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## IRISH JOURNAL OF MEDICAL SCIENCE

XXXVIIIth Sir Peter Freyer Memorial Lecture and  
Surgical Symposium 2013

Arts Millennium Building,  
National University of Ireland, Galway  
6th & 7th September, 2013

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## *XXXVIIIth Sir Peter Freyer Memorial Lecture & Surgical Symposium 2013*

*Arts Millennium Building,  
National University of Ireland, Galway*

### Timetable of Events

#### Friday, 6<sup>th</sup> September 2013

<b>The Máirtín Ó Tnúthail Theatre AM150 Theatre</b>	<b>The Patrick F Fottrell Theatre AM200 Theatre</b>	<b>The Colm Ó hEocha Theatre AM250 Theatre</b>
9.00 a.m. Session 1: Upper GI Papers No. 001-010 Chair: Professor T Walsh & Mr C Collins	9.00 a.m. Session 2: Breast Clinical Papers No. 011-019 Chair: Mr R McLaughlin & Ms R Prichard	9.00 a.m. Session 3: Orthopaedic I Papers No. 020-026 Chair: Mr J McCabe & Mr A Devitt
10.30 a.m. Poster Judging – Room AM109		
11.00 a.m. Session 4: General Papers No. 027-035 Chair: Mr R Waldron & Mr M Caldwell <i>Sponsored by Applied Medical</i>	11.00 a.m. Session 5: Breast Research Papers No. 036-044 Chair: Mr E McDermott & Ms L Connolly	11.00 a.m. Session 6: Vascular Papers No. 045-053 Chair: Professor S Walsh & Mr D Moneley
12.30 p.m. Lunch and Poster Viewing		
1.30 p.m. Session 7: Urology Papers No: 054-059 Chair: Mr K Walsh & Mr G Durcan	1.30 p.m. Session 8: Plastics Papers No: 060-065 Chair: Mr P Regan & Mr J Kelly	1.30 p.m. Session 9: Training and Education Papers No: 066-071 Chair: Prof P Ridgway & Prof I Keogh
2.30 p.m. Coffee and Poster Viewing		
3.00 p.m. <i>Sir Peter Freyer Memorial Lecture</i> The Colm Ó hEocha Theatre – AM250 Theatre  <i>Professor Leslie K. Nathanson presents</i> <i>‘A Journey Towards the Perfect Fundoplication?’</i>		
4.00 p.m. Session 10: Plenary Session The Colm Ó hEocha Theatre Papers No: 072-080 Chair: Professor Calvin Coffey & Professor Arnold Hill <i>Sponsored by Leo Pharma</i>		
7.30 p.m. Social Programme Sir Peter Freyer Annual Banquet–The Radisson Blu Hotel, Galway		

#### Saturday, 7<sup>th</sup> September 2013

<b>The Máirtín Ó Tnúthail Theatre AM150 Theatre</b>	<b>The Patrick F Fottrell Theatre AM200 Theatre</b>	<b>The Colm Ó hEocha Theatre AM250 Theatre</b>	<b>The Siobhan McKenna Theatre</b>
10.00 a.m. Session 11: General Papers No: 081-089 Chair: Ms C Malone & Mr D Hehir	10.00 a.m. Session 12: Lower GI Papers No: 090-098 Chair: Mr M O’Riordain & Mr E Condon	10.00 a.m. Session 13: Training and Education Papers No. 099-107 Chair: Prof O Traynor & Mr K Sweeney	10.00 a.m. Session 14: Orthopaedic II Papers No. 108-116 Chair: Mr F Shannon & Mr S Kearns <i>Sponsored by Pfizer</i>
11.30 a.m. Coffee and Poster Viewing			
The Colm Ó hEocha Theatre 12.00 p.m. Session 15: ‘Publish or Perish’			
1.00 p.m. <i>State of the Art Lecture</i> The Colm Ó hEocha Theatre – AM250 Theatre  <i>Professor Patrick Broe presents</i> <i>‘Irish Surgery: The Need for Vision and Leadership’</i>			

*The Sir Peter Freyer Memorial Lecture & Surgical Symposium qualifies for 10.5 CPD Credits*

**XXXVIIIth Sir Peter Freyer Memorial Lecture & Surgical Symposium 2013**  
**Arts Millennium Building,**  
**National University of Ireland, Galway**  
**Timetable of Events**

**Friday, 6<sup>th</sup> September 2013**

**SESSION 1: UPPER GI SESSION**

**Time Allowed:** 7 Minutes Speaking  
3 Minutes Discussion

**Location:** The Máirtín Ó Tnúthail Theatre, AM150 Theatre  
**Chair:** Professor Tom Walsh & Mr Chris Collins

**9.00 a.m. Targeting Therapy for Esophageal Cancer in Patients Aged 70 and Over**

**Paper 1:** H Furlong<sup>1</sup>, GA Bass<sup>1</sup>, O Breathnach<sup>2</sup>, BP O'Neill<sup>3</sup>, E Leen<sup>4</sup>, TN Walsh<sup>1</sup>  
 (1) Department of RCSI Academic Dept of Surgery, Connolly Hospital, Blanchardstown, Dublin 15, Ireland;  
 (2) Department of Medical Oncology, Beaumont Hospital, Dublin, Ireland;  
 (3) Department of St Luke's Radiation Oncology Network, Beaumont Hospital, Dublin, Ireland;  
 (4) Department of Pathology, Connolly Hospital, Blanchardstown, Dublin 15, Ireland

**9.10 a.m. Alcohol an Increasing Factor in Young Patients with Pancreatitis**

**Paper 2:** A Gillis<sup>1</sup>, S Kelly<sup>1</sup>, C Redmond<sup>2</sup>, C Purcell<sup>1</sup>, R Kelly<sup>2</sup>, S Rafee<sup>1</sup>, J Geoghegan<sup>2</sup>, E Hoti<sup>2</sup>, O Traynor<sup>2</sup>, D Maguire<sup>2</sup>, Professor K Conlon<sup>1</sup>  
 (1) Department of Surgery, Tallaght Hospital, Tallaght, Dublin 24, Ireland;  
 (2) Department of Surgery, St. Vincent's Hospital, Dublin 4, Ireland

**9.20 a.m. Cholelithiasis and the Clinical History: Comparison of the 6Fs Mnemonic with Radiological Findings**

**Paper 3:** GA Bass, S Nadia, S Gilani, TN Walsh  
 Department of Surgery, RCSI Connolly Hospital, Blanchardstown, Dublin, Ireland

**9.30 a.m. Role of Endoscopic Ultrasound and Multidimensional Computed Tomography in Predicting Need for Mesenteric Vein Resection in Pancreaticoduodenectomy Specimens**

**Paper 4:** R Kelly, T Gallagher, K Conlon, E Hoti, D Maguire, O Traynor, J Geoghegan  
 Department of National Surgical Centre for Pancreatic Cancer, St Vincent's Hospital, Elm Park, Dublin 4, Ireland

**9.40 a.m. Predictive Value of 18-FDG-PET following Neoadjuvant Chemoradiotherapy for Locally Advanced Oesophageal Cancer**

**Paper 5:** J Elliott<sup>1</sup>, NJ O'Farrell<sup>1</sup>, AM Mongan<sup>1</sup>, SL Doyle<sup>1</sup>, C Muldoon<sup>2</sup>, C Johnston<sup>3</sup>, N Ravi<sup>1</sup>, JV Reynolds<sup>1</sup>  
 (1) Department of Surgery, St James's Hospital, Dublin, Ireland;  
 (2) Department of Histopathology, St James's Hospital, Dublin, Ireland;  
 (3) Department of Nuclear Medicine, St James's Hospital, Dublin, Ireland

**9.50 a.m. The Critical View of Safety in Laparoscopic Cholecystectomy: Towards a National Consensus**

**Paper 6:** JO Kelly<sup>1</sup>, WP Joyce<sup>2</sup>  
 (1) Department of Undergraduate Medicine, Royal College of Surgeons in Ireland, 123 St Stephens Green, D2;  
 (2) Department of Surgery, Galway Clinic, Doughiska, Co. Galway, Ireland

**10.00 a.m. The Efficacy of EUS Guided Drainage of Pancreatic Pseudocysts in a Tertiary Referral Centre**

**Paper 7:** D Nally, P Cronin, B Ryan, P Ridgway, K Conlon  
 Department of General Surgery, AMNCH, Tallaght, Dublin 24, Ireland

**10.10 a.m. Incidence and Risk Factors of Post-Operative Delirium in Patients following a Pancreaticoduodenectomy**

**Paper 8:** A O Farrell, S McErlean, T Gallagher, E Hoti, D Maguire, O Traynor, K Conlon, J Geoghegan  
 Department of National Surgical Centre for Pancreatic Cancer, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland

**10.20 a.m. Laparoscopic Sleeve Gastrectomy as A Treatment For Metabolic Syndrome; Analysis of Outcomes**

**Paper 9:** B Moloney<sup>1</sup>, P Neary<sup>1</sup>, RM Waldron<sup>1</sup>, F Finucane<sup>2</sup>, E McAnena<sup>4</sup>, D Lowe<sup>3</sup>, O McAnena<sup>1</sup>  
 (1) Department of Surgery, Galway University Hospital, Galway, Ireland;  
 (2) Department of Medicine, Galway University Hospital, Galway, Ireland;  
 (3) Department of Anaesthesia, Galway University Hospital, Galway, Ireland;  
 (4) Galway Clinic, Doughiska, Galway, Ireland

**10.30 a.m.**      **Preoperative Biliary Drainage of Radiologically Resectable Malignant Biliary Tumours**  
**Paper 10:**      HM Heneghan, C Redmond, R Kelly, KC Conlon, O Traynor, J Geoghegan, D Maguire, E Hoti  
 National Surgical Centre for Pancreatic Surgery, St Vincent's University Hospital, Elm Park, Dublin

**10.40 a.m.**      **COFFEE**

**SESSION 2: BREAST CLINICAL SESSION**

**Time Allowed:**    **7 Minutes Speaking**  
**3 Minutes Discussion**

**Location:**        **The Patrick F Fottrell Theatre, AM200 Theatre**  
**Chair:**            **Mr Ray McLaughlin & Ms Ruth Prichard**

**9.00 a.m.**        **Outcome of Patients Diagnosed with Triple Negative Breast Cancer in a Tertiary Referral Centre**  
**Paper 11:**        M Curtin, J Walsh, R Piggott, P Waters, C Malone, K Sweeney, R McLaughlin, MJ Kerin  
 Discipline of Surgery, NUI Galway, Newcastle Rd, Galway, Ireland

**9.10 a.m.**        **Factors Secreted from Mammary Adipose Tissue from Metabolically Unhealthy Breast Cancer Patients do not Influence Breast Tumour Cell Progesterone Receptor Expression**  
**Paper 12:**        S O'Brien<sup>1</sup>, S McGarrigle<sup>1</sup>, P Carroll<sup>1</sup>, L Healy<sup>2</sup>, T Boyle<sup>1</sup>, G Pidgeon<sup>1</sup>, MJ Kennedy<sup>3</sup>, E Connolly<sup>1</sup>  
 (1) Department of Surgery, St James Hospital & Trinity College Dublin, Dublin 8, Ireland;  
 (2) Department of Clinical Nutrition, St. James's Hospital & Trinity College Dublin, Dublin 8, Ireland;  
 (3) Department of Academic Unit of Clinical and Medical Oncology, St. James's Hospital & Trinity College Dublin, Dublin 8, Ireland

**9.20 a.m.**        **Impact of Lymph Node Ratio (LNR) on Prognosis of Early Breast Cancer**  
**Paper 13:**        E Donnellan<sup>1</sup>, J O'Keefe<sup>1</sup>, D O'Connor<sup>1</sup>, C Murphy<sup>1</sup>, D O'Hanlon<sup>2</sup>, B Bird<sup>1</sup>  
 (1) Department of Medical Oncology, Bon Secours Hospital, College Road, Cork, Ireland;  
 (2) Department of Surgery, Bon Secours Hospital, College Road, Cork, Ireland

**9.30 a.m.**        **Surgeon and Breast Unit Volume-Outcome Relationships in Breast Cancer Surgery and Treatment**  
**Paper 14:**        AM McDermott<sup>1</sup>, D Wall<sup>1</sup>, P Waters<sup>1</sup>, S Cheung<sup>2</sup>, M Sibbering<sup>3</sup>, K Horgan<sup>4</sup>, O Kearins<sup>2</sup>, G Lawrence<sup>2</sup>, J Patnick<sup>5</sup>, MJ Kerin<sup>1</sup>  
 (1) Department of Surgery, Clinical Sciences Institute, NUI Galway, Ireland;  
 (2) Department of West Midlands Cancer Intelligence Unit (WMCIU), University of Birmingham, United Kingdom;  
 (3) Department of Surgery, Royal Derby Hospital, Derby, United Kingdom;  
 (4) Department of Surgery, St James University Hospital, Beckett St, Leeds LS97TF, United Kingdom;  
 (5) Department of Director of the NHS Cancer Screening Programmes, Sheffield S10 3TH, United Kingdom

**9.40 a.m.**        **Breast Clinic Referrals; Can Mastalgia be Managed in Primary Care?**  
**Paper 15:**        DP Joyce<sup>1</sup>, J Alamiri<sup>1</sup>, Lowery AJ<sup>1</sup>, E Downey<sup>1</sup>, A Ahmed<sup>2</sup>, R McLaughlin<sup>2</sup>, ADK Hill<sup>1</sup>  
 (1) Department of Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland;  
 (2) Department of Surgery, Galway University Hospital, Galway, Ireland

**9.50 a.m.**        **16. Investigating the Role of Neoadjuvant Radiotherapy in Patients with Breast Cancer requiring Mastectomy**  
**Paper 16:**        McVeigh T<sup>1</sup>, Grealish M<sup>1</sup>, Martin J<sup>2</sup>, McLaughlin R<sup>1</sup>, Kerin MJ<sup>1</sup>  
 (1) Department of Breast Surgery, Galway University Hospital;  
 (2) Department of Radiation Oncology, Galway University Hospital

**10.00 a.m.**        **A Comparison of Prognostic Features in Screen Detected versus Symptomatic Breast Cancers**  
**Paper 17:**        B Meshkat<sup>1</sup>, Z Al-Hilli<sup>1</sup>, GA Bass<sup>1</sup>, C Quinn<sup>2</sup>, A O'Doherty<sup>3</sup>, J Rothwell<sup>1</sup>, J Geraghty<sup>1</sup>, D Evoy<sup>1</sup>, EW McDermott<sup>1</sup>, RS Prichard<sup>1</sup>  
 (1) Department of Breast and Endocrine Surgery, SVUH, Elm Park, Dublin 4, Ireland;  
 (2) Department of Pathology, SVUH, Elm Park, Dublin 4, Ireland;  
 (3) Department of Radiology, SVUH, Elm Park, Dublin 4, Ireland

**10.10 a.m.**        **Pre-Operative Core Biopsy of Sonographically Abnormal Axillary Nodes in Breast Cancer**  
**Paper 18:**        D McCartan<sup>1</sup>, CF Castineira<sup>2</sup>, CA Daly<sup>3</sup>, GT O'Donoghue<sup>2</sup>, D O'Driscoll<sup>3</sup>  
 (1) Department of Surgery, Waterford Regional Hospital, Dunmore Road, Waterford, Ireland;  
 (1) Department of Surgery, Waterford Regional Hospital, Dunmore Road, Waterford, Ireland;  
 (3) Department of Radiology, South-Eastern Cancer Centre, Waterford Regional Hospital, Waterford, Ireland

**10.20 a.m. Breast Infection in an Irish Tertiary-Referral Centre; Observations on Referral Pathway, Patient Management and Case-Load**  
**Paper 19:** N Nic Cinnáide, GA Bass, B Meshkat, I Daskalova, Z Al-Hilli, M Boland, RS Prichard, J Rothwell, J Geraghty, D Evoy, A O'Doherty, EWM McDermott  
 Department of Breast and Endocrine Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland

**10.30 a.m. COFFEE**

### **SESSION 3: ORTHOPAEDIC I SESSION**

**Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion

**Location:** The Colm Ó hEocha Theatre, AM250 Theatre  
**Chair:** Mr John McCabe & Mr Aiden Devitt

**9.00 a.m. Validation of Predicted Survival Rates in Spinal Metastases**  
**Paper 20:** CA Fleming, S O'Neill, F Rowan, J Baker, K Synnott  
 Department of Orthopaedic Surgery, Mater University Hospital, Eccles St, Dublin 7, Ireland

**9.10 a.m. An Analysis of Outcome of Whiplash Injury in an Irish Setting**  
**Paper 21:** E McCabe, M Jadaan, J McCabe  
 Department of Trauma and Orthopaedic Surgery, Galway University Hospitals, Galway, Ireland

**9.20 a.m. Birmingham Hip Resurfacing Review with a Mean Follow-Up of 7.5 Years: A Galway Experience**  
**Paper 22:** B Moloney, M Quinn, G Solayar, K Kaar, W Curtin  
 Department of Trauma and Orthopaedic Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland

**9.30 a.m. The Use of Sound Analysis to Guide Femoral Reaming in Uncemented Total Hip Arthroplasty: A New Concept**  
**Paper 23:** A Abdulkarim<sup>1</sup>, A Elsibaei<sup>2</sup>, B Jackson<sup>3</sup>, D Riordan<sup>3</sup>, J Rice<sup>2</sup>  
 (1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;  
 (2) Department of Trauma and Orthopaedics, Kerry General Hospital, Ireland;  
 (3) Department of Institute of Technology, Tralee, Ireland

**9.40 a.m. Detecting and Adjusting For Publication Bias in Spine Surgery Meta-Analyses**  
**Paper 24:** D Abdallah<sup>1</sup>, M Jadaan<sup>2</sup>, J McCabe<sup>2</sup>  
 (1) Department of Public Health, University College Dublin, Belfield, Dublin, Ireland;  
 (2) Department of Trauma and Orthopaedics, Galway University Hospitals, Newcastle Rd., Galway, Ireland

**9.50 a.m. The Role of Wrist Arthroscopy in the Management of Wrist Disorders: A Single Surgeon's Experience over A 5 Year Period**  
**Paper 25:** C Sugrue, M O'Sullivan  
 Department of Orthopaedics, University College Hospital, Galway, Galway, Ireland

**10.00 a.m. The Influence of Patellofemoral Degenerative Changes on the Outcome of the Unicompartmental Knee Replacement**  
**Paper 26:** A Abdulkarim<sup>1</sup>, N Motterlini<sup>2</sup>, TM O'Donnell<sup>3</sup>, MJ Neil<sup>4</sup>  
 (1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;  
 (2) Department of HRB, Health Research Board, Dublin, Ireland;  
 (3) Department of Trauma & Orthopaedics, UPMC, Beacon Hospital, Dublin, Ireland;  
 (4) Department of Orthopaedic Surgery, St. Vincent's Healthcare Campus, Sydney, Australia

**10.10 a.m. COFFEE**

### **SESSION 4: GENERAL SESSION**

**Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion

**Location:** The Máirtín Ó Tnúthail Theatre, AM150 Theatre  
**Chair:** Mr Ronan Waldron & Mr Martin Caldwell



- 11.00 a.m.**      **Type And Screen: Is It Worth It?**  
**Paper 27:** J De Marchi<sup>1</sup>, J Woods<sup>1</sup>, A Lowery<sup>1</sup>, P Sheridan<sup>2</sup>, A Hill<sup>3</sup>  
 (1) Department of General Surgery, Beaumont Hospital, 9 Beaumont Road, Beaumont, Dublin 9, Ireland;  
 (2) Department of Blood Bank and Transfusion Services, Beaumont Hospital, 9 Beaumont Road, Beaumont, D9, Ireland;  
 (3) Department of Royal College of Surgeons in Ireland, 123 St. Stephen's Green, Dublin 2, Ireland
- 11.10 a.m.**      **Under Siege; The Bed Management Battle**  
**Paper 28:** M Murphy<sup>1</sup>, E Daly<sup>2</sup>, H Horsnell<sup>2</sup>, MJ Kerin<sup>1</sup>, KJ Sweeney<sup>1</sup>  
 (1) Department of Surgery, NUI Galway, Clinical Science Institute, NUI Galway, Ireland;  
 (2) Department of Hospital Administration, Galway Roscommon University Hospitals Group, Galway, Ireland
- 11.20 a.m.**      **10-Year Retrospective Review of Changes in Practice in Open and Laparoscopic Appendectomies in an Adult and Paediatric Population**  
**Paper 29:** MF Khan, N McCawley, PA Cronin, A Hania, N Jabbar, A Gillis, KC Conlon, PF Ridgway  
 Professorial Surgical Unit, AMNCH, Tallaght, Dublin 24, Ireland
- 11.30 a.m.**      **Road Traffic Accidents: Considerations in Restructuring Trauma Care in Ireland**  
**Paper 30:** H Mohan, D Winter  
 Department of Surgery, St Vincent's Hospital, Elm Park, Dublin 4, Ireland
- 11.40 a.m.**      **Can We Hear Ourselves Think? An Observational Study of Noise and Interruptions in the Operating Theatre**  
**Paper 31:** C Clancy, Y Bukhari, M Joyce  
 Department of Colorectal Surgery, University College Hospital Galway, Newcastle Road, Galway, Ireland
- 11.50 a.m.**      **Negative Appendectomy Rates in Adolescent Girls Compared To Boys: The Role of Ultrasound and Serum Inflammatory Markers**  
**Paper 32:** D Nally<sup>1</sup>, OM Aworanti<sup>1</sup>, SP Thambipillai<sup>2</sup>  
 (1) Department of Paediatric Surgery, Children's University Hospital, Temple St., Dublin 1, Ireland;  
 (2) Department of Paediatric Surgery, Our Lady's Children's Hospital, Crumlin, Dublin 12, Ireland
- 12.00 p.m.**      **Prevalence of Mesenteric Fat Encroachment and Its Correlation with Inflammatory Changes in Crohn's Intestinal Resection Specimens**  
**Paper 33:** S Sahebally<sup>1</sup>, M Samaha<sup>1</sup>, J Ruddy<sup>1</sup>, J Burke<sup>2</sup>, C Coffey<sup>2</sup>  
 (1) Department of 4i Centre for Interventions in Inflammation, Infection and Immunity, University of Limerick, Castletroy, Limerick, Ireland;  
 (2) Department of Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland
- 12.10 p.m.**      **Surgery For Acute Cholecystitis: Can We Do More On The Index Admission?**  
**Paper 34:** S Francis, J Bolger, A Hill  
 Department of Surgery, RCSI, 123 St Stephen's Green, Dublin 2, Ireland
- 12.20 p.m.**      **First Laparoscopy or Active Observation in Acute Non-Specific Abdominal Pain the FLO Trial**  
**Paper 35:** D Healy<sup>1</sup>, M Clarke Moloney<sup>1</sup>, J Saunders<sup>1</sup>, P Grace<sup>1</sup>, E Kavanagh<sup>1</sup>, P Burke<sup>1</sup>, S Kinsella<sup>2</sup>, S Walsh<sup>1</sup>  
 (1) Department of Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland;  
 (2) Department of Economics, University of Limerick, Limerick, Ireland

**12.30 p.m.**      **LUNCH**

**SESSION 5: BREAST RESEARCH/ENDOCRINE SESSION**

**Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion

**Location:** The Patrick F Fottrell Theatre, AM200 Theatre

**Chair:** Mr Enda McDermott & Ms Liz Connolly

- 11.00 a.m.**      **Circulating Microrna Biomarkers for Luminal A Breast Cancer**  
**Paper 36:** LM Martyn, AM McDermott, N Miller, MJ Kerin  
 Discipline of Surgery, School of Medicine, NUI Galway, Galway, Ireland

- 11.10 a.m. Low MAD2 Protein Expression is A Predictor of Poor Outcome After Chemotherapy & Radiotherapy in Oestrogen Receptor Negative Breast Cancer**  
**Paper 37:** EA O Reilly<sup>1</sup>, S Sharma<sup>1</sup>, R Klinger<sup>1</sup>, L Gubbins<sup>1</sup>, C Kelly<sup>2</sup>, T Lyons<sup>2</sup>, A Maguire<sup>3</sup>, S Aherne<sup>3</sup>, M Barry<sup>4</sup>, S Conlon<sup>5</sup>, J McCaffrey<sup>2</sup>, M Harrison<sup>5</sup>, S Glynn<sup>6</sup>, A McCann<sup>1</sup>, M Kell<sup>4</sup>  
 (1) Department of Pathology, UCD Conway Institute of Biomolecular and Biomedical Research, UCD School of Medicine and Medical Science (SMMS), Belfield, Ireland;  
 (2) Department of Oncology, Mater Misericordiae Hospital, Eccles St, Dublin 1, Ireland;  
 (3) Department of Pathology, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland;  
 (4) Department of Surgery, Mater Misericordiae Hospital, Eccles St, Dublin 1, Ireland;  
 (5) Department of Pathology, Mater Misericordiae Hospital, Eccles St, Dublin 1, Ireland;  
 (6) Department of Prostate Cancer Institute, NUI Galway, National Cancer Institute, Bethesda, USA
- 11.20 a.m. Exosome-Mediated Active Transport of Selected Micrnas by Breast Cancer Cells**  
**Paper 38:** CL Glynn, MJ Kerin, RM Dwyer  
 Discipline of Surgery, School of Medicine, NUI Galway, Galway, Ireland
- 11.30 a.m. Pre-Clinical Evaluation of Novel Anti-Angiogenic Agents as Breast Cancer Therapeutics**  
**Paper 39:** S McGarrigle<sup>1</sup>, A Murphy<sup>2</sup>, B Kennedy<sup>2</sup>, A Reynolds<sup>2</sup>, J O'Sullivan<sup>1</sup>, M J Kennedy<sup>3</sup>, E Connolly<sup>1</sup>  
 (1) Department of Surgery, St James's Hospital & Trinity College Dublin, Dublin 8, Ireland;  
 (2) Conway Institute of Biomolecular & Biomedical Research, University College Dublin, Dublin, Ireland;  
 (3) Academic Unit of Clinical and Medical Oncology, St James's Hospital & Trinity College Dublin, Dublin, Ireland
- 11.40 a.m. Relationship between Circulating Micrnas and Breast Cancer Intrinsic Subtype**  
**Paper 40:** CL Brougham<sup>1</sup>, PS Waters<sup>1</sup>, D Wall<sup>2</sup>, RM Dwyer<sup>1</sup>, MJ Kerin<sup>1</sup>  
 (1) Discipline of Surgery, School of Medicine, NUI Galway, University Road, Galway, Ireland;  
 (2) Department of HRB Clinical Research Facility and School of Mathematics, Statistics and Applied Mathematics, National University of Ireland, Galway, University Road, Galway, Ireland
- 11.50 a.m. Operative Intervention for Thyroid Disease; Oncological and Endocrine Outcomes Over 5 Years in 423 Cases**  
**Paper 41:** N Mayooraan<sup>1</sup>, PS Waters<sup>2</sup>, D Alazawi<sup>1</sup>, TM Kaimkahi<sup>1</sup>, D Quill<sup>1</sup>, MJ Kerin<sup>2</sup>  
 (1) Department of General Surgery, University College Hospital Galway, Newcastle, Galway, Ireland;  
 (2) Discipline of Surgery, NUI, Galway, Clinical Science Institute, Galway, Ireland
- 12.00 p.m. Neural Monitored Revision Thyroid Cancer Surgery-Surgical Safety and Thyroglobulin Response**  
**Paper 42:** E Phelan, D Kamanai, J Shin, G Randolph  
 Department of Otolaryngology, Mass Eye Ear Infirmary, Charles St., Boston, USA
- 12.10 p.m. Management of Thyroid Carcinoma; A Single Institutional Experience over 10 Years**  
**Paper 43:** L Mc Grath Soo, A Lowery, N Elsafty, D Joyce, A Hill  
 Department of Breast and Endocrine Surgery, Beaumont Hospital, Beaumont, Dublin 9, Ireland
- 12.20 p.m. Investigating the Association between Snps and Indels in the PCMI Gene in Breast Cancer In the West of Ireland**  
**Paper 44:** TP McVeigh<sup>1</sup>, T Paranjape<sup>2</sup>, F Slack<sup>2</sup>, JB Weidhaas<sup>2</sup>, KJ Sweeney<sup>1</sup>, MJ Kerin<sup>1</sup>, NM Miller<sup>1</sup>  
 (1) Discipline of Surgery, Clinical Sciences Institute, National University of Ireland, Galway  
 (2) Yale University, New Haven, Connecticut, USA

**12.30 p.m. LUNCH**

**SESSION 6: VASCULAR SESSION**

**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

**Location:** The Colm Ó hEocha Theatre, AM250 Theatre

**Chair:** Professor Stewart Walsh & Mr Daragh Moneley

**11.00 a.m. Illness Severity Scoring Systems and Risk Prediction in Vascular Intensive Care Admissions**

**Paper 45:** M Dover, W Tawfick, S Sultan

Department of Vascular Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland

**11.10 a.m. Radio-frequency Ablation vs. Open Surgery in the Treatment of Varicose Veins - A Comparative Study**

**Paper 46:** T Aherne, W Tashkandi, J Byrne, D Moneley, A Leahy, P Naughton

Department of Vascular Surgery, Beaumont Hospital, Beaumont, Co. Dublin, Ireland

- 11.20 a.m.**      **Should Colour Duplex Ultrasound Replace CT In The Surveillance of Abdominal Aortic Aneurysms?**  
**Paper 47:** P Cullen<sup>1</sup>, C Gray<sup>1</sup>, P Goodman<sup>2</sup>, K O'Malley<sup>1</sup>, M O'Donohoe<sup>1</sup>, C McDonnell<sup>1</sup>  
 (1) Department of Vascular Surgery, Mater Misericordiae University Hospital, Eccles Street, Dublin 7, Ireland;  
 (2) Department of School of Physics, Dublin Institute of Technology, Cathal Brugha Street, Dublin 1, Ireland
- 11.30 a.m.**      **A Review of Inpatient Consults to a Department of Vascular Surgery**  
**Paper 48:** C Herron, D Moneley, P Naughton, A Leahy  
 Department of Vascular Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland
- 11.40 a.m.**      **Comparison of Radiation Dose Administered During Endovascular Aneurysm Repair under Radiologist Supervision versus the Surgeon - A Case Control Study**  
**Paper 49:** P Carroll<sup>1</sup>, A Noorani<sup>2</sup>, JR Boyle<sup>2</sup>, TY Tang<sup>2</sup>, R Clarke<sup>2</sup>, M Clarke-Moloney<sup>1</sup>, P Grace<sup>1</sup>, E Kavanagh<sup>1</sup>, P Burke<sup>1</sup>, S Walsh<sup>1</sup>  
 (1) Department of Surgery, University of Limerick, Limerick, Limerick, Ireland;  
 (2) Department of Surgery, Cambridge University Hospital, United Kingdom
- 11.50 a.m.**      **Implications of Carotid Stenting on Endarterectomy Practise – Relating Volume to Safety**  
**Paper 50:** A Ali, A O'Callaghan, T Moloney, C Kelly, D Monoley, AL Leahy  
 Department of Vascular Surgery, Beaumont University Hospital, Dublin, Ireland
- 12.00 p.m.**      **Peripheral Arterial Disease: A Marked Lack of Public Awareness in Ireland**  
**Paper 51:** C Cronin, D McCartan, M McMonagle, KSC Cross, J Dowdall  
 Department of Surgery, Waterford Regional Hospital, Dunmore Road, Waterford, Ireland
- 12.10 p.m.**      **Carotid Plaque Composition and Mechanism of Behaviour**  
**Paper 52:** S McHugh<sup>1</sup>, J Mulvihill<sup>2</sup>, E Cunnane<sup>2</sup>, E Kavanagh<sup>1</sup>, S Walsh<sup>3</sup>, M Walsh<sup>2</sup>  
 (1) Department of Vascular Surgery, Regional Hospital Limerick, Limerick, Ireland;  
 (2) Department of CABER, University of Limerick, Materials and Surface Science Institute, Limerick, Ireland;  
 (3) Department of Medical School, University of Limerick, Limerick, Ireland
- 12.20 p.m.**      **Supragenicular Bypass Using Cuffed Synthetic Grafts In Management of Critical Lower Limb Ischaemia (CLI) In TASC II D Lesions**  
**Paper 53:** M Curtin, W Tawfick, S Sultan  
 Department of Vascular Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland
- 12.30 p.m.**      **LUNCH**

#### SESSION 7: UROLOGY SESSION

- Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion
- Location:** The Máirtín Ó Tnúthail Theatre, AM150 Theatre  
**Chair:** Mr Kilian Walsh & Mr Garrett Durkan
- 1.30 p.m.**      **Laparoscopic Nephrectomy in High Body Mass Index Patients: Analysis of Waist Circumference and Waist-To-Hip Ratio on Surgical Outcomes**  
**Paper 54:** EM Bolton, PE Lonergan, D Hennessy, A Walsh, AZ Thomas, FT Darcy, TH Lynch  
 Department of Urology, St. James's Hospital, James's Street, Dublin 8
- 1.40 p.m.**      **Final Pathological Outcomes in Men with Low-Grade Prostate Cancer Undergoing Radical Prostatectomy**  
**Paper 55:** L Smyth, KW Walsh, E Rogers, GC Durkan  
 Department of Urology, Galway University Hospital, Galway, Ireland
- 1.50 p.m.**      **GP Referral is to The Rapid Access Prostate Cancer (RAPC) Clinic in Galway Are They Adequate?**  
**Paper 56:** L Lenihan, IM Cullen, G Durkan, K Walsh, M Corcoran, S Jaffrey  
 Department of Urology, Galway University Hospital, Newcastle Road, Galway, Ireland
- 2.00 p.m.**      **Positive Predictive Role of CT in Preoperative Histologic Assessment of Renal Cell Carcinoma in our Institute**  
**Paper 57:** M Conneely<sup>1</sup>, D Ferguson<sup>2</sup>, M Quinlan<sup>3</sup>, T McHale<sup>4</sup>, P McCarthy<sup>1,2</sup>  
 (1) Department of Radiology, School of Medicine, NUI Galway, Galway, Ireland  
 (2) Department of Radiology, Galway University Hospital, Galway, Ireland;  
 (3) Department of Urology, Galway University Hospital, Galway, Ireland;  
 (4) Department of Pathology, Galway University Hospital, Galway, Ireland

