1st Annual Virtual Conference

April 10, 2022 10am-2pm EST





ORTHOPEDIC SYMPOSIUM

Final Program

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OUR MISSION

To support medical student research and educational opportunities for students interested in orthopedic surgery.



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CONFERENCE SCHEDULE



Sunday, April 10, 2022: 10am-2pm EST

10:00AM-10:15AM Opening Remarks

Alex Gu, MD

Lisa K. Cannada, MD

10:20AM-11:00AM Award Winning Presentations
Moderated by Cara A. Cipriano, MD and Sean Tabaie, MD
Michael T. Arnold, BS
Derrek Edukugho, BS
Lindsey Johnson, BS, MBA
Rachel Joujon-Roche, BS
Patricia Rodarte, BS

11:05AM-12:00PM Breakout Sessions

12:15PM-12:55PM A Day in the Life of a Resident - Orthopedic Surgery Resident Panel

Moderated by Alisa Malyavko, BS
David Bernstein, MD
Wendell (Cody) Cole, MD
Justin Hicks, MD
Pradip Ramamurti, MD
Rachel Ranson, DO
Kamali Thompson, MD

1:00PM-1:45PM How to be a Competitive Residency Applicant - Program Director Panel

Moderated by Amil Agarwal, BA Craig Eberson, MD Anthony Johnson, MD

Monica Kogan, MD

Dawn LaPorte, MD

I. Martin Levy, MD

Sam Moghtaderi, MD

1:45PM-2:00PM Closing Remarks and Breakout Room Awards

William N. Levine, MD Awards Presented by Amil Agarwal, BA



High Dose Radiation Therapy is Associated with Early Mechanical Failure of Cemented Endoprostheses

PRESENTING AUTHOR: MICHAEL T. ARNOLD, BS

Erik J. Geiger, MD, Christopher Hart, MD, Danielle Greig, MD, Rishi Trikha, MD, Troy Sekimura, MD, Jeffrey J. Eckardt, MD, Nicholas M.Bernthal, MD

David Geffen School of Medicine, University of California, Los Angeles, CA

Introduction: Endoprosthesis durability in limb salvage surgery is dependent on factors including resection length, implant location, and the quality of bone remaining after tumor resection. Radiation therapy (XRT) has detrimental effects on bone including fracture and impaired osseointegration. We hypothesized that XRT to the extremities would decrease primary endoprosthesis survivorship.

Methods: This was a retrospective cohort study using our institution's database of 822 endoprostheses. Inclusion criteria was limb salvage surgery with cemented endoprosthesis reconstruction for a primary extremity tumor. Patients with a non-oncologic diagnosis or metastatic disease were excluded. Patients receiving XRT to the extremities were sub-divided into low dose (≤ 3000 cGy) and high dose (> 3000 cGy) cohorts. The primary outcome was implant failure using the Henderson classification system, specifically aseptic loosening and mechanical failure. Binary logistic using patient sex, age, XRT dose, resection length, stem length, stem diameter, implant fabrication, and implant location was used to identify significant risk factors for implant failure.

Results: Low dose XRT was not associated with a significant difference in implant survival to aseptic loosening (X2=2.6, p=0.11) via the log rank test; however, endoprostheses in patients exposed to high dose XRT had significantly shorter time to aseptic loosening compared to no XRT (X2=4.1, p=0.04). XRT dose was not a significant predictor of aseptic loosening on binary logistic regression analyses. High dose XRT was associated with a significantly shorter time to mechanical failure compared to non-irradiated patients (X2=4.2, p=0.04) (Figure 1). High dose (O.R.=4.75, p=0.03) XRT was a significant risk factor for developing mechanical failure on binary logistic regression.

Conclusion: Patients receiving XRT doses greater than 3000 cGy may be at increased risk of early aseptic loosening and all-cause mechanical failure of cemented endoprostheses.

Screw Thread Configuration Has No Effect on Operative Outcomes of Slipped Capital Femoral Epiphysis

PRESENTING AUTHOR: DERREK EDUKUGHO, BS

Garrhett Glenn Via, MD, David A Brueggeman, MD, Joseph G Lyons, Andrew W Froehle, PhD, Melissa A Martinek, DO, Michael C Albert, MD

Department of Orthopedic Surgery, Boonshoft School of Medicine, Wright State University, Dayton, OH

Introduction: The current "gold standard" treatment for slipped capital femoral epiphysis (SCFE) is insertion of a single cannulated screw down the epiphyseal center. Debate remains as to whether partially- (PTCS) or fully-threaded (FTCS) cannulated screws, and what number, are optimal. The present retrospective cohort study compares such constructs in a clinical model.

Methods: IRB approval was obtained. Patients (N=158) presenting to a level-one pediatric trauma center for in situpinning of SCFE between January 2005 and April 2018 were included. Covariates analyzed were sex, race, BMI, history of endocrinopathy, and preoperative designation of unstable SCFE. Outcomes included return to the operating room (OR), avascular necrosis (AVN), hardware failure/removal, and the sequelae of femoroacetabular impingement (FAI). Multivariable logistic regression models included covariates with significant univariate effects, as well as thread configuration, number of screws, preoperative instability, and the screw*thread and screw*instability interactions.

Results: Average patient age at surgery was 12.3±1.9 years; 63% of patients were male; 68% of patients were White/Caucasian and the remaining 32% were Black/African American. Mean BMI was 28.4±6.4 kg·m-2. PTCS were utilized in 81.0% of constructs and 1 screw was placed in 83.5% of hips. Outcome rates were as follows: return to OR=15.8%, AVN=7.6%, FAI=7.0%, hardware failure/removal=9.5%. Univariate modeling demonstrated no significant covariate effects on return to OR (each P≥0.181) or AVN (each P≥0.099). Sex had a significant effect on FAI (P=0.012). Age and bilateral SCFE were significantly related to hardware failure/removal (P=0.039 and P=0.015, respectively). Multivariable models found that 2 screw constructs were associated with increased odds of return to OR [P=0.027; OR=3.01 (1.13-7.98)]. Odds of AVN were increased by older age (P=0.024; OR=1.45 [1.03-2.03]) and 2 screw constructs in stable SCFE [screws*stability interaction: P<0.001; OR=60.5 (5.60-652.31)]. Female sex increased odds of FAI (P=0.012; OR=5.17 [1.31-20.36]). Finally, odds of hardware failure/removal were increased by 2 screw constructs [P=0.038; OR=3.64 (1.13-11.70)] and bilateral SCFE [P=0.027; OR=3.51 (1.15-10.74)].

Conclusion: A single, PTCS comprises the majority of SCFE constructs, and this construct carries the least risk for negative outcomes in cases of stable SCFE. These data demonstrate no significant effects of thread configuration on outcomes. The authors caution orthopaedic surgery providers against using more than one screw in cases of stable SCFE, as well as to monitor older, female, and/or bilateral SCFE patients more closely due to an increased risk for complications.

3D Bioprinted GelMA-Gelatin-Hydroxyapatite Osteoblast Laden Composite Hydrogels for Bone Tissue Engineering

PRESENTING AUTHOR: LINDSEY JOHNSON, BS, MBA

Nicholas B. Allen, BS, Bijan Abar, MS, Richard Danilkowicz, MD, Samuel B. Adams, MD

Department of Orthopaedic Surgery, Duke University Medical Center, Durham, NC

Introduction: 3D bioprinting offers a novel solution to critical sized bone defects by allowing the placement of osteogenic cells, additive biomaterials and bioactive signaling that mimic native tissue. We describe the suitability of an extrusion-based 3D bioink composed of gelatin methacryloyl (GelMA), gelatin, hydroxyapatite (HA), and osteoblasts for bone tissue engineering.

