

AAOS/ORS Annual Meeting Update

The Duke Department of Orthopaedic Surgery had a proud showing at both the 2014 Orthopaedic Research Society (ORS) annual meeting held, March 15th to 18th, 2014 in New Orleans, Louisiana, as well as the American Academy of Orthopaedic Surgeons (AAOS) annual meeting held, March 11th to 15th, 2014 in New Orleans, Louisiana. Many members of the Duke Orthopaedic Surgery family were able to gather for the Piedmont Orthopedic Society Mid-Winter reception at the Sheraton New Orleans Hotel on Friday, March 14th. Listed below is a summary of the podium presentations, posters, demonstrations, and invited lectures from the current faculty and residents at these meetings.

AAOS

Symposia

The Leg Length is Not Right: Paul F Lachiewicz, MD

Hot Topics and Controversies in Revision Total Hip Arthroplasty

Moderator: Paul F Lachiewicz, MD

Best of AAOS—Symposium

Hand and Wrist: Fraser J Leversedge, MD

Podium Presentations

Does Ankle Syndesmosis Screw Removal Affect Patient Outcomes? A Prospective, Randomized, Controlled Trial
Matthew J Boyle, MD, Ryan Gao, Brendan Coleman, MD

Characterizing the Molecular Biology of Pain and Degeneration in Posterior Tibial Tendon Dysfunction
David M Tainter, BSE, Selene G Parekh, MBA, MD, Richard Bell, BS, James A Nunley II, MD, Mark E Easley, MD, Liufang Jing, Janet L Huebner, Virginia B Kraus, PhD, Samuel B Adams Jr, MD

Diagnosing Acute Rheumatic Fever or Septic Arthritis in Children: The Value of Serological Inflammatory Markers
Matthew J Boyle, MD, Raakhi M Mistry, MBBS, Diana Lennon, Karel Chivers, MD, Wesley P Bevan, MD, Chris Frampton, Haemish A Crawford, MBChB, FRACS

Percent Body Fat more Associated with Perioperative Outcomes after Total Joint Arthroplasty than BMI
Cameron K Ledford, MD, Ramon R Thiele, MS, Robert J Butler, DPT, PhD, PT, John S Appleton Jr, MD, Robin M Queen, PhD, Samuel S Wellman, MD, David E Attarian, MD, Michael P Bolognesi, MD

Malrotation of the Tibial Component in Total Knee Replacements: The Impact of Implant Design and Surgical Experience
Sabir Ismaily, Jonathan Gold, BS, Stephen J Incavo, MD, Michael P Bolognesi, MD, Philip C Noble, PhD

A Randomized Controlled Trial Comparing Arthroscopic and Open Bankart Repair for Anterior Shoulder Dislocations
Steven J Svoboda, MD, Kenneth L Cameron, PhD, Karen Y Peck, ATC, MEd, Thomas M DeBerardino, MD, Bradley J Nelson, MD, Dean C Taylor, COL, MD, Joachim Tenuta, MD, John M Uhorchak, MD, Brett D Owens, MD

Posterior Elbow Soft-tissue Reconstruction using a Flexor Carpi Ulnaris Muscle Turnover Flap
Christopher O Bayne, MD, Jianjun Ma, MD, William Slikker III, MD, Fraser J Leversedge, MD, Mark S Cohen, MD, Robert W Wysocki Jr, MD

Propionibacterium Acnes in Shoulder Surgery: False Positive, Commensal Organism or Pathogen?
William R Mook, MD, Grant Garrigues, MD

Outcomes after Total Ankle Replacement in Association with Ipsilateral Hindfoot Arthrodesis

John S Lewis Jr, MD, Samuel B Adams Jr, MD, Robin M Queen, PhD, James K DeOrio, MD, James A Nunley II, MD, Mark E Easley, MD

Adolescent Anterior Cruciate Ligament Reconstruction: Autograft vs Allograft

Michael T Busch, MD, Mackenzie M Herzog, BA, Keith May, ATC, DPT, Will Mansour, BS, Jonathan C Riboh, MD, Melissa Leake, MS, ATC, Meagan M Fernandez, DO, Samuel C Willimon, MD

Arthroscopic Treatment of Anterior Ankle Impingement: A Prospective Study of 46 Patients with 5-year Follow-up

Stewart J Walsh, MD, Bruce C Twaddle, FRACS, Michael Rosenfeldt, MD, Matthew J Boyle, MD

