



\*All Presentations are 10 minutes, unless noted.

SATURDAY   March 28 (Paper No 1 - 107)					
Time	Podium	Podium	Podium	Podium	Podium
	Moderators - Natalina Harasymowicz and Li Zeng	Moderators - Lynn Ann Forrester and Ines Reichert	Moderators - Ted Gross and Liyun Wang	Moderators - Brian Feeley and Rebekah Lawrence	Moderators - Hannah Dailey and Leila Mehraban Alvandi
10:00 AM-11:00 AM	Spotlight - Synovial Fibroblasts and Inflammatory Pathways in Osteoarthritis (featuring Tristan Maerz)	Spotlight - A Focus of Different Aspects of the Wrist (featuring Trey Crisco)	Osteocyte and Osteoblast Regulation of Bone Homeostasis	Rotator Cuff and Labrum Pathology	Hip Fractures Across the Lifespan
10:00 AM	Paper 1 <b>Developing Novel Complement Inhibitors Targeting Synovial Lining Macrophages</b>	Paper 4 <b>How Does Capitate Bone Morphology Relate To Screw Toggle Characteristics?</b>	Paper 7 <b>Cox2-independent And Cox2-dependent Effects Of Naproxen On Bone Quality, Osteocytes, And Fatigue Fracture Healing In Male And Female Mice</b>	Paper 13 <b>Subchondral Bone Loss In A Rat Rotator Cuff Tear Arthropathy Model Fails To Recover Even After 6 Months</b>	Paper 19 <b>Repeatability Of A Transcatheter Arterial Embolization Approach To Induce Partial Femoral Head Ischemia In Porcine Model Of Legg-calvé-perthes Disease</b>
10:10 AM	Paper 2 <b>Dual Inhibition Of Tnfa And Il-1β Signaling Attenuates Osteoarthritis In Mouse And Non-human Primate Models</b>	Paper 5 <b>Patient Outcomes Following Denied Rehabilitation After Total Wrist Arthroplasty: A Retrospective Review</b>	Paper 8 <b>A Low Dose Of Wnt-agonist Molecule Stimulates Bone Formation In Aged Mice Additively With Mechanical Loading In Strain-dependent Manner</b>	Paper 14 <b>Dynamic Changes In Tendon Cell Apoptosis, Mitochondrial Damage And Autophagy During Early-to-middle Rotator Cuff Tendinopathy</b>	Paper 20 <b>Cystic Lesions In Femoral Head Necrosis: A Dual Role As Both Bone Repair Indicator And Collapse Risk Factor</b>

10:20 AM	Paper 3 <b>Cationic Interleukin-1 Receptor Antagonist (catil-1ra) For Post-traumatic Osteoarthritis Pain Relief</b>	Paper 6 <b>Osteolysis In Hand And Wrist Surgery: Are Peek Implants At Higher Risk?</b>	Paper 9 <b>Interrogating The Impact Of Sustained Sclerostin Monoclonal Antibody Treatment On In Vivo Osteocyte Mechanosensitivity</b>	Paper 15 <b>Modulating Immune And Progenitor Cell Responses For Enhanced Labrum Tear Repair</b>	Paper 21 <b>Characterization Of Subtrochanteric Bone Density In Patients With Atypical Femur Fracture</b>
10:30 AM	Tristan Maerz - Synovial fibroblasts as drivers of osteoarthritis	Trey Crisco - Wrist arthroplasty: Why are we so far behind the other joints?	Paper 10 <b>Inhibition Of Axl Receptor Tyrosine Kinase Enhances Osteoblast Function And Bone Mass In Mice</b>	Paper 16 <b>Inflammatory And Overuse Tendinopathy Impair Chondrocyte Function In Shoulder Crosstalk</b>	Paper 22 <b>Comparison Of Lower Limb Muscle Characteristics And Bone Mineral Density Between Femoral Neck And Intertrochanteric Fractures Using Ai-based Ct Analysis</b>
10:40 AM			Paper 11 <b>CXCL2 Mediates The Bidirectional Regulation Of Bone Homeostasis By Senescent Osteocytes In Mice</b>	Paper 17 <b>Multiple Corticosteroid Injections Compromise Tendon Histology And Biomechanical Properties In A Murine Rotator Cuff Tendinopathy Model</b>	Paper 23 <b>Correlation Of Glp-1 Agonists With 90-day Postoperative Adverse Events Following Geriatric Hip Fracture Surgery: A Large Database Analysis</b>
10:50 AM			Paper 12 <b>Lactation Induced Site-specific, Irreversible Osteocyte Lacunar Enlargement In Cortical Bone Formed After Pregnancy Onset</b>	Paper 18 <b>Bariatric Surgery Is Associated With Surgical Failure And Inferior Outcomes After Arthroscopic Rotator Cuff Repair Compared To A Matched Cohort</b>	Paper 24 <b>Investigating The Effect Of Glp-1 Medications On The Outcomes Of Geriatric Patients Undergoing Hip Fracture Surgical Fixation</b>
11:15 AM-12:15 PM	<b>Spotlight - From Molecules to Movement: Mechanobiology of the Skeleton (featuring Joel Boerckel)</b>	<b>Sex Differences in Knee Pathology</b>	<b>Skeletal Muscle - Disease, Growth and Aging</b>	<b>Functional Spine Biomechanics: Insights from Imaging and Motion Analysis</b>	<b>Structural Hip Deformity</b>

