8:00-9:30 ICORS/COA Symposium: Peri-Prosthetic Joint Infection: An Evidence-Based Approach • Room 517D
*Moderator:* Paul E. Beaulé, ON

**Objectives:**
1. To understand biomarkers.
2. To understand surgical options in PJI.
3. How to diagnose PJI.
4. How to manage complex PJI.

**Speakers:**
- Defining the Burden of PJI: Is This an Epidemic? Fares Haddad, UK
- Making the Diagnosis – Systematic Review - Hesham Abdelbary, ON
- Surgical Management - What to Do in the Acute Phase - James Howard, ON
- Will Direct Exchange Become the New Standard? Bas A. Masri, BC

**10:45-11:15 Poster Session with Coffee • Exhibit Hall, Room 516**

11:15-12:45 COA Arthroplasty ICL: Trunnionosis • Room 521
*Moderator:* Michael Tanzer, QC

**Objectives:**
1. To understand trunnion design.
2. To understand mechanically assisted crevice corrosion.
3. How to diagnose hip pain related to trunnion wear.
4. How to manage a worn trunnion.

**Speakers:**
- The Role of Metal Ion Testing in Diagnosis - Pascal-André Vendittoli, QC
- The Evolution of Trunnion Design - Is There a Flaw? - Michael Tanzer, QC
- Can Bearing Choice Influence MACC? - Brent Lanting, ON
- How to Manage ARMD - Nelson V. Greidanus, BC

12:45-13:30 Lunch - Food and Beverage for Purchase in Exhibit Hall

13:30-15:00 COA Paper Session: Adult Reconstruction Knee 2
- Room 521
  Moderators: Edward Vasarhelyi, ON; Marie-eve Bolduc, QC

251 - 13:30
Who Needs a Total Knee Replacement?: Study of Appropriateness and Triage for Patients with Osteoarthritis of the Knee
Geoffrey Dervin, ON; T. Derek V. Cooke, ON

252 - 13:36
Can the Oxford Knee and Hip Score Identify Patients That Don’t Require Total Knee or Hip Arthroplasty?
Michael Neufeld, BC; Bas A. Masri, BC

253 - 13:42
Dexmedetomidine Compared to Epinephrine in Prolonging the Duration of Analgesia of Motor Sparing Knee Block after Total Knee Arthroplasty – Randomized Double-Blinded Single-Centre Study
James Howard, ON; Deepti Vissa, ON; Cheng Lin, ON; Sugantha Ganapathy, ON; Dianne Bryant, ON; Drishya Adhikari, ON; Steven MacDonald, ON; Brent Lanting, ON; Edward Vasarhelyi, ON

13:48 Discussion

254 - 13:57
Subvastus Lateralis Approach: Initial Evaluation of its Effectiveness as a Standard for Total Knee Arthroplasty
Brent Lanting, ON; Josée Legault, ON; Tyler Beveridge, ON; Marjorie Johnson, ON; James Howard, ON; Steven MacDonald, ON
255 - 14:03
Combined Intra-Articular and Intravenous Tranexamic Acid Administration Associated With Improved Early Rehabilitation Outcomes after Total Knee Arthroplasty: A Randomized Controlled Trial
Ping Keung Chan, Hong Kong; Chun Hoi Yan, Hong Kong; Kwong Yuen Chiu, Hong Kong

256 - 14:09
An Examination of the Association Between Surgical Wait Times and Hospital Length of Stay in Nova Scotia
Shahriar Seddigh, NS; Michael J. Dunbar, NS; Jo-Anne Douglas, NS; Lynn Lethbridge, NS; Patrick Theriault, NS

14:15 Discussion

257 - 14:24
Prediction Model of Acute Surgical Site Infections Post Total Knee Arthroplasty Using Pre-Operative Blood Markers
Amir Khoshbin, ON; Luana Melo, ON; Achal Sharma, ON; Alexandra Stavrakis, US; Michael Zywiel, ON; Sarah Ward, ON; Amit Atrey, ON; Samantha White, ON; Lauren Nowak, ON

258 - 14:30
A Randomized Trial Investigating the Cost-Effectiveness of Patient Specific Instrumentation in Total Knee Arthroplasty in an Obese Population
Bryn Zomar, ON; Lyndsay Somerville, ON; Edward Vasarhelyi, ON; Brent Lanting, ON; James Howard, ON; Jacquelyn Marsh, ON

259 - 14:36
Fifteen-Year Survivorship of 1719 Medial Oxford Unicompartmental Knee Replacements Performed at a Single Centre: The Ottawa Hospital Experience
Jonathan Howatt, ON; Johanna Dobransky, ON; Geoffrey Dervin, ON; Paul Kim, ON
260 - 14:42
Prolonged Surgical Times Increase the Risk of Complications Following Total Knee Arthroplasty
Lauren Nowak, ON; Emil H. Schemitsch, ON

14:48 Discussion

15:00-15:30 Break - Food and Beverage for Purchase in Exhibit Hall

15:30-17:00 COA Trauma / Arthroplasty ICL: Perspectives on Fractures • Room 525
Moderators: Hans Kreder, ON

Objectives:
1. Know when to choose fracture fixation vs. revision arthroplasty for periprosthetic femur fractures.
2. Decide when to include multiplanar fixation (strut or otherwise) as part of the surgical tactic for fixation of periprosthetic femur fractures.
3. Decide on fixation vs. replacement arthroplasty for fragility fractures of the distal femur with surgical tips and tricks applied to each treatment.
4. Decide on fixation vs. replacement arthroplasty for fragility fractures of the acetabulum with surgical tips and tricks applied to each treatment.

Part 1- Peri-Prosthetic Fractures:
Is the Implant Loose? Moderated by Hans Kreder, ON
• Arthroplasty Perspective - James Howard, ON
• Trauma Perspective - Richard Jenkinson, ON

Multiplanar Fixation - Allograft or Metal: Moderated by Amit Atrey, ON
• Should be Used in Most Cases - Amit Atrey, ON
• Is Seldom Needed - Hans Kreder, ON

Part 2 - Fragility Fractures (Fix vs. Replace):
Distal Femur: Moderated by James Howard, ON
• Fix - Aaron Nauth, ON
• Replace - James Howard, ON
Acetabular Fractures: Moderated by Richard Jenkinson, ON
- Fix - David J.G. Stephen, ON
- Replace - Michael Zywiel, ON

COA Foot & Ankle and Canadian Orthopaedic Foot & Ankle Society (COFAS)

7:30-9:10 COA Paper Session: Foot and Ankle • Room 518C
Moderators: Christina Bakir, AB; Peter Dryden, BC

261 - 7:30
Accuracy and Radiologic Outcomes of Patient Specific Instrumentation for Total Ankle Arthroplasty
Susan Ge, QC; Bardia Barimani, QC; Laura Mery Epure, QC; Ahmed Aoude, QC; Lucy Luo, QC

262 - 7:36
What is the Role of the Deltoid Ligament Repair in Ankle Fracture?
Julian Wang, ON; Moin Khan, ON; Bashar Alolabi, ON; Nolan Horner, ON; Devon Stride, ON

7:48 Discussion

263 - 7:57
A Comparison of Ankle Arthritis Outcomes and Reoperation Rates Between MSP-Funded, WCB-Funded and Self-Funded Surgery in Vancouver
Jillian Fairley, BC; Alastair S.E. Younger, BC; Murray Penner, BC; Andrea Veljkovic, BC; Kevin Wing, BC

264 - 8:03
Variability in the Reporting Terminology of Adverse Events in Ankle Fracture Fixation
Stefan St. George, BC; Andrea Veljkovic, BC; Hooman Sadhr
Hamedany, BC; Kevin Wing, BC; Murray Penner, BC; Peter Salat, AB; Alastair S.E. Younger, BC

