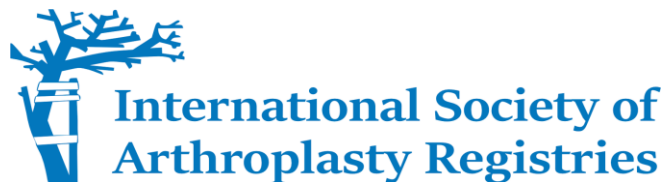2023-05-08

# Program - 12th Annual ISAR congress – May 13th – 15th, 2023, Montreal, Canada

## Venue: Hotel Omni Mont-Royal, Saisons Ballroom, 1st floor

## Saturday May 13th

**7.00 – 8.00**     **Breakfast – Room: Pierre de Coubertin**

**7.30 – 8.00**     **Registration**

**8.00 – 8.15**     **Welcome Remarks**

**8.15 – 9.15**     **Lessons Learned in Establishing and Running a Registry International Perspectives**
Moderators: Eric Bohm and Ola Rolfson
Presenters:
Tim Wilton, NJR
James (Hutch) Huddleston III, AJRR
Michael Terner, CJRR

**9.15 – 10.15**     **Understanding Registry Statistics**
Moderator: Adrian Sayers
Presenters:
Heather Prentice: Estimating failure using Kaplan Meier
Anne Marie Fenstad: Comparing failure using the Cox model
Adrian Sayers: Competing events and estimating failure

**10.15 – 10.45**     **Coffee & Posters:Implant Outcomes and Data Quality**
2 minute presentation poster walk
Adjudicators: Richard de Steiger and Jörg Lützner

| No 90 | Does precoating of the NexGen Option tibial component lower the risk of loosening? 10 years follow up from the Norwegian Arthroplasty Register 2012-2021 | Michelle Khan, Stein Håkon Låstad Lygre, Paul Johan Høl, Ove Furnes | Michelle Khan |
|---|---|---|---|

**International Society of Arthroplasty Registries**

| No 2 | Association of coating and architecture of the surface metal with survival of uncemented total knee arthroplasty - A comparison between 11,135 uncemented and 235,500 cemented implants registered in the Dutch Arthroplasty Register | Raymond Puijk, Rachid Rassir, Inger N Sierevelt, Anneke Spekenbrink-Spooren, Rob G H H Nelissen, Peter A Nolte | Raymond Puijk |
|---|---|---|---|
| No 31 | Long-term implant survival of hemiarthoplasties with three different head designs as treatment of patients with femoral neck fractures | Cecilia Rogmark, Jonatan Nåtman, Soren Overgaard, Maziar Mohaddes | Maziar Mohaddes |
| No 8 | The completeness of national joint replacement registers from around the globe | Jonathan M French, Kevin Deere, Michael R Whitehouse, Adrian Sayers | Adrian Sayers |
| No 41 | Adherence, completeness and correctness of the Tyrolean hip arthroplasty registry – an external validation study | Sabrina Neururer, Moritz Wagner, Irmgard Delmarko, Dietmar Dammerer, Paul Nardelli, Gerhard Kaufmann, Matthias Braito, Alexander Brunner | Florian Pedross |

**10.45 – 12.00**     **Podium Presentations: Implant Outcomes**
5 minute presentation and 2 minute discussion
Moderators: Jason Werle and Annette W-Dahl

| No 54 | Survivorship of modern cementless total knee arthroplasty: Analysis from the Canadian Joint Replacement Registry | Olawale A Sogbein, Richard W McCalden, Eric R Bohm, Brent A Lanting | Eric Bohm |
|---|---|---|---|
| No 30 | A non inferiority approach to investigate the differences between stem design and fixation of elective THA procedures on revision rates depending on patient age | Michael Morlock, Oliver Melsheimer | Michael Morlock |
| No 29 | Reoperation because of periprosthetic fracture with use of polished stems. Analysis of 48,799 Exeter, MS30 and CPT stems in the Swedish Arthroplasty Register (SAR) | Vasileios Angelomenos, Georgios Chatziagorou, Maziar Mohaddes, Ola Rolfson, Johan Kärrholm | Maziar Mohaddes |
| No 66 | Comparison of a new and an older TKA design: similar results at mid-term follow-up | Nam Lê, Oscar Vazquez, Christoph Barea, Didier Hannouche, Anne Lübbeke, Hermes H Miozzari | Hermes Miozzari |
| No 114 | Thirty years follow-up of three commonly used femoral stems in the Norwegian Arthroplasty Register | Anne Marie Fenstad, Stein Håkon Låstad Lygre, Geir Hallan, Ove Furnes | Anne Marie Fenstad |

## International Society of Arthroplasty Registries

| No 9 | Substandard 10-year survival of Triathlon cementless knee prosthesis in Sweden | Annette W-Dahl, Perna Ighani Arani, Martin Sundberg, Ola Rolfson | Annette W-Dahl |
|---|---|---|---|
| No 71 | The use and outcomes of multicompartmental knee replacement: A cohort study of data from the National Joint Registry in England and Wales | Kevin Deere, Adrian Sayers, Tim Wilton, Michael Whitehouse | Michael Whitehouse |
| No 53 | Fixed bearing in primary total ankle replacement is associated with reduced revision rates | Peter Stavrou, Dylan Harries, Michelle Lorimer, Sophie Corfield | Peter Stavrou |
| No 76 | Survival of the Exeter V40 short revision (44/00/125) stem when used in primary total hip replacement (THR), analysis of the National Joint Registry (NJR). | Jonathan T Evans, Omer Salar, Sarah Whitehouse, Exeter Hip Research Group, Adrian Sayers, Michael Whitehouse, Timothy Wilton, Matthew Hubble | Jonathan Evans |
| No 109 | Long-time follow-up of cemented non-resurfaced total knee arthroplasty brands from the Norwegian Arthroplasty Register | Stein Håkon Låstad Lygre, Anne Marie Fenstad, Stein Atle Lie, Geir Hallan, Ove Furnes | Stein Lygre |

