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Lecture and Surgical Symposium

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4-5 September 2020

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45th Sir Peter Freyer Memorial Lecture & Surgical Symposium 2020

Friday, 4th September 2020

Timetable of Events

Theatre 1	Theatre 2	Theatre 3
<p>9.00 a.m. Session 1: Trauma & Orthopaedic Surgery</p> <p>Papers No. 001-009</p>	<p>9.00 a.m. Session 2: General Surgery</p> <p>Papers No. 010-018</p>	<p>9.00 a.m. Session 3: Upper GI Surgery</p> <p>Papers No. 019-027</p>
10.30 a.m. Coffee & Poster Viewing		
<p>11.00 a.m. Session 4: Breast Clinical & Endocrine</p> <p>Papers No. 028-036</p>	<p>11.00 a.m. Session 5: Vascular & Cardiothoracic Surgery</p> <p>Papers No. 037-045</p>	<p>11.00 a.m. Session 6: Lower GI Surgery</p> <p>Papers No. 046-054</p>
12.30 p.m. Lunch & Poster Viewing		
<p>1.30 p.m. Session 7: Breast Research</p> <p>Papers No: 055-060</p>	<p>1.30 p.m. Session 8: Oncology</p> <p>Papers No: 061-066</p>	<p>1.30 p.m. Session 9: Plastic & Reconstructive Surgery</p> <p>Papers No: 067-072</p>
2.30 p.m. Coffee & Poster Viewing		
<p>Theatre 1</p> <p>3.00 p.m. Session 10: Plenary Session</p> <p>Papers: 073-081</p>		



**O'É Gaillimh
NUI Galway**

44th Sir Peter Freyer Memorial Lecture & Surgical Symposium 2019

Saturday, 5th September 2020

Timetable of Events

Theatre 1	Theatre 2	Theatre 3	Theatre 4
<p>9.30 a.m. Session 11: Trauma & Orthopaedic Surgery Papers No: 082-090</p>	<p>9.30 a.m. Session 12: General Surgery Papers No: 091-099</p>	<p>9.30 a.m. Session 13: Urology Papers No. 100-108</p>	<p>9.30 a.m. Session 14: Training & Education Papers No: 109-117</p>

11.00 a.m. Coffee & Poster Viewing

Theatre 1
11.30 a.m. Session 15:
The Impact of Covid19 and Surgical Recovery Programme
Chairs: Professor Michael Kerin & Professor Ronan O’Connell

Theatre 1
Closing Remarks
Professor Michael Kerin
Professor of Surgery
NUI Galway

The Sir Peter Freyer Memorial Lecture & Surgical Symposium qualifies for 9.5 CPD Credits



45th Sir Peter Freyer Memorial Lecture and Surgical Symposium
Arts Millennium Building, National University of Ireland Galway
4th & 5th September 2020
Programme

FRIDAY, 4th SEPTEMBER 2020

SESSION 1: TRAUMA AND ORTHOPAEDIC SURGERY

Time Allowed: 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 1

Chaired by: Prof Joseph Butler & Mr Michael O'Sullivan

- 9.00 a.m. 3-Part and 4-Part Proximal Humerus Fractures: Is There A Role for Fixation**
Paper 1: M Zubairu, M Diack, D Vukanic, F Shannon
 Department of Orthopaedic and Trauma Surgery, University Hospitals Galway, Galway, Ireland
- 9.10 a.m. A Systematic Review of Complications in Intramedullary Nailing of Open Tibial Shaft Fractures**
Paper 2: L Turley¹, I Barry²
 (1) Department of Orthopaedic Surgery, St. Vincent's University Hospital Dublin, Elm Park, Dublin 4, Ireland;
 (2) Department of Surgery, Fiona Stanley Hospital, 11 Robin Warren Dr, Murdoch, Perth, WA, Australia
- 9.20 a.m. Clinical Outcomes of Patients with Anterior Shoulder Instability & Glenolabral Articular Disruption Lesions - A Retrospective Comparative Study**
Paper 3: M Davey, E Hurley, J Scanlon, M Gaafar, L Pauzenberger, H Mullett
 Department of Trauma and Orthopaedic Surgery, Sports Surgery Clinic, Santry, Dublin, Ireland
- 9.30 a.m. Introducing A Virtual Fracture Clinic During A Pandemic: Reducing Patient Attendance in A District General Hospital**
Paper 4: E Coveney¹, F Gorman², J Horan³, D Bennett¹, P O'Grady¹
 (1) Department of Trauma and Orthopaedic Surgery, Mayo University Hospital, Castlebar, Mayo, Ireland;
 (2) Department of Physiotherapy, Mayo University Hospital, Castlebar, Mayo, Ireland;
 (3) Department of Emergency Medicine, Mayo University Hospital, Castlebar, Mayo, Ireland
- 9.40 a.m. A Retrospective Review of Ankle Fracture Open Reduction Internal Fixation in Patients with Diabetes Mellitus: Are We Putting Our Foot in It?**
Paper 5: S Callaghan, C Stanley, M Kelly, L D'Souza
 Department of Orthopaedic Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland
- 9.50 a.m. Does Country of Origin Influence Research Outcomes in Lumbar Spinal Stenosis?**
Paper 6: FJ McCabe, DM Dalton, JP McCabe
 Department of Spine Surgery, Trauma and Orthopaedic Surgery, Galway University Hospitals, Galway, Ireland
- 10.00 a.m. Evolution of Hip Fracture Surgery in Ireland: Analysis of the Irish Hip Fracture Database over a 6-Year Period (2013-2018)**
Paper 7: S Irwin, A Hughes, K Clesham, I Feeley, K Merghani, E Sheehan
 Department of Trauma and Orthopaedic Surgery, Midlands Regional Hospital Tullamore, Tullamore, Ireland
- 10.10 a.m. Improved Redislocation Rates Following Shoulder Instability Surgery Using Tape**
Paper 8: J Ranson¹, L Hoggett¹, N Jain²
 (1) Department of Trauma & Orthopaedic Surgery, Pennine Acute Hospitals NHS Trust, Manchester, United Kingdom;
 (2) Department of Sports Medicine, Manchester Institute of Health & Performance, Alan Turing Way, Manchester, United Kingdom
- 10.20 a.m. Changing Demographic Trends in Spine Trauma: The Presentation and Outcome of Major Spine Trauma in the Elderly**
Paper 9: K Nagassima, D Ahern, S Evans, J McDonnell, D Gibbons, JS Butler
 Department of Orthopedic Surgery, Trinity College Dublin, Pearse Street 250, Dublin, Ireland
- 10.30 a.m. COFFEE**

SESSION 2: GENERAL SURGERY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 2**Chaired by:** Prof Mark Regan & Mr Sean Johnston

- 9.00 a.m. An Observational Study, Identifying, Measuring and Quantifying the Interference of Intraoperative Distractions within the General Surgery Operating Theatre**
Paper 10: S Keogh, D Laski, M Saeed, I Ahmed
 Department of General Surgery, Our Lady of Lourdes Hospital, Drogheda, Co. Louth, Ireland
- 9.10 a.m. Body Composition among Patients with Soft Tissue Sarcoma – Association with Clinicopathologic Characteristics, Complications and Oncologic Outcome – A Systematic Review**
Paper 11: M Barnes¹, T V McIntyre², JA Elliot², EA Boyle², U Hayden², N Hickey², AE Gillis², PF Ridgway²
 (1) Department of Surgery, Trinity College Dublin, College Green, Dublin 2, Ireland;
 (2) Department of Surgery, Tallaght University Hospital, Dublin 24, Ireland
- 9.20 a.m. Splenic Artery Angioembolisations an Adjunct to Observation for Non-Operative Management of Haemodynamically Stable Patients with Blunt Splenic Injury – A Systematic Review and Meta-Analysis**
Paper 12: C Keady¹, EJ Ryan¹, MG Davey¹, M Joyce¹, MJ Kerin²
 (1) Department of General and Colorectal Surgery, Galway University Hospital, Galway, Ireland;
 (2) The Lambe Institute for Translational Research, National University of Ireland, Galway, Ireland
- 9.30 a.m. Current Management of Helicobacter Pylori Infection in Patients Undergoing Upper GI Endoscopy: A Single Centre Retrospective Review**
Paper 13: C Everard¹, M O'Neill¹, E Myers², B Waldron¹
 (1) Department of Surgery, University Hospital Kerry, Tralee, Co. Kerry, Ireland;
 (2) Department of Endoscopy, University Hospital Kerry, Tralee, Co. Kerry, Ireland
- 9.40 a.m. Cytoreductive Surgery and Hipec: A National Experience**
Paper 14: N McInerney, A Keyes, M Kelly, MF Khan, JC Bolger, O McCormack, D Brennan, R Cahill, C Shields, J Mulsow
 National Centre for Peritoneal Malignancy, Department of Surgery, Mater Hospital, Eccles St, Dublin 7, Ireland
- 9.50 a.m. External Validation of a See and Treat Model for Skin Lesions Referred To A General Surgical Department**
Paper 15: A Iruthayanathar¹, S Upadhayay¹, E Myers¹, P Ridgway², D McNamara², H Bakri³
 (1) Department of General Surgery, Portiuncula Hospital, Ballinalsoe, Co. Galway, Ireland;
 (2) National Clinical Programme in Surgery, RCSI, Dublin, Ireland;
 (3) Department of Surgery, Galway University Hospital, Galway, Ireland
- 10.00 a.m. Institutional Behavioural Changes in Management of Acute Appendicitis Following Conduction of a Randomised Control Trial**
Paper 16: G Sexton, J De Marchi, A Hill
 Department of Surgery, RCSI, ERC, Beaumont Hospital, Beaumont, Dublin Ireland
- 10.10 a.m. Analysis of the Factors Contributing To Unplanned Admissions of Surgical Day-Cases In A Module 3 Hospital**
Paper 17: R Al-Zubaidy, C Greaney, H Malik, F Awan
 Department of General Surgery, St. Luke's General Hospital, Freshford Road, Ireland
- 10.20 a.m. The Impact of Covid-19 on Surgical Activity in a Model 3 Irish Hospital**
Paper 18: P Rohan¹, F Slattery¹, GJ Nason², R Chelyn¹, K Schmidt¹, K Mealy³
 (1) Department of Surgery, Wexford General Hospital, Newtown Road, Wexford, Ireland;
 (2) Department of Urology, Toronto General Hospital, Toronto, Ontario, Canada;
 (3) President, Royal College of Surgeons of Ireland, 123 St Stephens Green, Dublin, Ireland
- 10.30 a.m. COFFEE**

SESSION 3: UPPER GI SURGERY**Time Allowed:** 7 Minutes Speaking
3 Minutes Discussion**Location:** Theatre 3**Chaired by:** Prof Chris Collins, Mr John Conneely and Ms Claire Donohue

- 9.00 a.m.** **A Surveillance of Intraoperative Bile Cultures in Patients Undergoing Pancreaticoduodenectomy**
Paper 19: I Liokati, K Cheung Ng, H Emir, K Conlon, A Stafford
Department of Hepatobiliary Surgery, St Vincent University Hospital, 196 Merrion Road, Elm Park, Dublin, Ireland
- 9.10 a.m.** **Artificial Intelligence in Upper GI Endoscopy, Far Fetched or Near Future?**
Paper 20: E Burke, F Udin, Z Ahmad, F Awan, P Balfé
Department of Surgery, St Luke's Hospital Kilkenny, Kilkenny, Ireland
- 9.20 a.m.** **Textbook Surgical Outcomes in Esophageal Cancer: The Influence of National Key Performance Indicators**
Paper 21: M Al Azzawi, J Bolger, J Whooley, E Downey, L Allen, L Trench, W Robb
Department of General Surgery, Beaumont Hospital RCSI, Beaumont Road, Dublin 9, Ireland
- 9.30 a.m.** **The Prevalence of Non-Alcoholic Fatty Liver Disease within the Irish Bariatric Population; A Prospective Study**
Paper 22: C Kennedy¹, N Fearon¹, A Zaborowski¹, A Doyle², N Nolan², H Heneghan¹
(1) Department of Surgery, St Vincent's University Hospital, Elm Park, Dublin, Ireland;
(2) Department of Histopathology, St Vincent's University Hospital, Elm Park, Dublin, Ireland
- 9.40 a.m.** **Laparoscopic Adjustable Gastric Banding: Impact of Medical Tourism on Our Public Healthcare System**
Paper 23: J Geoghegan, H Heneghan, N Fearon, A Hamed, Z Penny
Department of Bariatric Surgery, St Vincent's Hospital Group, Elm Park, Merrion Rd, Dublin 4, Ireland
- 9.50 a.m.** **Prospective Study of Postoperative Pneumonia and Surgical Site Infections following Esophageal Cancer Surgery; Incidence, Associations, and the Implications of Positive Cultures**
Paper 24: N Raftery¹, C Murphy¹, C Donohoe¹, B O'Connell², N Ravi¹, J Reynolds¹
(1) Department of General Surgery, St James Hospital, James Street, Dublin 8, Ireland;
(2) Department of Microbiology, St. James Hospital, James Street, Dublin 8, Ireland
- 10.00 a.m.** **Bariatric Surgery in Ireland: A Review of 300 Cases from an Academic Institution**
Paper 25: N Fearon, E Kearns, J Geoghegan, H Heneghan
Department of Surgery, St Vincent's University Hospital, Elm Park, Dublin, Ireland
- 10.10 a.m.** **Management of Colorectal Liver Metastasis: Outcomes Over A 5-Year Period**
Paper 26: C Neary, LP O'Brien, ME Kelly, JC Bolger, GP McEntee, JB Conneely
Department of Hepatobiliary Surgery, Mater Misericordiae Hospital, Eccles St., Dublin, Ireland
- 10.20 a.m.** **The Rate of Surgical Site Infection (SSI) After Laparoscopic Bariatric Surgery**
Paper 27: P O'Reilly, E Kearns, C Lawton, H Heneghan
Department of Bariatric Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland
- 10.30 a.m.** **COFFEE**

SESSION 4: BREAST CLINICAL & ENDOCRINE**Time Allowed:** 7 Minutes Speaking
3 Minutes Discussion**Location:** Theatre 1**Chaired by:** Mr Mark Corrigan and Ms Ruth Prichard

- 9.00 a.m.** **The Localizer Radiofrequency Identification System: An Effective New Technology for Localising Non-Palpable Breast Lesions for Surgery**
Paper 28: C Cullinane, J Byrne, L Akmenkalne, P O'Leary, L Kelly, H Redmond, M Corrigan, M O'Sullivan
Department of Breast and General Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 9.10 a.m.** **Sarcopenia in Locally Advanced Breast Cancer: Prevalence, And Impact on Clinical and Oncologic Outcomes**
Paper 29: P Collins, J Elliott, M Brennan, M McNamara, E O'Malley, K Barry, K Sweeney, C Malone, A Lowery, R McLaughlin, M Kerin
Department of General and Breast Surgery, Galway University Hospital, Galway, Ireland
- 9.20 a.m.** **Clinical Value of Oncotype Dx Gene Assay Recurrence Score on Diagnostic Core Biopsy to Predict Response to Neoadjuvant Chemotherapy in Patients with Breast Cancer: Systematic Review and Meta-Analysis**
Paper 30: A Al Maksoud, MR Boland, ÉJ Ryan, I Balasubramanian, D Evoy, J Geraghty, D McCartan, RS Prichard, E McDermott
Department of Breast Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland
- 9.30 a.m.** **Audit of the Moderate Risk Breast Cancer Surveillance Programme; Outcomes and Comparison to the Breastcheck Screening Programme**
Paper 31: L Akmenkalne, C Cullinane, B Donovan, DP O'Leary, M Morrogh, MA Corrigan
Cork University Hospital, Department of General and Breast Surgery, Wilton, Cork, T12 V8KC, Ireland
- 9.40 a.m.** **The Impact of Postoperative Complications Following Immediate Breast Reconstruction on Breast Cancer Outcomes: A Meta-Analysis**
Paper 32: I Balasubramanian, T Harding, M Boland, E Ryan, J Geraghty, D Evoy, D McCartan, E McDermott, R Prichard
Department of Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland
- 9.50 a.m.** **Early-Stage Luminal A Breast Cancer Patients Treated Surgically with Curative Intent in a Publicly Funded, Irish Tertiary Referral Centre**
Paper 33: MG Davey, ÉJ Ryan, MR Boland, MK Barry, RJ McLaughlin, CM Malone, KJ Sweeney, AJ Lowery, MJ Kerin
Discipline of Surgery, Lambe Institute for Translational Research, NUI Galway
- 10.00 a.m.** **A Systematic Review and Meta-Analysis of Attempted Minimally Invasive Parathyroidectomy with and Without the Use of Intra-Operative Parathyroid Hormone for Primary Hyperparathyroidism**
Paper 34: A Quinn¹, E J Ryan¹, S Garry², DL James¹, A Lowery¹, MJ Kerin¹, O Young², MR Boland³
(1) Department of General Surgery, University Hospital Galway, Galway, Ireland;
(2) Department of Otolaryngology, University Hospital Galway, Galway, Ireland;
(3) Department of Surgery, Royal College of Surgeons, 123 St Stephens Green, Dublin, Ireland
- 10.10 a.m.** **Radioiodine Remnant Ablation for Long Term Cure in Differentiated Thyroid Carcinoma – A Systematic Review and Meta-Analysis**
Paper 35: D James¹, É Ryan¹, D Heath¹, S Garry², A Quinn², M Boland³, O Young², A Lowery⁴, MJ Kerin⁴
(1) Department of Breast and Endocrine Surgery, University Hospital Galway, Galway, Ireland;
(2) Department of Otolaryngology, University Hospital Galway, Galway, Ireland;
(3) Department of Surgery, Royal College of Surgeons, 123 St. Stephen's Green, Dublin 2, Ireland;
(4) The Lambe Institute for Translational Research, National University of Ireland Galway, Galway, Ireland
- 10.20 a.m.** **Intra-Operative Adjuncts in Minimally Invasive Radio-Guided Parathyroidectomy at a Specialist Endocrine Surgery Centre**
Paper 36: Z Razaq, M Majeed, M Hanrahan, D Cagney, H Mustafa, M Aakif, ZZ Hashmi, AU Khan, F Aftab, AA Achakzai, HP Redmond
Department of Endocrine and General Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 10.30 a.m.** **COFFEE**

SESSION 5: VASCULAR & CARDIOTHORACIC SURGERY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 2**Chaired by:** Prof Stewart Walsh, Mr Alan Soo, Ms Sarah Early and Mr Tony Moloney

- 11.00 a.m.** **A Toe in Time Save Nine: Re-Amputation Rates and Survival Following Toe Amputation**
Paper 37: P Collins, D Joyce, R Elkady, E Boyle, B Egan, S Tierney
 Department of Vascular Surgery, Tallaght University Hospital, Tallaght, Dublin 24, Ireland
- 11.10 a.m.** **Assessing Endoleak Detection Diagnostic Modalities in Galway University Hospital, A Retrospective Audit of Multiple Imaging Techniques Used Over Last 10 Years**
Paper 38: AA Hassanin, A Elamin, A Zafar, M Mustafa, Y Roden, I Jamil, E Attia, H Raslan, S Walsh, M Tubassam, S Sultan, M Alawy, W Tawfik
 Department of Vascular Surgery, Galway University Hospital, Galway, Ireland
- 11.20 a.m.** **Ten Year Audit of Outcomes Following Digital Amputation**
Paper 39: S Doyle¹, M Bourke¹, E Kellegher², D Comally¹, R Flavin³, J Dowdall¹, S Sheehan¹, A El-Mallah¹, MC Barry¹
 (1) Department of Vascular Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland;
 (2) Department of Clinical Podiatry, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland;
 (3) Department of Orthopaedic Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4, Ireland
- 11.30 a.m.** **Does Longitudinal or Transverse Orientation of the Ultrasound Probe Improve Cannulation Success in Minimally Invasive Venous Surgery: A Multicentre Randomised Controlled Trial**
Paper 40: T Ahern¹, A Zafar¹, D Gourlay¹, D O'Neill¹, K Bashar¹, C Yap², T Tang², S Walsh¹
 (1) Department of Vascular Surgery, Galway University Road, Galway, Ireland;
 (2) Department of Vascular Surgery, Singapore General Hospital, Singapore, Ireland
- 11.40 a.m.** **Open versus Endovascular Surgery in Complex Aortoiliac Occlusive Disease: A Systematic Review and Meta-Analysis of Comparative Studies**
Paper 41: D Cagney¹, A Sautha², G Fulton², BJ Manning²
 (1) Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland;
 (2) Department of Vascular Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 11.50 a.m.** **Symptoms to CEA: Factors Associated with Delays to Surgery**
Paper 42: MP Foley, C Gray, E Mulkern, C O McDonnell, MK O'Donohoe
 Department of Vascular Surgery, Mater Misericordiae University Hospital, Eccles Street, Dublin 7, Ireland
- 12.00 p.m.** **Using a Large Administrative Healthcare Database to Identify Opportunities for Service Development in Lower Extremity Amputation in Ireland**
Paper 43: A Mealy¹, J Sorensen¹, S Tierney²
 (1) Department of Healthcare Outcome Res Centre, RCSI, Beaux Lane House, Mercer Street Lower, Dublin 2, Ireland;
 (2) Department of Vascular Surgery, Tallaght University Hospital, Tallaght, Dublin, Ireland
- 12.10 p.m.** **The Utility of Surgical Cardiac Sympathetic Denervation in the Management of Ventricular Arrhythmias: A Systematic Review**
Paper 44: L Casey, D Eaton
 Department of Thoracic Surgery, Mater Misericordiae University Hospital, Eccles St, Dublin 7, Ireland
- 12.20 p.m.** **Negative Impact of Rurality on Lung Cancer Stage – St. Vincent's University Hospital Experience**
Paper 45: G Qsous, N Mc Veigh, M Tolan, RN Santy Manoj, D Healy
 Department of Cardiothoracic Surgery, St. Vincent's University Hospital, Dublin, Ireland
- 12.30 p.m.** **LUNCH**

SESSION 6: LOWER GI SURGERY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 3**Chaired by:** Ms Aisling Hogan, Mr Colin Peirce, Mr Ronan Waldron

- 11.00 a.m. A Comparison of Oncological Outcomes after Abdominoperineal Resection Before and After the Implementation of a Selective Perineal Flap Closure Programme**
- Paper 46:** C Murphy¹, I Stephens¹, G O'Flanagan¹, L O'Byrne¹, I Reynolds¹, N Ajmal², B O'Sullivan², B O'Neill³, J Deasy¹, J Burke¹, D McNamara¹
 (1) Department of Colorectal Surgery, Beaumont Hospital, Beaumont, Dublin 9, Ireland;
 (2) Department of Plastic and Reconstructive Surgery, Beaumont Hospital, Beaumont, Dublin 9, Ireland;
 (3) Department of Radiation Oncology, Beaumont Hospital, Beaumont, Dublin 9, Ireland
- 11.10 a.m. Investigation of Aberrant Mirna Expression in Colorectal Tumours**
- Paper 47:** G Feeney¹, H Annuk¹, M Joyce², MJ Kerin¹, N Miller¹
 (1) Department of Surgery, Lambe Institute, NUI Galway, Galway, Ireland;
 (2) Department of General Surgery, Galway University Hospital, Galway, Ireland
- 11.20 a.m. Audit of Enhanced Recovery after Surgery (ERAS) Protocol for Elective Colorectal Surgical Procedures**
- Paper 48:** SMU Kabir, H Huan, J Cheah, S Samodee, L Almillah, M Khalifa, S Zeeshan
 I Department of General Surgery, Letterkenny University Hospital, Letterkenny, County Donegal, Ireland
- 11.30 a.m. Cell-Free DNA Trends in the Perioperative Period Predict Recurrence of Non-Metastatic Colorectal Cancer in the First Two Years Post-Operatively Significantly Earlier Than Trends in CEA**
- Paper 49:** P Jordan¹, C Flemming², P O'Leary¹, M Corrigan¹, E Andrews², M McCourt², S Killeen², J Wang¹, HP Redmond¹
 (1) Surguvant Research Centre, Cork University Hospital, Wilton, Cork, Ireland;
 (2) Department of Colorectal Surgery, Cork University Hospital, Cork, Ireland
- 11.40 a.m. Endoscopic Management versus Transanal Surgery for Early Primary or Early Locally Recurrent Rectal Neoplasms – A Systematic Review and Meta-Analysis**
- Paper 50:** A Naughton¹, É Ryan¹, CT Bardon¹, M Boland¹, T Aheme¹, M Kelly¹, M Whelan¹, P Neary¹, D McNamara², J O'Riordan¹, D Kavanagh¹
 (1) Department of Surgery, Tallaght University Hospital, Tallaght, Dublin 24, Ireland;
 (2) Department of Gastroenterology, Tallaght University Hospital, Tallaght, Dublin 24, Ireland
- 11.50 a.m. Persistent Nature of Advanced Presentation of Colorectal Cancer in A Rural Population; Consequences for Disease Management**
- Paper 51:** S Hembrecht¹, E Carroll¹, GP Leonard², W Khan¹, I Khan¹, RP Waldron¹, MK Barry¹
 (1) Department of General Surgery, Mayo University Hospital, Castlebar, Co. Mayo, Ireland;
 (2) Department of Medical Oncology, Mayo University Hospital, Castlebar, Co. Mayo, Ireland
- 12.00 p.m. An Audit of The Incidence of Incisional Surgical Site Infections Following Elective Colorectal Surgery Involving Ostomy Formation in St James's Hospital, Dublin**
- Paper 52:** B Rigney, P Shokuhi, J Larkin, B Mehigan, P McCormick
 Department of Colorectal Surgery, St James Hospital, Ushers, Dublin 8, Ireland
- 12.10 p.m. An Analysis of the Perioperative Human Metabolome and Its Association with Differential Body Composition and Five-Year Colon Cancer Outcomes**
- Paper 53:** C Fleming¹, R Fritsche², P O'Leary¹, Y Gloaguen², Dr JH Wang¹, M Corrigan¹, M McCourt³, S Killeen³, E Andrews³, J Kirwan², HP Redmond¹
 (1) Department of Academic Surgery, Cork University Hospital, Wilton, Cork, Ireland;
 (2) Department of Metabolomics Facility, Berlin Institute of Health, Max Delbrück Centre, Berlin, Germany;
 (3) Department of Colorectal Surgery, Cork University Hospital, Ireland
- 12.20 p.m. Segmental Versus Extended Colectomy for Tumours of the Transverse Colon: A Systematic Review and Meta-Analysis**
- Paper 54:** S Morarasu¹, C Clancy¹, C Cronin¹, T Matsuda², H Heneghan¹, D Winter¹
 (1) Centre for Colorectal Disease, St Vincent's University Hospital, Dublin 4, Ireland;
 (2) Center of Minimally Invasive Surgery, Kobe University of Medicine, Japan
- 12.30 p.m. LUNCH**

SESSION 7: BREAST RESEARCH**Time Allowed:** 7 Minutes Speaking
3 Minutes Discussion**Location:** Theatre 1**Chaired by:** Prof Malcolm Kell, Prof Elizabeth Connolly and Mr Karl Sweeney**1.30 p.m. Surgical Management of an Irish Cohort of BRCA-Mutation Carriers: A Single-Centre Retrospective Analysis****Paper 55:** N Christodoulides¹, I Hassan¹, L Burns¹, T Boyle¹, S McGarrigle², J Kennedy³, E Connolly¹

(1) Department of Surgery, St James's Hospital, James's Street, Dublin 8, Ireland;

(2) Department of Cancer Genetics, St James's Hospital, James's Street, Dublin 8, Ireland;

(3) Department of Clinical and Molecular Oncology, St James's Hospital, James's Street, Dublin 8, Ireland

1.40 p.m. Effect of Afimoxifene on Cell Proliferation and Adipogenesis of Adipose-Derived Stromal Cells**Paper 56:** RS Challapalli¹, RM Dwyer, N McInerney², MJ Kerin¹, AJ Lowery¹

(1) Department of Surgery, National University of Ireland, Galway, Galway, Ireland;

(2) Department of Plastic Surgery, University Hospital Galway, Galway, Ireland

1.50 p.m. Use of Liquid Biopsy to Detect Risk of Early Post-Operative Recurrence in Breast Cancer Patients**Paper 57:** F Hassan¹, JH Wang², DP O'Leary¹, M Ita², M Corrigan¹, HP Redmond¹

(1) Department of General and Breast Surgery, Cork University Hospital, Wilton, Cork, Ireland;

(2) Department of Academic Surgery, University College Cork, Cork, Ireland

2.00 p.m. The Influence of Histological Subtype on the Accuracy of Axillary Ultrasound in Breast Cancer**Paper 58:** E O'Beim, B Moloney, R McLaughlin, K Sweeney, C Malone, MJ Kerin, A Lowery

Department of Surgery, Galway University Hospital, Galway, Ireland

2.10 p.m. Suitability of Hyaluronic Acid Hydrogels for Adipose Tissue Engineering**Paper 59:** RS Challapalli¹, J O'Dwyer², E Dolan³, R Dwyer¹, N McInerney⁴, MJ Kerin¹, G Duffy², A Lowery¹

(1) Department of Surgery, College of Medicine Nursing and Health Sciences, NUI Galway, Galway, Ireland;

(2) Department of Anatomy, College of Medicine Nursing and Health Sciences, NUI Galway, Galway, Ireland;

(3) Department of Biomedical Engineering, College of Science and Engineering, NUI Galway, Galway, Ireland;

(4) Department of Plastic Surgery, University College Hospital Galway, Galway, Ireland

2.20 p.m. The Impact of Progesterone Receptor Negativity on Oncologic Outcomes in Estrogen Receptor Positive Breast Cancer**Paper 60:** MG Davey^{1,2}, ÉJ Ryan¹, PJ Folan², N O'Halloran^{1,2}, MR Boland³, MK Barry¹, KL Sweeney¹, CM Malone¹, RJ McLaughlin¹, MJ Kerin^{1,2}, AJ Lowery^{1,2}

(1) Department of Surgery, Galway University Hospitals, Galway, Ireland

(2) The Lambe Institute for Translational Research, National University of Ireland, Galway, Ireland

(3) Department of Surgery, The Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin, Ireland

2.30 p.m. COFFEE

SESSION 8: ONCOLOGY

Time Allowed: 7 Minutes Speaking
3 Minutes Discussion

Location: Theatre 2

Chaired by: Mr Paul Carroll, Mr Tom Gallagher and Prof Peter Neary

- 1.30 p.m.** **AI Decision Support System for Fluorescence Guided Surgery: Clinical Application of Real-time ICG Perfusion Analysis for Intraoperative Tissue Classification of Colorectal Cancer**
- Paper 61:** N Hardy¹, D O'Shea², R Nahir³, P McAonghusa³, S Zuk³, R Cahill¹
(1) Department of Surgery, MMUH, 47 Eccles Street, Dublin 7, Ireland;
(2) Department of Chemistry, Royal College of Surgeons in Ireland, Ireland;
(3) Department of Research, IBM in Ireland, Ireland
- 1.40 p.m.** **Cytoreductive Surgery (CRS) and Hyperthermic Intraperitoneal Chemotherapy (HIPEC) For Peritoneal Malignancy during the COVID-19 Pandemic**
- Paper 62:** T Crotty, R Sehgal, J Grundy, C Shields, J Mulsow
Department of Colorectal Surgery and National Centre for Peritoneal Malignancy,
Mater Misericordiae University Hospital, Eccles St, Dublin 7, Ireland
- 1.50 p.m.** **Patient Derived Tumour Stromal Cells – A Culprit in Breast Cancer Recurrence Following Neoadjuvant Chemotherapy**
- Paper 63:** DJ O'Connor, MJ Kerin, LR Barkley
Department of Surgery, Lambe Institute for Translational Research, NUI Galway, Galway, Ireland
- 2.00 p.m.** **The Challenge of Outruling Concomitant Cholangiocarcinoma in Patients with Primary Sclerosing Cholangitis Wait-Listed for Liver Transplantation: A Nationwide Evaluation**
- Paper 64:** W Duggan, T Gallagher
Department of Hepatopancreatobiliary Surgery, St. Vincent's University Hospital, Elm Park, Dublin, Ireland
- 2.10 p.m.** **The Immunostimulatory and Immunoinhibitory Effects of Chemotherapies in Oesophageal Adenocarcinoma; A Double-Edged Sword**
- Paper 65:** M Davern, A Sheppard, N Donlon, JV Reynolds, R Narayanasamy, S Maher, A Bhardwaj, J Lysaght
Department of Surgery, Trinity Translational Medicine Institute, St James's Hospital, Dublin 8, Ireland,
- 2.20 p.m.** **Tumour Location is a Risk Factor for Lymph Node Metastasis in Early Colorectal Cancer**
- Paper 66:** P Mc Entee, P Mc Cormick, B Mehigan, J Larkin, D Kearney
Department of Colorectal Surgery, St. James's Hospital, St. James's St, Dublin 8, Ireland
- 2.30 p.m.** **COFFEE**