Methods: A mouse calvarial osteoblast-laden GelMA-gelatin-LAP bioink consisting of various concentrations of HA was 3D-bioprinted into a porous hydrogel construct. After days 1, 14, and 28, five constructs from each HA concentration were analyzed. The water weight percent differences of the hydrogels and the degradation behavior in enzyme solution were characterized. An ALP assay and histological analysis were performed. Cell survivability was determined using a LIVE/DEAD Viability/Cytoxicity Kit and AlamarBlue Cell Viability reagent. Real-time polymerase chain reaction (RT-qPCR) was performed to measure expression levels of bone morphogenetic protein-7 (BMP-7) and Osteocalcin (BGLAP).

Results: The addition of 5, 10, and 20 mg/ml of HA significantly reduced hydrogel swelling (p \leq 0.01) from baseline GelMA-Gelatin hydrogels (Figure 3A). HA significantly decreased hydrogel breakdown in a concentration dependent manner (Figure 3B, p \leq 0.001). A significant increase in cell proliferation at day 28 was noted in all groups (Figure 3D). ALP activity (Figure 3E) significantly increased with the addition of 5mg/ml and 20mg/ml of HA at days 7 and 28 (p \leq 0.05). Live/dead staining at 1, 14, and 28 days showed high chondrocyte viability. The addition of 20mg/ml of HA demonstrated significantly greater BMP7 and BGLAP gene expression at both 14 and 28 days over the hydrogels without HA (Figure 5, p \leq 0.05).

Conclusion: The addition of HA to GelMA-gelatin hydrogels significantly decreased hydrogel swelling, improved the ability of the hydrogel to resist enzymatic degradation, increased osteoblastic differentiation and mineralization, and increased osteogenic gene expression while maintaining equal cell viability and proliferation to non-HA hydrogels.

Natural History of Adult Spinal Deformity: How do patients with Less than Optimal Surgical Outcomes Fare Relative to Non-Operative Counterparts?

PRESENTING AUTHOR: RACHEL JOUJON-ROCHE, BS

Peter Tretiakov, BS, Oscar Krol, BA, Tyler Williamson, MS, Bailey Imbo, BA, Lara Passfall, BS, Shaleen Vira, MD, Peter G. Passias, MD

Donald and Barbara Zucker School of Medicine at Hofstra/Northwell Health, Hempstead, NY

Introduction: Management of adult spinal deformity(ASD) increasingly favors operative intervention, however complication rates remain high. This study compares health-related-quality-of-life(HRQL) metrics of patients with suboptimal surgical outcomes to non-operative management, which approximates the natural history of ASD.

Methods: This is a retrospective analsis of operative and non-operative patients(≥18yo) from a single-center ASD database. Patients with baseline and 2-year follow-up were included. For non-operative patients, decision to forego surgery was made by the patient. Operative patients were selected for "suboptimal outcomes," defined as any reoperation, major complication, or ≥2 severe SRS-Schwab modifiers at 2-years. Suboptimal operative(SOp) vs. natural history(NH) groups were propensity score matched(PSM) by age, deformity, Oswestry-Disability-Index(ODI), and comorbidities. Means comparison tests assess differences in improvement and rates of achieving minimal clinically important difference(MCID) in ODI and ScoliosisResearch-Society-22(SRS-22).

Results: After PSM, 74 patients were included(37-SOp; 37-NH). SOp and NH groups were not significantly different in baseline demographics, HRQLs, or radiographic deformity(Table 1). At 2Y, SOp patients had greater improvement in ODI and higher rates of reaching MCID, both p-values<.001. SOp patients had significantly better SRS-22-Total, SRS-22-Pain and SRS-22-Satisfaction scores at 2Y, all p-values<.001. Finally, significantly more SOp patients gained ≥1 MCID in SRS-Activity and SRS-Pain, both p-values<.002.

Conclusion: Compared to the natural history of ASD, operative patients with suboptimal outcomes still experience significantly greater improvement in HRQLs. Such divergent outcomes at 2Y, highlight the stagnation and deterioration associated with the disease process. Spine surgeons should consider the outcomes associated with the natural history of ASD when weighing risks and benefits of operative intervention.

The Other Side of Conflict: examining the challenges of female orthopaedic surgeons in the workplace

PRESENTING AUTHOR: PATRICIA RODARTE, BS

Maria S Kammire, BS, Heidi Israel, PhD, Selina C Poon, MD, MPH, MS, Lisa K Cannada MD

Warren Alpert Medical School of Brown University, Providence, RI

Introduction: Gender bias has not been studied extensively within orthopaedic surgery, where only 8% of practicing orthopaedic surgeons in the US identify as female. As more women enter the field, it is critical to examine female orthopaedic surgeons' experiences in navigating conflict and its impact on their career and wellbeing.

Methods: An anonymous 54-question survey was distributed through the Ruth Jackson Orthopaedic Society membership roster (n=1.1K) and Women in Orthopaedics (n=1.6K), an online group exclusive to female orthopaedic surgeons in practice/training. Questions inquired about several workplace conflict scenarios.

Results: There were 373 female respondents. 55% were between 35 and 45 years old, 79% were White/Caucasian, 10% Asian/Asian American, 4% Black/African American, and 4% Hispanic/Latinx. Results showed that 73% had been described as "bossy, too assertive, pushy, demanding, or difficult", 80% had to do more administrative work in clinic than their male counterparts, and 51% had been reported for behaviors that a male counterpart had not. Respondents who were reported noted depression (n=40), anxiety (n=69), burnout (n=85), and sleep disturbances (n=48) as emotional effects of the event. Additionally, 29 respondents reported being forced out or leaving their previous job due to workplace conflict. When asked if they would choose the same career again, 21% said no

Discussion: Female orthopaedic surgeons encounter unique workplace challenges that diminish career satisfaction and contribute to burnout. Understanding and acknowledging this relationship between gender bias and orthopaedic surgery is essential to create a more positive working environment for female orthopaedic surgeons and encourage incoming trainees.



BASIC SCIENCE

MODERATED BY DRS. CECILIA PASCUAL-GARRIDO & DAVID CLEVER



Ankle and Knee Osteoarthritis: A Comparison of Synovial RNA Sara Buckley University of Colorado Anschutz

Anatomic Study of the Humeral Intramedullary Canal Jason Chen Texas Tech University

Bioresorbable Porous Composite Ceramic Polymer Scaffolds Support Bone Growth In Vivo Robert Childers University of Arizona Tucson

Myofiber distribution and fibrosis of the Articularis genu relative to functional limitations in osteoarthritis Jose Cruz Ayala Louisiana State University

Comparison of Loose vs Tight Suture Repair Techniques in Nerve Tissue Undergoing Wallerian Degeneration in a Rat Model Grace Gilbert St. George's University

Addition of osmotic agents to normal saline prevents metabolic impairment in articular chondrocytes during arthroscopy Arman Hlas University of lowa

Blood Clots Formed In Vitro as a Therapeutic Vehicle During Bone Healing Peter Awad Western Michigan University

Effect of muscle paralysis on load-induced β-catenin activation in in-vivo mechanical loading mice model Kashif Javid University of Missouri - Kansas City

Usefulness of nerve conduction study for immediate differentiation of mild and moderate nerve crush injuries in mice Jungeun Lee Penn State College

Low Oxygen Culture Induction of Increased PD-L1 Expression in C2C12 Myoblasts Juliana Overbey Western Michigan University

Analysis of Growth Rate and Chondrocyte Alignment of Rabbit Tibial Growth Plates after Periosteal Resection Grant Ozaki University of Nebraska

Urine Stinks: Little Correlation between Urinary and Synovial Fluid IL-6 in Patients Post-Anterior Cruciate Ligament Repair Breanna Sullivan University of Illinois Peoria

Enhanced bone formation is observed by Cold Plasma Treatment at Revision Surgery Christophe Talone Philadelphia College of Osteopathic Medicine

Identification of new therapeutic targets for osteoarthritis by proteomic analysis
Jen Xu
Medical University of South Carolina

Serum Calcium and Vitamin D levels and Fracture Risk in Post-Menopausal Women Lubna Ziauddin University of Illinois Chicago