- 2.10 p.m.**      **Circumcision for Balanitis Xerotica Obliterans (BXO) in A Paediatric Population - The Correlation between Clinical Evaluation and Histology**  
**Paper 58:**      A Looney<sup>1</sup>, G Nason<sup>2</sup>, F Tareen<sup>2</sup>, M Danepal<sup>2</sup>, P Puri<sup>2</sup>  
 (1) Department of Urology, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland;  
 (2) Department of Paediatric Surgery and Urology, Our Lady's Hospital for Sick Children, Crumlin, Dublin 12, Ireland
- 2.20 p.m.**      **Paradigm Shift Towards Management of Small Renal Tumours, Evaluating Technique and Outcome of Partial Nephrectomy in West of Ireland**  
**Paper 59:**      N Nusrat, G Nama, B Barea, I Cullen, L Smyth, M Corcoran, S Jaffrey, E Roger, K Walsh, G Durkan  
 Department of Urology, University College Hospital Galway, Ireland
- 2.30 p.m.**      **COFFEE**
- 3.00 p.m.**      **SIR PETER FREYER MEMORIAL LECTURE**  
**Introduction:**    **Professor Michael Kerin**  
**Speaker:**        **Dr Leslie K. Nathanson**  
**Topic:**            **'A Journey Towards the Perfect Fundoplication**  
**Location:**        **The Colm Ó hEocha Theatre - AM250 Theatre**
- 4.00 p.m.**      **Plenary Session**
- SESSION 8: PLASTICS SESSION**
- Time Allowed:**    **7 Minutes Speaking**  
                           **3 Minutes Discussion**
- Location:**        **The Patrick F Fottrell Theatre, AM200 Theatre**  
**Chair:**            **Mr Padraic Regan & Mr Jack Kelly**
- 1.30 p.m.**      **Guidelines for Sentinel Node Biopsy in Melanoma; Should T1b Melanomas be Offered a Sentinel Node Biopsy**  
**Paper 60:**      KM Joyce<sup>1</sup>, NM McInerney<sup>2</sup>, RP Piggott<sup>1</sup>, CM Sugrue<sup>1</sup>, D Jones<sup>2</sup>, JL Kelly<sup>2</sup>, AJ Hussey<sup>2</sup>, MJ Kerin<sup>1</sup>, PJ Regan<sup>2</sup>  
 (1) Department of Surgery, Clinical Science Institute, NUI Galway, Galway, Ireland;  
 (2) Department of Plastic Surgery, Galway University Hospital, Ireland
- 1.40 p.m.**      **Squamous Cell Carcinoma Excision in a Tertiary Referral Centre the importance of the Deep Excision Margin**  
**Paper 61:**      RJ Hurley<sup>1</sup>, NM McInerney<sup>2</sup>, EJ Palmer<sup>2</sup>, CM Sugrue<sup>1</sup>, D Jones<sup>2</sup>, PJ Regan<sup>2</sup>, JL Kelly<sup>2</sup>, AJ Hussey<sup>2</sup>  
 (1) Department of Surgery, Clinical Science Institute, NUI Galway, Galway, Ireland;  
 (2) Department of Plastic Surgery, Galway University Hospital, Ireland
- 1.50 p.m.**      **Risk Factors for Incomplete Excision of Basal Cell Carcinomas: A Review of 1423 Consecutively Excised Basal Cell Carcinomas in a Tertiary Referral Centre**  
**Paper 62:**      C Sugrue, N McInerney, T Tarmey, D Jones, P Regan, J Kelly, A Hussey  
 Department of Plastic, Reconstructive & Hand Surgery, Galway University Hospital, Galway, Ireland
- 2.00 p.m.**      **A Novel Barbed Suture Repair Technique For Flexor Tendons; A Comparative Study**  
**Paper 63:**      CW Joyce<sup>1</sup>, KE Whately<sup>1</sup>, JC Chan<sup>2</sup>, M Murphy<sup>1</sup>, FJ Brien<sup>3</sup>, SM Carroll<sup>1</sup>  
 (1) Department of Plastic and Reconstructive Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4;  
 (2) Department of Plastic and Reconstructive Surgery, University Hospital Galway;  
 (3) Department of Anatomy, Royal College of Surgeons Ireland
- 2.10 p.m.**      **Comparison of Open Carpal Tunnel Release under Local or Regional Anaesthetic**  
**Paper 64:**      C de Blacam<sup>1</sup>, D Jones<sup>2</sup>, J Kelly<sup>2</sup>, PJ Regan<sup>2</sup>, A Hussey<sup>2</sup>  
 (1) Department of Surgery, Clinical Science Institute, NUI Galway, Galway, Ireland;  
 (2) Department of Plastic Surgery, Galway University Hospital, Ireland
- 2.20 p.m.**      **The Trap Door Flap A Reliable, Reproducible Method Of Anterior Pinna Reconstruction**  
**Paper 65:**      RP Piggott, NM McInerney, PJ Regan  
 Department of Plastic and Reconstructive Surgery, University Hospital Galway, Newcastle Road, Galway
- 2.30 p.m.**      **COFFEE**

**3.00 p.m. SIR PETER FREYER MEMORIAL LECTURE**

**Introduction:** Professor Michael Kerin  
**Speaker:** Dr Leslie K. Nathanson  
**Topic:** 'A Journey Towards the Perfect Fundoplication'  
**Location:** The Colm Ó hEocha Theatre - AM250 Theatre

**4.00 p.m. Plenary Session**

**SESSION 9: TRAINING & EDUCATION SESSION**

**Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion  
**Location:** The Colm Ó hEocha Theatre, AM250 Theatre  
**Chair:** Professor Paul Ridgway & Professor Ivan Keogh

**1.30 p.m. Prospective Analysis of Errors in Requesting Blood Products and the Effect of Training on Intern Practice**

**Paper 66:** K Joyce, D Devitt, P O'Connor, MJ Kerin  
 Department of Surgery, Galway University Hospital, Galway, Ireland

**1.40 p.m. Acquisition and Retention of Complex Procedural Skills amongst Medical Trainees**

**Paper 67:** P Sexton, P Waters, B Kelly, D Mitchell, D Devitt, G Flaherty, M Kerin  
 Discipline of Surgery, NUI Galway, Newcastle Rd, Galway, Ireland

**1.50 p.m. Trans Atlantic Peer to Peer Learning- An Initial Feasibility Analysis**

**Paper 68:** N Lynch<sup>1</sup>, E Lehane<sup>2</sup>, C Tulin<sup>3</sup>, M Corrigan<sup>1</sup>, M Reardon<sup>4</sup>, P Henn<sup>4</sup>, A Joy<sup>4</sup>  
 (1) Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland;  
 (2) Department of Catherine McAuley School of nursing and Midwifery, UCC, Cork, Ireland;  
 (3) Department of Surgery, University of Toronto, Toronto, Ontario, Canada;  
 (4) Department of ASSERT Centre, UCC, Cork, Ireland

**2.00 p.m. Surgical Research and Training: Is It Time to Consider Intercalated Higher Degrees?**

**Paper 69:** J Bolger, F McNamara, ADK Hill  
 Department of Surgery, RCSI, York House, York St, Dublin 2, Ireland

**2.10 p.m. Surgical Checklists: The Human Factor**

**Paper 70:** M OSullivan<sup>1</sup>, C Reddin<sup>2</sup>, P O'Connor<sup>3</sup>, FO Duffy<sup>4</sup>, I Keogh<sup>4</sup>  
 (1) Department of Surgery, NUIG, Costello Road, Newcastle, Galway, Ireland;  
 (2) Department of School of Medicine, NUIG, Costello Road, Newcastle Galway, Ireland;  
 (3) Department of General Practice, NUIG, Costello Road, Newcastle, Galway, Ireland;  
 (4) Department of Academic Department of Otolaryngology, NUIG, Costello Road, Newcastle Galway, Ireland

**2.20 p.m. Does Performance in Preclinical Year Assessments Predict Performance in Clinical Year Assessments?**

**Paper 71:** T McVeigh<sup>1</sup>, G Avalos<sup>2</sup>, P Cantillon<sup>3</sup>, F Dunne<sup>4</sup>  
 (1) Department of Surgery, Galway University Hospital, Galway, Ireland;  
 (2) Department of Medical Informatics and Education, National University of Ireland Galway, Galway, Ireland;  
 (3) Department of General Practice, National University of Ireland Galway, Galway, Ireland;  
 (4) School of Medicine, National University of Ireland Galway, Galway, Ireland

**2.30 p.m. COFFEE**

**3.00 p.m. SIR PETER FREYER MEMORIAL LECTURE**

**Introduction:** Professor Michael Kerin  
**Speaker:** Dr Leslie K. Nathanson  
**Topic:** 'A Journey Towards the Perfect Fundoplication'  
**Location:** The Colm Ó hEocha Theatre - AM250 Theatre

**4.00 p.m. Plenary Session**

**SESSION 10: PLENARY SESSION**

**Time Allowed:** 7 Minutes Speaking  
3 Minutes Discussion

**Location:** The Colm Ó hEocha Theatre, AM250 Theatre  
**Chair:** Professor Calvin Coffey & Professor Arnold Hill

- 4.00 p.m.** **Mutation in TAGAP is Protective of Anal Sepsis in Crohn's Disease**  
**Paper 72:** T Connelly<sup>1</sup>, A Berg<sup>2</sup>, L Harris<sup>1</sup>, J Hegarty<sup>1</sup>, S Deiling<sup>1</sup>, W Koltun<sup>1</sup>  
(1) Department of Division of Colon and Rectal Surgery, Hershey Medical Center, Penn State College of Medicine, Hershey, PA, 17033, USA;  
(2) Department of Biostatistics, Hershey Medical Center, Penn State College of Medicine, Hershey, PA, 17033, USA
- 4.10 p.m.** **Mir-339-5p Acts as a Tumour Suppressor in Breast Cancer, Mediated at Least in Part Through Regulation of Cell Proliferation**  
**Paper 73:** S Khan<sup>1</sup>, CL Brougham<sup>1</sup>, D Wall<sup>2</sup>, J Newell<sup>2</sup>, MJ Kerin<sup>1</sup>, RM Dwyer<sup>1</sup>  
(1) Discipline of Surgery, School of Medicine, National University of Ireland Galway, Galway, Ireland;  
(2) Department of HRB Clinical Research Facility and School of Mathematics, Statistics and Applied Mathematics, National University of Ireland, Galway, Galway, Ireland
- 4.20 p.m.** **Global Genetic Alterations from Primary and Node to Metastasis: New Insights into Breast Tumour Reprogramming**  
**Paper 74:** J Bolger<sup>1</sup>, J McBryan<sup>1</sup>, A Fagan<sup>1</sup>, E Hughes<sup>1</sup>, C Byrne<sup>1</sup>, D McCartan<sup>1</sup>, P O'Gaora<sup>2</sup>, ADK Hill<sup>1</sup>, L Young<sup>1</sup>  
(1) Department of Endocrine Oncology Research, RCSI, York House, York St, Dublin 2, Ireland;  
(2) Department of Conway Institute, UCD School of Medicine, UCD, Ireland
- 4.30 p.m.** **NR4A Orphan Nuclear Receptors in Colorectal Cancer**  
**Paper 75:** H Mohan<sup>1</sup>, D Crean<sup>2</sup>, A Baird<sup>2</sup>, K Sheahan<sup>3</sup>, M Cotter<sup>3</sup>, E Ryan<sup>1</sup>, E Murphy<sup>2</sup>, D Winter<sup>1</sup>  
(1) Department of Surgery, St Vincent's Hospital, Elm Park, Dublin 4, Ireland;  
(2) School of Veterinary Medicine, UCD, Belfield, Ireland;  
(3) Department of Pathology, St. Vincent's University Hospital, Ireland
- 4.40 p.m.** **Aerosolised Intraperitoneal Local Anaesthetic (AILA): A Randomised, Double-Blinded, Placebo-Controlled Study**  
**Paper 76:** AM McDermott<sup>1</sup>, KH Chang<sup>1</sup>, K Mieske<sup>1</sup>, P McAnena<sup>1</sup>, B Kinirons<sup>2</sup>, A Abeidi<sup>2</sup>, B Harte<sup>2</sup>, MJ Kerin<sup>1</sup>, O McAnena<sup>1</sup>  
(1) Department of Surgery, NUI Galway, Galway, Ireland;  
(2) Department of Anaesthesia, Galway Clinic, Doughiska, Galway, Ireland
- 4.50 p.m.** **Colonic and Rectal Adenocarcinomas Can be Differentiated Based on Transcriptional Profiles**  
**Paper 77:** J Hogan<sup>1</sup>, M Kalady<sup>2</sup>, K DeJulius<sup>2</sup>, X Li<sup>2</sup>, JC Coffey<sup>1</sup>  
(1) Department of General Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland;  
(2) Department of Digestive Diseases Institute, Cleveland Clinic, Ohio, USA
- 5.00 p.m.** **Survival Benefit Conferred by the Androgen Receptor is Lost in Aromatase Inhibitor Treated Breast Cancer**  
**Paper 78:** A Ali<sup>1</sup>, F Bane<sup>2</sup>, Y Hao<sup>3</sup>, D McCartan<sup>2</sup>, P O'Gaora<sup>3</sup>, ADK Hill<sup>1</sup>, L Young<sup>2</sup>, M McIlroy<sup>2</sup>  
(1) Department of General Surgery, RCSI and Beaumont Hospital, 31 A York House, York Street, Royal College of Surgeons, Dublin 2, Ireland;  
(2) Endocrine Oncology Research Group, Royal College of Surgeons, 31 A York House, York Street, RCSI, Ireland;  
(3) School of Medicine and Medical Sciences, Conway Institute, University College Dublin, UCD, Belfield, Dublin 4, Ireland
- 5.10 p.m.** **Role of Mesenchymal Stem Cells in the Colorectal Cancer Cell Environment: Stimulation of Epithelial-Mesenchymal Transition**  
**Paper 79:** N Hogan, MR Joyce, RM Dwyer, MJ Kerin,  
Discipline of Surgery, School of Medicine, National University of Ireland, Galway, Ireland
- 5.20 p.m.** **The Molecular Muddle of Glioblastoma: Understanding the Neovascular Interactions**  
**Paper 80:** P O'Halloran<sup>1</sup>, T Viel<sup>2</sup>, K Buther<sup>2</sup>, L Wachsmuth<sup>3</sup>, P Dicker<sup>4</sup>, C Faber<sup>3</sup>, M Jarzabek<sup>5</sup>, D O'Brien<sup>6</sup>, J Prehn<sup>5</sup>, A Jacobs<sup>2</sup>, A Byrne<sup>5</sup>  
(1) Department of Neurosurgery, Beaumont Hospital, Dublin 9, Ireland;  
(2) Department of European Institute of Molecular Imaging (EIMI), Westfälische Wilhelms-Universität Münster, Germany;  
(3) Department of Clinical Radiology, University Hospital Münster, Münster, Germany;  
(4) Department of Epidemiology & Public Health, Royal College of Surgeons in Ireland, Dublin 2, Ireland;  
(5) Department of Physiology & Medical Physics, Royal College of Surgeons in Ireland, Dublin 2, Ireland;  
(6) Department of Neurosurgery, Beaumont Hospital, Dublin 9, Ireland
- 7.30 p.m.** **SIR PETER FREYER BANQUET- RADISSON BLU HOTEL, GALWAY**



**Saturday, 7th September 2013****SESSION 11: GENERAL SESSION**

**Time Allowed:** 7 Minutes Speaking  
3 Minutes Discussion

**Location:** The Máirtín Ó Tnúthail Theatre, AM150 Theatre  
**Chair:** Ms Carmel Malone & Mr Dermot Hehir

**10.00 a.m.** **A Prospective Audit of Surgical Discharge Letters, Are They Fit for Purpose?**

**Paper 81:** D O Keeffe, S Johnston  
Department of General Surgery, Tullamore MRH, Arden Road, Tullamore, Ireland

**10.10 a.m.** **Farm-Related Morbidity and Mortality in the West of Ireland A Single Institution Experience**

**Paper 82:** MC Casey, I Robertson, H Abaza, M Irfan, W Khan, K Barry  
Department of Surgery, Mayo General Hospital, Castlebar, Co Mayo, Ireland

**10.20 a.m.** **A Review of Factors Affecting the Interval from Excision Biopsy to Definitive Surgical Treatment Of Malignant Melanoma in a Tertiary-Referral Centre**

**Paper 83:** MR Boland, GA Bass, Z Al-Hilli, B Meshkat, RS Prichard, B Kirby, K Sheahan, EW McDermott, D Evoy  
Department of Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland

**10.30 a.m.** **Enhanced Recovery after Surgery (ERAS) Initiated in a Colorectal Surgical Unit: A General Hospital Pilot Study**

**Paper 84:** R Irwin, L Quinn, I Robertson, M Duggan, K Barry, R Waldron  
Department of Surgery, Mayo General Hospital, Castlebar, Co Mayo, Ireland

**10.40 a.m.** **Penetrating Stab Injuries At A Single Urban Unit Are We Missing The Point?**

**Paper 85:** N Kharytaniuk<sup>1</sup>, M Twyford<sup>1</sup>, A Salih<sup>1</sup>, E O'Connor<sup>2</sup>, M Arumugasamy<sup>1</sup>, TN Walsh<sup>1</sup>  
(1) Department of General Surgery, Connolly Hospital, Blanchardstown, Dublin 15, Ireland;  
(2) Department of Emergency Department, Connolly Hospital, Blanchardstown, Dublin 15, Ireland

**10.50 a.m.** **Abdominal Rectopexy - Does A Laparoscopic Approach Compare Favourably With An Open Approach?**

**Paper 86:** R Tevlin<sup>1</sup>, A Rogers<sup>1</sup>, A Hanly<sup>1</sup>, D Winter<sup>1</sup>, J Hyland<sup>1</sup>, A Brannigan<sup>2</sup>, R O'Connell<sup>1</sup>  
(1) Department of Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland;  
(2) Department of Surgery, Mater Misericordiae University Hospital, Eccles St, Dublin 7, Ireland

**11.00 a.m.** **Increasing Frequency of Surveillance CT is not Associated with Improved Survival**

**Paper 87:** N Kharytaniuk, A Salih, M Twyford, E O'Connor, M Arumugasamy, TN Walsh  
Department of Surgery, Connolly Hospital, Blanchardstown, Dublin 15

**11.10 a.m.** **Post Operative Complications Following Nodal Dissection and their Association with Melanoma Recurrence**

**Paper 88:** A Ahmed, G Sadadcharam, F Huisma, K Fogarty, M Mushtaque, A Shafiq, P Redmond  
Department of Surgery, University College Cork, Cork University Hospital, Cork, Ireland

**11.20 a.m.** **Prophylactic Use of an Intraperitoneal 3-Dimensional Pre-Shaped Mesh in the Prevention of Parastomal Hernias; A Single Institution Experience**

**Paper 89:** A Ali<sup>1</sup>, Z Al-Hilli<sup>2</sup>, J Hanson<sup>3</sup>, S El-Masry<sup>2</sup>  
(1) Department of General Surgery and Endocrine Oncology Research Group, RCSI and Beaumont Hospital, 31 A York House, York Street, Royal College Of Surgeons, Dublin 2, Ireland;  
(2) Department of Surgery, Our Lady of Lourdes Hospital, Drogheda, Co. Louth, Ireland;  
(3) Department of Radiology, Our Lady of Lourdes Hospital, Drogheda, Co. Louth, Ireland

**11.30 a.m.** **COFFEE**

**SESSION 12: LOWER GI SESSION**

**Time Allowed:** 7 Minutes Speaking  
3 Minutes Discussion

**Location:** The Patrick F Fottrell Theatre, AM200 Theatre  
**Chair:** Mr Michael O'Riordain & Mr Eoghan Condon

- 10.00 a.m.**      **Transanal Endoscopic Microsurgery; A Safe and Effective Treatment for Rectal Neoplasms**  
**Paper 90:**      N Foley<sup>1</sup>, E Andrews<sup>2</sup>, M McCourt<sup>2</sup>  
 (1) Department of Academic Surgery, Cork University Hospital, Wilton, Cork, Ireland;  
 (2) Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 10.10 a.m.**      **A Single Institution Experience of Laparoscopic Ileal-Pouch Anal Anastomosis**  
**Paper 91:**      NM Fearon, C Browne, MC Whelan, D Kavanagh, P Neary  
 Department of Surgery, Tallaght Hospital, Dublin, Ireland
- 10.20 a.m.**      **Colonoscopy on Patients on Anti Coagulants and Anti Platelets**  
**Paper 92:**      N Mayoaran, JT Gavin, M Joyce  
 Department of Surgery, University College Hospital Galway, Ireland
- 10.30 a.m.**      **The Mesocolon A Histological Characterisation of the Mesenteric Attachment of the Colon**  
**Paper 93:**      K Culligan<sup>1</sup>, S Walsh<sup>1</sup>, C Dunne<sup>1</sup>, MI Walsh<sup>2</sup>, F Remzi<sup>3</sup>, S Ryan<sup>4</sup>, F Quondamatteo<sup>4</sup>, P Dockery<sup>4</sup>, C Coffey<sup>1</sup>  
 (1) Department of Surgery, Graduate Entry Medical School, University of Limerick, Limerick, Ireland;  
 (2) Department of Materials and Surface Science Institute, University of Limerick, Limerick, Ireland;  
 (3) Department of Colorectal Surgery, The Cleveland Clinic, Cleveland, Ohio, USA;  
 (4) Department of Anatomy Unit, School of Medicine, NUI Galway, Galway, Ireland
- 10.40 a.m.**      **Volumetric Fat Ratio and Not Body Mass Index is Predictive of Ileocelectomy Outcomes in Crohn's Disease Patients**  
**Paper 94:**      T Connelly<sup>1</sup>, R Juz<sup>2</sup>, R Sehgal<sup>1</sup>, R Tappouni<sup>3</sup>, S Deiling<sup>1</sup>, D Brinton<sup>1</sup>, E Messaris<sup>1</sup>  
 (1) Department of Division of Colon and Rectal Surgery, Hershey Medical Center, Penn State College of Medicine, Hershey, PA, 17033, USA;  
 (2) Department of Surgery, Hershey Medical Center, Penn State College of Medicine, Hershey, PA, USA;  
 (3) Department of Radiology, Hershey Medical Center, Penn State College of Medicine, Hershey, PA, USA
- 10.50 a.m.**      **Circulating and Tissue Levels of Mir-504 in Colorectal and Breast Cancer**  
**Paper 95:**      N Hogan, S Khan, QTT Huong, C Brogham, MR Joyce, MJ Kerin, RM Dwyer  
 Discipline of Surgery, National University of Ireland, Clinical Science Institute, Galway, Ireland
- 11.00 a.m.**      **Yield of Full Colonoscopy in Patients with Bleeding Per Rectum**  
**Paper 96:**      MU Rashid, NDM Farouk, N Couse  
 Department of General Surgery, Letterkenny General Hospital, Letterkenny, Co. Donegal, Ireland
- 11.10 a.m.**      **Surgical Management of Colorectal Lung Metastases: A Case Series in the West of Ireland**  
**Paper 97:**      C Clancy, M DaCosta, D Veerasingam  
 West of Ireland Cardiothoracic Surgery Unit, University College Hospital Galway, Newcastle Road, Galway, Ireland
- 11.20 a.m.**      **Fibroblasts and Their Precursors can be Generated from Mesocolic Mesothelium Implications for Intraperitoneal Fibrotic Diseases**  
**Paper 98:**      S Sahebally<sup>1</sup>, M Kiernan<sup>1</sup>, J Burke<sup>2</sup>, S Walsh<sup>2</sup>, C Dunne<sup>1</sup>, P Kiely<sup>3</sup>, C Coffey<sup>2</sup>  
 (1) Department of 4i Centre for Interventions in Inflammation, Infection and Immunity, GEMS, University of Limerick, Castletroy, Limerick, Ireland;  
 (2) Department of Surgery, University Hospital Limerick, Dooradoyle Road, Limerick, Ireland;  
 (3) Department of Life Sciences and Biology, University of Limerick, Castletroy, Limerick, Ireland
- 11.30 a.m.**      **COFFEE**

### **SESSION 13: TRAINING AND EDUCATION SESSION**

**Time Allowed:**    **7 Minutes Speaking**  
**3 Minutes Discussion**  
**Location:**        **The Colm Ó hEocha Theatre, AM250 Theatre**  
**Chair:**            **Professor Oscar Traynor & Mr Karl Sweeney**

**10.00 a.m.**      **A Time Use Diary Study of Surgical Interns**  
**Paper 99:**      B Moloney, P O' Connor, D Byrne, MJ Kerin  
 Department of Department of General Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland



- 10.10 a.m.**      **Impact of Emergency Department Closures and Centralization of Acute Surgical Services on Patient Mortality**  
**Paper 100:** D Wijewardene<sup>1</sup>, D Healy<sup>1</sup>, M Flahive<sup>2</sup>, S Walsh<sup>1</sup>  
 (1) Department of General Surgery, Mid Western Regional University Hospital, Dooradoyle, Limerick, Ireland;  
 (2) Department of Physiotherapy, Mid Western Regional University Hospital, Dooradoyle, Limerick, Ireland
- 10.20 a.m.**      **Laparoscopic Cholecystectomy in the Acute and Elective Setting: An Assessment of Trainee Operating Patterns**  
**Paper 101:** S Francis, J Bolger, ADK Hill  
 Department of Surgery, RCSI, 123 St Stephen's Green, Dublin 2, Ireland
- 10.30 a.m.**      **Higher Surgical Training Opportunities in the General Hospital Setting; Getting the Balance Right**  
**Paper 102:** I Robertson<sup>1</sup>, O Traynor<sup>2</sup>, W Khan<sup>1</sup>, K Barry<sup>1</sup>  
 (1) Department of Surgery, Mayo General Hospital, Castlebar, Co Mayo, Ireland;  
 (2) Department of National Surgical Training Centre, Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2, Ireland
- 10.40 a.m.**      **An Audit into the Knowledge and Practice of Junior Doctors in the Consent Process**  
**Paper 103:** T McVeigh<sup>1</sup>, D Byrne<sup>2</sup>, O McWeeney<sup>2</sup>, P O'Connor<sup>2</sup>, M Kerin<sup>1</sup>  
 (1) Department of Surgery, Galway University Hospital, Galway, Ireland;  
 (2) School of Medicine, National University of Ireland Galway, Galway, Ireland
- 10.50 a.m.**      **Competency in Scrotal Examination - Survey of Newly Qualified Doctors**  
**Paper 104:** N Kelly, J Forde, S Giri, H Flood  
 Department of Urology, Limerick University Hospital, Dooradoyle, Limerick, Ireland
- 11.00 a.m.**      **Factors Affecting Irish Medical Students' Attitudes Towards, And Awareness of Research Opportunities**  
**Paper 105:** S Duignan, H Mohan, D Winters  
 Department of Colorectal Surgery, SVUH, Elm Park, Dublin 4, Ireland
- 11.10 a.m.**      **Macrophage Polarisation**  
**Paper 106:** N Foley, JH Wang, HP Redmond  
 Department of Academic Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 11.20 a.m.**      **Objective Measurement of Knot Tying Skills Using Motion Tracking System**  
**Paper 107:** S Shaharan, R Sekhon, D Ryan, P Neary  
 Department of Surgical Affairs, RCSI, 121 St Stephen's Green, Dublin 2, Ireland
- 11.30 a.m.**      **COFFEE**

#### **SESSION 14: ORTHOPAEDIC II SESSION**

**Time Allowed:** 7 Minutes Speaking  
 3 Minutes Discussion  
**Location:** The Siobhan McKenna Theatre  
**Chair:** Mr F Shannon & Mr Stephen Kearns

- 10.00 a.m.**      **An In Vivo Study of Bioactive Multilayered Scaffolds for Regeneration and Repair of Osteochondral Defects**  
**Paper 108:** A Ramesh<sup>1</sup>, T Levingstone<sup>2</sup>, J Gleeson<sup>2</sup>, J O'Byrne<sup>3</sup>, F O'Brien<sup>4</sup>  
 (1) Department of Anatomy, RCSI, Dept. of Anatomy, 123, St. Stephens Green, Dublin 2, Ireland;  
 (2) Department of Tissue Engineering, RCSI, 123, St. Stephens' Green, Dublin 2, Ireland;  
 (3) Department of Orthopaedics, Cappagh, Dublin, Ireland;  
 (4) Department of Bioengineering, Trinity College Dublin, TCD, Dublin, Ireland
- 10.10 a.m.**      **Can The Sound of Hammering Objectively Predict Micro-Fracture In Bones? A Study on Animal Bone**  
**Paper 109:** A Abdulkarim<sup>1</sup>, A Elsibaei<sup>2</sup>, B Jackson<sup>3</sup>, D Riordan<sup>3</sup>, J Rice<sup>2</sup>  
 (1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;  
 (2) Department of Trauma and Orthopaedics, Kerry General Hospital, Ireland;  
 (3) Department of Sound Engineering, Institute of Technology, Tralee, Ireland

- 10.20 a.m.**      **Mimicking Developmental Bone Formation As a Strategy to Enhance Tissue Engineered Collagen-Based Scaffolds for Bone Repair**  
**Paper 110:** E Thompson<sup>1</sup>, A Matsiko<sup>1</sup>, J Gleeson<sup>1</sup>, D Kelly<sup>2</sup>, F O'Brien<sup>1</sup>  
(1) Department of Anatomy, Tissue Engineering, RCSI, 123 St Stephens Green, Dublin 2, Ireland;  
(2) Department of Trinity Centre for Bioengineering, TCD, 152-160 Pearse Street, Dublin 2, Ireland
- 10.30 a.m.**      **The Morphological Characteristics of the Lumbar Pedicle in the Osteoporotic and Aging Spine**  
**Paper 111:** D Dalton, M Jadaan, JP McCabe  
Department of Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland
- 10.40 a.m.**      **Financial and Economic Implications for Being the National Referral Centre for The Management of Pelvic and Acetabular Fractures in Ireland**  
**Paper 112:** M Kelly, M Leonard, C Green, J Mc Elwain, S Morris  
Department of Orthopaedics, Adelaide and Meath Hospital, Tallaght, Dublin, Ireland
- 10.50 a.m.**      **Knee Extensor Disruption; Under- Diagnosed Cause of Gait Deterioration in Cerebral Palsy Diplegia**  
**Paper 113:** Y Elhassan, R O'Sullivan, D Kiernan, J Rossiter, M Walsh, T O'Brien  
Department of Gait Laboratory, Central Remedial Clinic, Vernon Avenue, Clontarf, Dublin 3, Ireland
- 11.00 a.m.**      **Cemented versus Uncemented fixation in Total Hip Replacement: A Systematic Review & Meta-Analysis**  
**Paper 114:** A Abdulkarim<sup>1</sup>, P Ellanti<sup>2</sup>, N Motterlini<sup>3</sup>, T Fahey<sup>3</sup>, JM O'Byrne<sup>4</sup>  
(1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;  
(2) Department of Trauma and orthopaedics, AMNCH, Ireland;  
(3) Department of Medical, Health Research Board, Ireland;  
(4) Department of Orthopaedic Surgery, RCSI, Ireland
- 11.10 a.m.**      **A Single Surgeons Experience with the Recalled Asr Hip System**  
**Paper 115:** M Curtin, M O'Sullivan, W Curtin  
Department of Trauma and Orthopaedic Surgery, UCHG, Newcastle Road, Galway, Ireland
- 11.20 a.m.**      **The Use of Weight Relieving Shoes in Forefoot Surgery**  
**Paper 116:** A Abdulkarim<sup>1</sup>, A Ismaeel<sup>2</sup>, R Stack<sup>3</sup>, G Mohamed<sup>2</sup>, L D'Souza<sup>2</sup>  
(1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;  
(2) Department of Trauma and Orthopaedics, Mid Western Regional Hospital, Limerick, Ireland;  
(3) Department of Physical Therapy, Mid Western Regional Hospital, Limerick, Ireland

**11.30 a.m.**      **COFFEE**

**SESSION 15: 'PUBLISH OR PERISH'**

**Location:**      **The Colm Ó hEocha Theatre - AM250 Theatre**

**Chair:**          **Professor Michael Kerin**

**12.00 p.m.**      **What Should Surgeons Write?**  
**Professor Ronan O'Connell**  
**Professor of Surgery**  
**University College Dublin and St Vincent's University Hospital**

**12.10 p.m.**      **How to Write a Paper?**  
**Professor Kevin Conlon**  
**Professor of Surgery**  
**Trinity College Dublin and Adelaide and Meath Hospital**

**12.20 p.m.**      **Irish Contribution to the Surgical Literature – Bright Past, Better Future**  
**Professor Arnold Hill**  
**Professor of Surgery**  
**RCSI and Beaumont Hospital**

**12.30 p.m.**      **Surgical Clinical Trials**  
**Professor Stewart Walsh**  
**University of Limerick**

**12.40 p.m.**      **Discussion**

**1.00 p.m.**      **STATE OF THE ART LECTURE**  
**Speaker: Professor Patrick Broe**  
**Topic: Irish Surgery: The Need for Vision and Leadership**  
**Location: The Colm Ó hEocha Theatre - AM250 Theatre**

### **POSTER ASSESSMENT**

**Chair: Professor Ronan O’Connell, Mr Myles Joyce, Mr Kevin Barry, Professor Eilís McGovern**

#### **BREAST**

##### **1. Symptomatic Breast: How Does Breast Cancer Present; Symptoms And Clues To Diagnosis**

A Ahmed, C Malone, K Sweeney, K Barry, MJ Kerin, R McLaughlin  
 Department of Surgery, NUI Galway and Galway University Hospital, Galway, Ireland

##### **2. Beaumont Hospital Breast MDM Decision versus Treatment Received; Are We Concordant?**

N Elsafty<sup>1</sup>, NE Al Sayed<sup>1</sup>, AA Dhanhani<sup>1</sup>, M Hussain<sup>1</sup>, D Joyce<sup>1</sup>, A Lowery<sup>1</sup>, ADK Hill<sup>2</sup>  
 (1) Department of Breast Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland;  
 (2) Department of Surgery, Royal College of Surgeons Ireland, 123, St. Stephen’s Green, Dublin 2, Ireland

