ASiT President's Introduction

Welcome to Liverpool - the city of culture, heritage and people. When I was elected President there was simply only one place that our 40th Anniversary Conference could be held. I had so many good memories of weekends with friends and colleagues here, and I couldn’t agree more that Liverpool was voted as the 4th Friendliest city in the world!

2016 marks our 40th Anniversary. A time to reflect and celebrate the excellence within surgical training, despite the turbulent times of late. It’s imperative to find solutions to the threats currently facing surgical training for the sake of the future of our beloved profession.

A thank you to all the conference sponsors, they are integral to the running of the conference. They have some great educational content for you, so please do visit their stands during the drinks reception and refreshment breaks.

I’m delighted to present such a fabulous line-up of speakers; with sessions focusing on the current climate within the NHS workforce, making the most out of surgical training, conflicts and catastrophes, celebrating women in surgery, preparing for life as a consultant and current hot topics in surgery including credentialing and surgeon specific outcomes. We also have two consensus sessions for you to contribute to: research output required for CCT and global surgery opportunities within surgical training, so ensure you sign up early to avoid missing out. We are hosting 12 pre-conference courses, covering a range of specialties, and also have sessions tailored to the future surgical workforce with our medical student parallel session and the STARSurg session.

I hope there is something to appeal to everyone and that you thoroughly enjoy the #ASiT2016 weekend!

Miss Rhiannon Harries, ASiT President 2015-16
@rhiharries

P.s. Please pencil in #ASiT2017 on 31st March-2nd April 2017 in Bournemouth- See you there!
ASiT Executive Conference Team 2016

President
Rhiannon Harries
@rhiharries

Outgoing Treasurer
Heman Joshi
@drhemanjoshi

Past-President
Vimal Gokani
@VimalGokani

Vice-President
Piriyah Sinclair
@PiriyahSinclair

Past-President
Andi Beamish
@beamishaj

Vice-President
Frank McDermott
@mcfark

Honorary Secretary
Phil McElnay
@Phil_mce

Director of Education
Devender Mittapalli
@DevMittapalli

Incoming Treasurer
Adam Peckham-Cooper
@abppc

Webmaster
Adam Williams
@adampwilliams13

Outgoing Treasurer
Heman Joshi
@drhemanjoshi

Publicity Officer
James Glasbey
@DrJamesGlasbey

Yearbook Editor
Helen Mohan
@HelenMohan1

ASiT Manager
Kristina Gloufchev

With thanks to previous ASiT administrators and helpers.
Maxine Petrovic • Carol Martin • Rebecca Gould
# ASiT Conference Programme

**Friday 18th March 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
<th>Pre-conference Courses</th>
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<tbody>
<tr>
<td>08.00 - 09.00</td>
<td>Hall 1B</td>
<td>ASiT Statistics for Surgeons Course</td>
</tr>
<tr>
<td>09.00 - 09.10</td>
<td>Room 4A</td>
<td>ASiT/ Medtronic Core Laproscopic Skills Course</td>
</tr>
<tr>
<td>09.10 - 09.45</td>
<td>Room 4B</td>
<td>ASiT/ Core Neurosurgical Skills Course</td>
</tr>
<tr>
<td>09.45 - 10.20</td>
<td>Room 11A</td>
<td>ASiT/ GE Ultrasound Scanning for Surgical Trainees Course</td>
</tr>
<tr>
<td>10.20 - 11.20</td>
<td>Room 11B</td>
<td>ASiT/ Core EVHR Course</td>
</tr>
<tr>
<td>12.20 - 12.50</td>
<td>Room 11C</td>
<td>ASiT/ Stryker Foundation Skills in Orthopaedics Course</td>
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<tr>
<td>12.50 - 13.00</td>
<td>Room 13</td>
<td>ASiT Basic Skills in Cardiothoracics Course</td>
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<tr>
<td>13.00 - 14.00</td>
<td>Room 14</td>
<td>ASiT Basic Skills in Vascular Surgery</td>
</tr>
<tr>
<td>14.00 - 15.00</td>
<td>Room 8,9 &amp; 10</td>
<td>ASiT/ THD/ BK Ultrasound Advanced Benign Proctology Course</td>
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**40th Anniversary Celebratory Drinks Reception at the ACC** 18.00 - 20.30

**Saturday 19th March 2016**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>09.00 - 09.10</td>
<td>Miss Rhiannon Harries (President's address)</td>
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<tr>
<td>09.10 - 09.45</td>
<td>Professor Sir Bruce Keogh (Opportunities and Challenges in Healthcare)</td>
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<tr>
<td>09.45 - 09.55</td>
<td>Mr David O'Megan (History of the Silver Scalpel Award)</td>
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<tr>
<td>09.55 - 10.20</td>
<td>Mr Shafi Ahmed (The 2016 Silver Scalpel Lecture: Virtual Surgical Strikes)</td>
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<tr>
<td>10.20 - 11.20</td>
<td>Mr Mike Lavelle-Jones (RCSEd)</td>
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<tr>
<td>11.50 - 12.20</td>
<td>Mr John Black (The ASiT Lecture Session)</td>
</tr>
<tr>
<td>12.20 - 12.50</td>
<td>Ms Elizabeth Ball (Breast Cancer as a Breast Surgeon)</td>
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<tr>
<td>12.50 - 13.00</td>
<td>Mr Wee Lam, Mr Matt Fell (Official Charity: BFIRST)</td>
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**Official Charity: BFIRST**

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**GlobalSurg Parallel Session** 14.00 - 15.00 [Room 12]

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15.00 - 15.30</td>
<td>Dr Johann Malawana (Hot Topics)</td>
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<tr>
<td>15.00 - 15.30</td>
<td>Professor Stephen Cannon (Cosmetic Surgery Interspecialty Committee)</td>
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<tr>
<td>15.00 - 15.30</td>
<td>Professor Stephen Westaby (Surgeon Specific Outcomes: Saint or Sinner?)</td>
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**Break** 11.20 - 11.50

**Second Session**

<table>
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</table>

**Break** 15.30 - 17.10

**BFIRST/ ASiT Short Papers Session** 15.30 - 16.20 [Hall 1B]

<table>
<thead>
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<tr>
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**Medical Student Poster of Distinction Prize Session** 16.20 - 17.10 [Hall 1B]

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<tr>
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<tbody>
<tr>
<td>15.30 - 17.30</td>
<td>Mr Craig McIlhenny (Medical Student Poster of Distinction Prize Session)</td>
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**Consensus Session on Global Surgery** 15.30 - 17.30 [Room 4]

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>15.30 - 17.30</td>
<td>Mr Craig McIlhenny (Consensus on Research Output for CCT)</td>
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**ASiT AGM** 17.10 - 17.30

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<tr>
<td>17.10 - 17.30</td>
<td>ASiT Black-Tie Charity Gala Dinner (ASiT AGM)</td>
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**ASiT Black-Tie Charity Gala Dinner** 19.00 - Late

**40th Anniversary Celebratory Drinks Reception at the ACC** 18.00 - 20.30

**Official Charity: BFIRST**

**Break** 11.20 - 11.50

**Second Session**

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<tr>
<td>08.00 - 09.00</td>
<td>Registration</td>
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<tr>
<td>09.00 - 09.45</td>
<td>ASiT Medal Prize Presentation Session</td>
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<tr>
<td>09.00 - 09.45</td>
<td>Posters of Distinction Prize Session 1</td>
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<tr>
<td>09.00 - 09.45</td>
<td>Medical Student Oral Prize Session</td>
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<tr>
<td>09.45 - 10.45</td>
<td>It's a Mans World.....Or is it?</td>
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<tr>
<td>09.45 - 10.45</td>
<td>Breaking the Glass Ceiling in Academia</td>
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<tr>
<td>09.45 - 10.45</td>
<td>Embracing LTFT in Surgery, the Growing Need and the Support From RCSEng</td>
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<td>09.45 - 10.45</td>
<td>Panel Q&amp;A</td>
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<td>09.45 - 10.45</td>
<td>ASiT Surgical Fellowships &amp; Prize Winners</td>
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<td>10.45 - 11.15</td>
<td>Break</td>
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<tr>
<td>11.15 - 12.30</td>
<td>Conflicts and Catastrophes</td>
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<tr>
<td>11.15 - 12.30</td>
<td>Responding to the 7/7 Terrorist Attacks</td>
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<td>11.15 - 12.30</td>
<td>Working in a War-Zone</td>
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<tr>
<td>11.15 - 12.30</td>
<td>Ebola and Sierra Leone</td>
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<td>11.15 - 12.30</td>
<td>Operation Hernia 2016 Shortland Hosking Traveling Fellowship Winner</td>
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<td>11.15 - 12.30</td>
<td>Operation Hernia's 2015 Shortland Hosking Traveling Fellowship Report: Ghana</td>
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<td>11.15 - 12.30</td>
<td>Let's Make Things Better Together: Update on ASiT Developments</td>
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<td>12.30 - 13.00</td>
<td>Shape of Training Survey Results</td>
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<td>Academic Training Pathways Survey Results</td>
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<td>Cost of Surgical Training Survey Results</td>
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<td>11.15 - 12.15</td>
<td>BASO Trainees Oral Session</td>
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<td>12.15 - 13.00</td>
<td>Posters of Distinction Prize Session 2</td>
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<tr>
<td>11.15 - 13.00</td>
<td>Medical Student Parallel Session</td>
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<tr>
<td>13.00 - 14.00</td>
<td>Networking Lunch</td>
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<tr>
<td>14.00 - 15.30</td>
<td>Preparing for Life as a Consultant</td>
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<td>14.00 - 15.30</td>
<td>How to Spot the Sick Patient</td>
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<td>14.00 - 15.30</td>
<td>Acing the Consultant Interview</td>
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<td>14.00 - 15.30</td>
<td>Academic Surgery/ Clinical Senior Lectureship Appointments</td>
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<td>14.00 - 15.30</td>
<td>Managing the Managers</td>
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<td>14.00 - 15.30</td>
<td>Private Practice</td>
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<td>14.00 - 15.30</td>
<td>Surgical Education and Training Prize Session</td>
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<td>Posters of Distinction Prize Session 3</td>
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<td>15.30 - 15.50</td>
<td>Break</td>
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<tr>
<td>15.50 - 16.40</td>
<td>SARS Prize Session</td>
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<tr>
<td>16.40 - 16.55</td>
<td>Prize Giving Presentations</td>
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<td>16.55 - 17.00</td>
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### Note

- **BASO** stands for Basic and Specialised Surgical Oncology.
- **SARS** stands for Surgery and Academic Research Society.
- **ASiT** stands for Association of Surgeons in Training.
ASiT Conference Competitions

ASiT Twitter Competition

ASiT will once again be running our Twitter competition this year at our Liverpool Conference. Twitter offers an instant medium to communicate with fellow delegates, Conference organisers and our Sponsors. If you haven’t before signed up to twitter, it takes a couple of minutes and is available on your smart phone.

Whether you want to feedback on a pre-conference course, get advice on which session to attend or what to wear to the Gala dinner, @ASiTOfficial will be constantly on hand.

We will be using #ASiT2016 throughout and offering a prize to the person with the best tweet using this hashtag. The winner will get a years free ASiT membership making them eligible for many of our courses, bursaries and awards.

Win our Sponsorship Prize

Please take time to visit some of the stars of our event:
our incredibly supportive sponsors

1. Visit our fantastic sponsors’ trade stands
2. Ask a minimum of 5 x Main Foyer AND 5 x Hall Three trade stand sponsors to punch a hole in their magnifying blong or the card (they’ll know their stand number)
3. Fill in your details on the back of the card (we won’t share them with anyone)
4. Put it in the Sponsorship Prize Box at registration desk by 3pm Sunday 20th March
5. Be entered into our prize draw for our spectacular Sponsorship Prize

Winning Tweet 2015

Dafydd Sion Loughran @dafyddloughran . 28 Feb 2015
Forgetting cufflinks is no obstacle at #asit2015... @ASiTOfficial @Ethicon

Winning Tweet 2015
BFIRST (The British Foundation for International Reconstructive Surgery and Training) is the official charity of the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS). Through reconstructive plastic surgery, BFIRST’s aim is to release some of the world’s most vulnerable children and adults from a state of poverty caused by a deformity or a disability.

We know from our experience and training that surgery transforms lives for the better. Untreated burns frequently result in disfigurement, deformity, and a life of destitution and marginalisation. Hand injuries result in loss of function, loss of income and severe disability.

BFIRST undertakes several projects across the world in the most deprived countries, including Cambodia, Bangladesh and Nigeria, with future plans for Vietnam and Sri Lanka.

We know that many deformities and disabilities caused by trauma, burns and cancer can be corrected by reconstructive plastic surgical techniques, giving this forgotten group of patients a chance of hope and a better life.

The main aims of these projects are empowerment and sustainability: BFIRST provides a consultant-led service whereby local surgeons are trained by an international team of reconstructive expertise, helping to develop their infrastructure, so that they become self-sufficient in providing life-changing procedures for their own communities.

**BFIRST: Join Our Team “Reconstruct Lives… Rebuild Futures”**

Tweet us on @BFIRSTTraining …#BFIRSTTraining #plasticsurgery
Connect with us on Facebook: Bfirst
Or simply click on our website: www.bfirst.org.uk

*We’ll see you there….*
ASiT Pre-Conference Courses

Non-Technical Skills Courses

ASiT/ RCSEd Non Technical Skills (NOTSS) Course
This one-day workshop gives participants practical experience of observing and rating non-technical behaviours. The format is centered on small group work and the use of simulated scenarios.

ASiT Statistics for Surgeons Course
This one day course combines taught components and supervised exercises using statistical software.

ASiT/ SARS Research Skills Course
Run in association with the Society of Academic & Research Surgeons (SARS), this course provides delegates with an overview of academic surgery.

Technical Skills Courses

ASiT/ Stryker Foundation Skills in Orthopaedics Course
This one day course aims to teach the basics in orthopaedic surgery, including casting and operative fracture management.

ASiT/ Covidien & Medtronic Core Laparoscopic Skills Course
This one-day skills course is aimed at trainees who have minimal laparoscopic experience and wish to develop core techniques in laparoscopic surgery.

ASiT Core Neurosurgery Skills Course
This full-day course aims to equip Foundation Doctors and CT/ST trainees with some of the introductory theoretical knowledge, and practical skills, that are specific to the management of Neurosurgical patients.

ASiT Basics Skills in Vascular Surgery Course
This one-day course teaches participants the assessment of patients with vascular emergencies, basic interpretation of vascular imaging and the application of basic practical skills in vascular surgery.

ASiT Foundation Skills in Cardiothoracic Surgery Course
This one-day course aims to teach the basic skills required for success in cardiothoracic surgery.
ASiT Pre-Conference Courses

**ASiT/ GE Ultrasound Scanning for Surgical Trainees Course**
This is a one-day practical skills course introducing surgically applied ultrasound scanning.

**ASiT/ Gore Endovascular Skills Course**
This one-day course is aimed at senior (ST3+) vascular trainees for development of endovascular skills using simulators.

**ASiT/ Cook Complex Abdominal Closure Course**
The aim of this course is to introduce trainees to abdominal wall reconstruction techniques, specifically focusing on component separation for mid line closure.

**ASiT/THD/BK Advanced Benign Proctology Course**
This one-day course aims to provide senior colorectal trainees with practical experience in the management of benign proctology conditions.

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**Make sure you visit the Education Zone on the Balcony!**

<table>
<thead>
<tr>
<th>Company</th>
<th>Event Details</th>
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<tbody>
<tr>
<td>eoSurgical</td>
<td>Friday 18th March 09:00- Saturday 19th March 14:00</td>
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<tr>
<td></td>
<td>Laparoscopic Assault Course Competition</td>
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<tr>
<td>Medtronic</td>
<td>Saturday 19th March 15:00-15:30</td>
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<td>Safe Abdominal Access Teaching</td>
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<td>ETHICON</td>
<td>Sunday 20th March 09:00-14:00</td>
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<td>Energy Devices and Stapling Teaching</td>
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<tr>
<td>ETHICON</td>
<td>Sunday 20th March 15:30-15:50</td>
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<td>Abdominal Wall Closure Teaching</td>
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ASiT Conference 2016 Prizes

Oral Presentation Prizes

ASiT Medal
ASiT’s most prestigious prize is awarded to the best presentation from a surgical trainee. This is selected from the highest scoring abstracts delivered as part of the ASiT Medal oral presentation session. The winner is presented with the ASiT Medal and a prize of £500.

SARS/ ASiT Prize
Awarded in conjunction with the Society of Academic and Research Surgery (SARS), this surgical trainee prize rewards high quality clinical and basic science research. The prize winner is the highest scoring oral presentation presented in the SARS oral presentation session. The prize is £150 and an invitation to present their work at SARS.

T-Log Surgical Education Prize
The T-Log Surgical Education Prize is awarded to the in the surgical education and training session. This is selected from the highest scoring abstracts delivered in the Surgical Education and Training oral presentation session. The prize is a £100 Voucher and an opportunity to present at ASGBI.

BASO-Trainees/ ASiT Presentation Prize
Awarded for the best surgical oncology oral presentation presented at the BASO Trainees prize session at the ASiT conference. BASO Trainees is a trainee organization representing a broad spectrum of members, all with a common interest in surgical oncology. The prize is an opportunity to present at BASO and £100.

ASGBI/ ASiT Short Paper Prize
Awarded in conjunction with the Association of Surgeons of Great Britain and Ireland, this rewards the best oral presentation in the ASGBI/ ASiT Short Papers Session. The winner is invited to present their work at the ASGBI.

STARSurg/ ASiT Medical Student Prize
This is awarded to the highest scoring oral presentation in the medical student oral presentation session. The prize is £100.

ASiT TMS Poster of Distinction Prize
This is awarded to the highest scoring Poster of Distinction short oral presentation in the Poster of Distinction Prize session. The prize is a trophy and £100.

ASiT Medical Student Poster of Distinction Prize
This is awarded to the highest scoring Medical Student Poster of Distinction short oral presentation in the Medical Student Poster of Distinction Prize Session. The prize is a Bailey and Love textbook.
ASiT Conference 2016 Prizes

**Poster Presentation Prizes**

**Mammary Fold/ASiT Prize**
Awarded for the best breast surgery poster presented at the ASiT Conference. The winner of the prize will receive a book token to the value of £75. The Mammary Fold is the national breast trainees group, representing general surgery trainees with a sub-specialty interest in breast surgery.

**AUGIS/ASiT Trainee Prize**
The objectives of the Association of Upper Gastrointestinal Surgeons (AUGIS) of Great Britain and Ireland are to improve the delivery, results and outcome of conditions of the upper GI tract requiring surgical treatment. The prize of £200 will be awarded for the best upper GI surgery related poster presented at the ASiT conference.

**Carrel Club/ASiT Trainee Prize**
This is awarded for the best transplant poster presented at the ASiT Conference. The prize is £100. The Carrel Club represents transplant surgical trainees in the UK.

**Dukes Club/ASiT Prize**
This is awarded for the best colorectal surgery poster presented at the ASiT Conference. The winner will receive £100. The Dukes’ Club represents general surgery trainees with a sub-specialty interest in colorectal surgery. The prize is sponsored by the Association of Coloproctology of Great Britain and Ireland (ACPGBI).

**Rouleaux Club Prize**
Awarded for the best vascular surgery poster presented at the ASiT Conference. The prize is a place on a vascular training day.

**BAETS Prize**
BAETS is the British Association of Endocrine and Thyroid Surgeons. This prize is awarded to the best endocrine poster presented at the ASiT Conference. The winner receives £150 and free BAETS conference 2016 registration.

**BOMSS/ASiT Trainee Prize**
This is awarded to the highest scoring poster relating to bariatric surgery presented at the ASiT Conference. The winner will receive a years membership of BOMSS (including AUGIS).

**Orthopaedic Research UK/ASiT Prize**
Orthopaedic Research UK is an independent research charity in the field of orthopaedic science founded in 1989. This prize will be awarded for the best orthopaedic related poster presented at the ASiT Conference. The winner will receive £150 and a certificate from ORUK.
ASiT Conference 2016 Prizes

AOT/ASiT Trainee Prize
Awarded for the best ENT surgery poster presented at the ASiT Conference. The winner will receive £100, sponsored by MED-EL. AOT is the Association of Otolarynologists in Training, representing ENT trainees.

BAOMS/ASiT Prize
Awarded for the best maxillofacial poster presented at the ASiT Conference. The winner of the prize will receive £100. The British Association of Oral and Maxillofacial Surgery represents Oral and Maxillofacial Surgeons in the UK.

BNTA/Codman Neuro/ ASiT Prize
Awarded for the best neurosurgery poster presented at the ASiT Conference. The winner of the prize will receive a medically related text book to the value of £150, sponsored by Codman Neuro. The BNTA is the national neurosurgical trainees group, representing neurosurgery trainees at the Society of British Neurological Surgeons.

Plasta/ASiT Prize
Awarded for the best plastic surgery poster presented at the ASiT Conference. The winner will receive £100. PLASTA is the Plastic Surgery Trainees Association, representing plastic surgical trainees.

SURG Prize
Awarded for the best urological surgery poster presented at the ASiT Conference. The winner will receive £100. SURG is the Senior Urological Registrars Group, representing trainees in urology.

ASiT/SCTS Prize
This is awarded to the best cardiothoracic poster presented at the ASiT Conference. The prize is £100.

ASiT/BAPS Prize
BAPS is the British Association of Paediatric Surgeons. This prize is £100 is awarded to the best poster in paediatric surgery presented at ASiT Conference.

British Hernia Society
This is awarded to the best two posters on the topic of hernia presented at the ASiT Conference. The prize is free British Hernia Society Conference 2016 registration.
ASiT Conference 2016 Prizes

**BASO/ASiT Poster Prize**
Awarded for the best surgical oncology poster presented at the ASiT Conference. BASO is the British Association of Surgical Oncologists. The prize is £100 and an opportunity to present at BASO.

**ALSGBI/ASiT Trainee Prize**
The Association of Laparoscopic Surgeons of Great Britain and Ireland is the premier professional association in the field of laparoscopic surgery. This £250 prize will be awarded for the best laparoscopic surgery related poster.