**12.00 – 12.45**  **Lunch**

**12.45 – 2.15**  **Translating Data Into Improved Patient Outcomes**
Moderators**:** Jason Werle and Eric Bohm

**Keynote Speaker**:  Perla J Marang -Van de Mheen (30 min virtual)
Using Data to Improve Quality of Care and Patient Outcomes

Jason Werle (15 min): Alberta QI Initiatives
Paddy Kenny (15 min virtual): Irish Hip Fracture QI Initiative
Brian Hallstrom (15 min): MARQI
Q & A (15 min)

**2.15 – 3.20**  **Podium Presentations: Quality Assurance**
5 minute presentation and 2 minute discussion
Moderators: Jesse Wolfstadt and Liza van Steenbergen

| No 96 | Operationalising the international component classification system to identify functioning hip constructs and attaching attributes, tip and tricks. | Adrian Sayers, Tim Wilton, Michael R Whitehouse | Adrian Sayers |
|---|---|---|---|

**International Society of Arthroplasty Registries**

| No 92 | Operationalising the international component classification system to identify functioning knee constructs and attaching attributes, tips and tricks | Adrian Sayers, Tim Wilton, Michael R Whitehouse | Adrian Sayers |
|---|---|---|---|
| No 85 | Use of a registry implant database to prevent 'never-events' | Richard Armstrong, Edward Caton, J Mark Wilkinson, Chris Bolton, Elaine Young | Richard Armstrong |
| No 86 | Improving registry compliance. A twenty-year journey to NJR mandation. | Richard Armstrong, J Mark Wilkinson, Chris Bolton, Elaine Young | Richard Armstrong |
| No 73 | A comparison of the surgical practice of potential revision outlier joint replacement surgeons with non-outliers: A case control study from the National Joint Registry for England, Wales, Northern Ireland and the Isle of Man | Chris M Penfold, Michael R Whitehouse, Adrian Sayers, J Mark Wilkinson, Linda Hunt, Yoav Ben-Shlomo, Andrew Judge, Ashley W Blom | Michael Whitehouse |
| No 72 | National Patient Reported Outcome Measures data from England and linkage to the National Joint Registry | Chris M Penfold, Adrian Sayers, Michael R Whitehouse, J Mark Wilkinson, Ashley W Blom, Andrew Judge | Michael Whitehouse |
| No 81 | Italian Arthroplasty Registry: proposal of a stakeholder communication model | Iuliia Urakcheeva, Paola Ciccarelli, Veronica Mari, Simona Pascucci, Stefania Ceccarelli, Alessia Biondi, Mascia Masciocchi, Marina Torre | Paola Ciccarelli |
| No 87 | 20 years of the National Joint Registry: Who benefits? | Chris Boulton, Elaine Young, Tim Wilton, Deirdra Taylor, Ashley Blom, Mike Whitehouse, Richard Armstrong, Derek Pegg, Gillian Coward, Robin Brittain, J Mark Wilkinson | Elaine Young |
| No 88 | Indian Joint Registry – The challenges and opportunities in establishing a national joint registry in India – progress to date | Javahir Pachore, Ashok Rajgopal, Shrinand Vaidya, Richard Armstrong | Javahir Pachore |

**3.20 – 3.50**          **Coffee & Posters: Quality Assurance/Miscellaneous/Pharmacology**
2 minute presentation poster walk
Adjudicators: Richard de Steiger and Jörg Lützner

| No 82 | Principles leading the design of the RIPI Information System: an example of a multi-level registry structure for different medical devices. | Veronica Mari, Simona Pascucci, Eugenio Carrani, Duilio Luca Bacocco, Riccardo Valentini, Paola Ciccarelli, Saif Aldeen Madi, Marina Torre | Simona Pasucci |

International Society of
Arthroplasty Registries

| No 83 | Registries might support updating and improvement of the national MD classification CND: an example for spinal devices. | Simona Pascucci, Michela Franzò, Eugenio Carrani, Iuliia Urakcheeva, Attanasio Cornacchia, Enrico Ciminello, Letizia Sampaolo, Paola Laricchiuta, Marina Torre | Simona Pascucci |
|---|---|---|---|
| No 107 | Has Covid-19 changed the practice of audit co-ordinators in the Irish National Orthopaedic Register, and impacted on the timely collection of the data | Catriona Flaherty, Dearbhail Foy, Noreen Lynch, Katrina (Kas) Linehan, Lisa Donnelly, Micheal Bailey | Suzanne Rowley |
| No 32 | The role of arthroplasty registry in detecting early failure of a modern uncemented total knee | Samo K Fokter, Vesna Levašič, Jakob Naranđa, Nenad Gubeljak, Esther Punzón-Quijorna | Samo Fokter |
| No 59 | The "symbiosis" between high-quality register data and value-based health care. The role of local, national and international registers in the development and promotion of value-based health care projects. | Peter Cnudde, Ola Rolfson, Louisa Huxtable-Thomas | Ola Rolfson |
| No 89 | Analysis of hip and knee patient demographics comparing patients from the Indian Joint Registry (IJR) to those recorded in the UK's National Joint Registry (NJR) | Javahir Pachore, Ashok Rajgopal, Shrinand Vaidya, Richard Armstrong | Javahir Pachore |