##### **3. The Feasibility of Breast Conserving Surgery in Patients with Large Primary Breast Tumours**

C Sugrue, P Waters, C Malone, K Sweeney, R McLaughlin, M Kerin  
 Discipline of Surgery, NUIG, Newcastle Rd, Galway, Ireland

##### **4. The Role of Ultrasound Guided Core Biopsy of Axillary Nodes in Predicting Macrometastases and Avoiding Overtreatment outside Z11 Parameters**

J YI Ting<sup>1</sup>, M Sugrue<sup>1</sup>, K McGowan<sup>1</sup>, S Curran<sup>1</sup>, G Cooley<sup>2</sup>, R Mclaughlin<sup>2</sup>  
 (1) Department of Breast Surgery Letterkenny, Donegal Clinical Research Academy, Letterkenny, Donegal, Ireland;  
 (2) Department of Breast Surgery, Galway University Hospitals, Galway, Ireland

##### **5. Oncological Safety of Nipple and Skin Sparing Mastectomy versus Conventional Mastectomy**

L Kilbane, P Waters, D Wall, MJ Kerin  
 Discipline of Surgery, NUIG, Newcastle Rd, Galway, Ireland

##### **6. The Evolving Role of Staging Axillary Ultrasound for Breast Cancer in the Z0011 Era**

M O’Sullivan<sup>2</sup>, PA Cronin<sup>2</sup>, C Malone<sup>1</sup>, R McLaughlin<sup>2</sup>, MJ Kerin<sup>1</sup>, KJ Sweeney<sup>2</sup>  
 (1) Department of Surgery, Clinical Science Institute, NUI Galway, Galway, Ireland;  
 (2) Department of Surgery, BreastCheck Western Unit and Symptomatic Breast Services, University Hospital Galway, Ireland

##### **7. Pathological Response in the Axilla following Neoadjuvant Chemotherapy In Breast Cancer**

LC Yap<sup>1</sup>, Z Al-Hilli<sup>1</sup>, E Francis<sup>1</sup>, B Meshkat<sup>1</sup>, J Rothwell<sup>1</sup>, D Evoy<sup>1</sup>, J Geraghty<sup>1</sup>, R Prichard<sup>1</sup>, C Quinn<sup>2</sup>, A O’Doherty<sup>3</sup>, E Mc Dermott<sup>1</sup>  
 (1) Department of Breast Surgery, St Vincent’s University Healthcare Group, Elm Park, Dublin 4, Ireland;  
 (2) Department of Pathology, St Vincent’s University Healthcare Group, Elm Park, Dublin 4, Ireland;  
 (3) Department of Radiology, St Vincent’s University Healthcare Group, Elm Park, Dublin 4, Ireland

##### **8. Management of Involved Anterior Margins Following Breast Conserving Surgery**

C Cheung<sup>1</sup>, Z Al Hilli<sup>1</sup>, J Rothwell<sup>1</sup>, J Geraghty<sup>1</sup>, D Evoy<sup>1</sup>, C Quinn<sup>2</sup>, A O’Doherty<sup>3</sup>, E Mc Dermott<sup>1</sup>, R Prichard<sup>1</sup>  
 (1) Department of Surgery, St Vincent’s Hospital, Elm Park, Dublin 4, Ireland;  
 (2) Department of School of Medicine & Medical Science, St. Vincent’s Hospital, Elm Park, Dublin 4, Ireland;  
 (3) Department of Radiology, St. Vincent’s Hospital, Elm Park, Dublin 4, Ireland

##### **9. Contrast Enhanced Digital Mammography in Breast Cancer A Single Centre Experience**

A McGuire, N Relihan, P O’Leary, P Redmond  
 Department of Surgery, CUH, Wilton, Cork, Ireland

**10. Assessing the Factors Contributing to the Presentation of Women within the Screening Age to Symptomatic Breast Clinics**

W Al Zawad<sup>1</sup>, J Bolger<sup>2</sup>, S Rajendran<sup>2</sup>, T Roche<sup>2</sup>, A Lowery<sup>2</sup>, A Hill<sup>2</sup>

(1) Department of Medicine, RCSI, 123 St Stephens Green, Dublin 2, Ireland;

(2) Department of Surgery, Beaumont Hospital, Beaumont, Dublin 9, Ireland

**11. Assessing the Accuracy of Pre-Operative Breast Cancer Imaging in the South Eastern Cancer Centre**

J Corcoran, U Akhtar, CF Castinieria, G O'Donoghue

Department of Breast and General Surgery, South Eastern Cancer Centre, Waterford Hospital, Waterford City, Ireland

**12. Snapshot of a Cancer Centre**

MP Murphy, S Hennessy, E Hennessy, R Tully, G Cooley, M Cox, TP McVeigh, MJ Kerin

Discipline of Surgery, Clinical Science Institute, NUI Galway, Galway, Ireland

**13. Surgical Site Infection in Breast Cancer Resection: Analysis of the At-Risk Population, Treatment and Prevention Strategies**

E Keane, E Connolly

Department of General Surgery, St James Hospital, James Street, Dublin, Ireland

**14. The Influence of Intrinsic Subtype on Survival in Breast Cancer**

J Walsh, A McDermott, P Waters, C Malone, K Sweeney, R McLaughlin, MJ Kerin

Department of Surgery, NUI Galway, Newcastle Road, Galway, Ireland

**ENDOCRINE****15. A Review of Surgical Management of Primary Hyperparathyroidism. Is Parathyroidectomy Always Enough?**

S Ryan<sup>1</sup>, D Courtney<sup>2</sup>, Conrad Timon<sup>1,2</sup>

(1) Departments of Otolaryngology, Royal Victoria Eye and Ear Hospital

(2) St James's University Hospital, Dublin, Ireland

**GENERAL****16. The Audit of Surgical Antibiotics Prophylaxis; A Scope on our Practice?**

H Shabana<sup>1</sup>, J O'Keeffe<sup>4</sup>, F Ryan<sup>3</sup>, O Murphy<sup>2</sup>, C O'Boyle<sup>1</sup>

(1) Department of Surgery, Bon Secours Hospital, Cork, Ireland;

(2) Microbiology Department, Bon Secours Hospital, Cork, Ireland;

(3) Pharmacy, Bon Secours Hospital, Cork, Ireland;

(4) Best Practice Department, Bon Secours Hospital, Cork, Ireland

**17. The Effect of Surgeons Attire on Trust And Confidence: An Analysis of Patient Perception in a Surgical Outpatient Setting**

A Salih<sup>1</sup>, T McHugh<sup>2</sup>, B Meshkat<sup>1</sup>, JU Choi<sup>3</sup>, S McHugh<sup>3</sup>, H Prins<sup>1</sup>

(1) Department of Surgery, Connolly Memorial Hospital, Blanchardstown, Dublin 15, Ireland;

(2) Department of School of Medicine, Trinity College Dublin, Pearse St, Dublin 2, Ireland;

(3) Department of Surgery, RCSI, 123 St Stephens Green, NA, Ireland

**18. Is Icd-10 Coding Done By NCHDs Any Better Than Flipping A Coin?**

S Murphy, L Lenihan, C Collins

Department of Surgery, Portiuncula Hospital, Ballinasloe, Co. Galway, Ireland

**19. Improving Communication between Hospital and GP Practices Using A New Electronic Discharge Summary**

L Lenihan, S Murphy, C Collins

Department of Surgery, Portiuncula Hospital, Ballinasloe, Galway, Ireland

**20. The Road Map to Better Performance? Care Pathways as an Educational Tool during Surgical Internship**

A Ahmed, G Sadadcharam, E Andrews

Department of Surgery, University College Cork, Cork University Hospital, Cork, Ireland

**21. Appendiceal Length Predicts Risk Of Perforation In Appendicitis – Does Size Matter?**

GA Bass, RSR Woods, MEIDin Babiker, TN Walsh

Department of Surgery, RCSI Connolly Hospital, Blanchardstown, Dublin, Ireland

**22. A Quality Assurance Audit On The Fluid Administration In Surgical Patients In Intensive Care Based on The Revised British Consensus Guidelines**

R Dunne<sup>1</sup>, C Hawrylyshyn<sup>1</sup>, WP Joyce<sup>2</sup>

(1) Department of Undergraduate School of Medicine, Royal College of Surgeons in Ireland, 123, St. Stephens Green, Dublin 2, Ireland;

(2) Department of Colorectal and Vascular Surgery, Galway Clinic, Doughiska, Co. Galway, Ireland

**23. Impact of Electronic Discharge Prescriptions on Accuracy of Discharge Prescribing In Surgical Patients**S Murphy<sup>1</sup>, L Lenihan<sup>1</sup>, G Colohan<sup>2</sup>, C Collins<sup>1</sup>

(1) Department of Surgery, Portiuncula Hospital, Ballinasloe, Co. Galway, Ireland;

(2) Department of Pharmacy, Portiuncula Hospital, Ballinasloe, Co. Galway, Ireland

**24. Head Injury on Warfarinised Patients, Can We Predict The Bleed?**N Mayoaran<sup>1</sup>, S Fong, A Olushola, S Gorman<sup>2</sup>

(1) Department of Surgery, Letterkenny General Hospital, Donegal, Ireland;

(2) Emergency Department, Letterkenny General Hospital, Donegal, Ireland<sup>2</sup>**LOWER GI****25. Early Removal of Urethral Catheter in Patients Undergoing Colorectal Surgery with Epidural Analgesia – A Single-Centre Prospective Randomised Controlled Clinical Trial**

D Coyle, K Joyce, JT Garvin, M Regan, OJ McAnena, P Neary, MR Joyce

Department of Colorectal Surgery, University Hospital Galway, Newcastle, Galway, Ireland

**ORTHOPAEDICS****Vascular Injuries Associated With Traumatic Bone Injuries**A Abdulkarim<sup>1</sup>, FJ Fleming<sup>2</sup>, PA Grace<sup>2</sup>, T Burke<sup>3</sup>

(1) Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland;

(2) Department of Vascular Surgery, Mid Western Regional Hospital, Limerick, Ireland;

(3) Department of Trauma and Orthopaedics, Mid Western Regional Hospital, Limerick, Ireland

**27. Functional Outcomes Following Total Wrist Arthrodesis**

M Hennessy, C Quinlan, P Fleming

Department of Orthopaedic Surgery, Cork University Hospital, Wilton, Cork, Ireland

**28. An Alternative Method for Predicting Component Sizes in Total Knee Arthroplasty**

A Abdulkarim, S Brady, K Ryan, S Chibuike, A Amin, M Donnelly, S Dudeney

Department of Orthopaedic Surgery, Cappagh Orthopaedic Hospital, Dublin 11, Dublin, Ireland

**29. Early Results of The Use of Collagenase in The Treatment Of Dupuytren's Contracture**S Considine<sup>1</sup>, KM Hirpara<sup>2</sup>

(1) Department of Orthopaedic Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland;

(2) Department of Orthopaedics, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland

**30. Periprosthetic Fracture after Lower Limb Arthroplasty**

M Harris, C Quinlan, S Guerin, R Gul, JA Harty

Department of Orthopaedics, Cork University Hospital, Wilton, Cork

**PLASTICS****31. Merkel Cell Carcinoma in a Tertiary Referral Centre a 12 Year Experience**

SA Sallihudin, N McInerney, J O'Sullivan, D Jones, A Hussey, P Regan, J Kelly

Department of Plastic Surgery, Galway University Hospital, Newcastle Road, Galway, Ireland

**TRAINING AND EDUCATION****32. Objective Measurement of Knot Tying Skills Using Motion Tracking System**

S Shaharan, R Sekhon, D Ryan, P Neary

Department of Surgical Affairs, RCSI, 121 St Stephen's Green, Dublin 2, Ireland

**33. Audit of Documentation Errors and Adherence to Safe Practice during Rapid Sequence Intubation in the Emergency Department**D Wijewardene<sup>1</sup>, M Flahive<sup>2</sup>, A Lal<sup>1</sup>, JC Coffey<sup>1</sup>, G Quinn<sup>2</sup>, D Ryan<sup>2</sup>, F Cummins<sup>2</sup>

(1) Department of General Surgery, Mid Western Regional University Hospital, Dooradoyle, Limerick, Ireland;

(2) Department of Emergency Medicine, Mid Western Regional University Hospital, Dooradoyle, Limerick, Ireland

**34. Improving Surgical Site Infection Prevention Practices through A Multifaceted Educational Intervention**P Owens<sup>1</sup>, S McHugh<sup>2</sup>, M Clarke-Moloney<sup>2</sup>, D Healy<sup>2</sup>, F Fitzpatrick<sup>3</sup>, P McCormick<sup>4</sup>, E Kavanagh<sup>2</sup>, S Walsh<sup>2</sup>

(1) Department of Post-graduate School of Medicine, University of Limerick, Castletroy, Limerick, Ireland;

(2) Department of Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland;

(3) Department of Health Protection Surveillance Centre, Dublin 1, Ireland;

(4) Department of Surgery, Adelaide and Meath National Childrens Hospital, Tallaght, Dublin 24, Ireland

**35. What of The Future - The Motivations And Concerns Of Teenagers Interested In Pursuing A Medical Career**N Foley<sup>1</sup>, BT Maher<sup>2</sup>, M Corrigan<sup>3</sup>

- (1) Department of Academic Surgery, Cork University Hospital, Wilton, Cork, Ireland;  
 (2) Department of School of Medicine, University College Cork, College Road, Cork, Ireland;  
 (3) Department of Breast Surgery, Cork University Hospital, Wilton, Cork, Ireland

**UPPER GI****36. Prophylactic Gastrectomy For CDH-1 Mutation: Family History And Timing Of Resection**B Cotter, DE Kearney, MW Bennett, DG Power, TJ Murphy  
Department of Upper GI Surgery, Mercy University Hospital, Cork, Ireland**UROLOGY****37. Prophylactic Antibiotics in the Prevention of Sepsis following Transrectal Ultrasound-Guided Biopsy of The Prostate: Closing the Audit Loop**S King, B Kelly, E Rogers, G Durkan, K Walsh  
Department of Urology, University Hospital Galway, Newcastle, Galway, Ireland**38. Renal Cell Carcinoma (RCC) - Two Decades of Analysis in a Tertiary Referral Hospital: 1995-2012**A Looney, G Nason, B McGuire, M Kelly, T Murphy, D Byrne, D Mulvin, D Galvin, D Quinlan, G Lennon  
Department of Urology, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland**39. The Effectiveness of Transperineal Template Guided Mapping Biopsy Compared to Transrectal Ultrasound Guided Biopsy in Detecting Prostate Cancer**R Dunne<sup>1</sup>, M Samra<sup>2</sup>, F Sullivan<sup>2</sup>, D Bouchier Hayes<sup>3</sup>  

(1) Department of Undergraduate School of Medicine, Royal College of Surgeons in Ireland, Doughiska, Galway, Ireland;  
 (2) Department of Radiation Oncology, Galway Clinic, Doughiska, Galway, Ireland;  
 (3) Department of Urology, Galway Clinic, Doughiska, Galway, Ireland

**40. Male Periurethral Sling Post Radical Prostatectomy**EM Bolton, LM Smyth, AL Walsh, PE Lonergan, FT Darc, TH Lynch  
Department of Urology, St. James's Hospital, James's Street, Dublin 8**41. Zero Ischaemia Laparoscopic Partial Nephrectomy for Clinical Tumour Stage 1 (Ct1) Renal Tumours**PE Lonergan, EM Bolton, F D'Arcy, AZ Thomas, TH Lynch  
Department of Urology, St. James's Hospital, James's Street, Dublin 8**42. Minimally Invasive Pyeloplasty is Facilitated by Use of Robotic Surgery and Barbed Suture**D Bouchier Hayes  
Department of Urology, Galway Clinic, Doughiska, Galway, Ireland**43. Paediatric Scrotal Exploration For Acute Scrotal Pain- A Decade of Experience In Two Tertiary Referral Centre**A Looney<sup>1</sup>, G Nason<sup>2</sup>, F Tareen<sup>2</sup>, D McLoughlin<sup>2</sup>, D McDowell<sup>2</sup>, F Cianci<sup>2</sup>, A Mortell<sup>2</sup>  

(1) Department of Urology, St Vincent's University Hosp, Elm Park, Dublin 4, Ireland;  
 (2) Department of Paediatric Surgery and Urology, Our Lady's Hospital for Sick Children, Crumlin, Dublin 12, Ireland

**VASCULAR****44. Systematic Review of Endovenous Laser Therapy versus Surgery for The Treatment of Great Saphenous Varicose Veins**N Lynch<sup>1</sup>, G Fulton<sup>1</sup>, M Clarke<sup>2</sup>  

(1) Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland;  
 (2) Department of Postgraduate research, RCSI, St Stephens Green, Dublin, Ireland

**45. Thromboprophylaxis Amongst Surgically Admitted Patients in a Tertiary Referral Centre, Are We Getting It Right? A Comparison with International Guidelines**R Hurley, R Piggott, P Water, MJ Kerin  
Discipline of Surgery, NUIG, Newcastle Rd, Galway, Ireland**46. Endovenous Radiofrequency Ablation: No Value In Short Term Duplex Ultrasound Follow Up**M Broe, F Shaikh, A Leahy  
Department of Vascular Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland

**47. Determining the Mechanical Characteristics of Intraluminal Thrombus in Patients Undergoing Abdominal Aortic Aneurysm Surgery**

C Power<sup>1</sup>, S O'Leary<sup>2</sup>, D Healy<sup>3</sup>, P Coyle<sup>3</sup>, S McHugh<sup>3</sup>, S Walsh<sup>3</sup>, E Kavanagh<sup>3</sup>, P Grace<sup>3</sup>, B Doyle<sup>2</sup>, T McGloughlin<sup>2</sup>

(1) Department of Graduate Entry Medicine, University of Limerick, Ireland;

(2) Department of Applied Biomedical Engineering Research, University of Limerick, Ireland;

(3) Department of Surgery, Mid-Western Regional Hospital, Limerick, Ireland

**48. Diagnostic Accuracy of Non-Radiologist Performed Ultrasound for Abdominal Aortic Aneurysm**

E Concannon, S Mc Hugh, D Healy, E Kavanagh, P Burke, M Clarke-Moloney, S Walsh

Department of Vascular Surgery, Mid Western Regional Hospital, Dooradoyle, Limerick, Ireland

**49. Pharmacomechanical Thrombectomy of I.V.C Thrombosis With The Trellis-8 Isolated Thrombolysis Catheter, A Case Report and Review of the Literature**

O Mohamed, P Neary, G O'Sullivan, M Regan

Department of Surgery, Galway University Hospital, Galway, Ireland

**50. Endarterectomy vs. Stenting for Carotid Stenosis – A Quality Assessment of Online Information Available to Patients**

C Keogh<sup>1</sup>, SM McHugh<sup>2</sup>, PE Burke<sup>2</sup>, M Clarke Moloney<sup>2</sup>, EG Kavanagh<sup>2</sup>, PA Grace<sup>2</sup>, SR Walsh<sup>2</sup>

(1) Department of Graduate Entry Medical School (GEMS), University of Limerick, Castletroy, Limerick, Ireland;

(2) Department of Vascular Surgery, University Hospital Limerick (UHL), Dooradoyle, Limerick, Ireland



## SESSION 1: UPPER GI SESSION

### 1. Targeting Therapy for Esophageal Cancer in Patients Aged 70 and Over

H Furlong<sup>1</sup>, GA Bass<sup>1</sup>, O Breathnach<sup>2</sup>, BP O'Neill<sup>3</sup>, E Leen<sup>4</sup>, TN Walsh<sup>1</sup>

(1) Department of RCSI Academic Dept of Surgery, Connolly Hospital, Blanchardstown, Dublin 15, Ireland; (2) Department of Medical Oncology, Beaumont Hospital, Dublin, Ireland; (3) Department of St Luke's Radiation Oncology Network, Beaumont Hospital, Dublin, Ireland; (4) Department of Pathology, Connolly Hospital, Blanchardstown, Dublin 15, Ireland

**Introduction:** Elderly patients with cancer are under-represented in randomized trials. Oesophageal cancer-management in the elderly is challenging because of morbidity and mortality associated with surgery.

**Aim:** We examined a strategy of neo-adjuvant chemo-radiotherapy (naCRT), followed by surgery or surveillance, in selected patients with cancer aged 70 and older.

**Methods:** We identified 56 consecutive patients over a 90-month period, who were aged 70 years and over, presented with oesophageal carcinoma and were treated with neo-adjuvant CRT (naCRT) ± surgery.

**Results:** Of 129 eligible patients, 66 (51 %) received palliative measures, while 63 (49 %) had curative intervention—7 had surgery and 56 had naCRT ± surgery. Of these 56 patients, 33 (59 %) had adenocarcinoma and 23 (41 %) had squamous cell carcinoma. Twenty five (45 %) had a complete clinical response (cCR), of which 6 had immediate resection; 4 (67 %) had a complete pathological response (pCR); 19 patients with cCR declined or were unfit for primary surgery and underwent surveillance; of these, 3 had interval esophagectomy; 16 were not offered or declined resection. Eight (50 %) survived ≥3 years. Mean overall survival was 28 months for the entire cohort; 47 months for cCRs; 61 months for patients undergoing primary resection, 46 months for cCRs who did not undergo resection and 29 months for those undergoing interval resection. In cCRs, surgery did not provide a survival advantage ( $p = 0.861$ ).

**Conclusion:** cCR yields an overall 3-year survival of 50 % without operation. As 45 % of patients have a cCR to naCRT, obligatory resection in high-risk cCR patients makes little sense. With the option for salvage esophagectomy in re-emergent disease, this strategy is an attractive alternative for elderly patients with cancer.

### 2. Alcohol an Increasing Factor in Young Patients with Pancreatitis

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**Introduction:** Traditionally, the predominant causes of acute pancreatitis (AP) in young adults are biliary and genetic events. Admission rates for AP are increasing, with alcohol frequently noted as an

aetiological factor. Little data exists, defining whether this trend has altered the hospital course for young patients.

**Aim:** To assess the role of alcohol use in young patients presenting with AP.

**Methods:** A retrospective chart review of prospective databases from two tertiary HPB specialist centres was conducted of patients < 30 - years admitted between January 2005 and June 2012. Clinical, demographic and aetiological data were collected. Chi squared and Mann–Whitney U test were performed for statistical evaluation.

**Results:** 104 patients under the age of 30 were admitted (Mean age  $23 \pm 4$  years; Female 61 %). The predominant aetiologies were gallstones (34 %), alcohol (25 %), and idiopathic (24 %). Length of hospital stay was  $6 \pm 5$  days. 10 patients required nutritional support. There were no deaths. 30 (86 %) patients with biliary pancreatitis underwent a cholecystectomy. There was a significant association between male gender and alcohol etiology ( $p = 0.008$ ), and lack of attendance at surgical follow up ( $p = 0.04$ ). There was a significant association between gallstones and female gender ( $<0.001$ ). Eleven patients presented with multiple admissions; the predominant etiology being alcohol.

**Conclusion:** Alcohol is a significant aetiological factor for AP in this young patient population. A pattern of recurrent admissions and failure to attend follow-up in young males is worrisome. This identifies a major public health issue and should be factored in determining future care pathways and resource allocation for AP.

### 3. Cholelithiasis and the Clinical History: Comparison of the 6Fs Mnemonic with Radiological Findings

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**Introduction:** The time-honored mnemonic of “5Fs” is a reminder to students that patients with upper abdominal pain and who conform to a profile of “fair, fat, female, fertile and forty” are likely to have cholelithiasis. We feel, however, that a most important “F” that for “family history” is overlooked and should be introduced to enhance the value of a useful aide memoire.

**Aim:** Assess the usefulness of each of the factors of a popular mnemonic. **Methods:** Patients admitted with upper abdominal pain between March 2009 and April 2010 were studied. The clinical features of patients presenting with upper abdominal pain features expressed in the cholelithiasis mnemonic and sonographic evidence of cholelithiasis were compared with those of patients without.

**Results:** In the cholelithiasis group there were significantly more patients who were female [150/198 (75.8 %) vs 111/200 (55.5 %),  $p < 0.001$ ], fair [144/198 (62.9 %) vs 54/200 (32.1 %), ( $p < 0.001$ )], fertile [135/198 (68.2 %) vs. 50/200 (25 %)( $p < 0.001$ )] and had a BMI > 30 [56/198 (28.3 %) vs 19/200 (9.5 %)( $p < 0.001$ )] compared with controls; but age over 40 years did not predict cholelithiasis [82/198 (41.4 %) vs 79/200 (39.5 %)( $p = 0.697$ )]. In the cholelithiasis group, 78/198 (39.4 %) had a family history in at least 1 first-degree relative, compared with 27/200 (13.5 %) of controls ( $p < 0.001$ ). Where phenotypic elements of the history existed in combination, that patient was found to be at an increased risk of cholelithiasis.

**Conclusion:** Good history-taking, with the aid of validated mnemonics, retains a central role in clinical diagnosis. In approaching patients suspected of cholelithiasis, the factor “familial”, however, should be substituted for “forty” in the students’ “5Fs” in recognition of the changing demographics of gallstone incidence.



#### 4. Role of Endoscopic Ultrasound and Multidimensional Computed Tomography in Predicting Need for Mesenteric Vein Resection in Pancreaticoduodenectomy Specimens

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**Introduction:** In locally advanced pancreatic cancer, portal vein resection has been shown to be a safe and feasible procedure that increases the number of patients who undergo curative resection with a survival benefit.

**Method:** A retrospective review of a prospectively maintained database of pancreaticoduodenectomy operations performed at National Surgical Centre for Pancreatic Cancer over 36 months (2010–2012) was performed. We looked at the pre-operative prediction of the need for venous resection made at the time of multidisciplinary team evaluation of CT and EUS findings based on current NCCN 'borderline resectable' criteria for venous involvement.

**Results:** Portal vein resection, with primary repair or reconstruction, was performed in 20 of 218 (9 %) consecutive procedures. Diagnostic pre-operative 4-Phase CT-Pancreas had been performed in all cases where vein resection was performed while additional EUS was performed in 15/20 (75 %). Combined preoperative imaging predicted the need for resection in 10 of 20 (50 %) cases while CT alone predicted only 6/20 (30 %). The R0 resection rate was 12/20 (60 %) with 17 (85 %) patients alive at follow-up.

**Conclusions:** Despite advances in multi-planar imaging, preoperative radiological evaluation often underestimates the need for mesenteric vein resection. All patients undergoing surgical resection for pancreatic cancer should be consented and assessed for suitability to undergo major venous resection and reconstruction.

#### 5. Predictive Value of 18-FDG-PET Following Neoadjuvant Chemoradiotherapy for Locally Advanced Oesophageal Cancer

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**Introduction:** PET-CT is the current standard for staging oesophageal cancer. The role of repeat PET-CT following induction therapy (CRT), prior to resection, is unclear and not widely adopted. This study evaluated a single centre experience.

**Methods:** Data from 122 patients who underwent multimodal therapy was collected from a prospectively maintained database. Patients were included where a pre- and post-neoadjuvant treatment PET-CT was performed. Histopathological response was determined by Mandard tumour regression grade (TRG) and nodal stage. Changes in PET-CT parameters were compared with histopathological indices.

**Results:** Of 122 patients a decrease in SUVmax was seen in 93 %. 107 (88 %) underwent definitive surgical resection while 15 (12 %) were inoperable. PET identified metastatic disease not evident on other modalities in 56 % of those who developed inoperable disease.

The mean percentage reduction in SUVmax in the resection group was 64.7 %. TRG 1 tumours had the greatest percentage change in SUVmax following neoadjuvant therapy (72.9 %, 95 % CI 66.7–79.0 %). Reduction in SUVmax in TRG 1 tumours was significantly greater than that in TRG 5 tumours (n = 7) (40.9 %, 95 % CI 20.3–61.6 %). In the prediction of nodal status, FDG uptake was highly specific (98 %) but not sensitive (11 %) for nodal positivity.

**Conclusion:** There is a relationship between %change in SUVmax and histopathological response but PET-CT may not be sufficiently accurate to allow substratified prediction of tumour response. PET identifies metastatic disease progression not evident on other modalities. PET-CT performs poorly for assessment of nodal status, which has implications for planning of surgical approach.

#### 6. The Critical View of Safety in Laparoscopic Cholecystectomy: Towards a National Consensus

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**Introduction:** Laparoscopic Cholecystectomy (LC) is one of the most common operations performed today. Bile duct injury (BDI) remains a serious complication of LC. The most common cause of BDI is misidentification of the anatomy of Calot's Triangle<sup>1</sup>. A technique of identification of this anatomy called the critical view of safety (CVS) has been shown to be the most effective method of avoiding BDI<sup>2</sup>.

**Aims:** To determine the level of anatomical knowledge and application of the CVS among Irish general surgeons.

**Method:** An anonymous postal questionnaire was sent to all general surgeons based in the Republic of Ireland (n = 187). 94 (50.2 %) completed questionnaires were returned. Twelve basic questions were asked.

**Results:** 90.6 % of responders perform LC. From this group, 2.4 % use the infundibular technique only, 31.8 % use the CVS only, 52.9 % use both techniques and 12.9 % were unfamiliar with both techniques (Of these, 11.8 % were involved in both training residents and performed emergency/urgent LC's). When training residents, 5.2 % demonstrate the infundibular technique only, 37.7 % demonstrate the CVS, 44.1 % demonstrate both techniques and 13 % demonstrate neither technique.

**Conclusion:** These results represent a "snapshot" of the anatomical approaches currently used by general surgeons in Ireland when performing LC. While the majority of surgeons (87.1 %) practice either technique or both, it is significant that 12.9 % either do not use or understand either technique. Additionally, only 81.8 % demonstrate CVS when training surgical residents. These results highlight the need for the CVS to be integrated into national guidelines, in particular in training surgical residents.

#### 7. The Efficacy of EUS Guided Drainage of Pancreatic Pseudocysts in a Tertiary Referral Centre

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**Introduction:** Pancreatic pseudocysts usually require intervention if they remain larger than 6 cm diameter for longer than 6 weeks.

Drainage is achieved by open surgical cyst-gastrostomy or with endoscopic ultrasound (EUS). This paper evaluates the experience of one tertiary referral centre with EUS guided pseudocyst drainage.

**Aims:** To perform a retrospective case series of patients undergoing EUS drainage of pancreatic pseudocysts. The primary outcome, efficacy was defined by the rate of successful drainage, need for reintervention, cyst size less than 2 cm diameter on subsequent imaging and resolution of symptoms. Secondary outcomes were complication rates and length of hospital stay.

**Methods:** Hospital HIPE codes, radiology reports and discharge summaries confirmed those for inclusion. For each patient, a structured review of case notes was performed. Baseline demographics, disease particulars and outcomes were recorded.

**Results:** 13 patients (8 male, 5 female) underwent the procedure over 112 months with a mean follow up of 26 months. The procedure was technically successful on the first attempt in 84 %. 61 % required reintervention. 72 % of those with repeat radiology had a cyst less than 2 cm in diameter. One patient was readmitted before outpatient review; of the remaining 12, 11 reported a subjective improvement in symptomatology. There were 6 complications: 3 superinfections, 2 stent migrations and one radiological evidence of perforation. The overall mean length of stay was 17.69 days.

**Conclusion:** EUS guided pseudocyst drainage is efficacious in selected patients but carries a significant reintervention rate. Prudent patient selection is important.

## 8. Incidence and Risk Factors of Post-Operative Delirium in Patients Following a Pancreaticoduodenectomy

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**Introduction:** Postoperative delirium is an important complication of abdominal surgery characterised by acute confusion with fluctuating consciousness.

**Aim:** The aim of this study was to establish the incidence and risk factors of postoperative delirium in patients undergoing a pancreaticoduodenectomy.

**Method:** We conducted a retrospective cohort analysis of 50 consecutive patients who underwent a pancreaticoduodenectomy at the National pancreatic cancer referral centre in St. Vincent's University Hospital and whose entire post-operative stay was in our institution, between July 2011 and December 2012. Delirium was diagnosed according to criteria of the Diagnostic and Statistical Manual Disorder, fourth edition. Univariate and multivariate analyses were performed.

**Results:** 7 patients (14 %) developed postoperative delirium. Older age (> 72 years), a greater number of pre-operative co-morbidities (>2) and intra operative blood loss of > 1,200 ml were statistically significant risk factors for the development of delirium. The median onset of symptoms occurred between 60 and 96 h post-op. Although not statistically significant, delirium was associated with prolonged length of stay and a higher rate of grade 1 and 2 complications (Clavien-Dindo classification) in the post operative period.

**Conclusion:** This study demonstrates that postoperative delirium is associated with a more complicated recovery after pancreaticoduodenectomy and that age is independently predictive of its development. Focused screening will likely allow targeted preventative strategies to be used in the perioperative period to reduce complications and costs associated with delirium.

## 9. Laparoscopic Sleeve Gastrectomy as A Treatment For Metabolic Syndrome; Analysis of Outcomes

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**Background:** Obesity has become a worldwide epidemic. Laparoscopic Sleeve Gastrectomy (LSG), is a surgical first alternative in cases of failed medical treatment of metabolic syndrome and extreme morbid obesity.

**Aim:** Following introduction of LSG to our institutions in 2009, the study assesses objective outcomes in patients with a mean follow up of 2.5 years.

**Method:** A review of all LSG cases performed was undertaken to determine the effect on BMI, Diabetes, Hypertension, BMI related comorbidities and post-operative complications.

**Results:** To date, 122 LSG's have been performed. 93 patients were studied to ensure adequate follow up. 72 % were female and 28 % were male. Average age was 44. Mean BMI at first presentation was 51 (weight 143 kg). At 2 years, there was a mean decrease in BMI to 34 and mean decrease in weight by 45 kg. 49 % had preexisting hypertension. At 2 years, hypertension medications were reduced in 83 and 30 % were discontinued. Pre-operatively, 29 % were diabetic. Of these, 95 % of diabetic medications were reduced and 67 % were discontinued. There was no mortality. Seven patients had significant post-operative complications of which four required prolonged and/or repeat admissions as a result.