265 - 8:09
Chronic Post-Operative Pain After Elective Foot and Ankle Surgery: A Scoping Review
Yibo (Teresa) Li, AB; Cierra Stiegelmar, AB; Martha Funabashi, AB; Elizabeth Pedersen, AB; Derek Dillane, AB; Lauren Beaupre, AB

8:15 Discussion

266 - 8:24
The Institutional Burden of Ankle Fracture Surgery: A Comparison of Cost and Resource Utilization Associated with Inpatient and Outpatient Care
Jason Akindolire, ON; Silvio Ndoja, ON; Abdel-Rahman Lawendy, ON; Brent Lanting, ON; Ryan Degen, ON

267 - 8:30
The Impact of Sagittal Talar Inclination on Total Ankle Replacement Failure
Vu (Brian) Le, US; Mario Escudero, BC; Kevin Wing, BC; Alastair S.E. Younger, BC; Murray Penner, BC; Andrea Veljkovic, BC

268 - 8:36
Current Radiographic Syndesmotic Malreduction Parameters Do Not Differentiate Anatomic Variation From Malreduction
Natalie Rollick, ON; David Helfet, US; Jessica Bear, US; Owen Diamond, UK; David Wellman, US

269 - 8:42
The Impact of Lower Back Pain on Functional Outcomes for Ankle Arthritis Treated with Arthroplasty and Arthrodesis: A COFAS Study
Oliver Gagne, BC; Michael Symes, BC; Murray Penner, BC; Andrea Veljkovic, BC; Alastair S.E. Younger, BC; Kevin Wing, BC
270 - 8:48
Comparison of Non-Operative Management Strategies for Acute Metatarsal Fractures: A Systematic Review
Ryan Paul, ON; Shawn Khan, ON; David Wasserstein, ON; David J.G. Stephen, ON; Patrick Henry, ON; Michael Catapano, ON

8:54 Discussion

9:15-10:30 COA/COFAS Foot and Ankle Symposium and Guest Speaker • Room 518C

Objectives:
1. Understand approach to degenerative forefoot pathology treatments.
2. Understand challenges with triple arthrodesis techniques and causes of failure.
3. Understand potential for artificial intelligence (AI) relative to foot surgery.

COFAS Visiting Professor: Thibaut Leemrijse, Belgium

- Forefoot Surgery, Our Concepts of Reconstruction
- Can AI and Modelization Revolutionize Foot Surgery?
- Triple Athrodesis, Techniques and Causes of Failures

10:35-11:45 COFAS Business Meeting • Room 518C

12:00-17:00 COFAS Lab: Foot and Ankle Arthroscopic and Reconstructive Techniques Lab • McGill Lab-Offsite

Moderators: Monika Volesky, QC; Ian Le, AB

Shuttle pick up: Departs from the Westin Hotel at 11:30

Address: Shriners Pediatric Simulation Centre, Shriners Hospital for Children, 2nd floor RM 2.37, 1003 Décarie Blvd, Montreal, QC, H4A 0A9

Goal: To demonstrate and practice arthroscopic, open and minimally invasive techniques for management foot and ankle pathology.
Objectives:
1. Describe the principles of arthroscopic treatments for anterior and posterior ankle pathology, as well as subtalar pathology.
2. Demonstrate relevant PEARLS for arthroscopic management of the above.
3. Demonstrate techniques of arthroscopic debridement for anterior and posterior ankle impingement and osteochondral lesions of the talus +/- subtalar arthroscopy.
4. Observe and/or demonstrate techniques in minimally invasive osteotomies in the foot.
5. Demonstrate arthroscopic and open ligament reconstruction techniques.
6. Demonstrate open fusion techniques and reconstructive procedures of the foot and ankle.

Didactic Talks:
1. Open and minimally invasive techniques
   a) MICA Forefoot - Marie Gdalevitch, QC
   b) MICA Hindfoot - Alastair Younger, BC
   c) The Belgian Scarf Technique for Hallux Valgus - Thibaut Leemrijse, Belgium
   d) Cartiva - Kevin Wing, BC
   e) Tendon Transfers and Disorders - Philippe-Hugo Champagne, QC
   f) Osteotomies and Fusions Around the Foot - Johnny Lau, ON

2. Arthroscopy
   a) Anterior ankle arthroscopy - Ian Le, AB
   b) Posterior ankle and subtalar arthroscopy - Monika Volesky, QC
   c) Arthroscopic ankle arthrodesis - Karl-Andre Lalonde, ON
   d) Arthroscopic, open and augmented lateral ligament reconstruction - Andrea Veljkovic, BC

Instructors:
COFAS guest surgeon/visiting professor: Thibaut Leemrijse, Belgium
- Kevin Wing, BC
- Alastair Younger, BC
- Andrea Veljkovic, BC
- Ian Le, AB
- Johnny Lau, ON
- Warren Latham, ON
- Karl-Andre-Lalonde, ON
- Mark Steeves, ON
- Monika Volesky, QC
- Marie Gdalevitch, QC
- Philippe-Hugo Champagne, QC
- Joel Morash, NS

2019 Featured Subspecialty
COA Hand & Wrist

7:50-9:30 COA Paper Session: Hand and Wrist 2 • Room 518A
Moderators: Bertrand H. Perey, BC; Gupreet Dhaliwal, AB

7:50
Welcome to Specialty Day
Thomas J. Goetz, BC

271 - 8:00
Joint Space Narrowing in Patients With Mal-Aligned Scaphoid Fractures
Madeline Perrin, ON; Emily Lalone, ON; Ruby Grewal, ON; Anna Seltser, ON; Karam Albakri, ON; Joy MacDermid, ON; Nina Suh, ON

272 - 8:06
Mid-Term Results of Scaphoid Excision and Bicolumnar Carpal Fusion Using Retrograde Headless Screws
Kendrick Au, ON; Sebastian Undurraga, ON; Johanna Dobransky, ON; Braden Gammon, ON

273 - 8:12
A Systematic Review on the Current Evidence in the Treatment of Lichtman Stages IIIA and IIIB in Kienbock’s Disease
Patrick Qi Wang, ON; Ruby Grewal, ON; Nina Suh, ON; Bogdan Matache, ON
8:18 Discussion

274 - 8:30
Ulnar Shortening Osteotomy – Does the Osteotomy Site and Plate Placement Affect the Rate of Complications
Yiyang Zhang, MB; Neil White, AB; Tod Clark, MB; Gurpreet Dhaliwal, AB; Tina Samuel, AB; Raghav Saini, ON

275 - 8:36
A Randomized Prospective Study Comparing Ligament Reconstruction and Tendon Interposition (LRTI) with the Ascension® PyroDisk for Trapeziometacarpal Osteoarthritis
Emanuelle Villemaire-Cote, QC; Bertrand H. Perey, BC

276 - 8:42
Management and Outcomes of Clinical Scaphoid Fractures in Children
Aneesh Karir, ON; Kevin Cheung, ON; Sasha Carsen, ON; Kevin Smit, ON; Minh NQ Huynh, ON

8:48 Discussion

277 - 9:00
Four-corner Fusion and Proximal Row Carpectomy Procedures Do Not Affect Pre-Operative Range Of Motion of the Wrist
Ang Li, QC; Zafeiria Glaris, BC; Thomas J. Goetz, BC; Parham Daneshvar, BC

278 - 9:06
Predictors of True Scaphoid Fractures in Children
Daniel Milad, QC; Kevin Smit, ON; Sasha Carsen, ON; Kevin Cheung, ON; Aneesh Karir, ON

