# THE 18TH LONDON SURGICAL SYMPOSIUM

**Wednesday, 27th of March 2024**

LSS
LONDON SURGICAL
SYMPOSIUM

# GROWING THROUGH ADVERSITY

#LSS2024

In the middle of a
difficulty lies opportunity.

ALBERT EINSTEIN

# PROGRAMME OVERVIEW

| | |
|---|---|
| **08:00** | **Registration** |
| **08:50** | **Welcome** |
| **09:00** | **Invited Lectures Part One** |
| **11:00** | **Coffee** |
| **11:30** | **Invited Lectures Part Two** |
| **12:30** | **Posters and Lunch** |
| **14:00** | **The Averil Mansfield Abstract Prize Session** |
| **15:15** | **The Hugh Dudley Memorial Session** |
| **15:50** | **Coffee** |
| **16:05** | **The Simpson Smith Memorial Session** |
| **16:55** | **Prizegiving** |
| **17:00** | **Symposium End** |
| **18:00** | **Post Conference Reception** |

# FIND US

## SYMPOSIUM VENUE

Sir Alexander Fleming Building
Imperial College
South Kensington Campus
London
SW7 2AZ

## REGISTRATION & LUNCH

**Foyer**
Sir Alexander Fleming Building

## LECTURES

**G16 Lecture Theatre**
Sir Alexander Fleming Building

## POSTERS

**G16 Lecture Theatre**
Sir Alexander Fleming Building

## POST-CONFERENCE DINNER

**Ognisko**
155 Exhibition Road
London SW7 2PG

# Imperial College London

↑ Hyde Park

A  B  C

N

150m / 2 min walk

Royal Albert Hall

Royal Geographical Society

Imperial College Union

Beit Quadrangle

Diamond Jubilee Steps

Holy Trinity Church

BREMNER RD

JAY MEWS

JAY MEWS

KENSINGTON GORE

KENSINGTON GORE

**PRINCE CONSORT ROAD**

Blackett Laboratory

Roderic Hill Building

Bone Building

Royal College of Music

Royal School of Mines

Ethos Sports Centre

8–9 Prince's Gardens

14–15 Prince's Gardens

Weeks Hall

PRINCE'S GARDENS

Huxley Building

ACEX Building

Electrical and Electronic Engineering Building

Bessemer Building

Business School

52 Prince's Gate

53 Prince's Gate

Eastside Restaurant and Bar

PRINCE'S GARDENS

William Penney Laboratory

Energy Futures Lab

Dalby Court

City and Guilds Building

College Main Entrance

Prince's Gardens

AYRTON RD

SHERFIELD WALKWAY

Grantham Institute

Faculty Building

58 Prince's Gate

CALLENDAR ROAD

Great Hall

Sherfield Building (West)

Sherfield Building (East)

WATT'S WAY

Abdus Salam Library

Dangoor Plaza

Queen's Tower

Skempton Building

Wohl Reach Out Lab

Southside

Health Centre

QUEEN'S GATE

WELLS WAY

170 Queen's Gate

**IMPERIAL COLLEGE ROAD**

PRINCE'S GATE MEWS

Gloucester Road 10 min walk

Sir Ernst Chain Building – Wolfson Laboratories

Chemistry Building

Sir Alexander Fleming Building

Royal College of Science

Dyson Building of Design Engineering

Flowers Building

ARMSTRONG ROAD

FRANKLAND RD

Science Museum

EXHIBITION ROAD

UNWIN RD

## LSS
### LONDON SURGICAL SYMPOSIUM

V&A

CROMWELL GARDENS

EXHIBITION ROAD

THURLOE SQUARE

THURLOE ST

South Kensington

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## SOUTH KENSINGTON — Campus map

## Key

- Visitor reception
- Chaplaincy Multi-Faith Centre
- Imperial College Union Shop
- Food and drink
- Internal route
- Building entrance
- Building entrance/exit via steps only
- Campus shuttle pick-up/drop-off point
- Health Centre
- Underground station
- Vehicle entrance
- Cycle hire
- Bus stop
- Publicly accessible toilets

For more information about the accessibility of our buildings search Imperial College London at www.accessable.co.uk

# PROGRAMME

## INVITED LECTURES PART I

**09:00**

**Out of Difficulties Grow Miracles**
**Lessons From the Lives of Extremophiles**
Mr James Kinross
Imperial College

**09:30**

**This Storm Will Pass**
**Understanding Moral Injury**
Dr Victoria Williamson
Kings College

**10:00**

**Growth Begins at the Edge of Your Comfort Zone**
**Breaking Boundaries in Ovarian Cancer**
Professor Christina Fotopoulou
Imperial College

**10:30**

**Adversity Is One of Life's Great Teachers**
**Lessons From Pelvic Mesh**
Professor Sohier Elneil
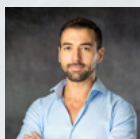University College London

## INVITED LECTURES PART II

**11:30**

**Courage Doesn't Always Roar**
**Why Personality Matters**
Dr Carly Bisset
University of Glasgow

**12:00**

**The Greater the Obstacle, the More Glory in Overcoming It**
**Tackling Scarcity With Frugal Innovation**
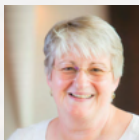Professor David Jayne
University of Leeds

**12:30**

**Dawn Comes on the Other Side of Darkness**
**Surviving Sepsis**
Dr Matthieu Komorowski
Imperial College

# PROGRAMME

## THE AVERIL MANSFIELD PRIZE SESSION



**14:00**

**Problems Are Solution Opportunities – The Key to Navigating a Non-traditional Career Pathway**
Professor Gerry Thomas
Imperial College



**14:15**

**Prize Papers**
Presented by Professor Averil Mansfield

## THE HUGH DUDLEY MEMORIAL SESSION



**15:15**

**Fistula-in-Ano - The Backstory of Medieval Proctology**
Professor Stephen Chadwick

## THE SIMPSON-SMITH MEMORIAL SESSION



**16:05**

**Hiding Behind the Truth - An Observational Study of Some 40 Years in a Career in Surgery**
Professor Peter Dawson

**16:35**   Experiences of the 2022/3 Simpson Smith Travel Award

**16:50**   The Simpson-Smith Travelling Fellowship Announcement

**16:55**   Prizegiving and meeting close

# NAMED LECTURES

Professor Hugh Dudley was a brilliant and demanding figure, setting high standards in surgery, research, and conduct. Renowned for his wide-ranging original research and peer-reviewed writings, he wrote on a wide range of topics in surgery randing from cancer and pancreatitis to the metabolic response to surgery.

During his tenure as Foundation Professor at Monash University in Australia, he not only established academic benchmarks but also served as the President of the Australian Surgical Research Society. His heroism was evident in his voluntary surgical fieldwork in Vietnam. Later, at St Mary's Hospital Medical School (1973-1988), Professor Dudley's leadership propelled the institution to eminence in academic circles, solidifying his legacy in the realms of education and medical research.



**HUGH DUDLEY**



**AVERIL MANSFIELD**

Dame Averil Olive Bradley, professionally known as Averil Mansfield, is a retired English vascular surgeon and the first British woman appointed a professor of surgery in 1993. Born in 1937 in Blackpool, Mansfield's early life was marked by her mother's health challenges, influencing her future medical specialization. Inspired at the age of eight by a book on surgical advancements, she pursued her dream, graduating from the University of Liverpool School of Medicine in 1960.

Beginning her career at the Royal Liverpool University Hospital, Mansfield later became a consultant vascular surgeon and lecturer at the University of Liverpool. Relocating to London in 1980, she joined Hillingdon Hospital and was appointed as a consultant vascular surgeon at St Mary's Hospital in Paddington in 1982.

Beyond her clinical role, she served as an honorary senior lecturer and founded the RCS's Women in Surgical Training committee in 1991. In 1993, Mansfield achieved a historic milestone as the first female professor of surgery in the United Kingdom. Recognized with a Commander of the Order of the British Empire (CBE) in 1999, she retired in 2002, subsequently becoming a Fellow of the Royal College of Physicians. Notably, she founded Women in Surgery, encouraging gender diversity in the field. In 2018, she received an NHS Heroes Award. In the 2023 Birthday Honours, Mansfield was appointed Dame Commander of the Order of the British Empire (DBE) for her significant contributions to surgery and equality.

# NAMED LECTURES

Alex Simpson-Smith, born in Honley near Huddersfield in 1900, faced adversity early on when burns to his right hand at age three led to multiple surgeries, leaving him with a significant deformity. Despite this, he excelled in education, attending Worksop College and eventually pursuing medicine at Guy's Hospital, completing his studies in 1922. His dedication to rugby, representing Guy's Hospital and Surrey, showcased his resilience despite the hand deformity.

Qualified in 1925 with MRCS (Eng) LRCP (Lon) and MBChB (Cantab), Simpson-Smith faced challenges in gaining an honorary staff position at Guy's Hospital, leading him to leave in 1930. Venturing to the Massachusetts General Hospital in Boston, he undertook research on experimental peptic ulceration. In 1934, he became Honorary Surgeon at The Hospital for Sick Children, Great Ormond Street, and Assistant Surgeon to the West London Hospital.

## ALEX SIMPSON SMITH

Simpson-Smith's commitment extended beyond peacetime, as he volunteered for service in the Royal Army Medical Corps during the Munich crisis. Rising to the rank of major at the outbreak of World War II, he served in North Africa, notably leading the 13 General Hospital in Tobruk.

Tragically, during the evacuation in July 1942, Simpson-Smith disappeared while transporting crucial research records. His widow, Marguerite, established the Alex Simpson-Smith Memorial Fund, supporting annual lectures and fellowships for young surgeons. His legacy endures, inspiring advancements in surgical knowledge and education.

# ABSTRACTS

**ORAL 1**
**Living with Faecal Incontinence: A Systematic Review and Meta-Ethnography**
Amal Ahmed1, Maryam Khan1,2, Victoria Williamson3,4, Emma V Carrington1,5
1 Translational Colorectal Research Laboratory, Department of Surgery and Cancer, Imperial College London, London, UK
2 The Royal College of Surgeons of Ireland, Dublin, Ireland
3 IOPPN, King's College London, London, UK
4 Psychology Department, University of Exeter, UK
5 St Mary's Hospital, Imperial College NHS Trust, London, UK

**Introduction:** Faecal incontinence (FI) affects up to 8.3% of the population with physical, psychological and social consequences. Sadly, patient experiences remain under-explored, and most symptom measures are based on clinical outcomes rather than patient narratives. This study aimed to describe the lived experience of FI through review of published qualitative studies.
**Method:** A systematic literature search of qualitative studies of patients with FI published between 2003-2023 was conducted. An inductive approach by 2 reviewers enabled identification of key concepts. Collaboration with a third reviewer then generated higher-order interpretations. Finally, a meta-ethnographic method was utilised to construct a comprehensive thematic framework of lived experiences of FI.
**Results:** Of 3394 studies identified, 13 were included. Six major themes emerged: quality of life, adaptation, protection, wider environment, perception and healthcare experiences. The most prevalent theme was quality of life, incorporating mental health, social well-being, functional ability, and physical impact of FI. Adaptation encompassed behavioral changes, dietary modification, and adjustments to routine. Protection comprised risk management strategies and symptom concealment. Wider environment described navigation of professional and public environments. Perception described self-perception, societal attitudes, and condition awareness. Healthcare experiences included access to care, clinician-patient interactions, and fulfilment of health needs.
**Conclusions:** This study provides a new, patient-centric framework of lived experiences of FI and gives insight into the breadth of factors contributing to the burden of this condition. Many themes found are not represented in current outcome measures highlighting the need for new ways of describing the impact of FI.

**ORAL 2**
**Remimazolam Besylate inhibits human prostate cancer cell (PC-3) viability, migration and promotes apoptosis in vitro**
Abdulrahman Alsharif1, Lucas Gabrovic1, Yifei Wang2, Hailin Zhao2, Daqing Ma1
1 Imperial College, London
1 Chelsea and Westminster Hospital, London

**Introduction:** Currently, 15% of UK patients with prostate cancer receive surgery, where the choice of anaesthetic has the potential to affect disease recurrence. While no consensus exists as to which anaesthetic has potential linking to cancer recurrence after surgery, pre-clinical data suggest that intravenous agents may be superior to volatile agents which are cancer promoting1, 2. Remimazolam besylate is a new intravenous anaesthetic that acts on the GABA-alpha subunit of the benzodiazepine receptors and is broken down by tissue-nonspecific esterases; its effects on prostate cancer cells has not be characterized 3. This study aims to characterize the effect of Remimazolam on PC-3 prostate cancer cell viability and migration, and further assess mitochondrial activity.
**Method:** Cultured PC-3 cells were treated with Remimazolam concentrations varying from 0.1 to 500 µM for 24 hours. Their viability was assessed with MTT assay. Further migration assays, immunofluorescence staining, and mitotracker assays were conducted on the cells treated with 300 µM of Remimazolam. The expression levels of multiple cell cycle and apoptotic markers were measured.
**Results:** Remimazolam reduced PC-3 cell viability in a dose-dependent manner from 100 (21.6% decrease [P = 0.034]) to 500 µM (70% decrease [P < 0.0001]). At 300 µM, it decreased cell migration by 66 % (P<0.0001). Furthermore, Ki-67, cyclin A and cyclin D expression were reduced after treatment (77.7% reduction, P<0.0001; 46.5% reduction, P = 0.0128; 47% reduction, P = 0.0128; respectively); while caspase-3, caspase-9 and cytochrome C expression were all increased (44% increase, P = 0.0483; 47% increase, P = 0.0013; 26% increase, P = 0.0012; respectively). In addition, 300 µM of remimazolam decreased mitochondrial mass compared to that in the vehicle group by (53.3% decrease [P = 0.0479]) (Figure.1).
Conclusions: Remimazolam decreased PC-3 cell proliferation and stimulated the intrinsic apoptotic pathway to cause cell death. The drug has "anti-cancer" properties, but its effect needs to be further explored in in vivo setting.

