

## MID-AMERICA ORTHOPAEDIC ASSOCIATION

**39<sup>th</sup> Annual Meeting**  
**April 6-10, 2022**  
**La Cantera Resort | San Antonio, TX**

### Scientific Program

\*Denotes speaker

#### WEDNESDAY, APRIL 6, 2022

7:30 a.m. - 5:00 p.m.

##### **MAOA Pre-Meeting Course**

Topic: The Shoulder Surgeon's Roadmap: From Arthroscopy to Arthroplasty

Room: San Antonio G

#### THURSDAY, APRIL 7, 2022

6:30 a.m. - 7:45 a.m.

##### **Instructional Course I**

Topic: Rotator Cuff Tears: PT to Reverse, a Case-Based Instructional Course

Room: San Antonio G

Faculty: Jonathan D. Barlow, M.D., M.S., Moderator  
Rochester, MN

Christopher L. Camp, M.D.  
Rochester, MN

Gregory L. Cvetanovich, M.D.  
Columbus, OH

Brian R. Wolf, M.D., M.S.  
Iowa City, IA

6:30 a.m. - 7:45 a.m.

##### **Instructional Course II**

Topic: Nailing Metadiaphyseal Femur and Tibia Fractures: When the Nail Does Not Reduce the Fracture

Room: San Antonio H

Faculty: Justin C. Siebler, M.D., Moderator  
Omaha, NE

Michael J. Beltran, M.D.  
Cincinnati, OH

Miguel S. Daccarett, M.D.  
Chicago, IL

Sara M. Putnam, M.D.  
Omaha, NE

**FIRST PLENARY SESSION**

**Room: San Antonio ABC**

8:00 a.m. - 8:05 a.m.

**Welcome and Introductory Remarks**

Norman S. Turner, M.D.  
Rochester, MN  
2021-2022 President, MAOA

8:05 a.m. – 8:50 a.m.

**Symposium I**

**Topic:** Foot and Ankle Injuries in Athletes

**Faculty:** Daniel B. Ryssman, M.D., Moderator  
Rochester, MN

Michael R. Anderson, D.O.  
St. Paul, MN

Taylor R. Beahrs, M.D.  
Mankato, MN

8:51 a.m. - 9:19 a.m.

**Scientific Paper Session #1**

**Co-Moderator:** Curtis W. Hartman, M.D.  
Omaha, NE

**Co-Moderator:** Matthew D. Karam, M.D.  
Iowa City, IA

8:51 a.m. – 8:56 a.m.

1. Preliminary Outcomes of the Femoral Neck System: Equivalent Outcomes at Three Months to a Matched Cohort of Cannulated Screws
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|--------------------------------|---------------|
| *Rachel L. Honig, M.D.         | Rochester, MN |
| Katherine Mallett, M.D.        | Rochester, MN |
| Alexandra Cancio-Bello         | Rochester, MN |
| William W. Cross III, M.D.     | Rochester, MN |
| Jonathan D. Barlow, M.D., M.S. | Rochester, MN |
| S. Andrew Sems, M.D.           | Rochester, MN |
| Brandon J. Yuan, M.D.          | Rochester, MN |

8:57 a.m. – 9:02 a.m.

2. Postoperative Bracing After Medial Patellofemoral Ligament Reconstruction
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|----------------------------|---------------|
| *Andrew L. Schaver, B.S.   | Iowa City, IA |
| Meaghan A. Tranovich, M.D. | Iowa City, IA |
| Olivia C. O'Reilly, M.D.   | Iowa City, IA |
| Matthew J. Bollier, M.D.   | Iowa City, IA |
| Kyle R. Duchman, M.D.      | Iowa City, IA |
| Brian R. Wolf, M.D.        | Iowa City, IA |
| Robert W. Westermann, M.D. | Iowa City, IA |

9:03 a.m. - 9:08 a.m.

3. Burnout and EMR Dissatisfaction Predicts Long-Term Depression and Anxiety Scores in Orthopedic Physicians
- |                          |                |
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| *Todd C. Kelley, M.D.    | Cincinnati, OH |
| William M. Kelley, Ph.D. | Cincinnati, OH |
| Kim Hasselfeld           | Cincinnati, OH |
| Rebekah West             | Cincinnati, OH |

- 9:09 a.m. - 9:14 a.m. 4. Outcomes of Distal Femur Fractures Using Nail/Plate Combination  
\*Troy D. Hollinsworth, B.S. Sioux Falls, SD  
Paul A. Thompson, Ph.D. Sioux Falls, SD  
Robert E. Van Demark III, M.D. Sioux Falls, SD  
G. David Potter, M.D. Sioux Falls, SD
- 9:14 a.m. - 9:19 a.m. Floor Discussion
- 9:20 a.m. – 9:30 a.m. Recognition of Dr. Miguel Cabanela – Past Managing Director 2011-2021  
Presented by: Norman S. Turner, M.D.  
Rochester, MN
- 9:31 a.m. – 10:01 a.m. **CLASSICS IN ORTHOPAEDICS**  
Topic: Tendon Transfers about the Foot and Ankle: Surgery for Motorheads  
Speaker: **Jeffrey E. Johnson, M.D.**  
St. Louis, MO  
  
Introduced by: Norman S. Turner, M.D.  
Rochester, MN
- 10:02 a.m. - 10:08 a.m. **Introduction of Recipients of Education Grants, Multipurpose Resident Grants, and Traveling Fellowships**  
Introductions by: Lisa K. Cannada, M.D.  
Jacksonville, FL
- 10:09 a.m. - 10:19 a.m. **OREF Presentation**  
Presented by: Richard F. Kyle, M.D.
- 10:20 a.m. - 10:30 a.m. **Historian’s Report**  
Robert L. Kurland, M.D.  
Rochester, MN  
Room: San Antonio ABC
- 10:30 a.m. - 10:40 a.m. **Member Business Meeting**  
Room: San Antonio ABC
- 10:30 a.m. - 11:00 a.m. **Poster Viewing** – presenters will be available (CME credit will be offered)  
Room: San Antonio Foyer
- 10:30 a.m. - 11:00 a.m. **Coffee Break in Exhibit Area**  
Room: San Antonio DEF
- 11:00 a.m. - 11:30 a.m. **Ask the Expert and Open Case Discussions**  
Topic: Trauma: Oh No! What Do I Do Now?  
Room: San Antonio ABC  
  
Faculty: S. Andrew Sems, M.D., Moderator  
Rochester, MN  
  
Matthew D. Karam, M.D.  
Iowa City, IA  
  
Justin C. Siebler, M.D.  
Omaha, NE

11:30 a.m. - 12:00 p.m.

**Ask the Expert and Open Case Discussions**

Topic: Adult Reconstruction: Challenges in Hip, Knee, and Shoulder Surgery  
Room: San Antonio ABC

Faculty: Michael J. Taunton, M.D., Moderator  
Rochester, MN

Jonathan D. Barlow, M.D., M.S.  
Rochester, MN

Rafael J. Sierra, M.D.  
Rochester, MN

12:00 p.m. - 1:00 p.m.

**DePuy Synthes-sponsored lunch/presentation (No CME offered)**

Room: San Antonio G  
Topic: Velys Digital Surgery- Valuable Insights for Hip and Knee Surgery

Speaker: Kevin I. Perry, M.D. – Velys Robotic Assisted Knee Surgery  
Rochester, MN

Christopher Jimenez, M.D. – Velys Hip Navigation  
Austin, TX

1:15 p.m. – 3:00 p.m. Five Breakouts to run concurrently

**THURSDAY, APRIL 7, 2022**  
**BREAKOUT SESSION #1**  
**Topic: Hand/Elbow**  
**Room: San Antonio I**

Co-Moderator: Joseph A. Morgan, M.D.  
Omaha, NE

Co-Moderator: Peter C. Rhee, D.O., M.S.  
Rochester, MN

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| 1:15 p.m. – 1:20 p.m. | 5. | Operative Treatment of Distal Radius Fractures in Patients with Parkinson's Disease<br>*Anthony L. Logli, M.D. Rochester, MN<br>Marco Rizzo, M.D. Rochester, MN   |
| 1:21 p.m. – 1:26 p.m. | 6. | Six-Week Radiographic Follow-Up Does Not Change Management for Nonoperatively Treated Extra-Articular Metacarpal Shaft Fractures<br>*Michael A. Moore, M.D. Cincinnati, OH<br>Brandon Ponce, B.S. Cincinnati, OH<br>Adam P. Schumaier, M.D. Cincinnati, OH<br>Phillip R. Ross, M.D. Cincinnati, OH<br>Peter J. Stern, M.D. Cincinnati, OH |
| 1:27 p.m. – 1:32 p.m. | 7. | Is It Safe to Immediately Mobilize Ulnar Shaft Fractures After Fixation?<br>*Lauren E. Dittman, M.D. Rochester, MN<br>Katharine Hinchcliff, M.D. San Diego, CA<br>Alexander Hooke Rochester, MN<br>Sanjeev Kakar, M.D. Rochester, MN  |

**Paper position #8 deleted**

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| 1:32 p.m. – 1:45 p.m. |    | Floor Discussion  |
| 1:46 p.m. – 1:51 p.m. | 9. | Outcomes of Lunate Fixation vs. Proximal Row Carpectomy for Lichtman Stage IIIC Lunate in Kienböck's Disease<br>*Lauren E. Dittman, M.D. Rochester, MN<br>Nicholas Munaretto, M.D. Rochester, MN<br>Sanjeev Kakar, M.D. Rochester, MN |

- 1:52 p.m. – 1:57 p.m. 10. National Benchmarks for the Efficacy of Trigger Finger and the Risk Factors Associated with Failure  
\*Jennifer B. Lewis Chicago, IL  
Henry Seidel, B.S. Chicago, IL  
Lewis Shi, M.D. Chicago, IL  
Jennifer Wolf, M.D. Chicago, IL  
Jason Strelzow, M.D. Chicago, IL
- 1:58 p.m. – 2:03 p.m. 11. Patient-Reported Outcomes Following Arthroscopic Trapeziectomy with Suture Button Suspensionplasty vs. Open Trapeziectomy with Ligament Reconstruction and Tendon Interposition for First Carpometacarpal Joint Arthritis  
\*Ryan R. Karlstad, M.D. Stillwater, MN  
Ava G. Karlstad Stillwater, MN
- 2:04 p.m. – 2:09 pm. 12. Leadership Trends in Hand Surgery Fellowships  
\*Ashwin Madhan, B.A. Chicago, IL  
Manish P. Mehta, M.D. Chicago, IL  
Mia Qin, M.D. Chicago, IL  
Peter Swiatek, M.D. Chicago, IL  
Erik Gerlach, M.D. Chicago, IL  
John Carney, M.D. Chicago, IL  
Colin K. Cantrell, M.D. Chicago, IL  
Chirag Shah, M.D. Chicago, IL
- 2:09 p.m. – 2:16 p.m. Floor Discussion
- 2:17 p.m. – 2:26 p.m. **Spotlight Lecture**  
Speaker: Peter C. Rhee, D.O., M.S.  
Rochester, MN  
Topic: Metacarpal Fractures: Evolution in Management
- 2:27 p.m. – 2:32 p.m. 13. Coronal Plane Fractures of the Lunate in Kienbock Disease: Do They Heal?  
\*Nicholas Munaretto, M.D. Rochester, MN  
Lauren Dittman M.D. Rochester, MN  
Karina Lenartowicz B.S. Rochester, MN  
Sanjeev Kakar M.D. Rochester, MN
- Paper position #14 deleted**
- 2:33 p.m. – 2:38 p.m. 15. Unique Indications for Internal Joint Stabilizer (IJS) for Elbow Instability  
\*Luis M. Salazar, B.S.A. San Antonio, TX  
Riikka E. Koso, M.D. San Antonio, TX  
Anil K. Dutta, M.D. San Antonio, TX
- 2:39 p.m. – 2:44 p.m. 16. Association Between Social Media Activity and Patient Ratings in Shoulder and Elbow Surgeons: How Many “Likes” for Five Stars?  
Cara E. Busheme, M.S. Boca Raton, FL  
Alessia C. Lavin, M.D. Boca Raton, FL  
Vani J. Sabesan, M.D. Boca Raton, FL  
Feyikemi Ogunfuwa, B.S. Boca Raton, FL  
William J. Pallisery, B.S. Boca Raton, FL  
\*Ajay Desai, B.S. Boynton Beach, FL  
Payton Yerke Hansen, B.S. Boynton Beach, FL
- 2:44 p.m. – 3:00 p.m. Floor Discussion

**THURSDAY, APRIL 7, 2022**  
**BREAKOUT SESSION #2**  
**Topic: Sports Medicine**  
**Room: San Antonio G**

Co-Moderator: Jeffrey A. Macalena, M.D.  
Minneapolis, MN

Co-Moderator: Robert W. Westermann, M.D.  
Iowa City, IA

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| 1:15 p.m. – 1:20 p.m. | 17. | Hip FAI with Low Femoral Version is Strongly Associated with ACL Injury<br>*Andrew L. Schaver, B.S. Iowa City, IA<br>Meaghan M. Tranovich, M.D. Iowa City, IA<br>Robert W. Westermann, M.D. Iowa City, IA   |
| 1:21 p.m. – 1:26 p.m. | 18. | MPFL Repair has a Higher Failure Rate at Long-Term Follow-Up Compared to MPFL Reconstruction for Recurrent Patellar Instability<br>*Bradley M. Kruckeberg, M.D. Rochester, MN<br>Ryan R. Wilbur, B.A. Rochester, MN<br>Bryant M. Song, M.S. Rochester, MN<br>Anna K. Reinholz, B.S. Rochester, MN<br>Jory N. Wasserburger, M.D. Rochester, MN<br>Christopher L. Camp, M.D. Rochester, MN<br>Aaron J. Krych, M.D. Rochester, MN<br>Michael J. Stuart, M.D. Rochester, MN |
| 1:27 p.m. – 1:32 p.m. | 19. | The Impact of Multiple Prior Dislocations on Outcomes of Isolated Medial Patellofemoral Ligament Reconstruction<br>*David Ryskamp, B.S. Columbus, OH<br>Roberto C. Gonzalez, B.S. Columbus, OH<br>Parker Cavendish, M.D. Columbus, OH<br>Eric Milliron, M.D. Columbus, OH<br>Alex DiBartola, M.D. Columbus, OH<br>Robert A. Duerr, M.D. Columbus, OH<br>David C. Flanigan, M.D. Columbus, OH<br>Robert A. Magnussen, M.D. Columbus, OH                                  |
| 1:33 p.m. – 1:38 p.m. | 20. | The Impact of Articular Cartilage Status on Outcomes of Isolated Medial Patellofemoral Ligament Reconstruction<br>*Roberto C. Gonzalez, B.S. Columbus, OH<br>David Ryskamp, B.S. Columbus, OH<br>Parker Cavendish, M.D. Columbus, OH<br>Eric Milliron, M.D. Columbus, OH<br>Alex DiBartola, M.D. Columbus, OH<br>Robert A. Duerr, M.D. Columbus, OH<br>David C. Flanigan, M.D. Columbus, OH<br>Robert A. Magnussen, M.D., MPH Columbus, OH                              |
| 1:38 p.m. – 1:45 p.m. |     | Floor Discussion  |

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| 1:46 p.m. – 1:51 p.m. | 21.  | <p>Differences in Glenohumeral Range of Motion and Humeral Torsion Between Right-Handed and Left-Handed Professional Baseball Pitchers</p> <p>*Jacob C. Maier, M.S. Cleveland, OH<br/>                 Jeremy Harris, PT, DPT, ATC Cleveland, OH<br/>                 Jonathan Freeston, Ph.D. Cleveland, OH<br/>                 Lonnie Soloff, PT, DPT, ATC Cleveland, OH<br/>                 Daniel Himmerick, PT, DPT, SCS Toronto, ON<br/>                 Andrew Pipkin, PT, DPT, SCS Toronto, ON<br/>                 Jason Genin, D.O. Cleveland, OH<br/>                 Mark Schickendantz, M.D. Cleveland, OH<br/>                 Salvatore Frangiamore, M.D., M.S. Cleveland, OH</p> |
| 1:52 p.m. – 1:57 p.m. | 22.  | <p>Biologic Augmentation in ACL Reconstruction: What Matters?</p> <p>*Paul R. Fleissner, Jr. M.D. Akron, OH<br/>                 Kodi Veale, PA-C Akron, OH</p>  |
| 1:58 p.m. – 2:03 p.m. | 23.  | <p>Augmented Immunomodulation of Endogenous Marrow-Derived Stem Cells in the Setting of ACL Rupture</p> <p>Mackenzie Fleischer, Ph.D. Royal Oak, MI<br/>                 Michael Newton, Ph.D. Royal Oak, MI<br/>                 Samantha Hartner Royal Oak, MI<br/>                 John A. Driscoll, M.D. Royal Oak, MI<br/>                 Anthony Arveschoug, M.D. Royal Oak, MI<br/>                 *Christopher C. Vasileff, M.D. Royal Oak, MI<br/>                 Kevin Baker, Ph.D. Royal Oak, MI</p>   |
| 2:04 p.m. – 2:09 pm.  | 24.  | <p>Compressibility of Osteochondral Autograft Transfer Donor Grafts</p> <p>*Rachel L. Kushner, M.D. Shreveport, LA<br/>                 Patrick A. Massey, M.D. Shreveport, LA<br/>                 Michael T. Lowery, M.D. Shreveport, LA<br/>                 Benjamin Cole Miller, B.S. Shreveport, LA<br/>                 R. Shane Barton, M.D. Shreveport, LA<br/>                 Giovanni F. Solitro, Ph.D. Shreveport, LA</p>   |
| 2:09 p.m. – 2:16 p.m. | Floor Discussion   |  |
| 2:17 p.m. – 2:26 p.m. | <p><b>Spotlight Lecture</b></p> <p>Speaker: Robert W. Westermann, M.D.<br/>                 Iowa City, IA</p> <p>Topic: MPFL Reconstruction Technique in the Skeletally Immature Athlete</p> |  |
| 2:27 p.m. – 2:32 p.m. | 25.  | <p>ACL Graft Preparation with Vancomycin Has No Effect on Patient Reported Outcomes, Graft Rupture Rates, and Chondrocyte Viability Following Primary ACL Reconstruction</p> <p>*Alan G. Shamrock, M.D. Iowa City, IA<br/>                 Molly A. Day, M.D. Iowa City, IA<br/>                 Trevor R. Gulbrandsen, M.D. Iowa City, IA<br/>                 Zain Khazi, M.D. Iowa City, IA<br/>                 Kyle R. Duchman, M.D. Iowa City, IA<br/>                 Robert W. Westermann, M.D. Iowa City, IA<br/>                 Matthew J. Bollier, M.D. Iowa City, IA<br/>                 Brian R. Wolf, M.D. Iowa City, IA</p>   |