Barbed vs Standard Sutures for Closure in Total Knee Arthroplasty: A Multicenter Prospective Randomized Trial

Jeremy Gililand, MD, Lucas Anderson, MD, Jacob Barney, BS, Hunter Ross, BS, Christopher R Jones, MD, Clint D Barnett, MD, Keith R Berend, MD, Christopher Pelt, MD, Christopher L Peters, MD

Do Surgeons Know the Cost of Orthopaedic Implants? A Multicenter Study of 503 Orthopaedic Surgeons

Kanu M Okike, MD, Robert V O'Toole, MD, Julius A Bishop, MD, Christopher McAndrew, MD, Samir Mehta, MD, William W Cross III, MD, Grant Garrigues, MD, Mitchel B Harris, MD, Christopher T LeBrun, MD

Instructional Course Lectures

Limited Wrist Arthrodesis and Motion—Preserving Reconstructive Procedures of the Wrist: Principles, Pearls and Pitfalls

Moderator: Fraser J Leversedge, MD

Hand and Wrist Problems General Orthopaedists Treat (or should treat): Diagnostic and Operative Tips

Fraser J Leversedge, MD

Revision Total Knee Arthroplasty: Step-by-Step Video Techniques

Michael P Bolognesi, MD

Innovative Techniques in Revision Total Hip Arthroplasty

Moderator: Paul F Lachiewicz, MD, Michael P Bolognesi, MD

Innovative Techniques and Frontiers in Revision Total Knee Arthroplasty

Moderator: Michael P Bolognesi, MD

Knee MLI Injuries: A Case-based Approach

Claude T Moorman III, MD

How to Build a Safe and Quality Orthopaedic OR Team in 2014: A Tool Kit to Improve Surgical

Outcomes for Your Patients

William J Richardson, MD

Management of Complex Foot and Ankle Injuries in the Athlete

Moderator: James A Nunley II, MD

Orthopaedic Video Theater

Arthroscopic-Assisted Core Decompression of the Femoral Head for Osteonecrosis

Rachel M Frank, MD, Anil Gupta, MD, MBA, Joshua Harris, MD, Frank McCormick, MD

Richard C Mather III, MD, Shane J Nho, MD

Poster Presentation

Correction of Valgus Deformity in Total Ankle Arthroplasty

Constantine Demetracopoulos, MD, Samuel B Adams Jr, MD, James K DeOrio, MD, James A Nunley II, MD, Mark E Easley, MD

Poster, Alternative Podium Presentation

Does Achilles Tendon Lengthening Improve the Results in Total Ankle Replacement

Robin M Queen, PhD, Robert J Butler, DPT, PhD, Samuel B Adams Jr, MD, Mark E Easley, MD, James A Nunley II, MD, James K DeOrio, MD

ORS

Podium Presentations

Preinjury Depletion of Macrophages Results in Increased Acute Joint Inflammation following Articular Fracture

Karsyn N Bailey, Bridgette D Furman, Kelly A Kimmerling, Chia-Lung Wu, Janet L Huebner, Virginia B Kraus, Farshid Guilak, Steven A Olson

Scaffold-mediated Viral Gene Delivery of Inducible IL-1ra to MSCs Enhances Chondrogenesis in an inflammatory Environment

Katherine A Glass, Jarrett M Link, Jonathan M Brunger, Franklin T Moutos, Charles A Gersbach, Farshid Guilak

Sustained Intra-articular Delivery of IL-1Ra using a Thermally-responsive Hydrogel Inhibits Post-traumatic Arthritis

Kelly A Kimmerling, Bridgette D Furman, Daniel S Mangiapani, Michael A Moverman, S Michael Sinclair, Janet L Huebner, Virginia B Kraus, Lori A Setton, Farshid Guilak, Steven A Olson

The Transient Receptor Potential Vanilloid 4 Ion Channel Regulates the Physiologic Response of Chondrocytes to Dynamic Loading

Christopher J O'conor, Holly A Leddy, Halei C Benefield, Wolfgang Liedtke, Farshid Guilak

Collagen VI: The Link between the Extracellular Matrix and Chondrocyte Mechanotransduction

Nicole Zelenski, Holly A Leddy, Johannah Sanchez-Adams, Paolo Bonaldo, Wolfgang Liedtke, Farshid Guilak