**Conclusion:** LSG is a proven alternative management for metabolic syndrome. Our results are comparable to international standards. The decision to resort to surgery in these patients requires expensive and careful medical and psychological preparation to ensure best outcome. While post-operative complications can be significant, the benefits of LSG in the long term appear to outweigh the risks.

## 10. Preoperative Biliary Drainage of Radiologically Resectable Malignant Biliary Tumours

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**Introduction:** A proportion of patients with radiologically resectable biliary tumours present with biliary obstruction, necessitating pre-operative decompression. This can be achieved endoscopically (ERCP) or percutaneously (PTC). Our aim was to report our experience with preoperative biliary drainage (PBD) prior to pancreaticoduodenectomy.

**Methods:** A retrospective review of a prospectively collected national pancreatic database was conducted. All patients referred to the national centre for pancreatic cancer surgery were identified, and their clinical and operative details reviewed.

**Results:** Between Jan 2010-July 2012, 159 pancreaticoduodenectomy procedures were performed for biliary tumours. Of these, 83 % underwent PBD. ERCP was more commonly performed than PTC (64

vs. 19 %). The time from biliary drainage procedure to surgery was significantly longer after ERCP compared to PTC ( $71 \pm 109$  days vs.  $34 \pm 35$  days,  $p = 0.019$ ). Successful decompression of biliary obstruction after a single intervention was more likely after PTC than ERCP (90 % vs. 76 %,  $p = 0.18$ ). Among the ERCP group, the sequelae of requiring  $> 1$  procedure included a delay in time to surgery and more advanced tumour size at the time of surgery. Procedure-related morbidity was similar for ERCP and PTC (23 % vs. 33 %,  $p = 0.395$ ). An additional cohort of patients ( $n = 12$ ) was identified who were referred with radiologically resectable tumors, but who became unresectable after resolution of ERCP-induced pancreatitis.

**Conclusion:** Early referral of biliary cancers to the national pancreatic centre is critical to achieve the optimal surgical outcome. Patients who undergo multiple ERCPs incur a significant delay in the time to pancreaticoduodenectomy and have more advanced disease at that time.

## SESSION 2: BREAST CLINICAL SESSION

### 11. Outcome of Patients Diagnosed with Triple Negative Breast Cancer in a Tertiary Referral Centre

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**Introduction:** Breast cancer is a heterogeneous and phenotypically diverse disease. Triple-negative breast cancer (TNBC) accounts for approximately 20 % of all breast cancers and is defined as being estrogen receptor (ER), progesterone receptor (PR) and HER2 negative. It commonly presents as a high grade cancer and carries a poorer prognosis compared to other subtypes.

**Aims:** The aim of this study was to analyse the presentation, outcomes and treatment strategies of patients diagnosed with TNBC within our institution. **Methods:** Clinico-pathological details of all patients with TNBC diagnosed from 2000–2012 were collated from a prospectively updated database. Minitab version 16 was used for statistical analysis with  $p < 0.05$  regarded as significant.

**Results:** 188 patients with TNBC were identified with an average age 55.8 years. 65.4 % of tumours were grade 3 with 47.8 % of patients were pre-menopausal at diagnosis. 78.7 % of patients had invasive ductal carcinoma with an average tumour size of 25.54 mm (2–160 mm). 45.1 % of patients had positive axillary disease with 8.5 % of patients having either bone or visceral metastases at presentation. TNBC had a significantly worse overall and disease free survival compared to Luminal A breast cancer. Overall survival of the TNBC cohort was 73.5 %.

**Conclusion:** In our experience TNBC is an aggressive subtype of breast cancer which commonly presents with evidence of locoregional or distant metastases at time of diagnosis. TNBC carries a poor prognosis when compared to the other breast cancer subtypes.

### 12. Factors Secreted From Mammary Adipose Tissue from Metabolically Unhealthy Breast Cancer Patients Do Not Influence Breast Tumour Cell Progesterone Receptor Expression

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**Introduction:** The metabolic syndrome (MetS) is common in post-menopausal breast cancer patients and is associated with more aggressive disease. However, the molecular mechanisms by which the MetS promotes breast cancer remain unclear. Mammary adipose tissue is a functionally active endocrine organ. Previously we have shown that mammary adipose conditioned media (ACM) from MetS breast cancer patients promoted significantly greater proliferation and invasion of hormone receptor (HR) positive MCF-7 cells compared to ACM from normal weight (NW) patients. These effects were not found in HR negative MDA-MB-231 cells suggesting that hormone receptors maybe involved in mediating the observed effects.

**Aim:** This study aimed to determine whether ACM from MetS breast cancer patients could affect MCF-7 cell progesterone receptor (PR) expression.

**Method:** Cells were treated with ACM for 24 h. PR gene expression was determined by qPCR. Tumour PR protein expression was compared in NW ( $n = 76$ ) and MetS ( $n = 37$ ) breast cancer patients by immunohistochemistry.

**Results:** ACM from MetS patients did not affect MCF-7 cell PR gene expression compared to ACM from NW patients ( $p = 0.47$ ). No differences in tumour PR protein expression levels were observed in breast cancer patients with the MetS compared to NW breast cancer patients ( $p = 0.51$ ).

**Conclusion:** These data demonstrate that factors secreted from mammary adipose tissue from metabolically unhealthy patients do not influence PR expression. Further work is required to elucidate the mechanisms by which factors secreted from mammary adipose tissue from MetS breast cancer patients have pro-tumourigenic effects on breast tumour cells.

### 13. Impact of Lymph Node Ratio (Lnr) on Prognosis of Early Breast Cancer

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**Introduction:** Breast cancer is currently staged according to the American Joint Committee on Cancer (AJCC) Staging System. Lymph node ratio (LNR, the ratio of positive axillary lymph nodes to the total number of nodes examined) may provide additional prognostic information to that provided by AJCC scores.

**Aim:** To determine whether LNR can provide additional prognostic information in node-positive breast cancer patients.

**Method:** We performed a single institution retrospective study of all patients diagnosed with early breast cancer between January 2000 and January 2011. Patients were divided into low- ( $\leq 0.14$ ), intermediate- (0.15–0.39) and high-risk ( $\geq 0.4$ ) LNR groups. We assessed the impact of LNR and conventional AJCC staging parameters on overall survival (OS) and disease-free survival (DFS).

**Results:** 786 patients were included in the analysis, 238 of whom were node-positive. Both pathologic node (pN) stage and LNR were significantly associated with prognosis. When Stage III patients were divided into low and high LNR groups, OS and DFS were markedly

reduced in the high LNR groups. A similar trend was not observed when Stage III patients were stratified according to pN status. LNR was also found to be prognostic when pN1 patients were divided into low and high LNR groups. Although both LNR and pN status were significantly associated with OS and DFS on univariate analysis, LNR retained its significance on multivariate analysis, while pN status did not.

**Conclusion:** LNR can identify subpopulations within the traditional AJCC staging that are at higher risk of adverse outcomes.

#### 14. Surgeon and Breast Unit Volume-Outcome Relationships in Breast Cancer Surgery and Treatment

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**Introduction:** International evidence suggests that a higher standard of cancer care is provided in high volume units or by high volume surgeons. The volume-outcome relationship pertaining to screen-detected breast cancers remains an issue in view of the debate surrounding screening.

**Aim:** The aims were to determine if surgeon case-volume and unit case-volume affected specific Key Performance Indicators (KPIs) of breast cancer surgical management.

**Methods:** All women attending the NHSBSP with a new screen diagnosed breast cancer in England between 2004/2005 and 2009/2010 were included. Surgeons' mean annual patient volumes were calculated and grouped as very low (<5), low (5-15), medium (16-49) or high-volume (>50). The effect of breast screening unit-volume was also evaluated. Statistical analyses were performed using Minitab V16.0 software and R V2.13.0.

**Results:** There were 81,416 patients age 61 ( $\pm 6.8$ ) years treated by 682 surgeons across 82 units. There were 209 very low-volume surgeons, 126 low-volume surgeons, 295 medium-volume surgeons and 51 high-volume surgeons. The proportion of patients managed by very low, low, medium and high-volume surgeons was 1.2, 6.9, 65.5 and 25.7 %, respectively. Patients managed by high-volume surgeons were more likely to have breast-conserving surgery (BCS) than those managed by low-volume surgeons ( $p < 0.001$ ). A higher proportion of sentinel lymph node biopsies (SLNB) were performed by high-volume surgeons in invasive cancers ( $p = 0.005$ ). High-volume units performed more BCS and SLNB than low-volume units ( $p < 0.001$  and  $p < 0.001$ , respectively).

**Conclusions:** Even in a setting with established quality control measures (KPIs) surgeon and unit volume have potent influences on initial patient management and treatment.

#### 15. Breast Clinic Referrals; Can Mastalgia Be Managed in Primary Care?

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**Introduction:** Centralisation of breast cancer services in Ireland has resulted in a significant increase in the number of patients attending symptomatic breast units (SBU). A considerable proportion of patients referred to SBU present with non-suspicious symptoms and fall into a "low-risk" category for breast cancer. It has been proposed that consideration be given to a primary care-delivered service for these patients.

**Aim:** To evaluate SBU attendances and correlate with diagnosis to identify a cohort of patients who may be suitable for management in the primary care setting.

**Methods:** Data was collected from a prospectively maintained database on patients attending SBU at two tertiary referral centres (Beaumont Hospital and University College Hospital Galway) from January 2011-May 2012. Reasons for attendance, outcome of triple-assessment and incidence of malignancy were analysed.

**Results:** 14,325 patients underwent triple-assessment at the SBU in this time-period. 5841 patients were referred with mastalgia, of whom 3331 (57 %) reported mastalgia as the only symptom. The incidence of breast cancer in patients presenting with mastalgia alone was 1.2 %. All patients diagnosed with breast cancer in this cohort were over 35 years of age.

**Conclusion:** The incidence of breast cancer in patients referred to SBU with mastalgia as an isolated symptom is extremely low. Patients under 35 years of age, with mastalgia as an isolated symptom do not require breast imaging and have a sufficiently low risk of breast cancer that they may be suitable for management in the primary-care setting.

#### 16. Investigating the Role of Neoadjuvant Radiotherapy in Patients with Breast Cancer requiring Mastectomy

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**Introduction:** Breast cancer management is multimodal, and includes surgery, chemo-, radio-, and hormone therapy. Sequencing of modalities is based on clinic-pathological features. Given that immediate reconstruction has favourable psychological outcomes; our institution has adopted a new therapeutic sequence whereby radiotherapy is delivered pre-operatively to facilitate effective breast irradiation and immediate reconstruction, without irradiating the autologous flap or prosthesis.

**Aim:** To investigate the outcomes of new sequencing of therapeutic modalities in patients with breast cancer requiring mastectomy.

**Methods:** A prospective cohort study was undertaken. The new therapeutic sequence incorporated neoadjuvant chemotherapy followed by chest wall irradiation, and finally definitive surgery(+/- reconstruction). Clinico-pathological data was collected including: tumour characteristics, tumour and nodal pathological response to therapy, TNM stage and surgical outcomes.

**Results:** To date, six patients have successfully completed the new therapeutic sequence. A further five patients have undergone interval radiotherapy between attempted breast conservation(BCS) and definitive mastectomy. Clinopathological features are described below.



	Neoadjuvant chemo-radiation followed by Surgery(n=6)	Trial of BCS, radiotherapy and subsequent definitive surgery(n=5)
Age (median (range))	45.5 (38–64)	44 (39–53)
Tumour size at resection (mm)	20 (0–70)	51 (45–63)
N-stage (median)	1 (0–3)	1 (0–1)
Pathological Response(N(%))		
Complete	2(33 %)	no residual invasive disease in any specimen
Moderate	4(66 %)	
Minimal	0	
Reconstruction(N(%))		
Prosthesis	3(50)	1(20)
Autologous flap	3(50)	2(40)
Declined	0	2(40)
Wound complication	2(33)	0(0 %)
Time to completion of therapy(weeks)	35(32–36)	36(29–38)

**Conclusion:** Our early experience with the new sequencing of breast cancer therapy shows non-inferior adverse event profile and favourable pathological response rates compared to standard regimes.

### 17. A Comparison of Prognostic Features in Screen Detected Versus Symptomatic Breast Cancers

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**Introduction:** Breast cancers arising between screening mammograms are a heterogeneous group which appear to have adverse prognostic features. Tumour biology may contribute to the favourable prognosis for screen-detected disease compared with age-matched symptomatic tumours.

**Aims:** To evaluate known prognostic features of screen-detected tumours compared to age-matched symptomatic breast cancers.

**Methods:** All patients diagnosed with breast cancer from January 2010 to January 2013 through the National Breast Screening Program (NBSP) Merrion Unit, and those between the ages of 50 and 65 diagnosed at the symptomatic breast clinic at St Vincent's University Hospital were included in the study. Data were retrospectively collected on patient demographics, tumour type, grade, hormone receptor status and stage.

**Results:** There were 1058 patients diagnosed with breast cancer during the study period, with 80 % (n = 844) diagnosed through the NBSP. Screen-detected cancers were more likely to be detected at a lower stage than those diagnosed in the symptomatic clinic (p < 0.001). Ductal carcinoma in situ accounted for 19 % (n = 160) of screen-detected breast cancers but only 8 % of symptomatic tumours (p < 0.001). The most common type of invasive cancer was invasive ductal carcinoma.

Tumour grade was significantly higher in symptomatic patients (p < 0.001). Patients diagnosed through NBSP were more likely to be ER positive (89.5 % vs 77.6 %, p < 0.001) and to over-express the HER-2neu receptor (31.2 % vs 23.9 %, p = 0.043).

**Conclusion:** This study highlights the biologic tumour differences between screen-detected and age-matched symptomatic patients which may contribute to better prognosis in asymptomatic patients and may increase our knowledge regarding the development of interval cancers.

### 18. Pre-Operative Core Biopsy of Sonographically Abnormal Axillary Nodes in Breast Cancer

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**Introduction:** Management of the axilla in breast cancer has evolved from radical to increasingly conservative approaches. Use of pre-operative ultrasound (US) axillary assessment aims to identify node positive patients who can proceed directly to axillary lymph node dissection (ALND).

**Aim:** To evaluate the role of pre-operative core biopsy of sonographically abnormal axillary nodes in patients with breast cancer.

**Methods:** A retrospective analysis of a prospectively maintained database of 189 histologically proven breast cancer patients from January 2012 to March 2013 was performed.

Patients who underwent axillary US as part of staging were selected. Sonographically abnormal nodes were subject to either US guided axillary core biopsy or FNA. Patients with distant metastatic disease at diagnosis were excluded.

**Results:** 54 of 189 patients (29 %) with breast cancer underwent pre-operative US guided sampling of sonographically abnormal axillary nodes. Of 48 patients who underwent core biopsy of abnormal nodes, metastatic carcinoma was confirmed in 32 (67 %). Of the remaining 16 patients with negative sampling, 10 were sentinel lymph node (SLN) negative, 1 had SLN Isolated Tumour Cells, 1 SLN micrometastases and 4 SLN positive [Sensitivity 84 %, Specificity 100 %, Positive Predictive Value 100 %, Negative Predictive Value 65 %].

**Conclusion:** While the ACOSOG Z011 trial has challenged the dogma of ALND in node positive disease, pre-operative core biopsy of sonographically abnormal axillary nodes is a safe and reliable method to identify patients who can proceed directly to axillary lymph node dissection.

### 19. Breast Infection in an Irish Tertiary-Referral Centre; Observations on Referral Pathway, Patient Management And Case-Load

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**Introduction:** Breast infection was traditionally treated by general surgical centres around Ireland. Since 2007, however, all breast

complaints are referred to 8 NCCP-designated Symptomatic Breast Clinics (SBC).

**Aim:** Centralisation of breast-care services provides an opportunity to audit patterns-of-referral of patients with breast infection, and to assess their impact on subsequent management.

**Methods:** Retrospective audit was undertaken of all 249 cases of breast infection in 197 patients referred to St Vincent's University Hospital between 1st January 2010 and 30th June 2012. Method-of-referral, diagnosis, intervention required, length of hospital stay (LOS, where relevant) and patient demographics were reviewed.

**Results:** Seventy-two patients (72/249, 29 %) with breast infection were admitted during the study period, utilising 345 bed-days. The remaining 177/249 (71 %) were successfully-managed as out-patients through the SBC. The mean ( $\pm$ SEM) age did not differ between in-patients and out-patients ( $42.9 \pm 1.032$  years vs.  $41.7 \pm 0.238$  years;  $p = 0.251$ ). Those admitted via the Emergency Department (ED) had a significantly longer mean LOS, compared with those admitted from the SBC ( $4.6 \pm 0.484$  days vs.  $3.1 \pm 0.377$  days;  $p = 0.015$ ). In-patients treated with ultrasound-guided aspiration (USAsp) had a significantly-shorter LOS compared with those who underwent operation ( $3.1 \pm 1$  days vs.  $4.2 \pm 1$  days;  $p < 0.001$ ). Patients attending the SBC with an abscess were significantly more-likely to be treated with USAsp than those attending the ED (65/177 vs 20/57,  $p < 0.001$ ).

**Conclusions:** Direct assessment in a SBC provides the most efficient pathway to patient care in breast infection. Lack of availability of dedicated UAsp out-of-hours may influence the management of breast abscesses. The majority of patients referred to clinic were successfully managed on an out-patient basis, and those who required admission had a shorter LOS than those referred to the ED.

### SESSION 3: ORTHOPAEDIC I SESSION

#### 20. Validation of Predicted Survival Rates in Spinal Metastases

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(i) 90 % of patients with vertebral metastases present with pain, 5 % develop neurological symptoms. The burden of such complications can be catastrophic but complications of surgery often outweigh the benefit in the setting of short life expectancy. The Oswestry Risk Index (OSRI) has been created to predict survival in the setting of spinal metastases to aid with the decision for surgery.

(ii) To analyse the presentation, aetiology, management of adult spinal metastases referred to the National Spinal Injury Unit (NSIU) and validate the OSRI through correlation of predicted survival and actual survival.

(iii) The NSIU spinal referral database and pathology lab database were used to identify patients referred and diagnosed with spinal metastases from 1993 to 2012. Retrospective review of medical records was performed for each patient. GPs were contacted to report on patient health status at the time of diagnosis using the Karnofsky Performance Status (KPS) scale and survival calculated using the national death registry. The OSRI was calculated for each patient and predicted survival correlated with actual survival.

(iv) 201 patients were suitable for inclusion. The most common site of metastasis was the thoracic spine and the most common site of primary malignancy was lung. 31 % had operative intervention in the form of decompression and fusion. The most common reason for

surgical intervention was neurological compromise ( $p < 0.05$ ). The accuracy of OSRI for predicting survival was high ( $p < 0.001$ ).

(v) The Oswestry Risk Index is a sensitive prediction tool for predicting survival in the setting of spinal metastases.

#### 21. An Analysis of Outcome of Whiplash Injury in an Irish Setting

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**Introduction:** Soft tissue injury to the cervical spine or whiplash following road traffic accidents is a common presentation to medical practitioners and results from an acceleration-deceleration injury of the cervical spine. The associated symptoms are largely subjective and include neck pain/stiffness; cervicogenic headaches; interscapular pain; upper limb pain, paraesthesia and weakness. Current treatment protocols involve patient education, conservative care and physiotherapy.

**Aims:** We aimed to determine current practice in the delivery of care and the impact of associated litigation on whiplash injury patients.

**Methods and Results:** The records of a specialist spine surgeon over a 15 year period from 1996 to 2011 were reviewed. A total of 291 patients (165 female [56.7 %] and 126 male [43.29 %]) presented were referred from their GP with soft tissue injury of the cervical spine following a motor vehicle collision. All were ultimately involved in litigation with a third party. All patients were investigated with plain film x-ray and MRI and in selected cases, CT (trimodal imaging). The documented patients were followed for 2 years post-accident. A conservative approach was initially used in all cases with a small number proceeding to surgery.

**Conclusion:** It should be assumed that all patients complaining of neck pain following a road accident have a potentially unstable injury even if presenting beyond the day of injury. Multimodal imaging should be followed in all cases. Pure whiplash is a diagnosis of exclusion. Neck pain which persists for 3 months after the accident may require on-going supportive measures. Radicular symptoms without mechanical nerve root compression are common.

#### 22. Birmingham Hip Resurfacing Review with a Mean Follow-Up of 7.5 Years: a Galway Experience

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**Introduction:** Recent events have highlighted the importance of implant design for survival and wear-related complications following metal-on-metal hip resurfacing arthroplasty.

**Aim:** We examine a retrospective cohort to assess mid-term survival of the most widely used implant, the Birmingham Hip Resurfacing (BHR). The aim of this study was to report the predicted ten-year survival and patient-reported functional outcome of the BHR from an independent centre.

**Method:** In this cohort of 320 patients (350 BHRs) with a mean age of 57.9 years (23 to 77) followed for a mean of 7.2 years (5 to 8), the survival and patient-reported functional outcome were identified.

**Results:** The 10-year survival rate for all hips was 92 % (95 % confidence interval (CI) 90 to 95), the 10-year revision rate for pseudo-

tumour was 3 %, the mean Oxford hip score (OHS) was 44 (SD  $\pm$  4) and the mean WOMAC activity score was 82 (SD  $\pm$  6). In the most demanding subgroup, comprising male patients aged < 50 years treated for primary osteoarthritis, the survival was 97 % (95 % CI 95 to 98).  
**Conclusions:** This study confirms recent reports that metal on metal hip resurfacing using the Birmingham Hip model remains a highly successful approach with low rates of complication.

### 23. The Use of Sound Analysis to Guide Femoral Reaming in Uncemented Total Hip Arthroplasty: a New Concept

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**Introduction:** No objective intraoperative method exist to determine proper femoral reaming in cementless hip arthroplasty.

**Method:** We recorded and analysed the frequencies of sound signals recorded via a bone conduction microphone during reaming of the femoral canal in a series of 10 consecutive patients undergoing uncemented total hip replacement performed by same surgeon. Hammering sound frequencies and intensity were analysed by mean of computer software. The relationship between the patterns of the recorded reaming sound frequencies compared with surgeon judgment of the reaming quality intraoperatively and post operative x rays. All patients were followed up clinically and radiologically for 6 months after surgery to determine the integrity of the fix and to evaluate the stability of the prosthesis.

**Results:** There was a consistent pattern of frequency changes detected in all cases. Our results showed a definite increase in the resonances of sound frequencies between 600 and 1000 Hz when the tension of the reamer moves from loose to tight during hammering. Adding all of the dB values between 600 to 1000 Hz for the loose tension sound and comparing this to the total for the tight tension sound showed an average of 449.6 % increase. Our Analysis of the sound signals changes was comparable to the adequacy of the reaming postoperatively.

**Conclusion:** There are identifiable audio frequency patterns changes associated with satisfactory reaming of the femoral canal. Our findings may pave the way for the development of a real-time intraoperative reaming audio analyser which can guide surgeons to the optimal reaming.

### 24. Detecting and Adjusting for Publication Bias in Spine Surgery Meta-Analyses

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**Introduction:** Empirical evidence suggests that studies with significant/positive findings are more likely to be published than studies with non-significant/negative findings. This positive-outcome bias could undermine the validity of the results from meta-analyses that pool data from published studies only. A number of graphical and statistical tests have been developed for detecting and correcting for publication bias.

**Aim:** To examine the existence of publication bias in the orthopaedic literature and measures taken to deal with it among meta-analyses of RCTs related to spine surgery.

**Methods:** PubMed and the Cochrane Database of Systematic Reviews were searched for meta-analyses of RCTs relevant to spine surgery published until December 2012. Meta-analyses were analysed for the following elements: the databases used to identify primary studies, the search for gray and unpublished literature and methods used to detect and corrects for publication bias.

**Results:** Thirty meta-analyses were identified. Nine reported planning an assessment of publication bias and six of these contained very few studies that an assessment of publication bias was not possible due to low power. The funnel plot was the most commonly used test, followed by Egger's regression and the trim and fill methods.

**Conclusion:** Our review suggests that few meta-analyses of RCTs in the field of spine surgery assess for the presence of publication bias. Low power is an important factor that hinders the assessment of publication bias in many situations. It is important that researchers are aware of the potential presence and impact of publication bias.

### 25. The Role Of Wrist Arthroscopy in the Management of Wrist Disorders: A Single Surgeon's Experience Over a 5 Year Period

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**Introduction:** Wrist arthroscopy is a crucial part of a wrist surgeon's armamentarium with its ability to diagnose, stage and treat of a variety of wrist pathology. There is currently very limited data on wrist arthroscopy practice in Ireland.

**Aim:** The aim of this study is to assess the role of wrist arthroscopy in the management of wrist disorders.

**Method:** A retrospective review of patients attending Merlin Park Hospital for wrist arthroscopy between 2008-2012. Demographics, pre-operative imaging, intraoperative findings and post-op results were collected.

**Results:** 73 wrist arthroscopies were performed in the 5 year period. The average age was 38.4  $\pm$  14.9 with 63 % male. 76.7 % of wrist arthroscopies were therapeutic, with 58.3 % performed on the dominant hand of the individual. FOOSH was the most common mechanism of injury and 17.4 % had a previous fracture. Synovitis, TFCC tears and scaphoid lunate tears were the most common intraoperative pathology finding. Symptoms improved in 78 % of patients with an average follow up length of 4.1 months. Additionally, clinical pain on rest correlated significantly with a finding of synovitis while a positive ulna impaction test was significantly associated with an intraoperative TFCC tear.

**Conclusion:** Arthroscopy of the wrist is safe and vital tool in diagnosis and management of a variety of chronic wrist problems. Thorough pre-operative clinical examinations can accurately predictive intraoperative findings.

### 26. The Influence Of Patellofemoral Degenerative Changes on the Outcome of the Unicompartmental Knee Replacement

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**Introduction:** Unicompartmental knee arthroplasty (UKA) is a recognized procedure for treatment of medial compartment osteoarthritis. Patellofemoral (PF) joint degeneration is widely considered to be a contraindication to medial compartment UKA.

**Methods:** We examined the validity of this preconception using information gathered prospectively on 147 consecutive patients who underwent the Repicci II<sup>®</sup> UKA for medial compartment osteoarthritis between July 1999 and September 2000 by the same surgeon.

The status of the PF joint was assessed intra-operatively in all patients, and accordingly patients were divided into two groups. Sixty-nine had associated PF osteoarthritis (group A) while 78 patients had a normal PF compartment (group B). Variables measured included the International Knee Society (IKS) score, limb alignment, and range of motion. Radiographs, demographic data, length of hospital stay, peri-operative complications. All subsequent surgery, and survivorship at 10 years were recorded. The mean follow-up was 9.4 years (range: 5–10.7 years) and results of the 2 groups compared. **Results:** We found no significant differences in terms of IKS scores, alignment, and flexion between the two groups. However, extension was significantly improved post-operatively in those patients with minimal or no PF joint degenerative disease ( $p < 0.05$ ).

## SESSION 4: GENERAL SESSION

### 27. Type and Screen: Is it Worth it?

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**Introduction:** Institutional maximum surgical blood ordering schedules (MSBOS) utilised in many institutions typically recommend a type and screen for a broad range of surgical procedures; however, for many intermediate surgical procedures the need for transfusion is almost negligible.

**Aim:** The aim of this analysis was to determine if routine T&S are justified for all surgical procedures.

**Methods:** A retrospective analysis was performed of all general surgical procedures from January 2010–June 2012. Surgical procedure data was obtained from the Hospital Inpatient Enquiry system (HIPE) and procedures matched to the MSBOS list. The number of type and screen samples and the number of peri-operative transfusions was recorded for each inpatient episode.

**Results:** Of 1618 intermediate surgical procedures performed, the overall transfusion rate was 1.3 %. Select procedures had lower rates of transfusion. In patients undergoing laparoscopic appendicectomies (0.16 %), elective inguinal hernia repairs (1.0 %), simple

mastectomies ± sentinel lymph node biopsy or regional excision of axillary lymph node (0 %), parathyroidectomies (0 %), thyroidectomies (0.6 %) and varicose vein stripping (0 %) the transfusion rate was ≤1 %. We propose that routine T&S is not required for these procedures with such a low transfusion rate.

**Conclusion:** The elimination of routine T&S for these procedures and the resultant change to the hospital's MSBOS would result in an estimated saving of €90,636 over a 30 month period. A selective approach to performing type and screen for elective surgery should be implemented based upon the operation being performed and associated patient co-morbidities. This will provide valuable cost saving measures.

### 28. Under Siege; The Bed Management Battle

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**Introduction:** Most Irish hospitals accept both elective and emergency admissions. This has significant consequences for the scheduling of elective surgical procedures with the cancellation of surgeries because of a “lack of beds” being all too common an occurrence.

**Aim:** To examine the effect of a bed cohorting policy on non-emergency department admissions and rates of cancellation of elective surgeries.

**Method:** A bed cohorting policy was implemented in our institution on May 8th 2012. All beds (excluding obstetrics/gynaecology, paediatrics) are designated medical, surgical or haematology/oncology. The ICU, HDU and infection control wards are the only shared areas. Only appropriate patients (those admitted under a consultant within the relevant discipline) can be admitted to beds assigned to that discipline. Admissions data from January 2012 and January 2013 was compared. **Results:** Total inpatient admissions increased by 9 % from January 2012 to January 2013. Surgical admissions increased by 10 % with a 1.8 % decrease in ED admissions and a 24 % increase in non-ED admissions. Medical ED admissions increased by 22.6 % and non-ED admissions increased by 29.7 %. The average number of patients on trollies increased from 17 to 19 per day. There was a 25 % reduction in the numbers of elective procedures cancelled or deferred.

	January 2012	January 2013
Inpatient admissions	<b>2047</b>	<b>2448</b>
Surgical admissions	<b>927</b>	<b>1021</b>
ED admissions	499	490
Non-ED admissions	428	531
Medical admissions	<b>977</b>	<b>1228</b>
ED admissions	553	678
Non-ED admissions	424	550
Cancer service admissions	<b>143</b>	<b>198</b>

**Conclusion:** A cohesive patient flow process is crucial to the running of a hospital and we have shown that bed cohorting can be a useful and effective tool in this matter.



## 29. 10-Year Retrospective Review of Changes in Practice in Open and Laparoscopic Appendectomies in an Adult and Paediatric Population

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**Introduction:** Despite expert recommendation, laparoscopic appendectomy (LA) has variable uptake in the treatment of acute appendicitis.

**Aim:** Our aim was to examine trends of laparoscopic and open appendectomy (OA) practice and the incidence of IAA in large teaching hospital with paediatric and adult referral populations.

**Methods:** Data were collected retrospectively for adult and paediatric patients undergoing LA or OA over a 10-year period. Analysis included patient demographics, length of hospital stay and presence of post operative IAA on post operative imaging.

**Results:** 4167 appendectomies were performed (3335 LAs and 832 OAs; 1994 adult and 2173 paediatric).

**Incidences of IAA in the laparoscopic and open groups were 2.42 % [81/3335] and 4.56 % [38/832] respectively (p = 0.001). The median length of stay was 3 days.**

**Conclusion:** In this 10-year retrospective study, default laparoscopic pathway rates in adults are 95-97 %. LA is associated with an IAA of 2.75 % [51/1852], and OA with 9.86 % [14/142] incidence of IAA and a median LOS of 8 days. This may be attributed to many technical factors. 65 % of paediatric patients underwent LA. Post-operative IAA in the laparoscopic (2.02 % [30/1483]) and open (3.48 % [24/690]) groups were lower than adult rates of IAA (LA 2.75 % [51/1852] and 9.86 % [14/142]).

LA is an acceptable surgical option in the treatment of acute appendicitis in both an adult and paediatric population with an IAA less than historic controls.

1 Laparoscopic versus open surgery for suspected appendicitis. Sauerland S, Lefering R, Neugebauer EA. *Cochrane Database Syst Rev.* 2002;(1):CD001546.

## 30. Road Traffic Accidents: Considerations in Restructuring Trauma Care in Ireland

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**Introduction:** UK guidelines advocate that a major trauma center should see 500 cases per annum and serve a population of 3 million. This study aims to evaluate the impact on distance to hospital of restructuring Irish trauma care to develop two level I trauma centers to serve a population of approximately 2.25 million each.

**Methods:** Data was obtained from the Road Safety Authority (RSA) on all serious and fatal road traffic accidents (1996 to 2010). Distance between RTAs and the nearest hospital that receives trauma was calculated using SPSS 18.0. Several models of a restructured trauma service were compared, including combinations of 2 to 3 major trauma centers located in either Dublin and Cork, Dublin, Cork and Galway or Dublin, Cork and Limerick.

**Results:** There were 18862 serious and fatal RTAs from 1996-2010. At present, trauma care is provided by 26 hospitals, with a mean of 48 cases of

per hospital per year. The mean distance to hospital from RTA's is 20.6 km  $\pm$  15.6, with a maximum distance of 145.6 km. If trauma are were restructured to two centers (one Dublin, one Cork), the number of cases per hospital per year would be 628, with a mean distance to hospital of 80.5 km  $\pm$  59.2 km, with a maximum distance of 263.5 km.

**Conclusion:** Trauma care in Ireland currently is provided by multiple centers, each seeing relatively few cases per annum. In restructuring trauma care, careful consideration of prehospital infrastructure is needed to minimize impact on travel times from RTA to advanced trauma care.

## 31. Can We Hear Ourselves Think? an Observational Study of Noise and Interruptions in the Operating Theatre

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**Introduction:** There are many factors which can interfere with performance during critical or complicated stages of any procedure. Surgeon related factors such as fatigue and stress combined with physical factors such as lighting and noise may affect surgical outcomes. Optimising the operating theatre environment may avoid surgical error and adverse events. The Sterile Cockpit Rule in the aviation industry forbids, by law, all non-essential activities and conversations by cabin crew and pilots during critical phases of flight as studies have shown these impair pilot performance. There is, however, a paucity of information regarding noise levels in the operating theatre. The aim of this study is to identify and quantify potential sources of distraction and noise.