**ASiT PLG Prize**
Awarded in conjunction with the RCSEng Patient and Lay Group (PLG). ASiT is a strong supporter of the work done by the PLG. The ASiT PLG Prize is awarded for the best presentation from a trainee relating to patient safety. This winner will be selected by both ASiT Council and lay members of the PLG group from the highest scoring poster relating to patient safety presented at the ASiT Conference. The winner will receive book tokens to the value of £200 and will be invited to present the winning abstract to the PLG at the Royal College of Surgeon of England.

**IJS Case Report**
Awarded in conjunction with the ASiT-affiliated International Journal of Surgery (IJS), these prizes reward the best surgical case report presented at the ASiT Conference. Elsevier’s new PubMed-indexed online surgical journal International Journal of Surgery Case Reports is a companion journal to the IJS, and is dedicated to publishing case reports only. The winner will be invited to submit their full case reports for publication in IJS Case Reports, and pending successful peer-review the publication fee will be waived.

**IME Ethics Prize**
Awarded in conjunction with Institute of Medical Ethics (IME) for the best poster presented at ASiT Conference relating to surgical ethics. The winner will receive a prize of £200.

**National Research Collaborative Prize**
This is awarded to the highest scoring poster from a recognised national research collaborative. The prize is £100 to be donated to the respective national research collaborative. This prize is sponsored by the Birmingham Clinical Trials Unit.

**ASiT/GlobalSurg Global Surgery Prize**
This prize is awarded to the highest scoring poster related to surgery in a low income country presented at the ASiT Conference. The prize is £100.
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How to contact us

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Other Sponsors and Exhibitors

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The Royal College of Surgeons of Edinburgh

The Royal College of Surgeons of Edinburgh (RCSEd) is the oldest and largest surgical organisation in the world, dedicated to the pursuit of excellence and advancement in surgical practice, through education, training and examinations, liaison with external medical bodies and representation of the surgical workforce.

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www.rcsed.ac.uk

The Royal College of Physicians and Surgeons of Glasgow

The Royal College of Physicians and Surgeons of Glasgow is a world leader in education, training, assessment and support for healthcare professionals.

We run a wide range of surgical skills courses and assessments for the surgical profession. Our state of the art Clinical Anatomy Skills Centre (CASC), based at the University of Glasgow, is one of only a handful of cadaveric skills training centres in the UK offering outstanding clinical training.

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Mr Shafi Ahmed

Mr Shafi Ahmed is a Consultant laparoscopic colorectal surgeon working at The Academic Surgical Unit at The Royal London and St Bartholomews Hospitals. He is the colorectal cancer lead for Barts Health and is on the Government task force for Cancer as part of the Five Year Forward view 2020. He is the Undergraduate Associate Dean at Barts Medical School and was recently elected as Council member of Royal College of Surgeons of England and is the youngest member. He sits on the education, examinations and opportunities in surgery committees. He is a surgical tutor and recently was the Training Programme director for core surgical trainees in NE London. He is also a civilian advisor in general surgery to the Royal Air Force and a Specialist advisor to the Care Quality Commission.

He has been developing innovation in education and performed a live steamed operation using Google Glass to 14000 people across 132 countries and 1100 cities. He has been working with both Google and Ubisoft to develop the glass for clinical use. Barts medical school is the first medical school outside North America to use this as part of the curriculum.

He has developed a company called Virtual Medics TM who are developing wearable technology for use in medicine. Recently he has performed the first operation to be filmed in virtual reality and has formed partnerships with key partners internationally to develop this further. He will show this footage to the ASiT conference first.

Rt Hon Heidi Alexander

Rt Hon Heidi Alexander has been the Member of Parliament (MP) for Lewisham East since the 2010 general election and is a member of the Labour party. She was appointed Shadow Secretary of State for Health on 13 September 2015. She holds a BA in Geography from the University of Durham and a Masters in European Urban and Regional Change. She was elected as a councillor to Lewisham London Borough Council in 2004. She served as Deputy Mayor of Lewisham and Cabinet Member for regeneration from 2006. She served as the Parliamentary Private Secretary to the Shadow Secretary of State for Environment, Food and Rural Affairs and from 2012 serves as an Opposition Whip as well as (from December 2013) a Shadow Minister for London. She is the Chair of the APPG on Choice at the End of Life.
Mr William Allum
Mr William Allum is a Consultant Upper GI surgeon at the Royal Marsden NHS Foundation Trust, London.

His main area of clinical interest is in oesophageal and gastric cancer with a research interest in perioperative multimodality therapy. He was joint Chief Investigator in the MAGIC trial of pre-operative chemotherapy in gastric cancer.

He is the immediate Past President of the Association of Upper GI Surgeons of Great Britain and Ireland (AUGIS). He is also Chair of the National Cancer Intelligence Network Upper GI Clinical Reference Group and is responsible for overseeing national data on upper GI cancers and how it can be used to improve outcomes. He was appointed Chair of the Clinical Reference Group – Upper GI Surgery in 2013 which advises the NHS Commissioning Board on Specialist Commissioning of Oesophago-gastric Cancer services. He is chair of the European Society of Surgical Oncology Upper GI quality assurance group and is lead for the EURECCA project comparing outcomes in management of oesophago-gastric cancer across Europe.

He has maintained an interest in training throughout his consultant career and was a member of the General Surgery SAC from 2003 and Chairman from 2010-12. He undertook a major review of the General Surgery curriculum and was responsible for the 2010 version. He was the Surgical Director of the Intercollegiate Surgical Curriculum Project from 2012-2104 overseeing a full evaluation of the role and functionality of the ISCP. He has been chair of Joint Committee on Surgical Training since January 2015. He is a Fellow of the Faculty of Surgical Trainers.

Mr Tim Archer
Mr Tim Archer was educated at Kingswood School Bath followed by Peterhouse, Cambridge. He qualified from Kings College Hospital in 1972 and obtained his FRCS in 1977. He undertook Higher Surgical Training in Southampton. He became President of ASIT in 1986. He was appointed a Consultant General Surgeon in Ipswich 1987, where he remained until 2008. His eventual Interests were Breast and Endocrine surgery. He was a Council Member of the Section of Surgery, Royal Society of Medicine 1990- 1995. He was an assessor at the National Confidential Enquiry into Perioperative Deaths 1991 -1992. He was the Clinical Director (General Surgery) at Ipswich Hospital 1994 – 1996. He was a Regional Breast Cancer Screening QA Co-ordinator (East Anglia) 1996 – 2001, a Treasurer of the Association for Breast Surgery@BASO 2001 – 2006 and a National Clinical Lead in the (Breast) Cancer Services Collaborative’ 2001 – 2008. He was on the Breast Cancer Clinical Outcomes Measures Steering group 2006 – 2008 and the DHS working group to discuss the options for expanding the breast screening programme 2008. His other interests include sailing, golf and house renovation.
**Miss Elizabeth Ball**

Miss Ball qualified from UWCM, Cardiff in 1998, and did her junior surgical training in South Wales, as well as a PhD in the Molecular Genetics of Cancer. She then moved to East Anglia for her SpR training, followed by a National Oncoplastic Fellowship in 2011-12 at the Royal Marsden Hospital, and was the Senior Rep on the Mammary Fold Committee. She started working (as Miss Ball) at Ipswich Hospital NHS Trust in May 2013 as a Consultant Oncoplastic Breast Surgeon. She completed a PG Dip in Oncoplastic Surgery in 2014. She is a member of the Women in Surgery Committee at the Royal College of Surgeons, England, and has co-written and edited a Part III FRCS viva revision book.

In 2015 she was diagnosed with breast cancer, and blogs (as Liz O’Riordan) about her story as both a doctor and a patient in her own speciality (http://liz.oriodan.co.uk/BreastCancerBlog.html). She wants to use her experience of chemotherapy, surgery and radiotherapy to improve patient care. She was runner-up in the BMA’s 2015 top doctor of the year 2015 on social media.

Outside of medicine she is a cyclist and triathlete, and continued to train and race during chemotherapy. She strongly believes in the benefits of exercise during cancer treatment. She also loves baking and tinkering with wool and fabric. She can be followed on Twitter at https://twitter.com/Liz_O Riordan. She is married to Dermot who is also a Consultant Surgeon and previous Medical Director, as well as a past President of ASIT.

**Mr Rob Bethune**

Mr Rob Bethune is a Colorectal Consultant at the Royal Devon and Exeter NHS Foundation Trust and the Clinical Lead for the South West Patient Safety Collaborative. His first involvement in quality improvement was as a surgical SHO in 2004 when he set up a programme running pre-operative team briefings which he evaluated as his master’s thesis. After spending a year as a surgeon in a rural mission hospital in Zambia he took time out of his training to work as a manager at the South West Strategic Health Authority. He was one of the founding board members of The Network (www.the-network.org.uk) which is a group of 3000 frontline healthcare professionals looking to improve care across the globe. He helped set up and now coordinates a programme in the South West for F1 doctors to run a structured, supported quality improvement project during their first year.

He is actively involved in supporting surgical trainees to work in a rural hospital in Zambia and teaches on a quality improvement training programme in Kenya.
ASiT Conference Speaker Biographies

**Professor Farah Bhatti**
Professor Bhatti is a Consultant Cardiothoracic Surgeon, and an Honorary Professor at Swansea University. Prof. Bhatti read Medicine at Somerville College, Oxford. She continued her clinical training at Cambridge University, where she discovered her love for surgery and spent an elective period at the Texas Heart Institute in Houston. Her mind was made up – it was a career in Cardiothoracic Surgery or bust.

Prof. Bhatti has trained at a number of prestigious units including The Royal Brompton and Harefield. She also has an MD in Transplantation from Cambridge University.

Prof. Bhatti teaches on Swansea University’s Graduate Entry Medicine (GEM) programme, where she is the Equality and Diversity Director and the Careers Lead. Farah is involved with the AthenaSWAN initiative and leads the Race Charter Mark agenda.

Prof. Bhatti works with the Royal College of Surgeons of England’s careers department and is a Lady Estelle Wolfson Emerging Leaders Fellow. Prof. Bhatti is an Examiner for the Intercollegiate Specialty Board in Cardiothoracic Surgery and involved in national selection.

Prof. Bhatti has delivered a Gresham College lecture at the Science Museum and was one of only 3 surgeons named by the Health Service Journal in its inaugural BME Pioneers list.

**Mr John Black**
Mr John Black was President of the Association of Surgeons in Training in 1977, a general surgeon in Worcester from 1978 to 2006 and served as Trust Medical Director in the 1990s. He was Programme Director for general surgical training in the West Midlands region and subsequently chaired the SAC during the ill-fated Modernising Medical Careers initiative. He was elected to the Council of the Royal College of Surgeons of England in 2003 and was President from 2008 to 2011.

Areas of interest include preserving a generalist base for surgeons and the adverse effects of working hours restrictions on patient care and training.

**Mr Mike Bradburn**
Mr Mike Bradburn is a Consultant Colorectal Surgeon working for Northumbria Healthcare. He is Head of School of Surgery in HENE. He trained as an undergraduate in Manchester and, as a postgraduate, largely in the North East of England. He was appointed as a consultant in 1995 and always had a keen interest in training. He was appointed as Training Programme Director for General Surgery in the Northern Deanery from 2004 – 2010 and Head of School of Surgery in 2010. He was elected as Chair of CoPSS in 2014. He has recently been involved in the Improving Surgical Training working party. He has an interest in teaching and assessment of professionalism and non technical skills in surgery and is a member of the RCSEd NOTSS faculty.
Professor Steve Cannon

Professor Steve Cannon qualified in medicine from Trinity College, Cambridge and the Middlesex Hospital Medical School. He was appointed Consultant Orthopaedic Surgeon to the Royal National Orthopaedic Hospital, London and Edgware General Hospital in 1987. Since 1995 he has worked solely in elective orthopaedic surgery where his field of responsibility is orthopaedic oncology, and primary and revision hip and knee arthroplasty. His main research is the use of prosthetics in limb salvage, particularly in the area of pelvic sarcoma surgery. He is a reviewer for a number of journals, including the Journal of Bone and Joint Surgery and the Annal. In 2014/2015 he is President of the European Federation of National Associations of Orthopaedics and Traumatology. He was elected Junior Vice President in 2014.

Mr Ian Eardley

Mr Ian Eardley studied medicine at Sidney Sussex College, Cambridge and at Addenbrooke’s Hospital, Cambridge. He undertook urological training in St Bartholomew’s Hospital, Portsmouth, Cambridge and Norwich. He was appointed to the post of Consultant Urologist at Leeds General Infirmary in 1993. He specialises in the areas of male sexual dysfunction, penile cancer and genitourinary reconstruction. In 2014 he was awarded the St Peter’s medal by the British Association of Urological surgeons for his contributions to the advancement of Urology.

He has written or co-authored seven urological textbooks and published over 200 chapters and scientific papers. He was the Director of the Office of Education for the British Association of Urologists between 2002 and 2006, Chairman of the Specialty Advisory Committee in Urology between 2007 and 2009, Surgical Director of the Intercollegiate Surgical Curriculum Programme between 2009 and 2011 and Chairman of the Joint Committee for Surgical Training from 2011 to 2014.

Elected to the Council of the Royal College of Surgeons in 2010, he is the Council Lead Trustee for Training, and became Vice President of the College in July 2015.
Professor David J. Galloway

Professor David J. Galloway’s qualifications include MB ChB 1977, FRCS[G] 1981, MD 1985, FRCS[Ed] 2005, FACS 2010 and FRCP[Edin], 2013. His present appointments include President of the Royal College of Physicians and Surgeons of Glasgow, an Honorary Professor, College of Medical, Veterinary & Life Sciences, University of Glasgow, and a Visiting Professor of Surgery, University of Malaya Medical Centre, Kuala Lumpur, Malaysia and a Consultant Surgeon (Volunteer), Chitokoloki Mission Hospital, Chitokoloki, North Western Province, Zambezi, Zambia. His immediate past appointment was as a Consultant Surgeon in General and Colorectal Surgery, Glasgow comprising a tertiary referral specialist practice in gastrointestinal surgery, advanced laparoscopic techniques, bariatric and metabolic surgery. His other interests include reading, golf, cycling and skiing.

Mr Geoffrey Glazer

Mr Geoffrey Glazer MS FRCS FACS is a General Surgeon whose medical school training was at the Sorbonne in Paris for a year before St Mary’s Hospital Medical School. After qualification he pursued his training in the South of England before spending a year in the USA at Harvard in research. On return he was appointed Assistant Director of the Academic Unit and thereafter as NHS consultant to St Mary’s from which he has now retired. He is the Medical Director of the Wellington Hospital, London, the largest independent hospital in the UK and also Chairman of FIPO (The Federation of Independent Practitioner Organisations) which has over twenty professional specialist associations in its membership, including various training associations. FIPO has become the voice of the profession in relation to the current Competition and Market Authority (CMA) report on independent healthcare which has dramatically altered private consultant practice and is currently challenging this report in the High Court.

Mr Gareth Griffiths

Mr Griffiths qualified in Manchester and trained in General Surgery with a special interest in Vascular Surgery in the North West, spending two years working on diabetic foot disease in the USA. He contributed to the Association of Surgeons in Training, becoming its President for a year. Having been appointed as a Consultant Vascular Surgeon in Dundee, he became Chairman of the local General Surgery Training Committee and subsequently Training Programme Director. He contributed to the development of national selection in General Surgery in Scotland, and led the process for two years. After being appointed to the SAC in General Surgery he helped with a pilot study on national selection and became the clinical lead for its introduction nationwide. As Chairman of the SAC in General Surgery he was responsible for the 2013 curriculum revision and the associated FRCS modifications. He is now the Surgical Director of the ISCP.
ASiT Conference Speaker Biographies

Mr Ewen Harrison
Mr Ewen Harrison is a Senior Lecturer in General Surgery at the University of Edinburgh and a Consultant Surgeon at the Royal Infirmary of Edinburgh.

He is a Clinician-Scientist and surgical lead for the Surgical and Perioperative Health Research Group, performing informatics research focused on improving patient outcomes after surgery.

He jointly leads the GlobalSurg Collaborative (globalsurg.org), an international collaboration of 1700 individuals in 350 centres across 58 countries studying outcomes in general surgery and quality improvement.

He is the Programme Director for the Masters in Surgery degree at the University of Edinburgh – a distance-learning qualification which allows surgeons to train while continuing to work in their home country.

Mr Mike Lavelle-Jones
Mr Mike Lavelle-Jones is President of the Royal College of Surgeons of Edinburgh since 2015. He is a Consultant General Surgeon with an interest in colorectal and paediatric surgery at Ninewells Hospital in Dundee and a previous Training Programme Director for the Eastern Region of Scotland. He previously held the positions of Examinations Convener, Honorary Secretary and Vice-President of RCSEd and is a very proud holder of the coveted ASiT Silver Scalpel Award.

Professor Danny Keenan
Professor Danny Keenan is a practicing Cardiac Surgeon to the Manchester Royal Infirmary, part of the Central Manchester University Hospitals NHS Foundation Trust where he is also Associate Medical Director.

He has had a great interest in the use of information to drive improvement in care. He is at the forefront of clinical audit, being responsible for taking meaningful clinical outcomes to healthcare providers, commissioners and patients.

He was appointed Professor of Cardiothoracic Surgery at the University of Manchester in 2009 where he is co-principal investigator within the cardiovascular research group at the University.

He is Medical Director (part time) of the Healthcare Quality Improvement Partnership (HQIP) responsible for national and local audit and promoting the consequent service improvement.

He chairs the Indicator Advisory Committee for NICE and the Clinical Reference Group on Adult Cardiac Surgery for NHS England.
ASiT Conference Speaker Biographies

Professor Sir Bruce Keogh

Professor Sir Bruce Keogh is NHS England’s Medical Director and professional lead for NHS doctors. He is responsible for promoting clinical leadership, quality and innovation.

Formerly, Sir Bruce had a distinguished career in surgery. He was Director of Surgery at the Heart Hospital and Professor of Cardiac Surgery at UCL. He has been President of the Society for Cardiothoracic Surgery in Great Britain and Ireland, Secretary-General of the European Association for Cardio-Thoracic Surgery, International Director of the US Society of Thoracic Surgeons, and President of the Cardiothoracic Section of the Royal Society of Medicine. He has served as a Commissioner on the Commission for Health Improvement (CHI) and the Healthcare Commission. He was knighted for services to medicine in 2003.

Mr Goldie Khera

Mr Goldie Khera operates in and around the South Coast of Brighton and Sussex and is a Consultant Laparoscopic General and Benign Upper GI surgeon specialising in Bariatric Surgery. He was Past President of the Association of Surgeons in Training (ASiT) 2011-12 and part of the ASiT Executive team 2010-2014. Goldie Khera started medical school in 1992 at Liverpool University; he taught physiology and was awarded an intercalated BSc (Hons) Physiology in 1995 researching molecular pain producing substances. He qualified with an MBChB from Liverpool University in 1998. Most of his surgical training took place in the Mersey deanery, where he completed his MRCS; he subsequently spent 12 months as a registrar in Brisbane Australia in 2003 where he learnt laparoscopic gastro-intestinal surgery. After returning to Merseyside he successfully completed his FRCS in 2010; he then obtained his Certificate of Completion of training (CCT) – Specialist GMC Register 2010. He subsequently undertook a fellowship at the Prince of Wales Hospital in Hong Kong 2010, where regular robotic and advanced natural orifice laparoscopic surgery is undertaken. He was then selected for one of only two nationally selected Ethicon Bariatric fellowships at North Tyneside Hospital 2011-2012. He performs most general surgeries laparoscopically and is part of the emergency surgical on call rota as a substantive Consultant General Surgeon at Brighton and Sussex University Hospital NHS trust. Mr Khera is married, enjoys interior design and DIY and loves gardening with his seven year old daughter – growing some fruit, vegetables and herbs. He enjoys the great outdoors especially cycling, canoeing, horse riding and skiing. His hobbies also include amateur astronomy and astrophysics. Mr Khera was shortlisted for astronaut interview in Hamburg, Germany by the European Space Agency in July 2008 in the same cohort of our current International Space station space man Tim Peake!
ASiT Conference Speaker Biographies

Mr Declan J. Magee
Mr Magee is the President of the Royal College of Surgeons in Ireland (RCSI) from 2014 to 2016. He is a Consultant General Surgeon with a special interest in Colorectal Surgery.

He is a graduate of University College, Dublin. He trained in surgery in Ireland, at Guy’s Hospital, London and Harvard Medical School, Boston before taking up his post as a Consultant General Surgeon at St Columcille’s Hospital, Loughlinstown & Blackrock Clinic, Dublin.

Mr. Magee has served on Council of RCSI since 1993 and has chaired most major committees of the organisation. During this time, he has been involved in the governance of surgical practice and training, as well as the many other College activities in the broad field of health sciences education and training.

He has a keen interest in undergraduate medical education, having previously chaired the Academic Council, which manages the large RCSI Medical School and Schools of Pharmacy and Physiotherapy.

Mr. Magee has been closely involved in the collaboration between RCSI and the College of Surgeons of East, Central and Southern Africa (COSECSA). This initiative, which is supported by funding from Irish Aid, has helped COSECSA to enhance and expand surgical training and, ultimately, the delivery of essential surgical services across this vast region.

Dr Johann Malawana
Dr Johann Malawana is a registrar in Obstetrics and Gynaecology at the Royal Free Hospital in London and the chair of the BMA junior doctors committee. He previously held roles with the BMA’s junior doctors committee and medical students committee.

From 2009 – 2012 he served as a member of the council, the postgraduate board, the resources committee and the standards and ethics reference group of the General Medical Council. He also served as a member of the Postgraduate Medical Education and Training Board and the Department of Health Medical Programme Board.