**THURSDAY, APRIL 7, 2022**  
**BREAKOUT SESSION #3**  
**Topic: Trauma**  
**Room: San Antonio H**

Co-Moderator: Animesh Agarwal, M.D.  
 San Antonio, TX

Co-Moderator: Brandon J. Yuan, M.D.  
 Rochester, MN

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| 1:15 p.m. – 1:20 p.m. | 29. Malnutrition is Common and Increases the Risk of Adverse Medical Events in Older Adults with Femoral Fragility Fractures<br>*Brady R. Wilkinson, M.D. Iowa City, IA<br>Michael C. Willey, M.D. Iowa City, IA<br>Qiang An, MBBS, MPH Iowa City, IA   |
| 1:21 p.m. – 1:26 p.m. | 30. Anatomic Considerations of Sacroiliac Joint Clamp Reduction Utilizing the Anterior Intrapelvic Approach<br>*Peter R. Wasky, M.D. Cincinnati, OH<br>H. Claude Sagi, M.D. Cincinnati, OH<br>Michael J. Beltran, M.D. Cincinnati, OH<br>Cory A. Collinge, M.D. Fort Worth, TX  |
| 1:27 p.m. – 1:32 p.m. | 31. Early Simultaneous Intramedullary Nailing vs. Temporizing External Fixation in Multiply Injured Patients with Bilateral Femoral Shaft Fractures<br>Rodolfo Zamora, M.D. Louisville, KY<br>Ali Mansour, M.D. Louisville, KY<br>Bradley J. Vivace, M.D. Louisville, KY<br>Salwa F. Rashid, M.D., MPH Louisville, KY<br>Jeffrey R. Engorn, D.O. Louisville, KY<br>*Travis Parkulo, M.D. Louisville, KY |
| 1:33 p.m. – 1:38 p.m. | 32. Soft Tissue Injury Should Guide Management in Open Fractures of the Femoral Shaft<br>Michelle Christy Cincinnati, OH<br>Matthew Hurn Cincinnati, OH<br>*Michael J. Beltran, M.D. Cincinnati, OH   |
| 1:38 p.m. – 1:45 p.m. | Floor Discussion  |
| 1:46 p.m. – 1:51 p.m. | 33. Traumatic Dislocation of the Proximal Tibiofibular Joint: A Systematic Review and 10-Year Experience from a Level 1 Trauma Center<br>Prashant V. Rajan, M.D. Cleveland, OH<br>*David Ramski, M.D. Cleveland, OH<br>Nicholas Romeo, D.O. Cleveland, OH   |
| 1:52 p.m. – 1:57 p.m. | 34. Compartmental Syndrome and Neurovascular Injuries in the Setting of Ballistic Fibula Fractures<br>Mark R. Adams, M.D. Newark, NJ<br>John S. Hwang, M.D. Columbus, OH<br>Mark C. Reilly, M.D. Newark, NJ<br>Michael S. Sirkin, M.D. Newark, NJ<br>Jeffrey A. Geller, M.D. New York, NY<br>*Cody A. Stover, M.D. Columbus, OH   |

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| 1:58 p.m. – 2:03 p.m. | <p>35. Short-Term Complications of Civilian Ballistic vs. Blunt Distal Intra-Articular Femur Fractures<br/>                 Colin K. Cantrell, M.D. Chicago, IL<br/>                 John J. Carney, M.D. Chicago, IL<br/>                 Daniel J. Johnson, M.D. Chicago, IL<br/>                 Mark A. Plantz, M.D. Chicago, IL<br/>                 Gregory H. Versteeg, M.D. Chicago, IL<br/>                 Eric J. Sanders, M.D. Chicago, IL<br/>                 Haley E. Smith, M.D. Chicago, IL<br/>                 Erik B. Gerlach, M.D. Chicago, IL<br/>                 Joel C. Williams, M.D. Chicago, IL<br/>                 Bennet A. Butler, M.D. Chicago, IL<br/>                 *Manish P. Mehta, M.D. Chicago, IL</p> |
| 2:04 p.m. – 2:09 pm.  | <p>36. Templating for Calcaneus Operative Treatment: How Similar Are Radiographic Measurements from One Side to the Other?<br/>                 Yazdan Raji, M.D. Cleveland, OH<br/>                 *Scott M. LaTulip, M.D. Cleveland, OH<br/>                 Navid Faraji, M.D. Cleveland, OH<br/>                 Tyler J. Moon, M.D. Cleveland, OH<br/>                 Sarah J. DeLozier, Ph.D. Cleveland, OH<br/>                 Heather A. Vallier, M.D. Cleveland, OH<br/>                 George Ochenjele, M.D. Cleveland, OH</p>   |
| 2:09 p.m. – 2:16 p.m. | <p>Floor Discussion</p>   |
| 2:17 p.m. – 2:26 p.m. | <p><b>Spotlight Lecture</b><br/>                 Speaker: Animesh Agarwal, M.D.<br/>                 San Antonio, TX<br/>                 Topic: Patella Fractures: Is the Tension Band Obsolete</p>  |
| 2:27 p.m. – 2:32 p.m. | <p>37. Fracture Collapse Correlates with Early Functional Outcomes After Cephalomedullary Nailing of Pertrochanteric Hip Fractures<br/>                 Rachel L. Honig, M.D. Rochester, MN<br/>                 Alexander G. Athey, M.D. Rochester, MN<br/>                 *Tyler Allen, M.D. Rochester, MN<br/>                 Jonathan D. Barlow, M.D., M.S. Rochester, MN<br/>                 S. Andrew Sems, M.D. Rochester, MN<br/>                 William W. Cross III, M.D. Rochester, MN<br/>                 Brandon J. Yuan, M.D. Rochester, MN</p>  |
| 2:33 p.m. – 2:38 p.m. | <p>38. Hip Resection Arthroplasty for Acute Native Hip Femoral Neck Fractures in the Non-Ambulator<br/>                 *Kevin R. Steelman, M.D. Detroit, MI<br/>                 Nicholas Bolz, M.D. Detroit, MI<br/>                 Jennifer Fleming, NP Detroit, MI<br/>                 Rahul Vaidya, M.D. Detroit, MI</p>   |
| 2:39 p.m. – 2:44 p.m. | <p>39. Clinical and Biomechanical Effects of Femoral Neck Buttress Plate Used for Vertical Femoral Neck Fractures<br/>                 *Andrew M Steffensmeier, M.D. Cincinnati, OH<br/>                 Nihar Shah, M.D. Cincinnati, OH<br/>                 Michael T. Archdeacon, M.D. Cincinnati, OH<br/>                 David Watson, M.D. Tampa, FL<br/>                 Roy W. Sanders Tampa, FL<br/>                 H. Claude Sagi Cincinnati, OH</p>   |

- 2:45 p.m. – 2:50 p.m.            40.    Comparison of Hospitalist and Trauma Surgery Admitting Services in Perioperative Hip Fracture Patient Management  
\*Jeffrey A. Gilbertson, M.D.            Kalamazoo, MI  
Rachael L. Tolsma, B.S.                Kalamazoo, MI  
Adam J. Misseldine, B.S.               Kalamazoo, MI  
Cuyler Huffman, M.S.                  Kalamazoo, MI  
Cameron J. Vanlaningham, M.D.      Kalamazoo, MI
- 2:50 p.m. – 3:00 p.m.            Floor Discussion

**THURSDAY, APRIL 7, 2022  
BREAKOUT SESSION #4**

**Topic: Hip and Knee Arthroplasty Complications and Infections  
Room: San Antonio ABC**

Co-Moderator: R. Michael Meneghini, M.D.  
Fishers, IN

Co-Moderator: Mark W. Pagnano, M.D.  
Rochester, MN

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| 1:15 p.m. – 1:20 p.m. | 41.              | Effect of Dedicated Surgical Staff on Operative Time and Turnover in Elective Total Joint Arthroplasty<br>*James R. Cardinal, M.D. Iowa City, IA<br>Qiang An, MBBS, MPH Iowa City, IA<br>Nicolas O. Noisieux, M.D., M.S., FRCSC Iowa City, IA<br>Timothy S. Brown, M.D. Houston, TX  |
| 1:21 p.m. – 1:26 p.m. | 42.              | Creation of a Total Hip Arthroplasty Patient-Specific Dislocation Risk Calculator<br>*Katherine E. Mallett, M.D. Rochester, MN<br>Hilal Maradit Kremers, M.D. Rochester, MN<br>Dirk R. Larson, M.S. Rochester, MN<br>Robert T. Trousdale M.D. Rochester, MN<br>Mark W. Pagnano, M.D. Rochester, MN<br>Daniel J. Berry, M.D. Rochester, MN<br>Michael J. Taunton, M.D. Rochester, MN<br>Rafael J. Sierra M.D. Rochester, MN<br>Cody C. Wyles M.D. Rochester, MN |
| 1:27 p.m. – 1:32 p.m. | 43.              | The Fate and Relevance of the Patella in Two-Stage Revision Total Knee Arthroplasty for Periprosthetic Joint Infection<br>Christian Eccles, M.D. Indianapolis, IN<br>Evan R. Deckard, BSE Indianapolis, IN<br>R. Michael Meneghini, M.D. Indianapolis, IN<br>*Leonard T. Buller, M.D. Indianapolis, IN   |
| 1:33 p.m. – 1:38 p.m. | 44.              | Failures after Two-Stage Exchanges are Secondary to New Organisms Not Previously Covered by Antibiotics<br>*Fortune J. Egbulefu, M.D. Las Vegas, NV<br>John C. Segreti, M.D. Chicago, IL<br>Scott M. Sporer, M.D. Chicago, IL<br>Antonia F. Chen, M.D., MBA Boston, MA<br>Matthew S. Austin, M.D. Philadelphia, PA<br>Craig J. Della Valle, M.D. Chicago, IL   |
| 1:38 p.m. – 1:45 p.m. | Floor Discussion |  |
| 1:46 p.m. – 1:51 p.m. | 45.              | COVID-19 Infection after Total Joint Arthroplasty is Associated an Increased Risk of Postoperative Complications<br>*Enrico M. Forlenza, M.D. Chicago, IL<br>John D. D. Higgins, M.D. Chicago, IL<br>Robert A. Burnett, M.D. Chicago, IL<br>Craig J. Della Valle, M.D. Chicago, IL   |

- 1:52 p.m. – 1:57 p.m. 46. A Major Increase of Thromboembolism in Total Hip/Knee Arthroplasty Patients During COVID-19 Pandemic  
\*Jesus M. Villa, M.D. Weston, FL  
Tejvir S. Pannu, M.D., M.S. Weston, FL  
Nicolas S. Piuizzi, M.D. Cleveland, OH  
Viktor Krebs, M.D. Cleveland, OH  
Aldo M. Riesgo, M.D. Weston, FL  
Carlos A. Higuera, M.D. Weston, FL
- 1:58 p.m. – 2:03 p.m. 47. Complication Rates and Costs of Hip Resurfacing Compared to Total Hip Arthroplasty at Five Years  
Robert A. Burnett, M.D. Chicago, IL  
Joseph Serino III, M.D. Chicago, IL  
\*Morgan Angotti, B.S. Chicago, IL  
Anthony Boniello, M.D. Chicago, IL  
P. Maxwell Courtney, M.D. Chicago, IL  
Craig J. Della Valle, M.D. Chicago, IL
- 2:04 p.m. – 2:09 pm. 48. Skeletal Muscle Mass Loss Following Knee Arthroplasty Compared to Hip Arthroplasty  
\*Michael C. Marinier, B.S. Iowa City, IA  
David E. DeMik, M.D., PharmD Iowa City, IA  
Jacob M. Elkins, M.D., Ph.D. Iowa City, IA
- 2:09 p.m. – 2:16 p.m. Floor Discussion
- 2:17 p.m. – 2:26 p.m. **Spotlight Lecture**  
Speaker: Mark W. Pagnano, M.D.  
Rochester, MN  
Topic: Contemporary Concepts of Alignment in TKA
- 2:27 p.m. – 2:32 p.m. 49. Efficacy of Saline Irrigation Plus Local Use of Polyvinyl Alcohol Polymer Composite Doped with Vancomycin and Tobramycin (PVA-VAN/TOB-P) in a Mouse Pouch Infection Model  
\*David C. Markel, M.D. Southfield, MI  
Bin Wu, M.D. Southfield, MI  
Paula Dietz, M.S. Southfield, MI  
Therese Bou-Akl, M.D, Ph.D. Southfield, MI  
Weiping Ren, M.D., Ph.D. Southfield, MI
- 2:33 p.m. – 2:38 p.m. 50. Influence of Antibiotic Timing on Native Knee Septic Arthritis Bacterial Culture Results  
\*Fahad Sarvari, B.S. Maywood, IL  
Theodore L. Schoenfeldt, M.D. Maywood, IL  
Madeline M. Lyons, M.D. Maywood, IL  
Michael W. Perry, M.D. Maywood, IL  
Nicholas M. Brown, M.D. Maywood, IL
- 2:39 p.m. – 2:44 p.m. 51. Predictors of Native Joint Septic Arthritis in the Setting of Crystalline Arthropathy  
Jacob L. Henrichsen, M.D. Iowa City, IA  
\*Mary Kate Skalitzky, M.D. Iowa City, IA  
Kyle Kesler, M.D. Iowa City, IA  
Nicolas O. Noiseux, M.D., M.S., FRCS Iowa City, IA

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| 2:45 p.m. – 2:50 p.m. | 52. Clinical Effectiveness of Serum D-Dimer in Evaluating Periprosthetic Joint Infections (PJI) in Total Knee Arthroplasty (TKA)<br>Arpan Patel, M.S. Chicago, IL<br>*Charles Engh, III, M.S. Chicago, IL<br>Brett R. Levine, M.D. Chicago, IL |
| 2:50 p.m. – 3:00 p.m. | Floor Discussion   |

**THURSDAY, APRIL 7, 2022**  
**BREAKOUT SESSION #5**  
**Topic: Tumor/Education/Practice Management**  
**Room: San Miguel**

Co-Moderator: Lisa K. Cannada, M.D.  
Jacksonville, FL

Co-Moderator: Peter S. Rose, M.D.  
Rochester, MN

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| 1:15 p.m. – 1:20 p.m. | 53. | ERAS Application Factors that Predict Outstanding Residency Performance<br>Charles A. Su, M.D., Ph.D. Cleveland, OH<br>Ryan J. Furdock, M.D. Cleveland, OH<br>Alexander Rascoe, M.D., MBA Cleveland, OH<br>Raymond W. Liu, M.D. Cleveland, OH<br>*Robert Gillespie, M.D. Cleveland, OH   |
| 1:21 p.m. – 1:26 p.m. | 54. | The Impact of Virtual Residency Interviews During Covid-19 on Orthopedic Surgery Applicants<br>*Alex M. Meyer, B.S., B.A. Iowa City, IA<br>Matthew D. Karam M.D. Iowa City, IA<br>Jerrod N. Keith M.D. Iowa City, IA   |
| 1:27 p.m. – 1:32 p.m. | 55. | Financial Literacy in Orthopedic Surgery Residents<br>Kyle D. Paul Birmingham, AL<br>Ryan Cone, M.D. Birmingham, AL<br>Brent Cone, M.D. Birmingham, AL<br>Alexandra Arguello, M.D. Birmingham, AL<br>*Yazen A. Shihab Birmingham, AL<br>Michael McCalman Birmingham, AL<br>Scott Porter, M.D. Greenville, SC<br>Elizabeth Ames, M.D. Burlington, VT<br>Brent A. Ponce, M.D. Columbus, GA<br>Michael Johnson, M.D. Birmingham, AL |
| 1:33 p.m. – 1:38 p.m. | 56. | "If Everyone is Special, Then No One Is" Do Standardized Letters of Recommendation Identify Top Applicants for Orthopedic Residency?<br>*Paul T. Rutkowski, M.D. Columbus, OH<br>Richard Fankhauser, M.D. Columbus, OH<br>Lynn Shaffer, Ph.D. Columbus, OH   |
| 1:38 p.m. – 1:45 p.m. |     | Floor Discussion   |
| 1:46 p.m. – 1:51 p.m. | 57. | The Impact of COVID-19 on the Social Media Practices of Orthopedic Surgery Residency Programs<br>*Lasun O. Oladeji, M.D., M.S. Columbia, MO<br>Cole Ohnoutka Columbia, MO<br>Nathan Cherian Columbia, MO<br>Daniel Hogan Columbia, MO<br>Brett D. Crist, M.D. Columbia, MO   |