	<b>Moderators - Annemarie Lang and Damian Genetos</b>	<b>Moderators - Deva Chan and Nele Haelterman</b>	<b>Moderators - Koyal Garg and Michael McClure</b>	<b>Moderators - Olumid Danisa and Arin Ellingson</b>	<b>Moderators - Jessica Goetz and Casey Myers</b>
11:15 AM	Paper 25 <b>Optogenetic Control Of Skeletal Muscle Activation During Early Postnatal Growth Induces Expansion Of The Growth Plate</b>	Paper 28 <b>Elucidating The Role Of Inflammation And Hormones On Sex Differences In Acute Post-ACL Tear Outcomes</b>	Paper 34 <b>Time-ordered Metabolic Vs Nutritional Pathways To Sarcopenia : Longitudinal Analysis With Mfr-based Classification</b>	Paper 40 <b>Imaging Anisotropic Mechanical Properties Of Lumbar Spinal Muscle Using MR Elastography</b>	Paper 46 <b>Comparing Sex-Based Transcriptomic Differences To Patient-Matched Reported Outcomes In Femoroacetabular Impingement Syndrome</b>
11:25 AM	Paper 26 <b>Bone Response To Mechanical Loading In Osteocyte-ablated Mice</b>	Paper 29 <b>Sex-Specific Associations Between Moderate-to-Vigorous Physical Activity And Serum MCP-1 Linked To Knee Osteoarthritis Development Following ACL Reconstruction</b>	Paper 35 <b>In-vivo Human Gracilis Muscle Active Force-Length Measurements Suggest Unexpectedly Short Muscle Fibers</b>	Paper 41 <b>The Effect Of Lumbar Decompression On Functional Transitions In Patients With Lumbar Spinal Stenosis: Clinical And Biomechanical Evidence</b>	Paper 47 <b>Age- And Sex-related Developmental Changes In Lesser Trochanteric Version And Its Relationship To Femoral Anteversion In Normal Patients</b>
11:35 AM	Paper 27 <b>Differential Effects Of Continuous And Intermittent Salt-inducible Kinase Inhibition On Cortical And Cancellous Bone Responses To Mechanical Loading</b>	Paper 30 <b>Contribution Of Gonads &amp; Sex Chromosomes To Early Knee &amp; ACL Structure &amp; Function In Four Core Genotypes Mouse Model</b>	Paper 36 <b>Machine Learning Image Classification Of Cell State Morphologies To Understand Mechanisms In The Effects Of Salubrinal And Isrib On Aging And Differentiation</b>	Paper 42 <b>Preoperative Hip Stiffness Effect On Spinopelvic Compensation Following Lumbar Fusion</b>	Paper 48 <b>Three-Dimensional Analysis Of Quantitative MRI Of The Secondary Ossification Center And Metaphysis In Children With Legg-Calvé-Perthes Disease</b>
11:45 AM	Joel Boerckel- Mechanobiology of skeletal development	Paper 31 <b>Age And Sex Influence Bone Marrow Cell Therapy Efficacy In An Aged Rodent Model Of Post-traumatic Osteoarthritis</b>	Paper 37 <b>Pancreatic Cancer Induces Skeletal Muscle Wasting Via Dysregulated Autophagy And Mitochondrial Dysfunction Downstream Of IGFBP-3 Activated TGF-β Receptor Signaling</b>	Paper 43 <b>Motion-based Phenotypes Of Healthy And Chronic Low Back Pain Individuals Using High Deflection Strain Gauges</b>	Paper 49 <b>Osteotomy-free Correction Of Acetabular Dysplasia: Proof Of Concept Of The Shale Procedure</b>

