; p=0.001). False negative mammography led to a delay in diagnosis >2 months in 11 patients.

Conclusion
Symptomatic patients with false negative mammograms often demonstrate definite abnormalities on imaging, the most common of which is architectural distortion/asymmetrical density. Ultrasound is a highly useful diagnostic tool in preventing a delayed diagnosis of breast cancer.

Analysis of false negative mammography in patients with symptomatic breast disease

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Clinically detected breast cancer in women of screening age-group – urgent need for national breast cancer screening

Aim
Early detection of breast cancer by screening mammography offers benefits in terms of improved prognosis and long-term survival as well as an increased likelihood of breast conserving surgery. The aim of this study was to assess the prognosis of breast cancer in women of screening age presenting symptomatically to a breast cancer service.

Methods
Patients diagnosed with breast cancer at University College Hospital Galway between July 2004 and March 2005 were identified from our breast cancer database. Details of patient age, tumour size, histological grade and lymph node stage were identified and the Nottingham Prognostic Index (NPI) for each case of invasive breast cancer was determined.

Results
In total 149 new breast cancer cases were diagnosed during this period. The mean age was 57.6 years. Seventy three cases (49%) were in women aged between 50 and 68, i.e. those who would have been eligible for screening since the commencement of the National Breast Cancer Screening Programme in certain regions. In this age-group there were 60 invasive and 15 pre-invasive cancers diagnosed. The mean tumour size for invasive cancer was 2.8cm (T2) and in 35% of cases there was axillary lymph node involvement at time of diagnosis. NPI for those with invasive cancer was 4.42±1.1 moderate prognosis.

Conclusion
Almost half of all clinically detected breast cancer cases diagnosed during this period were in women of screening age group, many of whom had advanced disease at presentation. This highlights the urgent need for full implementation of the National Breast Cancer Screening Programme.

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17 Breast cancer in the southeast; an audit prior to the introduction of screening

Aims
We present an audit of a regional breast centre prior to the introduction of breast screening, to define present workload and practice, analyse quality assurance parameters (QA), and provide a starting point to allow measurement of the impact, breast screening will have.

Methods
We obtained data on the 164 women that were diagnosed with breast cancer in the southeastern region of Ireland, in the year prior to the introduction of screening. All aspects of their presentation and management were analysed using prospectively collected data.

Results
Greater than 80% of triple assessment breast clinic referrals were seen within two weeks; all patients had pre-operative mammography; greater than 95% of patients had an accurate preoperative diagnosis; and a nodal staging procedure was performed in >90% of women undergoing a breast cancer resection. The data obtained was compared with symptomatic cancer data in the UK (ref) where screening has been in operation since 1990. The southeast saw more invasive disease (98%: "V" 91%), observed a greater amount of node positive disease in all age groups (e.g. 35–49 year olds, 65% V 42%), and performed more mastectomies than the UK (56% V 45.8%). Women in the screening (50–64 a) group comprised 29% of the southeast workload.

Conclusion
In the absence of a screening programme, breast cancer in the southeast is presenting at a more advanced stage. Screening can be expected to reduce the workload of the symptomatic clinic by 25 – 30%. This data allows effective planning and resource allocation.

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18 Predictors of invasive disease in breast cancer when core biopsy dictates dcis only

Ductal in situ disease on core does not always preclude invasive disease on excision necessitating later axillary surgery in substantial number of patients. We sought to identify preoperative predictors of invasion when DCIS is present on core.

Methods
From a database of 895 breast cancer patients, all those who had a preoperative diagnosis of DCIS on core were identified. Their preoperative mammography and subsequent excision pathology was analysed to determine features that may be predictive of invasion.

Results
Ninety-three breast cancer patients had a preoperative diagnosis of DCIS on core biopsy. Following excision, 31 patients were diagnosed with invasive disease, and 12 patients with micro invasion. A preoperative finding of calcification only on mammogram was associated with DCIS on excision (p=0.014). The presence of other mammographic features (p=0.004) or tumour size ≥2 cm was associated with increased risk of invasion (p=0.018). Fifty-two percent of those diagnosed by ultrasound guided core biopsy (n=12/23) had frank invasion on excision compared to 19% diagnosed by stereo tactic techniques (n=1/7) (p=0.009).

Conclusion
Mammographic features and tumour size are useful in predicting invasion in patients who have DCIS on core biopsy only. Patients who have features other than calcification on mammography or have tumour size ≥2 cm should be considered for a sentinel node procedure.

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19 Sestamibi scan directed minimally invasive video assisted parathyroidectomy: an effective treatment for solitary parathyroid adenoma

Aims
Solitary adenomas have been shown to be responsible for almost 90% of cases of primary hyperparathyroidism. The purpose of this study was to determine the utility of sestamibi scanning pre-operatively to guide minimally invasive video assisted (MIVA) parathyroidectomy.

Methods
The charts of 30 successive patients presenting to one surgeon at a tertiary referral centre with primary hyperparathyroidism were reviewed retrospectively. Age, sex, sestamibi scan result, preoperative calcium, and parathormone levels, operative procedure and pathological diagnosis were noted.

Results
Thirty-three (82%) patients were female. Average age of patient was 60 years (22–75 SD). All patients underwent a pre-operative sestamibi scan. Thirty-three (82%) patients had a localized adenoma on sestamibi scan. Of these patients 29 underwent attempted MIVA parathyroidectomy. This was successful in 22 patients, with seven having to be converted to an open procedure. In four cases this was due to thyroid enlargement and in three cases because the parathyroid adenoma was not in the position indicated by sestamibi. When pre-operative sestamibi scanning was correlated with pathological diagnosis it was shown to have a sensitivity of 83% and positive predictive value of 88%.

Conclusion
Pre-operative sestamibi scan localization of a parathyroid adenoma offers an 88% positive predictive value for adenoma location. This facilitates MIVA parathyroidectomy, with its lower morbidity and costs, to be used effectively to treat primary hyperparathyroidism in the majority of patients.

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20 A combination of minimally invasive radioguided parathyroidectomy and intra-operative pth assay accurately predicts resection of parathyroid adenomas

Aims
The role of gamma probe activity and intra-operative parathyroid hormone (PTH) assay in the surgery of primary hyperparathyroidism is well established. The purpose of this study was to assess the accuracy of these techniques as predictors of successful resection of a parathyroid adenoma.

Methods
Fifty-one patients undergoing surgery for a suspected parathyroid adenoma were prospectively analysed. All patients had a sestamibi scan performed three hours pre-operatively and five minutes after excision of a suspected adenoma. We used the combination of histological diagnosis and normalization of post-operative serum calcium levels to define successful resection of a parathyroid adenoma. Statistical analysis was performed using the Wilcoxon Rank test.

Results
An ex vivo count of 40% over the resected specimen and a 45% decrease in PTH levels were significantly associated with a histologically confirmed parathyroid adenoma (p=0.018 and p=0.021 respectively).

Conclusions
A combination of ex vivo gamma probe activity counts and intra-operative PTH assay accurately predicts resection of a parathyroid adenoma.

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Fractured neck of femur in Cork City and County 1994-2003 – changes in demographics and lifetime hip fracture risk

**Aims**

Hip fracture is a significant public health problem worldwide and remains the most serious manifestation of osteoporosis. International published data has shown an increase in the incidence of hip fractures with significant implications for health service providers. Our aim was to examine the incidence and demographics of hip fractures in Cork over a 10 year period.

**Methods**

All persons resident in Cork city and county admitted to CUH with a hip fracture from 1994-2003 were entered into the study. Population statistics for Cork city and county was obtained for years 1991, 1996 and 2002 from the CSO. Using a linear calculation we determined the age and sex specific population for the cork area for the years 1994-2003 and calculated life time fracture risk.

**Results**

Eighty-eight per cent of male fractures and 92% of female fractures occurred in the over 50 age group. In total there were 3784 hip fractures in the 10 year period. The male female ratio was 1.27:1. There has been a statistically significant decrease in incidence in 70-74 year old men and 75-79 year old women (P<0.01).

The incidence of hip fractures in the over 80’s however, is increasing (P<0.01). There was a statistically significant increase in the lifetime risk of hip fracture in females of all ages, greatest in women aged 60 (P<0.001)

**Conclusion**

Despite increased screening and treatment of osteoporosis the burden of hip fractures continues to rise. The increasing incidence of hip fracture in the over 80 age group will have significant implications both in terms of operative morbidity and post operative rehabilitation and placement.

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Ankle fractures in the geriatric population: operative or non-operative treatment

**Aims**

The optimal management of ankle fractures in the elderly is controversial, with wide variation in the complication rates reported in the literature. In elderly patients surgery carries increased risks due to osteoporosis, poor skin condition and decreased vascularity.

**Methods**

We performed a retrospective review (X-rays, medical and nursing notes) of outcome and complications in patients over 70 years of age with ankle fractures. Patients were admitted for manipulation under anaesthetic and application of cast (MUA) or open reduction and internal fixation (ORIF).

**Results**

A total of 114 patients over the age of 70 were admitted for management of ankle fractures during January 1995 and December 2003 and 117

**Conclusion**

These times do not correlate well with the severity of the injury or the need for prompt definitive orthopaedic treatment. There has been a minor general improvement in transportation times since 1994, however.

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Spinal injuries in Irish rugby - a 10 year review

**Aims**

Over 90,000 players are registered with the Irish Rugby Football Union (IRFU). We report a 10-year series of spinal injuries presenting to the National Spinal Injuries Unit (NSIU) at the Mater Misericordiae University Hospital.

**Methods**

A large series of spinal injuries in rugby players was isolated using the NSIU database. HIPE and ORIF. An extensive chart review and telephone interview was performed to determine age, mechanism of injury, possible aetiological factors, anatomic location of injury, American Spinal Injuries Association (ASIA) scores and response to rehabilitation.

**Results**

From 1994 to 2004, 22 rugby players with spinal injuries necessitated admission to the NSIU. Twelve patients (54%) presented with neurology. The average age at time of injury was 21.1 years (range 14 – 44 years) and all patients were male. The average length of hospital stay was 10.1 days (range 1 – 35 days). The most common mechanism of injury was hyperflexion of the cervical spine, with C5/C6 most commonly injured. Sixty-eight per cent of injuries occurred in the tackle situation.
Mean streets - Patterns of firearm injury presenting to an Irish acute General Hospital

Aims
Due to a perceived increase in the incidence of firearm injuries we undertook to study this phenomenon with the aim of quantifying the number of injuries and characterising the nature of the clinical and resource burden this caseload represents.

Methods
Data relating to patient demographics, injury pattern and treatment were collected prospectively from patients presenting to the emergency Dept over a 64-month period between 01/01/2000 and 30/04/2005.

Results
During the period of the study there were 38 shootings in 36 patients with a progressive increase in incidence year on year. Predominantly young males (M:F 18:1), mean age of 26.05 years. The shotgun was the most utilised weapon. All but two cases were considered by the patient to be intentional i.e. assaults and none were self-inflicted. Seven patients were dead on or shortly after admission, giving a mortality rate of 18.42%. Only 5.2% were fit for discharge from the emergency Dept. The mean length of stay was 9.34 days (range 1.57 days). The majority required the care of one or more specialists and 4.7% required one or more surgical procedures (mean number of procedures required 3.62).

Conclusion
We have identified an increasing trend in the incidence of firearm injuries, these patients are overwhelmingly young males who sustain their injuries as the result of an assault. The treatment of these patients is resource intensive, with a wide range of expertise required, resource intensive multidisciplinary care is required in the majority of cases and multiple trips to theatre are necessary in most.

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Osteoporosis management in Ireland - who does and who should?

With an aging population, and an expected doubling in numbers of septagenarians between 1990 and 2020, we are seeing a predicted increase in osteoporosis and resultant fractures.

The International Osteoporosis Foundation (IOF) surveyed consultant orthopaedic surgeons in Europe and New Zealand to determine how osteoporosis knowledge of osteoporosis management, and estimated numbers treated for osteoporosis and investigations available.

Results
The response rate of over 50% was higher than that of our European colleagues, and showed that only 25% of Irish surgeons felt they received sufficient training in osteoporosis management, but only a minority were not confident managing the disease. One-quarter would treat a patient with a fragility fracture for osteoporosis themselves, while over half would refer the patient to a General Practitioner(GP) for further management. Fifty per cent would order bone mineral densitometry, and nearly three-quarters believe the GP should follow up these patients. Significantly, 15% did not have access to densitometry. The most popular treatment is a combination of calcium and vitamin D supplementation in conjunction with Alendronate.

Conclusion
There is a lack of standatisation in the management of patients with osteoporosis. While the disease and its treatment is an important issue, nationally there is a dearth of specialised services and implementation of treatment algorithms, due in part to lack of investigative facilities and organised management teams.

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Work related injury presenting to a regional orthopaedic service

1.4 million work days were lost in 2002 due to work-related injury resulting in significant morbidity and economic loss.

Aim
To investigate the epidemiology of work related injury presenting to a regional orthopaedic service.

Methods
Patients presenting with work-related injury over an eighteen month period were identified from the operative register and hipe.

Results
194 patients were identified. The mechanism of injury involved crush injuries in 57, accidental lacerations in 41 and falls from a height in 40. The majority of accidents involved construction workers (55%) with industrial workplace injuries resulting in significant morbidity and loss of production. These injuries appear to be both more common and more severe in non-national workers.

Conclusion
Despite significant investment, work related injury remains a common cause of orthopaedic referral resulting in significant morbidity and loss of production. These injuries appear to be both more common and more severe in non-national workers. This group should be targeted in any future work-related injury prevention strategy.

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Analysis of Current Administrative Database Coding for Spinal Surgery

Aims
Hospital administrative databases are used to establish health care utilisation and cost and also to set health care policy yet few data exist in the literature regarding database coding for spinal surgery. We aimed to investigate the accuracy of spinal procedure coding systems completed by administrative staff and to determine the effect current coding has on hospital policy and departmental funding.

Method
A retrospective analysis of the 250 most recent spinal surgery cases at our unit was performed.
The records of all patients were independently reviewed by two surgeons and were assigned correct ICD-9-CM coding. The diagnostic codes assigned by the surgeons were compared with the ICD-9-CM codes that had been assigned during the ordinary course of events by personnel in the medical records Dept.

**Results**

The ICD procedural codes contained in administrative databases under represented the population across different risk groups. The ICD-9-CM codes that had been assigned during the ordinary course of events by personnel in the medical records Dept. of Orthopaedics were compared with the diagnostic codes assigned by the surgeons. The accuracy of coding was also found to vary depending on the diagnosis. In particular, cases utilising extensive instrumented fusion were associated with a high level of false negative coding. Cost analysis based on the current administrative database for spinal surgery demonstrated a 38% increase when coding was corrected.

**Conclusion**

This study found that the accuracy of a diagnosis of a spinal disorder recorded in an administrative database varies according to the specific condition being evaluated and has major implications for cases requiring spinal instrumentation. The current coding system in administrative databases may impact negatively on the quality of information available for setting hospital policy and departmental funding.