- 1:52 p.m. – 1:57 p.m.      58.    High Satisfaction with Use of Telehealth for Routine Follow-Up Care after Total Joint Arthroplasty in a VA Healthcare System  
\*Nathan R. Graden, B.S.                                  Minneapolis, MN  
Kelsey L. Wise, M.D.                                  Minneapolis, MN  
Kelly Edwards, B.S.                                  Minneapolis, MN  
Melissa Albersheim, M.D.                              Minneapolis, MN  
Benjamin R. Williams, M.D.                              Minneapolis, MN  
Amy Gravely, M.A.                                  Minneapolis, MN  
Vernon F. Sechrist, M.D.                              Minneapolis, MN
- 1:58 p.m. – 2:03 p.m.      59.    Telehealth Utilization and Perspectives Among Orthopedic Surgeons  
Vani Sabesan, M.D.                                  Boca Raton, FL  
Joel Grunhut, B.A.                                  Boca Raton, FL  
Shad Sommerville, B.S.                              Boca Raton, FL  
\*Feyikemi Ogunfuwa, B.S.                              Boca Raton, FL  
Alessia C. Lavin, M.D.                              Boca Raton, FL
- 2:04 p.m. – 2:09 pm.      60.    Does Medicaid Insurance Status Affect Access to Orthopedic Care?  
Vani Sabesan, M.D.                                  Boca Raton, FL  
Loren Breen, B.S.                                  Boca Raton, FL  
Feyikemi Ogunfuwa, B.S.                              Boca Raton, FL  
\*Alessia C. Lavin, M.D.                              Boca Raton, FL
- 2:09 p.m. – 2:16 p.m.      Floor Discussion
- 2:17 p.m. – 2:26 p.m.      **Spotlight Lecture**  
Speaker:      Lisa K. Cannada, M.D.  
                                Jacksonville, FL  
Topic:      Did Covid Create a "New" Normal in Education and What Could it Mean?
- 2:27 p.m. – 2:32 p.m.      61.    Osteosarcoma Incidence and Overall Survival Rates from 1975 to 2018: Have We Really Improved?  
\*Trevor R. Gulbrandsen, M.D.                                  Iowa City, IA  
Christopher Halbur, B.S.                                  Iowa City, IA  
Benjamin J. Miller, M.D.                                  Iowa City, IA
- 2:33 p.m. – 2:38 p.m.      62.    Transcutaneous Oxygen as a Predictor of Wound Healing Complications in Preoperatively Radiated Soft Tissue Sarcoma  
Benjamin J. Miller, M.D.                                  Iowa City, IA  
Nathan W. Mesko, M.D.                                  Cleveland, OH  
Jeremy White, M.D.                                  Oklahoma City, OK  
Andre Spiguel, M.D.                                  Gainesville, FL  
Yuxuan Jin, M.S.                                  Cleveland, OH  
\*Lukas M. Nystrom, M.D.                                  Cleveland, OH

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|-----------------------|------------------|---|
| 2:39 p.m. – 2:44 p.m. | 63.              | Adjuvant Radiation after Resection of Atypical Lipomatous Tumors is Associated with Improved Local Control but Increased Complications: A Multicenter Evaluation<br>*Kevin Y. Zhu, B.S. Cleveland, OH<br>Joshua M. Lawrenz, M.D. Nashville, TN<br>Samuel R. Johnson, B.S. Nashville, TN<br>Mallory McKeon, B.S. Nashville, TN<br>Cullen P. Moran, B.S. Nashville, TN<br>Jose Vega, M.D. Cleveland, OH<br>Nathan W. Mesko, M.D. Cleveland, OH<br>Herbert S. Schwartz, M.D. Nashville, TN<br>Ginger E. Holt, M.D. Nashville, TN<br>Lukas M. Nystrom, M.D. Cleveland, OH |
| 2:45 p.m. – 2:50 p.m. | 64.              | Venous Thromboembolism Following Upper Extremity Orthopedic Surgery for Metastatic Bone Disease<br>*Roberto Gonzalez, B.S.A. Dallas, TX<br>Aaron Hurd, B.S. Dallas, TX<br>Kathryn E. Gallaway, B.A. Dallas, TX<br>Alexandra K. Callan, M.D. Dallas, TX  |
| 2:50 p.m. – 3:00 p.m. | Floor Discussion |   |

**FRIDAY, APRIL 8, 2022**

6:30 a.m. – 7:45 a.m.

**Instructional Course III**

Topic: Management of Skeletal Metastatic Disease in 2022: Should Everything Be Referred to Orthopedic Oncology?

Room: San Antonio G

Faculty: Matthew T. Houdek, M.D., Moderator  
Rochester, MN

Cory G. Couch, M.D.  
Rochester, MN

S. Mohammed Karim, M.D.  
Rochester, MN

Peter S. Rose, M.D.  
Rochester, MN

6:30 a.m. – 7:45 a.m.

**Instructional Course IV**

Topic: How to Advance Your Career Through Scholarly Publication

Room: San Antonio H

Faculty: Marc F. Swiontkowski, M.D., Moderator  
Minneapolis, MN

Timothy S. Brown, M.D.  
Houston, TX

Edward Y. Cheng, M.D.  
Minneapolis, MN

**SECOND PLENARY SESSION**

**Room: San Antonio ABC**

Co-Moderator: Jonathan D. Barlow, M.D., M.S.  
Rochester, MN

Co-Moderator: Jeffrey R. McLaughlin, M.D.  
Oshkosh, WI

8:00 a.m. - 8:02 a.m.

Assemble/Announcements

8:02 a.m. – 8:42 a.m.

**Symposium II**

Topic: Ankle Fractures: The Good, the Bad, and the Ugly

Faculty: Christopher M. McAndrew, M.D., Moderator  
St. Louis, MO

Jonathan D. Backus, M.D.  
St. Louis, MO

Sara M. Putnam, M.D.  
Omaha, NE

8:43 a.m. – 9:13 a.m.

**PRESIDENTIAL GUEST SPEAKER**

Topic: Culture of Excellence: How Vision and Principles Beat Goals and Rules  
Speaker: Mark W. Pagnano, M.D.  
Rochester, MN  
  
Introduced by: Norman S. Turner, M.D.  
Rochester, MN

9:14 a.m. - 9:16 a.m.

**Presentation of Mid-America Orthopaedic Association Physician in Training Award Winners for Excellence in Medical Writing**

Edward D. Henderson Award  
E. W. Johnson, Jr. Award  
Carl L. Nelson Award  
Dallas B. Phemister Award

Presented by: William W. Cross III, M.D.  
Rochester, MN

9:17 a.m. - 9:22 a.m.

65. **Edward D. Henderson, M.D. Award Presentation**  
Surgical Treatment of Anterior Cruciate Ligament Tears in Competitive Wrestlers: Reoperations, Outcomes, and Return to Play  
\*Erick M. Marigi, M.D. Rochester, MN  
Bryant M. Song, M.S. Rochester, MN  
Jory N. Wasserburger, M.D. Rochester, MN  
Sara Till, B.A. Rochester, MN  
Christopher L. Camp, M.D. Rochester, MN  
Bruce A. Levy, M.D. Rochester, MN  
Michael J. Stuart, M.D. Rochester, MN  
Kelechi R. Okoroha, M.D. Rochester, MN  
Aaron J. Krych, M.D. Rochester, MN

9:23 a.m. - 9:28 a.m.

66. **E. W. Johnson, Jr., M.D. Award Presentation**  
Spinal Anesthesia vs. General Anesthesia in Contemporary Primary Total Hip Arthroplasties  
\*Aaron R. Owen, M.D. Rochester, MN  
Adam W. Amundson, M.D. Rochester, MN  
Christopher M. Duncan, M.D. Rochester, MN  
Hugh M. Smith, M.D., Ph.D. Rochester, MN  
Rebecca L. Johnson, M.D. Rochester, MN  
Michael J. Taunton, M.D. Rochester, MN  
Mark W. Pagnano, M.D. Rochester, MN  
Daniel J. Berry, M.D. Rochester, MN  
Matthew P. Abdel, M.D. Rochester, MN

9:29 a.m. – 9:34 a.m.

67. **Carl L. Nelson, M.D. Award Presentation**  
Impact of Registry Education on Opioid Utilization: MARCQI's Pain-Control Optimization Pathway  
\*James T. Layson, D.O. Warren, MI  
David C. Markel, M.D. Southfield, MI  
Richard E. Hughes, Ph.D. Ann Arbor, MI  
Heather Chubb, M.S. Ann Arbor, MI  
Nicholas B. Frisch, M.D., MBA Rochester Hills, MI

9:35 a.m. – 9:40 a.m.

68. **Dallas B. Phemister Award Presentation**  
Depth of Tissue Necrosis and Cell Viability Following Treatment with Arthroscopic Radiofrequency Wand
- |                                 |                  |
|---------------------------------|------------------|
| *Jacob C. Maier, M.S.           | Cleveland, OH    |
| Danielle Barnes                 | Toledo, OH       |
| Meredith Herman, M.S.           | East Lansing, MI |
| Nahimarys Colón Hernández, M.D. | Toledo, OH       |
| Phillip Stokey                  | Toledo, OH       |
| Brooke Koltz, M.D.              | Toledo, OH       |
| Anil Gupta                      | Toledo, OH       |
| David Sohn, M.D., J.D.          | Toledo, OH       |

9:40 a.m. – 9:45 a.m.

Floor Discussion

9:45 a.m. - 10:15 a.m.

**CLASSICS IN ORTHOPAEDICS**

Topic: Supracondylar Humerus Fracture Management: Evolution Over the Last 20 Years

Speaker: Amy L. McIntosh, M.D.  
Dallas, TX

Introduced by: Norman S. Turner, M.D.  
Rochester, MN

10:16 a.m. – 10:30 a.m.

**ABOS Update 2022**

Speaker: J. Lawrence Marsh, M.D.  
Iowa City, IA

10:30 a.m. – 11:00 a.m.

**Poster Viewing** – presenters will be available (CME credit will be offered)  
Room: Magnolia Foyer

10:30 a.m. - 11:00 a.m.

**Coffee Break in Exhibit Area**

11:00 a.m. - 1:00 p.m.

Five Breakouts to run concurrently

**FRIDAY, APRIL 8, 2022**  
**BREAKOUT SESSION #6**  
**Topic: Foot and Ankle**  
**Room: San Miguel**

Co-Moderator: Jeffrey E. Johnson, M.D.  
St. Louis, MO

Co-Moderator: Richard T. Laughlin, M.D.  
Cincinnati, OH

11:00 a.m. - 11:05 a.m.

69. To BE(AR) Or Not To BE(AR) - Jones Dilemma?  
Neha Singh, MBBS. Birmingham, AL  
Nicholas Andrews, B.S. Birmingham, AL  
Austin Hughes B.S. Birmingham, AL  
\*Chad B. Willis, M.D. Birmingham, AL  
Roshan Jacob, M.D. Birmingham, AL  
Whitt Harrelson, B.S. Birmingham, AL  
Vyshi Rallapalle Birmingham, AL  
Zachary L. Littlefield, M.D. Birmingham, AL  
Ashish Shah, M.D. Birmingham, AL

11:06 a.m. - 11:11 a.m.

70. Diagnostic Accuracy of Weightbearing CT in Detecting Subtle Chronic Syndesmotic Instability: A Prospective Comparative Study  
\*Caleb J. Iehl, B.S. Iowa City, IA  
Samuel J. Ahrenholz, B.S. Iowa City, IA  
Tutku E. Tazegul, BBME Iowa City, IA  
Christian A. VandeLune, B.S. Iowa City, IA  
Eli L. Schmidt, B.S. Iowa City, IA  
Victoria Vivtcharenko, B.A. Iowa City, IA  
Kevin N. Dibbern, Ph.D. Iowa City, IA  
Nacime S. Mansur, M.D., Ph.D. Iowa City, IA  
Matthieu J. Lalevee, M.D. Iowa City, IA  
Cesar de Cesar Netto, M.D., Ph.D. Iowa City, IA

11:12 a.m. - 11:17 a.m.

71. Comparison of Medial and Dorsal Approach for Talonavicular Fusion: A Cadaver Study  
Nicholas Andrews, B.S. Birmingham, AL  
David Patch, M.D. Birmingham, AL  
Whitt Harrelson, B.S. Birmingham, AL  
Abhinav Agarwal, M.D. Birmingham, AL  
\*Zachary L. Littlefield, M.D. Birmingham, AL  
Christine S. Scott, B.A. Birmingham, AL  
Ashish Shah, M.D. Birmingham, AL

11:17 a.m. - 11:25 a.m.

Floor Discussion

- |                         |  |  |
|-------------------------|--|--|
| 11:26 a.m. - 11:31 a.m. | 72.  | <p>Impact of Patient Resilience on Outcomes of Open Brostrom-Gould Lateral Ligament Repair</p> <p>Sean Young, B.S. Birmingham, AL</p> <p>*Aseel Dib, B.S. Birmingham, AL</p> <p>Nicholas Andrews, B.S. Birmingham, AL</p> <p>Timothy Torrez, B.S. Birmingham, AL</p> <p>Vyshi Rallapalle Birmingham, AL</p> <p>Tanvee Sinha, B.S. Birmingham, AL</p> <p>Zachary L. Littlefield, M.D. Birmingham, AL</p> <p>Christine S. Scott, B.A. Birmingham, AL</p> <p>Ashish Shah, M.D. Birmingham, AL</p>   |
| 11:32 a.m. - 11:37 a.m. | 73.  | <p>Does BMI Affect Intermediate Outcomes of Open Brostrom-Gould Repair?</p> <p>Aseel Dib, B.S. Birmingham, AL</p> <p>Roshan Jacob, M.D. Birmingham, AL</p> <p>Abhinav Agarwal, M.D. Birmingham, AL</p> <p>Zachary L. Littlefield, M.D. Birmingham, AL</p> <p>Christine S. Scott, B.A. Birmingham, AL</p> <p>Ashish Shah, M.D. Birmingham, AL</p> <p>*Sudarsan Murali, M.S. Birmingham, AL</p>  |
| 11:38 a.m. - 11:43 a.m. | 74.  | <p>Predictors Of Deformity in Patients with Progressive Collapsing Foot Deformity and Valgus of The Ankle</p> <p>*Christian A. VandeLune, B.S. Iowa City, IA</p> <p>Mattieu Lalevee, M.D. Iowa City, IA</p> <p>Samuel J. Ahrenholz, B.S. Iowa City, IA</p> <p>Caleb J. Iehl, B.S. Iowa City, IA</p> <p>Tutku E. Tazegul, BBME Iowa City, IA</p> <p>Eli L. Schmidt, B.S. Iowa City, IA</p> <p>Kevin N. Dibbern, Ph.D. Iowa City, IA</p> <p>Nacime S. Mansur, M.D., Ph.D. Iowa City, IA</p> <p>Cesar de Cesar Netto, M.D., Ph.D. Iowa City, IA</p> |
| 11:43 a.m. - 11:51 a.m. | Floor Discussion   |  |
| 11:52 a.m. – 12:00 p.m. | <p><b>Case Presentations</b></p> <p>Jeffrey E. Johnson, M.D.<br/>St. Louis, MO</p> <p>Richard T. Laughlin, M.D.<br/>Cincinnati, OH</p> |  |
| 12:01 p.m. – 12:06 p.m. | 75.  | <p>Evaluating Prospective Patient-Reported Pain and Function Outcomes after Ankle and Hindfoot Arthrodesis</p> <p>*Manish P. Mehta, M.D. Chicago, IL</p> <p>Mitesh P. Mehta, M.D. Chicago, IL</p> <p>Alain E. Sherman, M.D. Chicago, IL</p> <p>Muhammad Mutawakkil, M.D. Chicago, IL</p> <p>Erik Gerlach, M.D. Chicago, IL</p> <p>John Carney, M.D. Chicago, IL</p> <p>Bennet A. Butler, M.D. Chicago, IL</p> <p>Milap S. Patel, D.O. Chicago, IL</p> <p>Anish R. Kadakia, M.D. Chicago, IL</p>  |

- 12:07 p.m. - 12:12 p.m.      76.      Quantifying Ankle Arthritis Using a 3D Hounsfield Unit (HU) Weight-Bearing Computed Tomography (WBCT) Algorithm  
\*Tutku E. Tazegul, BBME      Iowa City, IA  
Christian A. VandeLune, B.S.      Iowa City, IA  
Caleb J. Iehl, B.S.      Iowa City, IA  
Samuel J. Ahrenholz, B.S.      Iowa City, IA  
Eli L. Schmidt, B.S.      Iowa City, IA  
Matthieu J. G. Lalevee, M.D.      Iowa City, IA  
Kevin N. Dibbern, Ph.D.      Iowa City, IA  
Nacime S. Mansur, M.D., Ph.D.      Iowa City, IA  
Cesar de Cesar Netto, M.D., Ph.D.      Iowa City, IA
- 12:13 p.m. - 12:18 p.m.      77.      MTP Arthrodesis: Percutaneous Interfragmentary Screw Placement and Nerve Injury  
David Patch, M.D.      Birmingham, AL  
Nicholas Andrews, B.S.      Birmingham, AL  
Roshan Jacob, M.D.      Birmingham, AL  
\*Anthony L. Wilson, M.S.      Birmingham, AL  
Whitt Harrelson, B.S.      Birmingham, AL  
Abhinav Agarwal, M.D.      Birmingham, AL  
Zachary L Littlefield, M.D.      Birmingham, AL  
Ashish Shah, M.D.      Birmingham, AL
- 12:18 p.m. – 12:26 p.m.      Floor Discussion
- 12:27 p.m. – 12:32 p.m.      78.      Surgical Correction of Peritalar Subluxation and Patient Reported Outcomes: A Prospective Comparative Outcome Study in Flexible Progressive Collapsing Foot Deformity  
\*Victoria Y Vivtcharenko, B.A.      Iowa City, IA  
Nacime S. Mansur, M.D., Ph.D.      Iowa City, IA  
Matthieu Lalevee      Iowa City, IA  
Francois Lintz, M.D.      Toulouse, France  
Kristian Buedts, M.D.      Antwerpen, Belgium  
Andrew J. Goldberg, OBE, M.D., FRCS      London, England  
Jonathan T. Deland, M.D.      New York, NY  
John E. Femino, M.D.      Iowa City, IA  
Kevin N. Dibbern, Ph.D.      Iowa City, IA  
Cesar de Cesar Netto, M.D., Ph.D.      Iowa City, IA
- 12:33 p.m. - 12:38 p.m.      79.      Middle Facet Subluxation Correlation with Foot and Ankle Offset in the Assessment of Progressive Collapsing Foot Deformity  
\*Christian A. VandeLune, B.S.      Iowa City, IA  
Nacime S. Mansur, M.D. Ph.D.      Iowa City, IA  
Samuel J. Ahrenholz, B.S.      Iowa City, IA  
Caleb J. Iehl, B.S.      Iowa City, IA  
Tutku E. Tazegul, BBME      Iowa City, IA  
Eli L. Schmidt, B.S.      Iowa City, IA  
Kevin N. Dibbern, Ph.D.      Iowa City, IA  
Matthieu Lalevee, M.D.      Iowa City, IA  
Cesar de Cesar Netto, M.D., Ph.D.      Iowa City, IA



