

Programme & abstracts



# 13<sup>th</sup> Annual Oxford Bone Infection Conference



13-14 April 2026  
Examination Schools  
Oxford



**OBIC 2026**

The Oxford Bone Infection Unit

[www.obic.org.uk](http://www.obic.org.uk)



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# Introduction

## Dear Colleagues and Friends,

It is a great pleasure to welcome you to the 13<sup>th</sup> Annual Oxford Bone Infection Conference!

This year is particularly special as we celebrate the 30th anniversary of the Oxford Bone Infection Unit. Over the past three decades, the Unit has played a leading role in advancing the understanding and management of bone and joint infections, and we are proud to mark this milestone together with colleagues and friends from around the world.

This meeting continues to provide a platform for sharing ideas, fostering discussion, and strengthening multidisciplinary collaboration in the field of orthopaedic infection. The programme brings together international experts and offers opportunity for discussion, debate, and exchange of ideas. As in previous years, we have incorporated interactive workshops to encourage engagement and knowledge-sharing across disciplines.

The conference takes place in the historic surroundings of Oxford, a city renowned for its academic heritage and tradition. We hope you will take full advantage of both the scientific programme and the opportunities to connect with your colleagues. We are especially delighted to host this year's conference dinner at the magnificent Sheldonian Theatre. Designed by Sir Christopher Wren and completed in 1669, the Sheldonian stands as one of Oxford's most iconic buildings and provides a truly memorable setting for socialising and networking with colleagues.

We extend our sincere thanks to all speakers, delegates, and sponsors for their continued support, without which this meeting would not be possible. Please make a special effort to meet with the sponsors' representatives.

We hope you enjoy a stimulating, inspiring, and memorable conference.

**Matt Scarborough**

on behalf of the organising committee

# Organisation

## Thirty Years of the Oxford Bone Infection Unit



### 1996–2026

The 'BIU' began in 1996, in the Girdlestone Ward of the Nuffield Orthopaedic Centre. It started with the novel idea to develop more collaborative working between infectious disease physicians and orthopaedic surgeons. The first ward had 16 beds. It was led by Prof. John Kenwright, Dr Tony Berendt, and the redoubtable Sister Honor Prout. It soon attracted specialist nurses and therapists focussed on patients with complex infections. Martin McNally developed the liaison with trauma and limb reconstruction and Bridget Atkins and Nick Athanasou led major studies on diagnosis of prosthetic joint infection. In 2000 we started the weekly combined clinic system, where new patients are seen at a 'triple' appointment' (infection physician, plastic surgeon and orthopaedic surgeon all together with the patient). In 2004, we opened the new hospital building which includes a purpose-designed, 26 bed, bone infection unit. We now have increasing referrals from all over the UK and abroad.

The Oxford BIU has become a major influence worldwide on development of protocols for diagnosis and management. The Unit has published around 300 papers covering all aspects of bone and joint infection. Members of the unit contribute to many international consensus groups and collaborative initiatives.

Over 30 years, the BIU has flourished. It has expanded and changed, but it remains dedicated to providing multidisciplinary care from teams who are knowledgeable and enthusiastic about infection.

### Local Organising Committee

The Oxford Bone Infection Unit  
[www.ouh.nhs.uk/boneinfection](http://www.ouh.nhs.uk/boneinfection)

### Conference Organiser

CAP Partner  
[info@cap-partner.eu](mailto:info@cap-partner.eu)  
[www.cap-partner.eu](http://www.cap-partner.eu)



Oxford University Hospitals   
NHS Trust

  
PARTNER

# General Information

## Conference Website

[www.obic.org.uk](http://www.obic.org.uk)



## Conference Venue

Oxford University  
Examination Schools  
75 - 81 High St  
Oxford OX1 4BG

## Certificate of attendance

You will receive an e-mail after the conference with your electronic certificate.

## CPD credits

The conference has been approved with 11 CPD credits. Medical staff and clinical scientists in career grade posts who are enrolled with one of the Royal Colleges for CPD purposes and attend the meeting will be entitled to receive CPD credits.

## Prizes

There will be prizes for the best poster and best oral presentation. These will be announced at the end of the second day. The prizes are supported by BIA.



## Wardrobe

Unmanned wardrobes are available on the 1st floor next to the session room.

## WIFI

Eduroam is available throughout the venue. Those who do not have use of Eduroam can use venue Wi-Fi.

Wi-Fi instructions:

1. Find venue Wi-Fi named 'ExSchWifi' and select
2. Pop up box should appear and give the option of either signing in using LinkedIn, Facebook or by contact number
3. Choose which option of preference
4. Follow remaining steps
5. Wi-Fi connected!



## Social programme

### Drinks reception

**Time** 13 April at 17.00 - 18.30  
**Place** Exhibition and poster area at the conference venue

*Included in registration fee  
- everyone is welcome to join*

### Conference dinner

**Time** 14 April at 19.30 - 22.30  
**Place** Sheldonian Theatre, Broad St, Oxford OX1 3AZ

*Admission by pre-booked ticket only*

# Programme

Monday, 13 April

Plenary Room: South School

<b>08:00</b>		<b>Registration and tea/coffee</b>	
<b>09:00–09:30</b>		<b>WELCOME</b>	
		Oxford Bone Infection Unit at 30: Where did we come from? Where do we go?	Martin McNally / Bridget Atkins / Ruth Corrigan / Tom Stevenson
<b>09:30–10:25</b>		<b>SESSION 1</b>	
		<b>Chairs: Bridget Atkins &amp; David Stubbs</b>	
09:30	O1	The surgical anatomy of bone and joint infection	Jamie Ferguson, Oxford
09:50	O2	The microanatomy of bone and joint infection	Florian Marro, Switzerland
10:10	O3	The superspecialty of orthoplastics	Alex Ramsden, Oxford
<b>10:25–10:30</b>		<b>Introduction of Sponsors</b>	
<b>10:30–11:00</b>		<b>Tea/coffee, poster walk and exhibition</b>	
<b>10:40</b>		<b>Poster walks in two groups: P01–P07 + P09–P14</b>	
<b>11:00–12:00</b>		<b>SESSION 2</b>	
		<b>Chairs: Ben Kendrick &amp; Andrew McCallum</b>	
11:00	04	So what's so special about Kids?	Max Mifsud & Yaron Berkowitz, Oxford
11:20	05	Incremental gains in infection prevention	Tri Wangrangsimakul, Oxford
11:40	06	What, why, when and whether to use '1.5 stage' revision	Antony Palmer, Oxford
		<b>5-minute break for room change</b>	
<b>12:05–13:00</b>		<b>Interactive Workshops</b>	
		Cases and conundrums in infection:	
<b>Room 6</b> <i>Ground floor</i>	a)	Spines	Euan Stirling / Bridget Atkins / Yaron Berkowitz
<b>South School</b>	b)	Upper limbs	Alex Woods / Andrew McCallum / Martin McNally / Andrew Hotchen
<b>Room 7</b> <i>Ground floor</i>	c)	Fractures	Jamie Ferguson / David Stubbs / Harriet Hughes
<b>13:00–14:10</b>		<b>Lunch, poster viewing and exhibition</b>	
<b>13:30–14:00</b>		<b>Industry Symposium A: BONESUPPORT</b>	
		<b>(See full details on page 61)</b>	
		It's All About the Patient – A Patient First Approach to Support Bone Infection Management with CERAMENT® G and CERAMENT® V	
<b>14:10–15:10</b>		<b>SESSION 3</b>	
		<b>Chairs: Bridget Atkins &amp; David Stubbs</b>	
14:10	O7	Clean and dirty revisions	Ben Kendrick, Oxford
14:30	O8	What goes into bones; then and now	Matt Scarborough, Oxford
14:50	O9	Bacteria-Targeted Dynamic Imaging of FRI: The Future Is Bright!	Frank Ijpmma, The Netherlands

# Monday, 13 April

Plenary Room: South School

<b>15:10-16:00</b>	<b>Rapid Fire Free Paper Session A</b>	
FPA1	Effectiveness of radiological imaging in guiding management of diabetic foot osteomyelitis	Mehtab Mann, UK Isha Wadhwa, UK
FPA2	Natural disaster response protocol: insights from the Valencian dana	Amparo Ortega-Yago, Spain
FPA3	Mortality of Fracture Related Infection in Geriatric Hip Patients: A Study of 6,600 Patients	Hin Ting Victor Yick, Hong Kong
FPA4	Ortho-plastic approach in management of infected charcot joint	Belal Abdelgawad, Egypt
FPA5	Does Combined Positive Microbiological Culture and Positive Histology Correlate with Clinical Outcome in Fracture-related Infection?	Martin McNally, UK
FPA6	"Dalbavancin Beyond ABSSSI: Real-Life Outcomes in Bone and Joint Infections Across Two Large NHS Hospitals" – A Five-Year Retrospective Study	Bushra Chaudhry, UK
FPA7	Burden and Cost of Periprosthetic Joint Infection in a Public Hospital Setting	Matthew Condon, Ireland
FPA8	Segmental Arthrodesis for Limb Salvage – A Tertiary Centre Review	Hosam Nasr, UK
FPA9	neuroSSCAR: – neuro and Spinal Surgical site infections: Consensus on Antibiotic Recommendations	Peter Davis, UK
FPA10	Revision Total Knee Replacement (TKR) for Prosthetic Joint Infection with Hinge Prosthesis: A Reliable Salvage Option in Complex Cases	Akshath Adapa, UK
FPA11	Does Pooled Intra-Operative Sampling Improve the Diagnosis of Peri-prosthetic Joint Infection? A Paired Diagnostic Accuracy Study	Peter Springall, UK
FPA12	Evaluating Forced-Air Warming Systems and Fracture-Related Infection in Extremity Long Bone Fractures: A Propensity Score-Matched Cohort Study	Sereechon Charusphaew, Thailand
<b>16:00-16:30</b>	<b>Tea/coffee, poster walks and exhibition</b>	
<b>16:10</b>	<b>Poster walks in two groups: P15-P21 + P22-P28</b>	
<b>16.30-17:00</b>	<b>SESSION 4</b>	
	<b>Chair: Jamie Ferguson</b>	
O10	<b>Cierny-Mader Lecture</b> <i>(To communicate excellence and innovation in the multidisciplinary management of bone and joint infection)</i> The future of BJI Management? Lessons from 20 years of innovative and translational research and collaborations	Frédéric Laurent, France
<b>17:00 – 18:30</b>	<b>Drinks reception – Exhibition area at the venue</b> <i>(Included in registration fee. Everyone is welcome to join)</i>	
<b>19:30 – 22:30</b>	<b>Conference dinner – The Sheldonian Theatre</b> <i>(Admission by pre-booked ticket only)</i>	

# Programme

Tuesday, 14 April

Plenary Room: South School

<b>08:00</b>	<b>Registration and tea/coffee</b>	
<b>08:30–09:30</b>	<b>SESSION 5</b>	<b>Chairs: Tom Stevenson &amp; Matt Scarborough</b>
08:30	O11	Diagnostics: future opportunities and directions Philip Bejon, Oxford
08:50	O12	'High risk' arthroplasty and inequities of healthcare Antony Palmer, Oxford
09:10	O13	Individual concepts against a postantibiotic era - everyone's responsibility Ilker Uckay, Switzerland
<b>09:30–10:00</b>	<b>Rapid Fire Free Paper Session B</b>	
	FPB1	Hands-Off Culture: Smarter Diagnostics in a Major Trauma Centre Tamara Hoban, Ireland
	FPB2	Flap-mediated Antibiotic Delivery in Reconstructed Composite Bone and Soft Tissue Defects: A Translational Porcine Study Josefine Slater, Denmark
	FPB3	Isolated Tibial Nocardia Osteomyelitis in an Immunocompetent Host: A Possibly First Case Report from Pakistan Nadia Naseem, Pakistan Fizzah Farasat, Pakistan
	FPB4	Evaluating Contamination Risk When Aspirating a Prosthetic Joint Using Microbial Next-Generation DNA Sequencing: An In Vitro Study Madhav Chowdhry, India
	FPB5	Sustaining Recovery; quantifying the cost of sequelae of open long bone fractures in a major trauma centre. Robert Milling, Ireland
	FPB6	Comparing Same-Specimen Next-Generation Sequencing to Culture and Biomarkers for Diagnosing PJI from Aspirated Synovial Fluid Edward McPherson, US
	FPB7	Outcomes of hip endoprosthetic replacements for non-oncological indications. Thomas Hall, UK
<b>10:00–11:00</b>	<b>SESSION 6</b>	<b>Chairs: Antony Palmer &amp; Harriet Hughes</b>
10:00	O14	Revision knees: What drives the choice of surgery / spacer? Alex Shearman, Oxford
10:20	O15	Antibiotic management: choice and rationale Staffan Tevell, Sweden
10:40	O16	Military bugs and blast injuries Debby Mortiboy, Birmingham
<b>11:00–11:30</b>	<b>Tea/coffee, poster walks and exhibition</b>	
<b>11:10</b>	<b>Poster walks in two groups: P29–P35 + P36–P42</b>	
<b>11:30–12.25</b>	<b>Interactive Workshops (1 of 2 loops)</b>	
<b>Room 6</b> <i>Ground floor</i>	a) Frames – when, why and how?	David Stubbs / Jamie Ferguson / Matt Scarborough
<b>South School</b>	b) Sampling, resection and bone preservation	Martin McNally / Bridget Atkins / Mario Morgenstern
<b>Room 7</b> <i>Ground floor</i>	c) Design a trial in 50 mins	Philip Bejon / Antony Palmer
<b>Room 8</b>	d) Paediatric Bone and Joint Infections	Max Mifsud / Yaron Berkowitz / Stéphane Paulus