**Methods**

To determine treatment regimes for thromboembolism prophylaxis in the orthopaedic population across different risk groups.

**Aims**

- Ninety letters were sent to Irish orthopaedic consultant surgeons - a simple ‘tick the box’ approach. The clinical case scenarios consisted of three groups as follows:
  1. Low risk: a routine hip replacement
  2. High risk: a knee replacement on a background of pulmonary embolism
  3. Trauma: a hip fracture

The treatment choices included: Nothing, TEDS, Compression devices, eg, AV boots, Greenfield filter insertion pre-operatively, Hypotensive anaesthesia, LMW Heparin, Aspirin post-operatively, low dose Warfarin, and regular Warfarin. More than one box could be ticked and space was provided for additional treatment regimes.

**Results**

Fifty-four completed returns were received (60% reply rate). The three most popular options in all three cases were early mobilisation, TED stockings and low molecular weight heparin. Less than 20% of all patients were prescribed aspirin. More than 80% of high-risk patients had no pre-operative intervention. Thirty-seven per cent of all knee replacements with a history of PE got no form of anti-coagulation after discharge, 75% of all routine hips got no anti-coagulation after discharge, and 77% of all hip fractures got no anti-coagulation after discharge.

**Conclusions**

While LMW Heparins are not conclusively shown to safely and effectively reduce the rate of symptomatic thromboembolism, it is the most popular chemotherapeutic prophylactic agent. Conversely, despite unequivocal results in the PEP trial, less than 20% of all patients were prescribed aspirin, which was surprising given that it shows aspirin safely reduces the risk of DVT/PE.

The relationship of the sciatic nerve to the tendons used for ACL reconstruction in the posterior thigh: an anatomical study

**Introduction**

Reconstruction of ruptured anterior cruciate ligament using medial hamstring tendons (semitendinosus and gracilis) is becoming more common. A recent case study reported injury to the sciatic nerve during the harvest of semitendinosus graft 1. Although morbidity arising from iatrogenic injury to nerves at the anterior aspect of the knee has been well documented, little has been written to document this.

**Rationale**

This study proposes to examine the relationship between the medial hamstring tendons (semitendinosus and gracilis) and the sciatic nerve in the posterior thigh.

**Methodology**

Twenty legs on ten cadavers underwent the same dissection to expose the semitendinosus tendon, gracilis tendon and the sciatic nerve while maintaining their anatomical relationships. The distance between the closest point of the sciatic nerve to the tendon of semitendinosus was measured at the joint line and at intervals of 2 cm from the joint line.

**Results**

In all cases the gracilis lay further away from the sciatic nerve than the semitendinosus tendon and so it was omitted from further study. In 45% of the subjects the sciatic nerve and the semitendinosus tendon gradually moved further apart as the measurements were taken more proximally from the joint line, and in 10%, 10% 15%, 10% at 6 cm, 8 cm, 10 cm and 12 cm from the joint line respectively the sciatic nerve and the semitendinosus tendon consistently moved apart.
Mesenteric reconstruction during open abdominal aortic aneurysm repair may lead to intestinal ischaemia

**Aims**
Intestinal manipulation and mesenteric traction during abdominal aortic aneurysm (AAA) repair may lead to intestinal hypoperfusion and the development of systemic inflammatory response syndrome. The aim of this study is to assess if intestinal manipulation and mesenteric traction will result in intestinal ischaemia.

**Methods**
Thirty-four patients undergoing open AAA repair were randomised into three groups. Group I (n=11) underwent repair via a retroperitoneal approach while Group II (n=12) and Group III (n=11) were repaired via the transperitoneal approach with the bowel packed within the peritoneal cavity or exteriorised in a bowel bag respectively. Isometric measurement of gastric intramucosal pH (pHi) was performed to assess intestinal perfusion just prior to aortic clamping.

**Results**
The operative time, aortic clamp time, amounts of blood lost and transfused and the pre-clamp gastric pHi were similar between the three groups. The number of patients with persistent low pHi measurements (<7.30 on at least 50% of the time points) were considered to have significant diminished gastric mucosal perfusion.

**Conclusion**
These results suggest that the retroperitoneal approach of repairing AAA can minimise intestinal ischaemia by avoiding mesenteric traction that is associated with the transperitoneal approach.

**Methods**
Forty-two consecutive patients undergoing AAA repair were randomised into three groups. Group I (n=14) underwent repair via a retroperitoneal approach while Group II (n=12) and Group III (n=14) were repaired via the transperitoneal approach with the bowel packed within the peritoneal cavity or exteriorised in a bowel bag respectively. Isometric measurement of gastric intramucosal pH (pHi) was performed to assess intestinal perfusion just prior to aortic clamping.

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**Conclusion**
These results suggest that the retroperitoneal approach of repairing AAA can minimise intestinal ischaemia by avoiding mesenteric traction that is associated with the transperitoneal approach.

Infringual arterial reconstruction – does gender influence outcome?

**Aims**
The effect of gender on long-term results of infrainguinal arterial reconstructions remains controversial. In this study, we analyse the outcome of infrainguinal bypass procedures performed over a ten-year period to stratify the results by gender.

**Methods**
A retrospective analysis of infrainguinal arterial reconstructions performed between 1995 and 2005 was performed. Demographics and adverse outcomes were analyzed. Statistical significance was determined using the chi-square test.

**Results**
Eighty procedures were analyzed. The male to female ratio was 1:1. Women were significantly older (69 years versus 63 years), less often diabetic (25% versus 40%), and less often smokers (75% versus 83%). The mean follow-up was 8.4 years. The mean ASA grade in both groups was three. The 90-day limb loss rates and mortality rates were similar for males and females. The five-year patency rate was 60% for males and 45% for females (p=0.003).

**Conclusion**
Female gender may be a negative predictor of outcome after infrainguinal arterial reconstruction.

A Prospective Observational Longitudinal Study of Pharmacological Manipulation in Abdominal Aortic Aneurysm (AAA) Surgery: Are Statins, Beta-blockers and Anti-platelet Therapy the Best Combination?

**Aims**
Cardiac morbidity and mortality are the most frequent complications post AAA surgery. The primary aim of our study is to compare the effect of cardioselective beta-blocker alone or as part of the ‘Magic Bullet’ (pre-operative Nuseal Aspirin 300mg, Pravastatin 40mg, and Bisoprolol 5mg, and post-operative Clopigrel 75mg for one year).

**Methods**
We reviewed two cohorts of patients undergoing AAA surgery. Primary endpoint was perioperative mortality and 30-day myocardial infarction (MI). Secondary endpoint was renal protection.

**Results**
Forty-two consecutive patients undergoing AAA surgery between January 1999 and July 2000 were compared with 40 consecutive patients between January 2001 and July 2003 (‘Magic Bullet’ group).

**Conclusion**
There was no statistical significance in the beta-blocker group, however there were fewer MIs and renal complications in patients in the ‘Magic Bullet’ group with lower 30-day mortality. All were statistically significant.

**Beta-blockers alone do not provide adequate cardio-protection in AAA surgery. The Magic Bullet reduced the incidence of perioperative renal and cardiac morbidity and 30-day mortality.**

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>PRE-OP SB-BLOCKER</th>
<th>NO SB-BLOCKER</th>
<th>P VALUE</th>
<th>MB AAA</th>
<th>AAA</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>21</td>
<td>21</td>
<td></td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Male:Female</td>
<td>15:6</td>
<td>16:5</td>
<td></td>
<td>14.6</td>
<td>13.7</td>
<td></td>
</tr>
<tr>
<td>Mean Age (years)</td>
<td>70</td>
<td>71</td>
<td></td>
<td>70.5</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>ASA III / IV</td>
<td>76%</td>
<td>77%</td>
<td></td>
<td>87%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>Myocardial Infarction</td>
<td>2 (9%)</td>
<td>4 (18%)</td>
<td>0.009</td>
<td>12.7%</td>
<td>19.1%</td>
<td>0.03</td>
</tr>
<tr>
<td>Renal failure</td>
<td>1 (4.7%)</td>
<td>3 (14%)</td>
<td>0.3</td>
<td>4%</td>
<td>14%</td>
<td>0.04</td>
</tr>
<tr>
<td>30-day mortality</td>
<td>1 (4.7%)</td>
<td>3 (14%)</td>
<td>0.4</td>
<td>4%</td>
<td>14%</td>
<td>0.04</td>
</tr>
</tbody>
</table>
Haemoglobin A1c (HbA1c) in nondiabetic vascular patients. Is HbA1c an independent risk factor and predictor of adverse outcome?

Diabetics with HbA1c >7% have increased risk of microvascular and macrovascular complications. Our aim is to determine if elevated HbA1c is associated with adverse outcome in non-diabetics and diabetics undergoing vascular procedures. Primary endpoint is postoperative morbidity and mortality. Secondary endpoint is length of hospital stay.

Plasma HbA1c was measured prospectively in 157 consecutive patients over six-months. Clinical data was entered into a prospectively maintained database (VascuBase). Non-diabetics were further stratified into two groups, HbA1c ≤6.0% (normal) or >6.0% (abnormal). Diabetics were also divided, HbA1c ≤7.0% (normal) or >7.0% (abnormal). Statistical analysis used two-tailed t-test and multivariate analysis.

One hundred and seventeen patients (74.3%) were non-diabetic. Overall mean age was 72-years and 59.4% were male. Abnormal HbA1c was found in 19.8% non-diabetics and 47.5% diabetics. Non-diabetics and diabetics with abnormal HbA1c had a significantly higher complication rate (6.25% vs 2.4%, p = 0.001) and 8.3% vs 32.6%, p < 0.05) than those with normal HbA1c. Diabetics with abnormal HbA1c had a significantly longer length of hospital stay (20 days vs 37 days, p < 0.001). Multivariate analysis demonstrated that elevated HbA1c is a significant independent predictor of adverse post-operative outcome in non-diabetics and diabetics. Abnormal HbA1c did not significantly affect mortality.

A significant proportion of non-diabetics undergoing vascular surgery have HbA1c of 6.1 - 7%, which was a significant independent predictor of increased length of stay, stroke, myocardial infarction, amputations and mortality after vascular surgery in non-diabetics. Diabetics with abnormal HbA1c have increased length of hospital stay. Tighter diet control and pharmacological manipulation are mandatory.

Demographic changes in the level and numbers of amputees since the introduction of Subintimal Angioplasty (SIA). Influence of Deliberate Practice on Limb Salvaeg Rates and Long-term in Critical Lower Limb Ischaemia (CLI): A 15-years experience

Costs of managing post-amputation CLI patients are twice that of successful limb salvage, justifying aggressive revascularisation policy. Aim of the study is to assess whether deliberate practice with SIA has influenced limb-salvage rate and amputation level.

Form January 1989-March 2004, 3268 patients were admitted with CLI. 829 underwent revascularisation (bypass 671, angioplasty 158), while 439 had primary amputations. Patients were divided into 2 groups, depending on whether they were admitted prior to or since SIA availability. Cumulative survival and limb-salvage rates were calculated using Life Table Analysis. Multivariate analysis was performed with Cox proportional hazards model to determine effect of patient demographics, disease presentation and treatment modality on amputation-free survival-rate.

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Revascularisation rate increased with introduction of SIA, from 66% to 82% (p < 0.001). Amputation level (AKA:BKA) did not vary significantly. Thirty-day morbidity, mortality and length of hospital stay were significantly lower post-SIA (p < 0.05).

Ten-year survival rates were 42.5% (SE 2.7%) for primary amputation and 44.4% (SE 2.5%) for bypass. Three-year survival rates for primary amputation, bypass and SIA were 54.0% (SE 2.4%), 60.1% (SE 1.88%) and 75.8% (SE 3.49%).

Five-year cumulative limb-salvage rate is significantly higher post-SIA (85.6% SE, 2.30%) than pre-SIA (66.5%, SE 2.4%). Risk of amputation following revascularisation was positively associated with procedure type, renal function and diabetic status.

Technical advances have resulted in steady improvements in amputation numbers despite rising population age and disease complexity. SIA improves symptom-free survival rate, is minimally invasive, cost effective, and associated with a high limb-salvage rate. Deliberate practise with SIA for limb-salvage in vascular units is warranted.

Aims

To examine the efficacy of cerebral protection devices in preventing cerebral insult during carotid angioplasty and stenting (CAS) and to evaluate diffusion weighted MRI as a method of assessing subclinical cerebral injury.

Use of cerebral protection devices during CAS is becoming more widespread. However, the effectiveness of these devices is controversial. The aim of this study was to assess the efficacy of cerebral protection devices in preventing cerebral insult during CAS in a large single centre series and to compare the incidence of clinical and subclinical cerebral infarction following CAS in protected and non-protected patients.

Methods

From October 2001-2004, 680 patients were treated with carotid artery disease, 116 had intervention. Forty-one were ASA III or higher and assigned to CEA or CAST. Three had bilateral interventions. Duplex was sole imaging modality for quantifying plaque type and percentage stenosis. Patients with seropositive internal carotid arteries and echoluent plaques had CEA. High-risk factors for CEA were previous CEA, neck dissection, radiation therapy, unstable angina, class III heart failure, FEV1 < 30%. CAST patients had Ciprofloxacin 500mg pre-operatively, local anaesthesia. Angioguard® filter wire; primary stenting using Xact® tapered stent, post-stenting dilatation and Perclose® automatic suture system. CEA patients had general anaesthetic; routine shunting; tacking; and at 4-weeks intervals thereafter. MRA was done to detect embolisation and recovered. Length of HCU/ hospital stay was lower in CAST, P < 0.01 and P < 0.05. There was no statistical difference in one-year patency between groups (P > 0.05). CAST is evolving as a safe, effective, first-line therapy in high-risk patients for CEA.

A prospective observational study of carotid artery stenting (CAST) under neuro-protection and carotid endarterectomy (CEA) in high-risk patients — short term results

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Depart of Vascular Surgery and Radiology, Mount Medical Centre, Perth, Western Australia

Efficacy of cerebral protection during carotid artery stenting: objective evidence from diffusion-weighted MRI

Asymptomatic. Following CAS, 7% of patients had a positive neurological exam and 20% had positive DWI scans, equating to a sensitivity of 86% and a specificity of 83% for DWI in detecting cerebral infarction following CAS. The positive predictive value of the test was 0.5 and negative predictive value 0.99, with a likelihood ratio of 5.7. Use of a cerebral protection device significantly reduced the incidence of both clinical (5% in CPD vs. 25% in non-protected, p < 0.05, Fisher’s Exact Test), and DWI-detected subclinical cerebral infarction (18% CPD vs. 35% in non-protected, p < 0.05, Fisher’s Exact Test).

Conclusions

Diffusion-weighted MRI is a useful adjunct to the assessment of patients pre and post CAS. Use of cerebral protection devices during CAS is associated with a reduced incidence of clinical and subclinical cerebral injury.

In a significant proportion of patients with CLI revascularisation is not feasible due to anatomical or co-morbid factors. Our aim is to report our initial experience with ArtAssist® device in patients with CLI. Primary endpoints were limb salvage and symptomatic patency. Secondary endpoints were changes in ABI and toe pressures.