**3.50 – 5.00**          **Podium Presentations: Miscellaneous & Pharmacology**
5 minute presentation and 2 minute discussion
Moderators: James Huddleston and Maziar Mohaddes

| No 4 | The prevalence of joint replacement in Sweden | Ola Rolfson, Jonatan Nåtman, Cecilia Rogmark, Martin Sundberg, Maziar Mohaddes, Johan Kärrholm, Annette W-Dahl | Ola Rolfson |
|---|---|---|---|
| No 74 | Temporal trends in comorbidity in adult elective hip and knee replacement patients in England: A national population-based cohort study from The National Joint Registry | Chris M Penfold, Andrew Judge, Adrian Sayers, Michael R Whitehouse, J Mark Wilkinson, Ashley W Blom | Michael Whitehouse |
| No 100 | Radiographic signs and hip pain 5 years after THA: useful in predicting future revision for aseptic stem loosening? A long-term follow-up study | Anne Lübbeke, C Barea, M Zingg, N Lauper, D Hannouche, G Garavaglia | Anne Lübbeke |
| No 34 | Trends in the cost of total knee arthroplasty — a US hospital database analysis, 2000 – 2021 | Yifan Zhang, Jill W Ruppenkamp, Anshu Gupta, Chantal E Holy | Anshu Gupta |

| No 3 | Associations between change in pain after participation in first-line osteoarthritis intervention and progression to joint replacement surgery – A register-based study of 44 588 patients with hip or knee osteoarthritis | Kristin Gustafsson, Anna Cronström, Ola Rolfson, Eva Ageberg, Therese Jönsson | Ola Rolfson |
|---|---|---|---|
| No 33 | Trends in racial disparities for total knee arthroplasty — a US hospital database analysis, 2000 – 2021 | Yifan Zhang, Jill W Ruppenkamp, Anshu Gupta, Chantal E Holy | Anshu Gupta |
| No 105 | Utilization of total joint arthroplasty by rural-urban designation in patients with osteoarthritis in a universal coverage system | Adrian Hinman, Richard Chang, Kathryn Royse, Ronald Navarro, Elizabeth Paxton, Kanu Okike | Heather Prentice |
| No 84 | Clinical and economic outcomes of computer-assisted fluoroscopic hip navigation versus robotic assisted total hip arthroplasty (THA | Rodrigo Diaz, Anshu Gupta, Laura Goldstein, Mina Kabiri, Jill W Ruppenkamp, Chantal E Holy | Anshu Gupta |
| No 63 | Is bisphosphonate use associated with an increased risk of reoperation after elective total hip replacement? | Karin Svensson Malchau, Nils P Hailer, Georgios Tsikandylakis, Jonatan Nåtman, Johanna Vinblad, Maziar Mohaddes, Ola Rolfson | Ola Rolfson |

**5.30 – 7.00**          **Drinks Reception**
                    **Venue: Atrium, Hotel Omni Mont-Royal**

**International Society of Arthroplasty Registries**

## Sunday May 14<sup>th</sup>

| | |
|---|---|
| **7.00 – 8.00** | **Breakfast – Room: Pierre de Coubertin** |

| | |
|---|---|
| **7.30 – 8.00** | **Registration** |

| | |
|---|---|
| **8.00 – 9.00** | **Registries and Regulators – A Symbiotic Relationship?** |
| | Moderators: Anne Lübbeke and Tim Wilton |
| | Presenters: |
| | Tim Wilton, UK (16 min): Registry perspective |
| | Russell Schenck, US (16 min: Industry perspective |
| | Tom Melvin, Ireland (16 min) (virtual): Regulator perspective |
| | Discussion (12 min) |

| | |
|---|---|
| **9.00 – 10.00** | **Podium Presentations: Shoulder Arthroplasty** |
| | 5 minute presentation and 2 minute discussion |
| | Moderators: Jarret Woodmass and Michael Whitehouse |

| No 20 | Association between same-day discharge shoulder arthroplasty and risk of adverse events in patients with American Society of Anesthesiologists Classification ≥ 3 | Michael Hachadorian, Richard N Chang, Heather A Prentice, Elizabeth W Paxton, Anita G Rao, Ronald A Navarro, Anshuman Singh | Heather Prentice |
|---|---|---|---|
| No 115 | Application of Orthopaedic Data Evaluation Panel (ODEP) criteria for Shoulders for elective total shoulder arthroplasty implants used in a United States-based shoulder arthroplasty registry | Heather A Prentice, Buu N Truong, Brian H Fasig, Edward H Yian, Ronald A Navarro, Elizabeth W Paxton | Heather Prentice |
| No 25 | The lifetime revision rate of anatomic and reverse total shoulder arthroplasty | Yushy Zhou, Avanthi Mandaleson, Chris Frampton, Marc Hirner | Yushy Zhou |
| No 57 | The projected burden of primary total shoulder replacement surgery in Australia to 2035 | Sze-Ee Soh, Connor Fisher, Richard Page, Richard de Steiger, Ilana Ackerman | Sze-Ee Soh |
| No 126 | A comparison of revision rates for stemmed and stemless primary anatomic shoulder arthroplasty with all polyethylene glenoid components. Analysis from the Australian Orthopaedic Association National Joint Replacement Registry | David R J Gill, Sophia Corfield, Dylan Harries, Richard S Page | David Gill |
| No 23 | Medium-term results of stemless, short stem, and conventional stem anatomic total shoulder arthroplasty | Yushy Zhou, Chris Frampton, Marc Hirner | Yushy Zhou |

| No 125 | Does modularity reduce the rates that 1<sup>st</sup> revision classes of primary inlay and onlay reverse shoulder arthroplasty undergo a 2<sup>nd</sup> revision? Analysis from the Australian Orthopaedic Association National Joint Replacement Registry. | David R J Gill, Sophia Corfield, Carl Holder, Richard S Page | David Gill |
|---|---|---|---|
| No 79 | Initial findings after implementation of a regional Shoulder Replacement Registry | Jarret Woodmass, Sheila McRae, Eric Bohm | Jarret Woodmass |