279 - 9:12
Prevalence of Positive Clinical Examination Findings in Population with Ulnar Sided Wrist Pain
Ang Li, QC; Zafeiria Glaris, BC; Thomas J. Goetz, BC

9:18 Discussion
**Saturday**

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<th>Time</th>
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<tr>
<td>9:45-11:30</td>
<td>COA Hand and Wrist: WECAN Research Update &amp; Business Meeting - How to Start a Research Group • Room 518A</td>
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<td>• Mohit Bhandari, ON</td>
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<td>• Shortening the Ulna in Ulnocarpal Impaction: A Survey of Canadian Upper Extremity Surgeons - Thomas J. Goetz, BC</td>
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<td>11:30-12:30</td>
<td>COA Hand and Wrist Debates: Dupuytren's Contracture • Room 518A</td>
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<td><strong>Moderator:</strong> Thomas J. Goetz, BC</td>
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<td>• Needling - Gupreet Dhaliwal, AB</td>
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<td>• Open - C. Vaughan A. Bowen, AB</td>
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<td>12:30-13:15</td>
<td>Lunch - Food and Beverage for Purchase in Exhibit Hall</td>
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<td>13:15-14:45</td>
<td>COA Paediatrics / Hand and Wrist ICL: Paediatric Wrist Pot-Pourri • Room 524A</td>
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<td><strong>Moderator:</strong> Mathilde Hupin, QC</td>
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<td><strong>Objectives:</strong></td>
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<td>Distal radius malunion – How can we prevent it? When to treat it?</td>
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<td>1. To recognize the risk factors of a symptomatic malunion.</td>
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<td>2. To recognize associated DRUJ problems.</td>
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<td>3. To define the indications for a corrective osteotomy.</td>
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<td>Ulnar sided wrist pain – USWP</td>
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<td>1. To assess the ulnar sided wrist pain in the paediatric population.</td>
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<td>2. To define the appropriate investigations.</td>
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<td>3. To elaborate a differential diagnosis.</td>
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<td>4. To guide the conservative treatment +/- surgical treatment.</td>
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<td>Madelung deformity – How can I help my patient?</td>
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<td>1. To assess the Madelung deformity.</td>
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<td>2. To define the indications for Vicker’s ligament excision and distal radius osteotomy.</td>
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<td>Scaphoid in pediatrics – Are children and adolescent the same?</td>
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1. To assess and follow acute and chronic scaphoid fractures.
2. To guide conservative treatment +/- surgical treatment depending on the age of the patient.
3. Could vape decrease scaphoid healing process?

Unexplained wrist pain – Where to start? How to approach it?
1. To assess the chronic wrist pain in the pediatric population
2. To define the appropriate investigations.
3. To elaborate an appropriate differential diagnosis.
4. To guide the conservative treatment +/- surgical treatment.

Speakers:
- Distal Radius Malunion - How Can We Prevent it? When to Treat it? Robert Chan, AB
- Ulnar Sided Wrist Pain - USWP - Jeffrey Pike, BC
- Madelung Deformity- How Can I Help my Patient? Constantin Stanciu, QC
- Scaphoid in Paediatrics - Are Children and Adolescent the Same? Kevin Cheung, ON
- Unexplained Wrist Pain - Where to Start? How to Approach it? Chantal Janelle, QC

14:45-15:15 Break - Food and Beverage for Purchase in Exhibit Hall

15:15-16:45 COA Hand and Wrist: Short Snapper Talks • Room 518A
Moderator: Thomas Goetz, BC

Speakers:
- Neuromas - Todd Kuiken, US
- Treatment of Acute and Sub-Acute SL Dissociation - Kevin Chan, US
- Carpal Dislocation - Neil White, AB
- Surgical Management of TFC Tears - Bertrand H. Perey, BC
8:00-9:30 COA Paediatrics: Update on Deformity and Guest Speaker
• Room 524A
Moderator: Sukhdeep Dulai, AB

Objectives:
1. Principles of Guided Growth:
   a. Outline traditional and novel indications for guided growth
   b. Discuss the limitations of guided growth.
   c. Compare and contrast different guided growth surgical techniques and instrumentation.
   d. Provide technical tips for optimizing outcomes when using guided growth techniques.
2. Intramedullary gradual lengthening and acute shortening – Where are we now?
   a. Provide indications and prerequisites for intramedullary lengthening.
   b. Outline the principles for patient selection for IM lengthening.
   c. Discuss the use of IM lengthening in the setting of concurrent deformity.
   d. Review complications of IM lengthening and provide tips on how to prevent them.
   e. Discuss the role of acute shortening in LLD.
3. Gradual Lengthening with External Fixation: Tips for an “easy” lengthening:
   a. Review patient selection criteria and limitations for gradual lengthening.
   b. Discuss soft tissue complications and management options to prevent/treat them.
   c. Provide strategies to optimize formation of a strong regenerate.
   d. Compare and contrast lengthening/deformity correction using monolateral frames vs. circular fixators.
4. Management Update for Congenital Pseudarthrosis of the Tibia- How to get the bone to heal and stay healed!
   a. Discuss unique pathological considerations and management conundrums in CPT.
   b. Provide a brief overview of historical approaches and outcomes in CPT.
c. Describe the Paley X-Union technique for management of CPT, including technical tips and rationale.
d. Review the outcomes to date of the Paley X-Union technique.

Speakers:
- Principles of Guided Growth - Debra Bartley, ON
- Intramedullary Gradual Lengthening and Acute Shortening – Where are We Now? Anthony Cooper, BC
- Gradual Lengthening with External Fixation: Tips for an “Easy” Lengthening - Reggie C. Hamdy, QC
- Management Update for Congenital Pseudarthrosis of the Tibia - How to Get the Bone to Heal and Stay Healed! Dror Paley, US

9:45-11:25 COA Paper Session: Paediatrics 2 • Room 524A
Moderators: Alaric Aroojis, India; Mark Camp, ON

280 - 9:45
Automatic Evaluation of 3D Femoral Head Coverage Variability for Dynamic Assessment of Hip Dysplasia
Kishore Mulpuri, BC; Olivia Paserin, BC; Rafeef Garbi, BC; Antony Hodgson, BC; Anthony Cooper, BC

281 - 9:51
Expert-Based Consensus on the Principles of Pavlik Harness Management in Developmental Dysplasia of the Hip
Simon Kelley, ON; Meghan Feeney, ON; Connor Maddock, ON; Lucas Murnaghan, ON; Catharine Bradley, ON

282 - 9:57
Predictors of Avascular Necrosis of the Femoral Head Following Closed or Open Reduction in the Treatment of Developmental Dysplasia of the Hip
Emily Schaeffer, BC; Jeffrey Bone, BC; Wudbhav Sankar, US; Travis Matheney, US; Kishore Mulpuri, BC

Discussion 10:03
283 - 10:12  
C-reactive Protein Level at Time of Discharge Is Not Predictive of Risk of Reoperation or Readmission in Children With Septic Arthritis  
Lara Shefelbine, US; Maryse Bouchard, ON; Viviana Bompadre, US

284 - 10:18  
Late Sequelae of Osteoarticular Infections in Paediatric Patients  
Lydia Saad, QC; Marie-Lyne Nault, QC; Mathilde Hupin, QC; Chantal Buteau, QC

285 - 10:24  
Outcome Tools in Paediatric Foot and Ankle Patients: Comparing Child and Parent Responses  
Maryse Bouchard, ON; Christopher Tipton, US; Tressa Mattioli Lewis, US; Viviana Bompadre, US