From August to November 2004, 34 patients presented with CLI. Of these, 10 (12 limbs) were not suitable for revascularisation and were treated with ArtAssist for 12 weeks. Exclusion criteria were severe infection, DVT and inability to tolerate compression. All patients were given best medical treatment and had a duplex scan and ABI, initially and at 4-weeks intervals thereafter. MRA was done in those anatomically unsuitable for reconstruction.

Non-operative management of critical limb ischemia (CLI): initial short term experience with a biomechanical device

B Mahendran, S Tawfik, N Hynes, A Patel, A Jawad, A Lichtiag, E Andrews, D Courtney, S Sultan

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Male-female was 7.3. Mean age was 775 years (range 58-89 years). Six patients were included due to anatomical factors and four due to co-morbidities. All patients were at least Rutherford classification IV and ASA III. Six patients were diabetic, and two were immobile. The paired-student’s t test was used. ABI increase of 0.05 was taken to be clinically significant. Limb salvage was 100%. There was significant relief of rest pain, and significantly reduced analgesia requirements from week 1 onwards. Gangrene remained dry and non-progressive with no need for antibiotics. ABI increased significantly (t = 1.991, df = n, p < 0.05). There were no complications related to use of the device. ArtAssist increases limb salvage rates, reduces length of hospital stay and relieves symptoms of CLI in patients with significant co-morbidities and no option of revascularisation.
**40** Factors predicting mortality in 178 consecutive patients undergoing surgery for ruptured abdominal aortic aneurysm.

**Aim**
Surgery for ruptured abdominal aortic aneurysm is associated with significant mortality. The aim of this study is to evaluate current mortality and assess whether preoperative risk factors can accurately predict operative mortality.

**Methods**
A retrospective analysis was carried out for the five Hardman index factors (age >76 years, loss of consciousness, haemoglobin <9 gm %, creatinine >19 mmol/l and ECG evidence of ischaemia) in 178 patients undergoing surgery for ruptured abdominal aneurysm in two teaching hospitals between January 2000 and December 2004.

**Results**
The mean age of the patients was 73.9 years (range, 51-94) with a male to female ratio of 5.4:1. The overall inhospital mortality was 57.3% (102/178) with a slightly lower mortality in women (45%; 72/158) compared to men 60% (30/50), p=0.09. Using a multivariate analysis, only age >76 years (p=0.04, OR 2.29, 95% CI 1.23-3.11) and ECG ischaemia (p=0.03, OR 2.93, 95% CI 1.11-7.67) were found to be sensitive predictors of mortality. The operative mortality was 44%, 46%, 68%, 79% and 100% for Hardman’s score 0, 1, 2, 3 and 4 respectively.

**Conclusion**
These results concur with that of Hardman’s, who demonstrated a correlation between the number of positive factors and mortality. However, contrary to their findings, our results show survival even with three positive factors and hence repair should not be denied in high risk patients (Table 1).

**Table 1**

<table>
<thead>
<tr>
<th>NUMBER OF POSITIVE CRITERIA</th>
<th>BELFAST</th>
<th>HARDMAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>44</td>
<td>16</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
<td>57</td>
</tr>
<tr>
<td>2</td>
<td>68</td>
<td>72</td>
</tr>
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<td>3</td>
<td>79</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**41** Surgery remains the primary treatment of choice for gastrointestinal stromal tumours

**Aims**
Gastrointestinal stromal tumours (GIST) are gastrointestinal sarcomas with an incomplete myogenic or neural phenotype predominantly expressing C kit and/or CD34 surface markers. Although surgical resection was the gold standard of treatment, the development of a targeted molecular therapy (imatinib), has led some to question whether surgery remains the primary modality of choice and therefore we wished to review our experience of GIST in the imatinib era.

**Methods**
All cases of GIST admitted between April 2003 and March 2005 were reviewed. Patients were recruited from the hospital’s histological database and a retrospective chart review was performed. Patient demographics, presentation, treatment and follow up were analysed.

**Results**
Eight patients diagnosed with GIST were identified, with a mean age of 55 years and male to female ratio of 6:1. Six patients had en bloc resection whilst one patient had an endoscopic excision. One patient had evidence of metastatic disease at a median follow up of 13 months. This patient, along with a patient who had unresectable disease, was treated with imatinib and both currently have stable disease.

**Conclusion**
Surgical resection is the gold standard for treatment of GIST. However, these are the first tumours for which targeted molecular therapy is successful and provides a bright future where tumours are unresectable or for those patients with metastatic disease.

**Table 1**

<table>
<thead>
<tr>
<th>GIST PRESENTATION</th>
<th>GIST ORIGIN</th>
<th>HISTOLOGICAL RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI Bleeding (n=3)</td>
<td>Stomach (n=4)</td>
<td>Low (n=1)</td>
</tr>
<tr>
<td>Incidental (n=1)</td>
<td>Duodenum (n=1)</td>
<td>Intermediate (n=3)</td>
</tr>
<tr>
<td>Pain (n=3)</td>
<td>Jejunum (n=2)</td>
<td>High (n=4)</td>
</tr>
<tr>
<td></td>
<td>Unknown (n=1)</td>
<td></td>
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</tbody>
</table>

**42** The application of proton pump inhibitors in long term use

**Aims**
To retrospectively analyse the quantity and indications for prescription of Proton Pump Inhibitors for long term use in patients with no active Peptic Ulcer Disease or Gastro-Oesophageal Reflux Disease.

**Methods**
Random 102 Medical patients were used for analysis. All patients were without active PUD/GORD. Average age is 73.5 (SD 6.3) years including 49 men and 53 women. Prescriptions were written by four independent participant doctors which later, as well as discharge summaries, patient notes and theatre notes formed the basis of the research.

**Results**
On discharge, 49.5% of all random patients were routinely taking a PPI. Of the PPI patients, 21% of these had previously undergone GGD and diagnosis of peptic ulcer disease or gastro-oesophageal reflux disease (4 male, 7 female). Patients previously diagnosed with PUD/GORD...
THE IMPACT OF MRSA INFECTION POST-WHIPPLE’S PANCREATECTOMY: A 10-YEAR EXPERIENCE

Methicillin resistant Staphylococcus aureus (MRSA) is a nosocomial pathogenic gram-positive bacterium which is prevalent worldwide. MRSA infection has been shown to result in substantial morbidity and mortality post-surgery in orthopaedic and ortho-rhino-laryngology units. The effect of MRSA on patients post-Whipple’s pancreatectomy has not yet been examined.

Aims
Examine the morbidity associated with nosocomial MRSA infection post-Whipple’s pancreatectomy and determine its impact on treatment costs and utilization of resources.

Methods
A retrospective cohort analysis of all patients undergoing Whipple’s resection (n=118) over a 10-year period (1995-2005) was carried out. MRSA positive cases had MRSA isolated from at least one site; MRSA negative cases were the controls.

Results
Nosocomial MRSA affected 19% of patients undergoing Whipple’s resection. 41% of MRSA positive cases developed subsequent infection warranting systemic antibiotic therapy. Mean time post-surgery to colonization was 9.5 days and mean time to diagnosis of clinical infection was 18.2 days. Morbidity included cellulitis (4), wound dehiscence (3), anastomotic breakdown (2), pneumonia (4) and septic arthritis (1). Twenty-seven per cent of MRSA cases required required further surgery. The mean in-hospital stay was prolonged in MRSA positive cases (47.7 vs. 26.1 days, MRSA positive vs. control).

Conclusions
MRSA infection is a significant cause of morbidity in patients following major pancreatic surgery. Prevention of MRSA cross-infection is essential if we are to minimize its impact on patient care and healthcare resources.

45
RELIABILITY OF SYMPTOM QUESTIONNAIRES IN PATIENTS WITH GASTRO-OESOPHAGEAL AND LARYNGOPHARYNGEAL REFUX

Aims
Laryngopharyngeal Reflux (LPR) is defined as retrograde extraoesophageal reflux of gastric contents into the larynx, pharynx, trachea & bronchus. Clinical manifestations and symptoms of LPR are atypical for gastro-oesophageal reflux disease (GORD) although heartburn is the most frequent and typical symptom. Our hypothesis is that GORD patients with objective evidence of LPR should also have positive LPR symptomatic scores.

Methods
Five hundred and thirty-two consecutive patients referred to our GI Function unit with GORD symptoms were asked to complete two validated questionnaires: (1) patient symptom index (PSI) for GORD and (2) reflux system index (RSI) for LPR. All patients then had oesophageal manometry followed by 24 hour pH monitoring. A subgroup of these patients (n=19) had simultaneous oesophageal and pharyngeal 24 hour pH monitoring.

Results
PSI was highly predictive for oesophageal reflux while LPR RSI did not predict LPR. (Table 1)

Conclusion
GORD patients with LPR documented by 24 hour ambulatory pH monitoring do not exhibit typical ENT symptoms.

Table 1

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<thead>
<tr>
<th>+VE PSI</th>
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<tbody>
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</tbody>
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44
CHOLANGIOCARCINOMA - A 10-YEAR EXPERIENCE IN A SPECIALIST HEPATOBILIARY UNIT

We report an audit of the management of cholangiocarcinomas presenting to a specialist hepatobiliary unit in Ireland over a 10 year period. The incidence and pattern of referrals of this rare tumour-type to a specialist hepatobiliary unit in Ireland has not been reported to date.

Aims
The aim of our audit was to document the prevalence and mode of presentations to our unit, the investigations that had been carried out (if any) prior to presentation, the investigations that we perform in diagnosing and staging these tumours, and the incidence of resectability in those presenting to our unit. We also aim to highlight the use of the various modalities employed in the treatment of these tumours, the incidence of use of these modalities and to compare our results to national and international data.

Methods
Data was collected retrospectively from the charts of 60 patients that had presented to our unit over the period April 1995 to April 2005 who were diagnosed with cholangiocarcinoma. We classify the tumours into intrahepatic, perihilar, or distal (extrahepatic) biliary tree, exclusive of the ampulla of Vater, we also include gallbladder cancers. We divided the extrahepatic bile ducts into perihilar and distal segments, with the transition occurring at the point where the common bile duct lies posterior to the duodenum.

Results
60 patients who presented to our unit, 48 of which had been referred by other units. Ultimately just over half of these went on to have resections, other treatment modalities including stenting, brachytherapy and liver transplantation.

Conclusions
Most patients had initially been assessed by their local general practitioners. Of those that presented to the hepatobiliary unit, the investigations that had been carried out over half of these went on to have resections, had been referred by other units. Ultimately just over half of these went on to have resections, other treatment modalities including stenting, brachytherapy and liver transplantation.

Aims
Laryngopharyngeal Reflux (LPR) is defined as retrograde extraoesophageal reflux of gastric contents into the larynx, pharynx, trachea & bronchus. Clinical manifestations and symptoms of LPR are atypical for gastro-oesophageal reflux disease (GORD) although heartburn is the most frequent and typical symptom. Our hypothesis is that GORD patients with objective evidence of LPR should also have positive LPR symptomatic scores.

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an update on comparable roles of ultrasonography and magnetic resonance in the biliary tract

Aims
The role of magnetic resonance imaging (MRI) in the diagnosis of pancreaticobiliary pathology is well recognized. Ultrasonography (US) continues to play a pivotal role however. With escalating health costs, the expense incurred in obtaining MRI requires justification. The aim of this study was to provide an update on the comparable roles of US and MRI in a group of patients with suspected biliary tract disease over a four-year period. This study provides encouraging and enlightening account as compared to the previous observations.

Methods
Sixty-one patients were recruited. All underwent abdominal US and MRI. The indications for US included abdominal pain (39%), jaundice (28%) and/or deranged liver function tests (27%). Indications for MRI included suspected cholangitis, clinically (57%) and ultrasonographically (36.5%), suspicion of pancreatic pathology (13%), cholangiocarcinoma (5%) or an inconclusive ultrasound (8%).

Results
Ultrasound identified common bile duct (CBD) dilatation in 26.5%. A normal study was identified in 54%. Pancreatic pathology was described in 13% (carcinoma, cyst, inflammation). Cholangiocarcinoma was seen in 8% of inconclusive studies accounted for 8.5%. MRI identified CBD dilatation in 26%. A normal CBD was identified in 62%. Pancreatic pathology was confirmed in 13%. Cholangiocarcinoma was identified in 5%.

Conclusions
In conclusion, MRI confirmed all positive ultrasound findings. The principle benefit of MRI was in establishing findings in the 8% of inconclusive ultrasound studies. We suggest that adopting a more selective practice could reduce the demand and associated cost implications of MRI.

Laparoscopic nissen fundoplication - the learning curve: a DGH experience

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A technique for surgical closure of the complex abdomen

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were close enough, the remaining patch material was removed and the abdominal wall closed, fascia-to-fascia (Days2).

Conclusions

The Wittmann Patch is effective for temporary bridging of abdominal wall openings where primary closure is not possible and/or repeat abdominal entries are necessary. In properly selected patients, this technique avoids the use of mesh or additional surgical procedures such as skin grafting or plastic surgical reconstruction of the abdominal wall.

Raised faecal calprotectin levels in patients with right iliac fossa pain: a non-invasive predictor of acute appendicitis

Background

Despite advances in medical investigation the rates of negative appendectomy remain unchanged. We investigated whether faecal calprotectin levels (FCP), a bowel lumen inflammatory marker, could accurately diagnose acute appendicitis.

Methods

Sixty-four consecutive patients presenting with RIF iliaca fossa pain: a non-invasive predictor of acute appendicitis.

Results

There were 43 (67%) cases of gastrointestinal (GIT) pathology of which 38 (60%) had acute appendicitis. FCP was raised in 14 patients (22%). Each of whom had GIT pathology. Likelihood ratio calculation and ROC analysis indicate that FCP is second only to leukocytosis in predictive power. In the presence of GIT pathology and 88% specificity for acute appendicitis.

Conclusion

We suggest that a high FCP level indicates definite GIT pathology and 88% specificity for acute appendicitis.

A prospective, randomised, controlled trial comparing Subacromial Bursa block with intrascalene block in patients undergoing arthroscopic subacromial decompression

Aims

We compared the effect of intrascalene block (ISB) and subacromial bursa block (SBB) in patients undergoing arthroscopic subacromial decompression.

Methods

Fifty-three (n = 53) patients scheduled for arthroscopic subacromial decompression were randomised into three groups receiving Intrascalene block (n = 19), Subacromial Bursa block (n = 19) or neither of the two blocks (n = 15 controls). Patients with cuff pathology were excluded. ISB was performed preoperatively with 20 ml of 0.5% Prilocaine and 10 ml of 0.25% Bupivacaine postoperatively. Pain, sickness and sedation scores were noted at 1, 2, 4, 8, 12 and 24 hours postoperatively. The postoperative consumption of morphine and the time when the first bolus of morphine was required were also noted.