**10.00 – 10.30**      **Coffee & Posters:Shoulder Arthroplasty and Infection**
2 minute presentation poster walk
Adjudicators: Richard de Steiger and Jörg Lützner

| No 113 | Application of Orthopaedic Data Evaluation Panel (ODEP) criteria for shoulders for hemiarthroplasty implants for proximal humerus fracture used in a United States-based shoulder arthroplasty registry | Heather A Prentice, Buu N Truong; Brian H Fasig, Edward H Yian, Ronald A Navarro, Elizabeth W Paxton | Heather Prentice |
|---|---|---|---|
| No 28 | AAOS Shoulder and Elbow Registry assessment of inpatient and outpatient shoulder arthroplasty trends over time | Oke Anakwenze, Ronald Navarro, Joaquin Sanchez-Sotelo, Carolyn Hettrich, Mita De, Stephen Weber, Stephen Brockmeier, Grant Garrigues, Jed Kuhn, Patrick St Pierre, Samuel Taylor, Gerald Williams | Oke Anakwnze |
| No 64 | No correlation between season of the year and risk of prosthetic joint infection after total hip arthroplasty: A cohort study on 58,449 patients with osteoarthritis from the Danish Hip Arthroplasty Register | Rajzan Joanroy, Jens K Møller, Sophie Gubbels, Søren Overgaard, Claus Varnum | Rajzan Joanroy |
| No 13 | Influence of single vs. dual antibiotic-loaded bone cement on the infection rate after hemiarthroplasty and total hip arthroplasty for the treatment for femoral neck fracture | Dominik Szymski, Nike Walter, Paula Krull, Oliver Melsheimer, Siegmund Lang, Alexander Grimberg, Volker Alt, Arnd Steinbrück, Markus Rupp | Dominik Szymski |
| No 51 | Adverse factors associated with failed treatment for infected primary total knee arthroplasty | Mohamed Yousef, Wenyun Yang, Hua Zheng, David C Ayers | David Ayers |

International Society of Arthroplasty Registries

| No 44 | Global Arthroplasty Infection Asssociation | Amit Atrey, Amir Khoshbin, David Campbell, Laurens Manning, Gavin Wood,  Eric Bohm, Christopher Jones, Christopher Kandel, Joshua Davis, Hesham Abdel-Barry, Dirk Jan Moojen, Piers Yates, James P Waddell, Christopher Grayson, Bryan Springer, Ben Ricciardi, Mike Reed | Gavin Wood |
|---|---|---|---|
| No 128 | Periprosthetic fractures: A rising tide of total hip arthroplasty failures noted in the American Joint Replacement Registry (AJRR) and the role of cemented stems in preventing them | Adam A Sassoon, Ayushmita De, Ryan D Stancil, Darryl F Cannady, Jeremiah Taylor, Emily Jimenez | Adam Sassoon |

**10.30 – 12.00**          **Podium Presentations: Infection, Obesity & Patient Factors**
5 minute presentation and 2 minute discussion
Moderators: Michael McAullife and Ove Furnes

| No 56 | Data linkage to determine the rate of prosthetic joint infection | Richard de Steiger, J Jin, K Duszynski, N Pratt, I Harris, S Graves, M Hanly, B Gallego Luxan, L Jorm | Richard de Steiger |
|---|---|---|---|
| No 43 | Periprosthetic joint infection rate in Germany – is it influenced by surgical teaching? | Arnd Steinbrück, Oliver Melsheimer, Alexander W Grimberg, Jörg Lützner | Arnd Steinbrück |
| No 69 | The effect of surgeon volume on revision for deep periprosthetic joint infection: An analysis of 602 919 primary total knee arthroplasties | Michael J McAuliffe, Carl Holder, Patrick B O'Connor, Matthew R Belford, Darren Vaotuua, Peter Lewis | Michael McAuliffe |

| No 123 | The epidemiology of antibiotic loaded bone cement and systemic antibiotic prophylactic usage in primary cemented or hybrid total knee arthroplasty among countries in Africa, Europe, North America, and Oceania: A register based descriptive international study 2010-2020 | Tesfaye H Leta, Stein Håkon L Lygre, Anne Marie Fenstad, Stein Atle Lie, Martin Lindberg Larsen, Alma Becic Pedersen, Annette W-Dahl, Ola Rolfson, Erik Bülow, James Ashforth, Liza van Steenbergen, Rob GHH Nelissen, Sophie Corfield, Richard de Steiger, Olav Lutro, Mäkelä Keijo, Hakulinen Emmi, Jinny Willis, Mike Wyatt, Chris Frampton, Alexander Grimberg, Arnd Steinbrück, Yinan Wu, Cristiana Armaroli, Marco Molinari, Roberto Picus, Kyle Mullen, Richard Illgen, Ioan Cristian Stoica, Andreea Elena Vorovenci, Dan Dragomirescu, Håvard Dale, Christian Brand, Bernhard Christen, Joanne Shapiro, J Mark Wilkinson, Richard Armstrong, Kate Wooster, Geir Hallan, Jan-Erik Gjertsen, Richard N Chang, Heather A Prentice, Elizabeth W Paxton, Ove Furnes | Tesfaye Leta |
| No 110 | Risk of second revision after first revision due to prosthetic joint infection after total hip arthroplasty: A register-based cohort study on 1,277 patients from the Danish Hip Arthroplasty Register | Rajzan Joanroy, Sophie Gubbels, Jens K Møller, Søren Overgaard, Claus Varnum | Rajzan Joanroy |
| No 11 | Infection after intracapsular femoral neck fracture – Does antibiotic-loaded bone cement reduce infection risk after hemiarthroplasty and total hip arthroplasty? – Data from the German Arthroplasty Registry | Dominik Szymski, Nike Walter, Paula Krull, Oliver Melsheimer, Alexander Grimberg, Volker Alt, Arnd Steinbrück, Markus Rupp | Dominik Szymski |
| No 75 | Obesity and revision surgery, mortality and patient reported outcomes after primary knee replacement surgery in the National Joint Registry | Jonathan Thomas Evans, Sofia Mouchti, Ashley William Blom, J Mark Wilkinson, Michael Richard Whitehouse, Andrew Beswick, Andrew Judge | Jonathan Evans |
| No 39 | Total knee arthroplasty and bariatric surgery: Change in BMI and risk of revision depending on sequence of surgery | Perna Ighani Arani, Per Wretenberg, Erik Stenberg, Johan Ottosson, Annette W-Dahl | Perna Ighani Arani |

