

The following poster will be displayed during the four days of the meeting

International Combined Orthopaedic Research Societies (ICORS)	Page 3
Business Innovation Competition (BIC)	Page 3
Future Faculty (FF)	Page 3 - 4
ORS Scientific Network Grant (SNG)	Page 4
New Investigator Recognition Awards (NIRA)	Page 4 - 8

Poster Index for Session 1 – (Saturday – Sunday)

Biomaterials	Page 9 – 16
Bone	Page 16 - 27
Cartilage and Synovium	Page 27 - 37
Clinical Research	Page 37 - 43
Education and Outreach	Page 43
Foot and Ankle	Page 44 – 46
Guest Nation- Ireland 	Page 10, 16, 32, 96, 101, 102
Hand and Wrist	Page 47 - 49
Hip	Page 49 - 52
Hip and Knee Arthroplasty	Page 53 - 63
Imaging	Page 63 - 66
Infection	Page 66 - 68
Intervertebral Disc	Page 69 - 73
Knee	Page 73 – 78
Late Breaking	Page 100 - 114
Meniscus	Page 78 - 80
Multi-organ System Crosstalk	Page 80 – 81
Shoulder and Elbow	Page 81 - 86
Skeletal Muscle	Page 86 - 88
Spine	Page 88 - 92
Tendon and Ligament	Page 92 - 98
Tumors	Page 99 – 100

Poster Index for Session 2 – (Monday - Tuesday)

Biomaterials	Page 115 – 121
Bone	Page 122 - 133
Cartilage and Synovium	Page 133 - 143
Clinical Research	Page 143 - 149
Education and Outreach	Page 149 - 150
Foot and Ankle	Page 150 – 153
Guest Nation-Ireland 	Page 122, 128, 131, 186, 207, 209
Hand and Wrist	Page 153 - 155
Hip	Page 155 – 158
Hip and Knee Arthroplasty	Page 158 - 168
Imaging	Page 168 - 171
Infection	Page 171 - 173
Intervertebral Disc	Page 173 - 177
Knee	Page 177 – 182
Late Breaking	Page 206 - 219
Meniscus	Page 183 - 185
Multi-organ System Crosstalk	Page 185 - 186
Shoulder and Elbow	Page 186 – 190
Skeletal Muscle	Page 190 - 193
Spine	Page 193 - 198
Tendon and Ligament	Page 198 – 204
Tumors	Page 204 – 206

The following poster will be displayed from Saturday – Tuesday

International Combined Orthopaedic Research Societies (ICORS) Best Poster

ICORS1 – AO Foundation

Mechano-Responsive Molecular Expression and Disease State In Osteoarthritic Articular Cartilage

Nuria Viudes-Sarrion; Rocio Castro-Vinuelas; Silvia Monteagudo; Rik Lories; Ilse Jonkers

ICORS2 – Australian & New Zealand Orthopaedic Research Society (ANZORS)

On Stem Cell Therapy for Osteoarthritis: An in Vitro Investigation to Explain Clinical Outcomes

Jiao Jiao Li; Christopher B. Little

ICORS3 – Chinese Orthopaedic Association (COA)

Magnesium Containing Hybrid Fixation System Promotes the Healing of Long Bone Fractures: A Large Animal Study

Yuantao Zhang; Lizhen Zheng; Wenxue Tong; Dick Ho Kiu Chow; Jiankun Xu; Ling Qin

ICORS4 – Japanese Orthopaedic Association (JOA)

Rapid Induction of Cancer Stem Cell Properties in Osteosarcoma Cells Using Polymer Hydrogels and Identification of Novel Therapeutic Targets

Takuma Kaibara; Masumi Tsuda; Lei Wang; Takayuki Nonoyama; Takayuki Kurokawa; Jian Ping Gong; Norimasa Iwasaki; Shinya Tanaka; Kazunori Yasuda

ICORS5 – Korean Orthopaedic Research Society (KORS)

Antibacterial Infection and Immune-Evasive Coating for Orthopedic Implant

Woo Young Jang; Youngmin Seo; Jungmok Seo

ICORS6 – Taiwan Orthopaedic Research Society (TORS)

Apoptotic Effect and Cell Arrest of Deoxyshikonin in Human Osteosarcoma Cells Through the P38 Pathway

Business Innovation Competition – posters from BIC1 up to BIC10

Future Faculty (FF)

FF1 - **Maryam Afzali** - Colorado State University

FF2 - **Rafay Ahmed** - Vanderbilt University Medical Center

FF3 - **Evan Buettmann** - Virginia Commonwealth University

FF4 - **Masnsen Cherief** - Johns Hopkins University

FF5 - **Lu Feng** - Hong Kong Institute of Science & Innovation

FF6 - **Michael Friedman** - Virginia Commonwealth University

FF7 - **Guoli Hu** - UT Southwestern Medical Center

FF8 - **Rebecca Irwin** - Cornell University

FF9 - **Wensen Jiang** - Cedars-Sinai Medical Center

FF10 - **Hemalatha Kanniyappan** - University of Illinois College of Medicine Rockford

FF11 - **Alexander Knights** - University of Michigan

FF12 – **Jiannan Li** - Stanford University

FF13 - **Jing-Sheng Li** - University of Washington

FF14 - **Bruno Menarim** - Gluck Equine Research Center

FF15 - **Arin Oestreich** – Washington University School of Medicine

FF16 - **Benjamin Osipov** - UC Davis Health

FF17 - **Qizhi Qin** – Johns Hopkins University School of Medicine

FF18 - **Sowmya Ramesh** - Johns Hopkins University

FF19 - **Guak-Kim Tan** - Shriners Hospitals for Children

FF20 - **Maryam Tilton** - Mayo Clinic

FF21 - **Hannah Zlotnick** - Colorado University Boulder

ORS Scientific Network Grant Awardees 2022 (SNG)

SNG1

Sex- and model-dependent transcriptomic differences of the dorsal root ganglion in osteoarthritis
Easton Farrell, Lai Wang, Alexander Knights, Lucas Junginger, Shingo Ishihara, Natalie Adamczyk, Alia M Obeidat, Matthew J Wood, Anne-Marie Malfait, Rachel E Miller, Tristan Maerz

SNG2

HyA-Hydrogel Promotes Myogenesis and Beige Adipogenesis in vitro and Muscle Recovery of Massive Rotator Cuff Tears in vivo

Prashant Nuthalapati, Michael R Davies, Anthony Nguyen, Morgan Pfaff, Anouk Killaars, Hannah Chi, Francisco Gomez Alvarado, Daniel Hu, Kevin Healy, Xuhui Liu, Brian T. Feeley

New Investigator Recognition Awards (NIRA)

Poster No. 79

An Indoleamine 2,3-dioxygenase Galectin-3 Fusion Protein As A Treatment For Osteoarthritis

Folly M. Patterson; Brittany Partain; Ron K. June; Benjamin G. Keselowsky; Hudalla A. Gregory; Kyle D. Allen

Poster No. 80

Single-cell Understanding Of Nucleus Pulposus Degeneration To Instruct New Treatment Strategies For Intervertebral Disc Disease

Deepani W. Poramba-Liyanage; Peter Zeller; Xiaole Tong; Frank M. Riemers; Frances C. Bach; Bjorn P. Meij; Anne Camus; Danny Chan; Alexander van Oudenaarden; Marianna A. Tryfonidou

Poster No. 81

Identification Of Multiple Stem Cell Populations In The Healthy Human Intervertebral Disc

Jasmin Mertens; Hannah Swahn; Oscar Alvarez-Garcia; Tony S. Mondala; Padmaja Natarajan; Steven R. Head; Martin K. Lotz

Poster No. 82

Multi-modal Transcriptomic Analyses Of The Mouse Intervertebral Disc Following Injury Reveals A Temporally Distinct Cascade Of Infiltrating Immune Cells

Sade W. Clayton; Aimy Sebastian; Nicholas R. Hum; Stephen Patrick Wilson; Remy E. Walk; Garrett W.D. Easson; Rachana Vaidya; Kaitlyn S. Broz; Laura Mpofu; Gabriela G. Loots; Simon Y. Tang

Poster No. 83

Disease-related Changes In The Cellular Landscape Of Human Intervertebral Disc

Hannah Swahn; Jasmin Mertens; Oscar Alvarez-Garcia; Tony S. Mondala; Padmaja Natarajan; Steven R. Head; Martin K. Lotz

Poster No. 84

Recombinant Protein Therapeutic Derived From Proteomic Analyses Of The MRL/MpJ Tendon Extracellular Matrix And Secretome Promotes Regenerative Behavior Across Tendon Cell Species

Jason C. Marvin; Ethan J. Liu; Nelly Andarawis-Puri

Poster No. 85

Marrow Adipogenic Lineage Precursors (malps) Facilitate Bone Marrow Recovery After Chemotherapy

Jiankang Fang; Leilei Zhong; Lutian Yao; Ling Qin

Poster No. 149

Identification Of T Cell Exhaustion As A Biomarker Of S. Aureus Chronic Osteomyelitis In Humanized Mice

Motoo Saito; Javier Rangel Moreno; Edward Schwarz; Gowrishankar Muthukrishnan

Poster No. 150

TrkA+ sensory neurons facilitate osteosarcoma disease progression

Sowmya Ramesh; Qizhi Qin; Leslie Chang; Edward McCarthy; Thomas Clemens; Aaron James

Poster No. 151

Modulation Of The Gut Microbiota With Bifidobacterium Longum Accelerates Bone Repair In Aged Mice

Joseph L. Roberts; Mateo Gollosi; Derek B. Harding; Hicham Drissi

Poster No. 152 (Guest Nation-Ireland) 

When Bacteria Meets Nanotechnology: Development Of Antibiotic-free Antimicrobial Scaffolds For Effective Delivery Of Osteogenic Genes To Simultaneously Treat And Regenerate Infected Bone Tissue

Joanna M. Sadowska; Katelyn J. Genoud; Rachael N. Power; Austyn Matheson; Arlyng Gonzalez-Vazquez; Lara Costard; Tanguy Hallegouet; Gang Chen; Brenton Cavanagh; Huijun Zhang; Aldo Boccaccini; Fergal J. O'Brien

Poster No. 153

Proliferation Of Early And Mature Osteoblasts Is Required For Fracture Callus Mineralization

Nicole Gould; Jennifer McKenzie; Katherine Hixon; Andre Coello Hernandez; Leyi Chen; David Ornitz; Matthew Silva

Poster No. 154

IVIM Can Detect Femoral Head Ischemia: An In Vivo Piglet Model Study

Erick O. Buko; Steen Moeller; Ferenc Toth; Casey P. Johnson

Poster No. 155

Evidence Of Bisphosphonate-conjugated Sitafloracin With The Ability Of "Target & Release" Kinetics To Kill S. Aureus Within Canaliculi Of Osteomyelitis One Stage-revision Murine Model

Youliang Ren; Jason Weeks; Thomas Xue; Joshua Rainbolt; Karen L. de Mesy Bentley; Ye Shu; Chad A. Galloway; Yuting Liu; Philip Cherian; Jeffrey Neighbors; Frank H. Ebetino; T. Fintan Moriarty; Shuting Sun; Edward M. Schwarz; Chao Xie

Poster No. 177

Subject Specific Measurements Are Required For Accurate Prediction Of Human Gracilis Muscle Active And Passive Mechanical Properties

Benjamin Binder-Markey; Lomas Persad; Alexander Shin; William Litchy; Kenton Kaufman; Richard Lieber

Poster No. 178

Understanding The Biological Basis Of Contracture Using A Mouse Model Of Single Hindlimb Immobilization-induced Fibrosis

Laura Moore; Samantha Lessard; Purva Singh; Deema Al-Abdulla; Liang Ying; Peter Sculco; Scott Rodeo; Miguel Otero

Poster No. 179

Gene Expressions Of Fgf7 And Postn In Canine Chordae Tendineae And Their Possible Relations To Tenogenesis In Chordae Tendineae And Potential Effects On Flexor Tenocyte Biology

Rou Wan; Ye Ren; Yinxian Yu; Ramona Kirk Reisdorf; Mohamed Abozaid; Gongyin Zhao; Tomoyuki Kuroiwa; Steven Moran; Anne Gingery; Chunfeng Zhao

Poster No. 180

When 1 + 1 Does Not Equal 2: Special Considerations Are Required For Inclusion Of Patients With Bilateral Conditions In Orthopedic Research Studies

Patrick M. Carry; Carson Keeter; David R. Howell

Poster No. 181

A Methodology For Developing Outcome Measures Aligned With Orthopaedic Patients' Desired Outcomes

Jenny M. Dorich; Roger Cornwall; Tim Uhl; Dana Howell; Camille Skubik-Peplaski
Poster No. 182

Teaching Principles Of Bioadhesives With An Inquiry-based Learning Module

Christopher J. Panebianco; Poorna Dutta; Jillian Frost; Angela Huang; Olivia S. Kim; James Iatridis;
Andrea Vernengo; Jennifer Weiser

Poster No. 183

Factors Associated With Concomitant Soft Tissue Injuries In The Setting Of Pediatric And Adolescent ACL Tears:data From The Boston Children’S Hospital ACL Registry

Nazgol Tavabi; James Pruneski; Benton Heywroth; Mininder S. Kocher; Ata M. Kiapour

Poster No. 214

Geometric MRI-derived Biomarkers As Predictors Of Changes In Joint Mechanics After Partial Meniscectomy: A Statistically Augmented Computational Approach

Brett Steineman; Erin Leatherman; Thomas J. Santner; Joshua Leadem; Madison Lang; Kate Lindsey; Erin Argentieri; Amanda Wach; Kalle Chastain; Ashley Pekmezian; Matthew Koff; Scott Rodeo; Amy Lerner; Suzanne Maher

Poster No. 215

Dynamic Response Of The First Carpometacarpal Joint During Pinching

David Jordan; Sohail Daulat; Kent Kwoh; Zong-Ming Li

Poster No. 216

Delayed Onset Of Physiological Loadings Promote Matured Healing Of Avascular Meniscus Tears

Hun-Jin Jeong; Solaiman Tarafder; Elen Zhu; Clair Yoon; Chang Lee

Poster No. 217

Knee Joint Changes Following An In Vivo ACL Tear In Adolescent Mice

Taeyong Ahn; Ben Loflin; Nicholas Nguyen; Ciena Miller; Kaitlyn Colglazier; Stephen Schlecht

Poster No. 218

The Relationship Between Disease Severity And Tissue Expression In The Cam Lesion And Capsule Tissues Retrieved From Patients Hips With Cam-type Femoroacetabular Impingement Syndrome

Catherine Yuh; Philip Malloy; Steven P. Mell; Garrett Jackson; Jorge Chahla; Robin Pourzal; Deborah J. Hall

Poster No. 219

The Role Of Dynamic Valgus Collapse In Non-contact Anterior Cruciate Ligament Injury: Insight From Tibiofemoral Range Of Motion Analysis

Zoë A. Englander; Louis E. DeFrate

Poster No. 220

The Effect Of Romosozumab For Perioperative Management Of Spinal Instrumentation - biomechanical Evaluation Using Finite Element Analysis-

Koji Ishikawa; Makoto Nakagawa; Puviindran Nadesan; Benjamin Alman

Poster No. 245

Corrosion In Modular Dual Mobility Acetabular Components: A Retrieval Analysis Study

Aarti Shenoy; Ashley Pekmezian; Timothy Wright; Douglas Padgett

Poster No. 246

Doxorubicin Functionalized Hydroxyapatite Nanoparticles Halt Tumor Growth And Prevent Bone Destruction In An Aggressive Orthotopic Osteosarcoma In Mice

Deepak B. Raina; Yang Liu; Tova Corbascio; Sujeesh Sebastian; Jintian Huang; Lars Lidgren; Magnus Tägil

Poster No. 247

Promising Strategy For Bone Repair And Regeneration: Bioactive Pectin Regulated IPN Scaffold

Hemalatha Kanniyappan; Varun Gnanasekar; Yani Sun; Aftab Merchant; Rong Wang; Mathew Mathew

Poster No. 248

Mechanobiology At Work: Physiologic Load Induced Strain Of 3d Printed Truss Element Amplifies Osteogenicresponse Of Human Mesenchymal Stem Cells Compared To Static Surface Feature Influence

Se-Hwan Lee; Ali Kiapour; Brendan Stoeckl; Lewis Harrison; Matthew Begley; Jessee Hunt; Robert Mauck; Su-Jin Heo

Poster No. 249

Onset Of Skeletal Deformities In A Rabbit Model Of Growth Plate Injury Is Delayed With A 3d Printed Biomimetic Composite

Kristine Fischenich; Francisco Rodriguez-Fontan; Stacey Thomas; Sarah Schoonraad; Laurel Stefani; Virginia Ferguson; Nancy Hadley-Miller; Stephanie Bryant; Karin Payne

Poster No. 250

Leptin Receptor Expressing Cells Are Present In Fibrotic Tissue At Both Implant-to-bone And Bone-to-bone Interfaces

Anastasia Oktarina; Vincentius Suhardi; Mohammed Hammad; Andrew Thomson; Lionel Ivashkiv; Matthew Greenblatt; Mathias Bostrom; Xu Yang

Poster No. 251

Implantable Tissue-Interfacing Automatic Stimulation Device For Mechanotherapy To Prevent Disuse Muscle Atrophy

Sungmin Nam; Bo Ri Seo; Alexander Najibi; Stephanie McNamara; David Mooney

Saturday, February 11 and Sunday, February 12

10:00 AM - 7:00 PM (Saturday) 10:00 AM – 5:00 PM (Sunday)

Even Number posters will have presenters at poster on Saturday from 10:15 am – 11:15 am

Odd Number posters will have presenters at posters on Sunday from 10:15 am – 11:15 am

POSTER SESSION 1

Room - Trinity I and II

Biomaterials - Controlled Release

Poster No. 363

Novel Exo/sf Nanocarriers For The Delivery Of Anti-inflammatory Natural Product Sulforaphane

Shirali Patel; Suridh Chakravarty; Divya Bijukumar

Poster No. 364

Pharmacokinetic And Biodistribution Study Of ProGel-Dex For Sustained Joint Pain Relief In Osteoarthritic Mice

Gang Zhao; Xin Wei; Xiaoke Xu; Zhenshan Jia; Devendra Kumar; Evan Glissmeyer; Daniel Tran; Haochen Jiang; Sumbal Talib; Ningrong Chen; Zhulian Wang; Yazen Alnouti; Steven Goldring; Dong Wang

Poster No. 365

Development Of Inorganic Polyphosphate-based Nanoparticles For Drug Delivery Into Articular Cartilage

Jordan Nhan; Khushnouma Virah Sawmy; Jordan Yin; Jean-Philippe St-Pierre

Poster No. 366

Efficacy Of Saline Wash Plus Vancomycin/tobramycin-doped PVA Composite (PVA-Van/Tob-p) In A Mouse Pouch Infection Model Implanted With 3D-printed Porous Titanium Cylinders

David Markel; Tong Shi; Paula Dietz; Bin Wu; Therese Bou-Akl; Weiping Ren

Poster No. 367

Cement Viscosity Does Not Impact In Vitro Efficacy Against Common Prosthetic Joint Infection Pathogens

Matthew J. Dietz; Dylan Thomas; Chance Anderson; Brian McGowan; Matthew Squire

Poster No. 368

Evaluating The Material Properties And Antimicrobial Efficacy Of Biphasic Calcium Sulphate/Hydroxyapatite Biomaterial Containing Tobramycin

Jintian Huang; Sujeesh Sebastian; Mattias Collin; Yang Liu; Deepak Bushan Raina; Magnus Tagil; Lars Lidgren

Poster No. 369

Application Of Multi-layered Temperature-responsive Polymer Brushes Coating On Titanium Surface To Prevent Peri-prosthetic Infection

Suenghwan Jo; Soo Kyung Choi; Hyeonjoon Lee; Ryu Je Hong; Byung Wook Cho

Biomaterials - Orthopaedic Implant Materials

Poster No. 370

Optimized Hot Isostatic Pressing Parameters Make Additive Manufacturing Of Femoral Stems Feasible

Ilona Hoffmann; Yoshihiro Hasebe; Hiroyuki Takahashi; Takashi Sakai; Tamon Kabata; Yoshitomo Kajino; Yoshio Nakashima