Results

The pain scores in the ISB and SBB group were lower than the control group in the first twelve hours postoperatively. The controls consumed more morphine postoperatively (mean 33.3 mls) than ISB (21.1 mls) and ISB groups (14.20 mls) (p < 0.001). The time for first bolus was earlier in the controls (mean 30.2 mins) as compared to both SBB (77.2 mins) and ISB groups (105.8 mins) (p < 0.001). The oral analgesic intake was less in the SBB and ISB groups than the controls (p = 0.004), but there was no difference between the two treatment groups.

Conclusion

Whilst intrascalene block remains the gold standard after subacromial decompression, subacromial bursa block is a safe alternative in patients with intact rotator cuff.

Experimental investigation of negative pressure intrusion techniques of acetabular component cementation in total hip arthroplasty

Aims

The aim of this study is to develop and evaluate a model which simulates negative pressure intrusion (NPI) cementation techniques and to use this to elucidate the effects of this technique on the cement bone interface.

Methods

Samples of cancellous bone are machined to create cylindrical specimens. Eight specimens were created and assigned to NPI and control groups. The NPI group specimens are subjected to negative pressure using clinical suction (Chenon, Czech Rep) in a custom rig. Polymethylmethacrylate cement is applied to the bone within the rig and subjected to a constant positive external pressure via a 2kg weight applied to the sliding arm of the rig until the cement has cured. Control is provided by an identical process in the absence of vacuum. Bone-cement constructs are removed en bloc and cement intrusion depth is ascertained with the use of MicroCT. The mean intrusion depth is calculated for each sample using 2D CT slices of known dimensions.

Results

There is tendency toward deeper cement interdigitation in the samples created using the NPI. The overall mean intrusion depth in the NPI group was 78.5µm compared to 48.3±7.5 µm in the control group. Giving a greater mean cement intrusion of 30.4±25.5 µm using NPI cementation.

Conclusions

We conclude that the model accurately mimics the operative technique and the use of microCT allows accurate non-destructive assessment of intrusion depth leaving samples intact for mechanical testing. The association of cement intrusion depth with increased mechanical strength has been shown in the literature.
53 Risk factors for predicting urinary catheterisation in the first 24 hours post lower limb arthroplasty — a prospective study

**Aims**
Urinary retention post lower limb arthroplasty is a common problem and the direct relationship between urinary tract instrumentation and deep sepsis in total hip replacement is well documented. This study tries to identify those patients at high risk for urinary retention.

**Methods**
This prospective study analysed 164 male patients who underwent primary arthroplasty between September 2004 and March 2005 inclusive. Patients who had previous urological intervention for obstructive symptoms were excluded from the study. Upon admission and prior to surgery, all patients answered an 8-point urinary symptom questionnaire and were tested on their ability to micturate while supine.

**Results**
Thirty-four patients required urinary catheterisation, 130 did not. The average age of the catheterised group was 69.5 ± 10.7 years (range, 45-90) and the non-catheterised group was 65.2 ± 10.5 years (range, 39-85). There was no difference between these groups (p = 0.194, ANOVA). Similarly, there was no difference (p = 0.919, ANOVA) between the blood loss in the 2 groups, 860 ± 645.5 mls and 895 ± 533.7 mls respectively. With regards to the symptom questionnaire, the average score in the catheter group was 3.1 ± 2.4 and the non-catheter group was 2.0 ± 1.8 (p = 0.054, ANOVA). Supine micturition was of no predictive value with 22 patients in the catheter group able to do so.

**Conclusion**
These results show the value of a pre-operative urinary symptom questionnaire in predicting those who may require post-operative catheterisation. By appropriate use of this tool, patients with potential for post-operative retention may be identified before surgery and consequently, this group should be catheterised pre-operatively thus reducing their risk of infection.

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Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

55 Contamination in cemented arthroplasty — a four-year follow up of deep wound contamination

Despite exhaustive prophylactic measures intra-operative contamination still occurs following cemented arthroplasty. We undertook a prospective study to identify the incidence of intra-operative deep wound contamination in cemented joint arthroplasty, and assessed incidence at four years of wound contamination.

**Methods**
Eighty-two patients admitted for elective cemented arthroplasty were enrolled in the study over a six-month period. All cases were undertaken in ultra-clean laminar air flow theatre. The surgical team wore isolation suits in all cases. Swabs from skin incision and wound were sent in addition to the blades and suction tip. Cultures were typed by morphology and identified by standard techniques.

**Results**
Fifty-nine cases were total hip replacements and 25 knee replacements. Five procedures were performed for revision arthroplasty. Nineteen of the 82 cases (23%) examined grew contaminating organisms with S. epidermidis being the commonest organism (46). Twelve patients had two contaminated specimens and one had three contaminated specimens. No significant correlation between the duration of the case, number of personnel in theatre or the seniority of the operating surgeon was demonstrated. On medium term follow up (mean 49.6 months, 95% CI 32-72 months) no patient had developed clinical evidence of infection.

**Conclusion**
We noted a high incidence of intra-operative contamination of cemented arthroplasties despite standard prophylaxis. However, this was not reflected by a similar rate of post-operative infection. This may be due to a small bacterial inoculum in each case or possibly may be due to the therapeutic effect of perioperative intravenous antibiotic prophylaxis.

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Dept of Orthopaedic Surgery and Dept of Medical Microbiology, Cappagh National Orthopaedic Hospital, Finglas, Dublin 11

56 Variation in position of the L4/5 disc inter-space from Tuffer’s line — review of 450 radiographs

**Aim**
Investigation of variation between Tuffer’s line (drawn between the two highest points on the iliac crests) and the L4/5 disc inter-space, in varying patient age groups.

**Methods**
Four-hundred and fifty AP and lateral lumbar spine radiographs (age range 30-90yrs). Patients with obvious deformity or previous spinal surgery were excluded. In AP films, Tuffer’s line was drawn between the iliac crests. From this line, the distance to the midpoint of the L4/5 disc was measured. This was achieved in lateral films, by finding the midpoint between the iliac crests and again measuring the distance from this point to the midpoint of the L4/5 disc.

**Results**
In all age groups measured, the true L4-5 disc inter-space lay below Tuffer’s line. In the patient group at 20 - 30 years, Tuffer’s line lay on average 1.86mm above the L4-5 disc space. At 30 - 40 years, average = 2.49mm above the disc space. Forty to 50 years, average = 6.05mm above. Fifty to 60 years and 60 - 70 years, average ≈ 17 mm above. Seventy to 80 years, average = 4.5 mm above. Eighty to 90 years, average ≈ 9.06mm above. Analysis using ANOVA system to assess statistical significance. Comparison of the patients aged 20 - 30 years versus patients aged 80 - 90 years yielded a p value of p=0.0045. Sixty to 70 years vs 80 - 90 years, p=0.0049. Fifty to 60 years vs 80 - 90 years, p=0.0023. 70 - 80 years vs 80 - 90 years, p=0.004. Other patient group comparisons of low statistical significance.

**Conclusions**
The L4-5 disc inter-space broadly corresponds to Tuffer’s line; however, there is significant variation between different age groups and within individual age groupings. Therefore, it is advisable to use a pre-operative AP and lateral radiograph of the lumbar spine, to enable accurate incision placement when performing spinal surgery in this area.

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**Quantitative assessment of helmet visor contamination in total hip arthroplasty**

**Aim**
The aim of this study is to document the risk of splash contamination of the face of those directly involved in total hip arthroplasty.

**Method**
A prospective study was conducted over a 6-month period. We collected one hundred and two face visor portions of the surgical helmet system (Stryker Sterishield T4 System) used in primary and revision hip replacements. The position of the individual (surgeon, first assistant or second assistant), the type of prosthesis (cemented, uncemented or hybrid) and the use of pulse lavage assistant) were recorded. Patients who had previous urological intervention for obstructive symptoms were excluded from the study. Upon admission and prior to surgery, all patients answered an 8-point urinary symptom questionnaire and were tested on their ability to micturate while supine.

**Results**
These results show the value of a pre-operative urinary symptom questionnaire in predicting those who may require post-operative catheterisation. By appropriate use of this tool, patients with potential for post-operative retention may be identified before surgery and consequently, this group should be catheterised pre-operatively thus reducing their risk of infection.
Evaluating the quality of ‘quality of life’ studies in spinal journals

**Aim**
Despite the increase in quality of life articles, the actual quality of these quality of life articles has not improved.

**Methods**
Six major journals were chosen. All abstracts during 1998-2001 inclusive which determined quality of life, clinical or functional outcome, patient satisfaction or efficacy were chosen. A total of 607 articles qualified of 1893 articles read. The articles were scored according to the Gill & Feinstein criteria and the Velanovich criteria.

**Results**
The number of articles increased from 16% in 1998 to 52% in 2002 (p < 0.01). In 1998, 14% of studies fulfilled three or more of the Gill & Feinstein criteria as compared to 7.1% in 2002 (p < 0.05). The median Velanovich score in 1998 was 0 and this was unchanged in 2002 (p < 0.05). Appropriate statistical analysis was performed in 26% of studies in 1998 and in 67% in 2001 (p < 0.01).

**Conclusion**
Despite the increase in quality of life studies, there is no significant improvement in the quality of these studies.

Significant psychological and functional improvement following surgical treatment of lumbar spondylolisthesis

**Aim**
We assessed the incidence of pre-operative functional impairment, anxiety and depression in patients presenting for spinal surgery. In addition, the medium term outcome on functional and psychological parameters following surgery was evaluated.

**Patients & Methods.**
Sixty-seven patients were evaluated prior to surgery. All patients admitted by the spinal service for decompressive surgery (microdiscectomy alone or microdiscectomy with spinal decompression) over a three year period were enrolled. Patients were evaluated 4-6 weeks pre-operatively with the Oswestry Disability Index (ODI) and the Hospital Anxiety and Depression Score (HADS). Patients were followed up in the clinic and by telephone with the same.

**Results**
Post-operative follow up was available on 53 patients (79.2%). Mean duration of follow up was 2.2 years (95% CI: 1.9-2.5). Forty-three patients (67%) presented with nerve root compression on the basis of MRI scans, having predominantly lower limb symptoms with the rest having back and/or leg pain. 23 patients underwent microdiscectomy alone, while 30 patients had microdiscectomy combined with lumbar decompression.

**Conclusion**
Our study indicates that the ability to rapidly relieve pain following nerve root impingement has a dramatic benefit in improving psychological distress and physical function and is maintained up to four years.

The weight of a patients’ hospital chart as a predictive factor of post operative morbidity following Lumbar Spinal Decompression

**Aim**
To show that the weight of a patients’ chart is an independent predictor of post operative outcome.

**Methods**
This prospective study examined the outcome of 92 consecutive patients who underwent lumbar spinal decompression. Data collected included patient demographics, pre-operative ASA score, operative time, operative blood loss, length of stay in hospital and the weight of the chart pre-operatively.

**Results**
There were eight patients with an ASA score of IV, 30 with an ASA score of III, 29 with an ASA score of II and 25 with an ASA score of I. The mean weight of the chart for patients with an ASA of I/II was 742 grams and statistically different from ASA III/IV which was 1263.75 grams (p = 0.02).

**Conclusion**
There was a positive correlation between ASA III/IV and post operative morbidity (correlation coefficient R = 0.81). There was a positive correlation between chart weight and post operative morbidity (correlation coefficient R = 0.91). There was no correlation between patient age, gender or duration of symptoms with post operative morbidity. There was a trend towards correlation with operative time and blood loss although this was not significant.

3-D Motion analysis of lumbar spine motion in athletes during weight lifting, using the Zebris system

**Aim**
To view the degree at which athletes flex and extend their lumbar spines, during light and heavy weight lifting. Also, to investigate, whether exercise induced fatigue results in increased movement beyond the normal flexion/extension range.

**Materials and Methods**
Using the Zebris three-dimensional motion analysis system, we assessed the lumbar spine movements during repetitive in line squat lifting by 20 high performance athletes, in whom weight lifting forms a regular part of their training. The subjects performed 5 squat exercises (in a controlled setting) with an Olympic bar (20kg) and then with a weight of 60kg.

**Results**
The average weight of the subjects used was 78.3kg, with an average height of 188cm. The average flexion with the bar (20kg) only was 2.45 +/- 1.72 degrees, while the average extension was 19.2 +/- 0.17 degrees. At the heavier weight, the average flexion was -10.6 +/- 0.96 degrees (i.e. 10.6 deg within the extension range). The average extension recorded was 28.23 +/- 4.97 degrees (p = 0.044 versus bar alone, Student’s t-test).

**Conclusion**
These results show that at the heavier weight, the range of flexion/extension is wholly within the extension range. This demonstrates a significantly increased extension load on the lumbar spine during heavy weight lifting. Further work is required to elucidate the potential pressure effects that this hyperextension has on the lumbar spines of athletes, particularly in younger athletes, who form the most vulnerable group performing this exercise.

**The positive correlation of a patients’ chart weight with post operative morbidity is significantly greater than for the ASA Score.**
Operative workload: a surgical trainee’s experience

In the current climate of debate regarding duty hours, experience of surgeons in training, delivery of specialist surgical services and centralisation, we have evaluated the operative exposure available to a first year surgical trainee.

Objectives
Our aim was to determine if the operative workload at a district general hospital fulfills the requirements of surgical services and delivery of training to surgeons in training, regarding duty hours, experience in anaesthesia and casemix.

Methods & Results
Over a six month period, 1010 surgical procedures were performed on a six monthly basis.

The operative workload at the institution. Four hundred and twenty-nine (42%) of these were day ward based.

Over a six month period, 1010 surgical procedures were performed on a six monthly basis.

The SHO was the principle supervised operator at 378 (37%) of these procedures, the registrar at 360 (36%), and the consultant at 271 (27%).

The operative workload of the SHO included 122 endoscopic procedures (31%), with 98 (26%) operative procedures performed under local anaesthetic.

One hundred and fifty-eight (42%) of the junior surgeon’s operative workload was in the major theatre suite and included cases of higher Intermediate Equivalent value (Table 1: representative sample).

Conclusion
We conclude that surgical training in a district hospital offers training commensurate with Royal College guidelines to junior surgeons in training.

<p>| TABLE 1 |</p>
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Discharge letters - pay attention to the small print!

The Hospital Inpatient Enquiry (HIPE) system utilises a series of diagnosis related groups (DRGs) to indicate the casemix workload and complexity in a hospital. These DRGs are used to calculate the funding allocated to institutions nationwide. This coding is based on the discharge summaries completed in the surgical unit.

Aims
To assess whether the coding assigned reflects the casemix severity of individual cases and whether such coding errors have financial implications.

Methods
Two clinicians who had been instructed in the calculation of the coding allocation blindly reviewed cases in two common elective surgical admissions, open inguinal hernia repair and colorectal cancer resection. Both independently allocated a code to each case. These blinded coding were then compared to the official coding allocated by the HIPE Dept.

Results
In both the inguinal hernia repair group (n=150) and the colorectal cancer resection group (n=150), 7% of charts were upgraded to a more complex casemix coding. Failure to list all secondary diagnoses in the discharge summary was the main cause for the initial lower coding.

