

NZOA ASM 2025

19th – 21st October 2025

**COMPLICATIONS
AND COMPLAINTS IN
ORTHOPAEDICS**



NZOA

New Zealand
Orthopaedic Association

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WELCOME

It is with great pleasure that we invite our colleagues to the NZOA ASM 19-21 October 2025.

The theme of the meeting is *"Complications and Complaints."*

The meeting will feature plenary sessions on revision arthroplasty and revision instability/arthroscopic surgery. These sessions will cover Hip, Knee, Ankle, Shoulder, and Elbow.

The international orthopaedic guests for the meeting are Pascal Boileau, from France, and Jegan Krishnan, from Australia. Both have extensive involvement in global orthopaedic education. Pascal Boileau is a giant in shoulder surgery and Jegan Krishnan has worked extensively with teaching in India, China, and Africa.

There will be a medicolegal session covering the complaints process. This will feature presentations from:

- The Health and Disability Commissioner, Morag McDowell,
- The Chair of the Medical Council of New Zealand, Dr Rachele Love,
- ACC Treatment Injury presentation, Denis Atkinson and
- Medicolegal Lawyer, Jonathan Coates.

Open lectures on resilience and managing stress, will be given by Nick Petrie and Silken Laumann. Nick is a researcher and speaker on leadership, reliance, and burnout prevention.

Those of you who heard him speak at the 2023 ASM in Nelson will have been mesmerised by his wisdom and his own life experiences, from professional rugby to cancer survivor to Harvard Masters graduate and inspirational speaker and author.

Silken Laumann is a household name in Canada, being a 4-time Olympian single skulls rower, 3-time Olympic medalist, and Canadian

of the year 1996 after overcoming dramatic adversities. She dedicates her time now to helping others and has a mental health charity – "Unsinkable."

The Gala dinner at the Skyline, will be fun with presentations from All Blacks, Richie McCaw, Israel Dagg and Colin Slade to our visiting speakers and allied orthopaedic association Presidents.

The pre-meetings on 18th and 19th October are with our Shoulder and Elbow Society and the Foot and Ankle Society. The guests for the NZSES meeting are Pascal Boileau, France, Jeff Hughes, Australia, and Sumit Raniga from Australia. The guests for the Foot and Ankle Society are Anish Kadakai from Chicago and Murray Penner from Vancouver.

The venue for both pre-meetings and the ASM is the Memorial Hall in Queenstown.

There will be golf and easy trail cycling options for recreation on the Sunday 19th October afternoon.

Welcome drinks will follow the sports afternoon back at Memorial Hall, along with our sponsors.

Co-convenors for the ASM are Richard Lloyd, Nick Lash and Brad Stone.

Queenstown is a wonderful venue for enjoyable meetings.

We hope you join us.


Khalid Mohammed
NZOA President



GENERAL INFO

Queenstown Memorial Hall

The ASM is being held in the Queenstown Memorial Hall. The space consists of the main Plenary room, the side main hall and the foyer. The exhibition stands will be in the side main hall and the foyer area. We have use of the Rugby Club Rooms next door to Memorial Hall for Gold sponsor breakfasts and lunches and if you should need a breakout space.

Wi-Fi

The Wi-Fi network: SSID – QLDC_Events
Password is: Events_J17#

Parking

Public parking is available near Memorial Hall at commercial rates.

On arrival at Memorial Hall

Collect your lanyard from the registration desk, which will be open from Saturday 18th of October from 7:00am– 5:00pm then every morning from 7:00am.

Mackenzie Coffee Cart

There will be a coffee cart outside the main entrance to the Memorial Hall. This is for the exclusive use of our Delegates, Sponsors and conference staff. You must present your official lanyard to order a complimentary coffee.

Abstracts

All presentations need to be loaded at least 24 hours prior to your talk. The AV tech will be onsite from Friday 17th October until Tuesday 21st October in the Plenary room.

- **Friday 17th – 1.00pm-5.00pm** for NZ Foot & Ankle and NZ Shoulder & Elbow Meetings
- **Saturday 18th – From 7.00am** for NZ Foot & Ankle and NZ Shoulder & Elbow Meetings, prior to conference start and during breaks only
- **Sunday 19th – From 7.30am** for NZ Foot & Ankle Meeting, prior to conference start and during breaks only
- **Sunday 19th – 1.00pm-5.00pm** for NZOA ASM
- **Monday 20th – From 7.00am**, prior to conference start and during breaks only
- **Tuesday 21st – From 7.30am**, prior to conference start and during breaks only

You can also upload your presentation via the SharePoint Link:

NZOA Conference - Queenstown 2025

Once you have loaded your presentation, no changes are able to be made.

Posters will be featured on screens in the trade's foyer area for viewing.

Catering

All catering will be held in Memorial Hall during the event in the exhibition space outside the Plenary room. Lunch comes in the form of a lunch box.



GENERAL INFO

Dietary Requirements

If you have indicated your dietary requirements when you registered, you will be catered for on a dedicated dietary table in the catering area. You must have indicated you had dietary requirements when registering, or unfortunately we will be unable to cater to your needs.

If you have any issues, please see Kirsty, Prue or Louise.

Single use policy

The Queenstown Lakes District Council promotes waste minimisation and sustainability. Single use takeaway coffee cups are not able to be brought into the venue. We will provide reusable coffee cups at the venue.

Single use water bottles are also not permitted, so please bring a refillable water bottle, water glasses will be provided at the venue also.

Welcome Function

The ASM welcome function will be held on Sunday the 19th October at Memorial Hall. The Welcome Function runs from 5:00pm - 7:00pm. Dress code is smart casual.

Gala Dinner

The Gala Dinner is a black-tie event, and evening attire is kindly requested.

Dinner will take place from 7:30pm (seated) in the Stratosfare Restaurant at the top of the Skyline Gondola, the Gondola ride is included in the dinner ticket. Please make your own way to the Skyline Gondola at 53 Brecon St.

Pre-dinner drinks, an oyster bar and canapé's will be available from 6:30pm in the Stratosfare Restaurant foyer.

If you have any accessibility requirements, please contact Kirsty as soon as possible.

The Gala Dinner has limited capacity. If you have registered to attend and can no longer make it, please contact Kirsty, Prue or Louise.

There is currently a wait list for the Gala Dinner, for those on this we will notify you as soon as possible if seats become available. Preference will be given to NZOA members.

Sunday 19th October Sports Afternoon – sponsored by



Make the most of your Sunday afternoon with one of two exceptional outdoor experiences in Queenstown.

Cycling: Queenstown Bike Hire, 134 Gorge Rd, at 1:30 PM

Meet at Queenstown Bike Hire then shuttle to the dramatic Shotover Gorge to begin a spectacular, Grade 2 (easy) ride. The ride follows the Tucker Beach trail, over the new suspension bridge, through the Hugo Tunnel onto the Wharehuanui trail to Millbrook, and then down to Ayrburn, where refreshments await. E-bikes available.

Golf at the Iconic Jack's Point

Tee off at midday at Jack's Point Golf Club for 18 holes on one of New Zealand's most scenic courses with stunning alpine views. Enjoy a break at the Halfway House, then finish your round with light refreshments at the Club Rooms.



GENERAL INFO

A shuttle will run from Memorial Hall at 11:00am to Jacks Point. It returns to Memorial Hall at 5:00pm for the Welcome Function.

If you wish to join the sporting activities please see Kirsty, Prue or Louise.

Sports awards will be announced at the Welcome Function, Sunday evening at the Memorial Hall.

CPD Hours

NZOA Members can claim 8 hours per day of attendance. A certificate will be sent to you via email of your attendance, if you presented you will be sent a second certificate.

Event Support

If you require assistance during the event, please ask Kirsty, Prue or Louise on the registration desk for support.

NZOA Staff Contact Details:

Kirsty Stratford

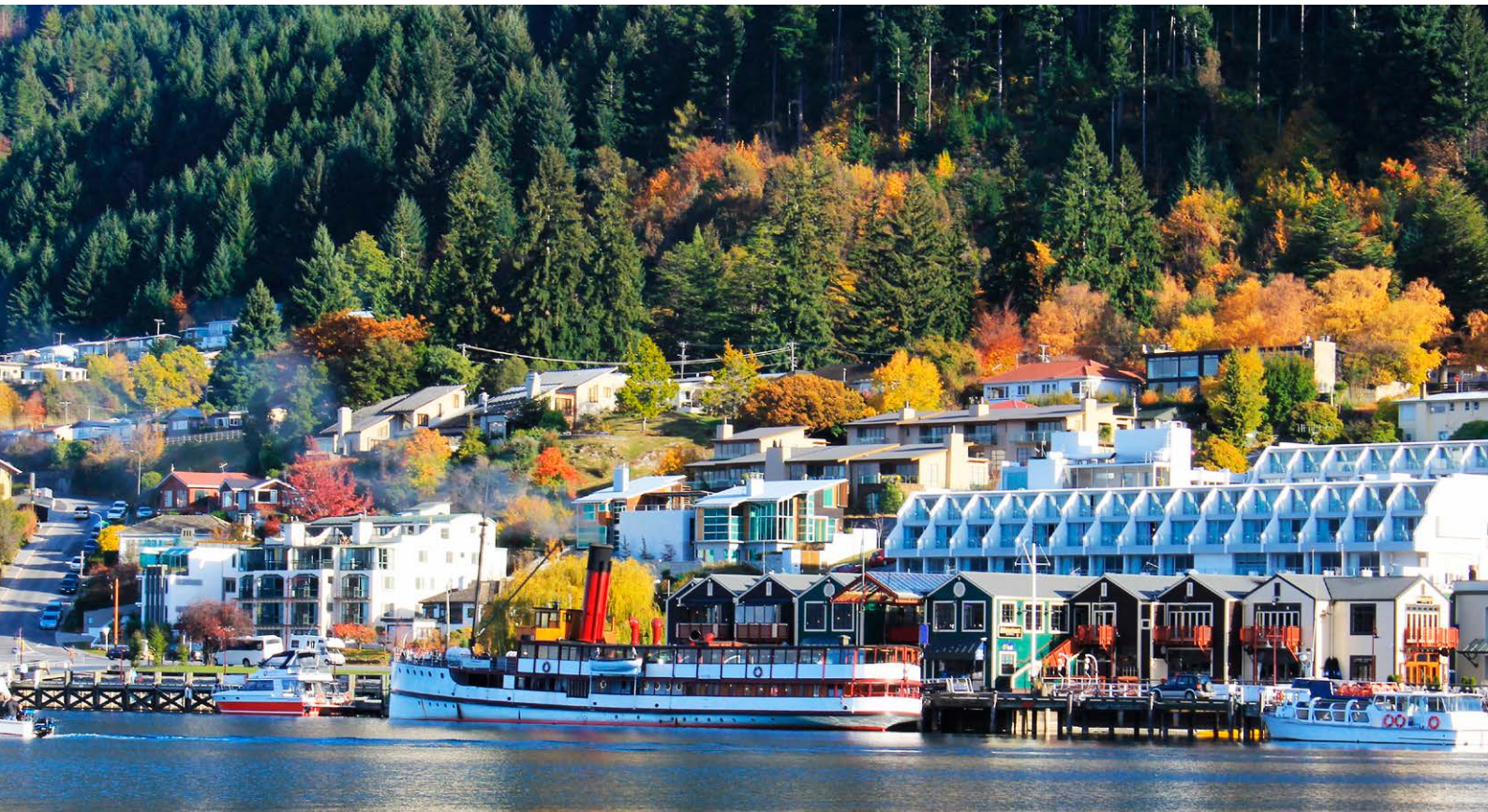
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1. Doan G, Curtis P, Wyss J, Clary C. Resection Accuracy Improved during Robotic-Assisted Total Knee Arthroplasty (March 2021). Internal Report 103720852. 2. Cool CL, Jacofsky DJ, Seeger KA, Sodhi N, Mont MA. A 90-day episode-of-care cost analysis of robotic-arm assisted total knee arthroplasty. J Comp Eff Res. 2019;8(5):327-336.

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*Compared to non-JOURNEY II knees. **1.** Iriuchishima T, Ryu K. A Comparison of Rollback Ratio between Bicruciate Substituting Total Knee Arthroplasty and Oxford Unicompartmental Knee Arthroplasty. J Knee Surg. 2018;31(6):568-572. **2.** Murakami K, Hamai S, Okazaki K, et al. Knee kinematics in bi-cruciate stabilized total knee arthroplasty during squatting and stairclimbing activities. J Orthop. 2018;15(2):650-654. **3.** Carpenter RD, Brilhault J, Majumdar S, Ries MD. Magnetic resonance imaging of in vivo patellofemoral kinematics after total knee arthroplasty. Knee. 2009;16(5):332-336. **4.** Grieco TF, Sharma A, Dessinger GM, Cates HE, Komistek RD. In Vivo Kinematic Comparison of a Bicruciate Stabilized Total Knee Arthroplasty and the Normal Knee Using Fluoroscopy. J Arthroplasty. 2018;33(2):565-571. **5.** Smith LA, Nachtrab J, LaCour M, et al. In Vivo Knee Kinematics: How Important Are the Roles of Femoral Geometry and the Cruciate Ligaments? J Arthroplasty. 2021;36:1445- 1454. **6.** Murakami K, Hamai S, Okazaki K, et al. In vivo kinematics of gait in posteriorstabilized and bicruciate-stabilized total knee arthroplasties using image-matching techniques. Int Orthop. 2018;42(11):2573-2581. **7.** Nodzo SR, Carroll KM, Mayman DJ. The Bicruciate Substituting Knee Design and Initial Experience. Techniques in Orthopaedics. 2018;33(1):37-41. **8.** Mayman DJ, Patel AR, Carroll KM. Hospital Related Clinical and Economic Outcomes of a Bicruciate Knee System in Total Knee Arthroplasty Patients. Poster presented at: ISPOR Symposium;19-23 May, 2018; Baltimore, Maryland, USA. **9.** Di Benedetto P, Vidi D,

Colombo, Buttironi MM, Cainero V, Causero A. Pre-operative and post-operative kinematic analysis in total knee arthroplasty. A pilot study. Acta Biomed. 2019;90:91-97. **10.** Kosse NM, Heesterbeek PJC, Defoort KC, Wymenga AB, Hellemondts GG. Minor adaptations in implant design bicruciate-substituted total knee system improve maximal flexion. Poster presented at: 2nd World Arthroplasty Congress;19-21 April, 2018; Rome, Italy. **11.** Takubo A, Ryu K, Iriuchishima T, Tokuhashi Y. Comparison of Muscle Recovery Following Bi-cruciate Substituting versus Posterior Stabilized Total Knee Arthroplasty in the Asian Population. J Knee Surg. 2017;30(7):725-729. **12.** Noble PC, Gordon MJ, Weiss JM, et al. Does Total Knee Replacement Restore Normal Knee Function? Clin Orthop Relat Res. 2005;431:157-165. Smith & Nephew Pty Ltd (Australia) +61 2 9857 3999 smith-nephew.com/en-au. Smith & Nephew Ltd (New Zealand) +64 9 820 2840 smith-nephew.com/en-nz. ◇Trademark of Smith+Nephew. All trademarks acknowledged. © September 2025 Smith+Nephew. 33745-anz V1 REVA 09/25. This material is intended for healthcare professionals. For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

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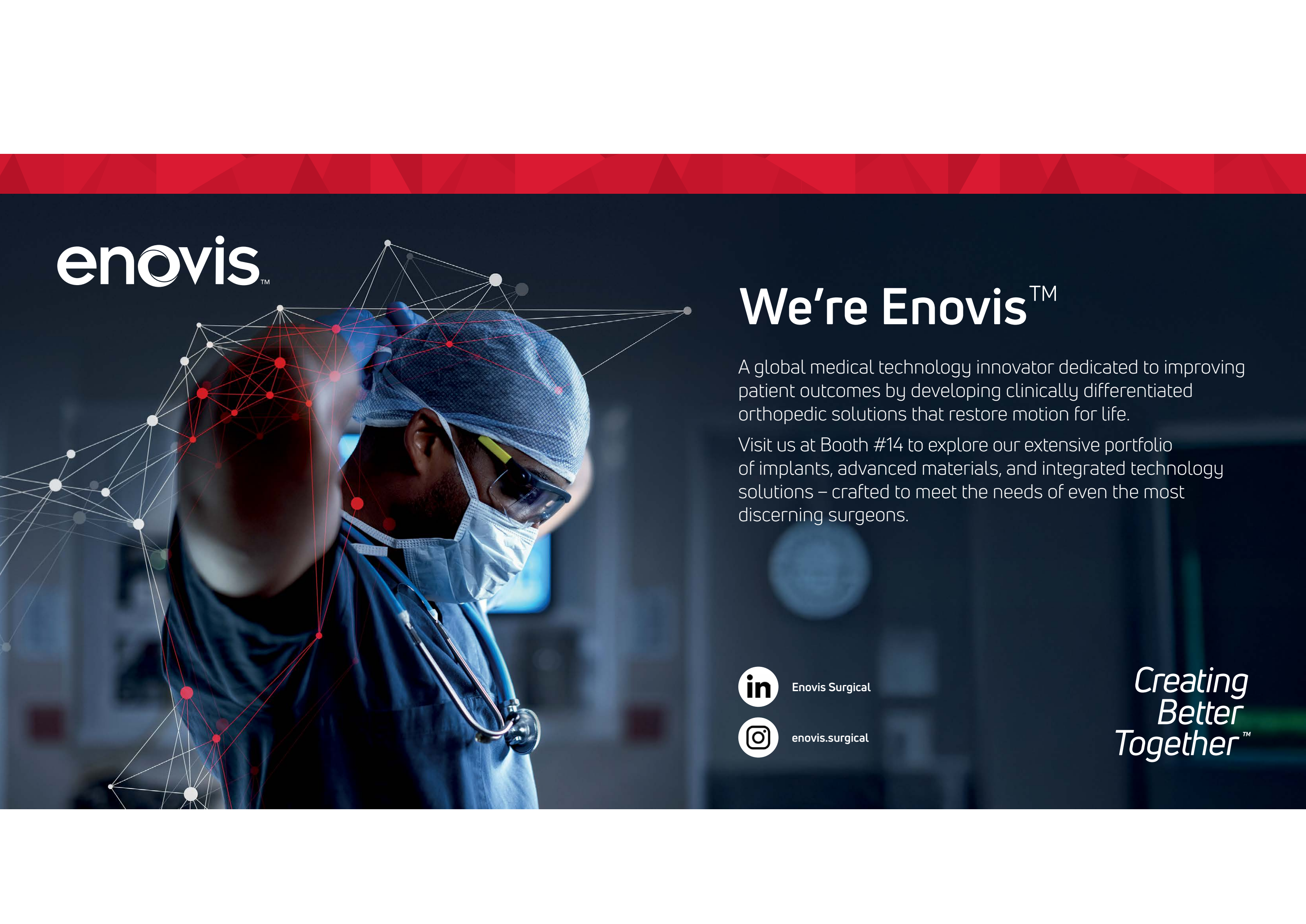
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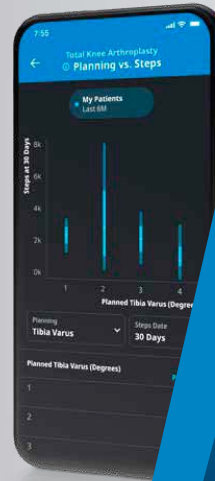
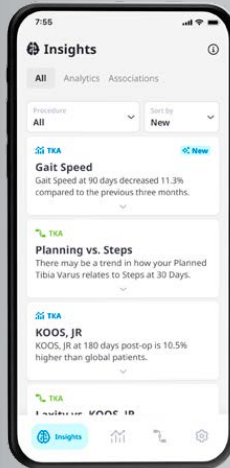
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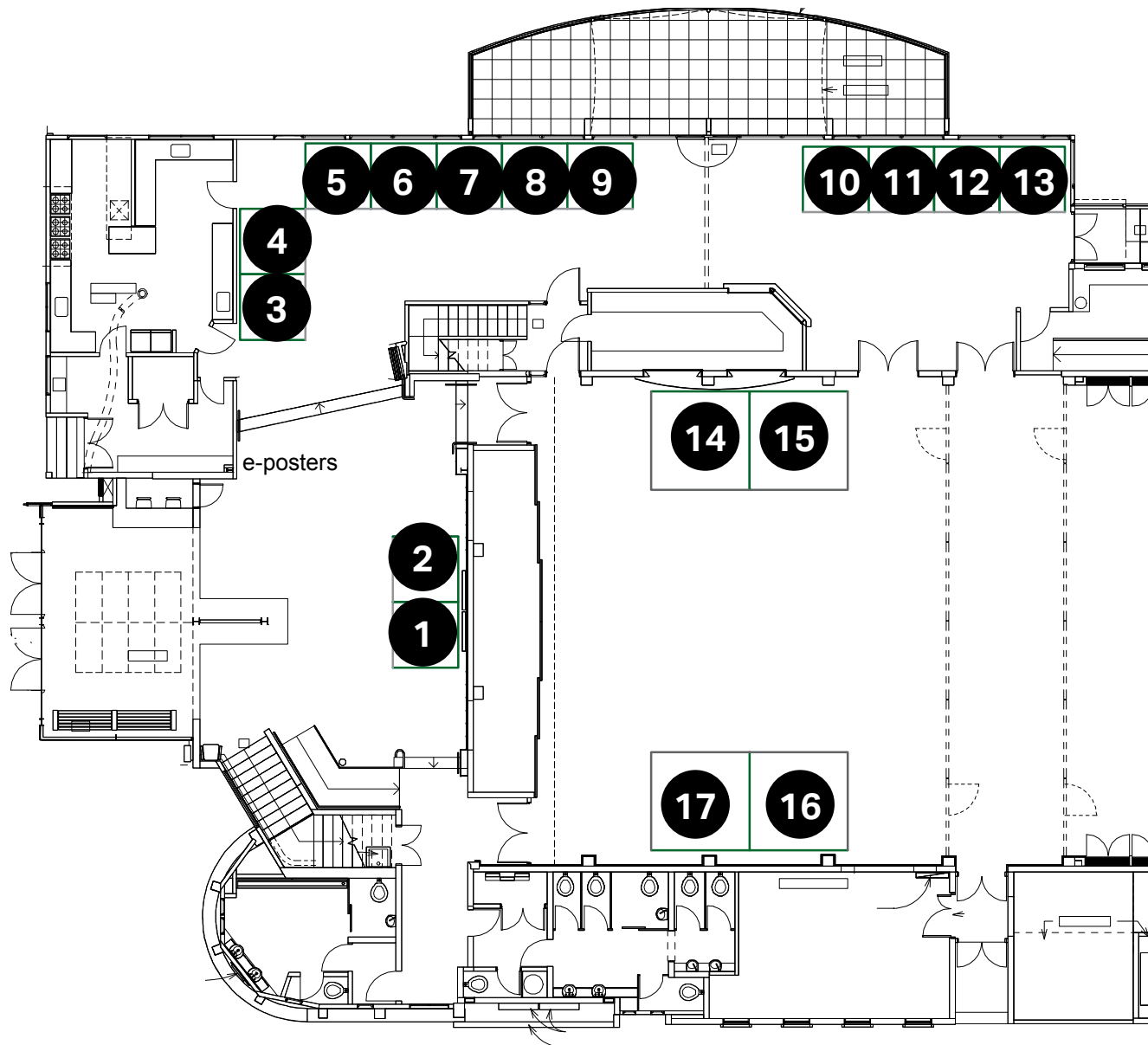
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PROGRAMME

PLEASE NOTE :

Pascal Boileau is no longer able to attend the 2025 NZOA ASM due to unforeseen circumstances. We have the good fortune to have replaced Pascals Keynote presentations with world class speakers.