Poster No. 371

Favorable Recellularization And Tendon-bone Integration Abilities Of Four Strand Decellularized Bovine Tendon Graft In A Sheep Model

Junya Itou; Masafumi Itoh; Umito Kuwashima; Ken Okazaki; Kiyotaka Iwasaki

Poster No. 372 (Guest Nation-Ireland) 

Development And Characterization Of A Novel Injectable And 3d Printable Hyaluronic Acid And Collagen-based Composite Hydrogel For The Repair Of Articular Cartilage Defects

Donagh G. O'Shea; Tom Hodgkinson; Caroline Curtin; Fergal O'Brien

Poster No. 373

Basement Membrane-derived Peptide Nanocoatings Promote Peri-Implant Epithelium-like Keratinocyte Function

Conrado Aparicio; Nicholas Fischer; Alexandra Kobe; John A. Pizarek; Jiahe He; David A. De Jong

Poster No. 374

HMGB1 Coating Strategy To Improve Osseointegration: A Novel Open Reduction Internal Fixation (ORIF) Model In Diabetic Lewis Rats

Alexandra Arteaga; Claudia C. Bigueti; Adeena Qureshi; Jimena Mora; Evelin Rios; Javier La Fontaine; Danieli Rodrigues

Poster No. 375

Investigating HMGB1 Isoforms On Titanium Coatings For Healing And Biocompatibility In Lewis Rats

Alexandra Arteaga; Claudia C. Bigueti; Bhuvana Lakkasethar Chandrashekar; Adeena Qureshi; Jimena Mora; Evelin Rios; Javier La Fontaine; Danieli Rodrigues

Poster No. 376

Comparative Immune And Neurotoxicity Effects Of Orthopedic Implant Metal Debris

Lauryn Samelko; Kyron McAllister; Joshua J. Jacobs; Robin Pourzal; Nadim J. Hallab

Poster No. 377

Carbon-infiltrated Carbon Nanotubes Prevent The Formation Of Methicillin-resistant Staphylococcus Aureus Biofilms

Lucy C. Bowden; Jocelyn Wells; Isaac Harriman; Shane Mann; Brian D. Jensen; Anton E. Bowden; Bradford K. Berges

Poster No. 378

Enhancement Of Bone Formation Potential Of β -tricalcium Phosphate Coated With Biological Trace Elements

Kenichiro Saito; Yusuke Inagaki; Tatsuro Sugino; Yoshinobu Uchihara; Hironori Sugimoto; Masakazu Okamoto; Yuki Nishimura; Kensuke Okamura; Munehiro Ogawa; Yasuhito Tanaka

Poster No. 379

Effect Of Low Young's Modulus Ti-nb-sn Alloy Locking Plate On Bone Healing

Masashi Koguchi; Yu Mori; Kentaro Ito; Tomoki Koyama; Masayuki Kamimura; Naoya Masahashi; Shuji Hanada; Toshimi Aizawa

Poster No. 380

Osteogenesis In Rat Femur Segmental Defect Model Using A Synthetic Carrier With Zinc Adjuvants

Andrew Leggett; Jonathan Lopez; David Ahn; Dhruv Mendiratta; Mark Fisher; Varoon Phondge; Isabel Herzog; Glen Nie; Yazan Kadkoy; Thomas Helbig; Alexis Dompore; David Paglia; James P. O'Connor; Sheldon Lin

Poster No. 381

Silicon Nitride-PEEK Composite Demonstrates Antimicrobial Effects In Vitro

Paul DeSantis; Ryan Bock; Sean Ronayne; Noreen Hickok; Steven M. Kurtz

Poster No. 382

Automated Finite Element Modeling Approach For Investigating A Range Of Implant Surface Topologies

Elizabeth Mathey; Greg Causey; James Price; Dana Carpenter

Poster No. 383

Altered Mitochondrial Dynamics: A Molecular Investigation On CoCrMo Particle Induced Neurodegeneration

Priyadarshini Vijayakumar; Yongchao Mou; Xue-jun Li; Mark Barba; Mathew Mathew; Divya Bijukumar

Poster No. 384

Improved Load-sharing Using An Injectable And Self-setting Resorbable Bone Adhesive In The Treatment Of Unstable Metaphyseal Fractures - A Pilot Biomechanical Test Using Strain Gauges

Sourabh Boruah; Brittany McDonough; David A. Bichara; Molly Shutt; Michael Brown; Michael J. Weaver

Poster No. 385

Surface Damage Mechanisms Of Polyethylene And Metal Components In Retrieved Rotating Hinge Knees

Tabitha L. Derr; Abigail Tetteh; Nicolas S. Puizzi; Daniel W. MacDonald; Michael A. Mont; Steven M. Kurtz

Poster No. 386

Retrieval Analysis And Effect Of Grain Size On The Corrosion Behaviour On The Occurrence Of Gross Trunnion Failure Of TMZF Implant Alloy

Mozart Q. Neto; Jennifer L. Wright; Bianca Romy; Catherine Yuh; Deborah J. Hall; WM Rainforth; Joshua J. Jacobs; Robin Pourzal

Poster No. 387

Chronic Heavy Alcohol Consumption Impairs The Ability Of Demineralized Allogenic Bone Matrix To Support Osteoinduction In Rats

Amida F. Kuah; Urszula T. Iwaniec; Russell T. Turner

Poster No. 388

Comparison Of Parallel And Antiparallel Bmp-2b PA Nanofibers For Osteoinductivity And Bone Regeneration In A Rat Spine Fusion Model

Alyssa M. Goodwin; Jacqueline Inglis; Ruomeng Qui; Hogan Brecount; Steven Kurapaty; Alexander Linton; Nicholas Lanzetta; Rahim Laiwalla; Samuel Stupp; Erin Hsu

Poster No. 389

Chemical Synthesis Of Silver Nanohybrids With Advanced Properties

Bingyun Li; Jianhua Yan

Poster No. 390

Transcript-activated Coatings On Titanium Mediate Cellular Osteogenesis For Enhanced Osteointegration

Elizabeth R. Balmayor; Omnia Fayed; Martijn van Griensven; Zeinab Tahmasebi Birgani; Christian Plank

Poster No. 391

An Analysis Of A Decade Of Lumbar Interbody Cage Malfunctions In The United States: A Maude Database Study

Oluwatodimu Richard Raji; Amit Piple; Victor Ungurean jr.; Andrea Rowland; Adam Schlauch; Dimitriy Kondrashov; Ken Hsu; Jim Zucherman

Poster No. 392

A High Strength UHMWPE For Prophylactic Pain Management Of Total Joint Replacement

Nicoletta Inverardi; Sashank Lekkala; Keith K. Wannomae; Hany Bedair; Orhun K. Muratoglu; Ebru Oral

Poster No. 393

Development And Clinical Introduction Of Di-cumyl Peroxide Crosslinked And Alpha-tocopherol Stabilized UHMWPE

Mehmet D. Asik; Cecilia Nepple; Keith Wannomae; Brad Micheli; Rachel Connolly; Ebru Oral; Orhun K. Muratoglu

Poster No. 394

Adverse Electrochemical Events Affect Ti-6Al-4V Oxide Structure And Passivation Resistance

Michael A. Kurtz; Audrey C. Wessinger; Lilliana M. Taylor; Jeremy L. Gilbert

Poster No. 395

Nanostructured Titanium Oxide On Ti6Al4v Drives A Surface Mediated Antimicrobial Response

Chase T. Davis; Gregory M. Williams

Poster No. 396

Biostimulative Collagen-polyethylene Suture For High-Demand Orthopedic Applications Compared To Conventional Suture

Kyle Christensen; Rohith Nair; Nardos Sori; Riya Palikonda; Amanda Carey; Amrita Dasgupta; Victoria Stagnaro; Kevin Bonner; Gregory DiFelice; Nicholas Sgaglione; Matthew Havener

Poster No. 397

Retrieval Analysis Of In Vivo Wear Of Temporal Mandibular Joint Replacement Prostheses Of One Design

Deborah J. Hall; Catherine Yuh; Mozart Q. Neto; Louis G. Mercuri; Kevin E. Cordero; Robin Pourzal

Biomaterials - Repair/Replacement of Hard Tissues

Poster No. 398

A Biomimetic Polymer Adhesive For Bone Fracture Repair

Jianying Zhang; James H-C. Wang

Poster No. 399

Regeneration Of Osteochondral Defects In The Rabbit Temporomandibular Joint

Joao Monteiro; Toru Takusagawa; Gerhilde Sampaio; Joseph McCain; Belmiro Vasconcelos; Mark Randolph; Fernando Guastaldi

Poster No. 400

Driving Osteogenesis In Composite Biomaterials Using Tunable Hydroxyapatite Surface Modifications

Matthew Fainor; Janai Augustin; Harvey Smith; Robert Mauck; Sarah Gullbrand

Poster No. 401

Demonstration Of Proportional Osteoinduction Using The Rat Calvarial CSD Model

John F. Kay, Ph.D.

Poster No. 402

An In Vitro Simulation Model To Assess The Tribology Of Decellularised Osteochondral Grafts In A Human Patellofemoral Joint

Raelene M. Cowie; Philip A. Straw; Hazel L. Fermor; Louise M. Jennings

Poster No. 403

The Mechanical And Tribological Performance Of Decellularised Porcine Osteochondral Allografts In An In Vitro Porcine Tibiofemoral Joint Model

Philip A. Straw; Raelene M. Cowie; Hazel L. Fermor; Louise M. Jennings

Biomaterials - Repair/Replacement of Soft Tissues

Poster No. 404

New Bioactive Spatially-embedded Growth Factor Scaffold Promotes Bone-to-tendon Interface Healing After Chronic Rotator Cuff Repair

Jian Han; Joo Han Oh

Poster No. 405

Dual Peptide Functionalized Alginate Hydrogels To Control Msc Therapeutic Potency For Cell-mediated Intervertebral Disc Repair

Xiaohong Tan; Liufang Jing; Sydney Neal; Munish C. Gupta; Jacob M. Buchowski; Lori A. Setton; Nathaniel Huebsch

Poster No. 406

An Innovative Perfusion Technique For Muscle Decellularization, A Therapeutic Approach For Large Defect In Turkey Volume Muscle Loss

Farbod Yousefi

Poster No. 407

A Sulfated Poly (Amido Saccharide) Interpenetrating Polymer Network Restores The Fixed Negative Charge Of GAG-depleted Cartilage

Christian DeMoya; Michael Albro; Brian Snyder; Mark Grinstaff

Poster No. 408

Expression Analysis Of Tendon-derived Markers In Human Rotator Cuff-derived Cells In Three-dimensional Culture

Takahiro Furukawa; Yutaka Mifune; Atsuyuki Inui; Hanako Nishimoto; Tomoya Yoshikawa; Issei Shinohara; Tatsuo Kato; Shuya Tanaka; Masaya Kusunose; Ryosuke Kuroda

Poster No. 409

Platelet-rich Plasma-loaded Hyaluronic Acid Based Bioactive Scaffolds For Nerve Regeneration Of Spinal Cord Injury

Meng-huang Wu; Ming-Thau Sheu; Hon-Pan Yiu; Bang-Yu Wen

Poster No. 410

Exosomes-functionalized Aligned Microfibers Hydrogel Creates Pro-regenerative Microenvironment For Tendon-to-bone Healing

Wei Song; Zhijie Ma; Haiyan Li; Yaohua He

Biomaterials - Scaffolds

Poster No. 411

Evaluating Donor Variability In Osteogenic Potential In Mineralized Collagen Scaffolds

Vasiliki Kolliopoulos; Aleczandria Tiffany; Maxwell Polanek; Brendan Harley

Poster No. 412

**In Vivo Gap Repair Between Bone And Cartilage With Co-cultured Human Articular Chondrocyte And Human Osteoblast On Plga Mesh Scaffold For The Treatment Of Osteonecrosis Of The Femoral Head
In Vivo Gap Repair Between Bone And Cartilage With Co-cultured Human Articular Chondrocyte And Human Osteoblast On Plga Mesh Scaffold For The Treatment Of Osteonecrosis Of The Femoral Head**

Hong Seok Kim; Jinwoo Nam; Jung-wee Park; Sunhyung Lee; Jae Youn Yoon; Jeong Joon Yoo

Poster No. 413

Development And In Vitro Evaluation Of An Electrically Conductive Demineralized Bone Matrix (DBM)-Based Composite For Use As A 3D-Printed Bone Tissue Substitute

Damion T. Dixon; Cheryl T. Gomillion

Poster No. 414

Optimizing Decellularization Of Meniscus Tissue For Meniscus Tissue Engineering Applications

Saman Firoozi; Rohan Shirwaiker; Matthew B. Fisher; Amy L. McNulty

Poster No. 415

Three-dimensional Printed β -tricalcium Phosphate Scaffolds Reproduce Bone Microstructure To Promote Bone Regrowth And Repair

Kyohei Takase; Takahiro Niikura; Tomoaki Fukui; Keisuke Oe; Kenichi Sawauchi; Ryo Yoshikawa; Yuya Yamamoto; Ryota Nishida; Ryosuke Kuroda

Poster No. 416

Development Of Polyurethane/ Hydroxyapatite (PU/HAp) Foam-based Material For Bone Tissue Engineering

Chiu-Fang Chen; Szu-Hsien Chen; Tzer-Min Lee; Yan-Hsiung Wang

Poster No. 417

Self-Regulating Anti-Cytokine Hydrogel Implants For The Treatment Of A Novel Model Of TNF-Mediated Rheumatoid Arthritis

Leila S. Saleh; Emma Erlich; Rafael Sanguinetti Czepielewski; Kelsey H. Collins; Kristin L. Lenz; Luke E. Springer; Christine T.N. Pham; Gwendalyn J. Randolph; Farshid Guilak

Poster No. 418

Altering Collagen Type I:III Ratio Affects Immune Cell Motility In In Vitro Hydrogel Tissue Models

Victor Z. Zhang; Raquel Ajalik; James McGrath; Hani Awad

Poster No. 419

3d Bioprinted Biomimetic Bone-tendon Interface With Decellularized ECM/GelMA Bioink

Seul-Ki Kim; Hyang Kim; Junghwa Choi; Saerom Jeong; Bo Young Park; Seung Yeol Lee

Poster No. 420

Compressive Mechanical Load Modulates Cytokine Production By Msc Spheroids

Kent Leach; Sabrina Mierswa; Victoria Thai

Poster No. 421

Macromolecular Crowding Enhances Bmp-2 Retention In Cell-secreted Extracellular Matrices

Kent Leach; Shierly Fok Lau; Robert Gresham

Poster No. 422

3D-Printed Bone Mimicking Scaffolds Composed Of Hyaluronan, Collagen And Calcium Phosphate Particles For Bone Regeneration

Daphne van der Heide; Elena Della Bella; Huipin Yuan; Florence de Groot-Barrère; Martin J. Stoddart; Matteo D'Este

Poster No. 423

Friction Properties Of 3D Printed TPMS Scaffolds: Are All Configurations Created Equal?

Samuel Fang

Poster No. 424

Bone Formation By Mesenchymal Stem Cell In 3D Hydrogel With An Antibacterial Dose Of Silver-containing Calcium Phosphate

Masaya Ueno; Hiroshi Miyamoto; Sakumo Kii; Hirohito Hirata; Masatoshi Murayama; Shunsuke Kawano; Akiko Kukita; Masaaki Mawatari

Poster No. 425 (Guest Nation-Ireland) 

Development Of A Pro-osteogenic And Pro-angiogenic Mrna-activated Scaffold For Bone Repair

Katie McCormick; Jorge Moreno Herrero; Sarinj Fattah; Andreas Heise; Fergal O'Brien; Sally-Ann Cryan

Poster No. 426

Micron-scale 3d Printing Using Melt Electrowriting For Biomimetic, Regenerative Bone Scaffolds

Naomi C. Paxton; Jiongyu Ren; Brenna L. Devlin; Edmund I. Pickering; Maria A. Woodruff; Paul D. Dalton

Poster No. 427

What Is The Best Reference Gene Of Rt-qpcr Analyses For The Three-dimensional Osteogenic Differentiation Of Human Induced Pluripotent Stem Cells?

Masakazu Okamoto; Yusuke Inagaki; Kensuke Okamura; Yoshinobu Uchihara; Kenichiro Saito; Munehiro Ogawa; Yasuhito Tanaka

Bone - Diseases and Disorders

Poster No. 428

Glycolytic Reprogramming In Macrophages And MSCs During Chronic Inflammation Induced By Contaminated Polyethylene Particles

Huaishuang Shen; Xueping Li; Mao Zhang; Qi Gao; Masanori Tsubosaka; Junichi Kushioka; Masakazu Toya; Victoria Teissier; Chima Maduka; Christopher Contag; Ning Zhang; Stuart Goodman

Poster No. 429

Prevalence Of Primary Carcinoma, Rates Of Pathologic Fracture, And Mortality In The Setting Of Metastatic Bone Disease

Brandon S. Gettleman; Alexander B. Christ; Amit S. Piple; Jennifer C. Wang; Andrew Duong; Nathanael D. Heckmann; Lawrence Menendez

Poster No. 430

Osteoclast Formation Dependent On Sex And Location Of Derivation In Inflammatory Arthritis

Michael Christof; Kiana L. Chen; Xi Lin; Edward M. Schwarz; Homaira Rahimi

Poster No. 431

Aged Senescence-accelerated Mouse Prone 8 Exhibits Osteopenia With Increased Osteoid

Yusuke Masuda; Hiroki Tawaratsumida; Toshiro Ijuin; Tomohiro Iuchi; Hiroyuki Tominaga; Shingo Maeda; Noboru Taniguchi

Poster No. 432

The Role Of Sclerostin In Bone Osteopenia Of Muscular Dystrophy

Xueqin Gao; Joseph J. Ruzbarsky; Matthieu Huard; Sudheer Ravuri; Ping Guo; Laura Chubb; Nicole Ehrhart; Bing Wang; Johnny Huard

Poster No. 433

Relationship Between Synovial Mesenchymal Stem Cells And Bone Morphology In Patients With Different Types Of Hip Osteoarthritis

Yang Yang; Kazumasa Miyatake; Yusuke Nakagawa; Tomomasa Nakamura; Hiroki Katagiri; Ryohei Takada; Mai Katakura; Kunikazu Tsuji; Ichiro Sekiya; Hideyuki Koga

Poster No. 434

Withdrawn

Poster No. 435

Csf1 From Marrow Adipogenic Precursors Is Required For Osteoclast Formation And Hematopoiesis In Bone

Leilei Zhong; Jiawei Lu; Jiankang Fang; Lutian Yao; Wei Yu; Nicholas Holdreith; Catherine Bautista; Yongwon Choi; Jean Jiang; Shuying Yang; Wei Tong; Nathaniel Dymont; Ling Qin

Poster No. 436

Elucidating Androgen Effects On Focal Erosions In TNF-Induced Inflammatory Arthritis

Kiana L. Chen; H. Mark Kenney; Edward Schwarz; Homaira Rahimi

Poster No. 437

Mir-378 Mediates The Ovariectomy Induced Bone Loss Via Exaggerating Osteoclastogenesis And Transforming Growth Factor Beta Impaired Osteogenesis

Lu Feng; Zhengmeng Yang; Micky D. Tortorella; Gang Li

Poster No. 438

Development Of A Cartridge-based Bioreactor Platform For Parallelized Cultivation And Stimulation Of Complex Tissue Models

Alexandra Damerau; Adel Ahmed; Timo Gaber; Chris Comparey; Jan Saam; Felix Löser; Nina Buffi; Martin Dulac; Frank Buttgerit; Moritz Pfeiffenberger

Poster No. 439

Effects Of SSRIs On Bone Cells In Vitro

Stephanie Khoo; Ryan Kelly; Kirsten Kelly; Amanda LaRue

Poster No. 440

Molecular Mechanism Of Nf1 Tibial Pseudarthrosis By Single-cell Rna-sequencing In Patient-derived Primary Cells

Nandina Paria; Aysha Khalid; Ben Lemoine; Jinyan Chan; Yared Kidane; Ila Oxendine; Reuel Cornelia; Carol Wise; Jonathan Rios