Conclusion
Inadequate completion of discharge summaries can lead to lower casemix coding of cases which will adverse financial implications for the institution. Regular auditing of discharge summaries can help to identify common mistakes and optimise the coding of a units casemix and help maximise funding.

Predictors of acute renal failure in patients with normal pre-operative renal function

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In both the inguinal hernia repair group (n=150) and the colorectal cancer resection group (n=150), 7% of charts were upgraded to a more complex casemix coding. Failure to list all secondary diagnoses in the discharge summary was the main cause for the initial lower coding.

Conclusion
Inadequate completion of discharge summaries can lead to lower casemix coding of cases which will adverse financial implications for the institution. Regular auditing of discharge summaries can help to identify common mistakes and optimise the coding of a units casemix and help maximise funding.

Predictors of acute renal failure in patients with normal pre-operative renal function

Aims
Renal complications following cardiac surgery are associated with very high morbidity and mortality and are most commonly seen in patients with pre-existing renal dysfunction. However limited literature is available on patients who develop acute renal failure who have normal pre-operative renal function, the objective of this study was to identify potential predictors for this complication.

Methods
One thousand, eight hundred and eighty consecutive patients with normal preoperative creatinine levels, who underwent cardiac surgery from a December 2002 to December 2004, were included in this study. Data was acquired from computerised patient information system and the hospital notes. Forty patients developed significant renal dysfunction requiring renal replacement therapy (RRT) and were compared with the total population.

Results
See Table 1 overleaf.

Conclusion
This study has identified that older female patients with compromised L.V function, a high euroscore and prolonged CPB time are at a higher risk of developing renal impairment post operatively. More over, this group of patients have a significantly higher mortality rate.
HMGB1 targeted immunotherapy provides unique protection against the local and systemic effects of acute pancreatitis

Aims
HMGB1 is a novel pro-inflammatory cytokine that contributes to sepsis associated lethality. Therapies directed against HMGB1, even when delayed, improve outcome in experimental sepsis. We have recently demonstrated that HMGB1 is elevated for up to three days after the induction of experimental pancreatitis, we hypothesized that HMGB1 targeted therapy would improve outcome in experimental sepsis.

Methods
Pancreatitis was induced using intraperitoneal injection of 300mg/kg of LPS. Following this, animals were treated with Ethyl Pyruvate (EP) 100mg/kg (n = 10), EP 200mg/kg (n = 10) and Control (n = 10). The animals were sacrificed at 72 hours. Pancreas and serum were analysed for HMGB1 expression. Histological specimens of pancreas and lung were assessed as well as broncho-alveolar lavage protein content.

Results
There was a 50% reduction in HMGB1 in the pancreas and serum of the treated groups. Reduced HMGB1 expression correlated with improved pancreatic histological scoring as well as improved bronchoalveolar lavage protein concentration. These beneficial effects were maintained even when the commencement of therapy was delayed for 24 hours.

Conclusions
These results show for the first time the unique potential of HMGB1 directed therapy in the treatment of pancreatitis. Its delayed temporal kinetics make it an unprecedented target of anti-inflammatory therapeutics.

Vascular audit using the possum scoring tool: implementation in a teaching hospital

Audit is an essential part of good surgical practice. Frequently, however, morbidity and mortality figures may be misleading, as they do not take into account case-mix differences.

HAMGB1 targeted therapy was delayed for 24 hours. These beneficial effects were maintained even when the commencement of therapy was delayed for 24 hours. Pancreas and serum were analysed for HMGB1 expression. Histological specimens of pancreas and lung were assessed as well as broncho-alveolar lavage protein content.

The results show for the first time the unique potential of HMGB1 directed therapy in the treatment of pancreatitis. Its delayed temporal kinetics make it an unprecedented target of anti-inflammatory therapeutics.

Back to the future - A wireless, real-time patient information system at the bedside

Technology has permeated nearly every aspect of healthcare delivery from radiology and the operating theatre to the processing and maintenance of vast quantities of patient data.

In collaboration with a systems development company, we have developed a wireless, portable “Tablet PC” based system which serves as the primary source of real-time patient data on ward rounds. Patient Order Communications are also placed in real time together with patient discharge summaries for issue to GPs. The system also incorporates a Clinical Audit Module which effectively automates the production of monthly audit and service activity reports. Because the Tablet PC’s are highly portable (poqoq) and the system fast and very user friendly, we believe that it will lead more effective decision making on ward rounds together with very tangible benefits in terms of work practices and cost savings.
European working time directive (EWTD) – are we getting better? The trainers’ perspective

Background & Objectives
Of late, much has been focussed on the implications of EWTD. We conducted a study to assess the views of consultants in two hospitals from neighbouring deaneries on its impact since being implemented in August 2004.

Methods
Opinions of consultants from clinical specialties were gathered on potential implications of EWTD on training aspects, patient care, and their social and academic life.

Results
Sixty-four consultants responded. Majority felt that the training during routine hours (81%) and out-of-hours (62%) is seriously affected. Almost all the consultants felt that continuity of patient care and teamwork has been greatly affected. Most of the trainers (90%) felt that the increase in the number of junior doctors has resulted in dilution of training prospects. However, consultants from critical care and A&E feel that the current system suits their trainees in view of their intense workload. Interestingly, more physicians compared to surgeons felt that academic and social life have been affected.

Conclusions
The general consensus is that health care delivery and training have been adversely affected in the new system. Working pattern needs to be tailored according to the needs of specialty and the workload density within a hospital to improve quality of patient care.

Handing over of surgical patients

Aims
There is no standard way of handing over surgical patients. Errors happen due to wrong or insufficient information. Can a Computer help in the handing over of surgical patients? Is there a better method of having team lists?

Methods
Using Windows Access, a database programme was created to allow each surgical firm to put in patient details such as demographics, diagnosis, plan of management etc. A report could then be obtained with the above data - for example Team based patient list or Ward based patient list.

Data was entered by House Officers. Day to day changes can be made. We surveyed both before and after this system was used.

Results
A 10-question survey done before starting this system of handover revealed that there was a lack of standardized form of handing over surgical patients. Survey done after implementation of this system revealed that this was an easy to use method, made ward rounds efficient, keeping track of patients was easy.

Conclusions
We have found this novel method to be very helpful because:
1. Does not require anything more than basic computer skills (user friendly).
2. The program is there to use with all computers at no extra cost.
3. The list is in the order in which the ward round progresses.
4. There is the potential to use such a database for auditing purposes.
5. Enables to keep track of all the patients, thus being an efficient method of ‘handing over’.

Hypoxia induced proteins, a potential mechanism for preconditioning in solid organ transplantation

Background
Ischaemia reperfusion and immunosuppressant drugs induce damage to kidneys during transplantation. This contributes to delayed graft function (DGF) and eventual graft failure. Protecting against this damage has clinical implications to the survival of transplanted organs. Our objective was to determine that non-lethal periods of hypoxia confer protection against these injuries.

Methods
Human proximal tubular cells (HK-2) were incubated under normoxic or hypoxic conditions for 24 hours and then placed at 4°C for 6 hours before they were returned to 37°C with Cylosporine A (CSA) to mimic the in vivo situation. Cell viability and apoptosis were measured by PI staining and flow cytometry. Genechip and western blotting analysis of HK-2 cells cultured in hypoxia for different times were carried out to identify upregulated proteins that induce this response.

Results
Varying periods of hypoxia preconditioning produced no change in cell viability and apoptosis compared to cells in normoxia. Pre-exposure of cells to hypoxia significantly (p<0.05) protected against CSA across a variety of environments. The anti-apoptotic protein, BNP-1 was up regulated across the hypoxic time points.

Conclusion
Exposure of HK-2 cells to reperfusion and immunosuppressant drugs predispose them to injury and death. Preconditioning kidneys to cause up regulation of hypoxia induced protective proteins at harvesting, could reduce this injury and DGF resulting in prolonged the life-expectancy of the transplanted organ.

Transrectal prostate biopsy - does a role exist for neurovascular bundle local anaesthesia?

Aims
Transrectal Ultrasound (TRUS)-Guided Prostate Biopsy has revolutionized the investigation of patients with elevated serum Prostate Specific Antigen (PSA) levels, and those with abnormal Digital Rectal Examinations. Though administration of local anaesthetic to the vicinity of the neurovascular bundle prior to TRUS has been evaluated during several studies, techniques vary greatly. Some operators prefer the use of local anaesthesia while others doubt it improves efficacy of prostate biopsy. Our aim was to evaluate the efficacy of neurovascular bundle local anaesthesia (LA) infiltration in decreasing the discomfort experienced by patients undergoing TRUS-guided biopsy of prostate gland.

Methods & Materials
Patients were randomised into groups administered either 2.5 ml of 1%, 5 ml of 1% lignocaine as local anaesthesia, or none at all. Following usual protocols, sextant TRUS-guided prostate biopsies were obtained by one of two consultant radiologists. Patients rated subjective experience on a scale of 0–10.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Normoxia 0uM</th>
<th>Hypoxia 0uM</th>
<th>Normoxia 80uM</th>
<th>Hypoxia 80uM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1h</td>
<td>12±2.3</td>
<td>15±2.5</td>
<td>40±2.4</td>
<td>35±3.2</td>
</tr>
<tr>
<td>*p&lt;0.05 vs Normoxia 0uM, # p&lt;0.05 vs Normoxia 80uM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Day case prostate vaporization using high-powered KTP laser

**Aims**
High-power photoselective potassium titanyl phosphate (KTP) lasers have the potential to revolutionise the surgical management of benign prostatic enlargement (BPE), in theory allowing day case surgery with minimal intraoperative blood loss and postoperative catheterisation for less than 24 hours. We set out to evaluate the safety and efficacy of day case KTP laser prostate vaporization.

**Methods**
Data on pre and postoperative uroflowmetry, post-void residual volume, and international prostate symptom score (IPSS) were prospectively recorded along with prostate volume, duration of vaporisation, energy consumption and duration of stay.

**Results**
Data on 117 patients were analysed. The mean (median) prostate volume was 59 (64) cm³ — three with a mean vaporisation time of 28 (26) minutes and energy consumption of 90096 (78871) Joules. Fewer than 25% of patients required admission, most having had surgery in the afternoon. No postoperative transfusions were required. There were statistically significant increases in maximum urinary flow rate from 10.25 mL/s preoperatively to 24.27, 25.15 and 23.22 mL/s at six weeks and three and six months postoperatively as well as significant improvements in average urinary flow rate, post-void residual urine volume and IPSS. No differences between energy consumption or lasting time for the first and last 20 cases were detected.

**Conclusions**
KTP laser vaporization of the prostate is possible as a day case in most patients and is safe and effective. The learning curve is short for urologists experienced in TURP.

<table>
<thead>
<tr>
<th>PSA PATTERN</th>
<th>BENIGN CASES (%)</th>
<th>CANCER CASES (%)</th>
<th>PROPORTION WITH CANCER (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45(27.5)</td>
<td>15(22.8)</td>
<td>15(56/123.2)</td>
</tr>
<tr>
<td>2</td>
<td>37(18.2)</td>
<td>20(35.1)</td>
<td>20(57/35.1)</td>
</tr>
<tr>
<td>3</td>
<td>62(31.3)</td>
<td>10(17.5)</td>
<td>10(72/123.9)</td>
</tr>
<tr>
<td>4</td>
<td>56(28.3)</td>
<td>14(24.6)</td>
<td>14(70/123.2)</td>
</tr>
</tbody>
</table>

The consent concept

**Aim**
To determine the level of knowledge of patients undergoing transurethral resection of prostate (TURP) on admission and ability to retain consent information post-operatively.

**Methods**
Thirty-two male patients were considered to study their level of understanding of the procedure. Each patient received a questionnaire testing knowledge of their condition, the procedure and post-operative course. Randomisation to receive a standardised verbal consent alone or to the verbal consent with the addition of a typed booklet detailing the same information was performed. Patients were retested on the day of their discharge.

**Results**
Twenty-eight of men were eligible. The age range was 60-85 years, (mean 73.2). Preoperatively the mean score over both groups was 51.9% with a range of 38.4%-73%. Eleven patients were randomised to verbal consent alone and the mean pre-op score was 48.3% however this improved to 60.4% post-operatively a net improvement in score of 12.1%. In the group randomised to receive the information booklet the mean pre-op score was 50.9% with an improvement in score post-operatively of 17.4%.

**Conclusions**
In this mostly elderly cohort of patients, pre-operative knowledge of the procedure is poor; however significant improvements can be obtained with a standard verbal consent especially when augmented with written information. Analysis revealed lower patient age correlated well with high pre-operative score, but did not necessarily relate with the percentage change in score in either group. The greatest improvements in score occurred in those patients who received a written information sheet in addition to verbal consent alone.
Apoptosis, proliferation and transdifferentiation in HK-2 cells during protein overload and hypoxia: effect of Angiotensin II treatment

Renal fibrosis is associated with apoptosis, proliferation and transdifferentiation. Angiotensin II (Ang II) has been proposed to mediate apoptosis, proliferation and transdifferentiation in various cell types. We hypothesised that in HK-2 cells, external stresses associated with renal disease, would alter apoptosis, proliferation and transdifferentiation which could be further regulated by the addition of Ang II.

Methods
HK-2 cells were cultured in proteinuric conditions (0.1µM-10µM). Protein overload was induced by the addition of Ang II alone or in combination with hypoxia. Hypoxia was induced by culturing cells in 1% oxygen for 24 hours. Cell proliferation was assessed by propidium iodide DNA staining using flow cytometry. E-cadherin protein expression was examined by Western blotting to determine changes in transdifferentiation.

Results
Protein overload induced a significant increase in apoptosis (7.58+/-1.36 vs 16.95+/-3.53; p<0.001), which was unaffected by Ang II co-culture. Neither hypoxia nor hypoxia-reoxygenation affected apoptosis or viability, in the presence or absence of Ang II. Hypoxia significantly decreased proliferation (21.83+/-1.99 vs 16.33+/-0.75; p<0.01). Protein overload and hypoxia (1%-reoxygenation) reduced E-cadherin expression which was accentuated by Ang II during hypoxia.

Conclusion
Ang II does not affect HK-2 cell apoptosis or proliferation under normal or stressed conditions. Ang II treatment did accentuate E-cadherin loss during hypoxia. In vitro renal stress causes characteristic changes in HK-2 cell transdifferentiation as opposed to cell death. Renal stresses induce differential effects on apoptosis and transdifferentiation leading to fibrosis. This study supports the use of Angiotensin converting enzyme inhibitors or receptor blockers to block AngII induced transdifferentiation and thus fibrosis.