Saturday 18th October

8:00am – 5:00pm

Foot & Ankle and Shoulder & Elbow Societies in Memorial Hall

COMBINED MORNING TEA, LUNCH, AND AFTERNOON TEAS WITH TRADES

6:30pm

Combined NZFAS & NZSES DINNER

Venue: The Cargo Collective, Arthurs Point

Transport: Buses will depart from Memorial Hall at 6:00pm and return to Memorial Hall at 9:30pm

Sunday 19th October

8:30am – 1:00pm

Foot & Ankle Society in Memorial Hall

Sunday Sports Afternoon

Golf: Jack's Point Golf Club. Tee off at 12:00pm

Mountain biking: Cycle the stunning Shotover Trail. Grade 2 (easy) ride. Meet at Queenstown Bike Hire at 1:30pm

5:00pm - 7:00pm

Sunday evening welcome drinks, Memorial Hall

Sunday dinner – own arrangements

Monday 20th October

7:00am - 8:00am

Registrations open at Memorial Hall & breakfast is available

8:00am - 8:20am

Welcome from locals - Russell Fowler and Nic Buckley

CAROUSEL PRESIDENTS - Khalid Mohammed: Chair

8:20am - 8:27am

Australian perspectives on future relationship with RACS - Mark Moroney, Australian Orthopaedic Association

8:27am - 8:34am

The Bone and Joint Journal - Fergal Monsell, British Orthopaedic Association

8:34am - 8:41am

Managing and under resourced orthopaedic workforce - Odette Koch, South African Orthopaedic Association

8:41am - 8:48am

Mentorship - Olufemi Ayeni, Canadian Orthopaedic Association

8:48am - 8:55am

Maintenance of certification - Kyle Jeray, American Orthopaedic Association

PROGRAMME

8:55am - 9:02am	Managing complaints relating to competence - Paul Tornetta, American Academy of Orthopaedic Surgeons Revision Surgery. Master's Tales - Olufemi Ayeni & Jegan Krishnan: Chairs
9:05am - 9:25am	Original research on Acromial stress fractures in RSA - Sumit Raniga
9:25am - 9:45am	Revision Elbow arthroplasty - Mr Jeff Hughes, Australia
9:45am - 10:05am	Complications of Hip Arthroscopy - Mr Matt Brick, New Zealand
10:05am - 10:25am	Common Mistakes with Ankle fractures - Paul Tornetta
10:30 am – 10:35 am	Enovis Gold Sponsor Update
10:35AM – 11:00AM	MORNING TEA PLENARY LECTURES
11:00am - 11:30am	The challenges of orthopaedic training and credentialling in the developing world. His work as a teacher and examiner in India, China, and Africa - Jegan Krishnan
11:30am - 12:00pm	"the transitional shoulder - basic Science driving a Paradigm Shift - Sumit Raniga
12:15PM – 1:00PM	LUNCH
12:10PM - 12:40PM	SMITH & NEPHEW PTY LTD GOLD SPONSOR LUNCH COMPLAINTS ALEX MALONE: CHAIR
1:00pm - 1:20pm	HDC Commissioner - Morag McDowell
1:20pm - 1:40pm	ACC Treatment Injury - Denis Atkinson
1:40pm - 2:00pm	NZMC Chair - Rachelle Love
2:00pm - 2:20pm	Medical Lawyer - Jonathan Coates
2:30pm - 2:35pm	Smith & Nephew Pty Ltd Gold Sponsor Update
2:35PM - 3:00PM	AFTERNOON TEA INTEREST SESSION ALL PARTNERS INVITED AND ENCOURAGED TO ATTEND RICHARD LLOYD & PERRY TURNER: CHAIRS
3:00pm - 3:30pm	Managing adversity and mental health for high achievers - Silken Laumann
3:30pm - 4:00pm	Surgeons managing complications and complaints - Nick Petrie
4:00pm - 4:07pm	All Inside Posterior Cruciate Ligament Reconstruction - ASEAN Travelling Fellow - Andri Lubris

PROGRAMME

4:07pm - 4:14pm	A Philippine Experience in the Management of Periprosthetic Joint Infection (PJI) - ASEAN Travelling Fellow - Peter Quiaoit
4:14pm - 4:21pm	Artificial Intelligence based risk stratification & dressing selection for lower limb wound management: a model development study using deep convolutional neural networks - Hong Kong Ambassador - Sum Lik Cheung
4:21pm - 4:28pm	Gender differences in foot & ankle sports injury rates in elite athletes: A systematic review and meta-analysis of 25,687,866 athlete exposures - Trans Tasman Travelling Fellow - Adrian Talia
4:30pm – 5:45pm	New Zealand Orthopaedic Association AGM
6:30PM	GALA DINNER AT STRATOSPHERE RESTAURANT, SKYLINE (GONDOLA INCLUDED IN DINNER TICKET) All Blacks Colin Slade, Richie McCaw and Israel Dagg will be signing AB jerseys for the visiting Presidents and invited speakers

Tuesday 21st October

7:30am - 8:30am	Registrations open at Memorial Hall & breakfast is available
8:30am - 10:00am	FREE PAPERS SESSION A PAEDIATRICS AND GENERAL ORTHOPAEDICS BREAKOUT ROOM ONE Mr John McKie, Dr Pierre Navarre: Moderators Format: 9 papers. 7-minute presentations per presenter, broken into three groups. Each group will have three surgeons presenting sequentially and then nine minutes (~3min per presenter) questions from the floor at the end of each group of 3
8:30am - 8:37am	A national analysis of surgical treatment of hip displacement in cerebral palsy - Sheena Seewoonarian
8:37am - 8:44am	Botulinum Toxin A (BTX-A) Injection Use in Children with Cerebral Palsy (CP) in Aotearoa New Zealand: A National Look - Jacob Coltman
8:44am - 8:51am	Outcomes of Slipped Upper Femoral Epiphysis at Middlemore Hospital from 2004 - Suyog Nagarkar
9:00am - 9:07am	Paediatric Acute Haematogenous Osteomyelitis – a fifteen-year review in Southern New Zealand - Anna McDonald
9:07am - 9:14am	The effects of a challenge state intervention on patients undergoing elective orthopaedic surgery - Cindy Ou
9:14am - 9:21am	Risk Stratification in Orthopaedic Surgery: An evaluation of current tools, and lessons from the United States - Alex Boyle

PROGRAMME

9:30am - 9:37am	Coping and Resilience After Adverse Surgical Events for Orthopaedic Surgeons in New Zealand - Hamish Clay
8:30am - 10:00am	FREE PAPERS SESSION B SPINE BREAKOUT ROOM TWO Mr Chris Hoffman, Mr Perry Turner: Moderators Format: 9 papers. 7-minute presentations per presenter, broken into three groups. Each group will have three surgeons presenting sequentially and then nine minutes (~3min per presenter) questions from the floor at the end of each group of 3
8:30am - 8:37am	Clinical Outcomes Following Early versus Delayed Decompression in Patients with Thoracolumbar Spine Injuries: A Systematic Review and Meta-Analysis - Karen Toh
8:37am - 8:44am	Mortality Rates in Elderly Patients with Traumatic Spinal Cord Injury - Katherine Borowczyk
8:44am - 8:51am	Surgical humidification (Humigard™) reduces bacterial load in an open spine animal infection model - Joe Baker
9:00am - 9:07am	Retrospective study of radiographic Alignment in Cervical Myelopathy - Geonhoo Park
9:07am - 9:14am	Lumbosacral transitional vertebrae as a risk factor for low back pain: a meta-analysis - Maksymilian Osiowski
9:14am - 9:21am	2 Year Clinical and Radiographic results of the Anterior Lumbar Fusion: A Single Surgeon Case Series - Jacob Wong Woo
9:30am - 9:37am	Influence of Ethnicity and NZ Deprivation Index on Complications Following Spinal Surgery. Claudia Bloy
9:37am - 9:44am	Complications and Mortality After Surgery for Degenerative Cervical Myelopathy: Outcomes Analysis from a New Zealand Centre - Wesley Tam
9:44am - 9:51am	Feasibility and Outcomes of a Joint Physiotherapy-Orthopaedic Consultation Model: A Single-Centre Secondary Care Experience - Rohil Chauhan
10:00am - 10:05am	Stryker Gold Sponsor Update
10:05AM - 10:30AM	MORNING TEA

PROGRAMME

10:30am-12:30pm

FREE PAPERS | SESSION C

KNEE | BREAKOUT ROOM ONE

Mr James Taylor, Mr Hamish Love: **Moderators**

Format: 10 papers. 7 minute presentations per presenter, broken into three groups. Each group will have three or four surgeons presenting sequentially and then nine or twelve minutes (~3min per presenter) questions from the floor at the end of each group

10:30am - 10:37am

Patient Reported and Functional Outcomes following Anterior Cruciate Ligament Injuries: A retrospective review of Escalated Care Pathways - Duncan Reid

10:37am - 10:44am

Results of Isolated BPB, Quads and Hamstring ACLR vs Combined ACLR with a Lateral Extra-Articular Procedure from the NZ ACL Registry - Mark Clatworthy

10:44am-10:51am

Lower Revision Rate with Bone-Patellar Tendon-Bone Autograft Compared to Both Quadriceps and Hamstring Tendon Autografts: Results from the New Zealand ACL Registry - Richard Rahardja

11:00am - 11:07am

Outcomes of Functional versus Mechanical Alignment in Robotic-Arm Assisted Total Knee Arthroplasty: A Randomised Controlled Trial - Simon Young

11:07am - 11:14am

Overall Pain is the Most Important Predictor of Patient Satisfaction Following Total and Unicompartmental Knee Arthroplasty - Mei Lin Tay

11:14am - 11:21am

Predicting future outlier status for total knee arthroplasty surgeons - Morgan Lingard

11:21am - 11:28am

Equivalent Clinical Outcomes of Cemented and Cementless Total Knee Arthroplasty With Patella Resurfacing at Five Years: A Randomised Controlled Trial - Simon Young

11:40am - 11:47am

Periprosthetic Joint Infection, Patellofemoral Arthrosis and Aseptic Loosening Remain the Main Reasons for Total Knee Arthroplasty Failure: A Multi-Centre Twenty-Four-Year Study - Aryan Katyal

11:47am - 11:54am

Fate of the Infected Unicompartmental Knee Arthroplasty: A New Zealand Joint Registry Study - Elizabeth Cullen

11:54am - 12:01am

Time Since Primary Arthroplasty Predicts Outcome After Debridement, Antibiotics and Implant Retention (DAIR) for Periprosthetic Joint Infection of the Knee: Utility of Current Classification Systems - Jason Ryu

PROGRAMME

10:30am-12:30pm

FREE PAPERS | SESSION D

GENERAL ORTHOPAEDICS | BREAKOUT ROOM TWO

Ms Lizzie Bond, Mr Mark Cvitanich: **Moderators**

Format: 12 papers. 7-minute presentations per presenter, broken into 4 groups. Each group will have three surgeons presenting sequentially and then nine minutes (~3min per presenter) questions from the floor at the end of each group of 3.

10:30am - 10:37am

The Effectiveness of the Functional Articulating Spacer for 2-Stage Revisions for Prosthetic Joint Infections – A Case Series Study from Southland Hospital -
Brian Tse

10:37am - 10:44am

Microorganism Profiles and Empirical Antibiotic Recommendations for Periprosthetic Joint Infections of the Hip from a Large, Longitudinal Study -
Ruikang Guo

10:44am - 10:51am

HumiGard™ reduces particle counts within the wound: A cadaver model of total hip arthroplasty - Rocco Pitto

11:00am - 11:07am

The Role of Early Range of Motion in Predicting Long-Term Outcomes in Total Knee Arthroplasty - Morgan Short

11:07am - 11:14am

Do Cobalt-Chromium Femoral Heads Have Higher Revision Risk Compared to Stainless Steel Metal Heads with a Single Cemented Femoral Design? A New Zealand Joint-Registry Study - Scott Bolam

11:23am - 11:30am

Immediate Versus Delayed Weight Bearing Following Ankle Open Reduction and Internal Fixation: A Pilot Randomised Controlled Trial - Benjamin Madsen

11:30am - 11:37am

Cracks in the System: The Rise of Periprosthetic Trauma - Cameron Tackey

11:37am - 11:44am

Prevalence, characteristics and clinical significance of Os Calcaneus Secundarius: A systematic review with meta-analysis - Maksymilian Osowski

11:53am - 12:00pm

Evaluation Of MagnetOs Putty as a Standalone Bone Graft for Hindfoot Fusion: A Retrospective Study - Kristian Dalzell

12:00pm - 12:07pm

Investigating the utility of ChatGPT in the diagnosis and management of common hand referrals - Niroshan Kumar

12:07pm - 12:14pm

Sustainability of New Zealand's private healthcare sector - Anand Desai

12:23PM - 1:20PM

LUNCH - SPONSOR AMISFIELD WINE COMPETITION CLOSES

12:40PM - 1:10PM

JOHNSON & JOHNSON (NEW ZEALAND) LTD GOLD SPONSOR LUNCH

PROGRAMME

REVISION SURGERY

Master's Tales - Prof David Gwynne-Jones & Mr Rod Maxwell: Chairs

1:20pm - 1:40pm

Revision instability - Mr Jeff Hughes

1:40pm - 2:00pm

Revision Elbow instability - Mr Jeff Hughes

2:00pm - 2:20pm

Revision Hip Arthroplasty - Mr Amir Sandiford

2:20pm - 2:40pm

Revision Knee Arthroplasty - Prof Gary Hooper

2:40pm - 3:00pm

Revision Knee instability / soft tissue - Mr Hamish Love

3:00pm - 3:05pm

Johnson & Johnson (New Zealand) Ltd Gold Sponsor Update

3:05PM – 3:30PM

**AFTERNOON TEA - SPONSOR AMISFIELD WINE COMPETITION
WINNER ANNOUNCED**

3:30pm - 3:50pm

Revision Ankle instability - Mr Rupesh Puna

3:50pm - 4:10pm

Future of Shoulder arthroplasty - Mr Sumit Raniga

4:10pm - 4:30pm

Closing remarks - Chris Hoffman

4:00PM

CONFERENCE CLOSES

6:30pm

President's dinner at Botswana Butchery (by invitation) Transport 6:00pm
from Sofitel Hotel

NZOA ASM BREAKOUT & ENTITY AGM MEETINGS

Friday 17th October

8:00am – 10:00am	Presidential Line Meeting Sofitel Hotel Boardroom
10:00AM – 4:00PM	MORNING TEA COUNCIL MEETING Sofitel Hotel Boardroom

Monday 20th October

10:30am - 11:30am	Wishbone Trust AGM Sofitel Hotel
12:00PM - 1:00PM	LUNCH NZOA TRUST AGM Sofitel Hotel
2:30PM - 3:30PM	AFTERNOON TEA NZ HIP FRACTURE REGISTRY TRUST AGM Sofitel Hotel
4:30PM - 6:00PM	NZOA AGM Memorial Hall

Tuesday 21st October

6:30AM - 7:30AM	BREAKFAST SUB SPECIALITY SOCIETIES MEETING Sofitel Hotel
10:00AM – 11:00AM	MORNING TEA NZOA JOINT REGISTRY TRUST AGM Sofitel Hotel
12:20 – 1:20PM	LUNCH NZ HIP SOCIETY AGM Sofitel Hotel Boardroom



Olufemi R. Ayeni

Md, PhD, Frcsc



Dr. Olufemi Ayeni is a Professor and the Academic Division Head of Orthopaedic Surgery at McMaster University (Canada), where he is also a University Scholar (2022–2026) and an Adjunct Professor in the Department of Health Research Methodology, Evidence and Impact.

He serves as Medical Director for the Hamilton Tiger-Cats (CFL) and Forge FC (CPL), is the Past President of the Canadian Orthopaedic Association, and was named a Member of the Royal Society of Canada (Class of 2025). Dr. Ayeni holds a Tier 2 Canada Research Chair in Joint Preservation Surgery (2022–2027), has published more than 400 academic papers in sports medicine and related fields, and is Editor-in-Chief of the Journal of ISAKOS. His clinical practice and research focus on minimally invasive orthopaedic interventions that treat joint injuries with the aim to prevent degenerative joint disease.





Dr Kyle Jeray



Dr. Kyle Jeray is the Chair of the Department of Orthopaedic Surgery at Prisma Health in Greenville, SC. He is a Professor of Orthopaedic Surgery at the University of South Carolina School of Medicine Greenville.

He is also a Clinical Professor in the Department of Health Research and an Adjunct Assistant Professor in the Department of Bioengineering at Clemson University.

Dr. Jeray is a graduate of the University of Illinois School of Medicine in Chicago. He completed his Orthopaedic Surgery Residency at the Greenville Hospital System in Greenville, SC and subsequently did his Orthopaedic Traumatology fellowship at the Carolinas Medical Center, in Charlotte, NC. Upon completion of his fellowship, Dr. Jeray joined the faculty of the Greenville Health System, now Prisma Health, where he serves as the Chair of the Department.

He is the president of the American Orthopaedic Association and the former chair of the Own the Bone Steering Committee and the former chair of the Critical Issues Committee. He is a Past President of the South Carolina Orthopaedic Association and Southeastern Fracture Consortium.

He is currently on the OTA Board as a member at large, and is the former chair of several committees within the Orthopaedic Trauma Association. He is on the editorial board for the Journal of Orthopaedic Trauma and a Deputy editor for OTA International. He serves as a Director for the American Board of Orthopedic Surgery (ABOS), and as an oral examiner, question writer and case log reviewer for the ABOS.

Dr. Jeray's research has focused primarily on the care of patients with musculoskeletal infections and fragility fractures. Dr. Jeray was a Co-Principal Investigator of the study titled Fluid Lavage of Open Fracture Wounds (FLOW) sponsored by the US Department of Defense. Dr. Jeray's clinical interests include the management of open fracture wounds, complex upper extremity fractures, and fractures of the pelvis and acetabulum.





Dr. Odette Koch



Dr. Odette Koch is an orthopaedic surgeon who is regarded for her leadership in the Association and her inspiring work with WALANT (Wide Awake Local Anaesthesia No Tourniquet) techniques

Based in Pretoria, South Africa, she practices in the Upper Limb Unit at 1 Military Hospital and part-time private practice at Netcare Pretoria East Hospital, where she specialises in managing complex trauma and elective hand and wrist, elbow and shoulder conditions.

A pioneer in her field, Dr. Koch made history as the first female President of the South African Orthopaedic Association (SAOA). She is also a leading authority on WALANT hand surgery in South Africa, championing its integration into public health systems and contributing to improved patient care through cost-effective, resource-sensitive surgical solutions.

Dr. Koch previously served as Chairperson of the South African Orthopaedic Registry (SAOR)—the world's first combined orthopaedic registry—where she played a key role in advancing data-driven quality improvement across the profession. Her current project examines thumb carpometacarpal joint replacement surgery and its outcomes on the SAOR. She also contributed to global orthopaedic education as an

international program editor for the AO Trauma Shoulder and Elbow Taskforce, helping shape surgical training materials and curricula worldwide.

A passionate teacher and mentor, Dr Koch holds an honorary lecturer position at the University of Pretoria, her alma mater, where she completed her undergraduate and postgraduate medical training and her specialist qualification through the South African College of Medicine in Orthopaedic Surgery.

Beyond her clinical work, Dr. Koch is passionate about outreach. She is actively involved with Operation Healing Hands, a South African-based non-profit organisation committed to providing surgical care to underprivileged patients. Through this partnership, Dr. Koch regularly participates in volunteer initiatives and pro bono procedures, ensuring that quality healthcare reaches those who need it most





Khalid Mohammed



Khalid is a Christchurch orthopaedic surgeon working in private practice and in the public hospital system. His specialist areas are shoulder and upper limb surgery and sports injuries.

Khalid graduated with a medical degree from the University of Otago and trained in orthopaedic surgery in New Zealand. He completed his post-graduate/ Fellowship training in Australia and the USA, followed by a sabbatical with Pascal Boileau in France and multiple shoulder visits to colleagues in Europe and USA. His private practice is at Elmwood Orthopaedics, and he is a consultant at Christchurch and Burwood hospitals. He is also a Senior Lecturer at the University of Otago Christchurch School of Medicine.

He is President of the New Zealand Orthopaedic Association.





Fergal Patrick Monsell

MSc, PhD, FRCS(Orth)



Fergal was born in Dublin and emigrated to England shortly before his sixth birthday.

He graduated without distinction from the Welsh National School of Medicine and was appointed to the Consultant Staff at RNOH Stanmore and Great Ormond Street Hospital in 1997.

He has been a Consultant at the Royal Hospital for Children, Bristol since 2004 and is involved in the management of paediatric patients with a special interest in limb deformity and trauma.