SESSION 9: PLASTIC AND RECONSTRUCTIVE SURGERY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 3**Chaired by:** Mr Fiachra Martin, Mr Niall McInerney, Mr Alan Hussey

- 1.30 p.m. A Retrospective Cohort Study of Cutaneous Squamous Cell Carcinoma of the Scalp: Features of Disease and Influence of Sociodemographic Factors on Outcomes**
Paper 67: E Fahy¹, D Jones¹, P Regan¹, A Hussey¹, M Kerin², N McInerney¹, J Kelly¹
 (1) Department of Plastic Surgery, University Hospital Galway, Galway, Ireland;
 (2) Department of General Surgery, University Hospital Galway, Galway, Ireland
- 1.40 p.m. A Comparison of Flap Skin Thickness in Autologous Breast Reconstruction**
Paper 68: S Beecher¹, N O'Gorman², P Dockery², MJ Kerin³, A Stanley², Jack Kelly¹
 (1) Department of Plastic Surgery, Galway University Hospital, Galway, Ireland;
 (2) Department of Anatomy, National University of Ireland, Galway, Ireland;
 (3) Lambe Institute for Translational Research, National University of Ireland, Galway, Ireland
- 1.50 p.m. To Evaluate the Rate of Positive and Near/Narrow Margins in BCC Excisions in a Tertiary Centre**
Paper 69: R Pollock, C Hevican, SME Ibrahim, P Sullivan
 Department of Plastic Surgery, Beaumont Hospital, Beaumont, Dublin, Ireland
- 2.00 p.m. Correct Identification of High Risk Cutaneous Squamous Cell Carcinoma on Pathological Reporting and Patterns of Referral for MDT Discussion and Adjuvant Therapy**
Paper 70: D Murphy, F Sheil, D Cinelli, J O'Donnell, D Jones
 Department of Plastic Surgery, University Hospital Galway, Galway, Ireland
- 2.10 p.m. Squamous Cell Carcinoma of the Lip: An 11 Year Experience**
Paper 71: MC Casey¹, R Pollock¹, C Gulman², P Sullivan¹, N Ajmal¹, B Kneafsey¹, B O'Sullivan¹, F Martin¹
 (1) Department of Plastic and Reconstructive Surgery, Beaumont Hospital, Beaumont Rd, Dublin 9, Ireland;
 (2) Department of Pathology, Beaumont Hospital, Beaumont Rd, Dublin 9, Ireland
- 2.20 p.m. Options for Immediate Implant-based Breast Reconstruction - Comparing the Benefits and Risks of Human or Xenograft Acellular Dermal Matrix (ADM) and Synthetic Mesh Support – A Systematic Review and Network Meta-analysis**
Paper 72: D Murphy¹, J O' Donnell¹, E Ryan², M Boland³, BL O'Neill¹, A Lowery², M Kerin², N McInerney¹
 (1) Department of Plastic Surgery, Galway University Hospital, Galway, Ireland;
 (2) Department of Breast Surgery, Galway University Hospital, Galway, Ireland;
 (3) Department of Breast Surgery, St Vincent's Hospital, Dublin, Ireland
- 2.30 p.m. COFFEE**

SESSION 10: PLENARY

Time Allowed: 7 Minutes Speaking
3 Minutes Discussion

Location: Theatre 1

Chaired by: Prof Helen Heneghan, Prof Calvin Coffey and Prof Aoife Lowery

- 3.00 p.m.** **The Histopathological and Molecular Features of Breast Carcinoma with Tumour Budding**
Paper 73: A Lloyd¹, E Ryan², M Boland¹, S Abd Elwahab², C Malone², K Sweeney², K Barry², R McLaughlin², M Kerin², A Lowery²
 (1) Department of Surgery, Royal College of Surgeons in Ireland, 123 St Stephens Green, Co Dublin, Ireland;
 (2) Department of Surgery, Galway University Hospital, Galway, Ireland
- 3.10 p.m.** **Epigenetic Alterations Following Tyrosine Kinase Inhibition in Breast Cancer Patients**
Paper 74 M Flanagan¹, D Varšlija¹, S Charmsaz¹, S Purcell¹, N Cosgrove¹, S Cocchiglia¹, F Bane¹, K Sheehan², B Hennessey³, ADK Hill⁴, L Young¹
 (1) Department of Endocrine Oncology Research Group, Department of Surgery, Royal College of Surgeons in Ireland, Dublin, Ireland;
 (2) Department of Pathology, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin, Ireland;
 (3) Department of Medical Oncology, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin, Ireland;
 (4) Department of Surgery, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin, Ireland
- 3.20 p.m.** **Enhancing Radiation Induced Immunogenicity in The Multimodal Treatment of Oesophageal Cancer: A Bench to Bedside Approach**
Paper 75: NE Donlon, M Davern, A Sheppard, N Ravi, C Donohoe, J Reynolds, J Lysaght
 Department of Surgery Trinity Translational, St. James's Hospital, James' Street, Dublin 8, Ireland
- 3.30 p.m.** **Lymph Node Yield Is Not A Reliable Prognostic Marker in Anterior Resection and Abdominoperineal Resection Following Neoadjuvant Therapy for Rectal Cancer**
Paper 76: J Harris¹, C Fleming¹, M Ullah¹, E McNamara¹, S Murphy², M Shelly², D Waldron¹, E Condon¹, J Coffey¹, C Peirce¹
 (1) Department of Colorectal Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland;
 (2) Department of Radiology, University Hospital Limerick, Dooradoyle, Limerick, Ireland
- 3.40 p.m.** **Comparison of Restorative Proctocolectomy with and Without Defunctioning Loop Ileostomy in Patients with Ulcerative Colitis – A Systematic Review and Meta-Analysis**
Paper 77: M Donnelly¹, ÉJ Ryan¹, OK Ryan¹, B Creavin¹, ME Kelly¹, GA Bass¹, D McNamara², M Whelan¹, PC Neary¹, JM O' Riordan¹, DO Kavanagh¹
 (1) Department of General Surgery, Tallaght University Hospital, Dublin 24, Ireland;
 (2) Department of Gastroenterology, Tallaght University Hospital, Dublin 24, Ireland
- 3.50 p.m.** **Optimal Sequencing of Radiotherapy and Reconstructive Strategies for Breast Cancer Patients Post Mastectomy – A Systematic Review and Network Meta-Analysis**
Paper 78: J O'Donnell¹, É Ryan¹, D Murphy², R Sugrue², BL O'Neill², M Boland³, A Lowery¹, MJ Kerin¹, N McInerney²
 (1) Department of Surgery, National University of Galway, Galway, Ireland;
 (2) Department of Plastic and Reconstructive Surgery, Galway University Hospitals, Galway, Ireland;
 (3) Department of Surgery, The Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin, Ireland

SESSION 10: PLENARY

Time Allowed: 7 Minutes Speaking
3 Minutes Discussion
Location: Theatre 1

- 4.00 p.m.** **Increased Myosteotosis is Associated with Poorer Outcome in Multivisceral Resections for Soft-Tissue Sarcoma**
Paper 79: T McIntyre¹, J Elliott¹, E Boyle¹, N Donlon², M Umair¹, M Barnes³, U Hayden¹, N Hickey¹, A Gillis¹, P Ridgway¹
 (1) Department of Surgery, Tallaght University Hospital, Tallaght, Dublin 24, Ireland;
 (2) Department of Surgery, St James's Hospital, Dublin 8, Ireland;
 (3) School of Medicine, Trinity College, College Green, Dublin 2, Ireland
- 4.10 p.m.** **An Exploration of the Genomic Landscape of Mucinous Rectal Adenocarcinoma**
Paper 80: IS Reynolds¹, E O'Connell², V Thomas², M Fichtner², DA McNamara¹, EW Kay³, JHM Prehn², SJ Furney², JP Burke¹
 (1) Department of Colorectal Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland;
 (2) Department of Physiology and Medical Physics, Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin 2, Ireland;
 (3) Department of Pathology, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland
- 4.20 p.m.** **Radiogenomic Evaluation of Colorectal Cancer — The Preoperative Radiological Features of Mismatch Repair Deficient Colorectal Cancer and Its Significance**
Paper 81: ÉJ Ryan¹, S Clifford², M Climent¹, AJ Lloyd¹, Á Stakelum¹, R Kennelly¹, A Hanly¹, ST Martin¹, K Sheahan³, S Skehan², DC Winter¹
 (1) Department of Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland;
 (2) Department of Radiology, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland;
 (3) Department of Histopathology, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland

SATURDAY, 5th SEPTEMBER 2020**SESSION 11: TRAUMA AND ORTHOPAEDIC SURGERY**

Time Allowed: 7 Minutes Speaking
3 Minutes Discussion

Location: Theatre 1

Chaired by: Mr John Galbraith, Prof Cathal Moran and Prof John McCabe

- 9.30 a.m. Neo-Adjuvant Denosumab and Disease Recurrence in Giant Cell Tumour of Bone: Has the Magic Bullet Lost Its Magic?**
Paper 82: F Power¹, C McDonald¹, L Mellon², A Molloy¹, G O'Toole¹
(1) Department of Trauma & Orthopaedic Surgery, Cappagh National Orthopaedic Hospital, Dublin 11, Ireland;
(2) Division of Population Health Sciences, Royal College of Surgeons in Ireland, Dublin 2, Ireland
- 9.40 a.m. Our Experience with Intra-Operative Spinal Cord Monitoring in the West of Ireland**
Paper 83: B Murphy, J McCabe
Department of Trauma & Orthopaedic Surgery, Galway University Hospital, Galway, Ireland
- 9.50 a.m. Perioperative Steroid Administration Reduces Opioid Consumption and Improves Knee Function in Bilateral Total Knee Arthroplasty**
Paper 84: D Keohane, G Sheridan, J Harty
Department of Orthopaedic Surgery, Cork University Hospital, Wilton, Cork, Ireland
- 10.00 a.m. Comparing Post-Operative Outcomes of Patients with an Intracapsular Neck of Femur Fracture Treated with Hip Hemiarthroplasty versus Total Hip Arthroplasty in The Republic of Ireland**
Paper 85: E Coveney¹, D McKeown², M Cleary³
(1) Department of Trauma and Orthopaedic Surgery, Mayo University Hospital, Castlebar, Mayo, Ireland;
(2) Department of Public Health and Epidemiology, Dr Steevens Hospital, Dublin 8, Ireland;
(3) Department of Trauma and Orthopaedic Surgery, University Hospital Waterford, Waterford, Ireland
- 10.10 a.m. Readability of Patient Educational Materials in Hip and Knee Arthroplasty: Has a Decade Made a Difference?**
Paper 86: T O'Doinn, JM Broderick, MM Abdelhalim, JF Quinlan
Department of Trauma and Orthopaedic Surgery, Tallaght University Hospital, Tallaght, Dublin, Ireland
- 10.20 a.m. Resurfacing the Patella Improves Outcomes When Using the Triathlon Prosthesis in Total Knee Arthroplasty. What Ireland Can Learn from the Australian National Joint Registry**
Paper 87: T McAleese¹, M Quinn², S Graves³, G Clark⁴
(1) Department of Trauma and Orthopaedic Surgery, Beaumont Hospital, Dublin 9, Ireland;
(2) Department of Trauma and Orthopaedic Surgery, Cappagh National Orthopaedic Hospital, Dublin 11, Ireland;
(3) Australian Orthopaedic Association National Joint Replacement Registry, SAHMRI, Adelaide, South Australia;
(4) Department of Orthopaedic Surgery, St John of God's Hospital, Subiaco, Perth, Australia
- 10.30 a.m. Assessing the Accuracy of Multimedia Messaging for the Diagnosis of Scaphoid Fractures**
Paper 88: C Stanley¹, F Moriarty², F McGrath³
(1) Department of Orthopaedic Surgery, University Hospital Limerick, Dooradoyle, Limerick, Ireland;
(2) Department of General Practice, Royal College of Surgeons in Ireland, 123 St. Stephen's Green, Dublin 2, Ireland;
(3) Department of Radiology, Beaumont Hospital, Beaumont, Dublin 9, Ireland
- 10.40 a.m. The Varus Cemented Femoral Stem in Total Hip Arthroplasty: Predictors and the Femoral Access Ratio**
Paper 89: H Hughes¹, G Sheridan², A Welch-Phillips², P Kenny², G O'Toole², J O'Byrne²
(1) Department of Trauma and Orthopaedic Surgery, Mater Misericordiae University Hospital, Eccles Street, Dublin 7, Ireland;
(2) Department of Trauma and Orthopaedic Surgery, National Orthopaedic Hospital Cappagh, Dublin 11, Ireland
- 10.50 a.m. Virtual Clinics and the COVID Catalyst: Are Virtual Fracture Clinics Safe, Productive and Cost Effective**
Paper 90: F Murphy¹, E Murphy², C Fenelon³, R Murphy⁴, E Pomeroy³, E Sheehan⁵, DP Moore²
(1) Department of Orthopaedic Surgery, Galway University Hospital, Galway, Ireland, Ireland;
(2) Department of Orthopaedic Surgery, Children's Health Ireland Crumlin, Crumlin, Dublin, Ireland;
(3) Department of Orthopaedic Surgery, National Orthopaedic Hospital Cappagh, Cappagh, Dublin, Ireland;
(4) Department of Orthogeriatric Surgery, Sligo University Hospital, Sligo, Ireland, Ireland;
(5) Department of Orthopaedic Surgery, Midlands Regional Hospital Tullamore, Tullamore, Offaly, Ireland
- 11.00 a.m. COFFEE**

SESSION 12: GENERAL SURGERY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 2**Chaired by:** Prof Dermot Hehir, Prof Ray McLaughlin and Prof Kevin Barry**9.30 a.m. Negative Pressure Wound Therapy for General Surgery Incisions: Systematic Review and Meta-Analysis of Latest Randomised Controlled Trials****Paper 91:** P Boland, ME Kelly, NE Donlon, JC Bolger, BJ Mehigan, PH McCormick, JO Larkin
Department of Colorectal Surgery, St James' Hospital, Dublin 8, Ireland**9.40 a.m. Non-Colorectal Metastasis and Non-Primary Tumours: The Other Resectional Workload of the Liver Surgeon****Paper 92:** LP O'Brien, CJ Neary, J C Bolger, ME Kelly, JB Conneely, GP McEntee
Department of Hepatobiliary Surgery, Mater Misericordiae Hospital, Eccles St, Dublin 7, Ireland**9.50 a.m. Powered Air Purifying Respirators (PAPR) for the Protection of Surgeons during Operative Tasks: A User Perspective Assessment****Paper 93:** J Dalli¹, D O'Keeffe², F Khan¹, O Traynor², R Cahill¹
(1) Department of Surgery, Mater Misericordiae University Hospital, Dublin 7, Ireland;
(2) Department of Simulation, Royal College of Surgeons in Ireland, Ireland**10.00 a.m. Prediction of Response to Neoadjuvant Therapy in Rectal and Breast Adenocarcinoma****Paper 94:** G Feeney¹, E Ryan², R Waldron¹, N Miller¹, M Joyce², M Kerin¹
(1) Department of Surgery, Lambe Institute for Translational Science, NUI Galway, Galway, Ireland;
(2) Department of General Surgery, University Hospital Galway, Galway, Ireland**10.10 a.m. The Relationship between BMI and Lymphocyte-Monocyte Ratio in Patients with Endometrial Cancer****Paper 95:** K Mulligan¹, N Fearon², S Murphy¹, S Egan¹, K Glennon¹, H Heneghan², D Brennan¹
(1) Department of Gynaecological Oncology, Mater Misericordiae Hospital, Eccles Street, Dublin 7, Ireland;
(2) Department of General Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland**10.20 a.m. Using Telemedicine to Streamline Out-Patient Activity in Response to the COVID19 Pandemic****Paper 96:** A Troy¹, R Sullivan¹, L Devane¹, S Sahebally¹, D Kearney¹, N McCawley¹, J Burke¹, D McNamara²
(1) Department of Colorectal and General Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland;
(2) Department of General Surgery, Royal College of Surgeon in Ireland, 123 Stephen Green, Dublin, Ireland**10.30 a.m. Multidisciplinary Evaluation of Preparation for Colonoscopy in the Republic of Ireland****Paper 97:** M Waldron, K Barry, P Waters
Department of Surgery, Mayo University Hospital, Castlebar, Mayo, Ireland**10.40 a.m. Subtotal Colectomy in Ulcerative Colitis- Long Term Considerations for the Rectal Stump****Paper 98:** O Hennessy¹, M Joyce²
(1) Department of Orthopaedic Surgery, Galway University Hospital, Galway, Ireland;
(2) Department of General Surgery, Galway University Hospital, Galway, Ireland**10.50 a.m. Systematic Review and Meta-Analysis of Factors Which Reduce the Length of Stay Associated with Elective Laparoscopic Cholecystectomy****Paper 99:** J Ryan¹, E O'Connell², A Rogers³, J Sorensen⁴, D McNamara⁵,
(1) Department of General Surgery, Regional Hospital Mullingar, Mullingar, Westmeath, Ireland;
(2) Department of Surgery, Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin 2, Ireland;
(3) Department of Colorectal Surgery, St. James's Hospital, James's Street, Dublin 8, Ireland;
(4) Healthcare Outcomes Research Centre, Royal College of Surgeons in Ireland, Beaux Lane House, Dublin 2, Ireland;
(5) Department of Colorectal Surgery, Beaumont Hospital, Beaumont Road, Dublin, Ireland**11.00 a.m. COFFEE**

SESSION 13: UROLOGY**Time Allowed:** 7 Minutes Speaking

3 Minutes Discussion

Location: Theatre 3**Chaired by:** Mr Niall Davis, Mr Kilian Walsh, Mr Paddy O'Malley, Prof Thomas Lynch and Mr Garrett Durkan**9.30 a.m. A National Study in Urolithiasis Presentations Over 4 Years****Paper 100:** P Rohan¹, C Casey², GJ Nason³, J Sorensen⁴, K Mealy⁵

(1) Department of Surgery, Wexford General Hospital, Newtown Road, Wexford, Ireland;

(2) Department of Surgery, Blackrock Clinic, Blackrock, Co. Dublin, Ireland;

(3) Division of Urology, Toronto General Hospital, Toronto, Ontario, Canada;

(4) Department of Healthcare Outcomes Research Centre, Royal College of Surgeons in Ireland, Beaux Lane House, Mercer Street Lower, Dublin, Ireland;

(5) Department of President, Royal College of Surgeons in Ireland, 123 St. Stephen's Green, Dublin, Ireland

9.40 a.m. Outcomes Following Testicular Vein Embolization for Symptomatic Varicocele**Paper 101:** J Ryan¹, M Broe¹, D Mulvin¹, D Brophy²

(1) Department of Urology, St Vincent's University Hospital, Dublin, Dublin, Ireland;

(2) Department of Radiology, St. Vincent's University Hospital, Dublin, Ireland

9.50 a.m. Efficacy of Commercialised Extracorporeal Shock Wave Lithotripsy Service: Outcomes of 100 Consecutive Patients**Paper 102:** G McGuinness, LC Yap, M Elamin, K Patterson, C Brady, P Sweeney, D Hennessey

Department of Urology, Mercy University Hospital, Grenville Place, Cork, Ireland

10.00 a.m. Electronic Urology Handover- A Quality Improvement Project**Paper 103:** SM Inder, S Omer, KG Keane, C O'Connell, A Madden, E O'Connor, RJ Flynn, LG Smyth, AZ Thomas, RP Manecksha

Department of Urology, Tallaght University Hospital, Tallaght, Dublin 24, Ireland

10.10 a.m. Systematic Review of Regional Paediatric Urological Services**Paper 104:** E O'Beirn, S Jaffrey, K Walsh, F D'Arcy, A Aslam, A Cham, R Khalid, M Taha, S David, N Nusrat

Department of Urology, Galway University Hospital Galway, Ireland

10.20 a.m. Revolutionising Urology Outpatient Appointments in the COVID-19 Era: Are Telephone Consultations the Future?**Paper 105:** E Hart, A Guy, A Efthymiadis, T Mahesan, R Harry, M Perry

Department of Urology, Royal Surrey County Hospital, Egerton Road, Guildford, GU2 7XX, United Kingdom

10.30 a.m. Comparison of Intrarenal Pressures Generated by Irrigation Devices during Ureterorenoscopy in a Porcine Kidney Model**Paper 105:** E MacCraith, LC Yap, M Elamin, K Patterson, C Brady, D Hennessey

Department of Urology, Mercy University Hospital, Cork, Ireland

10.40 a.m. Sarcopenia and Return to Continence after Robotic Assisted Radical Prostatectomy (RARP)**Paper 107:** S Norton, M Hastings, E Low, E Roche, K Daly, R Kilcawley, S Considine, P O'Malley, G Durkan, C Dowling

Department of Urology, Galway University Hospital, Galway, Ireland

10.50 a.m. Radiomic Analysis of Histologic Grade in Clear Cell Renal Cell Carcinoma: A Multiregional Approach**Paper 108:** KG Bymes¹, D McNicholas¹, N O' Halloran², L Walsh², U Haroon¹, R Power¹, N Davis¹

(1) Department of Urology, Beaumont Hospital, Beaumont, Dublin, Ireland;

(2) Department of Radiology, University Hospital Galway, Galway, Ireland

11.00 a.m. COFFEE

SESSION 14: TRAINING AND EDUCATION**Time Allowed:** 7 Minutes Speaking
3 Minutes Discussion**Location:** Theatre 4**Chaired by:** Ms Emmeline Nugent, Prof Sean Tierney and Prof Paul Ridgway

- 9.30 a.m. Urology at Your Fingertips: The Development of a Urology E-Learning App for Medical Students**
Paper 109: KG Keane, NR Bhatt, PM Collins, RJ Flynn, RP Manecksha
Department of Urology, Tallaght University Hospital, Tallaght, Dublin 24, Ireland
- 9.40 a.m. The Impact of COVID-19 on Surgical Training in the Republic of Ireland**
Paper 110: O Hennessy¹, A Fowler², A Hogan², E Nugent², M Joyce²
(1) Department of Orthopaedic Surgery, Galway University Hospital, Galway, Ireland;
(2) Department of General Surgery, Galway University Hospital, Galway, Ireland
- 9.50 a.m. Mapping Modifiable Lifestyle Factors That Impact On-Call Surgical Performance**
Paper 111: D Whelehan¹, T Connelly², E Doherty³, P Ridgway¹
(1) Department of Surgery, Trinity College Dublin, Trinity Centre for Health Sciences, Tallaght University Hospital, Dublin 24, Ireland;
(2) Department of Surgery, Tallaght University Hospital, Dublin 24, Ireland;
(3) Department of Surgery, Royal College of Surgeons, 121 Stephen's Green, Dublin 2, Ireland
- 10.00 a.m. Onsite Cadaveric Operative Sessions – “OCOS”**
Paper 112: MF Khan, D Killeen, C Myles, J Jones, R Cahill
UCD Centre for Precision Surgery, Mater Misericordiae University Hospital, Eccles Street, Dublin, Ireland
- 10.10 a.m. Critical Care Experience of Surgical Non-Consultant Hospital Doctors, Are We Equipped to Assist During the Covid-19 Outbreak and Beyond?**
Paper 113: E Burke, Z Ahmad, F Uddin, F Awan, P Balfe
Department of Surgery, St Luke's Kilkenny, Kilkenny, Kilkenny, Ireland
- 10.20 a.m. Are Trainees and Educators on the ‘Same Page’ When It Comes to Their Surgical Training Requirements? A Qualitative Study**
Paper 114: M Al Azzawi¹, L Heskin², B Clyne²
(1) Department of General Surgery, Beaumont Hospital RCSI, Beaumont Road, Dublin 9, Ireland;
(2) School of Postgraduate Studies, Faculty of Medicine and Health Sciences, Royal College of Surgeons in Ireland, Stephen's Green, Dublin 2, Ireland
- 10.30 a.m. Quantitative Effects of COVID-19 on Surgical Training - The Era of Competency Based Assessment**
Paper 115: M Bucheeri, RM O'Connell, S Hembrecht, W Khan, I Khan, R Waldron, K Barry
Department of General Surgery, Mayo University Hospital, Castlebar, Co. Mayo, Ireland
- 10.40 a.m. Fatigued Surgeons – Would You Let Them Fly A Plane?**
Paper 116: D Whelehan¹, T Connelly², E Doherty³, P Ridgway¹
(1) Department of Surgery, Trinity College Dublin, Trinity Centre for Health Sciences, Tallaght University Hospital, Dublin 24, Ireland;
(2) Department of Surgery, Tallaght University Hospital, Dublin 24, Ireland;
(3) Department of Surgery, Royal College of Surgeons, 121 Stephens Green, Dublin 2, Ireland
- 10.50 a.m. The Future of General Surgery in Ireland Factors Influencing Career Decisions of Medical Students**
Paper 117: K Corless¹, A Samy¹, A Kamil¹, E Ryan¹, L Shafik², K Bassily³, AB Ali⁴, K O'Brien⁵, A Hogan¹
(1) Department of General Surgery, Galway University Hospital, Galway, Ireland;
(2) School of Medicine, NUI Galway, Galway, Ireland;
(3) School of Medicine, University of Limerick, Limerick, Ireland;
(4) School of Medicine, Royal College of Surgeons Ireland, Dublin, Ireland;
(5) School of Medicine, Trinity College Dublin, Dublin, Ireland
- 11.00 a.m. COFFEE**

SESSION 15: The Impact of Covid19 and Surgical Recovery Programme**Location:** Theatre 1**Chairs:** Professor Michael Kerin & Professor Ronan O'Connell

- 11.30 a.m. Presidential Address**
Professor Ciarán Ó h Ógartaigh,
President
NUI Galway
- 11.35 a.m. Impact of Covid19 on Irish Surgery**
Professor Ronan O'Connell
A View from the President
- 11.47 a.m. A View from Surgical Educators**
Professor Arnie Hill
Professor and Chair of Surgery, RCSI
Beaumont Hospital
- 12.00 p.m. Impact on Surgical Programmes**
Professor Debbie McNamara
Co-lead on National Clinical Programme in Surgery, RCSI
Chair of RCSI's Working Group on Gender Diversity
- 12.12 p.m. Impact on Surgical Training – Covid Recovery Plan**
Professor Oscar Traynor
Dean, Postgraduate Training, RCSI
- 12.25 p.m. Covid19 Current State of the Nation**
Dr Ronan Glynn
Acting Chief Medical Officer
- 12.40 p.m. Question and Answer Session**
- Followed by Closing Remarks and Prize Announcements**
Professor Michael Kerin
Professor of Surgery
NUI Galway

POSTERS

BREAST CLINICAL

1. **The Prognostic Role of Circulating Tumour DNA (Ctdna) In Breast Cancer – A Systematic Review and Meta-Analysis**
C Cullinane, C Fleming, F Hassan, P O' Leary, L Kelly, M O' Sullivan, M Corrigan, HP Redmond
Department of Breast and General Surgery, Cork University Hospital, Wilton, Cork, Ireland
2. **Clinicopathological and Immunohistochemical Predictors of Outcome in Invasive Lobular Carcinoma Breast Cancer Patients in a Tertiary Referral Centre in the West of Ireland**
CC McFeetors, MG Davey MG, ÉJ Ryan, DJ O'Connor DJ, PF McAnena, B Maloney, MK Barry, RJ McLaughlin, CM Malone, KJ Sweeney, AJ Lowery, MJ Kerin MJ
Discipline of Surgery, Lambe Institute for Translational Research, NUI Galway
3. **Early BRCA Mutation Detection and Cancer Prognosis**
A Hegarty¹, T Roche¹, L Hudson¹, F Bane¹, C Power², M Allen², R Salman², ADK Hill², LS Young¹
(1) Department of Surgery, Royal College of Surgeons, Beaumont Hospital, Dublin 9, Ireland;
(2) Department of Surgery, Royal College of Surgeons, Beaumont Hospital, Dublin, Ireland
4. **Magtrace Experience of Localising Sentinel Lymph Node in Breast Cancer**
N Scully, H Mathers, R Salman
Breast Surgery Unit, Craigavon Area Hospital, Northern Ireland
5. **The Role of Sentinel Lymph Node Biopsy in Breast Cancer Patients Over the Age of 80 – How Much Is Enough?**
S Doyle, G Hanley, M Boland, I Balasubramanian, D McCartan, J Geraghty, D Evoy, E McDermott, R Prichard
Department of Breast Surgery, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland
6. **Breast Cancer in Patients aged 70 years and older – Management Strategies with Surgery or Primary Endocrine Therapy?**
PJ Folan, MG Davey, ÉJ Ryan, N O'Halloran, MK Barry, RJ McLaughlin, CM Malone, KJ Sweeney, AJ Lowery, MJ Kerin
Discipline of Surgery, Lambe Institute for Translational Research, NUI Galway, Ireland

CARDIOTHORACIC

7. **The Impact of Covid 19 on Cardiothoracic Services in a Single Centre**
L Casey, D Healy
Department of Cardiothoracic Surgery, Mater Hospital, Eccles St, Dublin 7, Ireland
8. **The Usefulness of Perioperative Bronchoalveolar Lavage in Thoracic Surgery**
G Qsous, N Mc Veigh, M Tolan, D Healy
Department of Cardiothoracic Surgery, St. Vincent's University Hospital, Dublin, Ireland

ENDOCRINE

9. **Early Experience of Laparoscopic Retro-Peritoneoscopic Adrenalectomies at A Specialist Endocrine Surgery Centre**
Z Razzaq, M Majeed, DP O' Leary, AA Achakzai, M Hanrahan, H Mustafa, M Aakif, AU Khan, F Aftab, M Corrigan, HP Redmond
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10. **Cardiopulmonary Exercise Testing in Oesophagogastric Surgery: A Systematic Review**
G Sheill¹, S Reynolds², L O'Neill¹, D Mockler³, J Reynolds⁴, J Hussey¹, E Guinan²
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(4) Department of Surgery, Trinity College Dublin and St James's Hospital Dublin, Dublin, Ireland
11. **The Role of Thymidylate Synthase in Chemotherapy Resistance in Mucinous Rectal Cancer**
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(2) Department of Medical Physics and Physiology, RCSI, York Street, Dublin 2, Ireland

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12. **E Cigarettes –What the Surgeon Needs to Know and Prevalence Among Staff and Patients in an Irish University Teaching Hospital**
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13. Emergency Surgical Ambulatory Care

A Tamas, B Yesudhas¹, N Mohamed, Nr Mahmoud, J McGrath
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14. Assessment of The Dietetic Needs of Acute and Elective Surgery Patients in An Irish Setting

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(2) Department of Surgery, Cork University Hospital, Wilton, Cork, Ireland

15. The Evolution of OPD in the COVID-19 Era; Is Telephone Clinic an Acceptable Alternative?

D James¹, E Ryan², A Quinn³, M Davey², S Garry³, K Corless², K McKeivitt², A Fowler², D Hechtl², A Samy², S Abd ElWahab², P Carroll², A Hogan², O Young³, C Collins², R McLaughlin², A Lowery², M Kerin²
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16. The Impact of Public Health Policy and Governing Body Advice on the Presentation and Management of Acute Appendicitis during the COVID-19 Pandemic

C Toale, D Westby, M O'Callaghan, D Nally, C Peirce, P Burke, R Cunningham
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S Hembrecht, CA Kennedy, W Khan, I Khan, RP Waldron, MK Barry
Department of General Surgery, Mayo University Hospital, Castlebar, Co. Mayo, Ireland

18. Random Colonic Biopsies at Endoscopy in Chronic Diarrhoea – Is It A Useful Endeavour?

D Van de Hoef, K McKeivitt, M Regan, M Joyce, A Hogan, E Nugent, A Mahmood
Department of Surgery, Galway University Hospital, Galway, Ireland

19. Spectrum of Stress within the Surgical Workforce during COVID-19

M Bucheeri, A Arif, W Khan, I Khan, R Waldron, K Barry
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D James¹, E Ryan², A Quinn³, M Davey², S Garry³, K Corless², K McKeivitt², A Fowler², D Hechtl², A Samy², S Abd ElWahab², P Carroll², A Hogan², O Young³, C Collins², R McLaughlin², A Lowery², M Kerin²
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21. Impact of COVID 19 Pandemic On General Surgical Services In Galway University Hospital

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Department of General Surgery, University Hospital Galway, Galway, Ireland

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A Kamil, A Samy, S Rooney, A Hogan
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23. Radiofrequency Ablation for the Treatment of Haemorrhoids

F Shahzad, E Myers
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(2) Department of Otolaryngology, St. Vincent's University Hospital, Nutley Lane, Dublin 4, Ireland

25. Correlation between Thyroid Fine Needle Aspiration Cytology (FNAC) Scores and Cancer Incidence on Final Histopathology – A Multi-Centre Retrospective Analysis

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(2) Department of Pathology, Cork University Hospital, Ireland
(3) Department of ENT Surgery, South Infirmary Victoria University Hospital, Ireland

26. Improving the Peri-Operative Journey For Children With Autism Spectrum Disorder Undergoing Otorhinolaryngology Procedures

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28. Emergency Plastic Surgery during COVID-19 at Galway University Hospital

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TRAUMA AND ORTHOPAEDIC SURGERY**29. Clinical Outcomes Following Arthroscopic Rotator Cuff Repair in Athletes**

M Davey, E Hurley, J Scanlon, M Gaafar, L Pauzenberger, H Mullett

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30. The Orthopaedic Injuries Associated with Multiply Injured Patients Suffering Traumatic Brain Injury

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31. Functional Outcomes Following Distal Biceps Surgical RepairR Piggott¹, G Heaney², S Derham², D Molony¹

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32. Early Fixation of Ankle Fractures - Can We Do Better?