Prostate cancer: presentation, diagnosis and management of prostate cancer in a peripheral hospital – a twelve month analysis

Objective
Patients diagnosed with prostate cancer in Letterkenny General Hospital during the 12 month period from January 2003 to December 2003 were studied. Patient presentation (source of referral), diagnostic methods and treatment options were reviewed by the urologist. All these patients were subsequently reviewed by the urologist. The age profile was between 48 and 84 with a median of 70 – 79 age group. Sixty-two percent presented with locally advanced metastatic disease. Sixty-two percent presented with disease confined to the prostate gland but even those did not opt for radical surgery. The follow up over 12 months show a 5% remission with a return to normal of their OSA. Two died as a direct result of prostate cancer. Treatment of prostate cancer improves the quality of life by decreasing their symptoms in addition to prolonging their survival.

Method
A retrospective analysis of all prostate cancer patients diagnosed during 2003 was performed. Patients presented to the Urology Assessment clinic or were referred from other services in the hospital. All patients with raised PSA underwent flexible cystoscopy and digital rectal examination (DRE) and urinary cultures. Patients with palpable prostatic nodules underwent blind biopsy. Patients with elevated PSA in the absence of infection where no nodule was palpable were referred for TRUS biopsy. Diagnosis was made on the basis of positive histology and tumours were Gleason scored and graded.

Results
Between January 2003 and December 2003, 64 prostate cancers were diagnosed in Letterkenny General Hospital. Of these six positive truc biopsies, 47 Letterkenny prostatic biopsies and 11 diagnosed by TURP. Of the patients that were referred to us, 35 were treated with androgen blockade therapy, seven underwent surveillance. Eighteen patients were staged by CT, one by MRI and three by ultrasound studies and exploratory findings. Data was reviewed by the urologist. All the patients had HHD examination. Fifteen patients had positive testicular artery signals which confirmed the diagnosis of inflammatory disease. All these patients were subsequently reviewed by the urologist.

Conclusions
Patients with prostate cancer usually present with an elevated PSA or low urinary tract infections. The age profile was between 48 and 84 with a median of 70 – 79 age group. Sixty-two percent presented with locally advanced metastatic disease. Sixty-two percent presented with disease confined to the prostate gland but even those did not opt for radical surgery. The follow up over 12 months show a 5% remission with a return to normal of their OSA. Two died as a direct result of prostate cancer. Treatment of prostate cancer improves the quality of life by decreasing their symptoms in addition to prolonging their survival.
A comparison of open (OR) and endovascular abdominal aortic aneurysm repair (EVAR) with best medical treatment (BMT). Has the availability of evar expanded our indications for intervention, and improved survival?

Aim of our study is to investigate whether EVAR has prolonged life expectancy in high-risk patients with AAA.

From 2002-2005, 280 patients with AAA were referred. 115 patients were deemed high-risk according to AAA classification and were prospectively assigned to OR (n=33), EVAR (n=77) or BMT (n=45). Adjustments were made for case severity mix and patients stratified using SVS/AAVS co-morbidity and anatomic factor severity scores. All patients had CT Angiography. Groups were matched for aneurysmal site, size, clinicopathological manifestations and gender.

Patients in BMT were significantly older than in the other two groups (p<0.01). However there was no statistical difference in co-morbidity severity scores between groups (p>0.05). Comparing EVAR with OR, there was no significant difference in primary technical and clinical success rates (p>0.05), but length of hospital stay and 30-day morbidity were significantly reduced in EVAR (p<0.0004, p<0.01).

The three-year cumulative survival rates were 84% (SE 6.06%) for EVAR, 84% (SE 7.47%) for OR, and 68% (SE 7.41%) for BMT. Compared to BMT, relative risk ratio for all cause mortality was 0.537 (95% CI 0.281-1.319) for EVAR and 0.54 (95% CI 0.322-1.38) for OR. One aneurysm-related death occurred in OR, and none in EVAR. One-year rupture rate in BMT was 11%, of which 86% died.

EVAR is an alternative to patients at high-risk for open repair, with significant reduction in morbidity risk compared to BMT. At one year no statistically significant survival benefit was seen between the three groups. However survival curves continue to diverge at three years.

Investigation of progesterone receptor B (PRB), and growth arrest-specific gene 6, (Gas6), in breast cancer

Progestational, implicated in breast cancer development, acts through two progesterone receptors PRA and PRB. PRB can be silenced by promoter hypermethylation. PRB upregulates a number of genes involved in breast cancer mitogenesis including growth arrest-specific gene 6 (Gas6), which codes for the ligand of the Axl tyrosine-kinase receptor. Overexpression of Gas6 has thought to result in increased tumour invasiveness and proliferation.

Aims
Our aims were firstly to evaluate the epigenetic status of PRB using sodium bisulphite modification and methylation sensitive PCR. Using a real time quantitative PCR analysis we calculated the levels of PRB and Gas6 mRNA expressed in these tumours. We evaluated protein expression immunohistochemically with a commercially available PRB specific antibody.

Methods
Following DNA and RNA extraction from 100 breast carcinomas, we assessed the methylation status of PRB using sodium bisulphite modification and methylation sensitive PCR. Using a real time quantitative PCR analysis we calculated the levels of PRB and Gas6 mRNA expressed in these tumours. We evaluated protein expression immunohistochemically with a commercially available PRB specific antibody.

Results
Seventy-seven per cent of samples in the cohort displayed promoter hypermethylation. There was a positive correlation between PRB promoter methylation and reduced PRB mRNA levels (p=0.06) and between lower levels of PRB protein (p=0.068). Gas6 expression correlated inversely with NPI, (r=0.18, r=0.37), with tumour grade (p=0.06), with mitotic count (p=0.018) and with ER Beta immunohistochemistry (p=0.09).

Conclusion
In this cohort PRB expression has been affected by transcriptional silencing. Regarding Gas6 levels, a high level of Gas6 was associated with favourable prognostic markers rather than tumour proliferation.

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2. Dept of Pathology, Mater Misericordiae Hospital, Dublin 7
3. Dept of Breast Surgery, University College Hospital Galway
Novel titanocene anti-cancer drugs and their effects on apoptosis in androgen independent prostate cancer cells

Aims
Treatment of androgen independent prostate cancer (AIPC) is limited by the lack of effective chemotherapeutic agents. The objective of this study was to investigate the effects of novel titanocene analogues on AIPC and to compare these agents to other transitional metal anticancer drugs.

Methods
AIPC cells PC-3 and DU-145 were cultured to confluence and treated with two novel titanocene compounds, thiophenyl ansa-titanium dichloride (B) and heteroaryl titanocene dichloride (Y) and compared to Cpt2TiCl2 and cisplatin. Cell number was assessed using the crystal violet uptake assay. Percent apoptosis and viability was assessed using propidum iodide and flow cytometry. Cytochrome C release was assessed using western blotting. Caspase 3 activity was assessed using the caspase inhibitor ZVAD-FMK.

Results
These novel titanocene agents cause a significant reduction in cell number compared to Cpt2TiCl2 that is comparable to that of cisplatin. This effect was not due to inhibition of cell cycle but a specific apoptotic effect with less necrosis when compared to cisplatin. Cytochrome C was released from the mitochondria but inhibition of caspase activity by the pancaspase inhibitor ZVAD-FMK did not block apoptosis.

Conclusion
These compounds induce their effects through apoptosis unlike cisplatin which induces a more necrotic effect. Apoptosis was mitochondrial mediated but caspase independent. These compounds represent a new and exciting death receptor pathway for prostate cancer. Treatment of androgen independent prostate cancer (AIPC) is limited by the lack of effective chemotherapeutic agents. The objective of this study was to investigate the effects of novel titanocene analogues on AIPC and to compare these agents to other transitional metal anticancer drugs.

Feedback
10

82
Initial psa levels and the long term risk of prostate cancer

Aim
To assess the relationship between initial PSA levels and the long-term risk of being diagnosed with prostate cancer in a population based cohort study in Northern Ireland (NI).

Methods
The NICR maintains an electronic register of PSA tests performed in NI, which is linked to NICR database of incident cancers occurring within the region. This study includes all men who had their first PSA between 1994 and 1998. These were followed up for death and diagnosis of cancer until 2003. The absolute risk of cancer based on the level of first PSA was calculated by age group, as were relative risks within age groups.

Results
68364 men were included, with 28374.4% diagnosed with cancer over the observation period. Mean follow-up was 6.05 years (max 9.96 years). Within age groups, the absolute and relative risk of cancer increased incrementally with PSA level (see Table). At any age, PSA >12 was associated with low risk of cancer (27/1000/yr).

Conclusions
The risk of developing prostate cancer correlates with increasing PSA, even at low levels. The upper normal PSA range shows a markedly increased relative risk compared to the lower range.

Table 1

<table>
<thead>
<tr>
<th>PSA LEVEL</th>
<th>AGE&lt;50</th>
<th>50 - 59</th>
<th>60 - 69</th>
<th>70</th>
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<tbody>
<tr>
<td>0 - 0.99</td>
<td>0.03 (1.0)</td>
<td>0.23 (1.0)</td>
<td>0.44 (1.0)</td>
<td>1.23 (1.0)</td>
</tr>
<tr>
<td>1 - 1.99</td>
<td>0.13 (4.7)</td>
<td>0.73 (5.2)</td>
<td>1.21 (5.7)</td>
<td>1.92 (5.6)</td>
</tr>
<tr>
<td>2 - 2.99</td>
<td>0.69 (24.4)</td>
<td>1.52 (6.6)</td>
<td>2.46 (5.6)</td>
<td>3.34 (1.0)</td>
</tr>
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<td>3.59 (15.7)</td>
<td>5.49 (12.5)</td>
<td>6.63 (5.0)</td>
</tr>
<tr>
<td>4 - 4.99</td>
<td>4.38 (15.8)</td>
<td>9.27 (22.4)</td>
<td>11.25 (25.4)</td>
<td>8.24 (6.7)</td>
</tr>
<tr>
<td>50</td>
<td>54.8 (124.6)</td>
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<td>54.8 (124.6)</td>
<td>66.5 (54.8)</td>
</tr>
</tbody>
</table>

10.0 as reference category

81
Associations between the co-regulatory protein SRC-1 and Ets-2 in breast cancer

Aims
In breast cancer associations between p160 co-activator proteins and the development of resistance to endocrine treatment have been shown. We hypothesised that nuclear co-regulatory proteins may interact with non-steroid receptors.

Methods
We examined the MAPK activated transcription factors, Ets-2 as possible interaction proteins of the co-activator SRC-1 in human breast cancer. Silencing of SRC-1 was used to inhibit estrogen induced growth of breast cancer cells in vitro. Interactions between SRC-1 and Ets-2 were assessed using co-immunoprecipitation. Expression and co-expression of Ets and the co-regulatory protein SRC-1 was investigated using immunohistochemistry and immunofluorescence in a cohort of breast tumour patients (n=132).

Results
It was found that Ets-2 interacted with SRC-1 under basal conditions and that the addition of growth factors further increased the level of interaction. Recruitment of SRC-1 to the Ets response element was demonstrated in primary breast tumour cell lines and in the SKBR3 cell line using electromobility shift assay. Growth factors induced interaction between Ets2 and the DNA response element and stimulated recruitment of co-activators to the transcription factor-DNA complex. Silencing of SRC-1 was found to down-regulate expression of the Ets target gene, c-myc. Ets-2 was found to be associated with reduced disease-free survival (p<0.0001), as was expression of SRC-1 (p<0.0001). Co-expression of Ets-2 and SRC-1 significantly reduced the period of disease-free survival (p<0.0001).

Conclusions
These data describing associations and interactions between non-steroid transcription factors and co-regulatory proteins may provide the basis for a new model of co-activator mediated endocrine resistance in breast cancer.
83  Taurofiline inhibits colorectal adenocarcinoma metastases in vivo and in vitro by inducing apoptosis

Taurofiline, an antimicrobial agent, has proven anti-neoplastic properties with the advantage of a lack of systemic toxicity. 5-Fluorouracil, the current mainstay of colorectal cancer chemotherapy, can be severely toxic. We hypothesised that Taurofiline reduces colorectal adenocarcinoma growth in vivo and in vitro.

Methods
Liver metastases were induced in adult Balb/C mice (n=20) by inoculating each mouse with 2x10⁵ CT26 (murine colorectal adenocarcinoma) cells by intraperitoneal injection. The animals were subsequently divided into groups: Group 1 received PBS as control, Group 2 received PVP (250mg/kg IP), as solvent control, Group 3 received Taurofiline (100mg/kg IP) and Group 4 received 5-Fluorouracil (25mg/kg IP) as positive control. One week following tumour cell inoculation, tumour burden was calculated by both counting liver surface nodules and measuring the ratio of liver weight/ body weight at 14 days. In vitro CT26 cells were incubated with culture medium, PVP (0.02micrograms/ml) and Taurofiline at concentrations of 5, 25, 50, 100, and 250micrograms/ml for 24 hours. Apoptotic cells were detected by flow cytometry by assessing the percentage of propidium iodide stained hypodiploid cells.

Results
Our results show a similar benefit in taurofiline over PBS and PVP in reducing liver tumour burden, similarly, 5FU treatment also reduced tumour growth. In vitro data showed that taurofiline induced dose dependent apoptosis in CT26 cells, which was most marked in the 200 microgram/ml group.

Conclusion
Taurofiline reduces colorectal cancer liver metastases in vivo by inducing apoptosis. Our results suggest that taurofiline should be considered an effective therapy for colorectal liver metastases.

84 Downregulation of the HHIP gene in Intraductal Papillary Mucinous Neoplasms of the Pancreas

Aims
Hedgehog pathway overactivity has been implicated in the development of a variety of human cancers. The Human-Hedgehog interacting protein gene, HHIP binds hedgehog pathway ligands and is responsible for negatively regulating hedgehog pathway activity. HHIP variants are intraductal mucin-producing cystic neoplasms of the pancreas implicated in the development of a variety of cancers. Hedgehog pathway overactivity has been implicated in various malignancies. The Human Hedgehog interacting protein (HHIP) gene is epigenetically inactivated by hypermethylation in IPMN's harbouring carcinoma. We investigated HHIP gene expression with methylation status of the HHIP gene in IPMN's harboring carcinoma in situ and investigated HHIP expression with methylation status of the HHIP gene in IPMN's harboring carcinoma in situ and investigate HHIP expression with methylation status of the HHIP gene in IPMN's harboring carcinoma in situ and investigate

Methods
Iodine positive cystic neoplasms of the pancreas were resected and resected. HHIP expression was measured with quantitative real-time PCR, and methylation status of the HHIP gene was assessed by methylation specific PCR.

Results
25% of IPMN's harbouring carcinoma in situ and 9/24 (37%) of IPMN's with invasive cancer, and 0/15 (0%) normal pancreata by methylation-specific PCR.

Conclusion
The human hedgehog interacting protein gene, HHIP, is epigenetically inactivated by hypermethylation in IPMN's harboring carcinoma in situ and invasive cancer and is a mediator of hedgehog pathway activity in IPMN tumours.

85 Hypertonic saline reduces post-operative peritoneal adhesion formation

The global inhibition of immune-competent cell interactions by hypertonic saline (HTS) may confer protection against formation of peritoneal adhesions following injury to the mesothelium at surgery. The aim of the present study was to elucidate the effect of hypertonic wash on the development of adhesions in an animal model. A model characterised by collagen production in response to tumour necrosis factor (TNF-a) and interleukin (IL)-6 release from macrophages.