10:30 Discussion

286 - 10:39  
Assessing the Need for Orthopaedic Follow-Up in the Management of Paediatric Femoral Fractures  
Gabrielle Sanatani, BC; Emily Schaeffer, BC; Eva Habib, BC; Jeffrey Bone, BC; Kishore Mulpuri, BC

287 - 10:45  
Point of Care Ultrasound in the Emergency Department May Provide More Accurate Diagnosis of Toddler Fractures than Radiographs: A Pilot Study  
Sasha Carsen, ON; Meagan Doyle, ON; Kevin Smit, ON; Allan Shefrin, ON; Terry Varshney, ON

288 - 10:51  
Hospital Type and Physician Training are Associated with Application of Best-evidence Recommendations for Children’s Low-risk Distal Radius Fractures Treated in Ontario Emergency Departments.  
Tara Baxter, ON; Andrew W. Howard, ON; Mark Camp, ON
10:57 Discussion

289 – 11:06
Multidisciplinary Clinic for Developmental Dysplasia of the Hip
Roya Yamini, BC; Emily Schaeffer, BC; Lydia Bajno, BC; Wendy Krishnaswamy, BC; Manraj Randhawa, BC; Kishore Mulpuri, BC

290 – 11:12
Risk-Taking Behaviours and Context of Paediatric Elbow Fractures – A Pilot Study
Anthony Cooper, BC; Victoria McCuthcheon, BC; Jennifer Smith, BC; Ian Pike, BC; Harpeet Chchina, British Columbia; Pardeep Sidhu, BC

11:18 Discussion

11:30-12:30 Canadian Paediatric Orthopaedic Group (CPOG) AGM
• Room 524A

12:30-13:15 Lunch - Food and Beverage for Purchase in Exhibit Hall

13:15-14:45 COA Paediatrics / Hand and Wrist ICL: Paediatric Wrist: Pot-Pourri • Room 524A
Moderator: Mathilde Hupin, QC

Objectives: see Hand and Wrist Section

Speakers:
• Distal Radius Malunion – How Can We Prevent it? When to Treat it? Robert Chan, AB
• Ulnar Sided Wrist Pain – USWP - Jeffrey Pike, BC
• Madelung Deformity – How Can I Help My Patient? Constantin Stanciu, QC
• Scaphoid in Paediatrics – Are Children and Adolescent the Same? Kevin Cheung, ON
• Unexplained Wrist Pain – Where to Start? How to Approach it? Chantal Janelle, QC

14:45-15:15 Break - Food and Beverage for Purchase in Exhibit Hall
Objectives:

Concussions: What do orthopaedics surgeons need to know?
1. To recognize the concussions’ symptoms.
2. To define the appropriate treatment.
3. To guide the return to play for the athlete after a concussion.

Shoulder: Anterior instability and MDI
1. To assess shoulder instability in the adolescent athlete.
2. To define the management for the first time traumatic dislocator.
3. To review the new recommendations for the surgical treatment of anterior instability in adolescent.
4. To guide the return to play for the athlete after a first dislocation and after surgical stabilization.

Elbow: Capitellum OCD – What’s new?
1. To assess clinically and radiologically the OCD.
2. To define the treatment (conservative and surgical algorithm).
3. To guide the return to play for the athlete after an OCD.

Athletic wrist injuries
1. To assess main athletic wrist injuries.
2. To manage the gymnast’s wrist.
3. To guide the return to play for the athlete after a wrist injury.

Spondylolysis
1. To assess clinically and radiologically the spondylolysis.
2. To define an appropriate treatment algorithm and the safe return to play.
3. To determine the indications for the surgical treatment.

Hip: FAI
1. To review femoroacetabular impingement pathology.
2. To understand the investigation and treatment algorithm.
3. To guide the return to play for the athlete.

Knee: ACL
1. Update on ACL repair in paediatric patients.
2. Is there a place for conservatory treatment with ACL tear?
3. ACL reconstruction with open physis: what are the options?
4. To guide the return to play for the athlete.

Ankle: Talar OCD
1. To review the epidemiology of talar OCD.
2. To review the treatment algorithm.
3. To guide the return to play for the athlete.

Speakers:
- Shoulder: Anterior Instability and MDI - Mathilde Hupin, QC
- Athletic Wrist Injuries - Carmen Brauer, AB
- Spondylolysis - Kevin Smit, ON
- Hip: FAI - Sasha Carsen, ON
- Knee: ACL - Thierry Pauyo, QC
- Ankle: Talar OCD - Marie-Lyne Nault, QC

COA Spine

8:00-9:30 COA Spine ICL: Surgical Treatment of LDS – What We Know and What We Don’t • Room 523

Moderators: Christopher Bailey, ON; Michael Weber, QC

Objectives:
1. To review the current indications for the surgical treatment of lumbar degenerative spinal stenosis.
2. To review the surgical treatment options for lumbar degenerative spinal stenosis.
3. To discuss the relevance of spinopelvic parameters in the treatment of lumbar degenerative spinal stenosis.
4. To review the patient outcomes of surgically treated lumbar degenerative spinal stenosis.

Speakers:
- Indications to Treat and Consideration of Stability - R. Andrew Glennie, NS
- MIS and Decompression Without Fusion Pros/Cons - Raja Y. Rampersaud, ON
- Radiographic Spinopelvic Parameters – Implications on Surgical Planning - Christopher Bailey, ON
- Patient Outcomes Following Surgery – What’s in the Literature - Michael Weber, QC
Objectives:
1. To understand indications and approaches for en bloc spinal resections for malignant bone lesions.
2. To discuss new techniques, indications and outcomes associated with radiation treatment of metastatic bone lesions.
4. To discuss new reported outcome measures for metastatic bones disease.

Speakers:
- Approaches/Reconstructions/Outcomes of En Bloc Spine Resections (Primary or MBD lesions) - Peter Lewkonia, AB
- Update on Techniques (SBRT): Patient Selection and Outcomes for MBD (Spine and Extremities) - Eric Tseng, ON
- AO Spine Foundation Development of Patient Reported Outcomes for Spine MBD - Nicolas Dea, BC
- Classification and Treatment of Sacral Tumors - Peter Rose, US

11:15-11:30 Break and Poster Session with Coffee • Exhibit Hall

11:30-12:30 COA Spine Debate - Sacroiliac Joint Dysfunction: Do they Move, Do they Hurt, and Should we be Fusing Them? • Room 523
Moderator: Jeremie Larouche, ON

Objectives:
1. To critically assess the evidence for Sacroiliac Joint Dysfunction (SIJD) as a source of ongoing back pain following lumbar fusion.
2. To review the current practice guidelines with respect to clinical, radiographic, and diagnostic test used to determine if Sacroiliac Joint Dysfunction exists.
3. To summarize the evidence supporting or refuting SI fusion as a treatment modality for SIJD.
Speakers:
- Diagnosis, Treatment Options, and The UBC Experience in SI Joint Dysfunction - Pierre Guy, BC
- What Can We Learn From Post Traumatic SI Joint Dysfunction - Hans Kreder, ON
- SI Joint Pain and Spine Surgery: Current Evidence and Future Direction - Jeremie Larouche, ON

12:30-13:15 Lunch - Food and Beverage for Purchase in Exhibit Hall

13:15-14:45 COA Paper Session: Spine 2 • Room 523
Moderators: Zhi Wang, QC; Michael Weber, QC

291 - 13:15
Providing Reference Values for Spinal Dimensions In Healthy Boys and Girls
Marie Beausejour, QC; Stefan Parent, QC; Paul Dallaire, QC; Félix Thibeault, QC; Ron El-Hawary, NS; James Sanders, US; Burt Yaszay, US; Behrooz Akbarnia, US; Patrick Tohme, QC; Marjolaine Roy-Beaudry, QC