Professor Averil Mansfield
Professor Mansfield graduated from Liverpool University and did most of her surgical training in that city apart from two years in the USA. She had her first consultant appointment in two Liverpool teaching Hospitals moving in to The Royal Liverpool when it opened. She moved to London and became first a consultant and later Professor at St Marys Hospital Imperial College. She was President of The Association of Surgeons of Great Britain and Ireland, and of the Vascular Surgical Society, and Vice President of The Royal College of Surgeons of England. The citation for her CBE said that it was awarded for services to surgery and to women in medicine. In her retirement she has been Chairman of The Stroke Association and President of the BMA.
ASiT Conference Speaker Biographies

Lieutenant Colonel Niall Martin

Lt Cl Niall Martin is a military Consultant Burns and Plastic Surgeon at the St Andrew’s Centre for Burns and Plastic Surgery in Chelmsford, Essex. He qualified from King’s College School of Medicine and Dentistry in London and subsequently trained at various centres of excellence in the UK. He has been deployed on overseas operations, including Afghanistan. Trauma and critical care are a significant part of his military and civilian practice. He is an enthusiastic surgical trainer with an interest in education. He has a specialist interest in forensic medicine and fire scene investigation, and works in partnership with external agencies to understand complex fire events or injuries affecting children and vulnerable adults.

Mr Craig McIlhenny

Mr Craig McIlhenny is a Consultant Urological Surgeon who works in NHS Forth Valley in Scotland. He has a subspecialty interest in the endourological management of urinary stone disease and malignant ureteric obstruction. His higher surgical training was in the west of Scotland and the USA. He has a special interest in surgical training and patient safety. He is currently Surgical Director of the Faculty of Surgical Trainers at the Royal College of Surgeons of Edinburgh, and is the co-author of Standards for Surgical Trainers. He is a Senior Clinical Teaching Fellow at the Centre for Medical Education at the University of Dundee and is currently redesigning their postgraduate certificate in surgical education. He sits on the British Association of Urological Surgeons Education committee and is Training programme director for urology in the west of Scotland.

Professor Dion Morton

Professor Dion received his degree in Medicine from Bristol University in 1985. He was given an Honorary Consultant appointment at the University Hospital Birmingham in 1996, and was appointed Professor of Surgery in 2006. He is Director of the Birmingham Experimental Cancer Medicine Centre, Director of Clinical Research at the Royal College of Surgeons of England and Deputy Head (Clinical) at the the Institute of Cancer and Genomic Sciences. He is also Research Committee Chair at the European Society of Coloproctology and President of the Society for Academic and Research Surgery.

His research interests are predominantly in clinical and translational research in colorectal cancer, but also encompassing the development of clinical trials in surgery.
Ms Claire Murphy
Ms Murphy is Flexible Working Advisor for the Royal College of Surgeons. She is also a Consultant in Oncoplastic Breast Surgery at Airedale Hospital in Yorkshire and an Associate Training Programme Director for General Surgery in Yorkshire and the Humber. A wife (for over 20 years) and mother of 3, Claire trained less than full time in the latter part of her training and currently has an 8 PA job plan although the ‘extra roles’ effectively mean she works what most people would consider full time.

Ms Murphy is committed to promoting LTFT working as a valid choice and one that is essential (among other initiatives) to achieving a better gender balance in the surgical workforce.

Mr David O'Regan
Mr O'Regan graduated from Southampton University in 1985 with a Bachelor of Medicine and was appointed a Consultant Cardiothoracic Surgeon in February 2001.

He has done over two thousand eight hundred heart operations as a consultant. He has a Doctor of Medicine and ten years ago was awarded with distinction an Executive MBA. He was privileged to be ASiT president in 1999 and 2000 and established the Silver Scalpel Award. He maintains a passionate interest in training and has written that “it is not how many hours you put in, it is more the quality of the training that occurs in those hours”. He is pleased that the GMC is insisting on trainer registration but feels that has to link directly to trainee feedback and success. His other interests include Karate. He writes “It is important for all of us to continue to challenge ‘because that is always the way thing are done round here’. We need to adapt and learn throughout our careers. It is paramount to add value to our personal portfolios every year and be willing to learn. This profession gives us ample opportunity to do just that. I congratulate ASiT on their success and increasing influence. I urge you all to be receptive to change and continue to grow.”

Mr Joe O'Beirne
Mr Joe O’Beirne is a Consultant Trauma and Orthopaedic Surgeon at Waterford Regional Hospital, Ireland, where he also served as Chairman of Medical Board from 2009 to 2013. He has a longstanding interest in surgical training and was a founder member of the Irish Orthopaedic Trainees’ Association in 1989. He has been a member of Irish and UK AO Faculties. In RCSI has has held numerous roles including chairman of the Hospital Recognition Sub-Committee 1997 to 2002, chairman of the Basic Surgical Training Committee 2003 to 2005, RCSI representative, Intercollegiate Committee for Basic Surgical Training and later, RCSI representative on the SAC for Trauma and Orthopaedics. He is currently the JCST QA lead, a member of the RCSI Council and Chair of the RCSI Committee for Surgical Affairs.
ASiT Conference Speaker Biographies

Mr Chris Oppong

Mr Chris Oppong is a Colorectal and General Surgeon specialising in pelvic floor surgery. Chris Oppong is the Chair of Operation Hernia and its Board of Directors. Operation Hernia (OH) is an independent not-for-profit organization that provides professional and educational opportunities to surgeons and surgical trainees in the repair of long-standing groin hernias at rural hospitals in the developing world. Operation Hernia was initiated in 2005 from Derriford Hospital in Plymouth, England, via that city’s official cultural link with Takoradi, Ghana. His main clinical interests apart from hernia surgery are pelvic floor disorders, including sacral nerve stimulation for faecal incontinence, slow transit constipation and bladder problems, rectal prolapse repair and treatment of haemorrhoids. Additional interests include obstetric anal sphincter injury.

Mr Janso Padickakudi

Mr Padickakudi is a graduate of the Royal College of Surgeons in Ireland. He holds a Masters in Surgical Sciences from the University of Edinburgh. He completed an academic foundation programme in the West of Scotland, core surgical training at Johns Hopkins Hospital in Baltimore, USA, and is currently a higher surgical trainee (ST4) in the West of Scotland Deanery.

He was a member of the NHS Ebola Response Team deployed to Sierra Leone in December 2014.

Mr Vernon Sivarajah

Mr Vernon Sivarajah is a general surgery trainee who was the Shorland Hosking Operation Hernia winner in 2015. He had previously volunteered on surgical missions in Sierra Leone and Pakistan. He has presented on topics relating to surgical training opportunities, disease burden and group consent at ASiT, ASGBI and EHS conferences. He intends to integrate global surgery throughout his career. He travelled to Ghana with Operation Hernia.

Miss Stella Vig

Miss Stella Vig qualified from the University of Wales Medical School in 1991. She currently works as a Consultant Vascular and General Surgeon at Croydon University and St Georges NHS Trusts. She enjoys training a range of trainees and is the Foundation Programme Director at Croydon and TPD for Core and Higher Surgical Training in South West London. She has been the Chair for the JCST Core Training committee and is determined to ensure that core trainees are able to access the right placements and trainers to build a strong surgical foundation.
AsiT Conference Speaker Biographies

Miss Alison Waghorn
Miss Alison Waghorn graduated from the University of Birmingham in 1986. She is a Consultant Endocrine Surgeon at the Royal Liverpool and Broadgreen University Hospital Trust since 1999. She has a keen interest in education. She has had many educational roles including Surgical Tutor for the Royal Liverpool and Broadgreen University Hospital and training programme director for both Core Surgical training and Higher Surgical Training in General Surgery in Merseyside and Cheshire. Currently, she is the President of LNWSS. She is the SAC representative for West Scotland. She is the Head of School of Surgery for HEE North West and the Chair of the National Selection Board for General Surgery and Vascular Surgery.

Professor Stephen Westaby
Professor Westaby has performed more than 11,000 heart operations on both adults and children in Oxford. He is a pioneer of mechanical circulatory support technology and of left ventricular assist devices as an alternative to cardiac transplantation. He has published 15 text books and more than 350 peer review papers in medical journals.

Professor Des Winter
A 1993 graduate of the National University of Ireland (Dublin) Professor Des Winter entered basic surgical training in Cork (Ireland) and achieved his fellowship examination (FRCSI) in 1998. During this time he completed research spanning Ireland and Yale University for a doctorate of medicine by thesis before entering the Irish senior registrar scheme in surgery. He received the ASGBI medal for the Intercollegiate Fellowship in 2003 and was awarded the Millin Lecture and Medal (RCSI) that year. He was appointed as a Consultant Surgeon to his alma mater, St Vincent’s University Hospital (Dublin) in 2004 but deferred commencement until 2006 to complete a fellowship at the Mayo Clinic. The recipient of over 30 national/international scholarships and research awards, he has over 200 publications. He is a member of 25 national and international surgical societies, is an editor of BJS, and sits on the editorial boards of several journals. He is married to Genevieve with whom he has 4 children.

Mr Andrew Hartle
Dr Hartle is a Consultant Intensivist and Anaesthetist at St Mary’s Hospital, London, part of Imperial College Healthcare NHS Trust, where he is also the Trust Lead for the Mental Capacity Act. He qualified in 1987 from the University of Leeds and trained in the RAF, London and Duke University, North Carolina, USA. His clinical interests are Critical Care and ENT anaesthesia for adults and children. He has been Clinical Director of the Department of Anaesthesia and Chairman of the Clinical Ethics and Clinical Risk Committees. He lectures, writes and broadcasts on issues related to Clinical Ethics, in particular Consent and the Mental Capacity Act. Elected to AAGBI Council in 2006, he has chaired the Joint Informatics and Safety Committees and was Honorary Secretary between 2010 and 2012 before becoming President in 2014.
Silver Scalpel Nominees 2016

Over the past decade the Silver Scalpel Award has played a vital part in recognising outstanding trainers who support and train their trainees to the highest standard. It has been a difficult year for doctors and the NHS, with morale among doctors at a low ebb in the setting of the junior doctors contract, and training increasingly squeezed by demands on service. It is therefore more important than ever that we recognise and reward good trainers. Their energy and enthusiasm has not been dampened, on the contrary they consistently and repeatedly demonstrate an outstanding ability to teach and train, and support their trainees. They exhibit a strong sense of leadership. It is clear the winners and the short listed candidates of the Silver Scalpel Award not only deliver excellence in training but also excellent care to patients. Patients deserve excellent care, which can only be achieved when there is excellent training. Here are this years inspiring nominees:

Mr Adrian Fawcett, General and Colorectal Surgeon
Mr Adrian Fawcett trained in North West London in General Surgery. After a short spell as a locum consultant in London, he moved to Surrey and was appointed as a Colorectal Consultant at Kingston Hospital. His interests include colorectal cancer, inflammatory bowel disease and surgical training. He was nominated for the Silver Scalpel award by three of his previous registrar trainees who wrote a glowing statement describing his exemplary trainer attributes. He is an experienced surgeon, who commands the respect of all the health care professionals that work with him. He leads by example, demonstrating how to provide excellent care for his patients and with his professional behavior. His communication skills are highly regarded in all clinical settings and his support for his clinical teams (peers, trainees and other health care professionals) provides a safe, enjoyable, efficient and effective working and learning environment.

Mr Gareth Griffiths, General and Vascular Surgeon
Mr Gareth Griffiths qualified in Manchester and trained in General Surgery with a special interest in Vascular Surgery in the North West, spending two years working on diabetic foot disease in the USA. He has been at the forefront of surgical training issues for many years. He contributed to the Association of Surgeons in Training, and was ASiT President for a year in 1999. Having been appointed as a Consultant Vascular Surgeon in Dundee, he became Chairman of the local General Surgery Training Committee and subsequently Training Programme Director. He contributed to the development of national selection in General Surgery in Scotland, and led the process for two years. After being appointed to the SAC in General Surgery he helped with a pilot study on national selection and became the clinical lead for its introduction nationwide. As Chairman of the SAC in General Surgery he was responsible for the 2013 curriculum revision and the associated FRCS modifications. He is now the Surgical Director of the ISCP.
Silver Scalpel Nominees 2016

Mr Alan John Ballantyne Kirk, Cardiothoracic Surgeon

Mr Alan John Ballantyne Kirk was born and brought up in the West of Scotland. In 1994, he was appointed to the Western Infirmary in Glasgow as Consultant in Cardiothoracic Surgery. In 2008 with the establishment of the West of Scotland Regional Heart & Lung Centre in the Golden Jubilee Hospital in Clydebank, he elected to pursue a career as a General Thoracic Surgeon in what is now one of the biggest Thoracic Surgical Centres in UK. Throughout his postgraduate career, he has had an ongoing and developing interest in Medical Education, in particular in relation to simulation. He has been Educational Lead in all units he has worked in as a Consultant and has organised numerous wet labs locally and overseas. He has been TPD for Scotland and Chair of the Scottish Training Committee. He is an examiner for the University of Glasgow and is an Honorary Clinical Tutor at the University of Edinburgh. He is an Honorary Clinical Associate Professor at the University of Glasgow. He has also served on the Cardiothoracic SAC and continues to participate in the National Selection process for Cardiothoracic Surgery in UK. At present he is Director of Medical Education for the Golden Jubilee Foundation and has a strategic role across all medical specialties there, not just in Cardiothoracic Surgery.

Mr Mike Chadwick, General and Colorectal Surgeon

Mr. Chadwick is a consultant Colorectal Surgeon with a special interest in pelvic floor disease. He has been working at Whiston Hospital since 2013, having spent 2 years prior at North Bristol NHS trust as a consultant. He qualified from Bristol University in 1996 and undertook his higher surgical training in the South West Deanery before securing a Laparoscopic fellowship at Frimley Park Hospital.

Since his current appointment, he has been instrumental in changing surgical practice, including introduction of a modified WHO surgical checklist, establishment of an acute cholecystitis surgical pathway and a new pelvic floor spectrum MDT. His enthusiasm for training and skill as a leader is evident by the praise from all members of his team and trainees he has mentored. He has involved himself in BST and HST in the hospital, is a CCRISP course coordinator and has pioneered a laparoscopic surgery programme in the unit. As a result of his efforts, Whiston Hospital is currently the most popular colorectal rotation in the Mersey Deanery among higher surgical trainees.
0520 - SURGICAL MANAGEMENT OF FISTULATING PERIANAL CROHN’S DISEASE - RESULTS OF A UK SURVEY
M. Lee*, N. Heywood*, P. Sagar*, S. Brown*, P. Fearnhead*
1) South Yorkshire Surgical Research Group, Sheffield, UK 2) Northwest Research Collaborative, Manchester, UK 3) Sheffield Teaching Hospitals, Sheffield, UK 4) Leeds Teaching Hospitals, Leeds, UK 5) Addenbrookes Hospital, Cambridge, UK

Aim: Fistulating perianal Crohn’s disease (PCD) affects 20-50% of Crohn’s patients. Despite advances in medical therapy, recurrence is frequent and there is significant impact on quality of life.

Method: A questionnaire was developed to assess current Consultant Colorectal surgeon practice in PCD. The final version of the questionnaire was disseminated through the surgical trainee research collaboratives. Responses were uploaded onto the REDCAP online database.

Result: Collaborators from 21 centres collected 107 responses. In the acute setting, 38% always give antibiotics, with metronidazole preferred (81.5%). Incision and drainage (30%) or draining seton (35%) are preferred at first operation. Draining seton is preferred at first-planned EUA (61%). Cutting seton (86.1%), excision of tract (60.1%) and fistulotomy (37.9%) are avoided. IBD MDT was available to 85% of respondents, and 29% routinely discussed PCD patients. Multimodal therapy is practiced by 92% of respondents. Preferred ‘definitive’ procedures were removal of seton (68%), fistulotomy (52%), mucosal advancement flap (38%) and fistula plug (32%).

Conclusion: A collaborative approach demonstrates wide variation in practice across UK centres. This information will inform a consensus exercise for UK practice as well as feasibility for a planned surgical trial.

0794 - THE ACCURE-UK TRIAL: THE EFFECT OF APPENDICECTOMY ON THE CLINICAL COURSE OF ULCERATIVE COLITIS - A FEASIBILITY STUDY
1) University Hospital Birmingham, UK 2) University of Birmingham, UK 3) University Hospitals Leicester, UK 4) Academic Medical Centre, Amsterdam, The Netherlands 5) Patient Representative, Birmingham, UK

Background: Several non-randomised studies have found that in patients with established ulcerative colitis (UC), appendicectomy may be associated with a reduced risk of relapse and reduced frequency of progression to colectomy. Our study aimed to determine the feasibility and acceptability of randomisation between appendicectomy versus standard treatment in both UC patients and their clinicians.

Methods: This prospective multicentre randomised feasibility study included adult patients with an established UC diagnosis who were currently in remission but had had a relapse within the previous 12 months. Patients were randomised 1:1 to standard medical treatment alone, versus elective laparoscopic appendicectomy plus standard medical treatment. The primary outcome measure was completion of planned recruitment according to a predetermined schedule.

Results: Of 106 patients approached, 60 (56.6%) were willing to be randomised. Overall 53 patients were randomised across 6 sites. Recruitment took slightly longer than anticipated, but the overall recruitment target of 48 patients was exceeded and the recruitment rate increased over time, with 25 patients recruited in the final two months. Appendicectomy was completed as a day case in the majority of cases. Four patients experienced minor complications.

Conclusion: Appendicectomy was an acceptable and safe treatment option for both patients and clinicians.

1101 - THE HOT CLINIC; PREVENTING EMERGENCY ADMISSIONS AND REDUCING LENGTH OF STAY IN A DISTRICT GENERAL HOSPITAL
G Humm*, A Campbell*, E Farinella*,
1) East and North Hertfordshire NHS Trust, Stevenage, UK

Aim: To evaluate the Hot Clinic (HC); which manages ambulant general surgical patients in emergency and post-discharge settings.

Method: Attendances were retrospectively identified between October 2014 and October 2015. Non-surgical and patients with limited documentation were excluded. Attendances were classified as emergency; General Practice (GP)/Emergency Department (ED) referrals and post-discharge; following an elective/emergency admission. We evaluated complaint, use of dedicated ultrasound scan (US) slot and outcome; allowing numbers of prevented emergency admissions and post-discharge patients with reduced length of stay to be determined.

Results: Of 536 HC attendances, 26 were excluded, leaving 510 for analysis. Of 180 emergency patients 134 admissions were prevented; 116 (64.4%) discharged to GP and 17 (9.4%) with outpatient follow-up. Twenty-six (14.4%) were admitted, 2 (0.01%) underwent day-case surgery. One hundred nineteen patients presented with abdominal pain and one hundred (84.0%) were investigated with US. There were 330 attendances for 221 post-discharge patients for assessment of bloods (n=74), surgical wounds (n=43), clinical condition (n=26) and surgical drains (n=35). Length of stay was reduced for 175 (79.2%) post-discharge patients.

Conclusion: The HC with dedicated US slots prevents admission for emergency patients presenting with abdominal pain. The HC provides early follow-up to post-discharge patients, reducing length of stay.

Acknowledgements: Rosa Crawley, Rachel Bickerstaff and the Staff at the Surgical Assessment Unit.
0415 - MICROBIOLOGICAL SWABS HAVE NO ROLE IN THE MANAGEMENT OF ACUTE PILONIDAL ABSCESSES

T. Craven*, 1 P. J. Webster2, D. A. Burke2

1) Faculty of Medicine and Health, University of Leeds, Leeds, UK
2) The John Goligher Colorectal Unit, St. James’s University Hospital, Leeds, UK

Aims: Microbiological swabs are often taken at the time of surgery for the treatment of acute pilonidal abscesses. This audit assessed whether swabs play a role in the management of these patients.

Methods: A retrospective audit of electronic records was undertaken over a 2-year period between 1st January 2012 and December 31st 2013. Variables measured included patient sex, episode index, swab results, antibiotic use and recurrences.

Results: Over the 2-year period there were 182 operations for acute pilonidal abscesses. Microbiological swabs were taken in 151 cases (83%). The most common culture was anaerobe (36%) followed by no growth (19%) and skin flora (8%). In total, 114 reports (94%) were issued after the patient had been discharged. Post-operative antibiotics were prescribed in 15 cases (8%) and within this group 9 patients (60%) had no growth on swab results. There were 11 recurrences (6%) with no correlation between the initial swab results and recurrent swab results being observed.

Conclusions: In this audit, swab results did not alter any patient’s treatment and nearly all reports were issued after the patient had been discharged. Recurrent abscesses do not appear to be linked to initial swab results.

0705 - ADHESIVE SMALL BOWEL OBSTRUCTION: TRENDS IN INCIDENCE, MANAGEMENT AND OUTCOMES OVER 15 YEARS

M. Abdelhalim*, R. McLean2, I. McCallum1

1) Sunderland Royal Hospital, Sunderland, UK
2) Queen Elizabeth Hospital, Gateshead, UK

Aims: Small bowel obstruction in a patient who has previously undergone abdominal surgery is a common emergency presentation in general surgery. This study describes the changes in incidence, management and outcomes in adhesive small bowel obstruction (ASBO) over a 15 year period (2000-2014).

Methods: Data for all emergency admissions under a general surgeon were collected from regional trust information departments and analysed.

Results: 6,557 cases of ASBO were identified and divided into 3 time periods. Requirement for operative management has reduced from 54% to 40% to 29% over the time intervals (p<0.05). Overall, patients requiring surgery were older than those who improved with conservative management (61.7 years compared to 56.1 years, p<0.05). There was a significant reduction in length of stay (17.1 days, 14.9 days, 12.4 days) as well as inpatient mortality (11%, 8%, 4%) during the study period (p<0.05).

Conclusions: There has been an increase in emergency admissions for ASBO over time, but operative management is required less often. Conservative management is more likely to be successful in younger patients. Overall outcomes as measured by length of stay and inpatient mortality improved during the study period. Advances in operative techniques and preoperative management could account for these positive results.

0888 - ACUTE DIVERTICULITIS: RISK OF READMISSION AND EMERGENCY SURGERY FOLLOWING AN ADMISSION FOR ACUTE DIVERTICULITIS

C. El-Sayed*, S. Radley2, J. Mytton2, F. Evison2, S. Ward1

1) University Hospitals Coventry and Warwickshire, West Midlands, UK
2) University Hospitals Birmingham, West Midlands, UK

Aim: Diverticular disease is accountable for significant morbidity and mortality. Current guidelines suggest elective resection should be individualised to each patient. We aimed to identify risk factors associated with risk of readmission.