FOOT AND ANKLE 1

MODERATED BY DRS. AMIETHAB AIYER & ARIANNA GIANAKOS



Analysis of Medicare Reimbursement Rates and Procedure Volume in Ankle Arthroplasty and Ankle Arthrodesis: 2000 - 2020 Olufunmilola Adeleye Mayo Clinic

Surgical Management of Chronic Achilles tendon rupture: A systematic review and Proposed Treatment Algorithm Mohammad Azam SUNY Upstate Medical University

Opioids in Foot and Ankle Fracture Surgery: A Systematic Review Daniel Badin Johns Hopkins University

General Anesthesia Versus Monitored Anesthesia Care in Fasciotomy for Nontraumatic Compartment Syndrome of the Leg Michael Barry SUNY Downstate College of Medicine

Orthopaedic Foot and Ankle Surgery Leadership Trends: A Cross-Sectional Study of Fellowship Directors and Division Chiefs Aman Chopra Georgetown University

Anatomic Structures at Risk During Posterior to Anterior Percutaneous Screw Fixation of Posterior Malleolar Fractures: A Cadaveric Study Natalia Czerwonka New York Medical College

The Rate of Post-Treatment Union Deformities in Fifth Metatarsal Fractures Alexandra Flaherty University of Texas Medical Branch The Statistical Fragility of Platelet-Rich Plasma as Treatment for Plantar Fasciitis: A Systematic Review and Meta-analysis Arjun Gupta Rutgers University

Outcomes for Metal Spacers in Treating Hind Foot Bony Defects Soroush Kazemi University of California, Davis

Defining reference values for the anatomical axis of syndesmosis and landmark for the clamp placement to minimize malreduction Marguerite Mullen Brown University

Patterns and Predictors of Anterior-inferior Tibiofibular Ligament (AITFL) Avulsions in Ankle Fractures Noopur Ranganathan Oakland University

Return to Sports and Clinical Outcomes in Suture-Tape Augmentation for Ankle Instability - A Systematic Review Alan Samsonov CUNY School of Medicine

A Systematic Review of YouTube Videos About Total Ankle Arthroplasty Jessica Schmerler Johns Hopkins University

Isolated ATFL versus Combined ATFL and CFL Suture Tape Augmentation for the treatment of lateral ankle instability: Are outcomes equivalent?

Zachary Troiani

Albany Medical College

Definition of Failure in Lateral Ankle Instability Surgery Jonathan Dallman *University of Kansas*

FOOT AND ANKLE 2

MODERATED BY DRS. MARC CHODOS, BRYAN VOPAT, & LORRAINE BOAKYE



Risk Factors for Surgical Site Infections Following Open Reduction and Internal Fixation for Bimalleolar Ankle Fractures Javier DeJesus Lugo Downstate Health Sciences University

Gastrocnemius Recession: Discrepancies in the Literature Nicholas Ehrenborg Ohio University Heritage College of Osteopathic Medicine

The interosseus crural branch of the tibial nerve: an anatomical study of a rarely described structure
Nicholas Gerard
Tulane University

Split Anterior Tendon Transfer & Split Posterior Tendon Transfer Treatment of Congenital Clubfoot in Cerebral Palsy: Is There a Difference? Aedan Hanna Rutgers University

Biomechanical Effectiveness of Unicortical vs Bicortical Blocking Screws in Distal Fibula Fracture Reduction Sheldon McCown University of Texas Medical Branch

Impact of ESRD on Postoperative Outcomes of Lower Extremity Amputations: An ACS NSQIP Analysis 2008-2016 Arie Monas SUNY Downstate College of Medicine

The Association between Open Proximal Tibial Fractures and Obesity Ebunoluwa Olawole Temple University

A Potential Surgical Solution for Non-Healing Diabetic Ulcerations: Long Term Outcomes of The Vertical Contour Calcanectomy Daniel Popovsky Georgetown University Micro-CT Analysis of the Lisfranc Complex Reveals Higher Bone Density in Dorsal Compared to Plantar Regions Melissa Requist University of Utah

Career Trajectory Analysis for Orthopedists with Master's in Public Health Franco Sabatini University of Texas Medical Branch

Radiographic Outcomes in the Treatment of Type II Adult Acquired Flatfoot Deformity Following Lateral Column Lengthening with a Titanium Wedge versus Autograft or Allograft Andrew Salgado Albany Medical College

Variant Posterior Tibial Vein Preston Terle Tulane University

Sleep Apnea and Postoperative Medical Complications and Healthcare Expenditures Following Open Reduction and Internal Fixation of Bimalleolar Ankle Fractures Semran Thamer Dartmouth College

Reconstruction of Charcot Foot Deformity Using Circular External Fixators and Fusion: A Case Report Bryant Transtrum Texas Tech University

Outcome Reporting in Total Ankle Arthroplasty: A Systematic Review Yuta Umeda University of Cincinnati

HAND AND WRIST MODERATED BY DRS. DANIEL LONDON & PETER CHANG



Transscaphoid, Transcapitate Perilunate Fracture Dislocation with Ulnar Nerve Compression: A Case Report John Avendano Rutgers University

Interconnections of the Flexor Digitorum Profundus: An Anatomic Cadaver Study Christopher Bellaire Icahn School of Medicine at Mount Sinai

Cubital Tunnel Release: Outcomes from a Two-Incision Approach Maxwell Davison-Kerwood Israel Institute of Technology

Arthrodesis for Carpometacarpal Joint Arthritis: A Systematic Review Miraal Dharamsi Texas Tech University

Novel Use of Blood Flow Restriction Therapy in the Treatment of Wrist Degenerative Osteoarthritis Kevin Feltz University of Missouri - Columbia

Comparison of Two Bone Anchors For the Management of Basal Thumb Arthritis Auggie Herber Arizona College of Osteopathic Medicine

Role of Laser Pointer in Budgeting Fluoroscopy Time and Radiation Exposure Keegan Hones University of Florida

Elective Hand Surgery is Delayed Among Private Insurance Holders Caleb Hood University of Alabama Birmingham

Radially-Based Extensor Retinacular Sling Reconstruction in Extensor Carpi Ulnaris Subsheath Injuries Michael Mastroianni Tufts University Optimizing the Orientation of a Suture Button to Stabilize the Distal Radioulnar Joint in a Bone Model Makoa Mau University of Hawaii

General Anesthesia Versus Regional Anesthesia in Metacarpal Shaft/Neck Fracture ORIF: An ACS NSQIP Analysis 2008-2016 Kevin Nicholas SUNY Downstate College of Medicine

The Single Assessment Numeric Evaluation (SANE), PROMIS-UE, and QuickDASH for Carpal Tunnel Release Surgery and Trigger Finger Release Surgery Gabrielle Notorgiacomo University of Cincinnati

Six-week radiographic follow up does not change management for non-operatively treated extra-articular metacarpal shaft fractures Robert Ponce University of Cincinnati

Arthrodesis as salvage for failed metacarpophalangeal joint arthroplasty Matthew Rode *Mayo Clinic*

A Review on the Utility of Custom Upper Extremity Orthotics in Managing Severe Spasticity in Pediatric Cerebral Palsy Patients Siraj Shaikh Rutgers University

MODERATED BY DRS. SAVYASACHI THAKKAR, PRADIP RAMAMURTI & DANIEL LAYON



The Impact of Blood Transfusion Utilization on Outcomes and Complications Following Total Hip Arthroplasty in Patients with Sickle Cell Anemia: A Propensity Score-Matched Analysis Kyrillos Akhnoukh SUNY Downstate College of Medicine

The Impact of Tourniquet Use on the Intraoperative Patient Experience of Pain During Total Knee Arthroplasty: A Prospective Comparative Clinical Trial Gabriel Alemayehu Washington State University Spokane

Comparison of Postoperative Outcomes Between Anesthetic Types Following Total Knee Arthroplasty: An ACS NSQIP Analysis 2008-2016 Joydeep Baidya SUNY Downstate College of Medicine