<b>12:25-13:35</b>	<b>Lunch, poster viewing and exhibition</b>	
<b>13:00-13:30</b>	<b>Industry Symposium B: Biocomposites</b> (See full details on page 63) Local Antibiotic Delivery in Hip Surgery	Antony Palmer, UK
<b>13:35-14.30</b>	<b>Interactive Workshops</b> (2 of 2 loops)	
<b>Room 6</b> Ground floor	a) Frames – when, why and how?	David Stubbs / Jamie Ferguson / Matt Scarborough
<b>South School</b>	b) Sampling, resection and bone preservation	Martin McNally / Bridget Atkins / Mario Morgenstern
<b>Room 7</b> Ground floor	c) Design a trial in 50 mins	Philip Bejon / Antony Palmer
<b>5-minute break for room change</b>		
<b>14:35-15:15</b>	<b>Best Free Papers Session</b>	<b>Chairs: Philip Bejon &amp; Alex Ramsden</b>
	BP1 Orthopaedic culture results inform peri-operative prophylaxis and local antibiotic use in bone and joint infections at James Cook University Hospital	Aeron Raphael Ibanez Alvarado, UK
	BP2 Is Prolonged Systemic Antibiotic Therapy Still Necessary for Diffused Chronic Osteomyelitis After Radical Resection and Local Antibiotic Delivery?	Qin Chenghe, China
	BP3 Injury Mechanism Predicts Microbiota Composition and Infection Risk in Severe Open Fractures: Insights from a 16S rDNA-Based Clinical Study	Sermsak Sukpanichyingyong, Thailand
	BP4 Short Against Long Antibiotic Therapy for Infected Orthopaedic Sites (SALATIO Trials) – 3rd interim analysis at 2 years (one-year follow-up)	Ilker Uckay, Switzerland
	BP5 Gentamicin-loaded calcium sulfate-hydroxyapatite biocomposite to surgically treat diabetic forefoot ulcers complicated by osteomyelitis: a prospective cohort study	Kor Hutting, Netherlands
	BP6 Precise Intraoperative Debridement of Osteomyelitis and Fracture-Related Infections under Laryngoscope Guidance: A Pilot Study	Liu Yang, China
	BP7 Poor Correlation Between Synovial Fluid Parameters and Reinfection After Two-Stage Revision for PJI	Marco Lenzi, Italy
	BP8 Pressure-ulcer-associated pelvic and hip osteomyelitis: healthcare burden, microbiology, reconstruction and time-weighted quality-of-life outcomes after surgery	Alistair Reed, UK
<b>15:15</b>	<b>The Magic of Medicine</b> Professor Riccardo MMC PDMC Consultant Charlatan and Specialist in the Care of the Gullible (Aka Richard Rawlins, Emeritus Consultant Orthopaedic and Trauma Surgeon, Bedford Hospital)	
<b>15:35</b>	<b>CLOSING - Prizes &amp; Sum-up</b>	

# Interactive Workshops

The objective of the workshops is to provide an opportunity for focussed discussion around specific areas of orthopaedic infection management. Much of the discussion will revolve around illustrative case histories that highlight the challenges, tips and tricks in each field. The workshops will be facilitated by both surgical and infection specialists. Active participation of delegates is both welcomed and strongly encouraged.

## Monday, 13 April

12.05-13.00

<b>Workshop A</b>	<b>Spines</b> Euan Stirling / Bridget Atkins / Yaron Berkowitz	Room 6*
<b>Workshop B</b>	<b>Upper limbs</b> Alex Woods / Andrew McCallum / Martin McNally / Andrew Hotchen	Room: South School
<b>Workshop C</b>	<b>Fractures</b> Jamie Ferguson/ David Stubbs	Room 7*

## Tuesday, 14 April

11.30-12.25 (First loop)  
13.35-14.30 (Second loop)

<b>Workshop A</b>	<b>Frames – when, why and how?</b> David Stubbs / Jamie Ferguson / Matt Scarborough	Room 6*
<b>Workshop B</b>	<b>Sampling, resection and bone preservation</b> Martin McNally / Bridget Atkins / Mario Morgenstern	Room: South School
<b>Workshop C</b>	<b>Design a trial in 50 mins</b> Philip Bejon / Antony Palmer	Room 7*
<b>Workshop D</b>	<b>Paediatric Bone and Joint Infections</b> Max Mifsud / Yaron Berkowitz / Stéphane Paulus <i>Please note that Workshop D only runs one time from 11.30-12.25</i>	Room 8*

\*) Workshops in room 6, 7, and 8 are placed on the ground floor.

# Abstracts & Faculty Biographies



INFORMATION

PROGRAMME

ABSTRACTS

POSTER OVERVIEW

INDUSTRY

## Session 1

### [O1] The surgical anatomy of bone and joint infection

Jamie Ferguson<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

This talk is focused on the classical intraoperative findings that are encountered in bone and joint infection and provides guidance on how to deliver effective operative management. Emphasis will be placed on recognising the true extent of infection within bone and soft tissues, and how this guides thorough yet judicious debridement. Practical principles for distinguishing viable from non-viable tissue, managing dead space, and preserving function while achieving infection control will be discussed. Through collaborative team working, we look at how pre-operative planning can optimise patient outcomes and support good outcomes.

#### **Biography:**

Mr. Jamie Ferguson works as a Consultant in Limb Reconstruction Surgery at the Bone Infection Unit in Oxford. He has a special interest in managing complex long bone infection, fracture related infection, and limb reconstruction, including the use of distraction osteogenesis for segmental defects. His research interests include limb reconstruction techniques in bone infection, osteomyelitis, fracture-related infection, local antibiotic carriers, and infected non-union.

### [O2] The microanatomy of bone and joint infection

Florian C. Marro<sup>1</sup>

<sup>1</sup>*Biozentrum, University of Basel, Basel, Switzerland*

Bone and joint infection are traditionally conceptualised as biofilm formation on implants or necrotic tissue. Yet bacteria are not confined to surfaces alone or organised communities. Increasing attention is being paid to their precise localisation. Pathogens may occupy diverse microanatomical niches, ranging from host cells to the osteocyte lacuno-canalicular network. Although our understanding of these reservoirs is still evolving, their spatial distribution and physiological state are likely to influence treatment response and antimicrobial strategies. This talk will explore the evolving view of BJI microanatomy and reflect on how understanding bacterial localisation may shape clinical decision-making.

#### **Biography:**

Florian Marro is a postdoctoral infection biologist based at the Biozentrum, University of Basel, Switzerland, where he leads translational research on the microanatomy of bone and joint infections. His work focuses on defining *Staphylococcus aureus* localisation within infected patient-derived bone tissues and investigating the mechanisms that drive antibiotic treatment failure.

He trained through a joint academic-industry programme between the Centre International de Recherche en Infectiologie (CIRI), University of Lyon, and Evotec ID Lyon, where he developed quantitative imaging approaches to investigate intracellular infection dynamics, antibiotic tolerance and support anti-infective drug discovery programmes.

## Session 1

### [O3] The superspecialty of orthoplastics

Alex Ramsden<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

'Necessity is the mother of invention'. The combination of orthopaedic and plastic surgical principles have combined to solve clinical problems for patients that each specialty cannot solve alone. The use of orthoplastic techniques has been established for over 100 years and is essential for the treatment of complex surgical challenges such as mangled extremities and sarcoma limb salvage. An effective orthoplastic collaboration is a key component in the treatment of exposed prosthesis, fracture related infection and open limb injury. The development, evidence, practicalities and future of this specialty will be discussed.

#### **Biography:**

Alex Ramsden is a consultant Plastic and Reconstructive Surgeon based in Oxford, UK. He is a specialist in orthoplastic infection.

He completed research (MD) in London at the University of London, specialist surgical training in Northern England and a microsurgical fellowship in Melbourne, Australia.

He has worked as a consultant in Oxford University Hospitals NHS Trust since 2010. The majority of his work takes place in the Bone Infection Unit in the Nuffield Orthopaedic Centre.

He was a NHS Leadership fellow in 2012 and European Bone and Joint Infection Society (EBJIS) Travelling Fellow in 2016. He was awarded a BAPRAS Travelling fellowship in 2013 to visit Isao Koshima in the University of Tokyo to study supermicrosurgery.

His interests are osteomyelitis, prosthetic joint infection, fracture related infection, open limb trauma and lymphoedema.

### [O4] So what's so special about Kids?

Max Mifsud<sup>1</sup>, Yaron Berkowitz<sup>1</sup>

<sup>1</sup>*Oxford University Hospitals NHS Trust, Oxford, United Kingdom*

So what's so special about Kids? Paediatric bone and joint infections are not simply smaller versions of adult disease. Children often present differently, with subtler clinical signs, age-specific microbiology, and unique risks to the physis and future growth. This joint presentation will explore the features that make paediatric osteomyelitis and septic arthritis distinct, focusing on diagnostic pitfalls, the role of CRP and PCR, and the strengths and limitations of ultrasound, radiographs and MRI. We will also discuss principles of management, including timely antibiotics, image-guided or surgical intervention, multidisciplinary care, and strategies to minimise long-term complications. Through practical cases, we will highlight how early recognition, family-centred care and careful follow-up can improve outcomes for children with these potentially devastating infections.

#### **Biographies:**

##### **Mr Max Mifsud**

Max is a Consultant Paediatric Orthopaedic and Trauma Surgeon. He completed international fellowship training in Paediatric Orthopaedics and Bone Infection at the Nuffield Orthopaedic Centre in Oxford, in Sarcoma and Joint Reconstruction at the Royal National Orthopaedic Hospital in London, and a clinical research fellowship at the Hospital for Sick Children in Toronto. He currently works as a Consultant Orthopaedic Surgeon at the Nuffield Orthopaedic Centre in Oxford, where he has a sub-specialist practice in Hip Dysplasia and Hip Preservation, Bone Infection and Limb Reconstruction, and Sarcoma. Max is an experienced educator at both undergraduate and postgraduate levels and holds a position as Visiting University Lecturer. He has a postgraduate research degree and continues to publish within his specialist areas. His leadership experience includes international elected roles of responsibility, as well as positions as Surgical Lead for Paediatric Orthopaedic Sarcoma and Clinical Governance Lead. Outside of work, he enjoys life in Oxfordshire with his wife and their dog.

##### **Dr Yaron Berkowitz**

Dr Yaron Berkowitz is a full-time Musculoskeletal (MSK) Radiologist at Oxford University Hospitals NHS Trust. He completed MSK fellowships in Vancouver in 2018 and at the Robert Jones & Agnes Hunt Orthopaedic Hospital in Oswestry, UK, following his core radiology training at Imperial College London. He has broad expertise across all areas of MSK radiology, with particular experience in imaging and image-guided interventions for sports injuries, rheumatological and inflammatory conditions including spondyloarthropathies, bone and soft tissue tumours, and bone infections. He leads the weekly Oxford BIU radiology MDT meetings and is widely published, with active involvement in clinical research with Oxford University and the OUH Trust. Dr Berkowitz serves as a reviewer for Clinical Radiology, the British Journal of Radiology, and Skeletal Radiology, and is an active educator who regularly presents at national and international subspecialty conferences. He is also the RCR College Tutor and MSK Clinical Supervisor for radiology registrars in the Oxford deanery.

## Session 2

### [O5] Incremental gains in the prevention of bone and joint infections

Tri Wangrangsimakul<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford, United Kingdom*

Orthopaedic infections represent the single largest source of surgical site infections today. Although the rates of infection for prosthetic joint infections (PJIs) and fracture-related infections (FRIs) remain relatively stable, the increase in the number of operations (particularly joint arthroplasty) over the previous decades have contributed to increasing burden. This comes at a cost, not just to health systems and society but more so to patients who suffer detrimental impact on their physical and mental health. Multiple risk factors for these infections are present as the patient transitions through the pre-operative, intra-operative and post-operative stages. Although some factors are intransigent, many are modifiable with an evidence base to support strategies to mitigate risk and reduce the burden of bone and joint infections. We will explore these preventative strategies and the evidence behind current infection prevention and control practices for orthopaedic-related infections. Finally, we will review preventative practices under debate and potentially beneficial areas for future research.

#### **Biography:**

Dr Tri Wangrangsimakul is an infectious diseases and general medicine consultant and clinical lead for complex outpatient antibiotic therapy in Oxford. He was appointed to his current role in 2020. He obtained his medical degree from Manchester, during which time he also received a 1<sup>st</sup> class degree in pathology. He completed Membership of the Royal College of Physicians (UK) examinations and Diploma in Tropical Medicine and Hygiene (Liverpool) prior to specialist training in infectious diseases and microbiology in Oxford. He obtained Fellowship of the Royal College of Pathologists (London) and worked on the Bone Infection Unit throughout his training, actively participating in the OVIVA trial. He then spent 5 years leading Chiangrai Clinical Research Unit in northern Thailand (part of the Mahidol-Oxford Tropical Medicine Research Unit, 2015-2020), focusing on rickettsial infections, febrile illnesses, melioidosis and antimicrobial resistance. He completed his DPhil on Scrub Typhus in Northern Thailand from the University of Oxford in 2022 with support from Wellcome, NDM Prize Studentship (Oxford) and NMRC/MIDRP (USA). He enjoys participating in sports and keeping his two children entertained.

## Session 2

### [O6] What, why, when and whether to use '1.5 stage' revision

Antony Palmer<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

The term '1.5 stage' is increasingly used to describe a first stage revision procedure that the surgeons wish to last a few years, preventing the need for an early second stage procedure while retaining the ability to revise components more easily if the first stage fails. The area is controversial though, as some surgeons argue that a '1.5 stage' is simply a poorly performed single stage revision that may leave patients with worse function and uncertainty over the longevity of their implants.