**Methods:** An independent observer recorded potential distractions in minor, intermediate and major surgical procedures throughout a range of specialities. The incidence of irrelevant conversation, door opening, beepers/intercom/phone ringing and cleaning/stocking were recorded on a pre-designed pro-forma to assist homogeneity of data collection. Interruptions were recorded from skin incision to closure. All conversations related to the current surgery and teaching activities were excluded.

**Results:** 50 operations were observed (10 laparoscopic). Length of operation ranged from 20-240 min. There was an average of 25 irrelevant conversations (3.6 per 10 min), 11 beeps/intercom/phone (1.7 per 10 min) and door opening occurred an average of 25 times (3.5 per 10 min).

**Conclusions:** A significant reduction in the number of potentially distracting factors may be possible within the operating theatre which could lead to improved surgical outcomes.

## 32. Negative Appendectomy Rates in Adolescent Girls Compared to Boys: the Role of Ultrasound and Serum Inflammatory Markers

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**Introduction:** Adolescent girls have more differentials for abdominal pain than their counterpart boys.

**Aim:** We aim to determine if this infers that a negative appendectomy (NA) is more likely in girls, and if the use of ultrasound scan (USS) and inflammatory markers reduce the likelihood of NA.

**Methods:** We reviewed the data pertaining to appendectomies performed over a 17 year period in boys and girls aged 12 to 16 years. Data on histology, the preoperative use of white cell count (WCC), C-reactive protein (CRP) and USS was analyzed. Significance was set at  $p < 0.05$ . **Results:** Data was available for 430 boys and 273 girls. The NA rates were 7.2 % and 12.1 % in boys and girls respectively (9.1 % overall) There was an increased odds of NA in girls: 1.77 [1.06 to 2.96] (odds ratio [95 % confidence interval])  $p = 0.03$ . Overall, where USS was indicative of, or could not exclude appendicitis, there was a slightly reduced odds of NA when compared to not performing USS: 0.98 [0.48 to 2.02];  $p = 0.9596$ . When the WCC and CRP were elevated in children who had a similar USS, the odds of a NA compared to children with no ultrasound and a normal WCC and CRP, was further reduced. 0.34 [0.04-2.79]  $p = 0.32$ .

**Conclusion:** Adolescent girls have increased odds of NA compared to boys. Though not statistically significant, there were reduced odds of NA in boys and girls when USS was performed and inflammatory markers were raised.

### 33. Prevalence of Mesenteric Fat Encroachment and its Correlation with Inflammatory Changes in Crohn's Intestinal Resection Specimens

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**Introduction:** Fat wrapping is an important surgical indicator of disease activity and pathologically appears to be pathognomonic for Crohn's disease (CD). However, there is a paucity of data in the literature regarding this finding. Moreover, it seems to receive little attention from pathologists and surgeons alike.

**Aim:** To assess the prevalence of mesenteric fat encroachment in CD intestinal resection specimens and its correlation with the characteristic clinicopathological inflammatory changes of CD.

**Method:** The histopathological findings of all CD intestinal resections carried out between January 2001 and 2013 were retrospectively reviewed. Additional information was retrieved from our prospectively maintained, institution review board-approved inflammatory bowel disease database. Data was analysed using SPSS v19.0 (Chicago, IL, USA) and presented as mean ( $\pm$ standard deviation). Fisher's exact test was used to determine correlation between categorical variables, with  $p < 0.05$  considered statistically significant.

**Results:** A total of 114 resections were performed on 91 patients during the 12-year study period. The mean age at operation was 37.0 ( $\pm$ 13.3) years. Surprisingly, fat wrapping was observed in only 9 (of 114, 7.9 %) specimens, of which the majority were small bowel specimens ( $n = 8$ ). Fat encroachment correlated with transmural inflammation ( $p = 0.016$ ), but not with fissuring ulceration ( $p = 0.477$ ), stricture ( $p = 0.260$ ) or granulomas ( $p = 0.481$ ).

**Conclusion:** The prevalence of fat wrapping is unexpectedly low in our cohort compared to the reported literature and probably reflects underreporting. However, when mentioned, it was associated with transmural inflammation but not fissuring ulceration, stricture or granulomas.

### 34. Surgery for Acute Cholecystitis: Can we do More on the Index Admission?

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**Introduction:** Approximately 10 % of people have gallstones, with 80 % of these becoming symptomatic. Of these, approximately 3 % will develop acute cholecystitis. Surgery in the acute setting within 48 h of presentation is safe, reduces total hospital stay and total cost per patient when compared with delayed interval cholecystectomy. In a climate of financial constraints, we wanted to determine if there is scope for doing more cholecystectomies in the acute setting.

**Aims:** i) To examine current practise in our unit for acute gallbladder disease. ii) To determine how many patients have surgery on their index admission compared to those undergoing interval cholecystectomy.

**Methods:** HIPE and PIPE data were examined for 2012 to determine rates of cholecystectomy in Beaumont Hospital and St Joseph's Hospital. Complication rates were compared between those undergoing cholecystectomy on their index admission or at a later.

**Results:** There were 374 admissions for acute gallbladder disease. 14 % ( $n = 54$ ) had surgery in the acute setting. The diagnoses were acute cholecystitis (52 %), acute pancreatitis (26 %), chronic gallbladder disease (18 %) and bile duct calculus (4 %). Mean age was 54.7 years (22-86). 147 patients had elective cholecystectomies. 65 % ( $n = 96$ ) of these had previously been admitted with gallbladder disease. 15 % ( $n = 22$ ) had multiple admissions. Mean age was 50.53 years (20-93). There was no significant difference in conversion to open rates or complications between elective and emergency admissions ( $p = 0.63$  and 0.06 respectively).

**Conclusions:** Cholecystectomy in acute gallbladder disease is safe. There is scope for increasing volume of acute surgery, potentially reducing costs and overall hospital stay.

### 35. First Laparoscopy or Active Observation in Acute Non-Specific Abdominal Pain 'The FLO Trial'

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**Introduction:** Patients with non-specific abdominal pain (NSAP) comprise a large proportion of acute surgical admissions and thus NSAP represents a considerable healthcare system burden. Traditionally, NSAP management has involved active observation (AO) although recently early laparoscopy (EL) has been proposed as an alternative management strategy.

**Aim:** We wished to compare AO and EL in the management of NSAP in a randomised controlled trial.

**Method:** This prospective single centre open label parallel group trial was registered (NCT 01675466) and had institutional review board approval. NSAP was defined as defined as acute abdominal pain of less than 7 days duration where the diagnosis remained uncertain after baseline assessment and diagnostic tests. Eligible participants were adults who were admitted with NSAP. Patients were randomly

assigned to either AO or laparoscopy within 12 h (EL). The primary outcome was length of stay. Secondary outcomes were complications, further investigations, further interventions, readmissions with abdominal pain, upstaging of diagnosis and quality of life scores. Results: Between August 2012 and January 2013, 152 patients were assessed for eligibility. After exclusions, 17 patients were recruited and randomised. Major recruitment difficulties were encountered and the trial was terminated due to futility. No differences were seen between groups.

Conclusion: We attempted to address weaknesses in previous clinical trials on EL in NSAP but we found difficulties that forced us to terminate our trial prematurely. Our experience highlights areas of concern for future clinical trials in NSAP.

## SESSION 5: BREAST RESEARCH/ENDOCRINE

### 36. Circulating MicroRNA Biomarkers for Luminal a Breast Cancer

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Introduction: Mi(cro)RNAs act at the post-transcriptional level to moderate gene expression. Their altered expression in cancer has revealed a potential role as cancer biomarkers. Breast cancer is a heterogenous disease in need of a circulating biomarker to facilitate diagnosis. Luminal-A (ER + PR + HER2-) is the most common subtype of breast cancer. MiRNA microarray analysis by our group identified 77 miRNAs with altered expression in blood of women with Luminal-A breast cancer.

Aim: To evaluate the role of three of these miRNAs (miR-29a, miR-223 and miR-486) as circulating biomarkers for Luminal-A tumours. Methods: Written informed consent was obtained and whole blood was prospectively collected at diagnosis from women with Luminal-A breast cancer (n = 36) and healthy volunteers (n = 39). Luminal-A phenotype was confirmed by immunohistochemistry and fluorescent in situ hybridisation (FISH). RNA was extracted, reverse transcribed and RQ-PCR performed for three miRNA targets. Data was analysed using qBase and Minitab V16.0.

Results: The mean age of the cancer and control groups were 58 and 51 years, respectively. All three miRNAs were detected in the circulation of both the cancer and control group. MiR-29a, miR-223 and miR-486 were all significantly overexpressed in women with Luminal A breast cancer compared to those who do not have breast cancer (p = 0.03, 0.001 and 0.001, respectively). Expression of the 3 miRNAs were not significantly affected by nodal status or tumour grade. Conclusions: MiR-29a, miR-223 and miR-486 are significantly overexpressed in blood of women with breast cancer, suggesting a potential role as circulating biomarkers for Luminal A breast cancer.

### 37. Low MAD2 Protein Expression is a Predictor of Poor Outcome After Chemotherapy & Radiotherapy in Oestrogen Receptor Negative Breast Cancer

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Introduction: Treatment options for TNBC are limited due the lack of a therapeutic target and are managed with standard chemotherapy such as paclitaxel (Taxol<sup>®</sup>). Decreased expression of the mitotic assembly deficient protein (MAD2) results in the induction of cellular senescence, demonstrable by enhanced chemoresistance to paclitaxel (Taxol<sup>®</sup>).

Aim: We hypothesize that low MAD2 is predictive of poor response to chemotherapy.

Method: 80 ER-negative tumours from an established US cohort of 248 incident cases of breast cancer (14 years follow up) were assessed for MAD2 expression using immunohistochemistry. MAD2 staining was quantified using automated software and verified manually by a pathologist. Kaplan–Meier graphs and log rank tests were used to display breast cancer survival. Proportional hazards cox regression were used to estimate hazard ratios and to conduct univariate and multivariable analysis. Chi square tests were used to assess the potential association of MAD2 with other clinic-pathological parameters.

Results: Patient with high levels of MAD2 display increased breast cancer specific survival (HRhighMAD2: 0.34, 95 % CI 0.15-0.76, p = 0.008). Patients with low MAD2 do poorly. MAD2 prediction of outcome limited to those who received chemotherapy. (Chemo: HRhighMAD2: 0.31, 95 % CI 0.12-0.80, p = 0.015). No chemo: HRhighMAD2: 1.03, 95 % CI 0.10-10.6, p = 0.978), or radiotherapy (Radiother: HRhighMAD2:0.24, 95 % CI 0.06-0.85, p = 0.027); No radiotherapy: HRhighMAD2: 0.48, 95 % CI 0.15-1.51, p = 0.210). MAD2 expression is predictive in patients who received both chemotherapy and radiotherapy. (HRhighMAD2: 0.09, 95 % CI 0.02-0.45, p = 0.003).

Conclusion: We believe MAD2 is a predictor of poor outcome after chemotherapy & radiotherapy in TNBC.

### 38. Exosome-Mediated Active Transport of Selected MicroRNAs by Breast Cancer Cells

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Introduction: MicroRNAs (miRNA) have a well established role in carcinogenesis at both the tissue and circulating level. Recent exciting developments have highlighted miRNA transport in protective microvesicles called exosomes. This novel mode of transport has the potential to support miRNA-mediated intercellular communication. Determination of precisely which miRNAs are being selectively packaged into exosomes, and their functional effects in target locations is poorly understood and requires elucidation.

Aim: The purpose of this study was to investigate exosome-mediated miRNA secretion by breast cancer cells.

Method: Four breast cell lines were employed: T47D, SK-BR-3, BT-20 and MCF12a. Cells were incubated for a fixed time period in the presence of medium containing exosome-depleted FBS. Conditioned media was then harvested for exosome isolation using high speed ultracentrifugation or ExoQuick-TC<sup>TM</sup> Solution. The purified

exosomal fraction was then analysed for miRNA and protein content. MiRNA extraction was performed using the miRVana™ miRNA isolation kit, followed by amplification by RQ-PCR.

Results: Exosomes were successfully isolated from conditioned media of each cell population using both ultracentrifugation and the Exo-Quick-TC Solution. Each of the breast cancer cell lines were shown to actively package a selection of miRNAs into exosomes for secretion. A significant portion of the miRNA panel detected are well defined mediators of carcinogenesis.

#### Conclusion

This study revealed the successful isolation of exosomes actively secreted from breast cancer cells, containing a selection of miRNAs. The data generated highlights the importance of exosomal transfer of miRNAs and their relevance in intercellular communication within the primary tumour microenvironment.

### 39. Pre-Clinical Evaluation of Novel Anti-Angiogenic Agents as Breast Cancer Therapeutics

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Introduction: Breast cancer represents the second leading cause of death from cancer. There is a need to develop novel drugs that will improve survival in breast cancer patients. Angiogenesis is essential for breast tumour progression. To date, the most promising approach to inhibit angiogenesis in breast cancer patients has been the drug bevacizumab which targets the pro-angiogenic factor VEGF. Recently, there has been controversy regarding the efficacy of bevacizumab for breast cancer treatment. In clinical trials, bevacizumab failed to establish an overall-survival benefit and was associated with serious toxicities. Therefore, there is a need for more effective novel anti-angiogenic drugs with better toxicity profiles for breast cancer treatment.

Aim: This study aimed to identify novel small-molecule anti-angiogenic agents with therapeutic potential in human breast cancer.

Method: Compounds with physicochemical properties consistent with drug-like compounds were screened for anti-angiogenic activity by high-throughput screening involving zebrafish larvae. Human breast tumour explants were treated with the lead compound and secretion of angiogenic factors was assessed by ELISA.

Results: We have identified a novel small-molecule agent 'SMG1' that significantly inhibited inter-segmental blood-vessel development in zebrafish and showed no toxicity. Treatment of breast tumour explants with SMG1 significantly inhibited secretion of the potent pro-angiogenic cytokine VEGF ( $p = 0.01$ ). Furthermore, SMG1 inhibited VEGF secretion more than the standard targeted breast cancer therapies tamoxifen and Herceptin® which have been reported to inhibit angiogenesis.

Conclusion: Continuing pre-clinical work will determine if SMG1 has potential as a therapeutic agent for human breast cancer.

### 40. Relationship between Circulating Micrnas and Breast Cancer Intrinsic Subtype

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Background: microRNAs (miRNAs) are known to be associated with carcinogenesis. These short endogenous non-coding RNAs are remarkably stable in the circulation, supporting their potential as biomarkers of disease. Breast tumours are divided into epithelial subtypes based on receptor status, with basal subtype being negative for oestrogen and progesterone receptors, and Her2/neu. Basal subtype accounts for ~ 20 % of breast cancers and due to the lack of targeted therapies has a poor survival rate. The aim of this study was to investigate the potential of circulating miR-106a, miR-191 and a novel miR, miR-A, as biomarkers of breast cancer.

Materials and Methods: Following informed patient consent, whole blood was harvested from breast cancer patients ( $n = 83$ ) and healthy control individuals ( $n = 83$ ). miRNA was extracted and analysed using RQ-PCR targeting a panel of miRNAs including miR-191 and miR-106a, miR-A and endogenous controls U6, miR-16 and miR-122. Any association with patient clinicopathological characteristics was also investigated.

Results: miR-A, miR-191 and miR-106a were detectable in the circulation of all breast cancer patients and healthy controls included in the study ( $n = 166$ ). miR-A was significantly up-regulated in the circulation of patients with breast cancer (Mean  $\pm$  SEM;  $2.05 \pm 0.06$  log<sub>10</sub> Relative Quantity (RQ)) compared to healthy controls ( $1.83 \pm 0.05$ ,  $p < 0.005$  log<sub>10</sub>RQ). miR-A displayed no relationship with clinicopathological characteristics. Although not significantly altered overall in breast cancer patients compared to healthy controls, miR-191 and miR-106a were significantly down-regulated in patients with basal breast cancer compared to healthy controls ( $p < 0.05$ ). Further, both miRs displayed differential expression across epithelial subtype (ANOVA miR-191  $p < 0.05$ ; miR-106a  $p < 0.005$ ).

Conclusion: These findings highlight miR-A as a potential circulating biomarker for breast cancer. Further, the data supports miR-106a and miR-191 as biomarkers for basal breast cancer. These circulating miRNAs have potential for use in conjunction with current screening techniques, and may improve the ability to more accurately detect and classify breast tumours.

### 41. Operative Intervention for Thyroid Disease; Oncological and Endocrine Outcomes Over 5 Years in 423 Cases

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Introduction: The surgical management for benign thyroid diseases varies from unilateral lobectomy to total thyroidectomy. We as a tertiary referral centre in Ireland, experiencing greater number of patient turnover over the last few years.

Aim: Main Object of this study is to assess the overall incidence, role surgical management in benign thyroid pathologies in West of Ireland. Methods: All patients undergoing operative management for thyroid diseases were included in our study ( $n = 426$ ). All the surgeries were performed by two experienced surgeons. Retrospective analysis of patient records was performed. Patient, demographic data thyroid



pathology and operative interventions were analysed to evaluate the overall workload at UCHG in the last 5 year period (2006-2011). Results: Over all 423 patients presented with benign (n = 340) and malignant (n = 83) requiring operative intervention, (Female 345, Male 81) average age 49.8 years (14-87 years). Thyroid pathologies included MNG (n = 86), Nodular Hyperplasia (n = 43) Follicular adenoma (n = 43), Chronic Lymphocytic thyroiditis (n = 41), Graves disease (n = 9), adenomatous hyperplasia (n = 19) Thyrotoxicosis (n = 3) Hurthle cell adenoma (n = 9) Hyperplastic nodules (n = 16) Hashimoto's Thyroiditis (n = 22) Colloid goitre (n = 4) Benign Thyroid tissue (n = 19) Malignancies (n = 83). We perform on average 85.6 surgeries in a year for thyroid pathologies. Procedures carried out were total thyroidectomy (n = 160), subtotal thyroidectomy (n = 25), lobectomies (n = 196) and 41 patients underwent completion thyroidectomy. Total 159 FNAC and 128 Frozen section were performed.

Conclusion: The need for surgical management of thyroid diseases are steadily increasing, careful pre operative assessment, skilful surgical techniques and prioritization of patients according to severity of disease will maintain a high quality surgical management of thyroid disease.

#### 42. Neural Monitored Revision Thyroid Cancer Surgery-Surgical Safety and Thyroglobulin Response

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Introduction: Patients with papillary thyroid cancer with early stage I disease have a risk of recurrence of up to 10 %, and in stage II and III disease, recurrence rates of 20 % and 30 % have been reported. Re-operative thyroid bed surgery has been reported to significantly increase the incidence of operative complications as compared to primary thyroidectomy.

Aim: To evaluate postoperative complications. To evaluate and stratify thyroglobulin response associated with revision surgery for thyroid malignancy.

Methods: All patients with recurrent thyroid carcinoma who underwent revision thyroid surgery during a 5 year period were identified. All patients had pre and postoperative laryngeal examination and underwent surgery with standardized neural monitoring. Postoperative complications and thyroglobulin response were recorded.

Results: 117 cases meeting the criteria were identified – 30 % presented for their third or higher revision procedure. Preoperative permanent vocal cord palsy was present in 14 %, and 19 % had preoperative permanent hypocalcaemia. There were no new cases of either temporary or permanent vocal cord palsy. Approximately 5 % developed temporary and 3 % permanent hypocalcaemia. The mean basal thyroglobulin following revision surgery was 5.6 ng/ml (range 0.2-32.7) which represented a mean postoperative significant decline in thyroglobulin of approximately 90 %. In nearly 40 %, basal Tg was undetectable postoperatively. Tg response was stratified based on the number of revision surgeries, Tg decline was 90 % in overall cases.

Conclusion: Revision thyroid cancer surgery can be performed with low rates of complications and significant impact on Tg levels even after multiple revision surgeries.

#### 43. Management of Thyroid Carcinoma; a Single Institutional Experience Over 10 Years

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Introduction: Thyroid carcinoma, albeit the commonest endocrine malignancy, is a rare clinical entity. Therefore, treatment decisions should be made in a multidisciplinary forum applying international guidance to ensure best practice.

Aims: Our aim was to audit the practice of thyroid carcinoma treatment and to characterise our patient population.

Methods: All cases of thyroid cancer treated at Beaumont Hospital from 1999-2010 were included. Data was obtained from a prospectively maintained database.

Results: There were 98 thyroid cancers treated surgically. The male: female ratio was 1:3. The number of thyroid cancers treated annually more than doubled; from 7 in 1999 to 18 in 2010. The majority of cancers were papillary (n = 45,) however, the proportion of papillary cancers was low at 60 % (international data 75-85 %). Follicular carcinoma was overrepresented compared to international figures (29 % vs 10-15 %). Node positive disease was found in 30 % of patients (5 % greater than expected). The majority of thyroid cancers diagnosed were T1. There was no increase in the proportion of T1 lesions diagnosed over the decade. Total thyroidectomy was the initial treatment in 41 % of patients while 51 % underwent initial lobectomy - 60 % of which proceeded to further surgery.

Discussion: The number of thyroid cancers undergoing surgical management is increasing. The large number who did not have a diagnostic FNA prior to initial surgery may be partially attributed to the high proportion of follicular cancers. The application of international guidance by a multidisciplinary team is essential.

#### 44. Investigating the Association between Snps and Indels in the PCM1 Gene in Breast Cancer In the West of Ireland

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Introduction: Breast and ovarian cancers share several environmental risk factors, and have some common genetic susceptibility (eg BRCA1 and BRCA2 germline mutations). It is postulated that additional inherited factors contribute to hereditary breast and ovarian cancer (HBOC) syndrome. High throughput sequencing has identified an insertion/deletion variant (insATTT at 8p22-21.3) in PCM1 (pericentriolar material) gene, which has been shown to be positively associated with ovarian cancer in a European cohort, and a single nucleotide polymorphism (SNP) (G>A) 9 bp upstream. The aim this study was to examine the association of these genetic variants with breast cancer in the west of Ireland.

Methods: Blood samples were collected from 384 women with breast cancer and 384 unaffected controls, subsequent to written and informed

consent. DNA was extracted, PCR amplified and subjected to bidirectional Sangersequencing for target regions in the PCM1 gene. Data analysis was performed using Chromas Lite and SPSS software.

Results: Both SNP and Indel were detected in the Irish population. Fifty-four (14 %) cases and 18 % (n = 66) of controls were homozygous for insertion ATTT, and the majority of cases (n = 242, 63 %) and controls (n = 227, 60 %) were heterozygous (p = 0.43, X2). There was no significant difference between cases and controls in minor allele frequency of the upstream SNP.

Conclusion: Two novel variants in the PCM1 gene although previously associated with ovarian cancer, did not associate with breast cancer in the Irish population. The search for further common genetic alterations predisposing to HBOC continues.

## SESSION 6: VASCULAR SESSION

### 45. Illness Severity Scoring Systems and Risk Prediction in Vascular Intensive Care Admissions

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Introduction: Prognostic scoring systems provide an objective, validated means of predicting survival in the critically ill. The challenge, in the vascular population is to identify a validated scoring system that would involve a relatively small number of variables, could be calculated with ease and not be prone to observer bias.

Aims: We aim to examine the predictive value of commonly used intensive care unit (ICU) scoring systems in a vascular ICU population. Methods: This is a retrospective review of prospectively collected clinical and operative data from 363 consecutive vascular ICU admissions. For each patient SAPS II, APACHE II, APACHE IV, MODS, ODIN, MPM and POSSUM were calculated. The Glasgow Aneurysm Score (GAS) was calculated for patients with aneurysm related admissions.

Results: At admission, the areas under the receiver operating characteristic curve (AUC) was 0.884 for SAPS II, 0.894 for APACHE II, 0.895 for APACHE IV, 0.902 for MODS, 0.891 for ODIN and 0.903 for MPM. At 24 h, model discrimination was best for POSSUM and MPM for which AUC were 0.906 and 0.912 respectively. Good model calibration was demonstrated for SAPS II, APACHE II, MODS, MPM and POSSUM. GAS demonstrated good discrimination (AUC = 0.824) and good calibration (H-L  $\hat{A}$  statistic of 6.445, p = 0.598).

Conclusion: Discrimination and calibration of the most commonly used ICU scoring systems in this vascular cohort were equivalent if not superior to those estimated for the original validating study populations in discriminating between survivors and non-survivors in vascular patients admitted to ICU.

### 46. Radio-frequency Ablation vs. Open Surgery in the Treatment of Varicose Veins - a Comparative Study

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Background: Varicose veins are common and often debilitating. Radio-frequency ablation (RFA) has emerged as a minimally invasive

alternative to open venous ligation surgery (OVL). It has been shown to reduce peri-operative morbidity and improves quality of life scores. Aim: The aim of the study was to directly compare RFA and OVL. Methods: This was a single centre retrospective cohort study. All patients with confirmed sapheno-femoral junctional incompetence who underwent surgical management between January 2011 and December 2012 were included. Radiological success, choice of anaesthesia and hospital length of stay (LOS) was documented. Procedural cost was also calculated. Focused cohort analysis was undertaken to compare the initial 50 RFA procedures performed with the last 50. This allowed for departmental learning curve assessment over a 12-month period.

Results: During the study period 298 patients underwent surgical intervention. A total of 204 patients had RFA. When compared RFA was associated with a reduction in the requirement for general anaesthesia (41 % vs 100 %, P = 0.000), overnight hospital stay (22 % vs 82 %, P = 0.000) and pre-operative blood tests (5 % vs 38 %, P = 0.000). RFA success rate was 98 %. Thirty-day readmission rates were similar (p = 0.203). OVL cost was significantly less than RFA (€884 vs €1102, p = < 0.001). RFA subgroup analysis identified increased use of intravenous sedation (18 % v 60 %) and reduction in overnight hospital stays (10 % vs 36 %) over the 12-month period. Conclusion: RFA is a viable alternative to OVL, requiring less invasive anaesthesia, fewer laboratory tests and reduced LOS. However, it is associated with a higher financial cost.

### 47. Should Colour Duplex Ultrasound Replace CT in the Surveillance of Abdominal Aortic Aneurysms?

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Introduction: Asymptomatic abdominal aortic aneurysms (AAA) should usually be >5.5 cm to be considered for repair. Smaller aneurysms are kept under surveillance. Traditionally this required multiple repeat computed tomography (CT) scans with associated radiation exposure and cost.

Aim: We sought to correlate Colour Duplex Ultrasound (CDU) and CT measurements of maximum aneurysm diameter to evaluate CDU as an alternative means of AAA surveillance.

Method: From July 1st 2007 to December 31st 2009, 389 patients attended the vascular laboratory for AAA surveillance. Eligibility required having a CT within 90 days of CDU. 126 patients and 130 tests were available for comparison. Pearson's Correlation Coefficient (r), paired t test and Limits of Agreement (LOA) were calculated and a subgroup analysis of small (<5.0 cm), medium (>5 cm/<6.5 cm) and large (>6.5 cm) aneurysms was performed.

Results: Overall, r = 0.95 and LOA = -0.62 to 0.54. In the small aneurysm group, r = 0.94 and LOA = -0.46 to 0.47. In the medium-sized aneurysm group, r = 0.69 and LOA = -0.68 to 0.59. In the large aneurysm group, r = 0.96 and LOA = -0.55 to 0.35. There was no statistically significant difference in size between the two imaging modalities.

Conclusion: We would advocate CDU as the surveillance tool of choice for small AAAs but highlight that CT is still necessary when aneurysms increase to >5 cm. CDU and CT correlate very closely when measuring maximum aneurysm diameter. The limits of agreement for AAAs < 5 cm is within the accepted range demonstrating that small aneurysms can be accurately measured using CDU.

#### 48. A Review Of Inpatient Consults to a Department of Vascular Surgery

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**Introduction:** Inpatient referrals from other services generate a considerable workload.

**Aim:** The aim of this study was to clarify the volume and identify the nature of the consults received by the vascular service and to establish the number requiring operative intervention.

**Methods:** Over a 100 day period we audited the inpatient consults sent to two consultants in our department. A database was created; patient's names, date of birth and hospital record numbers were noted, along with the referring team's specialty, the nature of the consult, the management plan and outcome.

**Results:** 183 consults were received over 100 days. Aortic disease accounted for 10.9 % of consults. Venous disease was the presenting complaint in 9.3 %. Other lower limb pathology including mixed or non-specific ulcers and lower limb oedema accounted for 9.3 %. Carotid disease generated 7.6 % of the referrals and upper limb disease 2.1 %. The nephrology service was responsible for over one-third of referrals, consults were sent in 21.4 % overall for issues relating to haemodialysis access, with 9.3 % relating directly to requests for arteriovenous fistula creation. Referrals relating to peripheral vascular disease accounted for 14.2 % as did those consults regarding diabetic foot disease. Overall 29 % of consults to our service required surgery.

**Conclusions:** This review confirms the significant addition to the workload of the vascular service by inpatient referrals. It also highlights areas where it may be possible to create treatment plans or protocols to guide the referring teams on the initial management and investigations required when treating common vascular complaints.

#### 49. Comparison of Radiation Dose Administered During Endovascular Aneurysm Repair Under Radiologist Supervision Versus the Surgeon-a Case Control Study

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**Introduction:** The use of endovascular aneurysm repair (EVAR) versus open repair has increased significantly in recent times. As a result, patients and operating theatre staff are exposed to increased radiation dose. We conducted a case-control study in Cambridge University Hospital (CUH) and University Hospital Limerick (UHL) comparing radiation dose administered during EVAR.

**Aim:** To show if a difference exists or not between radiation doses administered during EVAR by surgeons in UHL versus radiologists in CUH.

**Methods:** Electronic databases were established in CUH and UHL. Using a ratio of 2:1 (CUH: UHL) we compared the radiation dose effects on patients (n = 129) in the two different hospital settings. We used endovascular aneurysm risk assessment (ERA) scores to reduce heterogeneity amongst patients. Radiation dose is measured in cGy cm<sup>2</sup>.

**Results:** In UHL, the surgeon performed EVAR median dose is 6,470 cGy cm<sup>2</sup>. In CUH, the radiologist supervised EVAR median dose is 15,284 cGy cm<sup>2</sup> (p = 0.0004).

**Conclusion:** Radiation dose administered during EVAR can have deleterious effects on patients and operating staff. Using CUH and UHL, we have compared radiation dose administered during EVAR by two different groups, namely radiologists and surgeons, respectively. Our study shows that the median radiation dose given to patients in CUH during radiologist supervised EVAR is higher than the median radiation dose given by the surgeon during EVAR in UHL. A further prospective study is required in order to elicit patient and operating theatre staff outcomes as a result of differences in median radiation dose.

#### 50. Implications of Carotid Stenting On Endarterectomy Practise – Relating Volume To Safety

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**Introduction:** The number of operations performed per surgeon affects the quality of carotid endarterectomy (CEA) surgery. More recently carotid artery stenting (CAS) has reduced the volume of CEA.

**Aim:** This paper assesses CEA and the effects of the introduction of CAS service on outcomes

**Methods:** Retrospective cohort study. Clinical data and results of CEA were reviewed retrospectively for the treatment of carotid stenosis, between January 1988 and December 2010. CEA patients were grouped into those treated before and after the introduction of CAS to our hospital in 2001.

**Results:** 757 patients underwent a CEA between 1988 and 2010. The perioperative stroke rate prior to the introduction of CAS was 4.9 %, and 3.3 % after stent introduction in 2001. In this latter period, ~80 % of patients were high risk and 85.5 % had symptomatic stenosis which suggests that the patients were not low risk. The major adverse event rate (inclusive of death and myocardial infarction) post introduction of CAS from 2001 to 2010 was 4.1 %. There was no correlation between post-operative stroke/ MAE and procedure volume, despite the trend of decreasing CEA numbers over time.

**Conclusion:** The introduction of carotid artery stenting has led to a decrease in carotid endarterectomy volume.

However, outcomes in our high risk patient population are acceptable. Therefore, CEA remains the procedure of choice for carotid artery revascularization.

#### 51. Peripheral Arterial Disease: a marked lack of public awareness in Ireland

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Patients with symptomatic peripheral arterial disease (PAD) have a 30 % risk of death within 5 years resulting primarily from myocardial infarction or stroke. However, public awareness of peripheral arterial disease is anecdotally low.

The aim of this study was to assess awareness regarding the risk factors, significance and potential sequelae of PAD in an Irish population.

An anonymous questionnaire was developed based on that used in a previous survey administered by the American Heart Association. Ethical approval was granted by the local ethics committee. The survey was administered by two investigators in face to face interviews with patients and members of the general public, older than 40 years of age, attending a range of outpatient clinics.

A total of 336 questionnaires were administered. Of the respondents, 49 % were male, 17 % were current smokers and 56 % had at least one risk factor for cardiovascular disease. A post-secondary school course had been completed by 32 % of respondents. Only 19 % of patients reported familiarity with PAD and 26 % had heard of abdominal aortic aneurysm, a figure considerably lower than those reporting familiarity with stroke (94 %), coronary artery disease (78 %) or diabetes (98 %) (Chi Sq  $p < 0.001$ ). Overall, 86 % identified smoking as a risk factor.

This demonstrates that the Irish public is not well informed about PAD as a unique disease. These knowledge gaps will impair the opportunity to link disease awareness to improved risk factor control with the aim of reducing cardiovascular morbidity and mortality.

## 52. Carotid Plaque Composition and Mechanism of Behaviour

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**Introduction:** This study determines whether biological plaque composition has any correlation with plaque mechanical behaviour, with particular focus on risk of rupture when undergoing stresses comparable with balloon angioplasty.

**Methods:** Carotid plaques were collected from consecutive patients undergoing endarterectomy to treat carotid artery stenosis. Fourier Transform Infra-Red (FTIR) was carried out on eight locations throughout each of the plaques. Uniaxial mechanical testing was carried out on 23 specimens as a whole to ascertain the global mechanical properties. This study establishes the stress due to a circumferential stretch that the plaque can withstand before rupture.

**Results:** FTIR analysis of each plaque specimen indicated that eight (32 %) of the plaques had a higher calcification as the Calcification to Lipid ratio (Ca:Li) ratio was greater than one. These plaques were noted to have a significantly increased initial rupture stress value ( $p = 0.003$ ). In plaques with a Ca:Li ratio less than one there was rupture at a lower stress and higher stretch value.