The Impact of Posterior-stabilized versus Constrained Polyethylene Liners in Revision Total Knee Arthroplasty Geidily Beaton The City College of New York

Does the Severity of Osteoarthritis Grade Correlate with Postoperative Functional Outcome Scores after Total Knee Arthroplasty? Brian Carlson Washington State University Spokane

Reliability of a simple fluoroscopic image to assess leg length discrepancy during direct anterior approach total hip arthroplasty Sandi Caus University of Vermont

Bone Remodeling and Cortical Thinning Distal to the Femoral Stem: A Retrospective Review Kelly Chandler University of Alabama at Birmingham Analyzing Racial Disparities in Total Knee Arthroplasty Outcomes Shivan Chokshi University of Texas Medical Branch

Comparison in Anesthetic Types in the Setting of Total Hip Arthroplasty: An ACS-NSQIP Propensity Score Matching Analysis 2008-2016 Matthew Chung SUNY Downstate College of Medicine

Does Antibiotic Bone Cement Reduce Infection Rates in Primary Total Knee Arthroplasty? David Cieremans A.T. Still University School of Osteopathic Medicine

Increased Rates of Postoperative Outcome in Patients with Iron Deficiency Anemia in the Setting of Primary Total Knee Arthroplasty Jimmy Council SUNY Downstate College of Medicine

Regional Versus General Anesthesia in Intertrochanteric Fracture Surgeries: An ACS-NSQIP 2008-2016 Study Benjamin de Leon III SUNY Downstate College of Medicine

Common Patient-Reported Outcome Measures in Total Joint Arthroplasty Inadequately Measure Sleep: a PRO Correlation Analysis Akiro Duey Icahn School of Medicine at Mount Sinai

Total Joint Arthroplasty in Homeless Patients at an Urban Safety-Net Hospital Nneoma Duru Boston University

The Effect of Preoperative Weight Change on Complication Rates Following Total Hip Arthroplasty Trevor Wyand Georgetown University





Insall-Savalti Index Measurement in Total Knee Arthroplasty Patients with a Mechanical Alignment versus a Kinematic Alignment Seleem Elkadi Georgetown University

Outcomes of Obese Patients Undergoing Total Knee Arthroplasty: Our Institutional Experience Ian Fleisher New York Medical College

Decreased Pre-operative Hip Motion is a Risk Factor for Decreased Postoperative Spinopelvic Motion Brandon Gettleman University of South Carolina- Columbia

The Impact of Articular Cartilage Status on Outcomes of Isolated Medial Patellofemoral Ligament Reconstruction Roberto Gonzalez The Ohio State University

Is there a Learning Curve for Direct Anterior Total Hip Arthroplasty for Fellowship-Trained Surgeons? Sean Griffin Florida Atlantic University

Concomitant Hip Arthroscopy and Periacetabular Osteotomy: Systematic Review and Meta-Analysis of Contemporary Outcomes, Survivorship, and Complications Christian Hecht Case Western Reserve University

The Impact of End Stage Renal Disease on Postoperative Outcomes of Total Knee Arthroplasty Patients Elver Ho SUNY Downstate College of Medicine

Evaluating Hip Disarticulation Outcomes in a 51-patient series Allison Huffman The Ohio State University Anatomic Head Replacement - Is it possible to replace a femoral head with a prosthetic head of the same size?
Chukwuma Iwuoha
Pacific Northwest University College of Osteopathic Medicine

Perioperative Safety of Uninterrupted Therapeutic Warfarin Anticoagulation for Primary Total Hip and Knee Arthroplasty Michael Johnston Washington State University

Correlation of Functional Outcomes and Alignment Category After Kinematically Aligned Total Knee Arthroplasty Brett Jones Washington State University Spokane

The Impacts of Sickle Cell Anemia on Outcomes Following Total Hip Arthroplasty With Minimum 2-Year Surveillance Alex Jung SUNY Downstate College of Medicine

Treating Hepatitis-C Prior to Total Hip Arthroplasty is Cost-Effective: A Markov Analysis Gokul Kalyanasundaram Albany Medical College

Angle Accuracy of Intramedullary Bone Resection Guides for Total Knee Arthroplasty Matthew Kane East Tennessee State University

Multiple Prior Dislocations Lead to Poorer Outcomes of Isolated Medial Patellofemoral Ligament Reconstruction: A Retrospective Chart Review David Ryskamp The Ohio State University

MODERATED BY DRS. JOSHUA CAMPBELL & JOSEF JOLISSAINT



Effects of Pelvic Obliquity and Limb Position on Radiographic Leg Length Discrepancy Measurement: A Sawbones Model Mohammed Hamad University of Illinois Chicago

Patient Outcomes of Conventional versus Robot Assisted Total Hip Arthroplasty Elan Karlin Georgetown University

Parkinson's Disease leads to Increased Complications, Readmission Rates, and Costs of Care after total hip arthroplasty: A Matched-Control Analysis Simon Katz New York Institute of Technology College of Osteopathic Medicine

Kinematically Aligned Total Knee Arthroplasty: Accuracy of Restoring the Native Preoperative Joint Line Hana Keller Washington State University Spokane

Total Joint Arthroplasty Complication Rates Vary by Region and Season Ankur Khanna Lousiana State University

The Impact of Ulcerative Colitis on Outcomes and Complications Following Total Hip Arthroplasty Andriy Kobryn SUNY Downstate College of Medicine

Unicompartmental Knee Arthroplasty Revised To Total Knee Arthroplasty Versus Primary Total Knee Arthroplasty: A Meta-Analysis Of Matched Studies Kenneth Levy CUNY School of Medicine

Impact of Chronic Kidney Disease on Postoperative Outcomes Among Total Knee Arthroplasty Patients With 2-Year Minimum Surveillance Colm Mulvany SUNY Downstate College of Medicine Does Changing Adductor Canal Block (ACB) with Ropivacaine to Liposomal Bupivacaine Improve Patient-reported Outcomes and Reduce Opioid Prescribing After Total Knee Arthroplasty?

Michael McMahon

Lousiana State University

Publication Journal Specialty Affects the Level of Influence in Knee Arthritis Research: Evaluation using Relative Citation Ratio and Journal Impact Factor Martinus Megalla Hackensack Meridian School of Medicine

Influence of Periacetabular Osteotomy on Femoral Head Coverage and Range of Motion in those with Developmental Dysplasia of the Hip Analisa Narro

Analisa Narro McGovern Medical School

The Health-Related Quality of Life of Patients Waiting for Anterior Cruciate Ligament Reconstruction is Worse than an Age and Sex Match Population: Increasing Time on Waiting List was Independently Associated with a Worse Quality of Life Arslan Raja University of Edinburgh

Periprosthetic Distal Femur Fractures Do Not Have Different Outcomes Compared to Native Distal Femur Fractures Vineeth Romiyo Rowan University

Impact of CHF on Postoperative Outcomes of Primary THA: An ACS NSQIP Analysis 2008-2016 Benjamin Sanits

SUNY Downstate College of Medicine

Incidence, common pathogens, and risk factors for infection after anterior cruciate ligament reconstruction: A systematic review Justine Schneider *The Ohio State University*

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Does Preoperative Bisphosphonate Use Affect Periprosthetic Fracture Outcomes Following Total Hip Arthroplasty? Kush Shah Icahn School of Medicine at Mount Sinai

Should You Transplant the Kidney Before or After Total Knee Arthroplasty in Patients with ESRD Siddharth Sharma SUNY Downstate College of Medicine

Comparing Survivorship and Revision Rates Following Unicompartmental Arthroplasty with Computer Navigation and Robotic Systems vs. Conventional Manual Approach Sanjum Singh Howard University

The Impact of Resident Involvement on Patient Outcomes in Revision Total Hip Arthroplasty Mackenzie Sowers University of Alabama Birmingham

Trends Since 2016 in Total Hip Arthroplasty Postoperative Pain Management David Sproul The George Washington University