#### **Biography:**

Antony Palmer is a Consultant Hip Surgeon at the Nuffield Orthopaedic Centre and Senior Clinical Research Fellow at the University of Oxford. Clinically, his specialist interest is hip arthroplasty with a focus on prosthetic joint infection.

Academically, he conducts research in the field of joint infection and perioperative care.

## Session 3

### [O7] Clean and dirty revisions

Ben Kendrick<sup>1</sup>

<sup>1</sup>*Nuffield Orthopaedic Centre, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom*

Single stage revision arthroplasty for infection can be an effective strategy to eradicate periprosthetic joint infections. However, there is not a well defined technique on how to perform a single stage revision. This talk will highlight some of the logistical challenges and decisions required to maximise the chances of success in hip and knee revision arthroplasty. The emphasis is on teamwork and having a structured protocol to maintain efficiency and safety.

#### **Biography:**

Mr Ben Kendrick is a Consultant Hip and Knee Surgeon at the Nuffield Orthopaedic Centre, specialising in primary and revision arthroplasty with a particular emphasis on the treatment of periprosthetic infection.

During his training in Oxford, he completed a DPhil at the Botnar Research Centre, where he researched fixation in unicompartmental knee replacement.

### [O8] What goes into bones; then and now

Matthew Scarborough<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

Advances in the management of bone and joint infection have included increasing reliance on locally implanted antimicrobial agents, although the principle behind their use is far from new. Before the time of Hippocrates, deep wounds were often managed with topical agents such as honey and bismuth powder, and maggot therapy has been used in many indigenous populations for millennia. Some such therapies are still used today, their mechanisms of action having been established long after their observed effectiveness.

More recently, topical antibiotics have been shown to have advantages over systemic therapy. They are most commonly used within a carrier. This talk aims to look at several forms of carrier that have emerged, along with their possible strengths and weaknesses. Whilst antibiotics are the main antimicrobial ingredient, there are other functional elements in the carrier compounds which contribute to the management of bone and joint infection, not least their role in dead space management.

#### **Biography:**

Matt Scarborough studied medicine at Queens University Belfast and undertook post graduate training mainly in London and Oxford. He currently works as a consultant physician in clinical infection and general medicine at Oxford University Hospitals NHS Trust. His research interests include orthopaedic infection, bacterial meningitis and blood stream infections.

## Session 3

### [O9] Bacteria-Targeted Dynamic Imaging of FRI: The Future Is Bright!

[Frank Ijpma](#)<sup>1</sup>

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Early and accurate diagnosis of fracture-related infection is challenging because infection is often hard to distinguish from sterile inflammation using conventional imaging techniques. Recent advances focus on bacteria-targeted imaging, aiming to detect and determine the extent of infections. This lecture will explore emerging imaging strategies with particular emphasis on dynamic PET imaging. In addition, the concept of fluorescent PET and optical bacterial-targeted tracers will be discussed, enabling surgeons to visualize bacteria during surgery and guide targeted removal of infected tissue. Together, these innovations may improve the diagnosis and treatment of fracture-related infections.

#### **Biography:**

Frank F.A. Ijpma, MD, PhD, is an Associate Professor of Trauma Surgery at the University Medical Center Groningen (UMCG) and a consultant trauma surgeon at the University of Groningen in the Netherlands. His work focuses on complex fractures and fracture-related infections. He applies advanced 3D technologies to improve surgical planning and treatment of complex fractures. He coordinates multidisciplinary research on image-guided detection and treatment of infections, including the development of dynamic PET imaging approaches. He is also involved in the development of fluorescent antibiotic tracers that allow surgeons to visualize bacteria during surgery and more precisely remove infected tissue.

### [FPA1] Effectiveness of radiological imaging in guiding management of diabetic foot osteomyelitis

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#### **Purpose**

To evaluate the effectiveness of plain radiography (X-ray) and magnetic resonance imaging (MRI) in influencing clinical management decisions in patients with suspected diabetic foot osteomyelitis (OM).

#### **Methods**

A retrospective review was conducted at a district general hospital in the West Midlands. Patients with suspected OM who underwent X-ray between January and May 2024 were identified via the patient access portal. Thirty-five imaging episodes across 30 patients were recorded. Six episodes were excluded due to incomplete documentation, leaving 29 patients for analysis; four patients underwent multiple X-rays. Imaging reports and clinical documentation were reviewed to determine whether findings resulted in changes to management, including alteration of antimicrobial therapy, further imaging requests, or referral for surgical intervention.

#### **Results**

Of 35 X-ray episodes, 27 (77%) supported existing clinical suspicion but did not alter management, typically in high-risk cases where treatment had already been initiated. Imaging directly influenced management in two episodes (6%), primarily medium-risk cases with diagnostic uncertainty, leading to escalation of antimicrobial therapy or surgical referral. In six episodes (17%), the impact of imaging could not be determined due to insufficient documentation. MRI was used selectively, predominantly when X-ray findings were inconclusive.

#### **Conclusion**

Plain radiography frequently supports clinical assessment but rarely changes management in high-risk presentations. MRI demonstrated greater utility in diagnostically uncertain cases. A stratified imaging approach may optimise investigation pathways and reduce unnecessary imaging in suspected diabetic foot OM.

### [FPA2] Natural disaster response protocol: insights from the Valencian dana

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María Dolores Pérez-Del Caz<sup>1</sup>, Jose Baeza-Oliete<sup>1</sup>, Alessandro Thione<sup>1</sup>

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#### Purpose

The October 2024 DANA\* in Valencia highlighted the need for structured protocols to manage contaminated wounds and respond effectively to such disasters. Our objective is to create a multidisciplinary treatment approach to guide the management of wounds resulting from natural disasters, drawing on our experience during the DANA\* event in Valencia and on evidence from previous large-scale catastrophes worldwide.

#### Study Design & Methods

We performed a retrospective study of patients with wounds or fractures related to the DANA\* disaster in our Emergency Department. Data on demographics, clinical features, treatment, and microbiology were collected. Statistical analysis included descriptive stats and appropriate tests based on data distribution.

#### Results

A total of 108 patients were included (mean age 47 years, predominantly male). Cellulitis was present in 26% of cases and was significantly associated with the need for hospitalization. Intravenous antibiotic prophylaxis in the Emergency Department was given in 52.8% of cases. The average delay in seeking emergency care was 2 days and 8 hours, with no significant relationship to hospitalization ( $p = 0.103$ ). Fifteen patients (14.8%) were admitted, of whom 13 required surgical debridement, with an average of 3 interventions per patient. Coverage techniques were used in 4 cases (3 flaps and 1 graft). Cultures were taken in 80% of hospitalized patients, with a predominance of Gram-negative bacteria. Six polymicrobial infections were identified, including 2 fungal infections.

#### Conclusions

Wound management in natural disasters requires early triage, decontamination, and individualized antibiotic prophylaxis. Delayed closure, serial debridement, and negative pressure therapy are effective for complex injuries. Multidisciplinary coordination is key to improve outcomes.

\*DANA = “depresión aislada en niveles altos”, an isolated atmospheric depression associated with extreme rainfall and flash flooding.

### [FPA3] Mortality of Fracture Related Infection in Geriatric Hip Patients: A Study of 6,600 Patients

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<sup>1</sup>University Of Hong Kong/ Queen Mary Hospital, Hong Kong, Hong Kong, <sup>2</sup>University Of Hong Kong, Hong Kong

#### Purpose

This study investigates the impact of fracture-related infections (FRIs) on mortality rates in geriatric hip patients, identifying associated patient, surgical, and disease factors.

#### Methods

A retrospective cohort study included 6,600 elderly patients with hip fractures, comparing those with infections (n=114) to those without (n=6,485). The primary outcome assessed was mortality rates between hip fracture patients with and without FRI. Secondary outcomes identified risk factors for mortality in FRI patients, including demographic characteristics (age, sex, residency in an old age home, pre-existing diabetes mellitus, Charlson Comorbidity Index), surgical methods (type of implant: dynamic hip screw, intramedullary nail, plating), and disease factors like bacteremia. Cox regression analysis evaluated the relationship between these factors and mortality, adjusting for confounders.

#### Results

The mortality rates in the 114 patients with FRIs did not significantly differ from the 6,485 patients without infections. Risk factors associated with increased mortality in the FRI group included age over 80 years ( $p = 0.009$ ), residency in an old age home ( $p < 0.001$ ), presence of bacteremia ( $p = 0.013$ ), and use of dynamic hip screws ( $p = 0.041$ ). Surgical debridement and/or implant removal did not significantly impact mortality rates.

#### Conclusions

This study indicates that FRI does not significantly elevate mortality rates in geriatric hip patients compared to those without infections. Surgical interventions, such as debridement or implant removal, do not influence outcomes. Key risk factors—advanced age, old age home residency, bacteremia, and implant type—are critical in managing these patients.

### [FPA4] Ortho-plastic approach in management of infected charcot joint

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<sup>1</sup>Cairo University, Cairo, Egypt, <sup>2</sup>Plastic Surgery UK, Liverpool, United Kingdom, <sup>3</sup>Benha University, Benha, Egypt

Charcot neuropathic osteoarthropathy (CN) is a chronic, progressive condition of bones, joints, and soft tissues, causing deformities, instabilities and ulceration. These in combination lead to infection in a large number of cases. The pathogenesis of Charcot arthropathy may be explained by neuro-traumatic and neuro-vascular theories, resulting in a major impact on microcirculation. Hence, this combination of pathologies in the infected charcot joint requires the collaboration of experts, an orthopaedic surgeon as well as a plastic surgeon.

Challenges in accessing an infected charcot joint include and are not limited to:

- Friable tissues with weak/absent microcirculation
  - Providing adequate exposure
  - The need to reconstruct or cover a tissue defect
  - The plan for future access
- All of which are the daily practice of a plastic surgeon

This Ortho-plastic collaboration was used in two infected charcot ankle cases that were previously explored by other orthopaedic colleagues. These complex patients required extensive exposure with soft tissue coverage that the plastic surgeon was able to execute. This enabled the team to provide a definitive single-staged treatment.

**[FPA5] Does Combined Positive Microbiological Culture and Positive Histology Correlate with Clinical Outcome in Fracture-related Infection?**

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**Introduction**

Microbiological culture and histology of deep tissue specimens are independent diagnostic criteria in fracture-related infection (FRI). However, the association between these tests has rarely been investigated, particularly in relation to clinical outcome after treatment.

**Method**

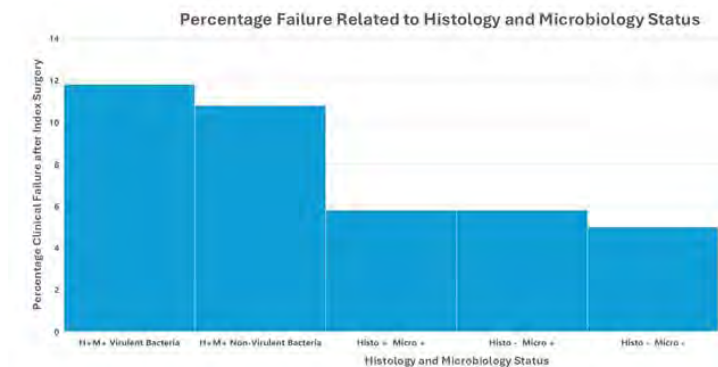
Patients having surgery for Consensus-confirmed FRI were included. All had at least 5 tissue specimens taken for microbiological culture and 2-3 for histology. Clinical outcome was determined at one year after index surgery. The correlation between pathogen, histological positivity (defined as  $\geq 5$  polymorphonuclear neutrophils/high power field), and outcome was explored.

**Results**

FRI was confirmed in 430 patients (mean age 51.7 years) and occurred predominantly in the tibia(194), femur(111), upper limb(70) and ankle(40). 321(74.7%) were culture positive and 334(77.7%) histology positive. 265(61.6%) were positive for both tests. 229(53.3%) had monomicrobial FRI. Staph. aureus was cultured in 170(42.5%), CoNs in 61(15.3%) and Gram negatives in 145(36.3%) cases. Virulent organism FRI was associated with positive histology (Odds ratio 2.72;95%CI 1.61-4.58) but not clinical failure (OR 1.74;0.59-5.14). Staph. aureus was strongly associated with positive histology compared to all other organisms (OR 2.21;1.27-3.87). Surgery succeeded in 390(90.7%) patients. Failure was weakly associated with positive microbiology (OR 2.03;0.83-4.96) or positive histology alone (OR 2.13;0.81-5.6). Combined positive culture and histology was strongly associated with clinical failure (OR 2.3;1.06-4.96).

**Conclusion**

A pronounced inflammatory response is a feature of virulent bacterial FRI. However, the presence of virulent infection alone does not affect clinical outcome without marked inflammation. This deserves further study to understand the mechanisms behind this interplay and clinical outcome.



### [FPA6] “Dalbavancin Beyond ABSSSI: Real-Life Outcomes in Bone and Joint Infections Across Two Large NHS Hospitals” - A Five-Year Retrospective Study

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#### Background

Dalbavancin, a long-acting lipoglycopeptide with potent activity against Gram-positive pathogens, offers a potential alternative to prolonged inpatient intravenous therapy and traditional OPAT regimens. Real-world data describing its use beyond licensed indications remain limited in UK practice.