11:55 AM		Paper 32 <b>Females Exhibit Excess Coupled Internal Tibial Rotation Driving High Acl Forces In Response To An Applied Valgus Moment Compared To Males: A Sex-specific Computational Modeling Study In 168 Young High-risk Athletes</b>	Paper 38 <b>Optimization Of Nuclei Isolation From Human Skeletal Muscle, Infrapatellar Fat Pad, And Synovium For Multi-Omics Methods</b>	Paper 44 <b>Spinal Movement Impairment During Gait Persists Regardless Of Speed In Patients With Chronic Low-back Pain</b>	Paper 50 <b>Discrete Element Analysis-computed Contact Stress As Computational Biomarker For Osteoarthritis Development In The Untreated Contralateral Hip Of Individuals That Underwent Unilateral Periacetabular Osteotomy To Treat Hip Dysplasia</b>
12:05 PM		Paper 33 <b>Sex Differences In Cell And ECM Nanomechanics And Collagen VI Distribution In Human Knee Cartilage</b>	Paper 39 <b>Elucidating The Role Of Ltbp4 In Neuromuscular Contracture Pathogenesis</b>	Paper 45 <b>Mid-range Motion Is More Sensitive Than End-range Motion For Detecting Changes Over Time In Adjacent Segment Motion After Anterior Cervical Arthrodesis</b>	Paper 51 <b>An International Multidisciplinary Consensus On Diagnosis Of Hip Instability Using A Delphi Method</b>
4:00 PM-5:00 PM	<b>Spotlight - Species Models of Tendon Disease (featuring Heidi Reesink)</b>	<b>NIRA - Models and Imaging (8 Minutes)</b>	<b>Meniscus Mechanobiology and Repair</b>	<b>Education - From Patients and Physicians to Training the Next Generation of Researchers</b>	<b>Clinical Research - Health Equity</b>
	<b>Moderators - Alayna Loiselle and Joanna Smeeton</b>	<b>Moderators - Dan Latt and Dennis Janssen</b>	<b>Moderators - Martin Englund and Liane Miller</b>	<b>Moderators - Susanna Chubinskaya and Elisha Raeker-Jordan</b>	<b>Moderators - Joel Gagnier and Elizabeth Yanik</b>
4:00 PM	Paper 52 <b>Athletic Training Alters Equine Superficial Digital Flexor Tendon Interfascicular Matrix Mechanics, Elastin And Lubricin</b>	(4:00 PM) Paper 55 <b>Hip Stability After Total Hip Arthroplasty: Quantifying Capsule And Passive Muscle Contributions</b>	Paper 62 <b>Modulating Human Meniscal Cell Phenotype Via Matrix Adhesion And Stiffness</b>	Paper 68 <b>Impact Of Preoperative Education Course Participation On Patient-Reported Outcomes After Total Joint Arthroplasty</b>	Paper 74 <b>Quantifying The Opportunity Cost Of Treating Obese Patients In Total Joint Arthroplasty: A Relative Value Unit Analysis Of 613,918 Cases</b>