Method: This study was conducted between April 2006 and March 2011 identifying 76,499 patients over the age of 18 with acute diverticulitis who were followed up for 4 years. Exclusion criteria included previous diagnosis of diverticulitis in HES data, colorectal cancer, GI bleed, previous colectomy, undergone surgery or died on index admission. 65,162 patients were included in the study.

Result: This is the largest study using HES data in the UK. A mixed effects logistic regression model was used for analysis. The re-admission rate equaled 11.55%. 1.16% of patients were readmitted within 30 days. An inverse relationship between age and risk of re-admission was found. Females were 46% more likely to be re-admitted (p <0.001). Complicated diverticulitis increased the risk of re-admission (OR 1.5 (0.95-1.12) p<0.001). Alcohol consumption also increased the risk of re-admission (OR 1.26 (1.17-1.35) p-value <0.001).

Conclusions: Risk of re-admission with acute diverticulitis decreases with older age, male gender and uncomplicated diverticulitis. Elective surgery should be offered based on the individual’s risk factors for readmission.
**ASiT Oral Presentation Prize Abstracts**

**0437 - DEFINING A 3D BIOMIMETIC COLORECTAL TUMOUROID**

E. Losif*, K. Stamati, A. Nyga¹, B. Ramesh¹, M. Loizidou¹

1) University College London, UK

**Aim:** Colorectal cancer is a worldwide healthcare problem. Better understanding of pathogenesis and relevant models to study drug action could improve therapies. There has been an increase in 3D in-vitro models, however most lack tissue density. We aimed to create and characterize a 3D in-vitro cancer model, comprising cancer and stromal cells in a dense matrix.

**Methods:** CRC cells (HT29) and patient fibroblasts (CRC-associated fibroblasts-CRF; normal colon fibroblasts-CF) were used. High density compressed tumouroids (9.6%, collagen 3D-cultures) were manufactured by mixing different ratios of HT29:fibroblasts. The following were measured: cell viability for establishing seeding density and optimal HT29:fibroblast ratio; size measurements of cancer spheroids; biomarker (TGFβ, VEGF) expression (ELISA); cell/spheroid morphology (cytokeratin-20, e-cadherin, vimentin, α-SMA immunofluorescence).

**Results:** Maximum seeding density for 7-day proliferation was 75,000 cells/(1.3ml)gel. Tumouroids with HT29:CF/CRF ratio(1:2) had significantly increased (p<0.05) metabolic activity. Cells aggregated in spheroids (epithelial) and stained for cytokeratin-20 and e-cadherin or distributed throughout (fibroblasts) and stained for vimentin (mesenchymal phenotype). Co-culture spheroid diameter and surface area was significantly (p<0.05) higher than HT29 monocultures. Biomarker release was higher in co-cultures (1:2) compared to HT29 monocultures (P=0.008) on day 3.

**Conclusions:** High density tumouroids provide a biomimetic platform that resembles the tumor microenvironment, suitable for assessing tumor growth and potentially therapeutic responses.

**Medical Student Poster of Distinction Prize Session**

**0725 - THE NOTTINGHAM HIP FRACTURE SCORE: CAN THIS BE A DISCHARGE PLANNING TOOL?**

C. Chew*, C. Peach²

1) University of Manchester, UK
2) University Hospital of South Manchester, UK

The Nottingham Hip Fracture Score (NHFS) is a pre-operative scoring system originally developed to assess the risk of mortality at 30 days after hip fracture. We performed an independent validation of the NHFS in a South Manchester population, aiming to define levels of high and low-risk within the NHFS. We assessed its ability to predict length of stay, 90-day mortality, and probability of return to pre-fracture residence (PFR). Observed and predicted 30-day mortality was compared for each level of the NHFS. In the 1037 hip fractures included in the study, the NHFS was found to reliably predict 30-day mortality and is responsive to change for up to 90 days after hip fracture. We divided our cohort into low (NHFS 0 to 3), medium (4 to 6) and high (7 to 9) risk groups. Low-risk patients were found to have a significantly shorter length of stay (15 days vs 28 days, p <0.001) and a higher probability of return to PFR (0.97 vs 0.89, p <0.001) than the medium risk group. We have validated this outcome score in our population in South Manchester and have proposed a model of risk stratification, which could be a useful tool for discharge planning.

**0060 - THE ROLE OF TISSUE FIBROSIS ON STIFFNESS OF THE DIGIT**

P. Sorooshian*¹, R. Wong², J. Wong²

1) University of Manchester, Manchester, UK
2) Blond McIndoe Laboratories, Manchester, UK

**Introduction:** The stiff finger represents significant morbidity to patients and a menace to hand surgeons that can arise from any trivial trauma or inflammatory disease processes. Our understanding of this problem remains without a unifying pathogenesis nor an effective solution.

**Aims:** We sought to study the pathogenesis of the stiff finger and hand by developing a mouse model of hand fibrosis, as well as examine macrophage recruitment in relation to fibrilic signaling and tissue stiffness.

**Methods:** Our research strategy involved inducing digit stiffness in the mouse using a cast immobilisation model (N=16). Macrophage recruitment was assessed by F4/80 immunohistochemistry and changes in matrix stiffness were assessed by atomic force microscopy. Fibrosis PCR arrays were used to provisionally examine these pro-fibrotic pathways.

**Results:** Macrophage recruitment was more extensive in the cast immobilised tissues. Furthermore, their localisation corresponded to notable morphological and immunohistochemical changes in the matrix of subcutaneous tissue and tendon. Multiple fibrotic markers were elevated and may indicate a specific macrophage-activated phenotype involved in the fibrotic process.

**Conclusion:** This study has identified a new model for digital and hand fibrosis that can be used to investigate novel therapeutics in reducing stiffness of the finger after immobilisation which may relate to aggressive macrophage biology.
0779 - SUBDURAL HAEMATOMA IN THE PAEDIATRIC POPULATION OVER A 20-YEAR PERIOD: AN OBSERVATIONAL STUDY
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2) The Trauma Audit and Research Network, University of Manchester, Salford, UK
Aim: Subdural haematoma (SDH) is a common subtype of traumatic brain injury in the paediatric population, but data examining its outcome and management remain sparse. We sought to determine 30-day survival trends and factors prognostic of outcome for paediatric SDH in England and Wales over a 20 year period.
Methods: Using the Trauma Audit and Research Network (TARN) database, we analysed SDH cases in the paediatric population (<16.0 years) treated between 1994 and 2013. 2,105 cases were identified. Univariate and multivariate logistic regression analyses were performed, using multiple imputation for missing data and restricted cubic splines for non-linear continuous variables.
Results: The cohort was 67% male with a median age of 5.1 years. Only 19% of patients were surgically managed with craniotomy. Unadjusted survival increased from 73.2% in 1994-1998 to 91.4% in 2009-2013, and this trend remained significant in a multivariate analysis that included known confounders. Other variables independently associated with survival were management in a neurosciences unit, Glasgow Coma Scale, Injury Severity Score, and pupillary reactivity.
Conclusions: After controlling for multiple prognostic factors, probability of survival has improved significantly in the management of paediatric SDH. Management in a neurosciences unit was identified as a potentially modifiable prognostic factor.

0017 - KNOWLEDGE, ATTITUDES AND PRACTICES OF MEDICAL STUDENTS TOWARDS RESEARCH IN TWO PUBLIC UNIVERSITIES IN EGYPT
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1) Faculty of Medicine, Suez Canal University, Ismailia, Egypt
2) Faculty of Medicine, Ain Shams University, Cairo, Egypt
Aim: assess current attitudes and practices of medical students towards research activities.
Methods: Survey of proportionately stratified and randomly selected 735 medical students at the Universities of Ain Shams (ASU) and the Suez Canal (SCU) in Egypt.
Results: 675 of the 735 of the surveyed students (91.8%) agreed to participate. Although more than 73% of the students agreed that research will be an aspect of their future career, only 60.1% of them had ever participated in research projects. The following barriers to participate in different research activities were reported: 1) Lack of time (71.3% in ASU, 63.5% in SCU); 2) Finding a supervisor (41.1% in ASU, said not difficult, 46.4% in SCU); 3) Funding (36.7% in ASU, said not difficult, 35.4% in SCU); 4) Inadequate instructions from supervisor (63.3% in ASU, 49.6% in SCU) & inadequate training in literature review (77.8% in ASU, 65% in SCU).
Conclusion: There is a gap between students’ attitudes and willingness to participate in research and their actual practices. Students’ perceived barriers need to be addressed in order to improve and implement more efficient research training programmes for the undergraduates.

0159 - SIGNIFICANT VARIATION IN BLOOD TRANSFUSION PRACTICE PERSISTS FOLLOWING IDIOPATHIC ADOLESCENT SCOLIOSIS SURGERY
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1) University of Rochester, New York, USA
2) University of Limerick, Limerick, Ireland
Aim: We investigated the factors associated with variation in blood transfusion utilization following primary spinal fusion for idiopathic adolescent scoliosis (IAS) and its association with infectious complications.
Methods: Data was extracted from the Statewide Planning and Research Cooperative System (SPARCS), using International Classification of Diseases (ICD-9), all patients included had a diagnosis of IAS and underwent spinal fusion from 2000 to 2013. Bivariate and mixed-effects logistic regression analyses were performed to assess the factors associated with receiving a perioperative allogeneic red blood cell transfusion.
Results: Among 6,230 patients who underwent IAS surgery, 27.77% of patients received a perioperative blood transfusion. After controlling for patient, surgeon, and hospital-level factors, significant variation in transfusion rates was present across both surgeons and hospitals with a 13-fold difference observed in transfusion rates between the lowest and highest utilization for hospitals and a 4-fold difference observed for surgeons (p < 0.0001).
Conclusions: Significant variation in perioperative blood transfusion utilization exists at both the surgeon and hospital level. These findings are unexplained by patient-level factors and other known surgeon and hospital characteristics, suggesting that variation is due to provider preferences and/or lack of standardized transfusion protocols.
0035 - A SYSTEMATIC REVIEW ON THE USE OF VACUUM ASSISTED CLOSURE THERAPY FOR THE CLOSURE OF ENTEROCUTANEOUS FISTULAE
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2) St Mark’s Hospital, London, UK

Aim: Enterocutaneous fistulae (ECF) are one of the most challenging surgical complications. The current treatment is surgical closure, associated with significant morbidity and mortality. Vacuum-assisted closure (VAC) has been used for persistent abdominal wounds for several years. This study aims to investigate whether current literature supports the use of VAC for ECF.

Method: A PubMed search of “enterocutaneous fistula” and “vacuum assisted closure” was performed in December 2014. Results were restricted to studies involving humans with available abstracts and full texts, written between 1950-2014. Outcomes analysed included rate of closure, follow-up, morbidity and mortality.

Results: 10 studies with 151 patients were examined. Median spontaneous closure rate was 64.6% (7.7-100), which occurred within 58 (12-90) days. Follow-up was mentioned in 3 of the 10 studies, where the patients were followed-up for 3, 20 and 28.5 months. No complications were identified in all except one study, which reported pain and fistula recurrence in a minority of patients.

Conclusion: The literature suggests that VAC is a promising tool for the treatment of uncomplicated ECF secondary to surgery. Further retrospective and prospective studies are necessary to establish true benefit and whether VAC is advantageous compared to standard surgical therapy.

0100 - CLINICALLY RELEVANT ANATOMICAL VARIATIONS OF NEURAL AND VASCULAR STRUCTURES OF THE NECK
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Aims: It has been proposed that anatomical variation of the common carotid artery (CCA) increases the incidence of hypoglossal nerve and superior thyroid artery (STA) injury when performing carotid endarterectomy and managing neck pathology. These potentially avoidable complications increase post-operative morbidity. We aimed to identify whether anatomical variation of the CCA bifurcation level alters its proximity to the hypoglossal nerve and the origin of the STA.

Methods: Bilateral neck dissection was performed on 24 embalmed human cadavers (18 male, 6 female). The level of the CCB was classified in relation to the anterior laryngeal structures.

Results: When the CCA bifurcation level was located more superiorly, the hypoglossal nerve was located significantly closer to the bifurcation (p<0.01) and the STA branched most frequently from the CCA (p<0.05). The STA branched from the CCA in 67%, carotid bifurcation in 10% and external carotid artery in 23% of the specimens.

Conclusions: These results demonstrate that if a patient possesses a raised CCA bifurcation level surgeons should be aware that the hypoglossal nerve may be exposed and the STA is more likely to originate from the CCA. Knowledge of these anatomical variations is necessary to reduce unnecessary complications and retain a bloodless surgical field.

0231 - OUTCOMES FOLLOWING SURGICAL DEBULKING OF HIGH-GRADE GLIOMAS IN AN ELDERLY PATIENT GROUP: A RETROSPECTIVE, SINGLE-CENTRE COHORT STUDY
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2) University Hospital of Wales, Cardiff, UK
3) Department of Neurosurgery, University Hospital of Wales, Cardiff, UK


Methods: Retrospective, single-centre cohort study. 40 elderly patients (>70yrs) who underwent craniotomy and debulking for a single supratentorial high-grade cerebral glioma between 01/01/2009 and 31/12/2012 were identified. Data was extracted using CANISC and Welsh Clinical Portal and analysed using SPSS®.

Results: The mean age of the 40 patients that met the specified criteria was 75 years (range 70-84yrs). The median inpatient stay was 6.1 days and the median post-operative survival time was 169 days (1-year survival rate of 7.5%). Complications were observed in 11 patients (27.5%), with a total of 7 occurring in the early post-operative stage (<30d). Most patients (90%) were referred to oncological services following their operations. Overall post-operative survival rate was 169 days (range 1-779d). Post-operative survival was significantly greater in the radical intent group in comparison to the group of patients where no adjuvant therapy was planned (p<0.001).

Conclusions: We have demonstrated that this patient group can be safely and efficaciously managed with neurosurgical debulking and aggressive multimodal adjuvant therapy. Complication rates were deemed acceptable considering the grade of glioma in question and comparable to those of a younger population (<70yrs).
0275 - THE EFFECTS OF CELL ASSISTED BREAST AUGMENTATION OR RECONSTRUCTION ON GRAFT VOLUME, COSMETIC OUTCOMES AND COMPLICATIONS IN FEMALES: A SYSTEMATIC REVIEW

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2) University of Oxford, Oxford, UK

Aim: Cell-assisted lipotransfer serves as a novel technique for both breast reconstruction and breast augmentation. This systematic review aims to discuss current trends in surgical technique, operator and patient-reported outcomes and present an up-to-date clinical trial landscaping analysis.

Methods: Key electronic databases were searched according to PRISMA guidelines and pre-defined inclusion and exclusion criteria. Two independent reviewers examined the retrieved publications and performed data extraction.

Results: 3980 publications were identified. Following screening, 11 studies were included for full review, representing a total of 336 patients with a follow up time ranging from six to 42 months. Variation was noted in graft retention and reported satisfaction levels. Complications occurred at a rate of 37.25%.

Conclusions: Cell-assisted lipotransfer is a promising surgical technique for both plastic surgeons and patients globally. Further technical and outcome standardization is required, in addition to rigorous randomized controlled trials and long term follow up data to determine oncological risk.

0029 - THE ASSOCIATION BETWEEN THE ‘FAT MASS AND OBESITY ASSOCIATED GENE’ (FTO) AND OBESITY-LINKED EATING BEHAVIOURS IN ADULTS AND CHILDREN: A SYSTEMATIC REVIEW

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Obesity is rapidly becoming a condition of increasing concern among surgical specialties, due predominately to its association with significant intraoperative and postoperative complications. FTO has been recognised as one of the principle candidate genes predisposing to common obesity in humans and numerous weight-associated single nucleotide polymorphisms (SNP) of FTO have been identified. However, understanding of the mechanism of action by which FTO contributes to obesity is limited. The objective of this systematic review is to investigate the hypothesis that weight-associated variants of the FTO gene elicit their effect on adiposity by influencing eating behaviour. An exhaustive database search and screening process was conducted, following PRISMA guidelines, culminating in data extraction from 16 relevant studies. The effects of five FTO SNPs were assessed across these studies: rs9939609, rs1421085, rs17817449, rs1121980 and rs939973. All five of the SNPs were significantly associated with increased adiposity in at least one study. The rs9939609 variant was significantly linked to multiple appetitive behaviours in children with the potential to predispose to obesity, including: increased energy and fat intake, risky eating behaviour, decreased satiety responsiveness and preference for energy dense foods. The four remaining SNPs were not related to eating behaviour in either adults or children.

0659 - SKIN SPARING MASTECTOMY WITH IMMEDIATE NIPPLE RECONSTRUCTION DURING AUTOLOGOUS LATISSIMUS DORSI BREAST RECONSTRUCTION: A REVIEW OF PATIENT SATISFACTION

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Introduction: Oncological resection for breast cancer can result in distressing chest wall deformities. Reconstructive surgery aims to restore normal shape and form following ablative surgery, but can involve multiple procedures. We aim to evaluate surgical, and patient-reported outcomes following mastectomy with immediate LD breast and nipple reconstruction.

Methods: Patients undergoing mastectomy with immediate breast and nipple reconstruction were included in the study. Clinical information was assessed. A validated, patient-reported outcome tool – The BREAST-Q – was administered to patients to assess the impact and effectiveness of this reconstructive strategy.

Results: Twenty-nine patients were included in the study. The majority of patients had in situ disease (51.7%) or invasive carcinoma (27.6%). 41.4% of patients had previous chest wall irradiation. The mean age at reconstruction was 48.0±1.8 years. The procedure was well tolerated, with seroma (27.6%) and capsular contracture (31.0%) being the most frequently encountered complications. Patients reported a high level of satisfaction with the overall physical appearance and psychological outcome following reconstruction (Q-scores of 74.3±5 and 77.7±3.2, respectively).

Conclusions: Nipple reconstruction should no longer be the final reconstructive procedure following breast cancer surgery. Immediate breast and nipple reconstruction is a well-tolerated procedure, with high levels of reported satisfaction amongst patients.
ASiT Oral Presentation Prize Abstracts

1048 - PREDICTING PAIN RELIEF AFTER VARIOUS FOOT AND ANKLE RECONSTRUCTIVE PROCEDURES - THE EFFICACY AND ROLE OF PERIPHERAL NERVE BLOCKS
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1)University of Leicester Medical School, Leicester, UK
2)University Hospitals of Leicester NHS Trust, Leicester, UK

Aim: Several variables affect post-operative pain after reconstructive foot and ankle surgery. Recently, image-guided regional nerve blocks for managing post-operative pain have become established, gaining popularity in F&A surgery. However, evidence is still inconsistent. Traditionally, hindfoot procedures are deemed more painful than forefoot or midfoot surgery. This study addresses this question.

Method: 145 patients undergoing elective F&A surgery were prospectively studied, 70 received peripheral nerve blockade. Anaesthetics were recorded and procedures categorised. Pain was recorded immediately post-operatively, 6 and 24 hours post-operatively using the visual analog scale (VAS). Kruskal-Wallis test was used for non-parametric analysis and Pearson’s Chi-square test for categorical data.

Results: There was no difference in post-operative, 6hr or 24hr VAS between patients undergoing hindfoot surgery and those having forefoot/midfoot surgery. Although patients undergoing nerve blocks had satisfactory initial pain relief, they experienced significantly more pain at 24hr than those not having a block (p=0.025). Overall, 94% patients were satisfied with their anaesthetic and would have it again.

Conclusions: This study shows that, contrary to popular belief, hindfoot surgery is not more painful than forefoot/midfoot surgery. Results showed that patients receiving nerve blocks probably had rebound pain at 24hr post-operatively. Further studies are needed to explore this relationship.

ASiT Medal Prize Presentation Session

0589 - THE COMBINED ENDOCRINE RECEPTOR (CER) IS A BETTER DISCRIMINATOR OF PATIENT OUTCOME THAN ER AND PR ALONE
E. J. Campbell1, M. Tesson2, F. Doogan1, Z. Mohammed2, E. Mallon1, J. Edwards2
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2)University of Glasgow, Glasgow, UK

Aim: To determine the prognostic power of the combined endocrine receptor (CER), a surrogate marker of oestrogen receptor (ER) and progesterone receptor (PR) functional cross talk and validate in a separate breast cancer patient cohort.

Methods: ER and PR were centrally retested for 557 early breast cancer patients by immunohistochemistry with accurate follow up. Tumour Allred ER and PR scores were reclassified as negative, low and high and the CER calculated as the average of the reclassified ER and PR scores, resulting in 3 groups: CER negative, impaired and high.

Results: In multivariate analysis the CER was independently prognostic for 5 years DFS (HR 0.393, CI 0.283-0.548, P=0.00001) and BCSS (HR 0.553, CI 0.423-0.722, P=2.506 x10^-8). In ER+ patients impaired CER was an independent marker of poor outcome in multivariate analysis which included all recognised prognostic indices for 5 years DFS (HR 2.469 CI 1.049-5.810, P=0.038) and BCSS (HR 1.946 CI 1.054-3.596 P=0.033) These results were validated in a separate cohort of patients.

Conclusion: CER is a more powerful discriminator of patient outcome than either ER or PR. Economical and simple, it can identify risk in ER+ early breast cancer and potentially be utilised for adjuvant cytotoxic chemotherapy decision-making.

0505 - CAN DIFFUSION TENSOR IMAGING GUIDED DEEP BRAIN STIMULATION IN POSTERIOR SUBTHALAMIC AREA IMPROVE LONG-TERM TREMOR CONTROL? 1-YEAR RESULT
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Abnormalities of dentatorubrothalamic tract (DRTT) involves in generation of Parkinsonian and essential tremor. DRTT can be identified with diffusion tensor imaging (DTI), which is currently applied to guide deep brain stimulation (DBS) electrode insertion.

Aims: To determine upper limb tremor control in conventional and DTI-guided DBS over 1 year. To compare active electrode positioning in conventional and DTI-guided DBS.

Methods: Total 24 patients, underwent DBS at Queen’s hospital London from 2009 to 2013, were divided into conventional magnetic resonance imaging (MRI) (n=14) and DTI-guided preoperative assessment (n=10). Upper limb tremor severity was assessed pre-operatively, 6 months and 1 year post-operatively by Fahn-Tolosa-Marin (FTM) scores. Active electrode co-ordinates were obtained from post DBS-inserted MRI by using Framelink 5 software.