#### Methods

We conducted a retrospective observational study of all adult inpatients and OPAT patients treated with dalbavancin across two large NHS hospitals in Dorset (combined bed capacity of more than 1,500) between January 2020 and December 2024. Microbiological data were extracted from WinPath Enterprise, and clinical data were obtained from electronic patient records and clinical notes. Collected variables included demographics, infection type, pathogen identification, dosing regimen, indication for dalbavancin, and 90-day clinical outcomes. The primary outcome was clinical success at 90 days, defined as resolution of infection without relapse.

#### Results

Ninety-four patients received dalbavancin, accounting for 203 administrations (range 1–6 doses per patient). Fifty-six percent were male, and 35% had a history of intravenous drug use. Concomitant antimicrobial therapy was used in 35% of cases. Dalbavancin was primarily utilised for complex Gram-positive infections, mainly bone and joint infections (BJIs) and bacteraemia secondary to BJIs. Clinical success at 90 days was achieved in 81% of patients. Adverse events were uncommon, occurring in 2/94 patients (2%), and were mild and self-limiting.

#### Conclusions

In this five-year two-centre NHS experience, dalbavancin demonstrated high clinical success, excellent tolerability, and practical utility in managing complex Gram-positive infections. Its use supported early discharge and OPAT optimisation, highlighting its value as a pragmatic treatment option within antimicrobial stewardship frameworks.

### [FPA7] Burden and Cost of Periprosthetic Joint Infection in a Public Hospital Setting

Matthew Condon<sup>1</sup>, Malak Alwaheed<sup>1</sup>, Jill O'Carroll<sup>1</sup>, Alan Molloy<sup>1</sup>

<sup>1</sup>St Vincent's University Hospital Dublin, Ireland

#### Introduction

Periprosthetic joint infection (PJI) following arthroplasty is associated with high morbidity and financial cost. Patients often undergo multiple complex procedures, prolonged inpatient stays and Out Patient Antibiotic Therapy (OPAT). We aim to quantify the economic implications of the inpatient and OPAT costs of the management of private patients treated within the public healthcare system.

#### Methods

Retrospective analysis of operative PJI cases between September 2020 and September 2025 was performed. Included patients were those who had primary THR or TKR for osteoarthritis or trauma. Data included inpatient stay, OPAT utilisation, surgical procedures (Debridement, Antibiotics, Implant Retention (DAIR), revisions), and private/public status at index procedure. Costs were estimated using available HSE information on operative costs and bed days.

#### Results

There were 40 operative PJI cases in our centre over the study period. There were 22 TKRs and 18 THRs. Eighteen had their initial surgery publicly, while 14 had their initial surgery privately. 19 patients underwent DAIR while the rest underwent one or several revisions. Combined total length of stay was 1796 bed-days. The operative PJI burden over that period was €5005339 (median €84232 per episode) or €1000000 per year approximately. Fourteen private patients treated in our centre had publicly funded treatment at an estimated cost of €1967270 over a 5-year period or €393454 per year.

#### Conclusion

Operative PJI imposes a substantial clinical and financial burden. Private patients treated in public hospitals contribute to total costs, raising the justification for private health care contributions to publicly treated complications arising after private procedures.

### [FPA8] Segmental Arthrodesis for Limb Salvage - A Tertiary Centre Review

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#### Background

Silver-coated knee arthrodesis endoprotheses are increasingly used for limb salvage in patients with severe joint destruction, segmental bone loss, extensor mechanism failure, and periprosthetic joint infection (PJI). The antimicrobial properties of silver aim to reduce reinfection risk in this high-risk population. This study evaluates limb-salvage rates, complications, and functional outcomes following silver-coated knee arthrodesis.

#### Methods

A retrospective review was conducted of 19 patients who underwent knee arthrodesis with segmental bone loss at a tertiary orthopaedic centre between 2021 and 2025. Clinical records and imaging were analysed. Data collected included infection status, microbiology, bone loss, need for soft-tissue reconstruction, complications, and ambulatory status. Statistical analysis used Mann–Whitney U and Fisher’s exact tests.

#### Results

Mean follow-up was 23.2 months (range 3.0–51.6). All patients had extensor mechanism compromise and were non-ambulatory pre-operatively. Thirteen patients (79%) had confirmed infection; 37% of culture-positive cases were polymicrobial. Mean segmental bone loss was 30.5% (SD  $\pm$ 11.1%). Seven patients (37%) required plastic surgical reconstruction. Post-operatively, all patients achieved ambulatory status. Recurrent infection occurred in five patients (29%), and one patient (6%) required reoperation. Two patients (11%) underwent amputation, resulting in an 89% limb-salvage rate (95% CI: 67.2%–96.9%). No significant association was found between initial infection and reinfection ( $p=0.101$ ).

#### Conclusion

Silver-coated knee arthrodesis endoprotheses provide a reliable limb-salvage option in complex infected and bone-deficient knees, restoring ambulation with a high limb-preservation rate despite substantial infection burden.

**[FPA9] neuroSSCAR: – neuro and Spinal Surgical site infections: Consensus on Antibiotic Recommendations**

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**Background**

Surgical site infections (SSIs) after cranial and spinal surgery cause significant morbidity, yet there are no evidence-based national guidelines to support antimicrobial management decisions. Neuro-SSCAR aims to define expert consensus antibiotic recommendations for these complex infections using a Delphi approach.

**Methods**

Phase 1 of the project involved an anonymous survey of UK infection specialists including five cranial and spinal SSI vignettes, distributed via professional societies and targeted invitations to neurosurgical centres. Respondents described antimicrobial regimens, route and duration, as well as adjunctive strategies. They also provided information on their experience managing these infections, their support in the development of consensus statements and views on perceived research gaps. Phase 2 will use an adaptive, multi-round online Delphi process, in collaboration with surgical specialists to develop and refine consensus statements on sampling, diagnosis, management and future research.

**Results**

Between April and November 2025, 57 responses were received; 82% of respondents worked in hospitals with neurosurgical and spinal surgery services and 57% were considered experienced in managing these infections (>10 cases managed per year). Significant variability in antimicrobial duration and agents was observed, however a coalescing of opinion was observed amongst experienced respondents. 95% of all respondents indicated that national guidance would be beneficial.

**Conclusions**

Evidence of coalescence in practice amongst national experts and strong support for guidance highlight an opportunity to form practical recommendations which can standardise care and optimise antimicrobial use in the UK.

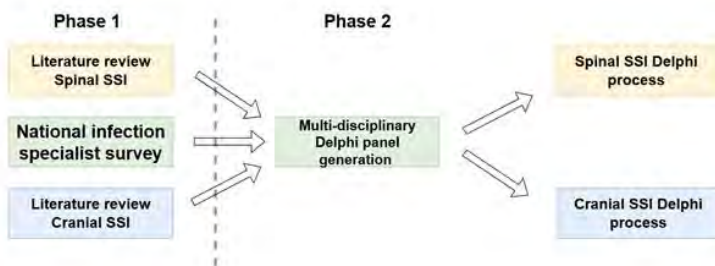


Figure 1: Flow chart demonstrating overall strategy for neuro-SSCAR

### [FPA10] Revision Total Knee Replacement (TKR) for Prosthetic Joint Infection with Hinge Prosthesis : A Reliable Salvage Option in Complex Cases

Akshath Adapa<sup>1</sup>, Darren Geoffrey<sup>1</sup>, Nimesh Patel<sup>1</sup>, Gaddam Reddy<sup>1</sup>, Majd Algharibeh<sup>1</sup>, Momna Raja<sup>1</sup>, Divya John<sup>1</sup>

<sup>1</sup>East Kent University Hospital Foundation Trust, Kent and Canterbury, United Kingdom

#### **Purpose**

Prosthetic joint infection (PJI) following Total Knee Replacement(TKR) is a challenging complication to manage. It is often associated with extensive bone loss, soft-tissue compromise, and ligamentous instability. In such complex revision scenarios, the use of a hinge TKR provides stability and functional restoration. This study evaluates the clinical and functional outcomes of hinge TKR used in revision surgery for PJI.

#### **Methods**

We conducted a retrospective review of patients who underwent revision TKR using a hinge prosthesis for the management of PJI at a Major Revision Centre(MRC). All patients included were treated by either single or two-stage revision. Demographic data, microbiological findings, surgical details, and postoperative complications were recorded. Outcomes were assessed using infection-free survival, range of motion, and Oxford Knee Score (OKS) at last follow-up.

#### **Results**

A total of 40 patients were included, with a mean follow-up of 26 months. 4 patients were excluded as they died after their treatment due to other causes. 21 patients underwent 2-stage revision and 19 patients had single stage revision. Infection eradication was achieved in 95% of cases. Mean knee flexion achieved was 106 degrees. Mean functional outcome with OKS was 35. Complications included - washout/DAIR post revision surgery (2) and stiffness (2).

#### **Conclusion**

Hinge TKR represents a valuable salvage option in revision knee arthroplasty for PJI. When combined with appropriate infection management, hinge implants can provide acceptable infection control and functional outcomes, with a recognized risk of complications. Infection management and meticulous surgical technique remain critical to optimizing results.

### [FPA11] Does Pooled Intra-Operative Sampling Improve the Diagnosis of Peri-prosthetic Joint Infection? A Paired Diagnostic Accuracy Study

Peter Springall<sup>1</sup>, Robert McCulloch<sup>2</sup>, Antony Palmer<sup>3</sup>, Bernadette Young<sup>4</sup>

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#### Background

Peri-prosthetic joint infection (PJI) is a serious complication of total joint arthroplasty with significant morbidity and healthcare costs. Accurate diagnosis of PJI is essential for targeted antimicrobial therapy and surgical intervention, yet the relative performance of intra-operative fluid and tissue culture, and the incremental value of combining results, remains unclear.

#### Methodology

This observational diagnostic accuracy study evaluated consecutive patients undergoing revision total hip or knee arthroplasty at a single orthopaedic referral centre (November 2024 - November 2025). PJI was defined using the EBJIS 2021 criteria. "Pooled" culture was a composite defined as positive if either fluid or tissue culture was positive. Paired comparisons used McNemar's test ( $\alpha = 0.05$ ).

#### Results

229 procedures were analysed; 74 (32%) were PJI-positive. Fluid and tissue culture showed similar diagnostic performance when each was interpreted using a  $\geq 1$  positive sample threshold, with no significant differences in sensitivity, specificity, PPV, or NPV on paired analysis. Compared with pooled (fluid-or-tissue) culture, fluid culture had a lower sensitivity (-5.4%;  $P=0.046$ ) but higher specificity (+3.9%;  $P=0.014$ ) and PPV (+7.4%;  $P=0.024$ ). In tissue culture, collecting  $\leq 2$  samples significantly reduced PPV compared to collecting  $\geq 3$  samples.

#### Discussion

In revision arthroplasty, fluid and tissue cultures perform comparably using EBJIS 2021 criteria. Pooling results increases sensitivity at the cost of specificity and PPV, a potentially useful compromise when adequate tissue sampling is not feasible (e.g. in knee effusion).

### [FPA12] Evaluating Forced-Air Warming Systems and Fracture-Related Infection in Extremity Long Bone Fractures: A Propensity Score–Matched Cohort Study

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<sup>1</sup>Department of Orthopaedics, Khon Kaen Hospital, Khonkaen, Thailand, <sup>2</sup>Department of Community Health, School of Public Health, University of Phayao, Thailand

#### Purpose

Forced-air warming (FAW) systems are widely used to prevent perioperative hypothermia, a known risk factor for surgical site infection. However, concerns persist that FAW may increase microbial contamination in the operating field. This study evaluated the association between intraoperative FAW use and fracture-related infection (FRI) following extremity long bone fixation.

#### Methods

A retrospective cohort study was conducted at a tertiary trauma center from August 2022 to August 2023. Adult patients ( $\geq 18$  years) undergoing operative fixation of extremity long bone fractures were included and followed for 12 months. The primary outcome was FRI defined by confirmatory diagnostic criteria. To minimize confounding, 1:1 nearest-neighbor propensity score matching (caliper 0.2 SD of the logit) was performed using demographic, comorbidity, fracture, and perioperative variables. Treatment effects were estimated using log-binomial regression and reported as risk ratios (RR) with 95% confidence intervals (CI).

#### Results

A total of 1,015 patients were analyzed (609 FAW; 406 non-FAW), with an overall FRI incidence of 4%. Propensity matching yielded 768 balanced patients (384 per group). In the matched cohort, FRI occurred in 4.2% of the FAW group and 3.9% of controls. FAW use was not significantly associated with FRI (RR 1.45; 95% CI 0.68–3.09;  $p = 0.330$ ). Independent predictors of FRI included open fractures (aRR 2.68), diabetes mellitus (aRR 3.39), and plate fixation (aRR 12.56) (all  $p < 0.05$ ).

#### Conclusion

Intraoperative FAW was not associated with increased FRI risk. Infection was primarily influenced by injury severity, host factors, and surgical characteristics rather than warming modality.

### [O10] The Future of BJI Management? Lessons from 20 years of innovative and translational research and collaborations

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<sup>1</sup>*Institut des Agents Infectieux – LBMMS - Hospices Civils de Lyon, France*

Henry Ford said, “Coming together is a beginning, staying together is progress, and working together is success”. Through this motto, he wanted to emphasize the transformative power of collaboration. Interdisciplinary teamwork - uniting microbiologists, clinicians, molecular biologists, pharmacologists and pharmacists - have driven the translational research from the laboratory to the clinic (ultimately improving patient care) in the field of bone and joint infections led by our lab at the Hospices Civils de Lyon.

“Coming together” marks, twenty years ago, the foundation of our collaborative initiative on BJI with a shared mission: to decode the pathophysiology of the chronic forms of these infections, laying the groundwork for targeted interventions.