- 12:39 p.m. - 12:44 p.m.      80.      The Role of Transverse Tarsal Arch Collapse in Progressive Collapsing Foot Deformity  
\*Eli L. Schmidt, B.S.      Iowa City, IA  
Matthieu Lalevee, M.D.      Iowa City, IA  
Caleb J. Iehl, B.S.      Iowa City, IA  
Christian VandeLune, B.S.      Iowa City, IA  
Nacime S. Mansur, M.D., Ph.D.      Iowa City, IA  
Kevin N. Dibbern, Ph.D.      Iowa City, IA  
Cesar de Cesar Netto, M.D., Ph.D.      Iowa City, IA
- 12:45 p.m. - 12:50 p.m.      81.      Influence of Weightbearing Computed Tomography in the New Staging System of Progressive Collapsing Foot Deformity Classification  
\*Samuel J. Ahrenholz, B.S.      Iowa City, IA  
Nacime S. Mansur, M.D., Ph.D.      Iowa City, IA  
Hee Young Lee, M.D.      Iowa City, IA  
Amanda Ehret, P.A.      Iowa City, IA  
Matthieu Lalevee, M.D.      Iowa City, IA  
Caleb J. Iehl, B.S.      Iowa City, IA  
Mark S. Myerson, M.D.      Iowa City, IA  
Alessio Bernasconi, M.D.      London, UK  
Kristian Buedts, M.D.      Antwerpen, Belgium  
Cesar de Cesar Netto, M.D., Ph.D.      Iowa City, IA
- 12:50 p.m. - 1:00 p.m.      Floor Discussion

**FRIDAY, APRIL 8, 2022**  
**BREAKOUT SESSION #7**  
**Topic: Sports/Shoulder/Elbow**  
**Room: San Antonio ABC**

Co-Moderator: Christopher L. Camp, M.D.  
Rochester, MN

Co-Moderator: Felix H. Savoie III, M.D.  
New Orleans, LA

- 11:00 a.m. - 11:05 a.m.      82.      Comparison of Triamcinolone and Methylprednisolone Efficacy and Steroid Flare Reaction Rates in Shoulder Corticosteroid Injection: A Randomized Parallel Study  
Myles R. Joyce, B.S.      Memphis, TN  
\*Robert R. Eason, B.S., M.S.      Memphis, TN  
Thomas W. Throckmorton, M.D.      Memphis, TN  
David L. Bernholt, M.D.      Memphis, TN  
Frederick M. Azar, M.D.      Memphis, TN  
Margaret C. Knack, M.S., R.N.      Memphis, TN  
Tyler J. Brolin, M.D.      Memphis, TN
- 11:06 a.m. - 11:11 a.m.      83.      Opioid-Sparing Pain Management Protocol Following Shoulder Arthroplasty Results in Less Opioid Consumption and Higher Satisfaction: A Prospective, Randomized Control Trial  
Tyler J. Brolin, M.D.      Memphis, TN  
\*Caleb A. Jones, M.D.      Memphis, TN  
Jeff Murphy, B.S., M.S.      Mounds View, IN  
Robert R. Eason, B.S., M.S.      Memphis, TN  
Myles Joyce, B.S.      Memphis, TN  
David L. Bernholt, M.D.      Memphis, TN  
Frederick M. Azar, M.D.      Memphis, TN  
Thomas W. Throckmorton, M.D.      Memphis, TN
- 11:12 a.m. - 11:17 a.m.      84.      Antibiotic Prophylaxis with Cefazolin is Associated with Lower Shoulder Periprosthetic Joint Infection Rates than Non-Cefazolin Alternatives  
Erick M. Marigi, M.D.      Rochester, MN  
Douglas W. Bartels, M.D.      Rochester, MN  
\*Joo Hee Yoon, B.S.      Rochester, MN  
John W. Sperling, M.D.      Rochester, MN  
Joaquin Sanchez-Sotelo, M.D. Ph.D.      Rochester, MN
- 11:17 a.m. - 11:25 a.m.      Floor Discussion
- 11:26 a.m. - 11:31 a.m.      85.      Does Concurrent Arthroscopic Rotator Interval Release Reduce Postoperative Stiffness following Rotator Cuff Repair?  
Mitchell J. Hughes, M.D.      Maywood, IL  
Richard Fagan, M.D.      Houston, TX  
Hassan Farooq, B.S.      Maywood, IL  
William Adams, Ph.D.      Maywood, IL  
Dane H. Salazar, M.D., MBA      Maywood, IL  
\*Nickolas G. Garbis, M.D.      Maywood, IL

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| 11:32 a.m. - 11:37 a.m. | <p>86. The Critical Shoulder Angle as a Highly Specific Predictor of a Full-Thickness Rotator Cuff Tear: A Case-Control Study</p> <p>Erik B. Gerlach, M.D. Chicago, IL</p> <p>Richard W. Nicolay, M.D. Chicago, IL</p> <p>*Rusheel Nayak, M.D. Chicago, IL</p> <p>Colin K. Cantrell, M.D. Chicago, IL</p> <p>Daniel J. Johnson, M.D. Chicago, IL</p> <p>Mark A. Plantz, M.D. Chicago, IL</p> <p>Joshua P. Weissman, B.B.A. Chicago, IL</p> <p>Vehniah K. Tjong, M.D. Chicago, IL</p> <p>Guido Marra, M.D. Chicago, IL</p> <p>Corey A. Jones, M.D. Chicago, IL</p>     |
| 11:38 a.m. - 11:43 a.m. | <p>87. Biomechanics of a Rotator Cuff Deficient Shoulder and the Effects of Acellular Dermal Matrix Allograft Reconstruction Techniques</p> <p>Aimee Bobko, M.D. Chicago, IL</p> <p>*Dmitriy Peresada, M.D. Chicago, IL</p> <p>Michael J. Patetta, M.D. Chicago, IL</p> <p>Pranav Krishnan, B.S. Chicago, IL</p> <p>Danil Rybalko, M.D. Chicago, IL</p> <p>Erwin Secretov, M.D. Chicago, IL</p> <p>Julio Castillo Tafur, B.S. Chicago, IL</p> <p>Farid Amirouche, Ph.D. Chicago, IL</p> <p>Jason Koh, M.D. Chicago, IL</p> <p>Benjamin Goldberg, M.D. Chicago, IL</p> |
| 11:43 a.m. - 11:51 a.m. | <p>Floor Discussion</p>   |
| 11:52 a.m. – 12:00 p.m. | <p><b>Spotlight Lecture</b></p> <p>Speaker: Felix H. Savoie III, M.D.<br/>New Orleans, LA</p> <p>Topic: My Top 10 Tips for Improving Your Rotator Cuff Repairs</p>  |
| 12:01 p.m. – 12:06 p.m. | <p>88. Courses of Iatrogenic Nerve Injuries Following Shoulder Surgery</p> <p>Evelyn R. Reed, M.D. Salt Lake City, UT</p> <p>*Brendan M. Patterson, M.D., MPH Iowa City, IA</p> <p>Joseph A. Buckwalter V, M.D., Ph.D. Iowa City, IA</p> <p>Elspeth J.R. Hill, M.D., Ph.D., M. Res St. Louis, MO</p> <p>Maria F. Bozoghlian, M.D. Iowa City, IA</p> <p>Susan E. Mackinnon, M.D. St. Louis, MO</p>   |
| 12:07 p.m. - 12:12 p.m. | <p>89. Cost of Arthroscopic Rotator Cuff Repairs Is Primarily Driven by Procedure-Level Factors: A Single-Institution Analysis of an Ambulatory Surgery Center</p> <p>*Jesse H. Morris, M.D. Columbus, OH</p> <p>Azeem T. Malik, M.D. Columbus, OH</p> <p>Sarah Hatef, B.S. Columbus, OH</p> <p>Andrew S. Neviasser, M.D. Columbus, OH</p> <p>Julie Y. Bishop, M.D. Columbus, OH</p> <p>Gregory L. Cvetanovich, M.D. Columbus, OH</p>   |

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| 12:13 p.m. - 12:18 p.m. | <p>90. Glenoid Labrum Reconstruction with Superiorly Connected Long Head of the Biceps Tendon Autograft: A Cadaveric Biomechanical Study<br/>           *Anthony J. Zacharias, M.D. Lexington, KY<br/>           Brooks N. Platt, M.D. Lexington, KY<br/>           Marshall D. Rutherford, M.D. Lexington, KY<br/>           Scott D. Mair, M.D. Lexington, KY<br/>           Srinath Kamineni, M.D. Lexington, KY</p>  |
| 12:18 p.m. – 12:26 p.m. | <p>Floor Discussion</p>  |
| 12:27 p.m. – 12:32 p.m. | <p>91. Outcomes of Arthroscopic Stabilization for Anterior Shoulder Instability in Pediatric Patients<br/>           *Zachary R. Diltz, M.D. Memphis, TN<br/>           Thomas W. Throckmorton, M.D. Memphis, TN<br/>           David L. Bernholt, M.D. Memphis, TN<br/>           Frederick M. Azar, M.D. Memphis, TN<br/>           Tyler J. Brolin, M.D. Memphis, TN</p>  |
| 12:33 p.m. - 12:38 p.m. | <p>92. Anteroinferior Glenoid Rim Fractures in Shoulder Instability Patients Over 50: A Matched Cohort Analysis of Risk Factors, Treatment Strategies, and Outcomes<br/>           Bryant M. Song, M.S. Rochester, MN<br/>           *Anne A. Smartt, M.D. Rochester, MN<br/>           Ryan R. Wilbur, B.A. Rochester, MN<br/>           Anna K. Reinholz, B.S. Rochester, MN<br/>           Sara E. Till, M.S. Rochester, MN<br/>           Jory N. Wasserburger, M.D. Rochester, MN<br/>           Kelechi R. Okoroa, M.D. Rochester, MN<br/>           Aaron J. Krych, M.D. Rochester, MN<br/>           Christopher L. Camp, M.D. Rochester, MN</p> |
| 12:39 p.m. - 12:44 p.m. | <p>93. Long Term Outcomes of Distal Biceps Injuries: A Comparative Study of Surgical and Nonoperative Management at a Mean Follow-Up of 13 Years<br/>           *Adam J. Tagliero, M.D. Rochester, MN<br/>           Bryant M. Song, M.S. Rochester, MN<br/>           Sara E. Till, M.S. Rochester, MN<br/>           Anna K. Reinholz, B.S. Rochester, MN<br/>           Joaquin Sanchez-Sotelo, M.D., Ph.D. Rochester, MN<br/>           Jonathan D. Barlow, M.D., M.S. Rochester, MN<br/>           Christopher L. Camp, M.D. Rochester, MN</p>  |
| 12:45 p.m. - 12:50 p.m. | <p>94. The Effect of Intraoperative Platelet-Rich Plasma on Rotator Cuff Repair Revisions, Complications, and Cost<br/>           *Quinn A. Stillson, B.S. Chicago, IL<br/>           Eugenia Lee Chicago, IL<br/>           Sarah Bhattacharjee Chicago, IL<br/>           Sean Pirkle Chicago, IL<br/>           Henry Seidel Chicago, IL<br/>           Jason A. Strelzow, M.D. Chicago, IL<br/>           Lewis L. Shi, M.D. Chicago, IL</p>   |
| 12:50 p.m. - 1:00 p.m.  | <p>Floor Discussion</p>  |

**FRIDAY, APRIL 8, 2022**  
**BREAKOUT SESSION #8**  
**Topic: Trauma**  
**Room: San Antonio G**

Co-Moderator: S. Trent Guthrie, M.D.  
 Detroit, MI

Co-Moderator: Krystin Hidden, M.D.  
 Rochester, MN

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| 11:00 a.m. - 11:05 a.m. | 95. An Epidemic Amidst a Pandemic: Musculoskeletal Firearm Injuries During the COVID-19 Pandemic<br>*Paul M. Inclan, M.D. St. Louis, MO<br>Katherine Velicki, M.D. St. Louis, MO<br>Ryan Christ, DPhil St. Louis, MO<br>David M. Brogan, M.D., M.S. St. Louis, MO<br>Anna N. Miller, M.D. St. Louis, MO<br>Christopher J. Dy, M.D., MPH St. Louis, MO  |
| 11:06 a.m. - 11:11 a.m. | 96. Mortality of Orthopedic Trauma Patients During the COVID-19 Pandemic: A Comparison Study of COVID-19 Positive and Negative Patients at a Level-1 Trauma Hospital<br>Richard S. Barton, M.D. Shreveport, LA<br>Brad J. Chauvin, M.D. Shreveport, LA<br>Patrick A. Massey, M.D. Shreveport, LA<br>Charles M. Lobrano, M.D. Shreveport, LA<br>Steven M. Kautz, M.D. Shreveport, LA<br>*Lincoln K. Andre, M.D. Shreveport, LA  |
| 11:12 a.m. - 11:17 a.m. | 97. Does Local Administration of Antibiotic Powder Increase the Risk of Nonunion in Tibial Plateau and Tibial Pilon Fractures?<br>*Luis Felipe Colón, M.D. Chattanooga, TN<br>Daniel T. Miles, M.D. Chattanooga, TN<br>Mila Schienberg, M.S. Memphis, TN<br>Michael A. Yee, M.D. Greenville, NC<br>Bryce A. Cunningham, M.D. Chattanooga, TN<br>Jesse F. Doty, M.D. Chattanooga, TN<br>Warren E. Gardner, M.D. Chattanooga, TN<br>Dirk W. Kiner, M.D. Chattanooga, TN<br>Peter J. Nowotarski, M.D. Chattanooga, TN |
| 11:17 a.m. - 11:25 a.m. | Floor Discussion   |
| 11:26 a.m. - 11:31 a.m. | 98. The IPA, a Modified Numerical System for Pain Assessment and Intervention<br>*Sasha A. Stine, M.D., MScEng Detroit, MI<br>Rahul Vaidya, M.D., CM, FRCSC, FAOA Detroit, MI<br>Andreea Geamanu, Ph.D. Detroit, MI<br>Ian Hudson, D.O., MPH Detroit, MI<br>Austen Washington, M.D. Detroit, MI  |

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| 11:32 a.m. - 11:37 a.m. | <p>99. Impact on Provider Prescribing Patterns After Implementation of Departmental Opioid Protocols</p> <p>*Lindsay M. Maier, M.D. Detroit, MI<br/>         Vincent A. Lizzio, M.D. Detroit, MI<br/>         Luke D. Wesemann, B.S. Detroit, MI<br/>         Charles Jiang, B.S. Detroit, MI<br/>         Kamil Bober, M.D. St. Paul, MN<br/>         S. Trent Guthrie, M.D. Detroit, MI<br/>         William M. Hakeos, M.D. Detroit, MI<br/>         Joseph J. Hoegler, M.D. Detroit, MI</p>   |
| 11:38 a.m. - 11:43 a.m. | <p>100. Resident Involvement is Associated with Improved Short-Term Outcomes in Hip Fracture Surgery</p> <p>Khalid Alhreish, M.D. Dallas, TX<br/>         *Lincoln Dutcher, M.D. Dallas, TX<br/>         Asadullah Helal, M.D. Dallas, TX<br/>         Jimmy Rizkalla, M.D. Dallas, TX<br/>         Alan Jones, M.D. Dallas TX</p>  |
| 11:43 a.m. - 11:51 a.m. | <p>Floor Discussion</p>   |
| 11:52 a.m. – 12:00 p.m. | <p><b>Spotlight Lecture</b></p> <p>Speaker: S. Trent Guthrie, M.D.<br/>         Detroit, MI</p> <p>Topic: The Evolution of Distal Femur Fracture Treatment</p>  |
| 12:01 p.m. – 12:06 p.m. | <p>101. Intramedullary Nailing of Concurrent Ipsilateral Fractures of the Tibia and Femur: Primary Synchronous Nailing vs. Staged Osteosynthesis with Temporizing External Fixation</p> <p>Rodolfo Zamora, M.D. Louisville, KY<br/>         Jeffrey R. Engorn, D.O. Louisville, KY<br/>         Bradley J. Vivace, M.D. Louisville, KY<br/>         David Seligson, M.D. Louisville, KY<br/>         *Travis Parkulo, M.D. Louisville, KY<br/>         Derek D. Arrington, B.S. Louisville, KY<br/>         Salwa F. Rashid, M.D., MPH Louisville, KY</p> |
| 12:07 p.m. - 12:12 p.m. | <p>102. Use of Single Agent Cefotetan for Gustilo-Anderson Type III Open Fracture Prophylaxis</p> <p>Garrhett G. Via, M.D. Dayton, OH<br/>         *David A. Brueggeman, M.D. Dayton, OH<br/>         Victoria A. Murray, B.S. Dayton, OH<br/>         Zachary J. Krauss, B.S.P.S. Dayton, OH<br/>         Andrew W. Froehle, Ph.D. Dayton, OH<br/>         Steven D. Burdette, M.D. Dayton, OH<br/>         Michael J. Prayson, M.D. Dayton, OH</p>  |
| 12:13 p.m. - 12:18 p.m. | <p>103. Immediate Fixation of Acetabular Fractures via an Anterior Approach Does Not Increase Morbidity or Mortality</p> <p>*Krystin A. Hidden, M.D. Rochester, MN<br/>         Lara Shefelbine, M.D. Seattle, WA<br/>         Julie Agel, ATC, MA Seattle, WA<br/>         William D. Lack, M.D. Seattle, WA<br/>         Michael F. Githens, M.D., M.S. Seattle, WA<br/>         Reza Firoozabadi, M.D., M.A. Seattle, WA<br/>         Conor P. Kleweno, M.D. Seattle, WA</p>   |
| 12:18 p.m. – 12:26 p.m. | <p>Floor Discussion</p>   |