292 - 13:21
Factors Associated With an Increased Risk of Developing a Post-Operative Infection Following Spine Surgery
Mina Aziz, MB; Greg McIntosh, ON; Michael Garth Johnson, MB; Charles G. Fisher, BC; Michael Weber, QC; Michael Goytan, MB

13:27 Discussion

293 – 13:37
Prognostic Factors of Lumbo-Sacral Spine Metastasis: Single Centre Experience
Zhi Wang, QC; Fidaa Al-Shakfa, QC

294 – 13:43
3D-Printed Scaffolds Loaded With Therapeutics for the Treatment of Bone Metastases
Elie Akoury, QC; Pouyan Ahangar, QC; Ana Sofia Ramirez-Garcia
Saturday

Luna, QC; Antone Nour, QC; Michael Weber, QC; Derek Rosenzweig, QC

13:49 Discussion

295 - 13:59
The Impact of Age on Outcomes Following Degenerative Scoliosis Surgery
Mina Aziz, MB; Peter F. Jarzem, QC; Greg McIntosh, ON; Michael Weber, QC

296 - 14:05 Off-Hours Surgery for Spinal Metastasis
Zhi Wang, QC; Fidaa Al-Shakfa, QC

14:11 Discussion

14:45-15:15 Break Food and Beverage for Purchase in Exhibit Hall

15:15-17:00 COA Spine ICL: Re-Operations in Spine Surgery - Pearls, Pitfalls and How to Avoid Them • Room 523
Moderators: Hossein Kamal Elgafy, US; R. Andrew Glennie, NS

Objectives:
1. Develop familiarity with common potential causes for re-operation in spine surgery.
2. Identify best plans for management in repeat spine surgery depending on the diagnosis
3. Review newer technologies designed at preventing re-operations and review post-operative recovery plans

Speakers:
- Single and Multi-Level Degenerative Lumbar Spine - Christopher Bailey, ON
- Adult Deformity - John Street, BC
- Spine Trauma - William M. Oxner, NS
- Metastatic and Primary Tumour Reconstruction - Nicolas Dea, BC
8:00-9:30 COA Paper Sessions: Sports 2 • Room 519B

Moderators: Catherine M. Coady, NS; Moin Khan, ON

297 - 8:00
Arthroscopic Iliac Crest Autograft Augmentation to Treat Shoulder Instability with Bone Loss: Safety Profile and Short-Term Outcomes
Ivan Wong, NS; Matthew Oldfield, NS

298 - 8:06
Outcome of Retrograde Drilling for Osteochondritis Dissecans of the Talus in a Paediatric Population
Xue Wei Tan, QC; Marie-Lyne Nault, QC; Stephane Leduc, QC

299 - 8:12
A Quantifiable Risk Factor for ACL Injury: Applied Mathematics to Model the Posterolateral Tibial Plateau Surface Geometry
Motaz Alaqeel, QC; Andrew Crapser, QC; Jimmy Tat, ON; Jacob Lee-Howes, QC; Justin Schupbach, QC; Iskandar Tamimi, QC; Paul Andre Martineau, QC

Discussion 8:18

300 - 8:27
Anterior Cruciate Ligament Reconstruction With Or Without A Lateral Extra-Articular Tenodesis – Assessment of Failure At Two Years From The ISAKOS Sponsored STABILITY Study
Alan Getgood, ON; Dianne Bryant, ON; Robert Litchfield, ON; Robert G. McCormack, BC; S. Mark Heard, AB; Peter B. MacDonald, MB; Tim Spalding, UK; Peter Verdonk, Belgium; Devin C. Peterson, ON; Davide D. Bardana, ON; Alex Rezansoff, AB; Stability Group, ON

301 - 8:33
Predictors of Poor Outcome Following ACL Reconstruction With or Without Lateral Extra-Articular Tenodesis: The STABILITY Experience
Saturday

Dianne Bryant, ON; Alan Getgood, ON; Robert Litchfield, ON; Robert G. McCormack, BC; S. Mark Heard, AB; Peter B. MacDonald, MB; Tim Spalding, UK; Peter Verdonk, Belgium; Devin C. Peterson, ON; Davide D. Bardana, ON; Alex Rezansoff, AB; Stability Group, ON

302 - 8:39
Patience is Not a Virtue: A Qualitative Investigation of the Delays to Surgery for Anterior Cruciate Ligament Reconstruction
Catherine Conlin, ON; Darrell Ogilvie-Harris, ON; Lisa Phillips, AB; Lucas Murnaghan, ON; John S. Theodoropoulos, ON; Norah-Faye Matthies, ON

8:45 Discussion

303 - 8:54
Injuries Sustained During Brazilian Jiu-Jitsu Training and Competition: A Descriptive Epidemiology Survey
Brad Petrisor, ON; Kim Madden, ON; Gina Del Fabbro, ON; Moin Khan, ON; Jeff Joslin, ON; Mohit Bhandari, ON

304 - 9:00
A Prospective Pilot Study in Hip Arthroscopy: How Many Opiates Should We Prescribe for Pain?
Vehniah Tjong, US; Ryan Selley, US; Bennet Butler, US; Matthew Hartwell, US; Daniel Johnson, US; Michael Terry, US

305 - 9:06
Utility of 3D Printed Models in the Treatment of Femoroacetabular Impingement
Anjaneyulu Purnachandra Tejaswi Ravipati, NS; Ivan Wong, NS; Catherine M. Coady, NS

306 - 9:12
Assessment of Engaging Hill-Sachs Lesions with Computed Tomography 3D Reconstruction and a Biomechanical Approach
Jimmy Tat, ON; Jaron Chong, QC; Tom Powell, QC; Paul André Martineau, QC

9:18 Discussion
Saturday

9:45-10:45 COA Sports: AAC Pecha Kucha X 3 • Room 519B
Moderator: Laurie Hiemstra, AB

Description: Concise, fast paced presentations on current arthroscopy and sport medicine topics, with 20 slides for 20 seconds each. A challenge for both the presenter and the audience.

Speakers:
- Should Rotator Cuff Tears Be Repaired? - Dave Sheps, AB
- Community Sport Medicine- What Should You Tackle? - Tracey Wentzell, NL
- Should We Do an ACL Reconstruction in Kids With Open Growth Plates? Nick Mohtadi, AB
- How Do We Treat FAI? Olufemi Ayeni, ON

10:45-11:00 Break and Poster Session with Coffee • Exhibit Hall

11:00-12:30 COA Sports: AAC Tips and Tricks • Room 519B
Moderators: Davide D. Bardana, ON; Mark Burman, QC

Speakers:
- Live Quadriceps Tendon Autograft Harvest for ACL Reconstruction Surgical Demonstration - Peter B. MacDonald, MB

Goal: To demonstrate the technique of a quadriceps tendon autograft harvest for use in ACL reconstruction. This will be a cadaveric demonstration broadcast live to the Palais des congrès.

Objectives:
1. Describe the indications for quadriceps tendon autograft in ACL reconstruction.
2. Observe an expert in the field of knee reconstruction perform a live demonstration of a quadriceps tendon harvest
3. Describe the technique of quadriceps tendon autograft harvest
4. Identify relevant PEARLS, tips and tricks for harvesting the quadriceps tendon.
Saturday

- TTO - Sebastian Tomescu, ON
- Superior Capsular Reconstruction - Ivan Wong, NS
- Femoral Condyle Cartilage Lesion - Tim Dwyer, ON
- Extra-Articular Lateral Epicondylar Release - William Regan, BC

12:30-13:15 Lunch - food and Beverage for Purchase in Exhibit Hall

13:15-14:45 COA Sports Symposium - Osteotomy: Beyond the Tibial Opening Wedge • Room 519B
Moderator: Michaela Kopka, AB

Objectives:
1. Discuss the expanding indications and different types of osteotomies about the knee.
2. Review imaging and measurement techniques in osteotomy planning.
3. Discuss the pros and cons of medial vs. lateral tibial osteotomies.
4. Discuss when and how to perform a distal femoral osteotomy.
5. Introduce the indications and techniques for derotation osteotomies in knee pathology.