“Staying together” reflects the commitment required to turn ideas into action that we applied for the development of innovative molecular assays to overcome the limitations of traditional culture methods, enabling faster and more accurate pathogen detection from clinical synovial and bone samples.

“Working together” is when success materializes. The study of antibiotic efficacy in intracellular and biofilm environments and more recently the development of the first public phage production platform - demonstrates how collective effort can transform an experimental concept into a scalable therapeutic solution. This initiative required the synergy of microbiologists, pharmacists, clinicians, engineers, and regulatory experts to ensure safety, efficacy, and accessibility to propose an innovative treatment for our patients and keep in mind the economic sustainability for the health care system.

All this 20-year journey underscores a fundamental truth: in science, as in industry, success is not the achievement of an individual, but the fruits of a united team. Through collaboration, the complex challenges of infectious diseases can be met with innovation, resilience, and ultimately, patient life-changing progress.

## Session 5

### [O11] Diagnostics: future opportunities and directions

Philip Bejon<sup>1</sup>

<sup>1</sup>*Nuffield Department of Medicine, University of Oxford*

Defining prosthetic joint infection (PJI) is difficult because there is no single gold standard test. This has led to several diagnostic criteria systems, most prominently the European Bone and Joint Infection Society (EBJIS), the International Consensus Meeting (ICM) updates and the Infectious Diseases Society of America (IDSA) guidelines. I will compare and contrast these systems, and will describe some of the studies underpinning their derivation. I will review emerging diagnostic modalities including synovial fluid biomarkers and systemic inflammatory markers, as well as microbiological techniques, including implant sonication and molecular diagnostics. I will illustrate different scenarios and the pragmatic application of these systems and tests to the clinical situation.

#### **Biography:**

Philip Bejon is a clinician scientist working in infectious disease with the University of Oxford and active in NHS practice. He was based in Kenya as Director of KEMRI-Wellcome between 2014 and 2024. He has interests in vaccines, malaria, virus infection, and also a significant focus on musculoskeletal infection, including clinical trials on oral versus IV antibiotics, outcomes following DAIR and revision surgery, and diagnostic criteria.

## Session 5

### [O12] 'High risk' arthroplasty and inequities of healthcare

Antony Palmer<sup>1</sup>

<sup>1</sup>*Oxford Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

Patients undergoing orthopaedic surgery have increasing complexity, both medically and surgically, requiring additional healthcare resource. The delivery of orthopaedic care is changing, with more than half of all hip replacements performed in independent hospitals last year. Surgeon outcomes are closely monitored by the National Joint Registry, which may make surgeons less likely to operate on patients perceived to have a high risk of complications. Factors such as these are exacerbating healthcare inequality for patients.

## Session 5

### [O13] Individual concepts against a postantibiotic era - everyone's responsibility

Ilker Uçkay<sup>1</sup>

<sup>1</sup>*Balgrist University Hospital, Zurich, Switzerland*

Antibiotic and diagnostic stewardship is a worldwide necessity in the management of osteoarticular infections, including for diabetic foot and implant-related infections. The implementation of (inter)-national guidelines are important cornerstones, but their recommendations are often based on a “conservative” consensus. Additionally, experienced clinicians can recur to panoply of small approaches in their daily clinical practice that might add some chili to the basic and established stewardship efforts...

#### **Biography:**

Prof. Dr. med. Ilker Uçkay is a physician who graduated from the University of Zürich, Switzerland, in 1995. He began his career in Infectious Diseases at Geneva University Hospitals in October 2002. Since 2018, he works as a clinician in Infectious Diseases and Infection Control at the Balgrist University Hospital, Zurich, and conducts numerous research projects in the fields of epidemiology, treatment and prevention of orthopaedic infections, including for diabetic foot infections. He is member of several national and international scientific working groups; and, since 2024, a Fellow at the Royal College of Physicians.

### [FPB1] Hands-Off Culture: Smarter Diagnostics in a Major Trauma Centre

Tamara Hoban<sup>1</sup>, Anne Mynes<sup>1</sup>, Louise O'Sullivan<sup>1</sup>, Emer Lee<sup>1</sup>, Tara Dwyer<sup>1</sup>, Maureen Lynch<sup>1</sup>

<sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland

#### Purpose

The microbiological diagnosis of trauma, orthopaedic, and reconstructive plastic surgery infections is challenging, particularly for deep or low-burden tissue specimens. Traditional enrichment broths are labour-intensive, slow, and may increase recovery of contaminating organisms. Following designation of the Mater Misericordiae University Hospital as a Major Trauma Centre, increasing specimen volumes prompted review of laboratory workflows. The laboratory transitioned to aerobic and anaerobic blood culture bottles (BCBs) to improve diagnostic yield and reduce time to positivity.

#### Methods

This study comprised two phases. Phase 1 was a validation study comparing BCBs with direct culture and cooked-meat broth enrichment in 92 tissue and bone samples. Phase 2 was an 18-week post-implementation review of 186 specimens assessing positivity rates, detection times, and organism diversity.

#### Results

Phase 1 bone and tissue samples analysed in BCBs yielded aerobic culture positivity rates of 43.4% and anaerobic 42.3%. Overall, 28.2% of samples demonstrated improved recovery or faster detection compared with conventional methods. Clinically significant organisms not recovered by direct plating or broth enrichment were identified in 9.3% of cases, including *Staphylococcus aureus*, *Aspergillus fumigatus*, and *Pseudomonas aeruginosa*.

Phase 2 demonstrated an overall positivity rate of 49.4% (tissue 56.7%, fluid 27.2%, bone 37.0%). Median time to positivity was 15.9 hours for aerobic and 13.4 hours for anaerobic bottles, with 95% of positives detected within 72 hours.

Extended incubation enabled recovery of slow-growing organisms such as *Cutibacterium acnes*.

#### Conclusion

Adoption of BCBs improved diagnostic yield, broadened pathogen recovery, and supported faster automated microbiological diagnosis in a high-volume trauma setting.

### [FPB2] Flap-mediated Antibiotic Delivery in Reconstructed Composite Bone and Soft Tissue Defects: A Translational Porcine Study

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#### Purpose

Effective management of complex bone infections relies on surgical soft tissue reconstruction combined with adequate local antibiotic delivery. However, antibiotic exposure within the reconstructed composite bone–soft-tissue unit remains poorly characterised.

#### Methods

In a controlled large-animal model, bilateral tibial bone and soft tissue defects were created in ten pigs and reconstructed with muscle flaps (n=8), fasciocutaneous flaps (n=8), or primary closure (n=4, controls). Both flaps underwent 60 minutes of arteriovenous clamping to mimic free flap ischaemia. Single intravenous infusions of meropenem (1000 mg) and vancomycin (2000 mg) were administered. Interstitial drug concentrations were obtained by microdialysis in flap or subcutaneous tissue (controls), at the tissue–bone interface, and in underlying cancellous bone. Antibiotic exposure was quantified as the area under the concentration–time curve. Plasma samples served as a systemic reference. Sampling continued for 450 minutes.

#### Results

For both antibiotics, no between-flap differences were observed at the tissue–bone interface or in cancellous bone. In contrast, differences were observed within flap tissues. Compared with muscle flaps, fasciocutaneous flaps achieved 1.70-fold (95% CI 1.27–2.29) and 1.29-fold (95% CI 1.06–1.58) higher exposure for meropenem and vancomycin, respectively. Primary closure resulted in the highest soft-tissue exposure.

#### Conclusions

Early postoperative antibiotic delivery within the reconstructed composite defects was tissue- and drug-dependent. Although interface and bone exposure were comparable across flap types, flap composition significantly influenced soft-tissue exposure. These findings challenge assumptions regarding flap-mediated antibiotic delivery, and the model provides a mechanism for investigating systemic and local antibiotic strategies in bone infection management.

### [FPB3] Isolated *Nocardia* Osteomyelitis in an Immunocompetent Host: A Possibly First Case Report from Pakistan

Nadia Naseem<sup>1</sup>, Fizzah Farasat<sup>2</sup>, Muhammad Ismail<sup>3</sup>, Tariq Mehmood<sup>4</sup>, Muneeb Ur Rehman Niazi<sup>4</sup>

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#### Introduction

*Nocardia* is a “diagnostic chameleon,” often misidentified as tuberculosis (TB) or actinomycosis on routine imaging and laboratory testing. Although primarily opportunistic, less than one-third of infections occur in immunocompetent individuals. Isolated skeletal involvement is exceedingly rare. We report the first documented case of primary *Nocardia* tibial shaft osteomyelitis from Pakistan, highlighting diagnostic challenges in resource-limited settings.

#### Case Presentation

A 37-year-old immunocompetent male presented with a five-month history of insidious distal leg pain and swelling, accompanied by weight loss but no other constitutional symptoms. Imaging findings were consistent with a chronic infective process, favoring osteomyelitis.

#### Diagnostic Workup and Management Outcome

MRI with contrast revealed cortical irregularity, thickening, and focal defects with sinus formation, consistent with chronic osteomyelitis but indistinguishable from TB in an endemic area. Open bone biopsy demonstrated chronic necro-inflammatory reaction with micro-abscesses and partially formed granulomas. Modified Ziehl–Neelsen staining showed weakly acid-fast organisms raising differential of *Nocardia*. Prolonged culture was maintained for 21 days, and definitive species-level identification of *Nocardia asteroides* was achieved via MALDI-TOF MS.

The patient received intravenous trimethoprim-sulfamethoxazole and carbapenem for four weeks, followed by oral TMP-SMZ. At six months, he showed clinical improvement, pain resolution, independent ambulation, and radiological evidence of bone healing.

#### Conclusion

In low- and middle-income countries, *Nocardia* remains underdiagnosed due to limited laboratory capacity and reliance on conventional staining methods. This case underscores the importance of considering *Nocardia* infection in chronic osteomyelitis, irrespective of immune status. Early surgical biopsy, utilizing modern diagnostic tools and targeted therapy are essential for successful limb-salvage.

### [FPB4] Evaluating Contamination Risk When Aspirating a Prosthetic Joint Using Microbial Next-Generation DNA Sequencing: An In Vitro Study

Madhav Chowdhry<sup>1</sup>, Edward J. McPherson<sup>2</sup>

<sup>1</sup>University Of Oxford, Oxford, United Kingdom, <sup>2</sup>David Geffen School of Medicine, UCLA, Los Angeles, USA

#### Background

A challenge in periprosthetic joint infection is the detection of microbiota. Next-generation sequencing (NGS) of microbial ribosomal DNA is one detection method, but false-positive results are of concern. We conducted a simulated joint aspiration study to assess false-positive rates with NGS testing.

#### Methods

The simulated joint was a 50-mL bottle of sterile saline. Four techniques (n = 20 per technique) were tested. Fluid aspirates were inserted into sterile vacutainers with different needle exchanges analyzed for potential contamination points. The negative control group (n = 20 per technique) consisted of 80 sterile saline bottles tested directly at the NGS laboratory.

#### Results

Eighty simulated aspirations were performed, two NGS tests per “joint.” In three simulated techniques, the positive detection rate was 0.8%. In the fourth technique, where 10 mL of ambient air was aspirated into the syringe, the rate was 10%. The positive detection rate among the negative control bottles was 1.2%.

#### Conclusion

NGS detected DNA signals from sterile saline aspirations using a sterile technique. However, the false-positive rate was low (0.8%). We theorize that positive DNA signals originated from errant microbe contamination from ambient air drawn into the testing needle bore. We advocate needle exchange at every fluid transfer point.

### [FPB5] Sustaining Recovery; quantifying the cost of sequelae of open long bone fractures in a major trauma centre.

Robert Milling<sup>1</sup>, Donal Murphy<sup>1</sup>, Christine Quinlan<sup>1</sup>

<sup>1</sup>*Mater Misericordiae University Hospital, Dublin, Ireland*

#### Purpose

The economic burden of major trauma on healthcare systems is well recognised however the financial impact of secondary complications remains difficult to quantify. As an evolving Major Trauma Centre, we evaluated the cost associated with complications arising from high-acuity trauma care, particularly fracture-related infections (FRI). Since July 2023, our centre has accepted open long bone fractures outside our traditional catchment area. While the immediate costs of trauma are known to be substantial, the burden of secondary complications remain poorly defined and the care is complex and multidisciplinary in nature.

#### Methods

Data was collected retrospectively and prospectively through chart review. Outcomes assessed included operative time, inpatient length of stay, outpatient visits, laboratory investigations, imaging requirements, and the cost of outpatient antibiotic therapy (OPAT).

#### Results

Since July 2023, 168 open long bone fractures were treated; of which 13 developed FRI. These cases required 16 additional operations, totalling 3,432 minutes of theatre time and 208 additional inpatient days. Patients attended a mean of 19.33 outpatient visits. Microbiological testing ranged from 1 to 16 additional samples per patient. Imaging included a mean of 2.14 CT scans, 10.2 radiographs, 2.2 image intensifier uses, 1 MRI, and 2.1 ultrasound scans. The cost of 28 weeks of OPAT was €140,000.

#### Conclusion

Immediate treatment of trauma is estimated to cost between £0.3–0.4 billion annually. The cost of subsequent treatment is challenging to quantify. Our findings highlight the substantial resource implications of infection following major trauma and underscore the need for dedicated funding to support comprehensive secondary care.

[FPB6] Comparing Same-Specimen Next-Generation Sequencing to Culture and Biomarkers for Diagnosing PJI from Aspirated Synovial Fluid

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**Purpose**

This study compared same-specimen testing by next-generation sequencing (NGS), culture, and synovial biomarkers for 569 synovial fluid aspirates for concordance in diagnosing periprosthetic joint infection (PJI).