Poster No. 441

Inflammatory Bone Loss Induced By SARS-CoV-2 Infection

Kelvin Yeung; Wei Qiao; Jasper F.W. Chan

Poster No. 442

Role Of Mast Cell-derived Rankl In Ovariectomy-induced Bone Loss In Mice

Verena Fischer; Benjamin Krüger; Jasmin Bülow; Melanie Haffner-Luntzer; Anne Dudeck; Anita Ignatius

Poster No. 443

Establishment Of Co-culture Model Of Chondrocytes And Osteocytes For Exploration Of Interplay Between Cartilage And Subchondral Bone In Osteoarthritis

Taiki Tokuhira; Taku Ebata; Alaa Terukawa; Masanari Hamasaki; Yoshio Nishida; Junki Shiota; Keita Kitahara; Shunichi Yokota; Tomohiro Shimizu; Daisuke Takahashi; Norimasa Iwasaki

Poster No. 444

Impact Of Covid-19 Pandemic On Osteoporosis Screening Using Dual-energy X-ray Absorptiometry

Dagoberto Pina Jr; Lauren Hisatomi; Alex Villegas; Micaela White; Alec Garfinkel; Garima Agrawal; Nisha Punatar; Barton Wise; Polly Teng; Hai Le

Poster No. 445

The Effect Of Testosterone Replacement Therapy Upon Bone Remodelling In Testosterone Deficient Apoe^{-/-} Mice Fed A High Fat Diet

Alexander N. Williamson; Lauren Bateman; Christine Le Maitre; Daniel Kelly; Nicola Aberdein

Poster No. 446

In Vitro Osteogenesis In A Biomimetic Spheroid Culture Model Of Physiological Mineralization

Maximilian Koblenzer; Athanassios Fragoulis; Marek Weiler; Stephan Rütten; Thomas Pufe; Holger Jahr

Poster No. 447

Rage Ablation Enhances Osteoblast Mineralizing Surface And Protects Against The Loss Of Lacunar Density In A Mouse Model Of Type 2 Diabetes

Kaitlyn Broz; Remy Walk; Simon Tang

Bone - Growth, Development and Aging

Poster No. 448

G Protein Couple Estrogen Receptor-1 (GPER-1) Regulates Cell Morphology And Rigidity To Impair Osteogenic Differentiation In Mesenchymal Stem Cells

Ya-Shuan Chou; Che-Wei Wu; Shu-chun Chuang; Chung-Hwan Chen; Mei-Ling Ho; Je-Ken Chang

Poster No. 449

Fecal Microbiota Transplantation Meliorates Bone Loss In The Mice Mimicking Postmenopausal Osteoporosis: Involvement Of Gut Microbiota-bone Axis

Yuan-Wei Zhang; Mu-Min Cao; Ying-Juan Li; Pan-Pan Lu; Guang-Chun Dai; Ming Zhang; Hao Wang; Yun-Feng Rui

Poster No. 450

Functional Role Of The Long Non-coding (lnc) RNA CASC20 In Endochondral Bone Formation

Favour Felix-Ilemhenbho; Endre Kiss-Toth; J Mark Wilkinson

Poster No. 451

Upregulation Of Pro-inflammatory Cytokines During Dexamethasone-induced Osteogenesis In Human BMSCs

Antoine Buetti-Dinh; Elisa Pianta; Carmen Lanzillotti; Gianvito Grasso; Filip Stojceski; Martin J. Stoddart; Elena Della Bella

Poster No. 452

Ketogenic Diet Induces Cortical Bone Loss In Adult Mice That Increases With Duration Of Diet

Benjamin Osipov; Ritvik Punati; Suraj Pathak; Hannah Zukowski; Tatu Rojalin; Keith Baar; Randy Carney; Blaine Christiansen

Poster No. 453

Slc38a2 Provides Proline And Alanine To Regulate Postnatal Bone Mass Accrual

Leyao Shen; Yilin Yu; Courtney M. Karner

Poster No. 454

The Chronic Inflammatory Reaction In Murine Long Bones Depends On Age

Junichi Kushioka; Huaishuang Shen; Masakazu Toya; Masanori Tsubosaka; Qi Gao; Victoria Teissier; Xueping Li; Ning Zhang; Stuart Goodman

Poster No. 455

Kruppel-like Factor 15 -deficient Mice Exhibit Delayed Endochondral Ossification During Fracture Healing

Shotaro Tachibana; Shinya Hayashi; Tomoyuki Matsumoto; Toshihisa Maeda; Naoki Nakano; Yuichi Kuroda; Yoshinori Takashima; Masahiro Fujita; Kenichi Kikuchi; Kemmei Ikuta; Kensuke Anjiki; Yuma Onoi; Ryosuke Kuroda

Poster No. 456

Characteristics And Role Of Osteoblast-derived Extracellular Matrix Vesicles Indicate They Are A Subpopulation Of Exosomes

Anne Skelton; David J. Cohen; Mariam Obaji; Zvi Schwartz; Barbara D. Boyan

Poster No. 457

Role Of Gata6 In Regulating Aging-associated Inflammation Of Periosteal Cells

Hongli Jiao; Ming-Song Lee; Wan-Ju Li; Eric CY Lin

Bone - Injury and Healing

Poster No. 458

Blood Clots Formed In Vitro As A Therapeutic Vehicle During Bone Healing

Victor Hung; Peter Awad; Erica Myrick; Kristi Bailey; Jered Cornelison; Christine Pink; Haiying Pan; Keith Kenter; Yong Li

Poster No. 459

Effect Of Low-intensity Pulsed Ultrasound On Osteogenic Differentiation And Angiogenesis Of Induced Membrane-derived Cells In Vitro

Kyohei Takase; Takahiro Niikura; Tomoaki Fukui; Keisuke Oe; Kenichi Sawauchi; Ryo Yoshikawa; Yuya Yamamoto; Ryota Nishida; Ryosuke Kuroda

Poster No. 460

Combined Single-cell Transcriptomics And Spatial Imaging Reveal Myofibroblastic Lineage Of Lepr⁺ Cells

Vincentius Jeremy Suhardi; Anastasia Oktarina; Mohammed Hammad; Andrew Thomson; Matthew Greenblatt; Lionel Ivashkiv; Mathias Bostrom; Xu Yang

Poster No. 461

Fate Of Host Osseointegration Is Influenced By Engrafted Lepr-lineage Cells

Anastasia Oktarina; Vincentius Suhardi; Matthew Greenblatt; Lionel Ivashkiv; Mathias Bostrom; Xu Yang

Poster No. 462

Transcript Shortening Through Alternative Polyadenylation Promotes Gene Expression During Fracture Healing

Reyad A. Elbarbary; Deepak Kumar Khajuria; Irena Nowak; Ming Leung; Vengadeshprabhu Karuppagounder; Yuka Imamura; Christopher C. Norbury; Fadia Kamal

Poster No. 463

Tranexamic Acid And Fracture Healing

Alexander F. Abraham; Ryan T. Anthony; Adam Y. Park; Deidre N. Meyers; Catherine G. Ambrose; James F. Kellam

Poster No. 464

Jagged-1 Expression By Alphasma Positive Cells At The Time Of Injury Is Required For Bone Fracture Healing

Sharon Shaw; Alexis Donneys; Karen Kessell; Daniel Youngstrom; Yadav Wagley; Ivo Kalajzic; Kurt Hankenson

Poster No. 465

The Role Of Dentin Matrix Protein 1 (dmp1) In Lipus Accelerated Osteoporotic Fracture Healing

Meng Chen Michelle Li; Can Cui; Yufeng Long; Simon Kwoon Ho Chow; Ronald Man Yeung Wong; Wing Hoi Cheung

Poster No. 466

Blocking CCN2 Reverses Established Bone Loss In A Rat Model Of Overuse Injury

Alex G. Lambi; Steven N. Popoff; Mary F. Barbe

Poster No. 467

Spatiotemporal Patterning During Digit Tip Regeneration Is Regulated By Hoxa13

Feini Qu; Kristin Lenz; Sarah Dunivan; Farshid Guilak

Poster No. 468

Bioactive Bone Extracellular Matrix Facilitates Allograft Mediated Bone Regeneration

Meng Zhou; Ying Rao; Haixiong Lin; Dan Wang

Poster No. 469

Extracellular Vesicles Isolated From Adipose Derived Stem Cells Enhance Osteogenesis Of Osteoblasts In Vitro

Che-Wei Wu; Mei-Ling Ho; Chen Jhen-Wei; Shun Cheng Wu; Pei-Lin Shao

Poster No. 470

Paracrine Effects Of Masquelet'S Induced Membrane On Gene Expression In Mesenchymal Stem Cells

Andrea Alford; Kyle Cragg; Emma Wessels; Alexis Donneys; Kurt Hankenson; Mark Hake

Poster No. 471

Finding The Fault In Tibial Nonunions: A Cross-species Analysis And Multicenter Virtual Mechanical Testing Study

Jordan Inacio; Brendan Inglis; James A. Harty; Meir T. Marmor; Adeshina Adeyemo; Henry Boateng; Chinenye O. Nwachuku; Hannah L. Dailey

Poster No. 472

Alginate Hydrogels As Platform Bone Spacers For Masquelet's Induced Membrane Technique: Pilot In Vivo Results

Sara H. McBride-Gagyi; Saksham Pruthi; Robert Hill; Abigail Avila; Clare Reinwart; J Tracy Watson; Daameon Nicolaou; Steven W. Buckner; Paul Jelliss; Scott Sell

Poster No. 473

Differentially Expressed MicroRNAs During Early Endochondral Differentiation Of Human Mesenchymal Stromal Cells As Biomarkers For Non-union Fractures

Franziska L. Breulmann; Soundhar Ramasamy; Manuel Herzog; Ganesh N. Pandian; Elena Della Bella; Martin J. Stoddart

Poster No. 474

Automated Femur Isolation In CT Scan Images By Generating Binary Mask-a Critical Step For 3d Femur Reconstruction

Jamalia Sultana; Mahmuda Naznin; Tanvir Faisal

Poster No. 475

Repeated Injection Of Sustained-release Buprenorphine Induces Adaptive Immune Reaction In Fracture Model

Annemarie Lang; Madhura Nijsure; Joel D. Boerckel

Poster No. 476

The Mediators And Pathways Analyses Of Atsttrin'S Therapeutic Effects Against Diabetic Fracture Healing

Lida Moradi; Chuanju Liu

Poster No. 477

Clec3b+ Cells Contribute To Bone Formation Following Musculoskeletal Injury

Jacob Moore; Ezgi Aydin; Kristin Gebauer; Ugur Ayturk

Poster No. 478

Biomarker To Collagen X Has Sensitivity To Detect Healing Difference In Long Bone Fractures

Zachary W. Working; Anna-Laura Nelson; Kelsey O'Hara; Ryan Coghlan; Molly Czachor; Lucas S. Marchand; Sofia Bzovskys; Sheila Sprague; Nathan N. O'Hara; Gerard Slobogean; Chelsea S. Bahney

Poster No. 479

Combination Of Bortezomib And Pdgf-bb Synergistically Enhances Fracture Repair In Aged Mice

Hengwei Zhang; Lianping Xing

Poster No. 480

Simulating The Effect Of Loading Angle On Stresses And Strains In The Second, Third, And Fourth Metatarsals

Bryhannah A. Young; Andrew Wilzman; Karen L. Troy

Poster No. 481

Osteocyte Specific Cx43 Deficiency Impairs Fracture Healing But Does Not Alter Systemic Bone Turnover After Injury

Lovell B. Abraham; Evan G. Buettmann; Rachel C. DeNapoli; Gabriel A. Hoppock; Yue Zhang; Henry J. Donahue

Poster No. 482

Heterogeneity Of Cellular Hypoxia In Murine Bone Marrow

Annemarie Lang; Cameron Koch; Joel D. Boerckel

Poster No. 483

Fracture Healing Is Associated With The Expression Of Specific MicroRNAs And Some Are Associated With Fracture Healing Phases, Patient Age And Multi-trauma

Martijn van Griensven; Rald VM Groven; Carlos J. Peniche Silva; Elizabeth R. Balmayor; Martijn Poeze; Taco J. Blokhuis

Poster No. 484

TGF- β 3 Stimulates Periosteal Cell Osteogenesis

Matthew Stewart; Julie Nguyen-Edquilang

Poster No. 485

Cd106⁺ Subset Of Cxcl12-abundant Reticular Cells Are Abundant In The Peri-implant Fibrosis Of Percutaneous Osseointegrated Prosthesis Failure

Mohammed Hammad; Vincentius J. Suhardi; Anastasia Oktarina; Andrew Thomson; Matthew B. Greenblatt; Lionel B. Ivashkiv; Mathias P.G. Bostrom; Xu Yang

Poster No. 486

Persistent Fibrin, But Not Fibrinogen, Is Sufficient To Cause Fracture Non-union.

Atsuyuki Kawabata; Jonathan Schoenecker; Stephanie Moore-Lotridge; Takuya Oyaizu; Satoru Egawa; Toshitaka Yoshii; Matthew J. Flick

Bone - Mechanobiology

Poster No. 487

Load-induced In Vivo Osteocyte Ca²⁺ Signaling Is Maintained Through Middle Age In Mice

James Boorman-Padgett; Randy Valcourt; Mayelin Hernandez Mendez; Jelena Basta-Pljakic; Mia Thi; David Spray; Mitchell Schaffler

Poster No. 488

Mechanical Loading Induces Short- And Long-term Changes In Murine Hindlimb Vasculature

Taylor J. Devet; Svetlana Komarova; Bettina M. Willie; Mahmoud Moussa

Poster No. 489

Intravital Imaging Of Osteocyte A_vB_3 Integrin Dynamics With Locally Injectable Fluorescent Nanoparticles

Melia D. Matthews; Nada Naguib; Emily Cook; Uli B. Wiesner; Karl Lewis

Poster No. 490

Mechano-sensitivity Of Early Angiogenesis During Bone Healing And Its Dependency On Endothelial YAP/TAZ

Julia Mehl; Saeed Khomeijani Farahani; Erik Brauer; Alexandra Klaus-Bergmann; Holger Gerhardt; Viola Vogel; Georg Duda

Poster No. 491

In Vitro Osteoporosis Model Of Minipig: Biomechanical Study With All Suture Anchor And Conventional Screw Type Anchor

Jeonghyeon Seo; Hyojune Kim; Wonhee Lee; Kyoung Hwan Koh

Poster No. 492

Localized Cortical Bone And Cellular Responses After Short-term And Long-term Mechanical Stimulation

Yumei Chen; Peter Shyu; Hong Zhou; X. Edward Guo

Poster No. 493

Cathepsin K-Lineage Periosteal Stem Cells Are Dispensable For Load-induced Anabolic Responses In The Murine Tibia

Tyler McNeill; Seoyeon Bok; Michelle Cung; Branden Sosa; Matthew Greenblatt; Marjolein van der Meulen

Poster No. 494

The Utility Of 3-dimensional Printing For The Preoperative Planning Of Clavicular Fixation: A Cadaveric Study

Daniel Lynch; Andrew Romero; Evan Johnson; Tammy Phillips; Daniel Topping; John Kirkpatrick; Francisco Schwartz-Fernandes

Poster No. 495

Upregulation Of Il6 In Human Msc-derived Osteocytes Via A Mechanism Involving The Piezo1 Calcium Channel

Sophie Gilbert; Ryan Jones; Deborah Mason

Bone - Structure, Function and Mechanics

Poster No. 496

Dose-Dependent Effects Of Gamma Radiation Sterilization On The Collagen Matrix And Its Possible Influence On The Fatigue Crack Propagation Resistance Of Human Cortical Bone

Dylan B. Crocker; Amy E. Biggs; Thomas M. Hering; Megan E. Oest; Clare M. Rimnac

Poster No. 497

Effects Of Vitamin D₃ Supplementation On Bone Structure And Strength In The Fam20c Mouse Model

Sabrina Kosnik; Joan Llabre; Xiaofang Wang; Deepak Vashishth

Poster No. 498

Age-related Mechanical Degradation Of Cortical Bone Is Driven By Microstructural Changes In Addition To Porosity

André F. Gutiérrez Marty; Paul Barbone; Elise Morgan

Poster No. 499

Chicken Genetic Strain Influenced In Vivo Strain Patterns And Bone Curvature

Isabela Vitienes; Mikolajewicz Nicholas; Seyedmahdi Hosseinitabatabaei; Alice Bouchard; Catherine Julien; Gabrielle Graceffa; Ana Rentsch; Tina Widowski; Russell Main; Bettina Willie

Poster No. 500

Pelvic Tilt Affects Risk Of Extra-articular Bony Impingement During Total Hip Arthroplasty

Xuzheng Han; Casey Myers; Kathryn Colone; Chadd Clary

Poster No. 501

Development Of A Novel Mri-based Finite Element Modeling Approach To Evaluate The Determinants Of Atypical Femoral Fracture

Ani Ural; Brandon Jones; Christiana Cottrell; Chamith Rajapakse

Poster No. 502

Three Dimensional Morphological Analysis Of The Proximal Tibia In Medial Osteoarthritis And Osteonecrosis Of The Knee

Teruya Ishibashi

Poster No. 503

Wolff'S Simplification Persists: The Unfortunate Historical View That The Proximal Human Femur Is A Cantilever Beam

John G. Skedros; Jamison K. Walker; Brett W. Richards; John T. Cronin

Poster No. 504

Determining Stress Relaxation Of Trabecular Bone To Simulate Realistic Press-fit Conditions Of Cementless Implants

Thomas S. Gersie; Thom Bitter; David Wolfson; Robert Freeman; Nico Verdonshot; Dennis Janssen

Poster No. 505

Estimation Of Subject-specific Bone Stress In Patients With Osseointegrated Prostheses During Walking

Jake Tinsley; Brecca Gaffney; Nicholas Vandenberg; Jason Stoneback; Dana Carpenter

Poster No. 506

Cortical Bone Post-Yield Energy Absorption Is Reduced In Older Adults With Long-Duration Type 1 Diabetes

Shannon R. Emerzian; Jarred Chow; Savni Sarolkar; Daniel J. Brooks; I-Hsien Wu; John Gauthier; Surya V. Jangolla; Marc G. Yu; Hetal S. Shah; George L. King; Fjola Johannesdottir; Elaine W. Yu; Mary L. Boussein

Poster No. 507

Validation Of The Patient-specific Flatfoot Model On Finite Element Analysis

Yasutaka Sotozono; Kazuya Ikoma; Masahiro Maki; Masamitsu Kido; Kan Imai; Suzuyo Ohashi; Zhongkui Wang; Shinichi Hirai; Kenji Takahashi

Poster No. 508

Impact Microindentation Enhances The Prediction Of Bone Strength A The Proximal Femur And The Distal Radius

Rachana Vaidya; Babak Jahani; Simon Tang

Poster No. 509

Characterization Of Tensile Behavior Of Maturing Porcine Cortical Bone Tissue

Emily Szabo; Jay Bensusan; Clare Rimnac

Poster No. 510

Phlpp2 Limits Osteoclast Lipid Responsiveness And Cortical Bone Mass

Ismael Y. Karkache; Elizabeth K. Vu; David HH Molstad; Kim C. Mansky; Elizabeth W. Bradley

Poster No. 511

PRG4 Deficient Mice Have Altered Mechanical, Structural, And Material Skeletal Properties, Increased Osteoclastogenesis, And Allodynia

Adam P. Tanguay; Nikhil G. Menon; Margaret Hamilton Boudreau; Erica Doyle; Debolina Ghosh; Paige S. Woods; Gregory D. Jay; W. Brent Edwards; Ivo Kalazjic; Lakshmi Nair; Sun-Kyeong Lee; Joseph Lorenzo; Tannin A. Schmidt

Bone - Treatment and Therapeutics

Poster No. 512

Treatment Of Bone Defect With Cartilaginous Particles Produced From Ips Cell-derived Expandable Limb Bud Mesenchymal Cells (explbm)

Kohei Sato; Tomoka Takao; Yuki Fujisawa; Tatsunori Osone; Daisuke Yamada; Takenori Uehara; Tomonhiro Fujiwara; Masanori Yorimitsu; Toshiyuki Kunisada; Eiji Nakata; Toshifumi Ozaki; Takeshi Takarada

Poster No. 513

A Novel, Shelf-Stable Complete Autograft Substitute Supports Smoker-Derived Osteoblast Cell Function