**ORAL 3**
**A 6-year retrospective study of vulvar cancer in a tertiary hospital in Indonesia: Portraying incidence trends and predicting adverse clinical features**
Muhammad Habiburrahman1,2,3, Danny Maesadatu Syaharutsa2,3, Tofan Widya Utami2,3, Andi Darma Putra2,3, Fitriyadi Kusuma2,3, Laila Nuranna2,3, Hariyono Winarto2,3
1 Division of Cancer, Department of Surgery and Cancer, Faculty of Medicine, Imperial College London, London, UK
2 Division of Gynaecological Oncology, Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia
3 Dr. Cipto Mangunkusumo National Referral Hospital, Jakarta, Indonesia

**Background:** This study investigated the rare occurrence of vulvar cancer (VC) in Asia, focusing on Southeast Asia, where data is scarce. We aimed to analyse the annual incidence trends, comprehensive profiling characteristics, and associative models of advanced-stage and distant metastasis in Indonesian VC patients.
**Methods:** Studying 86 eligible vulvar cancer cases in an Indonesian tertiary hospital, we compared clinicopathological and treatment-related characteristics based on staging and distant metastasis (DM). Joinpoint was used for trend analysis, expressed as an annual percentage change (APC). Univariate and multivariate logistic regression analyses established a logistic-regression model for advanced stage and DM occurrences, with the model's discrimination performance assessed using the ROC curve.

**Results:** Over 6 years, the incidence of VC significantly increased annually (+21.43%, p=0.034). This increase was more pronounced in older patients, rural communities, and VC cases without DM compared to their counterparts (+25.53% vs. +19.61%, +22.25% vs. +19.08%, and +30.50% vs. +9.95%, respectively). The logistic-regression model for advanced-stage VC identified associated traits such as urban living (OR 5.12), right-sided lesion (OR 7.93), bilateral lesion (OR 10.25), and tumour volume ≥70 cm3 (OR 10.88); achieving an AUC of 0.81, p<0.001. Associated traits to VC with DM included normal-underweight nutritional status (OR 5.50), presence of pain (OR 4.88), right-sided lesion (OR 13.80), and non-keratinised tumour (OR 5.72) with an AUC of 0.80, p<0.001.
**Conclusions:** VC incidence in Indonesian patients has notably risen annually, particularly in older patients, rural areas, and cases without DM. Specific clinicopathological characteristics are linked to adverse clinical outcomes in VC.

**ORAL 4**
**Tenascin-C as a target for Intra-operative margin assessment in patients after neo-adjuvant chemotherapy.**
Sneha Kanth1, Victoria Ngai2, JTJ Tai4 , Delvira sunggoro3, , Jasmine Lee5, Soha El Sheikh5, Muneer Ahmed6
1 UCL, Medicine, London, United Kingdom.
2 UCL, Medical School, London, United Kingdom.
3 UCL, Division Surgery and Interventional Sciences, London, United Kingdom.
4 Royal Free Hospital, Oncoplastic Breast Surgery, London, United Kingdom.
5 UCL, Histopathology, London, United Kingdom.
6 UCL, Division of Surgery and Interventional Sciences, London, United Kingdom.

**Introduction:** Re-excision rates following breast-conserving surgery (BCS) are high, especially after neoadjuvant chemotherapy (NACT). Intraoperative margin assessment is limited in this patient group. This retrospective analysis investigates using tenascin-C (TN-C), an extracellular matrix protein, for intraoperative margin assessment in BCS post-chemotherapy.
**Method:** A cohort of 24 breast cancer patients who had NACT participated in the study. Core biopsies were taken before treatment (Pre-NACT) and breast specimens after (Post-NACT). Samples were stained with anti-TNC antibody and the TN-C staining at the margin was correlated with histology. TN-C expression was also scored between 0 (none)- 3 (strong) to assess change in TN-C expression following NACT. Statistical analysis included Spearman's correlation and Wilcoxon sign tests, with a significance level set at p ≤ 0.05.
**Results:** In Pre-NACT samples, TN-C expression consistently encapsulated tumour invasive edge in 17/20 cases, giving a sensitivity for margin assessment of 85%. In post NACT samples, TN-C's had a sensitivity of 56.25% and specificity was 53.33% In margin assessment when correlated to histology. When we only considered samples in which the initial pre-NACT invasive edge TN-C staining was at least week-moderate (≥ 1.5), the sensitivity and specificity increased to 100% and 60% respectively. Additionally, complete pathological response (pCR) was correlated to a decrease in TN-C expression (r= -0.57, p=0.003).
Conclusion: Our proof-of concept study shows that using TN-C expression is feasible for use in margin assessment of residual breast cancer lesions after NACT in a subset of patients. These patients can be identified before NACT as having a TN-C expression at their invasive edge that scores ≥ 1.5. This provides more reliability than existing tools. Furthermore, reduction in TN-C with pCR and TN-C role in breast cancer progression, points toward a potential prognostic role.

**ORAL 5**
**Proof-of-Concept: Can Wearable Devices Differentiate Upper-Limb Exercises used in Breast Cancer Surgery Rehabilitation?**
Ahmed Latif1, Meera Joshi1,2, Gianpaolo Fusari3, Leila Shepherd3, Ara Darzi1, Daniel R Leff1,2
1 Institute of Global Health Innovation, Imperial College London, London
2 Imperial College Healthcare NHS Trust, London
3 The Helix Centre, Imperial College London, London

**Background:** Breast cancer (BC) is the commonest cancer worldwide. Most BC patients suffer mild to moderate shoulder disability post-axillary surgery, yet physiotherapy is not routinely offered. Patients are given exercise leaflets without monitoring of compliance. This proof-of-concept study uses an experimental app that detects tri-axial movement, utilising a smartwatch gyroscope and accelerometer. The study aims to assess whether wearables can differentiate post-BC surgery exercises, and different levels of exercise restriction.
**Methods:** Ten healthy adults were asked to perform six cycles of nine exercises routinely prescribed to post-operative BC patients for shoulder rehabilitation. Their upper-limb movement outcomes, including gravity, acceleration, attitude and rotation-rate were recorded for each exercise over three sets of movement. Set one was performed without restriction, set two was performed with a restriction band to simulate muscle injury and weakness, and set three was performed with 50% range of movement (ROM) restriction to simulate movement limitation due to pain or chording.
**Results:** Nine unique tri-axial waveform signatures were identified for each of the nine post-operative exercises. Simulated band restriction and 50% ROM restriction produced widening of the tri-axial waveforms, with peaks and troughs of the sinusoidal waveforms narrowing with increasing restriction.
**Discussion:** This proof-of-concept study demonstrates that wearables can differentiate exercises used in post-BC surgery rehabilitation. Moreover, it shows that wearables can detect exercise restriction, and have potential to monitor patient progress through their rehabilitation. Further studies utilising a movement classifier or a neural network should explore the utility of wearables in providing remote monitoring of self-directed rehabilitation.

# ABSTRACTS

**POSTER 1 - LS001**
**Understanding influences on waste in operating theatres: an interview study about unnecessary glove use**
Aws Almukhtar2, Carys Batcup1, Aarya Menon2, Pelin Demirel1, Gaby Judah2, Talya Porat1
1 Dyson School of Design Engineering, Imperial College London, Imperial College Road, South Kensington, London, SW7 2DB
2 Department of Surgery and Cancer, Imperial College Healthcare NHS Trust, St Mary's Hospital, 10th Floor Queen Elizabeth Queen Mother Building, W2 1NY, London

**Background:** Approximately 5.5 billion disposable gloves are used across NHS England annually. Many of those are used in operating theatres (OTs), often unnecessarily: alcohol hand gel and hand washing have a lower environmental impact and are in many cases safer alternatives. However, the influences on unnecessary glove use are not well understood. Therefore, we investigated the key behavioural determinants for overuse of non-sterile, single-use gloves in OTs.
**Methods:** Nineteen surgeons, nurses and anaesthetists (of different specialties and seniority) were interviewed using a semi-structured technique based on the Theoretical Domains Framework (TDF). Transcripts were analysed using framework analysis and mapped to the TDF.
**Findings:** Six themes were identified, covering ten of the 14 TDF domains. Participants described the influence of the wider context of the NHS, including having finances taking precedence over sustainability, and a lack of incentivisation to reduce waste. Patient outcomes were described as the highest priority, resulting in a reluctance to change current practices. There are strong social influences: a less communicative or familiar team results in more waste, and junior staff model the glove wearing of more experienced staff. Alternatives to gloves were reported to be much less readily available, resulting in higher glove use. There are no clear guidelines for glove use, and limited training, leading to the influence of individual differences, such as 'common sense', habits, values and years of experience.
**Discussion:** This study provides insight into an important behaviour affecting sustainability in healthcare, and will inform the design of appropriate and effective interventions.

**POSTER 2 - LS002**
**Remote Patient Monitoring for Patients Awaiting Elective Cardiac Surgery: What Symptoms Should We Monitor?**
Thanakorn Rojanathagoon1,2, Anas Boulemden3, Niki Nicou3, Adam Szafranek3, Jacob Chacko3
1 School of Medicine, University of Nottingham, Nottingham, United Kingdom
2 Faculty of Medicine, Srinakharinwirot University, Bangkok, Thailand
3 Trent Cardiac Centre, Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

**Background:** Patients waiting for major cardiac surgery have significant comorbidities and are at risk of morbidity and mortality whilst awaiting intervention. With prolonged waiting times, remote patient monitoring (RPM) allows for regular monitoring of patients who may demonstrate evolving symptoms and herald the risk of an adverse event. RPM and the utilization of current technology allows clinicians and healthcare systems to monitor the waiting list and amend surgical priority thereby minimizing the risk of adverse events. This study sought to guide RPM by evaluating the key symptoms and preoperative risk factors to monitor that lead to increased mortality & perioperative complications.
**MethoDs:** A literature review was conducted. Data was collected through Pubmed, Ovid MEDLINE, Embase, and Google Scholar. Articles were screened and relevant articles were extracted; results were summarized in the related section.
**Results:** Eighteen manuscripts were reviewed with a total of 121,555 patients. Key outcomes of common symptoms and risk factors used to assess preoperative patients for worsening were: impaired left ventricular function (66%); unstable angina (44%); myocardial infarction, prior history of MI, or AMI (33%); atrial fibrillation, non-AF arrythmia, and ECG abnormalities (27.7%); congestive heart failure and associated symptoms (22%); and others.
**Discussion:** Based on a review of existing literature we have identified the key risk factors associated with adverse outcomes whilst waiting cardiac surgical intervention. For RPM systems we suggest that the utilization of technology and a questionnaire specifically monitoring for the above risk factors will result in a lower rate of adverse events on the waiting list.

**POSTER 3 - LS003**
**How Does Exercise Aid Recovery After Surgery in Patients with Breast Cancer: a Quantitative Analysis of Quality of Life and Patient Satisfaction**
Saran S Gill1, Anushka Shukla1, Srikar R Namireddy1, Sarah Moin2
1 Faculty of Medicine, Imperial College London, London, UK
2 The Hillingdon Hospitals Foundation Trust, London, UK

**Background:** Trials to assess differences in FACT-B (Functional Assessment of Cancer Therapy - Breast) over time, as a proxy for quality of life and patient satisfaction, in patients that have surgical interventions for breast cancer, between arms that have prescribed exercise in their recovery compared to a control are rare. Conflicting data and results make it difficult to determine the extent to which exercise can help to improve postoperative recovery.
**Methods:** PubMed and Cochrane were searched for randomised controlled trials up to 15.12.23, reporting FACT-B at baseline and at least one other data point within 24 months. Data was extracted by 2 researchers. Mean monthly change in FACT-B after surgical intervention for breast cancer in patients that have had a prescribed exercise routine, compared to those that have not, were assessed using unpaired T testing. 1221 records were screened. 6 studies enrolling 642 participants met the eligibility criteria and were analysed.
**Results:** The mean monthly rate of ΔFACT-B score differed significantly between intervention and control groups (1.31 ± 3.40 vs 0.46 ± 3.55, respectively; p < 0.001). However, upon considering the effect size, the overall pooled Mean Difference estimate showed no significant differences (D = 0.20, 95% CI = -0.12 to 0.51, p = 0.22), with moderate heterogeneity (I² = 69%, p = 0.006).
**Conclusions:** Change in FACT-B over time may be a useful measure of treatment efficacy in patients that have had surgery to treat breast cancer. This could be assessed in practice, and exercise could be used as a formal method of treatment, potentially provoking a change in the post operative guidelines for patients with breast cancer. This could inform future trial design, and could encourage physical activity among patients. Higher powered trials are required to validate our results.

**POSTER 4 - LS004**
**Evaluating prescribing practice of best medical therapy in patients with peripheral arterial disease requiring lower limb interventional angioplasty**
Runzhi Chen1, Nickisha Patel1, Xun Luo1, Jorlin Liu1, Monty Fricker1, Joseph Shalhoub1
1 Department of Vascular Surgery, St Mary's Hospital, Imperial College Healthcare NHS Trust, London, W2 1NY

**Introduction:** Peripheral arterial disease (PAD) affects 1 in 5 people over the age of 60 years old and increases the risk of chronic limb-threatening ischaemia with subsequent tissue loss. Stringent risk factor modification with best medical therapy (BMT) is the first-line treatment for patients with PAD. The aim of this audit was to evaluate prescribing practices of BMT based on recommendations by the European Society of Cardiology (ESC) PAD guidelines for our cohort of patients pre- and post-lower limb interventional angioplasty at a specialist tertiary centre.
**Methods:** Patients who received lower limb interventional angioplasty between July-September 2021 were included. BMT was defined as dual antiplatelet therapy or single antiplatelet therapy with an anticoagulant, and lipid-lowering therapy. Development of local trust guidelines with key stakeholders and departmental teaching were implemented based on the results from the first cycle. The evaluation was performed on patients receiving angioplasty between June-August 2023.
**Results:** First cycle analysis of 30 patients observed that only 44% of patients were prescribed BMT on discharge. Barriers to gold-standard prescribing included inconsistent documentation of medications and discharging junior doctors finding the ESC PAD guidelines vague or difficult to interpret. After implementation of local trust guidelines and teaching, the second cycle analysis of 45 patients showed an improvement of 82% of patients discharged on BMT.
**Conclusion:** Overall, this audit highlighted inconsistent prescribing of BMT secondary to lack of confidence in current guidelines. Design and implementation of local trust guidelines and teaching led to marked improvement in doctors prescribing BMT post-angioplasty.