**International Society of Arthroplasty Registries**

| No 15 | Creation of a patient-specific total hip arthroplasty periprosthetic fracture risk calculator | Cody C Wyles, Hilal Maradit-Kremers, Kristin M Fruth, Dirk R Larson, Bardia Khosravi, Pouria Rouzrokh, Quinn J Johnson, Daniel J Berry, Rafael J Sierra, Michael J Taunton, Matthew P Abdel | Cody Wyles |
|---|---|---|---|
| No 99 | Level of physical activity after total hip arthroplasty and risk of revision surgery in patients aged under 65 | Elena Zaballa, Stefania D'Angelo, Christophe Barea, Georgia Ntani, Didier Hannouche, Cyrus Cooper, Anne Lübbeke, Karen Walker-Bone | Anne Lübbeke |
| No 70 | A comparison of comorbidity measures for predicting mortality after elective hip and knee replacement: A cohort study of data from the National Joint Registry in England and Wales | Chris M Penfold, Michael R Whitehouse, Ashley W Blom, Andrew Judge, J Mark Wilkinson , Adrian Sayers | Michael Whitehouse |
| No 98 | External validation of simple-to-use preoperative risk prediction models for early (6 months) adverse events following total hip arthroplasty | Mikko S Venäläinen, Valtteri J Panula, Erik Bülow, Carl Holder, Antti P Eskelinen, Emmi Peltonen, Mikko J Manninen, Jukka S Kettunen, Ari-Pekka Puhto, Anna I Vasara, Ola Rolfson, Stephen E Graves, Keijo T Mäkelä, Laura L Elo | Mikko S Venäläinen |

**12.00 – 12.45**          **Lunch**

**12.45 – 1.30**          **Podium Presentations: Hip Fracture**
5 minute presentation and 2 minute discussion
Moderators: Gavin Wood and Ola Rolfson

| No 117 | Risk factors for postoperative morbidity and mortality in elderly hip fracture patients prior to surgery | Vimal Desai, Priscilla Chan, Kathryn E Royse, Ronald A Navarro, Heather A Prentice, Glenn R Diekmann, Kent T Yamaguchi, Liz W Paxton, Chunyuan X Qiu | Matthew Kelly |
|---|---|---|---|
| No 118 | Optimizing time to surgery for hip fracture repair in the elderly to reduce mortality | Chunyuan X Qiu, Priscilla H Chan, Kathryn E Royse, Ronald A Navarro, Glenn R Diekmann, Kent T Yamaguchi, Elizabeth W Paxton, Vimal Desai | Matthew Kelly |

**International Society of Arthroplasty Registries**

| No 37 | Comparable revision rates for bipolar and unipolar hemiarthroplasties but higher revision rates in uncemented stem hemiarthroplasty | Esther M Bloemheuvel, Liza N van Steenbergen, Bart A Swierstra, B Willem Schreurs | Liza van Steenbergen |
|---|---|---|---|
| No 120 | Associations between SSRIs and adverse events following hip fracture arthroplasty | Lynn Lethbridge, Matt Nagle, Emily Johnson, C Glen Richardson, Michael J Dunbar | Lynn Lethbridge |
| No 12 | Mortality and complications after surgical treatment of femoral neck fractures by hemiarthroplasty in Germany - An analysis from the German Endoprosthesis Registry (EPRD) | Nike Walter, Dominik Szymski, Oliver Melsheimer, Alexander Grimberg, Volker Alt, Arnd Steinbrück, Markus Rupp | Dominik Szymski |
| No 45 | Examining trends in Canada for cemented fixation for hemiarthroplasty for fracture | Carolyn Sandoval, Ricky Chin, Michael Terner, Jason R Werle, Eric Bohm | Carolyn Sandoval |

**1.30 – 2.15**          **Podium Presentations: Machine Learning**
5 minute presentation and 2 minute discussion
Moderators: Heather Prentice and Adrian Sayers

| No 38 | Prediction of arthroplasty revision surgery: Competing risk analyses with machine learning or conventional modelling | Jacobien H F Oosterhoff, Anne A H de Hond, Rinne M Peters, Liza N van Steenbergen, Juliette C Sorel, Wierd P Zijlstra, Rudolf W Poolman, Paul C Jutte, Gino M M J Kerkhoffs, Hein Putter, Ewout W Steyerberg, Job N Doornberg | Liza van Steenbergen |
|---|---|---|---|
| No 102 | Measuring and predicting 4-year progression of osteoarthritis with machine learning | Seong Jun Jang, Kyle N Kunze, Chris Anderson, David J Mayman, Seth A Jerabek, Jonathan M Vigdorchik, Peter K Sculco, Mark Alan Fontana | Mark Fontana |
| No 21 | Developing and evaluating *the smart choice (knee):* A patient-focused tool to predict health-related quality of life outcomes after total knee arthroplasty | Yushy Zhou, Michelle Dowsey, Tim Spelman, Peter Choong, Chris Schilling | Yushy Zhou |
| No 16 | THA-Net: A deep learning solution for next generation templating and patient-specific surgical execution | Cody C Wyles, Pouria Rouzrokh, Bardia Khosravi, John P Mickley, Bradley J Erickson, Mark W Pagnano, Matthew P Abdel, Michael J Taunton | Cody Wyles |