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33. Combined Orthopaedic and Vascular Approach for Total Hip Arthroplasty Revision with Intrapelvic Cup Migration: A Clinical StrategyA Canas-Martinez¹, M Claudiu Rotaru², D Collins³, P Kenny², F Doyle², P Keogh², MJ Allen⁴

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34. Qi Project Hip Fracture Bleep UseM Zubairu¹, G Montgomery¹, M Diack¹, A Dempsey¹, M Canavan², C Murphy¹

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35. Anatomical Reconstruction of First Ray Instability Hallux Valgus with Medial Anatomical TMTJ1 Plate

FJ McCabe, PM McQuail, L Turley, R Hurley, RA Flavin

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UPPER GI SURGERY**36. The Computer Will See You Now, Assessing the Quality of Information on Gastric Cancer on the Internet**

E Burke, G Ismaili, R Pretorius, P Balfe

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37. Assessment of the Anti-Proliferative Effects of Standard Chemotherapy Drugs and Pan-HER Family Tkis in Esophageal Cancer Cell Line ModelsM Al Azzawi¹, D Collins², N Gaynor², W Robb¹

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38. The Qualitative and Quantitative Assessment of Breast Density Following Bariatric Surgery: A Meta-Analysis

N Fearon, I Balasubramanian, E McDermott, H Heneghan

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UROLOGY**39. Post-Operative Opiate Use in Urological Patients: A Quality Improvement Study Aimed to Reduce the Risk of Opiate Dependence and Improve Safe Opiate Disposal Practices**

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40. Revolutionising Urology Outpatient Appointments in the COVID-19 Era: Are Telephone Consultations the Future?

E Hart, A Guy, A Efthymiadis, T Mahesan, R Harry, M Perry
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41. TRUS Issues: Rates of Post-TRUS Sepsis in a Tertiary Centre

P Collins, S Omer, C O'Connell, MS Inder, A Madden, L McEvoy, L Smyth, R Casey, R Flynn, R Manecksha, A Thomas
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42. Lignocaine Trial: Preliminary Results of An RCT Assessing the Efficacy of Lignocaine Gel Post Flexible Cystoscopy

KG Keane, SM Inder, E Redmond, A Madden, E O'Connor, C O'Connell, S Omer, LG Smyth, AZ Thomas, RJ Flynn, RG Casey, RP Manecksha
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43. Reproducible Modular Open Surgical Technique for the Management of Complex Small Renal Tumours

K Daly, E O'Brien, E Roche, S Norton, S Considine, M Taha, R Khalid, S David, M Evangelos, A Cham, P O'mally, E Roger, G Durkan, C Dowling, S Jaffrey, K Walsh, F D'Arcy, N Nusrat
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44. A Retrospective Analysis of Medical Management of Peripheral Arterial Disease in Diabetes Mellitus Patients in a Tertiary Hospital in Western Australia

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Department of Vascular Surgery, Fiona Stanley Hospital, Murdoch, Western Australia, Australia

VASCULAR SURGERY**45. Concomitant versus Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis**

T Aherne, E Ryan, M Boland, K McKeivitt, A Hassanin, M Tubassam, S Walsh
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46. A Retrospective Clinical Audit of Antithrombotic Medications Prescription in Patients Who Underwent Infra-Inguinal Bypass Surgery for Chronic-Limb Threatening Ischaemia (CLTI)

M Mustafa, A Hassanin, A Elamin, W Tawfick, S Sultan, M Tubassam, S Walsh, M Alawy
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47. Home-Based Structured Resistance Exercise for Chronic Venous Insufficiency: A Pilot Study

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(3) Department of Vascular Surgery, Galway Clinic, Doughiska, Galway, Ireland;
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48. The Effects of Cinpwt Upon SSI In Vascular Surgery; A Single Centre Experience

I Barry, T Richards
Department of Vascular, Fiona Stanley Hospital, 11 Robin Warren Dr, Murdoch, WA 6150, Australia

49. The Value of Bone Biopsies on Antibiotic Stewardship in Patients with Peripheral Vascular Disease

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50. Two-Year Outcome Data for Arteriovenous Fistulae Creation

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SESSION 1: TRAUMA AND ORTHOPAEDIC SURGERY

1. 3-Part And 4-Part Proximal Humerus Fractures: Is There A Role For Fixation

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Introduction: Proximal humerus fractures account for 4-6% of all fractures. Varied treatment options exist for the fracture configurations and patient type. There's much recent debate over surgical management options for 3-part and 4-part proximal humerus fractures, namely open reduction and internal fixation (O.R.I.F) and reverse shoulder arthroplasty (R.S.A). Reverse shoulder arthroplasty has gained popularity largely across Europe and increasing used in North America however, recent advances in locking plate technology has garnered the open fixation method more clinical attention.

Aim: To measure outcomes of plate fixation of 3-part & 4-part proximal humerus fractures in a single center, single surgeon cohort.

Methods: Retrospective review of 135 cases of 3-part & 4-part proximal humerus fractures identified between 2007 - 2020. Neer classification system used for fracture identification and all cases deemed reducible by plate fixation. Data included age, gender, injury side, complications (infection, loss of fixation, AVN, need for revision). XR imaging pre & post-op were assessed for fracture pattern, fixation and longevity of fixation. Range of motion and functional outcome assessed in outpatient setting between surgery and discharge.

Results: Patients were found to have satisfactory range of motion of affected shoulder with adequate functional outcome for age and complication rate.

Conclusion: Similar outcomes seen compared to reverse arthroplasty procedure, with the advantage of preservation of bone stock. With adequate range of motion and functional outcome, plate fixation can be considered a viable treatment option, in a select group of patients.

2. A Systematic Review of Complications In Intramedullary Nailing Of Open Tibial Shaft Fractures

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Introduction: Open tibial shaft fractures comprise almost 45% of all open fractures and are frequently the result of high energy trauma. Due to contamination, limited soft tissue coverage of the tibial shaft, and poor tibial blood supply; open tibial shaft fractures are associated with a high complication rate.

Aim: Intramedullary nailing has been a mainstay of treatment. This study aims to determine the incidence rate of the various complications in this cohort.

Methods: A systematic review and meta-analysis of papers published on Embase, PubMed, and Cochrane databases pertaining to the use of IMN to fix open tibial shaft fractures were included. The available evidence was collated in regards to the incidence of union, malunion, non-union and infection seen in this cohort.

Results: A total of 2169 citations were reviewed, 15 studies comprising 1626 patients were ultimately included in the analysis. There was a delayed union rate of 22.4%, a malunion rate of 8%, a non-union rate of 10% and an overall infection rate of 12% in this patient cohort. Subgroup analysis showed a 2-fold increase in non-union, and a 4-fold increase in deep infection among Gustilo III injuries compared to Gustilo I&II.

Conclusions: IMN for open tibial shaft fractures results in high rates of union and low rates of infection, comparable to figures seen in closed injuries and superior to those seen with alternative methods of fixation. There is an increased risk of complication associated with Gustilo III injuries, reinforcing the significance of the soft tissue injury in these patients.

3. Clinical Outcomes of Patients with Anterior Shoulder Instability & Glenolabral Articular Disruption Lesions - A Retrospective Comparative Study

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Introduction: Anterior shoulder instability is a common clinical condition, which often requires surgical stabilization. Glenoid labral tears are often associated with instability, with glenolabral articular disruption (GLAD) lesions occasionally being identified arthroscopically during repair, particularly in collision athletes.

Aim: To evaluate the clinical outcomes and recurrence rates in patients who had GLAD lesions and underwent arthroscopic Bankart repair (ABR), and compare them to a control group without GLAD lesions.

Methods: A retrospective review of patients who underwent ABR with GLAD lesions, by a single surgeon was performed. These were pair matched in a 2:1 ratio for age, gender, sport and level of play with a control group who underwent ABR without GLAD lesions.

Results: The study included 66 patients (22 and 44 for GLAD and control groups respectively), with a mean age of 25.8 years and a mean follow-up of 69.6 months. Overall, there was no significant difference in any of the clinical outcome scores (VAS, Rowe, SIRSI, SSV) utilized for the GLAD and control groups ($p > 0.05$ for all). Similarly, there was no significant difference in the total rate of return to play (90.1% vs 88.6%, $p = 1.00$), or return at the same/higher level (68.2% vs 73.7%, $p = 0.78$). There were 4 cases (18.2%) requiring further surgery in the GLAD group, and 2 cases (4.5%) requiring further surgery in the control group ($p = 0.09$).

Conclusion: Following arthroscopic repair, patients with GLAD lesions had similar outcomes when compared to a control group without GLAD lesions.

4. Introducing A Virtual Fracture Clinic During A Pandemic: Reducing Patient Attendance In A District General Hospital

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Introduction: The use of virtual fracture clinics is in its relative infancy. In the midst of an international pandemic our institution developed a virtual Trauma Assessment Clinic to reduce the necessity for patient attendance to the hospital.

Aim: To reduced patient attendance to a district hospital by implementing a virtual Trauma Assessment Clinic.

Methods: This is a review of prospectively collected data from 23rd March 2020 to 7th May 2020. Patients who had been referred from ED to the traditional fracture clinic were instead referred to a consultant delivered virtual Trauma Assessment Clinic. Upon review of their clinical records and imaging a clinical physiotherapist contacted the patient and advised over the phone. Information leaflets were sent out to the patient with a progress report. Patients could also contact the TAC directly 24/7 with any questions or issues.

Results: There were 142 new referrals to the TAC in MUH during the timeframe of this study. Mean age of referrals was 33.04 years. 43% were male patients. Overall 32.4% (n=46) of new referrals were discharged directly to their GP. 30.3% (n=43) were discharged for physiotherapy follow up. 36.6% (n=52) were brought back to the hospital for clinical review and 0.7% (n=1) was admitted for surgical intervention.

Conclusion: The TAC in our institution has resulted in a 63% reduction in patients attending the hospital for outpatient fracture clinic follow up. In the time of a pandemic this has allowed the mobilisation of staff to assist with other essential duties in other areas of our hospital without compromising care.

5. A Retrospective review of Ankle Fracture Open Reduction Internal Fixation in patients with Diabetes Mellitus: Are we putting our foot in it?

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Introduction: Ankle fractures pose a significant public health challenge with approximately 187 ankle fractures per 100,000 population per year. Diabetes Mellitus is increasingly prevalent. In Ireland there are an estimated 200,000 patients diagnosed with this condition. Poorly controlled Diabetes Mellitus has been demonstrated to impair healing and contribute to poor postoperative outcomes.

Aim: The aim of this study was to conduct a retrospective analysis of outcomes in patients with diabetes mellitus that underwent ankle fracture open reduction internal fixation.

Methods: Data from a Regional Trauma & Orthopaedic Unit was collected and evaluated from a 10 year period. Patients were identified using HIPE data. Retrospective chart and radiographic reviews were conducted. Epidemiological data was collected relating to fracture types, surgical procedures performed, peri-operative and postoperative complications, surgical revision rates and mortality.

Results: 41 patients over the 10 year period were identified to have ankle open reduction and internal fixation and diabetes mellitus. All patients were previously diagnosed with Diabetes Mellitus prior to presentation; 25% Type1 DM, 75% Type2 DM. Bimalleolar ankle fractures were the most frequent injury pattern sustained. There was a 16% wound infection rate in the postoperative period. Similarly there was a 16% readmission rate following surgery.

Conclusions: Ankle fractures are frequently encountered by Trauma & Orthopaedic surgeons. The occurrence of these injuries in the diabetic population poses significant challenges in the perioperative and postoperative period. We have demonstrated surgical wound infections and hospital readmissions are a significant issue which should be considered when devising a management plan in this patient cohort.

6. Does Country Of Origin Influence Research Outcomes In Lumbar Spinal Stenosis?

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Introduction: Bias undermines evidence-based decision making. To counter this, surgeons must be aware of the possible biases that may influence studies' reported outcomes. Lumbar spinal stenosis is an increasingly relevant surgical problem, with multiple published surgical strategies.

Aim: Our aim was to assess the role that country of origin plays in published surgical outcomes for lumbar spinal stenosis.

Methods: We performed a search strategy of MEDLINE and EMBASE for all English language primary research papers evaluating operative

interventions for lumbar spinal stenosis during the years 2010-2019 inclusive. Small case series and meta-analyses were excluded. Papers were assessed for self-reported outcome positivity and country of origin. Data analysis was conducted using GraphPad Prism statistical software.

Results: 492 papers met the inclusion criteria. Of these, 423 (86%) reported positive outcomes. Asian studies were the most likely to report positive outcomes, at 93% (221 of 237), followed by US studies at 88% (99 of 112). European studies had the lowest positive publication rate at 70% (86 of 123). This reached statistical significance, Pearson chi square test $P < 0.001$. This effect was seen across different levels of evidence. Healthcare system played a role, with National Health Service-type systems publishing more negative research than more privatised systems (Fisher's exact $P < 0.001$).

Conclusion: There is an association between country of origin and positive reported outcome in studies evaluating interventions for lumbar spinal stenosis. Clinicians should consider this when making clinical decisions based on published evidence.

7. Evolution of Hip Fracture Surgery In Ireland: Analysis of The Irish Hip Fracture Database Over A 6-Year Period (2013-2018)

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Introduction: Hip fractures are a significant cause of morbidity and mortality for elderly patients and represent an increasing burden on health service providers. The National Office of Clinical Audit (NOCA) publishes annual reports with the aim to improve patient outcomes. The National Institute for Health and Care Excellence (NICE) has published guidelines on the management of hip fractures.

Aim: To review the published NOCA Irish Hip Fracture Database (IHFD) audits over a 6-year period (2013-2018), analyse the trends in surgical management of hip fractures and compare arthroplasty rates to international standards.

Methods: A comprehensive review and analysis of the IHFD between 2013 and 2018 was performed. Data corresponding to each fracture pattern and type of surgery performed was plotted for the 6-year period.

Results: 17983 patients were recorded, 29.6% male and 70.4% female. Displaced intracapsular fractures accounted for 36.8%, undisplaced intracapsular 11%, intertrochanteric 36.3% and subtrochanteric 6.9%. A cemented hemiarthroplasty was the most commonly performed procedure (33.3%) followed by dynamic hip screw (23.3%) and uncemented hemiarthroplasty (13.8%). In total, 8651 arthroplasties were recorded (50.4%) with 69.6% cemented. Rate of arthroplasty cementing ranged from 62.3% to 73%. Total hip replacement (THR) rates increased from 1.8% to 4% over this period. Rate of intramedullary nails increased from 28.8% to 54% for intertrochanteric fractures and 78.6% to 87% for subtrochanteric fractures. Conclusion: The use of intramedullary nails for intertrochanteric and subtrochanteric fractures has increased. Despite current guidelines recommending cemented arthroplasties and THR to those eligible, Irish rates remain low compared to international registries.

8. Improved Redislocation Rates Following Shoulder Instability Surgery Using Tape

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Introduction: Arthroscopic shoulder stabilisation is an established surgical treatment for recurrent instability. Traditionally this has been performed with

the use of sutures and anchors to repair the torn gelinoid labrum. Recent advances have led to the introduction of tape rather than suture with the intent that a broader and flatter material would provide a more stable repair with less suture prominence. Ultimately the hope is that this would translate to a better clinical outcome.

Aim: To report the clinical findings from a large series of patients undergoing arthroscopic shoulder stabilisation using tape rather than suture.

Methods: A case series of 57 patients undergoing arthroscopic shoulder stabilisation was reviewed. Their mean age at surgery was 28 years. Each underwent arthroscopic shoulder stabilisation in the form of labral (Bankart) repair using knotless anchor fixation and suture tape. Follow Up was between 6 and 48 months. Each patient was assessed for number of re-dislocations and Oxford Shoulder Instability Score.

Results: There were no surgical complications in the group, 4 patients (7%) suffered a further dislocation and the mean Oxford Shoulder Instability Score was 40.8 (out of 48). A score between 40–48 is deemed excellent outcome. The range was 38.6–43 (96% CI).

Conclusion: The established literature suggests a redislocation rate of 25–33% following arthroscopic shoulder stabilisation surgery. Our cohort represents a lower rate and therefore we conclude this may be due to the use of tape rather than suture in labral repair.

9. Changing Demographic Trends in Spine Trauma: The Presentation and Outcome of Major Spine Trauma in the Elderly

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Introduction: Traumatic injuries are among the leading cause of death and disability worldwide. Major trauma has seen a demographic shift in recent years from the young to the elderly. However, whether a similar trend exists in those undergoing operative intervention for major spinal trauma remains to be elucidated.

Aim: To compare the presentation and outcomes of patients >65 years of age sustaining major spine trauma to those <65 years at a national tertiary referral spine centre.

Methods: The local Trauma Audit Research Network (TARN) database was analysed to select patients admitted between November 2015 and May 2019. Variables analysed included patient demographics, injury severity, comorbidity, mortality, interventions, mechanism of injury and length of hospital stay. **Results:** 471 patients underwent operative intervention for spinal trauma. Within the elderly cohort, this represented 73.7% of cases. Among the younger population, road traffic collisions were the most common mechanism of injury (37.1%) followed by high falls (>2m) (31.7%), while low falls (<2m) (63.3%) was the most common mechanism among the older population. Patients >65 years old had significantly longer length of stay (21 days v 14 days) and suffered higher 30-day mortality rates (1.8% v 0.6%).

Conclusion: Major orthopaedic spinal trauma in older people is associated with a significantly higher mortality rate as well as a longer duration of hospitalization. Even though severity of injury is similar for both young and old patients, the mechanism of injury for the older population is of typically much lower energy compared to the high energy trauma affecting younger patients.

SESSION 2: GENERAL SURGERY

10. An Observational Study, Identifying, Measuring and Quantifying The Interference Of Intraoperative Distractions Within The General Surgery Operating Theatre

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Introduction: Surgical research has broadened to include an interest into the investigation of surgical workflow. Rigorous analysis of the surgical process has focused on distractions. Distractions have the potential to increase surgeon stress, operative time and complications.

Aim: Our study aims to objectively identify, classify and quantify distractions during the surgical process.

Method: 46 general surgical procedures were observed between June–October 2019. An established observational tool was used to apply a structured observation to all operations. Additionally, a nine-point ordinal behaviourally anchor scoring scale was used to assign an interference level to each distraction.

Results: Total operative observation time was 4605 minutes (mean=100.11 minutes, Std. Deviation 45.6 minutes). Overall, 855 intraoperative distractions were coded. On average, 18.58 distractions were coded per operation (Std. Deviation 6.649; range 5–34), with 11.14 distractions occurring per hour. Entering/exiting (n=380, 42.88%) and case-irrelevant-communication (n=251, 28.32%) occurred most frequently. Disruption rate was highest within the first (32%) and fourth operative quartiles (41%). Highest interference rates were observed from equipment issue and procedural interruptions. Anaesthetists initiated CIC more frequently 2.72 per operation, compared to nurses 1.57 and surgeons 1.17.

Conclusion: Our results confirm that distractions are prevalent within the operating theatre and contribute to significant interferences of surgical workflow. Steps can be taken to reduce overall prevalence by drawing upon a systems based perspective. However due to the ubiquitous nature of distractions, surgeons may need to develop skills to help them resume interrupted primary tasks so to negate the effects distraction have on surgical outcomes.

11. Body Composition Among Patients With Soft Tissue Sarcoma – Association With Clinicopathologic Characteristics, Complications And Oncologic Outcome – A Systematic Review

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Introduction: Sarcopenia and obesity in cancer are associated with negative outcomes in cancer. Their prevalence and impact in modern regimens for soft-tissue sarcoma (STS) treatment have not been systematically studied.

Aim: To critically evaluate the evidence-based literature regarding body composition among patients with STS in relation to clinicopathologic outcomes and treatment-associated morbidity.

Methods: A PubMed search using the keywords “sarcoma”, “sarcopenia”, “body composition”, “muscle mass”, “body mass index”, “frailty”, “obesity” and “visceral obesity” was performed. Data were extracted on study design and size, patient demographics, histopathologic features, treatment, postoperative morbidity, and functional and oncologic outcomes, by two independent reviewers.

Results: Thirteen studies including 3453 patients were included, classified as level 3b or 4 evidence. Significant variability was present regarding study design and method of body composition measurement, including BMI (11 studies) and CT (3 studies). Obesity was associated with increased tumour size (2 studies) and grade (1 study) at presentation, increased postoperative morbidity (6/7 studies) and impaired functional outcomes (1/4 studies). Obesity did not impact long-term oncologic outcomes (4 studies). Obesity was noted in 18–38% of study participants. Neither sarcopenia nor visceral obesity were associated with clinical outcomes (2 studies), however reduced fat (1 study) and muscle attenuation (2 studies) were associated with adverse oncologic outcomes.

Conclusion: The relationship between body composition and clinical outcomes in STS remains unclear. Heterogeneity in measurement and reporting a significant challenge. Further studies utilising standardised definitions and comprehensive metabolic assessment are required to delineate the impact of obesity and sarcopenia among patients with STS.

12. Splenic Artery Angioembolisation As An Adjunct To Observation For Non-Operative Management Of Haemodynamically Stable Patients With Blunt Splenic Injury – A Systematic Review And Meta-Analysis

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Introduction: Non-operative management(NOM) of haemodynamically stable patients with blunt splenic injury(BSI) is the standard of care. Guidelines suggest the use of splenic artery angioembolisation(SAE) in American Association for the Surgery of Trauma(AAST) grade IV-V splenic injuries. **Aim:** To assess the safety and efficacy of SAE as an adjunct to observation in adult patients with BSI.

Methods: A systematic search(Pubmed, Embase, Scopus and Web of Science) was performed for randomised control trials and observational studies that compared NOM of adult patients with BSI, with and without SAE as an adjunct. Dichotomous variables were pooled as odds ratios(OR) using the Cochran-Mantel-Haenszel method. Quality assessment was performed using the Newcastle-Ottawa scale(NOS).

Results: A total of 31 studies comparing 8188 patients(SAE n=1399, 17.1%; observation n=6789, 82.9%) managed non-operatively for BSI with AAST grades I-V, met our predefined inclusion criteria. The studies had a moderate to high risk of bias. The median NOS was 7(range; 6-8). Meta-analysis showed that patients undergoing SAE were more likely to require surgical intervention(OR 1.99, 95% CI 1.39-2.84 P=0.0002). Patients undergoing SAE were also more likely to require further intervention(SAE or surgery)(OR 1.22, 95% CI 0.99-1.50 P=0.06), however, this did not reach statistical significance. Subgroup analysis showed that SAE statistically reduced the rate of failure of NOM for high-grade(Grade IV-V) injuries (OR 0.16, 95% CI 0.08-0.31 P<0.0001).

Conclusion: SAE does not offer benefit with regard to NOM of BSI in less severe BSI (<Grade IV), however, it reduces the need for surgery in high grade injuries.

13. Current Management of Helicobacter Pylori Infection In Patients Undergoing Upper GI Endoscopy: A Single Centre Retrospective Review

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Introduction: Helicobacter pylori is a chronic bacterial infection with global prevalence of 50%. Untreated, it increases lifetime risk of conditions such as chronic gastritis, peptic ulcer disease and gastric cancer. Triple therapy eradication aims to avert these sequelae. This unit updated protocols in July 2018, following national consensus guidelines from the Irish Helicobacter pylori Working Group.

Aim: To evaluate practices surrounding detection and management of H. pylori, with comparison to best practice guidelines and to findings of previous departmental audit in 2016.

Method: Literature review and retrospective review of electronic and paper records for OGD and urea breath test, in a single endoscopy department. All patients undergoing OGD from 1st August 2018 to 31st July 2019 were included (n=1,920). Anonymized data was collated using Microsoft Excel.

Results: 1,920 OGDs were performed on 1,868 adult patients. 1,775 patients (95%) had CLO test completed, while 93 (5%) did not. H. pylori was detected in 179 patients (10%). 74% of patients with H. pylori infection (n=133) were followed up after triple therapy. First line treatment had an 86% success rate (n=114), increased from 72% on previous audit. Fifteen patients (11%) retested positive. Just three received follow-up after second line therapy, with H. pylori persisting in two patients. Overall, 64% of patients diagnosed with H. pylori infection had subsequent confirmation of eradication.

Conclusion: We report enhanced success of first line triple therapy in eradicating H. pylori since amendment of local policy to prolong treatment duration to two weeks, reflecting current national guidelines.

14. Cytoreductive Surgery and Hipec: A National Experience

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Introduction: Cytoreductive surgery and Heated Intra-peritoneal Chemotherapy (CRS/HIPEC) is the standard of care for selected patients with peritoneal metastases from abdominal & pelvic malignancies. These malignancies can be challenging to manage, and are associated with considerable morbidity.

Aim: This study aims to review perioperative outcome data from a national unit.

Methods: A retrospective review of CRS/HIPEC cases at the Mater Misericordiae University Hospital between the period May 2013 (initiation of the national program) to May 2020 was conducted. Perioperative morbidity data were recorded and classified based on the Clavien-Dindo Classification.

Results: 270 patients proceeded to surgery for advanced colorectal, appendiceal, gastric, peritoneal and gynaecological neoplasms. The median peritoneal carcinomatosis index (PCI) was 11 (IQR 6-21). 43 patients (16%) did not receive HIPEC. Median length of post-operative stay was 14 days (IQR 9-19). The most common complication was wound infection (n=31, 11.4%) Overall, 34 patients (12.6%) had a major complication (≥ Grade 3 Clavien-Dindo complication). Eight patients (2.9%) had an unplanned return to theatre. There was one perioperative death due to myocardial infarction(0.3%).

Conclusion: Data from our unit observed that CRS/HIPEC is associated with acceptable perioperative morbidity and mortality, and is comparable to other large-volume national units.

15. External Validation of A See And Treat Model For Skin Lesions Referred To A General Surgical Department

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Introduction: Skin lesions represent a significant proportion of referrals to the general surgical OPD. The see and treat concept has previously been demonstrated to be an effective means of dealing with these patients. The purpose of this study was to externally validate this model.

Aim: The Aim of the study was to externally validate the model.

Methods: The concept was independently reviewed by a project management team with a particular focus on adaption of the model to align with local facilities. Potential gaps, limitations and targets were observed, discussed and adjusted. Governance policies and procedures were implemented to support the model's sustainability and the study was carried out prospectively. All suitable referrals were triaged to attend the clinic. Patients were contacted in advance to assess suitability. Follow up was performed by the General Practitioner.

Results: Three Hundred and Fifty-Nine patients were assessed over a 13 months period. Two Hundred and Forty patients underwent a procedure. The average interval from triage to treatment was 51 Days (0 to 542). Eighteen patients (7.5%) had incidental non melanoma skin cancers excised. Self-reported patient satisfaction with the service was excellent.

Conclusion: The see and treat model has been externally validated and can now be implemented nationally with site specific adjustments.

16. Institutional Behavioural Changes In Management of Acute Appendicitis Following Conduction Of A Randomised Control Trial

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Introduction: Acute appendicitis is a common abdominal emergency. Appendectomy is often considered the gold standard management of appendicitis. There is a growing body of evidence for non-operative treatment of appendicitis (NOTA), including the currently unpublished Conservative Versus Operative Management of Appendicitis trial (COMMA), a Randomised Control Trial (RCT) comparing appendectomy and NOTA which began recruitment in 2016.

Aim: To examine the effect COMMA had on local use of NOTA.

Methods: A retrospective cross-sectional study was conducted using STROBE standardized reporting guidelines. Inclusion criteria were surgical admissions with a primary diagnosis of acute appendicitis between January 2014 and July 2019 that were managed non-operatively. Patients with phlegmonous appendicitis and those included in COMMA were excluded. Data was obtained through Hospital In-Patient Enquiry (HIPE) records. Variables analysed were: age, evidence and nature of complication, index treatment, length of stay, readmission, further intervention, and histology.

Results: 49 patients met inclusion criteria. There was a clear positive trend in the use of NOTA: 0.97% (n=3) in 2014 increasing incrementally from 2016 up to 6.36% (n=18) in 2018. The use of NOTA in complicated appendicitis also rose: there were no such cases in 2014, rising to 6 cases in 2018 (2.12%). NOTA resulted in readmission for operative intervention in 28.5% (n=14).

Conclusions: In the era of a RCT, there was a trend of increasing use of the trial intervention outside of the study. There was a tendency to use NOTA inappropriately in complicated appendicitis. This occurred prior to the publication of the results of COMMA.

17. Analysis of the Factors Contributing to Unplanned Admissions of Surgical Day-cases in a Module 3 Hospital

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Introduction: The definition of a day case patient as appointed by the HSE is one "who is admitted to hospital on an elective basis for care and/or treatment which does not require the use of a hospital bed". Its benefits include a reduction in: waiting lists, hospital acquired infections and demand on inpatient beds, it is also highly cost effective.

Aim: To identify which patient factors or procedural/postoperative complications lead to the unanticipated admission of daycases, in order to modify future patient selection.