Comparison of Outcomes between Conventional versus Robot-Assisted Partial Knee Replacement Alexander Strait Georgetown University

Impact of Diabetes on Postoperative Outcomes of ACL Reconstruction: An ACS NSQIP Analysis 2008-2016 Shahriar Tahvilian SUNY Downstate College of Medicine

A Prospective Study on the Utility of Perioperative ROM to Determine Patient Outcomes in TKA Ethan Taira University of Illinois Chicago Risk Factors for Reoperation Following Megaprosthesis in Revision Total Knee Arthroplasty Alex Tang CUNY School of Medicine

Comparing resource utilization and outcomes between periprosthetic and native hip fractures: a systematic review Mitchell Thom Case Western Reserve University

Risk Factors for Manipulation Under Anesthesia Following Total Knee Arthroplasty: A Systematic Review and Meta-analysis Son Tran Western Michigan University

Complications, Readmission Rates, and In-Hospital Lengths-of-Stay in Octogenarian vs. Non-Octogenarians following Total Knee Arthroplasty: An Analysis of over 1.7 Million Patients Priscilla Varghese SUNY Downstate College of Medicine

The Impact of Acquired Immunodeficiency Syndrome on Post-Operative Outcomes Following Total Hip Arthroplasty: A Propensity Scored-Match Analysis Lucy Wei SUNY Downstate College of Medicine

A Novel Radiographic Method Accurately Referencing the Anterior Pelvic Plane for THA Cup Orientation Sara Winfrey Loyola University Chicago

Impact of CHF on Postoperative Outcomes of Primary TKA: An ACS NSQIP Analysis 2008-2016 Menachem Zlatopolsky SUNY Downstate College of Medicine

MEDICAL EDUCATION MODERATED BY DRS. CARA CIPRIANO & SETH STAKE



Simulation Training to Retool Practicing Orthopedic Surgeons: Not Fit for Purpose Graham Cate University of Arkansas

The Utility of Virtual Reality in Orthopaedic Surgical Training Nicolas Cevallos University of California San Francisco

Female Resident Attrition in Orthopaedic Surgery Xi Chen California University

Bullying in Orthopaedic Surgery: A Survey of U.S. Orthopaedic Residents, Fellows and Attending Surgeons Monica DiFiori Temple University

Social Media Utilization by American Orthopedic Residency Program Directors Yasmine Ghattas University of Central Florida

Understanding the Application of Tumescent Fluid in Cadaveric Foot Dissections Jonathon Hines Sam Houston State University

Impact of USMLE Step 1 P/F on Diversity in the Field of Orthopaedic Surgery William Huffman University of Pennsylvania

How Has the COVID-19 Pandemic Changed the Rate of Home Matches for Orthopaedic Surgery Residency? Nicholas Lanzetta Northwestern University The Effectiveness of Thiel Cadavers for Diagnostic Knee Examinations Adam Musick

East Tennessee State University

Medical Student Authorship Trends: A 10-Year Analysis of Four Major Orthopaedic Journals Kyle Obana University of Hawaii

Orthopaedic Surgery Boot Camp: An Immersion Course for Medical Students Yesha Parekh Rutgers University

Current State of Research Gap-Years in Orthopedic Surgery Residency Applicants: Program Directors' Perspectives Evan Polce University of Wisconsin

Evaluation of Diversity Representation on Orthopedic Residency Program Websites Jaime Quirarte UT Health San Antonio

Evaluation of Orthopaedic Residency Program Reporting of Faculty and Resident Diversity Data Matthew Smith UT Health San Antonio

The Effect of Hand Size and Gender on Grip Strength Christina Stach Dartmouth College

PEDIATRICS

MODERATED BY DRS. SEAN TABAIE & JEFFREY HENSTENBURG



Complication Rates Associated With Elastic Stable Intramedullary Nail Treatment of Pediatric Tibial Shaft Fractures: Application of Age-Adjusted Malunion Criteria Taylor Bradley University of Kentucky

The Value of Postoperative Radiographs After Hardware Removal in Pediatric Patients Michael Garner University of Central Florida

Does 3D ultrasound better predict residual dysplasia following previously "successful" Pavlik treatment of infantile DDH? Nathan Houlihan Thomas Jefferson University

Comparing Radiographic Outcomes and Complications of Transphyseal Cannulated Screw Fixation and Percutaneous Pinning for Pediatric Distal Femoral Physeal Fractures Sina Kazemzadeh East Carolina University

New Prognostic Classification for Pediatric Proximal Fifth Metatarsal Fractures Hannah Lee University of Pennsylvania

Posterior Tibial Slope is an Anatomic Risk Factor for Pediatric Tibial Eminence Fractures Sudarsan Murali University of Alabama Birmingham

Trends in Relapse Rates of Pediatric Clubfoot After Management with Ponseti Method: A Systematic Review Julia Nguyen Rutgers University

BMI and Severity of Disease in Patients with Osteogenesis Imperfecta Lauren Nun University of Nebraska Rotator Cuff Injury in the Pediatric Population - a Systematic Review of Patient Characteristics and Treatment Kevin Orellana University of Texas Rio Grande Valley

Treatment of pediatric Lisfranc injuries: a systematic review and introduction of a novel treatment algorithm
Samuel Paek
Geisinger Commonwealth School of Medicine

"Thumbprint" Cast Reduction for Minimally Displaced Pediatric Supracondylar Humerus Fractures Eric Poole Michigan State University

Changes in Incidence of Pediatric Fractures During the COVID-19 Pandemic Isaiah Selkridge The University of Chicago

Evaluating Postoperative Immobilization Following Hip Reconstruction in Children with Neuromuscular Conditions Aribah Shah George Washington University

Correction of Posttraumatic Cubitus Varus in Children Using Computer Assisted Circular External Fixators: A Report of Three Cases Allen Wang Texas Tech University

Complications Following Spinal Fusion for Scoliosis in Patients with Myelomeningocele: Are We Getting Better? Andrew Winsauer University of Texas Southwestern

PRACTICE MANAGEMENT AND HEALTH DISPARITIES MODERATED BY DRS. MARVIN DINGLE & CLAIRE MCDANIEL



Safe to Scope: Preoperative COVID-19 Infection Does Not Increase the Risk of Postoperative Complications after Arthroscopic Surgery Elyse Berlinberg New York University

Impact of Depression and/or Anxiety on Patient Reported Outcomes After Posterior Cervical Fusion Shivangi Bhatt Drexel University

The Importance of Provider Culture and Language for Orthopaedic Patients Alondra Diaz University of Illinois Chicago

Assessment of Quadriceps Muscle Weakness in Association with Symptomatic and Radiological Osteoarthritis of the Knee Siddhi Hegde KVG Medical College

Racial, Ethnic and Socioeconomic Disparities in Hip Fracture Evaluation, Management and Outcomes in the U.S.: A Systematic Review Noel Jeansonne Wake Forest Univeristy

Socioeconomic and Demographic Factors Impacting Pediatric Forearm Diaphyseal Fracture Management: An Analysis of 23,644 Cases Cameron Johnson Brown University

Spread Too Thin: Burnout Among Orthopaedic Surgeons during the COVID-19 Pandemic Nisha Kale Tulane University

Safety and Efficacy of In-Office Hand Procedures Brandon Knopp Florida Atlantic University A Bibliometric Analysis of Trends in Orthopedic Female Authorship Jeffrey Okewunmi Icahn School of Medicine at Mount Sinai

Burden of Extremity Disease in a Long-Term Humanitarian Setting: A Cross Sectional Study in Nyarugusu Refugee Camp, Kigoma, Tanzania Sarah Rapaport Johns Hopkins University

Patient Perceptions of Telehealth Orthopedic Services in the Era of COVID-19 and Beyond Verdinand Ruelos Tufts University

Comprehensive Analysis of Opioid Use Following Common Elective Outpatient Orthopaedic Surgeries Philip Seger Drexel University