**Conclusions:** Carotid plaques with a higher calcium composition are more stable and less likely to rupture in physiological conditions. However, in patients undergoing angioplasty, FTIR can identify calcified plaques that may be more likely to rupture from the circumferential force during angioplasty. The results presented in this study add to debate around the use of minimally invasive techniques to treat carotid artery disease and, in particular the rupture potential due to plaque composition.

## 53. Supragenicular Bypass Using Cuffed Synthetic Grafts in Management of Critical Lower Limb Ischaemia (CLI) in TASC II D Lesions

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**Introduction:** Cuffed grafts enhance patency when an autologous vein and endovascular revascularisation (EvR) are not feasible.

**Aims:** We examined the efficiency of cuffed versus uncuffed bypass grafts in the treatment of TASC-II-D lesions. Primary-endpoints are clinical improvement and limb salvage. Secondary endpoints are binary restenosis, Target Lesion Revascularisation (TLR), Target Extremity Revascularisation (TER) and survival free from Major Adverse Events (MAE).

**Methods:** From 2003, 4106 patients presented with peripheral vascular disease. 617 patients underwent revascularisation for TASC C and D lesions, of whom 50 underwent 56 supragenicular bypasses using ePTFE synthetic grafts. 17 Femoro-Supragenicular Popliteal bypasses were performed using uncuffed Gortex<sup>®</sup> grafts. 39 bypasses were performed on 34 patients using cuffed Distaflo<sup>®</sup>/Dynaflor<sup>®</sup> grafts.

**Results:** Demographics, vascular-related risk factors and runoff grading were comparable in both groups. Immediate clinical improvement to Rutherford Category  $\leq 3$  occurred in 89 % of Gortex<sup>®</sup> and 95 % of cuffed bypasses ( $P = 0.463$ ). ABI's improved by 0.15 or greater in 78 % of Gortex<sup>®</sup> and 90 % of cuffed bypasses ( $P = 0.391$ ). 5-year Limb salvage was 87 % for cuffed and 76.4 % with Gortex grafts ( $P = 0.039$ ). 5-years freedom from binary restenosis was substantially improved with cuffed (79.5 %) over Gortex grafts (59 %) ( $P = 0.029$ ). Cuffed grafts demonstrated superior 5 year freedom from TLR (82 % versus 65 %  $P = 0.031$ ) and from TER (89.7 % vs. 70.6 %,  $P = 0.042$ ). 5-years freedom from MAE was equivalent in both groups (56.4 % Vs. 52.9 %,  $P = 0.524$ ).

**Conclusion:** Cuffed bypass grafts provided improved function in supragenicular arterial bypass, with superior limb salvage, freedom from binary restenosis and required less TLR and TER re-interventions.

## SESSION 7: UROLOGY SESSION

### 54. Laparoscopic Nephrectomy in High Body Mass Index Patients: Analysis of Waist Circumference and Waist-To-Hip Ratio on Surgical Outcomes

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**Introduction:** The prevalence of obesity in Ireland is increasing (8 % males, 13 % females in 1995; 26 % males, 21 % females in 2010). Waist circumference is an accurate method for determining abdominal and intra-abdominal obesity over BMI. Waist circumferences of  $> 94$  cm in males and  $> 80$  cm in females are used as parameters to define obesity in European populations.<sup>1</sup> Minimally invasive

<sup>1</sup> Tsigosa Constantine; Hainer, V; Basdevant, A; Finer, N; Fried, M; Mathus-Vliegen, E; Micic, D; Maislos, M et al. (April 2008). "Management of Obesity in Adults: European Clinical Practice Guidelines". *The European Journal of Obesity* 1 (2): 106–16.



procedures in obese patients are favoured to avoid complications with large wounds and immobility.

**Aims:** To evaluate the impact of obesity as determined by waist circumference on simple and radical laparoscopic nephrectomy outcomes.

**Methods:** Data was collected prospectively on 176 patients, including 91 (52 %) obese and 85 (48 %) non-obese patients as per European definitions. Measurements for waist circumferences were obtained from axial abdominopelvic CT scans.

**Results:** The majority of patients ( $n = 165$  (95 %)) of patients were treated with a 3 port approach using hem-O-Lock ligation of the renal vessels. Durations of anaesthesia and operation were longer in obese patients compared to non-obese patients (241.3 min-v-230 min; 174.6 min-v-169.6 min respectively), but no differences in blood loss or complication rate. Post-op creatinine clearance was elevated in obese compared to non-obese subjects.

**Conclusions:** Obese patients are challenging anaesthetic and operative candidates owing to difficulties in vascular access, intubation and wound closure. However, laparoscopic approaches afford obese patients similar complication rate profiles as non-obese patients. Final pathological outcomes in men with low-grade prostate cancer undergoing radical prostatectomy [726].

### 55. Final Pathological Outcomes in Men with Low-Grade Prostate Cancer Undergoing Radical Prostatectomy

LG Smyth, KW Walsh, E Rogers, GC Durkan

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**Introduction:** In this era of PSA testing, low risk prostate is frequently diagnosed. It poses a clinical challenge for urologists trying to avoid over treatment of non-life threatening cancers.

**Aim:** To assess the final pathology in patients diagnosed with low risk prostate cancer.

**Methods:** All patients diagnosed with low risk prostate cancer (PSA < 10, Gleason Score (GS) < 6 and cT1c-cT2a) were identified from the Rapid Access Prostate Cancer Clinic database. Low risk patients who proceeded to radical prostatectomy (RP) were analysed to evaluate the final pathological outcomes.

**Results:** 57 patients diagnosed as low risk prostate cancer proceeded to RP. The mean age was 56.2 years (40-66 years). The mean PSA was 6.3 ng/ml (3.7-10). Thirty-one patients (54.3 %) were upgraded from GS 6 disease. Nine patients (15.7 %) were upstaged to pT3a tumours. Of the 57 men diagnosed, only 6 (10.5 %) would have been suitable for active surveillance according to the Epstein criteria. Of these 6 patients 4 were upgraded from GS 6 to GS 7 (3 + 4=7) disease. One patient was upstaged to pT3a disease (16.6 %).

**Conclusions:** More than 50 % of low risk patients were upgraded to >GS 6 and 15.7 % were upstaged after radical prostatectomy. This study shows the importance of repeat biopsy in men on active surveillance for low risk prostate cancer as more than 50 % will be upgraded.

### 56. GP Referrals to the Rapid Access Prostate Cancer (RAPC) Clinic in Galway; are They Adequate?

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**Introduction:** National Prostate Cancer Referral Guidelines for General Practitioners (GP) were produced in 2010 to improve speed and access to appropriate investigations in cases of suspected prostate cancer in men aged from 50 to 70. There are five key data that should be included: patients age, two prostate specific antigen (PSA) results six-weeks apart, digital rectal examination result, urinalysis result and whether or not the patient is on any anticoagulation. Each of these data fields is available on the referral form, which is submitted to the RAPC clinic. Once submitted it is triaged by a consultant urologist. If some of these details are missing this can delay the patient's access to services.

**Aim:** We sought to assess the quality of GP referrals to the RAPC. We evaluated the completeness the referrals in terms of the five key data required.

**Method:** Over a six-month period from October 2012 to March 2013 each referral received in GUH RAPC was retrospectively audited for the above information.

**Results:** 379 referrals were received and the results of the data discrepancies are shown below.

**Conclusion:** Of the 379 referrals reviewed, only 101 (27 %) were completed fully. In over 74 % of cases there was an omission in a key area of the data field necessitating further contact with the GP to request the missing data. This results in delays in investigations and treatment for the patient.

Data	Result present on form	Result absent on form
DRE	266 (70 %)	113 (30 %)
2 PSA results	285 (75 %)	94 (25 %)
Urinalysis	201 (53 %)	178 (47 %)
Anticoagulation use	283 (75 %)	96 (25 %)
Age < 70	292 (77 %)	87 (23 %)

### 57. Positive Predictive Role of CT in Preoperative Histologic Assessment of Renal Cell Carcinoma in Our Institute

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**Introduction:** Early determination of histological subtype of renal cell carcinoma allows optimal management, as subtype response varies with treatment.

**Aim:** We aimed to assess the positive predictive role of CT in pre-operative histologic assessment of renal cell carcinoma in our institute.

**Methods:** A retrospective review was performed to identify patients who underwent nephrectomy, between January 2009 and June 2012,

for renal cell carcinoma. Review of associated imaging was performed, by a consultant radiologist with a special interest in urooncology. Preoperative CT studies were evaluated for the presence of necrosis, calcification and degree of arterial and delayed enhancement. Comparison with histological findings was undertaken.

Results: 130 patients were identified of which 78 %, 9 % and 5 % of patients were diagnosed with clear cell, papillary and chromophobe subtype respectively. Necrosis was present in 80 % of tumours and most widespread in clear cell subtypes. Calcification was more prevalent in papillary subtype (25 %). Using combined values of increased arterial phase enhancement of <18HU and decreased delayed phase attenuation of <5HU, the sensitivity and specificity for differentiating papillary cell subtype was 83 % and 93.7 % respectively. Using the converse attenuation values (i.e. >18HU and >5HU), the sensitivity and specificity for differentiating clear cell carcinoma within our study was 66 % and 73.6 %. Chromophobe tumours demonstrated a more uniform enhancement pattern within the tumour, but varying values of enhancement/washout.

Conclusion: Using the attenuation values stated, CT can aid the determination of papillary renal cell carcinoma histological subtype, within our institute, given their reduced levels of enhancement/washout.

### 58. Circumcision for Balanitis Xerotica Obliterans (BXO) in a Paediatric Population - the Correlation Between Clinical Evaluation and Histology

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Introduction: Pathological phimosis occurs in 0.6 % of boys. Balanitis Xerotica Obliterans (BXO) is a chronic inflammatory skin condition of unknown cause, resulting in phimosis and potential urethral stricturing.

Aims: The aim of this study was to assess the prevalence of BXO in a tertiary referral paediatric centre.

Methods: A retrospective chart review and analysis of pathological databases was performed from 2006-2011.

Results: 876 medical circumcisions were performed in this period. 169 foreskin specimens were received in the pathology department. The mean age was 7.6 years. BXO was confirmed in 99 (11.3 %) cases, non-BXO chronic inflammation in 53 (6.1 %) and normal histology findings in 13 (1.5 %). The initial consultant clinical assessment diagnosed 87 (77 %) cases of BXO correctly, however 32 cases of BXO were undiagnosed at initial assessment. 16 patients had a meatal stenosis, 8 requiring subsequent meatal dilatations.

**Table 1** Summary of pathological findings

Pathology	n (%)
Balanitis Xerotica Obliterans	99 (58.6 %)
Chronic Inflammation with no evidence of BXO	53 (31.4 %)
Normal	13 (7.7 %)
Spongiotic Dermatitis	3 (1.8 %)
Foreskin Hyperkeratosis	1 (0.6 %)

**Table 2** Comparison of clinical assessment with final histological analysis

Clinical impression	Final histological diagnosis
BXO (n = 87)	Correct: 67 (77 %)
	Incorrect: 20 (23 %) Chronic inflammation: 15 Normal: 5
Phimosis (n = 81)	Correct: 37 (46 %)
	Incorrect: 44 (54 %) BXO: 32 Spongiotic Dermatitis: 3 Normal: 8 Foreskin Hyperkeratosis: 1

Conclusions: The incidence of BXO complications appear to be underreported. Routine histological analysis of pathological phimosis specimens needs to be considered due to the consequences of a missed diagnosis of BXO.

### 59. Paradigm Shift Towards Management of Small Renal Tumours, Evaluating Technique and Outcome of Partial Nephrectomy in West of Ireland

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Introduction: Recurrence free and long term survival rates in partial nephrectomy, even up to tumour size of 7 cm are reported to be the same as in radical nephrectomy (EAU guidelines 2013).

Objective: To evaluate the technique and outcomes of partial nephrectomy in small renal tumours.

Methods: 18 cases of partial nephrectomy were performed, mostly in last 12 months. Deep cortico-medullary tumours and tumour > 7 cm in size were excluded.

Results: Mean age 51.38 (32-64), 11 male 61.11 % 7 female 38.88 %, 1 5.5 % were symptomatic presented with haematuria rest of 17 94.4 % were all incidental. 6 upper pole 5 mid pole and 7 lower pole with 33.3 % 27.7 % and 38.8 % respectively. Mean radiological size was 3.2 cm (2.3 cm-4.2 cm). Extra peritoneal flank approach was adopted in all 100 % cases.

Warm ischemia was considered in 5 cases 27.7 % with mid pole tumours. Mean warm ischemia time was 13.2 m (8 m-18 m). Mean estimated blood loss was 422.2 (100mls-1000mls). Mean operating time was 140.8 m (110 m-160 m). No Clavien-Dindo grade 3-5 complications were observed.

Mean pathological tumour size was 3.05 cm (1.5 cm-5 cm). 10 were clear cell type 55.5 %, and 4 were papillary type 22.2 %, 1 chromophobe 1 AML and 2 cystic nephromas. 16 were pT1a 88.8 % and 2 pT3a due to small vein margin positive. Fuhrman Grade 2 was found in 9 50 % and grade 1 in 4 22 % whereas in 5 cases grade wasn't provided. Resection margins were clear in all 100 %.

Conclusion: Partial nephrectomy is technically challenging, however in appropriately selected cases and expert hands it is feasible with good outcomes.

**SESSION 8: PLASTICS SESSION****60. Guidelines For Sentinel Node Biopsy In Melanoma; Should T1b Melanomas Be Offered A Sentinel Node Biopsy**

KM Joyce<sup>1</sup>, NM McInerney<sup>1</sup>, RP Piggott<sup>1</sup>, CM Sugrue<sup>1</sup>, D Jones<sup>1</sup>, JL Kelly<sup>1</sup>, AJ Hussey<sup>1</sup>, MJ Kerin<sup>2</sup>, PJ Regan<sup>1</sup>

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**Introduction:** Sentinel node biopsy (SLNB) is now standard practice in the staging of patients with malignant melanoma of Breslow thickness (BT) greater than one millimetre (mm). SLNB allows identification of patients with clinically occult lymph node disease and permits patient stratification with relation to adjuvant treatments. Recent guidelines advise discussion of a SLNB with patients with a BT less than one mm with tumours which are ulceration or have a mitotic rate greater than one per mm<sup>2</sup>.

**Aim:** To audit all melanoma patients who underwent SLNB in University College Hospital Galway between 2005-2012 to ascertain whether SLNB in T1b tumours was warranted.

**Methods:** Patients have been assessed through retrospective analysis of histopathology reports, chart and radiology review. Binary Logistic Regression Analysis was performed using SPSSv18.

**Results:** In total 367 patients underwent SLNB in the time period analysed, of which complete data was obtained on 338 patients. Superficial spreading melanoma was the most common subtype (42.4 %) followed by nodular melanoma (22.6 %). 296 patients had a negative sentinel node, 40 patients a positive node and in 2 patients a sentinel node could not be identified. 25 cases of T1b melanomas who underwent SLNB with one positive result. Breslow depth and ulceration of the primary tumour as the strongest predictors of sentinel node positivity.

**Discussion:** SLNB is central to staging of malignant melanoma. 9 % of all sentinel node biopsies were positive in our cohort and these had an average BT of 2.2 mm. Our analysis highlights a weakness of current melanoma guidelines with regard to T1b melanomas. A low positivity rate (5 %) was demonstrated in our cohort. SLNB for T1b melanoma has questionable utility and its role in melanoma staging, if any, requires further evaluation.

**61. Squamous Cell Carcinoma Excision In A Tertiary Referral Centre The Importance Of The Deep Excision Margin**

RJ Hurley<sup>1</sup>, NM McInerney<sup>2</sup>, EJ Palmer<sup>2</sup>, CM Sugrue<sup>1</sup>, D Jones<sup>2</sup>, PJ Regan<sup>2</sup>, JL Kelly<sup>2</sup>, AJ Hussey<sup>2</sup>

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**Introduction:** Surgical excision is the gold standard treatment for squamous cell carcinoma. Four and six millimetre margins are recommended for low and high risk tumours respectively. These margins are predict to achieve a 95 % oncological clearance.

**Aims:** To identify risk factors associated with incomplete excision of SCC's in a tertiary referral unit

**Methods:** Cases were identified through the regional pathology database in Galway University Hospital. A retrospective review was carried out assessing histopathological details.

**Results:** 275 SCCs were excised during the study period. 69 % of patients were male. 8.4 % of specimens showed a positive margin, with the deep margin contributing to the majority of these (5.4 %). Location was found to be significantly associated with incomplete excision for tumours at the medial canthus, scalp and temple ( $p < 0.01$ ).

**Discussion:** This study demonstrates that despite adherence to guidelines for excision of SCCs it is difficult to achieve an incomplete excision rate less than 8 %. This rate is consistent with international literature. We believe this is because the deep margin is more frequently incomplete and therefore we question the utility of increasingly wide radial excision margins. A consensus view on the deep excision margin is required to ensure consistency in the management of this cutaneous malignancy.

**62. Risk Factors for Incomplete Excision of Basal Cell Carcinomas: a Review of 1423 Consecutively Excised Basal Cell Carcinomas in a Tertiary Referral Centre**

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**Introduction:** Basal cell carcinoma (BCC) is the commonest form of skin cancer. Surgical excision the gold standard treatment. Incompletely excised BCC's is a frustrating problem with reported rates in the literature varying from 6-36 %.

**Aim:** To identify risk factors associated with incomplete excision of BCC's in a tertiary referral unit.

**Methods:** A retrospective histological review was performed of surgically excised primary BCC's between Jan 2011-Feb 2013. Patient demographics, number of lesions excised, location and subtype BCC, histological margins were recorded. t-tests and  $\chi^2$  analysis were utilised to test statistical significance.

**Results:** 1423 BCC were excised from 1198 patients over the study period. 62 % of these patients were male with an average age of 69. 78.2 % of the BCC's were located in the head and neck region. The most common histological subtype were nodular (38 %), superficial (20 %) and nodulocystic (9.7 %). Overall 114 (8 %) BCCs were incompletely excised. The peripheral and deep margins were incompletely excised in 6.5 % and 2 % of cases respectively. Risk factors for incomplete excision identified include location of tumour ( $p = 0.001$ ), histological subtype ( $p = 0.01$ ) and increasing diameter ( $p = 0.03$ ). **Conclusion:** Current guidelines recommend a four millimetre margin of excision for BCCs. The rate of incomplete excision in this study is consistent with international literature. This study highlights a number of risk factors, including morphoeic subtype and increasing tumour size, which should be considered prior to the excision of this common malignancy.

**63. A Novel Barbed Suture Repair Technique for Flexor Tendons; a Comparative Study**

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**Aims:** Traditional flexor tendon repair techniques create knots that increase the cross-sectional area at the repair site. This increased area can create problems with tendon gliding. Knots tend to decrease tendon apposition and are a cause of early rupture. We hypothesize that a knotless flexor tendon using a barbed suture has a reduced cross-sectional area at the repair site and has a tensile strength comparable to traditional methods. **Methods:** 40 fresh porcine flexor digitorum profundus tendons were used in our study. The tendons were randomly assigned into one of two groups for repair: a traditional four stranded repair or a knotless barbed suture repair (V-Loc, Covidien). The cross sectional area of each tendon was measured at the repair site before and after the tendon repair. Tensile strengths were measured using mechanical testing to calculate the 2 mm-gap formation force, the ultimate strength as well as cause of repair failure. **Results:** The tensile strengths between both flexor tendon repair groups were very similar. However, less force was required to create a 2 mm gap in the traditional four-stranded repair compared to the barbed technique. There was a marked reduction in the post-repair cross sectional area in the barbed suture group when compared to the traditional modified Adelaide repair group. **Conclusions:** This novel knotless barbed suture repair could theoretically reduce the rate of flexor tendon repair ruptures in vivo and also improve tendon glide through the pulley system due to their reduced cross sectional area at the repair site.

#### 64. Comparison of Open Carpal Tunnel Release under Local or Regional Anaesthetic

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**Aim:** To compare procedural pain and functional outcomes in open carpal tunnel release under local and regional anaesthetic. **Methods:** Over a 6 month period, all patients undergoing open carpal tunnel release in the Department of Plastic Surgery at UCHG were included in the study. Preoperatively, patient demographics and symptom severity were recorded using the CTS6 scale. According to surgeon preference and/or availability of regional block on the day, patients received either regional or local anaesthetic. At time of discharge, patients evaluated pain of the anaesthetic, pain during the procedure, pain due to the tourniquet and pain 2 h after the procedure using a visual analog scale. Six weeks post operatively patients completed the CTS6 symptom severity scale again. **Results:** Thirty-three patients were included in the study. Eleven patients underwent open carpal tunnel release under regional anaesthetic and 22 under local anaesthetic. There was no significant difference in level of pain recorded for administration of the anaesthetic ( $p = 0.2995$ ), pain during the procedure ( $p = 0.2218$ ), tourniquet pain ( $p = 0.2752$ ) or pain at time of discharge ( $p = 0.4371$ ). There were no complications in either group and no difference in functional outcome 6 weeks postoperatively. **Conclusion:** Patient reported procedural pain and functional outcomes were the same following open carpal tunnel release under both local and regional anaesthesia. Local anaesthetic is more time efficient and cost effective. In the context of our results, this makes it the preferable choice for open carpal tunnel release.

#### 65. The Trap Door Flap; A Reliable, Reproducible Method of Anterior Pinna Reconstruction

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**Introduction:** Skin cancers of the conchal fossa and antihelical rim presents a challenging reconstructive problem. A full thickness skin graft (FTSG) is often used following excision of the cartilage underlying the lesion however colour mismatch, contour defect and donor site scar are potential drawbacks. The post auricular trap door flap offers a superior option for these defects. **Aims:** To assess the reliability and outcomes of the trap door flap for defects of the anterior surface of the pinna. **Methods:** A retrospective review of all trap door flaps carried out in University Hospital Galway was carried out. Charts were reviewed in order to examine operative notes and assess for any complications and length of follow up. **Results:** 41 patients were operated on by a single surgeon. The age range was 61 to 93 years. The majority of lesions excised were from the conchal area with 6 defects predominantly involving the scapha. No partial or complete flap loss occurred. 2 patients required further excision due to an incomplete margin and a local recurrence respectively. Follow up ranged from 3 months to 4 years with excellent cosmetic results were achieved in all cases with no scar issues. **Conclusion:** The trap door flap is an excellent method of conchal reconstruction. It is reliable and reproducible with no flap loss demonstrated in our series. Large defects can be reconstructed and the cosmetic result in terms of colour and contour, as well as a hidden donor site scar, make this a superior option to a FTSG.

#### SESSION 9: TRAINING & EDUCATION SESSION

#### 66. Prospective Analysis of Errors In Requesting Blood Products and the Effect of Training on Intern Practice

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**Introduction:** The collection of an appropriately labelled specimen from the correct patient is of critical importance in pre-transfusion testing. The 'Transitioning Programme for Final Meds' (TP5MB) is a 3 week education programme introduced in UCHG in 2012 designed to rapidly up-skill the graduates in medical practices. **Aim:** The aim of our study was to prospectively assess the errors in blood product prescribing in UCHG by all doctors in Jul-Oct 2012. We assessed the effect of TP5MB training programme by comparing results of those who completed it, to those who did not. **Methods:** We prospectively analysed all blood product samples completed by doctors from UCHG from 9/7/12-9/10/12. Details of rejected specimens and reasons for rejection were compiled, with analysis performed using SPSSv18. **Results:** 5217 blood product requests were analysed showing 323 rejected samples. TP5MB had a lower error rate (4.3 %; 43/999) compared to those who did not complete TP5MB (10.5 %; 77/732). The error rate during on-call hours was higher than that of regular working hours (6.2 % vs. 8.1 %). Overall the rate of intern rejected samples was higher than that of non-intern NCHD's (7.11 % vs.



6.51 %). Weekly analysis of errors showed a trend of decreased error rate as job experience increased.

Conclusion: TP5MB rapidly up-skills medical graduates. It makes students medically adaptable and leads to safer intern practice. TP5MB should be incorporated into medical training in other universities prior to commencing internship.

## 67. Acquisition and Retention of Complex Procedural Skills Amongst Medical Trainees

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Introduction: The acquisition of clinical skills is an essential component of learning for medical trainees. The objective of this study was to assess which teaching method of performing urinary catheterisation is associated with most efficient skill acquisition and retention. We evaluated factors affecting acquisition and retention of skills when using simulators as adjuncts to medical training.

Methods: Forty-two second year medical students were taught urinary catheter insertion using different teaching methods. The interactive group (n = 19) were taught using a PowerPoint presentation and a high fidelity human urinary catheter simulator. They were provided with the use of simulators prior to examination. The observer group (n = 12) were taught using the same method but without with simulator use prior to examination. The didactic group (n = 11) were taught using PowerPoint alone. Student characteristics such as hand dexterity and IQ was measured to assess intrinsic differences. All students were examined at 4 weeks to measure retention.

Results: Catheter scores were significantly higher in the interactive group (p < 0.005). Confidence scores with catheter insertion were significantly lower in the didactic group at the retention test (p < 0.05). Retention scores were higher in the interactive group (p < 0.001). A significant positive correlation was observed between laparoscopy scores, time to completion with overall catheter score (p < 0.05). Teaching method, spatial awareness and time to completion of laparoscopy were significantly associated with higher catheter scores (p = 0.001). Retention scores at 4 weeks were significantly associated with teaching method and original catheter score (p = 0.001).

Conclusion: The importance of simulators in teaching a complex procedural skill has been highlighted. Didactic teaching method was associated with a significantly higher rate of learning decay.

## 68. Trans Atlantic Peer to Peer Learning- an Initial Feasibility Analysis

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Introduction: Peer to peer learning is a well established learning modality which has been shown to improve learning outcomes, with positive implications for clinical practice.

Aims: The aim of this study was to explore the feasibility of linking students on surgical rotations from North America and Europe with a peer to peer learning approach.

Methods: Face and content validity studies were completed on the previously designed online repository <http://www.pilgrimshospital.com>. Four medical students from the University of Toronto, Canada were paired with four students from University College Cork, Ireland. Each student was invited to upload two pieces of information learned from a senior surgical colleague that day. Each student was asked to review the information uploaded by their partner, editing with references if needed. A quantitative and qualitative assessment of the system was employed.

Results: Over the 4 week study period the system recorded a total of 10,079 individual page views. Questionnaires completed by participants demonstrated that 6/8 found the system either 'very easy' or 'easy' to use, while all found the system promoted evidenced based, reflective learning. Structured interviews revealed three main themes; peer connectivity, the contextualization of clinical learning and the benchmarking of learning levels.

Conclusions: It is feasible to link students from separate continents in a community of peer to peer learning. This is viewed positively by students and enhances evidenced based learning. Such an approach encourages peer cooperation and has the potential to disseminate key clinical and learning experiences widely, in a transcontinental manner.

## 69. Surgical Research And Training: Is it Time to Consider Intercalated Higher Degrees?

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Introduction: Surgical training in Ireland is evolving. Recent changes have eliminated 'gap' years between basic and higher surgical training, where candidates typically attained a higher degree. A number of UK universities now have formal intercalated MB/PhD programmes where students attain a PhD as part of their medical education. Should a similar programme be introduced for Irish students to train the next generation of academic surgeons?

Aims: To survey attitudes among students towards surgical careers and the prospect of undertaking a research degree while at medical school. Methods: 434 undergraduate intermediate cycle students (year 2 and 3) were surveyed at RCSI using 5-point Likert scales to determine the factors influencing the choice of a surgical career, and their attitudes to research.

Results: 77 % of students were considering a career in surgery. There was no difference in gender distribution. Factors influencing choosing surgery were identification of a surgical mentor (p = 0.0001), perceived prestige (p = 0.0001), financial reward (p = 0.008) and research opportunities (p = 0.002). Factors discouraging a surgical career were family and social demands (p = 0.002), long hours as a consultant (p = 0.01) and length of training (p = 0.04). 84 % of students said research was important or very important for their future career. 26 % of students would consider or strongly consider doing an intercalated PhD. These students rated the importance of research significantly higher (p < 0.0001).

Conclusions: Factors deterring students from a surgical career remain length of training, long hours and social demands. Most students recognise that research remains important and a significant proportion would consider an intercalated PhD.

## 70. Surgical Checklists: the Human Factor

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**Introduction:** The World Health Organization (WHO) surgical checklist has been shown to improve patient safety and teamwork. Despite the known benefits of the WHO checklist, in some cases the implementation of the checklist has been found to be less than universal.

**Aim:** To use a questionnaire methodology to obtain information on attitudes to a surgical checklist as implemented in an Irish hospital.

**Method:** Using the theory of planned behaviour as a framework, 14 semi-structured interviews were conducted with operating room personnel regarding their attitudes towards, and levels of compliance with, the checklist. Based upon the interviews, a 27-item questionnaire was developed and distributed to all operating room personnel in an Irish hospital.

**Results:** Responses were obtained from 107 operating room personnel (42.6 % response rate). The attitudes towards the effect of the checklist on safety and team working were positive. There was a lack of rigor with which the checklist was being applied. Nurses were significantly more sensitive to the barriers to the use of the checklist than anaesthetists or surgeons. Moreover, anaesthetists were not as positively disposed to the surgical checklist as surgeons and nurse. This finding was attributed to the tendency for the checklist to be completed during a period of high workload for the anaesthetists.

**Conclusions:** To improve the rigor with which the surgical checklist is applied, there is a need for the involvement of all members of the operating room team in the checklist process, support for the checklist from senior personnel and on-going education and training.

## 71. Does Performance in Preclinical Year Assessments Predict Performance in Clinical Year Assessments?

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**Aims:** Our aims were to determine whether assessment performance in preclinical years of undergraduate education correlates with overall performance in medical school, and to identify any individual subject predictive of success or failure in the final medical year.

**Methods:** A retrospective observational study was undertaken. The study group comprised six graduating classes from NUI Galway. Each student's assessment results over the undergraduate programme, and demographic data including gender, nationality and any change in year were tabulated. Multivariate analyses including binary logistic

regression and classification tree analysis were used to identify relationships between earlier and later assessment performance (PASW V18).

**Results:** Of 609 students, 213 (35 %) studied a system-based curriculum and 396 (65 %) from a traditional discipline-based curriculum. The study group was 59 % female and 41 % non-EU. Students taking the traditional curriculum were more likely to fail and less likely to achieve an honours degree than students of the system-based curriculum ( $p = 0.029$ ,  $\chi^2$ ). Preclinical subjects found to be positively correlated with overall results with highest predictive values included anatomy ( $r = 0.532$ ) and physiology ( $r = 0.511$ ); health and disease ( $r = 0.707$ ), and medical professionalism I ( $r = 0.68$ ). Multivariate analysis showed female gender and Irish nationality to be factors predictive of an honours degree.

**Conclusion:** Success in medical school is dependent on a host of interrelated factors. In our study we found factors predicting a greater risk of failure in assessments, including male sex, non-Irish ethnicity, and poor performance in certain pre-clinical subjects. Intervention at an early stage for these vulnerable students may impact favourably on final results.

## SESSION 10: PLENARY SESSION

### 72. Mutation in TAGAP is Protective of Anal Sepsis in Crohn's Disease

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**Introduction:** Anal disease (AD), found in approximately 50 % of Crohn's Disease (CD) patients, ranges from painless skin tags to debilitating fistuli and abscesses. Anti-Tumour Necrosis Factor (TNF) treatment for CD-AD is unpredictable. The discovery of >200 CD-associated Single Nucleotide Polymorphisms (SNPs) offers the opportunity to possibly genetically predict the severity and prognosis of CD-AD and its response to anti-TNFs.

**Aim:** To identify genetic determinants associated with:

1. CD-AD generally and septic-AD specifically
2. Anti-TNF responsivity

**Methods:** Ileocolonic CD patients were identified from the Hershey Medical Center's IBD Biobank and divided into: no-AD ( $n = 64$ ), benign-AD (strictures/fissures/skin tags,  $n = 17$ ) and septic-AD (abscesses/fistuli,  $n = 37$ ) groups. Anti-TNF treatment response was recorded. Patients were genotyped on a custom microarray containing 192 CD-related SNPs.

**Results:** SNP rs212388 correlated with the presence of septic AD ( $p = .036$ ). Presence of the non-wildtype allele was protective of anal sepsis with homo and heterozygotes having a 75 % chance of no-AD ( $p = .0001$ ). Homozygous wildtype patients had the highest risk of septic-AD (92 %) with 3 of 4 requiring ileostomy having this genotype. Rs212388's gene candidate, TAGAP, is associated with T cell activation and cytoskeleton regulation. 9 of 24 patients treated with anti-TNFs had beneficial response. No SNP correlated with response. **Conclusions:** 1) Rs212388 in the TAGAP gene most significantly correlated with the presence and severity of CD-AD. 2) A single copy of the risk allele was protective while wildtype homozygotes had the highest risk of septic-AD. 3) In this small subgroup, no SNP was predictive of anti-TNF response. Mutations in TAGAP may predict a more benign form and course of CD-AD.

### 73. Mir-339-5p Acts as A Tumour Suppressor in Breast Cancer, Mediated at Least in Part Through Regulation of Cell Proliferation

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MicroRNAs (miRNAs) are short non-coding RNA molecules known to be differentially expressed in many diseases including breast cancer. The focus of this study was to quantify expression of miR-339-5p in both tissue and circulation of patients with breast cancer. The effect of miR-339-5p on breast cancer cell proliferation in vitro was also determined.

Following informed patient consent and ethical approval, breast tissues (n = 163) were harvested from patients undergoing surgery, including malignant (n = 103), normal (n = 30) and fibroadenoma (n = 35). To determine the level of circulating miR-339-5p, whole bloods were collected from breast cancer patients (n = 40) and healthy controls (n = 34). MicroRNA was extracted, reverse transcribed, and the level of miR-339-5p quantified using RQ-PCR. Expression of miR-339-5p was also detected in breast cancer cell lines, and the effect of a miR-339-5p mimic on cell proliferation investigated.