Results: The FTM tremor scores at 6-months and 1-year showed statistically significant reduction in both conventional and DTI-guided groups. (P<0.05) The DTI-guided group showed statistically significant improvement of tremor control, compared with conventional group in 1 year. (P<0.05) The x, y and z co-ordinates in both groups showed comparable mean values. (P>0.05)

Conclusions: DTI-guided DBS improves upper limb tremor control with comparable result of active electrode positioning. DTI may be considered as a future radiological guidance to improve long-term therapeutic effect.
0555 - PLATELET-RICH-PLASMA INJECTIONS FOR THE TREATMENT OF RESISTANT TROCHANTERIC PAIN

N. Blucher**, S. Nahas1, V. Bonatsos1, A. Patel, K. Sarraf1, V. Vedi1

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Introduction: Platelet-Rich-Plasma (PRP) contains and releases a high concentration of activated platelet derived growth factors which is believed to stimulate the body's natural healing response in areas of inflamed tissue. PRP injections are used in many tendinopathies and inflammatory conditions, but there is a lack of clinical studies and trials in the treatment of trochanteric pain. We investigated whether PRP injections improve symptoms of resistant trochanteric pain.

Methods: The prospective study included 88 patients with trochanteric bursitis resistant to steroid therapy and physiotherapy. PRP was prepared using a standardised technique. Patient demographics were documented. Pain scores (0-10), EQ-5D Health Domain, Utility and VAS scores, Hip Disability and Osteoarthritis Outcome Scores (HOOS) were recorded pre and post PRP injection.

Results: The mean age was 60 (27-83), male to female ratio 1:4 and BMI 26 (20-35). Duration of symptoms ranged from 3-120 months. 20% of patients reported moderate and 78% severe symptoms. Pain scores decreased from 8.1 pre-injection to 4.6 post-injection (p < 0.0001). 69% of patients had a successful outcome (Excellent/good/satisfactory). Both EQ-5D Utility and EQ-5D VAS scores improved after the PRP injection (p < 0.001) as did HOOS scores (p < 0.01).

Conclusions: This is the largest clinical study into PRP for treatment of trochanteric pain. We have shown promising results and good outcomes in both subjective and objective scoring. PRP injections should be considered in the management of this condition.

0556 - THE ASSOCIATION BETWEEN SODIUM FLUCTUATIONS AND MORTALITY IN SURGICAL PATIENTS REQUIRING INTENSIVE CARE

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2) Institute of Biomedical Engineering, Department of Engineering Science, University of Oxford, UK
3) Beth Israel Deaconess Medical Centre, Division of Pulmonary, Critical Care, and Sleep Medicine, Boston, USA
4) Section of Vascular Surgery, Department of Surgery and Cancer, Imperial College London, UK

Aim: Previous reports have demonstrated a relationship between serum sodium fluctuations and mortality in surgical critically ill patients. Our aim was to assess the association between sodium fluctuations and mortality in a large population of adult surgical patients requiring intensive care.

Methods: A retrospective analysis of critically ill surgical patients from the Multi-Parameter Intelligent Monitoring in Intensive Care database. The associations between sodium fluctuations and 28-day mortality were assessed using multivariable logistic regression. Dysnatraemia was defined as a sodium concentration upon ICU admission outside physiologic range (135-145 mmol/L).

Results: A total of 8600 subjects were included in the analysis. Fluctuations in serum sodium were associated with 28-day mortality (adjusted odds ratio (OR) per 1 mmol/L change: 1.10 (95% CI 1.08-1.13)) in dysnatraemia. In subjects who remained normotraemic there was an association between fluctuation in sodium value and 28-day mortality (adjusted OR 1.13, 95% CI 1.10–1.16; p < 0.001). Subjects with dysnatraemia were more likely to be dead at 28-days (17% vs 7%; p < 0.001).

Conclusions: Dysnatraemia is common in post-surgical patients admitted to intensive care. Fluctuations of serum sodium, including patients with normal sodium, were associated with an increase in 28-day mortality and that dysnatraemia was associated with 28-day mortality.

0555 - IMPACT OF PROXIMITY TO PLASTIC AND RECONSTRUCTIVE SERVICES ON THE GEOGRAPHICAL VARIATION IN IMMEDIATE BREAST RECONSTRUCTION PRACTICES IN THE UNITED KINGDOM

N. A. C. Bakri1**, A. Bottle1, G. Fontana1, D. J. Hadjiminas2, S. Wood, D. Leff1

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Aim: This study aimed to investigate the impact of proximity to the nearest specialist plastic and reconstructive services on the geographic variation in the volume of immediate post-mastectomy breast reconstruction (IBR).

Methods: HES data was interrogated to derive 10-year [2004-2013] rates of expander implant-only, autologous latissimus dorsi (LD), LD-implant and autologous (non-LD) IBR by UK NHS Trust. The distance to specialist plastic and reconstructive surgery services was derived from the data available on the BAPRAS website. Bivariate spearman correlation analysis was conducted between 10-year reconstruction volume and distance to plastic reconstructive services (significance p < 0.05).

Results: An inverse relationship was observed between distance and IBR volume for all procedures. The strength of the inverse relationship was not significant for LD-implant (Rho = -.134, p = 0.084) moderately significant for implant-only (Rho = -.161, p = 0.05) but highly significant for autologous LD (Rho = -.254, p < 0.001) and free-flap reconstructions (Rho = -.377, p < 0.001).

Conclusion: As predicted, the inverse relationship between proximity and IBR volume and the strength of this association especially for autologous and free-flap procedures suggests that distance to plastic and reconstructive service may in explain some of the geographic variation in post-mastectomy breast reconstruction. These implications are that patients with easier proximity to plastic surgeons may receive more complex IBR procedures.
ASiT Oral Presentation Prize Abstracts

0751 - RENAL TRANSPLANT FIBROSIS AT ONE MONTH POST TRANSPLANTATION IS A SIGNIFICANT INDICATOR OF GRAFT SURVIVAL AT ONE YEAR POST TRANSPLANTATION

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2)University of Leicester, UK

Aim: Renal transplant fibrosis process commonly starts early after transplantation due to various causes. Several risk factors have been identified such as young recipient age, presensitization, histo-incompatibility, and acute rejection episodes, especially vascular rejection episodes and rejections that occur late after transplantation.

Methods: The study has been designed to identify five time points of the renal transplant fibrosis (pre-transplant, 1 month, 3 months, 6 months and 12 months) for 300 live donor renal transplant patients over 12 years period between March 1997-august 2009. All samples have been stained with red Pickering Sirius red stain and fibrosis was quantified using Image Pro. Digital computerised analysis system

Statistical analysis

Univariate linear regression was performed to explore the association between fibrosis at 1 month and graft survival, rejection and severity of rejection.

Results: Fibrosis quantity at 1 month is significantly associated with graft survival (p=0.01 and 95%CI 0.02 to 0.14). Rejection and severity of rejection were not found to be associated with fibrosis at 1 month. (Rejection: p=0.74 and 95%CI -0.02 to 0.03). (Severity: p=0.81 and 95%CI -0.05 to 0.04)

Conclusion: Renal transplant fibrosis at 1 month post transplant is a strong indicator of graft survival at 1 year post transplantation.

Posters of Distinction Prize Session 1
20th March 2016 09:00 Hall 1B

0166 - THE ROLE OF SURGICAL TRAINEES IN IMPROVING MEDICAL STUDENT ENGAGEMENT WITH SURGERY

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Aim: With changes to postgraduate training and a reduction in the number of surgical foundation posts, the student experience of surgery is evermore important for recruiting the surgeons of tomorrow. We undertook a quality improvement project to examine whether a structured, trainee-led teaching programme can improve interest in surgical careers.

Methods: During a five-day general surgery attachment, fourth year medical students were mentored by a surgical trainee. A trainee-led structured teaching programme was centred on the team’s theatre list.

Results: 46 students participated. 58% reported more interest in a surgical career immediately after the project. Students enjoyed having a mentor, helping with clinical tasks and feeling more integrated within the team. Six months after the project, 45% reported more interest in surgery than at baseline.

Discussion: We have shown that a brief trainee-led programme can increase student interest in surgical careers and that this interest persists over time. As students enjoy practical sessions and being involved in team activities, the operating theatre is a good environment for trainees to discuss surgical training and engage students in teaching. We propose this model should be expanded to all surgical specialties to increase student exposure to a range of surgical careers.

0217 - WEEKEND HOSPITALIZATION AND MORTALITY RATES

1)Nevill Hall Hospital, Abergavenny, UK

Aim: Recent publications suggest higher mortality in patients admitted at the weekend. The aim of this study is to analyse whether there is an increased risk of death when admitted on a weekend compared to weekday admissions in a single Health Board in Wales.

Method: A retrospective observational study was conducted over a 3-year period from April 2012 to March 2015 inclusive. We analysed the number of deaths on each day of the week. These deaths were correlated to their day of admission.

Results: 448,827 patients were admitted during this 3-year period. 8099 deaths occurred. The crude mortality rate for elective and emergency admissions on a weekday was 1.5-1.7% whereas it was 2.8-2.9% for all admissions on the weekend. The average mortality rate for emergency admissions over the weekend was 3.2% with 95%CI [3.05% to 3.36%] and for the weekdays was 3.05% with 95% CI [2.97% to 3.13%]. No significant difference for mortality rate by weekend and weekday (p=0.243) when excluding elective admissions.

Conclusions: This study clearly demonstrates that mortality rates are unrelated to the day of admission in our Health Board. This suggests that reduction in weekend mortality should not be a driver for seven day working for doctors.
0308 - SYSTEMATIC REVIEW AND META-ANALYSIS OF PROGNOSTIC VALUE OF CIRCULATING TUMOUR CELLS (CTC) IN EARLY BREAST CANCER

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Aim: Prognostic value of circulating tumour cells (CTC) in breast cancer is currently under investigation. This systematic review with meta-analysis aimed to measure the evidence on prognostic relevance of CTC in early breast cancer presented in recent published studies.

Method: A detailed search was made for published primary studies of the prognostic value of CTC in early breast cancer. After review and quality assessment, 22 studies with data on CTC status and disease recurrence and breast cancer mortality, were included. Primary outcomes analysed were hazard ratios for disease-free survival (DFS) and overall survival (OS) between the patient groups with positive and negative detection of CTC. Meta-analysis calculated the pooled hazard ratio (HR) with 95% confidence intervals (CIs) as the overall effect measure on DFS and OS using fixed and random effects models.

Results: 22 studies enrolling total of 5724 patients were eligible for the systematic review and meta-analysis. The pooled HR for DFS and OS for CTC positive status were 2.81 (CI: 2.20-3.61) and 2.74 (CI: 2.20-3.41) respectively.

Conclusion: This review and meta-analysis found that the presence of CTC in early breast cancer was associated with a nearly 3 fold greater hazard of recurrence and death compared with non-detection.

0836 - SURGERY FOR INFANTILE HYPERTROPHIC PYLORIC STENOSIS: A TEN YEAR NATIONAL COHORT STUDY

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2)University of Liverpool, Liverpool, Merseyside, UK

Aims: Assess trends in: (i) epidemiology of infantile hypertrophic pyloric stenosis (IHPS); and (ii) service provision of pyloromyotomy in England.

Methods: Hospital Episode Statistics (HES) data were used to analyse all IHPS admissions in England 2002-2011. Office for National Statistics provided birth rates. Data are presented as median (IQR).

Results: 9686 infants (83% male) underwent pyloromyotomy. Age was most commonly 29-90 days (n=6563, 67.8%), then 7-28 days (n=2945, 30.4%). Annual incidence was approximately static at 1.5/1000 live-births. Surgery was performed in 22 specialist (SpCen) and 39 non-specialist (NonSpCen) centres. The proportion treated in SpCen increased linearly by 0.4%/year (r=0.76, p=0.01, slope 0.43 [0.12-0.73]). 6221 (64%) infants were transferred to SpCen for surgery. Annual case-volume in SpCen vs. NonSpCen was 40 (24-53) vs. 1 (0-3). The highest volume SpCen performed 85/year (73-117) vs. 11/year (9-15) NonSpCen. 17/39 (44%) NonSpCen averaged less than one/year: 4/39 (11%) greater than five/year. The steady increase in laparoscopic surgery reached 20-23% 2009-2011: significantly more were laparoscopic in SpCen (11% vs. 1%, p=0.000, OR 12.31 [5.83-25.98]).

Conclusions: IHPS incidence appears lower than previously reported. The low procedural incidence in NonSpCen would appear to be contrary to NCEPOD guidance. Initial adoption of laparoscopic pyloromyotomy has plateaued.

1349 - ZERO ISCHAEMIA OPEN PARTIAL NEPHRECTOMY: A SUITABLE ALTERNATIVE TO THE MINIMALLY INVASIVE APPROACH

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Aim: Open partial nephrectomy has evolved over time from an open technique to minimal access approaches including laparoscopic and robotic. Our minimal access open technique includes stenting all patients and a supra 12th 6-8cm mini-flank incision without renal artery ischaemia.

Methods: A prospectively populated database of a single surgeon was analysed. 71 patients underwent a partial nephrectomy over a 6 years. Data for operative time, blood loss, change in renal function, complications, histopathology and RENAL nephrometry was analysed.

Results: A single surgeon performed 71 partial nephrectomies over a 6 year period. Mean operative time was 72 minutes. Mean estimated blood loss was 608 mls with one patient receiving a blood transfusion. The mean pre and post-operative haemoglobin levels were 144 and 112 g/l. The mean pre and post-operative creatinine levels were 82 and 103 Umol/L. Overall complication rates were comparable with the BAUS audit. There were 8 Grade 2 (Clavien-Dindo) complications and 1 major complication (Clavien IIIa). Median follow up was 38 months with no local recurrence or progression of disease with 5 patients having a positive margin (7%).

Conclusion: Our results demonstrate than an open partial nephrectomy with a mini-incision has satisfactory outcomes relative to the BAUS audit data.
0277 - PHARMACOLOGICAL MANAGEMENT TO PREVENT ILEUS IN MAJOR ABDOMINAL SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS
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Aim: Prolonged ileus is a common complication following gastrointestinal surgery, with an incidence of up to 40%. Investigations examining pharmacological treatment of ileus have proved largely disappointing; however, recently several compounds have been shown to have benefit when used as prophylaxis to prevent ileus.

Objective: This review aimed to evaluate the safety and efficacy of compounds which have been recently developed or repurposed to reduce bowel recovery time, thereby preventing ileus.

Data sources: A systematic review of the MEDLINE, EMBASE and Cochrane Library in addition to manual searching of reference lists up to April 2015.

Results: A total of twenty-one studies were included in the final analysis. The µ-opioid receptor antagonist Alvimopan and serotonin receptor agonists appeared to significantly shorten the duration of ileus. The use of Ghrelin receptor agonists did not appear to have any effect in five trials. No publication bias was detected.

Conclusions: There is evidence to make a strong recommendation for the use of Alvimopan in major gastrointestinal surgery to reduce postoperative ileus. Further randomized trials are required to establish whether serotonin receptor agonists are of use. Identifying a low-cost compound to promote bowel recovery following surgery could reduce complications and shorten duration of hospital admissions.

1105 - TRAINEE APPENDICECTOMIES - IS AN INTEGRATED ‘CEPOD ROTA’ BENEFICIAL FOR SHO’S?
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Aims: Although appendicectomies were previously regarded as a routine procedure for junior trainees, they are increasingly performed by more senior trainees [2]. Nevertheless, progression to higher surgical training in General Surgery is partly dependent on competence in index procedures such as appendicectomies.

Methods: We retrospectively analysed records of 221 appendicectomies performed between October 2014 and October 2015 in a hospital with a dedicated week attached to the CEPOD team, integrated into the general surgical SHO rota. Data collected included demographics, approach (open or laparoscopic), grade of the 1st operator & 1st assistant, and to ascertain if the procedure was complicated or not. All records were independently scrutinised by a second reviewer.

Results: An SHO was the 1st operator in 9.9%, and present in 78.8% of cases. The percentage of performed cases was highest in laparoscopic cases, in younger males (12.7%)

Conclusions: The proportion of 1st operator SHOs remained considerably lower than data from previous decades. Our data highlighted simple factors, such as gender and age, which favour SHOs as 1st operators. The emphasis should perhaps focus on identifying cases which, owing to several factors, are more suited for SHOs to perform, in order to improve experience.

0430 - ARE WE NOT DOING ENOUGH? RISE IN ACUTE TONSILLITIS AND DEEP NECK ABSCESSES IN WALES
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Aim: Sore throat and tonsillitis represent a significant burden to the National Health Service (NHS). With the introduction of ‘procedures of low clinical effectiveness’, we have seen a large reduction in number of tonsillectomies performed. We carried out a cross-sectional study of the correlation of complication secondary to the reduction of tonsillectomies.

Method: Data were extracted from the Patient Episode Database of Wales (PEDW). Microsoft Excel were used to analyse the results.

Results: Between 1999 to 2014, the amount of tonsillitis rose by almost 3 folds (Pearson’s r=0.968). The rate of admission for peritonsillar abscess rose by 48% (r=0.857) and retro/parapharyngeal abscess admission have also been rising (r=0.709). The amount of tonsillectomy performed per 100,000 population remained almost the same (r=-0.16). There is a positive correlation between amount of tonsillectomy performed and number of peritonsillar abscess admission (R2= 0.016, p=0.07) as well as retropharyngeal abscesses(R2 = 0.007, p = 0.00016). Whereas there is no correlation between the amount of tonsillitis to the amount of tonsillectomy performed. (R2 = 0.017, p = 0.07)

Conclusion: The rise in the retro and parapharyngeal abscess rate is alarming as these conditions are associated with high mortality. The reduction in tonsillectomy rate correlates with significant raise in emergency admissions.
AN EARLY DIAGNOSTIC SCORING SYSTEM

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Aim: Mesenteric ischaemia (M.Isch.) after cardiac surgery carries a high mortality rate. Identification of preoperative, perioperative and postoperative risk factors and early diagnostic blood markers potentiates early diagnosis.

Methods: Patients with post cardiac surgery M.Isch. between the years 2000 - 2011 were selected. Over 150 variables were assessed. Data was collected from patient notes and the departmental database and was analysed using the SPSS software.

Results: 86 patients were identified; a full dataset was obtained for 36. Overall incidence was 0.8% with a mortality of 73.26%. Risk factors included pre-operative hypertension, smoking, dyspnoea, haemodialysis, atrial fibrillation, angina and peri-operative use of intra-aortic balloon pumps especially in emergency coronary artery bypass graft and valve surgeries. Average BMI was 29.00 and post-operatively 66.7% had diarrhoea prior to M.Isch. Biochemical indicators included: abnormal blood lactate, pH and c-reactive protein (CRP) levels.

26 patients underwent a diagnostic laparotomy; negative and positive outcomes were compared using a t-test with significant (p<0.05) differences noted in post-diagnosis glucose and pre-diagnosis CRP, base excess, lactate and bicarbonate levels.

Conclusion: This study provides sufficient data to perform a propensity score matched analysis to establish a scoring system for the early diagnosis and treatment of M.Isch. to reduce mortality rates.

ASiT Medical Student Oral Presentation Prize

1272 - X-PERIENCE - A RADIOGRAPHIC VIEWING PLATFORM DISPLAYING PROFILES OF CADAVERS FOR EDUCATIONAL PURPOSES

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3) Mater Misericordiae University Hospital, Dublin 7, Ireland

This project presents radiographic profiles of UCD’s anatomical donors for educational purposes. An interactive viewing platform X-perience was developed to display these images. Comprehensive donor profiles were created by adding medical histories and consultant radiologists’ reports. These clinical cases enhance anatomical learning and offer early introduction of radiography.

Full skeletal radiographs were obtained from 13 donors. Radiographic images were produced digitally and labelled. Articulate Storyline2 was used to build X-perience, a HTML5 interactive interface. To assess the value of X-perience Locomotor Biology students were surveyed. This cohort (n=50) had prior traditional anatomical teaching and could compare anatomical learning with and without X-perience.

The workflow of profiling cadavers and constructing X-perience proved successful. X-perience is currently used by students during dissection. Results of student acceptability survey, Kirkpatrick Level-1, are extremely positive. Students (84%) agree that X-perience is relevant and easy to use. Students (88%) appreciate the clinical relevance that X-perience offers. A greater understanding of the importance of radiology is acknowledged (92%).

The introduction of similar platforms in other medical schools is recommended. CT and histology could further refine X-perience. In addition to its educational value, X-perience strengthens the body donation programme, highlights the individuality of each donor and generates enthusiasm amongst students.

1307 - VAGUS NERVE STIMULATION: EFFECTS ON CHOLINERGIC NEURAL NETWORKS?

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Introduction: Vagus Nerve Stimulation (VNS) is currently a neurosurgical management for medication-resistant epilepsy. In animal studies, VNS can activate cholinergic networks. Cholinergic projections are mainly received from the Pedunculopontine Nucleus (PPN) or the Nucleus Basalis of Meynert (NBM). Cholinergic dysfunction is implicated in symptoms of neurodegenerative disorders. Cholinergic activity can be assessed electrophysiologically using Prepulse Inhibition (PPI) and Short Latency Afferent Inhibition (SAI).

Aim: To investigate whether VNS can access human cholinergic networks.

Method: Twenty subjects were recruited in a double-blinded randomised control trial. SAI involved median nerve stimulation preceding transcranial magnetic stimulation of the motor cortex at various interstimulus intervals (ISI). PPI incorporated median nerve stimulation before supraorbital nerve stimulation at several ISIs. Electromyograms were recorded from first dorsal interosseous and orbicularis oculi muscles. Non-invasive VNS (nVNS) and placebo sham intervention were delivered to the right vagus nerve. Results: nVNS increased inhibitory effects of SAI significantly when compared with placebo stimulation (P=0.011).

The significant effect was only seen in the SAI–PPI trial order subgroup (P=0.021). nVNS had no significant effect on PPI.

