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OREF SOUTHEAST REGION
RESIDENT RESEARCH SYMPOSIUM
Friday, August 14, 2026

Orlando Health Jewett Orthopedic Institute
Surgical Training and Education Center (7th Floor)
62 Columbia Street
Orlando, Florida 32806

Hosted by:

M. Kareem Shaath, MD
Chairman of Orthopedic Surgery
Chief of Orthopedic Research
Orlando Regional Medical Center

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About OREF:
The Orthopaedic Research and Education Foundation (OREF) is a charitable 501(c)(3) organization committed to improving lives by supporting excellence in orthopaedic research through its grant funding and research education programs. As an independent nonprofit, OREF strives to improve clinical care and patient outcomes by advancing innovative research, developing new investigators and uniting the orthopaedic community in promoting musculoskeletal health.

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OREF SOUTHEAST REGION RESIDENT RESEARCH SYMPOSIUM
SUMMARY AGENDA
Friday, August 14, 2026

7:00 a.m. – 7:45 a.m.	**Registration and Breakfast** Orlando Health Jewett Orthopedic Institute Surgical Training and Education Center (7th Floor) 62 Columbia Street Orlando, FL
7:45 a.m. – 7:50 a.m.	**Welcome and Introductions** **M. Kareem Shaath, MD** Chairman of Orthopedic Surgery Chief of Orthopedic Research Orlando Regional Medical Center
7:50 a.m. – 8:00 a.m.	**OREF Welcome** **Lee Grossman, MBA, ML** Chief Executive Officer Orthopaedic Research and Education Foundation
8:00 a.m. – 8:30 a.m.	**Session I – Resident Research Presentations & Discussion** **Shoulder and Elbow**
8:30 a.m. – 9:00 a.m.	**Session II – Resident Research Presentations & Discussion** **Trauma**
9:00 a.m. – 9:10 a.m..	*Break – please submit your scores from Sessions I and II to OREF Staff*
9:10 a.m. – 9:40 a.m.	**Session III – Resident Research Presentations & Discussion** **Joints**
9:40 a.m. – 10:10 a.m.	**Session IV – Resident Research Presentations and Discussion** **Hand**
10:10 a.m. – 10:20 a.m.	*Break – please submit your scores from Sessions III and IV to OREF staff*
10:20 a.m. – 10:50 a.m.	**Session V – Resident Research Presentations and Discussion** **Pediatrics, Sports and Spine**
10:50 a.m. – 11:00 a.m..	**Break –** *please submit your scores from session V to OREF staff*
11:00 a.m. – 11:03 a.m.	**Introduction of Keynote Speaker**
11:03 a.m. – 11:33 a.m.	**Keynote *Speaker*** ***Turning Everyday Questions into High-Impact Resident Research*** **M. Kareem Shaath, MD** Chairman of Orthopedic Surgery Chief of Orthopedic Research Orlando Regional Medical Center
11:33 a.m. – 11:48 a.m.	**Keynote Question and Answer**
11:48 a.m. – 12:00 p.m.	**Closing Remarks and Awards Presentation**
12:00 p.m. – 1:00 p.m.	**Lunch**

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KEYNOTE SPEAKER

M. Kareem Shaath, MD

Chairman of Orthopedic Surgery
Chief of Orthopedic Research
Orlando Regional Medical Center

M. Kareem Shaath, MD, is a fellowship-trained orthopedic trauma surgeon with the Orlando Health Jewett Orthopedic Institute. Certified by the American Board of Orthopaedic Surgery, Dr. Shaath has advanced training in caring for severely injured patients with complex fractures and dislocations. He treats injuries to the upper and lower extremities as well as the pelvis and acetabulum. He also treats patients with complex orthopedic conditions, such as infected or non-healing fractures, post-traumatic deformities, and sacroiliac arthritis. Dr. Shaath also serves as the Chief of Orthopedic Research for the Orlando Health Jewett Orthopedic Institute.

Dr. Shaath earned his bachelor's degree in microbiology and Arabic language from the University of Kansas. He then earned his medical degree from the University of Kansas School of Medicine in Kansas City. Dr. Shaath then completed a residency in orthopedic surgery at Rutgers University – New Jersey Medical School, where he served as administrative chief resident. His residency was followed by a fellowship in orthopedic trauma at the University of Texas Health Science Center in Houston, the busiest trauma center in the United States and one of the busiest trauma centers in the world. He was then the recipient of the prestigious John Border Memorial Fellowship, which allowed him to further his training at the University of Nottingham Queen's Medical Centre, which is the busiest trauma center in the United Kingdom, and one of the busiest trauma centers in Europe.

Dr. Shaath has published extensively and is a frequent presenter at national and international medical conferences. He is fluent in both English and Arabic.

Judges and Moderator

Judge and Moderator

M. Kareem Shaath, MD
Orlando Regional Medical Center

Judges

Atif Ahmed, MD, FAAOS
Rothman Orthopaedic Institute

Cody Green, MD
Orlando Health Jewett Orthopedic Institute

George Haidukewych, MD
Orlando Health Jewett Orthopedic Institute

OREF Southeast Region Resident Research Symposium
DETAILED AGENDA
Friday, August 14, 2026

7:00 a.m. – 7:45 a.m. **Registration/Breakfast**
Orlando Health Jewett Orthopedic Institute
Surgical Training and Education Center (7th Floor)
62 Columbia Street, Orlando, FL

7:45 a.m. – 7:50 a.m. **Welcome and Introductions**
M. Kareem Shaath, MD
Chairman of Orthopedic Surgery
Chief of Orthopedic Research
Orlando Regional Medical Center

7:50 a.m. – 8:00 a.m. **OREF Welcome**
Lee Grossman, MBA, ML
Chief Executive Officer
Orthopaedic Research and Education Foundation

Session I – Resident Research Presentations and Discussion
Shoulder and Elbow

8:00 a.m. – 8:04 a.m. *Long-Term Outcomes of Shoulder Arthroplasty for Humeral Head Avascular Necrosis*
Conrad Stoy, MD, University of South Florida

8:04 a.m. – 8:08 a.m. *Implant Position and Tuberoplasty Effects on IFROM in RSA*
Blake H. Hodgens, MD, Atrium Health – Carolinas Medical Center/OrthoCarolina

8:08 a.m. – 8:12 a.m. *Gap Balancing in Reverse Shoulder Arthroplasty Is Associated with Fewer Complications Without Compromising Outcomes*
Jesse Seilern und Aspang, MD, Emory University School of Medicine

8:12 a.m. – 8:16 a.m. *Glenoid Morphology in Patients Undergoing Reverse Total Shoulder Arthroplasty Due to Fracture*
Jackson Hamersly, MD, Orlando Health Jewett Orthopedic Institute

8:16 a.m. – 8:20 a.m. *Clinical Outcomes and Complications Profile of Open and Arthroscopic Ankle Arthrodesis: A Systematic Review*
Rodrigo Encinas Yanez, MD, Orlando Health

8:20 a.m. – 8:30 a.m. **Question and Answer**

Session II – Resident Research Presentations and Discussion
Trauma

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Calvin Chandler, MD, Carolinas Medical Center

8:34 a.m. – 8:38 a.m. *Mortality After Operative Proximal Humerus Fractures Is Associated with Age and Baseline Ambulatory Status*
Michael P. Kucharik, MD, University of South Florida – Florida Orthopaedic Institute