Meeta Gidwani; Melissa D'Alia; Doga Oruc; Anouska Dasgupta

Poster No. 514

Examination Of The Effect Of Black Cohosh On The Efficacy Of Risedronate On Bone Mineral Density In An Ovariectomized Rat Model

Elysia A. Masters; Amy Inselman; Jalina Moore; Rajiv Agarwal; Audrey Gassman; Gemma Kuijpers; Richard Beger; Barry Delclos; Sibyl Swift; Luisa Comacho; Michelle Vanlandingham; Daniel Sloper; Noriko

Nakamura; Goncalo Gamboa; Kellie Woodling; Matthew Bryant; Raul Trbojevich; Qiangen Wu; Florence McLellen; D. Hansen; Donna Christner

Poster No. 515

Investigating The Hippo-yap/taz Pathway And Lats1/2 Kinase In Response Of Chondrocytes To Mechanical Compressive Loading

Christopher Warburton; Olivia F. Perez; Xiaomin Cai; Lee Kaplan; Thomas M. Best; Zhipeng Meng; Charles Huang

Poster No. 516

Differences In Post-operative Pain Outcomes Following Orthopedic Surgery Considering Gender And Exogenous Hormone Use

Haley Albers; Matthew Bagby; Johnathan Dallman; Kimberly Templeton; Kimberly Templeton; Damon Mar

Poster No. 517

Bone-protective Effect Of Resveratrol In Ovariectomized Mice

Ying Peng; Asma Arshad; Tiankuo Chu; Rosa Guerra; Liyun Wang; X. Lucas Lu

Poster No. 518

In Vivo Effects Of Cell Seeding Technique In Ex-vivo Regional Gene Therapy Model

Jennifer A. Bell; Cory K. Mayfield; Kevin Collon; Stephanie Chang; Matthew C. Gallo; Osamu Sugiyama; Jay R. Lieberman

Poster No. 519

Single-cell Rna Sequencing Of Lentiviral Transduced Adipose Derived Stem Cells For Bone Morphogenic-2 Protein Upregulation

Jennifer A. Bell; Arijita Sarkar; Cory K. Mayfield; Stephanie Chang; Matthew Gallo; Mina Ayad; Elizabeth Lechholz-Zey; Osamu Sugiyama; Amy Tang; Denis Evseenko; Jay R. Lieberman

Poster No. 520

Tuberosin Stimulates The Osteogenic Activity Of Osteoblasts Via Wnt Signaling Pathway

Ashish Ranjan Sharma; Yeon-Hee Lee; Sudarshini Nath; Sang-Soo Lee

Poster No. 521

Delivery Of MicroRNA 26a Via A Peptide-based Nanoparticle For Enhanced Bone Regeneration

Ahmed Elkashif; Monika Ziminska; Nicholas J. Dunne; Helen O. McCarthy

Poster No. 522

Utility Of A Bone Health Clinic In Bridging The Osteoporosis Care Gap: Prescribing Habit Review At An Academic Institution

Edward J. Fox; Marisa Riley; Derek M. Crossman; Paul Kocis; Susan Hassenbein

Poster No. 523

Complication Rates Associated With Elastic Stable Intramedullary Nail Treatment Of Pediatric Tibial Shaft Fractures: Application Of Age-adjusted Malunion Criteria

Taylor R. Bradley; Charles Mehlman

Poster No. 524

Long Term Oral Administration Of Meclozine For The Treatment Of Achondroplasia Using A Mouse Model

Hiroto Funahashi; Masaki Matsushita; Yasunari Kamiya; Kinji Ohno; Shiro Imagama

Poster No. 525

Sex Differences Of NF κ B-targeted Therapy For Mitigating Chronic Inflammation In A Murine Bone

Masakazu Toya; Junichi Kushioka; Huaishuang Shen; Masanori Tsubosaka; Qi Gao; Victoria Teissier; Xueping Li; Ning Zhang; Stuart B. Goodman

Poster No. 526

Engineering A Fracture Hematoma Model To Identify The Signals That Regulate Mineralization

William Lackington; Matthias G. Wiesli; Arlyng Gonzalez-Vazquez; Fergal O'Brien; Katharina Maniura; Markus Rottmar

Poster No. 527

Effects Of Age And Sex Using Msc-based Therapies For Healing Of Murine Critical-size Defects In Long Bones During The Chronic Inflammatory Phase

Ning Zhang; Hirohito Hirata; Ni Su; Masaya Ueno; Huaishuang Shen; Elijah Ejun Huang; Qi Gao; Xueping Li; Masanori Tsubosaka; Junichi Kushioka; Masakazu Toya; Victoria Teissier; Stefan Zwingenberger; Joy Wu; Fan Yang; Stuart Goodman

Poster No. 528

Bisphosphonate Inhibits In Bone Loss And Pain-related Behavior In Neighboring Joints Arthritis Model

Hiroki Wakabayashi; Norihiro Mayumi; Akihiro Sudo

Poster No. 529

Functional Comparison Of Human-induced Pluripotent Stem Cell-derived Mesenchymal Progenitor Cells

Qi Gao; Victoria Teissier; Ning Zhang; Huaishuang Shen; Xueping Li; Masanori Tsubosaka; Junichi Kushioka; Masakazu Toya; Bruce Bunnell; Hang Lin; Michael Gold; Stuart Goodman

Cartilage and Synovium - Diseases and Disorders

Poster No. 530

Temporal Analysis Of OA Primary Human Chondrocytes Via Untargeted Metabolomics

Ayten E. Erdogan; Priyanka Brahmachary; Ron June

Poster No. 531

Incorporation Of R992C Mutant α 1(II) Chains In Type II Collagen Molecules: Consequences On Fibril Diameters And Post-translational Modifications

David M. Hudson; Aysel A. Fernandes; MaryAnn Weis; Russell J. Fernandes

Poster No. 532

Subchondral Osteocytes Mitochondria Impair Chondrocytes During Osteoarthritis

Yiyang Ma; Yidan Pang; Jimin Yin; Kaiwen Zheng; Xiaoyuan Peng; Dajiang Du; Junjie Gao; Changqing Zhang

Poster No. 533

Tlr8 Signaling Exacerbates Zymosan Induced Arthritis Via An Early Influx Of Macrophages And Cd8+ T Cells With Unresolved Synovitis

Richard Bell; Abrefi Cann; Chao Yang; Lionel Ivashkiv

Poster No. 534

Cell Senescence And Facet Joint Osteoarthritis In Adolescent Idiopathic Scoliosis

Kai Sheng; Daniel Bisson; Jean Ouellet; Neil Saran; Svetlana Komarova; Lisbet Haglund

Poster No. 535

FNIII14, A Fibronectin Peptide, Is Involved In The Pathophysiology Of Osteoarthritis By Reducing The β 1 Integrin Activity Of Chondrocytes.

Fumihiro Nishimura; Masahiro Hasegawa; Yohei Yamabe; Manabu Sasada; Fumio Fukai; Kyoko Imanaka-Yoshida; Akihiro Sudo

Poster No. 536

Integrated ScRNA-seq And Spatial Transcriptomics Analysis Uncovers Distinct Cellular Populations And Transcriptomes In Human Hip Synovium Between Patients With Femoroacetabular Impingement And Osteoarthritis

Gulzada Kulzhanova; Jack Reuter; Eloise Fadiat; Benjamin Ricciardi; Brian Giordano; Chia-Lung Wu

Poster No. 537

Anti-inflammatory Effect Of Nonsteroidal Anti-inflammatory Drugs On Human Synovium- Derived Synoviocytes

Junghwa Choi; Hyang Kim; Seul-Ki Kim; Saerom Jeong; Bo Young Park; Seung Yeol Lee

Poster No. 538

Synovial Fluid Proteomics From Serial Aspiration Of ACL Injured Knees Identifies Candidate Biomarkers For Osteoarthritis

Robert Brophy; Lei Cai; Muhammad Farooq Rai

Poster No. 539

Glycophenotype In Human Osteoarthritis Cartilage By Comprehensive Glycomics Analysis

Kentaro Homan; Tomohiro Onodera; Hisatoshi Hanamatsu; Jun-ichi Furukawa; Keizumi Matsugasaki; WooYoung Kim; Masatake Matsuoka; Norimasa Iwasaki

Poster No. 540

Gene Expression Of Glenoid Articular Cartilage Varies By Acuity Of Instability And Osteoarthritis Of The Shoulder

Alexander W. Aleem; Lei Cai; Robert Brophy; Muhammad Farooq Rai

Poster No. 541

Klf15 Deficiency Is Susceptible To Accelerated Severe Osteoarthritis Associated With Ppar γ Signaling

Kemmi Ikuta; Shinya Hayashi; Tomoyuki Matsumoto; Toshihisa Maeda; Naoki Nakano; Yuichi Kuroda; Kenichi Kikuchi; Masahiro Fujita; Kensuke Anjiki; Yuma Onoi; Shotaro Tachibana; Yoshihito Suda; Kensuke Wada; Ryosuke Kuroda

Poster No. 542

Ex Vivo Secretome Analysis Of Tissue Explants Stratifies Acetabular Labrum Calcification And Disease Status In Hip Osteoarthritis

Alexander Antoniadis; Julien Wegrzyn; Patrick Omoumi; Thomas Hugle; Geurts Jeroen

Poster No. 543

Does Chondrocyte Biomarker Production In Vitro Correlate With Synovial Fluid Biomarker Content In Patients With Knee Osteoarthritis?

Anna N. Sullentrop; Aaron M. Stoker; Allyson B. Caisley; Harjeev Singh; James A. Keeney; James L. Cook

Poster No. 544

Therapeutic Effects Of The Stromal Vascular Fraction And Adipose-derived Stem Cells For Osteoarthritis In An Experimental Rabbit Model

Kensuke Anjiki; Tomoyuki Matsumoto; Yuichi Kuroda; Masahiro Fujita; Shinya Hayashi; Naoki Nakano; Kenichi Kikuchi; Kenmei Ikuta; Yuma Onoi; Shotaro Tachibana; Ryosuke Kuroda

Poster No. 545

Cigarette Smoke Extract Decreases Viable Chondrocytes In Cartilage Explants

Emily Sawvell; Jeremy Mercuri

Poster No. 546

Human Adipose-derived Stromal Vascular Fraction Inhibits The Progression Of Cartilage Degeneration In Immunodeficient Rats

Yuma Onoi; Tomoyuki Matsumoto; Shinya Hayashi; Toshihisa Maeda; Naoki Nakano; Yuichi Kuroda; Masahiro Fujita; Kenichi Kikuchi; Kensuke Anjiki; Kenmei Ikuta; Shotaro Tachibana; Yoshihito Suda; Kensuke Wada; Ryosuke Kuroda

Poster No. 547

Withdrawn

Poster No. 548

IKK Kinase ϵ (IKK ϵ) Inhibition Attenuates Cartilage Degradation By Regulating NF- κ B Signaling

Taisuke Uchida; Yukio Akasaki; Takuya Sueishi; Ichiro Kurakazu; Masakazu Toya; Masanari Kuwahara; Ryota Hirose; Yuki Hyodo; Hidetoshi Tsushima; Yasuharu Nakashima

Poster No. 549

A Novel Rat Model Of Cuff Tear Arthropathy: Evaluating The Role Of The Glenohumeral Capsuloligamentous Complex

Toshiro Ijuin; Tomohiro Iuchi; Hiroki Tawaratsumida; Yusuke Masuda; Shingo Maeda; Noboru Taniguchi

Poster No. 550

Synovitis In Chronic Joint Conditions And Its Effect On Chondrogenesis In Vitro

Zijun Zhang; Sharada Paudel; Tyler Feltham; Lumanti Manandhar; Yi Guo; Lew Schon

Poster No. 551

Correlation Between High Expression Of Ccn3 And Osteoarthritis In Hip Joints

Hirose Kazuki

Poster No. 552

Analysis On Autophagy-related Molecules In The Deferent Subtype Of Macrophagesin The Synovium Of Rheumatoid Arthritis And Osteoarthritis

Hanqing Huang; Yuya Takakubo; Masahiro Maruyama; Tomohiro Uno; Takeru Akabane; Takahiro Igarashi; Xing Liu; Yuji Takeda; Stuart B. Goodman; Michiaki Takagi

Cartilage and Synovium - Growth, Development and Aging

Poster No. 553

In Vivo Monitoring Of The Development And Progression Of Naturally-Occurring Osteochondrosis Lesions In The Elbow Joint Of Juvenile Pigs

Ferenc Toth; Alexandra Armstrong; Erick Buko; Samantha Likar; Casey Johnson

Poster No. 554

Mitochondrial transfer suppresses senescence induced mitochondrial dysfunction and oxidative stress in chondrocytes

Che Wei Wu; Yao-Hui Huang; Pei-Ling Shao; Ling-Hua Chang; Jhen-Wei Chen; Mei-Ling Ho; Shun-Cheng Wu

Poster No. 555

Investigating The Effect Of Glucose Levels On In Vitro Cartilage Maturation

Abrie Girgis; Jean-Philippe St-Pierre

Poster No. 556

Age-related And Sex-specific Histopathological Analysis And Metabolomic Profiles Of Murine Joints

Priyanka Brahmachary; Hope D. Welhaven; Avery H. Welfley; Matthew Thompson; Ronald K. June

Poster No. 557

Superficial Zone Cell Death In Adult Mouse Joints Leads To Early Onset Osteoarthritic Progression

Danielle Rux; Maurizio Pacifici

Poster No. 558

Mechanical Loading Drives Chondrocyte Proliferation In Prenatal Joint Morphogenesis

James Monsen; Niamh Nowlan

Cartilage and Synovium - Injury and Healing

Poster No. 559

Withdrawn

Poster No. 560

Free Lateral Femur Condyle Chondral Fragment Swells After Soaking In Isotonic Solution For 14 Days

Carver Montgomery; Patrick Massey; Wayne Scalisi; James Robinson; William Sherman; Shane Barton

Poster No. 561

Dual Effect Of An Inhibitor Of IRF5 For The Expression Of Inflammation Related Genes In Human Synovial Fluid Derived Stem Cells

Alex L. Chang; Haixiang Liang; Pooja Swami; Henintsoa F. Andriamifidy; Betsy Barnes; Daniel Grande

Poster No. 562

Enhancement Of Senescent Chondrocyte Function By Extracellular Vesicles Released From Human Adipose-derived Stem Cells

Shun Cheng Wu; Ling-Hua Chang; Che-Wei Wu; Jhen-Wei Chen; Chung-Hwan Chen; Je-Ken Chang; Mei-Ling Ho

Poster No. 563

Compare Anti-inflammatory Effects Of Adipose Derived Stem Cells (ADSCs) And Minced Adipose Tissue To Chondrocytes

Alexander Morledge; Haixiang Liang; Pooja Swami; Henintsoa Fanjaniaina Andriamifidy; Daniel Grande

Poster No. 564

Micro-ct Analysis Of Commonly Utilized Tools For Articular Cartilage Defect Marrow Stimulation

Lucy E. Meyer; Richard M. Danilkowicz; Zoe W. Hinton; Bijan Abar; Nicholas Allen; Bryan S. Crook; Mitchell Negus; Alison P. Toth; Annunziato Amendola; Samuel B. Adams

Poster No. 565

Effects Of Losartan And Fisetin On Microfracture Mediated Cartilage Repair Of Ankle Cartilage In A Rabbit Model

Ingrid K. Stake; Xueqin Gao; Matthieu Huard; Naomasa Fukase; Sudheer Ravuri; Marc Philippon; Thomas O. Clanton; Johnny Huard

Poster No. 566

Purified Exosome Product Alleviates The Development Of Knee Osteoarthritis In A Rat Model

Gongyin Zhao; Farbod Yousefi; Ichiro Tsukamoto; Ramona Kirk Reisdorf; Chunfeng Zhao

Poster No. 567

Impact Of Exercise On Posttraumatic Osteoarthritis After Knee Joint Injury: A Systematic Review Of Animals With Anterior Cruciate Ligament Or Medial Meniscus Transection

Taylor R. Bradley; Cale Jacobs; Austin Stone; Caitlin Conley; Brian Noehren

Poster No. 568

Chondroprotective Effects Of Srebp Inhibitor By Regulation Of Intracellular Metabolic Changes

Sato Ryo

Poster No. 569

The Role Of A RHAMM-mimetic Peptide In Cartilage Repair

Thorsten Kirsch; Ashley Sin; Emilia Bianchini; You Jin Lee; Charles Lin; Utkarsh Anil; Mary K. Cowman

Poster No. 570

Periodontitis Increases The Risk Of Osteoarthritis (oa) In Murine Model Of Ptoa

David Brand; Jiwen Luo; Do-Gyoon Kim; Hongsik Cho

Poster No. 571

Progressive Degradation Of Articular Cartilage In Rabbit Cartilage Due To Trauma By Microscopic Mri (μ Mri)

Amanveer Singh; Hannah Mantebea; Farid Badar; Syeda Batool; Gabrielle Abdelmessih; Talia Sebastian; Michael Newton; Yang Xia

Poster No. 572

Rna-based Therapeutics For The Prevention Of Arthrofibrosis

Christine Van Duyn; Robert O'Connell; Zvi Schwartz; Barbara D. Boyan; Joshua Cohen

Poster No. 573

Associations Of Serum Leptin Levels With Intra-articular Inflammatorycytokine Levels In Acute Arthritic And Nonarthritic Knees Of Mice

Shinya Masujima; Koji Aso; Shogo Takaya; Masashi Izumi; Masahiko Ikeuchi

Poster No. 574 (Guest Nation-Ireland) 

An Innovative Mir-activated Scaffold For The Delivery Of A Mir-221 Inhibitor To Enhance Cartilage Defect Repair

Claudio Intini; Andrea Lolli; Lia Blokpoel Ferreras; Nicole Kops; Sarah Casey; James Dixon; John P. Gleeson; Gerjo J.V.M. Van Osch; Fergal O'Brien

Cartilage and Synovium - Mechanobiology

Poster No. 575

Time Course Of Metabolic Shifts In Cartilage Explants Exposed To Short-term Simulated Microgravity

Alyssa K. Hahn; Eden Houske; Matthew Glimm; Marrin Chapman; Katherine Bourekis; Hope Welhaven; Ron June

Poster No. 576

A Calibrated Multiscale Model To Study The Crosstalk Between Inflammation And Mechanics In The Pathophysiology Of Articular Cartilage

Satanik Mukherjee; Raphaëlle Lesage; Liesbet Geris

Poster No. 577

Optimizing The Mechanical Stimulation Loading Regime Of Chondrocyte Seeded Agarose Constructs

Lea Zila; Stephen Waldman

Poster No. 578

An In Vitro Hydrogel Model To Study Cell Proliferation Under Mechanical Constraint

Elizabeth R. George; Stacey Thomas; Karin Payne; Stephanie Bryant

Poster No. 579

Chondrocyte Mechano-sensitivity Following A Massive Rotator Cuff Tear

Devon E. Anderson; Katherine Broun; Alexander Kotelsky; Sandeep Mannava; Whasil Lee

Cartilage and Synovium - Function, Structure and Mechanics

Poster No. 580

Synovium Friction Properties Are Influenced By Proteoglycan Content In Bovine And Human Ex Vivo

Lianna R. Gangi; Kimberly R. Kroupa; Gerard A. Ateshian; Clark T. Hung

Poster No. 581

Ppary Promoter Demethylation Rescues Articular Chondrocytes From Catabolic State In Hip FAI

Tomoyuki Kamenaga; Jie Shen; May Wu; Robert H. Brophy; Regis J. O'Keefe; John C. Clohisy; Cecilia Pascual-Garrido

Poster No. 582

Iterative Fitting Of Cartilage Indentation Tests Yields Different Material Property Definitions Based On Use Of 2D Or 3D Finite Element Meshes

Nicole Szabo; Marc Brouillette; Joshua Johnson; Jessica Goetz

Poster No. 583

Unloaded-to-loaded Changes In Regional Tibial Cartilage Thickness, T1p And T2: Utilization Of An Mri Compatible Loading Device

Erin C. Argentieri; Andrew Zhu; Arden Wach; Ashley Pekmezian; Sonia Bansal; Ryan E. Breighner; Hollis G. Potter; Suzanne A. Maher; Matthew F. Koff