- 12:27 p.m. – 12:32 p.m.      104.    Rate of Secondary Surgery and Implant Removal Following Superior, Pre-Contoured Plating of Mid-Shaft Clavicle Fractures  
\*Patrick M. Ryan, M.D.    Temple, TX  
Charlie D. Wilson, M.D.    Temple, TX  
Randy D. Volkmer, M.D.    Temple, TX  
Garret R. Hisle, M.D.    Temple, TX  
Michael L. Brennan, M.D.    Temple, TX  
Daniel L. Stahl, M.D.    Temple, TX
- 12:33 p.m. - 12:38 p.m.      105.    Acute vs. Delayed Surgery for Midshaft Clavicle Fractures: A Systematic Review  
\*Peter H. Sanchez, B.A.    Iowa City, IA  
Michael C. Willey, M.D.    Iowa City, IA  
Ignacio Garcia Fleury, M.D.    Iowa City, IA  
Joseph A. Buckwalter V, M.D., Ph.D.    Iowa City, IA
- 12:39 p.m. - 12:44 p.m.      106.    Complications Associated with Administration of Postoperative Weight Based Lovenox in Obese Orthopedic Trauma Patients  
\*Michael Booth, M.D.    Morgantown, WV  
Michelle Bramer, M.D.    Morgantown, WV  
Owen Hamilton, BSc    Morgantown, WV  
William Brooks, M.D.    Morgantown, WV  
Michael Niemann, M.D.    Morgantown, WV
- 12:45 p.m. - 12:50 p.m.      107.    Risks for Chronic Opioid Usage in Orthopedic Polytrauma Patients  
Alexandra G. Otwell, BS    Little Rock, AR  
\*Chad B. Willis, M.D.    Birmingham, AL  
Saleema Karim, Ph.D.    Little Rock, AR  
Hannah Jensen, M.D., Ph.D.    Little Rock, AR  
Jeffrey B. Stambough, M.D.    Little Rock, AR  
Steven M. Cherney, M.D.    Little Rock, AR  
Simon C. Mears, M.D., Ph.D.    Little Rock, AR
- 12:50 p.m. - 1:00 p.m.      Floor Discussion

**FRIDAY, APRIL 8, 2021**  
**BREAKOUT SESSION #9**  
**Topic: Opioid Management**  
**Room: San Antonio H**

Co-Moderator: Michael P. Mott, M.D.  
 Detroit, MI

Co-Moderator: Brent L. Norris, M.D.  
 Jenks, OK

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| 11:00 a.m. - 11:05 a.m. | 108. Novel Approach for Opioid Prescribing Recommendation in an Orthopedic ASC<br>*Jake W. Rodgers Des Moines, IA<br>Simran Aulakh, B.S. Des Moines, IA<br>Jeffrey A. Rodgers, M.D. Des Moines, IA  |
| 11:06 a.m. - 11:11 a.m. | 109. A Reduction in Opioids Prescribed after Total Joint Arthroplasty as a Result of Statewide Registry Prescribing Protocol<br>Thomas S. Wenzlick, M.D. Grand Rapids, MI<br>*Andrew R. Kutzner, M.D. Ada, MI<br>Karl C. Roberts, M.D. Grand Rapids, MI   |
| 11:12 a.m. - 11:17 a.m. | 110. Variation in Opioid Prescribing in Post Total Joint Arthroplasty<br>Roshan Jacob, M.D. Birmingham, AL<br>Mackenzie Sowers Birmingham, AL<br>*Kelly Chandler Birmingham, AL<br>Sameer Naranje M.D. Birmingham, AL   |
| 11:17 a.m. - 11:25 a.m. | Floor Discussion  |
| 11:26 a.m. - 11:31 a.m. | 111. The Drivers of Persistent Opioid Use and Its Impact on Healthcare Utilization after Elective Spine Surgery<br>Erik B. Gerlach, M.D. Chicago, IL<br>Mark A. Plantz, M.D. Chicago, IL<br>*Andrew Furman Chicago, IL<br>Nicholas A. Arpey, M.D. Chicago, IL<br>Peter R. Swiatek, M.D. Chicago, IL<br>Joseph A. Weiner, M.D. Chicago, IL<br>Joshua P. Weissman, B.B.A. Chicago, IL<br>Srikanth N. Divi, M.D. Chicago, IL<br>Wellington K. Hsu, M.D. Chicago, IL<br>Alpesh A. Patel, M.D. Chicago, IL |
| 11:32 a.m. - 11:37 a.m. | 112. Opioid Prescribing Habits after Single Level Posterior Lumbar Spine Surgery<br>*Zachary C. Bailey, M.D. Omaha, NE<br>Austin T. Gibson Omaha, NE<br>Scott A. Vincent, M.D. Omaha, NE<br>Chris A. Cornett, M.D. Omaha, NE  |
| 11:38 a.m. - 11:43 a.m. | 113. What Dose of Preoperative Opioids Affects Outcomes after Revision Total Knee Arthroplasty?<br>E. Bailey Terhune, M.D. Chicago, IL<br>Robert A. Burnett, M.D. Chicago, IL<br>*Charles P. Hannon, M.D. Rochester, MN<br>Craig Della Valle, M.D. Chicago, IL  |



- 11:43 a.m. - 11:51 a.m. Floor Discussion
- 11:52 a.m. – 12:00 p.m. **Spotlight Lecture**  
Speaker: Brent L. Norris, M.D.  
Jenks, OK  
Topic: Use of Regional Anesthesia in Orthopedic Trauma
- 12:01 p.m. – 12:06 p.m. 114. Patterns of Opiate Prescription Practices in Isolated Operative Ankle Fractures: Creating Guidelines  
\*David J. Kusun, M.D. Omaha, NE  
Ryan E. Miller, M.D. Covina, CA  
Emily A. Boes, M.D. Salt Lake City, UT  
Erin L. Stockwell, M.D. Omaha, NE  
Colton Roessner, M.D. Columbus, OH  
Kaeli K. Samson, M.A., MPH Omaha, NE  
Sara M. Putnam, M.D. Omaha, NE  
Alexander B. Sawatzke, M.D. Omaha, NE  
Justin C. Siebler, M.D. Omaha, NE  
Matthew A. Mormino, M.D. Omaha, NE
- 12:07 p.m. - 12:12 p.m. 115. Chronic Opioid Use after Hip Fracture Repair  
\*Timothy E. Hereford, M.D. Little Rock, AR  
Simon Mears, M.D., Ph.D. Little Rock, AR  
Austin Porter, DrPH Little Rock, AR
- 12:13 p.m. - 12:18 p.m. 116. Does Preoperative Opioid Consumption Predict Postoperative Opioid Dependence Following ORIF of Olecranon Fractures?  
Laila Khoury Boca Raton, FL  
Skyler Jenkins Boca Raton, FL  
\*Payton Yerke Hansen, B.S. Boca Raton, FL  
Alessia C. Lavin, M.D. Boca Raton, FL  
Vani Sabesan, M.D. Boca Raton, FL
- 12:18 p.m. – 12:26 p.m. Floor Discussion
- 12:27 p.m. – 12:32 p.m. 117. Opioid-Limiting Legislation in Ohio Reduces Opioid Prescription Following Shoulder Arthroscopy  
John T. Strony, M.D. Cleveland, OH  
Yazdan Raji, M.D. Cleveland, OH  
Nikunj N. Trivedi, M.D. Cleveland, OH  
Christopher J. McMellen, M.D. Cleveland, OH  
Jiao Yu, M.A. Cleveland, OH  
Jacob G. Calcei, M.D. Cleveland, OH  
James E. Voos, M.D. Cleveland, OH  
Robert J. Gillespie, M.D. Cleveland, OH  
\*Bhargavi Maheshwer, M.D. Cleveland, OH

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| 12:33 p.m. - 12:38 p.m. | 118. | Effects of Opioid-Limiting Legislation on Postoperative Opioid Use in Shoulder Arthroplasty in the Epidemic Epicenter<br>Yazdan Raji, M.D. Cleveland, OH<br>John T. Strony, M.D. Cleveland, OH<br>Nikunj N. Trivedi, M.D. Cleveland, OH<br>*Elisabeth Kroneberger, B.S. Cleveland, OH<br>Jiao Yu, M.A. Cleveland, OH<br>Jacob G. Calcei, M.D. Cleveland, OH<br>James E. Voos, M.D. Cleveland, OH<br>Robert J. Gillespie, M.D. Cleveland, OH       |
| 12:39 p.m. - 12:44 p.m. | 119. | Risk Factors for Postoperative Opioid Use after Medial Patellofemoral Ligament Reconstruction<br>Joshua P. Castle, M.D. Detroit, MI<br>Toufic R. Jildeh, M.D. Detroit, MI<br>*Muhammad Abbas, B.S. Detroit, MI<br>Patrick Buckley, B.S. Detroit, MI<br>Salma Mumuni, M.D. Chicago, IL<br>Michael Gaudiani, M.D. Detroit, MI<br>Daniel Cotter, M.D. Detroit, MI<br>Vasilios Moutzouros, M.D. Detroit, MI<br>Kelechi R. Okoroha, M.D. Rochester, MN |
| 12:45 p.m. - 12:50 p.m. | 120. | Does the Type of Lower Extremity Fracture Affect Long-Term Opioid Usage? A Meta-Analysis<br>*Alexandra G. Otwell, B.S. Little Rock, AR<br>Jeffrey B. Stambough, M.D. Little Rock, AR<br>Steven M. Cherney, M.D. Little Rock, AR<br>Lindsay Blake, MLIS, AHIP Little Rock, AR<br>Eric R. Siegel Little Rock, AR<br>Simon C. Mears, M.D., Ph.D. Little Rock, AR   |
| 12:50 p.m. - 1:00 p.m.  |      | Floor Discussion  |

**FRIDAY, APRIL 8, 2022**  
**BREAKOUT SESSION #10**  
**Topic: Hip Preservation and Arthroscopy**  
**Room: San Antonio I**

Co-Moderator: J. Paul Schroepel, M.D.  
 Leawood, KS

Co-Moderator: Nathaniel J. Stewart, M.D.  
 Altoona, WI

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| 11:00 a.m. - 11:05 a.m. | 121. Sex- and Age-Based Differences in Outcomes and Survivorship Following Primary Hip Arthroscopy at Short- and Mid-Term Follow-Up<br>*David R. Maldonado, M.D. Des Plaines, IL<br>Jade S. Owens, B.S. Des Plaines, IL<br>Cammille C. Go, B.A. Des Plaines, IL<br>Benjamin R. Saks, M.D. Des Plaines, IL<br>Andrew E. Jimenez, M.D. Des Plaines, IL<br>Hari K. Ankem, M.D. Des Plaines, IL<br>Ajay C. Lall, M.D., M.S. Des Plaines, IL<br>Benjamin G. Domb, M.D. Des Plaines, IL                                      |
| 11:06 a.m. - 11:11 a.m. | 122. Return to Sport and Minimum Two-Year Outcomes of Hip Arthroscopy in Elite Athletes with Coexisting Low Back Pain<br>*Jade S. Owens, B.S. Des Plaines, IL<br>Andrew E. Jimenez, M.D. Des Plaines, IL<br>Peter F. Monahan, B.S. Des Plaines, IL<br>David R. Maldonado, M.D. Des Plaines, IL<br>Benjamin R. Saks, M.D. Des Plaines, IL<br>Payam W. Sabetian, M.D. Des Plaines, IL<br>Hari K. Ankem, M.D. Des Plaines, IL<br>Ajay C. Lall, M.D., M.S. Des Plaines, IL<br>Benjamin G. Domb, M.D. Des Plaines, IL       |
| 11:12 a.m. - 11:17 a.m. | 123. Return to Sport and Testing Following Hip Arthroscopy for FAI in High School and Collegiate Athletes<br>*Steven M. Leary, M.A. Iowa City, IA<br>Jacob L. Henrichsen, M.D. Iowa City, IA<br>Andrew L. Schaver, B.S. Iowa City, IA<br>Michael C. Willey, M.D. Iowa City, IA<br>Amanda C. Paulson, D.P.T. Iowa City, IA<br>Robert W. Westermann, M.D. Iowa City, IA  |
| 11:17 a.m. - 11:25 a.m. | Floor Discussion   |
| 11:26 a.m. - 11:31 a.m. | 124. Minimum Two-Year Outcomes of Staged Bilateral Hip Arthroscopy In the Context of Femoroacetabular Impingement Syndrome<br>Hari K. Ankem, M.D. Des Plaines, IL<br>Samantha C. Diulus, B.S. Des Plaines, IL<br>Cynthia Kyin, B.A. Des Plaines, IL<br>Andrew E. Jimenez, M.D. Des Plaines, IL<br>Benjamin R. Saks, M.D. Des Plaines, IL<br>Payam W. Sabetian, M.D. Des Plaines, IL<br>*David R. Maldonado, M.D. Des Plaines, IL<br>Ajay C. Lall, M.D., M.S. Des Plaines, IL<br>Benjamin G. Domb, M.D. Des Plaines, IL |

- 11:32 a.m. - 11:37 a.m. 125. Outcomes Following Hip Arthroscopy in Patients with Global Acetabular Retroversion: Male Gender and Competitive Athletes are Associated with Better Outcomes  
 Olivia C. O'Reilly, M.D. Iowa City, IA  
 \*Molly A. Day, M.D., ATC Madison, WI  
 Kayla Seiffert, B.A. Edina, MN  
 Hollis M. Fritts, M.D. St. Louis Park, MN  
 Qiang An, MBBS, MPH Iowa City, IA  
 Robert W. Westermann M.D. Iowa City, IA  
 Christopher M. Larson, M.D. Edina, MN
- 11:38 a.m. - 11:43 a.m. 126. Radiofrequency Probe Design Influences Traction Duration and Surgical Time for Hip Arthroscopy  
 \*Justin O. Aflatooni, M.D. Houston, TX  
 Austin E. Winingar, M.D. Houston, TX  
 Joshua D. Harris, M.D. Houston, TX
- 11:43 a.m. - 11:51 a.m. Floor Discussion
- 11:52 a.m. – 12:00 p.m. **Spotlight Lecture**  
 Speaker: Nathaniel J. Stewart, M.D.  
 Altoona, WI  
 Topic: Making Abductor Tendinitis Less Painful
- 12:01 p.m. – 12:06 p.m. 127. Post-Related Complications in Prospective vs. Retrospective Hip Arthroscopy Evidence - If You Want to Know the Answer, You have to Ask the Question, A Priori - A Systematic Review  
 \*Austin E. Winingar, M.D. Houston, TX  
 Omer Mei-Dan, M.D. Aurora, CO  
 Thomas J. Ellis, M.D. Upper Arlington, OH  
 Brian D. Lewis, M.D. Durham, NC  
 Robert C. Kollmorgen, D.O. Fresno, CA  
 Anthony Echo, M.D. Houston, TX  
 Joshua D. Harris, M.D. Houston, TX
- 12:07 p.m. - 12:12 p.m. 128. High-Level Athletes with a High BMI Demonstrate Inferior Outcomes Compared to High-Level Athletes with a Normal BMI  
 \*Michael S. Lee, B.A. Des Plaines, IL  
 Andrew E. Jimenez, M.D. Des Plaines, IL  
 James D. Fox, B.B.A. Des Plaines, IL  
 Peter F. Monahan, B.S. Des Plaines, IL  
 David R. Maldonado, M.D. Des Plaines, IL  
 Benjamin R. Saks, M.D. Des Plaines, IL  
 Hari K. Ankem, M.D. Des Plaines, IL  
 Payam W. Sabetian, M.D. Des Plaines, IL  
 Ajay C. Lall, M.D., M.S. Des Plaines, IL  
 Benjamin G. Domb, M.D. Des Plaines, IL
- 12:13 p.m. - 12:18 p.m. 129. Incidence and Treatment of Os Acetabuli in Femoroacetabular Impingement: A Systematic Review  
 Andrew L. Schaver, B.S. Iowa City, IA  
 Steven M. Leary, M.A. Iowa City, IA  
 \*Emily A. Parker, B.S. Iowa City, IA  
 Robert W. Westermann, M.D. Iowa City, IA  
 Michael C. Willey, M.D. Iowa City, IA

- 12:18 p.m. – 12:26 p.m. Floor Discussion
- 12:27 p.m. – 12:32 p.m. 130. Difference in Postoperative Pain Between Two Techniques for Arthroscopic Hip Capsule Closure  
Andrew L. Schaver, B.S. Iowa City, IA  
\*Steven M. Leary, M.A. Iowa City, IA  
Robert W. Westermann, M.D. Iowa City, IA
- 12:33 p.m. - 12:38 p.m. 131. Sex Differences in Outcomes following Surgical Management of FAI and Dysplasia: A Systematic Review and Meta-Analysis  
Emily A. Parker, B.A. Iowa City, IA  
\*Rebecca Peoples, B.S. Iowa City, IA  
Michael C. Willey, M.D. Iowa City, IA  
Robert W. Westermann, M.D. Iowa City, IA
- 12:39 p.m. - 12:44 p.m. 132. Modified Loop Suture Technique in Arthroscopic Labral Repair of the Hip  
Joshua S. Bowler, M.D. Columbus, OH  
W. Kelton Vasileff, M.D. Columbus, OH  
John M. Ryan, M.D. Columbus, OH  
\*Azeem T. Malik, M.D. Columbus, OH
- 12:45 p.m. - 12:50 p.m. 133. Outcomes of Arthroscopic Decompression of the Anterior Inferior Iliac Spine: A Systematic Review and Meta-Analysis  
\*Andrew L. Schaver, B.S. Iowa City, IA  
Steven M. Leary, M.A. Iowa City, IA  
Jacob L. Henrichsen, M.D. Iowa City, IA  
Christopher M. Larson, M.D. Edina, MN  
Robert W. Westermann, M.D. Iowa City, IA
- 12:50 p.m. - 1:00 p.m. Floor Discussion

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6:30 p.m. – 7:30 p.m.