8:38 a.m. – 8:42 a.m.. *A Dual-Implant Approach to Vancouver C Femur Fractures: Improved Outcomes with Retrograde Nail and Lateral Plate Fixation Compared to Lateral Locked Plating*
Brendan Page, MD, Orlando Health Jewett Orthopedic Institute

8:42 a.m. – 8:46 a.m. *Outcomes of Operative versus Non-Operative Treatment for Tibial Plateau Fractures*
Kassandra Flores, MD, Orthopedic Surgery Residency Greenville

8:46 a.m. – 8:50 a.m. *Intra-articular Air Predicts Hip Joint Instability Following Posterior Wall Fracture, Irrespective of Fracture Size or History of Dislocation*
Jacob Meyer, MD, Orlando Health

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8:50 a.m. – 9:00 a.m.	**Question and Answer**
9:00 a.m. – 9:10 a.m.	**Break - please submit your scores from Sessions I & II to OREF Staff**
	Session III – Resident Research Presentations and Discussion **Joints**
9:10 a.m. – 9:14 a.m.	*Primary Total Hip Arthroplasty via the Direct Anterior Approach for Displaced Femoral Neck Fractures in Non-Geriatric Patients* Griffin R. Rechter, MD, Orlando Health – Orlando Regional Medical Center
9:14 a.m. – 9:18 a.m.	*Femoral Distalization Using Rebar Screw Augmentation in Primary Total Knee Arthroplasty* Daniel Bailey, MD, Florida Orthopaedic Institute/University of Southern Florida Health
9:18 a.m. – 9:22 a.m.	*Can Chronic Antibiotic Suppression After Two-Stage Exchange Arthroplasty Prevent Treatment Failure?* Dillon Graham, MD, Atrium Health Carolinas Medical Center
9:22 a.m. – 9:26 a.m.	*Duloxetine Does Not Reduce Early Opioid Use or Pain Scores After Total Hip Arthroplasty: A Randomized, Double-Blind, Placebo-Controlled Trial* Aneesh Samineni, MD, University of Miami/Jackson Memorial Hospital
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9:44 a.m. – 9:48 a.m.	*Does Ten Minutes of Intraoperative Nerve Stimulation Improve Outcomes Following Nerve Transfer?* Manohar Devarasetty, MD, Carolinas Medical Center/OrthoCarolina
9:48 a.m. – 9:52 a.m.	*Increasing Complication Rates After Complex Wrist Reconstruction: An American Board of Orthopaedic Surgery Database Study* Olivia de Araujo, MD, University of Miami/Jackson Memorial Hospital
9:52 a.m. – 9:56 a.m.	*Timing of Tourniquet Release: A Prospective Randomized Trial* Brendan Kosko, MD, Orlando Health Jewett Orthopedic Institute
9:56 a.m. – 10:00 a.m.	*Functional Outcomes and Reoperation Rate of Nano Scope-Assisted Carpal Tunnel Release: A Retrospective Analysis* Alexander Vaccaro IV, MD, Rothman Orthopaedic Institute
10:00 a.m. – 10:10 a.m.	**Question and Answer**
10:10 a.m. – 10:20 a.m.	**Break – please submit your scores from Sessions III & IV to OREF Staff**

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Session V – Resident Research Presentations & Discussion
Pediatrics, Sports and Spine

10:20 a.m. – 10:24 a.m.	*Preoperative MRI Derived Navigation Reduces Radiation Exposure in Pediatric Spinal Fusion* Logan A. Reed, MD, Orlando Health
10:24a.m. – 10:28 a.m.	*Pediatric Lateral Condyle Fractures: Pins or Screws?* Brian Sweeney, Jr., MD, Carolinas Medical Center
10:28 a.m. – 10:32 a.m.	*Brace for Impact: Comparing Return-to-Sport and Outcomes of Ulnar Collateral Ligament Reconstruction Versus Repair with Internal Brace* Sione Ofa, MD, Tulane University School of Medicine
10:32 a.m. – 10:36 a.m.	*Fresh Meniscus Allograft Transplantation Using a Double-Bone Plug Technique Result in an Overall High (>90%) 2-to-7-year Functional Survival Rate* Justin T. Childers, MD, Orlando Health
10:36 a.m. – 10:40 a.m.	*The Association Between TLIF Cage Lordotic Angle, Segmental Lordosis, and Cage Subsidence: A Retrospective Cohort Study* Michael Barnum, MD, Orlando Health
10:40 a.m. – 10:50 a.m.	**Question and Answer**
10:50 a.m. – 11:00 a.m.	**Break – *please submit your scores from Session V to OREF Staff***
11:00 a.m. – 11:03 a.m.	**Introduction of Keynote Speaker**
11:03 a.m. – 11:33 a.m.	**Keynote Speaker** ***Turning Everyday Questions into High-Impact Resident Research*** **M. Kareem Shaath, MD** Chairman of Orthopedic Surgery Chief of Orthopedic Research Orlando Regional Medical Center
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Long-Term Outcomes of Shoulder Arthroplasty for Humeral Head Avascular Necrosis

Conrad Stoy, MD
University of South Florida

Purpose: To determine whether AVN etiology influences functional recovery, revision-free survival, and mortality after shoulder arthroplasty. We hypothesized that idiopathic and known etiologies would show different trajectories and survival profiles.

Significance: Humeral head AVN has multiple causes, yet many patients are labeled idiopathic, and outcome differences across etiologies remain poorly defined. Clarifying whether etiology or medical status predicts outcomes may improve counseling and risk stratification.

Methodology: We retrospectively reviewed 51 shoulders in 42 patients treated with arthroplasty for primary humeral head AVN from 2003-2023. Kaplan-Meier analysis assessed revision-free and survival outcomes. Multivariable logistic regression evaluated mortality predictors. In 31 shoulders with >1 year follow-up, mixed-effects models compared ASES, SST, and range-of-motion trajectories.

Results: Mean age at surgery was 51.2 ± 13.6 years; 56.9% were female. Five revisions (9.8%) occurred. Revision-free survivorship was 90.2% at 5 years and 82.0% at 10 years, with no significant differences by etiology or procedure. Survival was 84.2% at 5 years, 79.1% at 10 years, and 75.8% at 15 years. ASA score predicted mortality (OR 14.86 per point, 95% CI 2.03-108.81; $p = 0.008$). Idiopathic AVN had lower baseline function but steeper improvement over time.

Conclusion: Etiology appears to shape recovery trajectory, whereas ASA better predicts long-term survival.

Implant Position and Tuberoplasty Effects on IFROM in RSA

Blake H. Hodgens, MD
Atrium Health – Carolinas Medical Center/OrthoCarolina

Hypothesis: Glenoid baseplate distalization and tuberoplasty will improve impingement-free range of motion following RSA.

Significance: Implant positioning, as well as partial resection of the tuberosities, or tuberoplasty, have been proposed as solutions to improve IFROM.[1-3] The purpose of this study was to compare tuberoplasty to various implant component modifications to assess their relative influence on IFROM to aid surgeons in intraoperative decision making.

Methods: Patients undergoing RSA were retrospectively collected for virtual analysis with 3D planning software. Baseplate distalization, glenoid baseplate inferior tilt, and humeral polyethylene thickness were manipulated to create additional constructs for IFROM analysis. From the baseline implant configuration, a standard 5mm tuberoplasty of the lesser tuberosity and greater tuberosity was performed. IFROM was independently recorded for each unique scenario.