Conclusion: nVNS can modulate cholinergic pathways in humans. The dissociation between PPI and SAI suggests nVNS effects are likely to be mediated via the NBM.
ASiT Oral Presentation Prize Abstracts

0484 - ACT A POOR MARKER FOR HEPARIN DOSING IN ECMO PATIENTS: THE POTENTIAL ROLE FOR ANTI-XA ASSAYS
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Venoarterial extracorporeal membrane oxygenation (ECMO) with continuous heparinization is used for circulatory support after pediatric cardiac surgery. Currently, heparin doses are determined using activated clotting time (ACT) however, there is evidence suggesting that ACT is an unreliable marker in determining heparin doses, which ultimately could increase the risk of life threatening bleeding.

Aim: To determine whether ACT is correlates with heparin dosing in patients on ECMO, and to investigate the potential role of anti-Xa assays as a viable, safe alternative.

Methods: This cohort study analysed 197 samples from 10 ECMO patients between 2014-15, and correlated heparin doses with subsequently measured ACT and factor Xa levels. Regression analyses were performed to determine the strength of the dose responses with heparin.

Results: ACT levels were found to very weakly correlate with heparin dosing (r²=0.009, p=0.908), whilst anti-Xa displayed a much stronger association. ACT was determined to be lower in those patients who underwent re-exploration for bleeding (p=<0.001).

Conclusion: ACT appears to be a poor marker for heparin dosing in paediatric cardiac patients on ECMO with potential for increased adverse outcomes. This study highlights that Anti-Xa assays could act as a viable alternative to ACT for heparinization in patients on ECMO.

0293 - THE EFFECT OF BODY CONTOURING SURGERY ON WEIGHT LOSS MAINTENANCE FOLLOWING BARIATRIC SURGERY
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Background: Despite proven benefits of bariatric surgery in reducing weight, patients are often left with excess skin. Body-contouring surgery (BCS) has been shown to improve quality of life and may help maintain weight-loss (WL). We evaluate the effect of BCS on WL over 3 years.

Methods: Two demographically matched groups of female patients were retrospectively analysed. The control group (n=61) received gastric bypass surgery only. The test group (n=30) received additional BCS 12 months afterwards. An independent t-test was used to compare mean WL at 1½, 3, 6, 12, 24 and 36 months. Statistical analysis was adjusted for patients lost to followup.

Results: Between 6 weeks and 12 months there was no difference in WL. At 24 months the test group (n=21) lost a mean 35.7% of their pre-op weight; the control group (n=54) lost a mean 30.2%. At 36 months the test group (n=10) maintained WL with a loss of 35.0%; the control group (n=15) increased weight from 24 months with a loss of 24.7%. Differences in WL at 24 and 36 months were statistically significant.

Conclusions: This suggests patients who undergo BCS after bariatric surgery lose significantly more weight and maintain WL 3 years after follow-up compared to those undergoing bariatric surgery alone.

0138 - DECISION MODELLING IN DONATION AFTER CIRCULATORY DEATH (DCD) LIVER TRANSPLANTATION
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Introduction: Donated after circulatory death (DCD) liver transplantations are increasingly used to meet waiting list demands, yet provide inferior outcomes compared to donated after brain death (DBD) allografts. This study aimed to determine the optimal decision for patients offered a DCD allograft based on their current Model for End-Stage Liver Disease (MELD) score - to accept, or remain wait-listed for DBD transplantation.

Methods: A Markov decision model was constructed to predict the 5 year clinical course of patients on the liver waiting list. Model parameters and confidence intervals were determined from the UK Transplant registry; appropriate literature; and local quality of life data. Sensitivity analyses were conducted to assess the impact of parameter uncertainties on conclusions.

Results: Quality-adjusted life years (QALYs) accumulated after 5 years were significantly higher in DCD-recipients (3.78, 95% CI=3.63-3.93) than those remaining on the waiting list with MELD scores of 15-20 (3.33, 95% CI=3.05-3.58), or >20 (3.03, 95% CI=2.71-3.33). There was no significant difference for MELD scores <15 (3.52, 95% CI=3.29-3.74).

Conclusions: This model predicts that patients on the UK liver transplant waiting list with MELD scores >15 should accept any DCD allograft offered. However, the optimal decision for patients with MELD scores <15 remains unclear.
0964 - INCREASED MORTALITY IN THE ELDERLY TRAUMA PATIENT: AGE, INJURY UNDERESTIMATION OR INAPPROPRIATE EARLY TRAUMA CARE?

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Aim: “Payment by Results” incentivises care quality using best practice indicators. This study investigates effects of trauma “best practice” achievement, age and injury severity score (ISS) on outcomes for poly-traumatic injury in younger (<65 years) and elderly (>65 years) patients, the latter being a rapidly increasing but under-researched cohort.

Method: Consecutive patients presenting to one major trauma centre with ISS of over 8 (excluding isolated proximal femoral fractures) were prospectively collected over a 30-month period. Multivariate analysis investigated effects of best practice achievement, age and ISS on Glasgow Outcome Score (GOS) and 30 day mortality in younger and elderly patient groups.

Results: In younger patients (n=1393), four of the 10 best practice indicators analysed showed independent significance in improving GOS (p<0.05 for all), and one in independently reducing mortality (p<0.05). In elderly patients (n=896), none of the trauma best practice indicator significantly improved either outcome measure. ISS and age were independent, additive factors for GOS and mortality (p<0.001).

Conclusions: With outcomes significantly worse in older patients, the lack of improvement with “best practice” indicates an important area for wider study, and may be due either to an underestimation of their injury severity, or best practice indicators inappropriate for this group.

0431 - EXTENDING INDICATIONS IN ROBOTIC PARTIAL NEPHRECTOMY: THE DEVELOPMENT OF THE PRACTICE AFTER 200 CASES

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Aim: Robotic partial nephrectomy (RPN) is becoming the gold standard technique in the surgical management of small renal masses. Our aim is to assess development of RPN within one centre over 5 years to measure quality outcomes and changes in case complexity.

Method: A prospective database of 200 elective cases from one institution was chronologically split into 4 groups of 50 patients: peri-, intra- and post-operative outcomes were compared. We compared length of stay, tumour size, warm ischaemic time (WIT), operative time and PADUA score.

Results: 181 cases were performed transperitoneally with 4 conversions to radical nephrectomy for tumour factors. There were no conversions to open surgery. Complications consisted of 1 transfusion, 5 positive margins and 3 Clavien IIIa/b complications. In comparing groups 1 and 4, mean PADUA score increased from 7.11 to 7.63 (p=0.045), mean length of stay decreased from 3.76 to 2.6 days (p<0.001), mean WIT decreased from 18.3 to 16.4 minutes (p=0.0245), mean operative time decreased from 180 to 162 minutes (p<0.001).

Conclusion: Despite taking on more complex cases, we have reduced length of stay, WIT and operative times. With increased experience, it is possible to broaden the suitability of patients for RPN without compromising outcomes.

0307 - BENEFIT OF PERCUTANEOUS NEPHROSTOMY IN MALIGNANT URETERIC OBSTRUCTION

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Introduction: Percutaneous nephrostomy (PCN) for malignant ureteric obstruction is an effective method of urinary diversion. There are no guidelines/selection criteria to guide decision-making; particularly in recurrent/advanced disease. Watkinson et.al. stratified patients into 4 groups. We aimed to identify survival benefit and morbidity following PCN for malignant obstruction.

Methods: We identified 86 patients stratified them as per Watkinson et.al. - Group I:non-malignant complication from previous surgery/radiotherapy (14 patients), II:untreated primary (20), III:relapsed disease viable treatment option (28) and IV:relapsed disease no treatment option (24). Most common primary tumour was bladder(34%). 43% were elective, 57% emergency (sepsis 34%, AKI/Hyperkalaemia 57%).

Results: Median survival post-PCN was 35.5 days in Group IV versus 212 and 207.5 days in Groups II and III. 1-year survival was 0 in Group IV, 20% in II and 16% in III. 76% group IV patients had nephrostomies in-situ at death (6% Group I, 10% Group II, 50% Group III). 26 patients required readmission for complications.

Conclusions: Patients with relapsed malignancy and no conventional treatment option have a shorter survival than Groups I-III. Additionally, 30% of all patients are readmitted with related complications. The decision for PCN should be based on prognosis and available treatment options whilst considering individual patient’s comorbidities and wishes.
0209 - GENOMIC AND PROGNOSTIC ASSOCIATIONS OF E-CADHERIN IN BREAST CANCER: AN IMMUNOHISTOCHEMICAL STUDY OF 3273 PATIENTS, SYSTEMATIC REVIEW AND META-ANALYSIS
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Few sufficiently powered studies have been published on the significance of E-cadherin in breast cancer survival, generating conflicting evidence. The relevance of loss of CDH1 relative to genomic subtypes of breast cancer has not been systematically investigated. We assessed CDH1 alterations and protein expression relative to IntClust subtypes in 732 patients from The Cancer Genome Atlas. E-cadherin protein expression was significantly lower in patients with CDH1 mutations compared to wild type (p<0.0001). Prevalence of mutations were more common in IntClust 3 (8.4%), and IntClust 8 (11.4%), compared to other subtypes (p<0.0001). Furthermore, we performed a systematic review and meta-analysis of 1299 articles from the PubMed database. We included 36 published studies, with data on 9070 patients, as well as unpublished patient-level data from an additional 3272 patients from the SEARCH and NEAT studies. Reduced E-cadherin expression was significantly associated with increased all-cause mortality (HR 1.22, 95% CI 1.04-1.44; p=0.02) and breast cancer specific mortality (HR 1.18, 95% CI 1.02-1.35; p=0.02). E-cadherin expression is strongly influenced by mutation and modestly influenced by methylation, with little contribution from copy number alterations. We demonstrate that reduced E-cadherin expression is a significant predictor of poor survival, albeit with a relatively small effect size.

1165 - IMPACT OF EARLY POSTOPERATIVE COMPLICATIONS ON DISEASE FREE SURVIVAL AFTER MAJOR RESECTION OF COLORECTAL CANCER
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Background: Impact of early postoperative morbidity from colorectal cancer surgery is unknown. This study aimed to determine whether pre-specified complications impacted disease free survival after resection of colorectal cancer.
Methods: Patients undergoing surgery with curative intent for colorectal cancer over 2 years were included. Pre-defined complications recorded were anastomotic leak, hospital acquired pneumonia (HAP), surgical site infection (SSI) and ileus. Primary endpoint was 3-year disease free survival (DFS). Cox’s proportional models generated hazard ratios (HR), excluding patients who died within 30 days of surgery.
Results: Of 220 patients, 55% underwent surgery for a colonic cancer. The 30-day mortality rate was 0.9%(n=2) and positive resection margin rate 5.9% (3.3% colon, 9.1% rectum). The overall complication rate was 56.3%. Specific complication rates were 11.3% anastomotic leak, 11.8% HAP, 15.0% SSI and 13.2% ileus. Including patients undergoing anastomosis, leak (HR 4.7, 1.5-15.5) predicted reduced DFS similar to a positive resection margin (HR 3.7, 1.1-14.8). In models containing all patients, HAP predicted reduced survival (HR 8.0, 3.1-20.9) similar level to a positive resection margin (HR 8.0, 3.1-20.9). SSI and ileus were not significant.
Conclusion: HAP and anastomotic leak decrease disease free survival to a level comparable to that of a positive resection margin. Further strategies ought to target reduction in perioperative complications.

0434 - IMPACT OF LYMPHOEDEMA ON QUALITY OF LIFE FOLLOWING RADICAL LYMPH NODE DISSECTION FOR PENILE CANCER
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Aim: Inguinal and pelvic lymphadenectomy in penile cancer can result in significant lymphoedema. The aim of this study was to assess the impact of any lower limb and/or genital lymphoedema on quality of life using a validated questionnaire.
Method: Between June and December 2015, 26 patients who attended clinic for surveillance following their lymph node surgery were asked to complete the validated LYMQOL LEG questionnaire. 16 had both inguinal and pelvic lymph node dissections. 12 had adjuvant inguinal +/- pelvic chemoradiotherapy.
Results: Median patient age was 62 years (range 47-82). Median time since nodal surgery was 25 months (2-90). Functional questions scored poorer overall. Comparing inguinal lymphadenectomy only to inguinal and pelvic lymphadenectomy, 22% men averaged a poor overall score on the functional domain compared with 50%. For the appearance domain it was 11% vs 13%, symptoms domain 11% vs 25%, and mood domain 0% vs 38%. Multiple logistic regression analysis showed a statistically significant correlation between symptom score and whether the patient had had adjuvant chemoradiotherapy (p=0.015).
Conclusions: Inguinal and pelvic lymphadenectomy in penile cancer impacts more on function than appearance, symptoms or mood. However, patients generally score their overall quality of life quite high.
1158 - OUTCOMES FOLLOWING SURGERY FOR COLORECTAL LIVER METASTASES
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Aims: Colorectal cancer is the second commonest cause of cancer related death in the UK. This study aims to assess survival differences across Scotland in patients who underwent surgery for colorectal liver metastases (CRLM).

Methods: Patient data was obtained from a national register of patients undergoing surgical treatment of CRLM in Scotland from April 1990 to April 2011. Resection was categorized into major (≥3 segments) and minor (1-2 segments). Survival analysis using Cox Proportional Hazards regression was undertaken.

Results: 1266 patients underwent surgical resection: 578 (45.7%) major resection; 688 (54.3%) minor resection. 757(59.8%) were male and 509(40.2%) female. Mean (sd) age for patients undergoing major resection was 59.5 (16.1) and minor resection 53.9 (24.2). Mean (sd) survival was similar with major 45.3 (43.2) months and minor 40.6 (39.5) months. Co-morbidity Hazard ratio 1.12 (95% CI 1.05-1.19), p<0.001 and health board of diagnosis (p=0.002) were associated with worse survival (adjusted for age, gender, comorbidity, and deprivation).

Conclusions: Significant regional variation in survival was seen despite correcting for deprivation, age, gender and co-morbidity. Future work should focus on reasons for this disparity and identify means by which outcomes in patients with CRLM can be improved across all regions of Scotland.

1207 - THE ROLE OF INTRAORAL ULTRASONOGRAPHY IN STAGING OF MUCOSAL MALIGNANCIES
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Introduction: Tumour thickness of oral tumour is an important prognostic factor for local recurrence, nodal metastasis and survival. Preoperative assessment of tumour thickness with ultrasonography was found to be superior to other image modalities. The use of pretreatment ultrasonography assessment is not currently part of the routine staging protocol in oral tumours in the UK. We describe one unit’s experience of this adjunctive assessment.

Methods: All patients with newly diagnosed oral cancer over an eighteen-month period were identified using patient database. Demographic data, imaging and final histology reports were collected. Statistical analysis was performed to assess correlation between various radiographic assessment and histology.

Results: 15 patients were identified with new oral cancer diagnosis within the studied period (mean age=68m M>F). Ultrasonography assessment of tumour showed a high degree of correlation with histology (P<0.01). This was found to be superior to other forms of imaging.

Conclusion: We found ultrasonography to be a reliable tool in objectively assessing tumour thickness in oral cancer. It provides surgeons with an accurate anatomical map of tumour invasion, allowing for more guided and less morbid resections whilst at the same time remain oncologically safe. We would advocate the use of intraoral ultrasonography in the routine assessment of oral mucosal tumours.

0265 - VARIATION IN THE MANAGEMENT OF DUCTAL CARCINOMA IN SITU: RESULTS OF THE MAMMARY FOLD NATIONAL PRACTICE SURVEY
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Introduction: Ductal carcinoma in situ (DCIS) accounts for approximately 10% of all diagnosed breast cancers and 20% of screen-detected breast cancers in the UK. The latest guidelines were published in 2009. Our survey assesses variation in management of DCIS.

Methods: A national practice questionnaire was developed by the Mammary Fold Academic Committee (MFAC) steering group. The survey focused on pre-operative, operative, and post-operative management. Trainees completed a one-off questionnaire on behalf of their unit.

Results: 76/144 UK breast units (52.8%) participated. 33/76 units perform routine pre-operative ultrasound assessment of the tumour or axilla. There was no clear consensus regarding indications for mastectomy; multifocality and extensive microcalcifications were most frequently cited. 34/76 units offered nipple sparing mastectomy. 33/76 units perform sentinel node biopsy in the presence of a mass lesion and 51/76 at mastectomy. The most widely accepted pathological radial margins were 1-2mm. The commonest factors in decision-making for radiotherapy were tumour grade and size. About half of breast units offer long-term follow-up; annual mammograms for five years after surgery were most common. Discussion: Variation is demonstrated in management of DCIS. MFAC aims to disseminate these results to influence the development of evidence-based guidelines, standardise practice, and improve patient outcomes.
Conclusions: C-index improved when examining significant prostate cancer. The nomogram developed from the logistic regression model had good discrimination with a c-index of 87% (95%CI 84-90%).

Results: A total of 615 consecutive men who underwent pre-biopsy mp-MRI and transperineal 24-40 core, sector-guided prostate biopsies from July-2012 to November-2015 were included. A multivariate logistic regression model was constructed to predict overall prostate cancer detection, considering age, PSAD, PI-RADS(v1) score and history of previous negative biopsy. Internal validation was performed by calculating the concordance index (c-index) from 200 bootstrap samples.

Methods: We searched the PubMed and Cochrane Central databases for articles published until July 2015. Randomized Controlled Trials that compare intravenously administered different dosing and regimens of anti-VEGF therapies with control, were included. Adverse events of interest were pooled as unadjusted relative risk in a random effect model using Mantel Haenzel method. P value below 0.05 was considered significant.

Results: We retrieved 84 RCTs that evaluated 46,078 patients. Bevacizumab significantly increased the risk of hypertension (RR 3.15; P < 0.00001), bleeding events (RR 2.39; P < 0.00001) and proteinuria (RR 2.04; P < 0.00001). Bevacizumab did not significantly increase the risk of venous thrombotic events (RR 1.09; p=0.36), arterial thrombotic events (RR 1.19; p=0.27) or congestive heart failure (RR 1.94; p=0.07).

Conclusion: The presented study shows that Anti-VEGF therapy is associated with an increased risk of cardiovascular adverse events. However, further investigations should be performed example spacing of the dosage of medications in the upcoming trials.

0385 - TOWARDS A MAGNETIC RESONANCE IMAGING-BASED NOMOGRAM FOR THE PREDICTION OF TRANSPERINEAL PROSTATE BIOPSY OUTCOME

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Aim: The aim of this study was to develop and validate a nomogram for the prediction of transperineal prostate biopsy outcome incorporating magnetic resonance-derived information, including prostate specific antigen (PSA) density (PSAD) and Prostate Imaging Reporting and Data System (PI-RADS) scoring.

Methods: A total of 615 consecutive men who underwent pre-biopsy mp-MRI and transperineal 24-40 core, sector-guided prostate biopsies from July-2012 to November-2015 were included. A multivariate logistic regression model was constructed to predict overall prostate cancer detection, considering age, PSAD, PI-RADS(v1) score and history of previous negative biopsy. Internal validation was performed by calculating the concordance index (c-index) from 200 bootstrap samples.

Results: All variables were significantly associated with prostate cancer on univariate analysis. Significant contributors to the multivariate model were age (OR 1.15), PSAD (OR 3.17 for >0.16ng/ml), PI-RADS score (OR 43.12 for score-5) and no previous negative biopsy (OR 2.18). PSA was excluded given high correlation with PSAD (r=0.81).

The nomogram developed from the logistic regression model had good discrimination with a c-index of 87% (95%CI 84-90%). C-index improved when examining significant prostate cancer.

Conclusions: An MR-based nomogram is a useful tool for the prediction of prostate biopsy outcome and may contribute to the biopsy decision-making process.

Posters of Distinction Prize Session 2
20th March 2016 12:15 Hall 1B

1018 - REDUCING THE INTRAOCULAR PRESSURE RISE THAT OCCURS DURING LAPAROSCOPIC SURGERY: IS ACETAZOLAMIDE THE ANSWER?

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Background: Perioperative vision loss following laparoscopic colorectal surgery has been reported. Studies show Trendelenburg positioning during surgery can produce a significant rise in the IOP, and this rise is thought to be a possible factor. Acetazolamide decreases IOP by reducing the formation of aqueous humour.

Aims: Investigate if acetazolamide reduces the IOP rise resulting from Trendelenburg positioning.

Methods: A randomised cross-over blinded pilot study. Nine healthy volunteers were randomised to start with the placebo or Acetazolamide with a 5 days’ washout period. Baseline IOP was measured on both days. After 1.5 hours of taking the medication, volunteers lay head-down at 17 degrees for 4 hours and IOP measurements repeated. This reading was subtracted from the baseline to give a ‘change in IOP’.

Results: Of the 9 volunteers, 2 were male and 7 female with an average age of 54 years (range: 21-76). The mean change in IOP after the placebo was -2.15mmHg (SD 3.34), after Acetazolamide was 0.17mmHg (SD 3.55). A student T-test was used to compare the change in IOP on both days and was statistically significant with a T-value of -2.25 and P=0.038.

Conclusion: Acetazolamide can reduce the rise that occurs in IOP whilst in the Trendelenburg position.
0796 - HOW TO SET UP AND RUN A CADAVERIC SURGICAL SIMULATION PROGRAMME: EXPERIENCE FROM A UK HAND SURGERY UNIT

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1) Pulvertaft Hand Centre, Derby, UK

Aim: Cadaveric surgical simulation (CSS) is useful in surgical education. We describe the development of our fresh frozen CSS programme.

Method: We performed a systematic evaluation of our CSS programme since 2012, including legal issues, protocols, materials, costs and trainee feedback.

Results: 10 CSS courses have been provided free of charge to our fellows. We explain the legality of importing fresh frozen cadaveric specimens, and describe our protocol, developed with the Human Tissue Authority, for storing, using and disposing of cadavers.

We describe the source of our specimens with costing and transport details. Our course programme utilises each specimen fully, simulating arthroscopic, soft tissue, bone and joint techniques. We present a description of our cadaveric preparation technique, appropriate instruments and simulation suites.

Our CSS protocol is now mandatory in our Trust, and used by multiple specialties including orthopaedics (upper and lower limb surgery), maxillofacial surgery (flap techniques) and anaesthetics (peripheral block techniques).

37 trainees provided feedback. The mean Likert score was 4.7/5 for educational relevance and impact on future practice.

Conclusions: CSS is a superb resource if utilised properly. We have provided the legal framework and protocols required along with a detailed review of practical considerations to enable successful CSS.