**Methods**

Hip and knee aspirations performed by a single surgeon with fluid split for parallel testing. Parameters measured included CRP, WBC, PMN, NGS, alpha defensin, and fluid culture results. PJI was classified based on 2018 ICM criteria, used as a reference to evaluate each parameter’s individual sensitivity, specificity, and accuracy.

**Results**

NGS showed superior sensitivity of 51% (95% CI: 44-58%) vs 29% (95% CI: 23-36%) for culture. Specificity (NGS = 94% [95% CI: 91-96%] vs culture = 97% [95% CI: 95-98%]) and accuracy (NGS = 80% [95% CI: 77-83%] vs culture = 75% [95% CI: 71-79%]) were comparable. In correlation analysis, NGS was more highly correlated than fluid culture to infection status and every biomarker evaluated. Combinations of biomarkers leveraging NGS, PMN, and WBC provided high sensitivity and specificity for diagnosing PJI (Table 1). Lastly, we compared NGS microbe detection power and accuracy compared to traditional fluid culture methods and found NGS to provide greater depth and breadth in detection of microbes.

**Conclusion**

In summary, NGS was 1.7x more sensitive than fluid culture (50% vs 29%) and had comparable specificity to culture. The results of this study support the utility of incorporating NGS analysis for diagnosing PJI, identifying causative pathogens, and should be considered in future diagnostic algorithms.

**Table 1. Diagnostic metrics of synovial markers for classifying PJI.**

Marker	Sensitivity	Specificity	Accuracy	Diagnostic OR	PPV	NPV
CRP	0.689 (0.618, 0.751)	0.865 (0.828, 0.896)	0.808 (0.774, 0.839)	14.198 (9.254, 21.785)	0.708 (0.637, 0.770)	0.854 (0.816, 0.886)
WBC	0.770 (0.704, 0.825)	0.982 (0.963, 0.991)	0.914 (0.888, 0.934)	181.765 (79.801, 414.012)	0.953 (0.906, 0.977)	0.900 (0.868, 0.925)
PMN	0.951 (0.909, 0.974)	0.948 (0.921, 0.966)	0.949 (0.928, 0.964)	353.800 (157.842, 793.038)	0.897 (0.846, 0.932)	0.976 (0.955, 0.987)
Alpha Defensin	0.967 (0.930, 0.985)	0.902 (0.868, 0.927)	0.923 (0.898, 0.942)	270.158 (112.078, 651.204)	0.823 (0.767, 0.868)	0.983 (0.964, 0.992)
Culture	0.290 (0.229, 0.359)	0.972 (0.950, 0.984)	0.752 (0.715, 0.786)	13.899 (7.046, 27.416)	0.828 (0.718, 0.901)	0.743 (0.703, 0.779)
NGS	0.508 (0.436, 0.580)	0.940 (0.912, 0.960)	0.801 (0.767, 0.832)	16.309 (9.779, 27.198)	0.802 (0.720, 0.864)	0.801 (0.762, 0.835)
NGS + WBC	0.809 (0.746, 0.859)	0.922 (0.891, 0.945)	0.886 (0.857, 0.909)	50.179 (29.714, 84.739)	0.831 (0.770, 0.879)	0.910 (0.878, 0.935)
NGS + PMN	0.967 (0.930, 0.985)	0.889 (0.853, 0.916)	0.914 (0.888, 0.934)	235.314 (98.270, 563.475)	0.805 (0.747, 0.852)	0.983 (0.963, 0.992)
PMN + WBC	1.000 (0.979, 1.000)	0.930 (0.900, 0.951)	0.953 (0.932, 0.967)	Inf (NaN, Inf)	0.871 (0.819, 0.910)	1.000 (0.989, 1.000)
NGS + alpha	0.989 (0.961, 0.997)	0.863 (0.825, 0.893)	0.903 (0.876, 0.925)	568.613 (136.980, 2360.352)	0.774 (0.716, 0.822)	0.994 (0.978, 0.998)

Highlighted are selected combinations of biomarkers and their combinatorial performance identifying PJI.

### [FPB7] Outcomes of hip endoprosthetic replacements for non-oncological indications.

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#### Purpose

Endoprosthetic replacements (EPRs) are commonly used in limb salvage surgery for prosthetic joint infection (PJI), extensive bone loss and complex fracture management. The aim of this study was to assess the outcomes of EPRs performed for failed hip surgery at a major revision centre.

#### Materials and methods

A review of EPRs was conducted between 2005 and 2024. All EPRs were performed for failed hip surgery. The primary outcome was to assess re-operation rate and eradication of infection. Successful treatment of infection in our study was defined as infection eradication with a healed wound, without infection relapse or recurrence, nor repeat surgical intervention and without PJI related mortality. Secondary outcomes included microbiological profile and all-cause mortality.

#### Results

In total 106 patients underwent EPR surgery. The mean age at time of surgery was 71 years (43 to 91) with a mean Charlson Comorbidity Index of 4 (2 to 10). 76 (72%) patients had three or more previous surgeries prior to undergoing EPR. Indication for index EPR surgery included PJI management (n=57), non-infection related revision arthroplasty (n=49). Mean follow up was 5.6 years (two months to 17.2 years). 33 (31%) patients required further procedures, most commonly for repeat infection (n=14), dislocation (n=15) and four patients required an amputation with a limb salvage rate of 96%. Successful eradication of infection was achieved in 41 patients (72%) at final follow up.

#### Conclusion

This study supports the use of EPRs for end-stage limb salvage procedures for the multiply revised and infected cases.

## Session 6

### [O14] Revision knees: What drives the choice of surgery / spacer?

Alex Shearman<sup>1</sup>

<sup>1</sup> *Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom*

During revision surgery, implant removal and radical debridement of devitalized tissue are essential to eradicate infection but can lead to bone destruction, complex anatomy and ultimately an unstable limb. Any temporary 'spacer' must adequately address these challenges during the inter-stage period, prior to joint reimplantation.

Goals of spacers include:

- Restore and maintain a functional 'joint space' to prevent limb shortening and maintain ligament tension
- prevent sarcopenia and deconditioning by allowing early movement and weight bearing where possible
- Facilitate local and targeted antibiotic delivery
- Provide the optimal mechanical environment to promote soft tissue healing

Static (non-mobile) spacers are preferable in certain circumstances, but unpredictable functional outcomes have driven surgeons to explore the use of complex joint replacements as temporary mobile spacers, allowing earlier movement whilst maintaining satisfactory infection clearance rates.

This talk assesses key factors that may influence choice of spacer in 2-stage revision knee surgery.

#### **Biography:**

Alex Shearman is a Consultant Orthopaedic Knee Surgeon working at the Nuffield Orthopaedic Centre in Oxford since 2023. His clinical practice encompasses all aspects of knee surgery, from sports and ligament injuries through to complex joint reconstruction and prosthetic joint infection. Alex qualified in 2008 from Imperial College, London. He undertook orthopaedic training in London before completing subspecialist knee fellowships in Basingstoke, Imperial, Oxford and Stanmore. In 2019 he was an ESSKA knee arthroscopy travelling fellow to Brandenburg, Germany.

Prior to his appointment in Oxford, Alex worked as a Consultant Orthopaedic Surgeon at the Royal National Orthopaedic Hospital in Stanmore.

### [O15] Antibiotic management: choice and rationale

Staffan Tevell<sup>1</sup>

<sup>1</sup>*Department of Infectious Diseases, Karlstad Central Hospital, Sweden*

The treatment and prevention strategies of prosthetic joint infections are complex, with numerous clinical decisions to be made at each step. This complexity is further amplified by a scarcity of high-quality evidence and, in some areas, conflicting data. Adding to this, the way evidence is interpreted and translated into guidelines varies widely between countries, and those guidelines are not always followed in practice. This talk will explore antibiotic-related decisions and the rationale – or the lack of rationale – behind some of the choices we make.

#### **Biography:**

Staffan Tevell (MD, PhD) is an Infectious Diseases specialist and senior consultant at the Department of Infectious Diseases, Karlstad Central Hospital, Sweden. He received his medical training at Uppsala University and is currently affiliated with Örebro University. His main research interests include orthopaedic infections and staphylococcal infections. He serves as the coordinator of the Swedish Association for Infectious Disease Specialists' therapy programme committee for orthopaedic infections and is a member of ESCMID, ESGIAI, and EBJIS.

## Session 6

### [O16] Military bugs and blast injuries

Deborah Mortiboy<sup>1</sup>

<sup>1</sup> *University Hospitals Birmingham NHS Foundation Trust, United Kingdom*

An overview of the sorts of infections, especially invasive fungal infection, we saw in military patients from Iraq and Afghanistan, through the lens of MDT working and some of the human factors aspects of managing unfamiliar clinical scenarios. There will be a particular focus on transferable learning and how we collectively rise to the challenges that current and future conflicts will bring.

#### **Biography:**

Debbie is a Consultant Microbiologist at the QE, University Hospitals Birmingham, her career bridging the millennium! She has been privileged to work alongside her military colleagues since the inception of the Royal Centre for Defence Medicine supporting the management of wounded service personnel from Iraq, Afghanistan and further afield and continues to support the weekly military MDT. Debbie is a Civilian Advisor to the RAF. She also has close working relationships with the Bone infection, Orthoplastic and Major Trauma Services at the QE.

Outside of work the natural habitat is walking damp Welsh hillsides, baking (for MDTs) and offsetting the ravages of time by keeping active with a variety of sporting activities to spread the injury burden around.

### [BP1] ] Orthopaedic culture results inform peri-operative prophylaxis and local antibiotic use in bone and joint infections at James Cook University Hospital

Aeron Raphael Ibanez Alvarado<sup>1</sup>, Sachin Karan<sup>2</sup>, Namitha Vinayan<sup>1</sup>, John Widdrington<sup>1</sup>

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<sup>2</sup>Newcastle Upon Tyne Hospitals NHS Foundation Trust, United Kingdom

#### Introduction

Fracture-Related Infections (FRIs) and Prosthetic-Joint Infections (PJIs) cause high rates of morbidity and mortality. Management typically involves surgery alongside local and intravenous antibiotics. Peri-operative arthrocentesis informs post-operative antibiotic selection. Emerging evidence suggests local antibiotic therapy may reduce the need for prolonged systemic therapy when prosthetic material is removed or exchanged. This study assessed current antimicrobial guidelines against culture results.

#### Methods

Eligible patients were identified from the National Joint Registry and trust orthopaedic infection databases. Demographic and clinical data were gathered retrospectively. Culture results were analysed for concordance between samples, and resistance patterns compared against trust-guideline antibiotic regimens.

#### Results

Of 174 patients, 143 had PJIs (83 Knee-PJIs, 60 Hip-PJIs), and 31 had FRIs. Most infections returned positive cultures (88% of PJIs and 97% of FRIs) commonly polymicrobial colonies (43% of PJIs and 76% of FRIs). *Staphylococcus aureus* and coagulase-negative *Staphylococci* were the most frequently isolated bacteria, followed by gram-negative organisms. We identified significant resistance rates to our current peri-operative antibiotic regimen (Ceftriaxone and Teicoplanin); 33% of FRIs and 17% of PJIs isolated resistant organisms, mainly gram-negative bacteria resistant to Ceftriaxone. Conversely, resistance to standard local antibiotics (Vancomycin and Gentamicin) was uncommon (2% of PJIs and 13% of FRIs).

#### Conclusion

This study informs a change in trust guidelines due to significant rates of antimicrobial resistance against current peri-operative antibiotic regimens in patients with PJIs and FRIs. Resistance to our usual local antibiotic combination of Vancomycin and Teicoplanin was less common, a reassuring finding as we transition from prolonged systemic antimicrobial treatments.

### [BP2] Is Prolonged Systemic Antibiotic Therapy Still Necessary for Diffused Chronic Osteomyelitis After Radical Resection and Local Antibiotic Delivery?

Qin Chenghe<sup>1</sup>

<sup>1</sup>*Biocomposites, China*

#### **Purpose**

The conventional 4–6 week systemic antibiotic regimen for chronic osteomyelitis is a long-standing clinical paradigm that is increasingly being questioned, particularly given advancements in local antibiotic delivery systems. This study evaluates the feasibility of a short-course systemic antibiotic protocol combined with radical segmental resection and local antibiotic-loaded bone graft substitutes for Cierny-Mader Type IV (diffuse-type) chronic osteomyelitis.

#### **Methods**

We retrospectively analyzed 166 patients with Cierny-Mader Type IV chronic osteomyelitis treated between January 2012 and December 2021. All patients underwent segmental resection and local antibiotic-loaded calcium sulfate implantation. Patients were categorized based on the duration of postoperative systemic antibiotics: Short-term ( $\leq 10$  days), Intermediate-term (11–28 days), and Long-term ( $> 28$  days). The primary outcome was the rate of infection recurrence across the three groups.

#### **Results**

The median duration of systemic antibiotics was 8 days (range 5–9) in the short-term group, 15 days (range 12–18.3) in the intermediate group, and 44 days (range 37–49) in the long-term group. No statistically significant difference in infection recurrence rates was observed among the groups ( $p > 0.05$ ): 6.8% for the short-term, 6.9% for the intermediate, and 6.1% for the long-term group.

#### **Conclusions**

Our findings suggest that a short-course systemic antibiotic regimen is a viable strategy for Cierny-Mader Type IV chronic osteomyelitis when combined with radical segmental resection and effective local antibiotic delivery, challenging the necessity of prolonged systemic treatment.