Results: Glenoid baseplate distalization and tuberoplasty resulted in statistically significant improvements in IFROM in abduction and forward elevation. Glenoid baseplate distalization led to a mean improvement of 6.1-12.6 degrees across motion planes whereas tuberoplasty resulted in a mean improvement of 0.5-11.6 degrees.

Conclusion: As the first comparative analysis of tuberoplasty and implant positioning, this study demonstrates that glenoid baseplate distalization as well as tuberoplasty were the two most potent factors in improving IFROM in multiple planes of movement within preoperative planning software.

Gap Balancing in Reverse Shoulder Arthroplasty Is Associated with Fewer Complications Without Compromising Outcomes

Jesse Seilern und Aspang, MD
Emory University School of Medicine

Purpose: We hypothesized that a standardized wedge-based gap balancing technique in reverse total shoulder arthroplasty (rTSA) would be associated with reduced complications and altered reconstruction geometry.

Significance: Soft tissue balancing in rTSA remains poorly defined, and intraoperative tensioning is often subjective. Clinical evidence linking a reproducible balancing method to postoperative outcomes is limited.

Methodology: We retrospectively reviewed prospectively collected registry data for 357 primary rTSAs with minimum 2-year follow-up. Patients were grouped by use of gap balancing. Complications, patient-reported outcomes (PROMs), range of motion, and postoperative radiographic geometry were compared using univariate analyses and subgroup analysis by humeral configuration (inlay/hybrid/onlay).

Results: Eighty-two shoulders underwent gap balancing and 275 did not. Gap balancing was associated with a lower complication rate (1.2% vs 10.9%, p=0.003), fewer acromial or scapular spine fractures (0.0% vs 4.9%, p=0.046), and fewer reoperations (1.2% vs 7.4%, p=0.036), with no difference in instability or revision. Gap balancing was also associated with greater glenoid and global lateralization, similar PROMs, greater abduction, and lower external rotation.

Conclusion: Gap balancing was associated with fewer complications without compromising outcomes, independent of implant configuration, and may improve rTSA by enabling patient-specific soft tissue optimization rather than adherence to a fixed radiographic target.

Glenoid Morphology in Patients Undergoing Reverse Total Shoulder Arthroplasty Due to Fracture

Jackson Hamersly, MD
Orlando Health Jewett Orthopedic Institute

Introduction: Glenoid morphology in patients undergoing reverse total shoulder arthroplasty (rTSA) due to arthritis has been previously studied; however, it has not been thoroughly evaluated in fracture populations. The purpose of this study is to utilize pre-operative computed tomography (CT) scans to better understand the glenoid anatomy of those patients undergoing rTSA for fracture.

Methods: Patients >18y/o who underwent rTSA for proximal humerus fractures from 2015 to 2023 at two hospitals were included. Glenoid version and reverse shoulder arthroplasty (RSA) angles were measured by a musculoskeletal fellowship-trained radiologist and a shoulder and elbow fellowship-trained orthopaedic surgeon and averaged for final values.

Results: A total of 53 patients were included in this study. Walch A1 glenoid morphology was noted in 92.5% of patients, and Favard E0 morphology was present in 98.1% of patients. Median glenoid version was 3° of retroversion. Median RSA angle was 19°. Of note, 37.7% of patients had a RSA angle of ≥ 20°.

Conclusions: Patients undergoing rTSA for fracture may not have significant glenoid deformity from arthritic wear. Over one-third of patients had a RSA angle of ≥ 20°. Thus, surgeons should take these findings into account when performing rTSA for fracture.

Clinical Outcomes and Complications Profile of Open and Arthroscopic Ankle Arthrodesis: A Systematic Review

Rodrigo Encinas Yanez, MD
Orlando Health

Purpose: Minimally invasive surgery (MIS) ankle arthrodesis is equivalent to open ankle arthrodesis

Significance: MIS has demonstrated safe and superior outcomes to open surgery in the different fields of foot and ankle surgery

Methodology: The Preferred Reporting Items for Systematic Reviews and Meta-Analysis protocol and the Cochrane Handbook guidelines were followed

Results: 19 studies including 719 open and 835 arthroscopic arthrodesis were included. Average age and BMI for the open and arthroscopic groups were 56.6 and 56.8 years and 29.3 and 28.8 kg/ m^2. A statistically significant lower infection rate 8.5% vs. 1.1% and length of stay 5.4 vs. 3.3 days was found in the arthroscopic group (P = 0.05, 0.05). The union rate was 91.2% and 94.9% for the open and arthroscopic groups. Revision procedures were required in 5.9% open procedures and 3.5% arthroscopic procedures; additional revision surgery (excluding revisions) was required after 13.2% and 6.9% arthroscopic arthrodesis. A total complication rate of 41% and 20.4% was reported among the open and arthroscopic groups.

Conclusion: This systematic review found with significance a lower infection rate and length of stay for the arthroscopic group.

Outpatient vs Inpatient Management of Higher Severity Proximal Tibia Fracture Patterns

Calvin Chandler, MD
Carolinas Medical Center

Purpose: To determine whether higher energy, length unstable proximal tibia fractures can be safely treated in the outpatient setting and identify factors associated with successful outpatient management.

Significance: Outpatient surgery has demonstrated safety in appropriately selected isolated tibial plateau fractures, with non-inferior rates of postoperative complications and compartment syndrome. As operative techniques have evolved, some studies have supported acute fixation in the inpatient setting for high energy fractures with non-inferior complication rates

Methods: Adults (>18 years) with OTA 41B&C fractures treated between 2018-2022. Included isolated medial condyle (n=8, 5.2%), partial articular bicondylar (n=87, 56.9%), and complete articular fractures (n=58, 37.9%). Outpatient surgery defined as definitive procedures performed in a separate encounter from initial presentation or discharge within 24 hours.

Results: 153 patients (Inpatient=115, Outpatient=38) were analyzed. Outpatient surgery was successful in 97.4% of cases with no significant difference in acute treatment success between groups (p=0.99). Inpatient group had higher ASA scores (ASA III-IV: 59.1% vs 26.3%), more open fractures (28.7% vs 2.6%), more additional injuries (72.2% vs 44.7%), and longer hospital stays (8.2 vs 1.5 days) ($p<0.05$). No significant differences were found in additional encounter rates (24.4% vs 21.1%, p=0.83), overall complication rates (44.4% vs 34.2%, p=0.27), radiographic union (77.4% vs 84.2%, p=0.37), or weight-bearing status at 6 months (93.9% vs 92.1%, p=0.71).

Conclusion: Higher severity proximal tibia fractures can be successfully managed in outpatient settings in appropriately selected patients. Lower ASA class, closed injuries, and isolated injuries are associated with successful outpatient management.

Mortality After Operative Proximal Humerus Fractures Is Associated with Age and Baseline Ambulatory Status

Michael P. Kucharik, MD
University of South Florida – Florida Orthopaedic Institute

Purpose: To evaluate mortality, complications, and loss to follow-up following operative management of proximal humerus fractures (PHFs) and identify factors associated with these outcomes.

Significance: PHFs in older adults may represent markers of frailty and physiologic vulnerability. However, interpretation of postoperative outcomes is limited by incomplete follow-up and potential survivorship bias.

Methodology: A retrospective cohort study of 459 consecutive patients undergoing operative fixation or arthroplasty for proximal humerus fractures between 2021-2024 was performed. Primary outcome was all-cause mortality. Secondary outcomes included 90-day complications and loss to follow-up at 3 months. Multivariable logistic regression identified independent predictors of each outcome.