0290 - THE SAFETY, FEASIBILITY AND UTILITY OF 3-DIMENSIONAL C-ARM CONE-BEAM COMPUTED TOMOGRAPHY WITH XperCT POST-EVAR

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1) Firmley Park Hospital, Firmley, Surrey, UK

Aim: 3-Dimensional C-arm Cone-beam (CACB) Computed Tomography is emerging as a useful adjunct for quality control during EVAR. We examined the safety, feasibility and utility of a new 3-D CACB, XperCT Allura FD20 system (Philips, Best, The Netherlands).

Methods: All patients in this prospective study underwent conventional post-EVAR uni-planar angiography (CPEA) and additional post-EVAR XperCT on-table. Patients with eGFR<30 mls/min/1.73m2 or previous renal interventions were excluded. We examined the impact of XperCT on additional on-table interventions and the correlation of XperCT observations with the routine 30-day surveillance CTA.

Results: Between April 2010 and July 2013, 51 patients underwent CPEA and XperCT post-EVAR. XperCT detected new findings not identified by CPEA in 9 (17.6%) patients (1 Type1A endoleak, 5 Type2 endoleaks, 3 sub-optimal limbs). Of these 4 (7.8%) underwent further on-table intervention for correctable technical error. Following satisfactory XperCT, 7 (13.7%) patients had new surveillance CTA findings at 30-days (5 new Type2 endoleaks, 2 limb occlusions). Renal function remained unchanged. Median time for XperCT acquisition was 11(6-23) minutes.

Conclusions: XperCT is feasible, safe and maybe a useful adjunct to guide further intervention on-table immediately post-EVAR for quality control but at present 30-day post-EVAR surveillance CTA may not be replaced by XperCT.

0774 - SIMPLE PERIOPERATIVE INTERVENTIONS CAN MINIMISE THE RISK OF PHARYNGOCUTANEOUS FISTULA FOLLOWING TOTAL LARYNGECTOMY – EXPERIENCE AT A SINGLE TERTIARY INSTITUTION

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Introduction: Pharyngocutaneous fistula following total laryngectomy contributes to patient morbidity and mortality from prolonged hospitalisation, delayed oral feeding, increased risk of catastrophic vascular haemorrhage and delays to commencement of adjuvant radiotherapy.

The experience at our institution has evolved with respect to standardisation of perioperative management of these patients since mid-2013 that has seen a marked reduction in the fistula rate. The changes instituted are simple interventions related to meticulous pharyngeal closure technique, a novel dressing technique and prolonged postoperative metronidazole administration.

Aims: To assess the independent effect of the change of practice on the fistula rate at our institution.

Methods: Here we present a retrospective review of a cohort comprising consecutive patients undergoing total laryngectomy between January 2010 and August 2015.

Results: The total fistula rate was 10 percent in the cohort of 80 patients. A dramatic reduction can be seen comparing the groups before and after the change of practice - 16.3 percent (8/49) versus 0 percent (0/31). The groups are otherwise similar accounting for known predictors including salvage surgery. Here, we present a statistical analysis of the attributable effect of each standardised intervention.

Conclusion: Simple interventions can seemingly reduce the fistula rate in favour of more morbid procedures.
0543 - CT FINDINGS OF SURGERICALLY PROVEN INTERNAL HERNIAS POST LAPAROSCOPIC GASTRIC BYPASS (LRYGB) -- A RETROSPECTIVE ANALYSIS
S. Gupta*, R. Zakeri, M. Howlader, D. Murray, M. Steward, A. Alhamdani, P. Sufi
1) Whittington Hospital NHS Trust, London, UK

Background: Diagnosing internal hernia after gastric bypass is still demanding, even with advanced CT scanning.

Methods: Patients who had diagnostic laparoscopy for abdominal pain after LRYGB over the period from 2013-2015 in our institute were included.

Results: Out of 23 patients, 16 patients had IH found during diagnostic laparoscopy. Six (37.5%) of those patients had their Peterson and mesenteric defects closed during primary surgery. The median time of presentation with abdominal pain post bypass was 1.5 years. At the time of the presentation the median excess weight loss was 68% and median BMI 33.3 kg/m2. Commonest sign at CT was “Swirl sign” 7/16 (44%) and “mesenteric oedema” 7/16 (44%). 6/16 (38%) had 2 or more signs while 5/16 (31%) had no signs. Seven cases of no internal hernia. Even in these patients Swirl sign was present in 3(43%) and mesenteric oedema in 2 (29%). 3(43%) had 2 or more of 9 previously documented CT signs pre-operatively. Pre-operatively 3(43%) had no signs at CT.

Conclusion: This study shows that the absence of CT finding should not preclude laparoscopic examination to rule out IH.

0463 - REDUCING THE RISK OF ATRIAL FIBRILLATION AFTER ANATOMICAL LUNG RESECTION
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Aims: De novo post-operative atrial fibrillation (POAF) may increase morbidity, hospital stay and healthcare expenditure. This study aims to determine the perioperative factors correlating with POAF and whether these may be modified to reduce its incidence.

Methods: The records of all patients undergoing anatomical lung resection from July-December 2015 were retrospectively reviewed. Patients treated with long-term antiarrhythmic therapy (excluding beta-blockers) or a history of arrhythmia were excluded.

Results: POAF occurred in 13.9% (29/209) of patients at a mean of 3.97 days post-operatively and significantly increased hospital stay (7.0±4.8 vs. 11.5±6.6 days(p=0.0014)). No correlation was found with gender, hypertension or ischaemic heart disease. However, older age (p=0.003, r²=0.04), post-operative infection (p<0.0001; Chi²=15.6) and an open rather than VATS approach (open 20/105 (19.0%); VATS 9/94 (9.6%); p=0.032) were found to be significant uni- and multi-variate predictors of POAF occurrence. Notably, 27.6% (8/27) of patients failed to be cardioverted and remained in AF on discharge, 4 of whom required long-term anticoagulation.

Conclusions: Increased adoption of VATS procedures reduces the overall incidence of POAF after anatomical lung resections. More rigorous control of modifiable risk factors such as stringent monitoring and early treatment of post-operative infection may further reduce POAF and its associated morbidity.

0403 - NON-OPERATIVE MANAGEMENT OF LOW RECTAL CANCER WITH COMPLETE RESPONSE TO STANDARD NEO-ADJUVANT CHEMO-RADIOThERAPY (CtR)
R. Dickson-Lowe*, P. Hanek, S. Kalaskar, J. Taylor
1) Darent Valley Hospital, Dartford, UK

Introduction: 15-20% of low rectal cancers achieve full response to long course (LC) chemoradiotherapy (CRT). A protocol for non-operative management of “complete responders” was started in January 2007 for this select group of patients. It was the patient’s free choice of declining surgery after being fully informed on three occasions.

Methods: 14 patients were followed up after complete response. A local protocol (no formal national guidelines) was used involving five years of regular Magnetic Resonance Imaging (MRI), Endoscopic Ultrasound (EUS) and Examination Under Anaesthetic (EUA) of anorectum under general anaesthetic. Colonoscopy and Computer Tomography (CT) chest-abdomen-pelvis (CAP) were done at year two and five.

Results: Seven are still disease-free and under surveillance. Three had recurrence; two underwent abdomino-perineal excision of the anorectum and one underwent ultra low anterior resection, all with R0 resections and still disease-free. Four were unfit for surgery and had transanal procedures with suspicion of disease; all had tumour-free specimens, are still disease-free and under surveillance.

Conclusions: This protocol and management is fully in line with current literature and best evidence and there has been no compromise to patient care. However, this study is low numbers and larger trials/studies are needed.
**ASiT Oral Presentation Prize Abstracts**

**0390 - SURGICAL MANAGEMENT OF AMIODARONE-INDUCED THYROIDITIS**
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**Introduction:** Amiodarone can be a life-saving medication; however it also has multiple side effects, for example; amiodarone-induced thyroiditis (AIT). AIT is rare, (incidence of 3-5%[1]), complex and life-threatening. AIT can cause significant cardiac dysfunction and cardiac failure. Medical management in Australia consists of cessation of amiodarone, prescription of thionamides, perchlorates and steroids.[2] However, a small sub-group don’t respond and are referred for a semi-elective total thyroidectomy. These are complex surgical patients with hyperthyroidism, the potential for thyrotoxic crisis, and end-stage cardiac failure. However without surgical removal of their thyroid gland they will continue to deteriorate, with a mortality rate of 30-50%.[3]

**Method:** Due to the rarity of this condition, a case series was used to evaluate the role of surgical management of AIT in those who have failed medical treatment.

**Results:** Patients were analysed with respect to; duration of trial of medical treatment, pre-medical treatment cardiac function, pre- and post-operative cardiac function, surgical complications and survival. Their results were compared to those of non-AIT patients undergoing total thyroidectomy.

**Conclusions:** Total thyroidectomy in patients with AIT shows comparable clinical outcomes to total thyroidectomies for other indications. It also restores euthyroidism and reduces mortality risk in patients with AIT.

**0456 - SURGICAL LEARNING ACTIVITIES FOR HOUSE OFFICERS - DO they IMPROVE THE SURGICAL EXPERIENCE?**
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2)University College Dublin School of Medicine, Dublin, Ireland
3)Kingston Hospital, London, UK, 5)St Vincent’s University Hospital, Dublin, Ireland

**Aims:** To ascertain whether house officers (HOs) attain a more satisfactory surgical rotation experience when they perform basic surgical learning events. We also sought to establish how many and which learning events HOs achieve and the effect on their surgical experience.

**Methodology:** A questionnaire listing 20 learning activities and questions regarding satisfaction with overall experience was disseminated to HOs in the UK and Ireland who had completed ≥3 months of surgical rotations. Satisfaction with surgical experience was dichotomised in order to perform logistic regression using R Studio software v0.98.

**Results:** 115 doctors completed the questionnaire with 17% achieving at least half of the learning activities. On multivariate analysis, satisfaction with surgical experience was statistically significantly associated with an increased number of completed learning activities (odds ratio 24.3, p=0.002), independent of one’s interest in surgery or satisfaction with teaching received.

**Conclusion:** Surgical HOs who performed basic surgical learning activities reported significantly greater satisfaction with surgical rotations. Therefore, we recommend facilitating HOs completion of these activities as this will ensure that basic surgical competencies are achieved and that HOs will be more satisfied with their surgical experience.

**0316 - A PROSPECTIVE MULTICENTRE STUDY OF OUT OF HOURS EMERGENCY UROLOGY: IMPLICATIONS FOR FUTURE WORKFORCE PLANNING**
L. Alzweri1, V. Modgil1, D. Mak2, C. Dowson1, P. Polson1, U. Otite2, P. Rajayabun2, S. Liu4, P. Ryan2, H. Ojha1
1)West Midlands Urology Research Collaborative, Birmingham, UK
2)Sandwell and West Birmingham NHS Trust, Birmingham, UK
3)Heart of England NHS Foundation Trust, Birmingham, UK
4)Royal Stoke University Hospital, Stoke on Trent, UK,
5)Worcestershire Acute Hospitals NHS Trust, Worcester, UK

**Background:** In 2014 a BAUS survey of 160 Urology departments concluded that up to 50% were reliant upon General Surgery middle grade support at night. The future of General Surgery cross-cover for other specialties is under considerable and constant debate. Our study aims to establish and further characterise contemporary levels of out of hours (OOH) Urological activity.

**Methods:** We prospectively gathered data on OOH Urology referrals for a 2 week period in 4 UK hospitals. Together these served a combined population circa 2 million patients.

**Results:** Overall 173 OOH referrals were received. Referrals were most commonly made between 17:00 - 23:00hrs (47%). The majority were related to existing in-patients (59%). Other sources included local Emergency Department, Surgical Assessment Unit and Primary Care (25%, 12%, and 4%). Urolithiasis (13%), Uro-sepsis (12%) and haematuria (10%) were the most common reasons for referral. Only 6% required urgent operative intervention - 45% of this activity being acute scrotal exploration. Telephone advice was offered in 41%. In-patient review was required for 42%.

**Conclusions:** We conclude that the majority of OOH Urological referrals do not require operative intervention. This data could be considered when constructing future models of emergency care.
0357 - THE INFLUENCE OF COGNITIVE LOAD ON TECHNICAL ABILITY AMONG SURGICAL TRAINEES
H. Modi*, D. Leff¹, H. Singh¹, A. Darzi¹
1)Imperial College London, London, UK

Aims: Intra-operative complications may place added cognitive strain on surgeons, requiring them to perform technical manoeuvres swiftly yet accurately. This study aims to determine the impact of a temporal stressor on surgeons’ technical performance during a laparoscopic suturing task.

Methods: 27 higher surgical trainees were asked to laparoscopically suture a defect in a Penrose drain under two conditions: (1) “self-paced” and (2) “time pressure”. The Surgical Task Load Index and continuous heart rate monitoring were used to measure subjective workload and the physiological stress response respectively. Technical skill was assessed by measuring a task progression score, an accuracy score (distance between needle entry/exit points and pre-marked points on the drain), leak volume, and tensile strength of the knots.

Results: Each trainee created five knots in each condition, producing a total of 270 knots for analysis. Time-pressure led to an increase in subjective workload (p<0.001) and heart rate (stress) (p<0.05), coupled with a deterioration in performance [inferior task progression (p<0.001), greater leak volumes (p<0.05), and lower tensile strengths of knots (p<0.01)].

Conclusions: Temporal demands increase trainees’ subjective workload and impair technical skills. Future work will focus on developing strategies to help trainees cope with excessive cognitive load in the operating theatre.

0413 - ENDOSCOPIC TRAINING OF SURGEONS
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Aims: During higher surgical training, all GI surgeons are expected to reach accreditation in endoscopic procedures. With the European Working Time Directive and competition for time other commitments this is becoming increasingly difficult. This study looks at data collected from all endoscopic trainees and compares the number of procedures attained by each and access to dedicated training lists.

Methods: JETS (Joint Advisory Group endoscopy training system) data was collected from self reported trainee experiences. A total of 1153 trainees were included. Of these, 590 were gastroenterology trainees, 435 GI surgical trainees and 128 nurse endoscopist trainees. Data was collected on procedures performed and access to training lists.

Results: Compared to the other two groups, surgeons performed fewer procedures. Gastroenterology trainees did more OGDs (mean: 128.6 vs 30.8), more sigmoidoscopies (mean: 23.1 vs 14.1) and more colonoscopies (mean: 65.1 vs 23.5). They attended more dedicated training lists (mean: 20.4 vs 6.8). Nurse endoscopists also performed more procedures and had more access to training lists.

Conclusions: There is a marked disparity between surgical and other trainees in endoscopic experience and training. A formal integration into the surgical training programme may become necessary to ensure high rates of accreditation at completion of training.

0477 - SURGICAL SUPERVISION AND ITS EFFECT UPON INTRA-OPERATIVE SURGICAL STRESS DURING SIMULATED LAPAROSCOPIC SURGERY
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2)Worcester Royal Hospital, Worcester, UK

This study aimed to determine what effect clinical supervision has upon the psychological and physiological stress response of medical students during simulated laparoscopic surgery.

An anonymous cohort of medical students were randomized into two arms and performed a laparoscopic task on a simulator. The ‘control’ group performed the task alone, whilst the ‘supervision’ group were assisted by a senior surgeon limited to providing verbal cues. Operator stress response was measured using a validated acute stress questionnaire and continuous heart rate (HR) monitoring. Prior ethical approval was obtained.

Seventy medical students participated. The ‘state’ component of the STAI questionnaire increased following the task in both groups (control: p=0.08; supervision: p=0.07) with globally higher scores recorded in the supervision group. The observed increase in ‘state’ scores was greater in the ‘supervision’ group; this did not reach significance (p=0.21). No significant difference was identified between ‘trait’ components of the stress questionnaire before or after the task or between the groups (p=0.47). Mean HR was similar throughout the task in both groups (p=0.79). Peak-resting HR (p=0.2) and mean HR (p=0.19) were higher in the supervision group though this did not reach significance.

Senior supervision does not exert significant stress response during simulated laparoscopic surgery.
ASiT Oral Presentation Prize Abstracts

0772 - FRACTURE FIXATION AS A BIOMECHANICAL STUDY: A PRACTICAL APPROACH TO TEACHING EVIDENCE-BASED MEDICINE
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2)Imperial College London, Department of Surgery & Cancer, London, UK

Aim: Effectively acquiring and retaining large volumes of evidence-based knowledge poses a significant challenge to medical students. The use of practical models may be a solution to this challenge. This study aimed to explore the feasibility of a practical biomechanical model to illustrate evidence-based principles.

Method: Forty-two medical students from Imperial College London were recruited and divided into six groups. Each group was allocated a different unilateral external fixator configuration to construct. These systems varied in pin configuration, primary bar-to-bone distance, and the number of bars. Following the induction of a transverse fracture each construct underwent cyclical compressive loading. Data was analysed using student t-tests and the results were compared to those attained in high quality research.

Results: Rigidity increased with reduced innermost pin-to-fracture distance (p<0.006), increased primary bar-to-bone distance (p<0.0001) and the addition of an extra bar (p<0.001). These findings are consistent with the evidence-based principles of external fixation.

Conclusion: Medical students and doctors are required to identify, appraise and integrate evidence into clinical decisions. Whilst a large proportion of medical students are kinaesthetic learners, few education strategies incorporate practical models. We demonstrate that biomechanical studies are a practically engaging and highly feasible method of teaching evidence-based medicine.

1376 - DELIVERING A NATIONAL INDUCTION PROGRAMME FOR HIGHER SURGICAL TRAINING – LESSONS FROM THE CARDIOTHORACIC EXPERIENCE
D. J. McCormack1*, N. Moorjani1, M. Lewis2, T. Graham1, S. Rathinam2
1)Society for Cardiothoracic Surgery in Great Britain and Ireland - Former Trainee Representative, London, UK
2)Society for Cardiothoracic Surgery in Great Britain and Ireland Education - Tutor, London, UK

Aim: In response to trainee requests we created a national induction programme for cardiothoracic surgery. We share our experience of creating this initial course and delivering four iterations.

Method: Newly appointed ST3 NTNs and existing trainees were surveyed in July 2012 regarding a proposed induction programme. Responses were used to guide the creation of a 3-day residential course focusing on simulation with a high faculty-to-delegate ratio. Sessions covered higher surgical skills, decision making and professionalism. Industry funding permitted free delivery of the course to trainees. Formal session feedback and trainee self-assessment were analysed.

Results: The annual course has been delivered to four cohorts, totaling 70 trainees. In 2015, the mean feedback scores for practical stations, professional development and clinical decision making stations were 89%, 82% and 91% respectively. 15 faculty taught, with a mean feedback score of 95% (range 88%-98%). Self-assessment revealed candidate progress in all sessions. Candidates recorded simulated assessments on the ISCP to benchmark future progress.

Conclusions: The course has become an accepted component of training in cardiothoracic surgery. Moreover, it has formed the basis for the development of a comprehensive portfolio of 12 courses delivered free to trainees by SCTS Education. Feedback continues to guide course evolution.

0378 - THE IMPACT OF IMPROVING TEAMWORK ON PATIENT OUTCOMES IN SURGERY: A SYSTEMATIC REVIEW
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2)Imperial College London, London, UK

Aim: To systematically review available literature assessing the effect of surgical teamwork on post-operative patient outcomes across a variety of surgical specialties.

Methods: Two independent researchers systematically searched Medline and EMBASE in accordance with PRISMA guidelines. Studies were screened for relevance, then subjected to inclusion and exclusion criteria. Study characteristics and outcomes were reported and discussed qualitatively.

Results: Following PRISMA guidelines, our initial search identified 2519 articles. 105 articles remained after duplicate removal and screening. 11 articles were fully reviewed following addition of exclusion and inclusion criteria. Six studies adopted the use of teamwork training intervention; three studies assessed outcomes based on the familiarity of teams, and two studies correlated teamwork quality with patient outcome. Overall, seven papers demonstrated a positive effect of teamwork on patient outcomes, of which five were significant. Two papers found mixed improvements and deteriorations, two papers found no correlation. There exists considerable heterogeneity in methodology, study characteristics and design.

Conclusions: The positive effect of teamwork on surgical patient outcome is overall supported. Insignificant and opposing results are likely due to inadequate methodology and study design. Common reasons identified are cohort size, lack of a validated training programme, length of training and follow-up time, and non-randomization.
0165 - THE RELATIONSHIP BETWEEN GRIT AND BURNOUT: HOW DO SURGICAL TRAINEES COMPARE TO OTHER DOCTORS?
L. Halliday*, A. Walker¹, S. Vig², J. Hines², J. Brecknell²
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2) London School of Postgraduate Surgery, London, UK

Aim: This aim of this study is to examine the relationship between burnout and the personality trait of ‘grit’ amongst surgical trainees, and to compare these findings to surgical consultants and doctors in other specialties.

Methods: A survey was distributed to doctors across the UK via social media. It consisted of two validated scales; the Short Grit Scale (SGS) and the Oldenburg Burnout Inventory (OLBI).

Results: 548 responses were collected. There was a negative correlation between grit and burnout amongst surgical trainees [r=-0.281, p<0.01]. In comparison to consultant surgeons, trainees has lower levels of grit (p<0.001) and higher burnout (p=0.01). Higher surgical trainees had higher levels of grit than core trainees (p<0.01). No significant differences in grit or burnout were found between trainees in different specialities or by gender. We found a weak positive correlation between age and grit (r=0.145, p<0.01).

Conclusion: Surgical trainees report higher levels of burnout than consultants, but levels are comparable to other UK trainees. Our findings show that grit increases throughout surgical training. As high levels of grit are associated with lower burnout, providing support to increase resilience may reduce the burden of burnout in surgical trainees.

0305 - SURGICAL SAFETY CHECKLIST TRAINING: A NATIONAL STUDY OF UNDERGRADUATE MEDICAL AND NURSING STUDENTS
C. L. S. Kilduff*, T. O Leith¹, J. E Fitzgerald³
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2) Royal Free Hospital, London, UK,
3) Lifebox Foundation, London, UK

Aims: Use of the World Health Organisation (WHO) surgical safety checklist is recognised to reduce human error peri-operatively. Most medical and nursing graduates join teams responsible for care of surgical patients; therefore surgical-safety education should start at university. This study aimed to investigate undergraduate experience of SSC training.