4:10 PM	Paper 53 <b>Type III Collagen Supports Recovery Of Matrix Structure And Tissue Mechanics In Early Neonatal Tendon Healing</b>	(4:08 PM) Paper 56 <b>CMTX-101 Treatment In A Mouse Model Of Periprosthetic Joint Infection</b>	Paper 63 <b>Meniscus Tear Gapping Under Physiological Knee Loading: Considerations For Postoperative Rehabilitation</b>	Paper 69 <b>Expert Consensus On Intraoperative Wound Irrigation In Orthopedic Surgery: A Delphi Study To Optimize Antiseptic Use And Combat Biofilm And Antimicrobial Resistance</b>	Paper 75 <b>Food And Water Insecurity Are Associated With Worse Pain And Mobility In Pre- And Post-TJA Patients</b>
4:20 PM	Paper 54 <b>Synovial Fibroblasts Exacerbate Inflammation And Peritendinous Adhesions In A Human Tendon-on-a-chip</b>	(4:16 PM) Paper 57 <b>Automated 3D Analysis Of Bilateral Weight-Bearing CT Data Enables Accurate Detection Of Subtle Syndesmotic Injury</b>	Paper 64 <b>Adipokine Dysregulation Alters Meniscus Fibrochondrocyte Mechanoreponse To Microenvironmental Cues</b>	Paper 70 <b>Women Are Unequally Represented Among Clinical Trial Leadership By Orthopaedic Subspecialty</b>	Paper 76 <b>Social Determinants Of Back Pain Severity In Chicago, Il</b>
4:30 PM	<b>Heidi Reesink</b> - One Health in Action: Multi-Species Models of Joint Disease and Tendinopathy	(4:24 PM) Paper 58 <b>Establishing Ovine Mscs As A Translational Model: Continuous Low-intensity Ultrasound Induces Comparable Chondroprotective Responses In Human And Ovine Mscs</b>	Paper 65 <b>Establishment Of A Pig Model For Preclinical Evaluation Of Vitrified Meniscal Allograft Transplantation</b>	Paper 71 <b>Cultivating Enthusiasm In Science And Orthopaedics In Middle School Students: Survey Data And Impact From The 2025 Ors Open Door Event</b>	Paper 77 <b>Area Deprivation Index Is A Predictor Of Readmission And Increased Medical Complications And Emergency Department Utilization After Surgery For Femoral Neck Fractures</b>
4:40 PM		(4:32 PM) Paper 59 <b>Short Socket Acl Reconstruction Reduces Tunnel Widening While Maintaining Graft Maturation And Comparable Clinical Outcomes: A Prospective Quantitative Mri Study</b>	Paper 66 <b>Systemic Administration Of HMGB1 Peptide Promotes Meniscal Healing Via Mobilization Of PDGFR<math>\alpha</math>+ Mesenchymal Cells</b>	Paper 72 <b>Sports2stem: Community-situated Approaches For Stem Outreach To Broaden Participation In University-based Stem Research For High School Students</b>	Paper 78 <b>Disadvantages In Social Determinants Of Health Linked To Reduced Odds Of Revealing A Specific Etiology Of Nonspecific Low Back Pain</b>

4:50 PM		(4:40 PM) Paper 60 <b>Towards Validating A Computational Workflow For Predicting Micromotion In Total Ankle Replacements</b>	Paper 67 <b>Investigating The Functionality And Modulation Of The Mechanosensitive Ion Channel Trpv4 In The Meniscus</b>	Paper 73 <b>From Birth To Practice: Geographic Migration Of U.S. Orthopaedic Surgeons Highlights Opportunities For Workforce Retention And Residency Redistribution</b>	Paper 79 <b>The Impact Of Healthcare Disparities On Surgical Timing For Acromioclavicular And Clavicular Injuries</b>
		(4:48 PM) Paper 61 <b>Statistical Shape And Intensity Models Of The Human Wrist</b>			
5:15 PM-6:15 PM	<b>Spotlight - Artificial Intelligence In Arthroplasty Surgery (featuring Nicolas Piuze)</b>	<b>Ion Channel and Steroid Pathways in Chondrocytes and Joint Degeneration</b>	<b>NIRA - Therapeutics (8 Minutes)</b>	<b>Arthroplasty Outcomes in Clinical Research</b>	<b>Imaging Techniques for Bone and Cartilage</b>
	<b>Moderators - Jennifer Nichols and Joshua Roth</b>	<b>Moderators - Lin Han and Carla Scanzello</b>	<b>Moderators - Alejandro Almarza and Bingyun Li</b>	<b>Moderators - Kenton Kaufman and Kaitlyn Whitney</b>	<b>Moderators - Brad Nelson and Janne Makela</b>
5:15 PM	Paper 80 <b>Analysis Of Planned Vs. Achieved Alignment In Robotic-assisted Total Knee Arthroplasty: Impact Of Deviations On Patient-reported Outcomes</b>	Paper 83 <b>Cartilage-specific Connexin43 Deficiency Alters Injury-induced Subchondral Bone Remodeling In A Sex-dependent Manner</b>	(5:15 PM) Paper 89 <b>Blood Flow Restriction Promotes Mitochondrial Transfer And Reduces Muscle Damage In A Duchenne Muscular Dystrophy Mouse Model</b>	Paper 96 <b>Early Achievement Of A Distribution-based MCID Predicts Long-term Patient-perceived Success Following Total Knee Arthroplasty</b>	Paper 102 <b>3-D High-resolution Micro-ct Imaging Of Nucleus Pulposus With A New Contrast Agent In Preclinical Models Of Disc Degeneration</b>