Methods
Adhesions were induced in 24 male Sprague-Dawley rats by laparotomy with cancal abrasion and deposition of polypropylene suture. Animals were prospectively randomized to receive one of three agents: eight rats, peritoneal toilet; six rats, saline; and six rats, HTS. All animals received the same i.p injection every 24 hours for three days. Treated rats were observed at sacrifice for frank adhesions.

Results
HTS inflation at abdominal closure significantly reduced peritoneal adhesion formation. Two groups were significantly easier in the HTS group (P=0.02). In addition, a significant reduction in peritoneal TNF-a and IL-6 levels was observed (P<0.05), while fibroblast growth and proliferation was significantly impaired by a hypertonic environment.

Conclusion
Peritoneal toilet with HTS attenuates adhesion formation. This may represent a novel therapeutic strategy.

86 Combination of SELDI-TOF and data mining provides early stage prediction for rectal cancers undergoing multimodal neoadjuvant therapy

Aims
This study investigated whether proteomic analysis of serum could be used to predict response of locally advanced rectal cancer to neoadjuvant radiochemotherapy (RCT). The aim was to elucidate the presence and absence of HTS.

Methods
Serum samples were collected pre-treatment, 24hrs, 48hrs, 1 week, 3 weeks, 5 weeks and pre-surgery. The response to treatment was measured by Mandurad Tumour Regression Grade (TRG) and was based on the degree of residual tumour to fibrosis. All serum samples were analysed by SELDI-TOF mass spectrometry.

Results
In total, 250 spectra from 9 good responders (TRG 1+2) and 11 poor responders (TRG 3+4) were generated. Using support vector classification analysis (SVM) an algorithm was generated that identified 14 key protein peaks of interest that segregated good and poor responders. Using this algorithm, predictive ability of individual samples from all time points was assessed. Whilst pre-treatment serum was unable to predict response, serum taken as early as 24 or 48 hrs into treatment was able to predict response with 87.5% sensitivity and 80% specificity.

Conclusions
These data indicate that analysis of low molecular weight serum proteins using SELDI-TOF may provide accurate and non-invasive response prediction to RCT at an early point in treatment. Further analysis will focus on purification of these proteins and testing in larger prospective studies.
Thermotolerance-induced goblet cell activity confers protection in post-operative gut barrier dysfunction

There is evidence that some level of protection against adverse sequelae of surgery is provided by induction of thermotolerance.

**Aims**
The aims of this research is to examine the hypothesis that the gut-barrier dysfunction which results from ischaemia-reperfusion injury and bowel-handling is prevented or decreased by prior induction of thermotolerance and whether the protective effect of thermotolerance may be due to phenomena other than heat shock protein, whether goblet cells might play a more protective role.

**Methods**
Adult Sprague-Dawley rats were randomized into thermotolerant (n=16) and control (n=16) groups; half of the animals in each group were subjected to bowel-handling and half to ischaemia-reperfusion. The responses of the thermotolerant and control animals were compared with respect to goblet cell type and number, oedema of the bowel wall, TNF blood levels and histopathological changes of the bowel wall.

**Results**
The thermotolerant animals were found to have significantly less oedema and histological damage. There was significant increase in the number of goblet cell in response to surgical insults (19.16±2.56 vs 16.33±1.53, and specifically a greater increase in acidic goblet cells (19.42±4.58) as compared with neutral ones (13.28±5.53) (P<0.0001).

**Conclusions**
Thermotolerant animals were not only able to recruit or produce more goblet cells to protect the gut surface, but the greater numbers of the goblet cells in the thermotolerant were of the mature acidic type thus capable of functioning in a protective capacity.

These findings provide evidence for the thermotolerance-induced histological changes in the bowel wall providing a protective effect against adverse sequelae of surgery.

Preconditioning modulation of leucocyte and endothelial activation in cardiac surgery: The role of an Omega-3 fatty acid infusion

Inappropriate systemic inflammatory leucocyte and endothelial activation mediates multiple organ dysfunction in cardiac surgery. We hypothesised that pretreatment with a clinically approved omega-3 fatty acid infusion would prevent this response in vitro.

**Methods**
Endothelial cells were isolated from saphenous vein of 75 cardiac surgery patients and grown into monolayers, pretreated with a clinically relevant level of the omega-3 infusion, stimulated with LPS/TNFα, C3a, prime mediators of the perioperative systemic inflammatory response, and adhesion molecules, coagulant and pro-inflammatory cytokine responses were assessed. Similar analysis was performed using isolated neutrophils. Endothelial protective mechanism was investigated by examining nuclear translocation of the inflammatory transcription factor NFkB and the heat-shock protein response.

**Results**
Pretreatment for only 4 hours prevented the inflammatory procoagulant response through maintenance of endothelial NFkB and the heat-shock protein response. Pretreatment upregulated HSP72 levels which was associated with reduced nuclear translocation of activated NFkB in response to LPS stimulation (Nuclear p50 levels of 2.1±0.2x100,000 RLU in controls vs 1.3±0.2x1000,000 RLU in pretreated endothelium, P<0.001 suggesting preconditioning protection against inflammatory activation.

**Conclusions**
Clinically acceptable preconditioning using an omega-3 infusion prevents the pathogenesis associated with organ dysfunction following cardiac surgery.
There was no correlation between number of ports returned.

Results

We examined the results of 180 consecutive ETS procedures on an Orthopaedic ward can lead to high morbidity and mortality. A retrospective audit and review

Aims

To determine causative factors why Clostridium difficile associated diarrhoea (CDAD) causes significant mortality in Orthopaedic patients.

Methods

A retrospective review and audit. POSSUM score to qualify morbidity.

Results

One year audit: in a four-month period a cluster of seven patients on our Orthopaedic ward contracted (CDAD) and mortality was 48%. The pathogenesis can be attributed to a triad of factors.

First is host susceptibility which now appears to be the critical factor for the development of CDAD because asymptomatic colonization is the most common outcome after exposure. The hosts’ immune systems ability to produce protective antibodies against the toxins of C. difficile plays an important role in reducing the severity of the disease and preventing further recurrences.

Second is exposure to antibiotic use which can disrupt the protective microflora in the gut.

Third is exposure to C. difficile where asymptomatic carriers and symptomatic hospital patients shed C. difficile cells and resistant spores into the hospital environment. Cluster outbreaks occur through patient to patient contact usually by hand transmission. The triad of factors is often fulfilled in Orthopaedic patients who routinely have prophylactic antibiotics. They are frequently patients with high co-morbidity and high POSSUM scores because they need emergency surgery after trauma.

Lastly hospital infectious control protocols and medical staff hygiene is important regarding transmission.

Conclusions

Orthopaedic patients are particularly susceptible to the triad of factors and have a high risk of mortality. Extreme vigilance must be taken with their care as the guise of simple diarrhoea may be misleading.

A cluster of Clostridium difficile Associated Diarrhoea on an Orthopaedic ward

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Suitability of laparoscopic nissen fundoplication to the day-care setting

Aims

Minimally invasive surgery has significantly facilitated the expansion of day care surgery. This study was to evaluate safety, patient acceptability and outcome of laparoscopic Nissen fundoplication in day-care setting.

Methods

Since 2003, patients undergoing laparoscopic Nissen fundoplication for proven symptomatic gastro-oesophageal reflux disease (GORD) were preferentially treated as day-cases. Suitable patients were admitted to a dedicated day unit and discharged later. Standard protocols were formulated for perioperative analgesic, anti-emetic use, postoperative oral intake and discharge policy. Patients were reviewed at 6 weeks and asked to complete a satisfaction questionnaire.

Results

Thirty patients were admitted as day cases for laparoscopic Nissen fundoplication, median age 38 (range 18-60) years, Male: female ratio was 2:1. All patients were ASA grade 2. All patients had significant symptoms of GORD. Symptoms duration on average was 4.8 years (range 1-40 years). Median operating time was 91 minutes (range 25-90). 8% of the patients were discharged within 4-6 hours of surgery. Five patients (17%) were admitted overnight. Indications included pain (n=2) and side effects of opiate use (n=3). Mean hospital stay in the admitted group was 50 hours (range 24-108). 11 patients (22.4%) complained of transient dysphagia in immediate postoperative period. Completed questionnaires were returned by 86%. The majority 93% satisfied with the day case surgery experience. No patient discharged from day care was readmitted.

Conclusions

Our experience demonstrates that laparoscopic Nissen fundoplication can be performed in a day-care setting in a safe manner and with a high degree of patient acceptability and satisfaction.

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Upper dorsal endoscopic thoracic sympathectomy: a comparison of one and two port ablation technique in 180 cases

Aims

Endoscopic thoracic sympathectomy (ETS) is the gold standard treatment for facial blushing and hyperhidrosis. Our aim was to analyze and compare the outcomes of patients treated using a one and more standard two port method.

Methods

We examined the results of 180 consecutive ETS performed on 96 patients (M 51, 39.66) with respect to operative method, symptom control, patient satisfaction and complications. Follow up was available on 144 treated sides in 77 patients (80.2%) with respect to operative method, symptom control, patient satisfaction and complications. Follow up was available on 144 treated sides in 77 patients (80.2%) with respect to operative method, symptom control, patient satisfaction and complications. Follow up was available on 144 treated sides in 77 patients (80.2%) return rate), 98 treated with one port, 39 performed by one port procedure. Average age was 32.6 years (18-63) with a median follow up of 25 months (5-85).

Results

There was no correlation between number of ports and patient satisfaction. Hospital stay was shorter in the one port group (1.31 nights) compared to the 2 port group (1.79 nights). Median satisfaction rating out of 5 was 3.5 with 59 patients (76.6%) rating the overall outcome as three or more. 90.9% had an improvement in symptoms, although 21 patients (27.3%) described a late return of symptoms. 11.7% had a post-operative pneumothorax, of which 2 (1.3%) necessitated intercostal drainage.

Conclusion

There was no significant difference between the outcomes of the one and two port groups. ETS can be safely and effectively carried out using a single port method with similar results to the traditional two port procedure. Despite high rates of reflex sweating, the majority of patients are very satisfied with the results.

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Long term evaluation of median and ulnar nerve injuries

Aim

Median and/or ulnar nerve injury causes significant disability and usually occurs in a young working population. The aim of this study was to evaluate long-term outcome after major nerve division treated in a tertiary referral unit.

Methods

All median and ulnar nerve injuries to the arm, forearm and wrist were included. Sixty-two patients were identified between 1998 and 2003. Assessment was by chart review, disability of arm, hand and shoulder (DASH) questionnaire and clinical examination of sensation (Semmes-Weinstein monofilaments and two-point discrimination), motor function (range of movement and dynamometry) and dexterity (pegboard).

Results

Eighty five female and 15 male patients (1:8:1) ranged from six to 64 years (mean, 27.5 years, median, 23.5 years). Two thirds were dominant hand injuries and glass was implicated in 75% of cases. Both nerves were divided in 21% of patients and in 76% nerve transection was complete. Eighty per cent of patients suffered concomitant tendon or muscle injury, ranging from one to 13 structures. Standard epineural repair was used in all cases followed by postoperative splinting; early active mobilisation and outpatient follow-up. Motor function was good or excellent, with average sensory recovery in the majority of cases.

Conclusion

This study quantifies long-term recovery of patients with major upper limb nerve injury using standard treatment protocols.

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Conclusion

Orthopaedic patients are particularly susceptible to the triad of factors and have a high risk of mortality. Extreme vigilance must be taken with their care as the guise of simple diarrhoea may be misleading.
Glycaemic control plus arginine supplementation attenuates the impaired wound healing in a diabetes mellitus experimental model

Aims

Various agents including the amino acid arginine have been shown to be effective in enhancing wound healing in non-glucose-controlled diabetic models. We tested the hypothesis that tight glucose control would enhance wound healing and that this would be further enhanced by arginine supplementation in an experimental model of diabetes mellitus.

Method

Thirty male Sprague Dawley rats were divided into five groups with average daily glucose levels in the diabetic insulin-treated groups kept below 10 mmol/l and arginine supplementation of 1g/kg/day was administered via intraperitoneal injection to the arginine groups. All animals underwent a dorsal skin wound incision and the placement of six polyvinyl alcohol sponges subcutaneously to collect wound fluid. At day 10 all animals were sacrificed and we measured fresh and fixed tensile strength, hydroxyproline, transforming growth factor beta-1 and nitric oxide levels.

Results

See Table 1 below.

Conclusion

This study shows the synergistic benefits of tight glycaemic control and arginine in a wound healing experimental diabetes-mellitus model. This data gives further support for the need to investigate the potential benefits of arginine in diabetic patients in clinical trials.

| Table 1 |
|----------------|----------------|----------------|----------------|----------------|
|               | CONTROL GROUP | DIABETIC NON-INSULIN-TREATED GROUP | DIABETIC NON-INSULIN-TREATED + ARGinine GROUP | DIABETIC INSULIN-TREATED + ARGinine GROUP |
| Fresh Tensile Strength | 3.57 | 1.13 (30%) | 1.44 (40%) | 2.59 (70%) | 2.72 (97%) |
| Fixed Tensile Strength | 8.52 | 2.31 (35%) | 2.88 (54%) | 6.02 (77%) | 6.98 (82%) |
| Hydroxyproline Analysis | 627.21 | 41.9 (6%) | 95.5 (15%) | 451 (69%) | 492 (75%) |
| TGF-b1 | 52,121.2 | 5,370.75 (17%) | 9,14.85 (28%) | 19,278 (60%) | 25,304.95 (79%) |
| Nitric oxide levels | 37 | 20 (54%) | 32 (86%) | 30 (81%) | 41 (111%) |

The role of isolated limb thermal preconditioning in flexor tendon healing

Aims

Thermal preconditioning is known to reduce inflammation by formation of heat shock proteins. This study evaluates the role of isolated limb thermal preconditioning in flexor tendon repair.

Materials & Methods

In a flexor tendon repair rabbit model the treatment group underwent isolated limb thermal preconditioning, by elevating their limb temperature to 41.5 °C for twenty minutes. Animals were sacrificed at three weeks and six weeks and compared with controls. Macroscopic adhesions, microscopic inflammation and biomechanical analysis of the repaired tendons were assessed.

Results

Macroscopic analysis demonstrated a significant improvement in adhesion formation in the three week treatment group (p=0.0003). The total inflammatory infiltrate was significantly reduced for all treatment groups (p=0.005). The difference in ultimate tensile strength was not significant at three weeks, and significantly increased six weeks in the treatment group (p=0.0019).

Conclusion

Isolated limb thermal preconditioning is an effective method of increasing HSP72 expression in a flexor tendon model. Preconditioning reduced inflammation and adhesion formation without adversely affecting the repair strength. Isolated limb thermal preconditioning therefore has the potential to improve clinical results in flexor tendon surgery.

Biomechanical assessment of skin suture techniques in a porcine model

The optimal scar is a fine, flat, concealed linear scar lying within or parallel to natural skin lines, without contour irregularity, distortion of adjacent anatomic or aesthetic units or pigment changes.