The Effects of Face Masks on the Doctor-Patient Relationship in Orthopaedic Surgery: COVID-19 Perspective Alina Syros University of Miami

Disparities Among Industry's Highly Compensated Orthopaedic Surgeons Anthony Wilson University of Alabama Birmingham

Unnecessary Preoperative Workup in Healthy Patients with Isolated Orthopedic Trauma: An Area of Healthcare Waste Branden Wright Rowan University

Geographic Variability in Orthopaedic Surgeon Density in the United States Is Substantial and Closely Related to Wealth and Urbanization Carlos Ortiz-Babilonia University of Puerto Rico

SHOULDER AND ELBOW 1 MODERATED BY DRS. DUC NGUYEN & MICHAEL BAIRD



Survivorship After Reverse Total Shoulder Arthroplasty and Predictors of 1-year Mortality Bishoy Abdelmalik University of Florida

Effects of Having Crohn's Disease on Post-Operative Outcomes of Primary Shoulder Arthroplasty Patients Sukhpreet Ahluwalia SUNY Downstate College of Medicine

The transition to outpatient total shoulder arthroplasty
Rachel Arakawa
George Washington University

Outpatient shoulder arthroplasty: Patient selection, patient experience, and cost analyses Robert Carrier University of New England

Prior Rotator Cuff Repair Is Not Associated with Worse Outcomes After Subsequent Superior Capsular Reconstruction: A Comparative Analysis Richard Chao University of Pittsburgh

Efficacy of Antimicrobial Washes Prior to Shoulder Surgery Against Cutibacterium: A Systematic Review and Meta-Analysis Andrew Collins University of Central Florida

Differences in Demographics and Patient Reported Outcome scores between Automated and Manual Response Methods in a Shoulder Registry Udit Dave Tulane University

Majority of Patients Find Sleep Patterns Return to Normal 6 Months Following Rotator Cuff Repair Martine Dolan University of Illinois Chicago Effects of Having Acquired Immunodeficiency Syndrome on Postoperative Outcomes of Primary Shoulder Arthroplasty Patients Andrew Dorritie SUNY Downstate College of Medicine

Clinical Outcomes of Rotator Cuff Repair as A Function of Time to Surgery: A Retrospective Cohort Study Logan Finger University of Pittsburgh

No Differences in 90-day Complications and Admissions Following Latarjet Procedure for Primary Bone Loss versus Latarjet Procedure for Failed Arthroscopic Instability Repair Neil Gambhir New York Institute of Technology

Midterm functional, radiographic, and patient-reported outcomes in a single-surgeon cohort of shoulder arthroplasty patients 75 years of age and older Benjamin Gross Icahn School of Medicine at Mount Sinai

Biceps Tenotomy Versus Tenodesis During Arthroscopic Rotator Cuff Repair: A Large Multicenter Database Analysis Kevin Hao University of Florida

Routine diagnostic arthroscopy with elbow ulnar collateral ligament reconstruction does not reduce the need for future valgus extension overload-related surgeries: a systematic review and meta-analysis Samuel Huffman Georgetown University

Long-Term Results of Arthroscopic Repair of Full-Thickness Traumatic Rotator Cuff Tears in Active-Duty Military Patients Under the Age of 40 Shravya Kichena Texas Tech University

SHOULDER AND ELBOW 2

MODERATED BY DRS. ZACHARY ZIMMER & ABHAY MATHUR



Assessment of Postoperative Fatigue Following Arthroscopic Shoulder Procedures Using a Validated Wearable Device in a Free-Living Setting Pranav Gadangi Texas A&M University

Same- and Next-day Discharge Following Shoulder Arthroplasty are Associated with Decreased Risk of Postoperative Complications Matthew Kim Stony Brook University

Outcomes of Subscapularis Repair Techniques after rTSA: A Systematic Review Andrew Lachance *Tufts University*

Characteristics of shoulder instability in active military patients: at ten-year follow-up a case series of 416 patients
Jacob Malmquist
UT Health San Antonio

Quality Assessment of YouTube Content on SLAP Tears Chelsea Matzko Tulane University

Incidence and Risk Factors for Re-revision After Revision Reverse Total Shoulder Arthroplasty Daniel O'Keefe University of Florida

Distance Traveled to Undergo Revision Shoulder Arthroplasty is Impacted by Patient Demographics and Exceeds that of Primary Shoulder Arthroplasty Matthew Orringer University of California, San Francisco Radiostereometric Analysis of Biceps Tenodesis: A Prospective Comparison of All-Suture Anchor vs. Interference Screw, Arthroscopic and Mini-Open Techniques Harsh Patel Rutgers University

Sociodemographic Disparities in Distance Traveled to Receive Primary Shoulder Arthroplasty Madeleine Salesky University of California, San Francisco

General Anesthesia Versus Regional Anesthesia in Acromioclavicular Joint Reconstructions: An ACS NSQIP Analysis 2008-2016 Olivia Tracey SUNY Downstate College of Medicine

Operative Time and Relative Value Units for Total Shoulder Arthroplasty Based on Pathology in the United States Robert Trenschel Nova Southeastern University

Surgical Outcomes for the Treatment of Massive Rotator Cuff Tears Marisa Ulrich The *Ohio State University*

Frequency of Adverse Events After Total Shoulder Arthroplasty Where Liposomal Bupivacaine Blocks Were Used Drashti Upadhyay Loyola University Chicago

Assessing Allograft Viability and Patient-Reported Outcomes for Clinical Shoulder Instability Allen Yazdi University of Alabama Birmingham

SPINE 1

MODERATED BY DRS. GRANT HOGUE, WARREN YU, & WILLIAM STOLL



Effect of Congestive Heart Failure on Postoperative Outcomes in Adult Patients Undergoing Laminectomy Surgery Juhayer Alam SUNY Downstate College of Medicine

Predictor of Survival Length Following Odontoid Fractures Apurva Choubey University of Cincinnati

Is lumbar spine fusion in HIV positive patients associated with a higher complication rate? Bianca Audrey Duah *University of Rochester*

Factors that Reduce Bundle Payment Profitability in Thoracolumbar Spine Surgery Dominic Farronato Thomas Jefferson University

Epidemiology of Cervical Spinal Fractures in the U.S: An NEISS Analysis 2001-2019 Shreya Jain SUNY Downstate College of Medicine

Radiographic Malalignment Has a Greater Impact on Clinical Outcomes than Complications in ASD Surgery Oscar Krol SUNY Downstate College of Medicine

Obesity and Low Back Pain in Children: Associations with Lumbar Spine Degeneration, Alignment, and Pain Management Perry Lim Rosalind Franklin University

The Effects of Florida Law HB21 on Opioid Prescriptions After Spine Surgery Jacob Milner University of Miami Plastic Multilayer Closure: Orthopedic Surgeons and Plastic Surgeons Achieve Comparable Outcomes Vamsi Mohan Texas Tech University

Foot Temperature Changes after Loss of Motor Evoked Potentials in Pediatric Spine Surgery Frederick Mun Penn State College

Robot-Assisted and Augmented Reality Assisted Spinal Instrumentation: A Systematic Review and Meta-Analysis of Screw Accuracy and Outcomes Over the Last Decade Kory Pasko Georgetown University

Influence of Predominant Back vs Leg Pain on MIS TLIF Outcomes Madhav Patel Georgetown University

Enhanced Recovery Pathway Reduces Opioid Use and Pain Scores in Patients Undergoing Elective Spine Surgery Logan Reed University of Alabama at Birmingham

Outcomes of spine surgery in achondroplastic patients: do the benefits outweigh the risks? Aaron Tran The University of Arizona

Radiologist Interpretation of Cervical CT Scans has Poor Agreement with Torg-Pavlov Ratio and Measured Canal Width for Degree of Stenosis Jay Zaifman Hackensack Meridian School of Medicine

SPINE 2 MODERATED BY DRS. MARC DYRSZKA & MICHAEL RAAD



The Impact of Sickle Cell Disease on Outcomes Following Adult Spinal Fusion: A Propensity Scored-Match Analysis Mohamud Abdi SUNY Downstate College of Medicine