### [BP3] Injury Mechanism Predicts Microbiota Composition and Infection Risk in Severe Open Fractures: Insights from a 16S rDNA-Based Clinical Study

Sermsak Sukpanichyingyong<sup>1</sup>, Somkiat Luengpailin<sup>2</sup>, David Stubbs<sup>3</sup>, Saksin Simsin<sup>4</sup>, Surachai Sae-Jung<sup>5</sup>

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#### Purpose

Infection is a major complication of open fractures, yet the role of trauma biomechanics in shaping early wound microbiota remains poorly understood. This study evaluated how blunt versus sharp injury mechanisms influence early microbial composition and fracture-related infection (FRI) risk.

#### Methods

A prospective cohort of 155 patients with Gustilo-Anderson type II, IIIA, or IIIB open fractures was enrolled. Deep tissue samples were collected at initial debridement, with additional samples at revision surgery in 28 FRI cases. Samples were stratified into four groups: Pre-debridement sharp, Pre-debridement blunt, Infection sharp, and Infection blunt. Microbial profiling was performed using 16S rDNA sequencing. Alpha and beta diversity analyses were conducted in QIIME2, and genus-level taxonomy was assessed.

#### Results

Sharp trauma wounds clustered with infection-associated communities on beta diversity analysis, while blunt trauma wounds formed a distinct cluster ( $p < 0.001$ ). Pre-debridement sharp wounds showed higher alpha diversity ( $p < 0.05$ ) and enrichment of opportunistic pathogens including *Pseudomonas*, *Acinetobacter*, and *Staphylococcus*. Blunt trauma wounds were dominated by low-virulence genera such as *Bacillus* and demonstrated progressive diversity loss. Traditional clinical factors, including fracture severity, timing of antibiotics or debridement, anatomical location, and comorbidities, showed no significant associations with microbial diversity.

#### Conclusion

Injury mechanism is a primary determinant of early wound microbiota and FRI risk. Sharp trauma promotes early pathogen enrichment, whereas blunt trauma leads to progressive dysbiosis, identifying trauma biomechanics as a key biological driver of infection susceptibility in open fractures.

## Best Free Papers Session

### **[BP4] Short Against Long Antibiotic Therapy for Infected Orthopaedic Sites (SALATIO Trials) – 3rd interim analysis at 2 years (one-year follow-up)**

Sara Keene<sup>2</sup>, Nathalie Kühne<sup>1</sup>, [Ilker Uckay](#)<sup>1</sup>

<sup>1</sup>Balgrist University Hospital, Zurich, Switzerland, <sup>2</sup>University of Zurich, Switzerland

#### **Objectives**

The optimal duration of postoperative antibiotic therapy in bone and/or orthopaedic implant infections is unknown. We investigate different infection strata within the prospective-randomized SALATIO Trials.

#### **Methods**

We include all bone and implant-related infections, and exclude diabetic foot osteomyelitis, native joint arthritis, spine or soft tissue infections. We randomize infected implants between a 6 weeks' (short-arm) and a 12 weeks' (long-arm) of antibiotic treatment. The outcomes are "clinical failure" (revision surgery for any indication), "microbiologically-identical relapses" (due to the same pathogens) and serious adverse events (SAE) within the intention-to-treat study population.

#### **Results**

As of 30 June 2025, including a one-year's follow-up, we analyze 234 episodes: 118 episodes (short-arm; 6 weeks) vs. 96 cases (long-arm; 12 weeks) for infected implants. The median duration of initial (empirical) parenteral medication was 6 days (interquartile range, 2-8 days) and the median number of surgical debridement was 1 (interquartile range, 1-2 debridement). Among a total of 49 "clinical failures" (49/234; 21%), we note 9 (9/234; 3.8%) identical infection relapses with the same pathogen after the end of treatment of the index infection. In the randomized group comparison, we noted 24 "clinical failures" in the short (24/118; 20%) and 25 (25/96; 26%) in the long-arm ( $\chi^2$ -test,  $p=0.32$ ). The number of important SAEs was 13 in the short, and 9 in the long arm.

#### **Conclusion**

In this 3rd and last interim analysis of the SALATIO Trials, shorter antibiotic treatment might still remain non-inferior to the traditional long treatment in terms of therapeutic failures or SAE.

Trials Registration: NCT05499481.

### [BP5] Gentamicin-loaded calcium sulfate-hydroxyapatite biocomposite to surgically treat diabetic forefoot ulcers complicated by osteomyelitis: a prospective cohort study

Kor Hutting<sup>1</sup>, Wouter Aan de Stegge<sup>2</sup>, Jaap van Netten<sup>3,4</sup>, Wouter Ten Cate<sup>5</sup>, Olaf Bakker<sup>6</sup>, Luuk Smeets<sup>7</sup>, Gijs Welten<sup>8</sup>, Edgar Peters<sup>3,9,10</sup>, Jeff van Baal<sup>5,11</sup>, Jean-Paul de Vries<sup>1</sup>

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#### Introduction

Diabetic foot ulcers complicated by osteomyelitis can be challenging to heal. Primary treatment by surgical debridement combined with gentamicin-loaded calcium sulphate–hydroxyapatite biocomposite (CaS-HAB) bone void filling has demonstrated wound healing rates of 81-89%. However, prospective studies are lacking. This study prospectively evaluated this surgical treatment method following unsuccessful conservative treatment.

#### Methods

A multicenter prospective cohort study was conducted in the Netherlands from March 2023 to June 2025. Patients with diabetic forefoot ulcers, complicated by osteomyelitis, were included and underwent initial conservative treatment consisting of ulcer care, 6 weeks of antibiotics, and offloading. Surgical treatment was performed only after unsuccessful conservative treatment and comprised debridement of infected tissue and bone without amputation, gentamicin-loaded CaS-HAB void filling, primary wound closure, 10 days of antibiotics, and offloading. The primary outcome was wound healing at 20 weeks. Associations with clinical variables were analyzed using logistic regression.

#### Results

Surgical treatments were performed in 53 patients, of whom 36 (68%) achieved wound healing, 7 (13%) underwent partial foot amputation, 1 (2%) underwent additional surgical debridement, and 9 (17%) had persistent wounds at final follow-up. Peripheral artery disease (toe pressure <60 mmHg) and chronic kidney disease (eGFR <60 mL/min/1.73m<sup>2</sup>) were independently associated with reduced odds of wound healing (odds ratio 0.179, p=0.017; odds ratio 0.269, p=0.034).

#### Conclusion

After unsuccessful conservative treatment, diabetic foot ulcers complicated by osteomyelitis can be effectively treated without amputation using this surgical treatment method. The lower wound healing rate compared with previous studies likely reflects the inclusion of difficult-to-treat cases.

### [BP6] Precise Intraoperative Debridement of Osteomyelitis and Fracture-Related Infections under Laryngoscope Guidance: A Pilot Study

Liu Yang<sup>1</sup>

<sup>1</sup>West China Hospital, Chengdu, China

#### **Purpose**

Residual necrotic and infected tissue within the intramedullary canal and metaphysis remains the primary cause of recurrence in osteomyelitis and fracture-related infections. In this pilot study, we hypothesized that intraoperative debridement under laryngoscope guidance facilitates precise excision of necrotic and infected tissue from the intramedullary canal and metaphysis.

#### **Methods**

From 13 January to 23 February 2026, we conducted a pilot study involving 10 patients who underwent surgical treatment for osteomyelitis and fracture-related infections. We employed intraoperative debridement under laryngoscope guidance to excise necrotic and infected tissue, including sequestrum, intramedullary abscesses, and cloacae. A 4.9 mm diameter laryngoscope was used to perform the debridement.

#### **Result**

The study included 8 male and 2 female patients with average age of 45.9 years (range: 17–77 years). The sites of lesion involvement were as follows: three cases in the femoral shaft, one in the distal femur, two in the tibial shaft, two in the tibial plateau, and two involving both the tibial shaft and plateau. No complications attributable to the flexible laryngoscope were observed during the study, such as elevated intramedullary pressure, endosteal injury, fat embolism, or bone necrosis.

#### **Conclusions**

Endoscopic techniques assist surgeons in debriding sequestrum, intramedullary abscesses, and cloacae that are difficult to locate under direct vision. Based on this pilot study, more precise debridement of the intramedullary canal of long tubular bones and the metaphysis can be achieved. In conclusion, intraoperative debridement under laryngoscope guidance may enable surgeons to achieve more precise, and more effective management of osteomyelitis and fracture-related infections.

### [BP7] Poor Correlation Between Synovial Fluid Parameters and Reinfection After Two-Stage Revision for PJI

Marco Lenzi<sup>1</sup>, Rosalba Tortia<sup>1</sup>, Filippo Givone<sup>1</sup>, Roberto Rostagno<sup>1</sup>, Loredana Pangaro<sup>1</sup>, Domenico Costantino Aloj<sup>1</sup>

<sup>1</sup>*Ospedale Sant'andrea, Vercelli, Italy*

#### Purpose

To determine whether synovial fluid analysis correlates with reinfection following two-stage exchange arthroplasty for the treatment of periprosthetic joint infection (PJI).

#### Methods

We retrospectively reviewed a prospectively collected database of patients who underwent two-stage exchange arthroplasty for knee and hip PJI. All patients underwent synovial fluid analysis at the time of reimplantation, together with standard microbiological cultures and histological evaluation. A standardized protocol was applied: prosthesis explantation, 6–8 weeks of antibiotic therapy, and subsequent reimplantation. Reimplantation timing was based on clinical assessment and a downward trend in C-reactive protein (CRP) levels. No antibiotics were administered after reimplantation.

Data collected between May 2023 and January 2025 were analyzed. The initial cohort comprised 86 patients (52 total knee arthroplasties [TKA], 34 total hip arthroplasties [THA]). Exclusion criteria included unavailable synovial fluid cell count, loss to follow-up, or follow-up <12 months. The final cohort included 81 patients (48 TKA, 33 THA).

#### Results

Eleven patients developed reinfection (5 TKA, 6 THA). Median follow-up was 25 months (range, 12–32). Median synovial white blood cell count was 1455 cells/ml (IQR 4803) in reinfected patients and 1445 cells/ml (IQR 2313) in non-reinfected patients, with no statistically significant difference. Polymorphonuclear leukocyte percentage showed no significant difference (median of 60% IQR 44% vs 60% IQR 21%). No differences were observed when TKA and THA were analyzed separately.

#### Conclusion

Synovial fluid analysis at reimplantation showed limited reliability in predicting reinfection. Further research is required to identify more accurate parameters for guiding timing of reimplantation.

### **[BP8] Pressure-ulcer–associated pelvic and hip osteomyelitis: healthcare burden, microbiology, reconstruction and time-weighted quality-of-life outcomes after surgery**

Alistair Reed<sup>1</sup>, Andrew Hotchen<sup>1</sup>, David Stubbs<sup>1</sup>, Jamie Ferguson<sup>1</sup>, Martin McNally<sup>1</sup>, Alex Ramsden<sup>1</sup>

<sup>1</sup>*Nuffield Orthopaedic Centre, Oxford, United Kingdom*

#### **Purpose**

To quantify healthcare burden and health-related quality of life (QoL) in patients with bone infection secondary to pressure ulcers, and to describe outcomes with longitudinal QoL.

#### **Methods**

Prospective observational cohort study at a tertiary bone infection centre. Baseline QoL was measured using the EuroQol EQ-5D-5L index score. Patients were managed operatively or non-operatively. For operative cases, intraoperative bone microbiology and reconstruction (including flap type) were recorded. Change in QoL from pre-operative baseline was quantified using a time-weighted area-under-the-curve (AUC) EQ-5D index improvement over 0–1 and 0–2 years.

#### **Results**

Eighteen patients were included (mean age 50.2years [SD14.2]; mean follow-up 2.5years [SD1.4]). Ulcer sites included greater trochanter, ischial, sacral and pubic symphysis regions. Baseline EQ-5D index was very low at 0.094 (SD0.269). Patients represented a large geographical spread, travelling a mean of 55.1miles to the specialist centre (SD 41.5). Twelve patients underwent operative management and six were managed non-operatively. Mean postoperative inpatient stay was 39.2 days (SD 20.5). Bone cultures were predominantly polymicrobial (8/12, 66%). Enterococcus faecalis and Enterobacteriaceae were the most common isolates (4/12 each, 33%). Seven patients required muscle flaps, most commonly gluteus maximus transposition (4/7). Two operative patients required further surgery for pressure ulcers at the same time. Time-weighted mean improvement in EQ-5D index was 0.225 (SEM 0.069) over year 1 and 0.310 (SEM 0.083) over 2 years compared to baseline.

#### **Conclusions**

Pressure-ulcer associated bone infection carries profound QoL impairment and substantial healthcare burden. Operative management was associated with sustained time-weighted QoL improvement over 1–2 years.