**POSTER 5 - LS005**
**Surgical trainee experiences from 2013 to 2023 within the United Kingdom as reported by the General Medical Council National Training Survey**
Neil Donald1
1 Department of Surgery, Dartford and Gravesham NHS Trust

**Introduction:** The General Medical Council (GMC) issues annual surveys to all doctors within the United Kingdom (UK) in a formal postgraduate training scheme. This facilitates the monitoring of experiences for quality assurance purposes. Low job satisfaction is associated with heightened burnout and staff turnover, as well as deteriorating clinical care and productivity levels.
**Methods:** We gathered and extracted data from the publicly available online GMC reporting tool. Data ranged from 2013 to 2023 and spanned 12 postgraduate surgical training programmes across all 18 indicators available. In total, 198 individual metrics were recorded, in addition to burnout. We conducted trend analysis and yearly average mean scores for individual metrics, burnout, and geographical differences for 141 individual training programmes within the 16 training regions.
**Results:** Of the 198 metrics analysed, 83 (42 %) were found to have statistically significant negative trends (P < 0.05), in comparison to 24 (12 %) with positive trends. 5 specialities had over 50 % of metrics showing a significant negative trend. Overall satisfaction was negative in all 12 programmes, with eight reaching significance (P < 0.05). Of 141 individual training programmes, 29 % showed a significantly negative trend in overall satisfaction, with 1 % demonstrating a significant positive trend (P < 0.05).
**Conclusion:** Our study is the first to explore long-term trends in trainee-reported surgical training experiences within the UK. Our data have revealed widespread worsening trainee-reported experiences and dissatisfaction across multiple specialities and geographical regions, especially in key areas of overall satisfaction, self-development, and clinical supervision.

**POSTER 6 - LS006**
**Incidence and trends in workplace violence within emergency departments in the United Kingdom 2017–2022: an observational time series analysis**
Neil Donald1
1 Department of Surgery, Dartford and Gravesham NHS Trust

**Background:** Workplace violence (WPV) is a notable issue facing healthcare services and workers globally. WPV impacts the well-being of staff and can put healthcare provision at risk with detrimental effects on patient care. This study aims to investigate and quantify the incidence and trends of WPV within emergency departments (EDs) at national and regional levels.
**Methods:** We requested data relating to WPV from all 152 trusts with an ED in the UK from January 2017–March 2022. We applied interrupted time series and trend analysis to check for significant differences in WPV across the COVID-19 pandemic.
**Results:** We conducted time series analysis on 58 million attendances and detected statistically significant increases in WPV in March 2020-5.06/100,000 attendances (95% CI 1.59/100,000–8.53/100,000 p < 0.01) and May 2020–20.63/100,000 attendances (95% CI 9.39–31.87 p < 0.01). We analyzed 96 million attendances for yearly trends, which revealed statistically significant increasing trends of WPV in London and North-West England (p < 0.05) and physical WPV in North-West England (p < 0.05).
**Conclusion:** There have been dramatic increases in WPV incidents in United Kingdom EDs over the last five years, with concerning rises during the COVID-19 period. Our findings highlight the potential to further demoralize a workforce already under significant strain, resulting in increased physical or mental health absences and an exodus of staff. Therefore, trusts should ensure there are robust systems in place to protect and safeguard staff.

**POSTER 7 - LS007**
**Understanding (Un)Sustainable Behaviours in Operating Theatres: An Ethnographic Study**
Carys Batcup2, Daniel Leff1,2, Talya Porat2, Pelin Demirel2, Gaby Judah2
1 Imperial College Healthcare NHS Trust, London
2 Imperial College, London

# ABSTRACTS

**Background:** Healthcare is a major source of carbon emissions and Operating Theatres (OTs) are one of the top contributors as they are highly resource intensive. We conducted the first known ethnographic field study to investigate (un)sustainable behaviours in OTs and identify influences on these behaviours.
**Methods:** Non-participant ethnographic observations with opportunistic discussions were conducted until saturation from June to November 2023 at two university hospitals in Central London. Inductive thematic analysis of transcripts was conducted, with influences then deductively mapped to the Theoretical Domains Framework (TDF).
**Results:** Nineteen elective general surgical procedures were observed (31 hours). The observed unsustainable behaviours were: (i) unnecessary glove use, (ii) incorrect waste disposal, (iii) unnecessary opening of packages, and (iv) energy waste. Thematic analysis generated 7 themes and 16 influences (mapped to 9 TDF domains). A key theme was that sustainable practices are "Fragile and inconsistent" due to limited awareness (Knowledge) and low environmental concerns (Decision Processes) – consequently, other themes strongly influence behaviour. Themes found to drive unsustainable practices were: "Precaution" (Emotions; Beliefs About Consequences); "Efficiency" (Goals); "Habit" (Attention); "Past experiences" (Emotions; Social Influences); and the "Physical environment" (Environmental Context and Resources). The theme of "Leadership" (Social Influences) led to either more or less sustainable practices.
**Conclusion:** This study provides nuanced understanding of (un)sustainable practices in OTs, e.g. the strong impact of habit, past experiences, leadership, and the desire for efficiency. The rich knowledge of influences on behaviour and the OT context identified in this study can inform the design of more successful interventions.

## POSTER 8 - LS008
### A new biomarker to early predict atrophy in patients with age-related macular degeneration

Radhika Pooja Patel 2, Maria Francesca Cordeiro1
1 Department of Surgery & Cancer, Imperial College London
2 Western Eye Hospital

Here we present a new biomarker, the subsidence of outer plexiform layer (OPL), to predict macular degeneration (MA) in patients with age-related macular degeneration (AMD). The development of MA in patients with AMD results in irreversible blindness, with no effective treatment to save this deterioration currently; therefore, early prediction of atrophy is an unmet need. Using follow-up OCT images from 400 patients with AMD, the correlation between the subsidence of OPL and MA conversion was analyzed and then compared to the correlation between other conventional biomarkers (drusen and reticular pseudodrusen (RPD)) and MA conversion. The presence of subsidence of OPL was validated to be the most reliable and sensitive biomarker among these atrophic-related biomarkers, with highest incidence before atrophy conversion, both in dry AMD (96.2%) and wet AMD (87.9%). In addition, whenever there was an appearance of drusen or RPD, it was always accompanied with the presence of subsidence. Our results show the potential use of the subsidence of OPL to early predict the subsequent MA conversion, 9 months on average before the stage of iRORA (incomplete RPE and outer retina atrophy) and 20 months on average before the stage of cRORA (complete RPE and outer retina atrophy).

## POSTER 9 - LS009
### Differentiating Tumour and Normal Tissue using Diffuse Reflectance Spectroscopy In Vivo in Upper Gastrointestinal Cancer Surgery

Maxime Giot1, Scarlet Nazarian1; Ioannis Gkouzionis1,2 ; Daniel Elson1,2 ; Christopher Peters1
1 Department of Surgery and Cancer, Imperial College London
2 Hamlyn Centre, Imperial College London

**Introduction:** Negative resection margins are an independent predictor of survival and recurrence. However, the intraoperative assessment of margins presents many limitations and there is currently no technique that allows real-time tissue differentiation. Diffuse reflectance spectroscopy (DRS) is a point-based optical sensing technique which can differentiate tissue type by analysing the absorbance and diffuse reflection of light in the tissue sampled. The aim of this study was to assess the diagnostic accuracy of a DRS probe and tracking system to differentiate tissue type in vivo.
**Methods:** Spectra were acquired sterilisably from normal and tumour, stomach and oesophagus tissue using a sterilisable DRS probe. Spectra were correlated with standard histopathology analysis for labelling of ground truths. Four supervised machine learning classifiers were trained and tested. All classifiers were evaluated for: sensitivity, specificity, overall accuracy and area under the curve (AUC).
**Results:** A total of 2,235 spectra were collected from 10 patients. In stomach tissue, LGBM was the best performing classifier achieving sensitivity and specificity of 88% and 97%, respectively, and a diagnostic accuracy of 94%. For oesophagus tissue, SpecNet yielded a sensitivity and specificity of 90% and 94%, respectively, and accuracy of 93%. AUC were >97% for all classifiers across datasets.
**Conclusion:** DRS can differentiate normal and tumour oesophageal and gastric tissue with high diagnostic accuracy. The use of DRS in combination with real-time tracking allows for differentiation of tissue intraoperatively with the aim of aiding surgeons in resection margin assessment and has potential for translation within the surgical workflow.

## POSTER 10 - LS010
### Breast Cancer Characterisation using Mass Spectrometry Imaging: Preliminary Results

H Chauhan, Y Xiang, D Simon, V Sagi-Kiss, D Roberts, L Ford, F Rashid, Z Takats, DR Leff
Imperial College London

**Introduction:** The accurate recognition of breast tissue is critical in the development of an intra-operative margin detection tool. Compared to invasive cancer, the relative risk of a positive margin with ductal carcinoma in-situ (DCIS) is nine-fold. The heterogeneity of breast tissue makes precise histopathological annotation challenging. The aim of this project was to accurately match mass spectral signatures to their corresponding pathological source to generate a classification model.

**Methods:** Breast tissue samples were collected from patients undergoing mastectomy surgery. These were flash frozen and sectioned into 10μm sections. Sections are selected for MSI analysis with consecutive sections sent for H&E staining and annotated by a Consultant Histopathologist. A laser was employed to ionise the molecules and the aerosol was aspirated into the mass spectrometer.
**Results:** Preliminary results have been analysed from a total of 9 images: 3 x normal, 3 x DCIS & 3 x invasive cancer. The mass spectra have been combined to create a 2D chemical image of the sample, combining information on spatial distribution with information on chemical identity from the characteristic ions in the mass spectra (figure 1). Preliminary PCA has demonstrated good separation between tissue types: normal breast tissue, DCIS and invasive cancer (figure 2).
**Conclusions:** Mass spectrometry imaging has successfully been used to generate 2D images which can be matched to underlying histology (gold standard) and therefore produce classification models to develop the diagnostic accuracy of intra-operative margin detection tools.

## POSTER 11 - LS011
### Predicting positive resection margins following breast conserving surgery

H Chauhan1, N Jiwa1, P Thiruchelvam2, K Hogben2, R Al-Mufti2, D Hadjiminas2, Z Takats1, H Ashrafian1, DR Leff1,2
1 Imperial College London
2 Imperial College Healthcare NHS Trust

**Introduction:** Breast conserving surgery is the most common treatment for breast cancer but is complicated by a risk of incomplete resection margins leading to re-operation in approximately 20% of patients. The aim of this study is to create a risk score model to predict the probability of positive resection margin which can be used to facilitate discussion and pre-operative joint decision making between patient and surgeon.
**Methods:** A single institution, retrospective, observational cohort study was conducted in which pathology databases were evaluated to identify patients who underwent BCS over 5-years. Patient demographic data, pre-operative variables and margin level interrogation included granular detail into the extent, pathology and grade of disease at each resection margin were collected. A nomogram was developed using Least Absolute Shrinkage and Selector Operator (LASSO) regression analysis.
**Results:** Clinicopathological details were examined from 5454 margins from 909 women. There were 6 pre-operative variables included in the prediction model: the presence of ductal carcinoma in situ (DCIS), age over 50 years, the presence of intermediate/high grade DCIS, PR or ER positivity and the presence of microcalcifications on mammogram (figure 1). The area under the curve (AUC) was calculated as 0.82 (figure 2).
**Conclusions:** A validated prediction model for positive resection margins has been constructed and demonstrates good discriminative ability. All features included are available pre-operatively and can facilitate joint decision making with the patient. The model has been presented as a nomogram for ease of use to allow a personalised score to be calculated for every patient.

## POSTER 12 - LS012
### An untrained open-source natural language processing tool (ChatGPT) can make complex surgical decisions with confidence similar to experienced surgeons: a comparative analysis

Omar Musbahi1, Martine Nurek2, Kyriacos Pouris1, Martinique Vella-Baldachino1, Olga Kostopoulou2, Caroline Hing4, Alex Bottle5, Justin Cobb1, Gareth Jones1
1 MSk Lab, Imperial College London, Sir Michael Uren Hub, White City Campus, 80 Wood Lane, London, W12 0BZ
2 Department of Surgery and Cancer
4 St George's University Hospitals NHS Foundation Trust
5. Institute of Global Health Innovation, Imperial College London

**Background:** Uncompartmental knee replacements (UKR) have become an increasingly attractive option for end-stage single-compartment knee osteoarthritis(OA). However, there remains controversy in patient selection. Natural language processing (NLP) is a form of artificial intelligence.
**Objectives:** We aimed to determine whether a General-Purpose open-source natural language program (ChatGPT) can make complex decisions regarding a patient's suitability for a total knee replacement (TKR) or a UKR.
**Study Design & Methods:** We conducted a case-based cohort study using data from a separate study, where participants (73 surgeons and ChatGPT) were presented with 32 fictitious clinical case scenarios that simulated patients with knee OA who would require surgery.
Using the overall UKR/TKR judgments of the 73 experienced knee surgeons as the gold standard reference, we calculated the sensitivity, specificity, and positive predictive value of ChatGPT to identify if a patient should undergo UKR.
**Results:** There was disagreement between the surgeons and ChatGPT in five scenarios (15.6%). With the 73 surgeons' decision as the gold standard, the sensitivity of ChatGPT in determining if a patient should undergo UKR was 0.91 (95% CI: 0.71 to 0.98) and the specificity was 0.70 (95% CI: 0.39 to 0.93). The positive predictive value for ChatGPT was 0.87 (95% CI: 0.72 to 0.94). ChatGPT was more confident in its UKR decision making (Surgeon mean confidence =1.7, ChatGPT mean confidence=2.4).
**Conclusions:** This General-Purpose open-source NLP program approximated the decision making, and exceeded the confidence, of experienced knee surgeons with substantial inter-rater agreement when deciding if a patient was most appropriate for a UKR.