Speakers:
- Expanding Indications and Techniques for Osteotomies About the Knee - Robert Litchfield, ON
- Imaging and Measurement Techniques in Osteotomy Planning - Marie Gdalevitch, QC
- Proximal Tibial Osteotomy: Pros and Cons of Medial vs. Lateral - Jarret Woodmass, AB
- Distal Femoral Osteotomy: When the Tibia is Not Enough - Nathan Urquhart, AB
- De-Rotation Osteotomy: Why, When, and How - Laurie A. Hiemstra, AB

14:45-15:30 AAC Business Meeting • Room 519B
Objectives: See Paediatrics Section

Speakers:
- Shoulder: Anterior Instability and MDI - Mathilde Hupin, QC
- Athletic Wrist Injuries - Carmen Brauer, AB
- Spondylolysis - Kevin Smit, ON
- Hip: FAI - Sasha Carsen, ON
- Knee: ACL - Thierry Pauyo, QC
- Ankle: Talar OCD - Marie-Lyne Nault, QC

15:30-17:00 CSES / AAC Combined ICL: Shoulder Instability
• Room 519A
Moderator: Ivan Wong, NS; Dominique Rouleau, QC

ICL Description: There continues to be many controversies in the diagnosis and treatment of shoulder instability. We highlight the current challenges and difficulties for the community and academic surgeons. There will be interactive case-based presentations at the conclusion of the didactic lectures, focusing on complex decision-making and advanced surgical techniques.

Objectives:
1. Describe best practice pre-op measurement of bone loss in shoulder instability.
2. Describe decision making process for surgical treatment after first dislocation.
3. Describe surgical treatments for posterior and multidirectional instability.
4. Contrast the risks and benefits between Bankart and Latarjet surgery.

Speakers:
- Introduction - Dominique Rouleau, QC
- First Time Dislocator: To Operate or Not to Operate? Paul André Martineau, QC
- What about Posterior and Multidirectional Instability? Jarret Woodmass, MB
- Bankart vs Latarjet? How to Decide? Robert Litchfield, ON
- Interactive Case-Based Presentations - All Faculty

**COA Trauma**

8:00-9:30 COA Paper Sessions: Trauma 2 • Room 525

*Moderators:* David Teague, US; Kelly Lefaivre, BC

307 - 8:00
**Surgical Fixation of Multiple Rib Fractures and the Flail Chest: A Meta-Analysis and Review of Evidence Quality**

Mina Tohidi, ON; Dylan O'Sullivan, ON; Patricia Groome, ON; Jeff D. Yach, ON

308 - 8:06
**Non-Displaced Femoral Neck Fractures in the Elderly Have a Higher Risk of Reoperation and Lower Mortality With Internal Fixation Compared to Arthroplasty: A Systematic Review and Meta-Analysis**


8:12 Discussion

309 - 8:22
**Periprosthetic Fracture Rate After Short and Long Hip Nails: Analysis of a Health Region Database**

Gabriel Larose, MB; Christopher Graham, MB; Ted Tufescu, MB

310 - 8:28
**Necrotizing Fasciitis: A Retrospective Review of Risk Factors and Current Prognostic Tools**

Faizal Kassam, ON; Gavin Wood, ON; Andrew Marsh, ON; Basheer Elsolh, ON; Chris Griffiths, ON; Joshua Hobson, ON; Heather Grant, ON; Mark M. Harrison, ON
8:34 Discussion

**311 - 8:44**
**The Prevalence of Distracted Driving Among Patients Attending Fracture Clinics in Canada: Results From The Canadian DRIVSAFE Study**
Bill Ristevski, ON; Marko Gjorgjievska, ON; Brad Petrisor, ON; Dale Williams, ON; Matthew Denkers, ON; Krishan Rajaratnam, ON; Herman Johal, ON; Jamal Al-Asiri, ON; Harman Chaudhry, ON; Aaron Nauth, ON; Jeremy Hall, ON; Daniel B. Whelan, ON; Sarah Ward, ON; Amit Atrey, ON; Amir Khoshsbin, ON; Ross Leighton, NS; Paul Duffy, AB; Prism Schneider, AB; Robert Korley, AB; Ryan Martin, AB; Lauren Beals, ON; Cameron Elgie, ON; Lydia Ginsberg, ON; Yasna Mehdian, ON; Paula McKay, ON; Nicole Simunovic, ON; Jenna Ratcliffe, ON; Sheila Sprague, ON; Milena Vicente, ON; Taryn Scott, ON; Jennifer Hidy, ON; Paril Suthar, ON; Tanja Harrison, AB; Kaitlyn dillabough, AB; Stephanie Yee, AB; Alisha Garibaldi, ON; Mohit Bhandari, ON

**312 - 8:50**
**Surgical Delay Increases the Rate of 30 Day Complications and Mortality in Lower Energy Femoral Shaft Fractures**
Lauren Nowak, ON; Ryan DiGiovanni, US; Rob Walker, US; David William Sanders, ON; Abdel-Rahman Lawendy, ON; Melanie MacNevin, ON; Michael D. McKee, US; Emil H. Schemitsch, ON

8:56 Discussion

**313 - 9:06**
**Should All Garden I and II Femoral Neck Fractures in the Elderly be Fixed? Effect of Posterior Tilt on Rates of Subsequent Arthroplasty**
Gerard P. Slobogean, US; Sheila Sprague, ON; Kanu Okike, US; Marc Swiontkowski, US; Mohit Bhandari, ON; Ugochukwu N. Udogwu, US; Marckenley Isaac, US; FAITH Investigators, ON

**314 - 9:12**
**Patient Coping and Expectations Predict Recovery After Major Orthopaedic Trauma**
Jason Busse, ON; Diane Heels-Ansdell, ON; Sun Makosso-Kallyth, ON; Brad Petrisor, ON; Kyle Jeray, US; Ted Tufescu, MB; George Yves
Laflamme, QC; Paula McKay, ON; Randi McCabe, ON; Yannick Le
Manach, ON; Mohit Bhandari, ON

9:18 Discussion

**9:45-11:15 COA Trauma Symposium: Hip Fracture Rx - Best Evidence for Medical and Surgical Care • Room 525**

*Moderator: Pierre Guy, BC; Steven Papp, ON*

**Objectives:**
At the end of this session, participants will be able to:
1. Justify the need for early surgery.
2. Advocate for full-time perioperative medical care.
3. Integrate a decision tree for surgical care.

**Speakers:**
- The Young Femoral Neck Fracture: Results from FAITH-2 Pilot Trial - Gerard Slobogean, US
- Optimal Timing for Surgery - Pierre Guy, BC
- Optimizing Peri-Operative Care in Your Hospital - Daniel Mendelson, US
- IM Nail vs. Plate – Rudy Reindl, QC
- When Should I Do a Bipolar / Unipolar / Total Hip? Emil H. Schemitsch, ON

**11:15-12:45 COA Trauma: Tips and Tricks - Tibial Fractures • Room 525**

*Moderator: Jeff D. Yach, ON*

**Objectives:**
1. To develop strategies for the improved management of more challenging tibial shaft fractures.
2. To develop an understanding of the indications and limitations of various reduction techniques and implants.
3. To use union and outcome measures to evaluate treatment efficacy.