He has collected an alphabet soup of post-nominals and has made a slightly greater than average contribution to the canon of lower-level evidence as a hobby researcher.

He has a longstanding interest in education, is Director of the Avon Centre for Musculoskeletal Education and Projector at the Grand Academy. He is Visiting Professor at Cardiff University and was previously King James IV and Hunterian Professor.

He was Editor of AO Surgery Reference (Paediatrics), Specialty Editor (Paediatrics) and Chairman of the Council of Management for the Bone and Joint Journal until September 2025 and will serve as British Orthopaedic Association President in 2025-2026.

He is married to Ros, has three grown-up children and to his credit is a lifelong Spurs supporter.





Mark Moroney

BMedSc, MBBS, FRACS, FAOrthA, GAICD



Mark is married to Paula with two sons and is the current President of the Australian Orthopaedic Association.

He has worked as an Orthopaedic Surgeon in Ipswich, just west of Brisbane, Queensland since 1999 maintaining a general practice but with a paediatric interest in the public and private sectors. He has always been committed to registrar teaching having been a past Chair of Training for Queensland. He is a past examiner for the Royal Australasian College of Surgeons, past Secretary of the Australian Paediatric Orthopaedic Society, a graduate of the Australian Institute of Company Directors and a Senior Lecturer at the University of Queensland where he also serves on the Board of Fellows at King's College.

Mark is passionate about Orthopaedic Outreach, maintaining a strong affiliation with the surgeons in Fiji via annual visitations and regular communications. He has previously served on the Outreach Board as an AOA appointment.

His hobbies include ornithology, skiing and when time allows, he enjoys trekking with his family which has taken them to places such as Mt. Kilimanjaro, Everest Base Camp, Langtang and Kokoda. Mark and Paula look forward to catching up with old friends and meeting new ones during their time in Queenstown.





Paul Tornetta

MD, PhD



Dr. Paul Tornetta is Professor and Chair and Residency Program Director in the Department of Orthopaedic Surgery at Boston University School of Medicine and the Director of Orthopaedic Trauma for Boston Medical Center.

Dr. Tornetta received his dual bachelor's degrees in chemistry and mathematics from Franklin and Marshall College in Lancaster, PA. He earned his medical degree from SUNY-Health Science Center at Brooklyn, NY, where he also completed his internship and residency in orthopaedic surgery, followed by a Fellowship in Acetabular/Pelvic Fractures at the Hospital of the Good Samaritan in Los Angeles under Joel Matta, MD. He received his PhD from the University of Groningen, the Netherlands.

Dr. Tornetta has expertise in multicentre trials and trial methodology, serving on the Executive Committees of the SPRINT, FAITH, TRUST, and FLOW trials. He leads the Orthopaedic Trauma Research Consortium and was on the Executive Committee of the Department of Defense funded METRC Consortium. He has lectured extensively worldwide on orthopaedic trauma, evidence-based literature application, statistical methodology, and education. He has served on the faculty of more than 250 American Academy of Orthopaedic Surgeons (AAOS) CMEs, Orthopaedic Trauma (OTA), and international symposia and skills courses and developed new educational programs for these organizations. An author of more than 350 peer-reviewed publications, Dr. Tornetta is also a Lead Editor for Rockwood and Green's textbook on fracture care (an industry

standard) and an Editor of multiple other textbooks and textbook series. Most recently he has led the AAOS ROCK curriculum for resident education. He has contributed to the field with the development of new surgical techniques as well as implants.

Dr. Tornetta has served many roles for national and international orthopaedic associations. He has served on the Board, Chaired the Evaluations and Annual Meeting Committees and Chaired the Council on Education for the AAOS prior to being the President of the organization in 2024. He is a past President of the OTA, served on the AOA executive committee in multiple roles for over a decade and was an American British Canadian (ABC) Travelling Fellow.

He has received numerous awards and honors, including the Orthopaedic Research and Education Foundation Clinical Research Award, the Kappa Delta Award (twice), multiple BUSM Robert E. Leach Residents Teaching Awards and OTA Bovill Awards for best paper, and was awarded the AOA Distinguished Clinical Educator Award in 2024. Dr. Tornetta has been named a Castle Connolly Top Doctor every year since 1996 and Boston Magazine Top Doctor since 2004. His passion is education and enjoys photography and exercise in his spare time.



GUESTS & SPEAKERS



Andri M T Lubis

MD, Ph D | ASEAN Travelling Fellow



Professor Lubis is at the Faculty of Medicine, University of Indonesia, Jakarta as Head of Division of Sports Injury, Department of Orthopaedics and Traumatology.

His subspeciality training includes American Academy of Orthopaedic Surgeon (AAOS) 2012 International Surgical Skills Scholarship Award, Mayo Clinic, Rochester, USA, April 2012. He completed a Fellowship in Shoulder and Elbow Surgery: Department of Orthopaedic Surgery, Kyung Hee University Hospital, Seoul, Korea, October 2004 – January 2005. Fellowship Training in Arthroscopy and Orthopaedic Sports Medicine: Department of Orthopaedic Surgery, Yonsei Severance University Hospital, Seoul, Korea, March – September 2004

Fellowship Training in Adult Joint Reconstruction: Department of Orthopaedic Surgery, Singapore General Hospital, Singapore, January 2 - July 1, 2003

He belongs to the Indonesian Orthopaedic Society for Sports Medicine and Arthroscopy (IOSSMA): President Founder and the Indonesian Orthopaedic Association. Professor Lubris belongs to many international organisations, International Cartilage Regeneration and Joint Preservation Society (ICRS).

International Society for Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS), American Academy of Orthopaedic Surgeon (AAOS) (International Affiliated Member), Arthroscopy Association of North America (AANA): International member, Asia Arthroscopy Congress (AAC): President 2017-2019, ASEAN Society for Sports Medicine and Arthroscopy (ASSA): President 2018-2019 and Asia Pacific Knee, Arthroscopy and Sports Medicine Society (APKASs): Board of Directors.

He is on the editorial board of Orthopaedic Journal of Sports Medicine (OJSM): Editorial Board Representative, Knee Surgery and Related Research (KSRR): Editorial Board, Asia-Pacific Journal of Sports Medicine, Arthroscopy, Rehabilitation and Technology (AP-SMART): Editorial Board and Clinics in Shoulder and Elbow (CiSE): Board of Editors



GUESTS & SPEAKERS



Peter Salcedo Quiaoit

MD | ASEAN Travelling Fellow



Dr. Peter Quiaoit is an Orthopaedic Surgeon practicing for 25 years in the southern island of the Philippines.

He earned his medical degree at the Ateneo de Cagayan – Xavier University Jose P. Rizal School of Medicine. He completed his residency training in Orthopaedic Surgery and Traumatology at the Philippine Orthopaedic Center. He had his fellowship training in Joint Replacement at Klinikum Bremen Mitte, Bremen, Germany. He is part of the consultant staff of the Department of Orthopaedics in Northern Mindanao Medical Center, a tertiary government general hospital. Aside from his engagement in the training of future orthopaedic surgeons, he is also part of the top management of the hospital, heading the medical division. Dr. Quiaoit is a fellow of the Philippine College of Surgeons, a diplomate of the Philippine Board of Orthopaedics and currently the secretary of the Philippine Orthopaedic Association.



GUESTS & SPEAKERS



Dr Sum-Lik Cheung

Hong Kong Ambassador



Dr. Sum-Lik Cheung is an orthopaedic trainee currently based at the Department of Orthopaedics and Traumatology, United Christian Hospital, Hong Kong. He graduated with a Bachelor of Medicine and Bachelor of Surgery (MBBS) from the University of Hong Kong in 2020.

With a strong foundation in clinical practice, Dr. Cheung has cultivated a deep interest in medical technologies, artificial intelligence, eHealth, and healthcare-related data science. His recent research focuses on applying AI to practical, frontline clinical challenges—most recently in wound care optimization using deep learning tools. He is the lead author of *“Artificial intelligence-based risk stratification and dressing selection for lower limb wound management: a model development study using deep convolutional neural networks,”* which he will be presenting at this conference.

Beyond the hospital, he is actively involved in community healthcare initiatives, humanitarian efforts, and social entrepreneurship. As both a committed learner and enthusiastic leader, Dr. Cheung aspires to bridge clinical excellence with technological innovation to enhance patient care and accessibility in Hong Kong and beyond.



GUESTS & SPEAKERS



Dr Adrian Talia

Trans-Tasman travelling Fellow



Adrian Talia is an Orthopaedic Surgeon specialising in Foot & Ankle surgery, General Trauma and Sporting Injuries.

He completed Orthopaedic training in Victoria through the AOA/RACS, being awarded FRACS & FAOrthA in January 2023. He completed post-fellowship Sub Specialty Fellowship training in Foot and Ankle surgery at the Nuffield Orthopaedic Centre, Oxford UK and Swiss Ortho Centre in Basel, Switzerland before returning to home to Melbourne.

He holds a current public appointment at Western Health where he is involved in adult and Paediatric on call Trauma cases and works as a training supervisor for AOA accredited registrars. Privately he practices as part of Melbourne Orthopaedic Group, where his elective practice focuses on Foot and Ankle surgery, Trauma and Sports Injuries.

He is actively involved in research in both the public and private sector. Outside of Orthopaedics, Adrian has a family with four young children, which doesn't leave much time for hobbies. Although he does enjoy cooking ... and of course eating!



Denis Atkinson



Denis has special interest in arthritic surgery for the knee and hip joint, and particular interests in sports injuries and general surgery of the knee joint.

He did his undergraduate studies at Otago University with post graduate training in Wellington, London and Leeds.

He is a past President of the New Zealand Knee Society and past President of the New Zealand Orthopaedic Association.

He is a current member of ACC's Clinical Advisor Panel (CAP) and has provided independent expert advice to the HDC



GUESTS & SPEAKERS



Jonathan Coates



Jonathan is one of New Zealand's leading health sector lawyers. He has extensive experience in all areas of health law and in the legal issues facing the health sector.

Following an early career in criminal law and civil litigation, Jonathan has specialised in health law since the late 1990s. After practising and studying health law in the UK, he returned to New Zealand to build a health sector practice. In the early 2000s, Jonathan undertook and completed a PhD in health law. Between 2005 and 2012, Jonathan was a litigation partner at Buddle Findlay, where he headed up that firm's specialist health sector team and practised almost exclusively in the health sector. He spent four years as a member of the firm's Board. Jonathan left Buddle Findlay in 2012 to set up Claro. In April 2024 Jonathan was part of the Claro team that joined Dentons.

Jonathan's litigation and advisory practice covers the provision, regulation, funding and management of health services. He works closely with Te Whatu Ora, Health New Zealand (previously District Health Boards), private providers, insurance companies and professional indemnifiers, statutory regulators (such as the registration authorities operating under the Health Practitioners Competence Assurance Act), aged care providers, primary care providers, NGOs, professional colleges and associations, government

departments, and many other health sector organisations. Public health law is an area of particular interest – from both a policy and legal perspective. Jonathan regularly appears in the courts and before specialist tribunals.

His advisory practice is typically at Board and senior management level. Jonathan is frequently engaged to undertake independent investigations, reviews and inquiries – including leading investigations raising complaints about behavioural, safety and competence issues, and disclosures made under the Protected Disclosures Act. He speaks and writes widely on health law and legal issues affecting the health sector and is a member of the New Zealand Law Society's specialist Health Law Committee.



GUESTS & SPEAKERS



Prof. Jegan Krishnan



Professor Jegan Krishnan (MBBS, FRACS (Orth), Ph.D.) is an Orthopaedic Surgeon based in Adelaide, South Australia who currently consults and operates at various locations across the state.

Jegan is committed to helping not only patients locally but also offering his services to the less fortunate. He has spent stints in Zimbabwe, Fiji, Rwanda and various parts of India and China focussed on teaching local practitioners how to improve their craft. Jegan is also involved in providing healthcare in the Third World and establishing a program linked to the University of Malawi for medical education and training.



Rachelle Love



Dr Love lives in Christchurch, she was appointed to the Medical Council of New Zealand in August 2020, she is Deputy Chair of the Audit and Risk Committee and was elected Chair of the Council in February 2024.

Dr Love is a member of the Royal Australasian College of Surgeons (RACS) Māori Health Advisory Group, an elected member of the National Board of RACS, the executive of the NZ branch of the Australasian Sleep Association, the Urutā National Māori Pandemic Group, and is a Trustee of the Hearing Research Foundation.

She practices as an ENT surgeon with an interest in in Māori health, particularly cultural competency and cultural safety in surgical education, sleep surgery, and is a cultural advisor to the ORL Training Board.



GUESTS & SPEAKERS



Dr. Jeffery Hughes



Dr Jeffery Hughes is an Orthopaedic Surgeon with an interest in shoulder and elbow reconstructive, trauma, arthroscopy and joint arthroplasty.

Dr Hughes has developed a tertiary shoulder and elbow practice undertaking arthroscopic shoulder stabilisation, capsular release, rotator cuff repair and tendon transfer for a rotator cuff deficiency. In addition he undertakes both primary and revision shoulder reconstruction arthroplasty.

He has been a course facilitator for training surgeons in shoulder arthroplasty, both advanced and revision procedures.

In addition Dr Hughes has developed a referral elbow practice in managing difficult elbow reconstruction for both acute and chronic elbow trauma, surgical release of post-traumatic and inflammatory joint contractures. This includes both arthroscopic and open surgery, along with ligament stabilisation.

Dr Hughes is one of the most experienced total elbow arthroplasty surgeons in Australia and is in fact on the design team for the Nexel total elbow arthroplasty designed in the Mayo Clinic in Rochester Minnesota USA. He has published numerous research articles and book chapters in sub-specialty shoulder and elbow text books.



Morag McDowell



The main role of the Health and Disability Commissioner is to ensure that rights of consumers are upheld.

This includes making sure that complaints about health or disability service providers are taken care of fairly and efficiently. Morag McDowell, Health and Disability Commissioner, began her term in September 2020.

Morag took up the role after serving nearly 13 years as a Coroner based in Auckland. She was formerly a Crown Prosecutor, Director of Proceedings for the Health and Disability Commissioner's Office, and a Senior Legal Adviser at Crown Law. Since completing her Master of Laws degree, her legal practice has had a strong focus on healthcare law, and she has appeared in different courts and tribunals on a variety of health-related litigation. She has also lectured and published on a range of medico-legal issues.

Morag is committed to promoting and protecting the rights of health and disability services consumers where the Code sets the benchmark for good practice, and opportunities for learning and quality improvement are embraced. She strongly values the importance of fair, timely, transparent, and culturally appropriate processes where people are engaged, and given the opportunity to be heard.



GUESTS & SPEAKERS



Nick Petrie



Nick Petrie is a researcher and speaker on leadership, resilience and burnout prevention.

Nick helps high achievers continue to perform at high levels but with lower stress. As well as his work with surgeons he works with Google, Salesforce, Mayo Clinic, Walmart, Home Depot, NASA, Wells Fargo, Kellogg's, and New Zealand rugby. He has worked globally across industries including healthcare, engineering, tech, banking, pharmaceuticals, energy, law, accounting, and television.

He holds a Master's degree from Harvard University and is the author of the book *Work Without Stress: Building resilience for long term success*. To learn more about Nick and his work you can visit his website [here](#).



Silken Laumann



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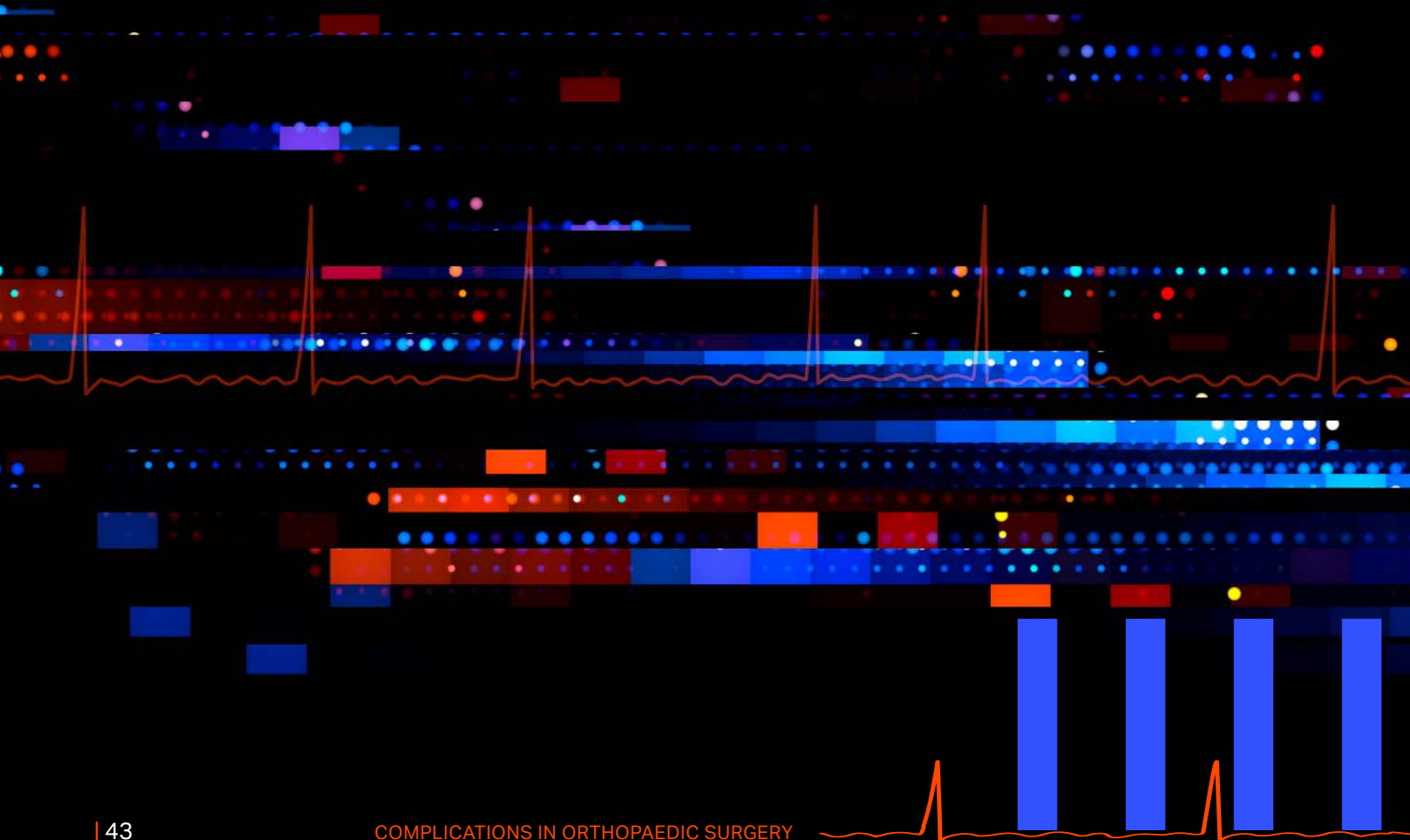
Drawing from her Olympic rowing journey, personal battles and successes, Silken paints vivid narratives about the power of storytelling and overcoming life's challenges.

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ABSTRACTS





Presenter: Sheena Seewoonarain

Authors: S. Seewoonarain, J. Coltman, A. Cavadino, A. Sorhage, S. Stott.

Affiliations: Starship Children's Hospital, Auckland, New Zealand

Type: Paper

Category: Paediatrics and General Orthopaedics



TITLE:

A national analysis of surgical treatment of hip displacement in cerebral palsy

Introduction

Paediatric patients with cerebral palsy (CP) have higher rates of hip displacement. Surgical strategies vary with the likelihood of repeat procedures remaining a key outcome. We compared paediatric patient characteristics (age, GMFCS, ethnicity, region) with regards to the primary surgical hip procedure and any subsequent surgical procedure, including soft tissue release (STR), femoral osteotomy $\pm$ STR, and femoral plus pelvic osteotomy $\pm$ STR.

Methods

Health data for 1,149 patients with cerebral palsy born between 2002-2018 and included on the New Zealand Cerebral Palsy Register were matched to data from the National Minimum Dataset (NMDS, 2002-2023) using the National Health Index (NHI). Procedures were grouped using national coding data and analysed by demographics, GMFCS level, CP type, and region of domicile.

Results

Overall, 251 of the 1149 patients (22%) had had hip surgery within the first 15 years of life. 182 of these patients (73%) were GMFCS IV-V and had quadriplegic CP. Overall, 72 of the 182 (40%) non-ambulatory children had ≥ 1 repeat operation, with 44 having one repeat operation, 28 having 3 operations and 8 having 4 operations.

Repeat procedure rates were highest in the STR group (45%), followed by femoral (40%) and combined osteotomies (29%). Femoral osteotomy was the most frequent repeat procedure (60%). The median time from index procedure to second operation was 3.8 years. Regional variation was observed in choice of index procedure.

Conclusion

Patients with non-ambulatory CP undergoing STR alone had an approximately 45% chance of further surgery, slightly higher than those undergoing femoral osteotomies as the index procedure. Patients undergoing femoral and pelvic osteotomy primarily had the lowest rate of repeat surgery. These findings highlight expected revision rates at a national level and could be useful in counselling families on outcomes for this group of patients.





Presenter: Jacob Coltman

Authors: Jacob Coltman¹, Susan Stott², Jimmy Chong³, Alexandra Sorhage⁴, Alana Cavadino²

Affiliations: ¹Middlemore Hospital, Auckland, ²University of Auckland, Auckland, ³Starship Children's Hospital, Auckland,

⁴New Zealand Cerebral Palsy Register, Auckland, New Zealand

Type: Paper

Category: Paediatrics and General Orthopaedics



TITLE:

Botulinum Toxin A (BTX-A) Injection Use in Children with Cerebral Palsy (CP) in Aotearoa New Zealand: A National Look

Introduction

BTX-A has been used in the management of spasticity in CP for >25 years in NZ and is provided by different specialists in centres across NZ. The aims of this study were to (1) describe use of BTX-A interventions for children with CP across NZ at a population level; (2) explore inequities of access.