Methods: A list of daycases that took place in 2017 was obtained from the HIPE department in St. Luke's General Hospital. Daycase patients who required admission were retrospectively analysed with the use of patient charts. Patient factors, length of stay in hospital, pre-assessment status and intra operative complications were recorded and analysed, and the root cause of admission was identified.

Results: 457 daycases took place during 2017. Laparoscopic cholecystectomy and inguinal hernia repair were the most commonly performed procedures. 35/457 patients were admitted postoperatively (7.7%). The majority were admitted post: cholecystectomy (22) and incisional hernia repair (8). The commonest reason for admission post cholecystectomy was conversion from laparoscopic to open surgery. While, postoperative pain and drain insertion lead to most admissions post-incisional hernia repair.

Conclusion: Intra-operative difficulties/complications was the main cause of admissions across different procedures. A thorough review of a patient's background history can lead to the identification of high-risk operations, these can then be directed away from daysurgery, minimising the need for unexpected admissions.

18. The Impact of Covid-19 on Surgical Activity in A Model 3 Irish Hospital

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Introduction: The Covid-19 pandemic has presented unprecedented challenges for healthcare services and particularly on surgical services. There have been reports of reduced attendances at emergency departments but there is little data quantifying the reduction in surgical activity during the pandemic.

Aims: This study aims to examine the impact of COVID-19 on surgical activity in a Model 3 Hospital.

Methods: A retrospective, observational study assessing data collected over a 3-month period (February to April) in 2019 and 2020.

Results: Elective theatre procedure fell 43%, 376 to 216. Elective endoscopy fell 35%, 1,140 to 743. In the month of April, elective admissions fell 83%, theatre procedures fell 93% and endoscopy activity fell 74%. Emergency admissions reduced from 534 to 408, 24% while emergency procedures fell from 166 to 122, 27%. The number of emergency oesophagogastroduodenoscopies (OGDs) fell 63% in 2020 compared to 2019, however the number of non-scheduled major abdominal surgeries increased by 33%. The number of patients attending outpatients in the study period fell from 1,211 to 683, 44%.

Conclusion: This study has quantified the reduction in surgical department activity in our Model 3 Hospital. This clear reduction in scheduled and non-scheduled care could be extrapolated nationally. It is reassuring to note that emergency abdominal procedures have continued at an appropriate rate. This data could be extrapolated nationally to inform service capacity planning, as it will become increasingly challenging unless action to address the service deficit is taken soon.

UPPER GI SURGERY

19. A Surveillance of Intraoperative Bile Cultures In Patients Undergoing Pancreaticoduodenectomy

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Introduction: Pancreaticoduodenectomy is the standard of care for patients with periampullary malignancies and cancer of the head of the pancreas. Peri-operative mortality from infective complications remains high.

Aim: Evaluation of the impact of bile contamination on infective complications and the significance of targeted anti-microbial prophylaxis based on the results of pre-operative bile duct culture.

Methods: This is a retrospective cohort study on patients who had pancreaticoduodenectomy at a referral centre in a 2-year period. Data on both intraoperative bile culture (IBC) and postoperative cultures in the event of infective complications were collected. Antimicrobial sensitivity was analysed.

Results: A total of 140 pancreaticoduodenectomies were performed. IBC was collected in 108 cases, 75% of these had positive bacterial growth. SSIs were recorded in 37 patients. Of which, 31/37 patients had positive growth from IBC and 28 of 31 patients with SSI (90%) grew the same organisms as IBC. Only 2 patients with sterile IBC developed SSI. The most common organisms found in IBC were gram-negative bacilli (*Escherichia* spp., *Klebsiella* spp., *Enterobacter* spp.) and gram-positive coccus (*Enterococcus* spp). Microbial sensitivity was available for 23 of 81 positive growths. There was a high level of resistance to penicillin derivatives and cephalosporins. Multi-antimicrobial resistance was found in patients who had preoperative bile drainage through endoscopic bile duct stents.

Conclusion: Positive IBC is associated with the development of SSI post pancreaticoduodenectomy. The bacteria responsible for SSI were correlated to the IBC growth. Careful selection of antibiotics for surgical prophylaxis may reduce the development of infective complications.

20. Artificial Intelligence in Upper GI Endoscopy, Far Fetched or Near Future?

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Introduction: The use of Artificial Intelligence (AI) in medicine is accelerating. Classically AI has been deployed in the so called pattern recognition disciplines of radiology and pathology. However with advanced image recognition it is now being deployed in the endoscopic evaluation of gastrointestinal (GI) diseases.

Aim: To assess current research questions exploring the use of AI in diagnosing upper GI pathology based on endoscopic images.

Methods: Systematic review of studies published on PubMed over the last 5 years using the search string: (((artificial intelligence) OR AI)) AND (Gastroscopy OR OGD OR EGD OR oesophagus OR esophagus OR stomach OR Gastric). Inclusion criteria included: retrospective and prospective studies, published in the English language with full abstracts available. Data extracted included: country of origin for the research, clinical question being explored and form of AI being used.

Results: Search run on 5th of February 2020 yielded 2542 results. Articles meeting inclusion criteria numbered 25. Research originated in: Japan (32%), Europe (24%), China (20%), South Korea (8%), other (16%). Clinical questions being explored included: use of AI for detecting gastric cancer, assessing depth of gastric cancer invasion, detecting early neoplasia in Barrett's Oesophagus, real time gastric polyp detection and H.Pylori infection status. Forms of AI used: convolutional neural networks (48%), deep neural networks (36%), support vector machine learning (12%) and unclear (4%).

Conclusions: AI use in upper GI endoscopy is being evaluated at an increasing rate. Surgeons must be ready to gain a working knowledge of this technology to safely interpret its results.

21. Textbook Surgical Outcomes in Esophageal Cancer: The Influence of National Key Performance Indicators

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Introduction: High quality surgery remains the cornerstone of treating esophageal malignancy. Recent work from the Dutch Upper-gastrointestinal Cancer Audit (DUCA) have defined ten surgical and perioperative 'textbook' parameters that correlate with improved overall survival in patients undergoing esophageal or gastric resection. In 2013 national key performance indicators (KPIs) were introduced in Ireland against which esophageal cancer resection was to be benchmarked.

Aim: The aim of this project was to examine the effect of the introduction of KPIs on the proportion of patients attaining 'textbook' outcomes for esophagectomy.

Methods: A retrospective review of all esophagectomies and from January 2010 until June 2019 was performed. Clinical, pathological, peri-operative, morbidity and mortality outcomes were recorded. 10 'textbook' parameters were studied pre- and post-KPI introduction.

Results: 269 underwent esophagectomy, 77 pre-KPI and 192 post-KPI. There were no significant differences in age (67.6 vs 66.4 years, $p=0.6$), gender (72% male, 28% female vs 67% male, 23% female, $p=0.43$), ASA grade ($p=0.6$) or tumour stage ($p=0.37$) pre- and post-KPI. In the pre-KPI era, 13/77 (17%) patients achieved all ten textbook parameters, compared with 79/192, (41%, $p=0.001$) post-KPI. This compares favourably to DUCA 'textbook' data. There was an improvement in adequate lymphadenectomy (56% vs 83%, $p=0.002$), a reduction in margin positivity (21% vs 7%, $p=0.001$) and reduced peri-operative mortality (6% vs 2%, $p=0.03$) post-KPI.

Conclusion: There has been a significant improvement in perioperative outcomes in esophagectomy following the introduction of national KPIs in our unit. The number of patients achieving 'textbook' outcomes is comparable with international standards.

22. The Prevalence of Non-Alcoholic Fatty Liver Disease Within The Irish Bariatric Population; A Prospective Study

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Introduction: Non-alcoholic fatty liver disease (NAFLD) is a complication of obesity that encompasses a spectrum of conditions including hepatic steatosis and non-alcoholic steatohepatitis (NASH). Characteristic histological findings give a NAFLD Activity Score (NAS). A NAS of ≥ 5 is diagnostic of NASH. Recently published literature has shown conflicting results regarding the prevalence of NAFLD and NASH amongst patients with obesity undergoing bariatric surgery.

Aim: The aim was to prospectively assess the prevalence and severity of NAFLD amongst an Irish cohort of bariatric patients.

Methods: Patients with severe obesity who were due to undergo either a laparoscopic sleeve gastrectomy or gastric bypass were enrolled. A wedge liver biopsy was taken intra-operatively. The NAS and Kleiner Brunt (KB) fibrosis score were reported.

Results: A total of 130 liver biopsies were collected. One hundred and twelve specimens had a NAS, and 127 had a KB fibrosis score calculated. The median age was 52 years (IQR 16). The mean pre-operative BMI was $52.6 \pm 8.7 \text{ kg/m}^2$. Most were Caucasian and female (70.4%). NAFLD was highly prevalent (91.4%). The NAS was classified as mild (61.7%),

indeterminate, (25%), or severe (13.3%). Thirty-one (24.4%) patients had a diagnosis of NASH. Severe steatosis was prevalent in 12.5% (n=16). Fibrosis was prevalent in 68.5% (n=87) of biopsies, with one third (n=42) demonstrating stage ≥ 2 fibrosis.

Conclusion: NAFLD is highly prevalent however severe disease is less common in our population than internationally reported. These results clarify the burden of liver disease in our bariatric cohort.

23. Laparoscopic Adjustable Gastric Banding: Impact of Medical Tourism On Our Public Healthcare System

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Introduction: Laparoscopic adjustable gastric banding (LAGB) as a treatment for severe obesity has declined amid high complication rates, insufficient weight loss and weight regain. Despite this, many patients still seek LAGB privately or abroad, and require further management in the public healthcare system thereafter.

Aim: To review our experience of patients presenting to the National Bariatric Surgery Centre with gastric band complications.

Methods: A retrospective review was performed to identify patients who underwent removal of an adjustable gastric band (AGB) in our institution, from 2009 to 2020. Patients demographic and clinical data were recorded. Results: Over an 11 year-period, 93 patients (84 female) underwent laparoscopic removal of AGB. Majority of AGB placement procedures were performed at private clinics outside Ireland (80.6%). Mean interval from AGB placement to removal was 56 months. Band slippage was the most common reason (58%) for removal, followed by band intolerance (15.6%), insufficient weight loss (10.7%), reflux (7.6 %), port site infection (6%), and patient request (2.1%) . The majority of band removals were completed as daycase laparoscopic procedures (85%). Two patients required conversion to an open procedure; one for repair of a gastrotomy and one required a splenectomy due to band erosion. Post-operative morbidity was 5%, comprising respiratory (3%) and surgical site (2%) infections.

Conclusion: Although LAGB insertion is no longer performed in Ireland, the sequela of medical tourism relating to this procedure places further burden on our overstretched public healthcare system.

24. Prospective Study of Postoperative Pneumonia and Surgical Site Infections Following Esophageal Cancer Surgery; Incidence, Associations, And The Implications Of Positive Cultures

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Introduction: Pneumonia and SSIs represent common infection-related morbidity following esophageal cancer surgery. For pneumonia, existing definitions are controversial and inconsistently applied, and for SSIs the incidence and prevention has not been reported. Both were studied within this detailed prospective analysis from a National Center.

Aim: To systematically analyze pneumonia and surgical site infections (SSIs) post esophagectomy.

Methods: Patients (2013–2018) treated with curative intent involving surgery were studied. Pneumonia was defined as per the American Thoracic Society definition. A care bundle pathway for management of SSIs was

introduced at the start of this study period, and audited annually. Cases with positive pathogen cultures were compared with culture-negative cases. Multivariable logistic regression examined independently predictive factors of outcomes.

Results: Of 343 patients, 56 (16%) developed pneumonia, 22 (39%) with positive cultures. Preoperative respiratory disease predicted pneumonia (P=0.042), which was significantly (P<0.050) associated with respiratory failure, atrial fibrillation, and transfusions. Neoadjuvant therapy (P=0.004) was associated with pneumonia that was culture negative, while older age predisposed (P=0.001) to culture positive pneumonia. The SSI incidence was 9.9%, with no significant annual variance, and was significantly associated with pneumonia, respiratory failure, atrial fibrillation, anastomotic leaks, and transfusions. Neither SSI (P=0.951) nor pneumonia (P=0.807) impacted overall survival.

Conclusion: SSI incidence is less than 10% using strict care bundles. Pneumonia occurred in 16%. Most cases were culture negative, this being associated with neoadjuvant treatment. Pneumonia as currently defined represents a spectrum, with infection per se rarely proven, highlighting a need to re-evaluate its definition, diagnosis and preventive and treatment strategies.

25. Bariatric Surgery in Ireland: A Review of 300 Cases From An Academic Institution

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Introduction: Bariatric surgery (BS) has been established as the most effective treatment for severe obesity and its complications. Obesity affects more than 20% of the Irish population however access to bariatric surgery remains limited.

Aim: To evaluate outcomes of patients treated electively at the National Bariatric Surgery Centre over the past 3 years.

Methods: This is a review of a prospectively maintained database. Operations were performed between February 2017 and March 2020. Patient characteristics and clinical outcomes were collected.

Results: A total of 300 patients underwent BS, of which 280 were primary procedures and 20 were revisional procedures. The average age was 47 years (70% female). The primary procedures were laparoscopic sleeve gastrectomy (57%), laparoscopic one anastomosis gastric bypass (33%) and laparoscopic roux-en-y gastric bypass (10%). Mean operative BMI was 49.5kg/m² (range 32–82kg/m²) and mean weight was 142kg (range 93–276kg). Comorbidities included hypertension (50%), obstructive sleep apnoea (51%), dyslipidaemia (37%) and type 2 diabetes mellitus (35%). The median length of stay postoperatively was 2 days. There was no mortality or conversion to open. The 30-day morbidity was 10% (6.5% minor, 3.5% major). The average total weight loss at 3months, 6 months and 12 months was 14%, 21% and 27% respectively, with one anastomosis bypass facilitating the greatest weight loss (30%) at 12 months.

Conclusion: Bariatric surgery is an important tool in the management of obesity and metabolic disease. Our outcomes compare favourably to international data.

26. Management of Colorectal Liver Metastasis: Outcomes Over A 5-Year Period

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Introduction: Surgical resection ensuring clear margins is the gold standard for the management of colorectal liver metastasis (CRLM). It remains the only modality that offers long-term survival.

Aim: We aim to analyse outcomes following resection of CRLM over a 5-year period, comparing open and minimally invasive surgery (MIS) approaches.

Methods: A review of all hepatectomies performed for CRLM from January 2015 to March 2020 was conducted. Short term outcomes including surgical approach, R0 resection rate, and major morbidity (≥ 3 Clavien-Dindo) were assessed.

Results: During the study period 153 hepatectomies for CRLM were performed. A minimally invasive approach was utilised in 48 (31.4%) of cases, and parenchymal sparing resection was achieved in 77 (50.3%) of cases. R0 resection was achieved in 88.9% of resections (Open 90.5% vs. MIS 85.4%, $p = 0.355$). Overall incidence of major morbidity (≥ 3 Clavien-Dindo) was 9.2%, with five patients (3.2%) requiring surgical reintervention. Overall, median length of hospital stay was 7 days, with MIS having a shorter duration (6 versus 8 days).

Conclusion: Data from our unit observed that the surgical management of CRLM is associated with acceptable perioperative morbidity and mortality and is comparable to other large-volume international units. Minimally invasive approach has considerable benefits in select patients.

27. Withdrawn

BREAST CLINICAL & ENDOCRINE

28. The LOCALizer radiofrequency identification system: An effective new technology for localising non-palpable breast lesions for surgery [2348]

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Introduction: Breast screening has decreased morbidity and mortality due to detection of early, non-palpable breast cancers. One of the challenges of performing breast conserving surgery on non-palpable breast tumours is localisation of the cancer.

Aim: We sought to evaluate the feasibility of a new radiofrequency identification system (RFID) called LOCALizer as an alternative to traditional wire-guided localisation.

Methods: Data were prospectively collected on patients undergoing breast-conserving surgery using the LOCALizer RFID system in a regional cancer centre between July 2019 and March 2020. Patients had a RFID tag placed pre-operatively and underwent surgical removal of the tag with the index lesion guided by a handheld LOCALizer probe. Primary aim was successful placement and retrieval of the RFID tag. Re-excision rates, specimen size, specimen weight, cancer subtype and hormone status and complication rate were all recorded.

Results: Sixty-nine patients had a LOCALizer tag inserted between July 2019 and March 2020. Of these, 6 (8.7%) were diagnostic and 63 (91.3%) were therapeutic. All patients were part of the national breast-screening program and aged between 50-65 (mean age 56). Overall, there was no migration of RFID tags and all tags were retrieved with the index lesion. The overall re-excision of margin rate was 17.4% (12/69). The re-excision rate of therapeutic excisions only was 19% (12/69). All re-excision of margins was due to positive radial margins.

Conclusion: The LOCALizer RFID is an effective and safe wire-free localisation method for non-palpable breast lesions and appears to have some user advantages over the other wire-free approaches.

29. Sarcopenia In Locally Advanced Breast Cancer: Prevalence, And Impact On Clinical And Oncologic Outcomes

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Introduction: Sarcopenia in cancer may confer negative outcomes, but its prevalence and impact in the modern multimodal management of locally advanced breast cancer have not been systematically studied.

Aim: To determine the independent impact of sarcopenia on clinical and oncologic outcome.

Methods: Consecutive female patients undergoing neoadjuvant therapy and surgery for locally advanced breast cancer between 2010 and 2015 were studied. Skeletal muscle index (SMI) and lean body mass (LBM) were determined. Sarcopenia was defined by computed tomography (CT) at L3 as SMI $< 38.5 \text{ cm}^2/\text{m}^2$. Multivariable linear, logistic, and Cox regression analysis was undertaken.

Results: 258 patients were studied. Sarcopenia was present in 23.0%, 7.8% and 0.0% of patients with normal weight, overweight and obesity, respectively ($P=0.001$). Sarcopenia was not associated with baseline cT and cN stage, tumour grade, histologic type or receptor status. Similarly, patients with sarcopenia exhibited equivalent indices of neoadjuvant therapy response including ypT and ypN stage, pathologic complete response and Sataloff grade following surgical resection. Postoperatively, sarcopenia was not independently associated with comprehensive complications index ($P=0.242$), length of stay ($P=0.716$) or overall morbidity ($P=0.365$). However, on multivariable analysis, lower LBM independently predicted reduced invasive disease free ($P=0.049$, HR0.93[95%CI 0.87-1.00]) and overall ($P=0.028$, HR0.92 [0.85-0.99]), but not disease-specific survival ($P=0.070$).

Conclusion: Consistent with a lack of association with baseline and post-treatment pathologic features, sarcopenia in locally advanced breast cancer is associated with reduced overall, but not disease-specific, survival. These data indicate that the prognostic impact of sarcopenia may be mediated by impaired performance status and increased non-cancer mortality.

30. Clinical Value Of Oncotype Dx Gene Assay Recurrence Score On Diagnostic Core Biopsy To Predict Response To Neoadjuvant Chemotherapy In Patients With Breast Cancer: Systematic Review And Meta-Analysis

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Introduction: The Oncotype DX breast recurrence score (RS) predicts the benefits of adjuvant chemotherapy oestrogen receptor (ER)-positive, HER2-negative breast cancer. The utility of an Oncotype DX test on core biopsy to predict response to neoadjuvant chemotherapy (NACT) is unclear.

Aim: To determine if RS performed on core biopsy at diagnosis predicted complete pathological response (PCR) to NACT in breast cancer patients. **Methods:** This study was performed according to PRISMA guidelines. PubMed, Embase and the Cochrane Library were searched systematically to identify studies evaluating the value of RS in predicting response to NACT in breast cancer patients.

Results: Seven studies involving 1744 patients reported the correlation between the pre-treatment RS and PCR to neoadjuvant chemotherapy. Three studies used a score of 30 as the cut-off for a 'high' score with four studies using a score of 25. 777 patients (44.5%) had a 'high' RS and 967 (55.5%) patients had a 'low/intermediate' RS. PCR was achieved in 94 (5.4%) patients. PCR rates were significantly increased in the 'high' RS group (9.5%) when compared to the 'low/intermediate group' (2.1%) [RR 4.47; 95% CI 2.76 – 7.21; $p < 0.001$]. A significant risk difference (RD) was also observed between the two groups [RD 0.10; 95% CI 0.04 – 0.15; $p = 0.001$].

Conclusion: Studies examining use of RS in the neoadjuvant setting are consistent with adjuvant studies. High RS are associated with higher PCR rates from NACT. Low RS may indicate chemoresistance. Consideration should be given to routine assessment of RS on core biopsy at diagnosis in ER+HER2- patients.

31. Audit of the moderate risk breast cancer surveillance programme; outcomes and comparison to the BreastCheck screening programme

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Introduction: BreastCheck invites women between the age of 50 to 69 to attend for mammography every 2 years. Younger women who are deemed high or moderate risk of developing breast cancer can be enrolled in a family history surveillance programme (FHSP) and undergo annual mammography.

Aim: To evaluate the effectiveness of annual mammography surveillance in the moderate risk population and compare outcomes to those reported by BreastCheck.

Methods: We retrospectively analysed records of women undergoing family history screening in a Regional Cancer Centre. Women eligible for inclusion were those assessed by the IBIS (International Breast Cancer Intervention Study) breast cancer risk evaluation tool. Those with a 3–8% estimated 10 year risk of developing breast cancer were considered to be moderate risk. Data obtained was compared to reports published by BreastCheck from 2014–2018.

Results: 414 women with a moderate risk of developing breast cancer were invited to participate in the FHSP from 2015–2019. In total 1581 mammograms were performed with 12 cancers detected. The mean number of cancers detected per 1000 women was 7.59 (2015–2019) in the FHSP compared to 6.6 (2014–2018) in BreastCheck (BC). The FHSP had a lower number of invasive cancers detected (75%) compared to BC (78.6%). The re-call rate was 8.4% in the FHSP and 3.9% in BC. Attendance was higher in the FHSP (91.2%) compared to BC (72.4%).

Conclusions: Family history surveillance programmes are an effective cancer detection service for patients with a moderate risk of developing breast cancer. Detection rates are comparable to those reported by BreastCheck with a higher compliance rate in the FHSP.

32. The Impact of Postoperative Complications Following Immediate Breast Reconstruction on Breast Cancer Outcomes: A Meta-Analysis

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Introduction: The association between immediate breast reconstruction (IBR) related complications and breast cancer recurrence remains uncertain.

Aim: This study aimed to investigate the oncological outcomes in patients with complication following mastectomy and IBR.

Methods: A comprehensive search was undertaken for all studies describing complications post mastectomy and IBR in breast cancer patients. Studies were included if they reported on IBR related complications and investigated their relationship with breast cancer recurrence. Meta-analysis was performed using a random-effects model with data presented as odds ratio (OR) and 95% confidence intervals.

Results: A total of 1418 patients from five studies met the inclusion criteria and were included in the final analysis. The mean age of patients included was 47.2 years and the most common type of reconstruction used is implant based IBR (822/1311). Of the 382 patients with postoperative IBR related

complications, 17.2% (66/382) developed breast cancer recurrence. There was no significant association of IBR related complications to breast cancer recurrence (p: 0.18) or mortality (p: 0.17). There was no significant difference in complication rates between the type of reconstruction used (implant versus autologous) (p: 0.98). Time to adjuvant therapy was significantly increased in patients with IBR related complications (MD: 8.69 days [1.18–16.21], p: 0.02, I2: 0.02).

Conclusion: Oncological outcomes in breast cancer following mastectomy and IBR is not influenced by postoperative complications. Although time to adjuvant therapy was significantly increased in patients with postoperative complications, IBR is not a contraindication to patients who require adjuvant therapy following mastectomy.

33. Early-Stage Luminal A Breast Cancer Patients Treated Surgically with Curative Intent in a Publicly Funded, Irish Tertiary Referral Centre

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Background: Luminal A breast cancer (LABC) is the most common molecular subtype with the most favourable prognosis.

Aim: To describe clinicopathologic features, oncological outcome and relapse patterns in LABC. Secondly, to assess the relationship between clinicopathological features, OncotypeDX™ (ODX) score and therapeutic strategies in LABC.

Methods: Oestrogen-receptor positive (ER+), human epidermal growth factor receptor-2 negative (HER2-), axillary lymph node negative (LN-), female breast cancer patients diagnosed between 2005–2015 were included. We recorded clinicopathological and recurrence data using descriptive statistics. Predictors of ODX were determined using binary logistic regression. Oncological outcome was determined using Kaplan-Meier and Cox-regression analyses.

Results: Analysis was performed for 849 consecutive ER+/HER2-/LN- patients. Median follow-up was 102.1 months. Low tumour grade (odds ratio [OR]:21.82, 95% confidence interval [CI]:5.88–81.02, $P < 0.001$) independently predicted low ODX. Mean invasive disease-free (DFS) and overall survival (OS) were 85.8% and 91.8%. Ki-67 index > 10 (hazards ratio (HR):3.07, 95%CI:1.29–7.25, $P = 0.011$) and requiring neoadjuvant chemotherapy (NAC) (HR:5.20, 95%CI:1.12–24.18, $P = 0.036$) predicted DFS. Age > 65 (HR:3.63, 95%CI:1.86–7.04, $P < 0.001$) and requiring NAC (HR:3.40, 95%CI:1.16–9.98, $P = 0.026$) predicted OS. Fifty-one patients had distant recurrence, of which 64.7% developed a fatal recurrence (n=33). Bone (37.2%), bone and liver (13.7%) and liver (11.8%) were the most frequent sites of metastasis, with liver recurrences having worst survival ($P = 0.438$).

Conclusion: Early-stage LABC is best managed with surgery and combined radioendocrine therapy, with limited role for systemic chemotherapy. Reduced tumour grade independently predicted low, non-actionable ODX in women with early-stage LABC.

34. A Systematic Review and Meta-Analysis of Attempted Minimally Invasive Parathyroidectomy with and Without the Use Of Intra-Operative Parathyroid Hormone For Primary Hyperparathyroidism

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Introduction: Intra-operative parathyroid hormone (ioPTH) assays may increase cure rates in patients undergoing minimally invasive parathyroidectomy (MIP) for primary hyperparathyroidism (PHP).

Aims: To perform a meta-analysis determining the efficacy and safety of MIP with and without the use of ioPTH for PHP.

Methods: A systematic search was performed to identify randomised controlled trials and observational studies that compared MIP with and without ioPTH. Dichotomous variables were pooled as odds ratios (OR) while continuous variables were compared using weighted mean differences (WMD). Quality assessment was performed using the Newcastle-Ottawa (NOS) scale.

Results: A total of 12 studies, involving 2,290 patients with PHP, (ioPTH n=1,148, without ioPTH n=1,132) were eligible for inclusion. The studies had a moderate to high risk of bias. The median NOS was 7. Patients who underwent MIP with ioPTH monitoring had increased cure rates (cure RR 4.40, 95% CI 2.12-7.10; $p < 0.0001$). There was an increased need for reoperation in the group who had surgery without ioPTH (RR 2.32, 95% CI 0.19-0.86; $p = 0.02$). There was a trend towards increased operating times in the ioPTH group, however this did not quite reach statistical significance (WMD 21.62 minutes, 95% CI -0.93-44.17; $p = 0.06$). The use of ioPTH led to increased rates of bilateral neck exploration (BNE) (RR 2.41, 95% CI 1.27-9.92; $p = 0.02$).

Conclusion: IoPTH improves cure rates for patients with PHP undergoing attempted MIP. Attempted MIP without ioPTH is associated with less conversion to BNE at initial surgery but results in lower cure rates and an increased risk for re-operation.

35. Radioiodine Remnant Ablation For Long Term Cure In Differentiated Thyroid Carcinoma – A Systematic Review And Meta-Analysis

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Introduction: The optimal dose of radioactive iodine (RAI) remnant ablation for differentiated thyroid cancer (DTC) remains controversial.

Aim: To evaluate long-term cure rate of different RAI activities in low-intermediate risk DTC. Secondary outcomes included successful remnant ablation, need for further ablation and adverse effects.

Methods: A systematic search of online databases was performed to identify studies that compared long-term outcomes of patients with low-intermediate risk DTC based on receipt of either low-dose (LD) or high-dose (HD) RAI. A pairwise meta-analysis was performed. Dichotomous variables were pooled as risk ratios (RR) while continuous data was pooled as weighted-mean differences (WMD). Quality assessment was performed using the Newcastle-Ottawa (NOS) and Grade criteria.

Results: Nine studies met the predefined inclusion criteria, including 5 RCTs and 4 observational studies, totalling 3512 patients. 3.5% of patients in the LD group (n = 1401) and 4.9% of patients in the HD group (n = 2111) had a recurrence. This difference in long-term cure recurrence rates was non-significant ([RR], 0.90; 95% [CI] 0.62–1.30; $p = 0.39$). There was no significant difference in remnant ablation (RR 0.94; 95% CI 0.85-1.04; $p = 0.24$) between LD and HD RAI activities. Less adverse effects were seen in the LD group (RR 0.78, 95% CI 0.65, 0.94; $p = 0.007$). These results did not change significantly when a subgroup analysis of RCTs only was performed.

Conclusions: LD RAI is comparable to HD RAI with regards both successful ablation and recurrence rates. LD RAI is preferable to HD in low-intermediate DTC due to its similar efficacy but reduced morbidity.

36. Intra-Operative Adjuncts In Minimally Invasive Radio-Guided Parathyroidectomy At A Specialist Endocrine Surgery Centre

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Introduction: Primary Hyperparathyroidism (PH) is a common cause of hypercalcaemia (0.3% of population). Minimally invasive radio-guided parathyroidectomy (MIRP) has been made possible due to advancements in pre-operative imaging i.e. sestamibi scans allowing localisation of areas of parathyroid hyperactivity.

Aim: Due to disagreement in the literature regarding which intra operative adjunct is best used in MIRP surgery to decrease recurrence, aim for this study is to examine and compare the performance of these adjuncts in consecutive patients i.e. 1. Intra operative PTH assay (IOPTHA) 2. Tc-99m radio-guidance using a gamma probe and the 20% rule 3. Frozen section analysis.

Methods: 45 MIRP procedures were carried out between 01/05/2018 and 30/04/2020. 77.8% were females; mean age was 62 years (range 30 - 79). **Results:** Final pathology showed that in 43 of the cases parathyroid tissue was correctly removed; thyroid tissue was identified for the other 2 cases. 20% rule was positive in 43 out of the 45 cases and negative in 2 (sensitivity 100%, specificity 100%). A drop in IOPTHA greater than 50% was found in 41 out of the 45 cases but not in 4 (sensitivity 93.9%, specificity 100%). Frozen section was 100% concordant with final pathology (45/45). AUC analysis showed no significant difference in the performance of these tests ($p = 0.15$) but was around 1 for 20% rule and Frozen section. **Conclusions:** When radio-guidance and frozen sections are added to IOPTHA, the success rate of parathyroidectomy is markedly improved. Using them together will greatly reduce recurrent hyperparathyroidism.

SESSION 5: VASCULAR AND CARDIOVASCULAR SURGERY

37. A Toe In Time, Saves Nine: Re-Amputation Rates And Survival Following Toe Amputation

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Introduction: Toe amputation is a commonly performed procedure for irreversible foot sepsis. However, re-amputation rates are poorly reported in the literature.

Aim: To determine survival and rate of progression to further amputation following toe amputation.

Methods: Consecutive patients between 2010 and 2015 were included. Progression to further minor or major amputation following digital but not complete transmetatarsal amputation was recorded. Event-free (EFS) and overall survival (OS) were calculated.