Results: Overall mortality was 8.7%, with 1-year mortality of 5.9%. Increasing age (OR 1.06/year, p=0.001) and baseline use of assistive devices (OR 3.39, p=0.002) independently predicted mortality. Mortality reached 34.5% among patients ≥65 years requiring assistive devices. The 90-day complication rate was 20.7%. At 3 months, 22.9% of patients were lost to follow-up. Operative fixation independently predicted loss to follow-up versus arthroplasty (OR 1.75, p=0.042).

Conclusion: Mortality following operative proximal humerus fractures is associated with age and impaired baseline ambulatory status, likely reflecting frailty and reduced physiologic reserve. Substantial follow-up attrition may bias outcome assessment in this population.

A Dual-Implant Approach to Vancouver C Femur Fractures: Improved Outcomes with Retrograde Nail and Lateral Plate Fixation Compared to Lateral Locked Plating

Brendan Page, MD
Orlando Health Jewett Orthopedic Institute

Purpose: Compare lateral locked plating (LLP) with a retrograde intramedullary nail plus periprosthetic plating system (NP) for Vancouver C periprosthetic femur fractures.

Significance: Vancouver C fractures were historically treated with lateral locking plate constructs, followed by periods of non-weight bearing. Intramedullary fixation allows for immediate weight bearing.

Methodology: Retrospective review of adults treated between 2019–2025 at a Level-1 trauma center. Fifty-two patients met inclusion criteria: 31 NP and 21 LLP. NP patients were allowed immediate weight-bearing; LLP patients remained non-weight bearing for 8 weeks. Primary outcome was fracture union; secondary outcomes included reoperation, implant failure, infection, and alignment.

Results: Groups were similar in demographics and fracture characteristics. Alignment remained stable in both groups with no significant differences postoperatively or at final follow-up. The NP group had 2 reoperations (6%) for loose interlocking screw removal, while the LLP group had 3 reoperations (14%) for nonunion requiring revision to nail-plate constructs. Nonunion occurred in 0 NP patients versus 3 LLP patients (14%) ($p=0.03$). No implant failures or infections occurred.

Conclusion: Retrograde nail-plate fixation achieved excellent union rates for Vancouver C periprosthetic femur fractures and allowed immediate postoperative weight-bearing, with lower nonunion rates compared with lateral locked plating alone.

Outcomes of Operative versus Non-Operative Treatment for Tibial Plateau Fractures

Kassandra Flores, MD
Orthopedic Surgery Residency Greenville

Purpose: This study compared patient-reported outcomes between operative and nonoperative management of tibial plateau fractures.

Significance: The outcome differential between treatment methodologies for tibial plateau fractures has not been determined.

Methodology: We conducted a retrospective cohort study of adult patients with tibial plateau fractures between 2016–2024. Patients were identified using CPT codes and institutional databases. Patients were contacted at ≥1 year follow-up to complete the WOMAC, Lysholm, and PROMIS score surveys. Multivariate linear regression was used to compare treatment group outcomes, controlling for Schatzker classification, age, gender, race, BMI, smoking status, and diabetes, with significance set at $\alpha=0.05$.

Results: Eighty patients were included (20 nonoperative, 60 operative). There were no differences in PROMs scores at ≥1 year follow-up between the non-operative and operative groups. Only BMI and smoking status were found to be significant predictors of patient-reported outcomes. One nonoperative patient (5%) ultimately required conversion to total knee arthroplasty six months after injury.

Conclusion: Controlling for Schatzker classification, comorbidities, and demographics, management technique of minimally displaced tibial plateau fractures demonstrated no statistically significant difference was found in patient-reported outcomes at ≥1 year. These findings suggest that operative fixation may not provide a consistent functional advantage.

Intra-articular Air Predicts Hip Joint Instability Following Posterior Wall Fracture, Irrespective of Fracture Size or History of Dislocation

Jacob Meyer, MD
Orlando Health

Purpose: To determine whether intra-articular air on computed tomography (CT) predicts hip instability following posterior wall acetabular fractures.

Significance: Posterior wall fractures have variable instability patterns, and current radiographic predictors are inconsistent. Examination under anesthesia (EUA) remains the gold standard for assessing hip joint stability but requires procedural resources. Use of a reliable imaging marker could improve identification of unstable hips requiring operative management.

Methods: Retrospective review at two Level I trauma centers of skeletally mature patients with AO/OTA 62-A1 posterior wall acetabular fractures who underwent EUA from 2014–2024. Patients were stratified by stable or unstable EUA findings. Variables analyzed included intra-articular air on CT, fracture displacement, sagittal angle, posterior wall size, and documented hip dislocation. Statistical significance was defined as $p<0.05$.

Results: Seventy-one patients met inclusion criteria, including 38 unstable and 33 stable hips. Intra-articular air was significantly more common in unstable hips (82% vs. 9%, $p<0.001$). Additional predictors included fracture displacement >5 mm (76% vs. 33%, $p<0.001$), sagittal angle >70° (74% vs. 21%, $p<0.001$), and hip dislocation (61% vs. 18%, $p<0.001$).

Conclusion: Intra-articular air on CT is a strong predictor of hip instability following posterior wall acetabular fractures and may improve selection for EUA and operative stabilization.

Primary Total Hip Arthroplasty via the Direct Anterior Approach for Displaced Femoral Neck Fractures in Non-Geriatric Patients

Griffin R. Rechter, MD
Orlando Health – Orlando Regional Medical Center

Purpose: To evaluate outcomes of primary total hip arthroplasty (THA) via the direct anterior approach (DAA) for displaced femoral neck fractures (DFNFs) in patients younger than 60 years.

Significance: Internal fixation of DFNFs in younger patients is associated with high failure and reoperation rates. Limited data exist regarding acute THA through the DAA in non-geriatric fracture patients.

Methodology: A retrospective review was performed of patients aged 18–59 years treated with primary THA via the DAA for acute DFNFs at a Level I trauma center between 2016–2025. Forty-nine patients with a mean age of 50 years and mean follow-up of 24.5 months were included. Outcomes included revision surgery, complications, ambulatory status, and Harris Hip Scores (HHS).

Results: Overall survivorship free from revision was 92% (45/49). Four patients underwent revision at a mean of 2.6 years, including three for aseptic loosening associated with a recalled femoral stem design and one for heterotopic ossification. Excluding recalled implants, survivorship was 97% (38/39). No dislocations, periprosthetic joint infections, intraoperative fractures, or mortality occurred. Ninety-four percent returned to preinjury ambulatory status. Mean HHS was 84.

Conclusion: Primary THA via the DAA demonstrated favorable early to mid-term outcomes with high survivorship and low complication rates, supporting its use in select non-geriatric patients with DFNFs.

Femoral Distalization Using Rebar Screw Augmentation in Primary Total Knee Arthroplasty

Daniel Bailey, MD
Florida Orthopaedic Institute/University of Southern Florida Health

Purpose: We hypothesized rebar screw augmentation in TKA would reliably restore range of motion with low complication rates.

Significance: Achieving balanced flexion and extension gaps in total knee arthroplasty (TKA) remains challenging. Conventional approaches may involve distal femoral resection, altering the joint line. We evaluated rebar screw augmentation for distalizing the femur to restore extension balance.