Methods

Data from the NZ Cerebral Palsy Register, matched with Ministry of Health data were analysed by GMFCS level, CP type, ethnicity, NZ Deprivation Index, and region. Analysis included 1,149 children across NZ.

Results

By age 15, 725 children (63%) had ≥ 1 episodes of BTX-A injections (total: 3,732 episodes).

By regression modelling, for GMFCS levels, compared to GMFCS I the odds of having any BTX-A were all increased in levels II- IV, with a peak at level III (OR: GMFCS II 3.05; III 5.41; IV 4.85). When adjusted by GMFCS levels, those with a diagnosis of triplegia or quadriplegia, were less likely to have BTX-A than those with hemiplegia or diplegia (OR: 0.38).

Compared to Starship, other regions had a 25-35% lower chance of repeat injection episodes.

However, region did not affect age at first treatment. Socioeconomic status and ethnicity were not statistically associated with odds of BTX-A treatment, age at first treatment, or treatment frequency.

Discussion/Conclusions

Two in three children with CP had BTX-A injections in childhood; these children were more likely to be GMFCS levels III and IV and classified as hemiplegia / diplegia.

The region of service showed the largest degree of variation in the delivery of repeat injections, with Starship delivering greater number of repeat episodes compared to other centres in NZ. Inequities related to socio-economic status and ethnicity were not seen.





Presenter: Suyog Nagarkar

Auckland, New Zealand

Authors: : Daniel Lemanu¹, James Recordon¹, Suren Senthil¹, Suyog Nagarkar², Hanson Unasa³

Type: Paper

Affiliations: ¹Middlemore Hospital, Auckland, ²Starship Children's Hospital, Auckland, ³North Shore Hospital,

Category: Paediatrics and General Orthopaedics



TITLE:

Outcomes of Slipped Upper Femoral Epiphysis at Middlemore Hospital from 2004 – 2024

Introduction

Slipped Upper Femoral (or Capital) Epiphysis (SUFE or SCFE) is the most common hip pathology in preadolescents. It has a higher incidence in Pacific Island and Māori patients. Left untreated it can cause life-long morbidity. Middlemore Hospital serves a high proportion of Pacific Island and Māori patients lending to its high-volume experience in treating SUFE. This experience has yet to be reviewed or published in peer-reviewed literature.

Objectives

To assess outcomes of patients from the past 20 years presenting with SUFE to Middlemore Hospital – focusing on rates of contralateral failure/slippage in patients who did not undergo prophylactic fixation/contralateral pinning, rates of avascular necrosis (AVN), and rates of osteotomy/subcapital realignment procedures.

Methods

A retrospective review of prospectively collected data. Inclusion criteria being patients who underwent treatment for SUFE at Middlemore in the past 20 years identified from electronic records. Comparative and matched cohort analysis using SPSS.

Results

662 patients were identified with SUFE and 579 patients were included in the final analysis after excluding duplicates and patients with insufficient data – yielding a total of 644 hips that received operations. 6.5% were unstable. 82% were pinned in situ. 17.7% had osteotomies. Rate of AVN after osteotomy was 12.9%. 12.8% had prophylactic contralateral pinning. 12.5% of patients who did not have contralateral prophylactic pinning had subsequent contralateral slippage. Mean follow-up was 32 months. Statistically significant factors associated with contralateral slippage were lower age (mean 10.8) and open triradiates (all contralateral slips in our group). Total rate of AVN was 3.3% and chondrolysis rate was 5.4%.

Conclusions and Discussion

Rates of AVN, chondrolysis and contralateral slippage at Middlemore are comparable to other centres worldwide. Statistically significant factors associated with contralateral slippage were lower age and open triradiate cartilage.





Presenter: Anna McDonald

Type: Paper

Authors: Anna McDonald¹, Amir Sandiford², Pierre Navarre²

Category: Paediatrics and General Orthopaedics

Affiliations: ¹Dunedin Hospital, Dunedin; ²Southland Hospital, Invercargill, New Zealand



TITLE:

Paediatric Acute Haematogenous Osteomyelitis – a fifteen-year review in Southern New Zealand

Introduction

New Zealand has high rates of pediatric acute hematogenous osteomyelitis (AHO); however, data has reflected large scale studies of North Island populations alone. The aim of this study is to record the incidence of the disease, diagnosis, management and barriers to care specific to the southern region.

Methods

A fifteen-year retrospective review of children aged 6 weeks to 15 years admitted with Pediatric AHO at Southland and Dunedin Hospitals from 2008 to 2022. Demographics, features of presentation, diagnosis, management, and complications were recorded. Data were compared to published data from the national tertiary centre, Starship Hospital.

Results

Ninety-eight cases met the inclusion criteria. On average, there were six admissions per year. Males are overrepresented (N=62, 64%). Mean age at presentation was 7.2 years. Mean length of stay was 7 days. MRI was used to diagnose 72% of cases. Diagnosis was made within the first 24 hours of admission in 50% of cases. Methicillin sensitive *Staphylococcus aureus* was the detected organism in 32% of cases.

MRSA was not detected in any cases. Two children were transferred to the Starship Intensive Care Unit (2%). There were no deaths. Mean antibiotic duration was 38 days.

Twenty-nine children (30%) had surgery. Two children had pathologic fractures, two had recurrence and one had leg length discrepancy.

Discussion

Compared to the northern data, presenting features of acute osteomyelitis are similar; Māori and Pacific Island children are not as grossly overrepresented and MRI for diagnosis is common. Duration of antibiotic therapy is shorter. Overall, the disease burden is lower with less surgery, shorter length of stay, no recorded MRSA and <5% developing long-term sequelae of disease.





Presenter: Cindy Ou

Authors: Cindy Ou¹, Joe Baker^{1,2}, Rich Masters³

Affiliations: Waikato Hospital¹, Hamilton; ²University of Auckland, Auckland; ³University of Waikato, Hamilton, New Zealand

Type: Paper

Category: Paediatrics and General Orthopaedics



TITLE:

The effects of a challenge state intervention on patients undergoing elective orthopaedic surgery

Specific aims and objectives

Elective orthopaedic surgery is in high demand; increasing pressures and resource constraints within the public health system are limiting the number of elective surgeries performed. Although there are numerous programmes in place to streamline patients for surgery and increase hospital turnover, individual psychological factors are being recognised as having an important role in patient preparedness for and recovery from surgery. One such psychological framework that incorporates these factors is the biopsychosocial model of challenge and threat which examines mechanisms underlying individual differences in performance under stress.

Purpose

The purpose of this study is to apply this framework to elective orthopaedic patients undergoing total hip/knee arthroplasty and lumbar decompression surgery. This study aims to determine whether a verbal pre-operative challenge state intervention influences the psychology of patients and the effects of the intervention on recovery from surgery.

Methods

Eligible participants were randomised into intervention and control groups; the intervention was applied pre-operatively. Patient demographics and baseline characteristics were collected. Outcomes,

including cognitive appraisal ratio (CAR), length of stay in hospital and patient-reported outcomes measures, were compared between the intervention and control group.

Results

No significant differences were found in baseline characteristics between the control and intervention group except for frailty. While the intervention affected the psychology of the intervention group into the challenge direction, there were no significant differences in CAR compared to the control group. The intervention group ($M = 4.15$, $SD = 2.48$) had a significantly shorter length of stay in hospital compared to the control group ($M = 5.85$, $SD = 2.58$, $p = .004$).

Conclusion

This study demonstrated that patient psychology can be manipulated towards a challenge state in elective orthopaedic patients and that those who received a challenge state intervention had a significantly shorter stay in the hospital. More experimentation is required to distinguish the mechanism underlying these observations and to control for potential confounding factors such as frailty. However, these results have shown promising results in targeting resource and demand appraisals in elective orthopaedic patients as conceptualised in the biopsychosocial model of challenge and threat.





Presenter: Alex B. Boyle

Authors: Alex B. Boyle^{1,2}, Andreea R. Lucaciu², David N. Bernstein², Mitchel B. Harris², Anoop Prasad², Daniel G. Tobert²

Affiliations: ¹Harvard University, School of Public Health,

Boston, Massachusetts, USA, Department of Orthopaedic Surgery, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA

Type: Paper

Category: Paediatrics and General Orthopaedics



TITLE:

Risk Stratification in Orthopaedic Surgery: An evaluation of current tools, and lessons from the United States

Introduction

In orthopaedic surgery, accurate prediction of postoperative complications is critical to guide clinical decision-making, enable shared patient-surgeon discussions, and avoid adverse outcomes. Risk stratification tools aim to quantify this risk, but existing models vary widely in their performance and applicability. As health systems move toward value-based payment models and become increasingly litigious, refining these tools is increasingly important to avoid penalising surgeons treating high-risk patients and to ensure equitable access to care.

Method

This review synthesised current evidence on risk-stratification tools in orthopaedics, focusing on their ability to predict complications and guide care. A practical analysis was also undertaken on 1,036 total knee arthroplasty patients at Massachusetts General Hospital, Harvard Medical School, to compare various risk stratification tools and to assess the variability of risk distributions based on the choice of tool.

Results

Of existing risk stratification tools, the Elixhauser Comorbidity Measure (ECM) and Risk Stratification Index (RSI) 3.0 showed the strongest ability to predict common and major adverse events following orthopaedic surgery.

Conversely, tools like the ACS NSQIP calculator demonstrated variable accuracy and poor performance for high-risk procedures. The total knee arthroplasty cohort analysis revealed disparate risk distributions for the same patient population depending on the tool chosen, representing high variability between tools and a high risk of introducing bias when selecting a particular tool for risk adjustment for public health or payment purposes.

Discussion and conclusions

Despite the clinical importance of accurately assessing risk of complications and poor outcomes, no single risk-stratification tool is universally applicable across the orthopaedic population. ECM and RSI 3.0 are the most effective tools at present. Introducing risk adjustments can have unforeseen consequences as has been demonstrated in the United States.





Presenter: Hamish Clay

Authors: Hamish Clay, Teriana Maheno

Affiliations: Tauranga Hospital, Tauranga, New Zealand

Type: Paper

Category: Paediatrics and General Orthopaedics



TITLE:

Coping and Resilience After Adverse Surgical Events for Orthopaedic Surgeons in New Zealand

Background

Adverse surgical events are an inherent risk in orthopaedics and can result in significant patient harm. The emotional toll on surgeons is increasingly recognised as a critical issue for clinician wellbeing and patient safety. Despite international awareness of this phenomenon, little is known about the emotional and professional impact of such events on orthopaedic surgeons in New Zealand.

Methods

A cross-sectional, vignette-based online survey was distributed to orthopaedic consultants and trainees across New Zealand. Participants were asked to respond to five emotionally complex clinical scenarios, designed to explore distinct themes and responsibilities of the clinician involved.

Results

A total of 153 surgeons participated. Emotional responses were consistently high across all vignettes, with guilt, professional self-doubt, anxiety, and sadness commonly reported. Intra-operative nerve injury was the most challenging scenario, the highest emotionally impactful score was associated with postoperative death.

Surgeon preference for dealing with complications involved discussion with a colleague followed by personal reflection. Challenges regarding accessing formalised support are elaborated on below.

Discussion

Emotional impact was significant across surgeon experience levels. The severity of emotional distress did not always align with clinical outcomes, but more often reflected perceived personal responsibility and the preventability of the event. The most common initial response following a complication was to discuss the incident with a colleague. Personal reflection was ranked second highest suggesting either a preference of these individuals for introspection or limited access to confidential support systems. Many participants also relied on external coping strategies including family and exercise. There was considerable reluctance to seek formal psychological support. A common concern with forums such as M&M meetings was fear of reputational damage and judgement from peers.

Conclusion

Confidential, peer-based support systems and resilience training are needed. A formalised mentoring framework with CPD-linked incentives may enhance uptake. These findings inform future wellbeing initiatives and help inform institutional culture change within surgical departments.





Presenter: Karen Toh

Authors: Karen HQ Toh¹, Tim Cheok², Rhys Martin³, Henrik Baecker¹

Affiliations: ¹Auckland City Hospital, Auckland, New Zealand; ²Princes Charles Hospital, Brisbane, Australia;

³University of Adelaide, Adelaide, Australia

Type: Paper

Category: Spine



TITLE:

Clinical Outcomes Following Early versus Delayed Decompression in Patients with Thoracolumbar Spine Injuries: A Systematic Review and Meta-Analysis

Introduction

The timing of decompression in thoracic and/or lumbar spine injuries remains debated. This systematic review and meta-analysis assessed whether early decompression improves clinical outcomes compared to delayed intervention.

Methods

A systematic search of PubMed, Embase, Web of Science and Google Scholar was performed. Outcomes included neurological improvement, respiratory complications, perioperative mortality, length of stay (LOS) in hospital and ICU, and duration on mechanical ventilation. Log odds ratios (LOR) and mean differences (MD) were calculated. Subgroup analysis by timing thresholds (24, 48, 72 hours) and meta-regression for injury severity were conducted.

Results

43 studies were included. Early decompression was associated with increased odds of neurological improvement (LOR = 0.82, $p < 0.001$), decreased LOS in hospital (MD = -3.19, $p < 0.001$) and ICU (MD = -3.21, $p = 0.01$), fewer respiratory complications (LOR = 0.58, $p = 0.01$), and shorter ventilation time (MD = -2.41, $p = 0.01$). No difference was observed in perioperative mortality ($p = 0.52$). Effects were greater in studies including severely injured patients.

Subgroup analysis showed 48-hour cutoff provided optimal benefits for neurological recovery and ICU LOS.

Discussion

Early decompression offers neurological and systemic benefits. Reduced ICU and ventilation times may reflect earlier mobilisation and improved respiratory function. Benefits were amplified in severely injured patients, suggesting that timely intervention may mitigate the physiological impact of polytrauma. The lack of increased perioperative mortality supports the safety of early surgery. While heterogeneity exists in study designs and definitions of "early," the consistent direction of benefit supports prioritising earlier intervention.

Conclusion

Early surgical decompression (<48 hours) in thoracolumbar spine injuries improves neurological and respiratory outcomes and reduces hospital resource use. Early intervention should be considered, especially in severe cases.





Presenter: Katherine Borowczyk

Authors: Katherine Borowczyk, Meenu Shunmugam, Tyler Rudolph, Alpesh Patel

Affiliations: Middlemore Hospital, Auckland, New Zealand

Type: Paper

Category: Spine



TITLE:

Mortality Rates in Elderly Patients with Traumatic Spinal Cord Injury

Introduction

This study aimed to identify the six-month mortality rate in elderly patients with traumatic spinal cord injuries, examining both surgical and non-surgical management approaches. Our secondary objective aimed to identify risk factors contributing to mortality.

Methods

A retrospective observational analysis was conducted on patients aged 65 and older with spinal cord injuries admitted to Middlemore Spinal Cord Injury Unit between 2014 and early 2022. After exclusions, 130 data points were analysed. Data was collected from clinical records and analysed using descriptive statistics. Survival and mortality rates for surgical and non-surgical groups were calculated, while factors such as age, sex, ethnicity, BMI, injury mechanism, smoking status, and neurological severity (ASIA Impairment Scale) were evaluated. Chi-square and Fisher's exact tests were used for variable-outcome comparisons. Cox regression models adjusted for clinically relevant confounding variables.

Results

Participants' ages ranged from 65 to 95; 77.7% were male. Surgical patients exhibited a 14.3% six-month mortality rate, compared to 28.2% in non-surgical patients. Statistical significance was limited by small cohort size, but increased mortality was associated

with a high comorbidity index. Statistically significant mortality was noted with ASIA A/B versus C/D/E scores; being 28.89% and 6.94%, respectively. Patients over 85 reflected significant mortality in surgical cases, with two thirds of these patients deceased at 6 months. Unique to the New Zealand population; Māori represented the only ethnic group with mortality exceeding survival at 55%.

Discussion and Conclusion

This research highlights the challenges clinicians face managing elderly patients with traumatic spinal cord injuries. Increased mortality was associated with age, injury severity, and comorbidities. These findings also highlight discrepancies of outcomes within the New Zealand population and serve as a foundation for further research, aimed to guide clinical decision making and discussions with patients and families.





Presenter: Joe Baker

Authors: J. Cunningham¹, D. Sreenivasan², S. Manners³, J. F. Baker⁴, and C. J. T. Spence⁵

Affiliations: ¹Epworth Richmond, University of Canberra, Australia, ²University of Auckland, Auckland; ³Middlemore

Hospital, Auckland; ⁴Waikato Hospital, Hamilton,

⁵Fisher and Paykel Healthcare Ltd, Auckland, New Zealand

Type: Paper

Category: Spine



TITLE:

Surgical humidification (HumiGard™) reduces bacterial load in an open spine animal infection model

Introduction

Surgical site infections (SSIs) are a leading cause of revision operations, impacting patient outcomes and healthcare costs. Exposure of surgical wounds to the dry and cold theatre environment has been overlooked as a modifiable factor in reducing SSIs. The F&P HumiGard™ system is designed to deliver warm and humidified air intra-operatively to the wound bed. This study investigates the potential for HumiGard™ to reduce bacterial load in a porcine model of spinal surgery.

Methods

Pigs were randomised to the Control and HumiGard groups (n=6 per group). An open spine surgery was simulated, and the wound surface was inoculated with ~106 CFU/ml of *Staphylococcus aureus*. Infected wounds were exposed to the ambient theatre conditions (Control) or warm humidified air (HumiGard) for 180 min. Wounds were re-opened three days post-surgery and bacterial enumeration and histological analyses were performed on biopsies.

Results

At Day 3 post-surgery, the growth of *Staphylococcus aureus* was 84% less in the HumiGard group tissue than the Control ($p < 0.05$). Large bacterial colonies infiltrated the deeper tissues in Control, while the HumiGard group tissues had smaller bacterial colonies

confined to the superficial zone. Distribution of white blood cells varied significantly between the Control and HumiGard groups at Day 3 post-surgery. Neutrophil proportion in the HumiGard group ($34\% \pm 5.1\%$) was significantly lower than the Control group ($65\% \pm 6.1\%$). In contrast, the proportion of mononuclear cells was significantly higher in HumiGard tissues ($66\% \pm 5.1\%$) than Control ($35\% \pm 6.1\%$), implying a transition from the pro-inflammatory to the reparative stage of wound healing.

Conclusion

In this animal study, HumiGard offered a protective benefit against bacterial growth, indicated by the lower bacterial load and an advancement in the wound healing process. By maintaining physiological temperature and humidity of the wounds, HumiGard may reduce the risk of SSIs following orthopaedic surgery.





Presenter: Geonhoo Park

Authors: Geonhoo Park, Henrik Baecker

Affiliations: Auckland City Hospital, Auckland, New Zealand

Type: Paper

Category: Spine



TITLE:

Retrospective study of radiographic Alignment in Cervical Myelopathy

Introduction

Cervical myelopathy is common and can lead to significant morbidities and can be caused by various pathologies. Understanding radiological differences between them would be crucial for optimising diagnosis and treatment. This study aims to outline the prevalence of cervical spine pathologies contributing to myelopathy and the correlation between cervical alignment and the causative pathology.

Methods

A retrospective analysis was conducted on patients referred to our spine centre from 2020–2024. The preoperative and postoperative imaging, patient demographics (age, ethnicity, BMI) and clinical presentation were reviewed. Pathologies identified were spondylosis, disc protrusion and Ossification of the Posterior Longitudinal Ligament (OPLL), and their alignments were assessed using erect X-ray and MRI using the C2–C7 Cobb angle.

Results

42 patients were included in the study after exclusion. 85.7% of them had myelopathic signs and 38% of them had associated radicular symptoms. Spondylosis accounted for 59.5%, disc protrusion 23.8% and OPLL 16.6% of patients. The average C2 to C7 Cobb angle on erect X-ray for spondylosis was $4.3 \pm 14.1^\circ$, for disc

it was $9.4 \pm 13.9^\circ$, and for OPLL $8.8 \pm 9.8^\circ$. On MRI these were $6.0 \pm 12.2^\circ$, $5.3 \pm 8.0^\circ$ and $4.5 \pm 9.5^\circ$ respectively. There was no statistically significant difference between the groups and no correlation between pathology and Cobb angle was found (C2-7 Cobb angle on erect X-ray $r = -0.653$; $p = 0.526$, Cobb angle on MRI $r = 0.069$, $p = 0.934$).

Discussion

Our study found no significant correlation between the specific cervical spine pathologies and the cervical spine alignments. There was a wide confidence interval within the pathology groups which could suggest individual variability in cervical alignment irrespective of the causative pathology. Despite these findings, the alignment remains a critical factor in cervical spine surgical planning.

Conclusion

No significant correlation was found between pathology and Cobb angle on X-ray or MRI. Erect X-ray remains crucial for accurate cervical alignment and optimal treatment planning.





Presenter: Maksymilian Osiowski

Authors: Maksymilian Osiowski, Aleksander Osiowski, Wojciech Siłka, Maciej Preinl, Kacper Stolarz, Dominik Tattera

Affiliations: Department of Orthopaedics and Rehabilitation, Jagiellonian University Medical College, Zakopane, Poland; OrthoSpine research group

Type: Paper

Category: Spine



TITLE:

Lumbosacral transitional vertebrae as a risk factor for low back pain: a meta-analysis

Background

Lumbosacral transitional vertebrae (LSTV) is a congenital spine anomaly in which the enlarged transverse process of the fifth lumbar vertebrae can fuse with the first sacral segment forming sacralisation or lumbarisation. Low back pain (LBP) has the highest prevalence globally among musculoskeletal conditions and is the leading cause of disability worldwide. Various authors tried to investigate the relationship between LSTV and LBP in their local populations with different results but the correlation remained unclear. Aim of this study was to unambiguously determine if LSTV can independently cause pain of the lower back.

Methodology

Two databases (Pubmed and Embase) were searched for clinical-control studies in which authors analyzed prevalence of LSTV in both control group (without low back pain) and in a study group (with low back pain). Search terms such as: "lumbosacral transitional vertebrae", "sacralisation", "lumbarisation", "LSTV", "Bertolotti syndrome", "lumbosacral transitional segment" were implemented to find eligible articles which resulted in screening 2152 records by 3 independent researchers. Only studies where patients had non-specific low back pain with no underlying pathology were included.

Pooled odds ratio was calculated using Comprehensive meta-analysis v4 programme under random effects model.