Results: 150 patients were included, with a mean age of 65 years. Following index toe amputation, 67 (44.7%) patients progressed to further minor or major ipsilateral amputation, mean time to which was 21.4 months. Twenty-four patients (16%) progressed to major ipsilateral amputation. Eight patients (5.3%) required bilateral major amputation. Of the 56 patients who underwent hallux amputation as a primary procedure, 13 (23.2%) went on to have a further ipsilateral minor amputation and 9 (16.1%) had an ipsilateral major amputation. Thirty-seven (39.4%) of the

94 non-hallux primary procedure patients proceeded to further ipsilateral minor amputation with 15 (16%) requiring an ipsilateral major amputation. Patients undergoing index non-hallux amputation were significantly more likely to require further minor amputation ($P=0.04$). Five-year EFS and OS for hallux and non-hallux procedures were $31.7\pm 6.3\%$ and $60.4\pm 6.6\%$, and $27.7\pm 4.7\%$ and $67.0\pm 4.8\%$ respectively. There was no significant difference in OS ($P=0.326$) or EFS ($P=0.610$) between hallux and non-hallux groups.

Conclusion: Approximately one third of patients undergoing toe amputation progressed to further digital amputation. However overall, limb preservation rates are high, with a majority of patients alive at five-year follow-up.

38. Assessing Endoleak Detection Diagnostic Modalities In GUH, A Retrospective Audit Of Multiple Imaging Techniques Used Over Last 10 Years

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Introduction: Patients with abdominal aortic aneurysm AAA who receive endovascular aneurysm repair (EVAR) are subjected to significant long-term complications specially endoleaks. The incidence rate of endoleak varies from 10% to 50% in different reports. Persistent endoleak may cause aneurysm sac enlargement and rupture risk. Different diagnostic modalities, including plain film radiograph, computed tomography (CT) scan, colour duplex ultrasound (CDUS) including contrastenhanced CDUS (CE-CDUS), magnetic resonance (MR), and angiography, can be used for post-EVAR Surveillance. US offers several advantages as: less invasive, lower cost, no risk of radiation exposure and easier to perform. The main limitation of US is that it is highly dependent on operator skills.

Aim: To audit our Endoleak Post-EVAR detection policy and to define if the new technique will add a benefit to our service.

Methods: We searched CT, US, MDM and OT angiogram reports for words of Endoleak, Sac size increase, or Sac expansion. We clarified endoleaks based on the type.

Results: After our search we found 810 cases of EVAR, of which 133 cases developed endoleak, of which 19 were Type I, 98 Type II, 7 Type III, 2 Type IV. Total incidence of endoleaks is 16%. Type 1 is 2.3% and majority were type 2 12%. US detected endoleaks in 88 cases, while endoleaks detected by CT first were 43.

Conclusion: US is a reliable noninvasive surveillance test for post-EVAR cases. However, CTA is needed when aneurysm sac expansion or planning for intervention.

39. Ten Year Audit of Outcomes Following Digital Amputation

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Introduction: Although more distal lower limb amputations are associated with preservation of greater levels of function, this must be balanced against likely healing and the biomechanical stability of the remaining limb. Recent data suggests that isolated hallux amputation predisposes patients to further surgery.

Aim: We sought to ascertain the number of digital amputations performed at our institution over a ten-year period, paying particular attention to hallux amputations and the requirement for further surgery.

Methods: Patients were identified using theatre logbooks and Hospital Inpatient Enquiry (HIPE) Data. These sources, as well as chart review, provided additional demographic data.

Results: In the ten-year period commencing January 1st 2009, 297 patients underwent digital (DA) or transmetatarsal amputation (TMA), requiring a total of 527 digital or higher level lower limb amputations. The median age was 68 years (29-97). One hundred and thirteen patients underwent more than one digital amputation or ultimately required TMA, with a median number of procedures for the entire cohort of 2 (1-11).

Sixty-five patients had hallux amputation performed. Twenty-eight (43%) of these patients required further surgery. Of the 37 patients who initially had a transmetatarsal amputation, only 10 (27%) required further surgery during our study period.

Conclusion: The patient cohort requiring digital amputation has multiple comorbidities and progressive disease. As a consequence, multiple interventions are frequently required. Our data suggests that, in the setting of an isolated hallux amputation being deemed necessary, performing a TMA instead may ultimately reduce the total number of interventions required.

40. Does Longitudinal or Transverse Orientation of The Ultrasound Probe Improve Cannulation Success In Minimally Invasive Venous Surgery: A Multicentre Randomised Controlled Trial

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Introduction: This study evaluates the effect of transverse (TO) and longitudinal (LO) ultrasound transducer orientation on saphenous vein cannulation during endovenous ablation.

Aim: To determine whether probe orientation effects speed and pain in venous cannulation

Methods: A single-blinded, multicentre, randomised controlled trial was performed in patients undergoing ultrasound guided venous cannulation for saphenous ablation. The primary outcomes were overall cannulation success and time to successful cannulation.

Results: In total 100 patients were assigned to parallel LO and TO groups. Cannulation success was 100%. There was no significant variation in time to cannulation detected between the TO and LO (85seconds vs. 71seconds, $p=0.314$). Longitudinal orientation was associated with significantly fewer needle passes [median 3 (IQR 1-5) vs. 2 (IQR 1-3), $p=0.026$] and less pain (Median Visual Analogue Scale score 1 vs. 2.5, $p=0.039$) than those in the TO group.

Conclusion: This trial has shown that while LO is associated with less procedural pain it has no significant effect on time to target vein cannulation during endovenous ablation.

41. Open versus Endovascular Surgery in Complex Aortoiliac Occlusive Disease: A Systematic Review and Meta-Analysis of Comparative Studies

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Introduction: Technological advances have increased the success of endovascular treatment in complex aortoiliac lesions but open surgery remains the standard of care.

Aim: This study aims to compare the short and mid-term outcomes of open (OS) and endovascular surgery (ES) in TransAtlantic InterSociety Consensus (TASC II) C/D lesions.

Methods: This review was conducted according to PRISMA guidelines. A systematic search of online databases was undertaken for articles which compared OS and ES in patients with complex aortoiliac occlusions.

Results: Twelve studies met the inclusion criteria including 1465 patients (690(OS) vs 777(ES)). OS patients were younger than ES patients (60.8 vs 63.64yrs; $p=0.04$). OS was associated with a significantly longer length of ICU (Mean Difference(MD) 0.9; 95% Confidence Interval(CI) 0.71-1.09; $p<0.00001$) and overall hospital stay (MD 4.88; 95%CI 3.78-5.97; $p<0.0001$) along with increased post-operative medical morbidity(Odds Ratio(OR) 6.41; 95%CI 2.38-17.25; $p=0.0002$). There was no significant difference in peri-procedural complications (OR 0.96; 95%CI 0.56-1.65; $p=0.88$) or 30-day mortality (OR 2; 95%CI 0.78-5.16; $p=0.15$), and OS was associated with greater technical success (OR 0.14; 95%CI 0.04-0.45; $p=0.001$). Primary patency was significantly improved in the OS group (OR 0.5; 95%CI 0.38-0.65; $p<0.0001$). There were no significant differences in secondary patency (OR 0.74; 95%CI 0.49-1.11; $p=0.15$) or limb salvage (OR 1.35; 95%CI 0.8-2.28; $p=0.27$) between the two groups.

Conclusions: Although associated with longer hospital stay and increased morbidity, OS demonstrates superior technical success and durability in complex aortoiliac lesions, however, ES has become a reasonable alternative in high risk patients who may not be suitable for major surgery.

42. Symptoms To CEA: Factors Associated With Delays To Surgery

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Introduction: Carotid endarterectomy(CEA) is the accepted treatment for stroke prevention in patients with symptomatic 70-99% carotid artery stenosis. NICE guidelines recommend that surgery be performed within 7 days of index symptoms to achieve maximum benefit, whereas the ESVS recommend surgery within 14 days.

Aims: To determine the proportion of CEAs meeting these targets and assess delaying factors

Methods: All symptomatic CEA performed between January 2017–December 2019 were extracted from a prospectively-maintained database and analysed.

Results: 123 CEAs were performed for 61 strokes (49.6%) and 62 TIAs (51.4%). 71.5% ($n=88$) were male, and median(IQR) age was 71.0 years(64-77). Twenty-five (20.5%) patients had surgery within 7 days of symptoms, 67 (54.5%) within 14 days, and 56 (45.5%) were done between 15-183 days of symptoms. Patients with FAST symptoms were more likely to undergo CEA within 14 days 53/88 (60%). Patients with amaurosis only were less likely to have surgery within 14 days 16/41 (39%).

The median symptoms-to-surgery interval was significantly less in patients presenting to the Mater Hospital, versus those referred from outside (median 12.0 vs 26.0 days, $p<0.001$). Factors identified with CEA delay were slow contact with the vascular service from the onset of symptoms and delay in inter-hospital transfer. **Conclusion:** These results are comparable to UK and Australia national audits, but a significant number fall outside even ESVS recommendations. Specific pathways need to be developed between secondary hospitals and vascular centres to expediate the treatment of symptomatic carotids, and this should be formalised as a KPI for stroke management.

43. Using A Large Administrative Healthcare Database To Identify Opportunities For Service Development In Lower Extremity Amputation In Ireland

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Introduction: Ireland, along-side the rest of the world, is facing a rapid growth in the incidence of diabetes. Among the most troublesome complications is diabetic foot ulcer (DFU) which frequently results in lower extremity amputation (LEA). In addition to the patient disability, this complication consumes enormous amounts of healthcare resources.

Aim: The objective of this study is to describe the current extent of healthcare resource utilisation (in terms of bed days) among patients undergoing LEAs in Ireland, to determine the average length of stay (LOS) and to assess potential for savings in bed days used.

Methods: We used a national administrative health database Hospital Inpatient Enquiry system (HIPE) to identify adult inpatients (aged >16) who underwent a minor or major LEA between 2015-2018, including number of procedures, length of stay (LOS), and bed days utilisation (BDU).

Results: A total of 2646 procedures were performed over the 4 years (660/year), 65% of whom had diabetes. Among patients with diabetes undergoing minor LEA, the total number of admissions was 1,219, the average LOS was 18 days and the total BDU was 21,942. In the diabetes cohort, there were 502 major LEAs, with an average LOS of 50 days and a total BDU utilisation of 25,100.

Conclusion: Patients undergoing LEA amputation account for a significant proportion of inpatient bed utilisation in Ireland. Better management of diabetes, ulcer prevention, early effective management of DFU and prompt access to rehabilitation may help mitigate this and large administrative databases like HIPE can provide relevant data to support prioritisation and service re-orientation.

44. The Utility of Surgical Cardiac Sympathetic Denervation in the Management of Ventricular Arrhythmias: A Systematic Review

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Introduction: The antiadrenergic and antifibrillatory effects of cardiac sympathectomy in pathological states such as long QT syndrome are well established, and the indications for the procedure have expanded since the video-assisted thoracoscopic approach was first used in 2003. However, the procedure is currently largely used in cases of failed medical therapy, or medication intolerance, and large randomised controlled trials are thus non-existent in the literature.

Aim: The aim of this study was thus to perform a systematic review of the available literature to examine the utility of cardiac denervation in the management of all ventricular arrhythmias.

Methods: A total of 16 studies published between 2009 and 2019 were evaluated for bias using the Risk of Bias in Non-Randomised Studies- of Interventions (ROBINS-I) tool. In addition the Harbour and Miller Grading System (2001) was used to assess the significance of the evidence in this review.

Results: All studies demonstrated a protective effect of sympathectomy against ventricular arrhythmias in both primary and secondary prevention strategies. The following risk of bias was observed: low in 4 studies, moderate in 8 studies, and serious risk in 4 studies. The highest level of

evidence observed was 2++, which indicated a high probability the results were causal, and was seen in 3 studies.

Conclusion: Cardiac sympathetic denervation provides benefit for patients with ventricular arrhythmias, in cases of refractory disease or in patients who require a primary prevention strategy where first-line therapies are not tolerated.

45. Negative Impact of Rurality on Lung Cancer stage – St. Vincent's University Hospital experience

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Introduction: Numerous studies have discussed the rurality as a risk factor for poorer prognosis in cancer.

Aim: Evaluate the rurality effect on patients with lung cancer in Ireland. Tumor size and lymph nodes stage were compared.

Methods: This is a retrospective study including 152 patients who suffered from lung cancer and underwent different thoracic surgeries in St. Vincent University Hospital from June 2013 to March 2020. Patients were divided into two groups. The first group including 97 patients who were referred to the hospital from Dublin and Wicklow cities, while the second group included 55 patients who were referred to the hospital from other cities in Ireland. Tumor size and lymph nodes stage were compared between the two groups. Data were collected from patient's files.

Results: The first group (n=97) had a significantly lower median tumor size (24.65 mm) compared to the second group (30.69 mm). Also, the lymph nodes' stage was significantly less in the first group (N1 9.2%, N2 4.2%) compared to the second group (N1 14.5%, N2 9.1%). Additionally, patients in the first group had significantly lower stage (stage II 12.4%, stage III 9.2%) comparing to the second group (stage II 29%, stage III 16.3%). Moreover, the first group showed less incidence of squamous cell carcinoma (21.6%) comparing to (30.9%) in the second group.

Conclusion: Rurality can have a negative effect on a patient with lung cancer in Ireland. The patients present with an advanced stage of lung cancer which increases the requirement for adjuvant treatment.

SESSION 6: LOWER GI SURGERY

46. A Comparison of Oncological Outcomes After Abdominoperineal Resection Before And After The Implementation Of A Selective Perineal Flap Closure Programme

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Introduction: Abdominoperineal resection (APR) remains the operation of choice for patients with low rectal cancer not amenable to sphincter preserving surgery. Perineal flap reconstruction is associated with less wound morbidity but little is known about oncological outcomes with this technique.

Aim: To compare outcomes in patients undergoing APR before and after the introduction of a programme that utilised flap-based closure of the perineum for a subset of patients.

Methods: A retrospective review of a prospectively maintained database was performed. Clinical and histopathological data were extracted for

patients who underwent APR for rectal adenocarcinoma between 1998-2018. The cohorts were divided according to the implementation of the flap reconstruction programme in our institution in July 2009. Clinicopathological data, recurrence and survival were compared between the cohorts.

Results: 149 patients underwent APR for rectal adenocarcinoma between 1998-2018. There were 57 patients in the pre-flap era and 92 in the post-flap era with 46 patients undergoing flap reconstruction in the latter cohort. Patients in the post-flap era were more likely to undergo neoadjuvant chemoradiotherapy (p<0.01). Margin positivity rates decreased from 21.1% in the pre-flap era to 10.9% in the post-flap era (p=0.10) and there was an associated improvement in median time to local recurrence (p=0.03). The median length of stay decreased from 21 days to 14 days (p<0.001).

Conclusion: The use of perineal flap reconstruction may contribute to reduced margin positivity and local recurrence rates by allowing more radical resection and should be considered in scenarios where achieving an RO resection might otherwise be difficult.

47. Investigation of Aberrant Mirna Expression In Colorectal Tumours

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Introduction: Colorectal cancer (CRC) is responsible for 10% of new cancer diagnoses globally. Mic(ro)RNAs are non-coding intracellular molecules frequently dysregulated in cancer.

Aim: To investigate potential correlation between disease burden and defined miRNA expression profile.

Methods: MiRNA targets were selected following literature review. Initial miRNA analysis was performed on 27 paired CRC tissue samples. Samples were obtained from surgical resection specimens. RNA was extracted using Trizol. RNA quality and quantity were ascertained by Agilent and Denovix, respectively. Real-time quantitative (RQ)-PCR was performed on each sample in triplicate for each target. Two endogenous controls were utilised with inter-assay control to minimise variations between PCR experiments. RQ data were normalised with QBase software. Statistical analysis was performed via SPSS with a p value <0.05 considered statistically significant.

Results: Overall, 27 paired tumour and tumour-associated-normal (TAN) CRC samples were analysed. These were comprised of 17 colon cancer and 10 rectal cancer samples. The gender breakdown was Male: 19, Female: 8. The average age was 72.4 and 69.1 in the colon and rectal group, respectively. There were no T0 or T1 tumours analysed. The most common T Stage was T3 (n=15) followed by T2 (n=8) and T4 (n=4). Synchronous metastases to the liver were present in 5 patients. Statistically significant upregulation was observed in tumour samples for miRs-155 (p=0.016), 31 (p<0.0001) and 135b (p=0.036). MiR-150 (p=0.003) expression was reduced in tumour compared to TAN samples.

Conclusion: Analysis to date has demonstrated differential expression in 4 different miRNA targets. Further analysis of these specific targets is currently ongoing in 50 paired CRC samples.

48. Audit of Enhanced Recovery After Surgery (ERAS) Protocol for elective colorectal surgical procedures

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Introduction: Enhanced recovery after surgery (ERAS) are proving to be the safest and most effective standards in managing elective colorectal cancer patients pre and post operatively.

Aim: To audit the current adherence to guidelines in all electively undertaken colorectal surgical procedures in a single centre.

Methods: A retrospective review of all patients admitted for elective colorectal surgery was carried out between 1st of January to 31st of December 2018. No emergency procedures were included. The anaesthetic component of the guidelines was excluded. Data was analysed for compliance with 5 pre-admission, 7 pre-operative, 4 Intra-operative and 10 post-operative criteria proposed by the ERAS guidelines.

Results: Forty-eight patients identified. Six of the charts were missing. Two patients were emergency procedures and excluded. Forty-one had their clinical records analysed. The adherence to pre-admission criteria was 59%, pre-operative criteria was 87.3%, intra-operative criteria was 70%, and post-operative criteria was 63.9%. Over-all adherence to guidelines was 63.9%. Mean length of stay (LOS) was 9.8 days.

Conclusions: The colorectal unit is above average in compliance to the ERAS protocols, but we have a higher than standard mean hospital length of stay. Further improvement can be made by using measures to correct areas of deficiency such as, cessation of smoking and alcohol, as well as use of carbohydrate drinks pre-operatively. Homogeneous and accurate clerking may also aid in improving outcomes.

49. Cell-Free DNA Trends in The Perioperative Period Predict Recurrence of Non-Metastatic Colorectal Cancer in The First Two Years Post-Operatively Significantly Earlier Than Trends In CEA

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Introduction: Changing trends (Δ) in carcinoembryonic antigen levels (Δ CEA) is accepted as a sensitive marker of disease recurrence following curative resection for colorectal cancer. We have previously shown that perioperative cell free DNA (cfDNA) changes (Δ cfDNA) are also prognostic.

Aim: To compare the diagnostic accuracy of perioperative Δ cfDNA to Δ CEA over the first two years post-operative for identifying disease recurrence.

Methods: Consecutive patients presenting for elective resection of colon cancer were screened for inclusion. Perioperative cfDNA levels were measured at seven difference times points (pre-operative and post-operative at 3hours, 6hours, 24hours, 48hours, POD3 and POD5). CEA levels were measured on the same patients up to two years post-operatively. Change in trend was defined as the β co-efficient using a logistic regression model. Statistical analysis was performed using SPSS, version 23.

Results: Data for 20 patients was analysed for a median of 28months (IQR 22 months) during which time 3 patients developed recurrence. Perioperative Δ cfDNA was significantly associated with early recurrence from 48hrs. Δ CEA was significantly associated with early recurrence from 6months post-operatively. Area under the curve analysis generated a specificity of 97% (95%CI 86.51-99.87%) for Δ cfDNA and 77.5% sensitivity (95%CI 62.5-87.7%) in the immediate perioperative period and a 88.9% specificity (95%CI 56.5-99.4%) and 76.5% sensitivity (95%CI 63.24-86%) for Δ CEA over the first two years post-operatively.

Conclusions: In this pilot study, following curative resection for colon cancer changing trends in perioperative cfDNA identifies those at risk of recurrent disease before recurrence develops which is at least six months

earlier than CEA changes.

50. Endoscopic Management versus Transanal Surgery For Early Primary Or Early Locally Recurrent Rectal Neoplasms – A Systematic Review And Meta-Analysis

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Introduction: Both endoscopic techniques and transanal surgery are viable options that allow organ preservation for early rectal neoplasms. While endoscopic approaches are less invasive and carry less morbidity, it is unclear whether they are as oncologically effective.

Aim: To compare endoscopic techniques with transanal surgery in the management of early rectal neoplasms.

Methods: A systematic literature search was performed for randomised and observational studies comparing these techniques. The pre-specified main outcomes measured were en bloc and R0 resection rates, and recurrence. Pair-wise meta-analysis was performed.

Results: This review included 1,044 patients. Transanal surgery had increased R0 resection rates (Odds ratio [OR] 2.66, 95% CI: 1.64, 4.31; $p < 0.0001$) versus endoscopic management. The latter was associated with higher rates of incomplete resection (OR 2.43, 95% CI: 1.19, 4.97; $p = 0.02$) and further intervention (OR 1.78, 95% CI 1.09, 2.88; $p = 0.02$). There was no difference in the rates of late recurrence (OR 1.01, 95% CI: 0.53, 1.91; $p = 0.99$) or further major surgery (OR 0.87, 95% CI 0.39, 1.94; $p = 0.73$) between the groups. Endoscopic treatment was associated with a shorter operating time (Weighted mean difference [WMD]-12.08, 95% CI: -18.97, -5.19; $p < 0.0001$) and LOS (WMD -1.94, 95% CI -2.43, -1.44; $p < 0.001$), as well as lower rates of urinary retention post-operatively (OR 0.12, 95% CI 0.02, 0.63; $p = 0.01$).

Conclusion: Endoscopic techniques should be favoured in the setting of benign early rectal lesions given their decreased morbidity. However, where malignancy is suspected transanal surgery should be the preferred option given the superior R0 resection rate.

51. Persistent nature of advanced presentation of colorectal cancer in a rural population; consequences for disease management

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Introduction: BowelScreen, the National Bowel Screening Programme was introduced in May 2014 to detect adenomas and invasive cancers at an early stage in an effort to reduce mortality. Manning et al (2006) previously reported 64% of patients diagnosed in our catchment area presenting with Duke's C or D tumours prior to screening introduction.

Aim:

To assess

- (1) The stage of presentation
- (2) Determine the rate of microsatellite instability (MSI) testing
- (3) Review MDT decision making regarding treatment in patients presenting to our institution

Method: Data was collected from a prospectively maintained database of all patients diagnosed with colon or rectal cancer from January 2015 - December 2019. Age, sex, histopathological features, microsatellite

instability (MSI) status, stage, imaging, operative management, neoadjuvant and adjuvant therapy were assessed.

Results: 350 cases of colorectal cancer were diagnosed over the study period. 63% of diagnosed were in males. 48% of cancers were diagnosed at either Stage III or IV with 80% of cases presenting with a T3 or T4 tumour. 105 cases were sent for MSI testing with 13 positive (3.7%).

Conclusion: Symptomatic presentation with colorectal cancer in our catchment population continues to raise concern. These patients are much more likely to undergo neoadjuvant and adjuvant therapies or undergo palliation and have much poorer outcomes in terms of morbidity and mortality. Patients in rural areas should be targeted by primary healthcare and outreach programmes to engage with screening services and to seek medical care earlier.

52. Tumour Location is a Risk Factor for Lymph Node Metastasis in Early Colorectal Cancer

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Introduction: The management of early colorectal cancer remains controversial with greater numbers undergoing local excision. Predicting which of these tumours are likely to have lymph node metastases is therefore crucial.

Aim: To identify anatomical and histological risk factors for lymph node metastases in surgically resected T1 tumours.

Method: All T1 colorectal cancers that underwent surgical resection at St James's Hospital over a 10-year period were included. Left sided lesions were defined as lesions distal to the splenic flexure. Exclusion criteria included patients that underwent neoadjuvant therapy, non-adenocarcinoma resections, and transanal resections.

Results: There were 201 T1 cancers resected over the time period. Of these, 35 were excluded. The majority of lesions were located in the rectum (32%) and sigmoid colon (33%), and 26% of the tumours were proximal to the splenic flexure. Lymphovascular or extramural venous invasion was present in 16% of resections. The vast majority of lesions were well or moderately differentiated (97%). The mean lymph node yield was 16. The mean size of the tumours resected was 22.5 mm with a trend towards larger lesions in node positive tumours (27.2 mm vs 22 mm, $P = 0.11$). Of the 19 lesions that had nodal metastases (11.4%), all were located on the left side of the colon. On multivariate regression analysis the only independent risk factor for node positivity was having a left-sided tumour.

Conclusion: In our cohort of T1 colorectal cancer resections over a 10-year period, the strongest indicator of node positivity was having a left-sided tumour.

53. An Analysis of The Perioperative Human Metabolome And Its Association With Differential Body Composition And Five-Year Colon Cancer Outcomes

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Introduction: High visceral adiposity (VA) and low skeletal muscle area(SMA) are poor prognostic indicators in colorectal cancer.

Aim: We characterised the perioperative human metabolome(combined end-products of cellular metabolism) in colorectal cancer surgery and the association between the human metabolome, poor prognostic body compositions and five-year cancer outcomes.

Methods: Serum samples were phlebotomised at three time points: 1.pre-operatively(PreOp); 2.24hours post-op(24Hrs); 3.Post-operative day five(POD5) from patients undergoing elective resection for non-metastatic colon cancer. Body composition was defined radiologically on pre-operative staging CT using Horos(Horos Project 2015) and gender-specific validated cut-off points used. The metabolome was extracted from serum samples using a modified Bligh-Dyer technique followed by online derivatisation using GC-mass spectrometry for targeted analysis. Data processing was performed using WiPP (Workflow for Improved Peak Picking) followed by standard post-processing statistical analysis.

Results: The perioperative metabolome in high VA showed a shift towards anaerobic metabolism and reduced protein biosynthesis. This was not significant pre-operatively($p=0.23$) but was significantly different to normal body composition at 24Hrs ($p=0.02$) and continued to POD5 ($p<0.001$). Similar, but more significant findings were observed in low SMA[pre-op($p=0.12$), 24Hrs($p<0.001$), POD5($p<0.001$)]. Significant diversity in glycolytic and TCA cycle metabolites at 24Hrs($p=0.03$) and POD5($p=0.02$) were observed between those who developed cancer recurrence and in disease-specific mortality at POD5($p<0.001$).

Conclusion: The perioperative human metabolome shift in high VA and low SMA states are prognostic of five year colon cancer outcomes. The perioperative metabolome may be modified and offers a unique opportunity to investigate cellular effects of pre-habilitation.

54. Segmental versus Extended Colectomy For Tumours of The Transverse Colon: A Systematic Review And Meta-Analysis

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Introduction: There is no consensus on the appropriate extent of oncological resection for tumours of the transverse colon.

Aim: The aim of the current study is to use meta-analytical techniques to compare segmental versus extended colectomy for transverse colon tumours.

Method: A comprehensive literature search of PubMed and EMBASE databases was performed. All studies comparing segmental or transverse colectomy with extended colectomy were included. Segmental colectomy was compared to extended colectomy using random effects methods to combine data. The main outcomes measured were peri-operative outcomes and long term oncological outcomes.

Results: Seven comparative series examining outcomes in 3,395 patients were identified. Segmental colectomy results in shorter operating times (mean difference 15.80 minutes, 95% CI: -20.98 - -10.62, $p<0.001$) and less ileus (OR: 0.52, 95% CI: 0.33-0.81, $p=0.004$). There was no difference length of hospital stay (mean difference 1.53 days, 95% CI: -3.79 - 0.73, $p=0.18$). Extended colectomy results in a lower rate of anastomotic leak (OR: 0.62, 95% CI: 0.40-0.97, $p=0.04$). There are less nodes retrieved in segmental colectomy (mean difference 7.60 nodes, 95% CI: -9.60 - -5.61, $p<0.001$) but no difference in disease recurrence (OR: 0.88, 95% CI: 0.59 - 1.34, $p=0.56$) or overall survival (OR: 0.98, 95% CI: 0.68-1.4, $p=0.9$).

Conclusions: Available data are limited due to a lack of randomized controlled trials. However, based on current evidence, segmental resection for transverse colon tumours results in higher anastomotic leak rates but equivalent oncological outcomes compared to extended resection.

SESSION 7: BREAST RESEARCH

55. Surgical Management of An Irish Cohort Of BRCA-Mutation Carriers: A Single-Centre Retrospective Analysis

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Introduction: Our unit runs the largest BRCA cancer genetics programme in Ireland. We examined the diagnosis and management of a cohort of BRCA-mutation carriers, between 2009 and 2019.

Aim: To describe a single institution's experience with management of confirmed BRCA mutation carriers.

Methods: Patients with breast cancer (BRCA-BC) were divided into two groups based on whether they were known to be gene carriers before their breast cancer diagnosis (pre-BRCA-BC) or not (post-BRCA-BC). Patient demographics, tumour characteristics, treatment and 5-year survival were analysed. Within the group unaffected by breast cancer (BRCA-NC), risk-reducing surgical procedures were recorded.

Results: 319 BRCA carriers were identified, of whom 69 had a breast cancer diagnosis. The pre-BRCA-BC cohort were more likely to be diagnosed on screening. Post-BRCA-BC patients were more likely to have breast-conserving surgery. There was no significant difference in 5-year survival between the two groups. Of the BRCA-NC group (n=250), 14.4% underwent risk-reducing mastectomy, while 50.8% had risk-reducing salpingo-oophorectomy.

Conclusion: BRCA mutation carriers require multidisciplinary management in a dedicated clinic, where co-ordinated, personalised care can help to mitigate morbidity and mortality from breast and ovarian cancer.

56. Effect of Afimoxifene On Cell Proliferation And Adipogenesis Of Adipose-Derived Stromal Cells

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Introduction: Adipose-derived stromal cells (ADSCs) are an attractive cell source for adipose tissue engineering for novel breast reconstruction techniques. Systemic chemo- & hormonal therapy may impact tissue regeneration in breast cancer patients. However, the effect of hormonal therapy on ADSCs and their regenerative capabilities is poorly understood.

Aims: This study aims to analyse the effect of Afimoxifene, an active metabolite of Tamoxifen, on proliferation, viability and adipogenesis of ADSCs, in-vitro.

Methods: Lipoaspirates or adipose tissue were obtained with informed consent from breast cancer patients and healthy controls. Cell proliferation/viability was analysed by subjecting isolated ADSCs to single or multiple dose(s) of Afimoxifene (12.5nM, 25nM, 50nM, 100nM and 1µM) and, analyzed on days 1, 3 and 5, using CellTitre 96 Aqueous Cell proliferation assay. T47D and MDA-MB-231 cell lines were used as positive and negative controls, respectively. For Adipogenesis, cells were subjected to adipogenic differentiation with or without Afimoxifene (25nM, 100nM and 1µM) and adipogenesis was quantified using Oil Red O staining.

Results: ADSCs were obtained from a total of 4 patients. Morphology, CFU assay and adipogenic differentiation assay were used to validate a stem cell population. Afimoxifene demonstrated no statistically significant reduction in the viability, proliferation or adipogenic differentiation of the ADSCs, irrespective of the dose- or time-dependent exposure or cancer status (p >0.05).

Conclusion: Afimoxifene has no deleterious effect on viability, proliferation or adipogenic differentiation of human ADSCs up to 1µM concentration – this supports the potential use of this cell source in novel approaches to post mastectomy reconstruction.

57. Use of Liquid Biopsy To Detect Risk Of Early Post-Operative Recurrence In Breast Cancer Patients

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Introduction: Liquid biopsy analysis using cell free DNA (cfDNA) and circulating tumour DNA (ctDNA) has emerged as a promising non-invasive technique to detect fragmented DNA in the blood stream. It has shown excellent diagnostic and prognostic potential in breast cancer.

Aim: To evaluate if perioperative liquid biopsy could detect early post-operative recurrence in patients with breast cancer

Methods: Breast cancer patients undergoing curative surgery were included. Blood samples were collected at the following time points: pre-operatively (Pre-op), post-operatively (POD) at day 15, 30 and 90. cfDNA was extracted and measured using spectrophotometer. PIK3CA mutation at exon 9 and 20 in ctDNA was detected using high resolution melting (HRM) real-time PCR combined with parallel internal controls. **Results:** A total of 41 patients were studied, n=26 (disease free group: DF) and n=15 (disease recurrence group: DR). The median follow-up was 36 months. Significantly higher cfDNA concentrations were observed in the pre-op period (p=0.0004) and early post-operative period within 90 days of surgery (p=0.0001) in patients at risk of future recurrence compared to patients who remain disease free on follow up. Log rank analysis indicated that a higher cfDNA concentration (HR: 6.9, 95%CI: 2.4-19.9, p=0.0003) and PIK3CA mutation detection in ctDNA (H.R: 3.91, 95% CI: 1.12-13.0, p<0.0001) in the early post-operative period were an independent negative prognostic factor for recurrence-free survival.