## POSTER 13 - LS013
### Short-term physical recovery of patients who undergo breast cancer surgery predicts their long-term functional outcomes

Nur Amalina Che Bakri1,2, Richard Kwasnicki1,2, Tanusree Dutta1, Chiara Rizk1, Emmanuel Giannas1, Hutan Ashrafian1,2, Judith E. Hunter4, Francis P. Henry4, Simon H. Wood1,4, Ara Darzi1,2, Daniel R. Leff1,2,3
1 Department of Surgery & Cancer, Imperial College London, United Kingdom
2 Imperial College Healthcare NHS Trust, St. Mary's Hospital, Praed Street, London W2 1NY, United Kingdom
3 Breast Unit, Imperial College Healthcare NHS Trust, Charing Cross Hospital, London, United Kingdom
4 Department of Plastic and Reconstructive Surgery, Imperial College Healthcare NHS Trust, Charing Cross Hospital, London, United Kingdom

# ABSTRACTS

**Introduction:** Upper limb (UL) morbidity is inadequately quantified/characterised which is usually assessed using patient-reported outcome measures (PROMs). These measurements are limited by recall/response bias. Our data indicates that wearable activity monitors (WAMs) are reliable and objective for measuring UL impairment after breast surgery. We present short-term (peri-operative) and long-term (6 months+) objective data to characterise UL recovery and identify predictors of long-term functional outcomes.

**Methods:** A prospective, non-randomised, observational study was conducted including patients undergoing breast surgery. Patients with movement disorders/mobility assistance, patients with additional operations or new diagnoses that might impair mobility during long-term follow-up were excluded. Participants were asked to wear WAMs on both wrists for 3 days pre-operatively, 2 weeks post-operatively, and for 72 hours at 6 months or > post-operatively.

**Results:** Physical activity (PA)(n=38) significantly decreased (% of pre-operative level) during the first and second weeks post-operatively (median PA:week 1=60.9% and week 2=71.7%, p<0.001). On average, PA returned to baseline in the long-term (median PA:105.6%, p>0.05), with 60% of patients reaching baseline (median PA:116.4%, p>0.05). Patients with a 2-week PA greater than 75% had a greater likelihood of returning to baseline (OR:7.5,p<0.01). Multivariable regression analysis demonstrated the only independent predictor of long-term functional outcomes was the 2-week post-operative recovery (β= 0.752, p<0.001).

**Conclusion:** Early two-week recovery is an independent predictor of long-term UL function. This emphasises the importance of measuring early recovery and implementing measures to mitigate long-term impairment. WAMs can complement PROMs as predictive instruments, identifying patients who may need further rehabilitation and promoting self-directed recovery.

## POSTER 14 - LS014
### Lymph node counts in the preoperative staging of colon cancer

Georgette Camilleri1,2, Nicola Hodges1,2, Danilo Miskovic1, Gina Brown2
1 St Mark's Academic Institute
2 Imperial College London

**Introduction:** The number of lymph nodes sampled at histology is an independent prognostic marker for improved survival in colon cancer. Halstedian views and stage migration provide incomplete explanations for this phenomenon, drawing light on the alternative hypothesis of immunogenicity. This retrospective cohort study aims to investigate the relationship between lymph node counts (LNC) on pre-operative CT and survival in colon cancer.

**Methodology:** 100 patients with non-metastatic, right-sided colonic adenocarcinoma were included. Their preoperative CT scan was reviewed and lymph nodes along the ileocolic, right colic, middle colic and superior mesenteric vessels counted. Para-aortic nodes were counted separately. The 5-year overall survival (OS) and disease-free survival (DFS) was recorded, and ROC curves were applied in the analysis.

**Results:** The median mesocolic LNC on CT was 24 (range 5-55). Higher mesocolic LNCs were associated with improved 5-year OS and DFS (p<0.001 for both end-points). Paraaortic LNCs showed no prognostic value (p=0.45 5-yr OS, p=0.49 5-yr DFS). Mesocolic LNCs yielded an area under the ROC curve of 0.88 (5-year OS) and 0.82 (5-year DFS). 94% (n=15/16) of mortalities had a CT LNC <19, making this a potential threshold for predicting overall survival.

**Conclusions:** Higher CT mesocolic LNCs are associated with improved survival in colon cancer, supporting the hypothesis of immunogenicity. Para-aortic nodes are extramesenteric, and may not contribute to the immune response. Larger-scale studies are needed to validate these results; machine learning could help in the automation of lymph node counting on CT.

## POSTER 15 - LS015
### Acceptability of Digital Health Interventions in Perioperative Care: A Systematic Review and Narrative Synthesis of Clinician Perspectives

Amal Ahmed1, Chik Wai Ho1, Yasmin Grant1, Stephanie Archer1,2,3, Emma V Carrington1
1 Institute of Global Health Innovation, Imperial College London, UK
2 Department of Public Health and Primary Care, University of Cambridge, UK
3 Department of Psychology, University of Cambridge, UK

**Introduction:** Digital health interventions (DHIs) are increasingly used in the peri-operative setting. Clinicians play a key role in their implementation, so an understanding of factors which influence clinician acceptability is key to facilitate long-term adoption and success.

**Objectives:** To identify themes relating to clinician acceptability of DHIs in the perioperative setting.

**Methods:** A systematic review and narrative synthesis was performed with a literature search across Medline, Embase and CINAHL. Studies published between inception and 2023 in English were included if they provided qualitative data on clinician perceptions of DHIs in the context of adult perioperative care. An inductive-deductive framework synthesis approach was employed. Included studies were coded inductively by a single reviewer. Codes were organised into themes based on conceptual similarities. Collaborative discussions with a second and third reviewer enabled higher-order interpretations and the emergence of subthemes. Themes and subthemes were systematically mapped onto the seven constructs of the Theoretical Framework of Acceptability (TFA).

**Results:** A total of 3234 publications were identified, of which 18 were selected for inclusion. DHIs studied included telemedicine platforms, mobile health applications, website-based programmes, and EHR-integrated software. The most commonly reported TFA construct was perceived effectiveness, followed by affective attitudes, opportunity costs, ethicality, burden, intervention coherence and self-efficacy.

**Conclusions:** Clinicians' acceptance of DHIs is primarily driven by perceived effectiveness. Optimism about the potential for DHIs to enhance care is often overshadowed by concerns about patient safety, privacy, and opportunity costs. As clinicians are key gatekeepers in DHI adoption, these perspectives have a significant impact on the long-term integration of these technologies into perioperative care. Co-creation of DHIs with clinicians is required to ensure future interventions are better aligned with clinical workflows and patient needs, enhancing their utilisation and uptake in the long-term.

## POSTER 16 - LS016
### Barriers to the adoption of routine surgical video recording: a mixed-methods analysis of real-world implementation of a recording platform

Catherine Simister1, Andrew Yiu1, Kyle Lam1, James Kinross1
1 Imperial College London, Department of Surgery and Cancer

**Introduction:** Routine surgical video recording is not mainstream despite widespread use of minimally invasive surgical techniques. Current literature is largely US-focused and questionnaire-based. Therefore, this mixed methods study aimed to identify the barriers to implementation in the UK.

**Methods:** Phase one of this study involved questionnaires of participants in a pilot of a C-SATSÓ, a surgical analytics platform, at a UK university hospital. Descriptive analysis of responses and the Nonadoption, Abandonment, Scale-up, Spread and Sustainability framework were used to create topic guides for semi-structured interviews, forming phase two of this study. Interviews were conducted and evaluated in a thematic analysis. Usage metrics for the C-SATS platform were also analysed.

**Results:** Usage data from the C-SATSÓ platform showed inconsistent use of the recording function. Three consultants, four trainees, three patients, one scrub nurse, one lawyer, and one industry representative were interviewed. Barriers of 'change,' 'resource' and 'governance' were identified. All surgeon participants favoured the adoption of routine video recording but hypothesised their colleagues may resist. Most saw videos as a more robust medicolegal document than the operative note. All participants believed availability of infrastructure would facilitate adoption but integration into the preoperative routine would be required, with 'forgot to use' cited as a primary factor in those with recording experience. Governance concerns were centred around the lack of anonymity and ownership guidelines.

**Conclusions:** The adoption of routine surgical video recording goes beyond provision of the infrastructure. Integration into the surgical workflow, digitising medical records, and resolving legal uncertainty will facilitate adoption.

## POSTER 17 - LS017
### Interventions to Achieve Environmentally Sustainable Operating Theatres: An Umbrella Review Using the Behaviour Change Wheel

Aws Almukhtar1, Carys Batcup1, Miranda Bowman1, Jasmine Winter Beatty1, Daniel Leff1,2, Pelin Demirel1, Gaby Judah1,Talya Porat1
1 Imperial College, London
2 Imperial College Healthcare NHS Trust

**Introduction:** Healthcare is a major contributor to the climate crisis, and Operating Theatres (OTs) are one of the highest sources of emissions. To inform emissions reduction, we aimed to (i) compare the outcomes of sustainability interventions in OTs using the Triple Bottom Line framework, (ii) categorise the sustainable behaviours' intervention strategies using the 5Rs (reduce, recycle, reuse, refuse, and renew) of circular economy, and (iii) examine the Intervention Functions (IFs) using the Behaviour Change Wheel (BCW).

**Methods:** Medline, Embase, and PsychInfo databases were searched until June 2023, in line with the Cochrane and the Joanna Briggs Institutions' recommendations. The review was registered on PROSPERO (CRD42024501755) and reported in line with PRISMA guidelines.

**Results:** 16 reviews encompassing 43 life-cycle analyses, 30 interventions, 5 IFs, and 9 BCW policy categories were included. 28/30 (93%) interventions were successful; however, the environmental outcomes were not suitable for meaningful comparisons due to their using different metrics and relying on local factors. The 'reduce' strategy was the most prolific and achieved through 'education' and/or 'environmental restructuring'; However, single-session educational interventions were ineffective. Improving recycling relied on 'environmental restructuring'. Arduous strategies such as 'reuse' can be achieved by integrating multiple functions either through a sustainability committee or through an intervention package.

**Conclusion:** Policymakers must examine interventions within the local context. Comparing the outcomes of different interventions could be misleading, highlighting the need for a tool integrating diverse outcomes and contextual factors. 'Reduce' strategy guarantees environmental and financial savings and can be achieved through 'Education' and/or 'environmental restructuring'.

## POSTER 19 - LS019
### Objective Assessment of Cognitive Workload in Surgery: A Systematic Review

Aws Almukhtar1, Virginia Caddick2, Ravi Naik2, Mary Goble2, George Mylonas2, Ara Darzi2, Felipe Orihuela-Espina3, Daniel R Leff1,2
1 Imperial College, London
2 Imperial College Healthcare NHS trust
3 University of Birmingham

**Background:** Surgical tasks entail concurrent clinical decision-making and the safe application of technical and non-technical skills, which requires a substantial cognitive workload (CWL). Assessing CWL could enable interventions to alleviate burden and improve patient safety. This study aimed to systematically review the technologies that objectively measure CWL in surgery, assessing their psychometric and methodological characteristics using Eggemeier's criteria.

**Methods:** Ovid MEDLINE, OVID Embase, the Cochrane Library and IEEE Xplore databases were searched from Inception to August 2023 in line with the Cochrane collaboration's recommendations. The study was registered on PROSPERO (CRD42023358935) and reported in line with the PRISMA guidelines.

**Results:** 10790 studies were identified, of which 67 met inclusion criteria. The most widely used assessment modalities were autonomic (32 ocular and 24 cardiac), and the most prevalent load sources were intrinsic workload (e.g. task complexity) and germane workload (effect of training). Sensitivity was greatest for neurophysiological instruments (100% EEG, 80% fNIRS) and, across modalities accuracy increased with multi-sensor recordings. Specificity assessment was possible for cardiac and ocular metrics (50% and 66.67%). Cardiac sensors were the least intrusive, with 54.2% of studies conducted in naturalistic clinical environments (higher ecological validity).

**Conclusion:** Physiological metrics provide an accessible, objective assessment of CWL in surgery, but their dependence on autonomic function negates selectivity and diagnosticity. Neurophysiological measures demonstrate favorable sensitivity, directly measuring brain activation as a correlate of cognitive state. A theoretical and technical framework for objective assessment of CWL is required to overcome the heterogeneity of methodological reporting, data processing, and analysis.