Main results

Our meta-analysis included 12 studies with 9910 patients. Pooled odds ratio turned out to be 1.35 (95%CI 1.15-1.58) which means that existence of LSTV significantly increases the chances of low back pain. Additional data shows prevalence of LSTV in symptomatic population at 18.9% (95%CI=0.15-0.23) while in asymptomatic population at 13.1% (95%CI=0.11-0.15) which confirms the correlation.

Conclusions

Our study is the first to unequivocally show an association between LSTV and LBP globally. LSTV is an independent and significant risk factor for lower back pain. When examining a patient suffering from low back pain, it is important to keep lumbosacral transitional vertebrae in mind as a potential separate cause of pain, especially when there is no other apparent pathology visible on diagnostic imaging. If LSTV is present in such a patient, surgical treatment to resect the enlarged transverse processes of the lumbosacral junction is worth considering.





Presenter: Jacob Wong Woo

Authors: Jacob Wong Woo¹, Dr John Ferguson²

Affiliations: ¹University of Auckland; ²Allevia Ascot Hospital, Auckland, New Zealand

Type: Paper

Category: Spine



TITLE:

2 Year Clinical and Radiographic results of the Anterior Lumbar Fusion: A Single Surgeon Case Series

Introduction

ALIF is enjoying something of a renaissance in the treatment of lumbar DDD. We reported the largest case series using a uniform technique, implant and graft material.

Study Design

Uncontrolled Case Series of a single cohort under the care of a single surgeon.

Objective

The goal of this study is to review the ability of ALIF to provide patients with successful outcomes using clinical and radiographic analysis.

Methods

Patients who had previously undergone a single or multilevel ALIF performed by a single surgeon for degenerative or post-traumatic aetiology, at a single institution between 2008 and 2021 were retrospectively reviewed. Clinical outcomes were determined according to patient's changes in preoperative and post-operative Oswestry Disability Index (ODI).

Radiographic outcomes were assessed by plain radiographs, CT scans and clinical examination one year into the post-operative period.

Results

463 patients met inclusion criteria. 102 patients were lost to follow up. The average age was 45.89 ± 12.5 years. A total of 340 patients (94.2%) had attained successful fusion based on plain radiographs and clinical exam. However, 21 patients (5.8%) developed pseudoarthrosis. Overall, ODI scores changed from $40.31\% \pm 15.86$ to $12.65\% \pm 14.56$.

Discussion

We present the largest case series currently reported demonstrating patient satisfaction and clinical success equivalent to more commonly performed orthopedic procedures.

Conclusion

Our study has demonstrated that the ALIF remains a highly successful surgical approach that provides patients with a high degree of satisfaction. The union rates for the anterior approach in this study are consistent with literature values between 90 and 95%. We also found that vertebrae are more likely to unite when performing a standalone 'single level' ALIF compared to an ALIF being performed as part of a multilevel fusion.





Presenter: Claudia Bloy

Type: Paper

Authors: Claudia Bloy¹, Tangi Porea², Martin Jadresic²,
Joe Baker²

Category: Spine

Affiliations: ¹University of Auckland, Auckland; ²Waikato
Hospital, Hamilton, New Zealand



TITLE:

Influence of Ethnicity and NZ Deprivation Index on Complications Following Spinal Surgery

Introduction

Understanding the risk of complications following surgery is essential for patient counselling but also, in the New Zealand context, accurately prioritising care within the public health system. This study aimed to assess the influence of ethnicity and social deprivation on complications following spine surgery.

Method

A cohort of 482 patients were analysed. Patients were undergoing spine surgery for any reason. Demographic variables, NZ Deprivation Indices, distance from hospital and comorbid conditions were collected. Outcomes of interest included any medical complications, surgical site infection, length of stay, readmission within 30-days and 1-year mortality. Univariate and multivariate analyses were performed to identify predictive variables.

Results

Mean age 56 years; 273 male (56%). There were 314 NZ European (65%), 108 Māori (22%) and 60 'other ethnicities' (13%). Māori were on average slightly younger and had greater NZDepIndex. There was very little influence of ethnicity or social deprivation on any outcome except for readmission within 30-days (Māori OR 1.05-14.02%).

Increased age, increased ASA (OR 1.03-1.16) and increased surgical invasiveness (OR 1.01 – 1.02) were all predictive of medical complications.

History of malignancy (OR 1.01 – 1.13), albumin (0.993 – 0.999) were predictive of increased risk of SSI. Rurality (distance from hospital) was equivocally associated.

Discussion and Conclusions

In this single centre analysis, neither ethnicity nor social deprivation provided any major predictive value for complications following spinal surgery. As Rumball-Smith et al. have reported, Māori were more likely to be readmitted. Robust prospective data collection will help us identify modifiable variables and identify 'at risk' patient cohorts. Enhanced preoperative counselling and post-operative support are desirable for Māori.





Presenter: Wesley Tam

Type: Paper

Authors: Wesley Tam¹, Joseph Baker²

Category: Spine

Affiliations: ¹Christchurch Hospital, Christchurch; ²Waikato Hospital, Hamilton, New Zealand



TITLE:

Complications and Mortality After Surgery for Degenerative Cervical Myelopathy: Outcomes Analysis from a New Zealand Centre

Introduction

Despite increased interest in degenerative cervical myelopathy (DCM), there is a lack of data from New Zealand. This study aims to describe the population of those who have undergone surgery for DCM in Waikato Hospital and analyse their outcomes.

Methods

All patients that underwent surgery for DCM at Waikato Hospital between the 1st January 2014 and the 1st December 2024 were included. Demographics, co-morbidities, surgical intervention, outcomes, and outpatient follow-ups were recorded. Complications were graded according to the Clavien-Dindo classification.

Results

345 surgeries were included. The mean age was 61.8 years. 58.8% were males. 21.5% were Māori. Māori presented for surgery at a younger age than non-Māori individuals (55.6 years and 63.4 years, $p < .001$). Socioeconomic barriers to health were higher among Māori: higher levels of socioeconomic deprivation ($p < .001$), higher rates of smoking (standardised residual = 3.28), and poorer follow-up clinic attendance (OR = 4.47, $p = .004$).

230 (66.7%) had no complications within 30 days of surgery. 51 (14.8%) had a Clavien-Dindo class I, and 18 (5.2%) class IIIb. 7 (2.8%) sustained a C5 nerve palsy. 15 (4.4%) developed surgical site infection (SSI). 6 mortalities within 365 days of surgery were recorded – only one was directly related to the surgery and was within 30 days of surgery.

Predictors of infection of SSI include Māori ethnicity (OR = 2.23), current smoking status (OR = 2.62), high deprivation score (OR = 11.99), and worse pre-op function (OR = 5.32).

Discussion and Conclusions

Selected variables were associated with higher complication risk and may allow for improved pre-operative counselling. The results highlight the need to better understand predisposition to DCM among Māori and ensure equitable healthcare access for timely diagnosis and treatment. Prospective, multicentre data collection is essential to achieve this.





Presenter: Rohil V. Chauhan

Authors: Rohil V. Chauhan¹, Aanirudh Kheterpal²,
Anand H. Segar^{1,2,3}

Affiliations: ¹Auckland Spine Surgery Centre, Auckland;
²Faculty of Medical and Health Sciences, The University of

Auckland; ³Department of Orthopaedics, Auckland City
Hospital, New Zealand

Type: Paper

Category: Spine



TITLE:

Feasibility and Outcomes of a Joint Physiotherapy-Orthopaedic Consultation Model: A Single-Centre Secondary Care Experience

Introduction

Timely access to orthopaedic spine consultation remains a challenge due to increasing demand and workforce constraints. Integrating advanced physiotherapy practice models within orthopaedic services is an emerging strategy to streamline care. While adopted across New Zealand's tertiary sector, its role in private secondary care is largely underexplored.

This study aimed to evaluate the feasibility, patient satisfaction, diagnostic concordance and clinical outcomes of a physiotherapy- integrated orthopaedic spine consultation model in private secondary care.

Methods

A retrospective review was conducted on all consenting patients seen between March and July 2023 in structured five-step physiotherapy-orthopaedic consultation model: (1) physiotherapist-led subjective history, (2) physical examination, (3) imaging review and provisional diagnosis, (4) handover and surgeon validation and (5) multidisciplinary shared decision-making. Outcomes included management decisions, wait times and patient satisfaction (5-item survey). Wait times were compared with a 2021 pre- model cohort. A diagnostic concordance sub-study (n=35) was planned but unavailable at submission.

Results

Among 233 patients (mean age: 46.8 years; 53.6% male), 89.3% were referred by their general practitioners. The predominant presentation was "lower back pain with referred leg symptoms" (73.4%). Non-operative care was indicated in 74.7% of cases, including referral for physiotherapy (51.1%), musculoskeletal medicine consultation (44.8%), or further imaging (24.1%). Surgical workup was indicated for 25.3% (n=59), with 10.7% (n=25) proceeding to surgery.

Patient satisfaction was high (mean: 91.3%), with highest ratings for "quality of care" (92.3%), followed by "explanation of treatment/outcomes" (91.7%) and "feeling heard with concerns addressed" (91.3%). As anticipated, mean wait times were longer compared to the 2021 cohort (63 vs 43 days), due to service growth during the study period.

Conclusion

A physiotherapy-integrated model is both feasible and well-received in private orthopaedic spine care. Given most patients are managed non-operatively, appropriately-trained physiotherapists can play a valuable adjunctive role in streamlining care pathways and optimising service delivery.





Presenter: Duncan Reid

Authors: Duncan Reid¹, Joel Collett², Daniel Harvey², Geoff Potts³

Affiliations: ¹School of Clinical Sciences, Auckland University of Technology, Auckland; ²Sports & Spinal

Physiotherapy, Auckland; ³KneeCare, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Patient Reported and Functional Outcomes following Anterior Cruciate Ligament Injuries: A retrospective review of Escalated Care Pathways

Introduction

ACL injuries in New Zealand (NZ) account for 80% of knee ligament surgeries, with most of the surgeries and rehabilitation funded by ACC. Due to increasing costs in 2020 ACC proposed a new way of working called Escalated Care Pathways (ECP) to develop innovative changes to the current management of significant musculoskeletal conditions in particular ACL. The objective of this pilot scheme was to improve management, return to work, equity, access to surgery, and more effective rehabilitation.

Aims

To analyse and quantify the Patient Reported Outcome Measures (PROMS) and functional measures in patients enrolled in the Careway ACL patient group.

Methods

The Knee Osteoarthritis Outcome Score (KOOS), Limb Symmetry Index (LSI), demographic information, number of physiotherapists visits and overall duration of treatment was collected from January 2021 to December 2023.

Results

Data from 750 patients (surgical: n = 332 (43%), mean age 33.1 ± 13.1 years, non-surgical: n = 418, (55.7%) mean age of 36.1 ± 15.1 years, were analysed.

Treatment duration was significantly longer in the surgical group (mean 317.2 ± 141.5 days) vs non-surgical group (280.2 ± 158.1 days) ($p < 0.01$). Surgical patients had more physiotherapy visits (25.2 ± 19.6 vs. 13.1 ± 14.1 , $p < 0.01$). KOOS Score and LSI values improved in both groups. The change scores for KOOS surgical (29.07 SD 20.0) and non-surgical (25.8 SD 18.4) were not statistically significant ($p = 0.052$). LSI scores increased from baseline to exit, (surgical: 77.25 ± 26.8 to 100.8 ± 29.7 ; non-surgical: 77.05 ± 36.3 to 104.7 ± 36.3) but were not statistically significant ($p = 0.051$).

Conclusion

The study found that both surgical and non-surgical patients achieved positive outcomes upon exiting the pathway. The surgical group's average number of physiotherapy visits aligned closely with existing literature but were higher than current practices in New Zealand.





Presenter: Mark Clatworthy

Authors: Mark Clatworthy¹, Richard Rahardja²,
Simon W. Young²

Affiliations: 1Allevia Auckland; 2North Shore Hospital,
Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Results of Isolated BPB, Quads and Hamstring ACLR vs Combined ACLR with a Lateral Extra-Articular Procedure from the NZ ACL Registry

Introduction

The addition of a lateral extra-articular procedure (LEAP) in primary anterior cruciate ligament reconstruction (ACLR) has increased to address rotational instability. Orthopaedic registries have made significant contributions to the improvement of patient outcomes through their ability to detect inferior results associated with specific surgical techniques. The aim of this study was to present the early results of combined ACL reconstruction with a LEAP from the New Zealand ACL Registry.

Methods

Prospective data recorded in the New Zealand ACL Registry were analyzed. Primary ACLR performed between May 2014 and June 2022 were included, allowing for a minimum follow-up of 1-year. Procedures using bone-patellar tendon-bone (BTB), quads tendon or hamstring tendon autografts were analyzed. The primary outcome was revision ACLR. The revision rate was also analyzed in patients 16-25 and 26 and older. Secondary outcomes included the Marx activity score and the Knee Injury Osteoarthritis Outcome Score (KOOS). Analysis was stratified by graft type and compared between isolated ACLR (iACLR) versus ACLR with a LEAP (ACLR+LEAP). Statistical analysis was performed through a Chi-square test for binary outcomes and Mann-Whitney U test for continuous outcomes.

Results

A total of 20329 primary ACLR were analyzed in which 1263 had a LEAP. In the BTB cohort (n = 6442), 5812 underwent ACLR and 630 underwent ACLR+LEAP.

There were 3 revisions in the ACLR+LEAP patients with a BTB autograft (0.4%), compared to 630 revisions in patients who underwent BPB graft only ACLR (2.4%, $p = 0.038$). In the hamstring cohort (n = 12776), 12231 underwent iACLR and 545 underwent ACLR+LEAP. Four patients with ACLR+LEAP with a hamstring tendon autograft underwent a revision (0.7%) compared to 541 patients with a hamstring tendon autograft (4.8%, $p = 0.020$). In the quads tendon cohort (n = 1111), 1023 underwent iACLR and 88 underwent ACLR+LEAP. One patient with an ACLR+LEAP underwent a revision (1.1%) compared to 19 patients with a quads tendon autograft (1.9%, $p = 0.845$). With all grafts + LEAP patients over 25 had no failures. Patients aged 16-25 with a LEAP had a lower failure rate with all graft types (Fig 1). In the BTB quads and hamstring cohorts, similar Marx activity ($p > 0.05$), and KOOS scores ($p > 0.05$), were reported at 2-year follow-up when comparing ACLR and ACLR+LEAP.

Discussion and Conclusion

Early data demonstrates a lower revision rate when ACLR using either BTB, quads or hamstring autograft is combined with a LEAP. Patients 16-25 showed a greater difference in the failure rate. Similar PROM scores were reported at 2-year follow-up between iACLR and ACLR+LEAP.

Summary

Early results from the New Zealand ACL Registry demonstrates lower revision rates when performing ACL reconstruction with a lateral extra-articular procedure. A further analysis will be performed just prior NZOA ASM.





Presenter: Richard Rahardja

Authors: Richard Rahardja, Hamish Love, Mark G. Clatworthy, Simon W. Young

Affiliations: Department of Surgery, University of Auckland, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Lower Revision Rate with Bone-Patellar Tendon-Bone Autograft Compared to Both Quadriceps and Hamstring Tendon Autografts: Results from the New Zealand ACL Registry

Introduction

The use of hamstring tendon (HT) autografts in anterior cruciate ligament (ACL) reconstruction has reduced in New Zealand after registry data demonstrated a higher revision rate. In contrast, the use of quadriceps tendon (QT) autografts has increased, but it is unclear whether it has a lower revision rate than the bone-patellar tendon-bone (BTB) autograft.

Methods

Prospective data from the New Zealand ACL Registry were analyzed. Primary ACL reconstructions performed between 2014 and 2022 with a minimum follow-up of two-years were eligible. The primary outcome was revision. Secondary outcomes included patient-reported kneeling difficulty, the Knee Injury and Osteoarthritis Outcome Score (KOOS) and the Marx activity score. Multivariable analysis was performed via Cox regression survival analysis to calculate hazard ratios (HR) adjusted for age, gender, timing of surgery and meniscal injuries.

Results

15,687 primary ACL reconstructions were analyzed, of which 4,424 used a BTB graft (28%), 574 used a QT graft (4%) and 10,689 used a HT graft (68%). The BTB graft had the lowest revision rate of 3.1% compared to 4.4% with the QT graft and 6.1% with the HT graft ($p < 0.001$). On multivariable analysis, the QT graft (HR = 1.7, $p = 0.01$) and the HT graft (HR = 2.3, $p < 0.001$) had a higher risk of revision when compared to the BTB graft. The BTB graft had the highest incidence of kneeling difficulty at 2-year follow-up (16.4%) when compared to the QT (13%) and HT (9.8%, $p < 0.001$) grafts. Despite this, the BTB graft had better KOOS and Marx activity scores when compared to the QT and HT grafts.

Discussion/Conclusion

The BTB graft has a lower revision rate than both the QT and HT grafts. Patients with a BTB graft are more likely to report difficulty with kneeling, but still report better KOOS and Marx activity scores at 2-year follow-up.





Presenter: Simon Young

Authors: Simon Young, Mei Lin Tay, Kohei Kawaguchi, Rupert van Rooyen, Matthew L Walker, Bill Farrington, Ali Bayan

Affiliations: North Shore Hospital, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Outcomes of Functional versus Mechanical Alignment in Robotic-Arm Assisted Total Knee Arthroplasty: A Randomised Controlled Trial

Introduction

Mechanically aligned (MA) total knee arthroplasty (TKA) is the gold standard; however, some patients continue to report post-surgical dissatisfaction. An alternative is Functional alignment (FA), which integrates kinematic alignment (KA) principles with pre-resection bone balancing within defined boundaries. FA aims to improve outcomes by restoring native joint lines and optimising soft-tissue balance. There is limited comparative evidence between the two procedures.

Methods

A prospective, randomised controlled trial compared MA (n=121) and FA (n=123) using robotic-assisted TKA. MA components were positioned perpendicular to the limb mechanical axis, and balance achieved with soft-tissue releases. For FA, initial virtual component positioning was matched with native knee anatomy, with soft-tissue adjustments prior to bone cuts. A mixed-model analysis of variance was performed to compare outcomes. The primary outcome was the Forgotten Joint Score (FJS).

Results

At two-years, mean FJS for both procedures were similar (MA: 64.4 ± 30.1 vs. FA: 70.1 ± 25.6 , $p=0.10$). More soft-tissue releases were performed in MA than FA (65% vs. 16%, $p<0.001$).

FA patients had higher Knee Injury and Osteoarthritis Outcome (KOOS) Symptoms (86.6 ± 12.9 vs. 82.5 ± 14.0 , $p=0.01$) and Quality of Life (QOL) scores (76.1 ± 20.3 vs. 70.7 ± 22.7 , $p=0.03$), and more 'would recommend' the procedure (94% vs. 82%, $p<0.01$) compared with MA.

For constitutionally varus knees (Coronal Plane Alignment of the Knee Type I), FA patients reported higher FJS (71.3 ± 24.8 vs. 56.8 ± 31.6 , $p=0.02$) and KOOS-QOL (76.4 ± 21.7 vs. 64.2 ± 19.2 , $p=0.02$) than MA. Both procedures had similar patient-reported outcomes (Oxford Knee Score, KOOS, EuroQol-5 Dimensions, Pain Visual Analog Scale), clinical outcomes (length of stay, functional physio tests), reoperations, and implant survivorship (FA: 1 vs. MA: 0 revisions).

Conclusions

FA required fewer soft-tissue releases compared with MA, however outcomes at two years were similar. FA may provide improved outcomes for a particular subgroup of patients based on preoperative alignments.





Presenter: Mei Lin Tay

Authors: Mei Lin Tay, Richard Rahardja, Bill Farrington, Kohei Kawaguchi, Simon W Young

Affiliations: North Shore Hospital, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Overall Pain is the Most Important Predictor of Patient Satisfaction Following Total and Unicompartmental Knee Arthroplasty

Aims

The Oxford Knee Score (OKS) is a validated questionnaire for measuring outcomes following knee arthroplasty. Of the 12 individual questions, some may have more clinical importance than others. The aim of this study was to identify the OKS question(s) most associated with patient satisfaction to inform clinical practice and future research.

Patients and methods

The New Zealand Joint Registry (NZJR) has captured patient satisfaction data for all knee arthroplasty patients since 2021. A total of 9,384 total knee (TKA) and 2,424 unicompartmental knee arthroplasty (UKA) with satisfaction scores recorded in the NZJR up to 15-year follow-up were included. Associations between individual OKS questions and satisfaction were assessed using logistic regression and receiver operating characteristic analyses.

Results

The most important question associated with patient satisfaction was on 'overall pain' for both TKA (6 months: odds ratio (OR) 1.6, $p < 0.01$; 5 years: OR 1.5, $p = 0.04$; 10 years: OR 1.7, $p = 0.02$; 15 years: OR 1.7, $p = 0.05$) and UKA (6 months: odds ratio (OR) 1.9, $p < 0.01$; 5 years: OR 2.0, $p = 0.01$; 10 years: OR 1.7, $p = 0.15$; 15 years: OR 1.4, $p = 0.49$).

Additional questions found to be associated with satisfaction were 'getting in and out of the car', 'limping when walking' and 'knee giving way', however these were mostly limited to TKA patients at early to mid-term follow-up (prior to 5 years).

Conclusion

The best predictor of patient satisfaction following knee arthroplasty was 'overall pain'. Future research and clinical practice focused on improving knee arthroplasty patient satisfaction should take into consideration patients' level of post-operative pain.





Presenter: Morgan Lingard

Type: Paper

Authors: Morgan Lingard, Chris Frampton, Gary Hooper

Category: Knee

Affiliations: University of Otago, Christchurch, New Zealand



TITLE:

Predicting future outlier status for total knee arthroplasty surgeons

Introduction

The New Zealand Joint Registry monitors surgeon-level arthroplasty outcomes using funnel plots. If future outlier status could be predicted, this would provide an opportunity to intervene and potentially improve performance prior to exceeding outlier thresholds. This study evaluated the predictive value of revision rate trend and exceeding a lower "alert" threshold for subsequent identification as an outlier.