5:25 PM	Paper 81 <b>Machine Learning For Risk Stratification After Primary Total Knee Arthroplasty</b>	Paper 84 <b>Uncovering The Role Of Growth Hormone In Aging Associated Hip Osteoarthritis</b>	(5:23 PM) Paper 90 <b>A Multi-functional Small Molecule 4PPBP Enhances Healing Of Meniscus Tears And Functional Outcomes</b>	Paper 97 <b>Tight Native Lateral Flexion Gap Is A Major Intraoperative Predictor Of Manipulation Under Anesthesia: A Cross-sectional Study</b>	Paper 103 <b>Radiograph-based Radiomics Trained On MSI-MRI Evaluation Of Femoral Loosening In Patients With Total Hip Arthroplasty Improves Sensitivity Of Standard Radiographical Assessments Of Implant Integration</b>
5:35 PM	Paper 82 <b>Impact Of Dynamic Alignment Cluster Preservation On Early Clinical Outcomes In Navigated Total Knee Arthroplasty Under Controlled Load</b>	Paper 85 <b>Piezo1-induced DNA Damage Reveals Novel Stress Response Mechanism In Chondrocytes</b>	(5:31 PM) Paper 91 <b>Intra-articular Anakinra Injection Mitigates Peri-articular Bone Loss In A Murine Model Of Non-invasive Anterior Cruciate Ligament Rupture With Delayed Reconstruction</b>	Paper 98 <b>Impact Of Preoperative Depression And Antidepressant Use On Postoperative Outcomes Following Knee Arthroscopy: A Retrospective Cohort Study</b>	Paper 104 <b>In-vivo Raman Spectroscopy Can Serially Monitor Focal Cartilage Defect Progression In A Porcine Impact Model</b>
5:45 PM	<b>Nicolas Piuze</b> - Integrating Preoperative, Intraoperative, and Postoperative Data: Advancing Evidence-Based Orthopaedic Surgery	Paper 86 <b>Acid-sensing Receptor Gpr68 Mediates Inflammatory And Structural Responses To Joint Acidosis In Osteoarthritis</b>	(5:39 PM) Paper 92 <b>Synergistic Inhibition Of Tnfa/tnfr And C5a/c5ar1 Pathways By Two Progranulin Derivatives-Atstrin And Nc5-in Osteoarthritis Treatment</b>	Paper 99 <b>Low Uptake Of Voluntary Patient-reported Outcomes For Total Hip And Knee Arthroplasty: A Nationwide Cms Dataset Analysis</b>	Paper 105 <b>High Resolution Diffusion Tensor Imaging Can Detect Molecular And Structural Cartilage Changes After Destabilization Of The Medial Meniscus</b>
5:55 PM		Paper 87 <b>Kca3.1: A Key Regulatory Molecule Of Ferroptosis In Chondrocytes, It Is Crucial For Cartilage Degradation And Bone Destruction In Rheumatoid Arthritis</b>	(5:47 PM) Paper 93 <b>Delivery Of Slit3 Peptide Via A Novel Composite Bone Wound Healing Patch Improved Osseointegration And Cranial Bone Defect Repair</b>	Paper 100 <b>The Effect Of Sarcopenia On Reverse Total Shoulder Arthroplasty Outcomes: A Matched Cohort Study</b>	Paper 106 <b>Ultradistal Ulnar Bone Density From Digital Wrist Tomosynthesis Imaging Is Effective For Screening Of Osteoporosis</b>

6:05 PM		<p>Paper 88 <b>Estrogen, But Not Progesterone, Reduces TNF-induced Inflammation In Chondrocytes Via ER Alpha</b></p>	<p>(5:55 PM) Paper 94 <b>The Protective Effect Of Microgel Cell Delivery For Intervertebral Disc Regeneration Therapy</b></p>	<p>Paper 101 <b>The PJI-TNM Classification And Early Surgical Success In Hip And Knee Arthroplasty Infections: Retrospective Evidence From 74 Procedures</b></p>	<p>Paper 107 <b>Deep Learning-based Polarization-SHG Image For Quantitative Assessment Of Collagen I/II In Regenerative Porcine Knee</b></p>
			<p>(6:03 PM) Paper 95 <b>Does Early Administration Of Disease Modifying Therapy Prevent Early Onset Scoliosis In Young Children With Spinal Muscular Atrophy</b></p>		