Conclusion: Our data identifies the prognostic and predictive ability of liquid biopsy analysis in the peri-operative period and may serve as a potential surrogate biomarker to risk stratify breast cancer patients.

58. The Influence of Histological Subtype on The Accuracy of Axillary Ultrasound in Breast Cancer

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Background: Radiological findings can be affected by histopathological characteristics of breast cancer. The aim of this study was to determine whether the diagnostic performance of axillary ultrasound (AUS) differs between invasive ductal carcinoma (IDC) and invasive lobular carcinoma (ILC).

Methods: A review of patients diagnosed with ILC and IDC, who underwent an axillary procedure and pre-operative AUS from 2004-2017 in a breast tertiary referral centre. AUSs were performed by Specialist Breast Radiologists. Patients treated with neo-adjuvant chemotherapy and micrometastases were excluded. Histopathology of the excised node(s) was the reference gold standard. AUS results were

compared to this. The sensitivity, specificity, NPV, and PPV of AUS were calculated.

Result: A total of 684 cases were identified. 224 cases of ILC were age and stage matched to 430 cases of IDC. The mean age was 60 (+/- 10.5) and mean tumour size was 31mm (+/-20). The prevalence of lymph node (LN) metastases was higher in IDC. Sensitivity of AUS was higher in ILC at 43.06% (CI 31.43-55.27%) compared to 38.86% (CI 31.94-46.12%) in IDC. Specificity was similar between ILC and IDC, at 94% (89.06-97.26) and 91.98% (CI 87.76-95.10), respectively. PPV was 77.5% (CI 63.41-87.26) in ILC and 79.79% in IDC (CI 71.24-86.29%). NPV was 77.72% (73.97-81.06%) in ILC and 64.88% (62.13-67.53%) in IDC.

Conclusion: AUS has a higher sensitivity in ILC compared to IDC, showing that the histological subtype of breast cancer does have an influence on the accuracy of axillary ultrasound.

59. Suitability of Hyaluronic Acid Hydrogels For Adipose Tissue Engineering

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Introduction: Hydrogels are widely being analysed for their suitability as scaffolds in post-mastectomy breast reconstruction, where current reconstruction methods are associated with significant limitations.

Aims: In this study, we aim to assess the biomechanical properties, biocompatibility and compatibility for adipogenesis of Hyaluronic acid derivatives as a novel approach to post-mastectomy breast reconstruction. Methods: Adipose-derived stromal cells (ADSCs) were obtained, with informed consent, from patients undergoing cosmetic liposuction. Hyaluronic acid mixture was prepared using equal parts of 2% w/v Hyaluronic acid-hydroxyphenyl-arginylglycylaspartic acid (HA-PH-RGD) and Hyaluronic acid-tyramine (HA-TA), herein referred to as HA-PH-RGD. 1x10⁶ ADSCs/mL were encapsulated in HA-PH-RGD and crosslinked using H₂O₂ (1.66 µmol/mL) and horse radish peroxidase (0.36 U/mL). The Young's (10% compressive) modulus was determined using a Zwick biaxial mechanical tester, cell metabolic activity using Alamar Blue assay and viability using Live/Dead assay. The ADSCs in hydrogels were subjected to adipogenic differentiation and analysed using confocal microscopy.

Results: Isolated cells were confirmed to be ADSCs via culture, morphology, Colony-forming unit-fibroblast (CFU-F) assay and adipogenic differentiation. The Young's modulus of the ADSC loaded hydrogels was found to be 9.89±0.3 kPa at day1, similar to human breast adipose tissue (10kPa). Alamar blue assay and Live/Dead assay demonstrated viable and proliferating cells within the hydrogels, analysed up to 23 days. The ADSCs encapsulated within the hydrogel were able to differentiate into mature adipocytes, visualised using Nile red staining at day 24.

Conclusion: The hyaluronic acid derivative mixture may be a suitable candidate for breast reconstruction in post-mastectomy breast cancer patients.

60. The Impact of Progesterone Receptor Negativity on Oncologic Outcomes in Estrogen Receptor Positive Breast Cancer

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Background: Estrogen receptor (ER) status provides invaluable prognostic and therapeutic information in breast cancer (BC). When clinical decision making is driven by ER status, the value of assessing progesterone receptor (PgR) status is less certain.

Aim: To describe the clinicopathologic features of ER positive (ER+) /PgR negative (PgR-) BC and to determine the effect of PgR negativity on oncologic outcomes in ER+ disease.

Methods: Consecutive female patients with ER+ BC managed in a single institution between 2005-2015 were included. Clinicopathological features of PgR- BC were determined. Factors associated with PgR- disease were assessed using binary logistic regression. Oncological outcome was assessed using Kaplan-Meier curves and Cox regression analysis.

Results: 2660 patients were included with a median age of 59.6±13.3 years (21-99). Median follow-up was 97.2 months (3.0-181.2). 2208 cases were PgR+ (83.0%) and 452 were PgR- (17.0%). Being postmenopausal (OR:1.656, 95% Confidence interval (CI):1.249-2.195, P<0.001), presenting with symptoms (OR:1.712, 95% CI:1.302-2.249, P<0.001), invasive ductal subtype (OR:1.514, 95% CI:1.166-1.966, P=0.002) and grade 3 tumours (OR:2.198, 95% CI:1.683-2.870, P<0.001) were all associated with PgR- status. In patients receiving neoadjuvant chemotherapy (n=308), pathological complete response rates were 10.1% (25/247) in patients with PgR+ disease, versus 18.0% in those with PgR- disease (11/61) (P=0.050). PgR negativity independently predicted worse disease-free (HR:1.632, 95%CI:1.209-2.204, P=0.001) and overall survival (OS) (HR:1.774, 95%CI:1.324-2.375, P<0.001), as well as worse OS in ER+/HER2- disease (P=0.004).

Conclusion: In ER+ disease, PgR- tumours have more aggressive clinicopathological features and worse oncological outcomes. Neoadjuvant and adjuvant therapeutic strategies should be tailored according to PgR status.

SESSION 8: ONCOLOGY

61. AI Decision Support System for Fluorescence Guided Surgery: Clinical Application of Real-time ICG Perfusion Analysis for Intraoperative Tissue Classification of Colorectal Cancer

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Introduction: To date, Fluorescence Guided Surgery (FGS) requires a sufficiently distinctive bias of fluorophore accumulation in malignant over normal tissue for human interpretation, an imperfect approach that can be challenging regarding timing. We describe a new approach in which indocyanine green (ICG) wash-in kinetic data is continuously collected intraoperatively revealing differences in dynamic intensity profiles between normal and cancerous tissues that can be rapidly assessed and interpreted by artificial intelligence (AI) classification algorithms.

Methods: For patients (n=24, 11 with cancer) undergoing surgical endoscopy of colorectal neoplasia, continuous fluorescence video imagery of suspicious tissue was collected after intravenous ICG administration through the first pass wash-in phase. Computer vision techniques

compensated for camera motion and tracked regions via synchronously recorded white light images to extract dynamic fluorescence intensity profiles corresponding to specific tissue regions. A profile-fitted biophysical model provided regional characterisation training a supervised classification algorithm to categorize tissue nature.

Results: Regions of interest (ROI, range 11–40/patient) within the field of view were tracked simultaneously for between 100–300 seconds and those not meeting NIR-intensity time-series quality thresholds discarded. Among 435 ROIs/20 patients, the AI-classifier correctly distinguished 86.4% of tumoral regions proving discriminant by Leave One Out cross-validation. The system correctly diagnosed 19/20 patients (95% overall accuracy, 100% cancer sensitivity, 91.2% specificity). The pipeline from data collection through classification was achievable live intraoperatively.

Conclusions: FGS employing AI-analysis of temporal changes in fluorescence intensity patterns has potential usefulness for real-time intraoperative tissue classification with potential applications to metastatic disease/other cancers and novel fluorophore development.

62. Early Experiences with Observation of Complete Clinical Response Following Long Course Chemo-Radiotherapy For Rectal Cancer

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Introduction: After neoadjuvant chemo-radiotherapy (CRT) most rectal cancer treatment guidelines dictate all patients proceed to surgery. Up to 30% of these patients have had a complete pathological response (CPR) and potentially could have avoided resection. Several centres have reported positive outcomes observing suspected CPR patients. This study describes our experience with observation of complete clinical responses (CCR) following long course CRT for rectal cancer.

Methods: This is a descriptive study of a retrospective review of a prospective database of Australian rectal cancer patients. In the first cohort observation was only offered to patients considered high risk for surgery or who refused surgery. During this period treatment and surveillance were on a 'case by case' basis. The second cohort follows introduction of a formal protocol.

Results: The first cohort consisted 7 patients managed with surveillance. One changed their mind and had resection (ypT0N0), one had local regrowth then salvage surgery and remains disease free, the rest remain cancer free or died of unrelated conditions. 55 patients diagnosed with rectal cancer in 2017/18 form the other cohort. 33 had neoadjuvant CRT. 7 had a CCR. 4 patients entered observation. All 3 patients who had a resection had a CPR. 1 of the observation cohort had local regrowth and then underwent resection with clear margins (ypT1N0). No patient suffered an untreatable regrowth nor suffered a local recurrence following salvage surgery.

Conclusion: Numbers and follow are limited; however our experience mirrors previous results. A poor outcome following observation in carefully selected cases with intensive surveillance is a rarity.

63. Patient Derived Tumour Stromal Cells – A Culprit In Breast Cancer Recurrence Following Neoadjuvant Chemotherapy

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Introduction:

Local recurrence after neoadjuvant chemotherapy (NACT) in breast cancer is a clinical problem. Tumour stromal cells (TSCs) are non-cancerous cells that support malignancy within the tumour microenvironment

(TME). In particular, TSCs can suppress the host immune response during tumourigenesis. It is unclear if NACT affects the survival of, or alter the immunosuppressive functions of TSCs in breast cancer patients and whether this may suggest TSCs as drivers of local recurrence following NACT.

Aim: To investigate the effect of clinically relevant chemotherapeutic drugs on the survival and immunosuppressive properties of patient-derived TSCs.

Methods: TSCs and Tumour-Associated Normal Stromal Cells (TANs) were isolated from breast cancer patients at the time of surgery. Clonogenic survival assays were performed following exposure to increasing doses of Paclitaxel (0–1000 nM), 4-Hydroxycyclophosphamide (4-HC) (0–3 μM) and Doxorubicin (0–100 nM). The activation of the DNA damage response (DDR) pathway in response to these drugs was investigated by Western blot analysis. Additionally, the effect of chemotherapeutics on the ability of TSCs to suppress CD4+ and CD8+ T-cell proliferation was determined.

Results: TSCs (N=6) were less susceptible to the cytotoxic effects of Paclitaxel, 4-OH and Doxorubicin compared to TANs (p=0.0001). Chemotherapy exposure resulted in transient activation of Chk2 in TSCs and induction of the double strand break marker, gamma-H2AX, in TANs. Chemotherapeutic treatment selectively enhanced the ability of TSCs (N=3) to suppress CD8+ T cell proliferation. Paclitaxel, 4-HC and Doxorubicin enhanced suppression by 35%, 26% and 9% (p=0.003) respectively.

Conclusion: Our data indicates that TSCs are uniquely resistant to the cytotoxic effects of NACT and this could be partly attributed to efficient activation of the DDR pathway in TSCs. Instead chemotherapeutic agents enhance the ability of TSCs to suppress CD8+ T-cells proliferation. These chemotherapy-induced capabilities present TSCs as potential drivers of local recurrence, resident in the TME of breast cancer patients.

64. The Challenge of Outruling Concomitant Cholangiocarcinoma In Patients With Primary Sclerosing Cholangitis Wait-Listed For Liver Transplantation: A Nationwide Evaluation

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Introduction: Primary sclerosing cholangitis (PSC) is a chronic liver disease characterized by progressive cholestasis secondary to bile duct inflammation and fibrosis. Dominant strictures are common amongst patients with PSC considered for transplantation. Differentiating cholangiocarcinoma (CCA) from inflammatory strictures can pose a significant diagnostic challenge. There remain no internationally accepted guidelines on CCA surveillance in patients with advanced PSC.

Aim: To critically evaluate the Irish Liver Transplant Unit's 12-year experience with the evaluation of wait-listed PSC patients, focusing on diagnostic evaluation, waitlist surveillance and clinical outcomes.

Method: All PSC patients waitlisted for transplant after January 2007 were included. Those with hilar CCA pursuing the Mayo protocol were excluded. Patient demographics, surveillance investigations (modality and frequency) were analysed. Explant pathology was deemed gold standard in diagnosing CCA. Sensitivity, specificity, positive and negative predictive values with exact binomial 95% confidence intervals were calculated.

Results: Of 77 waitlisted PSC patients, 68 proceeded to transplantation, 5 developed malignancy while waitlisted. Explant liver histology confirmed 51 patients (75%) to have isolated PSC. 6(8.8%) had an incidental finding of either concomitant cholangiocarcinoma or high grade dysplasia on explant histology.

Conclusion: The approach to investigating this cohort is heterogenous and individualised. HGD and overt malignancy, while infrequent, were still present despite rigorous workup. A structured intensive diagnostic approach is justified.

Table I.

	Sensitivity(%)	Specificity(%)
CT	42.9	68.6
MRI	28.6	67.1
PET/CT	NA	85.7
Brush cytology	66.7	92.3
EUS FNA	50	100
CA 19-9 (>129U/ml)	42.9	78.6

65. The Immunostimulatory and Immunoinhibitory Effects of Chemotherapies in Oesophageal Adenocarcinoma; A Double-Edged Sword

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Introduction: Immune checkpoint inhibitors (ICIs) reinvigorate anti-tumour immunity and are ineffective in 'cold' tumours as there is no pre-existing anti-tumour immune response to reinvigorate. Immunostimulatory chemotherapies are a valuable tool to convert 'cold' tumours to 'hot' tumours in oesophageal adenocarcinoma (OAC) stimulating anti-tumour immunity, whereby ICIs prevent immune exhaustion, boosting response rates.

Aim: Profile immune checkpoint (IC) expression in OAC patients and investigate the immunostimulatory/immunoinhibitory properties of clinically relevant chemotherapies in OAC.

Methods: IC expression was profiled on circulating and tumour-infiltrating T-cells in treatment-naïve OAC patients (n=10). The effect of chemotherapies on IC expression on OAC and T-cells and on T-cell activation status was investigated in vitro. T-cell activation was assessed in circulating T-cells of OAC patients pre-treatment and post-treatment (n=12). The ability of chemotherapy regimens FLOT, CROSS and MAGIC to induce immunogenic cell death in OAC cells was also assessed by measurement of damage-associated molecular patterns in vitro (DAMPs:calreticulin, HMGB1).

Results: A range of ICs were increased on tumour-infiltrating T-cells compared with peripheral T-cells in OAC patients (PD-1, TIM-3, LAG-3, TIGIT, CTLA-4). Single-agent chemotherapies (5-fluorouracil, oxaliplatin) increased ICs on T-cells and OAC cells and enhanced T-cell activation markers (CD27, CD69) in vitro. Following chemotherapy/chemoradiotherapy, circulating T-cells displayed enhanced activation (increased CD69) ex vivo. FLOT and CROSS upregulated antigen-presentation machinery (HLA-DR) and induced immunogenic-cell death by upregulation of HMGB1 on OAC cells in vitro.

Conclusion: A link between chemotherapy and the development of immune-resistance is highlighted. ICIs may enhance the efficacy of immunostimulatory chemotherapies and warrants further investigation. As FLOT and CROSS induced immunogenic-cell death in OAC cells, these regimens may synergise with ICIs in patients.

66. Tumour Location is a Risk Factor for Lymph Node Metastasis in Early Colorectal Cancer

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Introduction: The management of early colorectal cancer remains controversial with greater numbers undergoing local excision. Predicting which of these tumours are likely to have lymph node metastases is therefore crucial.

Aim: To identify anatomical and histological risk factors for lymph node metastases in surgically resected T1 tumours.

Method: All T1 colorectal cancers that underwent surgical resection at St James's Hospital over a 10-year period were included. Left sided lesions were defined as lesions distal to the splenic flexure. Exclusion criteria included patients that underwent neoadjuvant therapy, non-adenocarcinoma resections, and transanal resections.

Result: There were 201 T1 cancers resected over the time period. Of these, 35 were excluded. The majority of lesions were located in the rectum (32%) and sigmoid colon (33%), and 26% of the tumours were proximal to the splenic flexure. Lymphovascular or extramural venous invasion was present in 16% of resections. The vast majority of lesions were well or moderately differentiated (97%). The mean lymph node yield was 16. The mean size of the tumours resected was 22.5 mm with a trend towards larger lesions in node positive tumours (27.2 mm vs 22 mm, P = 0.11). Of the 19 lesions that had nodal metastases (11.4%), all were located on the left side of the colon. On multivariate regression analysis the only independent risk factor for node positivity was having a left-sided tumour.

Conclusion: In our cohort of T1 colorectal cancer resections over a 10-year period, the strongest indicator of node positivity was having a left-sided tumour.

SESSION 9: PLASTIC & RECONSTRUCTIVE SURGERY

67. A Retrospective Cohort Study of Cutaneous Squamous Cell Carcinoma of The Scalp: Features of Disease And Influence of Sociodemographic Factors On Outcomes

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Introduction: Cutaneous squamous cell carcinoma (SCC) is an increasingly prevalent and potentially fatal disease with considerable implications if not recognized early and treated accordingly. Several disease features contribute to a higher risk profile and associated adverse outcomes. With the clinical observation that large scalp SCCs are common in elderly males, we describe a cohort of patients and their sociodemographic factors in a rural community.

Methods: Histology reports of 93 occurrences of scalp SCC in 61 patients were retrospectively assessed. Recurrence and metastasis rates were examined amongst 188 patients with scalp SCC. Disease and demographic features were recorded. Descriptive statistics were generated and statistical analyses (Fisher's exact, Mann Whitney U Test and Spearman's rank test) were utilized to examine relationships between high risk disease features and sociodemographic features.

Results: Average patient age was 78.81 years. Males were predominantly affected at a 14:1 sex ratio. Half of all tumors were greater than 2cm (47/93 (50.54%)). Geographical distance from care centre was significantly associated with larger tumors at presentation. (rs=.34 p-value: 0.002) Recurrence and metastasis rates were low, at 2.66% and 2.13%, respectively.

Conclusion: Elderly males are inordinately affected by SCC of the scalp compared to females. Those living further from care exhibited larger lesions at presentation. Data from this study characterize features of squamous cell carcinoma of the scalp and provides evidence to suggest rural isolation may act as a mediator of high-risk presentation and larger tumor size.

68. A Comparison of Flap Skin Thickness in Autologous Breast Reconstruction

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Introduction: Autologous breast reconstruction is a diverse specialty that uses multiple flaps from different parts of the body. Although many studies focus on donor site morbidity and overall flap volume, there is no study that compares flap skin thickness with that of the native breast. This is the first study to investigate the relationship between the flap skin and the native breast envelope.

Aim: To compare skin thickness of commonly used autologous flap reconstructions that of the native breast.

Methods: Samples were taken from five female cadavers including the breast recipient site & common flap donor sites, including Deep Inferior Epigastric Perforator (DIEP), Latissimus Dorsi (LD), Transverse Upper Gracilis (TUG), Profunda Artery Perforator (PAP), Lumbar Artery Perforator (LAP), Superior (SGAP) & Inferior (IGAP) gluteal artery perforator flaps. Samples were stained with Masson's Trichrome, Gomori's Aldehyde Fuchsin and Verhoeff-Van Gieson's Elastic stains. A detailed histological and quantitative analysis was performed.

Results: The mean breast skin thickness was 1.657mm. Of those flaps examined, the flap with the closest skin thickness to that of the breast was the DIEP (mean: 1.6748mm) followed by the TUG & PAP flaps (mean: 1.9641mm). The skin thicknesses for back and buttock flaps were significantly thicker.

Conclusion: This study reveals that the DIEP flap has the most similar skin thickness compared to native breast skin and is justified in being the gold standard in autologous reconstruction. Others with similar properties include the TUG and PAP flaps and these should be considered as the next best second options available.

69. To Evaluate the Rate of Positive and Near/Narrow Margins in BCC Excisions A Tertiary Centre

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Aim: To evaluate the rate of positive and near/narrow margins in BCC excisions in a tertiary centre.

Method: This was a retrospective review on 213 excisions of basal cell carcinoma that were performed over a four month period in 2019 at Beaumont and Connolly Hospital, Ireland. Data was collected for anatomical location, grade of marking/operating surgeon, previous biopsy, clinical margin marked, closure/reconstruction and final histology.

Result: One hundred and forty six (68.5%) were biopsy proven prior to excision and 67 (31.5%) were excised due to clinical suspicion. In total 12 (5.6%) showed positive margins and 24 (11.3%) narrow margins (those less than 0.5mm). All 12 excisions with a positive margin were of a biopsy proven BCC (100%). Of those with a narrow margin 15 (62.5%) were biopsy proven and 9 (37.5) were excised due to clinical suspicion. Of those with a positive margin six (50%) were closed primarily, five (41.6%) reconstructed with full thickness skin graft and one (8.3%) with local flap.

Conclusion: In this centre there was a higher rate of positive and narrow margins in BCC excisions that were biopsy proven. Half of these were closed primarily, leading us to assess the need for a wider excision margin with subsequent reconstruction.

70. Correct Identification of High Risk Cutaneous Squamous Cell Carcinoma on Pathological Reporting and Patterns of Referral for MDT Discussion and Adjuvant Therapy

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Introduction: According to the national cancer registry of Ireland Squamous Cell Carcinoma (SCC) accounts for approximately 30% of all non-melanomatous skin cancers.

Aim: To audit the reporting standards of high risk SCCs and their subsequent management through the MDT process.

Methods: All histopathological reports for cutaneous SCC's excised during 6 consecutive months were reviewed independently by two reviewers. High risk lesions were identified by criteria as outlined in the SIGN 140 Guidelines. The pathology reports of high-risk lesions were then compared and scored against "The Royal College of Pathologists standards and datasets for reporting cancers proforma for High Risk SCCs 2019".

Results: A total of 207 high risk SCCs were identified from histological reports. On comparison of the RCP reporting standards, 80% of reports had at least one criteria required for a complete report missing. The pTMN stage was the most commonly omitted, in 80% of cases. Of these cases, 32 were pT3 lesions. Other common omitted criteria were; level of invasion (38%), Deep margins (28%) and grade (14%).

Conclusions: Several key criteria were commonly omitted from our centres pathological reports which reduces the likelihood of detecting high risk lesions. This may have implications for decision on referral to MDT, especially in the case of high-volume centres where referral criteria may be narrow. The outcomes of this audit will be utilised internally to standardise reporting for cutaneous SCCs with the intention that high-risk lesions are appropriately identified and subsequently managed.

71. Squamous Cell Carcinoma of The Lip: An 11 Year Experience

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Introduction: Squamous cell carcinoma (SCC) of the lip is the most common malignant tumour affecting the head and neck. Tumours of the lip require separate consideration to oral cancers, as reflected in the slightly adjusted eighth edition of the AJCC TNM staging system. Lip SCC has an excellent overall prognosis nearing 90% 5-year survival. However, with lymphatic spread, survival drops to ~50%

Aim: To analyse lip SCC management in a consecutive series of patients in a tertiary-referral hospital in Ireland and identify recurrence rates.

Methods: A retrospective analysis of consecutive lip SCC's presenting to a tertiary-referral hospital was conducted over an 11-year period, January 2008-December 2018. Data was obtained from 'Winpath', the hospital pathology database, and patient records.

Results: 75 patients were identified, with male to female ratio of 2.5:1. Average age was 70years(range 30-91). Average tumour size was 16.7mm(range 5-43mm) with average depth of invasion 4.5 mm(range 0.5-14mm). 87% of patients were cured of disease by primary surgery(n=65), with ten patients(13%) experiencing recurrence. Of patients with recurrence, six required neck dissection(60%). The overall rate of neck dissection was 9%(n=7). Two patients died of metastatic SCC, with staging confirmed systemic metastasis.

Conclusion: Given the low morbidity associated with selective neck dissection, we recommend selected patients with high-risk features be offered sentinel lymph node biopsy.

72. Options for Immediate Implant-based Breast Reconstruction - Comparing the Benefits and Risks of Human or Xenograft Acellular Dermal Matrix (ADM) and Synthetic Mesh Support – A Systematic Review and Network Meta-analysis]

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Aim: To investigate the clinical efficacy and safety of the use of Human and Xenograft acellular dermal matrices (ADM) as well as synthetic mesh as part of implant-based breast reconstruction (IBBR) in post-mastectomy patients as compared to standard immediate and delayed-immediate techniques.

Methods: A network meta-analysis was conducted using the Bayesian Markov Chain Monte Carlo method in WinBUGS 1.4.3 (MRC Biostatistics Unit, Cambridge, and Imperial College School of Medicine, London, UK) and Microsoft-Excel-based network meta-analysis tool (NetMetaXL).

Results: A total of 30 studies, from 2375 identified, met the predefined inclusion criteria. Traditional muscular coverage had fewer overall complications compared to HADM (odds ratio [OR] 0.51; Credible interval [Cr.I]: 0.34 – 0.74), however there was no significant difference between traditional submuscular placement and XADM (OR 0.63; CrI: 0.29-1.32) or synthetic mesh (OR 0.77; CrI: 0.44 – 1.30). No one treatment was superior with regards to implant loss. Traditional placement and XADM was associated with less infectious complications than HADM (OR 0.60; CrI:0.39-0.89).

Conclusion: Selecting the appropriate IBBR should evaluate effectiveness, adverse events, and cost. This study showed that IBBR techniques utilising XADM or synthetic mesh have acceptable complication profiles compared to submuscular staged reconstruction. While it is difficult to select a universal ideal IBBR, evaluation using this network analysis may help guide both physicians and patients in their choice of procedure.

73. The Histopathological and Molecular Features of Breast Carcinoma with Tumour Budding

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Introduction: Tumour budding (TB) is an adverse histological feature in many cancers. It is thought to represent epithelial-to-mesenchymal transition, a key step in the metastatic process. The role of TB in breast carcinoma (BC) remains unclear.

Methods: A systematic search was performed to identify studies that compared features of BC based on the presence or absence of high-grade TB. Dichotomous variables were pooled as odds ratios (OR) using the Cochran-Mantel-Haenszel method. Quality assessment of the included studies was performed using the Newcastle-Ottawa scale (NOS).

Results: Seven studies with a total of 1040 patients (high grade TB n= 519, 49.9%; low grade TB n=521, 50.1%) were included. A moderate- to high-risk of bias was noted. The median NOS was 7 (range

6-8). High-grade TB was significantly associated with lymph node involvement (OR 2.28, 95% c.i. 1.74 to 2.98, P<0.001) and lymphovascular invasion (OR 3.08, 95% c.i. 2.13 to 4.47, P<0.001). With regards to molecular subtypes, there was an increased likelihood of high-grade TB in oestrogen- (OR 1.66, 95% c.i. 1.21 to 2.29, P=0.002) and progesterone-receptor positive (OR 1.68, 95% c.i. 1.10 to 2.59, P=0.02) tumours. In contrast triple negative breast cancer had a reduced incidence of high-grade TB (OR 0.46, 95% c.i. 0.30 to 0.72, P=0.0006).

Conclusion: High-grade TB is enriched in hormone-positive BC and is associated with known adverse prognostic variables. TB may offer new insights into the metastatic processes of luminal BC.

74. Epigenetic Alterations Following Tyrosine Kinase Inhibition in Breast Cancer Patients

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Introduction: Therapeutic pressure functionally affects oncogenes and related signalling pathways through dynamic transcriptional and epigenetic adaptation. Altered receptor status occurs throughout tumour progression and may be influenced by adjuvant and neoadjuvant therapies. Recurrent transcriptional remodelling events have been described in the progression of primary breast cancer to metastasis, including increased tyrosine kinase signalling, specifically Her2, and loss of ESR1 gene expression.

Aim: We hypothesise that in the setting of tyrosine kinase inhibition, an increase in estrogen receptor (ER) signalling is observed.

Methods: ICORG 07/09 trial database was queried to identify patients with histologically confirmed, Her2-overexpressing, non-metastatic, invasive breast cancer who received neoadjuvant trastuzumab, either alone or in combination with neoadjuvant systemic chemotherapy. Clinicopathological characteristics recorded include age at diagnosis, presenting clinical stage, histology, estrogen and progesterone receptor status and percentage positivity, and pathological complete response.

Results: A total of 104 patients identified on ICORG trial 09/07 received neoadjuvant trastuzumab. Of these, 50 achieved a complete pathological response (pCR) (48%; n=50/104). In those with residual disease, a gain in mean ER staining percentage positivity was observed in the residual disease compared to diagnostic biopsy staining (45.11 vs 59.22; p=0.03). A corresponding loss in Her2 staining percentage positivity by immunohistochemistry was also observed (p=0.006).

Conclusion: An inverse correlation was observed between loss of Her2 positivity and percentage gain in ER staining in patients with residual disease following treatment with neoadjuvant trastuzumab. Further study is needed to elucidate the regulatory mechanism of ER/Her2 crosstalk, which may be epigenetically regulated through DNA methylation.

75. Enhancing Radiation Induced Immunogenicity In The Multimodal Treatment Of Oesophageal Cancer: A Bench To Bedside Approach

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Introduction: The incidence of oesophageal adenocarcinoma (OAC) is increasing rapidly in the Western world and is characterized by a highly immunosuppressive tumour microenvironment (TME). A promising treatment option is enhancing the immune mediated anti-tumour response via Immune Checkpoint Blockers (ICB).

Methods: The effects of ICB's were characterised in terms of proliferation, cytolysis and cancer cell viability. The basal expression of ICB's (PD-1, PD-L1, PD-L2) and Damage Associated Molecular Patterns (Calreticulin, HMGB1) in OAC patients was profiled ex vivo using fresh tumor, blood and lymph node tissue by flow cytometry. In an in-vitro study, peripheral T-lymphocytes were isolated and treated with Nivolumab, Pembrolizumab or Atezolizumab and activated over 1 week, and co-cultured for 48 hours with a panel of four oesophageal cancer cell lines treated with 1.8Gy and 3.6Gy of radiation. Cytolysis was measured using a CCK8 assay.

Results: The expression of PD-1 and ligands were higher ($p < 0.001$) in OAC patients compared to age matched healthy controls. Similarly, when mimicking conditions of the TME including nutrient deprivation and hypoxia, this results in a significant ($p < 0.001$) increase in DAMP and ICB expression on CD3,4 and CD8 T cells when treated with radiation. T-lymphocytes induced by checkpoint blockers plus ionising radiation directly to the tumor resulted in significant repression of tumour growth with 3.6Gy inducing the highest rate of cytolysis ($p < 0.001$). ICB and radiation also reduced cancer cell viability and proliferation.

Conclusions: Fractionated radiation enhance immunologic function. In combination with ICB, this symbiotic relationship enhances the cytotoxic potential of T-lymphocytes and this provides a potential combination strategy in the multimodal treatment of OAC.

76. Lymph Node Yield Is Not A Reliable Prognostic Marker In Anterior Resection And Abdominoperineal Resection Following Neoadjuvant Therapy For Rectal Cancer

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Introduction: International guidelines recommend a minimum LNY of ≥ 12 for oncological resection in colorectal cancer. NACRT decreases LNY, which questions its ability to provide accurate prognostic information. The consensus of this significance remains undetermined.