Methods

Three separate analyses were undertaken. The first used the revision within five years timeframe and evaluated trend in revision rate for 2021 outliers over the previous ten years. The second summarized the predictive value of exceeding the 80% control limit for being identified as an outlier (exceeding the 95% control limit) within the subsequent three years. The third identified outliers and summarized the percentage of these that exceeded the 80% control limit in the three years preceding identification as an outlier. These two latter analyses identified outliers from 2017 through 2021.

Results

Six of eight outliers with a tracked longitudinal performance showed an upward trend in revision rate, relative to the control limit, prior to exceeding the outlier threshold.

Thirty-six surgeons exceeded the 80% control limit in the five reporting years (2014 to 2018). Ten of these surgeons became outliers within three years of first exceeding the lower threshold; a significantly higher proportion than those remaining below the 80% control limit ($p < 0.001$). All seven surgeons identified as outliers from 2017 to 2021 were outside the 80% control limit in at least one of the three years prior to exceeding the outlier threshold.

Conclusion

Trend in revision rate and exceeding the 80% control limit have predictive value for future outlier status. Including this information in reports could facilitate earlier changes to practice and avoidance of outlier status.





Presenter: Simon Young

Authors: Mei Lin Tay^{1,2}, Kohei Kawaguchi², Ali Bayan¹, Robert S. J. Elliott^{1,2}, Bill J Farrington¹, Rupert van Rooyen¹, Rob Sharp¹, Matthew L Walker¹, Simon W Young^{1,2}

Affiliations: ¹North Shore Hospital, Auckland; ²University of Auckland, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Equivalent Clinical Outcomes of Cemented and Cementless Total Knee Arthroplasty with Patella Resurfacing at Five Years: A Randomised Controlled Trial

Introduction

Cemented fixation remains the gold standard for total knee arthroplasty (TKA). Introduction of cementless implants was intended to improve fixation and reduce risk of aseptic loosening, which is a leading cause of TKA failure. While use of cementless TKA has increased over the last decade, comparative mid to long-term data is lacking. This randomised controlled trial (RCT) aimed to compare clinical and radiographic outcomes between cemented and cementless TKA at five years.

Methods

In this prospective RCT, 316 patients undergoing primary TKA were randomised to receive either fully cemented (n=158) or fully cementless (n=158) implants including patella resurfacing. All patients in the cemented arm received the allocated intervention, whereas 15 patients in the cementless arm required cementation of at least one component. Primary study outcomes included revisions and reoperation rates, patient-reported outcome measures (PROMs) and incidence of radiolucent lines assessed from standardised radiographs. Outcomes were compared using risk ratios, t-tests and Chi-squared tests.

Results

There was 95% follow-up at five years. There were no differences between the groups for incidence of revisions (1 cemented vs. 2 cementless, relative risk (RR): 1.4, 95% confidence interval (CI): 0.6-3.2, p=0.49; all periprosthetic infections) or other reoperations (10 cemented vs. 7 cementless, RR: 0.9, CI 0.5-1.6, p=0.62). Similarly, no differences were found in PROMs (Oxford Knee Score, EuroQol-5Dimensions, International Knee Society Score, Pain Visual Analog Scale, Forgotten Joint Score, or satisfaction).

Compared with cementless TKA, cemented TKA had a higher incidence of non-progressive radiolucencies (27 cases, RR: 1.9, CI: 1.6-2.2, p<0.001), and longer surgical time of four minutes (73.4 vs. 69.7, p=0.04).

Conclusions

At five years, cemented and cementless TKA demonstrated equivalent clinical outcomes, including revision rates, reoperation rates and PROMs. Additionally, the incidence of non-progressive radiolucencies detected on standardised radiographs were decreased with use of cementless compared with cemented TKA implants.





Presenter: Aryan Katyal

Authors: Aryan Katyal, Simon Young, Mark Zhu

Affiliations: North Shore Hospital, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Periprosthetic Joint Infection, Patellofemoral Arthrosis and Aseptic Loosening Remain the Main Reasons for Total Knee Arthroplasty Failure: A Multi-Centre Twenty-Four-Year Study

Introduction

While large-scale data on total knee arthroplasty (TKA) failures are well established in national joint registries, recorded reasons for failure lack granularity. Understanding reasons for TKA failures is crucial for optimising patient outcomes. This study aimed to identify reasons for TKA failures and trends in failure over the last two decades.

Methods

A total of 20,235 primary TKAs were identified across the three Auckland tertiary hospitals from 2000–2023. Clinical coding and national joint registry data were cross-referenced to identify any 'failures', defined as subsequent revision or reoperation for periprosthetic joint infection (PJI). Failure reasons were determined from systematic review of operative notes, microbiology, and imaging. For revisions outside of Auckland, records were obtained from operating surgeons. For analysis, failures were grouped by time from index procedure (five-year bands) and by year (2000-2014, 2014-2023) and compared using chi-squared tests.

Results

A total of 714 failures were identified (3.5%). The three most common reasons were PJI (51.2%), patellofemoral (PF) arthrosis (15%), and aseptic loosening (12.2%).

The proportion of PJI failures was greatest at early follow-up (56% within 5 years of index procedure vs. 21% at 15-20 years, $p < 0.001$), whereas aseptic loosening was more prevalent at late follow-up (29% at 15-20 years vs. 9% within 5 years, $p < 0.001$). PF arthrosis rates were consistent across 20 years ($p = 0.14$). PJI failures increased from 43% of all failures in 2000-2014 to 61% in 2014-2024 ($p = 0.02$). There was no difference for aseptic loosening (2000-2014: 14% vs. 2014-2024: 10%, $p = 0.51$) or PF arthrosis (2000-2014: 14% vs. 2014-2024: 16%, $p = 0.84$).

Discussion and Conclusion

PJI remains the leading cause for failure, while proportions of failures due to aseptic loosening and PF arthrosis are unchanged over the last two decades. These findings emphasize the need for continued optimisation of infection control, implant development and patient selection strategies for TKA.





Presenter: Elizabeth Cullen

Authors: Cullen E¹, Frampton C², Sandiford A¹

Affiliations: ¹Southland Hospital, Invercargill; ²Department of Medicine, University of Otago, Christchurch, New Zealand

Type: Paper

Category: Knee



TITLE:

Fate of the Infected Unicompartmental Knee Arthroplasty: A New Zealand Joint Registry Study

Introduction

Incidence of prosthetic joint infection (PJI) in Unicompartmental Knee Arthroplasty (UKA) is up to 0.8% worldwide and evidence for long term outcomes remain limited. The unique presence of implant infection in combination with native cartilage and septic arthritis have both diagnostic and management implications. This study aims to identify outcomes of PJI revision following UKA from the New Zealand Joint Registry (NZJR).

Methods

All UKA revisions were extracted from the NZJR. Demographic, relevant clinical and intra-operative data, reason for revision, time to revision and death were identified. Revisions and re-revisions were analysed to determine revision strategy, outcomes and survival.

Results

77 UKA revisions for PJI were identified. An additional 37 re-revisions following prior revision(s) for reasons other than deep infection were analysed. Of the 77 UKA revisions, 31 were conversion to TKA and 42 were liner exchange, with 27 (83.9%) and 33 (78.6%) respectively having no further revisions for PJI. The remaining 4 were 2-stage revision (2SE) with 3 (75%) of these free from further PJI.

Of the 37 re-revisions, 14 were component exchange for deep infection, following a prior revision from UKA to TKA for aseptic reasons, and none having infection recurrence. 22 were liner exchange, 1 was revision to TKA.

Discussion

PJI revision outcomes following UKA compare favourably to that for TKA, with single stage TKA revision comparable to 2SE. Registry data is known to outperform case series reviewing management stratified by PJI type, which is reflected here.

Conclusion

Liner exchange is a viable option for management of PJI following UKA with comparable success rates across groups. Higher success rates of single stage TKA could favour this as a revision strategy for UKAs in the appropriately selected patient.





Presenter: Jason Ryu

Authors: Jason Ryu, Maitreyi Jain, Kate Lee, Katy Kim, Mark Zhu, Mei Lin Tay, Simon W Young

Affiliations: Department of Orthopaedic Surgery, North Shore Hospital, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Time Since Primary Arthroplasty Predicts Outcome After Debridement, Antibiotics and Implant Retention (DAIR) for Periprosthetic Joint Infection of the Knee: Utility of Current Classification Systems

Background

Prosthetic joint infection (PJI) is a common cause of failure following total knee arthroplasty (TKA). While debridement, antibiotics, and implant retention (DAIR) offer a less invasive treatment option, its success varies based on infection timing and causative organisms. This study aimed to investigate outcomes of DAIR in a large multicentre cohort of TKA PJIs and assess the predictive utility of existing classification systems for early versus late infections.

Methods

In a multicentre review over 23 years, 441 patients underwent DAIR for first episode PJI following primary TKA. Patient demographics, disease and surgical factors, treatment regime, and outcomes were identified. Success was defined as patients alive with no evidence of infection, not on long-term antibiotics, and retention of the original prosthesis without revision. Multivariate regression identified predictors of DAIR success, and the prognostic accuracy in outcomes using multiple classification systems (International Consensus Meeting (ICM), Coventry, and Auckland).

Results

Patients were followed up for an average of 6.2 years. The overall success rate of DAIR was 51.5% and remained consistent over time (50.5% for the period 2001-2015, and 52.2% for 2016-2023). Success was higher in 'early' PJIs as defined by ICM (<90 days, adjusted odds ratio [AOR] 2.0, $p < 0.01$), Coventry (<30 days, AOR 2.5, $p < 0.01$), and Auckland (<1 year, AOR 2.2, $p < 0.001$) classifications. Infections occurring more than one year after TKA had markedly lower success, particularly when caused by *Staphylococcus aureus* (20% vs 50% for other organisms, AOR 4.1, $p < 0.001$). Subclassification of late infections into acute haematogenous vs chronic did not predict outcome.

Conclusion

DAIR offers moderate success in early PJIs but has limited efficacy in late infections, especially those due to *S. aureus*. Time since primary TKA is a stronger predictor of DAIR success than current subclassifications of late PJI, highlighting the critical role of infection timing in surgical decision-making.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Brian Tse

Authors: Cheuk Bun Tse (Brian), N Amir Sandiford

Affiliations: Southland Hospital, Invercargill,
New Zealand

Type: Paper

Category: Arthroplasty



TITLE:

The Effectiveness of the Functional Articulating Spacer for 2-Stage Revisions for Prosthetic Joint Infections – A Case Series Study from Southland Hospital

Introduction

The optimal management of prosthetic joint infections (PJI) is undecided. In two-stage revisions, multiple designs of spacers have been described, but the optimal spacer is undecided. The objective of this study is to explore the survivorship of the functional articulating spacer within the concept of a 1.5-stage revision.

Methods

A prospective case series study is performed, cases extracted from our departmental database starting from 2019. Primary outcome is survival of 1.5 implants, with the endpoint being revision of components.

Results

8 patients fit inclusion criteria; one had early failure of components managed with a second 1.5 stage procedure, thus 9 cases for analysis, 5 hips and 4 knees, 5 male and 3 female. At revision, the average age is 63.8 and BMI 39.8. The most common organism is staphylococcus species. 3 of 3 low functioning patients have the 1.5 stage implant in-situ, mean time of 65.7 months since implantation. 3 of 5 high functioning patients are at 44.7 months.

2 of 5 high functioning patients were revised to a second stage implant at 21 and 65 months. The mean prospective survival of the 1.5 stage implants is 49 months.

Discussion

PJI remains a huge burden accounting for 15% and 30% of revisions of THA and TKA. The 1.5 stage revision allows patients to have one operation with equivalent outcomes up to the mid-term. In those of high demand, this allows a more stable implant and reimplantation at a much later stage under a better environment; those of low physical demand, this may eliminate the necessity for a second stage revision, reducing morbidity and improving cost effectiveness.

Conclusion

The 1.5 stage revision is an effective way of managing PJI.





Presenter: Ruikang Guo

Authors: Ruikang Guo, Ha Seong You, Tim Karssiens, Mark Zhu, Mei Lin Tay, Simon W Young

Affiliations: North Shore Hospital, Auckland, New Zealand

Type: Paper

Category: Knee



TITLE:

Microorganism Profiles and Empirical Antibiotic Recommendations for Periprosthetic Joint Infections of the Hip from a Large, Longitudinal Study

Introduction

Periprosthetic joint infection (PJI) after total hip arthroplasty (THA) is a challenging complication with a 5-year mortality rate exceeding 20%. Treatment success is dependent on early appropriate empiric antibiotic treatment, which requires accurate knowledge of common pathogens and resistance patterns. This study evaluated the microbiology and antibiotic susceptibility of hip PJI to guide empiric therapy.

Method

All first-episode PJIs following primary THA (2016-2023) at three large tertiary hospitals were identified. PJIs were classified into 'early' and 'late' per International Consensus Meeting (ICM; <90 days or >90 days since primary) and Auckland classifications (<1 year or >1 year since primary). The causative organism(s) and antibiotic sensitivity were recorded and analysed for each case. Odds ratios were calculated.

Results

There were 160 PJI cases and 209 positive cultures. Early (<90 days, <1 year) PJIs were more likely to involve resistant microorganisms (ICM, Odds ratio (OR)=2.09, 95% confidence interval (CI) 1.07-4.14,

$p<0.05$; Auckland, OR=2.34, CI 1.15-4.93, $p<0.05$) and also more likely to be polymicrobial (ICM, OR=2.68, CI 1.14-6.64, $p<0.05$; Auckland, OR=2.77, CI 1.09-7.92, $p<0.05$).

Gram-negative microorganisms were also more prevalent in PJIs <90 days from primary (OR=2.77, CI 1.25-6.38, $p<0.05$). Flucloxacillin monotherapy provided poor coverage, particularly in early PJIs (<60%), however its efficacy was higher for late PJIs, achieving near 70% coverage. In contrast, Vancomycin monotherapy provided superior coverage across all cases (>80%).

Combining gram-negative antibiotics such as co-trimoxazole/gentamicin with vancomycin increased coverage to >90% irrespective of infection timing.

Conclusion

Early PJIs are more likely to involve polymicrobial, resistant and gram-negative bacteria, therefore vancomycin plus a gram-negative agent is recommended for empiric therapy. Flucloxacillin may suffice for late PJIs but should be escalated to combination therapy if risk factors for resistant or gram-negative organisms are present.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Rocco Pitto

Authors: Molly I. Abraham¹, Callum J.T. Spence¹, Peter R. Riordan², Rocco P. Pitto^{2,3}

Affiliations: ¹Fisher & Paykel Healthcare, Auckland;

²University of Auckland, Auckland; Middlemore Hospital, Auckland, New Zealand

Type: Paper

Category: Arthroplasty



TITLE:

HumiGard™ reduces particle counts within the wound: A cadaver model of total hip arthroplasty

Introduction

Infection remains a clinically significant problem in orthopaedic surgery, particularly in joint arthroplasty. Current Infection prevention protocols aim to provide an aseptic operating room environment. An intervention to further reduce airborne particles local to the surgical site may be valuable to protect against infection. Surgical Humidification (F&P HumiGard™) is a novel device designed to provide a warm and hydrated wound environment and reduce particles entering the orthopaedic surgical site. This study aimed to evaluate the ability of HumiGard to deflect airborne particles during a dynamic simulation of total hip arthroplasty, involving movement of tools, surgeon's hands, and tissue.

Methods

A simulated total hip arthroplasty was performed on a human cadaver using the direct anterior approach under laminar downflow conditions. HumiGard was positioned at the surgical site before incision and remained throughout the procedure. Images of the surgical site were taken during the procedure. Airborne particles (0.3–10 µm) were continuously measured at the wound using an Optical Particle Sizer.

Particle counts were compared between standard care (exposure to ambient air), and HumiGard conditions using the Mann–Whitney test.

Results

HumiGard significantly reduced airborne particle counts at the surgical site. Median particle counts were reduced by 61% compared to standard care ($p < 0.0001$), excluding measurements during bone saw use. Particle counts dropped immediately when HumiGard was turned on and increased again when turned off, indicating active deflection of exogenous particles. The device integrated seamlessly into the surgical workflow without impeding tool or hand movement.

Conclusion

This pilot study demonstrates that HumiGard effectively reduced surgical site airborne particle counts during a dynamic cadaveric model of total hip arthroplasty. These findings suggest HumiGard may be a valuable addition to current infection prevention protocols, helping to minimise airborne particle contamination and potentially reduce the risk of surgical site infection.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Morgan Short

Type: Paper

Authors: Morgan Short, Mei Lin Tay, Silvia Lin, Simon Young

Category: Knee

Affiliations: North Shore Hospital, Auckland, New Zealand



TITLE:

The Role of Early Range of Motion in Predicting Long-Term Outcomes in Total Knee Arthroplasty

Introduction

Knee stiffness is a potential complication following total knee arthroplasty (TKA). It is possible that early post-operative range of motion (ROM) can predict longer-term outcomes, which can be used to optimise clinical care during recovery. This study aimed to investigate whether early post-operative ROM can predict longer-term ROM and patient-reported outcome measures (PROMs) following TKA.

Methods

Analysis utilised prospectively collected data from 278 patients who underwent a robotic-assisted TKA. A linear regression model was applied using SPSS to assess whether early ROM could predict knee ROM and PROMs at two years follow-up. Early ROM was assessed pre-operatively, prior to hospital discharge, and at 6 weeks post-surgery. Multivariate analysis was conducted to explore the influence of patient demographics (age, sex, ethnicity, body mass index (BMI), and American Society of Anesthesiologists (ASA) status) on long-term ROM and PROMs, including the Oxford Knee Score (OKS), Forgotten Joint Score (FJS), International Knee Society Scoring (IKSS), and visual analogue scale (VAS).

Results

The mean pre-operative ROM was 124°, compared with 119° at 2 years. Six patients required manipulation under anaesthesia. Pre-operative and early knee ROM showed a weak predictive relationship with 2-year post-operative knee ROM (pre-operative: $B = 0.244$, $p < 0.001$; discharge: $B = 0.097$, $p = 0.002$; 6-week post-operative: $B = 0.255$, $p < 0.001$). The magnitude of these relationships was small. No relationship was observed between early knee ROM and long-term PROMs. Demographic factors did not impact on long-term ROM or PROMs at the 2-year follow-up.

Conclusion

The findings of this study suggest that while early ROM may have a weak positive association with long-term ROM, it is not a reliable predictor of long-term PROMs following TKA. A reduced ROM in the initial post-operative period should not cause concern for patients and clinicians and should not delay timely discharge from hospital.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Scott M. Bolam

Authors: Scott M. Bolam¹, Chris M.A. Frampton²,
Rocco P. Pitto¹

Affiliations: ¹Middlemore Hospital, Auckland, ²Department of Medicine, University of Otago, Christchurch, New Zealand

Type: Paper

Category: Hip



TITLE:

Do Cobalt-Chromium Femoral Heads Have Higher Revision Risk Compared to Stainless Steel Metal Heads with a Single Cemented Femoral Design? A New Zealand Joint Registry Stud

Introduction

In primary total hip arthroplasty (THA), the Exeter V40 femoral stem (Stryker, USA) can be implanted using either low friction ion treated cobalt-chromium (LFIT-CoCr) or stainless steel (SS) metallic heads. LFIT-CoCr is sometimes favoured by surgeons due to its higher Young's modulus and lower friction that is hypothesised to reduce wear. However, combining different metallic alloys (i.e. LFIT-CoCr head with SS alloy stem) has been associated with either increased corrosion or fretting at the head-neck junction. In addition, there is substantially higher cost with LFIT-CoCr heads. This registry-based study aimed to compare survivorship and reason(s) for revision between Exeter V40 femoral stems implanted using SS or LFIT-CoCr heads.

Methods

Using New Zealand Joint Registry data collected between 1999 and 2022, we identified 11,040 patients who underwent primary THA indicated for osteoarthritis using an Exeter V40/Trident or Exeter V40/Trident II hybrid combination with a highly crosslinked polyethylene (XLPE) liner and a metallic head. The groups were sub-divided into LFIT-CoCr (13.1%) and SS (86.9%) heads.

Revision-free implant survivorship and functional outcomes (Oxford Hip Score [OHS]) were compared using adjusted Cox proportional hazard models.

Results

Revision-free implant survival at 10 years was 96.3% for LFIT-CoCr and 96.5% for SS heads. When compared with the SS group, there was no difference in the adjusted risk of revision for LFIT-CoCr group (Hazard ratio = 1.17, $p=0.32$). The most common indications for revision in both groups were firstly dislocation, then secondly deep infection. There was no difference in rates of aseptic loosening. Mean OHS scores were similar between groups at 6 months, 5 years and 10 years.

Discussion and Conclusion

Overall, survivorship outcomes were similar between LFIT-CoCr and SS metallic femoral heads and revision rates for osteolysis did not differ between groups. However, given the higher costs of the LFIT-CoCr implants, surgeons should consider using a SS head when using a Exeter/Trident hybrid THA with XLPE liner.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Benjamin Madsen

Authors: Benjamin Madsen¹, Blair Mason², Helen Ingoe¹,
Zorheh Jafarian Tangrood

Affiliations: ¹Christchurch Hospital, Christchurch; ²Tauranga
Hospital, Tauranga, New Zealand

Type: Paper

Category: Trauma



TITLE:

Immediate Versus Delayed Weight Bearing Following Ankle Open Reduction and Internal Fixation: A Pilot Randomised Controlled Trial

Introduction

Immediate weight bearing (IWB) following ankle fracture fixation may accelerate functional recovery, but concerns regarding safety have limited its routine use. This randomised controlled trial (RCT) pilot study evaluated the feasibility and early functional outcomes of IWB compared with delayed weight bearing at six weeks (DWB) after open reduction and internal fixation (ORIF).

Methods

Thirty patients with stable ankle fractures after ORIF were randomised (IWB n = 15; DWB n = 15). Primary outcome was the Self- Reported Foot and Ankle Score (SEFAS) at three months. Secondary outcomes included Olerud-Molander Ankle Score (OMAS), time to full weight bearing, and time to return to pre-injury activities.

Results

At three months, mean SEFAS and OMAS scores were higher in the IWB group (35.8 and 66.9) compared with DWB (31.1 and 57.1), respectively. The median time to full weightbearing and pre-injury activities was 24 and 65 days in the IWB group, and 59 and 74 days in the DWB group, respectively.