# ABSTRACTS

## POSTER 20 - LS020

**Long-term outcomes relating to upper tract drainage in patients who have undergone robotic-assisted intra-corporeal neobladder construction**

Raashi Padhiyar1, Pratham Upadhyay1, Ashwin Sridhar2, John Kelly2, Anthony Ta2, Elizabeth Day2
1 University College London
2 University College London Hospital

**Introduction:** Robotic-assisted intra-corporeal neobladder construction has increased in popularity as a urinary diversion option. The long-term impact on upper tract drainage is not well described. This case series reports on our centre's experience, focussing on hydronephrosis, anastomotic stricture and renal function.
**Methods:** A retrospective review of all intra-corporeal neobladders performed between January 2015 and December 2022. Neobladders were constructed using a pyramid pouch by three high volume surgeons. Electronic health care records were examined to extract patient characteristics, imaging and renal function follow up.
**Results (Table):** 72 patients were identified with a median imaging and renal function follow-up of 39 and 44 months respectively. 6 patients (8%) had unilateral and 9 (13%) had bilateral hydronephrosis. The cause was cancer recurrence (5), reflux (1), poor emptying (1), unclear (8). Of those that it was unclear, 6 underwent dynamic imaging, all of which failed to demonstrate obstruction. Three strictures (4%) were identified, occurring between 5-17 months post-operatively, all at the ureteric-neobladder anastomosis. Two patients underwent re-implantation and one nephrectomy. Renal function declined in 44 (61%) patients, with 9 (13%) falling into CKD stage 3 or more. There was no correlation with the presence of hydronephrosis and fall in CKD stage (Chi Square, p=0.79.)
**Conclusions:** Hydronephrosis is a frequent finding (21%) and dynamic imaging is important in confirming no obstruction. The stricture rate is low. A fall in renal function is common and prevention is likely to be multifactorial as it does-not appear to be correlated with hydronephrosis.

## POSTER 21 - LS021

**The Use of Commercial Grade Wearable Devices for Physical Rehabilitation in Healthcare: A Systematic Review**

Ahmed Latif1, Hasaneen Al Janabi2, Meera Joshi1,3, Gianpaolo Fusari4, Leila Shepherd4, Ara Darzi1, Daniel R Leff1,3
1 Institute of Global Health Innovation, Imperial College London, London
2 University Hospitals Birmingham NHS Foundation Trust, Birmingham
3 Imperial College Healthcare NHS Foundation Trust, London
4 The Helix Centre, Imperial College London, London

**Background:** Physiotherapy remains vital for patient rehabilitation, though limited resources pose significant challenges. Technology driven self-care has gained significant traction and the use of wearables presents potential solutions. This review evaluates whether commercial-grade wearables (CGW) improve patient rehabilitation outcomes, and categorises wearables currently being used, including the disciplines and conditions under investigation.
**Methods:** Embase, MEDLINE, Web of Science, and the Cochrane Library (up to and including July 2023) were searched using PRISMA guidelines for peer-reviewed studies utilising CGW for patient rehabilitation. The disciplines, conditions treated, types and brands of device, main study findings and limitations were analysed.
**Results:** Eighteen studies encompassing 1754 patients met eligibility, including six randomised controlled trials, six quasi-experimental studies and six observational studies. Eight investigated CGW in Orthopaedics, seven in Stroke Medicine, two in Oncology and one in General Surgery. All studies reported improved patient outcomes using CGW, including an increase in functional capacity, step-count, physical activity, joint range of movement and quality-of-life. Eleven studies utilised wrist-worn activity trackers, including eight FitBit, one Garmin, one Patron and one using Polar wristbands. Seven studies utilised apps on smartwatches and smartphones of which four used Android and three used Apple operating systems.
**Discussion:** All included studies demonstrated that CGW can be utilised at the least as an adjunct to traditional physiotherapy, and at best as alternatives for self-directed rehabilitation. This was despite a heterogenous pool of devices and interventions employed. Future trials should focus on economic evaluations of CGW before widespread adoption in healthcare settings can be considered.

## POSTER 22 - LS022

**Documentation of Pelvic Floor Symptoms in IBD Patients**

Chiara Dell'Oro1, Emma Carrington1, Lucy Hicks1
1 Imperial College, London

**Introduction:** The prevalence of pelvic floor (PF) symptoms is high in patients with Inflammatory Bowel Disease (IBD) and over 50% report symptoms of incontinence or constipation using standardised questionnaires. Despite having significant negative impacts on quality of life, few patients proactively seek help for PF symptoms. This quality improvement project aims to describe how well clinicians are identifying PF symptoms in routine IBD care.
**Methods:** Clinic letters from patients attending IBD clinics at Imperial College Healthcare Trust (ICHT), from 1 January 2024, were analysed retrospectively for documentation of PF symptoms.
**Results:** 120 consecutive patients (60/120 (50%) male, median age 45 [18-88]) were included - 76/120 (63.3%) with ulcerative colitis, 44/120 (36.7%) with Crohn's disease. Abdominal pain was the most frequently documented symptom (44/120 (36.7%)), followed by faecal urgency (26/120 (21.7%)). Faecal incontinence and evacuatory dysfunction were each documented in 5/120 (4.2%) patients. Impact on quality of life was only documented in 1 patient. Symptoms of urinary frequency, voiding and sexual dysfunction were not documented in any patients. Significantly fewer consultant clinicians documented symptoms of abdominal pain compared to ST1-8 clinicians (p = 0.004).
**Conclusion:** PF symptoms are not frequently documented in IBD patients at ICHT - barriers may include patient fear of stigmatisation, or physician lack of awareness of PF symptoms. The prevalence of PF symptoms in IBD patients at ICHT should be identified, and implementation of a standardised reporting tool may increase identification.

## POSTER 23 - LS023

**The Burden of Anal Cancer in Women with Genital Cancers**

Rachael Butler1, Micol Lupi1
1 Chelsea and Westminster Hospital, London

**Background:** Women account for the majority of anal squamous cell carcinoma (ASCC) cases in the UK compared to men and incidence continues to rise more rapidly. ASCC is typically preceded by high-grade lesions (HSIL) caused by HPV. Risk of ASCC increases with a history of HPV-related genital HSIL or cancers. Most women present with stage 3 disease, a missed opportunity given that HSIL can be detected and treated.
**Methods:** There are no national guidelines to manage these patients. Recommendations published by the ACPGBI were used as audit standards. Cycle 1 assessed the number of women in the trust between 2002-2022 with anal HSIL/SCC and concurrent genital HSIL/SCC. This led to implementation of a pilot multidisciplinary anogenital neoplasia pathway within the trust over a year. Cycle 2 compared outcomes of women diagnosed between 2022-2023.
**Results:** In cycle 1, 91 women were diagnosed with anal SCC/HSIL compared to 19 in cycle 2. Across both cycles, women mostly presented with stage 3 disease and approximately 25% had concurrent genital diagnosis. More were diagnosed with anal HSIL at the time of SCC diagnosis (61%) in cycle 2, compared to cycle 1. In both cycles, women mostly presented with stage 3 disease. Screening for synchronous genital lesions increased from 50% to 79% across cycles.

## POSTER 24 - LS024

**Advancing Surgical Training Through 3D Printing: A Multispecialty Approach**

Sofia Chacon1,2, Reza Haghighi Osgouei1,Joshua Brown1, Fernando Bello1,
1 Imperial College
2 Chelsea and Westminster Hospital

Surgical skill acquisition and competence, while upholding patient safety, is affected by restricted working hours and limited exposure to uncommon cases.
3D printing technology is transforming healthcare by enhancing patient care through improved medical and surgical education, pre-operative planning, and patient communication. This study details our collaboration with consultant surgeons at Chelsea and Westminster Hospital (CWH) to develop surgical models across four specialties: paediatric, colorectal, maxillofacial, and orthopaedic surgery, using a combination of 3D printing and silicon casting. These models, crafted from medical imaging data and refined iteratively, include patient-specific models for carpal tunnel release, parasymphyseal mandibular fracture repair, rectal anastomosis, and paediatric congenital pulmonary airway malformation repair.
By addressing the unique challenges of each specialty, our study aims to assess the role of 3D printed models in surgical training, with the primary aim of evaluating their efficiency.
A comprehensive literature review revealed the utility of 3D printed models for surgical skills training and anatomy learning, highlighting their superiority over traditional methods. Proposed models offer advantages including reduced surgical time, risk mitigation, and avoidance of ethical concerns associated with cadaveric models. However, limitations including material realism and adoption barriers must be addressed through further research and innovation.
This study underscores the transformative potential of 3D printing in surgical training, offering tailored solutions to address the specific needs of diverse surgical specialties. By enhancing trainee confidence and competence, 3D printed models represent a significant advancement in modern surgical education that can lead to improve surgical outcomes.

## POSTER 25 - LS025

**Quality Improvement Project: Improving access to psychological wellbeing support for patients with bowel dysfunction**

Guowei Yang 1, Yaman Mhissen 1, Hewad Ahmadzai 1, Helen Lada 2, Harry Kingsley-Smith 1,2, Emma Carrington 1,2
1 Imperial College, London
2 Imperial College Healthcare, London

**Aim:** It is well appreciated that bowel dysfunction may affect a patient's psychological wellbeing. Nevertheless, access to psychological wellbeing support is limited. This quality improvement project aimed to investigate barriers to offering psychological support and explore interventions to address these barriers.
**Method:** Over a one-week period in November 2023, an opportunistic sampling approach was taken to distribute two surveys: one for patients with bowel symptoms at Imperial College Healthcare Trust and one for clinicians via email. The surveys, which included Likert scales, dichotomous and open-ended questions, explored patient experiences of the impact of bowel symptoms on psychological wellbeing and the usefulness of possible interventions.
**Results:** 19 patient and 25 clinician responses were received. No patient reported being offered psychological wellbeing support, despite an average rating of 7.2/10 when asked if their psychological wellbeing impacted their quality of life (1 being no effect at all, 10 being a very big effect). 20/25 (80%) of clinicians felt psychological wellbeing was often an important feature in patients with bowel disorders. However, only 9/25 (36%) reported asking about their patients' psychological wellbeing in at least half of their consultations. Time limitations, lack of mental health expertise and accessible signposting resources were cited as barriers. Both patients and clinicians rated a leaflet and in-person consultations useful as a form of psychological wellbeing support.
**Conclusions:** This small study highlights the gap in accessible psychological support for patients with bowel dysfunction. To address this, interventions including signposting leaflets and in-person consultations with clinical psychologists will be explored.

## POSTER 26 - LS026

**Fluorescence confocal microscopy for detection of positive surgical margins in prostate cancer: development of a standard operating procedure in the IP8-FLUORESCE study**

Nikhil Mayor 1,2, Anna Silvanto 2, Alexander JW Light 1,2, Emma Cullen 1,2, Peng Ng 2, Almostafa Badreldin 2, Bijan Khoubehi 1,2, Giles Hellawell 2, Martin J Connor 1,2, Taimur T Shah 1,2, Hashim U Ahmed 1,2, Mathias Winkler 1,2
1 Imperial Prostate, Imperial College London, Division of Surgery and Cancer, Hammersmith Hospital, 72 Du Cane Road, W12 0HS
2 Imperial College Healthcare NHS Trust, Charing Cross Hospital, Fulham Palace Road W6 8RF

# ABSTRACTS

**Introduction:** The IP8-FLUORESCE study evaluates the accuracy of fluorescence confocal microscopy (FCM) for detection of positive surgical margins (PSMs) in radical prostatectomy (RP) specimens. We describe our reproducible standard operating procedure (SOP) for evaluating RP specimens with FCM.

**Methods:** FCM uses a digital laser microscope and pinhole aperture to reject out-of-focus light combined with fluorochromes to increase cell-to-stroma contrast, producing high-resolution imaging. The Histolog® Scanner is a CE-marked portable FCM device which can produce near-instant images. The SOP was developed by the IP8-FLUORESCE study team including urologists, an expert uro-pathologist, and device experts based on two pilot cases.

**Results:** Ethical approval was granted via Imperial College Healthcare Tissue Bank (ICHTB). Patients receive a generic digital patient information sheet as part of the standard consent process. 95% of patients approached consented. The Scanner is kept in a clinical area adjacent to the operating theatre. Immediately after extraction, the specimen is immersed in the Acridine Orange dye for 10s followed by a saline rinse, then placed directly onto the Scanner. Six margins making up the whole surface are scanned. Each margin takes 45s to scan. The whole procedure takes 15min. As the soluble dye preserves specimen integrity, it can then undergo standard histological processing. A blinded histopathologist then reports the margin status on FCM and histological images.

**Conclusions:** Our streamlined SOP and ultrafast scanner provide microscopic images rapidly without need for expert laboratory staff. The compact, portable Scanner is stored in/near the operating theatre. Digital consent via ICTHB has led to high patient acceptance and rapid recruitment.

## POSTER 27 - LS027
### Imperial Prostate 8 - Fluorescence confocal microscopy for rapid evaluation of surgical cancer excision (FLUORESCE): update on trial progress

Nikhil Mayor 1,2,
1 Imperial Prostate, Imperial College London, Division of Surgery and Cancer, Hammersmith Hospital, 72 Du Cane Road, W12 0HS
2 Imperial College Healthcare NHS Trust, Charing Cross Hospital, Fulham Palace Road W6 8RF

**Introduction:** Positive surgical margins (PSMs) post-radical prostatectomy (RP) heighten mortality risk, especially in high-risk patients. Current intraoperative margin assessment methods, notably frozen section, face constraints in time, cost, and expert availability. Fluorescence confocal microscopy (FCM) offers a promising alternative. IP8-FLUORESCE aims to validate FCM accuracy against gold standard histopathology for margin detection.

**Methods:** IP8-FLUORESCE is a multicentre, ex vivo, prospective, blinded, cohort study. Men undergoing RP for prostate cancer are included. After extraction, the specimen is immediately placed into an Acridine Orange dye for 10s then rinsed in saline. It is placed directly onto the Histolog® Scanner which produces a digital microscopic image using FCM in under a minute. The whole surface is scanned (6 margins). After formalin fixation and paraffin embedding (FFPE), an independent, blinded uropathologist analyses FCM images and histological slides. Primary outcome: accuracy of FCM for margin detection compared to histopathology. The study was powered for a sensitivity analysis (estimated PSM rate 41%). Sample size was calculated a priori using +/-14 points precision margin, accounting for 10% dropout (n=100). An interim event rate analysis was planned to maximise power.