A significant decrease in miR-339-5p expression in breast cancer was observed (n = 101, Mean (SEM) 2.0 (0.06) Log<sub>10</sub> Relative Quantity (RQ)) compared to healthy control tissue (n = 24, 2.5 (0.1) Log<sub>10</sub> RQ, p < 0.01), and benign tissue (n = 34, 2.45 (0.1) Log<sub>10</sub> RQ, p < 0.01). miR-339-5p was also detectable in the circulation of individuals included in the study, although no significant difference was observed between breast cancer patients and healthy controls (p = 0.41). Functional assays revealed reduced proliferation following transfection of breast cancer cells with miR-339-5p (T47D; –17 % and SK-BR-3; –27 %).

Although not a suitable circulating biomarker of the disease, this study highlights miR-339-5p as a tumour suppressor in breast cancer, potentially mediated through knockdown of cellular proliferation. Further investigation is required to determine the target mRNA involved in this response.

### 74. Global Genetic Alterations from Primary and Node to Metastasis: New Insights Into Breast Tumour Reprogramming

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**Introduction:** The development resistance to endocrine therapy in breast cancer results from altered cellular plasticity leading to the emergence of a metastatic tumour. The underlying mechanism of how an ER+, endocrine-sensitive tumour activates these adaptations remains unresolved. We hypothesise that cellular reprogramming may

result from long-term endocrine therapy, manifesting clinically as tumour recurrence.

**Aims:** To investigate breast cancer cellular reprogramming in a clinical context.

**Methods:** We developed a novel method of RNA-sequencing utilising paraffin-embedded tissue, determining gene expression profiles of matched primary, nodal and metastatic tissue of three ER+ patients (luminal A, luminal B1, luminal B2) who recurred on endocrine therapy. Bio-informatics analysis identified common pathways and genes expressed in the metastatic setting. Targets were confirmed in an endocrine resistant in vivo model and a cohort of matched primary/recurrence patients.

**Results:** 21 genes were commonly expressed in the metastatic setting. Pathway analysis showed up-regulation of developmental pathways (WNT, TGFbeta), growth factor signalling (MAPkinase) and adhesion-related pathways. Primary xenograft tumours were resected at 100 mm<sup>3</sup>. Only tamoxifen-treated mice developed metastases and expressed the metastatic gene signature. In our patient cohort, our signature was only expressed in metastases following endocrine therapy. Treatment naïve metastatic patients did not express our gene signature. These genetic alterations are specific to endocrine treated metastases.

**Conclusion:** Using novel global analysis, we identified a gene signature associated with metastasis following endocrine treatment. This represents a fundamental shift in understanding the development of resistance to endocrine therapy: treatment may drive genetic alterations and recurrence of initially well-differentiated, steroid-responsive tumours.

### 75. NR4A Orphan Nuclear Receptors in Colorectal Cancer

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**Background:** This study evaluates a the NR4A orphan nuclear receptors in colorectal cancer. These receptors have a key role in the development of “tumour-like” behaviour of the inflammatory synovial tissue in rheumatoid arthritis. These cellular switches promote the development of resistance to cell death. Unravelling the role of NR4A receptors in colorectal cancer may enhance our understanding of colorectal cancer biology.

**Aims:** This study aimed to evaluate expression of NR4A2 in colorectal cancer and the functional role of inflammation and hypoxia in the tumour microenvironment in mediating these receptors.

**Methods:** Colon cancer cell lines (Caco-2, T84, LS174T) were treated with a variety of stimuli important in the tumour microenvironment (hypoxia, prostaglandin E2, adenosine and proinflammatory cytokines). Expression of NR4A receptors was analysed by RT-PCR. Immunohistochemistry was performed on a tissue microarray of stage II colorectal cancer with tumour and adjacent normal colonic tissue. Staining was assessed by two assessors (1 surgery, 1 pathology). Survival was analysed using Kaplan–Meier curves.

**Results:** All NR4A receptors are induced in colon cancer cell lines in response to stimuli important in the tumour microenvironment including prostaglandin E2, adenosine and hypoxia. In a tissue microarray of stage II colorectal cancer, there is increased cytoplasmic staining for NR4A2, and an altered nuclear-cytoplasmic ratio with



more cytoplasmic NR4A2 in tumour compared to matched normal tissue ( $p < 0.001$ ). The functional significance is currently being evaluated.

Conclusion: Induction of NR4A receptors occurs in the tumour microenvironment in colorectal cancer, and cytoplasmic mislocalisation of NR4A2 is seen in stage II colorectal cancer.

## 76. Aerosolised Intraperitoneal Local Anaesthetic (AILA): A Randomised, Double-Blinded, Placebo-Controlled Study

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Introduction: Despite technical advances in minimally-invasive surgery postoperative pain remains a challenge and prolongs inpatient stay. Aerosolised Intra-peritoneal Local Anaesthetic (AILA) is a method of delivering analgesics at the time of laparoscopy.

Aim: We aimed to evaluate the efficacy of aerosolized ropivacaine delivered using the AeroSurge<sup>®</sup> device in the management of post-operative pain following laparoscopic Nissen's fundoplication (LNF) and cholecystectomy (LC).

Methods: This was a prospective randomised double-blinded placebo-controlled trial with Irish Medicines Board and local ethics committee approval (EudraCT 2009-015236-15). Consecutive patients undergoing LNF and LC were accrued after obtaining consent. The treatment group (TG) received intra-peritoneal ropivacaine (5mls 1% Naropin<sup>®</sup>) using the AeroSurge<sup>®</sup> device after the insertion of 10 mm port. The control group (CG) received 5 ml saline. Peri-operative data including pain scores were recorded.

Results: 99 patients were recruited, with 87 in the final analysis (TG n = 40, CG n = 47). There was no difference in pain scores overall. In the LNF group, AILA significantly reduced post-operative abdominal pain at rest at 6 h ( $p = 0.009$ ). In the LC group, AILA significantly reduced shoulder tip pain at rest at 10 and 30 min ( $p = 0.030$  and  $0.040$  respectively) and shoulder-tip pain on movement at 10 and 30 min ( $p = 0.030$  and  $0.037$  respectively). In addition, AILA reduced the incidence of shoulder-tip pain in the LC group (11.8 % vs 57.9 %,  $p = 0.004$ ). TG required significantly less diclofenac than CG ( $p = 0.013$ ).

Conclusion: AILA is a safe and effective method in reducing post-operative pain following laparoscopic surgery.

## 77. Colonic And Rectal Adenocarcinomas Can be Differentiated Based on Transcriptional Profiles

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Introduction: Dissimilarity exists between colon and rectal cancer at a genetic, clinical and molecular level. This is likely to reflect variation at a transcriptomic level. This study aims to develop classifiers based

on transcriptomic differences between colon and rectal cancer and utilize these classifiers to predict tumor location (colon vs. rectum). Methods: Comparisons were made between cDNA microarrays derived from colonic and rectal adenocarcinomas. Results were filtered according to standard deviation to retain only highly dysregulated genes. Genes were rank ordered in terms of descending fold change. Comparisons included a) colonic adenocarcinoma vs. rectal adenocarcinoma (stages I - III), b) stage II colonic adenocarcinoma vs. stage II rectal adenocarcinoma and c) stage III colonic adenocarcinoma vs. stage III rectal adenocarcinoma. For each comparison, those five genes with the greatest positive fold change were grouped in a classifier. Results were imported into R and summary receiver operator characteristic curves generated for each classifier.

Results: Genetic classifiers derived from a comparison of stage II colon and stage II rectal adenocarcinoma were the most accurate in distinguishing tumor type (mean sensitivity 82.5 %, mean specificity 81.7 %). Classifiers derived from a pooled analysis comparing colon and rectal tumors (stages I - III) (mean sensitivity 79.8 %, mean specificity 71.1 %) and those derived from a comparison of stage III colon and stage III rectal tumors (mean sensitivity 57.1 %, mean specificity 98.6 %) were also accurate in determining tumor type (colon vs. rectum).

Conclusion: Colonic and rectal adenocarcinoma differ at a transcriptomic level.

## 78. Survival Benefit Conferred by the Androgen Receptor is Lost in Aromatase Inhibitor Treated Breast Cancer

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Introduction: Aromatase Inhibitors are the gold-standard treatment of post-menopausal breast cancer. They inhibit the conversion of androgens to estrone by Cyp 19 thereby blocking ligand-dependent activation of the estrogen receptor. Research from our lab has identified the homeobox protein, HOXC11, to be an indicator of poor response to endocrine therapy and development of metastasis.

Aims: Investigate the role of the HOXC11 target gene PSAP in aromatase inhibitor resistance. Assess the impact of PSAP and AR on clinical outcome.

Methods: RNA-sequencing was performed to identify HOXC11 target genes in endocrine-resistant breast cancer cells. Molecular biology techniques were used to validate these findings. Statistical analysis (STATA10) was used to ascertain the impact of these genes on survival rates in a cohort of breast cancer patients (n = 488).

Results: 27 HOXC11 target genes were identified, Prosaposin (PSAP) being most significant. PSAP upregulates AR (mRNA and protein level). Treatment with an anti-androgen reduced both cell proliferation and motility in AI resistant cell lines. Survival analysis of breast cancer patients (n = 488) indicates that the protective influence of AR is lost in AI treated patients.

Conclusion: In AI resistance, HOXC11 upregulates PSAP which subsequently promotes AR expression. This pathway elucidates a novel mechanism enabling tumour utilization of androgens for cell proliferation. AR normally has a protective effect on breast cancer, however, in the AI treated population this is lost. Thus androgen

antagonists could have efficacy in treating refractory disease. Secreted PSAP in the serum can potentially be used as a biomarker indicative of response to treatment.

## 79. Role of Mesenchymal Stem Cells in the colorectal cancer cell environment: stimulation of Epithelial-Mesenchymal Transition

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Epithelial-Mesenchymal Transition (EMT), whereby adherent cells adopt a migratory state, is a key step in progression of colorectal cancer (CRC). Mesenchymal Stem Cells (MSCs) are a group of non-haematopoietic multipotent cells known to migrate to and integrate within colorectal tumours. However, their role following engraftment is not known. This study aimed to investigate MSC/CRC cell interactions in terms of EMT-related changes.

**Methods:** MSCs harvested from healthy volunteers, WI-38 normal fibroblast controls, HCT116 and HT29 CRC cell lines were employed in this study. Both direct, and indirect co-culture of cell populations was performed. Mixed populations of cells were fluorescently labelled and examined for changes in morphology and polarity. Analysis of changes in expression of EMT-related markers was carried out by RQ-PCR. Changes in CRC cell migration and proliferation in response to MSCs were also examined.

**Results:** Upon co-culture with MSCs, pre-migratory changes in CRC cell morphology were observed including increased apical polarity, actin deposition and decreased cell clustering. Co-culture with MSCs also stimulated increased migration of both CRC cell lines (Range 2-5-fold increase), with a concurrent downregulation in E-cadherin expression. Decreased proliferation following exposure to MSCs was observed (Range 50-80 % decrease), supported by a reduction in Ki67 expression. Increased expression of the EMT transcription factor, SNAIL, was also observed upon co-culture with MSCs but not WI-38 s, suggesting an MSC-specific effect.

**Conclusion:** EMT is central to initiation of the potentially devastating metastatic cascade in colorectal cancer. As a component of the colorectal tumour microenvironment, MSCs may play a crucial role in regulation of EMT.

## 80. The Molecular Muddle of Glioblastoma: Understanding the Neovascular Interactions

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**Introduction:** The treatment of Glioblastoma (GBM) remains an unmatched medical need. Despite intensive therapeutic efforts, the median survival remains 15-18 months. Current evidence suggests that GBM cells are able to circumvent anti-angiogenic therapy, such as Bevacizumab (Bev) and develop resistance to targeted monotherapy via activation of complex molecular escape pathways such as PI3K/mTOR, thereby leading to a paradoxical increase in tumour cell invasion.

**Methods:** Actively growing U87 cells expressing Luciferase were stereotactically implanted into the right cortex of 26 nude mice ( $1 \times 10^5$  cells/mouse) and were randomized into 4 groups prior to the initiation of treatment: control group, PIK3/mTOR inhibitor alone, Bev alone and combined treatment. Pre and post treatment MRI (T2; T2\*; T2\*MAP; ADC; ASL + VSPO) and PET (FET, FLT) sessions were carried out as well as weekly Bioluminescence (BLI).

**Results:** Kaplan–Meier analysis demonstrated a statistically significant survival benefit in the combined treatment ( $p = 0.0007$ ) and Bev alone group ( $p = 0.0007$ ). Based on BLI, combined and Bev treated mice showed a delayed tumour growth compared to BEZ235 monotherapy ( $p = 0.0404$  and  $p = 0.0253$ , respectively). Tumour volume was significantly reduced in the combination therapy versus Bev alone ( $p = 0.045$ ). Overall, cerebral blood flow was increased significantly in the combined group with a corresponding increase in the vessel size index with an antagonistic effect on the vessel density index. Proliferation and neovascularization/permeability was reduced in combined therapy in comparison to Bev and BEZ 235 monotherapy via FLT and FET analysis respectively.

**Conclusion:** The combination of Bevacizumab and a dual PI3K/mTOR inhibitor demonstrates potent preclinical antitumour activity and may represent a novel treatment approach in the management of GBM.

## SESSION 11: GENERAL SESSION

### 81. A prospective audit of surgical discharge letters, are they fit for purpose?

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**Introduction:** With the stated government policy of prospective funding based on case mix analysis, it is critically important that Discharge forms contain appropriate information. Discharge summaries form the basis for case mix and thus funding.

**Aim:** Access suitability for case mix analysis.

**Method:** 110 discharge letters were prospectively analysed. The data was extracted from electronic and handwritten discharge summaries. Information was compared against the Western Australian Discharge template.

**Results:**

**Conclusion:** Discharges for the most part continue to be delegated to the most junior team member and this probably contributes to lack of accuracy. The lack of ICD10 coding and poor complication recording, means that accurate and timely HIPE coding and thus case mix analysis remains difficult and will pose problems for accurate funding in the future.

	% Yes	% No
Patient Name and MRN	95.45 %	4.55 %
Admit date	100 %	0 %
D/C date	99.09 %	0.91 %
LOS	0 %	100 %
D/c reason	6.36 %	93.64 %
D/c destination	98.18 %	1.82 %
Specialty	10 %	90 %
Consultant	92.73 %	7.27 %
Main diagnosis	100 %	0 %
History	95.45 %	4.55 %
Findings	95.45 %	4.55 %
Summary of significant results	95.45 %	4.55 %
On admission	92.73 %	7.27 %
Post op recovery	11.82 %	88.18 %
On discharge	29.09 %	70.91 %
Management	94.55 %	5.45 %
Social Issues	0 %	100 %
Instructions to GP	66.36 %	36.63 %
Review details	80 %	20 %
Copies to	0 %	100 %
ICD10 coding	0 %	100 %
DC complete < 48 h	77.27 %	22.73 %

## 82. Farm-Related Morbidity and Mortality in The West of Ireland a Single Institution Experience

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**Introduction:** Figures released by the Irish Health and Safety Authority for 2012 demonstrated that the farming sector recorded the highest number of workplace fatalities nationally for the third year in a row. Clinical information relating to the management of such injuries in Irish hospitals remains under reported and only one previous Irish study exists.

**Aims:** The aim of this study was to examine all farm-related morbidity and mortality presenting to a general hospital in the west of Ireland. **Methods:** A consecutive series of all farm-related fatal and non-fatal injuries presenting to our institution over a 7 year period (2005-2011) was compiled by examining the hospital inpatient enquiry system (HIPE) and mortuary records.

**Results:** One hundred and thirty two patients were admitted to Mayo General Hospital with farm-related injuries during 2005-2011. The most common mechanism of injury was animal attack. There were seven farm-related fatalities during the same study period. Four were livestock-related, two due to machinery accident and one due to fall of a heavy object.

**Conclusions:** Farm fatalities in Ireland remain at their highest recorded levels despite the introduction and implementation of several farm safety initiatives during recent years. This analysis outlines the severity of injuries suffered in the farming workplace and greater awareness of our results may help to reduce the incidence and severity of such injuries.

## 83. A Review of Factors Affecting the Interval from Excision Biopsy to Definitive Surgical Treatment of Malignant Melanoma in a Tertiary-Referral Centre

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**Introduction:** Diagnostic excisional biopsy with follow-up definitive surgery is the mainstay of treatment of malignant melanoma. Delay in definitive surgery causes anxiety for the patient and can adversely affect prognosis.

**Aim:** This study sought to determine the surgical interval (SI) between diagnostic biopsy and definitive surgery and to elucidate factors associated with delayed definitive management.

**Methods:** A cohort of 110 consecutive patients who had a diagnostic biopsy and subsequent wide local excision presenting to our institution between January 2011 and June 2012, was identified from MDT records. The mode of referral, date of diagnostic biopsy and date of definitive surgery were documented. Patient demographics and tumour characteristics were reviewed.

**Results:** The mean age was  $60 \pm 2$  years, and the male to female ratio was 1.3:1. The median duration of the SI was  $36 \pm 3$  days (Range: 6-143 days). The SI was longer if a dermatologist performed the diagnostic biopsy as opposed to a general surgeon ( $p = 0.005$ ). The anatomic location of the lesion predicted the SI, with lesions of the head and neck undergoing definitive excision on average  $58.2 \pm 6$  days after diagnostic biopsy compared with  $40.7 \pm 3$  day for all other sites ( $p = 0.002$ ). Anatomic sites did not differ in terms of histopathologic prognostic features (Clarke's level, Breslow's depth, ulceration, mitotic rate). Reasons for a prolonged SI included referral for definitive surgery and time for pre-operative staging investigations.

**Conclusions:** Significant variations were noted in the SI. Referral pathway protocols would reduce the SI, decrease patient anxiety and optimise outcome.

## 84. Enhanced Recovery After Surgery (ERAS) Initiated in a Colorectal Surgical Unit: a General Hospital Pilot Study

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**Introduction:** Enhanced Recovery after Surgery (ERAS<sup>®</sup>) represents a fundamental shift in peri-operative care when compared with traditional management. ERAS is now considered the standard of care for all patients undergoing elective colorectal surgery in Ireland.

**Aims:** The aim of this study was to assess the implementation of an ERAS programme using current hospital infrastructure. This was objectively assessed using time until fitness for surgical discharge.

**Methods:** Twenty patients scheduled for elective abdominal surgery during 2012 were included in this study and compared to a similar patient group in 2011, prior to the introduction of the ERAS programme. All operations were colonic resections (17 open, 3 laparoscopic). A standardised peri-operative ERAS care-plan was devised and patients were deemed surgically fit for discharge when they reached all ERAS targets as shown below.

**Results:** The results are shown below in Table 1.

**Table 1** Comparison of discharge parameters pre and post implementation of ERAS

Time period	Age	Return GI function	Pain relief adequate	Mobilisation, Self-Caring	Resumption full diet	Discharge criteria met
2012	65.3y	4.9 days	3.8 days	3.7 days	4.2 days	5 days
2011	64.6y	6.1 days	5.9 days	6.6 days	6.8 days	7.8 days

**Conclusions:** The results of this study have shown that an ERAS programme can be successfully implemented within a general hospital using its existing infrastructure. Return of gastrointestinal function was the most significant factor in delaying surgical discharge and the increased use of laparoscopic surgery has reduced time until surgical discharge.

### 85. Penetrating Stab Injuries At A Single Urban Unit – Are We Missing The Point?

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**Introduction:** Stab wounds – the classical presentation of disorganised crime – can pose a challenge in their management. We examined our experience of stab injuries presenting to Connolly Hospital to draw conclusions pertinent to other centres.

**Methods:** We performed a retrospective study of all injuries presenting to the Emergency Department of Connolly Hospital between January 2010 and December 2012. Information was collected from the HIPE, theatre logbooks and Emergency Department records.

**Results:** Eighty-two patients presented with stab wound injuries in the given period. Five mortalities were recorded. Abdominal injury was recorded in 24 % of patients; seventeen percent of patients had multiple injuries not involving the abdomen; twelve percent had an isolated thoracic injury. Single injuries to other parts of the body were minority. Forty-three percent of patients were managed surgically, of which 26 % underwent early surgical and 17 % delayed surgical intervention, respectively. Laparotomy was performed in 15 % of cases; nine percent of patients were managed laparoscopically, seven percent required thoracotomy of which two had cardiac injury, both of whom survived.

**Conclusions:** The majority of patients with penetrating trauma are safely managed conservatively. However, complex injuries tend to affect younger patients and such patients require the highest quality of emergency care. These data highlight the need for dedicated trauma fellowships for general surgeons on emergency on-call rotas. Management of trauma should be centered in a limited number of designated trauma centres.

### 86. Abdominal Rectopexy - Does A Laparoscopic Approach Compare Favourably With An Open Approach?

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**Introduction:** Abdominal rectopexy is used to treat full-thickness rectal prolapse (FTRP) and obstructed defecation syndrome (ODS), with good outcomes. Use of a laparoscopic approach may reduce morbidity.

**Aim:** This study assessed short-term operative outcomes for patients undergoing laparoscopic or open rectopexy.

**Methods:** Rectopexy cases were identified from theatre logs in two tertiary referral centers. Patient demographics, intra-operative details and early post-operative outcomes were examined.

**Results:** There were 62 patients included, a third of whom underwent laparoscopic rectopexy.

Laparoscopy was associated with a longer operative time (195.9 versus 129.6 min,  $p = 0.003$ ), but this did not affect postoperative outcomes, with no significant differences found for complication rates and length of stay between the two groups. Univariable analysis found no influence of laparoscopic approach on the likelihood of post-operative complications, and no factor achieved significance with multivariable analysis.

This study included the first laparoscopic cases performed in the involved institutions, and a “learning curve” existed as seen with a decreasing operative duration per case over time ( $p = 0.002$ ).

**Conclusions:** Laparoscopic rectopexy is safe and effective as a modality and its short-term outcomes are comparable to open rectopexy. We anticipate that with increased proficiency in the procedure, operative duration will decrease, translating to improved short-term outcomes.

### 87. Increasing Frequency Of Surveillance CT is not Associated with Improved Survival

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**Introduction:** Optimal radiological follow-up with computed tomography post curative resection in colon cancer is yet to be determined. Discrepancy exists between international guidelines resulting in significant inter and intra institutional variation.

**Aims:** This study aims to determine the role of increasing frequency of radiological surveillance (computed tomography) in colon cancer.

**Materials and methods:** All patients undergoing curative surgery for colon cancer between 2000 – 2010 were included. The number of CTs performed in years one, two and three post op were recorded and cases categorized as A) no CT/CT in year one post op (no further radiological surveillance), B) CT in years one and two post op (no further radiological surveillance) and C) CT in years one, two and three (no further radiological surveillance). A univariate analysis was employed to determine the association (if any) between increasing frequency of surveillance CT and overall survival/disease-free-survival.

**Results:** Distribution of poor prognostic factors was similar between groups. Increasing frequency of CT in the surveillance period was not associated with improved overall survival ( $p = 0.30$ ) and disease-free-survival ( $p = 0.63$ ) on univariate analysis. There was no difference in distribution of curves representing groups A – C in Kaplan–Meier estimates with respect to overall and disease-free-survival. Classification and regression tree analysis identified three as the



optimal number of CTs associated with improved survival. Receiver operating characteristic curve analysis failed to validate this finding (area under the curve 0.55,  $p$  0.13).

Conclusions: Radiological follow-up (CT) is not associated with improved outcomes in colon cancer.

## 88. Post Operative Complications Following Nodal Dissection and their Association with Melanoma Recurrence

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Background: Although post-operative complications are common after lymph node dissection, its association with disease recurrence has not yet been fully investigated

Methods: A retrospective review of a prospectively maintained database was conducted; looking at all malignant melanoma patients with sentinel nodes positive disease requiring axillary or inguinal dissection between 2002 and 2011.

Results: A total of 124 patients required nodal clearance from 317 patients with stage I/II malignant melanoma who had undergone sentinel lymph node biopsy. Of these, 104 patients met the inclusion criteria. These patients were then divided into either inguinal lymph node dissections (ILND;  $n = 63$ ) or axillary lymph node dissections (ALND;  $n = 41$ ). Male patients formed the majority of the ALND group with a female majority in the ILND group ( $p = 0.08$ ). Breslow thickness of more than 3.5 mm was noted in 49 % of patients. Immunohistochemical deposits had higher detection rate in the axillary disease ( $p = 0.01$ ). The ILND patients had a higher recurrence rate (84.1 % vs. 63.4 %;  $p = 0.02$ ) and mortality (68.3 % vs. 48.8 %;  $p = 0.05$ ) without a significant difference in complications. Male patients were more likely to develop complications after ALND ( $p = 0.03$ ). In patients whom complications developed, 75 % of the ILND group and 71.4 % of the ALND group had disease recurrence, but without reaching a statistical value as an independent predictor of melanoma recurrence.

Conclusion: The development of complications is common following both ILND and ALND, however there is no significant difference in the rates of complications between the groups with some associations with recurrence without reaching a significant difference.

## 89. Prophylactic Use of an Intraperitoneal 3-Dimensional Pre-Shaped Mesh in The Prevention of Parastomal Hernias; a Single Institution Experience

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Introduction: Parastomal herniation is accepted as a common complication following stoma formation, with a documented incidence of up to 48 %. Several management options are available for hernia repair, including stoma relocation, direct repair of the fascial defect and

repair using prosthetic mesh. The results, however, remain controversial. More recently, the prophylactic use of mesh at the time of surgery has been described and has demonstrated promising results.

Aims: To evaluate the use and efficacy of a polyvinylidene fluoride-polypropylene mesh constructed as a one-piece three-dimensional pre-shaped implant (Dynamesh-IPST) in the prevention of parastomal hernias. Methods: A prospective observational study of patients treated both therapeutically and prophylactically for parastomal hernias between April 2009 and December 2012 was performed. Dynamesh-IPST was fixed in an intraperitoneal position. Follow-up ranged from 5 to 44 months.

Results: 31 patients were included in the study with a male to female ratio of 1.8:1 and an age range of 32-88 years. Four patients were treated for an existing parastomal hernia, while 27 were treated prophylactically with Dynamesh-IPST. No clinically or radiology detected parastomal hernias were documented during the study period. One patient had a re-operation during their postoperative period for a tight stoma, one had superficial refashioning of the stoma and one patient developed cellulitis at stoma site. No long-term mesh-related complications were observed.

Conclusion: Prophylactic use of an intraperitoneal pre-shaped mesh, Dynamesh-IPST, in our patient population has revealed favorable results with a low associated patient morbidity.

## SESSION 12: LOWER GI SESSION

### 90. Transanal Endoscopic Microsurgery; a Safe and Effective Treatment for Rectal Neoplasms

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Introduction: Transanal endoscopic microsurgery is available in limited centres in Ireland.

Aim: The aim of this study was to review this institutions experience with TEM since its introduction in 2008.

Methods: A retrospective analysis of all TEM operations was performed. Appropriate statistical analysis was performed.

Results: All data is presented in Table 1. Two procedures are worth noting. Firstly, the scar of a previously excised polyp with well-differentiated carcinoma within it was resected. Secondly, there was a patient with a 3 mm focus of intramucosal carcinoma in an adenoma. This patient had an R0 resection. Despite this, he presented with local recurrence fourteen months later and was treated with radiotherapy alone.

Conclusion: TEM is a safe and effective treatment option with an acceptable complication rate compared to other centres in Ireland ( $n = 5/32$ ; 15.6 %).

### 91. A Single Institution Experience of Laparoscopic Ileal-Pouch Anal Anastomosis

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Introduction: Ileal-pouch anal anastomosis is a surgical procedure where a loop of ileum is used to construct a reservoir in place of the

	No.	Mean Age (years)	HGD	LGD	Associated Carcinoma	Un-reported	Mean Diameter (cm)	Mean distance from verge (cm)	Mean LOS (days)	Complications
Total	32	68.4	6	9	2	9	3.97	6.88	3.69	2 PR Bleeds 2 Acute Urinary Retention 1 Bacteraemia 0 Mortality
Tubulovillous adenoma	14	65.1	3	6	1	4	4.21	6.5	4.14	2 AUR 1 Bacteraemia
Villous adenoma	4	71	0	2	0	2	3.53	5.75	3.5	1 PR Bleed
Tubular adenoma	2	59	1	1	0	0	5	8.5	3.5	
Adenoma	6	72.3	2	0	1	3	4.77	7.83	3.5	
Adenocarcinoma	5	76				0	2.64	6.4	3	1 PR Bleed
(2 = T1; 3 = T2)										
Normal (scar tissue)	1	61	0	0	0	0	2.2	10	3	

rectum (J pouch). Advances in minimally invasive surgery have led to the development of a laparoscopic approach, we share our initial series of patients who have had this surgery.

**Aims:** The purpose of this study was to assess the outcomes in patients who have undergone Ileal-Pouch Anal Anastomosis (J Pouch).

**Methods:** A retrospective review was carried out, of patients who had laparoscopic J pouch surgery between 2008-2013. Complications were grouped into time periods and graded according to the Clavien Dindo Classification. Functional outcomes were assessed using The Gastrointestinal Quality of Life Index and Wexner Scoring Systems.

**Results:** Twenty patients were identified. The majority were male (n = 15) and had a diagnosis of ulcerative colitis (n = 18). The median length of stay for completion surgery was 6.5 days (3-11 days). There were no immediate complications, 25 % (n = 5) of patients had an early complication, and 15 % (n = 3) had a late complication. There were no Grade IV complications, 10 % (n = 2) were classed as Grade III, the remainder were Grade I and II. Half of the patients gave a Wexner score 0 indicating no faecal incontinence, two gave a score above 5/20. The median frequency of daily bowel movements was 5.5 (1 – 12) and nocturnal was 1.5.

**Conclusions:** Patients who undergo laparoscopic J pouch surgery generally have good results. The complication rate compares favourably to international standards and functional outcomes are promising.

## 92. Colonoscopy on Patients on Anti Coagulants and Anti Platelets

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**Introduction:** There are increasing numbers of patients on long term anticoagulation for various medical conditions. At our hospital, the discontinuation of anti-coagulants prior to elective colonoscopy varies between teams. Depending on the indication for anti-coagulation or colonoscopy, anticoagulation may or may not need to be discontinued in order to safely perform colonoscopy.

**Aims:** To audit the current practice on performing colonoscopy on long term anti-coagulated patients in order to identify a safe and cost effective approach.

**Methods:** A retrospective analysis of elective colonoscopies performed in surgical day ward (SDW) between July 2011 and July 2012 was performed. Out of these, patients on anti-coagulants or anti-platelet agents (warfarin, clopidogrel, dabigatran and LMWH) were identified. Scope list, discharge summaries, lab systems and patient notes were used to collect the data.

**Results:** There were 56 patients on long term anti-coagulants or anti platelets (warfarin 71 %, clopidogrel 23 %, others (dabigatran, LMWH etc.) 4.5 %), who underwent colonoscopy at SDW. Pre-endoscopy discontinuation of anticoagulation/anti platelets noted in 28/52 patients with bridging therapy in 2/52 patients. Colonoscopy was normal in 24/52, 10/52 had diverticulosis, 6/52 underwent polypectomy 2 of these 6 didn't discontinue anti-coagulation. Procedure repeated in 1/52 to perform biopsy. 8/52 (15 %) colonoscopies were cancelled (3/52 due to non-discontinuation of warfarin and 5/52 due to high INR).

**Conclusions:** This study confirms there are increased numbers of patients in whom anticoagulants or anti platelets are inappropriately discontinued prior to colonoscopy, regardless of indication for the colonoscopy. This highlights the necessity to implement generalised guidelines for pre-colonoscopy management of anti-coagulation.

## 93. The Mesocolon; A Histological Characterisation of the Mesenteric Attachment of The Colon

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**Introduction:** Recent studies have confirmed that the right and left mesocolon do not regress as previously thought. This finding prompts a re-appraisal of mesocolic structure. Surprisingly, no studies to date have characterised the histological structure of the mesocolon.

**Aim:** To perform an analysis of the structure of the mesocolon, and the fascial plane which separate the apposed portions of the mesocolon from the underlying retroperitoneum.

**Method:** Mesocolic samples were harvested from 12 cadavers, which had been bequeathed to the Medical School, NUIG. Samples were taken from the ascending, transverse, descending mesocolon, and mesosigmoid (from apposed and mobile components). Specimens were fixed, embedded, sectioned and then stained with haematoxylin and eosin, and also Mason's Trichrome.

**Results:** In general, the mesocolon was comprised of adipocyte compartments demarcated by connective tissue septae. A surface mesothelium was evident throughout. At all levels a connective tissue layer of variable thickness and cellularity was evident beneath the surface mesothelial monolayer. Two mesothelial layers were regularly evident separating the mesocolon from underlying retroperitoneum, for non-mobile portions of the mesocolon. Between these a connective tissue layer was evident, corresponding with Toldt's fascia. Deviations from this pattern occurred for mobile portions of the mesocolon where adipocyte compartments occurred between two mesothelial layers.

**Conclusion:** This is the first study that systematically characterises histological appearance of the mesocolon. The findings demonstrate that the mesocolon and retroperitoneum are separated by mesothelial and connective tissue layers. Thus the mesocolon should not be considered a retroperitoneal structure throughout any of its length.

#### 94. Volumetric Fat Ratio and Not Body Mass Index is Predictive of Ileocolectomy Outcomes in Crohn's Disease Patients

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**Introduction:** Crohn's Disease (CD) patients are typically underweight. However, a growing cohort of overweight CD patients is emerging. High Body Mass Index (BMI) and increased visceral adipose tissue have been associated with increased surgical complications in colonic cancer surgery but have not been assessed as predictors of surgical outcomes in the CD population.

**Aim:** To determine whether BMI or volumetric fat parameters can be used to predict morbidity after ileocolectomy for CD.

**Methods:** 143 CD patients who underwent elective ileocolectomy were identified from our Inflammatory Bowel Disease (IBD) Registry. Patient demographics and operative outcomes were recorded. Visceral (VA), subcutaneous adiposity (SA) and abdominal circumference (AC) were analyzed on preoperative CT scans using Aquarius iNtuitionR software. A visceral/subcutaneous ratio was calculated.  $\chi^2$  and Pearson's tests were used for statistical analysis.