**Steel Memorial Lecture**

Topic: Back to Basics: Investing in the Patient-Centric Team, Optimizing Potential, and the Recovery Glass Ceiling

Speakers: COL. Joseph F. Alderete, Jr., M.D. and CPT. (Ret.) Kelly Elmlinger  
Wounded Warrior Project  
San Antonio, TX

Introduced by: Norman S. Turner, M.D.  
Rochester, MN

**SATURDAY, APRIL 9, 2022**

**THIRD PLENARY SESSION**  
**Room: San Antonio ABC**

Moderator: Matthew F. Dilisio, M.D.  
Omaha, NE

7:00 a.m. – 7:04 a.m. Assemble/Announcements

7:05 a.m. – 7:50 a.m.

**Symposium III**

**Topic:** “Innovative Technology in Arthroplasty - Bring it On or Go it Alone?”

**Faculty:** James A. Keeney, M.D., Moderator  
Columbia, MO

Carlos A. Higuera, M.D.  
Weston, FL

Sayfe A. Jassim, M.D.  
Omaha, NE

Glenn D. Wera, M.D.  
Cleveland, OH

7:51 a.m. – 7:56 a.m. Presentation of MAOA Poster Award Winners

**Presented by:** William W. Cross III, M.D.  
Rochester, MN

7:57 a.m. – 8:29 a.m.

**AAOS Report**

**Speaker:** Felix H. Savoie III, M.D.  
New Orleans, LA  
President, American Academy of Orthopaedic Surgeons

**Introduced by:** William W. Cross III, M.D.  
Rochester, MN

8:30 a.m. – 9:30 a.m.

**Quiz Bowl**

**Room:** San Antonio ABC  
**Moderator:** James A. Keeney, M.D.  
Columbia, MO

9:30 a.m. – 10:00 a.m.

**Rapp Lecture**

**Topic:** Updates on Complex Reconstruction of the Shoulder  
**Speaker:** Bassem Elhassan, M.D.  
Boston, MA

**Introduced by:** Norman S. Turner, M.D.  
Rochester, MN

10:00 a.m. – 10:30 a.m.

**Coffee Break in Exhibit Area**

**10:30 a.m. – 1:30 p.m. Five Breakouts to run concurrently****SATURDAY, APRIL 9, 2022****BREAKOUT SESSION #11****Topic: Hip Arthroplasty****Room: San Antonio G**

Co-Moderator for Papers #134-143: Andrew A. Shinar, M.D.  
Brentwood, TN

Co-Moderator for Papers #134-143: Jonathan E. Webb, M.D.  
Eau Claire, WI

- 10:30 a.m. - 10:35 a.m. 134. Deep Learning Tool for Accurate and Precise Automatic Measurement of Femoral Component Subsidence Following Total Hip Arthroplasty from Plain Radiographs  
Alexis K. Matrka, M.D. Rochester, MN  
Pouria Rouzrokh, M.D., MPH, MHPE Rochester, MN  
Shyam J. Kurian, M.D. Rochester, MN  
Taghi Ramazanian, M.D. Rochester, MN  
Michael J. Taunton, M.D. Rochester, MN  
Hilal Maradit Kremers, M.D. Rochester, MN  
Bradley J. Erickson, M.D., Ph.D. Rochester, MN  
Cody C. Wyles, M.D. Rochester, MN  
\*Evan M. Dugdale, M.D. Rochester, MN
- 10:36 a.m. - 10:41 a.m. 135. Preoperative Digital Templating for Primary Uncemented Total Hip Arthroplasty Proves Consistently Accurate Over a Four-Year Period  
\*Adam Wheeler, M.S. Toledo, OH  
Ian M. Gradisar, M.D. Akron, OH
- 10:42 a.m. - 10:47 a.m. 136. Is Radiographic Malseating of Modular Dual-Mobility Liners Associated with Tribocorrosion Damage in Total Hip Arthroplasty?  
\*E. Bailey Terhune MD Chicago, IL  
Joseph Serino III, M.D. Chicago, IL  
Robin Pourzal, Ph.D. Chicago, IL  
Deborah J. Hall, Ph.D. Chicago, IL  
Denis Nam, M.D., MSc Chicago, IL  
Joshua J. Jacobs, M.D. Chicago, IL  
Craig J. Della Valle, M.D. Chicago, IL
- 10:47 a.m. - 10:54 a.m. Floor Discussion
- 10:55 a.m. - 11:00 a.m. 137. Biomarkers of Compromised Implant Fixation, Following Total Hip Arthroplasty  
Trey D. VanAken, MBA Detroit, MI  
Tariq Z. Issa, B.A. Detroit, MI  
\*Mohamed E. Awad, M.D., MBA Detroit, MI  
Khaled J. Saleh, M.D., MSc, FRCSC, MHCM, CPE Detroit, MI
- 11:01 a.m. - 11:06 a.m. 138. Impact of Transitioning to Mepivacaine from Bupivacaine Spinal Anesthesia in Anterior-Approach Total Hip Arthroplasty at a Free-Standing Ambulatory Surgery Center  
\*Tyler E. Calkins, M.D. Memphis, TN  
Samuel G. McClatchy, M.D. Memphis, TN  
Carson M. Rider, M.D. Memphis, TN  
Patrick C. Toy, M.D. Memphis, TN

- 11:07 a.m. - 11:12 a.m. 139. Causes of Early Hip Revision Vary by Age and Sex: Analysis of Data from a Statewide Quality Registry  
 \*Jacob F. Markel, M.D. Louisville, KY  
 John A. Driscoll, M.D. Royal Oak, MI  
 Richard Hughes, Ph.D. Ann Arbor, MI  
 James Verner, M.D. Royal Oak, MI  
 Thomas Zheng, Ph.D. Ann Arbor, MI  
 Brian Halstrom, M.D. Ann Arbor, MI  
 David C. Markel, M.D. Southfield, MI
- 11:13 a.m. - 11:18 a.m. 140. Monoblock Fluted Tapered Stems: How Do They Compare to Modular Fluted Tapered Stems?  
 \*Alexis K. Matrka, M.D. Rochester, MN  
 Michael J. Taunton, M.D. Rochester, MN  
 Robert T. Trousdale, M.D. Rochester, MN  
 David G. Lewallen, M.D. Rochester, MN  
 Matthew P. Abdel, M.D. Rochester, MN  
 Tad M. Mabry, M.D. Rochester, MN
- 11:18 a.m. - 11:26 a.m. Floor Discussion
- 11:27 a.m. - 11:32 a.m. 141. Patient Satisfaction following Total Joint Arthroplasty Before and During the COVID-19 Pandemic  
 \*Thomas H. Christensen, B.S. New York, NY  
 Vivek Singh, M.D. MPH New York, NY  
 Jeffrey B. Stambough, M.D. Little Rock, AR  
 C. Lowry Barnes M.D. Little Rock, AR  
 Ran Schwarzkopf, M.D. MSc New York, NY  
 Simon C. Mears, M.D. Ph.D. Little Rock, AR
- 11:33 a.m. - 11:38 a.m. 142. The Fragility Index of Total Hip Arthroplasty Randomized Control Trials: A Systematic Review  
 David R. Maldonado, M.D. Des Plaines, IL  
 Cammille C. Go, B.A. Des Plaines, IL  
 Beatrice C. Go, B.A. Des Plaines, IL  
 Shawn Annin, M.D. Des Plaines, IL  
 \*Andrew J. Curley, M.D. Pittsburgh, PA  
 Benjamin G. Domb, M.D. Des Plaines, IL
- 11:39 a.m. – 11:44 a.m. 143. A Retrospective Review of Relative Value Units in Revision Total Hip Arthroplasty: A Dichotomy Between Surgical Complexity and Reimbursement  
 \*Arpan Patel, M.S. Chicago, IL  
 Benjamin Kerzner, B.S. Chicago, IL  
 Omar Martini, B.S. Chicago, IL  
 Brett R. Levine, M.D. Chicago, IL
- 11:44 a.m. – 11:51 a.m. Floor Discussion
- 11:52 a.m. – 12:01 p.m. **Spotlight Lecture**  
 Speaker: Simon Mears, M.D.  
 Little Rock, AR  
 Topic: Periprosthetic Hip Fractures  
 Co-Moderator for Papers #144-154: Marcus C. Ford, M.D.  
 Germantown, TN  
 Co-Moderator for Papers #145-154: Simon Mears, M.D.  
 Little Rock, AR



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| 12:02 p.m. – 12:07 p.m. | 144.             | How Surgeon Experience affects Periprosthetic Fracture Rates Following Hip Replacement<br>*Elizabeth A. Klag, M.D. Detroit, MI<br>Luke D. Wesemann, B.S. Detroit, MI<br>Hailey O. Heil, B.S. Detroit, MI<br>Megan A. Delmonte Detroit, MI<br>Deepika Baskar Detroit, MI<br>Michael A. Charters, M.D. Detroit, MI<br>W. Trevor North, M.D. Detroit, MI   |
| 12:08 p.m. – 12:13 p.m. | 145.             | A Randomized Controlled Trial of Conventional and Modular Dual-Mobility Bearings - Are Serum Metal Levels a Concern?<br>*Anne DeBenedetti, B.A., CRCM Chicago, IL<br>Craig, J. Della Valle, M.D. Chicago, IL<br>Joshua, J. Jacobs, M.D. Chicago, IL<br>Denis, Nam, M.D., MSc Chicago, IL  |
| 12:14 p.m. – 12:19 p.m. | 146.             | The Effect of Surgical Staff Intraoperative Turnover on Operative Times and Complication Rates for Elective Primary Arthroplasty<br>James R. Cardinal, M.D. Iowa City, IA<br>Qiang An, MBBS, MPH Iowa City, IA<br>Nicolas O. Noisieux, M.D., M.S., FRCSC Iowa City, IA<br>*Timothy S. Brown, M.D. Houston, TX   |
| 12:20 p.m. – 12:25 p.m. | 147.             | Comparison of Postoperative Instability and Acetabular Cup Positioning in Robotic-Assisted vs. Traditional Total Hip Arthroplasty<br>*Jonathan H. Shaw, M.D. Detroit, MI<br>Brian Darrith, M.D. Detroit, MI<br>Tahsin M. Rahman, M.D. Detroit, MI<br>Luke D. Wesemann, BS Detroit, MI<br>Charles Jiang, BS Detroit, MI<br>Jason Davis, M.D. Detroit, MI   |
| 12:25 p.m. - 12:33 p.m. | Floor Discussion |   |
| 12:34 p.m. – 12:39 p.m. | 148.             | When Do We Recommend Surgery? Trends and Demographic Associations of Baseline PROMs Before THA<br>*Ahmed K. Emara, M.D. Cleveland, OH<br>Melissa Orr, M.S. Cleveland, OH<br>Matthew Hadad, B.S. Cleveland, OH<br>Alison K. Klika, M.S. Cleveland, OH<br>Carlos A. Higuera, M.D. Weston, FL<br>Viktor E. Krebs, M.D. Cleveland, OH<br>Robert M. Molloy, M.D. Cleveland, OH<br>Wael K. Barsoum, M.D. Weston, FL<br>Nicolas S. Piuze, M.D. Cleveland, OH |



**SATURDAY, APRIL 9, 2022**  
**BREAKOUT SESSION #12**  
**Topic: Pediatrics/Spine**  
**Room: San Miguel**

Co-Moderator for Papers #155-164: Michael C. Albert, M.D.  
Dayton, OH

Co-Moderator for Papers #155-164: Amy L. McIntosh, M.D.  
Dallas, TX

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| 10:30 a.m. - 10:35 a.m. | <p>155. Predictors of Re-Operation in Adolescents Undergoing Hip Preservation Surgery for Femoroacetabular Impingement</p> <p>*Philip A. Serbin, M.D. Dallas, TX</p> <p>Savannah Cooper, M.S. Dallas, TX</p> <p>Benjamin L. Johnson, PA-C Dallas, TX</p> <p>Tyler R. Youngman, M.D. Dallas, TX</p> <p>Philip L. Wilson, M.D. Dallas, TX</p> <p>Dan Sucato, M.D. Dallas, TX</p> <p>David Podeszwa, M.D. Dallas, TX</p> <p>Henry B. Ellis, M.D. Dallas, TX</p>  |
| 10:36 a.m. - 10:41 a.m. | <p>156. Risk Factors for Nonunion in Pediatric Lateral Column Lengthening Surgery</p> <p>*Sean Young, B.S. Birmingham, AL</p> <p>Timothy Torrez, B.S. Birmingham, AL</p> <p>Shane Strom, M.D. Birmingham, AL</p> <p>Alexandra Seidenstein, B.S. Birmingham, AL</p> <p>Nicholas Andrews, B.S. Birmingham, AL</p> <p>Jared Halstrom, B.S. Birmingham, AL</p> <p>Michael Conklin, M.D. Birmingham, AL</p> <p>John Doyle, M.D. Birmingham, AL</p> <p>Zachary Littlefield, M.D. Birmingham, AL</p> <p>Ashish Shah, M.D. Birmingham, AL</p> |
| 10:42 a.m. - 10:47 a.m. | <p>157. Elective Musculoskeletal Surgery Leads to Postoperative Weight Changes in Pediatric Patients</p> <p>*Sharon G. Huang, B.A. Dallas, TX</p> <p>Henry B. Ellis, M.D. Dallas, TX</p> <p>Hannah Worrall, MPH, CCRP Dallas, TX</p> <p>Brandon A. Ramo, M.D. Dallas, TX</p> <p>Philip L. Wilson, M.D. Dallas, TX</p>   |
| 10:47 a.m. - 10:54 a.m. | <p>Floor Discussion</p>   |
| 10:55 a.m. - 11:00 a.m. | <p>158. Pediatric Orthopedic Trauma: What Defines "Pediatric?"</p> <p>*Erin L. Stockwell, M.D. Omaha, NE</p> <p>Susan A. Scherl, M.D. Omaha, NE</p> <p>Maegen J. Wallace, M.D. Omaha, NE</p> <p>Matthew A. Halanski, M.D. Omaha, NE</p> <p>Brian P. Hasley, M.D. Omaha, NE</p>  |
| 11:01 a.m. - 11:06 a.m. | <p>159. Pediatric Ballistic Epidemiology: Two Years of Pediatric Orthopedic Consults at a Level 1 Trauma Center</p> <p>*Kathryn E. Schultz, M.D. Chicago, IL</p> <p>Jason L. Dickherber, M.D. Chicago, IL</p> <p>Jennifer M. Wolf, M.D. Chicago, IL</p> <p>Jason A. Strelzow, M.D. Chicago, IL</p>  |

- 11:07 a.m. - 11:12 a.m. 160. Screw Thread Configuration Has No Effect on Outcomes of In Situ Fixation for Stable Slipped Capital Femoral Epiphysis  
 Garrhett G. Via, M.D. Dayton, OH  
 \*David A. Brueggeman, M.D. Dayton, OH  
 Joseph G. Lyons, M.D. Dayton, OH  
 Derrek O. Edukugho, B.S. Dayton, OH  
 Andrew W. Froehle, Ph.D. Dayton, OH  
 Melissa A. Martinek, D.O. Dayton, OH  
 Michael C. Albert, M.D. Dayton, OH
- 11:13 a.m. - 11:18 a.m. 161. Time to Return to School Following ACL Reconstruction  
 \*Travis W. Turner, B.S. St. Louis, MO  
 Scott G. Kaar, M.D. St. Louis, MO
- 11:18 a.m. - 11:26 a.m. Floor Discussion
- 11:27 a.m. - 11:32 a.m. 162. Estimating Skeletal Maturity by Segmented Linear Modeling of Key AP Knee Radiographic Parameters  
 \*Joshua T. Yuan, B.A. Cleveland, OH  
 Ryan J. Furdock, M.D. Cleveland, OH  
 Alexander J. Benedick, M.D. Cleveland, OH  
 Raymond W. Liu, M.D. Cleveland, OH
- 11:33 a.m. - 11:38 a.m. 163. Femoral and Tibial Indications for Initial and Reoperation Surgeries with Fassier-Duval Intramedullary Rods for Children with Osteogenesis Imperfecta  
 \*Adriano J. DellaPolla, B.S. Omaha, NE  
 Kaeli K. Samson, M.A., MPH Omaha, NE  
 Tinotenda Sekeramayi, B.S. Omaha, NE  
 Arianna M. Dalamaggas, B.S. Omaha, NE  
 Megan R. Gillespie, B.S. Omaha, NE  
 Vincent P. Eaton, B.S. Omaha, NE  
 Elizabeth K. Strudthoff, R.N., B.S.N. Omaha, NE  
 Maegen J. Wallace, M.D. Omaha, NE
- 11:39 a.m. – 11:44 a.m. 164. Calculated Blood Loss Associated with Posterior Spinal Instrumented Fusion in Adolescent Idiopathic and Neuromuscular Scoliosis  
 Christina Hardesty, M.D. Cleveland, OH  
 \*Christopher Cheng, M.D. Cleveland, OH
- 11:44 a.m. – 11:51 a.m. Floor Discussion
- 11:52 a.m. – 12:01 p.m. **Spotlight Lecture**  
 Speaker: Michael C. Albert, M.D.  
 Dayton, OH  
 Topic: ApiFix Mid-C System: "The Internal Brace Option" for Treatment of Adolescent Idiopathic Scoliosis
- Co-Moderator for Papers #165-175: David B. Bumpass, M.D.  
 Little Rock, AR
- Co-Moderator for Papers #165-175: Chris A. Cornett, M.D.  
 Omaha, NE



- 12:40 p.m. – 12:45 p.m. 170. Outcomes of Elective Lumbar Decompression and Decompression with Fusion Procedures in Octogenarians  
 \*Joshua P. Weissman, B.B.A. Chicago, IL  
 Mark A. Plantz, M.D. Chicago, IL  
 Erik B. Gerlach, M.D. Chicago, IL  
 Nicholas A. Arpey, M.D. Chicago, IL  
 Srikanth N. Divi, M.D. Chicago, IL

**Paper Position #171 Deleted**

12:46 p.m. – 12:58 p.m. Floor Discussion

- 12:59 p.m. – 1:04 p.m. 172. Analysis of Spine Range of Motion and Muscle Activity in Rowers  
 Jordan P. Ankersen, B.S. Houston, TX  
 \*Bradley Lambert, Ph.D. Houston, TX  
 Varan Haghshenas, M.D. Houston, TX  
 Stephanie Gardner, M.D. Houston, TX  
 Lise Ochej College Station, TX  
 Brendan Holderread Houston, TX  
 Haley Goble, M.H.A. Houston, TX  
 Patrick McCulloch, M.D. Houston, TX  
 Shari Liberman, M.D. Houston, TX