Discussion

In this pilot trial, Immediate weight bearing after ankle ORIF was associated with earlier recovery milestones and improved patient- reported outcomes at three months compared with delayed weight bearing.

Conclusion

This pilot trial has demonstrated the safety of early weight bearing post ankle ORIF with improved early functional outcomes. These findings support the feasibility of a larger multicentre RCT to confirm clinical benefit and inform postoperative rehabilitation protocols. Lessons learned from this pilot on patient screening and enrollment will be invaluable in doing so.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Cameron Tuckey

Authors: Cameron Tuckey, Jay Jefferies, Jonathan Sharr

Affiliations: Christchurch Hospital, Christchurch,
New Zealand

Type: Paper

Category: Trauma



TITLE:

Cracks in the System: The Rise of Periprosthetic Trauma

Introduction

Periprosthetic fractures (PPFs) are a growing challenge in orthopaedic care. With an aging population and a rise in arthroplasty procedures, formerly straightforward fragility fractures now frequently involve prosthetic implants. This shift demands more theatre time, senior surgical input, and greater hospital resources. Identifying and quantifying this burden is essential for planning orthopaedic workforce and operative capacity.

Method

We performed a retrospective audit of all PPFs treated operatively at Christchurch Hospital over four 12-month periods spaced five years apart: 2009, 2014, 2019, and 2024. Cases were identified using ICD coding for periprosthetic fractures and procedural codes for operative fixation. Data collected included number of cases, fracture classification, surgeon seniority, surgical time, and overall time spent in theatre.

Results

Despite modest population growth in Christchurch (2009: 372,000; 2024: 412,000), PPF cases rose dramatically from 20 in 2009 to 70 in 2024. Corresponding total theatre time increased from 2,877 minutes in 2009 to 12,117 minutes in 2024.

Average theatre time per case also rose from 144 to 169 minutes. The growth in operative burden (4.2-fold increase in theatre minutes) was disproportionate to population increase (11%).

Discussion

The data shows a substantial and accelerating increase in the burden of PPFs. This has implications for theatre capacity, surgical workforce, and hospital resource allocation. Planning must address both increasing demand and the increased complexity of surgery required. These findings highlight the importance of ensuring future employment positions maintain a workforce skilled in complex revision and arthroplasty surgery. Equally, it supports retaining arthroplasty expertise within trauma teams.

Conclusion

Periprosthetic fractures are rising at a rate far exceeding population growth, placing increased demands on operative services. Planning for additional theatre capacity and senior arthroplasty expertise is critical to meet future demand and maintain timely, safe care for this vulnerable patient group.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Maksymilian Osiowski

Authors: Maksymilian Osiowski, Aleksander Osiowski, Maciej Preinl, Dominik Tattera

Affiliations: Department of Orthopaedics and Rehabilitation, Jagiellonian University Medical College, Zakopane, Poland; OrthoSpine research group

Type: Paper

Category: Foot & Ankle



TITLE:

Prevalence, characteristics and clinical significance of Os Calcaneus Secundarius: A systematic review with meta-analysis

Introduction

The common presence of anatomical variations on the foot and ankle region may be oftentimes associated with painful syndromes. For medical professionals, their resemblance to fractures may pose a diagnostic conundrum, particularly following an incident. Os calcaneus secundarius (OCS), is a rare accessory ossicle located between the anterior process of the calcaneus and the navicular bone. Up to this date, the epidemiology of OCS is not established and poorly understood, as it varies between 0.1% to 15.2%.

The aim

This study aimed to synthesize the relevant data regarding the prevalence of this accessory ossicle and key clinical aspects, to provide a comprehensive summarization of the existing knowledge, subsequently helping clinicians make a precise diagnosis and plan treatment

Materials and methods

A thorough search of Pubmed/Medline, Embase, and ScienceDirect was conducted for studies presenting relevant information on OCS. The structure of this study strictly adhered to the PRISMA guidelines and was pre-registered on PROSPERO (ID: CRD42024626488). The random-effect model has been used to calculate the pooled prevalence estimates (PPE).

Results

In total, 25 articles (25 029 feet), qualified for the inclusion into the quantitative analysis. The PPE of OCS was 1.1% (95%CI: 0.7%-1.6%). There was no significant difference in the prevalence of OCS between sex-based subgroups. The PPE of OCS in studies that used X-ray was 0.7% (95%CI: 0.4%-1.2%) and was substantially lower than in the cadaver-based subgroup, which was 4.4% (95%CI: 2.4%-8.0%; 95%PI: 0.00-0.45). The highest PPE of OCS was noted in Europe – 1.6% (95%CI: 1.1%-2.5%), and the lowest in Asia - 0.5% (95%CI: 0.4%-0.8%).

Conclusions

In order to minimize orthopedic consultations or even procedures, clinicians should be aware of the significance of the potential encounter of this anatomical variety. Differentiating between an anterior process fracture and the OCS is particularly crucial in the emergency room because of their distinct treatment protocols.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Kristian Dalzell

Time of Presentation: 12.00 pm

Authors: Luuk Van Dijk¹, Katherine Sage², Paulo Amado³

Affiliations: ¹Kuros Biosciences, Bilthoven, Netherlands,

¹Kuros Biosciences, Atlanta, USA, ³Hospital Lusíadas Porto, Porto, Portugal

Type: Paper

Category: Foot & Ankle



TITLE:

Evaluation Of MagnetOs Putty As A Standalone Bone Graft For Hindfoot Fusion: A Retrospective Study

Background

Autologous cancellous bone, the “gold standard” for bone grafting, is limited by donor site morbidity, restricted availability, and procedural complications. Synthetic bone graft substitutes, particularly calcium phosphate ceramics (CaPs) with submicron topography, offer a promising alternative due to their osteoconductive and osteoinductive properties. MagnetOs Putty, a synthetic CaP-based graft with advanced submicron surface topography, has demonstrated equivalence to autograft in preclinical and human clinical studies. This study evaluates the clinical performance of MagnetOs Putty as a standalone bone graft in hindfoot fusion

Objectives

This study aims to (1) evaluate the clinical and radiological outcomes of MagnetOs Putty in hindfoot fusion, (2) compare these outcomes to autograft, and (3) assess patient-reported outcomes, complications, and reoperation rates.

Study Design and Methods

A retrospective medical chart review identified 72 patients undergoing hindfoot fusion that met the inclusion criteria and was conducted. Data was collected from Patients receiving either MagnetOS Putty (36) or were divided into two groups: 36 treated with MagnetOs Putty and 36 with autologous bone graft.

Inclusion criteria required degenerative hindfoot disease, treatment with either graft type, and follow-up data availability.

Primary outcomes included radiographic fusion assessed by independent, blinded radiological analysis. Secondary outcomes included changes in outcome scores, complication rates, and reoperation rates. Descriptive statistics and appropriate statistical tests will be used to analyze the results.

Results - Data collection is ongoing. Results are forthcoming and will describe fusion rates, clinical outcomes, and complication rates associated with MagnetOs Putty compared to autograft. Preliminary analysis suggests that MagnetOs Putty offers a viable alternative to autograft for hindfoot fusion.

Conclusions

This study aims to provide evidence supporting the use of MagnetOs Putty as a standalone bone graft in foot and ankle surgery, addressing limitations and avoiding complications associated with traditional grafting materials. The findings could inform clinical decision-making and promote the adoption of advanced synthetic bone graft substitutes.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Niroshan Kumar

Authors: Niroshan Kumar

Affiliations: Palmerston North Hospital, Palmerston North,
New Zealand

Type: Paper

Category: Wrist & Hand



TITLE:

Investigating the utility of ChatGPT in the diagnosis and management of common hand referrals

Introduction

Chat Generated Pre-trained transformer (ChatGPT) is a type of large language model. It has the potential advantage of providing an overview of the existing literature plus presenting potential novel ideas. Despite the potential applications there remain concerns regarding the use of such artificial intelligence (AI) models, specifically surrounding data governance and accuracy. In this study we aim to evaluate the clinical accuracy of ChatGPT in the diagnosis and management of common hand referrals to an orthopaedic service.

Method

Common hand referrals were selected based on a local audit of referrals to a regional orthopaedic service. Subsequently clinical cases were generated and relevant images sourced from online resources and run through ChatGPT. Differentials and management options were generated. The answers generated by ChatGPT were scored. Given the novel nature of this study a scoring system was developed for the purpose of this study.

The components of the system are:

1. How accurate is the information given?
(Scored 1 – 5)
2. How complete is the answer (Scored 1 – 3)

3. Overall rating (Scored 1 – 5)
4. Any safety concerns (Yes/No)
5. Conversation structure (Scored 1 – 5)

Results

The overall results demonstrated ChatGPT was accurate and overall safe in the diagnosis and management when information was provided in a written form. It demonstrated excellent scoring in the conversation structure with clearly written diagnoses and management plans. Interestingly it was noted to struggle with x-ray interpretation but demonstrated a surprising effectiveness with clinical images.

Discussion and Conclusion

This novel validity study demonstrates that ChatGPT has potential in providing timely and accurate information for common hand referrals. Nevertheless, this study suggest that ChatGPT may have potential in providing clinical assistance and more research in the area is necessary to test the limits and safety of the model.





ABSTRACTS

FREE PAPER SESSION D

HIP, FOOT & ANKLE, TRAUMA, GENERAL

Tuesday 21 October 2025

10.30 am – 12.20 pm

Breakout Room 2

Moderators: Mark Cvitanich, Elizabeth Bond

Presenter: Anand Desai

Type: Paper

Authors: Stephen Child

Category: General

Affiliations: Southern Cross Health Insurance,
Auckland, New Zealand



TITLE:

Sustainability of New Zealand's private healthcare sector

Introduction

Pressure in the public health system is contributing to increased demand in the private healthcare sector. Growth in health insurance claims costs, due to a persistently high inflationary environment combined with extraordinarily high demand, will, over time, impact sustainability of the private healthcare sector.

Aim

To analyse health insurance claiming patterns in the private provision of the orthopaedics speciality. The hypothesis of this study is that there is sustained claims growth in orthopaedics private practice.

Method

A comprehensive review of Southern Cross Health Insurance claims in orthopaedics private practice.

Results

Findings show a sustained increase in volume and cost for orthopaedics services. Several indicators for this increase will also be examined.

Discussion and Conclusion

Claims data in orthopaedic private practice shows high volume and cost growth year on year. This will impact the sustainability of the private healthcare sector, and we need to promote professional reflection on how to respond to the current climate.





ABSTRACTS

ASEAN FELLOW ABSTRACT

Presenter: Dr. Peter Quiaoit

Authors: Dr. Peter Quiaoit

Type: Paper



TITLE:

A Philippine experience in the management of periprosthetic joint infection (PJI) presents a significant approach to managing a complex and challenging condition in a resource-limited setting. PJI, a potentially catastrophic complication following total joint replacement, often leads to multiple surgical procedures and prolonged or permanent disability. In the Philippines, orthopedic infections are becoming increasingly prevalent due to factors such as delayed medical attention, increasingly complex co-morbidities, and limited access to advanced surgical interventions.

The two-stage revision procedure is considered the gold standard treatment for PJI. In the Philippine context, the application of this method has been shaped by local challenges such as resource limitations, varying healthcare access, and the diverse socioeconomic factors that influence patient outcomes.

This presentation will explore the technical details, outcomes, and challenges of performing two-stage revision arthroplasty in the country as drawn from the experience of a Filipino arthroplasty surgeon, highlighting the importance of accurate diagnosis, the role of culture-based antibiotic therapy, adherence to the surgical principles and the necessity of interdisciplinary collaboration.





ABSTRACTS

ASEAN FELLOW ABSTRACT

Presenter: Andri Lubis MD, Ph D

Authors: Andri Lubis MD, Ph D

Affiliations: Department of Orthopaedic's and Traumatology, Faculty of Medicine, University of Indonesia

Type: Paper



TITLE:

All Inside Posterior Cruciate Ligament Reconstruction

Posterior cruciate ligament (PCL) reconstruction is quite challenging and often problematic. The graft required for PCL reconstruction must have a sufficiently large diameter. Furthermore, a sufficiently long graft is required for transtibial/ conventional PCL reconstruction, given that interference screws are commonly used for fixation in the tibia.

When performing PCL reconstruction using autografts and transtibial/ conventional techniques, long grafts often run the risk of under-diameter the graft.

Even after passing, the prepared autograft sometimes remains too short on the tibial side, which can lead to the risk of the graft breaking during fixation with interference screws.

Using the all-inside technique, which uses individual buttons on both the femoral and tibial sides for fixation, this risk can be avoided.

In PCL reconstruction using the all-inside technique, a graft length of 8.5 cm is generally sufficient. This allows for a satisfactory graft thickness, often achieved with a diameter of 9 or 10 mm.

A graft diameter that is too small can increase the risk of PCL reconstruction failure.

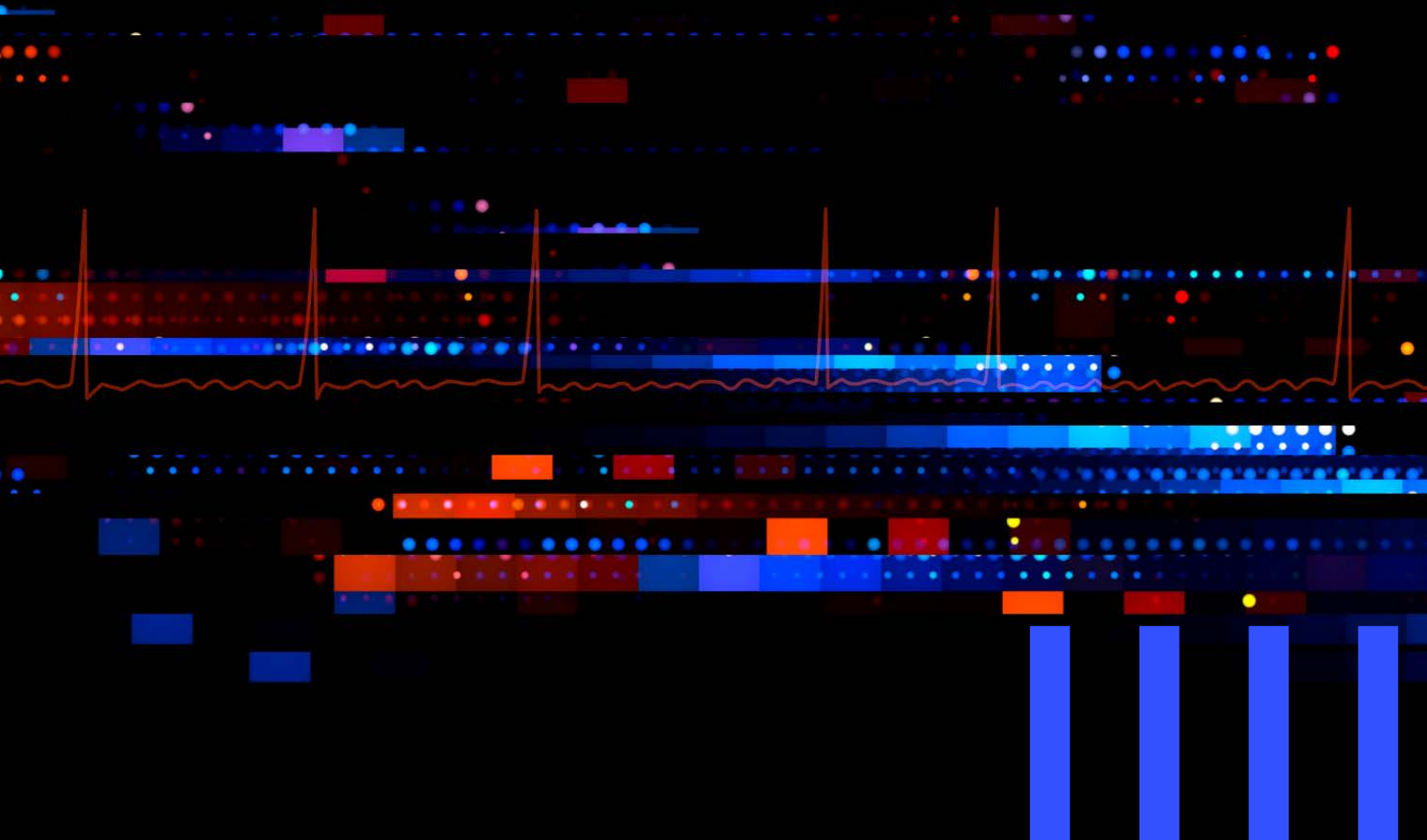
Our PCL reconstruction technique utilizes the "transseptal" technique, which utilizes two posterior portals: the posteromedial and posterolateral portals in the posterior aspect of the knee.

From the posteromedial portal, the septum behind the knee is cleared, reaching the posterior lateral aspect of the knee joint. This allows for clear visualization of the PCL remnant in the tibia. Using the transseptal technique, the tibial PCL jig can be placed posteriorly in the desired area, allowing for clear visualization. This eliminates the need for image intensifier guidance.





POSTERS





Presenter: Geonhoo Park

Authors: Geonhoo Park, Henrik Baecker

Affiliations: Auckland City Hospital, Auckland,
New Zealand

Type: Poster

Category: General



TITLE:

Systematic review on the mid to the long term effects and safety of blood flow restriction therapy

Introduction

High Intensity Resistance Training (HIRT) is the gold standard for muscle training, but high loads pose a risk to the vulnerable groups, such as the elderly or those who have undergone surgery. Blood flow restriction therapy (BFRT) has been posed as an alternative, which involves conducting Low Intensity Resistance Training (LIRT) with a tourniquet on the limb/ limbs, allowing for equivalent muscle adaptations under lower intensities of exercise. This review aims to address the gap in the mid to long term effects of BFRT in the literature.

Method

A literature search was conducted throughout the period of August 2023. 12 randomised controlled trials (RCTs) were selected for the review after exclusion. These included contributions from Japan, North America, Germany and Brazil. Studies included 221 healthy participants at average age of 24 with minim training period of eight weeks. The outcomes assessed were strength, hypertrophy endurance performance and safety.

Results

BFRT consistently improved strength and hypertrophy compared to baseline LIRT. Gains were generally comparable to HIRT. Endurance outcomes, like VO₂max, were also comparable to HIRT. BFRT was well tolerated, with no increased perceived exertion or pain and no reported complications.

Discussion

BFRT's benefits stem from inducing a hypoxic environment, mimicking HIRT's mechanism of action. This involves increased growth hormone release, anabolic signalling, anaerobic metabolic accumulation and preferential type II muscle recruitment. This study has shown that BFRT is a safe and effective alternative to muscle development.

Conclusion

This review shows significant mid to long term benefits of BFRT for muscle strength, hypertrophy and endurance, comparable to HIRT, with fewer posed risks. It is a valuable tool requiring further research to standardise protocols.





Presenter: Ampili Mathews Jain

Type: Poster

Authors: Ampili Mathews¹, Mark Zhu², Hamish Deverall³, Joe Baker³

Category: General

Affiliations: ¹Hawke's Bay Hospital, ²North Shore Hospital, ³Waikato Hospital, New Zealand



TITLE:

Imposter Syndrome in Non-Trainee Orthopaedic Registrars in New Zealand

Introduction

Imposter syndrome (IS) is a psychological phenomenon where individuals experience pervasive self-doubt despite being high-performing and successful. This can lead to adverse mental health effects and long-term job dissatisfaction. To date, no research has characterised IS in non-trainee orthopaedic registrars in New Zealand.

Method

An anonymous cross-sectional survey was distributed to non-trainee orthopaedic registrars in New Zealand between August 2023 and January 2024. The validated Clance Impostor Phenomenon Scale (CIPS) was used to categorise respondents into mild, moderate, severe or intense IS. Demographic and employment variables were collected. Both univariate and multivariate analyses were performed to determine associations with increased IS severity.

Results

Sixty-five responses were collected (estimated 55% response rate). Of the respondents, 46.8% were female and 53.1% male. The prevalence of IS (CIPS score ≥ 41) was 93%, with 23.3% scoring in the moderate range, 50% severe, and 20% intense. On univariate analysis, female sex ($p=0.014$), presence of self-reported burnout ($p<0.001$), and belief that mental health affected work performance ($p<0.001$) were associated with increased CIPS scores.

Age ($p=0.21$), ethnicity ($p=0.63$), work experience ($p=0.14$), working hours ($p=0.42$), and previous diagnosis of anxiety or depression ($p=0.26$) were not significant predictors. On multivariate analysis, self-reported burnout ($p=0.013$) and belief that mental health affected performance ($p=0.005$) remained significant.

Discussion

This research underscores the elevated occurrence of IS in junior orthopaedic professionals. Burnout and perceived impact of mental health on performance were key predictors, whereas demographic variables were not.

Conclusions

Imposter syndrome is highly prevalent among non-trainee orthopaedic registrars. Awareness, burnout management, and strategies that promote psychological safety are needed to support professional growth in this group.





Presenter: Ampili Mathews Jain

Type: Poster

Authors: Ampili Mathews¹, Jillian Lee², Joseph Baker²

Category: Spine

Affiliations: ¹Hawke's Bay Hospital, ²Waikato Hospital, New Zealand



TITLE:

An Assessment of Paediatric Vertebral Body and Canal Dimensions in the Cervical Spine Considering the Influence of Ethnicity

Introduction

Variation in cervical spine dimensions is linked to the risk of myelopathy and spinal cord injury. While ethnic differences in adult canal dimensions have been described, data in paediatric populations is limited. This study aimed to define cervical vertebral body (VB) and canal dimensions in a paediatric cohort and assess the influence of ethnicity, specifically comparing New Zealand European (NZE) and Māori populations.

Method

A retrospective analysis of cervical computed tomography (CT) scans from children under 18 years was performed. Scans with congenital anomalies, trauma, infection, tumours or prior surgery were excluded. Measurements were taken at the mid-pedicle level for anteroposterior (AP) and transverse dimensions of the vertebral body and spinal canal. Canal-to-vertebral body (C/VB) ratios were calculated. Correlation analysis and analysis of covariance (ANCOVA) were used to assess associations and ethnic differences.