# Poster Overview & Poster Walks



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P02	Management of Large Infected Bone Defects around the Ankle with Bone Transport over a Retrograde Nail	<a href="#">Martin McNally</a> , Erik Formanek
P03	Management of Fracture Related Infections: Are we assessing cases in accordance with updated guidance?	<a href="#">Hollie Glover</a> , <a href="#">Benjamin Wall</a> , Martin Taylor, Tarlochan Bhambra
P04	Beyond the Flap: Orthoplastic Management of Delayed Sternal Osteomyelitis and Non-union	Katie Hutchinson, <a href="#">Jamie Banks</a> , Jonathan Lohn, Amber Arnold, Alex Trompeter
P05	"Oh Deer!" Preventing infection in open fractures involving deer fur contamination: A case report	<a href="#">Camille "Mika" Talwar</a> , James DeLullo
P06	Pathogen-Specific Risk for Iterative Surgical Debridement in Orthopedic Infections: A Prospective Multicohort Analysis	Anna Jedrusik, Flamur Zendeli, Raymond O Schäfer, <a href="#">Ilker Uckay</a>
P07	No need for routine histopathology in the assessment of surgical spine infections	Michael Betz, Tanja Gröber, Suzana Petkovic, Sander Botter, <a href="#">Ilker Uckay</a>
P09	Reconstruction of Sequelae Following Pediatric Septic Arthritis of the Hip: Outcomes Based on a Modified Choi Classification	<a href="#">Qin Chenghe</a>
P10	Individualized Reconstructive Strategies for Lower Limb Deformities Secondary to Chronic Osteomyelitis: A Review of 190 Cases	<a href="#">Qin Chenghe</a>
P11	Treatment of Femoral Osteomyelitis with Antibiotic Cement-Coated Intramedullary Nails and the reamer-irrigator-aspirator (RIA) -our experience	<a href="#">Liu Yueju</a> , Zhao Jun
P12	Clinical Outcomes of Continuous Local Antibiotic Perfusion in Fracture-Related Infection: A Systematic Review	<a href="#">William Elias Pandapotan</a> , Arizal Hidayat, Hanindya Prasojo, Agustinus Budhi Prasefio, Albert Lesmana
P13	An unusual case of disseminated gonococcal spinal infection	<a href="#">Katy Baple</a> , Sunil Sharma
P14	Joint Effort: A Multi-Disciplinary Approach to Multidrug-resistant TB of the Hip	<a href="#">Lottie Platel</a> , Sunil Sharma
P15	Porous uncemented joint-sparing endoprosthetic reconstruction in infected and biologically compromised bone	<a href="#">Arpan Doshi</a> , Ashley Scrimshire, Harshadkumar Rajgor, Jonathan Stevenson
P17	Short postsurgical antibiotic therapy for implant related spinal infections (SASI trials) - a stratified unblinded randomized-controlled non-inferiority trial	Ilker Betz, Tanja Gröber, <a href="#">Ilker Uckay</a>
P18	Two-Year Outcomes of Deep Surgical Site Infection After Spinal Surgery: Implant Retention and Predictors of Treatment Failure	<a href="#">Peter Davis</a> , Tim Jones, Idil Hassan, Radek Kaiser, Euan Stirling, Matthew Scarborough, Monique Andersson
P19	Intramedullary Nailing with Absorbable Antibiotic Carrier (INAAC) for Treatment and Prophylaxis of Fracture-Related Infection in a Major Trauma Centre	<a href="#">Andrew Blythe</a> , Gerry Kelly, Denise Wilson, Mark Robinson
P20	Opportunistic Invader with a Kneesty Consequence. Successful Management of Bilateral Periprosthetic Knee Infection caused by Burkholderia cenocepacia: A Case Report	<a href="#">Julie-Anne Houlihan</a> , Sina Vollert, Amber Arnold, Sulaiman Alazzawi, <a href="#">Marina Basarab</a>
P21	Timing of Surgical Antimicrobial Prophylaxis in Orthopaedic Surgery at a Tertiary Orthopaedic Unit: A Prospective Observational Study	<a href="#">Stephen Murphy</a> , John McAndrew, Colm Taylor

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No.	Title	Authors
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P24	What Bugs? – The microbiology of Trauma Associated Infections in the Major Trauma Centre in Dublin	<u>Josephine Hebert</u> , <u>Michael Feely</u> , Aisling Spratt, Ahmed Al Badi, Katherine Egan, Robert Milling, Kasie O'Reilly, Kevin McSorley, Claire Kenny, James Woo, Colette O'Connor, Christine Quinlan, Eavan Muldoon
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P30	Clostridium Perfringens Prosthetic Joint Infections: A Case Report and Literature Review	<u>Dimitris Panayiotou</u> , Lee Xin Ting, Itisha Gupta
P31	Establishing the first Orthopaedic Infection Biobank in Denmark – FRAMED MSI.  Fragment Recognition of All Musculoskeletal Infections Providing Early Diagnostics	<u>Thea Geil</u> , Nis P. Jørgensen, Rikke L. Meyer, Rasmus A Nielsen, Nina B. Stærke, Ole H. Larsen, Josefine Slater, Mats Bue
P32	Introducing “Antimicrobial Brachytherapy” Protocol for Chronic Periprosthetic Joint Infection in Total Knee Arthroplasty: Case Series with Preliminary 2-year Results	<u>Edward McPherson</u> , <u>Madhav Chowdhry</u>
P33	Osteomyelitis: A Rare But Serious Complication of Hidradenitis Suppurativa	Sahar Davoudi, Gabrielle Ventola, Travis Hughes, Mohammad Fazel, <u>Talha Riaz</u>
P34	Can classifications predict outcomes in long bone Fracture Related Infection or Osteomyelitis?	<u>Andrew Hotchen</u> , Maria Dudareva, Ruth Corrigan, Florian Frank, Alex Ramsden, David Stubbs, Jamie Ferguson, Martin McNally
P35	Can extending enrichment duration improve yield of Cutibacterium acnes in shoulder prosthetic joint infection?	<u>Hannah Ward</u> , <u>Dowan Kwon</u> , Eleanor Quin, Elizabeth Darley
P36	Two knees Too Many. Arthrodesis versus reimplantation in bilateral knee infection.	<u>Marco Lenzi</u> , Rosalba Tortia, Laura Ravera, Roberto Rostagno, Silvio Borre, Domenico Costantino Aloj
P37	Malassezia pachydermatis in a Fracture-Related Infection	<u>Kirsten MacGregor</u> , James Chowdhury, Stephen Mitchell, Andrew M Borman, Martin O Williams

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P39	The Orthoplastic Gap: A National Survey on the Management of Open Fractures and Systemic Barriers to Collaborative Care in Ireland	<a href="#">Paul O'Donovan</a> , Paul McCarroll, Kevin McSorley, Christine Quinlan
P40	The orthoplastic management of fracture related infection (FRI), early experience of a novel Multi-Disciplinary Team.	<a href="#">Katherine Egan</a> , Eavan Muldoon, Kevin McSorley, Claire Kenny, James Woo, Collette O'Connor, Christine Quinlan
P41	Developing a Radiological Pathway for Bone Infection Management in Secondary Care	<a href="#">Hassan Hirji</a> , <a href="#">Ishaq Sardar</a> , <a href="#">Jack Hasler</a>
P42	Outcomes of Debridement, Antibiotics and Implant Retention (DAIR) for Periprosthetic Joint Infections: A Single-Centre Retrospective Review	<a href="#">Joseph Ayathamattam</a> , Rahul Bagga, Michael Robinson, Richard Goddard

## Poster Walks

The poster walks will take place during the coffee breaks, with two walks running in parallel.

P01-P07 + P09-P14      Monday, 13 April at 10:40

P15-P21 + P22-P28      Monday, 13 April at 16:10

P29-P35 + P36-P42      Tuesday, 14 April at 11:10



# Industry



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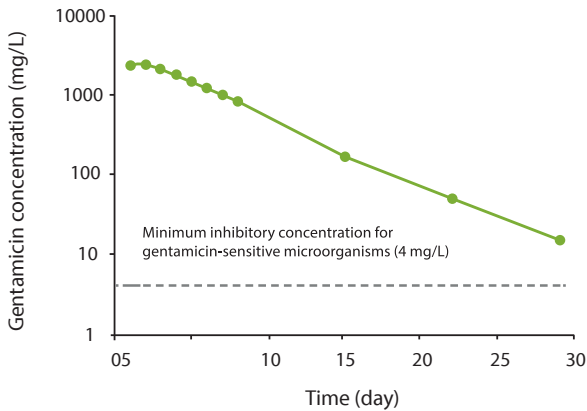
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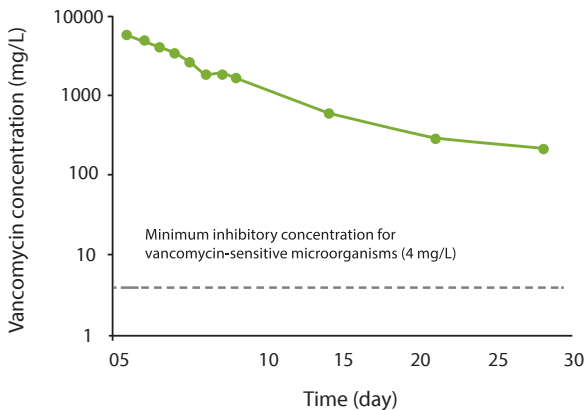
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<sup>1</sup> Stravinskas, M., Horstmann, P., Ferguson, J.Y., Hettwer, W., Nilsson, M., Tarasevicius, S., et al., 'Pharmacokinetics of Gentamicin Eluted from a Regenerating Bone Graft Substitute', Bone and Joint Research, 5.9 (2016), 427-35  
<sup>2</sup> CERAMENT G. Data on File (MC-002489). CERAMENT V. Data on File (S031/2013). BONESUPPORT AB Sweden.  
<sup>3</sup> Muir, R., Birnie, C., Hyder-Wilson, R., Ferguson, J., McNally, M.A., 'Does Local Implantation of Gentamicin Impair Renal Function in Patients Undergoing Surgery for Chronic Bone Infection?', International Journal of Research in Orthopaedics, 7.3 (2021), 438



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## It's All About the Patient A Patient First Approach to Support Bone Infection Management with CERAMENT® G and CERAMENT® V

### Agenda

- Welcome and introduction, Prof. Martin McNally
- It's all about the exposure, Dr. Staffan Tevell
- It's all about the bone, Prof. Martin McNally
- Q&A and key takeaways, Prof. Martin McNally

### Faculty

#### Prof. Martin McNally

Honorary Consultant in Limb Reconstruction Surgery,  
Oxford Bone Infection Unit  
Nuffield Orthopaedic Centre, Oxford, UK

#### Dr. Staffan Tevell

Senior Consultant, Department of Infectious  
Diseases, Central Hospital in Karlstad, Sweden



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## Local Antibiotic Delivery in Hip Surgery

### Speaker

#### Mr Antony Palmer

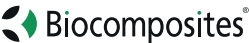

Consultant Orthopaedic Surgeon - Nuffield Orthopaedic Centre, Oxford

Antony Palmer, Consultant Hip Surgeon at Nuffield Orthopaedic Centre, and Senior Clinical Research Fellow at the University of Oxford, has extensive experience in primary and revision hip arthroplasty, with a particular clinical and research focus on prosthetic joint infection.


In his practice, he regularly uses local antibiotic delivery as part of infection management strategies, including the treatment of prosthetic joint infections.

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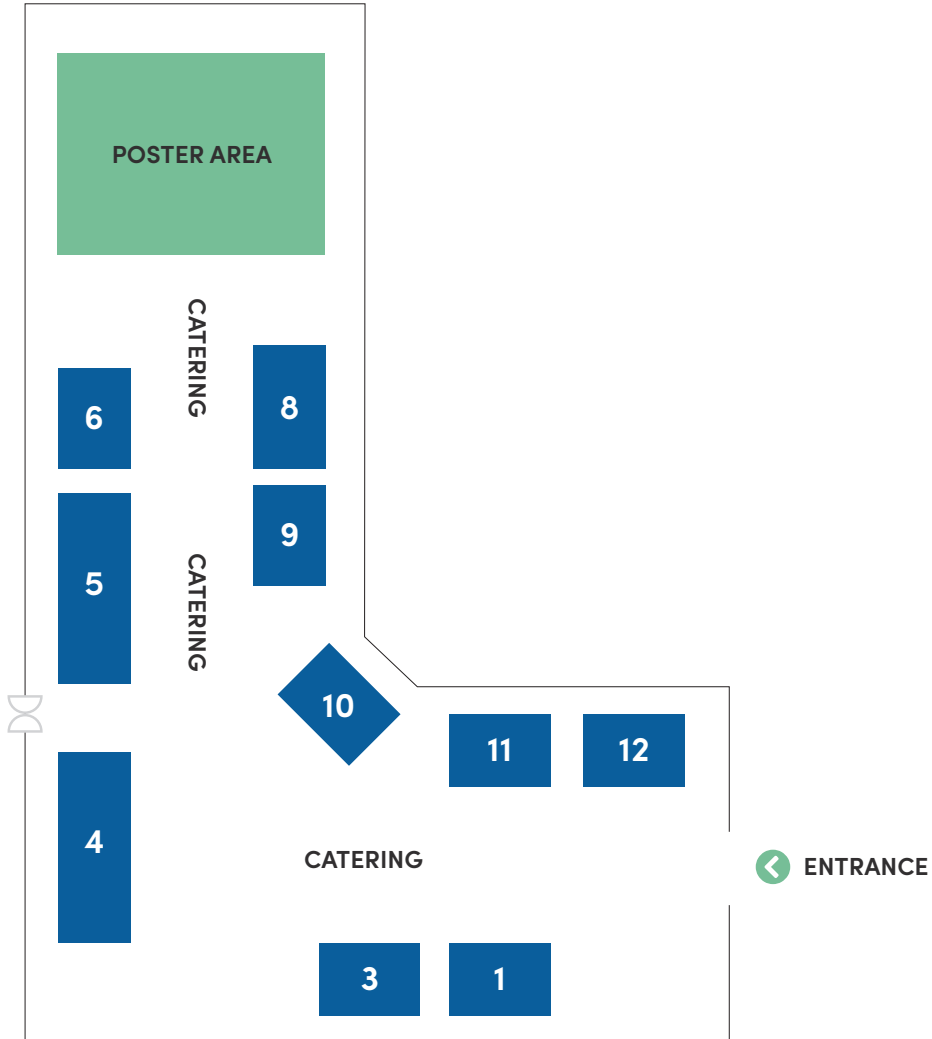
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