- 1:05 p.m. – 1:10 p.m. 173. Surgeon and EOS Agreement of Spinal Sagittal Plane Parameters  
 John T. Anderson, M.D. Kanas City, MO  
 Nigel Price, M.D. Kanas City, MO  
 \*Daniel M. Cherian, M.D. Kansas City, MO

- 1:11 p.m. – 1:16 p.m. 174. The Incidence and Evaluation of Postoperative Dysphagia Following an Anterior Cervical Discectomy and Fusion  
 \*Matthew W. Kaufman, B.B.A. Cleveland, OH  
 Jennifer L. Shearer, B.A. Cleveland, OH  
 Claudia Cabrera-Aviles, M.D., M.S. Cleveland, OH  
 Morgan A. Terry, B.S. Cleveland, OH  
 Elizabeth M. Jackson, B.A. Cleveland, OH  
 Rachel Kominsky, M.D. Cleveland, OH  
 Innocent Njoku, M.D. Cleveland, OH  
 Todd Otteson, M.D., MPH Cleveland, OH  
 Christopher Furey, M.D. Cleveland, OH  
 Nelson Scott Howard, M.D., MBA Cleveland, OH

- 1:17 p.m. – 1:22 p.m. 175. Improved Cervical Sagittal Alignment Predicts Better Patient Reported Outcomes Following Long Posterior Fusion  
 Zachariah W. Pinter, M.D. Rochester, MN  
 \*Sarah H. Townsley, M.D. Rochester, MN  
 Harold I. Salmons, M.D. Rochester, MN  
 Adan Omar, M.D. Rochester, MN  
 Giorgos Michalopoulos, M.D. Rochester, MN  
 Sally El Sammak, M.D. Rochester, MN  
 Benjamin Elder, M.D., Ph.D. Rochester, MN  
 Brett Freedman, M.D. Rochester, MN  
 Ahmad Nassr, M.D. Rochester, MN  
 Scott C. Wagner, M.D. Bethesda, M.D.  
 Arjun Sebastian, M.D., MS Rochester, MN

1:22 p.m. – 1:30 p.m. Floor Discussion

**SATURDAY, APRIL 9, 2022**  
**BREAKOUT SESSION #13**  
**Topic: Knee Arthroplasty**  
**Room: San Antonio I**

Co-Moderator for Papers #176-185: Amar S. Ranawat, M.D.  
 New York, NY

Co-Moderator for Papers #176-185: Michael J. Taunton, M.D.  
 Rochester, MN

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| 10:30 a.m. - 10:35 a.m. | 176. Are Minimum Two-Year PROMS Necessary for Accurate Assessment of Patient Outcomes after Primary TKA?<br>*Abhi Seetharam, M.D. Indianapolis, IN<br>Evan R. Deckard, BSE Indianapolis, IN<br>Mary Ziemba-Davis, B.A. Indianapolis, IN<br>R. Michael Meneghini, M.D. Indianapolis, IN   |
| 10:36 a.m. - 10:41 a.m. | 177. Osteoarthritic Severity in Unresurfaced Patellae Does Not Adversely Affect PROMS in Contemporary TKA<br>Gregory Schmidt, M.D. Indianapolis, IN<br>*Hassan Farooq, B.S. Indianapolis, IN<br>Evan R. Deckard, BSE Indianapolis, IN<br>R. Michael Meneghini, M.D. Indianapolis, IN   |
| 10:42 a.m. - 10:47 a.m. | 178. Survivorship Analysis of Cementless Total Knee Arthroplasty with and without Patellar Resurfacing<br>Luke D. Wesemann, B.S. Detroit, MI<br>Tahsin M. Rahman, M.D. Detroit, MI<br>*Brian Darrith, M.D. Detroit, MI<br>Jonathan H. Shaw, M.D. Detroit, MI<br>Elizabeth A. Klag, M.D. Detroit, MI<br>Erickson Andrews, M.D. Detroit, MI<br>David Wright, B.S. Detroit, MI<br>Kevin Lindsay-Rivera, M.D. Detroit, MI<br>Craig D. Silverton, D.O. Detroit, MI                        |
| 10:47 a.m. - 10:54 a.m. | Floor Discussion   |
| 10:55 a.m. - 11:00 a.m. | 179. Home Health Care in Medicare-Aged Patients Is Associated with Increased Early Emergency Visits, Readmissions, and Costs Following Total Knee Arthroplasty<br>*Robert A. Burnett, M.D. Chicago, IL<br>Christopher E. Mestyaneck, B.S. Chicago, IL<br>P. Maxwell Courtney, M.D. Philadelphia, PA<br>Craig J. Della Valle, M.D. Chicago, IL  |
| 11:01 a.m. - 11:06 a.m. | 180. Early Outcomes Using the Posterior Stabilized ATTUNE® Revision System in Revision Total Knee Arthroplasty (RTKA): Interim Results from an International, Multi-center, Post-Market Study<br>Mark W. Hollmann, M.D. DeLand, FL<br>E. Matthew Heinrich, M.D. Austin, TX<br>Kirk A. Kindsfater, M.D. Fort Collins, CO<br>*J. Craig Morrison, M.D. Nashville, TN<br>Thomas G. Baboolal, Ph.D. Leeds, UK<br>Paul J. Lupinacci, Ph.D. West Chester, PA<br>Jim Lesko, Ph.D. Warsaw, IN |

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| 11:07 a.m. - 11:12 a.m. | 181.             | <p>The Cost-Effectiveness of Tibial Metaphyseal Cones in Revision Total Knee Arthroplasty</p> <p>*Joseph Serino, III, M.D. Chicago, IL</p> <p>Robert A. Burnett, M.D. Chicago, IL</p> <p>Anthony J. Boniello, M.D. Chicago, IL</p> <p>Scott M. Sporer, M.D. Chicago, IL</p> <p>Craig J. Della Valle, M.D. Chicago, IL</p>  |
| 11:13 a.m. - 11:18 a.m. | 182.             | <p>Similar Outcome Between Native and Periprosthetic Fractures of the Distal Femur</p> <p>Matthew W. Kaufman, B.B.A. Cleveland, OH</p> <p>Alexander S. Rascoe, M.D., MBA Cleveland, OH</p> <p>Jeffrey L. Hii, B.A. Cleveland, OH</p> <p>*Mitchell L. Thom, MSc Cleveland, OH</p> <p>Ari D. Levine Cleveland, OH</p> <p>Roger G. Wilber Cleveland, OH</p> <p>Adam G. Hirschfield Cleveland, OH</p> <p>Nicholas M. Romeo Cleveland, OH</p> <p>Glenn D. Wera, M.D. Cleveland, OH</p>                                      |
| 11:18 a.m. - 11:26 a.m. | Floor Discussion |  |
| 11:27 a.m. - 11:32 a.m. | 183.             | <p>Spinal Anesthesia vs. General Anesthesia in Contemporary Primary Total Knee Arthroplasties</p> <p>Aaron R. Owen, M.D. Rochester, MN</p> <p>Adam W. Amundson, M.D. Rochester, MN</p> <p>Christopher M. Duncan, M.D. Rochester, MN</p> <p>Hugh M. Smith, M.D., Ph.D. Rochester, MN</p> <p>Rebecca L. Johnson, M.D. Rochester, MN</p> <p>*Michael J. Taunton, M.D. Rochester, MN</p> <p>Mark W. Pagnano, M.D. Rochester, MN</p> <p>Daniel J. Berry, M.D. Rochester, MN</p> <p>Matthew P. Abdel, M.D. Rochester, MN</p> |
| 11:33 a.m. - 11:38 a.m. | 184.             | <p>Comparison of Anemia and Blood Transfusion after Single-Team and Two-Team Simultaneous Bilateral Total Knee Arthroplasty</p> <p>Nicholas L. Kolodychuk, M.D. Akron, OH</p> <p>Daniel J. Enright Akron, OH</p> <p>Joseph N. Gabra, DEng Akron, OH</p> <p>Paul Wilkie, M.D. Akron, OH</p> <p>Gregory A. Vrabec, M.D. Akron, OH</p> <p>*J. Collin Krebs, M.D. Akron, OH</p>  |
| 11:39 a.m. - 11:44 a.m. | 185.             | <p>Intraosseous Morphine Decreases Postoperative Pain and Opioid Consumption in Total Knee Arthroplasty: A Prospective, Double-Blind, Randomized Controlled Trial</p> <p>*Austin E. Winger, M.D. Houston, TX</p> <p>Ava Brozovich, MPH Houston, TX</p> <p>Stephen J. Incavo, M.D. Houston, TX</p> <p>Bradley S. Lambert, Ph.D. Houston, TX</p> <p>Thomas Sullivan, B.S. Houston, TX</p> <p>Terry A. Clyburn, M.D. Houston, TX</p> <p>Francesca Taraballi, Ph.D. Houston, TX</p> <p>Kwan J. Park, M.D. Houston, TX</p>  |
| 11:44 a.m. - 11:51 a.m. | Floor Discussion |  |



11:52 a.m. – 12:01 p.m.	<p><b>Spotlight Lecture</b></p> <p>Speaker: Craig R. Mahoney, M.D. Des Moines, IA</p> <p>Topic: Patellar Resurfacing in TKA</p> <p>Co-Moderator for Papers #186-196: Craig R. Mahoney, M.D. Des Moines, IA</p> <p>Co-Moderator for Papers #186-196: W. Trevor North, M.D. Detroit, MI</p>
12:02 p.m. – 12:07 p.m.	<p>186. Robotic-Assisted Total Knee Arthroplasty: Is there a Maximum Level of Efficiency for the Operating Surgeon?</p> <p>Kishan Patel, D.O. Edgewood, KY          Hyrum Judd, D.O. South Miami, FL          Richard G. Harm, M.S. Edgewood, KY          Joseph R. Nolan, Ph.D. Highland Heights, KY          Matthew Hummel, M.D. Edgewood, KY          *Jonathon M. Spanyer, M.D. Edgewood, KY</p>
12:08 p.m. – 12:13 p.m.	<p>187. The Cost-Effectiveness of Robotic-Assisted Total Knee Arthroplasty: A Computer Model-Based Evaluation</p> <p>Prashant V. Rajan, M.D. Cleveland, OH          *Anton Khlopas, M.D. Cleveland, OH          Alison K. Klika, M.S. Cleveland, OH          Robert Molloy, M.D. Cleveland, OH          Viktor E. Krebs, M.D. Cleveland, OH          Nicolas S. Piuizzi, M.D. Cleveland, OH</p>
12:14 p.m. – 12:19 p.m.	<p>188. Validation and Performance of a Machine-Learning Derived Prediction Guide for Total Knee Arthroplasty Component Sizing</p> <p>Arpan Patel, M.S. Chicago, IL          Kyle Kunze, M.D. New York, NY          Evan Polce, B.S. Madison, WI          *Brett R. Levine, M.D. Chicago, IL</p>
12:20 p.m. – 12:25 p.m.	<p>189. Repeated 2-Stage Arthroplasty to Treat a Failed 2-Stage Revision for Periprosthetic Hip or Knee Infection: A Tertiary Center Experience</p> <p>*Tejbir S. Pannu, M.D., M.S. Weston, FL          Jesus M. Villa, M.D. Weston, FL          Ardalan Sayan, M.D. Weston, FL          Carlos A. Higuera, M.D. Weston, FL          Aldo M. Riesgo, M.D. Weston, FL</p>
12:25 p.m. - 12:33 p.m.	Floor Discussion
12:34 p.m. – 12:39 p.m.	<p>190. Identifying Total Joint Arthroplasty Patients at Risk for Active Dental Infection</p> <p>James G. Kohler, M.D. Iowa City, IA          *Michael D. Russell, M.D., MBA, MPH Iowa City, IA          Natalie A. Glass, Ph.D. Iowa City, IA          Nicholas A. Bedard, M.D. Iowa City, IA          Nicholas O. Noiseux, M.D., M.S., FRCSC Iowa City, IA          Jacob M. Elkins, M.D., Ph.D. Iowa City, IA          Timothy S. Brown, M.D. Houston, TX</p>

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| 12:40 p.m. – 12:45 p.m. | 191.             | Costs Associated with Different Revision Types Commonly Used for the Treatment of Hip and Knee PJI<br>Jesus M. Villa, M.D.<br>Tejbir S. Pannu, M.D., M.S.<br>Aldo M. Riesgo, M.D.<br>Preetesh D. Patel, M.D.<br>*Carlos A. Higuera, M.D.   | Weston, FL<br>Weston, FL<br>Weston, FL<br>Weston, FL<br>Weston, FL   |
| 12:46 p.m. – 12:51 p.m. | 192.             | Joint Line Elevation on PROMS after Contemporary Revision TKA: Is Traditional Teaching Still Valid?<br>Leonard T. Buller, M.D.<br>*Cameron M. Metzger, M.D.<br>Evan R. Deckard, BSE<br>R. Michael Meneghini, M.D.  | Indianapolis, IN<br>Indianapolis, IN<br>Indianapolis, IN<br>Indianapolis, IN   |
| 12:51 p.m. – 12:58 p.m. | Floor Discussion |  |  |
| 12:59 p.m. – 1:04 p.m.  | 193.             | Hypoalbuminemia Increases Mortality after Two-Stage Revision Total Joint Arthroplasty<br>*Jonathan Guntin, B.S.<br>Joseph Serino III, M.D.<br>David Rossi, M.D.<br>Anthony Boniello, M.D.<br>Charles A. Gusho, B.S.<br>Craig J. Della Valle, M.D.  | Chicago, IL<br>Chicago, IL<br>Chicago, IL<br>Chicago, IL<br>Chicago, IL<br>Chicago, IL                               |
| 1:05 p.m. – 1:10 p.m.   | 194.             | Postoperative Stiffness after Total Knee Arthroplasty in Patients with Prior ACL Reconstruction<br>Benjamin J. Davis, M.D.<br>*Zoe E. Brown, B.S.<br>Nicholas M. Brown, M.D.   | Chicago, IL<br>Chicago, IL<br>Chicago, IL  |
| 1:11 p.m. – 1:16 p.m.   | 195.             | Patient Satisfaction of Ambulatory Surgical Care Centers Compared to Hospital-Based Outpatient Care<br>*Luke D. Wesemann, B.S.<br>Alejandra Dulworth<br>Michael A Charters, M.D.<br>Hailey O. Heil, B.S.<br>Jason J. Davis, M.D.<br>Casey Korhonen, B.S.<br>Awab Tanoli<br>W. Trevor North, M.D. | Detroit, MI<br>Detroit, MI<br>Detroit, MI<br>Detroit, MI<br>Detroit, MI<br>Detroit, MI<br>Detroit, MI<br>Detroit, MI |
| 1:17 p.m. – 1:22 p.m.   | 196.             | Mid-Term Survivorship and Predictors of Failure of Medial Mobile Bearing Unicompartmental Knee Arthroplasty<br>*Christopher N. Carender, M.D.<br>Dayton R. Rand<br>David E. DeMik, M.D., PharmD<br>Qiang An, MBBS, MPH<br>Nicolas O. Noiseux, M.D., M.S., FRCSC                                  | Iowa City, IA<br>Iowa City, IA<br>Iowa City, IA<br>Iowa City, IA<br>Iowa City, IA                                    |
| 1:22 p.m. – 1:30 p.m.   | Floor Discussion |  |  |

**SATURDAY, APRIL 9, 2022**  
**BREAKOUT SESSION #14**  
**Topic: Shoulder Arthroplasty**  
**Room: San Antonio H**

Co-Moderator for Papers #197-206: Bassem Elhassan, M.D.  
 Boston, MA

Co-Moderator for Papers #197-206: Alicia K. Harrison, M.D.  
 Minneapolis, MN

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| 10:30 a.m. - 10:35 a.m. | 197. Clinical and Radiographic Outcomes of Hybrid Glenoid Fixation with a Central Porous Titanium Post: Analysis of 714 Consecutive Shoulders<br>Erick M. Marigi, M.D. Rochester, MN<br>Karina A. Lenartowicz, BMSc Rochester, MN<br>*Brenton Jennewine, M.D. Memphis, TN<br>Thomas W. Throckmorton, M.D. Memphis, TN<br>John W. Sperling, M.D., MBA Rochester, MN  |
| 10:36 a.m. - 10:41 a.m. | 198. Patient-Reported Adverse Events after Total Shoulder Arthroplasty Where Liposomal Bupivacaine Blocks were Used<br>*Drashti Upadhyay, B.S. Maywood, IL<br>Robert Kelly, B.S. Maywood, IL<br>Vikrum Jain, B.S. Maywood, IL<br>Teresa Veselack, M.S. Maywood, IL<br>Isabel Reedy, B.S. Maywood, IL<br>Hassan Farooq, B.S. Maywood, IL<br>Scott W. Byram, M.D. Maywood, IL<br>Dane H. Salazar, M.D., MBA Maywood, IL<br>Nickolas G. Garbis, M.D. Maywood, IL |
| 10:42 a.m. - 10:47 a.m. | 199. Optimal Treatment for Glenoid Bone Loss: Augmented vs. Standard Reverse Shoulder Arthroplasty?<br>Vani J. Sabesan, M.D. Boca Raton, FL<br>*Sarah J. Girshfeld, B.A. Delray Beach, FL<br>Alessia C. Lavin, M.D. Boca Raton, FL<br>Christian Martinez, B.S. Miami, FL<br>Howard D. Routman, D.O. Boca Raton, FL  |
| 10:47 a.m. - 10:54 a.m. | Floor Discussion  |
| 10:55 a.m. - 11:00 a.m. | 200. Subscapularis Integrity and Patient Outcomes after Total Shoulder Arthroplasty: What is the Influence of Sling Immobilization?<br>Noam Kupfer, M.D. Chicago, IL<br>Hassan Farooq, B.S. Maywood, IL<br>William Adams, Ph.D. Maywood, IL<br>Dane H. Salazar, M.D., MBA Maywood, IL<br>*Nickolas G. Garbis, M.D. Maywood, IL  |