Poster No. 584

Compression Induces Chondrocyte Detachment From Scaffolds In Tissue-engineered Cartilage Constructs

Byumsu Kim; Nikolaos Bouklas; Itai Cohen; Lawrence Bonassar

Poster No. 585

Obesity With ACL Transection Leads To Severe Collagen Matrix Disorganization Of Knee Cartilage In A Rat Model

Kalle J. Karjalainen; Petri Tanska; Kelsey Collins; Walter Herzog; Rami Korhonen; Eng Kuan Moo

Poster No. 586

Mechanical Response Of TMJ Condylar Cartilage Under Dynamic Unconfined Compression Loading

Annie Porter; Jonathan Kim; Lin Han; John Peloquin; Michael Santare; X. Lucas Lu

Poster No. 587

A Novel Bioreactor To Quantify The Effects Of Sliding Velocity On Cartilage Mechanics Results In Physiological Stresses And Strains

Ashley Pekmezian; Peter A. Torzilli; Suzanne Maher; Tony Chen

Poster No. 588

The Impact Of β -Glycerophosphate Treatment On Mesenchymal Stem Cell Chondrogenesis

Tiana J. Wong; Rhima Coleman

Poster No. 589

Robust Articulation-Mediated Cartilage Lubrication Persists Following Enzymatic Digestion

Meghan E. Kupratis; Atia Rahman; David L. Burris; Elise A. Corbin; Christopher Price

Poster No. 590

Collagen Crosslinking Dramatically Impairs The Frictional Performance Of Articular Cartilage

Meghan E. Kupratis; Uriel Gonzalez; Atia Rahman; David L. Burris; Elise A. Corbin; Christopher Price

Poster No. 591

Hyperglycemic Culture Conditions Alters The Functional And Mechanical Properties Of Synovium In The Progression Of Diabetic Osteoarthritis

Neeraj Sakhrani; Lianna Gangi; Hagar Kenawy; Ratna Sharma; Roshan Shah; Nadeen Chahine; Gerard Ateshian; Clark Hung

Poster No. 592

Real-Time Measurement Of Mouse Knee And Ankle Motion

Laura Moore; Tony Chen; Samantha Lessard; Purva singh; Camila Carballo; Edward Bowen; Alexander Piacentini; Scott Rodeo; Miguel Otero

Poster No. 593

Relationship Between Microscale Shear Modulus, Composition, And Structure In Porcine, Canine, And Human TMJ Cartilage

Dong Hwan Yoon; Santiago Peralta; Nadine Fiani; Gwendolyn Reeve; Lawrence Bonassar

Cartilage and Synovium - Treatment and Therapeutics

Poster No. 594

Improving Chondrogenic Potential Of Mesenchymal Stromal Cells By SiRNA Delivery In Hydrogels

Elena Della Bella; Guoliang Chen; Laura Mecchi; Anne Géraldine Guex; Valentina Basoli; Martin J. Stoddart

Poster No. 595

Hyaluronic Acid Has No Effect On The In Vitro Tribomechanics Of Degenerated Knee Joint Tissues

Luisa de Roy; Matthias Sukopp; Jonas Schwer; Graciosa Teixeira; Anita Ignatius; Andreas Seitz

Poster No. 596

Therapeutic mRNA For The Treatment Of Osteoarthritis. Utopia Or Future Strategy?

Valentina Basoli; Andreas Traweger; Christian Plank; Jaap Rip; Mauro Alini; Sibylle Grad

Poster No. 597

Optimizing Lubricin Expression In 3D Bioprinting Using Primary Human Chondrocyte Reporters

Kari Martyniak; Maria Cruz; Sean Kennedy; Makan Karimzadeh; Oju Jeon; Eben Alsberg; Thomas J. Kean

Poster No. 598

Optimization Of Scaavil-1ra Dose In A Large Animal Model Of Post-traumatic Osteoarthritis

Parvathy Thampi; Kathryn A. Seabaugh; Constance R. Chu; Jennifer N. Phillips; Joshua C. Grieger; C. Wayne McIlwraith; R. Jude Samulski; Laurie R. Goodrich

Poster No. 599

A Latent TGF- β Conjugated Scaffold For Improving The Biomechanics And Cell Morphology Of Engineered Cartilage

Tianbai Wang; Celina C. Maldonado; Junhan Liao; Andrew Martin; Zhonghao Dai; Joanne E. Murphy Ullrich; Mark W. Grinstaff; Michael B. Albro

Poster No. 600

Biodistribution And Stability Of Cartilage-targeting Cationic Peptide Carriers In Adult Rabbit Knee Joints

Timothy L. Boyer; Bill Hakim; Olivia Chao; Mary Ondrechen; Ryan M. Porter; Ambika G. Bajpayee

Poster No. 601

Restoring Chondroprotection To Synovial Joints During Early Stage Oa Using Hydrophobic Pgc Nanoparticles

Anisha T. Joenathan; Melissa Gillis; Taylor Lawson; Brian Snyder; Mark W. Grinstaff

Poster No. 602

Temporal Delivery Of TGF- β Doses For Optimization Of Engineered Cartilage Scaffold Delivery Platforms

Tianbai Wang; Zhonghao Dai; Michael B. Albro

Poster No. 603

Screen Of Natural Products To Stimulate Lubricin Production In Human Cartilage

Maria Cruz; Ramapaada Medam; Sean Kennedy; Thomas J. Kean

Poster No. 604

High Antioxidation Capacity Stem Cells Enhance Cartilage Regeneration

Won-Young Cho; Hyun Cheol Bae; Sun Young Wang; Hyuk Soo Han

Poster No. 605

Optimization Of Lipid Nanoparticles For Intra Articular Delivery Of Therapeutic mRNA In Mucopolysaccharidosis VII

Karthikeyan Rajagopal; Kelsey L. Swingle; Zhirui Jiang; Savan Patel; George R. Dodge; Susan W. Volk; Margret L. Casal; Michael J. Mitchell; Lachlan J. Smith

Poster No. 606

Functionalization Of C' Dot Nanoparticles With Collagen-II Targeting Peptide Alters Effective Diffusivity In Healthy Articular Cartilage

Aiyana Fortin; Nada Naguib; Uli Wiesner; Lawrence Bonassar

Poster No. 607

Influence Of The Synthetic Cannabinoid Agonist On Normal And Interleukin-1 β Treated Cartilage

Jiangyinzi Shang; Peter Alexander; McCalus Hogan; Alan Yan; Hang Lin

Poster No. 608

Effects Of Cell Embedded ADSC Hydrogel Concentration On MMP Gene Expression In Chondrocytes For Treatment Of Osteoarthritis

Vaughn K. Greene Jr.; Sarah Spinelli; Anika Mathia; Pooja Swami; Hixiang Liang; David Rubenstein; Daniel Grande

Poster No. 609

PEGylated PLGA Microspheres For The Sustained Delivery Of Hydrocortisone-17-butyrate To Articular Cartilage Chondrocytes

Nathaniel Myers

Poster No. 610

Partitioning In Degraded Cartilage Treated With GAG Mimetic Interpenetrating Polymer Network

Kirk C. Pierce; Christian D. DeMoya; Brian D. Snyder; Mark W. Grinstaff

Poster No. 611

Novel Gene For Amplifying Tissue Engineered Cartilage Deposition

Hunter Levis; Elise Stockham; Jacob Weston; Robert Bowles

Poster No. 612

Modulation Of Cartilage Progenitor Cell Differentiation By Inflammatory Environments Simulating Osteoarthritis

Kyra W.Y. Smith; Stephanie L. Fung; Irene Chiesa; Amrita Mehta; Alexandra Dumas; Claudia Hejazi-Garcia; Hannah Bonelli; Riccardo Gottardi

Poster No. 613

Minoxidil Attenuates Fibrous Deposition By Synoviocytes Derived From Knee Osteoarthritis Patients

Davis E. Martin; Peter Issa; Stefan Sarkovich; Jennifer Simkin; Andrew Longanecker; Patrick McTernan; Vinod Dasa; Luis Marrero

Poster No. 614

Development Of Engineered Cartilage Tissue Construct Maintaining Healthy Function Of Cartilage Cells

Ian Sands; Anne Yau; Jinhyung Lee; Yupeng Chen

Poster No. 615

Role Of Distal-less Homeobox 5 (dlx5) In Bone-marrow-derived Mesenchymal Stem Cell-mediated Cartilage Repair

Jay Trivedi; Salomi Desai; Chathuraka Jayasuriya

Poster No. 616

Medial Meniscal Root Repair Versus Debridement At Two-Year Follow-up: A Retrospective Comparative Cohort Study

Zachary Wang; Kevin Credille; Navya Dandu; Tristan J. Elias; Nolan Horner; Brian Forsythe; Nikhil Verma; Brian J. Cole; Adam B. Yanke

Poster No. 617

Neutralized Lidocaine Mixed With Platelet-rich Plasma Has No Effect On Inflammatory Gene Expression: An In Vitro Study On Human Chondrocytes

Camille Pinpin; Michael J. Sayegh; Eric V. Neufeld; Pooja Swami; Andrew Wong; Haixiang Liang; Steven E. Rokito; Kate W. Nellans; Lewis B. Lane; Jessica M. Intravia; Daniel A. Grande

Poster No. 618

ROS-Scavenging Manganese Dioxide Nanoparticles Mitigate Inflammatory Signaling By Macrophages

Tiffany Conklin; Shreedevi Kumar; Blanka Sharma

Poster No. 619

Effects Of Amniotic Fluid Stem Cells Conditioned Media For Treating Ptoa In A Rat Model

Marcel G. Brown; Tameka Dean; Jacob A. Hamby; Xue Ma

Poster No. 620

Exploring Molecular Mechanisms Of Inhibition Of Atp-citrate Lyase (acly) In Regulation Cartilage Matrix Metabolism By Integrated Chip-seq And Rna-seq Analysis

Paulo Vinicius Gil Alabarse; Ru Liu-Bryan

Poster No. 621

Maintaining Chondrocyte Viability In The Processing Of Bendable Osteochondral Allografts

Katherine A. Spack; Courtney A. Petersen; Peter T. Shyu; Chantelle C. Bozynski; Mary K. Romesburg; X. Edward Guo; James T. Cook; Clark T. Hung; Melvin P. Rosenwasser; Gerard A. Ateshian

Poster No. 622

Evaluating The Therapeutic Potential Of Delivering MSCs Encapsulated In Tunable PEG-4MAL Microgels For Treating Established Post-traumatic Osteoarthritis

Angela S.P. Lin; Lina M. Mancipe Castro; Kelly Leguineche; Sruthi Ranganathan; Yan Pacheco; Jake Heinonen; Nisha Kyathsandra; Aletta Combs; Nick J. Willett; Robert E. Guldberg

Clinical Research - Big Data Research

Poster No. 623

Sepsis And Septic Shock In The Surgical Hip Fracture Population

Christian A. Gonzalez; Alana O'Mara; Noelle L. Van Rysselberghe; Jacquelyn P. Cruz; Dylan Roth; Michael J. Gardner

Poster No. 624

Disparities In Treatment Of Congenital Hand Differences In New York State

Derek T. Schloemann; Warren C. Hammert; Caroline P. Thirukumaran

Poster No. 625

Physical And Financial Impacts Caused By The Covid-19 Pandemic Exacerbate Knee Pain:a Longitudinal Study Ofa Large-scale General Population

Hiromu Ito; Yugo Morita; Kohei Nishitani; Shinichi Kuriyama; Shuichi Matsuda

Poster No. 626

Determining An Ideal Cutoff For Home Disposition Utilizing Risk Assessment And Prediction Tool

Rade R. Jibawi Rivera; Asher Lichtig; Abhishek Deshpande; Ye Lin; Julio Castillo Tafur; Lucas Paladino; Luke Zabawa; Mark H. Gonzalez

Poster No. 627

Bacterial Meningitis In Patients After Cervical Spinal Fusion: Who Is At Risk?

Gabriel Hanna; Alejandro Pando; Eli Bryk

Poster No. 628

Clinical Risk Factors Of Perioperative Pressure Injury In Older Adult Patients With Hip Fracture

Yi-Ting Tzen; Senthil Sambandam; Barbara Delmore; Jijia Wang; Dane K. Wukich

Poster No. 629

Factors Affecting Clinical Outcomes After Massive Rotator Cuff Repair Using Datamining Technique

Tomoyuki Muto; Hiroshi Tanaka; Hiroaki Inui

Poster No. 630

National Disparities In Access To Operative Management Of Rotator Cuff Tears

Zachary L. LaPorte; Nathan J. Cherian; Christopher T. Eberlin; Michael P. Kucharik; Michael D. Dean; Kaveh A. Torabian; Kieran S. Dowley; Scott D. Martin

Poster No. 631

Racial Disparities In Arthroscopic Rotator Cuff Repair: An Analysis Of Utilization And Perioperative Outcomes

Jacob A. Linker; Christopher T. Eberlin; Sara A. Naessig; Samuel S. Rudisill; Michael P. Kucharik; Wendy M. Meek; Nathan J. Cherian; Matthew J. Best; Scott D. Martin

Poster No. 632

Impact Of Covid-19 Pandemic On Arthroplasty Practice Patterns In The United States

Amit S. Piple; Jennifer C. Wang; Gabriel J. Bouz; Brian C.H. Chung; Cory K. Mayfield; Daniel A. Oakes; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 633

Epidemiologic Characteristics Of Trauma Fractures During Covid-19 In Western New York

Ivette Chen; Sonja Pavlesen; Laura Ryan; Alexa Schenk; Catherine Miller; Mark J. Anders

Poster No. 634

Medicaid Patients Undergo Total Joint Arthroplasty At Lower Volume Hospitals By Lower Volume Surgeons

Mary K. Richardson; Anna Cohen-Rosenblum; Amit S. Piple; Jennifer C. Wang; Charles Hansen; Alexander B. Christ; Nathanael D. Heckmann

Clinical Research - Clinical Research Methods

Poster No. 635

Joint Stability Analysis Of Talocalcaneal Coalition Patients After Resection

Junyo Boo; Woo Young Jang; Seungbum Koo

Poster No. 636

The Impact Of Mental Health On Post-operative Outcomes For Adolescents Undergoing Posterior Spinal Fusion For Idiopathic Scoliosis At A Tertiary Care Children'S Hospital In An Underserved Region

Leila Mehraban Alvandi; Kathryn R. Segal; Alexandria Debasitis; Jorden Xavier; David Ge; Jaime A. Gomez; Jacob Schulz; Jacob Schulz; Eric F. Fornari

Poster No. 637

Cannabidiol Perceptions And Use In The Orthopedic Patient Population

Karen Hernandez; Kendra Ihaza; Haley Goble; Bradley Lambert; Patrick McCulloch

Poster No. 638

Use Of Wearable Sensors To Measure Improvements In Real-world Upper Extremity Activity After Brachial Plexus Reconstruction

Arakua N. Welbeck; Yosita Beamer; David M. Brogan; Catherine E. Lang; Christopher J. Dy

Poster No. 639

3d Motion Analysis Of Shoulder Function Correlates With Patient-reported Outcome Measures After Surgery For Traumatic Brachial Plexus Injury

Christopher J. Dy; Rannon Huo; Yosita Beamer; David M. Brogan; Michael Harris

Clinical Research - Observational Studies

Poster No. 640

The Impact Of Prolonged Operative Duration On Postoperative Venous Thromboembolic Events Following Thoracolumbar Spine Surgery

Tariq Z. Issa; Khoa S. Tran; Yunsoo Lee; Mark J. Lambrechts; Parker L. Brush; Jasmine S. Lin; Skylar Nahi; Andrew Tokarski; Jose A. Canseco; Alan S. Hilibrand; Alexander R. Vaccaro; Christopher K. Kepler; Gregory D. Schroeder

Poster No. 641

A Favorable Suture Method For Size-mismatched Nerve Transfer:a Clinical Case Series And An Experimental Animal Study

Sho Iwabuchi; Yuki Hara; Akira Ikumi; Naoyuki Ochiai; Masashi Yamazaki

Poster No. 642

Growth Modulation Significantly Increases The Chance Of Postoperative Success Following Vertebral Body Tethering

Daniel G. Hoernschemeyer; Patrick Elliott; Melanie E. Boeyer

Poster No. 643

Surgical Management Of Sacral Metastases: Outcomes And Complications

Takaki Shimizu; Botros Mina; Addisu Mesfin

Poster No. 644

Co-fluctuations Of Knee Pain Between Knees: Data From The Osteoarthritis Initiative

Martin Englund; Tuhina Neogi; Aleksandra Turkiewicz

Poster No. 645

Impact Of Smoking And Diabetes On Carpal Tunnel Syndrome Pre And Post-surgical Intervention

Stephanie Choo L. Choo; Tzu Chuan Yen; Rachel Phillips; Rown Parola; Bryce Fletcher; Andrea Evenski

Poster No. 646

Patient Reported Outcomes Of Pain And Related Quality Of Life One Year Following Osseointegration In Patients With Lower Extremity Amputations

Kylie G. Shaw; Mohamed Awad; Danielle Melton; Jason W. Stoneback

Poster No. 647

The Prevalence Of Posttraumatic Stress Disorder In Orthopaedic Trauma Patients And A Call To Implement The Injured Trauma Survivor Screen (ITSS) As A More Formalized Screening Protocol

Victoria J. Nedder; Mary A. Breslin; Alex O. Rothbaum; Heather A. Vallier; Vanessa P. Ho

Poster No. 648

Localized Fibrosis And Implant Particle Reaction As Underlying Pathogenesis For Patellar Clunk Syndrome Following Total Knee Arthroplasty- A Study Of 48 Cases

Yaxia Zhang; Thomas W. Bauer

Poster No. 649

Use Of Mesh Plate For Graft Containment In Femur Nonunion Repair

Augustine Saiz; Blake Schultz; Patrick Kellam; Ryan Mayer; Adeet Amin; Stephen Warner; Timothy Achor

Poster No. 650

Clinical Differences Amongst Periprosthetic And Native Distal Femur Fractures

Augustine Saiz; Shana Kong; Barry Bautista; Judas Kelley; Max Haffner; Mark Lee

Poster No. 651

Allogenic Blood Transfusions For Distal Femur Fractures Increase Surgical Site Infection Rates

Johnathan Dallman; Douglas Haase; Lucas Haase; Tyler Moon; Dylan Vancer; Alexander Benedick; George Ochenjele; Joshua Napora; Brent Wise

Poster No. 652

A Measurement Of Energy Deficiency, Passion Scale, And Burnout In Male And Female College Athletes

Johnathan Dallman; Ezra Goodrich; Nick Guisti; Jordan Baker; Armin Tarakemeh; Megan Wolf; Lisa Vopat; Bryan Vopat

Poster No. 653

Relationship Between Body Composition And Grip Strength In Patients With Thoracolumbar Vertebral Compression Fractures Using A Bioelectrical Impedance Analysis

Hirokazu Inoue; Yukinori Hayashi; Hideaki Watanabe; Hideaki Sawamura; Atsushi Kimura; Masaaki Masubuchi; Katsushi Takeshita

Poster No. 654

Association Between Sarcopenia And Regional Brain Atrophy In A General Older Population: The Hisayama Study

Takahiro Tajimi; Naoki Hirabayashi; Yoshihiko Furuta; Takanori Honda; Jun Hata; Tomoyuki Ohara; Mao Shibata; Takanari Kitazono; Toshiharu Ninomiya; Yasuharu Nakashima

Poster No. 655

Differences in Pain and Sleep Status between TKA and UKA

Takeo Mammoto

Poster No. 656

Implementation Of A Dedicated Orthopedic Trauma Room Improves Care For Patients With Isolated Hip, Open Tibia, And Midshaft Femur Fractures

Hadi Aziz; Sally M. Trout; Cristy Meyer; Ariel T. Goldman

Poster No. 657

Two-year Outcomes Of A Monoblock Tapered Femoral Stem For Complex Tha Femoral Reconstruction: A Multicenter Prospective Study

Vinaya Rajahraman; Daniel Waren; Kyle Lawrence; Weston Buehring; Jeremiah Thomas; Erik Schnaser; Ran Schwarzkopf

Poster No. 658

ACL Reconstruction In Athletes: Bone-patellar Tendon-bone Autograft Versus Soft Tissue Quadriceps Autograft

Sean P. Renfree; Joseph C. Brinkman; Sailesh Tummala; Kostas Economopoulos

Poster No. 659

Association Between Sarcopenic Obesity And Risk Of Cardiovascular Disease: The Hisayama Study

Yu Setoyama; Takahiro Tajimi; Takanori Honda; Jun Hata; Takanari Kitazono; Yasuharu Nakashima; Toshiharu Ninomiya

Poster No. 660

Do All Hip Preserving Surgeries Provide The Same Value?