**International Society of Arthroplasty Registries**

| No 17 | Creating high fidelity synthetic pelvis radiographs using generative adversarial networks: Unlocking the potential of deep learning models without patient privacy concerns | Cody C Wyles, Bardia Khosravi, Pouria Rouzrokh, John P Mickley, A Noelle Larson, Hillary W Garner, Benjamin M Howe, Bradley J Erickson, Michael J Taunton | Cody Wyles |

**2.15 – 2.45**     **Coffe & Posters: Obesity, Hip Fracture, Machine Learning**
2 minute presentation poster walk
Adjudicators: Richard de Steiger and Jörg Lützner

| No 36 | Patient factors influencing the treatment effects for total hip arthroplasty (THA) and knee arthroplasty (TKA) in the SIRIS Registry – Analysis of the SIRIS data of Kanton Zurich | Christian Brand, Joerg Huber, Lilianna Bolliger, Bernhard Christen, Viliiam Zdravkovic, Martin Beck | Joerg Huber |
| No 116 | Risk factors for postoperative morbidity and mortality in elderly hip fracture patients on anticoagulation medications prior to surgery | Vimal Desai, Priscilla Chan, Kathryn E Royse, Ronald A Navarro, Heather A Prentice, Glenn R Diekmann, Kent T Yamaguchi, Liz W Paxton, Chunyuan X Qiu | Matthew Kelly |
| No 62 | Preoperative Oxford hip score as a predictor of risk of revision and death after hip replacement surgery using meta-parametric neural networks | Fabio Luis de Mello, Visakan Kadirkamanathan, J Mark Wilkinson | No presenter |
| No 127 | Transfer learning strategy to overcome partial availability of pre-operative PROMs data in estimation of hip and knee revision | Fabio Luis de Mello, Visakan Kadirkamanathan, J Mark Wilkinson | No presenter |

**2.45 – 4.00**     **Podium Presentations: Outcomes 1**
5 minute presentation and 2 minute discussion
Moderators: Michael Morlock and Ove Furnes

| No 60 | Dislocation after elective THA | Peter Cnudde, Jonatan Nåtman, Ola Rolfson, Nils P Hailer | Ola Rolfson |
| No 95 | The association between surgeon volume and patient outcomes after elective shoulder replacement surgery | Epaminondas Markos Valsamis, Gary S Collins, Rafael Pinedo-Villanueva, Michael Whitehouse, Adrian Sayers, Jonathan L Rees | Adrian Sayers |

**International Society of Arthroplasty Registries**

| No 93 | The association between surgeon grade and risk of revision following total hip replacement: an analysis of National Joint Registry data | Tim J Fowler, Alex L Aquilina, Mike Reed, Ashley W Blom, Adrian Sayers, Michael R. Whitehouse | Adrian Sayers |
|---|---|---|---|
| No 67 | What is the learning curve for total ankle arthroplasty? | Peter Stavrou, Dylan Harries, Michelle Lorimer, Sophie Corfield | Peter Stavrou |
| No 119 | Surgeon selection of new total knee arthroplasty implants and risk of revision: A cohort study | Heather A Prentice, Adrian D Hinman, Nithin C Reddy, Matthew P Kelly, Elizabeth W Paxton | Matthew Kelly |
| No 77 | How long do revised and multiply revised hip replacements last? A retrospective observational study of the National Joint Registry | Kevin Deere, Michael R Whitehouse, Setor K Kunutsor, Adrian Sayers, James Mason, Ashley W Blom | Jonathan Evans |
| No 78 | How long do revised and multiply revised knee replacements last? An analysis of the National Joint Registry | Kevin Deere, Michael R Whitehouse, Setor K Kunutsor, Adrian Sayers, Andrew J Price, James Mason, Ashley W Blom | Jonathan Evans |
| No 68 | Does the use of technology (computer navigation/robotics) diminish total knee revision rates when optimal prosthetic combinations are selected? | Michael J McAuliffe, Christopher Vertullo, Jon A Anderson, Dylan Harries | Michael McAuliffe |
| No 129 | Collared femoral stem design for total hip arthroplasty reduces the risk of periprosthetic femur fracture in patients 65 years or older: An analysis from the American Joint Replacement Registry | Mackenzie Kelly, Antonia F Chen, Sean P Ryan, Zachary Working, Ayushmita De, Kyle Mullen, Kimberly Porter, Ryland Kagan | Mackenzie Kelly |
| No 61 | Merging data from the Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) and the Dutch Arthroplasty Register (LROI): A comparison of patient, prosthesis and procedure characteristics as well as revision rates of uncemented short-stemmed total hip arthroplasties performed between 2009-2021. | Mirthe H W van Veghel, Gerjon Hannink, Peter L Lewis, Carl Holder, Liza N van Steenbergen, B Willem Schreurs | Mirthe van Veghel |

**4.00 – 4.15**       **ISAR Update – Eric Bohm and Anne Lubbeke**

**4.15 – 5.00**       **ISAR Business meeting**

**7.00**       **Congress dinner**
       **Venue: Pierre de Coubertin, Hotel Omni Mont-Royal**

![International Society of Arthroplasty Registries]