**Results:** Recruitment commenced 17th August 2023. At interim analysis after 50 cases, PSM rate exceeded expectations (50%); precision margin was therefore narrowed to +/-10 points. Adjusted target: 123 patients. Recruitment target was met by 14th March 2024 (n=129).O

**Conclusions:** IP8-FLUORESCE marks the first blinded assessment of FCM accuracy. FCM generates real-time digital images similar to H&E-stained slides, bypassing the need for expert specimen preparation. Results are expected in mid-2024.

## POSTER 28 - LS028
### Exploring Unreported Pain in Major Trauma Centres

Byapti Alice Nandi 1, Sreeraag Kanakala 1, Harry Kingsley-Smith 1,2
1 Imperial College, London
2 Imperial College Healthcare Trust

**Aims:** Existing reviews acknowledge the benefits of effective pain management in trauma patients, yet there are few studies soliciting stakeholder opinion. This project investigates the disconnect in perceptions of pain management among major trauma patients, nurses, and doctors, evaluating the efficacy of pain management delivery in an acute setting.

**Method:** A preliminary questionnaire was conducted using the Likert Scale (1-5), with 1 indicating the least agreement and 5, the greatest. The survey explored patient, nurse and doctor perceptions/satisfaction of (i) relative pain levels (ii) pain management guidelines (iii) patient comfort in escalating pain needs (iv) frequency of pain monitoring. This yielded 18 datasets, each containing a patient matched to a unique nurse and doctor. Exclusion criteria included traumatic brain injuries and ward admission < 3 days.

**Results:** The average relative pain scores were 2.67 for patients, 2.11 for nurses, and 1.61 for doctors. Doctors exhibited higher average satisfaction with current pain management protocols (3.61), compared to nurses (2.28) and patients (2.10). However, doctors overestimate patients' comfort in escalating pain to staff, averaging 4.17, compared to nurses (2.94) and patients themselves (2.0). The average patient satisfaction with pain monitoring frequency was 2.33, while nurses (2.94) and doctors (3.28) were more satisfied.

**Conclusion:** This project highlights a consistent under-appreciation of patient pain and its management by major trauma healthcare professionals, with doctors doing so the most. This warrants intervention; a 30-second pain checklist' will be piloted, and its efficacy will be evaluated.

## POSTER 29 - LS029
### Understanding the Effects of Cognitive Load Domains Upon a Surgical Procedure: Laparoscopic Appendicectomy

Virginia Caddick 1, Aws Almukhtar 1, Ara Darzi1, Felipe Orihuela-Espina 2*, Daniel R Leff 1,3*
1 Department of Surgery and Cancer, Imperial College London, UK.
2 Department of Computer Science, University of Birmingham, Birmingham, UK.
3Department of Breast Surgery, Imperial College Healthcare NHS Trust, Charing Cross Hospital, London, UK
*Joint senior author

**Introduction:** High cognitive workload (CWL) states, particularly extraneous, account for 87.1% of medical errors. Post Covid-19 pandemic, with burden higher than ever, recognising the factors contributing to cognitive overload could reduce surgical errors and enhance patient safety.

This study explores how independent CWL domains affect perceived CWL and technical performance.

**Methods:** 10 surgical trainees (CT1-CT3) perfomed laparoscopic appendicectomies using an augmented-reality simulator (INOVUS LapAR, UK). A baseline benchmarking procedure was followed by a 2x2 block design, independently assessing the effects of: (i) intrinsic load (low (LI) vs high (HI)); and (ii) extraneous load (low (LE) vs high (HE) conditions). Outcome measures included perceived workload (SURG-TLX), and objective performance metrics (task completion times (TCTs), and specimen/stump quantitative measurements).

**Results:** The mean (+/-StD) age was 29.6 (+/-2.41) and 40% female. Two way ANOVA analysis revealed main effect of extraneous load for total SURG-TLX scores (F(1,45)=27.291, p<0.001), situational stress (F(1,45)=17.058, p<0.001) and distraction (F(1,45)=12.413, p<0.001). Conversely, perceived physical demand (F(1,45)=4.079, p=0.049) and task complexity (F(1,45)=10.712, p=0.002) decreased. Mean stump length (F(1,45)=5.679, p=0.022) and stump:specimen ratio (F(1,45)=4.316, p=0.044) increased with extraneous load and appendix specimen length decreased (F(1,45)=4.658, p=0.036). TCTs increased with high intrinsic load (F(1,45)=10.325, p<0.001).

**Conclusions:** High load conditions increase perceived total workload, stress, distraction and are associated with performance decline both in terms of extent of surgical resection and TCTs. High intrinsic workload increases operative time. Contributors to extraneous workload such as bleeps, loud anaesthetic monitors, and team interruptions increase workload to a greater extent, and may lead to surgical errors.

## POSTER 30 - LS030
### Coding in Corneal Ophthalmology Procedures

Radhika Patel1, Nizar Din1
1 Western Eye Hospital, Imperial College NHS Trust

**Background:** Due to the corneal graft shortages the Western Eye Hospital has looked to source tissue from North America, which comes at a much higher premium. In light of this we aimed to evaluate the tariffs for all corneal procedures to ensure that they accurately reflect the care provided and that the trust is being paid correctly for procedures performed.

**Methods:** Data from all corneal procedures carried out from a consecutive 3 month period (Feb-April 2023) was extracted and analysed with pre-audit tariff calculated. All procedures were cross-checked manually with operation notes and appropriate codes were added for each procedure. The tariffs for each month were then recalculated for all procedures.

**Results:** As a stand-alone hospital there are no coders on site and we found there were significant gaps in procedure knowledge and discrepancy in how each case was being coded. 141 procedures were included. 47% of these were incorrectly coded amounting to a total of £30,876 being reclaimed for the department.

**Conclusion:** This simple project has had large ramifications and helped support the finances in the cornea department. Extrapolated across the year and to other subspecialties the amount claimed back facilitates more procedures, equipment and staff for better patient care. We continue to meet regularly with the coding team who now have better support and have developed a network to include other subspecialties with individual leads, nurses and surgeons documenting. A subsequent reaudit from Oct-Dec showed sustained improvement with only 6% incorrectly coded.

## POSTER 31 - LS031
### Cytoskeletal Dynamics and F-actin Redistribution Changes Induced by Lidocaine in Colon Cancer Cells: A Fluorescence Microscopy Analysis

Raha West1, Chen Pac Soo1, Jamie Murphy1,2, Daqing Ma1,3
1 Imperial College, London
2Cleveland Clinic London
3National Clinical Research Centre for Child Health, Hangzhou

**Introduction:** The reorganisation of F-actin within cancer cells profoundly influences their migration abilities, affecting cellular stiffness and motility. In this invitro study, we explored the impact of lidocaine, a local anaesthetic commonly used clinically, on the cytoskeletal dynamics of F-actin in three colon cancer cell lines.

**Method:** Colon cancer cell lines (SW480, SW620, and HCT116) were cultured and treated with or without 100μM lidocaine for 24 hours. An immunofluorescent staining was performed with phalloidin for F-actin and Dapi for nuclei. F-actin distribution was analysed using ImageJ, focusing on fluorescence intensity changes from the cell centre to the periphery. Ten total cells were randomly chosen for each cell line from 4 biological repeats. The cell centroid crossline is segmented into ten equal parts, with bins 0–2 and 7–9 marking the periphery and bins 3–6 denoting the centre. A two-way ANOVA with Tukey test for multiple comparisons for each bin was carried out.

**Results:** A notable shift was observed in F-actin distribution following lidocaine treatment, whilst in untreated cells, F-actin was predominantly centralised within the cells. Lidocaine caused marked decentralisation, with increased fluorescence intensity at the cell periphery. This redistribution suggests a significant disruption in the actin cytoskeleton, characterised by the accumulation of high-intensity F-actin spots and rings at the cell edges (Figure 1).

**Conclusion:** Lidocaine treatment induced a redistribution of F-actin, moving from a centralised to a more peripheral distribution in all colon cancer cells. This reorganisation could potentially reduce cell migration capabilities, a crucial aspect of cancer metastasis.

## POSTER 32 - LS032
### Improving patient information post haemorrhoidectomy

Symriti Kaur-Paneser 1, Loren Boles 1, Salia Yassin 1, Miss Emma Victoria Carrington 1,2
1 Imperial College London
2 Department of Colorectal Surgery Imperial College NHS Trust

**Introduction:** In the UK, approximately 20,000 haemorrhoidectomies are performed annually [1]. Research shows that perioperative patient education impacts upon surgical outcomes [2]. During our placements we observed inconsistencies in the postoperative information provided to haemorrhoidectomy patients, so we aimed to address this and clarify the content of discharge summaries at our trust.

# ABSTRACTS

**Method:** We conducted a two-part study, first analysing the discharge summaries of patients (n=40) from 2 hospitals within Imperial College Foundation Trust who underwent haemorrhoidectomies between June 2023 - February 2024. We identified discrepancies in advice including return to work, analgesia and antibiotics. To understand the reasons behind these, we then developed a clinician questionnaire distributed to the colleagues of our clinical lead (n=19), comprised of 5 Likert scales and 1 free text question.

**Results:** Variations in postoperative care advice were evident across discharge summaries. Among the patients 33/40 (83%) were not given the reason for their operation, 38/40 (95%) were not prescribed topical GTN and 30/40 (75%) were not given wound care guidance. Analysis of the clinician questionnaire revealed 8/19 clinicians (42%) cited 'not appropriate' as the reason behind the omissions whilst 4/19 (21%) chose both 'time limitations' and 'inexperience'.

**Conclusions:** Our findings indicate a significant number of discharge summaries lacked essential reporting elements due to time constraints and parameters within current understanding. Consequently, we developed a patient information leaflet to standardise postoperative advice. With this approach, we aim to reduce the variation in discharge summary content and provide adequate care instructions to facilitate recovery post haemorrhoidectomy.

## POSTER 33 - LS033
### Can appendiceal adhesions cause small bowel obstruction ? A rare case presentation managed laparoscopically
Shreya Pal1, Anang Pangeni1, Veera Allu1
1 East Kent Hospitals University NHS Foundation Trust

**Aims:** Adhesions are the commonest cause of small bowel obstruction worldwide. However, a band adhesion from the appendicular tip to the small bowel causing small bowel obstruction is rarely reported in literature. We report such a presentation and successful management by laparoscopic approach with good outcome.

**Methods:** 61-year-old female, presented with abdominal pain, mild distension & vomiting for 3-days. She had undergone ultrasound-guided-drainage of appendicular abscess 3-months ago. CTAP showed small-bowel obstruction with transition point in pelvis - possible cause being adhesions. After initial conservative management, since she was not improving for 2-days, she was consented for diagnostic laparoscopy.

**Results:** Intraoperatively, an adhesive band was found between the appendicular tip and distal ileum around 100cm proximal to Ileo-colic junction, resulting in mechanical bowel obstruction. Laparoscopic division of band was performed followed by appendicectomy, and patient had an uneventful recovery and discharged on post-operative day-2.

**Conclusion:** Though an uncommon cause of adhesive small bowel obstruction, a band from appendicular tip causing mechanical bowel obstruction can be managed effectively by laparoscopic approach.

**Key Statement:** This is an unusual case of small bowel obstruction secondary to band from appendicular tip causing mechanical bowel obstruction with a transition point. In future when dealing with complications of appendicitis, like appendicular abscess - it needs to be addressed with clinical suspicion in such presentations.

## POSTER 34 - LS034
### A review of emergency general surgery (EGS) admissions via the direct access pathway (DAP) in a district general hospital in United Kingdom
Shreya Pal1, Zoe Ng Zhen Yi1, Semosh Sunwar1, Iesleen Abigaelle Bartolome1, Anange Pangeni1, Md Abu Kamal Nahid1, Ashish Shrestha1
1 East Kent Hospitals University NHS Foundation Trust, Ashford, Kent

**Aims:** Emergency surgical presentations require urgent attention by surgeons to ensure appropriate treatment. However, increased waiting time in A&E often leads to delayed diagnosis and subsequently delayed management. A direct access pathway (DAP) to Surgical Emergency Assessment Unit (SEAU) helps minimize these delays and subsequently improve patient outcome.

**Methods:** A retrospective observational study of Emergency General Surgery (EGS) admissions from May 2023 to December 2023 was performed. Structured DAP referral proforma was implemented for patients to be directly referred to SEAU from A&E triage. Factors taken into consideration were - initial presentation, source of referral, time of initial assessment and patient outcome.

**Results:** A total of 265 patients were channeled through DAP referrals during the study period, of which 96.6% were appropriate referrals. The main source of the referral was the A&E (52.4%), while the UTC-GP and GP constituted the remaining (47.6%). The most common clinical presentations were abdominal pain (32.4%), followed by subcutaneous abscess (17.3%). The median waiting time for initial assessment by the surgical team was 60 minutes. In terms of outcomes - 15 % patients were admitted, 14.7% were discharged after intervention, 35.8 % were discharged without intervention and 28.6% were planned to return for investigations or interventions.

**Conclusion:** The DAP for EGS admissions has enabled surgical emergencies to be addressed more promptly, and thus seen to have improved patient outcome as a result of avoiding unnecessary steps and delays before being reviewed by the surgical team through A&E pathway.

## POSTER 35 - LS035
### Pilot Project: Developing a Paediatric Pain Management Resource for Healthcare Professionals
Elizaveta Varaksina1, Neha Hussain1, Vaneeza Chaudry1, Hannah Ellison2, Ami Kotecha2
1 Imperial College, London
2 Chelsea and Westminster Hospital, London

**Background:** Pain is underestimated and undertreated in children. A survey carried out at Chelsea & Westminster Hospital (CWH) highlighted the need to improve pain management resources for healthcare professionals looking after paediatric inpatients. Accurate pain assessment and confident use of existing pain management guidelines at CWH should achieve the goal of reducing post-operative pain in children.

**Method:** A needs analysis was conducted by surveying paediatric nurses and anaesthetists at CWH in February 2024. Likert scales established confidence in assessing pain in children; accessibility of existing pain resources; and perceived benefit of having a unified resource.