Paul Beaulé; Lissa Pacheco-Brousseau; Stéphane Poitras; Sasha Carsen; Geoffrey Wilkin; George Grammatopoulos; Marc-Antoine Ricard; Koorosh Kashanian

Poster No. 661

Predictors Of Osteoarthritis Among Obese U.S. Adults: National Health And Nutrition Survey, 2005 - 2018

Ayobami Ogunsola; Arman Hlas; Michael Marinier; Jacob Elkins

Clinical Research - Randomized Studies

Poster No. 662

Efficacy Of Electrocautery In Eradicating Cutibacterium Acnes From Surgical Skin Incision During Shoulder Arthroplasty Surgery

Haley D. Huff; Michael Nguyen; Matthew Smith; Mike Kim

Poster No. 663

Efficacy Of A Non-surgical Treatment Protocol For Patients With Symptomatic Femoro-acetabular Impingement: A Randomized Controlled Trial

Paul Beaulé; Lissa Pacheco-Brousseau; Stéphane Poitras; Sasha Carsen; Marc-Antoine Ricard; Koorosh Kashanian; George Grammatopoulos; Geoffrey Wilkin

Poster No. 664

Comparison Of Pain Control And Postoperative Clinical Outcome Between Intravenous Administration And Periarticular Injection Of Corticosteroid In Total Knee Arthroplasty: A Prospective, Randomized, Controlled Study

Kazuhi Hatayama; Masanori Terauchi; Satoshi Nonaka; Hibiki Kakiage

Clinical Research - Systematic Review/Meta-analyses

Poster No. 665

Patient Reported Outcome Measures Following Total Hip Arthroplasty: A Systematic Review And Meta-analysis Comparing Surgical Approaches

Andrew Kim; Adam Rizk; Austin Chiu; William Zuke; Alexander Acuna; Atul Kamath

Poster No. 666

The Hip-spine Syndrome: A Systematic Review Of Outcomes After Primary Hip Arthroscopy With Concomitant Low Back Pathology

Michael Lee; Ronak Mahatme; Jacquelyn Simington; Stephen Gillinov; Scott Fong; David Kim; Jay Moran; Seyi Abu; Andrew Jimenez

Poster No. 667

Age And Prevalence Of Upper Extremity Cerebral Palsy Therapies

Matthew Weintraub; David Ahn; Justin Lee; Siraj Shaikh; Hutnik Lauren; Amy Song; Ravikumar Vaishali; Anugya Mittal; Alexandra McGrath; Alice Chu

Poster No. 668

Effectiveness Of Thromboprophylaxis Following Hip Fracture: A Network Meta-analysis

Ahmed Negm; Lisa Yamaura; Ashley Clarke; Daniyya Chaudhry; Tanya Cherppukaran; Prism Schneider

Poster No. 669

Operative Versus Non-operative Management Of Acute Scapholunate Ligament Injuries At The Time Of Distal Radius Fracture Osteosynthesis: An Outcomes-based Systematic Review And Metanalysis

Francisco Rodriguez Fontan; Alexandra Stein; Andy Lalka; Frank Scott

Poster No. 670

Long-term Outcomes And Survivorship Following Primary Hip Arthroscopy: A Systematic Review

Michael S. Lee; Jade S. Owens; David N. Kim; Jay Moran; Stephen Gillinov; Ronak Mahatme; Nathan Grimm; Andrew Jimenez

Poster No. 671

A Systematic Review Analyzing Anxiolytic Medications Fracture Risk

Johnathan Dallman; Levi Aldag; Amanda Klass; Morgan Hadley; Steven Clary; Armin Tarakemeh; Bryan Vopat

Poster No. 672

Varus Alignment Was A Risk Factor For Osteoarthritis Of The Knee After The Anterior Cruciate Ligament Injury: A Systematic Review And Meta-analysis

Junya Itou; Masafumi Itoh; Umito Kuwashima; Ken Okazaki; Kiyotaka Iwasaki

Poster No. 673

Obesity And Rotator Cuff Disease: A Systematic Review And Meta-analysis

Simone Herzberg; Gustavo Garriga; Nitin Jain; Aysh Giri

Poster No. 674

Emerging Role Of Quantitative Ultrasound-based Imaging For Characterizing Rotator Cuff Tears: A Systematic Review

Yen-Sheng Lin; Andrew J. Nasr; Yi-Ting Tzen; Kevin Prabhu; Michael Khazzam; Nitin B. Jain

Basic Science Education

Poster No. 675

A Biomechanical And Radiographic Evaluation Of Casting Technique

Trenton P. Sprenkle; Alexander Chong; Jordan Shearer; Brandon Fisher; Brian R. Sauer

Poster No. 676

Application Of Situated Learning And Instructional Scaffolding In Research Mouse Surgeries

Kirsten Kelly; Ryan R. Kelly; Stephanie Khoo; Amber M. Wolfe; Amanda C. LaRue

Poster No. 677

How Do Academic Bibliometrics Compare To Social Media Altmetric Scores For Orthobiologics Research?

Mario Hevesi; Tristan J. Elias; Kevin Credille; Eric Azua; Hailey Huddleston; Johnathan McCormick; Adam B. Yanke

Education and Outreach - Clinical Education

Poster No. 678

The Value Of An Orthopaedic Oncology Rotation For Resident Education

Oscar Y. Shen; George Asham; Justin Seo; Deep Patel; Pietro M. Gentile; Christina J. Gutowski; Tae Won B. Kim

Poster No. 679

The Intersection Of Race And Sex: A New Perspective Into Diversity Trends In Orthopaedic Surgery

Jennifer C. Wang; Ikenna Nwachuku; Stephanie W. Chang; William J. Hill; Alana M. Munger; Linda I. Suleiman; Nathanael D. Heckmann

Poster No. 680

Profile Of An Orthopaedic Surgery Residency Applicant: What Factors Define A Successful Match?

Dagoberto Pina Jr; Benjamin Van; Joseph Wick; Om Patel; Shana Kong; Katherine Wick; Max Haffner; Gillian L. Soles; Steven Thorpe; Cassandra Lee; Mark Lee; Hai Le

Poster No. 681

Exploring Geographic Trends In Race And Sex Representation Within Orthopaedic Surgery Residency Programs

Ikenna Nwachuku; Jennifer C. Wang; William J. Hill; Stephanie W. Chang; Alana M. Munger; Linda I. Suleiman; Nathanael D. Heckmann

Poster No. 682

Gender Disparities In Musculoskeletal Research Endowments And NIH Funding

Alicia Asturias; Leena Feeley; Brian Feeley

Foot and Ankle - Diagnostics

Poster No. 683

Investigation Of Radiographic Morphological Characteristics In Non-traumatic Osteochondral Lesions Of The Talus

Yuta Kawae; Yuki Suzuki; Tomohiro Onodera; Koji Iwasaki; Masatake Matsuoka; ryosuke hishimura; Eiji Kondo; Jun Onodera; Tomonori Yagi; Norimasa Iwasaki

Poster No. 684

Limb Rotation Alters Apparent Fibular Length And Talocrural Angle On Ankle Radiographs

Kevin T. Root; Nicholas J. Jackson; Jennifer A. Nichols; Christopher W. Reb

Poster No. 685

Anatomical Features Of Patients With Recurrent Dislocation Of The Peroneal Tendons

Akinobu Nishimura; Yoshiyuki Senga; Fujikawa Yuki; Akihiro Sudo

Poster No. 686

Weight-bearing Ct For 3d Alignment Of Foot Bones Before And After Surgical Correction Of Flatfoot

Claudio Belvedere; Luigi Piarulli; Chiara Pavani; Lisa Berti; Maurizio Ortolani; Stefano Durante; Mauro Girolami; Alberto Leardini

Poster No. 687

Diagnosis Of Lisfranc Instability Using 3d Measurements In Weightbearing Computedtomography Imaging

Alexandra Flaherty; Noopur Ranganathan; Sayyed-Hadi Sayyed-Hosseini; Christopher DiGiovanni; Soheil Ashkani Esfahani; Lorena Bejarano Pineda

Poster No. 688

Statistical Shape Modeling Of Post Lateral Column Lengthening Adult Cerebral Palsy Flatfoot

Kas Knutson; Joseph J. Krzak; Karen M. Kruger; Amy L. Lenz

Foot and Ankle - Injury and Healing

Poster No. 689

The Impact Of Peripheral Nerve Block On The Quality Of Care Following Ankle Fracture Surgery: A Quality Improvement Study

Bahar Entezari; Josh Gleicher; John Matelski; Jesse I. Wolfstadt

Poster No. 690

Utilization Of Weightbearing Computed Tomography To Assess Radiographic Alignment Of The Foot And Ankle In Post-operative Pilon Fracture Patients

Jacob C. Benna; Andrew C. Peterson; Justin Haller; Amy L. Lenz

PS1-027 Foot and Ankle - Structure, Function and Mechanics

Poster No. 691

The Impact of Ligament Tears on Plantar Pressure in Progressive Collapsing Foot Deformity: A Cadaveric Model

Sean Renfree; Simeon Smith; Patrick Newton; Alfonso Ayala; Hamed Malakoutikhah; Mark Borgstrom; Daniel Latt

Poster No. 692

The Effect Of Backpack Load On Intersegmental Motions Of The Foot And Plantar Pressure In Individuals With Mild Flatfoot

Min Gyu Kyung; Ppu Ri Bak; Jong Wook Lim; Dong-Oh Lee; Gil Young Park; Yun Jae Cho; Young Sik Yoon; Dong Yeon Lee

Poster No. 693

Hindfoot Motion Analysis According To The Subtalar Compensation And The Stage Of Ankle Osteoarthritis Using Multi-segment Foot Model

Min Gyu Kyung; Ho Won Kang; Dae-Yoo Kim; Gil Young Park; Dong-Oh Lee; Young Sik Yoon; Dong Yeon Lee

Poster No. 694

Foot And Ankle Automatic Anatomical Coordinate System Definition

Andrew Peterson; Karen Kruger; Amy Lenz

Poster No. 695

Comparison Of Tibiotalar And Subtalar Kinematics During Walking And Running

Tetsuya Yamamoto; Paige Paulus; Joshua Charles Setliff; Tom Gale; Shumeng Yang; Jessica Brown; MaCalus Hogan; William Anderst

Poster No. 696

Characterizing The Naviculocuneiform Complex Using Statistical Shape Modeling And Joint Coverage Area

Jayson R. Nelson; Andrew C. Peterson; Nicola Kraehenbuehl; Amy Lenz

Poster No. 696A

Gait Symmetry In Patients With Unilateral And Bilateral End-stage Ankle Arthritis

Stephanie Hamlin; Martin Barylak; Robin Queen

Poster No. 697

Angle Bisector Method To Determine Accurate Syndesmotic Fixation Angle: Computed Tomography Validation

Bedri Karaismailoglu; Erdem Sahin; Mustafa Kara; Mehmed Nuri Tutuncu

Poster No. 698

Quantitative Evaluation Of Ankle Drawer Test In Chronic Lateral Ankle Instability Using An Electromagnetic Measurement System

Kiminari Kataoka; Yuichi Hoshino; Noriyuki Kanzaki; Kyohei Nishida; Kanto Nagai; Takehiko Matsushita; Ryosuke Kuroda

Poster No. 699

Haptic Feedback Differentiation And Response On The Lower Extremity

Cassandra Tom; Joseph Novack; Ana Sanz Cozcolluela; Jason Bariteau; Frank Hammond III

Foot and Ankle - Surgical and Non-surgical Interventions

Poster No. 700

Biomechanical Comparison Of Two Different Methods For Fibula Fracture Fixation

Marcus Mohr

Poster No. 701

Tranexamic Acid In Foot And Ankle Surgery: A Systematic Review And Meta-analysis

Jake S. Enos; Nicholas Dombrowski; Erik Henkelman; Damon Mar; Armin Tarakemeh; Bryan Vopat

Poster No. 702

Assessing The Effect Of Unilateral Total Ankle Arthroplasty On Fall Risk During Gait Using Margin Of Stability

Martin Barylak; Sara Arena; Stephanie Hamlin; Robin Queen

Poster No. 703

A Single Institution Comparison Of Dislocation Rates For Screw Versus Plate Posterior Malleolus Fixation In Trimalleolar Ankle Fractures

David Z. Forrister; William Beard; Brady Moore; John Hagedorn

Poster No. 704

Is There Any Gender Difference Among Patients Receiving Ankle Fracture Treatment?

Noopur Ranganathan; Aayush Mehta; William DiGiovanni; Bardiya Akhbari; Hamid Ghaednia; Lorena Bejarano Pineda; Nour Nassour; Soheil Ashkani Esfahani

Poster No. 705

Difference Of Visibility Between Portals With Needle Arthroscopy Of The Anterior Ankle Joint: A Cadaveric Study

Jumpei Inoue; Youichi Yasui; Jun Sasahara; Tetsuya Takenaga; Kenjiro Wakabayashi; Masahiro Nozaki; Makoto Kobayashi; Myongsu Ha; Hiroaki Fukushima; Jiro Kato; Hideki Murakami; Masahito Yoshida

Poster No. 706

Constraint Characteristics Of Bearing Surfaces For Two Generations Of Total Ankle Replacements

Samuel Fang; Hannah Fatemi

Poster No. 707

Postoperative Outcomes In Malleolar Fractures Fixed With A 3.5mm Lcp Hook Plate

Hadi Aziz; Sally Trout; Rishabh Jethanandani; Christine Bub; Lewis Collins; Ariel Goldman

Poster No. 708

Radiographic And Clinical Outcomes In Forefoot Osteotomy Utilizing Headed Vs. Headless Trauma Screws

Jillian Mohn; Madilyn Riegel; Hallie Murray

Hand and Wrist - Biomechanics

Poster No. 709

Biomechanical Comparison Of Three Different Olecranon Fracture Fixation Methods

Marcus Mohr; Andrew J. Jacobs; Andrew W. Seykora

Poster No. 710

A Robotic Testing Approach For Quantifying The Passive Range Of Motion Of The Thumb CMC Joint

Josephine M. Kalshoven; Rohit Badida; Amy M. Morton; Douglas C. Moore; Trey Crisco

Poster No. 711

Biomechanical Evaluation Of Three Different Reconstructive Techniques For Scapholunate Dissociation

Dai-Soon Kwak; Il-Jung Park; Seungbum Chae; Dohyung Lim

Poster No. 712

Motion Analysis Of Extensor Carpi Ulnaris In Triangular Fibrocartilage Complex Injury By Using Ultrasonography Images

Shuya Tanaka; Atsuyuki Inui; Yutaka Mifune; Hanako Nishimoto; Tomoya Yoshikawa; Issei Shinohara; Tatsuo Kato; Takahiro Furukawa; Masaya Kusunose; Ryosuke Kuroda

Poster No. 713

Carpal Arch Space Augmentation By Volar Force Applied To The Wrist Skin Surface

Hui Zhang; David Jordan; Zong-Ming Li

Poster No. 714

Changes In Radiocarpal Joint Pressures And Carpal Kinematics Following Wrist Ligament Sectioning

Sanju P. Eswaran; Walter H. Short; Frederick W. Werner

Hand and Wrist - Imaging

Poster No. 715

Effect Of Axial Traction MRI On The Articular Cartilage Visibility Of Thumb CMC Joint Arthritis

Akira Ikumi; Sho Kohyama; Kazuhiro Ikeda; Sho Iwabuchi; Takeshi Ogawa; Yuichi Yoshii; Masashi Yamazaki

Poster No. 716

The Effect Of Initial Radial Inclination On The Staging Of Kienbock'S Disease At Initial Presentation

Griffin R. Rechter; Christina Wassef; Varun Sambhariya; Suhas Tatapudi; William F. Pientka

Poster No. 717

Differences In Standard Morphology Of The Distal Radius And Ulna By Gender

Yuichi Yoshii; Yusuke Eda; Satoshi Matsuura; Tomoo Ishii

Hand and Wrist - Osteoarthritis

Poster No. 718

Identification Of Novel Variants In Hedgehog Signaling Pathway Genes Associated With Familial Osteoarthritis

Shivakumar Rayavara Veerabhadraiah

Poster No. 719

Cmc Osteoarthritis Treatment Using A Novel Device: A Biomechanical Analysis For Thumb Range Movement

Dimitri Madden; Nathan T. Morrell; Ethan C. Darwin; Lauren Ostermann; Diego Rodriguez; August Finke; Christina Salas

Poster No. 720

Exosomes Derived From Hypoxia Cultured Human Adipose Stem Cells Alleviate Articular Chondrocyte Inflammation And Oa Progress

Linghua Chang

Hand and Wrist - Surgical and Therapeutic Innovation

Poster No. 721

A New Biofeedback Rehabilitation Technique Using Upper Limb Hybrid Assistive Limb Robot Technology In Patients With Brachial Plexus Injury

Shigeki Kubota; Hideki Kadone; Yukiyo Shimizu; Tadashi Kubo; Yukei Matsumoto; Masashi Yamazaki

Poster No. 721A

Patient Attitudes Towards Hand Surgery In The Office Vs Ambulatory Surgical Center Settings

Brandon W. Knopp; Emma Eng

Poster No. 722

Hook Plate Fragment Specific Fixation For Volar And Dorsal Rim Distal Radius Fractures

Alexander Kelsheimer; Nino Coutelle; Meera Gill; Jason Nydick

Poster No. 723

A New Test Method For Characterization Of Headless Compression Screw Performance

Marcus Mohr; Brayden J. Reiland; Brian R. Conley; Bharadwaj Ananthan

Hand and Wrist - Tendon, Ligament and Neuromuscular Disorders

Poster No. 724

Titanium Alloy Allergy In A Patient With Distal Radius Fracture

Taylor A. VanHelmond; Richelle Fassler; Edward Wang

Poster No. 725

Investigating Inflammatory Mechanisms Activated By Genetic Predisposition In Dupuytren's Contracture

Hiroaki Kida; Yuichiro Matsui; Ikuko Takahashi; Masaaki Murakami; Norimasa Iwasaki

Poster No. 726

Comparative Hand Surgery Outcomes In The Office And Ambulatory Surgical Center Settings

Brandon W. Knopp; Emma Eng; Jake Goguen; Ehsan Esmaeili

Poster No. 727

Adiponectin Inhibits Fibrosis Of Fibroblasts In The Palmar Aponeurosis In Dupuytren's Contracture

Yoshiaki Yamanaka; Takafumi Tajima; Yoshitaka Tsujimura; Toichiro Naito; Yukichi Zenke; Kunitaka Menuki; Toshihisa Oshige; Naoki Toba; Akinori Sakai

Poster No. 728

Cellular Characterization Of Human Peritendinous Fibrotic Scar Tissue By Scrna-seq

Nicholas Wagner; Constantinos Ketonis; Alayna E. Loiselle; Anne E.C. Nichols

Hip - Diagnostics

Poster No. 729

Is There Value In Defining Condition Groups Within Pre-arthritic Hip Disease?