Methods: 97 patients undergoing primary TKA with femoral distalization using 6.5 mm rebar screws were retrospectively analyzed. Outcomes included extension, flexion, ambulatory status, and complications within 1 year.

Results: Preoperatively, mean flexion was 117.1° ± 13.4 and extension was 1.6° ± 4.9. At 6 weeks, mean active extension was 2.1° ± 3.4 and flexion was 111.9° ± 12.1. At 1 year, mean active extension improved to -0.1° ± 1.8 and flexion to 121.1° ± 9.5. At 6 weeks, 40.2% of patients required an assistive device, decreasing to 12.2% at 1 year. Infection occurred in 2.3%, mechanical failure in 2.3%, and periprosthetic fracture in 4.7%, with no DVT/PE within 1 year. Reoperation rate was 7.0%.

Conclusion: Rebar screw-assisted femoral distalization in TKA appears to reliably restore extension, preserve flexion, and is associated with low early complication and reoperation rates. Longer-term follow-up is needed to confirm durability.

Can Chronic Antibiotic Suppression After Two-Stage Exchange Arthroplasty Prevent Treatment Failure?

Dillon Graham, MD
Atrium Health Carolinas Medical Center

Background: Periprosthetic joint infection remains one of the most devastating complications of total joint arthroplasty, with two-stage exchange representing the gold standard treatment for chronic infections. Despite optimal surgical technique, failure rates remain substantial. Recent evidence suggests that oral antibiotic suppression after reimplantation may improve outcomes, but definitive data on its efficacy in preventing treatment failure after two-stage exchange remains limited.

Methods: We conducted a retrospective cohort study of patients who underwent two-stage exchange arthroplasty for chronic periprosthetic joint infection. All patients received a planned minimum of 6 months oral suppressive antibiotic after reimplantation, with the option for longer suppression based on surgeon discretion, patient tolerance, and preference. The primary outcome was treatment failure, defined as reinfection requiring additional surgical intervention or active infection at time of final follow-up. Patients were stratified based on whether they were on oral suppressive antibiotic therapy at the time of failure or at final follow-up. Finally, we compared the overall duration of use of antibiotic suppression using logistic regression to determine the optimal minimum duration of oral antibiotic therapy after reimplantation.

Results: A total of 534 eligible procedures in 512 patients were included in the study. Of the 446 patients not on oral antibiotic suppression at final follow-up, 88 failed (19.7%). Of the patients on chronic antibiotic suppression at final follow-up, none failed ($P < 0.0001$). All patients receiving chronic antibiotic suppression achieved infection-free survival at median follow-up of 2.3 years. The average duration of antibiotic use for patients who did not experience failure was 13.0 months (IQR 7.0-34.0) compared to 7.2 months (IQR 4.2-52.1) in the failure of treatment group ($P = 0.0375$). In a regression analysis, the optimum minimum duration of oral antibiotic therapy after reimplantation was 24 months ($P = 0.037$).

Conclusions: Oral antibiotic suppression after two-stage exchange arthroplasty was associated with significant reduction of treatment failure in this cohort. These findings provide strong evidence supporting the use of chronic postoperative antibiotic suppression of at least two years to improve outcomes following two-stage exchange procedures.

Duloxetine Does Not Reduce Early Opioid Use or Pain Scores After Total Hip Arthroplasty: A Randomized, Double-Blind, Placebo-Controlled Trial

Aneesh Samineni, MD
University of Miami/Jackson Memorial Hospital

Purpose: To test the hypothesis that postoperative duloxetine reduces 24-hour opioid consumption, pain scores, and time to first opioid following primary total hip arthroplasty (THA).

Significance: Duloxetine, a serotonin-norepinephrine reuptake inhibitor, demonstrated analgesic and opioid-sparing effects in total knee arthroplasty, but its efficacy in THA remains unclear. Given efforts to optimize multimodal analgesia and reduce opioid exposure in joint arthroplasty, clarifying its role in THA is clinically relevant.

Methodology: In this prospective, randomized, double-blind, placebo-controlled trial, adults undergoing primary elective THA were assigned to 60 mg oral duloxetine or placebo. Exclusion criteria included chronic opioid use, active SNRI therapy, or duloxetine contraindications. Primary outcome was 24-hour opioid consumption in morphine milligram equivalents (MME). Secondary outcomes included serial visual analog scale (VAS) and time to first opioid. Multivariable regression adjusted for covariates. Fifty-eight patients were analyzed (29 per group).

Results: Opioid use occurred in 34.5% of duloxetine cohort versus 48.3% placebo. Mean 24-hour opioid consumption (MME) was 8.8 ±15.62 versus 12.07±15.91 ($p=0.447$), with no adjusted difference (mean −1.22 MME, $p=0.814$). VAS pain scores and time to first opioid did not differ significantly.

Conclusion: Duloxetine did not significantly reduce postoperative opioid consumption, pain scores, or time to first opioid following primary THA.

Use of Constrained Liners in All Cause Revision Hip Arthroplasty: to Revise or Retain the Cup

Jack Hardman, MD
Orlando Health

Purpose: To compare outcomes following revision total hip arthroplasty (THA) with constrained liner (CL) placement in patients who underwent acetabular cup revision versus cup retention, and to assess whether acetabular repositioning—via cup revision or cemented liner face change (FC)—reduces postoperative instability and failure compared to modular CL placement alone.

Significance: Instability remains a leading cause of revision THA, and CLs are critical in managing this. Routine cup revision at the time of CL placement remains debated.

Methodology: A multi-surgeon retrospective cohort study identified 115 patients who underwent revision THA with CL placement. Patients were stratified into cup-revised (n=51) and cup-retained (n=64) groups. Subgroup analysis compared acetabular repositioning (cup revision or FC; n=73) versus modular CL exchange (n=42). Outcomes included subsequent dislocation and re-revision.

Results: At mean 36-month follow-up, the cup-retained group demonstrated significantly higher subsequent dislocation (28.6% vs. 11.8%, p=0.029) and any subsequent failure (54.7% vs. 35.3%, p=0.038). Acetabular repositioning trended toward lower re-operation rates versus modular exchange (39.7% vs. 57.1%, p=0.071).

Conclusion: Reliance on constraint alone without addressing component position may be insufficient. Surgeons should consider acetabular revision or face change when feasible to reduce dislocation and failure following revision THA with CL placement.

Table vs Stretcher: A Prospective, Randomized Trial

Katherine Druskovich, MD
Orlando Health

Purpose: To determine whether stretcher-based positioning for hand and upper extremity surgery is as safe as traditional operating room (OR) table positioning. We hypothesized that stretcher-based surgery would not increase complication rates.

Significance: Traditional OR positioning requires patient transfers that may increase risk of staff injury, patient falls, and inefficiency. Prior retrospective studies suggest stretcher-based surgery may improve OR efficiency without compromising safety; however, prospective randomized data in hand surgery are limited.

Methodology: A prospective randomized controlled trial was conducted between 2017 and 2021 including 105 adult patients undergoing elective or traumatic hand and upper extremity surgery. Patients were randomized to stretcher-based surgery (n=54) or standard OR table positioning (n=51). Complications were assessed for a minimum of six months postoperatively. Statistical analysis included independent t-tests and Chi-square/Fisher exact tests with significance set at $p<0.05$.

Results: Postoperative complication rates were similar between stretcher and OR table groups (3.7% vs 2.0%, p=1.00), with no statistically significant differences in demographic characteristics or outcomes. There were no intraoperative complications.