Aim: To investigate the significance of lymph node yield (LNY) on recurrence and survival following anterior resection and abdominoperineal resection with or without neoadjuvant chemoradiotherapy (NACRT) for rectal cancer.

Methods: Prospectively collected data on patients diagnosed with rectal cancer in a tertiary referral centre was analysed. Patients were divided into primary surgery and NACRT groups. Univariable analysis was performed using Fisher's exact test, t-test, and χ^2 test, while multivariable analysis utilised a multiple regression model. Disease recurrence and survival was analysed with logrank test and Kaplan-Meier curves generated.

Results: 148 patients were included (56.1% [$n=83$] receiving NACRT). The median LNY of the primary surgery group was 14 (interquartile range [IQR] 11-19) and for the NACRT group was 12 (IQR 8-14) ($p < 0.001$). Disease recurrence was similar in both primary surgery and

NACRT groups. There was a significant decrease in overall mortality in NACRT patients ($p = 0.03$), but there was no significant difference observed in recurrence or mortality amongst LNYs of < 8 , 8-11, and ≥ 12 . Conclusion: LNY less than 12 was not a negative prognostic indicator following NACRT and surgery for rectal cancer.

77. Comparison of Restorative Proctocolectomy With And Without Defunctioning Loop Ileostomy In Patients With Ulcerative Colitis – A Systematic Review And Meta-Analysis

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Introduction: Restorative proctocolectomy (RPC) without a defunctioning loop ileostomy (DLI) in patients with ulcerative colitis (UC) remains controversial.

Aim: To compare safety and efficacy of RPC with and without DLI in patients with UC.

Methods: A systematic review was performed according to PRISMA/MOOSE guidelines. Dichotomous variables were pooled as odds ratios (OR). Continuous variables were pooled as weighted mean differences (WMD). Quality assessment was performed using Newcastle-Ottawa (NOS) and Jadad scales.

Results: A total of 17 studies (4 paediatric & 13 adult) with 3075 UC patients (without DLI $n=1646$, 53.5%; with DLI $n=1429$, 46.5%) were eligible for inclusion. The median NOS was 8 (range 6-9). There was no increased risk of anastomotic leak ([AL]OR 1.04, 95% Confidence interval [CI]: 0.83, 1.30; $p=0.76$) or pouch excision (OR 1.35, 95% CI: 0.67, 2.70; $p=0.40$) for RPC without DLI. While there was no difference in overall morbidity (OR 0.70, 95% CI: 0.45, 1.07; $p=0.10$), subgroup analysis of the adult only data indicated that RPC without DLI increased the likelihood of major morbidity (OR 1.79, 95% CI: 1.03, 3.12; $p=0.04$). RPC without DLI resulted in fewer anastomotic strictures (OR 0.54, 95% CI: 0.34, 0.86; $p=0.009$), less requirement for dilation (WMD -0.45, 95% CI: -0.84, -0.05; $p=0.03$) and shorter operation time (WMD -0.20, 95% CI: -0.26, -0.14; $p < 0.001$) and length of stay (WMD -1.22, 95% CI: -1.71, -0.73; $p < 0.001$).

Conclusion: While RPC without DLI is not associated with increased AL/pouch excision rates and may have several advantages, it is associated with increased major morbidity in adults. Consequently, it should only be performed in select patients with UC.

78. Optimal Sequencing of Radiotherapy and Reconstructive Strategies for Breast Cancer Patients Post Mastectomy – A Systematic Review and Network Meta-Analysis

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Introduction: Up to one-third of breast cancer patients require mastectomy. In some high-risk cases postmastectomy radiotherapy (XRT) is indicated, potentially increasing reconstructive complications. Several XRT and reconstruction combinations are used. Autologous flap (AF) reconstruction may be immediate (AF-XRT), delayed-immediate with tissue

expander (TE[TE-XRT-AF]) or delayed (XRT-AF). Implant-based breast reconstruction (IBR) includes immediate TE followed by XRT and conversion to permanent implant (PI[TE-XRT-PI]), delayed immediate TE insertion (XRT-TE-PI), and prosthetic implant conversion prior to XRT (TE-PI-XRT).

Aim: Perform a network meta-analysis (NMA) assessing optimal sequencing of XRT and reconstructive type.

Methods: A systematic review and NMA was performed in accordance with PRISMA-NMA guidelines. An NMA was conducted using the Bayesian Markov Chain Monte Carlo method.

Results: A total of 18 studies, from 4182 identified, met the predefined inclusion criteria. The studies demonstrated moderate inconsistency and heterogeneity. Surface under the cumulative ranking curve (SUCRA) scores showed that AF-XRT was the best approach to avoid reconstructive failure (SUCRA 0.9603). XRT-AF was best to avoid infection (SUCRA 0.9888). Subgroup analysis of IBR techniques demonstrated that immediate-IBR (TE-PI-XRT) reduced failure rates compared to XRT with TE in situ (RR 0.41, CrI 0.27–0.63) but delaying implant exchange reduced risk of contracture (TE-XRT-PI v TE-PI-XRT (RR 0.30, CrI 0.19–0.47).

Conclusion: AF reconstruction is associated with less morbidity and risk of reconstructive failure in the setting of postmastectomy XRT. However, the optimal reconstructive strategy will depend on patient, surgeon and institutional factors. If IBR is chosen, failure rates are less if performed prior to XRT.

79. Increased Myosteatosis is associated with poorer outcome in multivisceral resections for soft-tissue sarcoma

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Introduction: Sarcopenia and obesity in cancer may confer negative outcomes, but their prevalence and impact in modern treatment of soft-tissue sarcoma (STS) is unstudied.

Aim: The aim of this study was to determine the prevalence of sarcopenia and visceral obesity among patients with STS, and to assess impact on operative and oncologic outcomes.

Methods: Consecutive patients undergoing treatment for STS were studied. Subcutaneous (SFA) and visceral fat areas (VFA), myosteatosis, and lean body mass (LBM) were determined at diagnosis by CT at L3 using SliceOmatic (Tomovision, Canada). Data were analysed using SPSSv26, and the impact of body composition on operative and oncologic outcome determined using linear, logistic and Cox proportional hazards regression.

Results: Ninety consecutive patients were studied. 52 [57.8%] were female, with average age of 52.3 ± 14.1 years. The most common histologic types were liposarcoma (15 [16.7%]), atypical lipomatous tumour (12 [13.3%]), leiomyosarcoma (12 [13.3%]), high-grade pleomorphic sarcoma (11 [11.1%]). Mean±SD body composition measures were: LBM, 50.2±11.9 kg; VFA, 130.6±101.7 cm²; SFA, 231.3±126.6 cm²; myosteatosis, 9.46±9.4 cm². At diagnosis, myosteatosis was associated with increased systemic inflammation (C-reactive protein, P=0.038; albumin, P<0.001). Twenty-six (50.0%) underwent multivisceral resection with postoperative complications occurring in 12 (26.1%) patients. Increased VFA, SFA and myosteatosis were associated with postoperative complications (P<0.001). There was a trend towards reduced overall survival with increasing myosteatosis (P=0.066, HR 1.06 [95%CI 1.00–1.12]).

Conclusion: Increased adiposity is associated with postoperative morbidity among patients with STS, while increased myosteatosis may be

associated with adverse oncologic outcomes in STS requiring multivisceral resections.

80. An Exploration of The Genomic Landscape Of Mucinous Rectal Adenocarcinoma

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Introduction: Mucinous adenocarcinoma (MC) of the rectum is an infrequently encountered histological subtype that is known to respond poorly to chemoradiotherapy and have worse overall survival when compared to adenocarcinoma not otherwise specified.

Aim: The aim of this study was to comprehensively describe the burden of somatic mutations and copy number alteration (CNA) as well as perform mutational signature and microbial analysis of an in-house collected cohort of rectal MC.

Method: Genomic DNA was extracted from 10 cases of rectal MC and matched normal tissue. Whole genome sequencing (WGS) was carried out on these 10 cases and a comprehensive bioinformatic analysis was undertaken.

Results: The average number of single nucleotide variations, insertion-deletion mutations and structural variants in this cohort was 16,600, 1,855 and 120 respectively. A single case was MSI-H. KRAS mutations were found in 70% of cases while TP53 was mutated in 40% of cases. CNA gain was identified on chromosomes 7, 8, 12, 13 and 20 while CNA loss was found on chromosomes 4, 8, 17 and 18 corresponding to oncogenes and tumour suppressor genes respectively. Microbial analysis demonstrated an abundance of *Fusobacterium nucleatum* in tumour samples compared to normal tissue.

Conclusion: This study provides a detailed WGS analysis of 10 cases of rectal MC. It demonstrates an important lesson in tumour biology in that histologically similar tumours can have extensive differences at the genomic level. This finding is particularly relevant in the current era of personalised medicine where WGS has the potential to influence treatment decisions.

81. Radiogenomic Evaluation of Colorectal Cancer — The Preoperative Radiological Features of Mismatch Repair Deficient Colorectal Cancer and Its Significance

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Background: Microsatellite instability (MSI) is reflective of a deficient mismatch repair system (dMMR) and occurs in approximately 15–20% of all colorectal adenocarcinoma (CRC). MMR status is increasingly tested due to its prognostic and predictive significance in CRC.

Aim: To investigate preoperative computed tomography (CT) features associated with dMMR CRC.

Methods: Consecutive patients undergoing resection for dMMR CRC were identified from a prospectively maintained institutional database.

Preoperative CT and post-resection histological features of dMMR CRC were compared to stage-matched MMR proficient (pMMR) disease. Results: A total of 150 dMMR and 136 pMMR tumours were included. A visible primary ($p=0.039$), synchronous tumours ($p=0.022$), sessile morphology ($p<0.001$), longer ($p<0.001$) and thicker appearance ($p<0.001$), more luminal narrowing ($p=0.032$) but less obstruction ($p=0.032$), fat stranding ($p=0.004$), larger node size ($p=0.006$) and peritoneal nodules ($p=0.034$) were all associated with dMMR on preoperative CT. The median overall survival time of pMMR tumours and dMMR was 60.1 vs. 83.2 months respectively (Hazard ratio [HR] 0.66, 95% confidence interval [c.i.] 0.4 to 0.9; $p=0.04$). On multivariable analysis CT free fluid (HR 2.94, 95% c.i. 1.1 to 7.8; $p=0.03$) low liver metastases attenuation (HR 4.5, 95% c.i. 1.2 to 16.5; $p=0.023$), extramural venous invasion (HR 3.07, 95% c.i. 1.4 to 6.3; $p=0.002$) and TNM stage (HR 2.95, 95% c.i. 1.62 to 5.4; $p=0.04$) were all independent predictors of survival in dMMR CRC. Conclusion: dMMR has distinct radiological features as compared to pMMR. Used in combination with immunohistochemical testing of CRC diagnostic biopsy tissue, CT assessment may allow the preoperative recognition of dMMR CRC with a number of clinical advantages, including tailored neoadjuvant therapies and surgical strategies.

SESSION 11: TRAUMA AND ORTHOPAEDIC SURGERY

82. Neo-Adjuvant Denosumab And Disease Recurrence In Giant Cell Tumour Of Bone: Has The Magic Bullet Lost Its Magic?

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Introduction: Denosumab is currently being used as a neo-adjuvant systemic therapy in an effort to reduce local disease recurrence and facilitate intra-lesional curettage of giant cell tumour of bone (GCTB) despite limited and conflicting evidence to support such use.

Aim: To assess the effect of neo-adjuvant denosumab on disease recurrence in skeletally mature individuals with giant cell tumours of bone treated with curettage.

Method: A comprehensive search strategy incorporating the Methodological Expectations for Cochrane Intervention Reviews (MECIR) was implemented which included database and citation searches and hand searching of selected journals. Randomised controlled trials (RCT) or non-randomised studies (NRS) with control groups that evaluated the effect of neo-adjuvant denosumab on disease recurrence in skeletally mature individuals with GCTB treated with curettage were included for analysis.

Results: Five NRS ($n=370$) met the review inclusion/exclusion criteria for the primary outcome measure of local disease recurrence and all five suggested that the use of neo-adjuvant denosumab was associated with an increased risk of local disease recurrence (RR 2.14 to 14.14). A meta-analysis was deemed inappropriate given the degree of methodological heterogeneity between studies and a narrative synthesis was provided.

Conclusion: The presence of significant risk of bias and methodological heterogeneity means that strong conclusions cannot be drawn from the available evidence. Given the consistency in direction and magnitude of effect seen across the included studies however there is a suggestion that the use of neo-adjuvant denosumab may be associated with an increased risk of local disease recurrence in GCTB.

83. Our Experience with Intra-Operative Spinal Cord Monitoring in the West of Ireland

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Background: Spinal cord surgery is a technically challenging endeavour with potentially devastating complications for patients and surgeons. Intra-operative neurophysiological monitoring (IONM), or spinal cord monitoring (SCM), is one method of preventing and identifying damage to the spinal cord. At present, indications for its use are based more on individual surgeon preference and for medico legal purposes.

Aim: Our study aimed to determine IONM's utility as a clinical tool.

Methods: This is a retrospective case series of 169 patients who underwent spinal surgery with IONM at two institutions between 2013 and 2018. Signal changes detected were recorded as well as the surgeon's response to these changes. Patients were followed up to one-year post-surgery using our institution's EVOLVE system. The main outcome measure in this study was new post-operative neurological signs and/or symptoms and what effect, if any, IONM and subsequent surgeon intervention had on these complications.

Result: Indications for IONM included cervical stenosis, cervical disc prolapse, unstable fractures and bony metastases. Signal changes were observed in 33% ($n=55$) of cases. 24 of these patients responded to re-positioning. There were 7 total complications with full resolution by 12 months. False negative rate was 2.4% ($n=4$). There was one true positive. The largest cohort of patients included those who experienced no signal changes and subsequently no post-operative deficits ($n=124$).

Conclusion: IONM is a non-invasive clinical tool that may be utilised for medicolegal reasons. Its use as a clinical tool is questionable given its relatively high false negative rate and high false positive rate.

84. Perioperative steroid administration reduces opioid consumption and improves knee function in bilateral total knee arthroplasty

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Introduction: Total Knee Arthroplasty (TKA) is a common orthopaedic procedure. Some 1.2% of all TKAs are performed as part of bilateral procedures. Enhanced acute recovery after bilateral TKAs is achievable with certain perioperative measures such as steroid administration.

Aim: We describe the impact of perioperative steroid administration in a cohort of bilateral TKAs with regard to day one postoperative knee function, postoperative knee strength and opioid consumption.

Methods: We report on a single-surgeon consecutive case series of simultaneously-performed bilateral TKAs. Eighteen patients received 2 doses of 8mg IV dexamethasone in the perioperative setting. There were 19 patients in the control group. Morphine dose equivalents (MDE) were calculated to compare all opioid-based analgesics. Secondary outcomes included post-operative pain according to the VAS (at 24, 48 and 72 hours), anti-emetic requirements (mg) and length of stay (days).

Results: The mean knee flexion achieved day 1 in the steroid group was 70.1° ($s=17.64$, 95% CI 64.1-76.0) compared to 55.8° in the non-steroid group ($s=19.8$, 95% CI 49.2-62.3) ($p=0.0008$). Regarding the straight leg raise, 88.9% of the steroid group were able to achieve this compared to only 55.2% of the non-steroid group ($p=0.002$). There was a reduction in the MDE requirement per patient across all medications for the 'steroid' group. Both Targin ($p=0.03$) and Fentanyl ($p=0.01$) requirements were significantly reduced in the 'steroid' group.

Conclusion: We recommend the use of perioperative steroids in bilateral TKA to allow accelerated rehabilitation, improved immediate knee function and an overall reduction in the consumption of potentially problematic opioid-based analgesics.

85. Comparing Post-Operative Outcomes of Patients With An Intracapsular Neck of Femur Fracture Treated With Hip Hemiarthroplasty Versus Total Hip Arthroplasty In The Republic of Ireland

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Introduction: Intracapsular neck of femur (NOF) fractures are a source of significant morbidity and mortality in our population. There is variation in choice of arthroplasty for treatment of these patients despite guidelines.

Aim: To compare post-operative outcomes for patients sustaining an intracapsular NOF fracture treated with either hip hemiarthroplasty (HA) or total hip arthroplasty (THA). Outcomes measured were inpatient mortality, reoperation within 30 days, inpatient mobility, pressure ulcer development and length of inpatient stay (LOS).

Methods: Retrospective data was collected from the Irish Hip Fracture Database on all patients treated for intracapsular neck of femur fractures with either THA or HA from January 2013 to December 2015. Data analysis was carried out using SPSS Version 25.

Results: 4,259 patients were included in this study. 92.9% underwent treatment with HA. 4.9% of the HA group and 3.7% of the THA group developed pressure ulcers ($p=0.33$). 23% treated with HA and 17% treated with THA were not mobilised on the day of, or day after surgery ($p=0.029$). 4% of those treated with HA died as an inpatient versus 0.6% of the THA group ($p=0.002$). Length of stay for those treated with THA was 12.87 versus 18.88 for HA ($p<0.01$)

Conclusion: THA was associated with reduced LOS and lower mortality when compared to HA for treatment of intracapsular NOF fractures. There was no significant difference between THA and HA with development of pressure ulcers or rates of reoperation within 30 days.

86. Readability of Patient Educational Materials in Hip and Knee Arthroplasty: Has a Decade Made a Difference?

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Introduction: The Internet has become an increasingly popular resource among orthopaedic patients for health education. Numerous organisations recommend that patient educational materials (PEMs) should not exceed a 6th grade reading level. Despite this, studies have repeatedly shown the reading grade level (RGL) of PEMs to be too advanced across numerous surgical specialties.

Aim: To evaluate the readability of online hip and knee arthroplasty PEMs. **Methods:** The readability of 134 articles pertaining to hip and knee arthroplasty from 5 leading worldwide healthcare websites were assessed, using 8 readability formulae; the Flesch-Kincaid Reading Grade Level, the Flesch Reading Ease Score, Raygor Estimate, SMOG, Coleman-Liau, Fry, FORCAST and Gunning Fog. The mean RGL was compared to the 6th and 8th grade reading level. The mean RGL of each website was also compared.

Results: The mean cumulative RGL was 12 (range=7-16.1). No articles were written at a 6th grade reading level and 4 articles (3%) were written at or below the 8th grade reading level. The mean RGL was significantly higher than the 6th (95% CI,5.62-6.30; $P<0.0001$) and 8th grade reading level (95% CI,3.63-4.30; $P<0.0001$). There was a significant difference between the RGLs of the 5 websites ($p=0.001$).

Conclusion: Arthroplasty PEMs produced by leading worldwide healthcare organisations have readability scores that are above the recommended levels. Given the imperative role of health literacy in patient outcomes and satisfaction, and the increasing prevalence of internet use among orthopaedic patients, a substantial amount of work needs to be done to improve the readability of these materials.

87. Resurfacing The Patella Improves Outcomes When Using The Triathlon Prosthesis In Total Knee Arthroplasty. What Ireland Can Learn From The Australian National Joint Registry

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Introduction: Patella resurfacing in primary total knee arthroplasty (TKA) remains a contentious issue. Australian rates of patellar resurfacing are 66.6%, significantly higher compared to Irish rates of 15% and Swedish rates of 2%. Resurfacing has gained popularity in Australia since registry data has shown decreased revision rates with no increase in patellar component related complications.

Aims: We present for discussion an analysis of 113,694 total knee arthroplasties using commonly implanted prostheses in Ireland.

Methods: We included all TKA's since the Australian register's conception on 01/09/1999 for a primary diagnosis of osteoarthritis involving the use of either the Triathlon or Duracon implant with and without patellar components. The primary outcome of the study was time to revision for Triathlon's resurfaced and non-resurfaced prosthesis compared to the Duracon's equivalent data. We also analysed the reasons for revision between the 4 groups, type of revision and complication rates. We then compared minimally stabilised and posterior stabilised prostheses.

Results: The cumulative revision rate for Triathlon prostheses with resurfacing after 12 years was 3.2% (95% CI, 2.9% to 3.6%) compared to 5.6% (95% CI, 5.0% to 6.2%) without resurfacing. Duracon's equivalent data was 6.3% with resurfacing and 5.9% without resurfacing. Triathlon prosthesis with resurfacing have much lower rates of revision due to loosening, patellofemoral pain, patellar erosion compared to unresurfaced Triathlon prostheses.

Conclusion: Triathlon with re-surfacing has lower revision rates regardless of age or BMI. Previous concerns regarding patellofemoral loosening, tibial wear, maltracking relate to Duracon only, indicating the importance of implant specific studies.

88. Assessing The Accuracy Of Multimedia Messaging For The Diagnosis Of Scaphoid Fractures

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Introduction: Use of smartphone messaging applications as a means of communication within clinical teams is now widespread(1). Orthopaedics is a specialty where the use of smartphones is commonly seen. Various studies have shown multiple uses for smartphones and multimedia messaging in orthopaedic clinical practice for coordinating clinical duties, assessing spine CTs and assessing tibial fractures(2-5).

Aims: Assess the diagnostic accuracy of viewing scaphoid x-rays on a smartphone compared with a desktop computer using radiologist reports on the same x-rays as reference test. Assess the intra-observer reliability of these studies.

Methods: This was a prospective cross-sectional study of diagnostic accuracy using paired tests. The standard for reporting diagnostic accuracy (STARD) guidelines were used in design of this study. We asked orthopaedic SPRs to interpret whether a scaphoid fracture was present on 20 scaphoid x-rays, obtained from NIMIS. These were viewed on a desktop and a smartphone. Data were analysed using STATA 14 to run McNemar's test and compare sensitivity and specificity of the two tests.

Results: Phone and desktop interpretation had good sensitivity (72.7% and 78.2%) and specificity (75.2% and 77.9%) in assessing scaphoid fractures with no significant difference in sensitivity (p -value= 0.507) or specificity (p -value= 0.547). There was fair to moderate intra-observer reliability (kappa score 0.436; 95% Confidence Interval 0.295–0.577).

Conclusion: There was no significant difference in the diagnostic accuracy of interpreting scaphoid fractures on a smartphone versus on a desktop. The fair to moderate scores of intra-observer agreement reflect the difficulty of diagnosing scaphoid fractures on x-rays.

89. The Varus Cemented Femoral Stem in Total Hip Arthroplasty: Predictors and The Femoral Access Ratio

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Introduction: Recent evidence exists to support the contribution of greater trochanteric lateroverion towards varus stem malalignment (VSM) in total hip arthroplasty (THA). The role of greater trochanteric height (GTH) in this process is unknown.

Aim: We describe a novel morphological ratio, the 'femoral access ratio' (FAR), in the preoperative femur (GTH / metaphyseal width at the level of the lesser trochanter) to investigate its role in VSM.

Methods: A series of 80 cemented femoral stems were reviewed. Preoperative patient data and radiographic morphological features of each femur were measured and the preoperative FAR score calculated. Immediate postoperative stem alignment was measured and the predictors of VSM assessed. Logistic regression analysis was performed control for confounding variables.

Results: In total, 77 patients were analysed. Cemented stems had higher rates of VSM compared to uncemented stems (53% v 38%) (p =0.015). The two predictors of VSM were body-mass-index (BMI) and FAR score. Higher BMI was associated with higher rates of femoral VSM (BMI=30: 77% varus; p =0.048). A FAR score of less than 1 lead to 68.4% of femoral stems in varus versus 36.6% with a FAR score greater than 1 (p =0.009). The GTH component of the FAR score contributed most to the prediction of VSM (p =0.013).

Conclusion: The FAR score is a simple preoperative radiographic measurement that can predict the likelihood of femoral VSM in cemented femoral stems. We recommend awareness when cementing femoral stems in femurs with a 'FAR' score less than 1 and in patients with high BMIs.

90. Virtual Clinics and The COVID Catalyst: Are Virtual Fracture Clinics Safe, Productive And Cost Effective

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Introduction: Virtual fracture clinics (VFC) are becoming increasingly utilised as a model to deliver care. They were first introduced as a concept in 2011 through the Glasgow Royal Infirmary and have been embraced by a number of institutions. The scope of these clinics have been rapidly expanding, but concerns exist about safety of such virtual consultations.

Aims: To describe the safety, productivity, efficiency, satisfaction and costs associated with the VFC model of care.

Methods: A systematic review of the PubMed, MEDLINE and CINAHL databases was conducted up to March 2020. The keywords 'virtual' or 'telemedicine' or 'telehealth' or 'remote' or 'electronic' AND 'fracture' or 'trauma' or 'triage' and 'clinic' or 'consultation' were entered. Two independent reviewers extracted the information. Five subdomains were recorded; focusing on safety, productivity of the clinic, efficiency, satisfaction and cost measures.

Results: The initial search revealed 1065 publications, with final review yielding 18 for inclusion. There were a total of 30,512 VFC encounters included in the review. 17 studies reported the VFC model of care to be safe. Productivity varied from discharge rates of 18.2–100%, safety was assessed through a variety of methods, satisfaction was high with rates from 78–100%, efficiency was reported on and cost savings varied from £42–£237 per patient.

Conclusion: Overall the VFC model is demonstrated to be safe, efficient, patient satisfaction is high and it provides cost savings to the department. . There have been no reported legal ramifications in the literature to date. It also is patient centred and empowers patients with knowledge and partners them in a collaborative approach to managing traumatic maladies. VFCs have an important role in the current pandemic.

SESSION 12: GENERAL SURGERY

91. Negative Pressure Wound Therapy for General Surgery Incisions: Systematic Review and Meta-Analysis of Latest Randomised Controlled Trials

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Introduction: Surgical site infections contribute significantly to post-operative morbidity and cost. Those undergoing resectional bowel surgery are at particular risk. Negative pressure wound therapy (NPWT) reduces wound infection rate in a variety of surgical incisions. To date however, there is a lack of consensus supporting its use in closed laparotomy incision.

Methods: Comprehensive search of PubMed, Cochrane, clinicaltrials.gov databases identifying randomised controlled trials comparing the use of prophylactic negative pressure wound therapy to standard dressings for closed laparotomy incisions. The primary outcome was incidence of incisional surgical site infection, odds ratios were calculated using the Mantel-Haenszel test. Secondary outcomes included; superficial and deep incisional surgical site infection, skin dehiscence, fascial dehiscence, length of stay.

Results: Five studies met criteria for inclusion with 467 patients randomised to NPWT versus 464 in the standard dressing group. The incisional surgical site infection rate was 18.6% (n=87/467) versus

23.9% (n=111/464) in the NPWT and standard dressing groups respectively (Odds ratio 0.71, 95% CI 0.52–0.99, p=0.04*). Deep incisional surgical site infection incidence was the same in both groups (2.6%). Skin dehiscence and fascial dehiscence were slightly higher in standard dressing group [(4.2%, n=11/263 versus 3.1% (n=8/261) and (0.9% (n=3/324) versus 0.6% (n=2/323)] respectively.

Conclusion: This study shows a significant reduction in overall surgical site infection rates in those treated with NPWT. It supports the prophylactic use of NPWT in closed laparotomy wounds following general surgical procedures.

92. Non-Colorectal Metastasis and Non-Primary Tumours: The Other Resectional Workload of the Liver Surgeon

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Introduction: The majority of liver resections are for colorectal liver metastases (CLRM), cholangiocarcinomas, and primary hepatocellular carcinomas (HCC). However, there is a growing role for liver resection for other pathology in selected cases.

Methods: Review of all liver resections performed at a tertiary referral unit over the 2015–2019 period was performed. Patient demographic details, tumour pathology, margin status and perioperative morbidity and mortality were reviewed.

Results: There were 207 resections in total. 29 (14%) of these were for non-CRLM/non-cholangiocarcinoma/non-HCC. Malignant pathology included: metastatic ovarian cancer (n=4), metastatic neuroendocrine tumours (n=2), sarcomatous lesions (n=2), metastatic oesophageal cancer (n=2), metastatic GIST (n=1) and metastases of unknown primary (n=5). Benign pathology included: adenoma (n=3), FNH (n=2), inflammatory processes including strictures (n=4), cystic neoplasia (n=2) and stone related pathology (n=2). 10 (35%) operations were performed laparoscopically. There was no difference in length of stay between the benign and malignant groups (6 days vs 8 days, p=0.41). There was no difference in morbidity between the groups (p=1.0).

Conclusion: This cohort of patients represent a broad spectrum of pathology. In selected cases these benign and malignant conditions are suitable for resectional surgery, including laparoscopic resection.

93. Powered Air Purifying Respirators (PAPR) for the Protection of Surgeons during Operative Tasks: A User Perspective Assessment

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Introduction: The COVID-19 pandemic has impacted enormously on surgical services. Both during and after peak crisis, protection of surgical teams from infection is a priority especially regarding aerosol generating procedures. Powered Air Purifying Respirators (PAPR) have been used but not, to date, formally assessed regarding appropriateness for the team at work.

Methods: PAPR (Scott Tornado, 3M) use was assessed subjectively and objectively in a variety of simulated, high fidelity surgical scenarios first by surgeons (both individually and in pairs) and then by full operating room teams (including nurses and anaesthesiologists). Laparoscopic and open general elective and emergency surgical practice was assessed alongside other specialties (plastic/reconstructive and head/neck) using both half (FH1) and full (FH2) hooded PAPR for up to two hours. Tasks were observed and individuals subjectively assessed using

validated (Thermal Sensation and Comfort, Perception of Breathing Effort, Perceived Exertion and Eye dryness) and adapted (Listening Effort and Confidence) scores.

Results: 46 healthcare professionals performed the assessments with, overall, high user acceptability and confidence. All tasks were completed within their allotted time without compromise. PAPR subjectively impacted Communication and Listening Effort particularly in full team simulations. FH1 experience was significantly better with regard to Thermal Sensation and Comfort, Perceived Exertion and Eye Dryness but FH2 experience was satisfactory. Qualitatively, users felt 'safe' and 'protected' with negative comments relating mostly to device noise.

Conclusion: PAPR was judged acceptable for complex surgical practice by all members of the operating room team from all perspectives. Further work regarding doffing/donning protocols is proceeding.

94. Prediction of Response To Neoadjuvant Therapy in Rectal and Breast Adenocarcinoma

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Introduction: Neoadjuvant therapy is an essential component of multimodality therapy for both locally advanced rectal (RC) and breast adenocarcinoma (BC). Complete pathologic response (pCR) is a useful surrogate for long-term oncologic outcome.

Aim: To assess the association between clinicopathologic, molecular and immunological markers and treatment response to neoadjuvant therapy in RC and BC.

Methods: RC and BC patients undergoing neoadjuvant therapy were identified from a prospectively maintained institutional database. Serum haematological/biochemical values, histopathologic and immunohistochemical data and TNM stage was obtained from electronic records. Statistical analysis was performed via SPSS.

Results: Overall, 150 RC patients and 189 BC patients were included. The average age was 66 +/- 10.6 and 48.9 +/- 11.3 years, respectively. A pCR was evident in 15.2% (n=23) and 26.5% (n=50) of the RC and BC groups. pCR in RC patients was associated with early T stage (<T3) (p<0.001) and absence of extramural venous invasion (EMVI) (P<0.001), while early T Stage and non-luminal subtypes (HER2 enriched [HER2+] & triple negative [TNBC]) had increased pCR rates in BC. Lymphocyte-monocyte ratio (LMR) at diagnosis was lower in RC patients with pCR (p=0.044), while in BC, the neutrophil-lymphocyte ratio (NLR) pre-operatively was lower in patients with a pCR (p=0.027).

Conclusion: pCR was more likely in patients with less advanced disease in both RC and BC. The absence of EMVI in RC and the presence of HER2+ or TNBC in BC also increases the likelihood of pCR. Neoadjuvant therapy stimulates the systemic inflammatory response, however, a reduced LMR and NLR at diagnosis may be associated with increased pCR but confirmation with larger datasets is required.