Paul Beaulé; Lissa Pacheco-Brousseau; Stéphane Poitras; Sasha Carsen; Marc-Antoine Ricard; Koorosh Kashanian; George Grammatopoulos; Geoffrey Wilkin

Poster No. 730

Comparison Of Manual Versus Statistical Shape Model-Derived Measurements Of Pathological Femur Morphologies

Jasper Kwasny; Cynthia Fantini Pagani; Alexander Zimmerer; Kevin Bill; Leon Robertz; Uwe Kersting; Bhushan Borotikar

Poster No. 731

Air Arthrograms In Hip Joint Injections: A Single-Center Study On Efficacy And Patient Outcomes

Shannon Tse; Ashley K. Chut; Jonathan Hutt

Poster No. 732

Withdrawn

Hip - Growth, Development and Aging

Poster No. 733

Verification Of Optimal Shelf Position To Avoid Iatrogenic Impingement In Shelf Acetabuloplasty

Shunsuke Miyajima; Naomi Kobayashi; Youhei Yukizawa; Hideki Honda; Yutaka Inaba

Poster No. 734

The Prevalence Of Infantile Hip Dislocation Before And During The Covid-19 Pandemic And Associated Treatment Outcomes - Retrospective Pilot Study

Anthony J. Mitchell; Jessica Block; Sonja Pavlesen

Hip - Injury and Healing

Poster No. 735

Injury Degree Of Nutrient Foramina In Displaced Femoral Neck Fractures: Anatomical And Clinical Observations

Shenghui Wu; Wei Wang; Xiaozhong Zhu; Jiong Mei

Poster No. 736

Side To Side Differences Of The Alpha Angle In Patients Undergoing Unilateral Hip Arthroscopy

Thomas Nau; Sohaib Darwish; Laila Zarnegar; Nerissa Naidoo

Poster No. 737

Accuracy Of 3D Printed Drill Guides For Femoral Neck Stabilization

Gregory Roytman; Brian Beitler; Julia LaMonica; Alim F. Ramji; Michael Baumgaertner; Brad Yoo; Michael Leslie; Steven M. Tommasini; Daniel H. Wiznia

Poster No. 738

Relationship Between Entry Point Position And Screw Length In Pelvic Anterior Column Fixation.

Connor Plaisance; Kevin Perry; Seokgi Lee; Brad Chauvin; Kamren Sutton; Drayton Daily; Shane Barton; Giovanni Solitro

Hip - Structure, Function and Mechanics

Poster No. 739

Hip And Pelvis Movement Patterns In Patients With Femoroacetabular Impingement Syndrome Differ From Controls During A Step-down Pivot-turn Task

Thomas W. Fenn; Thomas Alter; Daniel M. Wichman; Alejandro Espinoza Orias; Shane Nho; Philip Malloy

Poster No. 740

Double-leg Squat Biomechanics Differ In Patients With Femoroacetabular Impingement Syndrome With Mild Compared To Severe Cartilage Damage

Wichman Daniel; Thomas W. Fenn; Martina Guidetti; Markus Wimmer; Shane Nho; Philip Malloy

Poster No. 741

Contributions Of The Ischiofemoral Ligament, Iliofemoral Ligament, And Conjoined Tendon To Hip Stability After Total Hip Arthroplasty: A Cadaveric Study

Yasuaki Tamaki; Tomohiro Goto; Joji Iwase; Yasuyuki Omich; Keizo Wada; Daisuke Hamada; Koichi Sairyo

Poster No. 742

Hip Broach Handle Stability Assessment Using Digital Image Correlation

Gregg Schmidig; Peter Tulkis; Melanie Caba; Anthony Habib; Ahmad Faizan

Poster No. 743

Assessing The Effect Of Lateral Locking Plate Working Length On Strain For Distal Femur Fractures

Gregory R. Roytman; Brian Beitler; Julia LaMonica; Alim F. Ramji; Michael Baumgaertner; Brad Yoo; Michael Leslie; Steven M. Tommasini; Daniel H. Wiznia

Poster No. 744

Is There A Better Bony Landmark Than The Lesser Trochanter To Reference Femoral Component Anteversion During Direct To Reference Femoral Component Anteversion During Direct Anterior Approach Total Hip Arthroplasty?

Thomas McCarthy; Ilya Borukhov; Peter Gold; Jonathan Danoff

Poster No. 745

Anatomical Differences Between Crowe Iv Hips With And Without A False Acetabulum

Yuki Maeda; Kazuma Takashima; Keisuke Uemura; Hidetoshi Hamada; Nobuhiko Sugano

Poster No. 746

Acetabular Wall Susceptibility To Reaming In Total Hip Arthroplasty: A Pilot Study On Bone Surrogates

Madeline Gautreaux; Zashiana Martin; Steven Kautz; Shane Barton; James Robinson; Matthew Dubose; Giovanni F Solitro

Poster No. 747

Sliding Distance During Cam-type Femoroacetabular Impingement: Quantification From In Vivo Data And Assessment If In Vitro Effect.

Taiyibah Afzal; Alison Jones; Sophie Williams

Poster No. 748

Trabecular Eccentricity: A Means For Studying Fracture Risk Of The Femoral Neck

John G. Skedros; John T. Cronin; Jamison K. Walker; Brett W. Richards

Hip - Surgical and Non-surgical Interventions

Poster No. 749

Does Pre-operative Proms Predict Management In Pao Plus Hip Arthroscopy

Paul Beaulé; Kenneth Milligan; Kawan Rakhra; Cheryl Kreviazuk; Stephane Poitras; Geoffrey Wilkin; Ira Zaltz; Etienne Belzile; Michael Stover; Kevin Smit; Ernest Sink; John Clohisy

Poster No. 750

The Contributions Of Femoral Deformities To The Range Of Motion Of The Dysplastic Hip After Periacetabular Osteotomy

Jennifer Cheng; Shuyang Han; Bowen Song; Omar G. Stocks; Sabir K. Ismail; Philip C. Noble; Alfred A. Mansour

Poster No. 751

Predicting Patient-specific Hip Motion During Functional Activities After Periacetabular Osteotomy

Omar G. Stocks; Shuyang Han; Bowen Song; Jennifer Cheng; Sabir Ismail; Philip C. Noble; Alfred A. Mansour

Poster No. 752

Correlation Between Periacetabular Osteotomy Outcomes And Intraoperative Labral Tear Size

Holden Archer; Aaron Shi; Yin Xi; Avneesh Chhabra; Ajay Kohli; Joel Wells

Poster No. 753

Mid- And Long-term Outcomes And Survivorship Of Borderline Dysplastic Patients Undergoing Primary Hip Arthroscopy: A Systematic Review

Michael Lee; Jade S. Owens; Scott Fong; David N. Kim; Stephen Gillinov; Ronak J. Mahatme; Nathan Grimm; Andrew Jimenez

Poster No. 754

Mid To Long-term Outcomes And Survivorship Of Athletes Undergoing Primary Hip Arthroscopy: A Systematic Review

Michael S. Lee; Jade S. Owens; Scott Fong; David N. Kim; Jay Moran; Stephen Gillinov; Andrew Jimenez

Poster No. 755

Low Rates Of Five-year Revision Surgery And Postoperative Complications After Primary Hip Arthroscopy In Over 30,000 Patients: A National Study

Stephen M. Gillinov; David N. Kim; Jay Moran; Michael S. Lee; Scott Fong; Ronak J. Mahatme; Jacquelyn Simington; Jade S. Owens; William M. McLaughlin; Jonathan N. Grauer; Andrew Jimenez

Poster No. 756

Effect Of Longer Femoral Head On Leg Length, Offset, And Range Of Motion In Total Hip Arthroplasty A Computer Simulation Study

Takuji Miyazaki; Tomohiro Shimizu; Takuya Ogawa; Daisuke Takahashi; Norimasa Iwasaki

Poster No. 757

The Efficiency Of Genetically-modified Mesenchymal Stromal Cells Combined With A Functionally-graded Scaffold For Bone Regeneration In Corticosteroid-induced Osteonecrosis Of The Femoral Head In Rabbits

Masanori Tsubosaka; Masahiro Maruyama; Elaine Lui; Seyedsina Moeinzadeh; Junichi Kushioka; Qi Gao; Huaishuang Shen; Xueping Li; Masakazu Toya; Victoria Tessier; Ning Zhang; Yunzhi Yang; Stuart Goodman

Poster No. 758

Biomechanical Testing Of Potential Implants For Prophylactic Stabilization Of The Femoral Neck

Gregory R. Roytman; Brian Beitler; Julia LaMonica; Alim F. Ramji; Michael Baumgaertner; Brad Yoo; Michael Leslie; Steven M. Tommasini; Daniel H. Wiznia

Poster No. 759

Association Between Insurance Provider And Postoperative Complications, Emergency Department Visits, And Five-year Revision After Primary Hip Arthroscopy

Stephen M. Gillinov; David N. Kim; Wasif Islam; Michael S. Lee; Jay Moran; Scott Fong; Ronak J. Mahatme; Jade S. Owens; Jonathan N. Grauer; Andrew E. Jimenez

Poster No. 760

Predicting Effects Of Muscle Strength Changes On Joint Loading After Transfemoral Osseointegrated Prostheses

Nicholas Vandenberg; Jason Stoneback; Cory L. Christiansen; Mohamed Awad; Benjamin Wheatley; Brecca Gaffney

Poster No. 761

Increasing Trend Towards Joint-preserving Procedures For Hip Osteonecrosis: A 2010-2019 Acs-nsqip Study

Mitchell K. Ng; Matthew Magruder; Aaron Lam; Ariel N. Rodriguez; Andriy Kobryn; Nicolas Piuze; Che Hang Jason Wong; Lynne Jones; Michael A. Mont

Hip and Knee Arthroplasty - Clinical Outcomes

Poster No. 762

The Identification Of Factors To Facilitate Same-day Discharge In Primary And Knee Arthroplasty: A Retrospective Cohort Study

Paul Beaulé; Antoine Bureau; Stéphane Poitras; Koorosh Kashanian

Poster No. 763

Assessment Of The Intraoperative User Experience Of A Short, Collared Stem Implanted With A Robotic-Assisted Direct Anterior Approach

Kevin Marchand; Laura Scholl; Kelly Taylor; Daniel Erwin; Zachary Guerrieo; Yasmine Mechrefe; Robert Marchand

Poster No. 764

Risk Factors Associated With Venous Thromboembolism Following Total Hip Arthroplasty

Kevin C. Liu; Amit S. Piple; Neelesh Bagrodia; Nick Kusnezov; Jennifer C. Wang; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 765

Complications Associated With Contracting Covid-19 Following Elective Total Joint Arthroplasty

Nathanael D. Heckmann; Jennifer C. Wang; Amit S. Piple; Gabriel J. Bouz; Brian C.H. Chung; Daniel A. Oakes; Alexander B. Christ; Jay R. Lieberman

Poster No. 766

Characteristics Of Young Patients Undergoing Total Hip Arthroplasty

Brandon S. Gettleman; Amit S. Piple; Jennifer C. Wang; Jaewon Yang; Nathanael D. Heckmann; Alexander B. Christ

Poster No. 767

Withdrawn

Poster No. 768

Effects Of Depression, Anxiety, And Pain Catastrophizing On Total Hip Arthroplasty Patient Activity Level One-year Postoperatively

Seth Reine; Yin Xi; Holden Archer; Joel Wells

Poster No. 769

Evaluation Of Reproducibility Of Preoperative Three-dimensional Ct Planning For Tha: A Comparison Of Taper-wedge Stem Vs Anatomical Stem Placed By One Surgeon

Takehiro Kaneoka; Takashi Imagama; Tomoya Okazaki; Yuta Matsuki; Takehiro Kawakami; Kazuhiro Yamazaki; Takashi Sakai

Poster No. 770

Preoperative Fatty Degeneration Of The Gluteus Medius Muscle On The Unaffected Side Influences Postoperative Timed Up And Go Test In Patients With Unilateral Hip Osteoarthritis.

Takehiro Kawakami; Takashi Imagama; Yuta Matsuki; Tomoya Okazaki; Takehiro Kaneoka; Kazuhiro Yamazaki; Takashi Sakai

Poster No. 771

Impact Of Hb S Gene On Hospital Charges And Length Of Stay Following Major Joint Replacement Surgeries: A Multivariate Meta-analysis

Oluwasegun Aremu; Ajibola Oladiran; Imonichie Adeoye-Sunday; Olusegun Ogunlade; Richard Omoyeni

Poster No. 772

Disparities Associated With Total Joint Arthroplasty Transfusion Rates

Shelby Meckstroth; Andrew G. Chapple; Peter Krause; Deryk Jones; Lauren Leslie; Vinod Dasa

Poster No. 773

Predictive Performance Of Machine Learning Algorithms For 30-day Complications After Primary Total Hip And Total Knee Arthroplasty In Racial And Ethnic Minorities

Christian A. Pean; Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad A. Subih; Mehdi S. Salimy; Pete Tuchinda; Michelle Shimizu; Hojoon Seo; On-Jak Kwon; John G. Esposito; Young-Min Kwon

Poster No. 774

The Extent That Morbid Obesity Is A Modifiable Risk Factor Among Morbidly Obese Patients With Joint Osteoarthritis Without Participating In A Formal Perioperative Optimization Program

Paul Guirguis; Mina Botros; Benjamin Ricciardi

Poster No. 775

Machine Learning Algorithms Predict Discharge Disposition After Revision Total Hip Arthroplasty: Analysis Using A National Inpatient Database

Murad A. Subih; Anirudh Buddhiraju; Tony Lin-Wei Chen; On-Jak Kwon; Michelle Shimizu; Hojoon Seo; Pete Tuchinda; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 776

Artificial Intelligence Algorithms Outperform Carde-b, 5-item And 6-item Modified Frailty Index Risk Scores Predictive Ability For 30-day Mortality After Revision Total Hip Or Knee Arthroplasty

Christian A. Pean; Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad A. Subih; Mehdi S. Salimy; Ajay Premkumar; Hojoon Seo; On-Jak Kwon; Pete Tuchinda; Michelle Shimizu; John G. Esposito; Young-Min Kwon

Poster No. 777

Does Bi-cruciate Retaining Tka Provide Biomechanical Or Clinical Benefit In Elderly Patients?: A Gait Analysis Of Simultaneous Bilateral Tkas Using Robotic-assisted Bi-cruciate Retaining And Stabilized Prostheses.

Satoshi Hakukawa; Yasuo Niki; Kengo Harato; Kohei Nishizawa; Kobayashi Shu; Takeo Nagura; Masaya Nakamura

Poster No. 778

Can Machine Learning Algorithms Identify Patients At High Risk For An Extended Length Of Stay Following Revision Hip And Knee Total Joint Arthroplasty?

Tony Lin-Wei Chen; Anirudh Buddhiraju; Murad A. Subih; On-Jak Kwon; Michelle Shimizu; Hojoon Seo; Pete Tuchinda; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 779

Machine Learning Algorithms Predict Surgical Site Infection Following Primary Total Knee Arthroplasty: A National Database Analysis

Tony Lin-Wei Chen; Murad A. Subih; Anirudh Buddhiraju; Pete Tuchinda; Michelle Shimizu; Hojoon Seo; On-Jak Kwon; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 780

Machine Learning Predicts Transfusion Rates Following Primary Total Hip Arthroplasty: A Study Of 173,334 Patients Using A National Database

Tony Lin-Wei Chen; Murad A. Subih; Anirudh Buddhiraju; Pete Tuchinda; Hojoon Seo; Michelle Shimizu; On-Jak Kwon; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 781

Internal And External Validation Of A Generalizable Machine Learning Model For The Prediction Of Discharge Disposition Following Primary Total Knee Arthroplasty

Tony Lin-Wei Chen; Anirudh Buddhiraju; Murad A. Subih; Hojoon Seo; Michelle Shimizu; Pete Tuchinda; Mehdi S. Salimy; On-Jak Kwon; Young-Min Kwon

Poster No. 782

Surgical Weight-loss To Improve Functional Status Trajectories Following Total Knee Arthroplasty: Swift Trial Preliminary Analysis

Ran Schwarzkopf; Benjamin Ricciardi; Peter Benotti; Jonathan Samuels; Craig Wood; Manish Parikh; Brian McGrath; Aaron Hoffman; James Browne; Peter Hallowell; Alexander McLawhorn; Spencer A. Ward; Anthony Petrick

Poster No. 783

Volume Of Synovial Fluid Prior To Total Knee Arthroplasty And The Relationship To Patient Reported Outcomes

Madison N. Brown; Lisa Phan; Jordan Justice; Chandler Sears; Marc J. Mihalko; Marcus C. Ford; John Crockarell Jr.; James Harkess; James Guyton; William M. Mihalko

Poster No. 784

Does Bi-Cruciate Retaining Total Knee Arthroplasty Restore Native In Vivo Patellofemoral Kinematics During Stair Climbing?

Anirudh Buddhiraju; Murad A. Subih; Tony Lin-Wei Chen; Michelle Shimizu; Pete Tuchinda; Hojoon Seo; On-Jak Kwon; Miho Tanaka; Young-Min Kwon

Poster No. 785

Machine Learning To Set Expectations And Improve Satisfaction Following Total Knee Arthroplasty

Jennifer Polus; Thomas Appleton; Edward Vasarhelyi; Steven MacDonald; Brent Lanting; Matthew Teeter

Poster No. 786

Emergency Department And Urgent Care Visits Within 90 Days Following Primary Total Hip Arthroplasty

Meera M. Dhodapkar; Michael J. Gouzoulis; Scott J. Halperin; Lee E. Rubin; Jonathan N. Grauer

Poster No. 787

Gender Differences In The 3D In-Vivo Patellofemoral Kinematics Of The Native Knee During Dynamic Stair Ascent

Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad A. Subih; Hojoon Seo; Pete Tuchinda; Michelle Shimizu; On-Jak Kwon; Miho Tanaka; Young-Min Kwon

Poster No. 788

Bi-Cruciate Retaining Total Knee Arthroplasty Does Not Restore Native In Vivo Patellofemoral Kinematics During Strenuous Flexion Activities

Murad Subih; Tony Lin-Wei Chen; Anirudh Buddhiraju; Hojoon Seo; Pete Tuchinda; Michelle Shimizu; On-Jak Kwon; Miho Tanaka; Young-Min Kwon

Poster No. 789

Do Patients Living In Rural Areas Report Lower Physical Function After Total Knee Arthroplasty? A Retrospective Matched Cohort Analysis

Ashwin Garlapaty; Kylee Rucinski; Emily Leary; James Cook

Poster No. 790

Two-year Safety And Efficacy Of A Cruciate-retaining Total Knee Implant: A Prospective Multicenter Study

Tad Gerlinger; Jordi Villalba; James MacDonald; Jimmy Chow; Michael Swank; Jeffrey Geller; Herbert Cooper; John Shields; Jonathan Miles

Poster No. 791

Improving Complication And Readmission Rates For Same-day Discharge Arthroplasty

Maveric Abella; Chukwunweike N. Ezeanyika; Andrea Finlay; Derek Amanatullah

Poster No. 792

Influence Of Unit Cell Geometry And Internal Defects On The Static And Fatigue Life Of Ti-6Al-4v Lattice Structures For Orthopedic Applications

Atieh Moridi; Ajay Pillai; Fernando Quevedo Gonzalez; Timothy Wright

Poster No. 793

Two-year Safety And Performance Of A Unicompartmental Knee System: A Prospective, Multicenter Study

Tad Gerlinger; Corrado Bait; Flavio Terragnoli; Mark Oyer

Poster No. 794

Comparison Of Subsidence And Stress Shielding Between Collarless And Collared Stems At 15 Years After Total Hip Arthroplasty

Akira Morita; Kazuo Hirakawa; Satoshi Takayanagi; Masahiko Mihara; Minoru Kashiwara; Daigo Kobayashi; Yutaka Inaba

Poster No. 795

Association Between Intraoperative 3D Correction And Radiographic Results At 1 Year After Surgery Among The Infants Received Angulated Innominate Osteotomy

Takuya Ogawa; Tomohiro Shimizu; Takuji Miyazaki; Daisuke Takahashi; Norimasa Iwasaki

Poster No. 796

Efficacy Of Diosmin In Lower Limb Swelling And Enhanced Recovery After Total Knee Arthroplasty: A Prospective Randomized Controlled Multi-center Trial: Interim Analysis

Qiuru Wang

Poster No. 797

Total Knee Arthroplasty In Patients With Classic Hemophilia: A Matched Comparison Of 90-day Outcomes And Five-year Implant Survival

Stephen M. Gillinov; Patrick J. Burroughs; Harold G. Moore; Lee E. Rubin; David B. Frumberg; Jonathan N. Grauer

Poster No. 798

Early Results With The First Cementless Medial Unicompartmental Knee Implant In The U.S.