Navigated LLIF Leads to Decreased Radiation Exposure Compared to Fluoroscopy Fares Ani St. George's University

Prediction of Lumbar Disc Herniation Resorption and Self-Healing in Symptomatic Patients: a Prospective, Multi- Imaging and Clinical Phenotype Study Juan Barajas George Washington University

The Impact of Acquired Immunodeficiency Syndrome on Outcomes and Complications Following Adult Spinal Fusion: A Propensity Score-Matched Analysis Rachel Baum SUNY Downstate College of Medicine

Increasing Patient Complexity is Associated with Longer In-Hospital Lengths of Stay and Higher Rates of Medical Complications Following Primary 1- to 2- Level Lumbar Fusion
Geoffrey Cloud
SUNY Downstate College of Medicine

The Association Between Prior Opioid Use and Patient Reported Outcomes Following Spine Surgery Oscar Covarrubias Johns Hopkins University

Impact of Intraoperative Microscope on Long-Term Outcomes in Anterior Cervical Discectomy and Fusion Kendrick Cuero George Washington University Motor Function Outcomes in Acute Traumatic Central Cord Syndrome: What to Expect Over the Course of a Patient's Admission Jorge Figueras University of Cincinnati

An Analysis of Five Year Outcomes of a Prospective Consecutively Enrolled Single-Center Adult Spinal Deformity Series Bailey Imbo St. George's University

Single-Level MIS TLIF vs ALIF for Surgical Treatment of Isthmic Spondylolisthesis Kevin Jacob University of Illinois Chicago

Malnutrition and Risk of Complications Following Posterior Lumbar Spine Fusion: A Matched Cohort Analysis Investigating Malnutrition and BMI Keir Johnson Brown University

Too Cool for Bracing? A Prospective Study Investigating Psychosocial Characteristics That Predict Scoliosis Brace Wear. Sara Kiani Icahn School of Medicine at Mount Sinai

Comparison of Perioperative and 90-Day Outcomes in Lumbar Extreme Lateral Interbody Fusion With and Without Posterior Fusion Alexander Linton Rutgers University

Spinal Fusion Outcomes in Patients with ESRD vs. Kidney Transplants Olga Pinkhasov SUNY Downstate College of Medicine

Comparative Analysis of 30-day Readmission, Reoperation, and Morbidity Between Posterior Cervical Decompression and Fusion Performed in the Inpatient and Outpatient Settings Junho Song Hofstra University

SPORTS MEDICINE 1

MODERATED BY DRS. TERESA DOERRE & WENDELL (CODY) COLE



Assessment of Self-Reported Psychological Readiness in Patients with Primary vs Revision Anterior Cruciate Ligament Reconstruction Austin Benson University of South Dakota

The Impact of Shoulder Labrum Tears on Position Player Performance and Longevity in Major League Baseball Players Boris Christopher UT Health San Antonio

It's a Slippery Slope: Is Increased Posterior Tibial Slope Associated with Tibial Spine Fracture versus ACL Tear? Patrick England Washington University

Social media as a means of increasing academic literature engagement: The effect of Facebook and Twitter on citation rates of three orthopaedic sports medicine journals Emil Espinal University of Cincinnati

Graft Choice for Anterior Cruciate Ligament (ACL) Reconstruction in Females Aged 25 Years and Younger: A Systematic Review Christine Etzel

Quinnipiac University

Biomechanical Assessment of a Novel Composite Lateral Meniscus Scaffold Peter Filtes Rutgers University

The Impact of the COVID-19 Pandemic on Football, Soccer, and Basketball Injuries Presenting to the Emergency Department Daniel Finch Tufts University

Is Minimally Invasive Orthopedic Surgery Safer than Open? A Systematic Review of Systematic Reviews Muhammad Talal Ibrahim Aga Khan University Advanced Patellofemoral Chondromalacia Does Not Affect Outcomes After Meniscal Root Repair Sierra Murphy Mayo Clinic

Πρ MRI Relaxation Ratios Linked with Symptoms Related to Posttraumatic Osteoarthritis Daniel OConnell University of North Carolina

Increased Posterior Tibial Slope is Associated with Revision Anterior Cruciate Ligament Reconstruction Graft Re-Rupture Benjamin Ormseth The Ohio State University

Comparison of dominant and non-dominant knee kinetics in healthy controls versus anterior cruciate ligament reconstruction. Olivia Panchal University of North Texas

Machine Learning Clustering Analysis to Identify High Achievers after Anterior Cruciate Ligament Reconstruction: Meniscal Debridement Strongly Predicts Negative Clinically Significant Outcomes Parker Rea Rush University

Efficacy of common stabilization techniques on protecting the ulnar collateral ligament of the thumb: A cadaveric study Morgan Turnow University of Pikeville Kentucky

Significantly Lower Infection Risk For Anterior Cruciate Ligament Grafts Pre-Soaked in Vancomycin Compared to Un-Soaked Grafts: A Systematic Review and Meta-analysis Michelle Xiao Stanford University

SPORTS MEDICINE 2 MODERATED BY DRS. MATTHEW BEST & PAUL INCLAN



Evaluation of a Novel ACL Injury Prevention Technique: Can Martial Arts Fall Training (Break-Falling and Rolling) Alter the Lower Extremity At-Risk Biomechanics in Soccer Athletes?

Blake Acquarulo Quinnipiac University

Adverse outcomes of intra-articular and peritendon corticosteroid injections Marilee Clunk University of Toledo

Incidence, Timing, and Risk Factors for 5-Year Failure after Autologous Chondrocyte Implantation Stephen Gillinov Yale University

Analysis of Charges Associated with Anterior Cruciate Ligament Reconstruction Paul Gottshall Penn State College

Surgical vs. Nonoperative Management of ACL Tears in Patients ≥40 Years Madison Hayes-Lattin *Tufts University*

Differences in Temporal Variables and their Effect on Kinetics for High School Pitchers with Higher Versus Lower Pitch Velocities Bryce Hrudka Medical College of Wisconsin

Onlay versus Inlay Biceps Tenodesis for Long Head Biceps Tendinopathy: A Systematic Review and Meta-analysis Garrett Jackson American University of the Caribbean School

Women and Men National Collegiate Athletic Association Ice Hockey Players Were Similarly Likely to Suffer Lumbar Spine Injuries Anna Jenkins Mayo Clinic Alix School of Medicine Arizona Return to Play and Player Performance following Meniscus Tear Among Elite-Level European Soccer Players: A Retrospective Case-Control of Injuries from 2006 to 2016 Avinaash Korrapati University California San Diego

Orthopaedic Consequences of Modern Gladiators: A Systematic Review of Lower Extremity Musculoskeletal Issues in Retired NFL Players Mark McClure University of Alabama Birmingham

Performance and Longevity After Total Knee Arthroplasty in Professional Golfer's Association Players Grayson Means UT Health San Antonio

Adolescent Patient Reported Outcomes after Anterior Cruciate Ligament Reconstruction with Suture Tape Augmentation Eliana Schaefer Georgetown University

Paresthesia is Predictive of Symptom Recurrence Following Fasciotomy for Exertional Compartment Syndrome of the Leg Dhruv Shankar Icahn School of Medicine at Mount Sinai

Influence of Staphylococcus epidermidis Biofilm on the Mechanical Strength of Soft Tissue Allograft Hanna Sorensen The Ohio State University

Blood Flow Restriction Training Limits
Hamstring and Quadriceps Atrophy After
Anterior Cruciate Ligament Reconstruction: A
Review of Randomized Controlled Trials
Joshua Spada
Rowan University

TRAUMA 1 MODERATED BY DRS. LISA CANNADA & KENDALL MASADA



The Care Conundrum of Low-Energy Pelvic Ring Fractures: A Review of 415 Patients Bailey Abernathy University of Minnesota - Twin Cities