**Speakers:**
- Suprapatellar vs. Infra Patellar Nailing - Trevor Stone, BC
Saturday

- Adjuncts to Reduction / How to get it right – David Teague, OTA President, US
- Nailing Distal Tibia Fractures - Stéphane Leduc, QC
- Assessing Union/ Who will Need Revision or Exchange - Prism Schneider, AB
- Disability with Tibia Fractures/ Optimizing Outcome - Kelly Lefaivre, BC

12:45-13:30 Lunch - Food and Beverage for Purchase in Exhibit Hall

13:30-15:00 COA Trauma ICL: EBM Decision Making for Common Upper Extremity Fractures - Operative vs. Non-Operative
  • Room 525
  Moderator: Aaron Nauth, ON

Objectives:
To understand the role of evidence based medicine and review the latest literature with regards to operative vs. non-operative treatment for common upper extremity fractures.

Speakers:
- Distal Radius Fractures - Edward Harvey, QC
- Proximal Humerus Fractures - Emil H. Schemitsch, ON
- Clavicle Fractures - Michael D. McKee, US
- AC Joint Injuries - Dominique Rouleau, QC
- Olecranon Fractures - Brad Petrisor, ON

15:00-15:30 Break - Food and Beverage for Purchase in Exhibit Hall

15:30-17:00 COA Trauma / Arthroplasty ICL: Perspectives on Fractures • Room 525
  Moderators: Hans Kreder, ON

Objectives: See Hip and Knee Section

Part 1- Peri-Prosthetic Fractures:
Is the Implant Loose? Moderated by Hans Kreder, ON
- Arthroplasty Perspective - James Howard, ON
Saturday

- Trauma Perspective - Richard Jenkinson, ON

**Multiplanar Fixation - Allograft or Metal:** Moderated by Amit Atrey, ON
- Should be Used in Most Cases - Amit Atrey, ON
- Is Seldom Needed - Hans Kreder, ON

**Part 2 - Fragility Fractures (Fix vs. Replace):**
**Distal Femur:** Moderated by James Howard, ON
- Fix - Aaron Nauth, ON
- Replace - James Howard, ON

**Acetabular Factures:** Moderated by Richard Jenkinson, ON
- Fix - David J.G. Stephen, ON
- Replace - Michael Zywiel, ON

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**COA Tumour**

8:00-9:30 COA Paper Sessions: Tumour • Room 518B
*Moderator:* Norbert Dion, QC

315 - 8:00
KRAS/p53 Mediated Murine Model of Undifferentiated Pleomorphic Sarcoma Has an Immune Inert Microenvironment and is an Ideal Model to Test Novel Immunotherapies
*Michael Monument, AB; Arvind Singla, AB; Asmaa Affan, AB; Frank Jirik, AB; Karys Hildebrand, AB; Joseph Kendal, AB*

316 - 8:06
Comparison of Porous Tantalum Acetabular Implants vs. Harrington Reconstruction for Metastatic Disease of the Acetabulum
*Joshua Johnson, US; Matthew Houdek, US; Kevin Perry, US; Matthew Abdel, US; Jay S. Wunder, ON; Franklin H. Sim, US; Peter Rose, US; Peter Ferguson, ON; Anthony Griffin, ON; David Lewallen, US*

317 - 8:12
Outcomes of Free Vascularized Fibular Grafts for the Treatment of
Radiation-Induced Femoral Nonunions

8:18 Discussion

318 - 8:27
The Sarcoma-Specific Quality of Life (SARCQoL) Study (Phase 1): A Qualitative Study of Psychological Functioning and Coping Styles in Adult Extremity Soft Tissue Sarcoma Patients
Krista Goulding, QC; Robert Turcotte, QC; Argerie Tsimicalis, QC; Urska Košir, UK; Kedar Mate, QC; Carolyn Freeman, QC

319 - 8:33
Surgical Decision Making in the Management of Metastatic Bone Disease: Matching Patient Expectations with Surgical Goals – Quantitative Analysis
Kristen Barton, ON; Olesja Hazenbiller, AB; Michael Monument, AB; Shannon Puloski, AB; Georgina Freeman, AB; Melvin Ball, AB; Abir Aboutaha, AB

320 - 8:39
A Convolutional Neural Network (CNN) for Predicting Fracture Risk in Metastatic Bone Disease (MBD) of the Proximal Femur
Anthony Bozzo, ON; Michelle Ghert, ON

8:45 Discussion

321 – 8:54
Lymph Node Metastasis From Extremity Soft Tissue Sarcomas
Georges Basile, ON; Ibrahim Alshaygy, ON; Jean-Camille Mattei, ON; Anthony Griffin, ON; Peter Ferguson, ON; Jay S. Wunder, ON

322 - 9:00
Is Regular Follow-Up Required After Margin Negative Resection of Dermatofibrosarcoma Protuberans?
Ibrahim Alshaygy, ON; Jean-Camille Mattei, ON; Georges Basile, ON; Anthony Griffin, ON; Peter Ferguson, ON; Jay S. Wunder, ON
323 - 9:06
BMP-2 Signalling Influences Tumour Biology in Pre-clinical Models of Osteosarcoma
Joseph Kendal, AB; Arvind Singla, AB; Abdullah Al-Ani, AB; Asmaa Affan, AB; Kurt Hildebrand, AB; Doha Itani, AB; Mark Ungrin, AB; Michael Monument, AB

324 - 9:12
Bone Metastases in Sarcoma: Is There Any Place For Curative Surgery?
Jean-Camille Mattei, ON; Ibrahim Alshaygy, ON; Georges Basile, ON; Anthony Griffin, ON; Jay S. Wunder, ON; Peter Ferguson, ON

9:18 Discussion

9:45-11:15 COA Tumour/Spine ICL • Room 523
Moderator: Michael Monument, AB; Jeremie Larouche, ON

Objectives: See Spine Section

Speakers:
- Approaches/Reconstructions/Outcomes of En Bloc Spine Resections (Primary or MBD lesions) - Peter Lewkonia, AB
- Update on Techniques (SBRT): Patient Selection and Outcomes for MBD (Spine and Extremities) - Eric Tseng, ON
- AO Spine Foundation Development of Patient Reported Outcomes for Spine MBD - Nicolas Dea, BC
- Classification and Treatment of Sacral Tumors - Peter Rose, US

11:15-11:30 Break and Poster Session with Coffee • Exhibit Hall

11:30-12:30 Canadian Orthopaedic Oncology Society (CANOOS) Business Meeting • Room 518B

12:15-13:30 Lunch - Food and Beverage for Purchase in Exhibit Hall
8:00-9:30 COA Paper Sessions: Upper Extremity 1 • Room 519A
Moderators: Emilie Sandman, QC; Benjamin Leger-St-Jean, QC

325 - 8:06
Less is More: Single-Incision Repair Results in Greater Terminal Supination Torque than Double-Incision Repair for Acute Distal Biceps Ruptures
David J. Stockton, BC; Gabriel Tobias, BC; Jeffrey Pike, BC; Parham Daneshvar, BC; Thomas J. Goetz, BC

326 - 8:12
Does Implant Alignment Correlate with Clinical Outcomes After Total Elbow Arthroplasty?
Bogdan Matache, ON; Graham J.W. King, ON; Adam C. Watts, UK; Paul Robinson, UK; Avanthi Mandaleson, Australia

8:18 Discussion

327 - 8:27
Drill Trajectory and Risk to Posterior Interosseous Nerve with Single-Incision Repair of Distal Biceps Tendon to Anatomic Footprint in Biceps Tuberosity
Thomas J. Goetz, BC; Tendai Mwaturura, Australia; Ang Li, QC