Conclusion: Stretcher-based hand surgery demonstrated comparable safety to traditional OR table positioning. These findings support stretcher-based surgery as a safe alternative that may improve OR efficiency and reduce costs without compromising patient outcomes.

Does Ten Minutes of Intraoperative Nerve Stimulation Improve Outcomes Following Nerve Transfer?

Manohar Devarasetty, MD
Carolinas Medical Center/OrthoCarolina

Purpose: To compare motor recovery outcomes in patients undergoing upper extremity nerve transfers with versus without brief intraoperative electrical stimulation (ES).

Significance: Brief intraoperative ES is a promising adjunct for peripheral nerve surgery shown in prior studies to accelerate axonal regeneration, but clinical data for nerve transfer outcomes remain limited.

Methods: A retrospective cohort study was performed of adults undergoing radial-to-axillary or median/ulnar-to-musculocutaneous nerve transfers at a single center (2015–2025). Patients were divided into those who received 10 minutes of continuous ES (2 mA, 100 μs) intraoperatively versus those who did not. Primary outcome was postoperative Medical Research Council (MRC) motor grade. Chi-square and t-tests were used for analyses.

Results: Eighty-three patients (58 No ES; 25 ES) were analyzed. Groups were similar in age (median 48.5 years, p=0.699), time to surgery (p=0.998), and construct type (p=0.268). The ES group demonstrated superior recovery, with 88% achieving M4–M5 versus 58.6% in the No ES group (p=0.0269). Stimulated patients also achieved maximum strength faster (median 10.1 vs 14.3 months, p=0.031).

Conclusion: Ten minutes of intraoperative ES significantly improved motor recovery and decreased time to recovery following nerve transfer. Given these results, we now perform therapeutic ES in all nerve transfers.

Increasing Complication Rates After Complex Wrist Reconstruction: An American Board of Orthopaedic Surgery Database Study

Olivia de Araujo, MD
University of Miami/Jackson Memorial Hospital

Purpose: Determine if complex wrist reconstruction procedures have higher complication rates since the advent of volar locking plates (VLPs)

Significance: Distal radius fractures (DRFs) are the most common fracture in adults. VLPs have improved achievement of radiographic parameters and patient outcomes, replacing former treatment methods. As a result, malunions and debilitating post-traumatic arthritis have become less common.

Methods: The ABOS Part II Oral Examination Case List Database was queried by CPT code to identify post-traumatic wrist reconstructions before and after VLPs including wrist osteotomy, osteoplasty, arthrodesis, and arthroplasty. Patients were separated into early (1998-2000) and late (2020-2022) cohorts, before and after the implementation of VLPs. T-tests and chi-squared tests were utilized to analyze data.

Results: There were 1,529 cases included (968 early cohort, 561 late cohort). The later cohort had higher complication rates, (25.1% versus 12.2%; $p<0.01$), postoperative stiffness or arthrofibrosis ($p<0.01$), prevalence of tendon, ligament or bone injury (3.44% versus 0.5%, $p<0.01$), as well as higher reoperation rate, though not statistically significant.

Conclusion: Since VLPs changed the treatment paradigm for DRFs, post-traumatic wrist reconstruction procedures are more infrequent but associated with more complications. Our results suggest hand fellowship directors consider augmenting training with wrist reconstruction cadaver labs or other methods to increase exposure.

Timing of Tourniquet Release: A Prospective Randomized Trial

Brendan Kosko, MD
Orlando Health Jewett Orthopedic Institute

Purpose: To determine whether tourniquet release before or after incision closure affects clinical outcomes in upper extremity surgery.

Significance: Although the benefits and complications of tourniquet use are well described, limited research has evaluated how the timing of tourniquet release influences patient outcomes in upper extremity procedures. Clarifying optimal timing may help guide intraoperative decision-making.

Methods: A total of 214 consecutive patients undergoing upper extremity surgery were prospectively randomized into two groups: tourniquet release before skin closure or after skin closure. Demographic, intraoperative, and follow-up data were collected. Outcome measures included complications, hematoma formation, Visual Analog Scale (VAS) pain scores, and QuickDASH questionnaires.

Results: Of the 214 enrolled patients, 172 completed follow-ups. Ninety-one patients underwent tourniquet release before incision closure, while 81 underwent release after closure. Demographic characteristics were similar between groups. No intraoperative or immediate postoperative complications requiring intervention occurred in either cohort. Follow-up outcomes, including VAS pain scores and QuickDASH scores, were comparable between groups.

Conclusion: In this prospective randomized trial, tourniquet release after incision closure produced clinical outcomes comparable to release before closure in upper extremity surgery. Pain and functional outcomes were similar between groups, suggesting surgeons may safely release the tourniquet either before or after incision closure

Functional Outcomes and Reoperation Rate of Nano Scope-Assisted Carpal Tunnel Release: A Retrospective Analysis

Alexander Vaccaro IV, MD
Rothman Orthopaedic Institute

Background: Carpal Tunnel Syndrome (CTS) is a prevalent peripheral compressive neuropathy. While open and endoscopic carpal tunnel release (CTR) are standard, the 1.9-mm NanoScope (Arthrex) offers a novel, portable, and potentially cost-effective alternative for use in both operating room and clinical settings. This study evaluates the safety and efficacy of NanoScope-assisted CTR compared to traditional methods.

Methods: A retrospective cohort study was conducted including 260 patients undergoing CTR between January 2022 and January 2025. Patients were divided into NanoScope-assisted CTR (Group 1, n = 200) and Centerline endoscopic CTR (Group 2, n = 60). Outcomes were assessed preoperatively and at 2 weeks, and 3 months postoperatively using patient-reported outcome measures (PROMs), including Boston Carpal Tunnel Questionnaire (Symptom Severity Score [SSS] and Functional Status Score [FSS]), QuickDASH, and visual analog scale (VAS) score, as well as objective measures including grip and pinch strength.

Results: Both groups showed significant postoperative improvement across all PROMs. At 3 months, the NanoScope group demonstrated significantly higher grip strength (19.2 kg vs. 14.7 kg, $p = 0.016$) and pinch strength (5.1 kg vs. 3.2 kg, $p < 0.001$) compared to the Centerline group. Subjective scores (SSS, FSS, QuickDASH, VAS score) generally favored the NanoScope group at 3 months, though these did not reach statistical significance. Reoperation occurred in 2 patients in each group, with no statistically significant difference between the NanoScope and Centerline cohorts ($p > 0.05$).

Conclusion: NanoScope-assisted CTR is a safe and effective procedure that provides superior early objective recovery in grip and pinch strength compared to traditional endoscopic release. The portable nature and functional outcomes support its wider adoption in clinical practice.

Preoperative MRI-Derived Navigation Reduces Radiation Exposure in Pediatric Spinal Fusion

Logan A. Reed, MD
Orlando Health

Purpose: To evaluate whether MRI-derived synthetic CT navigation reduces radiation exposure while maintaining the benefits of navigated pedicle screw placement during posterior spinal fusion for adolescent idiopathic scoliosis (AIS).

Significance: Pediatric deformity patients are particularly susceptible to the cumulative lifetime effects of ionizing radiation. While CT-based navigation improves screw placement and decreases intraoperative fluoroscopy, it introduces substantial preoperative radiation exposure. MRI-derived synthetic CT imaging may provide a radiation-sparing alternative without sacrificing navigational utility.