Comparison of Operative and Non-operative Management of Geriatric Pelvic Insufficiency Fractures: A Meta-Analysis Shadi Baajour Nova Southeastern University

Knee Pain and Functional Outcomes After Retrograde Femoral Nailing: A Retrospective Review Garrett Breyer Rowan University

STTGMA-COVID: Is it still effective and can we make it better?
Garrett Esper
SUNY Upstate College of Medicine

Management of Soft-Tissue Wound Coverage Following Open Tibia Fractures in Latin America Michael Flores University of California-San Francisco

Developing a Minimally Invasive Cell-Based Model to Predict Response to Major Trauma Kayla Gates Indiana University

Pediatric Fractures Associated with Riding Bicycles: A Twenty-Year Analysis Radhika Gupta University of Pennsylvania

Comparison of Outcomes of Distal Femur Fracture Fixation Methods used in Elderly and Non-Elderly Patients: A Meta-Analysis Christopher Huffman University of Toledo General Anesthesia Versus Spinal Anesthesia in Intertrochanteric Femur Fracture Treatments: An ACS NSQIP Analysis 2008-2016 Benjamin Krasnyanskiy SUNY Downstate College of Medicine

Three-Dimensional Fracture Frequency Mapping of Sternum injuries due to High-Energy Trauma Michael LaRoque University of Minnesota

Discharge Rehabilitation Planning for Hip Fracture Patients: The COVID Effect Ariana Meltzer-Bruhn University of Pennsylvania

Patient Satisfaction Following Definitive Fixation of Tibial Plateau Fractures: Minimum 17-Year Follow-up Arun Nadar University of Louisville

Standard Post-operative X-rays in Patients with Long Bone Fractures: When are they necessary? Vivek Nair University of Chicago

Comparison of Post-Op Opioid use and Pain Among Short, Medium, and Long Cephalomedullary Nails in Elderly Intertrochanteric Femur Fractures Wes Pectol East Tennessee State University

Rates of Discontinuation and Non-Publication of Upper and Lower Extremity Fracture Clinical Trials Samuel Shepard Oklahoma State University

TRAUMA 2 MODERATED BY DRS JAN SZATKOWSKI & TRICIA MEI VIN



Impact of ESRD on Antegrade and Retrograde Intramedullary Nailing for Femoral Shaft Fractures Bradley Amazan SUNY Downstate College of Medicine

Effect of Clavicle Shortening on Rates of latrogenic Nerve Injury After Operative Treatment of Midshaft Clavicle Fractures William Beard University of Texas Medical Branch

Suprapatellar tibial rodding revised with infrapatellar exchange rodding yields superior knee range of motion compared to infrapatellar rodding for both index and revision procedures Rachel Boxer University of Cincinnati

Open Tibia Fracture Treatment in Argentina Kelsey Brown *Brown University*

Impact of Diabetes Mellitus on Postoperative Outcomes of Tibial Plateau Open Reduction Internal Fixation: An ACS NSQIP Analysis 2008-2016 Jesse Chan SUNY Downstate College of Medicine

Predictors of Nonunion in Transverse Femoral Shaft Fractures Treated with Intramedullary Nailing: A SIGN Database Study Blake Cohoe Washington State University

Risk Factors for Recalcitrant Osteomyelitis Following Appropriate Surgical and Antibiotic Treatment Evan Dowell University of Cincinnati

The Impact of Education Level on Patient Reported Outcomes after Orthopaedic Trauma Surgery Nicolas Echeverria Temple University Risk Factors for Short-Term Total Knee Arthroplasty Following Open Reduction Internal Fixation of Bicondylar Tibial Plateau Fracture Garrett Gordon University of Cincinnati

Social deprivation is associated with delayed healing and worse patient-reported outcomes following intramedullary nailing of tibial shaft fractures
Zachery Hong
Washington University in St. Louis

Impact of CHF on Postoperative Outcomes of Lower Extremity Amputations: An ACS NSQIP Analysis 2008-2016 Girish Jayant SUNY Downstate College of Medicine

Does Prophylactic Local Tobramycin Injection Lower Open Fracture Infection Rates: A Pilot Retrospective Study Matthew Kavolus University of Kentucky

Comparison of Surgical Timing of Patients with Hip Fractures Between Hospitalist and Trauma Surgery Admitting Services Adam Misseldine Western Michigan University

ASA Score and Age are Predictors of Mortality and Amputation in Necrotizing Fasciitis Patients Sarah Nagel UT Health San Antonio

TRAUMA/ONCOLOGY

MODERATED BY DRS. JOSHUA LAWRENZ & JONATHAN SAVAKUS



Multicenter Retrospective Analysis Evaluating Two- year Survival of Proximal Tibia Endoprosthetic Reconstruction using Compressive Osseointegration Yesenia Day University of California San Francisco

Socioeconomic and Geographic Factor Effects on Outcomes in Ewing Sarcoma: An NCDB Review Vincent Eaton Creighton University

Advances in Virtual Cutting Guides and Stereotactic Navigation for Complex Tumor Resections of the Sacrum and Pelvis: Case Series and Review of Literature Lawrence Garvin Howard University

The Clinical Utility of Next Generation Sequencing in Sarcoma Sean Gilhooley Rowan University

How do patients fair after nonoperative or surgical management of pathologic acetabular fractures? A single-center retrospective study Christopher Leland Johns Hopkins University

Risk of Acute Kidney Injury and Fracture Related Infection after Antibiotic Prophylaxis with Piperacillin-Tazobactam Alexander Mihas University of Alabama at Birmingham

Metastatic Bone Disease at Diagnosis is Associated with Lower Body Mass Index and Worse Survival in Clear Cell Renal Cell Carcinoma Jon-Luc Poirier Indiana University

Adamantinoma of the Ulnar Shaft Reconstructed with a Vascularized Free Fibula John Schutz *University of Colorado* Orthopedic Management of Pubic Symphysis Osteomyelitis: Is Internal Fixation Necessary for Pelvic Stability? Henry Shu Johns Hopkins University

The impact of peripheral nerve block on opioid pain management in surgical treatment of patella fractures Krunal Shukla Virginia Commonwealth University

Can Lateral X-rays Reliably Determine Which Trimalleolar Ankle Fractures Need a CT? Ayush Thomas University of Massachusetts

Prevalence of Evaluation and Treatment of Osteoporosis after Low-Energy Hip Fractures at a Level-I Academic Tertiary Care Trauma Center with a Multi-Disciplinary Geriatric Hip Fracture Program Benjamin Van University California, Davis

The Pathologic Fracture Mortality Index: Predicting 30-day Postoperative Morbidity and Mortality Ashish Vankara Johns Hopkins University

Timing and Outcomes of Hip Fracture Surgery During the COVID-19 Pandemic Sherrie Wang Rowan University

Comparative Risk Stratification for Prediction of Early Postoperative Morbidity and Mortality After Open Fixation of Periarticular Lower Extremity Fractures Amy Xu Johns Hopkins University

The Frequency of Occult Intertrochanteric Fractures Among Isolated Greater Trochanter Fractures Michael Zappa University of Cincinnati



A Day in the Life of a Resident

ORTHOPEDIC SURGERY RESIDENT PANEL



David Bernstein, MD PGY-2 Orthopedic Surgery Harvard University



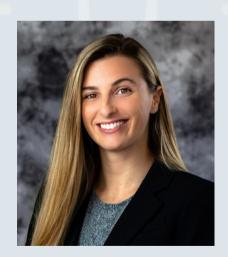
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Justin Hicks, MD
PGY-4 Orthopedic Surgery
Washington University in St. Louis



Pradip Ramamurti, MD PGY-1 Orthopedic Surgery University of Virginia



Rachel Ranson, DO
PGY-1 Orthopedic Surgery
The George Washington University



Kamali Thompson, MD PGY-1 Orthopedic Surgery Temple University

How to be a Competitive Residency Applicant

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Associate Professor and Chief of
Pediatric Orthopedics and Scoliosis
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