Following implementation of a pain management infographic, an immediate post-intervention survey assessed the perceived usefulness of a comprehensive Paediatric Pain Management (PPM) resource.

**Results:** 16 healthcare professionals responded to the initial survey, with 75% agreeing that a PPM resource would prove beneficial to their daily practice. The post-intervention survey was completed by 4 nursing staff. 100% of respondents felt a PPM resource would be 'extremely useful'; would be 'extremely likely' to recommend the resource to colleagues; and 'strongly agree' that the guide addressed their needs. Additionally, all respondents asserted the potential to use the resource 2-4 times a week, with 50% proposing to use it 4-6 times a week.

**Conclusion:** This study identified the need for a concise and accessible PPM resource and implemented a successful infographic, with potential to develop it into a comprehensive universal pain guide to be utilised within the operative delivery network and improve the inpatient experience for children.

## POSTER 36 - LS036
### The importance of weekly Radiology-General Surgery Multi-Disciplinary Meetings (MDMs) in the management of Emergency General Surgery (EGS) patients
Shreya Pal1, Zoengzhen Yi1, Iesleen Abigaelle Bartolome2, Leonardo Bareli1, Anuj Shrestha1, Jann Yee Colledge1, Ashish Shrestha1
1 East Kent Hospitals University NHS Foundation Trust

**Aim:** Most patients in Emergency-General-Surgery (EGS) require radiological investigations as part of their management. However, unlike cancer services where structured multi-disciplinary-meetings (MDMs) form an integral part of patient management, MDMs are not commonly practised in EGS. Having a weekly Radiology-General Surgery-MDM leads to better outcome in management of EGS-patients, & also improves learning of surgeons & junior-doctors.

**Methods:** A prospective study of weekly 1-hour Radiology-GeneralSurgery-MDMs over 24-weeks during May2023-December2023 was performed. These MDMs were led by consultant radiologist who discussed the scans with consultant surgeons & other junior-doctors. A new referral-form was introduced after discussion with consultant surgeons & radiologists, & the surgical team was informed about this. Factors considered were clinical presentation, original scan report, missed findings not mentioned in original scan report, changes recommended in management plan for better patient outcome. These scans were also discussed with junior-doctors to improve their knowledge of interpretation of scans.

**Results:** A total of 92 cases were discussed during the study period, 25(35.71%) initially reported by out-of-hours reporting system. Few had missed findings that were noted as result of Radiology-GeneralSurgery-MDM, & 32(34.7%) had change in management plan. The informal feedback collected after these MDMs noted over 85%junior-doctors agreed that these MDMs had improved their understanding of interpretation of radiological-scans in EGS.

**Conclusion:** Weekly Radiology-GeneralSurgery-MDMs for EGS-admissions has been seen to improve patient outcome due to expert 2nd-opinion and discussion between surgeons and radiologists, & also recommending change in management plan in significant proportion of patients. It also improved the clinical correlation of radiological-scans by junior-doctors regularly attending these meetings.

## POSTER 37 - LS037
### Talking Trash: A Quality Improvement Project focussed on encouraging the correct disposal of waste
Poppy-Valerie Walker1, Esandhi Thilakarathne1, Lance Domingo1, Girish Ravi1
1 Imperial College, London

**Background:** The NHS is responsible for up to 5% of the UK's carbon footprint. Among many other issues beleaguering the NHS, a focus on planetary health also now seems timely. We have a moral imperative to care not just for the patients of today, but of tomorrow. We discovered infectious clinical waste bags were being unnecessarily filled with recyclable packaging. These not only required industrial burning, increasing emissions, but also cost tenfold to dispose of than recycling bags.

**Aims:** A QIP investigating recycling habits of theatre staff and encouraging proper disposal of waste.

**Methods:** We randomly sampled clinical waste bins in St Mary's theatres to determine if bins were being appropriately used. Next, we surveyed theatre staff's knowledge and interest in waste disposal. After creating a poster, we resampled the bins to see if our poster affected behaviour change, and resurveyed theatre staff about their opinions on our intervention.

**Results:** Our poster was unsuccessful in changing behaviour however we did receive positive feedback from stakeholders. Whilst our sample size was small, we received many congruent opinions from staff who thought a training programme would be more beneficial in future.

**Conclusions:** More work is required to target different aspects of the COM-B model to facilitate greater behaviour change regarding waste disposal. Overall our laminated posters were sustainable and low cost, and equally a training programme would pay for itself if improving waste costs long term, as well as making surgery more environmentally viable in future.

## POSTER 38 - LS038
### Emergency Laparoscopic Parastomal Hernia Repair Around Ileal Conduit in a Morbidly Obese Patient - a Surgical Challenge Managed Successfully
Shreya Pal1, Sanjoy Basu1, Ashish Shrestha1
1 East Kent Hospitals University NHS Foundation Trust

**Aim:** Management of a strangulated parastomal hernia (PH) around the ileal conduit can be a surgical challenge. We demonstrate here a safe and effective laparoscopic repair of a strangulated PH in the emergency setting for a 53year-old morbidly obese woman (BMI: 40).

**Method:** Entry to abdominal-cavity was by Veress-needle technique. PH defect was identified – containing strangulated part of ascending-colon that reduced spontaneously during creation of pneumoperitoneum. Adhesiolysis around stomal defect upto lateral attachment of ileal conduit was completed. 3cm defect was apposed using transfascial nonabsorbable sutures. 15cm circular-composite-mesh was fashioned U-shaped and introduced in medial to lateral direction with the U lips overlapped and fixed snug laterally around the ideal conduit. Mesh was further fixed through double-crown fixation.

# A B S T R A C T S

**Results:** Patient had an uneventful recovery and discharged on the second post-operative day. A 10-month CT as a part of bladder cancer follow up showed no PH recurrence.

**Conclusions:** This case shows that strangulated PH around an ileal conduit, an uncommon presentation, can be successfully managed laparoscopically even in the emergency setting especially for patients of high BMI with proper assessment and appropriate expertise. Successful management of this challenging presentation of strangulated PH around ileal conduit demonstrates the safe and effective use of laparoscopic surgery especially in the emergency setting for patients of high BMI.

## POSTER 39 - LS039
### Correlation between self-reported and objective cognitive workload estimation in surgeons using functional neuroimaging

Jessica Caterson[1]*, Mary Goble[1]*, Virginia Caddick[1], Ara Darzi[1], Felipe Orihuela-Espina[2]**, Daniel R Leff[1]**
1 Imperial College London
2 University of Birmingham

**Background:** Understanding the impact of cognitive load on surgeons during operative tasks is vital for preventing errors and patient safety. Neural activation follows an inverted 'U-shape', increasing with cognitive load up to a peak, after which 'overload' leads to neural deactivation and performance decline. While the validated SURG-TLX score can measure global cognitive workload, the relationship between SURG-TLX and neural activation for cognitive load is poorly characterized.

**Aim:** The study aimed to assess the relationship of the SURG-TLX score and neural activation for cognitive load.

**Method:** Final-year medical students and foundation doctors (n=20) completed a suturing task under self-paced, time-pressured, and time-pressured with extraneous cognitive demand conditions. Functional near-infrared spectroscopy (fNIRS) measured neural activation in the prefrontal and motor cortex using a NIRSports 2 device (NIRx, wavelengths 760nm and 850nm). SURG-TLX questionnaires were completed after each trial block. Scores for each domain (distractions, mental demands, physical demands, situational stress, task complexity, temporal demands) and total score were fitted to a quadratic function to model an inverted U-shape. Quality of fit was assessed using R-squared. Statistical significance was set to $p < 0.05$.

**Results:** An inverted U-shape response was identified in the prefrontal cortex for distractions, physical demands, situational stress, and total scores, and in the premotor cortex and supplementary motor area for distractions, mental demands, physical demands, situational stress, temporal demands, and total scores (Table 1) (Fig. 1).

**Conclusion:** SURG-TLX scores can model neural activation related to cognitive load in surgical tasks. Modelling cognitive overload and performance decline has implications in improving surgical training and patient outcomes.

## POSTER 40 - LS040
### A case of Painless Palpable Gall bladder - a rare Exception of the Courvoisier's Law

Shreya Pal[1], Aditya Pusalkar[1], Anang Pangeni[1], Ashish Shrestha[1]
1 East Kent Hospitals University NHS Foundation Trust

**Introduction:** The Courvoisier's law states that a painless palpable enlarged gallbladder with jaundice is unlikely to be caused by gallstones. There are however various exceptions to the law. We report a rare case of such an exception to make us aware of the clinical condition.

**Case Description:** 72-year-old male, otherwise fit and healthy, presented to the Emergency department with epigastric discomfort, along with dark urine and pale-colored stool. He was clinically examined to have jaundice, and a painless globular palpable gall bladder, with blood results confirming obstructive picture i.e. raised bilirubin (70 $\mu$mol/L), ALT (103 U/L) and Alkaline Phosphatase (590 IU/L). Ultrasound abdomen showed acute cholecystitis. CT chest-abdomen-pelvis showed cholelithiasis and choledocolithiasis with dilated common bile duct (CBD), as well as asymmetric gallbladder wall thickening. The MRCP showed concentric and uniform thickening of the entire gallbladder wall, with minimal pericholecystic fluid reflecting acute inflammation. Multiple calculi were noted to be present within the CBD and gall bladder, resulting in dilation of CBD (15.8mm). The patient had ERCP with sphincterotomy and retrieval of multiple stones by balloon trawl. He was discharged the following day and is planned to undergo laparoscopic cholecystectomy as an elective procedure. His liver function test markedly improved at discharge bilirubin of 18 $\mu$mol/L and ALP of 364 IU/L.

**Conclusion:** This is an unusual case of painless jaundice with palpable gall bladder due to stones impacted in the CBD and not due to periampullary carcinoma, which is an exception to the Courvoisier's Law.

## POSTER 41 - LS041
### Trachelectomy as a fertility-sparing treatment for early cervical cancer – oncological and reproductive outcomes: a systematic review and meta-analysis

Laura Ellis[1], Menelaos Tzafetas[1,2], Anita Mitra[1,2], Anastasios Pandraklakis[3], Antonios Athanasiou[1], Areti Veroniki[4], Sarah Bowden[1,2], Ilkka Kalliala[1,5], Maria Kyrgiou[1,2].
1 Imperial College London    2 Imperial College Healthcare NHS Trust    3 Alexandra Hospital
4 University of Toronto    5 University of Helsinki

**Objective:** To assess the oncological and reproductive outcomes following different fertility-sparing radical trachelectomy (RT) procedures in presumed early cervical cancer.

**Methods:** Design - Systematic review and meta-analysis

**Data Source:** PubMed, Embase and the Cochrane Central Register of Controlled Trials (1999-2024). **Eligibility Criteria** - Studies exploring oncological or pregnancy outcomes after vaginal simple trachelectomy (VST) and vaginal (VRT), abdominal (ART), laparoscopic (LRT) or robotic (RRT) radical trachelectomy, as well as neo-adjuvant chemotherapy (NACT) followed by surgical excision. **Data synthesis:** Data extraction and risk of bias assessments were performed in duplicate. Pooled proportions for each outcome were calculated using the generalized linear mixed model and the random-effects model. **Main Outcomes:** Oncological: rate of margin involvement, disease recurrence and deaths; reproductive: pregnancy rates, 1st trimester and 2nd trimester miscarriages, preterm and term birth.

**Results:** We identified 93 studies that included 5624 women treated for stage IA1-IIA cervical cancer. The recurrence rates overall were found to be higher in cases >2cm [17% (39/227)] compared to <2cm [2% (66/3159)]. ART was the most common surgical approach [39% (2210/5624)], followed by VRT [31% (1767/5624)] LRT [6% (339/5624)], RRT [5% (278/5624)], and VST [4%(215/5624)]. Pregnancy rates were good amongst those attempting to conceive [63.8% (1100/1723)]. ART had a higher rate of pre-term birth [39%(137/351)] in comparison to VST [28% (23/83)].

**Conclusion:** Recurrence rates were low for patients undergoing trachelectomy with tumours <2cm. ART surgery appears to be associated with better oncological outcomes but has worse reproductive outcomes when compared to VST. Careful selection of cases is crucial.

## POSTER 42 - LS042
### Quality Improvement Project: Enhancing medical education for medical students on surgical placements through pre-placement resources

Michael Song[1], Hollie Meyers[1], Aiden Grant[1], Aaliyah Ali[1], Meera Joshi[2], Daniel Leff[2], Paul Thirushelvam[2], Katy Hogben[2], Hira Rizki[2]
1 Imperial College, London
2 Imperial College Healthcare NHS Trust, London

**Aim:** Hospital placements are an essential part of a medical student's education and professional development. This quality improvement project aims to investigate barriers to education for medical students on placement and address this through the creation of pre-placement resources.

**Method:** An online survey was distributed opportunistically to medical students on placement over a three-week period in February 2024. Students on breast surgery placement then received a pre-placement resource signposting key conditions and concepts. Likert scales, open-ended questions and dichotomous questions were used in the survey to assess student placement experiences, barriers to education and interest in pre-placement resources.

**Results:** 23 students responded to the first survey. Students gave an average score of 2.78/5 when asked about how much they learned on placement (0 meaning nothing, 5 meaning a lot) and 15/23 (65%) students had their learning experience negatively affected by a lack of prior knowledge. Students mentioned that one barrier to education was that students and consultants had different perceptions of an appropriate baseline of knowledge. 21/23 (91%) students believed they would likely learn more with a pre-placement resource and an average score of 4.17/5 was given for how likely they would use a pre-placement resource (0 meaning not likely at all, 5 meaning extremely likely).

**Conclusions:** This study identified that the different perceptions between consultants and students for an appropriate baseline knowledge is a potential barrier to student education. To address this, a pre-placement resource was created, and its impacts are currently being assessed through a second ongoing survey.