328 - 8:33
Association Between Open vs. Arthroscopic Rotator Cuff Repair and Subsequent Revision Repair: A Population-Based Cohort Study of 37,255 Repairs With Follow-Up of 13 Years.
Jonathan Peck, ON; Daniel Pincus, ON; David Wasserstein, ON; Hans Kreder, ON; Patrick Henry, ON
329 - 8:39
Superior Capsular Reconstruction Using Dermal Allograft: Early Outcomes and Survival

8:45 Discussion

330 - 8:54
Clinical Outcomes and Complications Following Revision Reverse Total Shoulder Arthroplasty Stratified by Primary Procedure: A Systematic Review
Aaron Bois, AB; Paige Knight, AB; Khalifa Alhojailan, AB; Kamal Bohsali, US; Michael Wirth, US

331 - 9:00
Glenoid Bone Grafting in Reverse Total Shoulder Arthroplasty: A Systematic Review
Ryan Paul, ON; Naomi Maldonado-Rodriguez, ON; Shgufa Docter, ON; Timothy Leroux, ON; Moin Khan, ON; Christian Veillette, ON; Anthony Romeo, US

332 - 9:06
A Prospective, Longitudinal, Multicentre Cohort Study to Determine the Factors Affecting the Functional Prognosis of Radial Head Fractures
Stéphane Pelet, QC; Benoit Lechasseur, QC; Etienne Belzile, QC; Maude Rivard-Cloutier, QC

333 - 9:12
Autologous Stem Cell Augmentation in Arthroscopic Cuff Repair: A Prospective Randomized Controlled Trial
Peter Lapner, ON; Odette Laneuville, ON; Hans K. Uthhoff, ON; Tinghua Zhang, ON; Lisa Howard, BC; J Pollock, ON; Sara Ruggiero, ON; Guy Trudel, ON

9:18 Discussion
Objectives:
1. Participants will present improved knowledge on elbow soft tissue anatomy (ligaments, distal biceps, distal triceps).
2. At the end of this session, participants will be more comfortable to diagnosis elbow soft tissue injuries.
3. Participants will master surgical techniques for soft tissue repair respecting anatomical landmarks.

Speakers:
• **Part 1- Acute Ligamentous Injuries:**
  o Acute Elbow Instability: Ligament Injuries, Diagnosis and Treatments - Shawn W. O'Driscoll, US
  o Discussion

• **Part 2- Acute Tendon Injuries in the Elbow: Diagnosis, Anatomy and Surgical Repair:**
  o Distal Biceps - Kenneth J. Faber, ON
  o Triceps Avulsion - J Pollock, ON

11:15-12:45 COA Paper Session: Upper Extremity 2 • Room 519A
*Moderators:* Marie-Ève LeBel, ON; Ghassan Alami, QC

334 - 11:15
The Association Between Psychological Factors And Outcome Following Treatment For Rotator Cuff Disease – A Systematic Review
**Christine Schemitsch, ON**; Aaron Nauth, ON; Jaskarndip Chahal, ON; Patrick Henry, ON; Aileen Davis, ON; Deborah Da Costa, QC; Lauren Nowak, ON

335 - 11:21
Total Shoulder Arthroplasty: Risk Factors for a Prolonged Length of Stay
Saturday

336 - 11:27
The Effect of Platelet Rich Plasma on Partial Thickness Rotator Cuff Tears: A Double-Blind Prospective Randomized Controlled Trial
Cory Kwong, AB; Ian King Yeung Lo, AB; Aaron Bois, AB; Justin LeBlanc, AB; Jarret Woodmass, MB; Eva Gusnowski, AB; Alexis Lo, US

11:33 Discussion

337 - 11:42
Deltoplectoral vs. Deltoid Split Approach for Proximal Humerus Fracture Fixation With Locking Plate: A Prospective Randomized Study (HURA Study)
Dominique Rouleau, QC; Frédéric Balg, QC; Benoit Benoit, QC; Stephane Leduc, QC; Michel Malo, QC; George Yves Laflamme, QC

338 - 11:48
Favard Type E2 Glenoid Bone Loss Orientation
Sejla Abdic, ON; Nikolas Knowles, ON; Jim Johnson, ON; Gilles Walch, France; George Athwal, ON

339 - 11:54
Surgery Has Little Benefit in Patients With Shoulder Impingement: A Meta-Analysis of Controlled Clinical Trials
Moin Khan, ON; Bashar Alolabi, ON; Nolan Horner, ON; Olufemi R. Ayeni, ON; Asheesh Bedi, US; Mohit Bhandari, ON

12:00 Discussion

340 - 12:09
Electromyographic and Kinetic Study of Reverse Total Shoulder Arthroplasty in Complex Proximal Humerus Fractures
Stéphane Pelet, QC; Rémi Pelletier-Roy, QC

341 - 12:15
Outcomes and Metal Debris in Second-Generation Porous Tantalum Metal-Backed Glenoid Anatomic Shoulder Arthroplasties
Jane Yeoh, BC; Patrick Chin, BC; William D. Regan, BC; Brendan Lim, BC; Treny Sasyniuk, BC; Eric Sayre, BC
342 - 12:21
Primary vs. Salvage Reverse Total Shoulder Arthroplasty for Displaced Proximal Humerus Fractures in the Elderly: A Systematic Review & Meta-Analysis
Ujash Sheth, US; Patrick Nelson, US; Claire Kwan, US; Vehniah Tjong, US; Michael Terry, US

343 - 12:27
Short Stem Humeral Components in Reverse Shoulder Arthroplasty: Stem Alignment Influences the Neck Shaft Angle
Sejla Abdic, ON; George Athwal, ON; Thomas Wittman, Germany; Gilles Walch, France; Patric Raiss, Germany

12:33 Discussion

12:45-13:15 Lunch - Food and Beverage for Purchase in Exhibit Hall

13:15-13:30 CSES Best Paper Award Presentation • Room 519A

13:30-15:00 COA/CSES ICL: Total Shoulder Arthroplasty for the Community Surgeon • Room 519A
Moderator: Jonah Davies, US

Objectives:
1. Participants will present improved knowledge on indications of shoulder arthroplasty.
2. Participants will be more comfortable to identify radiological sign of complex shoulder arthroplasty.
3. Participants will master algorithm on shoulder arthroplasty implant choice.
4. Participants will understand the importance of surgical key techniques point to prevent complications.

Speakers:
- Epidemiology of Shoulder Arthritis and Under Treatment Across Canada: Invitation to Community Surgeons - David Sheps, AB
- Radiological Analysis: How to Identify Cases for Tertiary Centre - Peter Lapner, ON
- Algorithm to Choose Implant in Total Shoulder Arthroplasty in Osteoarthrosis: Anatomic-Reverse-Short Stem-Resurfacing-Hemi - Cemented or Not - Diane Nam, ON
- Revision of Technical Mistakes: Lessons Learned - Darren S. Drosdowech, ON

**15:00-15:30 Break - Food and beverage for Purchase in Exhibit Hall**

**15:30-17:00 CSES/AAC Combined ICL: Debates in Shoulder Instability • Room 519A**
*Moderator: Ivan Wong, NS; Dominique Rouleau, QC*

**Objectives and Description:** See Sports Section

**Speakers:**
- Introduction - Dominique Rouleau, QC
- First Time Dislocator: To Operate or Not to Operate? Paul André Martineau, QC
- What about Posterior and Multidirectional Instability? Jarret Woodmass, MB
- Bankart vs. Latarjet? How to Decide? Robert Litchfield, ON
- Interactive Case-Based Presentations- All Faculty
Saturday