## Monday May 15<sup>th</sup>

**7.00 – 8.00**　　　　　　**Breakfast – Room: Pierre de Coubertin**

**8.00 – 9.00**　　　　　　**PROMs versus Revision Risk: Pick One? Pick Both?**
　　　　　　　　　　　5 minute presentation and 2 minute discussion
　　　　　　　　　　　Moderators: Jesse Wolfstadt and Brian Hallstrom

- 8.00-8.15　　　　The Use of PROMs to Promote Quality Improvement: The MARCQI Experience (Brian Hallstrom)

- 8.15-8.22　　　　Abstract No 111 – Patient reported outcomes vary by TKA implant design (Richard Hughes)

- 8.22-8.29　　　　Abstract No 124 – Propensity score matching to evaluate the improvement of KOOS-JR with applications to selected devices: MARCQI five year study (2017-2021) (Richard Hughes)

- 8.30-9.00　　　　Panel discussion – What should we be reporting and measuring? What's more important: PROMs or implant survivorship?
　　　　　　　　　**Invited panelists**: David Ayers, Annette Dahl, Ola Rolfson, Adrian Sayers and Anne Lübbeke

**9.00 – 9.55**　　　　　　**Podium Presentations: PROMs 1**
　　　　　　　　　　　5 minute presentation and 2 minute discussion
　　　　　　　　　　　Moderators: Jarret Woodmass and Maziar Mohaddes

| No 24 | Comparing functional outcomes after total hip and knee arthroplasty by patient response to registry questionnaires | Yushy Zhou, Cade Shadbolt, Sharmala Thuraisingam, Michelle Dowsey, Peter Choong, Chris Schilling | Yushy Zhou |
|---|---|---|---|
| No 27 | Calculating and comparing the minimal clinically important difference for veterans-rand 12 utility score in total knee arthroplasty | Yushy Zhou, Cade Shadbolt, Siddarth Rele, Tim Spelman, Michelle Dowsey, Peter Choong, Chris Schilling | Yushy Zhou |
| No 91 | Socio-economic inequalities in patient-reported outcome measures of Dutch primary hip and knee arthroplasty patients for osteoarthritis | Joshua M Bonsel, Max Reijman Jan A N Verhaar, Liza N van Steenbergen, Mathieu F Janssen, Gouke J Bonsel | Max Reijman |

**International Society of Arthroplasty Registries**

| No 42 | Effect of pre-operative self-reported anxiety and/or depression on patient-reported outcomes in hip and knee replacement patients in Ontario, Canada | Shannon Weir-Seeley, Clarissa Encisa, Robin Santiago, Michael Terner, Colleen Bedford, James Waddell | Shannon Weir-Seeley |
|---|---|---|---|
| No 80 | Similar patient-reported outcome measures after direct superior, anterior and posterolateral approach total hip arthroplasty: 1 year follow-up of 37,976 primary THAs in the Dutch Arthroplasty Registry | Bart van Dooren, Rinne M Peters, Harmen B Ettema, B Wim Schreurs, Liza N van Steenbergen , Stefan B T Bolder, Wierd P Zijlstra | Bart van Dooren |
| No 106 | Feasibility of international comparisons of patient-reported outcome measures for hip and knee replacement surgery | Micheline Turnau, Candan Kendir, Katherine de Bienassis, Candy Chow, Krysia Walczak, Michael Terner, Eric Bohm, Brian Hallstrom, J Mark Wilkinson, Anne Lübbeke-Wolff | Michael Terner |
| No 58 | Minimally clinically important changes for the Oxford Shoulder Score in patients undergoing primary total shoulder replacement: Data from the Australian Orthopaedic Association National Joint Replacement Registry Patient-Reported Outcomes Measures Program | Sze-Ee Soh, Yiying Fang, Ian Harris, Richard Page, Kara Cashman, Michelle Lorimer, Emma Heath, Ilana Ackerman | Sze-Ee Soh |

**10.00 – 10.45**          **Keynote Speaker**(45 min): Jean François Menard
Title: Train Your brain like an Olympian
Introduced by: Eric Bohm

**10.45 – 11.10**          **Coffee & Posters (Outcomes)**
2 minute presentation poster walk
Adjudicators: Richard de Steiger and Jörg Lützner

| No 18 | Selective use of Dual mobility cups does not reduce the risk of aseptic revision in primary total hip arthroplasty when compared to ceramic or metal on cross-linked polyethylene articulations | Monti Khatod, Priscilla H Chan, Heather A Prentice, Elizabeth W Paxton, Nithin C Reddy, Matthew P Kelly | Matthew Kelly |
|---|---|---|---|
| No 122 | Reasons for revision of dual-mobility-cups vs standard cups in primary total hip arthroplasty in Switzerland | Christian Brand, Lilianna Bolliger, Bernhard Christen, Viliiam Zdravkovic, Martin Beck | Martin Beck |

| No 19 | Can dual mobility constructs lower the risk of aseptic re-revision in revision total hip arthroplasty when compared to metal or ceramic-on-highly cross-linked polyethylene and constrained liner articulations? | Monti Khatod, Priscilla H Chan, Heather A Prentice, Elizabeth W Paxton, Nithin C Reddy, Matthew P Kelly | Matthew Kelly |
|---|---|---|---|
| No 50 | One-year total knee arthroplasty revision in the US: Incidence and outcome | David C Ayers, Wenyun Yang, Hua Zheng, Mohamed Yousef | David Ayers |
| No 97 | Association of implant positioning with patient satisfaction scores in hip arthroplasty | James Anthony Ashforth, Antoine Smith Dryden Dymond | James Anthony Ashforth |
| No 40 | Differences in early recovery following unicompartmental knee replacement with daycase and standard care pathways, assessed using Novel Patient-Reported Measures | Louise H Strickland, Azmi Rahman, Martina Zagaria, David W Murray, Hemant G Pandit, Crispin Jenkinson | Martina Zagaria |