Methodology: A retrospective cohort study of 94 AIS patients undergoing posterior spinal fusion compared fluoroscopy-only guidance (n=39), CT-based navigation (n=28), and MRI-derived synthetic CT navigation (n=27). Demographic, operative, and radiation variables were analyzed using comparative statistical methods, including fluoroscopy time and total effective radiation dose (mSv).

Results: Groups were demographically and operatively comparable (all $p>0.05$). Fluoroscopy time was significantly lower in the CT-navigation (48.2±21.9 seconds) and MRI-to-CT groups (47.5±21.7 seconds) compared with fluoroscopy-only guidance (90.9±28.0 seconds; $p<0.001$). Intraoperative radiation dose was similarly reduced in both navigation cohorts ($p=0.008$). Preoperative radiation exposure was significantly higher in the CT-navigation cohort because of preoperative CT imaging.

Conclusion: MRI-derived synthetic CT navigation achieved radiation profiles comparable to CT-based navigation while eliminating preoperative CT radiation exposure, supporting its utility as a radiation-sparing alternative in pediatric deformity surgery.

Pediatric Lateral Condyle Fractures: Pins or Screws?

Brian Sweeney, Jr., MD
Carolinas Medical Center

Purpose: This prospective observational cohort study evaluates the clinical, radiographic and functional differences between pins and screw fixation for displaced pediatric lateral condyle fractures of the elbow.

Significance: There is no consensus on the optimal fixation method for lateral condyle fractures that promotes union while minimizing risk of infection, avascular necrosis, cubitus valgus among other perioperative complications.

Methods: Skeletally immature patients <18 years with isolated Weiss type 2 and 3 lateral condyle fractures undergoing operative fixation were prospectively enrolled to receive either pins or screw fixation at a single level 1 trauma center. Fixation choice was by attending surgeon preference. Exclusion criteria was concomitant orthopedic injury at time of lateral condyle fracture. Patients were followed at 3, 6, 9, and 12 weeks or until fully healed. A non-inferior analytical framework was performed for comparison.

Results: 66 patients with pin fixation and 37 patients with screw fixation were studied, with an average age of 6 years (SD 2.6). Patients treated with screw fixation were mean 1.5 years older (0.4,2.4). There was no significant difference in time to radiographic union or odds of a complication. Mean difference in time to radiographic union was 1.5 days in favor of pins (31.6,38.9) over screws (28.3,45.3), which remained within the accepted non-inferiority margin. Patients treated with screw fixation had 0.2 odds (0.02,1.7) of a complication compared to pins, which was not significant. Two patients treated with pins developed nonunion and two developed avascular necrosis versus none in the screw fixation group. Patients with screw fixation spent 8 fewer days in cast immobilization (-10.6,-5.3). The average time in cast was 31.4 days (SD 6.9) for the pins group and 23.5 days (SD 6.3) for the screw group. There was no significant difference in flexion, extension or total arc of motion achieved between groups.

Conclusions: Patients with screw fixation were out of casts faster without compromising time to union or elbow arc of motion. There was no significant difference in complications between fixation types; however, two patients with pin fixation developed a nonunion. Screw fixation is non-inferior to pin fixation when considering time to radiographic union, complications and final range of motion achieved.

Brace for Impact: Comparing Return-to-Sport and Outcomes of Ulnar Collateral Ligament Reconstruction Versus Repair with Internal Brace

Sione Ofa, MD
Tulane University School of Medicine

Purpose: To compare return-to-sport timelines, complications, and patient-reported outcomes between ulnar collateral ligament (UCL) reconstruction and UCL repair with internal brace (IB) augmentation.

Significance: UCL injuries are increasingly common among overhead athletes. Although reconstruction was historically the gold standard, repair with IB augmentation may allow accelerated rehabilitation while maintaining comparable outcomes.

Methodology: A retrospective cohort study was performed on patients aged 15–45 undergoing UCL reconstruction or UCL repair with IB augmentation between 2013–2023 at a single institution. Outcomes included time to full range of motion, throwing progression, return to sport, complications, reoperations, SANE, and ASES-E scores. A postoperative questionnaire assessed long-term pain, function, return-to-play performance, and satisfaction. Statistical analysis utilized t-tests, Wilcoxon tests, and chi-square tests.

Results: A total of 155 patients met inclusion criteria (23 reconstruction, 132 repair). Repair patients demonstrated significantly faster return to throwing, full activity, and sport. Survey response rate was 32.5%. Functional outcomes, satisfaction, and complication rates were comparable between groups.

Conclusion: UCL repair with IB augmentation demonstrated comparable functional outcomes and patient satisfaction while permitting faster postoperative recovery and return to sport compared with reconstruction.

Fresh Meniscus Allograft Transplantation Using a Double-Bone-Plug Technique Result in an Overall High (>90%) 2-to-7-year Functional Survival Rate

Justin T. Childers, MD
Orlando Health

Purpose: To analyze meniscus allograft transplantation (MAT) failure rates, timing, and mechanisms to characterize risk factors and identify modifiable variables that could be addressed to optimize outcomes after MAT.

Methods: Using prospectively collected registry data, patients who underwent primary MAT at a single institution between 2016 and 2023 with a minimum follow-up of two years were analyzed. Initial treatment failure was defined as re-operation, including partial or complete allograft removal, revision MAT, or conversion to unicompartmental or total knee arthroplasty. Treatment failure mechanisms included joint disease progression, meniscus tearing, meniscal extrusion, graft shrinkage, malunion/nonunion, and fixation failure. Treatment failure and non-failure cohorts were compared, as well as failure mechanism subcohorts, based on patient sex, age, body mass index, laterality, nicotine use, concomitant procedures, graft preservation method, MAT technique, and adherence.

Results: A total of 61 patients with a mean age of 33 years (range, 15-62 years) and mean follow-up of 47.2 months (range, 24-88 months) were included. Thirteen patients underwent medial MAT and 44 patients underwent lateral MAT. Seven patients (11.5%) were found to have initial treatment failure at a mean of 18.1 months versus 54 patients (88.5%) who had functional graft survival. All failures involved medial MAT. Patients were more likely to experience treatment failure if they used nicotine (OR, 19.5) or had concomitant OCAT (OR, 8.8). The most common mechanism of failure was the progression of degenerative joint disease (n=5, 71.4%), followed by meniscus tears (n=2, 28.6%). Four failures underwent revision MAT, while three underwent TKAs. Two of the patients who underwent revision MAT remained at $\geq$ 2 years after revision surgery, resulting in a 91.8% overall MAT functional survival.

Conclusion: Fresh MAT resulted in a high (92%) short- to mid-term functional survival rate, with nicotine use and concomitant cartilage restoration procedure(s) being significant risk factors for treatment failure; joint disease progression and meniscus allograft tears were the primary mechanisms of failure.

The Association Between TLIF Cage Lordotic Angle, Segmental Lordosis, and Cage Subsidence: A Retrospective Cohort Study

Michael Barnum, MD
Orlando Health

Purpose: Evaluate whether transforaminal lumbar interbody fusion (TLIF) cage lordotic angle and segmental lordosis are associated with cage subsidence.

Significance: TLIF is one of the most commonly performed procedures in the lumbar spine. Interbody cage subsidence is a recognized complication and severe cases may necessitate revision surgery, exposing patients to additional morbidity.