Since every skin incision, traumatic or surgical, heals with a scar it behoves all surgeons to perform wound closure likely to achieve the most discreet scar possible for patients increasingly conscious of cosmetic outcomes.

Good repair principles are assumed. Since repair strength is 5-10% that of unwounded skin after 1-2 weeks and only reaches the final 80% at 8-10 weeks, the contributing strength of dermal sutures is very important to maintain wound strength and prevent scar stretching during the period after removal of epidermal sutures at 1-2 weeks, particularly in sites where movement or distraction of the repair is practicably unavoidable.

This study compares interrupted versus continuous monofilament nonabsorbable suture (Prolene) repairs with and without an interrupted monofilament absorbable (Monocryl) dermal layer. Porcine skin was incised and repaired by a single operator. The force(N) was recorded at 2 mm gap formation and repair failure induced by distraction using a Zwick I tensiometer. Results were analyzed using ANOVA and Tukey’s multiple comparison tests.

There was no significant difference between a Prolene repair using interrupted or continuous sutures for gap formation or for repair failure. The addition of a Monocryl dermal suture significantly increased repair strength, more than two-fold. There was also a significant increase in the force required to produce gap formation, five-fold for interrupted Prolene and three-fold for continuous Prolene repairs.
Imaging of the liver after colorectal carcinoma resection: a waste of time?

**Aims**
Guidelines from the American Society of Clinical Oncology, 1999 and the American Society of Colon and Rectal Surgeons, 2004 advise that routine use of hepatic imaging in the follow-up of colorectal cancer resection should not be performed. As routine CT scanning continues to be the standard of care in this country, we aimed to evaluate whether such aggressive follow-up is justified.

**Methods**
Information was gathered from the colorectal database, which is updated prospectively from the hospital HIPE system. All patients who had colorectal tumours resected since 1999 were included. Results of these patients’ abdominal CT scans were then downloaded from the hospital computer system.

**Results**
Two hundred and fifty-eight patients underwent colorectal tumour resection since 1999. One hundred and eight patients were excluded, as they only had one pre-operative scan, on the basis of advanced age, multiple co-morbidities or patient preference. One hundred and fifty patients were included in the study and had 448 scans performed, i.e. on average, three per patient. Thirty-four patients were found to have inoperable liver metastases. Two pre-operative scans revealed liver metastases, and these patients were referred for surgery.

Four patients were found to have operable liver metastases on follow-up scanning and underwent potentially curative liver resections.

**Conclusions**
Only 2.6% of patients screened for hepatic metastatic disease underwent liver resection, and only half of this group were alive at two years. Our figures concur with the advice of the American guidelines, and suggest that other forms of follow-up may be more successful at detecting recurrences at an earlier stage.

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Growth factors regulation of Ets-2 protein and c-Myc in recurrent breast cancer

Ets proteins are effectors of the MAPK pathway that have been implicated as a downstream mediator of Her-2 signaling. Studies from our group have reported a strong association between Ets-2 expression and reduced disease free survival (p<0.0001). Binding motifs have been identified in the promoter region of the oncogene c-Myc.

**Hypothesis**
Ets-2 mediates breast cancer progression by regulating the expression of the oncogene c-Myc.

**Methods**
Ets-2 and c-Myc were localised by immunohistochemistry and immunofluorescence in breast cancer tissue.

SK-BR3 cells (ER–ve, Her2–ve), endocrine sensitive MCF-7 cells (ER+ve, Her2–ve) and the endocrine resistant transformed Ly-2 cells (ER+ve, Her2–ve) were treated with growth factors EGF and BFGF. Ly-2 cells were transfected with Ets-2 expression vector pCGN-ets-2 using the Amaxa nucleofector technology.

**Results**
Protein expression of Ets-2 and c-Myc was determined by western blotting.

SK-BR3 cells (ER–ve, Her2–ve), endocrine sensitive MCF-7 cells (ER+ve, Her2–ve) and the endocrine resistant transformed Ly-2 cells (ER+ve, Her2–ve) were treated with growth factors EGF and BFGF. Ly-2 cells were transfected with Ets-2 expression vector pCGN-ets-2 using the Amaxa nucleofector technology.

**Conclusion**
These data indicate that growth factors mediate breast cancer cell survival at least in part by activating the transcription factor Ets-2 thereby up regulating protein expression of the oncogene c-Myc.

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Hypoxia mediates invasion of breast cancer cells via increased expression of the chemokine receptor CXCR4

**Aims**
Experimental evidence has demonstrated that hypoxia stimulates tumor progression, and resistance to chemotherapy. Recently, the chemokine receptor CXCR4 has been implicated in organ-specific metastasis of breast cancer. We hypothesized that hypoxia would stimulate increased CXCR4 expression and thus increased invasion of breast cancer cells.

**Methods**
Four cell lines were cultured, SK-BR3, MCF-7, BT23 and MDA MB 231. These cell lines were then subjected to hypoxia for 6, 12, 24 or 48 hrs.

**Results**
Total RNA was extracted for RT-PCR. Protein was extracted for western blots. Chemoinvasion was verified using a modified Boyden chamber.

**Conclusions**
Tumour hypoxia significantly increases CXCR4 expression in breast cancer causing increased invasion of cells. The increased aggression of Her-2 ne-positive breast cancer may be due to increases in CXCR4 expression stimulated by hypoxia.

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Parallel gene and protein expression analysis of the immune response to major surgery in oesophageal cancer patients treated with surgery alone or a multimodality regimen

**Aims**
A multimodality approach is increasingly utilised in gastrointestinal cancer, but the impact of neoadjuvant chemoradiotherapy on the immune response to surgery is unclear. This study examined the pattern of postoperative gene expression and protein production of pro-inflammatory TNF-alpha and anti-inflammatory IL-10 in non-randomised but stage-matched patients with oesophageal cancer undergoing a multimodality protocol or surgery alone.

**Methods**
Microchip array technology was used to measure serum IL-10 and TNF-alpha pre-operatively and on days 1 and 7 postoperatively in 22 patients (9 multimodal, nine surgery). Real-time quantitative (RT) PCR was performed on RNA extracted from whole blood in 11 patients (seven multimodal, four surgery). Triplicate reactions were performed for IL-10 and TNF-alpha using duplicate endogenous controls, pre-operatively and days 1 and 7 (n=9 assays).

**Results**
There was a median 28-fold increase in relative IL-10 gene expression on the first day after surgery compared to pre-operative samples (p<0.001). This dropped to a four-fold increase after one week and mirrored parallel serum protein analysis. The increase in TNF-alpha gene expression did not
reach statistical significance and was not matched by a significant difference in serum levels. No differences were observed between those treated with surgery alone versus multimodal therapy.

**Conclusions**

Evolving gene expression and protein quantification technology is producing a new understanding of the complex immune response to surgery and multimodal therapy. This study to date has identified no extra immune cell perturbations in multimodality patients, and the study requires larger numbers and expansion to encompass both serum and tissue-specific cytokines.

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**100 Analysis of Ex-vivo staging of colorectal carcinoma by sentinel lymph node mapping**

**Aims**

Sentinel lymph node (SLN) biopsy is widely used for solid tumors and has been proposed for use in staging colorectal cancer (CRC). Few studies have examined the ex vivo lymphatic mapping (EVLM) technique for staging CRC. We hypothesized that EVLM is technically feasible, sensitive, accurate, and improves the staging of CRC.

**Methods**

Within 20 minutes of surgical excision 1 ml of one per cent isosulfan blue dye was injected subserosally around colon cancers (n=10). The first to fourth blue-staining nodes seen within five minutes of injection were marked as sentinel lymph nodes. For rectal cancer (n=10) the mesorectum was dissected ex vivo to identify blue nodes nearest the tumor as sentinel lymph nodes. Multilevel microsections of sentinel lymph nodes and all other retrieved nodes were performed and these were stained with hematoxylin and eosin and immunostained for cytokeratin.

**Results**

Twenty patients underwent 20 cancer resections with EVLM from September 2000 to July 2004. SLN were identified in 16 of 20 (80%) specimens. The mean number of SLN obtained was 2.7 (range, 0-6). Pathologic evaluation demonstrated nodal metastasis in nine specimens. The SLN was tumor-positive in seven patients. The overall accuracy of EVLM was 77.7%. Five patients with H&E node-negative disease were upstaged when found to have micrometastases by IHC staining (33%).

**Conclusions**

In conclusion, EVLM is technically possible in 80 per cent of patients with CRC. Although overall accuracy was high, the SLN status correlated poorly with the true nodal status of the CRC. However, EVLM improves pathologic staging of patients and therefore may be of value in CRC.

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**102 Th1/Th2 imbalance in patients with malignant brain tumours**

**The Central Nervous System (CNS) has been regarded as being an immune privileged site but as our understanding of the immune system has improved, this idea is under threat. Recent studies have shown that immunomodulation occurs in the CNS.**

**Aim**

To evaluate cytokines produced by T-Helper cells type 1 and 2 (Th1 and Th2) in the serum of newly diagnosed Glioblastoma multiforme (GBM) patients.

**Methods**

Prospective analysis of the serum samples collected from patients with GBM (n=20) and to match these with age and sex matched controls (n=20). The samples were analysed using a Proteopex multiarray kit and the results were analysed for statistical significance using the Mann Whitney U test.

**Results**

Analysis of the Th1 and Th2 cytokines showed that the Th2 cytokines IL-4 and IL-10 were raised (IL-4; p=0.041, IL-10; p=0.005), while there was no significant increase in IL-2, IL-6, IL-12 and TNFα (Th1 cytokines).

**Conclusion**

In our study we have shown that in the case of GBM patients there is an imbalance in the pattern of the Th1 / Th2 cytokine profile, with an increase in the Th2 cytokine levels which has not been seen in other studies in malignant brain tumour patients. This imbalance in the Th1/Th2 cytokine profile could suggest an ineffective anti-tumour response.
Breast cancer is the control not only of circulating steroids but also locally produced growth factors. Survivin has emerged as a unique regulator of cell death through its response to growth factors, which we have previously shown to be MAP kinase dependent. The transcriptional complex myc/max is an oncogene lying downstream of the MAP kinase pathway suggesting a possible role in survivin’s regulation.

**Aim**
To investigate the ability of growth factors to induce signalling of the MAP kinase effector transcription factor c-myc in human breast cancer.

**Methods & Results**
Treatment of SKBR3 breast cancer cell line with growth factors induced phosphorylation and transcriptional complex myc/max is an oncogene lying downstream of the MAP kinase pathway suggesting a possible role in survivin’s regulation.

**Conclusions**
These data provide evidence that growth factors signal through the transcription factor myc and indicate a role for myc/max in the transcriptional regulation of survivin in breast cancer. Growth factor mediated proliferation may be pivotal to the development of endocrine independent breast cancer.

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**The psychosocial and demographic correlates of post-mastectomy breast reconstruction**

This retrospective study compared psychosocial well-being (as measured by depression anxiety, self-esteem and body image scores) across four different breast cancer treatment groups (breast conserving surgery, mastectomy alone, mastectomy and immediate breast reconstruction, mastectomy and delayed breast reconstruction).

The study specifically examined the role of immediate versus delayed breast reconstruction in the psychological rehabilitation process of breast cancer survivors in Ireland. Coping strategies and demographic details were incorporated in the analysis. Participants (N=153) were selected from hospital databases according to the type of surgical treatment they had undergone since their breast cancer diagnosis. All women were registered under the care of a general surgeon and a plastic surgeon (in the case of the reconstruction groups) and were between one and seven years post surgery. Similar levels of positive psychological adjustment and self-concept were found across the four groups. However, differences were observed between the four groups on levels of anxiety (p < 0.05) with the mastectomy alone and mastectomy and immediate breast reconstruction demonstrating the lowest levels. Interestingly, 92% of women who had undergone delayed breast reconstruction would have preferred to have the procedure immediately at the time of their mastectomy. The high preference rate for immediate breast reconstruction amongst mastectomy patients should be considered by the Irish Health Service Executive. Many regional hospitals do not provide this service and so patients should be made aware of the option of attending a specialized Breast Unit where reconstructive services are available.
No studies have selectively evaluated epithelial apoptosis in invasive breast cancer and correlated it with survival. The recent emergence of M30, an antibody specific for epithelial apoptosis, now enables this. Bcl2 was used to measure antiapoptotic activity.

Aims
To determine if M30 and Bcl2 immunoreactivity correlate with longterm outcome in IBC.

Methods
All patients with grade three infiltrating ductal breast cancer diagnosed during 1999 (n=17) who had similar adjuvant treatment, were included. Serial sections from each tumor were stained immunohistochemically for M30 and Bcl2. An apoptotic index (AI) was established for both M30 and Bcl2 and individual as well as combination scores were then correlated with five year survival.

Results
A protocol was first optimized to detect M30 and Bcl2 immunoreactivity in archival breast samples. In total, 93% of the cohort (n=6) were strongly M30 positive and the five year survival (5ySURV) of this group was 71%. In contrast, 59% was 70% in M30 negative patients. Bcl2 expression directly correlated with improved survival. Of patients who were M30/Bcl2 positive overall 5ySURV was 80%. The combination of both indices thus generated a powerful predictive index of long-term survival in invasive breast cancer.

Conclusions
This is the first study to selectively correlate epithelial apoptosis with survival in breast cancer. M30 immunoreactivity correlated with overall survival. When Bcl2 and M30 scores were combined the correlation with overall survival improved even further. These findings identify a novel prognostic index (“The M30/Bcl2 Index”) that accurately predicts long-term survival in invasive breast cancer.

Our primary aim was to quantitate and compare the levels of ERα, ERβ and mammaglobin mRNA expression in malignant and benign breast specimens and to ascertain any relationship between mRNA levels, prognostic indicators and patient outcome.

Two per cent of tumours did not express ERα mRNA and 11% did not express ERβ mRNA. (6% of tumours proved to be mammaglobin negative). No significant difference was evident between the benign and tumour mRNA levels for any gene. Spearman’s correlation tests showed that in the tumour group ERα mRNA levels positively correlated with ERβ mRNA levels for both pre (p=0.001) and post (p=0.001) menopausal patients. It was also demonstrated that elevated ERβ mRNA levels were associated with high mammaglobin mRNA levels in both benign (p=0.025) and tumour tissue (p=0.035). Kaplan-Meier survival analysis did not report any significant association between ER mRNA levels and disease free survival. However, both five and 10 year overall survival was reduced in premenopausal patients expressing below median levels of ERα.

Demonstrating an association between ERα and ERβ could be of relevance in that high levels of ERα are accompanied by high levels of ERβ, suggesting the existence of molecular crosstalk between these two markers potentially resulting in either an enhanced or diminished response to therapy. The correlation observed between ERα and mammaglobin may serve to further characterize breast cancer cells, identifying them by mammaglobin expression and determining their hormonal status by ERα analysis.

A molecular analysis of the relationship between hormone receptors and mammaglobin in breast cancer

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