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| 11:01 a.m. - 11:06 a.m. | 201.             | <p>Restoration of the Native Humeral Anatomy During Anatomic Total Shoulder Arthroplasty: A Radiographic Comparison of Intramedullary vs. Extramedullary Resection</p> <p>*John T. Strony, M.D. Cleveland, OH<br/>           Mark LaBelle, M.D. Salt Lake City, UT<br/>           Christopher J. McMellen, M.D. Cleveland, OH<br/>           Michael L. Golden, M.D. Salt Lake City, UT<br/>           Peter Chalmers, M.D. Salt Lake City, UT<br/>           Robert Z. Tashjian, M.D. Salt Lake City, UT<br/>           Robert J. Gillespie, M.D. Cleveland, OH</p>  |
| 11:07 a.m. - 11:12 a.m. | 202.             | <p>Efficacy of Combinational Therapy Using Blue Light and Benzoyl Peroxide In Reducing Cutibacterium Acnes Bioburden at the Deltopectoral Interval: A Randomized Controlled Trial</p> <p>Lisa M. Cotter, M.D. Madison, WI<br/>           Elliot B. Franczek, M.D. Madison, WI<br/>           Jared J. Godfrey, B.S. Madison, WI<br/>           Scott J. Hetzel, M.S. Madison, WI<br/>           Nasia Safdar, M.D., Ph.D. Madison, WI<br/>           Tianhong Dai, Ph.D. Boston, MA<br/>           Lisa Arkin, M.D. Madison, WI<br/>           Brian F. Grogan, M.D. Madison, WI<br/>           *Eric J. Cotter, M.D. Madison, WI</p> |
| 11:13 a.m. - 11:18 a.m. | 203.             | <p>Effect of Reverse Total Shoulder Arthroplasty (rTSA) on Scapulothoracic Positioning</p> <p>Aimee Bobko, M.D. Chicago, IL<br/>           Julio C. Castillo Tafur, B.S. Chicago, IL<br/>           Dmitriy Peresada, M.D. Chicago, IL<br/>           *Michael J. Patetta, M.D. Chicago, IL<br/>           Alejandro Gonzalez, B.S. Chicago, IL<br/>           Benjamin A. Goldberg, M.D. Chicago, IL</p>   |
| 11:18 a.m. - 11:26 a.m. | Floor Discussion |   |
| 11:27 a.m. - 11:32 a.m. | 204.             | <p>Trends in Shoulder Arthroplasty During the COVID-19 Era: Increased Proportion of Outpatient Cases with Decrease in 90-Day Readmissions</p> <p>Brian L Badman, M.D. Indianapolis, IN<br/>           *Priyanka Ghosh, B.S. Indianapolis, IN<br/>           Ruben Prado, B.S. Indianapolis, IN<br/>           Abhi Seetharam, M.D. Indianapolis, IN</p>   |
| 11:33 a.m. - 11:38 a.m. | 205.             | <p>Ambulatory Outpatient Shoulder Arthroplasty Two-Year Outcomes and Complications: A Case-Control Cohort Study</p> <p>*Anthony J. Marois, M.D. Memphis, TN<br/>           Thomas W. Throckmorton, M.D. Memphis, TN<br/>           David L. Bernholt, M.D. Memphis, TN<br/>           Frederick M. Azar, M.D. Memphis, TN<br/>           Tyler J. Brolin, M.D. Memphis, TN</p>  |

- 11:39 a.m. – 11:44 a.m. 206. Local Infiltration Analgesia vs. Interscalene Block for Postoperative Pain Management Following Total Shoulder Arthroplasty: A Randomized Clinical Trial  
 \*Michael A. Ewing, M.D. Columbia, MO  
 Sally D. Heil, B.S. Columbia, MO  
 Matthew J. Smith, M.D. Columbia, MO  
 H. Mike Kim, M.D. Columbia, MO
- 11:44 a.m. – 11:51 a.m. Floor Discussion
- 11:52 a.m. – 12:01 p.m. **Spotlight Lecture**  
 Speaker: Vani J. Sabesan, M.D.  
 Boca Raton, FL  
 Topic: Innovations in Shoulder Arthroplasty  
 Co-Moderator for Papers #207-217: Jonathan D. Barlow, M.D., M.S.  
 Rochester, MN  
 Co-Moderator for Papers #207-217: Vani J. Sabesan, M.D.  
 Boca Raton, FL
- 12:02 p.m. – 12:07 p.m. 207. Reverse Shoulder Arthroplasty for the Treatment of Primary Glenohumeral Arthritis Among American Board of Orthopaedic Surgery Part II Candidates, 2008-2019  
 \*Olivia C. O'Reilly, M.D. Iowa City, IA  
 Molly A. Day, M.D., ATC Madison, WI  
 Mary Kate Skalitzky, M.D. Iowa City, IA  
 Trevor R. Gulbrandsen, M.D. Iowa City, IA  
 Brendan M. Patterson, M.D. MPH Iowa City, IA
- 12:08 p.m. – 12:13 p.m. 208. The Influence of Diabetes Mellitus on Outcomes in Shoulder Arthroplasty  
 Noah A. Kuhlmann, M.S. Grand Rapids, MI  
 Sreten Franovic, B.S. Grand Rapids, MI  
 \*Danielle Hanson, B.S. Grand Rapids, MI  
 Miriam Dash, B.S. Detroit, MI  
 Gabriel Burdick, B.S. Detroit, MI  
 Stephanie J. Muh, M.D. Detroit, MI
- 12:14 p.m. – 12:19 p.m. 209. Shoulder Arthroplasty for Patients with a History of Convulsive Seizures is Safe  
 Rachel L. Honig, M.D. Rochester, MN  
 Daniel C. Austin, M.D., MS Rochester, MN  
 \*Zachary Braig, M.D. Rochester, MN  
 Thomas H. Rogers, M.D. Rochester, MN  
 Jonathan D. Barlow, M.D., M.S. Rochester, MN  
 Christopher L. Camp, M.D. Rochester, MN  
 Mark E. Morrey, M.D. Rochester, MN  
 John W. Sperling, M.D. Rochester, MN  
 Joaquin Sanchez-Sotelo, M.D., Ph.D. Rochester, MN

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| 12:20 p.m. – 12:25 p.m. | <p>210. What are the Risk Factors Associated with Limited Musculoskeletal Health Literacy in Shoulder Arthroplasty Patients?<br/>           *Ramsey S. Sabbagh, M.S. Cincinnati, OH<br/>           Nihar S. Shah, M.D. Cincinnati, OH<br/>           Brian M. Newyear, B.S. Toledo, OH<br/>           Cameron G. Thomson, M.D. Cincinnati, OH<br/>           Robert N. Matar, M.D. Cincinnati, OH<br/>           Brian M. Johnson, B.S. Cincinnati, OH<br/>           Brian M. Grawe, M.D. Cincinnati, OH</p>   |
| 12:25 p.m. - 12:33 p.m. | <p>Floor Discussion</p>   |
| 12:34 p.m. – 12:39 p.m. | <p>211. Undergoing an Arthroscopic Procedure Prior to Shoulder Arthroplasty is Associated with a Greater Risk of Prosthetic Shoulder Infection<br/>           *Azeem T. Malik, M.D. Columbus, OH<br/>           Jesse H. Morris, M.D. Columbus, OH<br/>           Andrew S. Neviasser, M.D. Columbus, OH<br/>           Safdar N. Khan, M.D. Columbus, OH<br/>           Gregory L. Cvetanovich, M.D. Columbus, OH</p>  |
| 12:40 p.m. – 12:45 p.m. | <p>212. Cost Analysis and Complication Rate of Massive Irreparable Rotator Cuff Tear Treatment: Comparisons of Superior Capsular Reconstruction, Lower Trapezius Tendon Transfers, and Reverse Shoulder Arthroplasty<br/>           Erick M. Marigi, M.D. Rochester, MN<br/>           *Quinn J. Johnson, B.A. Rochester, MN<br/>           Ruchita Dholakia, MBA Rochester, MN<br/>           Bijan J. Borah, Ph.D. Rochester, MN<br/>           Joaquin Sanchez-Sotelo M.D. Ph.D. Rochester, MN<br/>           John W. Sperling M.D., MBA Rochester, MN</p> |
| 12:46 p.m. – 12:51 p.m. | <p>213. Patients' Perceptions and Utilization of Physical Therapy after Shoulder Surgery<br/>           Vani J. Sabesan, M.D. Boca Raton, FL<br/>           Mirelle Dawoud, M.S. Weston, FL<br/>           Joshua Stephens, B.S. Davie, FL<br/>           Cara E. Busheme, M.S. Boca Raton, FL<br/>           *Brandon Macknofsky, B.S. Boca Raton, FL<br/>           Alessia C. Lavin, M.D. Boca Raton, FL</p>   |
| 12:51 p.m. – 12:58 p.m. | <p>Floor Discussion</p>   |
| 12:59 p.m. – 1:04 p.m.  | <p>214. Better Outcomes? Rotator Cuff Repair vs. Reverse Shoulder Arthroplasty for Massive Rotator Cuff Tears<br/>           *Laila Khoury, B.S. Boca Raton, FL<br/>           William J. Pallissery, B.S. Boca Raton, FL<br/>           Alessia C. Lavin, M.D. Boca Raton, FL<br/>           Howard D. Routman, D.O. Boca Raton, FL<br/>           Vani Sabesan, M.D. Boca Raton, FL</p>   |
| 1:05 p.m. – 1:10 p.m.   | <p>215. Sensitivity of Quantitative Measures of Soft Tissue Quality in Patients Undergoing Reverse Shoulder Arthroplasty<br/>           *Shannon E. Linderman, M.A., M.S. Iowa City, IA<br/>           Joshua E. Johnson, Ph.D. Iowa City, IA<br/>           Donald D. Anderson, Ph.D. Iowa City, IA<br/>           Brendan M. Patterson, M.D., MPH Iowa City, IA</p>   |

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| 1:11 p.m. – 1:16 p.m. | 216. | An Analysis of Inclination Correction by Reaming in a Consecutive, Single-Surgeon Series of 3D Planned Reverse Total Arthroplasties |                  |
|                       |      | *Ryan N. Madden, B.A.   | San Antonio, TX  |
|                       |      | Matthew D. Smith, B.S.  | San Antonio, TX  |
|                       |      | Mike Proffitt, Ph.D.  | San Antonio, TX  |
|                       |      | Robert U. Hartzler, M.D.  | San Antonio, TX  |
| 1:17 p.m. – 1:22 p.m. | 217. | The Impact of Depression and Anxiety on Shoulder Arthroplasty Outcomes  |                  |
|                       |      | Noah A. Kuhlmann, M.S.  | Grand Rapids, MI |
|                       |      | Sreten Franovic, B.S.   | Grand Rapids, MI |
|                       |      | Miriam Dash, B.S.   | Detroit, MI      |
|                       |      | Danielle Hanson, B.S.   | Grand Rapids, MI |
|                       |      | *Gabriel Burdick, B.S.  | Detroit, MI      |
|                       |      | Stephanie J. Muh, M.D.  | Detroit, MI      |
| 1:22 p.m. – 1:30 p.m. |      | Floor Discussion  |                  |







11:52 a.m. – 12:01 p.m.

**Spotlight Lecture**

Speaker: Patricia A. Kolowich, M.D.  
Novi, MI  
Topic: Anterolateral Ligament Anatomy and Reconstruction  
Co-Moderator for Papers #228-238: Kyle R. Duchman, M.D.  
Iowa City, IA  
Co-Moderator for Papers #228-238: Patricia A. Kolowich, M.D.  
Novi, MI

12:02 p.m. – 12:07 p.m.

228. The Association Between the Chase Utley Rule and Collision-Related Injuries in Major League Baseball  
Joseph E. Tanenbaum, M.D., Ph.D. Chicago, IL  
\*Derrick M. Knapik, M.D. Chicago, IL  
Michael R. Karns, M.D. Cleveland, OH  
Michael J. Salata, M.D. Cleveland, OH  
Robert Gillespie, M.D. Cleveland, OH  
James E. Voos, M.D. Cleveland, OH

12:08 p.m. – 12:13 p.m.

229. Despite Understanding of Injury Risk, There is Widespread Use of Weighted Baseballs among Elite Athletes: A Multi-Center Survey Study  
Austin G. Cross, B.S. Detroit, MI  
\*Lafi S. Khalil, M.D. Detroit, MI  
Alexander J. Swantek, BSE Detroit, MI  
Vincent A. Lizzio, M.D. Detroit, MI  
Alexander C. Ziedas, B.S. Detroit, MI  
Christopher L. Camp, M.D. Rochester, MN  
Peter N. Chalmers, M.D. Salt Lake City, UT  
Sarah E. Chaides, B.S. Detroit, MI  
John D. Rexroth, B.S. Detroit, MI  
Eric C. Makhni, M.D., MBA Detroit, MI

12:14 p.m. – 12:19 p.m.

230. Retired NFL Players Face Increased Risk of Osteoarthritis and Joint Replacement  
Mark A. McClure Birmingham, AL  
\*Brett J. Cooke Birmingham, AL  
Joseph W. Elphingstone, M.D. Birmingham, AL  
Amit Momaya, M.D. Birmingham, AL  
Eugene W. Brabston, M.D. Birmingham, AL  
Brent A. Ponce, M.D. Birmingham, AL

12:20 p.m. – 12:25 p.m.

231. Patient's Perceptions of Regenerative Medicine: What Can It Do For You?  
Arjun Meiyappan, M.D. Weston, FL  
Ravi Teja Rudraraju, M.D. Weston, FL  
\*Bhavya Sheth, M.D. Miami, FL  
Alessia C. Lavin, M.D. Boca Raton, FL  
Jacob Oster, BS Davie, FL  
Vani Sabesan, M.D. Boca Raton, FL

12:25 p.m. - 12:33 p.m.

Floor Discussion

- 12:34 p.m. – 12:39 p.m. 232. Lower Extremity Injury Following Return to Sport from Concussion: A Systematic Review  
 \*Joshua P. Castle, M.D. Detroit, MI  
 Toufic R. Jildeh, M.D. Detroit, MI  
 Patrick Buckley, B.S. Detroit, MI  
 Muhammad Abbas, B.S. Detroit, MI  
 Yash Hedge, B.S. Lansing, MI  
 Vasilios Moutzouros, M.D. Detroit, MI  
 Kelechi R. Okoroa, M.D. Rochester, MN
- 12:40 p.m. – 12:45 p.m. 233. Hamstring Strength Variation Among Football and Soccer Athletes  
 \*Elizabeth C. Marks Birmingham, AL  
 Yazen Shihab Birmingham, AL  
 Joseph W. Elphingstone, M.D. Birmingham, AL  
 Kyle D. Paul Birmingham, AL  
 Amit M. Momaya, M.D. Birmingham, AL
- 12:46 p.m. – 12:51 p.m. 234. Early Light-Duty after Shoulder Arthroscopy is Associated with Earlier Return to Full-Duty in Workers' Compensation Patients  
 \*Gabriel G. Sampognaro, M.D. Shreveport, LA  
 Patrick A. Massey, M.D. Shreveport, LA  
 R. Shane Barton, M.D. Shreveport, LA  
 Milan G. Mody, M.D. Shreveport, LA  
 Lindy R. Robichaux-Edwards, M.D. Shreveport, LA  
 Phillip G. Fincher, B.S. Shreveport, LA
- 12:51 p.m. – 12:58 p.m. Floor Discussion
- 12:59 p.m. – 1:04 p.m. 235. The More the Merrier? Meniscus Implants - An Analysis of All-Inside Repair Failure  
 \*James D. Oosten, B.S. Columbus, OH  
 Alex C. DiBartola, M.D., MPH Columbus, OH  
 Jonathan C. Wright, B.S. Columbus, OH  
 Robert Duerr, M.D. Columbus, OH  
 Robert A. Magnussen, M.D., MPH Columbus, OH  
 Christopher C. Kaeding, M.D. Columbus, OH  
 David C. Flanigan, M.D. Columbus, OH
- 1:05 p.m. – 1:10 p.m. 236. Prospective Consecutive Clinical Outcomes Following Transtibial Root Repair for Posterior Meniscal Root Tears: A Multi-Center Study  
 Bryant M. Song, M.S. Rochester, MN  
 \*Richard F. Nauert III, M.D. Rochester, MN  
 Mario Hevesi, M.D., Ph.D. Rochester, MN  
 Corey S. Cook, MA Columbia, MO  
 Sara E. Till, M.S. Rochester, MN  
 Bruce A. Levy, M.D. Rochester, MN  
 Christopher L. Camp, M.D. Rochester, MN  
 Michael J. Stuart, M.D. Rochester, MN  
 Patrick A. Smith, M.D. Columbia, MO  
 Aaron J. Krych, M.D. Rochester, MN
- 1:11 p.m. – 1:16 p.m. 237. Clinical Outcomes of Fixation of Radial Meniscus Tears  
 Macey G. Duncan Shreveport, LA  
 Patrick A. Massey, M.D. Shreveport, LA  
 Kaylan N. McClary, M.D. Shreveport, LA  
 Ellie O. Starnes, B.S. Shreveport, LA  
 \*Michael Lowery, M.D. Shreveport, LA  
 R. Shane Barton, M.D. Shreveport, LA

1:17 p.m. – 1:22 p.m.

238. Analysis of Isolated Medial Meniscus Root Tears: Risk Factors for  
Clinical Failures

Bryant M. Song, M.S.	Rochester, MN
Mario Hevesi, M.D., Ph.D.	Rochester, MN
Ryan R. Wilbur, B.A.	Rochester, MN
John-Rudolph Smith, B.S.	Rochester, MN
Anna K. Reinholz, B.S.	Rochester, MN
*Sara E. Till, M.S.	Rochester, MN
Michael J. Stuart, M.D.	Rochester, MN
Aaron J. Krych, M.D.	Rochester, MN

1:22 p.m. – 1:30 p.m.

Floor Discussion