**Results:** BMI showed a direct correlation with SA ( $p = 0.0001$ ), VA ( $p = 0.0001$ ) and AC ( $p = 0.0001$ ). However, it did not correlate with the visceral/subcutaneous fat ratio ( $p > 0.05$ ). BMI, VA and AC did not predict surgical morbidity ( $p > 0.05$ ). However, decreased SA ( $p = 0.02$ ) and increased visceral/subcutaneous fat ratio ( $p = 0.0001$ ) were associated with postoperative complications. In multivariate regression analysis, family history of IBD ( $p = 0.009$ ), high ASA score ( $p = 0.02$ ) and increased visceral/subcutaneous fat ratio ( $p = 0.03$ ) were found to be independent predictors of postoperative morbidity.

**Conclusions:** The visceral/subcutaneous fat ratio is a more reliable predictor of postoperative outcomes in CD patients undergoing ileocolectomy than conventional adiposity markers such as BMI. Preoperative calculation of the visceral/subcutaneous fat ratio offers the opportunity to optimize high risk surgical patients, thus improving outcomes.

#### 95. Circulating and Tissue Levels of miR-504 in colorectal and breast cancer

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**Introduction:** The discovery of MicroRNAs, short non-coding RNAs with a regulatory role in gene expression, has added greatly to investigation of novel diagnostic and therapeutic strategies in cancer. miR-504 has recently been implicated in regulation of the p53 tumour suppressor.

**Aim:** This study aimed to investigate, for the first time, circulating and tissue miR-504 expression in patients with colorectal or breast cancer.

**Methods:** With consent, tissue was harvested from patients with breast or colorectal cancer. RNA was extracted from tissue ( $n = 20$  colorectal tumour,  $n = 13$  colonic tumour associated normal (TAN),  $n = 43$  breast tumour,  $n = 20$  normal breast), whole blood from patients with breast cancer ( $n = 20$ ), colorectal cancer ( $n = 23$ ) and healthy controls ( $n = 23$ ). RNA was reverse transcribed and relative levels of miR-504 quantified by RQ-PCR.

**Results:** In breast tissue, significantly lower expression of miR-504 was observed in cancers (Mean  $\pm$  SEM;  $1.766 \pm 0.096 \log_{10}$ Relative Quantity (RQ)) compared with normal breast samples ( $2.935 \pm 0.202 \log_{10}$ RQ,  $p < 0.001$ ). No significant difference was observed across epithelial subtype, grade or stage. In contrast to the differential expression observed in breast cancer, in colorectal cancer tissue no significant difference was observed ( $2.99 \pm 0.33 \log_{10}$ RQ) compared with TANs ( $2.73 \pm 0.30 \log_{10}$ RQ). In the circulation, no change in miR-504 expression was observed in colon cancer, breast cancer or healthy controls.

**Conclusion:** This is the first study to examine miR-504 expression in patient samples and shows miR-504 to be dysregulated in breast tumour but not in colorectal cancer tissue. Combined with the absence of dysregulation in the circulation, this highlights the potential importance of miR-504 in the breast tumour microenvironment.

#### 96. Yield Of Full Colonoscopy in Patients With Bleeding Per Rectum

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**Introduction:** Bleeding per rectum for more than 6 weeks is investigated by lower GI endoscopy. Full colonoscopy in comparison to left sided colonoscopy (flexible sigmoidoscopy) requires more intensive bowel preparation, takes more time to perform and has higher complication rate.

**Aim:** This study was done to evaluate the yield of full colonoscopy in detecting significant pathology beyond splenic flexure (SF).



Pathology	Frequency	Percent
No pathology	155	63
Pathology up to SF	57	23.2
Pathology beyond SF	34	13.8
Total	246	100
Pathology VS age groups		
Age	Number	Pathology beyond SF
<50	106	12
>50	140	22

**Method:** Retrospective case study from Jan 2011 to Sept 2012 of 246 patients. Data was collected from the endoscopy register of all the patients who underwent lower GI endoscopy with indication of bleeding per rectum. Histology reports were obtained from the histopathology department. Results were obtained using SPSS and applying Chi Square test.

**Results:** Mean age of patients in this study was 53.81 with SD of 16.80. Highest frequency was in the age group of 41-50 years (21 %). 204 (82 %) patients had full colonoscopy while 42 (18 %) had left sided colonoscopy. In 13.8 % cases pathology beyond splenic flexure was detected which is a significant number. There was no statistically significant difference in detection of pathology beyond SF when compared in 2 age groups, above or below 50 years of age.

**Conclusion:** Full colonoscopy has a higher yield than left sided colonoscopy in patients presenting with bleeding PR and should be the first line investigation.

## 97. Surgical Management Of Colorectal Lung Metastases: a Case Series in the West of Ireland

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**Introduction:** Chemotherapy remains the gold standard treatment for metastatic disease. In select cases of pulmonary metastases surgery can improve disease free survival. There is no consensus, however, on which patients benefit most from surgery and how extensive resection should be. Disease free survival, TNM staging of the primary tumour, number of metastases and carcino-embryonic-antigen (CEA) levels have been reported to predict survival following surgery. Surgery type is influenced by location and number of metastases. This study aims to review surgical intervention for isolated colorectal lung metastases in the West of Ireland.

**Methods:** A retrospective audit of patients undergoing surgery for colorectal lung metastases in our centre was performed from 2007-2012 inclusive. Patients were identified through operative logs and electronic patient records. Patient demographics, primary tumour site and operation type, radiological and pathological TNM staging, recurrence free interval, radiological location of recurrence, pre-operative CEA levels, thoracic surgery type and follow up were recorded. **Results:** 37 patients underwent surgery for pulmonary metastases. 12 were colorectal in origin (8 male). Median age was 60 (32-87). All were pathologically staged T3 or higher excluding 1 (pathological complete response). Median recurrence free interval was 31 months. 11 patients had normal CEA levels pre-operatively. 6 underwent lobectomy, 6 underwent wedge resection. 3 required repeat wedge resections. Average follow up was 30 months (10-52 months). 3 were

found to have recurrent disseminated disease. There was 1 death unrelated to cancer.

**Conclusions:** Lung resection for isolated colorectal metastases provides good short and medium term outcomes.

## 98. Fibroblasts and their Precursors Can be Generated from Mesocolic Mesothelium; Implications for Intraperitoneal Fibrotic Diseases

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**Introduction:** We recently identified a mesothelial layer overlying the entire mesocolon. Additionally, we identified a submesothelial connective tissue layer as well as sporadic fibroblast reservoirs beneath this monolayer. We speculated that these fibroblasts could be generated through ex vivo culture of the mesocolic mesothelium (MM).

**Aim:** To develop a novel mechanism for ex vivo harvest and culture of MM to determine if this process could lead to fibrocyte and fibroblast generation.

**Method:** Following ethical approval and informed consent, a technique was developed enabling the stripping and harvest of MM in patients undergoing colorectal resections. From these, a single cell suspension was prepared and cultured ex vivo. The cellular composition of the suspension was subsequently characterised via immunofluorescence and confocal microscopy with markers targeting collagen-1 (C), vimentin (V), Golgi apparatus (GM-130), phalloidin (P) and CD45. Following a period in culture, this was repeated.

**Results:** Initial staining demonstrated mesothelial cells (V+/CD45-). Spindle-shaped cells morphologically resembling fibroblasts appeared in 9 (of 21) samples 10.5 (±13.3) days post plating. These were derived from a mixture of oncologic (n = 7), Crohn's (n = 1) and diverticular (n = 1) resections. Dual staining with C and V confirmed these were mainly fibroblasts whilst dual staining with CD45 and C identified a fibrocyte subpopulation.

**Conclusion:** MM can be harvested from benign and oncologic colorectal resections. This is predominantly mesothelial in composition at first. Following a period in culture, it is replaced by fibrocytes and fibroblasts. As MM thus represents a source of mesenchymal cells, these observations have implications for intraperitoneal fibrotic conditions.

## SESSION 13: TRAINING AND EDUCATION SESSION

### 99. A Time Use Diary Study of Surgical Interns

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**Introduction:** Intern education and training is designed to ensure that on completion of the intern year every intern will be able to practice medicine in a competent and safe manner.

Categories	Days (n = 44)	Nights (n = 9)
Patient related	283 (150)	390 (99)
Administration	218 (120)	167 (120)
Education	70 (74)	53 (61)
Personal	407 (166)	383 (102)
Sleeping	462 (122)	447 (160)

**Aim:** The purpose of the study was to provide insights into how interns are spending their time and the extent to which this aligns with the National Intern Training Programme (NITP).

**Method:** The study used an on-line time diary to anonymously log the sequence and duration of 22 activities (divided into patient related, administrative, education, personal). The surgical intern accounted for their activities every 30 min, 24 h a day. A total of 14 interns participated in the study, with recordings of 53 days. The responses are summarised in Table 1.

**Results:** Mean number of minutes and standard deviation (brackets) per day spent on each task.

**Conclusion:**

Although patient related activities take up a considerable part of a surgical intern's day, a large proportion of time is spent on administrative tasks. The provision of training in administrative tasks such as completion of forms and discharge summaries is an important element of patient care. Poor communication of medical information at transition points is responsible for as many as 50 % of medication errors and 20 % of adverse drug events in hospital<sup>2</sup>.

### 100. Impact of Emergency Department Closures and Centralization of Acute Surgical Services on Patient Mortality

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**Background:** Despite nation-wide efforts to reduce health care costs through emergency department closures and centralization of services (COS), little is known about the impact of such actions on mortality of surgical patients (MOSP).

**Aim:** To determine the impact on MOSP as a result of a recent centralization of acute surgical services to Mid Western Regional University Hospital Limerick (MWRUHL).

**Methods:** Hospital Inpatient Enquiry data was used to identify patients who had mortalities at MWRUHL during the years 2007, 2008, 2011 and 2012. This represented 24 months pre and post centralization of acute surgical services to MWRUHL. Data was excluded from the years 2009 and 2010 to minimize bias arising during the transitional period.

**Results:** The total number of surgical mortalities pre-centralization was 116 with 55 and 66 respectively for years 2007 and 2008. Total occupied inpatient mortality bed days were 13676 with an avg. of 117.90 per mortality. Average age per surgical patient mortality was 72.76 years with SD 14.29. Similarly, the total number of surgical mortalities post-centralization was also 116 with 61 and 55 respectively for years 2011 and 2012. Total occupied inpatient mortality bed days were 18830 with an avg. of 162.33 per mortality. Average age for this group was 72.25 years with SD 13.73.

**Conclusion:** COS to MWRUHL was not associated with a resultant increase in inpatient surgical mortality. Our findings indicate that controversial changes to the structure of the health care system can occur without losses in patient safety and reduction in quality of care.

### 101. Laparoscopic Cholecystectomy in the Acute And Elective Setting: an Assessment of Trainee Operating Patterns

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**Introduction:** With streamlining and of surgical training, there may be increased pressure on trainees to perform an adequate number of procedures to fulfil their training needs. Laparoscopic cholecystectomy is one of the commonest laparoscopic surgical procedures and serves as an ideal operation for trainees to develop laparoscopic operating skills.

**Aims:** To assess operating patterns for laparoscopic cholecystectomy in the acute and elective setting to determine the involvement and level of trainees in performing these procedures.

**Methods:** HIPE data, theatre logbooks and trainee logbooks were used to determine all cholecystectomies performed in Beaumont and St Joseph's hospital in 2012. The status of the lead and assistant surgeons was recorded.

**Results:** 201 laparoscopic cholecystectomies were performed in 2012, 54 (27 %) in the acute setting in Beaumont; 72 electively in Beaumont (36 %) and 75 (37 %) electively in St Joseph's. Overall 54 % of procedures (n = 93) recorded an NCHD as the primary surgeon. In the acute setting, this was 38 % (n = 21) of procedures. In the elective setting 49 % (n = 72) of procedures recorded an NCHD as primary surgeon. 88 % (n = 82) of procedures with an NCHD as lead surgeon were performed by SpR or senior registrar grade trainees. 11 % (n = 10) were performed by junior registrars with 1 % (n = 1) performed at SHO grade.

**Conclusions:** Trainees are more likely to be lead surgeons in the elective setting. Senior trainees perform the majority of laparoscopic cholecystectomies where an NCHD is the lead surgeon. Consideration must be given to expanding the opportunities for junior trainees to gain operative experience.

### 102. Higher Surgical Training Opportunities in the General Hospital Setting; Getting the Balance Right

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<sup>2</sup> Institute for Healthcare Improvement (2008).

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**Introduction:** The general hospital can play an important role in training of higher surgical trainees (HSTs) in Ireland and abroad. Training opportunities in such a setting have not been closely analysed to date.

**Aims:** The aim of this study was to quantify operative exposure for HSTs over a 5-year period in a single institution.

**Methods:** Analysis of electronic training logbooks (over a 5-year period) was performed for general surgery trainees on the higher surgical training programme in Ireland. The most commonly performed adult and paediatric procedures were analysed.

**Results:** Standard general surgery operations such as herniae (average 58, range 32-86) and cholecystectomy (average 60, range 49-72) ranked highly in each logbook. The most frequently performed emergency operations were appendicectomy (average 45, range 33-53) and laparotomy for acute abdomen (average 48, range 10-79). Paediatric surgical experience included appendicectomy, circumcision, orchidopexy and hernia/hydrocele repair. Overall, the procedure most commonly performed in the adult setting was endoscopy, with each trainee recording an average of 116 (range 98-132) oesophagogastroduodenoscopies (OGDs) and 284 (range 227-354) colonoscopies.

**Conclusions:** General hospitals continue to play a major role in the training of higher surgical trainees. Analysis of the electronic logbooks over a 5-year period reveals the high volume of procedures available to trainees in a non-specialist centre. Such training opportunities are invaluable in the context of changing work practices and limited resources.

### 103. An Audit into the Knowledge And Practice of Junior Doctors in the Consent Process

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**Aims:** Doctors are obliged legally and ethically to obtain informed consent from patients. The aims of this study are to audit the knowledge and practices of interns regarding consent.

Task Completed N (%)	Pre-ALARM (n = 52)	Post-ALARM (n = 43)
Explained Reason for Test	26 (50)	27 (63)
Explained Sedation and Risks	13 (25)	26 (61)
Mentioned Biopsy	40 (77)	32 (74)
Mentioned Infection Risk	29 (56)	32 (74)
Mentioned Bleeding Risk	41 (79)	39 (91)
Mentioned minor risk of Mortality	7 (14)	6 (14)
Completed Consent form	Fully = 21 (40) Partially = 23 (44)	Fully = 33 (77) Partially = 4 (9)
Documented Consent Process	4 (7)	23 (54)

**Methods:** A prospective observational study was undertaken. The study cohort included all interns working in a tertiary hospital in the west of Ireland (n = 57). A pilot education program (Applied Legal and Risk Management (ALARM)) was delivered to this group. Pre-course assessment of interns' knowledge of medico-legal implications of the consent process was assessed by means of a multiple choice questionnaire (MCQ). Assessment of consenting behaviour before and after the educational intervention was carried out by means of standardised patient (SP) exercises where interns were observed taking consent for endoscopy.

**Results:** The mean MCQ result obtained at intern induction was 61 % ( $\pm$  19). Results from SP assessments are outlined below:

**Conclusions:** A standardised educational intervention has been shown to lead to improved rates of disclosure and documentation of risks. Guidelines and education are required to both improve patient safety and safeguard against litigation.

### 104. Competency in Scrotal Examination - Survey of Newly Qualified Doctors

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**Introduction:** Testicular cancer awareness has increased following a number of high profile public information campaigns, emphasising early detection and early presentation to a doctor. Teaching scrotal examination technique to medical students is difficult however, given its personal and intimate nature, in comparison to abdominal or chest examinations. We aimed to assess opinions from newly-qualified doctors of the quality of scrotal examination (SE) training in medical school.

**Methods:** An online survey was created using SurveyMonkey™ and distributed to 475 Interns in the Republic of Ireland (ROI). The survey was accessible from October to December 2012.

**Results:** In total, 179 responses were received (response rate = 37 %). Overall, 67 respondents were male (37.4 %). 164 respondents (91.4 %) completed medical school in ROI. Only 101 (56.4 %) had formal SE training during medical. Various training methods were used including demonstration models (50 %), human volunteers (10 %) or both (21 %). The majority of respondents feel that SE training was inadequate in medical school (74.9 %) and that they did not feel competent in performing SE on graduating (73.2 %). Of note, 175 respondents (97.8 %) do not routinely examine the scrotum when examining a male abdomen. Of male respondents, 16 (33.3 %) do not perform self-examination of their testicles.

**Conclusion:** SE is poorly taught in medical schools with many new graduates not competent in the technique. This could compromise a doctor's ability to educate a patient in testicular self-examination. Similarly, this lack competence may explain the poor rates of SE when examining the male abdomen.

### 105. Factors Affecting Irish Medical Students' Attitudes Towards, and Awareness of, Research Opportunities

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**Introduction:** In an era of a declining interest in research within the medical field, it is important to know the attitudes of medical students towards research.

**Aims:** To assess students' attitudes towards research; awareness of research opportunities; ability to carry out literature appraisals.

**Methods:** Students were invited to participate in an online anonymous questionnaire.

**Results:** Of 180 responses, 83 % did not feel adequately aware of research opportunities and 40 % would like to participate in research but did not know how to get involved. The strongest motivating factor was the potential benefit for future career prospects, followed by an inspiring mentor, ahead of prizes, monetary incentives or academic credits. The most common disincentive was 'difficulty balancing with academic commitments' (30 %), followed by 'lack of awareness'. A third of students thought that an intercalated BSc was a good idea, however only 11 % thought that the medical school provided enough information. Almost all (88 %) students felt they needed more guidance in interpretation of the literature; 23 % judged themselves capable of performing literature appraisals. Students with a first degree relative in the medical profession were twice as likely to have done research as their counterparts and twice as aware of research opportunities.

**Conclusions:** Medical students show an interest in participating in research and are aware of its importance, but are not appropriately aware of research opportunities. Students are generally unaware of the option of an intercalated degree. Finally, most students do not feel they have the ability to critically appraise literature.

## 106. Macrophage Polarisation

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**Background:** Macrophages are divided into subpopulations based on their anatomical location and functional phenotype. M1 macrophages are involved in the acute phase of infection or inflammation and M2 macrophages are involved in resolution of inflammation and tissue repair. The M1 phenotype is induced by LPS and IFN- $\gamma$  and characterised by high levels of pro-inflammatory cytokine such as IL-6, IL-12 and TNF- $\alpha$ . The M2 phenotype is induced by IL-4 and is characterised by high levels of IL-10 and low levels of IL-12.

**Aims:** In order to establish whether a predominance of M1 or M2 pattern of polarisation can be induced in vitro.

**Methods:** Peritoneal and bone marrow derived macrophages were harvested from C57BL/6 mice. The cells were cultured and then exposed to polarising stimuli for 18-24 h. LPS and IFN- $\gamma$  were used to induce M1. The M2 phenotype was induced using IL-4. ELISA was performed on the supernatant to confirm the M1 and M2 phenotypes.

**Results:** All results are shown in Table 1. The M1 phenotype is characterised by high levels of TNF- $\alpha$ , IL-6 and IL-10. The M2 phenotype had low levels of IL-12p70.

**Conclusion:** We have shown that the M1 and M2 phenotypes are inducible in vitro.

	Peritoneal Macrophages			Bone Marrow Derived Macrophages		
	Control	M1	M2	Control	M1	M2
TNF- $\alpha$	13.2	2,878*	40.1	2.5	1,132.8*	2.6
IL-6	159.4	1,675	2,429	12.5	1,773.7*	15
IL-10	376.8	1,249.4	390.9	48.8	90.5	48.2
IL-12p70	2.5	15.7	3.4	4.87	777.1*	3.65

Values shown are pg/ml

\*( $p < 0.05$ )

## 107. Objective Measurement of Knot Tying Skills Using Motion Tracking System

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**Introduction:** Open knot tying skills are fundamental skills in surgery. It is important to be able to assess the performance of the skills objectively and train the trainees to proficiency.

**Aim:** The aim was to assess the validity of the metrics generated from the motion tracking system in assessing open knot tying skills.

**Methods:** 5 consultant surgeons, 14 basic surgical trainees and 24 medical students were recruited as experts, trainees and novices respectively. The subjects performed one-handed and two-handed knot tying on a bench model by using 2/0 silk ligature. An electromagnetic sensor was attached to their right index finger to track the movement while performing the tasks. The metrics used to assess the skills were path length, time and average distance from the centre of the bench model. They were also scored by using the proficiency score system based on the time and error, which was previously validated. The metrics of the groups were analysed using Kruskal–Wallis Test and to compare the correlation between the metrics and the proficiency score, Spearman coefficient analysis were used.

**Results:** The experts performed the skills faster than the novices in both techniques. The metrics generated from the motion tracking system were able to discriminate between the groups. There is a correlation between the metrics and the proficiency scoring system.

**Conclusion:** The motion tracking system showed a construct validity and concurrent validity in assessing the performance of knot tying skills and potentially effective in evaluating open surgical skills.

## SESSION 14: ORTHOPAEDIC II SESSION

### 108. An In Vivo Study of Bioactive Multilayered Scaffolds for Regeneration and Repair of Osteochondral Defects

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**Introduction:** Articular cartilage damage leads to formation of an osteochondral defect, which essentially translates to exposed bone. The repair of such damaged tissues with conventional methods of allograft, autograft and microfracture still don't have satisfactory long term results. ChondroColl (WO2010/084481) a novel multilayered scaffold developed in our lab addresses this issue as it closely matches the structure and composition of osteochondral tissue. Each layer in the scaffold is custom built to encourage the formation of distinct tissue that mimic the composition and structure of the native tissues.

**Aim:** This study thus aims to assess the regenerative capacity of ChondroColl in a large animal model.

**Method:** In vivo assessment was carried out by creating a bilateral 6 mm × 6mm defect in the medial femoral and lateral trochlear ridge of a caprine model. Defects were implanted with ChondroColl, a market leader and others were left empty, acting as controls. Initially in a 6 week pilot study was carried out. This was followed by a long term study at 3 months, 6 months and 1 year. The repair was assessed by micro C.T. analysis, histological staining and 3D image analysis of the samples.

**Results:** The 6 week and 3 month study showed good scaffold retention and repair of subchondral bone and generation of hyaline like cartilage. The 6 month and 1 year study are ongoing.

**Conclusion:** Positive results to date show that ChondroColl to be a promising method for cartilage repair and regeneration by promoting rapid cell growth and natural cartilage re-growth.

### 109. Can The Sound of Hammering Objectively Predict Micro-Fracture In Bones? a Study on Animal Bone

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**Introduction:** To prove the hypothesis indicating humming sound change can predict development of micro-fracture during rasping of long bones.

**Methods:** An experiment using porcine femur bone performed by attaching a bone conduction microphone to the distal part of the bone while hammering a rasps of different sizes through the medullary canal till the point where a fracture developed. The transduce sound resonances recorded and analysed using Matlab software and a spectrum analyzer using Fast Fourier Transforms (FFT).

**Results:** Our analysis proved that the sound frequency response (SFR) are influenced by the structural integrity of the Rasp-femur interface.

The pitch of the resonance increases as the rasp approaches optimal tension and grip in cortical bone. The SFR graph shifted to the right between successive hammer blows as the fixation stiffness increased and that was reflected by increasing resonance frequencies. Once bone fracture developed this structure was compromised leading to a change in the pitch and duration of the resonance. When the tension decreased due to the fracture The SFR graph shifted to the left as the structure no longer has the capacity to resonate to the same extent. SFR analysis can detect accurately the rasping end point where the risk of fracture increases if hammering continued beyond it.

**Conclusion:** There is a relationship between hammering sound frequency response during rasping and internal stress in the bone which could be used as an objective method to predict and prevent the development of intraoperative micro-fracture through the identification of insertion end point.

### 110. Mimicking Developmental Bone Formation as a Strategy to Enhance Tissue Engineered Collagen-Based Scaffolds for Bone Repair

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**Introduction:** Refinement of critical care and improving oncological treatments have led to increased orthopaedic patient survival rates following trauma and malignancy. Complex reconstructive procedures are commonly needed to restore bone loss and limb function. Tissue engineering (TE) strategies aim to meet these needs. Mimicking developmental bone formation via endochondral ossification (ECO) advantageously uses the release of angiogenic factors such as vascular endothelial growth factor (VEGF) from hypertrophic cartilage as well as alkaline phosphatase, an early marker of osteogenesis, to promote bone formation.

**Aim:** To develop an in vitro model of ECO using collagen-based scaffolds to support tissue engineered cartilage production for in vivo bone formation.

**Methods:** Collagen-glycosaminoglycan (CG) and collagen-hydroxyapatite (CHA) scaffolds were seeded with rat mesenchymal stem cells (rMSCs) in the presence of chondrogenic factors (TGF-β3) for 42 days and assessed for gene expression, sulphated-GAG deposition and calcium content. Histological analyses further assessed production and distribution of cartilage-like and mineralised matrix.

**Results:** Sulphated-GAG quantification and histology demonstrate both scaffolds support cartilage matrix deposition, with CG scaffolds promoting significantly greater levels of cartilage-like matrix ( $p < 0.01$ ). Expression of COLX and VEGF genes associated with hypertrophy was evident in both groups, with CG supporting significantly higher COLX expression. Mineralisation increased with time in both scaffolds, however, CHA scaffolds contained significantly higher calcium ( $p < 0.01$ ).

**Conclusion:** This study demonstrates the potential of these biomimetic scaffolds as cartilage precursors to mimic the process of ECO for bone repair applications. In vivo assessment of this model to heal a mid-diaphyseal femoral defect is currently ongoing.

### 111. The Morphological Characteristics of the Lumbar Pedicle in the Osteoporotic and Aging Spine

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It has been proven that long bones in aging patients, especially those with osteoporosis, undergo appositional bone growth leading to a larger medullary cavity, increased overall cross sectional area and importantly reduced cortical thickness. There have been no studies that prove similar morphological changes in the lumbar pedicles.

Lumbar spine instrumentation is indicated for a variety of pathologies. In the past patients with significant osteoporosis would not have been considered for surgery due to the high risk of complications particularly screws pull-out, mostly accounted for by loss of bicortical grip.



Our study investigates CT Lumbar Spines in the last 7 years in a tertiary referral centre in the west of Ireland and studies the characteristics of the pedicles (measured on CT) and patient including age, sex and (measured by DEXA).

There was 618 CT lumbar spine scans carried out since 2006. Eighty-nine patients had DEXA scans. We analysed the CT and DEXA scans of 50 of these patients with complete data. Average age was  $59.9 \pm 11.45$  years (21–76) and consisted of 41 females and 9 males. Patients with osteoporosis had significantly lower cortical thickness measured in both axial and sagittal views ( $p < 0.05$ ). Osteoporosis or gender had no effect on the overall width or height of the pedicle. Increasing age did not correlate with a significant change in the morphological characteristics of the pedicle.

This information may be used to calculate a patient's osteoporosis status based on CT and to develop devices for use in osteoporosis to improve outcomes.

## 112. Financial and Economic Implications for Being the National referral Centre for the Management of Pelvic and Acetabular fractures in Ireland

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**Introduction:** Pelvic and acetabular fractures account for 3–8 % of all skeletal fractures. The majority of these fractures are due to road traffic and other high velocity trauma. They are complex injuries that require specialist treatment, with significant cost impact. Our institution is the national centre for treatment and management of these injuries with over 150 referrals per year.

**Aim:** To audit all referrals to our institution over a 6-month period and calculate the cost incurred by being the national referral centre.

**Methods:** We performed a retrospective review of a prospective database, and subsequent allocation of Casemix points to assess total cost of treatment for each patient referred to our institution.

**Results:** During the 6 month study period from 1st November 2010 to the 30th April 2011, a total of 103 patients with an acetabular or pelvic fracture were referred and admitted to our institution. The furthest referral being 181 miles away. Over-all length of stay was 15.4 days. Mean Injury severity score was 12. The average inclusive cost for a referral to our unit for operative management was €16,302.

**Conclusion:** Pelvic and acetabular fractures are complex injuries with significant morbidity and mortality. They are frequently due to high velocity accidents with polytrauma and multisystem injuries. The need for recognised specialist referral units that employ good evidence based approaches coupled with economic efficiency is palpable. However for these units to remain sustainable money needs to “follow the patient”.

## 113. Knee Extensor Disruption; Under- Diagnosed Cause of Gait Deterioration in Cerebral Palsy Diplegia

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**Introduction:** Crouch gait is defined as excessive flexion of the knee throughout the stance phase of gait. We report that Knee extensor disruption (KED), which is often un-diagnosed, is the major

complication of crouch gait and how a pre-morbid gait analysis can help in diagnosing the pre-rupture state.

**Aim:** To demonstrate the role of gait analysis in diagnosing knee extensor disruption as a cause of gait deterioration.

**Method:** We compared post-rupture analyses to pre-rupture data in diplegic patients to identify the knee kinematic and kinetic pattern associated with a malfunctioning knee extensor mechanism.

**Results:** see table below

**Conclusions:** In this report we highlight the direct relation between crouch and the risk of knee extensor rupture and how a fracture of the knee extensor mechanism causes significant deterioration in an already compromised individual. Kinematic and kinetic analysis of gait provides objective data for diagnosis of KED and identifies at risk individuals. KED is not a condition confined to severely involved CP patients. This must be kept in mind when supervising children or adult CP patients with crouch in sport.

Variable	Pre-rupture (n = 10) Mean (SD)	Post-rupture (n = 10) Mean (SD)	P value
Speed	0.99 (0.26)	0.66 (0.23)	0.009
Stance (%)	61.66 (3.95)	66.98 (6.6)	0.047
Ground contact	26.80 (11.43)	43.80 (16.61)	0.009
Shock absorption	32.10 (10.48)	44.70 (20.31)	0.080
50 % stance	21.60 (10.35)	44.40 (18.00)	0.002
Return to Extension	10.50 (2.46)	0.30 (3.47)	<0.001

Results for kinematic variables comparing pre and post rupture. Published by the same authors part of the abstract.

## 114. Cemented versus Uncemented fixation in Total Hip Replacement: A Systematic Review & Meta-Analysis

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**Introduction:** Controversy exists regarding the optimal method of fixation for primary total hip replacement.

**Methods:** We performed a systematic review and meta-analysis of all randomized controlled trials (RCTs) available in the published literatures that compare cemented versus uncemented fixation in THR.

**Results:** Our Meta analysis of the included RCTs suggests that there is no significant difference between cemented and cementless hip arthroplasty in term of survival of implant measured by revision rate. However, better short-term clinical outcomes mainly improved pain score can be obtained with cemented fixation than those without cement. On the other hand the results are still unclear for the long-term clinical and functional outcome.

No difference was evident in mortality or complications rate between the two fixation methods. On the other hand, radiographic differences are variable and do not seem to correlate with clinical findings. Differences in both cemented and cementless surgical technique

combined with nature of the prosthesis might be associated with the incidence of osteolysis.

We strongly emphasize the need for more uniform standards in the selection of control groups and better reporting technique in future orthopaedic randomized trials. Further research, improved methods and longer follow up are necessary to better define specific subgroups of patients in which the relative benefits of cemented and uncemented implant fixation can be more clearly demonstrated.

Conclusion: Cemented hip arthroplasty is similar if not superior to cementless fixation, and provide better short term clinical outcomes. Our findings summarize the best available evidence and provide information for future research.

### 115. A Single Surgeons Experience with the Recalled Asr Hip System

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**Introduction:** The ASR hip system was voluntarily recalled in 2010 as it was associated with a 5 year revision rate of 13 %. Several authors have reported revision rates of up to 48.8 % for these implants.

**Aims:** The aims of this study were to analyse a single surgeon experience with the ASR devices between 2004 and 2013.

**Methods:** Patient data was obtained from a database used to monitor patients progress from the time of the recall. All charts were retrospectively analysed, WOMAC scores, X-rays, serum ion levels and biochemical parameters are presented.

**Results:** 138 cases were identified in 122 patients - 70 stemmed MoM implants and 68 resurfacing procedures. 83.3 % of patients were male, 16.7 % were female. The average age was 54 years. 9 cases (6.52 %) were revised - 6 female, 3 male. 8 stemmed MoM prostheses, and one resurfacing were revised. All revisions were performed following the public recall. The mean time to revision was 4.77 years. The mean WOMAC score of the entire cohort was 85.14 while that of the revised cases was 63.67. 6 revisions were attributed to patient discomfort, 2 to periprosthetic fracture, and 1 to component loosening.

**Conclusion:** In this highly observed cohort the ASR revision rate is higher than what would be acceptable in modern arthroplasty practise.

It is however quite low in comparison to other published series. We discuss possible reasons to explain the observed differences.

### 116. The Use of Weight Relieving Shoes in Forefoot Surgery

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**Introduction:** After reconstructive forefoot surgery, patients require complete or partial forefoot relief, which can be obtained with a variety of shoe designs.

**Aim:** To review our experience with the use of the heel bearing shoes for forefoot weight relief and evaluate its use & application in our daily forefoot surgical practice.

**Method:** A retrospective review of all (341) patients who underwent reconstructive forefoot surgery in our unit during the period of January 2003 to October 2007.

**Results:** All patients used Barouk heel bearing shoes in the post operative period 283 (83 %) were females and 58 (17 %) were males. Average age was 56 years (range 14–84). In March 2006 we changed our postoperative protocol with the introduction of early physiotherapy for the lesser toes. 258 procedures performed between January 2003 to February 2006 (first group), while 83 procedures performed March 2006 to October 2007 (second group).

51 (19.77 %) from the first group reported stiffness of toes at 6 weeks review whilst only 3 (3.61 %) out of the second group. 18 (6.98 %) reported discomfort and stiffness of the hip from the first group in comparison to only 2 (2.25 %) patients in group two. From the first group 27 (10.47 %) reported knee stiffness while only one patient in the second group. The incidence of clinically significant low back pain was 12 (4.65 %) in the first group and 5 (5.61 %) patients in the second group.

**Conclusion:** Heel weight bearing shoes have important role in reconstructive forefoot surgery; however some problems may be encountered during their use. Early physiotherapy is essential to avoid problems.