95. The Relationship between BMI and Lymphocyte-Monocyte Ratio in Patients with Endometrial Cancer

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Introduction: Greater than 50% of all endometrial cancer in the U.S.A is attributable to obesity. Raised lymphocyte to monocyte ratio (LMR; calculated as the proportional ratio of the absolute count of lymphocytes over the absolute count of monocytes) is a positive prognostic indicator in endometrial cancer patients. Obese patients with endometrial cancer have less aggressive disease. We aim to establish whether there is a significant relationship between lymphocyte-monocyte ratio and BMI in endometrial cancer patients.

Aim: To investigate the relationship between LMR and BMI in patients with endometrial cancer

Methods: Retrospective analysis of preoperative full blood count results of 147 women with endometrial cancer were obtained to calculate LMR. Preoperative BMI, stage, grade, lymphovascular invasion and histological diagnosis of all patients were compiled. An age matched control sample of preoperative lymphocyte-monocyte ratios of 71 bariatric patients without endometrial cancer was also collected. **Results:** BMI was positively correlated with LMR in the endometrial cancer group ($p=0.011$ (linear regression), [95% confidence interval 0.007-0.052] $R^2=0.3$). Mean LMR in the obese endometrial cancer group (BMI>30) was 3.78 (SD +/- 1.73) compared to 3.95 (SD +/- 1.33) in the bariatric group and 3.41 (SD +/- 1.60) in the nonobese endometrial cancer group ($p=0.03$ chi squared).

Conclusion: BMI is significantly correlated to LMR in endometrial cancer patients. Obese patients in our endometrial cancer cohort and those in our bariatric control group had a significantly higher LMR compared to nonobese patients with endometrial cancer. This study contributes to current literature exploring the role of LMR in endometrial cancer.

96. Using Telemedicine to Streamline Out-Patient Activity in Response to the COVID19 Pandemic

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Introduction: High volume, crowded out-patient departments are a high risk source of viral transmission and are unsustainable following the recent COVID19 pandemic. This paper describes the out-patient protocol adopted in our Department to minimise patients attending clinic and viral transmission risk. This was developed in line with guidance from the Royal College of Surgeons Ireland

Aim: To establish a virtual pathway during a pandemic as an alternative to attending a face to face outpatient appointment.

Methods: All colorectal clinic appointments from 18/03/2020 to 08/05/2020 were included. New referrals were triaged by Consultants. Return appointments were reviewed by a physician associate or colorectal cancer nurse specialist 2 weeks in advance. Patients unlikely to require physical examination were selected for a virtual telephone clinic 1 week prior to their scheduled appointment.

Results: During the 8 weeks of this study, 630 appointments were originally scheduled (171 new, 459 return). This included 6 new cancer patients and 116 return cancer patients. Of the 630 patients selected for virtual clinic, 40 patients were required to be physically seen for clinical exam.

Conclusion: Use of telemedicine reduced outpatient clinic footfall by 94%. This enables adequate social distancing and minimises the risk of viral transmission at outpatient clinics. Nevertheless, all face to face consultations and physical examinations cannot be eliminated but, organising tests in advance or instead of a clinic visit increases efficiency and has potential to deliver a better hospital service to complex patients who need a personal consultation.

97. Multidisciplinary Evaluation of Preparation for Colonoscopy in the Republic of Ireland

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Introduction: With increasing waiting lists and potential legal implications ensuring optimal bowel preparation and informed consent is pivotal. Inadequate bowel preparation incurs a detrimental effect on all aspects of colonoscopy including accuracy, caecal intubation rate and patient satisfaction. Furthermore, it may lead to increased healthcare costs by reducing the interval of colonoscopy surveillance and may potentially render colonoscopy surveillance ineffective.

Aim: To investigate a potential consensus of potential best optimal benchmark for colonoscopy preparation and counseling amongst senior physicians and surgeons in the Republic of Ireland.

Methods: A structured questionnaire was posted to consultant and registrar gastrointestinal (GI) physicians and surgeons in the Republic of Ireland who perform colonoscopy in their practice ($n=200$). The demographics and routines of patient preparation of the four groups of colonoscopists were evaluated.

Results: A 76.50% response rate was obtained ($n=153$) across the four HSE regions. The majority of respondents in all groups favoured PEG containing preparation as bowel cleansing. Moviprep (low volume PEG plus ascorbate, 67.97%) was the most commonly recommended, followed by Kleanprep (high volume PEG, 22.8%) for elective colonoscopy. Patient consent was consistent across groups with regards to sedation, haemorrhage and perforation. However, consultant surgeons were significantly more likely not to verbally consent regarding 'missed lesion' relative to consultant gastroenterologists.

Conclusion: The preparation of colonoscopy varies significantly by specialty and level of experience. Given the potential adverse events and medicolegal issues related to colonoscopy, we suggest a possible consensus amongst gastrointestinal physicians and surgeons, with consideration to recently published European guidelines.

98. Subtotal Colectomy in Ulcerative Colitis- Long Term Considerations for the Rectal Stump

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Introduction: The initial operation of choice in many patients presenting as an emergency with ulcerative colitis is a subtotal colectomy with end ileostomy. A percentage of patients do not proceed to completion proctectomy with ileal pouch anal anastomosis.

Aim: To review the existing literature in relation to the significant long term complications associated with the rectal stump, to provide an overview of surgical management of the remnant rectum and anal canal and to form a consolidated guideline on endoscopic screening recommendations in this cohort.

Methods: A systematic review was carried out in accordance with PRISMA guidelines for papers containing recommendations for endoscopy surveillance in rectal remnants in ulcerative colitis. A secondary narrative review was carried out exploring the surgical management options for the retained rectum.

Results: In terms of surveillance guidelines, 20% recommended an interval of 6 months to a year, 50% recommended yearly surveillance 10% recommended 2 yearly surveillance and the remaining 30%

recommended risk stratification of patients and different screening intervals based on this. All studies agreed surveillance should be carried out via endoscopy and biopsy. Increased vigilance is needed in endoscopy in these patients. Literature review revealed a number of options for surgical management of the remnant rectum.

Conclusion: The retained rectal stump needs to be surveyed endoscopically according to risk stratification. Great care must be taken to avoid rectal perforation and pelvic sepsis at time of endoscopy. If completion proctectomy is indicated the authors favour removal of the anal canal using an intersphincteric dissection technique.

99. Systematic Review and Meta-Analysis of Factors which Reduce the Length of Stay Associated with Elective Laparoscopic Cholecystectomy

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Introduction: Laparoscopic cholecystectomy is a safe ambulatory procedure in appropriately selected patients. Despite this, day case rates in laparoscopic cholecystectomy remain low.

Aim: The objective of this systematic review and meta-analysis was to identify interventions which are effective in reducing the length of stay (LOS) or improving the day case rate for elective laparoscopic cholecystectomy.

Methods: Comparative English-language studies describing perioperative interventions applicable to elective laparoscopic cholecystectomy in adult patients and their impact on LOS or day case rate were included. PubMed, Embase, and Cochrane databases were searched for articles published up to January 2019. Mean LOS was compared between studies using the mean differences (MD) and day case rate was compared using odds ratios (OR).

Results: Quantitative data were available for meta-analysis from 80 studies of 10,615 patients. There were an additional 17 studies included for systematic review. The included studies evaluated 14 peri-operative interventions. Implementation of a formal day case care pathway was associated with a significantly shorter LOS (MD=24.9 hours, 95% CI, 18.7-31.2, $p<0.001$) and an improved day case rate (OR=3.5; 95% CI, 1.5-8.1, $p=0.005$). Use of non-steroidal anti-inflammatories, dexamethasone and prophylactic antibiotics were associated with smaller reductions in LOS.

Conclusion: Care pathway implementation demonstrated a significant impact on LOS and day case rates. A limited effect was noted for smaller independent interventions, highlighting the additive effect of interventions in a care pathway. In order to achieve optimal day case targets, a greater understanding of the effective elements of a care pathway and local barriers to implementation is required.

SESSION 11: UROLOGY

100. A National Study in Urolithiasis Presentations Over 4 Years

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Introduction: Urolithiasis is a common urological presentation¹.

Aim: This study examines presentation, length of stay (LOS) and transfer patterns for patients presenting with urolithiasis to model 2/3 hospitals without a specialist urology service, compared to those who present to a model 4 hospital with an on-site urology service.

Methods: Using the National Quality Assurance & Improvement System (NQAIS), we assessed patients presenting with urolithiasis, nationally from January 2016 to December 2019.

Results: During the study period, there were 11,945 emergency presentations with urolithiasis. 6,545 (54.8%) presented to model 4 hospitals, while 5,400 (45.2%) presented to model 2/3 hospitals. 874 (16.19%) patients required transfer from model 2/3 hospital to a model 4 hospital for further management.

Those transferred from model 2/3 hospitals spent a mean of 3.68 days awaiting transfer and had a mean LOS of 3.88 days in the model 4 hospital. A total of 7.56 days compared to a mean LOS of 2.9 days for those presenting directly to a model 4 hospital.

Once a patient was transferred to a model 4 hospital, the wait for intervention was still longer (1.77 days vs 1.62 days) compared to a patient who presented directly to the model 4 hospital.

Conclusion: Patients presenting with urolithiasis to model 2/3 hospitals have significantly longer LOS compared to patients who present directly to a model 4 hospital. A formal, national "stone pathway" may significantly alleviate much of the burden on our health system caused by this common, debilitating condition¹.

101. Comparison of Radical Prostatectomy Histology with Biopsy Technique

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Introduction: Pre-biopsy MRI followed by targeted biopsies improves the detection of clinically significant cancer.

Aim: We assess results from targeted and non-targeted biopsies and compare them to final histological prostatectomy results.

Methods: Patients who underwent radical prostatectomy between 2017 & 2019 having had a prior prostate biopsy (transperineal excluded) were evaluated.

Results: Ninety-seven patients are included. Fifty-one patients had a targeted and 46 had a standard biopsy.

Standard Biopsy

Upgraded 30.7% (n=14)

Downgraded 21% (n=10)

No change 47% (n=22)

Targeted Biopsy

Upgraded 13.7% (n=7)

Downgraded 27.7% (n=15)

No change 57.8% (n=29)

Targeted biopsy significantly reduced the likelihood of upgrading on final histological results compared to standard biopsy, OR 0.4 (0.145 -1.124 95% CI, $p<0.05$). Patient who had a targeted biopsy were more likely to have been downgraded on final histology ($p=0.54$).

Conclusion: The use of MRI with targeted biopsy reduces the likelihood of upgrading on final histology compared to standard biopsy in radical prostatectomy specimens. A significant number of patients were downgraded on final prostatectomy specimens which may have

implications for intraoperative planning.

102. Efficacy of Commercialised Extracorporeal Shock Wave Lithotripsy Service: Outcomes of 100 Consecutive Patients

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Introduction: Many hospitals use outsourced extracorporeal lithotripsy (ESWL) services for renal calculi.

Aim: To compare stone-free rates (SFR) of this service to accepted international results of fixed-site lithotripters.

Methods: An analysis of 100 consecutive patients who attended for ESWL was performed. All treatments were done using a Storz Modulith SLK. The Triple D (TD) score (integrates three predictors of SWL success into a single score) was calculated. SFR rate after a single session of ESWL was assessed, then compared to predicted TD score from international outcomes.

Results: 58 (58%) patients were male, 42(42%) were female; the mean age was 54.2 years. ESWL was right side in 46 and left in 54. Stone characteristics; mean Hounsfield units were 939, mean skin to stone distance was 9.1 cm and mean elliptical volume was 200 mm³. Thirteen patients (13%) had a TD of 3,48 (48%) had a score of 2, 34 (34%) had a score of 1, and 5 (5%) had a score of 0. Using the TD score, 63 (63%) patients in this cohort should have been stone-free after one session of ESWL. However, no patient in this cohort regardless of TD score was stone-free after the first session. 100% of patients had a second ESWL session, and further analysis showed that the SFR rate was again 0%.

Conclusions: Our results demonstrate that the service provided by a mobile ESWL service falls short of expected international outcomes. This strengthens the argument for a fixed-site lithotripsy service within our region.

103. Electronic Urology Handover- A Quality Improvement Project

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Introduction: A handover should convey high quality and appropriate clinical information at shift change over, ensuring safe transfer of responsibility for patients. Verbal handover (VH) of urology patients has been practiced in TUH to date.

Aim: To implement a weekend electronic handover (EH) to share complete, comprehensive and key information with the clinical team.

Methods: The existing VH was audited over a 4 week period. An EH was then implemented by the urology team pre and post weekend calls over a pilot period of 2 weeks. The EH was then audited over a 5 weeks period. Primary outcomes measured were; number of inpatients, number of weekend discharges, patients' length of stay (LOS), number of readmissions and total number of emergency response team (ERT) calls over each period. Secondary outcomes included; handover quality, duration, and adherence to GDPR.

Results: Total number of patients included were 224. Weekend discharges improved by 100% over the 2 time periods ($p=0.013$). For patients' admitted over weekends, we noted a decrease in LOS from 4 days to 3.5 days ($p=0.072$) after the implementation of an EH. Readmissions decreased by 50% and number of ERT calls decreased by 40%. The average duration of handover was higher after the implementation of the EH (13.2 mins vs 9mins). EH shared significant relevant information while VH were deemed unsatisfactory.

Conclusion: Implementation of a weekend electronic urology handover in TUH has improved the way clinical information is shared, facilitated

increased weekend discharges, and enhanced patient safety.

104. Systematic Review of Regional Paediatric Urological Services

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Introduction: Specialised paediatric urology care is centralised in Crumlin and Temple Street. There is an extremely high regional demand and to reduce further pressure on already overstretched tertiary care centres. A model of care for paediatric urology service was developed within the Saolta region. This was in collaboration with Crumlin to provide local consultant delivered care.

Aim: To review the efficacy, safety and quality of service. Review of pathways involved in the process by way of auditing their implementation and progress to date.

Method: A retrospective review of paediatric urology service. Metrics analysed were referrals, DNAs, discharges, procedures performed, nursing staff and theatre access from 2012-2020.

Results: A regional need was identified for various types of paediatric urological abnormalities. A total number of 2552 patient's attended paediatric urology OPD, with 369 DNAs. Outpatients capacity was increased from 1 per month in 2012 to 4 a month with initiative clinics over the weekends. Theatre capacity was increased from half session a month to 4 session a month. 624 surgical procedures have been performed since 2013. There are currently 89 patients waiting for a procedure. An average of two complex procedures per year were referred to Dublin after an initial work up locally.

Conclusion: In our opinion the vast majority of non-complex paediatric urological procedures can be performed regionally with active engagement with HSE management and good support from Crumlin. We hope to increase diagnostic and therapeutic resources in future to improve the capacity of service.

105. Revolutionising Urology Outpatient Appointments in the COVID-19 Era: Are Telephone Consultations the Future?

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Introduction: The COVID-19 pandemic has necessitated radical changes to healthcare worldwide, including measures to promote social distancing to minimise virus transmission. As part of this effort, clinicians have introduced telemedicine into their daily practice. At The Stokes Centre for Urology, outpatient clinics were conducted exclusively via telephone following the government enforced lockdown. Although forced upon us, recent events may serve as a catalyst for the modernisation of healthcare delivery.

Aim: To establish patient satisfaction with telephone consultations, and to evaluate their potential for future use.

Methods: All patients who received a telephone appointment in a 1-month period were identified and invited to complete a questionnaire. An adaptation of the Telehealth Satisfaction Scale (TeSS) was used, with additional questions relating specifically to telephone consultations. No triage of patients was conducted.

Results: A total of 194 patients were included, and 119 patients completed questionnaires. 12 patients did not attend the telephone appointment. The mean item scores from the adapted TeSS ranged from 3.70 to 3.93 on a 4-point Likert scale, indicating high satisfaction. Additionally, 95.80% of respondents indicated overall satisfaction with the telephone appointment service, with 77.31% in agreement with their use following the pandemic. The nature of the clinical problem was frequently cited as an important consideration when selecting patients for telephone consultation.

Conclusion: Our study demonstrates high satisfaction with the use of telephone consultations amongst Urology patients. This supports their continued use once social distancing measures are relaxed. However, it is clear that in selected cases face-to-face consultations are required for safe, comprehensive clinical assessment.

106. Comparison of Intrarenal Pressures Generated By Irrigation Devices during Ureterorenoscopy in a Porcine Kidney Model

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Introduction: Elevated intrarenal pressure (IRP) during retrograde intrarenal surgery (RIRS) is a predictor of post-operative complications. The aim of this study is to evaluate IRP during RIRS in porcine kidney models with various ureteroscopes, access sheaths and irrigation devices to determine the safest combination for RIRS.

Methods: Urinary tracts were harvested from Landrace pigs slaughtered for the food chain. Two flexible ureteroscopes, 9.3Fr and 9.5Fr were evaluated with 11/13Fr and 12/14Fr access sheaths. Irrigation systems evaluated include: single action pumping system, small bulb irrigator, pressure chamber system and bag 'squeeze'. IRPs were measured in the porcine kidney during all possible combinations of scope, access sheath and irrigation system.

Results: The use of ureteric access sheaths was associated with significantly reduced resting IRP compared to no access sheath ($p < 0.0001$). The safest combination appeared to be with a large access sheath and smaller scope. While a larger scope and no access sheath/small access sheath was associated with higher pressures. The maximum IRP generated was 140cm H₂O with the single action pumping system. Indeed, this system generated higher IRP than small bulb irrigator, pressure chamber system and bag 'squeeze' ($p < 0.05$). No significant difference was noted between IRPs generated small bulb irrigator and pressure chamber system devices.

Conclusion: The use of a ureteral access sheath significantly lowers resting IRP during RIRS. The single action pump system creates significantly higher IRP than other irrigation devices despite the use of an access sheath and should be used with caution by urologists.

107. Sarcopenia and Body Composition Analysis – Initial Results of a Urological Surgery Cohort

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Introduction: The core feature of sarcopenia is low muscle strength, reduced quality and quantity of muscle mass. Sarcopenia is more prevalent with increasing age. It is associated with increased mortality. The Seca Bioimpedance Analysis (BIA) device has been deemed appropriate by the European Working Group on Sarcopenia in Older People for analysis of sarcopenia.

Methods: Following informed consent, patients were enrolled in a prospectively maintained database. Body composition analysis was performed on all patients using the Seca BIA device. Surgeries included radical prostatectomy, radical and partial nephrectomy and radical cystectomy.

Results: Preliminary data of 40 patients reveals a median age of 62; 50% had comorbidities and the mean BMI was 30.55. Thirty-five percent were sarcopenic with low Skeletal Muscle Mass (SMM). Visceral fat was elevated in 93%. Phase angle (PA) (a measure of healthy cell membranes)

was low in 21%. Ten patients had a complication ranging from transfusion requirement, to wound dehiscence or post-operative collection. Forty percent of patients with complications were in the sarcopenic group. Clavien Dindo complications ranged between 1-2.

Conclusion: Studies across varying oncological disciplines, have shown longer length of stay, poorer outcomes and higher rates of post-operative complications in patients undergoing surgery who have sarcopenia when compared to non-sarcopenic patients. Low SMM was evident in 35% of our cohort but they did not have a higher rate of complications than their non sarcopenic counterparts. This may be due to the low number of patients in each cohort or may represent differing complexity of surgeries.

108. Withdrawn

SESSION 14: TRAINING AND EDUCATION

109. Urology at Your Fingertips: The Development of A Urology E-Learning App for Medical Students

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Introduction: Surgical education has embraced advancing technology with an emphasis on e-learning in recent years. Smartphones are a useful tool for medical teaching and learning with increasing use by medical students to access e-books, medical calculators, podcasts and medical applications (apps).

Aim: Our aim was to develop a dedicated urology app for medical students as an adjunct to traditional teaching.

Methods: We published an e-book: "Urology Handbook for Medical Students" in 2017 based on the core urology curriculum for medical students. Subsequently, we developed a concise, simple and user-friendly smartphone app for medical students called "Urology Med", available for download on App Store and Google Play.

Results: This app is an introduction to urology for medical students but may also be useful for interns and surgical trainees. The app encompasses core urology topics subdivided into common urological presentations, urological examination, urological diseases and urological devices. To make the app interactive, it includes 5 clinical cases that complement the reading material and 6 quizzes for self-assessment. A comprehensive checklist of 31 "must see" and "good to see" urology experiences is included. Within one month of launch, the app was downloaded 435 times in 5 countries across 3 continents. It has a 5-star rating in the Apple store³.

Conclusions: High educational standards with relevant content make e-learning a valuable learning tool for Surgical Education. The Urology Med app facilitates easy access to urology and is ideal for quick reading while working or revising.

110. The Impact of COVID-19 on Surgical Training in the Republic of Ireland

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Introduction: The World Health Organisation declared a global pandemic on the 12th March 2020 resulting in implementation of methods to contain viral spread, including curtailment of all elective and non-emergent interventions. Institutions have experienced changes in rostering practices and redeployment of trainees to non-surgical services. Examinations,

study days, courses and conferences have been cancelled in light of restrictions. These changes have the potential to significantly impact the education and training of current RCSI (Royal College of Surgeons in Ireland) trainees.

Aim: To investigate the impact of the COVID-19 pandemic on training, educational and operative experiences of RCSI trainees.

Methods: Surgical trainees were surveyed anonymously regarding changes in working and educational practices since the declaration of the COVID-19 pandemic. The survey was circulated in May 2020 to both basic and higher RCSI surgical trainees electronically. Questions included level of training, specialty, previous and current operative experience, previous and current educational activities, access to senior-led training and access to simulation/practical based training methods. Quantitative and qualitative research methodology will be used to analyse results.

Results:

Conclusion: Surgical training has been significantly impacted in light of COVID-19, the extent of which will vary across level of training, region and specialty. Significant efforts have to be made to ensure trainees meet educational and operative targets and to ensure the ongoing pandemic does not continue to impact training opportunities.

111. Mapping Modifiable Lifestyle Factors That Impact On-Call Surgical Performance

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Introduction: Surgical performance is influenced by patient, disease and personal factors. This research explores the relationship between self-reported surgical performance and modifiable factors.

Methods: A standardised anonymous online mapping tool was distributed to consultants and NCHDs in surgery department of a Dublin University teaching hospital. The tool comprised of fifty questions mapped onto eight performance and wellbeing headers. Non-parametric testing determined statistically significant differences.

Results: Twenty-eight completed the mapping tool. The majority (40.7%) were registrars. Most (64.3%) reported regularly fatigue at work. Nearly half reported their on-call performance as either very good (48.1%) or excellent (1.5%), while 33.3% reported performance as poor. Those who reported better mental health (n=22) were more likely to report better on-call performance (r=.59, p=.027). Better self-reported on-call performance was associated with honesty in disclosing hours slept (p=.011). Several behaviours were associated with self-reported good on-call performance (Table).

Factor	Excellent	Very Good/Good	Poor	P value
Consistent sleep pattern	1.75	1.5	1	p=.049*
Regular breakfast	2	2	1	p=.022*
Regular lunch	2	1.8	1.6	p=.401
Sufficient hydration	3.2	2.8	2.6	p=.753
Regular fast food	3.5	3	4.6	p=.03*
Longer commute times	2.7	2.8	3.3	p=.51
Smoking regularly	1	1	1.2	p=.74
Increased alcohol	1.5	1.7	1.8	p=.52

Table: The influence of modifiable factors on self-reported on-call performance

Conclusion: Reported better on-call performance was significantly associated with good mental health and influenced by modifiable lifestyle factors. Strategies to improve personal wellbeing and positive psychology are needed in workplace.

112. Onsite Cadaveric Operative Sessions – “OCOS”

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Introduction: Hands on cadaveric surgical sessions can be a useful adjunct to training, especially when certain skill sets, steps to specific operations need reinforcement and revision. At our hospital, old original surgical theatres have been transformed into a designated skills lab, with specific space allocation to allow for cadaveric work to take place.

Aim: To enable our surgical senior house officers and registrars to attend frequent operation specific cadaveric sessions. This would give them hands on exposure, ability to practice and transfer their learned reinforced skill sets to actual live operating.

Methods: 3 planned sessions, 3 hours long were designated within a 4month period (Aug – Dec 2019). Each included two senior surgeon trainers, 2 theatres with a human cadaver set up for open surgical operations. At the start of each practical, an introductory presentation with relevant surgical anatomy & steps of chosen operations took place. CPD points were allocated.

Results: 10 participants on each day, spent hands on time carrying out "open" surgery. 1st session (28.08.19) covered inguinal hernia operations, with and without mesh repairs. 2nd session (09.10.19) was on perforated duodenal ulcer, cholecystectomy and splenectomy. Final workshop (18.12.19) concentrated on emergency laparotomy with subsequent Hartman's procedure, appendicectomy and right hemicolectomy. The groups feedback was positive. This has become part of our local training model with potential to expand.

Conclusion: Running such an exercise for our surgical trainees was feasible, fruitful, well attended and allowed for a unique exposure within their working timetable, without any undue stress.

113. Critical Care Experience of Surgical Non Consultant Hospital Doctors, Are We Equipped to Assist during The Covid-19 Outbreak and Beyond?

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Introduction: The ongoing COVID-19 pandemic has presented unforeseen threats and stresses to healthcare systems around the world, most notably in the ability to provide critical care. There are numerous examples from around the world of surgical staff being redeployed to support their colleagues in critical care.

Aim: To assess surgical NCHD experience in providing critical care and working in an intensive care environment.

Methods: An electronic survey was distributed amongst surgical trainees and then amongst individual surgical departments. Ten questions were included in the survey assessing the NCHD's experience with aspects of critical care.

Results: 39 respondents including 16 specialist registrars, 3 senior registrars, 11 registrars and 9 senior house officers. 18% of respondents had previous experience in anaesthetics or intensive care. 23% self-reported being competent in performing endotracheal intubation. 15% self-reported being competent in the use of CPAP and BiPaP, 5% did not know what these were. 20% self-reported being competent in the use of

AIRVO. 15% self-reported being competent in placing central and arterial lines. 15% self-reported being competent in starting and adjusting inotropes/vasopressors. 49% reported completing a CCRISP or BASIC course. 85% felt that a rotation in anaesthesia should be a routine part of surgical training.

Conclusions: Whilst there is critical care experience amongst the surgical NCHD cohort there remains room for further development.

114. Are Trainees And Educators on The ‘Same Page’ When It Comes to their Surgical Training Requirements? A Qualitative Study

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Introduction: With the recent introduction of European Working Time Directives (EWTd), the experience of the surgical trainees in the operative theatre has been negatively impacted. Trainees within the Basic Surgical Training (BST) program feel the need to have more practice and exposure to operative skills. The aim of this study is to analyse trainees’ experience during their BST and explore what is lacking in terms of teaching and practicing.

Methods: Descriptive qualitative study with semi-structured interviews were conducted with trainees and trainers. 10 BST trainees and 8 supervising trainers were interviewed and basic demographics were recorded. The number of participants was determined using the concept of saturation of content. The data outcome was analysed using inductive thematic analysis. The outcomes of the two sets of interviews were compared and conclusions were drawn.

Results: Ten trainees and 8 trainers were interviewed from various surgical specialties. Results showed 60% satisfaction rate of the current program amongst trainees with certain areas of improvement. These include research, hospital based training and improvement of the level of technical skills. The trainers’ interviews revealed general satisfaction with the training program in the ROI. The majority of the trainers felt the performance of trainees was average and 37.5% felt the performance has deteriorated overtime.

Conclusion: The current Basic Surgical Training program is of excellent quality in producing safe and efficient surgeons although certain aspects require improvement. This study can help provide direction for further qualitative research in surgical training.

115. Quantitative Effects of COVID-19 on Surgical Training - The Era of Competency Based Assessment

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Introduction: The COVID-19 pandemic has led to a nationwide reduction in surgical services provided to patients. This inherently leads to a significant impact on the quality & quantity of operative surgical exposure, an aspect which is imperative in a candidate’s surgical training and professional development.

Aim: The study aims to plot the trend in the number of cases that each individual NCHD was involved in during the period of August 2019 to June 2020.

Method: All general surgical registrars and senior house officers were recruited and the numbers of surgical cases in their respective logbooks

analyzed. All logbooks will be analyzed to review the number of elective and emergency operations as well as endoscopic procedures.

Results: A total of 9 surgical NCHDs were recruited from Mayo University Hospital, 5 of which are registrars and 4 senior house officers. From August 2019 to February 2020 NCHDs averaged 41 cases per month. During the month of March 2020, this number reduced to an average of 25 cases per month, a reduction of 39%. This fall is even more dramatic in April 2020 where the NCHDs averaged 6 cases per month, a reduction of 85%.

Conclusion: The reduction in operative experience secondary to the COVID-19 pandemic reiterates the need to establish specific measures to support the needs of surgical trainees for the duration of this pandemic. Intra-operative assessment of competency may provide an alternative means of assuring quality of training in an environment of reduced exposure to operative procedures.

116. Fatigued Surgeons – Would You Let Them Fly A Plane?

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Introduction: High levels of fatigue are thought to occur in on-call surgical services. No occupational controls exist to mitigate the potential negative effects of fatigue. Understanding the baseline level of fatigue and subjective performance of surgeons is warranted.

Methods: A sample of surgical consultants and NCHDs in a Model-4 teaching hospital were invited to complete a standardised questionnaire. Validated themes around fatigue and performance on-call were explored. Kruskal-Wallis was used to test statistical differences.

Results: The clear majority (64.3%) of 28 respondents reported feeling regularly fatigued. Surgeons slept a median of 7 hours (5-7). 35.7% were not meeting the National Sleep Foundation guidelines of 7-9 hours. The fatigued cohort reported increased rates of poorer mental health (p=.009), stress at work (p=.034), difficulty in ‘switching off’ after work (p=.034), and being anxious or depressed (p=.001). Further significant causations and effects are recorded in Table below.

Conclusion: Surgeons self-report a high amount of fatigue. The causes of fatigue appear multifaceted and closely linked to well-being. There is a need for developing appropriate and fatigue management protocols similar to other high stakes professions.

Causes	Effects
Eating more fast food	Impacts non-surgical professional tasks
Less hydration	Difficult to ‘switch off’
Poor self-management of fatigue	Disruption to work
Less sleep on-call	Poorer on-call performance
	Bothered by emotional problems
	Less honest about hours slept to patients
	More stressed at work
	Poorer self-reported mental health
	Disruption to social activities

Table: The Causes and Effects of Fatigue

117. The Future of General Surgery in Ireland Factors Influencing Career Decisions of Medical Students

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Introduction: The decline in popularity of general surgery as a career has been described. A number of factors have been put forward to explain this, for example burnout and difficulty with work/life balance. The aim of this study was to elucidate the reasons for this among medical students in Ireland.

Aims: To assess the current level of interest of medical students in pursuing a career in general surgery and their perception of general surgery as a career.

Method: A questionnaire was distributed to clinical year medical students in Ireland using an online survey via SurveyMonkeyTM. Domains

assessed included demographics, career plan and associated rationale. Anonymised responses were collated and evaluated.

Results: There were 307 responses (response 23%). Females accounted for 66% (202). Mean age was 24y (SD=2.89). 112 (36%) were contemplating becoming surgeons. 195 were not considering surgery, however 87 had previously considered. Of the 87, 41 (47%) attributed the decision to work/life balance, 30 (35%) to impact on personal relationships and 10 (11%) blamed unclear career projection. Students interested in surgery were asked to quantify their knowledge of the application process- 17 (15%) good, 39 (35%) fair and 56 (50%) poor.

Conclusion: A small proportion of respondents plan to pursue a career in general surgery. This is concerning in view of attrition rates through junior years. Although lifestyle factors are significant, clarity regarding training pathways was also reported. Undergraduate education regarding career trajectory, quality of life and practicalities of a career in general surgery may increase applications.

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