**11.10 – 12.00**  **Podium Presentations: PROMs 2**
5 minute presentation and 2 minute discussion
Moderators: Richard Hughes and John Mckie

| No 52 | Do pain relief and functional gain vary by implant manufacturer after primary TKA? | David C Ayers, Adam Green, Wenyun Yang, Hua Zheng, Kyle Alpaugh, Mohamed Yousef | David Ayers |
|---|---|---|---|
| No 46 | The prevalence and predictors of patient dissatisfaction 5-years after primary total hip arthroplasty | Forrest Rackard, Mohamed Yousef, Hua Zheng, Wenyun Yang, David C Ayers | Forrest Rackard |
| No 35 | Benefit of total hip arthroplasty (THA)/total knee arthroplasty (TKA) for the patients of Kanton Zurich – Individual treatment effects measured in the Swiss Implant Registry (SIRIS) | Joerg Huber, Christian Brand, Martin Beck, Lilianna Bolliger, Viliiam Zdravkovic, Bernhard Christen | Joerg Huber |
| No 5 | Comparison of prevalence and overlap of different definitions of poor response after total knee arthroplasty using the Dutch Arthroplasty Register and the Osteoarthritis Initiative database | M E M Te Molder, M M Dowsey, J M H Smolders, L N Van Steenbergen, C H M Van den Ende, P J C Heesterbeek | Liza van Steenbergen |

| No 65 | Association of pre-existing mental disorders with quality of life in primary total hip and knee arthroplasty | Siddharth Rele, Jesse T Young, Cade Shadbolt, Daniel Gould, Peter FM Choong, Michelle M Dowsey | Siddharth Rele |
|-------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| No 101 | One-year after total joint arthroplasty: Patient-reported outcome measure thresholds using the patient acceptable symptom state question as an anchor | Mihir Dekhne, Mark Alan Fontana, Daniel A Driscoll, Sohum Pandey, Stephen Lyman, Alexander McLawhorn, Catherine H MacLean | Mark Fontana |
| No 121 | Defining success: Comparison of different methods to report patient reported outcome measure-based quality for lower extremity total joint arthroplasty (TJA) | Daniel A Driscoll, Mihir Dekhne, Stephen Lyman, Vinicius C Antao, Catherine MacLean, Alexander S. McLawhorn | Vinicius Antao |

**12.00 – 12.30**          **Lunch**

**12.30 –1.00**          **Fellowship updates**
Moderator: Eric Bohm
Presenters: Lina Holm Ingelsrud (virtual), Liza van Steenbergen, Peter Cnudde (virtual)  (5 minute presentation & 5 minute discussion)

**1.00 – 2.00**          **Podium Presentations: Outcomes 2**
5 minute presentation and 2 minute discussion
Moderators: Annette W-Dahl and Claus Varnum

| No 94 | The association between surgeon grade and risk of revision following knee replacement: an analysis of National Joint Registry data | Tim J Fowler, Ashley W Blom, Adrian Sayers, Michael R Whitehouse | Adrian Sayers |
|-------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------|
| No 26 | The effect of total knee arthroplasty on mortality: Is there an optimal age for surgery? | Yushy Zhou, Chris Frampton, Marc Hirner | Yushy Zhou |
| No 103 | Sex-specific implant fixation can reduce revision rates in total hip arthroplasty:- Evidence from the Swiss National Joint Registry | Andreas Ladurner, Vilijam Zdravkovic, Karlmeinrad Giesinger | Andreas Ladurner |
| No 104 | Tourniquet use in total knee replacement - A report from the Norwegian Arthroplasty Register (NAR) with 3 years follow-up (2018-2021). | Ove Furnes, Michelle Khan, Geir Hallan, Jan-Erik Gjertsen, Mona Badawy, Otto Schnell Husby, Paul Johan Høl, Stein Håkon Låstad Lygre | Ove Furnes |

**International Society of Arthroplasty Registries**

| No 108 | Revision rates after primary THA in registries: Systematic review and meta-analysis of selected hip stems and cups | Anne Lübbeke, James Smith, Christophe Barea, Lotje A Hoogervorst, Perla J Marang-van de Mheen, Christophe Combescure | Anne Lubbeke |
|---|---|---|---|
| No 14 | Comparison of mortality rate, septic and aseptic revisions in total hip arthroplasties for osteoarthritis and femoral neck fracture – An analysis of the German Arthroplasty Registry (EPRD) | Markus Rupp, Nike Walter, Paula Krull, Oliver Melsheimer, Melanie Schindler, Alexander Grimberg, Volker Alt, Arnd Steinbrück, Dominik Szymski | Markus Rupp |
| No 112 | Temporal trends in revision hip arthroplasty – hip revisions reported to the Swedish Arthroplasty Register during years 2004–2021 | Maziar Mohaddes, Ola Rolfson, Cecilia Rogmark, Johan Kärrholm | Maziar Mohaddes |
| No 6 | Distal femoral replacement for periprosthetic fractures is associated with high revision rates and mortality | Jörg Lützner, Oliver Melsheimer, Arnd Steinbrück, Anne Postler | Jörg Lützner |

**2.00 – 3.00**          **Best Paper Session**
                         Moderator: Ola Rolfson


**3.00 – 3.30**          **Working Group Updates**
                         Moderator: Eric Bohm
                         Presenters:
                         IPL – Eric Bohm;
                         Benchmarking/Signal Detection/Statistics – Adrian Sayers or Richard de Steiger
                         PROMs – Brian Hallstrom
                         Education – Anne Lubbeke Wolff


**3:30 – 3:40**          **Update on the next ISAR Congress in Hamburg**


**3.40 – 4.0**0           **Awards / Wrap Up**