Methodology: A retrospective review was performed on patients who underwent TLIF between January 2018 and December 2025. Demographic variables, radiographic parameters, and cage characteristics were compared between patients with and without subsidence.

Results: Ninety-one patients met inclusion criteria. Cage subsidence occurred in 25 patients (27.5%) at final follow-up. Cage lordotic angle did not differ between the subsidence and no-subsidence groups and segmental lordosis correction was not associated with subsidence. No demographic, clinical, or cage-specific variable reached statistical significance. Subsidence observed on the first postoperative radiograph predicted persistent subsidence at final follow-up (64.0% vs 0.0%, $p < 0.001$).

Conclusion: Neither cage lordotic angle nor segmental lordosis was associated with cage subsidence following TLIF. These findings suggest that selection of a more lordotic cage does not independently increase the risk of subsidence.

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Ten Years of a Novel Telemedicine System for Management of Statewide Hand Trauma in Arkansas – A Decade in Review

Erik Nakken, MD
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Optimizing Contact Pressures of the Posterior Heel During Lower Extremity Immobilization: A Biomechanical Study

Sreetha Sidharthan, MD
The Hospital for Special Surgery
Reverse-Anatomical Front and Back Reconstruction for Volar Intercalated Segment Instability Non-Dissociative: A Biomechanical Study

Presenters' Choice

Alexander E. White, MD
The Hospital for Special Surgery
The Effect of Posterior Tibial Slope on Tibiofemoral Joint Biomechanics: An In-Vitro Analysis

MID-ATLANTIC

First Place

Julia Retzky, MD
The Hospital for Special Surgery
Early Anterior Cruciate Ligament Reconstruction Mitigates the Development of Post-Traumatic Osteoarthritis in a Murine Anterior Cruciate Ligament Rupture Model

Second Place

Zachary J. Herman, MD
University of Pittsburgh Medical Center
Overhead Athletes Have Comparable Intraoperative Injury Patterns and Clinical Outcomes to Non-Overhead Athletes Following Surgical Stabilization for First-Time Anterior Shoulder Instability at Average 6-year Follow-up

Alexander E. White, MD
The Hospital for Special Surgery
The Effect of Posterior Tibial Slope on Tibiofemoral Joint Biomechanics: An In-Vitro Analysis

Third Place

Alexander Berk, MD
University Hospitals/
Case Western Reserve University
Patients with Vitamin D Deficiency are More Likely to Develop Complex Regional Pain Syndrome After Extremity Fractures: A Large Database Propensity-Matched Cohort Study

Alexandra Baker Lutz, MD
University of Maryland
Impact of Obesity on Patient-Reported Outcomes Two Years After Multiple Ligament Knee Reconstruction

Margaret Sinkler, MD
Case Western Reserve University
To Fix or to Replace? An Analysis of Geriatric Periprosthetic Distal Femur Fractures Treated with Open Reduction Internal Fixation, Retrograde Intramedullary Nail, or Distal Femoral Replacement

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Alexander P. Hoffman, MD
University of Pittsburgh Medical Center
Intraoperative Evaluation of Sarcoma Surgical Margins with Indocyanine Green Fluorescence Imaging

MIDWEST

First Place

Katherine J. Montoya, MD
University of Arkansas for Medical Sciences
Ten Years of a Novel Telemedicine System for Management of Statewide Hand Trauma in Arkansas – A Decade in Review

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Bhargavi Maheshwer, MD
University Hospitals Cleveland Medical Center
Predictors of Anterior Cruciate Ligament Re-Injury and Return to Sports in Adolescent Athletes: Increased Risk in Younger Age and Earlier Time to Return to Sport

Erik Nakken, MD
University of Michigan
Optimizing Contact Pressures of the Posterior Heel During Lower Extremity Immobilization: A Biomechanical Study

Third Place

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University of Illinois Chicago
Joint Arthroplasty in Breast Cancer: PE Risk and Thrombo-Prophylaxis Depend on Time Since Mastectomy

Kyleen Jan, MD
Rush University Medical Center
Midcarpal Stability Persists with ≤33% Distal Scaphoid Resection: A 3D Computational Analysis

Mark Plantz, MD
Northwestern University
Pre-Clinical Safety and Efficacy Assessment of a Novel 3D-Printed Hydroxyapatite Demineralized Bone Matrix (HA-DBM) Composite Scaffold Using a Rodent Posterolateral Fusion Model

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University of Chicago
AI-Assisted MRI Interpretation Improves Surgeon Performance in Diagnosing Bankart Lesions

NORTHEAST

First Place

Joshua T. Bram, MD
The Hospital for Special Surgery
Skeletal Age Assessment from Knee Radiographs Using Deep Learning

Second Place

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The Hospital for Special Surgery
Reverse-Anatomical Front and Back Reconstruction for Volar Intercalated Segment Instability Non-Dissociative: A Biomechanical Study

Nathan Varady, MD
The Hospital for Special Surgery
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Icahn School of Medicine at Mount Sinai Hospital
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A Novel Clinical Calculator to Identify Patients at Risk for Ileus after Short-Segment Lumbar Fusion

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The Hospital for Special Surgery
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SOUTHEAST

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Joseph Geller, MD
Jackson Memorial Hospital/University of Miami
Tracking Wearable Device Compliance in Total Knee Arthroplasty Recovery

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David S. Constantinescu, MD
University of Miami
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Atrium Health Carolinas Medical Center
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Aneesh V. Samineni, MD
Jackson Memorial Hospital/University of Miami
Prediabetes as an Unrecognizable Risk Factor for Inpatient Postoperative Complications After Total Knee Arthroplasty

Ryan Serbin, MD
Atrium Health Carolinas Medical Center
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Blake H. Hodgens, MD
Atrium Health Carolinas Medical Center
Weightbearing After Distal Femur Fractures: Does the Surgeons' Postoperative Protocol Matter?

WESTERN

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Kyla Petrie, MD
University of California, San Francisco
Comparison of Retear Rates and All-Cause Reoperation Rates in Pediatric and Adolescent AL Reconstructions Using Bone Patellar Tendon and Quadriceps Tendon Grafts

Second Place

Grant Schroeder, MD
Stanford University
Shorter Relative Patellar Defect Length After Bone Patellar Tendon Bone Anterior Cruciate Ligament Reconstruction is Associated with Better Postoperative Patient-Reported Outcomes at 1-year Follow-up

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University of California, Los Angeles
Predictive Factors of Having a Second UBC Related Pathologic Fracture

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Kelechi Nwachuku, MD
University of California, San Francisco
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Navigated and Robotic Total Knee Arthroplasty (TKA) Do Not Confer Improved 5-Year Survivorship Compared to Conventional TKA: An Analysis from the American Joint Replacement Registry (AJRR)

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University of California, San Diego
Combined Root and Body (CRAB) Lateral Meniscus Tears in the Adolescent Population: An Underrecognized and Underreported Tear Pattern

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San Francisco Orthopaedic Residency Program at University of California,
San Francisco Health St. Mary's Hospital
Osteochondral Autograft from the Proximal Tibiofibular Joint for Reconstruction of Acute Tibial Plateau Fractures with Severe Chondral Defects

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University of California, Los Angeles
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Mayo Clinic
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Chris Chermside-Scabbo, MD
University of Minnesota
Better Functional Scores in Arthroscopic Assisted Percutaneous Fixation Than Open Reduction Internal Fixation of Lateral Tibial Plateau Fractures