Knee Kinematics during Noncontact ACL Injury as Determined from Location of Bone Bruises

Sophia Y Kim, Charles E Spritzer, Gangadhar M Utturkar, Alison P Toth, William E Garrett, Louis E DeFrate

Poster Presentations

An induced Pluripotent Stem Cell-based Model of Osteoarthritis for Therapeutic Screening

Vincent P Willard, Brian O Diekman, Johannah Sanchez-Adams, Shannon K O'Connor, Nicolas Christoforou, Kam W Leong, Farshid Guilak

Omega-3 Fatty Acids Mitigate Obesity-induced Osteoarthritis and Accelerate Wound Repair

Chia-Lung Wu, Deeptee Jain, Jenna Mcneill, Dianne Little, John Anderson, Janet Huebner, Ramona Rodriguiz, William Wetsel, Virginia Kraus, Farshid Guilak

Cellular Biomechanical Properties Reflect the Differentiation State of Induced Pluripotent Stem Cells Undergoing Chondrogenesis

Johannah Sanchez-Adams, Vincent P Willard, Brian O Diekman, Nicolas Christoforou, Kam Leong, Farshid Guilak

Poly(ϵ)caprolactone-Tendon Derived Matrix Multi-layered Electrospun Scaffolds for Rotator Cuff Tendon Tissue engineering

Steven B Orr, Sean Meehan, Abby Chainani, Nabil Enayet, Kirk Hippensteel, David S Ruch, Farshid Guilak, Dianne Little

Aligned Multi-layered Electrospun Scaffolds for Rotator Cuff Tendon Tissue Engineering

Steven B Orr, Abby Chainani, Kirk J Hippensteel, Alysha Kishan, Christopher L Gilchrist, David S Ruch, Farshid Guilak, Dianne Little

Quantitative Assessment of the Compositional and Functional State of Articular Cartilage via T1-Rho Imaging

Alexander Bada, Amy L McNulty, William C Mostertz, Rebecca E Wilusz, James A Nunley, Charles E Spritzer, Farshid Guilak, Louis E Defrate

Articular Fracture in the Ankle Results in Increased Acute Local Inflammation

Bridgette D Furman, Kelly A Kimmerling, Janet L Huebner, Virginia B Kraus, Farshid Guilak, Steven A Olson

Chondrogenesis of MSCs within a 3D Fiber-reinforced Semi-interpenetrating Polymer Network Hydrogel

Kristen Moffat, Kelsey Goon, Franklin Moutos, Bradley Estes, Xuanhe Zhao, Farshid Guilak

The Effect of Dynamic Activity on Localized T1-Rho Relaxation Times in Knee Cartilage

Kwadwo E Owusu-Akyaw, Alexander Bada, Gangadhar M Utturkar, Amber T Collins, Charles E Spritzer, William E Garrett, Louis E Defrate

The Effects of Gait on *in vivo* Tibiofemoral Cartilage Strains

Nimit K Lad, Gangadhar M Utturkar, Charles E Spritzer, Edward G Sutter, Claude T Moorman, William E Garrett, Louis E Defrate

The Effect of Dynamic Activity on *in vivo* Cartilage Thickness Distribution in the Healthy Ankle

Amber T Collins, Wei Liang Cher, Charles E Spritzer, James A Nunley, Louis E Defrate

Elevated Levels of Inflammatory Cytokines, Matrix Metalloproteases, and Pain Neuromediators in Pathologic Posterior Tibial Tendons of Patients with Posterior Tibial Tendon Dysfunction

David M Tainter, Richard D Bell, Selene G Parekh, Mark E Easley, James A Nunley, Liufang Jing, Janet Huebner, Virginia B Kraus, Lori A Setton, Samuel B Adams

Effect of Aging and Interleukin-1 β on the Production of Adipokines by the Infrapatellar Fat Pad

Yao Fu, Janet Huebner, Virginia Kraus, Timothy M Griffin

Sustained Release of a Small Molecule Therapeutics from Across Linked Elastin-like Polypeptide for Intra-articular Delivery

Richard Bell, Robby D Bowles, Lori A Setton, Samuel B Adams

Workshop

Understanding Early Onset Scoliosis—From Bench Top to Bedside: The Evolution from Genetics to Animal Models to Clinical Trials

Benjamin A Alman, MD

Jonathan A Godin MD MBA
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