Results

A total of 111 patients were included (63 NZE, mean age 10.6 years; 48 Māori, mean age 8.3 years). The NZE group had significantly larger vertebral body and canal dimensions overall, though C/VB ratios were smaller.

A significant difference in C/VB ratio at C7 was found ($p = 0.011$). Age strongly correlated with VB AP diameter, but only weakly with C/VB ratios. ANCOVA revealed that ethnicity (particularly NZE) significantly predicted transverse VB diameters at C4–6. The adjusted R^2 was lower for canal dimensions and C/VB ratios, suggesting other contributing factors.

Discussion

Vertebral body growth is more strongly associated with age than canal expansion. Ethnicity had a limited but notable influence on VB dimensions, particularly transversely.

Conclusions

This is the first New Zealand study examining ethnic variation in paediatric cervical spine dimensions. Findings underscore the multifactorial nature of spinal development and support the need for further research incorporating body composition and skeletal maturity.





Presenter: Harrison Beadel

Type: Poster

Authors: Harrison Beadel¹, Katy Kim², Brendan Coleman³

Category: Arthroplasty

Affiliations: ¹Dunedin Hospital, ²Whangarei Hospital,
³Middlemore Hospital, New Zealand



TITLE:

Post-operative CRP as a predictor of DAIR failure in prosthetic knee joint infection

Abstract

Debridement, antibiotics and implant retention (DAIR) surgery is often performed as a first-line treatment for prosthetic joint infection (PJI). This study aimed to evaluate whether post-operative C-reactive protein (CRP) levels accurately predict DAIR failure.

Methods

A multi-centre retrospective review was performed over a 15-year period. Total knee arthroplasty (TKA) patients undergoing DAIR for first episode of PJI were included. CRP was measured for six weeks post-operatively. Treatment success was defined as implant retention without the need for revision surgery or long-term suppressive antibiotics. Trends in CRP were compared between groups.

Results

189 DAIR procedures were included; 92 (49%) failed and 97 (51%) were successful. Mean follow up was 7.5 years. In both groups, CRP trended down following surgery. Mean CRP was significantly higher in the failed DAIR group at all time points post-operatively. The greatest difference was at one week (76 vs 114, $P < 0.01$). This difference remained significant when patients experiencing DAIR failure within 90 days were excluded (mean 76 vs 107, $P < 0.01$).

CRP was most accurate as a predictor of failure at one week post-operatively, with an area under the curve (AUC) of 0.71. The optimal CRP threshold for predicting DAIR failure was 89, which yielded a sensitivity of 74% and specificity of 66%.

Discussion

Our results suggest post-operative CRP is associated with DAIR failure. Patients with a week one CRP greater than 89 were five times more likely to experience DAIR failure. Post-operative CRP outperformed several other predictors of DAIR failure. The utility of routine CRP measurement beyond a week may be limited.

Conclusion

While post-operative CRP may be a better predictor of DAIR success than some existing tools, it should be considered alongside other clinical factors





Presenter: Nayan Borude

Authors: Nayan Borude, Alistair Dray

Affiliations: Hawke's Bay Hospital, New Zealand

Type: Poster

Category: Foot & Ankle



TITLE:

Clinical and MRI Predictors of Brostrom Repair in Chronic Lateral Ankle Pathology

Introduction

Magnetic resonance imaging (MRI) grades lateral-ligament injury but may not reflect functional laxity. We compared MRI findings with clinical instability in deciding on a Broström procedure (lateral-ligament reconstruction).

Method

Retrospective cohort of 139 ankles (mean age 44 ± 15 y; 38 % female, 2017-2024). Presentation was categorised as pain only, subjective instability, or objective instability (positive anterior-drawer or stress exam under anaesthesia). MRI graded the anterior talofibular ligament (ATFL) and calcaneofibular ligament (CFL) 0–3 and recorded peroneal-tendon tears. Primary outcome was Broström repair. χ^2 /Fisher tests and multivariate logistic regression ($\alpha = 0.05$) evaluated predictors.

Results

Broström was performed in 64/66 objectively unstable ankles (97 %) versus 2/73 without objective laxity ($\chi^2 = 91.3$, $p < 10^{-21}$; odds ratio [OR] 220, 95 % CI 46–1 060). In pain-only ankles, a high-grade (≥ 2) ATFL/CFL tear on MRI led to Broström in 3/20 (15%) compared with 0/35 when MRI was ≤ 1 (Fisher $p = 0.043$).

Conversely, MRI grade ≤ 1 did not exclude instability: 22/22 objectively unstable ankles with low-grade MRI still underwent Broström (false-negative rate 100 %, 95 % CI 85–100). Peroneal-tendon tears were equally frequent with and without Broström (54 %, $p = 0.91$).

Multivariate analysis retained only objective (OR 870, $p < 10^{-8}$) and subjective instability (OR 16, $p = 0.006$) as independent predictors.

Discussion

MRI may under-call chronic ligament insufficiency, offering false reassurance when pain inhibits stress testing. Yet a high-grade ligament tear on MRI raises surgical suspicion in pain-dominant ankles and should prompt consent for possible reconstruction.

Conclusions

Objective laxity remains the decisive trigger for Broström repair. Surgeons should rely on stress examination first, use MRI to flag severe tears in clinically guarded ankles, and recognise that low-grade MRI findings alone must not delay needed stabilization.





Presenter: Hamish Clay

Type: Poster

Authors: ¹Hamish Clay, ²Richard Keddell

Category: Arthroplasty

Affiliations: Tauranga Hospital¹; Grace Hospital²,
Tauranga, New Zealand



TITLE:

Amyloid arthropathy of the hip in a Multiple Myeloma Patient: A Case Report

Introduction

Amyloid arthropathy is a rare but recognised complication of systemic amyloidosis, often associated with long-term dialysis or renal impairment. In multiple myeloma (MM), amyloid deposition in bone is well described, but significant joint destruction due to amyloid arthropathy remains uncommon.

Case Presentation

An 83-year-old female with a recent diagnosis of light chain multiple myeloma presented with acute worsening of chronic right hip pain and inability to weight bear. Radiographs one month prior showed only mild osteoarthritic changes. On admission, repeat imaging demonstrated collapse of the right femoral head. MRI revealed severe erosive arthropathy with periarticular soft tissue masses and bilateral hip involvement, suggestive of amyloid deposition. CT confirmed joint destruction and cortical erosions. The patient underwent right total hip arthroplasty with acetabular reinforcement. Intra-operative findings included avascular necrosis and infiltrative lesions. Histopathology confirmed amyloid deposition using Congo red staining with green birefringence.

Discussion

Amyloid involvement of bone occurs in 6–15% of MM patients, particularly in those with light chain disease. However, severe joint destruction is rare, especially in patients not receiving dialysis or with preserved renal function. MRI is particularly sensitive for detecting amyloid arthropathy and may reveal disease not apparent on plain radiographs. This case demonstrates rapid disease progression over one month, highlighting the need for advanced imaging in MM patients presenting with new or worsening joint symptoms.

Conclusion:

This case underscores the potential for rapidly progressive amyloid arthropathy in MM patients without traditional risk factors. Clinicians should consider amyloid arthropathy in the differential diagnosis of acute joint pain in MM and utilise MRI when radiographs are inconclusive. Early recognition may guide appropriate intervention and prevent further morbidity.





Presenter: Aleksander Osiowski

Authors: Maksymilian Osiowski, Aleksander Osiowski, Wojciech Siłka, Maciej Preinl, Kacper Stolarz, Dominik Tattera, Tomasz Potaczek

Affiliations: Department of Orthopaedics and Rehabilitation, Jagiellonian University Medical College, Zakopane, Poland; OrthoSpine research group

Type: Poster

Category: Paediatrics



TITLE:

Predictors of surgical treatment outcomes in patients with neuromuscular scoliosis

Introduction

Spinal muscular atrophy (SMA) and Duchenne muscular dystrophy (DMD) are two neuromuscular disorders which often lead to serious spinal deformities, frequently requiring corrective surgery. Unfortunately previous research used to treat them as one disease despite being separate medical conditions. The purpose of this study was to evaluate the existence of predictors in scoliosis surgical treatment in SMA and DMD patients, with a comparison of clinical and radiological surgical outcomes.

Methods and materials

Preoperative and postoperative protocols of 70 pediatric patients with SMA or DMD were reviewed. All necessary radiological measurements were taken to determine improvement after the surgery. Student t-test and Welch's t-test were utilized to compare means. For nonparametric analyses Mann-Whitney U was employed. Multiple regression was used when adjusting for confounders.

Results

The mean percentage of Cobb angle correction was 47.49% (SD=17.06) in DMD patients and 57.53% (SD=14.83) in SMA patients with differences being statistically significant ($p < 0.04$). The mean weight was 52.21kg (SD=14.59) in DMD patients and

39.86kg (SD=11.05) in SMA patients ($p = 0.002$). The difference between mean Cobb angle in pre-op elongation x-ray and post-op x-ray was 4.6 ° in DMD and 10.4 ° in SMA patients.

There was no significant difference in mean Cobb angle before surgery ($p = 0.32$), pelvic obliquity change ($p = 0.89$), post-op hospital stay time ($p = 0.77$), time spent in ICU ($p = 0.61$), post-op blood units transfusions ($p = 0.31$) and BMI ($p = 0.39$) between these two groups of patients.

Conclusions

When adjusted for weight and initial Cobb angle, the type of disease (DMD vs SMA) remained the only predictor of higher Cobb angle change after surgery. Considering the results, pre-operative x-ray in elongation could be used for prediction of surgical outcome in SMA and DMD patients. No other analyzed factors played a significant role in surgical outcomes.





Presenter: Fraser Prendergast

Type: Poster

Authors: Fraser Prendergast, David Gwynne Jones, Fraser Harrold, Brendan Arnold

Category: Arthroplasty

Affiliations: Dunedin Hospital, New Zealand



TITLE:

The outcomes of Debridement Antibiotics and Implant Retention (DAIR) for acute prosthetic hip and knee infection

Introduction

DAIR is increasingly performed for acute prosthetic joint infection (PJI). Higher success rates (60 -84%) have been reported in early infections but drop to 38% in late infection. As there is significant morbidity with revision of well-fixed implants, an initial DAIR remains a pragmatic option.

Methods

A 10 year retrospective review of 94 patients (M 53, F 41) presenting with acute hip (45) and knee (49) PJI treated with DAIR at a single centre. Patients with chronic infection or loose implants who had a washout as source control prior to planned revision were excluded.

Results

42 (45%) patients presented within 1 year of index surgery and 52 (55%) over 1 year. The mean age was 73.4 years, mean BMI 32kg/m², 61 (65%) were ASA class 3 and 4. The median duration of symptoms was 3 days (1-180 days). DAIR was performed by a consultant in 78 cases (83%) with modular component exchange in 77 (82%). 16 (17%) patients underwent a second DAIR or washout procedure. One patient died 26 days due to PJI, 17 patients underwent revision or implant removal (12 two stage revision, 2 single stage, 3 Girdlestone) at median 165 days post DAIR (14 – 1825 days).

75 (80%) patients were successfully controlled with 18 on long term antibiotic suppression. 37 of 42 (88%) presenting within 1 year and 38 of 52 (73%) of patients > 1 year post index surgery were controlled. The control rate for hips (37/45, 82%) and knees (38/49, 78%) knees was similar.

Conclusion

Initial management of acute PJI with DAIR, exchange of modular components and a multidisciplinary approach, is an effective strategy in both early and late infections in elderly co-morbid patients.





Presenter: Ben Ross

Authors: Ben Ross

Affiliations: Tauranga Hospital, New Zealand

Type: Poster

Category: General



TITLE:

Experiences of Orthopaedic Trainees Following Their First Complaint

Introduction

Complaints are a significant and often distressing milestone in a doctor's career and can be particularly impactful during formative years of surgical training. This study explores experiences of orthopaedic trainees following their first complaint, aiming to understand their impact and to aid in informing improved support systems.

Methods

A mixed-methods, online survey was distributed to New Zealand Orthopaedic SET trainees and recent graduates. The survey assessed complaint characteristics, impacts, perceived validity, changes in practice and supports accessed.

Results

We received 37 responses from an approximate pool of 84 trainees (44.0%). Of this cohort, 64.9% had received complaints, most commonly at the pre-SET level (83.3%). The leading causes were communication issues (41.7%), patient outcomes (25.0%), and delays in treatment (25.0%). 'Stress and anxiety levels' was the most affected domain (mean Likert scale 2.96), followed by 'occupational satisfaction' (2.52). Complaints from colleagues had the greatest impact.

Those who perceived complaints as valid had positive responses and self-reported improvements in clinical practice (62.5%) compared with those who perceived the claim as invalid (8.3%). 25% of the latter cohort reported defensive changes to practice.

Negative emotions dominated the qualitative analysis regarding impact of complaints. Most found professional supports accessible and adequate though notably, no respondents accessed formal psychological support.

Discussion

Complaints have significant impacts on trainees, with perceived validity and complaint origin both influential factors in the individual's experience. A trainee comment, "most complaints make a better clinician," goes against current international literature in which most changes are towards negative or defensive practices.

Conclusion

This study highlights common themes in orthopaedic trainee experiences of receiving complaints, confirming the substantial personal and professional impacts during their early careers. Improved structured support systems, complaints management education and resilience training may all improve trainees' future experiences.





Presenter: Ben Ross

Authors: Ben Ross

Affiliations: Tauranga Hospital, New Zealand

Type: Poster

Category: Trauma



TITLE:

Clinician-Related Barriers to Bone Protection Uptake Following Neck of Femur Fractures

Introduction

Bone protection medications (BPMs) are often underprescribed following neck of femur (NOF) fractures. Tauranga and Whakatāne Hospitals currently perform sub-optimally in the Australian and New Zealand Hip Fracture Registry (ANZHFR). Clinician-related factors such as knowledge, experience and attitudes may contribute. This study aimed to identify key clinician-related barriers to BPM uptake to inform future Quality Improvement initiatives.

Methods

An anonymous online survey was distributed to Orthopaedic Consultants and Registrars, assessing their confidence, knowledge and attitudes towards BPM.

Results

71% of the department responded. Confidence in BPM guideline knowledge was low (mean Likert scale of 1.43). While 81% were familiar with bisphosphonates, 65% did not routinely prescribe or request BPMs. Only one-third correctly identified current guideline-recommended BPM choice and timing following NOF fracture. Most (81%) felt prescribing responsibility lay with Ortho-geriatricians. Just 38% of respondents correctly estimated BPM rates at discharge, whilst 57% correctly identified the risk reduction of subsequent hip fractures.

Knowledge was limited regarding risk reduction of subsequent vertebral fractures, mortality, and community costs of BPM. Over half (52%) reported experience with a BPM-related complication, though many underestimated the frequency of common risks such as acute phase reactions and hypocalcaemia. The most commonly cited barriers to prescribing BPM were unfamiliarity, unclear responsibilities and perceived risks.

Discussion

Clinicians reported low confidence and knowledge regarding BPM use following NOF fracture with frequent uncertainty regarding key clinical data. A disconnect between Fracture Liaison Service (FLS) targets and Orthopaedic Department understanding highlights the need for closer working relationships to improve NOF fracture outcomes across our region, a shared responsibility.

Conclusion

Knowledge gaps and unclear prescribing responsibilities are key barriers to BPM uptake. These findings can be utilised when designing targeted Quality Improvement activities in conjunction with FLS and Ortho-geriatricians.





Presenter: Karen Toh

Authors: Karen HQ Toh

Affiliations: Tauranga Hospital, New Zealand

Type: Poster

Category: Arthroplasty



TITLE:

Fractured Femoral Stems in Total Hip Arthroplasty: Diagnostic Delays and Revision Challenges in Two Cases

Introduction

Fractures of femoral stems post-total hip arthroplasty (THA) are rare, with a reported incidence under 0.3%. While modular uncemented designs are most implicated, cemented stems are not immune. Diagnosis can be delayed due to subtle imaging findings or vague symptoms. We present two cases highlighting diagnostic challenges and complex revision strategies.

Methods

Two elderly male patients with fractured femoral stems requiring revision THA were reviewed. We examined clinical presentation, imaging, intraoperative techniques, and implant strategies. Key similarities and differences were compared against the literature.

Results

Case 1: An 87-year-old male experienced 6 months of progressive pain. Initial radiographs showed a non-displaced fracture of a cemented Exeter stem, which was missed. Repeat imaging later revealed broken stem displacement. Revision was performed with an Arcos modular stem following an extended trochanteric osteotomy (ETO). Cement was meticulously removed using saws, osteotomes, and burrs, with the osteotomy closed using stainless steel cables.

Case 2: An 80-year-old male had sudden thigh pain while getting into a car. Radiographs showed trunnion fracture of a Zimmer ZMR stem. Revision was performed with an Arcos bowed STS distal stem. Subvastus approach facilitated distal femur exposure. Old ETO hardware was removed but one incarcerated cable block remained. A combination of carbide-tip drills, osteotomes, and trephines was used to extract the incarcerated distal fragment.

Discussion

Both cases required ETO and complex cement or stem extraction. Diagnosis was delayed in one due to subtle imaging. Factors like stem design, prior revisions, and fixation method influenced fracture location and revision complexity. Advanced imaging and surgical planning were crucial.

Conclusion

Fractured femoral stems, though rare, should be suspected in patients with late-onset pain post-THA. Early detection and meticulous revision technique are critical for optimal outcomes.





The poster presentations listed below will be available to view throughout the duration of the conference in the Memorial Hall

1. Mathews A, Lee J, Baker J.

An Assessment of Paediatric Vertebral Body and Canal Dimensions in the Cervical Spine Considering the Influence of Ethnicity.

2. Park G, Baecker H.

Systematic review on the mid to long term effects and safety of blood flow restriction therapy.

3. Mathews A, Zhu M, Deverall H, Baker J.

Imposter Syndrome in Non-Trainee Orthopaedic Registrars in New Zealand.

4. Ross, B.

Experiences of Orthopaedic Trainees Following Their First Complaint.

5. Osiowski M, Osiowski A, Siłka W, Preinl M, Stolarz K, Tattera D, Potaczek T.

Predictors of surgical treatment outcomes in patients with neuromuscular scoliosis.

6. Borude N, Dray A.

Clinical And MRI Predictors Of Brostrom Repair In Chronic Lateral Ankle Pathology.

7. Toh K.

Fractured Femoral Stems in Total Hip Arthroplasty: Diagnostic Delays and Revision Challenges in Two Cases.

8. Prendergast F.

The outcomes of Debridement Antibiotics and Implant Retention (DAIR) for acute prosthetic hip and knee infection.

9. Ross, B.

Clinician-Related Barriers to Bone Protection Uptake Following Neck of Femur Fractures.

10. Clay H, Keddell R.

Amyloid arthropathy of the hip in a Multiple Myeloma Patient: A Case Report.

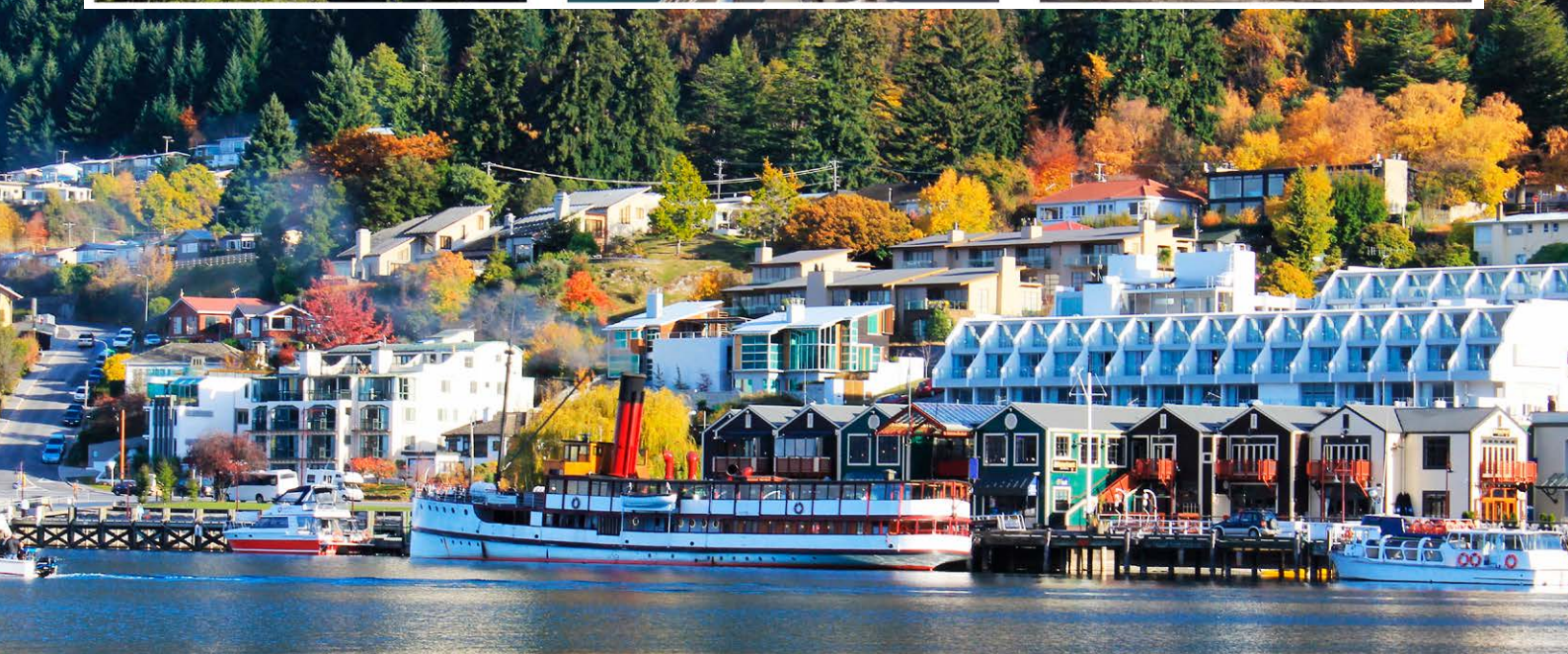
11. Beadel H, Kim K, Coleman B.

Post-operative CRP as a predictor of DAIR failure in prosthetic knee joint infection.



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