## POSTER 43 - LS043
### Increasing awareness of Mask Fit-testing amongst NHS Staff

Ivin Jose[1], Veena Saravanan[1], Samuel Lubega[1]
1 Imperial College, London

**Background:** Despite the critical role of mask fit-testing in preventing infectious disease transmission, a significant portion of NHS staff and students have not undergone fit-testing in the past two years, often due to lack of awareness and accessibility.

**Objectives:** Our study aimed to: 1) Increase awareness and accessibility to mask-fit testing. 2) Raise awareness about aerosol-generating procedures (AGPs) and the availability of fit-tested masks. 3) Identify and address barriers to accessing and wearing fit-tested masks.

**Methods:** We conducted a pre-intervention survey to assess awareness, knowledge of mask locations, and understanding of mask usage. Strategic placement of posters in various hospital locations provided information on fit-testing appointments and AGP awareness. Post-intervention surveys were conducted to evaluate the effectiveness of our intervention.

**Results:** Pre-intervention findings revealed that one-third of NHS staff members had not undergone mask fit-testing, while 43% observed others not wearing fit-tested masks for AGPs, and 41% were unaware of mask locations. Post-intervention, approximately 80% of respondents (out of 68 participants) across all intervention locations had seen our posters, with 97% reporting knowledge of how to book fit-testing appointments and feeling confident in doing so.

**Conclusions:** Our study demonstrated an improvement in awareness of mask fit-testing procedures among NHS staff. Future research should focus on enhancing compliance and accessibility to fit-tested masks to further mitigate the spread of infectious diseases in healthcare settings.

## POSTER 44 - LS044
### Can 3-D Planning Optimise Femoral Head Coverage in Periacetabular Osteotomy?

Anshini Thakur 1, Dr Simon Harris 1, Mr Karthik Logishetty 1
1 Imperial College London

**Background:** Bernese periacetabular osteotomy (PAO) is performed in patients with hip dysplasia. Currently, intra-operative fluoroscopy aids cut placement and translation/rotation of the acetabular fragment. However, minimal pre-operative techniques exist to determine ideal fragment adjustment. The MSK Lab Hip Planner (MSKL-HP) can simulate PAOs pre-operatively, providing more precise parameters and optimising lateral centre-edge (LCEA) and Tönnis angles.

**Aims:** To investigate utility of the MSKL-HP in PAO planning and quantify the influence of varying surgical technique on LCEA and Tönnis angles.

**Methods:** The MSKL-HP was used to simulate 30 PAOs on two patients with hip dysplasia (four hips). Acetabular and femoral anatomy were landmarked to simulate PAO cuts. The posterior and ischial cuts were standardised. The slope of the iliac cut was neutral (aligned to pelvis), exit point 5mm above the anterior entry point or 5mm below. The slope of the pubic cut was neutral (perpendicular to the pubis), 50° or 70° (medial-to-lateral). Iliac and pubic cut combinations were varied.

**Results:** Median pre-operative LCEA and Tönnis angles were 27° and 15.3° respectively, with median improvements of 7.6° and -8.4° across all PAOs. A Kruskal-Wallis test showed no statistically significant difference in change in LCEA or Tönnis between variations of both iliac and pubic cuts (p>0.05). Optimal angles were associated with forward flexion, valgus rotation and increasing anteversion of the acetabular fragment.

**Conclusion:** The MSKL-HP simulates feasible PAOs with improved post-operative parameters – showing benefit as a pre-operative planning tool for surgeons. Specific PAO technique should be validated through further studies.

# SPEAKER BIOGRAPHIES

Abdulrahman Alsharif is a PhD student at Imperial College London and an associate Fellow (AFHEA) in higher education. My research focuses on the impact of anaesthetics and its mechanism of action on cancer cell biology following surgery.

Dr Carly Bisset is a General Surgery Specialty Trainee in Glasgow, Scotland and Honorary Clinical Lecturer at the University of Glasgow. She was awarded her PhD with the University of Aberdeen in 2023, which explored the influence of surgeon personality on anastomotic decision-making in colorectal surgery (the Plato Project).

Stephen Chadwick qualified from the Middlesex Hospital Medical School in 1975. He undertook surgical training on the St Mary's rotations. He was a consultant surgeon at Northwick Park and St Marks Hospitals and latterly for the medical charity UK Med. He was appointed Hon Professor at University of West London in 2010 and continues to teach on various courses. Since retiring from a busy clinical workload, he has more time to spend on medieval manuscripts and his horses.

Mr Peter Dawson was appointed as a Consultant General Surgeon in 1994 at West Middlesex University Hospital, London, with a special interest in bowel cancer and inflammatory bowel disease. He was Principal Investigator of 'CREST', 'FACS' and 'DREAMS' research studies (late phase National Cancer Research Institute studies). He has taught widely and written over 100 peer reviewed scientific papers. He was Consultant Surgeon to Charing Cross Hospital (latterly Imperial College and Chelsea and Westminster Foundation Trust). Mr Dawson was also Past President of the Association of Coloproctology of Great Britain & Ireland and Past Secretary of the European Society of Coloproctology. He has held several senior managerial positions and was a founder member of the new Modernised National Health service in Cyprus. He is adjunct Professor of Surgery University of Cyprus and continues to advise Trusts across the UK in Tribunals and service provision reconfiguration. He recently demitted office as Chair of the West London Medical Trust – a position he held for many years.

Sohier Elneil is the first Professor of Urogynaecology at University College London, and is a Consultant Urogynaecologist and Uro-neurologist, based at University College Hospital and the National Hospital for Neurology and Neurosurgery (NHNN). Her career has been dedicated to addressing women's health issues in marginalized communities including female genital mutilation (FGM), childbirth trauma, obstetric fistula, incontinence and prolapse issues, chronic pain, and more recently those with complications of continence and/or prolapse mesh . As a result, Sohier has been integral in developing/implementing novel reconstructive surgical techniques, sacral neuromodulation, and botulinum toxin treatments for pelvic floor disorders. Sohier has extended her UK clinical and academic work experience globally and works with colleagues in Africa and Asia. She promotes women's health issues on a national and international scale, by encouraging dialogue between medical and paramedical experts, governments, and international organizations. By developing and endorsing globally accepted health policies, she believes it can truly empower women and improve their lives.

# SPEAKER BIOGRAPHIES

Christina Fotopoulou is the Professor of Gynaecological Cancer Surgery in the Department of Surgery and Cancer, Faculty of Medicine of Imperial College London, UK. She is the Deputy director of the Ovarian Cancer Action Research Centre at Imperial College. She holds a honorary chair in the Gynaecology Department at the Charite' University of Berlin, where she was trained and then later took the role of the Vice Director of the Gynecological Department. Her surgical and scientific expertise focusses on the management of patients with advanced and relapsed ovarian cancer, profiling of tumor heterogeneity and integration of tumorbiology factors with surgical effort under the umbrella of individualisation of surgical care. She has served as the lead of the guidelines committee of the British Gynaecological Cancer Society (BGCS), elected member of the ESGO- council (European Society of Gynaecologic Oncology) and lead of the ESGO guidelines committee and is also a member of the German AGO- Ovarian Cancer Group. She is on the editorial board and reviewer of numerous international gynaecological and oncological journals and is member of various international oncological committees, including BGCS, ASCO, ESGO, IGCS, ESMO, ENGOT, AGO, SGO and NOGGO.

Dr Muhammad Habiburrahman is a PhD student in the Clinical Medicine Research Programme at Imperial College London, specialising in women's cancer. He holds a Bachelor in Medicine and Medical Doctor degrees from Universitas Indonesia, with his primary training at Dr Cipto Mangunkusumo Tertiary Hospital (CMH), Indonesia (2015-2021). While working as a general practitioner, he gained experience in leadership, management, and research through his fellowship in the Obstetrics and Gynaecology, and Anatomical Pathology Departments at CMH (2021-2023). Habiburrahman's research interests include gynaecologic oncology, obstetrics, pathology, personalised medicine, and clinical epidemiology, reflected in his numerous publications and awards for presentations at conferences.
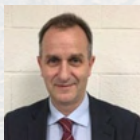
Professor Jayne is Bowel Cancer UK & RCS England Professor of Surgery at the University of Leeds and Hon. Consultant Surgeon at Leeds Teaching Hospitals NHS Trust. His clinical interests include robotic and minimally invasive surgery for colorectal cancer and pelvic floor dysfunction. His research interests include the development of new surgical technologies and devices to improve outcomes in colorectal disease. In 2012 he was awarded an NIHR Research Professorship to accelerate research and implementation of new technologies into clinical practice. He is currently an NIHR Senior Investigator. He is Chief Investigator for several NIHR portfolio clinical trials. He has previously served on the EME/NIHR Prioritisation and Strategy Groups, the Doctoral Research Fellowship Committee, and the Clinician Scientist Awards Panel. He is currently a member of the NIHR Advanced Fellowship Panel and the NIHR i4i Programmes. He is Clinical Director of the NIHR MedTech Co-operative in Surgical Technologies, a national network of clinicians, academics, patient & public representatives, and commercial partners to develop novel solutions to unmet surgical need. His former position as Clinical Director for the NIHR Global Health Research Group affords him the opportunity to apply his expertise in the clinical translation of surgical technologies to the context of low resource countries.

James Kinross is a Reader in Surgery and Consultant Surgeon at Imperial College London. His clinical interest is in robotic surgery for colorectal cancer, and he holds a PhD on the gut microbiome. His clinical interest is in minimally invasive surgery for colorectal cancer. He was trained in north west London, and he was an NIHR clinical lecturer in surgery and an Ethicon Laparoscopic Fellow in colorectal surgery. He was awarded a Royal College of Surgeons of England training fellowship during his PhD and he was funded by the Academy of Medical Sciences as an early stage lecturer. He is a visiting Professor at the Royal College of Surgeons of Ireland. James's first scientific love is the gut microbiome, and he studies how the microbiome causes chronic diseases such as cancer. He is also currently funded by CRUK, DASA, Horizon 2020 and the EPSRC to perform translational research into a diverse set of research themes such as surgical artificial intelligence, augmented reality, and robotics.
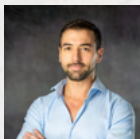
Matthieu Komorowski MD PhD is a Clinical Senior Lecturer in the department of Surgery and Cancer at Imperial College London and an honorary consultant in intensive care and anaesthetics at Charing Cross Hospital. He holds full board certification in anaesthetics and intensive care in both France and the UK. He was previously a research fellow at the European Space Agency and holds additional qualifications in space, mountain, diving and hyperbaric medicine. He joined Imperial College London in 2014 and completed a Masters of Research and a PhD in Medicine and Bioengineering, supervised by Profs Aldo Faisal and Anthony Gordon. In 2016/2017, he was a visiting scholar at the Laboratory of Computational Physiology at Harvard-MIT Division of Health Sciences and Technology (Profs Roger Mark and Leo Celi). In his research, he applies machine learning techniques to build the next generation of decision support systems for critical care with a specific focus on sepsis.

# SPEAKER BIOGRAPHIES

Dr Ahmed Latif is a Surgical Registrar sub-specialising in Oncoplastic Breast Surgery, and is a Fellow of the Royal College of Surgeons of England and the European Board of Surgery. Coming towards the end of his surgical training, he is taking time out for research and is completing a PhD as a Darzi Fellow at the Institute of Global Health Innovation (IGHI), Imperial College London. His PhD focuses on the use of Wearable Technology in post Breast Cancer surgery upper-limb rehabilitation

Professor Averil Mansfield made history when she was appointed as the first female professor of surgery at St Marys Hospital in 1993, making her the first female professor of surgery in the United Kingdom. She has been made a Dame Commander of the Order of the British Empire in the first King's Birthday Honours. Professor Mansfield received her honour for services to Surgery and to Equality in Medicine. Professor Mansfield is also a past Vice President of the Royal College of Surgeons of England and founding chair of the Royal College of Surgeons of England's Women in Surgical Training (WIST) committee (todays Women in Surgery).

Professor Gerry Thomas is a renowned expert in Molecular Pathology who retired from Imperial's Department of Surgery and Cancer in 2022 after a prominent and celebrated career. She established the current Imperial College Healthcare Tissue Bank, an infrastructure that enables Imperial researchers to collect, store and use human tissue appropriately under a single Human Tissue Authority (HTA) licence and Ethics approval. In the wider medical field, Professor Thomas established the Chernobyl Tissue Bank in 1998 in response to the scientific interest in studying the molecular biology of thyroid cancer post-Chernobyl. She was the Scientific Director of the Wales Cancer Bank and Clinical Director of the West London Genome Medicine Centres and part of the 100,000 genomes project. Professor Thomas was awarded an OBE for her services to Science and Public Health in 2019.

Dr Victoria Williamson is the President of the UK Psychological Trauma Society (UKPTS) and is a researcher at King's College London. Her research focuses on the psychological impact of trauma exposure in high-risk groups, including frontline staff, military veterans, and survivors of human trafficking. Her recent work has been highly influential in furthering the understanding and treatment of moral injury and she currently leads the first UK treatment trial for moral injury-related mental health difficulties with Combat Stress.
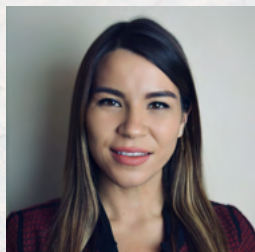
# MEET THE TEAM

**Professor George Hanna**
Honorary Chair

**Dr Emma Carrington**
Chair

**Mrs Dorcas Ishaya**
Event Lead

**Ms Yasmin Grant**
Scientific Lead

**Ms Anuja Mitra**
Finance Lead

**Ms Cansu Ates**
Design Lead

**Mr Ravi Naik**
Tech lead

**Mr Edward Fletcher**
Organsation lead

**Benjamin Coleman**
Communications lead

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