Method: An 8-item electronic questionnaire was distributed to 32 medical and 72 nursing schools. Medical and nursing analyses were conducted separately, and only final-year responses were included.

Results: 1,459 medical students from 22 universities, and 1,879 nursing students from 31 universities completed the survey. 37.8% of medical and 52.3% of nursing students received teaching on the checklist, whilst 6.3% of medical and 4.0% of nursing students were formally examined on it. 72.9% of medical and 66.1% of nursing students understood its purpose. There was a significant relationship between receiving training and understanding in both cohorts (p<0.0001). Understanding varied according to inclusion in the Time Out. Medical students were more likely to be included than nurses.

Conclusion: Undergraduate surgical safety checklist training does not meet the WHO standards, with wide variations in experience. Knowledge of perioperative patient checks, and participation in safety protocols, are important skills that should be taught at undergraduate level.

1278 - DOES SPLIT-SITE WORKING AFFECT TRAINING?
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Aim: Service rationalisation in the NHS has lead to clinical teams covering multiple hospital sites. We evaluate referral trends before and after the centralisation of Urology services at our institution and its impact on junior doctor training.

Methods: A prospective analysis of all referrals over 3 months was performed before and after the reconfiguration of our department to a single site. Training requirements were outlined as per the intercollegiate surgical curriculum programme (ISCP) syllabus.

Results: Before: Of 256 referrals, 36% were for advice, 41% required admission and 23% required intervention. The commonest pathologies encountered were stone disease, urinary tract obstruction and haematuria.

After: Of a total of 222 referrals, 40% were for advice, 38% were for admission and 22% for intervention. The commonest pathologies requiring intervention were for urinary tract obstruction, stone disease and testicular pain.

In both time periods, the referral pattern and operative spread did meet the ISCP requirements.

Conclusions: Service rationalisation reduced the overall number of referrals to urology, without alternating their nature. Surgical opportunities before and after the move correlated with the national requirements for Urologists in training.
0937 - CAN NEWLY APPOINTED CONSULTANTS ACHIEVE NATIONAL STANDARDS IN COLORECTAL CANCER SURGERY?

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All primary colorectal cancer resections performed in the first 15 months of practice of three newly appointed consultant surgeons were prospectively audited and their outcome data compared to National Bowel Cancer Audit Standards.

Demographics and outcomes measures were collected from October 2014 - December 2015. 58 patients underwent primary resection. 37.9% of patients were ≥ 75 years old. 24% of resections were performed as emergency or expedited cases. Compared to national data, patients had a higher elective ASA grade (37.9% ≥ ASA 3 vs 21.5%). 53.4% underwent laparoscopic, or hand-assisted laparoscopic resection despite more advanced pathological staging (86% ≥ pT3 vs 74.9%). 20.7% had metastases at diagnosis compared with 8.9% nationally.

82.8% of resections went to HDU or ITU post-operatively compared to 32.5% nationally. Median length of stay was 7 days, 30-day mortality was 3.4%, despite a mean CR possum score of 5%. 85% of resections were R0 and mean lymph node yield was 28.

Newly appointed consultants can achieve national standards of care in colorectal cancer resections from the start of their practice, even with a patient cohort exhibiting more advanced disease at presentation and higher peri-operative morbidity than the national average.

1362 - ENDOSCOPIC AND MINIMAL INVASIVE SURGERIES FOR SELLAR AND PARASELLAR TUMORS: CADAVERIC DATA

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Aim: Aim of this study is to assess assumed advantage of the pure endoscopic to endoscopic assisted or Microscopic supraorbital key hole approach. The idea is to measure visibility and accessibility to avoid the surgical complications.

Method: We will perform eight dissections on eight cadaver heads. This dissections integrated an operating microscope, endoscope, and neuronavigation. Comparison was made between visibility and accessibility of sellar and parasellar region in both approaches.

Results: Our measurements of the formalin fixed heads including each side: the mean ± SD from the bone margin to anterior communicating artery = 68.56±6.00, to ipsilateral internal carotid artery= 74.24±7.76, to contralateral internal carotid artery= 82.85±7.50, to basilar bifurcation= 86.16±5.11, to optic chiasma= 75.11±5.82, to ipsilateral anterior clinoidal process= 65.69±6.62, to ipsilateral posterior clinoidal process= 74.3±7.29, to ipsilateral optic canal= 63.73±6.13.

Conclusion: Using endoscope alone during conducting the keyhole approach is better/or no advantage over Using the endoscope as an assistance tool. Our recommendations are to use the introduced measurements in this study for the development of a complete set of instruments for the pure endoscopic approach. We do belief that after starting the pure endoscopic approaches with more advances of technology of endoscopes the pure endoscopic approaches may replace the microscopic in near future.

0645 - THE FORGOTTEN BILIARY STENT: SHOULD WE IMPLEMENT A REGISTRY?

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Aims: Temporary biliary stenting is performed for malignant biliary obstruction, benign strictures, biliary leaks and stones. Complications include stent occlusion, cholangitis and distal migration. The incidence of adverse events increases with prolonged stent indwelling time. There are no current UK guidelines for the maintenance of a biliary stent registry. The British Association of Urological Surgeons recommends a registry which tracks all ureteric stents prospectively, with automatic reminders when exchange or removal is due, thus minimising stent-related complications. This study aimed to investigate our unit’s outcomes, demonstrating the need for a biliary stent registry.

Methods: 2-year retrospective data was collected. This included: patient demographics, indications for stenting, follow-up and complications.

Results: Of 478 ERCPs performed on 341 patients (125 M:215 F, median age 76), 149 underwent stenting. The indications were: malignant obstruction 48(32.2%), benign stricture 15(10.1%), stone disease 76(51%) and biliary leak 10(6.7%). The mean duration temporary stents were left in-situ was 102 days (range 4-553). Complications included: stent-related sepsis 10.3%(n=12), stent migration 3.4%(n=4) and occlusion 2.6%(n=3). In 3.4%(n=4) of these, the complication occurred after the specified follow-up period. 10 patients(8.5%) were lost to follow-up.

Conclusions: The implementation of a registry may further improve outcomes by ensuring timely follow-up, and preventing patients from “slipping through the net”. Re-audit post-implementation should be conducted.
0568 - FLEXIBLE CYSTOSCOPY: IS IT REQUIRED FOR ALL PATIENTS WHO PRESENT WITH HEMATURIA?
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Introduction: CT Urography (CTU) is considered the standard imaging modality in detecting upper renal tract causes for haematuria. However its role in detecting bladder pathology is controversial and so all patients with haematuria undergo both the CTU and cystoscopy. We have noticed that flexible-cystoscopy often fails to contribute any additional information to the CT. This study analyzes the detection rate of bladder pathology in haematuria in patient who have had an equivocal CTU.

Methods: Data was retrospectively reviewed from 628 patients who underwent flexible-cystoscopy for hematuria over 13 months. Out of 628 haematuria patients, 32.4% (n = 204) had microscopic hematuria and 67.5% (n = 424) had visible haematuria.

Results: The sensitivity, specificity, positive and negative predictive value for CTU detected bladder cancer was 96.30% (81.03% to 99.91%), 97.84% (96.34% to 98.85%), 66.67% (49.78% to 80.91%) and 98.83% (99.06% to 100.00%) respectively, while for CTU plus flexible-cystoscopy it was 100% (86.77% to 100%), 99.83% (99.08% to 100%), 96.30% (81.03% to 99.91%) and 100% (99.39% to 100.00%).

Conclusion: CTU with flexible-cystoscopy in equivocal cases only offers an accurate and reliable means of investigating patients with haematuria. Flexi-cystoscopy does not need to be performed in patients with a normal CTU.

0783 - BIOCHEMICAL FOLLOW UP OF THYROID CANCER: A MULTICENTRE AUDIT
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Introduction: Thyroglobulin (Tg) is secreted by both normal and cancerous thyroid cells; after treatment of differentiated thyroid cancer (DTC) its presence suggests residual tissue or recurrence. Antibodies against thyroglobulin (TgAb) can lead to false positive results so it is essential to monitor these simultaneously to interpret values correctly. Guidelines regarding when to perform these tests exist; it was our aim to audit the performance of three trusts comprising a regional multidisciplinary team (MDT) against these standards.

Method: Electronic records were searched retrospectively to identify patients following surgical management of DTC within a 5 year period (1/1/2008-31/12/2012).

Results: 156 patients met inclusion criteria across all sites. 985 Tg tests were performed on this cohort over a mean follow up time of 940 days
59.7% of Tg tests were paired with TgAb indicating marked variation of compliance
66.2% of patients had tests ≥6 weeks after surgery
34% patients had Tg/TgAb tests too early
11.8% of TgAb positive patients were monitored correctly

Conclusion: The importance of paired thyroglobulin and antibody measurement cannot be underestimated when monitoring patients after treatment. Wide variation in practice exists across sites within the same MDT network. We are currently implementing a standardised monitoring protocol across the network.

0285 - THE USE OF ARTERIOVENOUS FISTULAE AS AN ADJUNCT TO PERIPHERAL ARTERIAL BYPASS: A SYSTEMATIC REVIEW AND META-ANALYSIS
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Aim: Peripheral arterial bypass is associated with significant graft occlusion rates particularly when the distal anastomosis is to the below knee arterial segment. A number of studies have suggested that an arteriovenous fistula (AVF) sited at the distal anastomosis may reduce afterload, improve graft patency and boost subsequent limb salvage.

Aim: To assess the effects of adjuvant AVF on the outcomes of peripheral arterial bypass.

Methods: A systematic database search was undertaken to identify all randomized controlled and observational studies assessing the role of AVF in bypass

Results: Two randomized controlled trials and seven cohort studies comprising 966 participants were included. Pooled standardized data showed no difference in primary graft patency (pooled RR=1.25 [95% CI, 0.73-2.16]), secondary patency (pooled RR=1.16 [95% CI, 0.82-1.66]), or limb salvage at 12-months (pooled RR=1.13 [95% CI, 0.80-1.60]) for the peripheral bypass with AVF group compared with peripheral bypass alone. Subgroup analysis indicated a reduction in re-intervention rates associated with AVF when performed in conjunction with a synthetic graft (pooled RR=0.55 [95% CI, 0.30-0.98]).

Conclusion: While adjuvant AVF is not associated with additional operative complication there is little evidence to support its use. This evidence is weakened by small, retrospective studies with heterogeneous cohorts.
0286 - CONNEXIN AS A BIOMARKER FOR VENOUS ULCERATION
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Aim: Leg ulceration is a feared complication of venous insufficiency. Cellular communication via Connexins (Cx) is crucial in wound healing, upregulation of which is associated with poor wound healing. This study aims to determine and compare the epidermal Cx levels across stages of venous disease and further determine if Cx can be used as a biomarker for risk of venous ulceration.

Method: Patients were assessed according to CEAP classification: C2 (n=10), C4 (n=8), and C6 (n=8). Paired 4mm punch biopsies of the skin were taken above the ankle (pathological) and above the knee (control). Tissues were stained for H&E and Immunohistochemistry for Cx43, Cx30 and Cx26.

Results: H&E revealed increased inflammation, loss of dermal architecture and epithelial hyper-thickening with increasing CEAP (C2: 41.94±9.39µm, C4: 106.34±24.3µm, C6: 674.44±116.21µm, p<0.05). Overall Cx expression similarly increased across CEAP grades (p<0.05). Cx43 had highest expression (C2: 2061.13, C4: 4061.08, C6: 11639.60, p<0.0001). Cx26 had lesser expression in C2 and C4 but increased significantly in C6 (C2: 120.21, C4: 558.79, C6: 11561.54, p<0.001), similarly Cx30 (C2: 145.16, C4: 268.88, C6: 8286.29, p<0.0001). Significant increased expression of all Cx was seen early in the disease; C2 vs. C6 (p<0.005) and C4 vs. C6 (p<0.005).

Conclusion: Cx proteins were expressed increasingly with disease progression which starts early in the disease, suggesting that skin is preconditioned for poor wound healing prior to ulceration. Cx can be used as a biomarker to identify patients that should be treated early.

0294 - APPLICATION OF GOLD NANORODS IN CANCER THERANOSTICS
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Aims: Gold nanoparticles can be utilised as photothermal therapeutic agents because of their strongly enhanced absorption of near infrared light (NIR) resulting in hyperthermia. We investigate the fluorescence and photothermal effect from gold nanorods (GNRs) in the diagnostics and therapy (theranostics) of in vivo upper gastrointestinal adenocarcinoma.

Methods: GNRs were functionalised with a fluorophore (Cy5.5 dye) modified with anti-EGFR antibody. Tumour xenografts were established in immunodeficient mice by subcutaneous inoculation of human oesophageal adenocarcinoma (FLO-1) cells. Functionalised GNRs were then randomised to be administered either intratumorally (IT) or intravenously (IV) into mice. Fluorescence imaging was performed to observe tumour site contrast enhancement, followed by tumour irradiation by an 808 nm (NIR) continuous wave laser for three minutes.

Results: In vivo, bright fluorescence emissions were observed specifically emanating from tumour sites, providing diagnostic information. NIR irradiation established clinically significant hyperthermia in tumours resulting in consistently successful tumour ablations which were confirmed histologically. Inductively coupled plasma mass spectrometry revealed no evidence of harmful organ accumulation of gold.

Conclusions: Fluorescence imaging of GNRs that localise to cancerous tissue enhances cancer diagnosis. With a single application of NIR light, this minimally invasive and clinically translatable technique can effectively and safely induce irreversible tumour photodestruction.
0521 - TR040303 REDUCES MITOCHONDRIAL INJURY AND AMELIORATES EXPERIMENTAL ACUTE PANCREATITIS

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Introduction: Mitochondrial permeability transition pore (MPTP) inhibition is a promising therapeutic strategy for treatment of acute pancreatitis (AP). We investigated the effects of TR040303 on MPTP opening and necrosis in pancreatic acinar cells (PACs) and evaluated its efficacy in experimental AP (EAP).

Methods: Mitochondrial membrane potential (ΔψM; TMRM), cytosolic Ca²⁺ levels ([Ca²⁺]c; Fluo-4) and necrosis (PI) were evaluated in freshly isolated murine and human PACs in the presence and absence of bile acid (TLCS) or fatty acid ethyl ester (POAEE) using confocal microscopy. EAP was induced by intraperitoneal (IP) caerulein injections, retrograde pancreatic ductal TLCS infusion or IP injections of palmitoleic acid and ethanol. Liposomal TR040303 was given post AP induction. AP was assessed by standard biomarkers and blinded histopathology.

Results: TR040303 protected loss of ΔψM induced by 500 µM TLCS or 100 µM POAEE in isolated PAC and improved [Ca²⁺]c clearance. TR040303 reduced necrosis in murine and human PACs (p<0.05). TR040303 significantly reduced serum amylase, pancreatic trypsin, pancreatic and lung myeloperoxidase and histopathological scores in all models of EAP.

Conclusion: TR040303 protects mitochondria, reduces necrosis and ameliorates the severity of three different models of EAP. TR040303 is a candidate drug for the treatment of human AP.

1122 - FIELD CANCERISATION IN COLORECTAL CANCER: CHARACTERISATION OF THE GENE EXPRESSION PROFILE OF THE MUCOSAL FIELD AROUND COLORECTAL CANCERS AND POLYPS

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Aim: Field cancerisation describes genetic changes in the macroscopically normal colonic mucosa (MNM) around a cancer which render it premalignant without morphological change. This study aimed to characterise the gene expression profile in the MNM around cancer and polyps compared to control subjects.

Methods: Subjects (n=15) were recruited and mucosal pinch biopsies taken. A two channel micro-array experiment was performed (SurePrint G3 Human Gene Expression 8x60K Gene Expression array). Genes (>1.5 fold different, p value of <0.05) were selected and analysed using PANTHER bioinformatics software.

Results: In total, 1665 genes were differentially expressed. The MNM around polyps demonstrated differential gene expression of genes involved in cell adhesion, cell morphology and cellular process. In comparison, genes responsible for the immune response, antigen processing and natural killer cell activation (fold enrichment >5, p<0.001) were found with transition to cancer. Comparing cancer to polyps identified genes that participate in cell signalling, protein degradation and microtubule binding (fold enrichment 3.01, p<0.001; 2.66, P<0.001 and 3.62, p<0.001, respectively).

Conclusion: The study findings support the field cancerisation concept. Genes that play a role in stromal-epithelial cell communication become more important with transition to cancer and represent potential molecular targets for early diagnosis and risk stratification.

0609 - MOLECULAR REGULATION OF A NEWLY DISCOVERED STEM CELL MARKER PROTEIN. A STEP FORWARD TOWARDS CELL SELECTION FOR TISSUE ENGINEERING?

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Aim: Cartilage engineering using mesenchymal stem cells (MSCs) holds the potential to generate autologous cartilage tissues for surgical transplantation in the future. The perfect cocktail for MSC differentiation and cartilage production is still unknown. Previous laboratory data showed that orphan-receptor-tyrosine kinase (ROR2) positive MSCs demonstrated enhanced chondrogenesis and this was tested with the use of a ligand for ROR2, Wnt5a.

Method: MSCs were differentiated in monolayer and pellet cultures in the presence of Wnt5a with/or without TGF-β3. Gene and biochemical analyses were performed using rt-PCR and ELISA assays.

Results: In the presence of TGF-β3, Wnt5a induced a dose-dependent effect on the up-regulation of ECM synthesis and expression of cartilage-marker genes and in particular, type II collagen. These effects were shown to surpass those produced by the use of TGF-β3 only.

Wnt5a effectively promotes chondrogenesis only when used in combination with TGF-β3. ROR2 up-regulation appears essential to the chondrogenic action of Wnt5a. The results suggest a role of TGF-β3 in up-regulating the expression of ROR2 receptors to facilitate the interaction of Wnt5a with ROR2 in promoting chondrogenesis.

Conclusion: The discovery of the crucial interaction between TGF-β3, Wnt5a and ROR2 may have brought us one step closer to the utopia of high efficiency cartilage engineering.
0958 - IN VITRO AND IN VIVO STUDY OF THE ROLE OF WDR11 IN IDIOPATHIC HYPOGONADOTROPIC HYPOGONADISM AND KALLMANN SYNDROME IN KNOCKOUT ANIMAL MODEL

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**Background:** In IHH/KS, the production of Gonadotropin-releasing hormone (GnRH) is aberrant and reduced causing a failure of normal reproductive organ development and function. As a result, a knock-out (KO) mouse model (with disrupted WDR11 gene) has been genetically engineered to study the implications of WDR11 mutation on IHH/KS in these mice.

**Aims:** To genotype the newly generated KO mice that may potentially represent an animal model of IHH and KS. To validate the antibodies raised against WDR11 from commercial sources in order to confirm these genotypes at DNA and protein levels.

**Methods:** The genotypes of the KO mice offspring were determined using the polymerase chain reaction (PCR) method. Western blot method was used to validate the antibodies raised against WDR11.

**Results:** The genotypes of the pups from F1-F2 generations in the heterozygous and wild type pair were successfully identified and the Mendelian ratio was gratified. The heterozygous KO pups demonstrated syndactyly which is a phenotypic feature found in IHH/KS patients. The pups produced by the heterozygous KO pairs were smaller in size compared to heterozygous KO and wild type mice bred pups. Antibodies against WDR11 derived from the rabbit, goat and mouse were all validated.

**Conclusion:** WDR11 gene disruption or mutation in these transgenic mice may cause similar reproductive disorder and other non-reproductive morphological changes as exhibited by IHH/KS patients.

1356 - THE ROLE OF THE TRANSCRIPTION FACTOR NRF2 AS A POTENTIAL ENHANCER OF HEPATIC REGENERATION

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**Background:** The liver has a remarkable capacity for regeneration; however, acute hepatic failure remains a significant and often fatal complication following major hepatectomy. The transcription factor Nrf2 plays a pivotal role as a master regulator of cyto-protection, nevertheless, its role in hepatic regeneration is still ill-defined. We sought to investigate the prospect of Nrf2 as an enhancer of hepatic regeneration.

**Methods:** A murine model was used utilising C57BL/6J mice and two thirds partial hepatectomy was performed, followed by culling the mice at different time points. The liver tissue was collected at both the time of surgery and the time of cull. Pharmacological induction of Nrf2 was implemented by intra-peritoneal administration of CDDO-Me pre and post op. Nrf2 knockout mice were used as negative controls. Western blots for the proliferation marker PCNA were performed.

**Results:** A significant correlation between the increase of proliferation and Nrf2 activity was observed at 48 hours post-hepatectomy especially in the CDDO-Me treated mice as compared to the non-treated and knockout mice.

**Conclusions:** The transcription factor Nrf2 has a potential major role at the early stages of liver regeneration. Induction of Nrf2 peri-hepatectomy could decrease post-hepatectomy liver failure.

1370 - DEVELOPMENT OF THE SURGICAL PROCEDURE FOR CELL TRANSPLANTATION IN AGE-RELATED MACULAR DEGENERATION

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**Background:** Age-related Macular Degeneration (AMD) is a leading cause of irreversible blindness. Retinal pigment epithelium (RPE) and Bruch’s Membrane (BM) replacement have been stipulated as a possible treatment option. The aim of this study was to use vitrectomy techniques to implant aRPE19 cell graft into the subretinal space in ex-vivo porcine eyes.

**Method:** aRPE19 cells were cultured on a polyurethane (PU) membrane to form a stable, confluent monolayer. While a 3-port 23-gauge vitrector was used for subretinal transplantation of the graft with the aid of a chute device. A pilot dextran transport study was conducted on a number of membranes with and without cultured aRPE19 cells to identify a suitable BM prosthesis.

**Results:** Transplantation of the graft in the subretinal space was possible. The PU membrane could be visualised between the choroid and retina with aRPE-19 cells placed in the correct apicobasal orientation. No statistical difference was found in dextran transport studies between acellular and cellular membranes, and the treated expanded polytetrafluoroethylene (ePTFE) membranes were found to be the most porous.

**Conclusion:** aRPE19 cells could be successfully transplanted in the submacular region however alternative cell sources must be found. Treated ePTFE membranes may be a promising candidate for transplantation.