Wesley G. Lackey

Poster No. 799

Automatic Versus Upon Request Opioid Prescribing Following Total Knee Arthroplasty

Leland van Deventer

Poster No. 800

Acetabular Cup Placement Using A Pelvic Rotation Correction Device During DAA-THA In Supine Position

Satoshi Nakasone; Mika Takaesu; Masamichi Onaga; Masato Ishihara; Takahiro Igei; Kotaro Nishida

Poster No. 801

Mediolateral Gap Balance In Functionally Positioned Robotic-Assisted TKA Categorized By Pre-operative HKA

Kevin Marchand; Laura Scholl; Michael Ormond; Kelly Taylor; Daniel Erwin; Robert Marchand

Poster No. 802

Novel Patellofemoral Ligament Modelling To Detect Anterior Knee Pain After Total Knee Arthroplasty

Andrew Shimmin; Ishaan Jagota; Brett Fritsch; David Parker; Joshua Twiggs; Brad Miles

Poster No. 803

Functional References For Tibial Axial Rotation In Total Knee Arthroplasty

Andrew Shimmin; David Liu; Brett Fritsch; David Parker; Ishaan Jagota; Joshua Twiggs; Brad Miles

Hip and Knee Arthroplasty - Complications/Infections

Poster No. 804

Parkinson'S Disease Patients Experience Higher Odds Of 90-day Adverse Events And Lower 5-year Implant Survival Following Total Joint Arthroplasty: A Matched Cohort Analysis

Michael R. Mercier; Bahar Entezari; Julien Montreuil; Jason Corban; Harold G. Moore; Jesse I. Wolfstadt; Jonathan N. Grauer

Poster No. 805

Surgical And Clinical Outcomes Following Management Of Total Knee Arthroplasty Periprosthetic Joint Infection With Extensor Mechanism Disruption And Soft Tissue Defect - The Terrible Triad Of Total Knee Arthroplasty

Bahar Entezari; Johnathan R. Lex; Madison L. Litowski; Saud Almaslmani; David Backstein; Jesse I. Wolfstadt

Poster No. 806

Distinct Adipogenic Potential In Knee Fibroblasts From Non-fibrotic And Fibrotic Patients

Roman Thaler; Jacob W. Bettencourt; Afton K. Limberg; Mason F. Carstens; Britta Stans; Varun G. Iyer; Mark E. Morrey; Joaquin Sanchez-Sotelo; Daniel J. Berry; Amel Dudakovic; Matthew P. Abdel

Poster No. 807

Total Hip Arthroplasty Complications In Patients With Chronic Kidney Disease: A Comparison Study

Jake Fox; Grayson Domingue; Bryan Brockman; Christian DeMaio; Kimberly Malloy; Rishi Thakral

Poster No. 808

NSAIDs May Present A Safer Treatment Option For Postoperative Analgesia Compared To Opioids After Total Hip Arthroplasty

Makenna L. Rice; Dylan J. Parker; William G. Rainer; Paul M. Werth; Wayne E. Moschetti

Hip and Knee Arthroplasty - Implant Materials, Fixation and Wear

Poster No. 809

Constrained Liners Used As An Articulating Hip Spacer For The Treatment Of Chronic Periprosthetic Joint Infections: A Viable Option For High Risk Patients

Mary K. Richardson; Nathanael D. Heckmann; Jennifer C. Wang; Brett Biederman; Ryan DiGiovanni; Alexander B. Christ; Daniel A. Oakes; Donald B. Longjohn

Poster No. 810

Wear Of Antioxidant Polyethylene In A Dual Mobility Hip System With Adverse Third Body Conditions

Mazen Al Hajjar; Elizabeth Hippensteel

Poster No. 811

Impingement In Dual Mobility Total Hip Replacement Following Astm F2582:2020

Mazen Al Hajjar; Ioan Cracaoanu; Ryan Keefer; Abimbola Oladokun

Poster No. 812

Comparative Tribocorrosion Assessment Of 3d Printed And Commercial Ti Alloys: In Vitro Hip Simulator Testing

Nathan Travers; Kai-yuan Cheng; Alejandro Espinoza Orias; Robin Pourzal; Richard van Arkel; Mathew Mathew

Poster No. 813

Cementless Total Knee Arthroplasty In Patients Under The Age Of 50 Years: Average 6-year Follow-up
Charles W. Long; Wyatt A. Nelson; Nolan S. Smith; Michael J. Ziegele; Langan S. Smith; James F. Baker;
Arthur L. Malkani

Poster No. 814

Effects Of Loading Frequency And Load Applicator Type On Tibial Tray Fatigue Testing
Akeem Downer; Gregory Pepe; Gregg Schmidig; Ananth Gopalakrishnan

Poster No. 815

Quantification Of The Seating Position Of A Cementless Femoral Component In TKA
Shouchen Dun; Boon Him Lim; Steve Swope; Daniel Hoeffel; Thiago Amaral; Alasdair Mercer; Dan Huff;
David Wolfson

Poster No. 816

Is It Appropriate To Study On Bone Resorption After Total Knee Replacement Through A Homogeneous Tibial Model?
Hyeong Ho Baek; Jae Woong Han; Tae Soo Bae

Poster No. 817

Contact Kinematics On The Lateral Condyle Correlate To Tibial Baseplate Migration Following Cemented Bi-cruciate Stabilized Total Knee Replacement
Jordan Broberg; Douglas Naudie; Brent Lanting; James Howard; Edward Vasarhelyi; Matthew Teeter

Poster No. 818

A Method To Evaluate The Femoral Component Fatigue Strength In Unicompartmental Knee Arthroplasty
Shouchen Dun; Galyna Loughran; Steve Swope; Cheryl Gill; Conor Lowry; Dwight Todd

Poster No. 819

Peri-operative Zoledronic Acid Attenuates Peri-prosthetic Osteolysis In A Rat Model Of Cemented Knee Replacement
Kenneth A. Mann; Mark A. Miller; Megan Tatusko; Jason E. Kusler; Amy Biggs; Megan E. Oest

Poster No. 820

Impact Of Patient, Surgical, And Implant Design Factors On Implant-bone Interface Micromotions In Cementless Unicompartmental Knee Replacement
Huizhou Yang; Daniele Marras; Chadd Clary; Paul Rullkoetter

Poster No. 821

Application Of A Crushable Foam Material Model In Computational Simulation Of The Failure Process Of Tibial Total Knee Arthroplasty
Navid Soltanihafshejani; Thom Bitter; Nico Verdonschot; Dennis Janssen

Poster No. 822

Neck Impingement And Rim Fracture Evaluation Of Modular THA In A Hip Simulator
Corey Laukhuf; Casey Wise

Poster No. 823

The Influence Of Plasticity Models On Micromotion Predictions In Total Knee Arthroplasty

Navid Soltanihafshejani; Thom Bitter; Nico Verdonschot; Dennis Janssen

Poster No. 824

Potential Local Toxicity Risk From Implant Generated Titanium Particles And Ions: An In Vitro Study

Amber Lopez; Hemalatha Kanniyappan; Shriya Singh Thakur; Sowmya Gurusamy Kamaraj; Mark Barba; Mathew Mathew

Poster No. 825

Simulating The Low Magnitude Fretting-corrosion At Hip Implant Taper Junctions: An In-vitro Model

Yani Sun; Hemalatha Kanniyappan; Remya Ampadi Ramachandran; Mozart Queiroz Neto; Michael McNallan; Robin Pourzal; Hannah Lundberg; Mathew Mathew

Poster No. 826

Corrosion/tribocorrosion Risk Evaluation Of Carbide-derived Carbon (CDC) Surface Modification For Hip Implants

Yani Sun; Kyle Kinnerk; Kai-yuan Cheng; Michael McNallan; Mathew Mathew

Hip and Knee Arthroplasty - Kinematics and Computational Modeling

Poster No. 827

In-vivo Tibiofemoral Articulation And Axial Tibial Rotation Of The Knee After A Cruciate Retaining Total Knee Arthroplasty

Guoan Li; Jia Yu; Sophia Li; Timothy Foster; Hany Bedair

Poster No. 828

Can Revision Hip Arthroplasty Achieve Similar Outcomes With Those Of Primary Hip Arthroplasty?

Dominic Thewlis; Jasvir Bahl; Hao Wei Chi; Stuart Callary; Lucian Solomon

Poster No. 829

Is The Mechanism Of Iliopsoas Tendonitis The Same In Total Hip Arthroplasty As Hip Resurfacing Arthroplasty? A Case-Controlled Investigation Using A Validated Simulation

Max Hardwick-Morris; Joshua Twiggs; Brad Miles; Rami Al-Dirini; Mark Taylor; William L. Walter

Poster No. 830

Determination Of Preoperative Risk Factors For Iliopsoas Tendonitis

Max Hardwick-Morris; Joshua Twiggs; Brad Miles; Rami Al-Dirini; Mark Taylor; William L. Walter

Poster No. 831

Effects Of Implantation Method On Biomechanical Alignment After Total Knee Arthroplasty: Data From A Southwest Ohio Orthopaedic Practice

Michael Nichols; Michael Swank; Christopher Gaunder

Poster No. 832

In Vivo Kinematics Of Medial Pivot Total Knee Arthroplasty For Valgus And Varus Knees During Squatting

Tomofumi Kage; Kenichi Kono; Tetsuya Tomita; Takaharu Yamazaki; Shuji Taketomi; Ryota Yamagami; Kohei Kawaguchi; Ryo Murakami; Takahiro Arakawa; Hiroshi Inui; Sakae Tanaka

Poster No. 833

Limited ROM In Medial-pivot And Posterior-stabilized Total Knee Arthroplasties During Step-up

Wanxin Yu; Diyang Zou; Jiaqi Tan; Nan Zheng; Yunsu Chen; Tsung-Yuan Tsai

Poster No. 834

Developing A Model For Optimizing Impingement Free Range Of Motion In Total Hip Arthroplasty Using A Cemented Collarless Stem And Robotic Technology

Matthew J. Wilson; Thomas McCarthy; Ahmad Faizan

Poster No. 835

A Biomechanical Model Comparing Knee Joint Laxity Following Robotic-Assisted Versus Conventional Mechanical Total Knee Arthroplasty

Emma Donnelly; Brent Lanting; Ryan Willing

Poster No. 836

Relationship Between Native Anatomic And Functional Femoral Version In Healthy, Total Hip Arthroplasty, And Spinal Fusion Patients

Kathryn Colone; Sam Mattei; Xuzheng Han; Casey Myers; Kevin Shelburne; Paul Rullkoetter; Chadd Clary

Poster No. 837

Feasibility Assessment Of Leg Length Discrepancy Measurements Using Sensor Technologies

Kevin Abbruzzese; Andre Freligh; Michael Dunbar; Jared Weir; Michael Mont; Stefano Bini

Poster No. 838

Pelvic Tilt During Dynamic Sit-to-Stand Compared To Static Functional X-ray Positions In Patients With Spinal Fusion

Kathryn Colone; Sam Mattei; Casey Myers; Kevin Shelburne; Paul Rullkoetter; Chadd Clary

Poster No. 839

In Vivo Collateral Ligament Force In Bicruciate-retaining Total Knee Arthroplasty

Kenichi Kono; Hiroshi Inui; Tetsuya Tomita; Takaharu Yamazaki; Shoji Konda; Shuji Taketomi; Ryota Yamagami; Kohei Kawaguchi; Ryo Murakami; Tomofumi Kage; Takahiro Arakawa; Sakae Tanaka; Darryl D'Lima

Poster No. 840

Biomechanical Effect Of Hinge Positions On The Tibial Wedge In Biplane Open-wedge High Tibial Osteotomy For Varus Deformity Angle Using Heterogeneous Tibial Model: A Computational Analysis

Tae Soo Bae; Hyeong Ho Baek; Jung Bo Won; Han Jae Woong; Dai-Soon Kwak

Poster No. 841

Preserving Primary Medial Static Stabilizers For Restoring Physiological Knee Kinematics After Total Knee Arthroplasty

Yasushi Oshima; Norishige Iizawa; Tokifumi Majima

Poster No. 842

A Forward Solution Mathematical Model For Analysis Of The Unicompartmental Knee Arthroplasty

Seth Coomer; Michael LaCour; Amitkumar Mane; Bradley Meccia; Richard Komistek

Poster No. 843

Application Of Correspondence-based Networks To The Analysis Of Spatial And Temporal Biomechanics Data

Penny R. Atkins; Alan Morris; Shireen Y. Elhabian; Andrew E. Anderson

Poster No. 844

Calipered Measurements Method For Kinetically Aligned Total Knee Arthroplasty Has A Risk Of Excessive Varus Cut For The Proximal Tibia In Japanese Varus Knees

Umuto Kuwashima; Masafumi Itoh; Junya Itou; Ken Okazaki

Poster No. 844A

Total Knee Arthroplasty May Affect Patellofemoral Rotation At Low Knee Flexion Angles

Michael Shannon; Tom Gale; Elizabeth Copp; Venkata Kalyan Byrapogu; Kenneth Urish; William Anderst

Poster No. 845

Robot Assisted TKA In Situ Coronal Alignment Predicts In Vivo Static And Dynamic Coronal Alignment At One-year Follow-up

Sean E. Higinbotham; Azhar A. Ali; Xiangyi (Cheryl) Liu; Cheryl Blackwood; Kevin B. Shelburne; Clint B. Blackwood

Poster No. 846

The Effect Of Repairing The Hip Capsule On Gait Biomechanics Following Total Hip Arthroplasty

Nicholas S. Ryan; Erik Kowalski; Alexandre Pelegrinelli; George Grammatopoulos; Paul Beaule; Mario Lamontagne

Poster No. 847

Feasibility Assessment Of Sensor Technologies To Measure Pelvic Tilt In Leg Length Discrepancy

Andre Freligh; Kevin Abbruzzese; Michael Dunbar; Jared Weir

Hip and Knee Arthroplasty - Robotics and AI

Poster No. 848

Ability To Achieve Gap Balancing With Instrumented Navigated Total Knee Arthroplasty -A Review Of The First 273 Cases

James Huddleston; Mark Davis; Brian Zirgibel; Matthew Rueff; Jake Deister; Amaury Jung; Cyril Hamad; Wen Fan; Laurent Angibaud

Poster No. 849

Building Surgeon-specific Predictive Models Of Tibial Insert Thickness Using Knee Joint Laxity Signature

Wen Fan; Laurent Angibaud; Matthew Rueff; Amaury Jung; James Huddleston

Poster No. 850

Automated Patient-Specific Simulation Of Implanted THA Mechanics From CT

William Burton; Casey Myers; Chadd Clary; Clare Fitzpatrick; Paul Rullkoetter

Poster No. 851

Clinical, Radiographic, And Patient-reported Outcomes Associated With A Handheld Image-free Robotic-Assisted Surgical System In Total Knee Arthroplasty

Vinaya Rajahraman; Ittai Shichman; Kyle Lawrence; Weston Buehring; Daniel Waren; James Chow; David W. Fabi; Mark E. Gittins; Joseph E. Burkhardt; Bertrand P. Kaper; Ran Schwarzkopf

Poster No. 852

Inter-observer And Intra-observer Agreement Of Balancing Methods In Total Knee Arthroplasty

Tejbir Pannu; Emily Hampp; Thomas McCarthy; Melanie Caba; Preston Grieco; Jorge Manrique-Succar; Carlos Higuera-Rueda

Poster No. 853

A Biomechanical Comparison Of Extension Motion With An Oxford Rig Versus A Novel Muscle Actuator System

Alexandre Galley; Ilya Borukhov; Brent Lanting; Stephen Piazza; Ryan Willing

Poster No. 854

The Effect Of Hamstring Loading On TKA Kinematics Predicted By A Gravity-dependent Knee Joint Motion Simulator

Alexandre Galley; Ilya Borukhov; Brent Lanting; Ryan Willing

Poster No. 855

What Is The Best Way To Identify The Transepicondylar Axis For Femoral Component Rotation?

Melanie Caba; Antonia Chen; Azhar Ali; James Crutcher; Michael Mont; Ormonde Mahoney

Poster No. 856

Variability In Compartmental Knee Laxity During Mid-Resection Balancing In Total Knee Arthroplasty

Azhar A. Ali; Emily Hampp; Cheryl Liu; Jerry D'Alessio; Martin W. Roche; Michael A. Mont; James P. Crutcher

Poster No. 857

Effect Of Posterior Cruciate Ligament Resection On Mid-resection Balancing In Total Knee Arthroplasty

Azhar A. Ali; Emily Hampp; Cheryl Liu; Jerry D'Alessio; Martin W. Roche; Michael A. Mont; James P. Crutcher

Imaging - Hard Tissue

Poster No. 858

Rate Of Tarsal And Metatarsal Bone Mineral Density Change In Adults With Diabetesmellitus And Peripheral Neuropathy: A Longitudinal Study

Rachana S. Vaidya; Nick J. Youmans; Ling Chen; Hyo Jung Jeong; Alexa York; Paul Commean; Mary K. Hastings; Jennifer Zellers

Poster No. 859

Sensitivity Of MRI Relaxation Time Mapping In Detecting Acute Ischemic Injury To The Femoral Head: Initial Results In An In Vivo Piglet Model Of Legg-Calvé-Perthes Disease

Casey P. Johnson; Erick O. Buko; Alaina L. Falck; Godson Aryee; Alexandra R. Armstrong; Ferenc Toth

Poster No. 860

Computer-Aided Quantitative Ultrasound Algorithm Of Acromiohumeral Distance Following Spinal Cord Injury

Yen-Sheng Lin; Hyungtaek Kim; Amee L. Seitz; Tsung-Yuan Tsai; Nitin Jain

Imaging - Image Analysis

Poster No. 861

Automated Segmentation And Prediction Of Intervertebral Disc Morphology And Uniaxial Strain From MRI

James A. Coppock; Nicole E. Zimmer; Charles E. Spritzer; Adam P. Goode; Louis E. DeFrate

Poster No. 862

Large Field Of View Synthesized Hip-CT Scan From Clinical MRI Offers Comparable Geometric Accuracy As Original CT Scan

Jin-Young Kim; Mallika Singh; Charles Mitchell; Sarah D. Bixby; Eduardo D. Novais; Young-Jo Kim; Ata Kiapour

Poster No. 863

Lower Body MRI For Image Tracking And 3D Modeling

Landon D. Hamilton; Sean E. Higinbotham; Thor E. Andreassen; Charles P. Ho; Kevin B. Shelburne

Poster No. 864

Comparing Real-time Perfusion Analysis Models In An In-vivo Implant Associated Infection

Paris E. Taylor; Dylan Shaver; Elizabeth Stewart; Jonathan Boyd; Matthew Dietz

Poster No. 865

Mri Appropriateness In The Evaluation Of Chronic Neck Pain: Comparison Of Ordering Practices And Treatment Outcomes For Primary Care Physicians And Specialists

Daniel Lynch; Andrew Romero; Evan Johnson; Xiang Zhu; John S. Kirkpatrick

Poster No. 866

Unbiased Quality Assessments And Full-automatic Diagnosis For DDH With Hybrid Machine Learning Algorithms

Tomohiro Shimizu; Hirokazu Shimizu; Takuya Ogawa; Daisuke Takahashi; Norimasa Iwasaki

Poster No. 867

Verification Of Horizontal Plane Measurement Method In Fluoroscopy

Takahiro Arakawa; Kenichi Kono; Tetsuya Tomita; Takaharu Yamazaki; Shuji Taketomi; Ryota Yamagami; Kohei Kawaguchi; Tomofumi Kage; Ryo Murakami; Hiroshi Inui; Sakae Tanaka

Poster No. 868

Evaluation Of The Dynamic Sternoclavicular And Acromioclavicular Joint Motions using An Upright Four-dimensional Computed Tomography.

Yuki Yoshida; Noboru Matsumura; Yoshitake Yamada; Minoru Yamada; Yoichi Yokoyama; Azusa Miyamoto; Satoshi Oki; Masaya Nakamura; Takeo Nagura; Masahiro Jinzaki

Poster No. 869

Deep Learning-generated Hip Radiographic Measurements Are Fast And Adequate For Reliable Assessment Of Hip Dysplasia: An External Validation Study

Holden Archer; Seth Reine; Ahmed Alshaikh Salama; Louis Vazquez; Yin Xi; Ajay Kohli; Avneesh Chhabra; Joel Wells

Poster No. 870

Orthopaedic Super-resolution Computed Tomography Imaging

Santeri JO Rytty; Aleksei Tiulpin; Mikko AJ Finnilä; Sakari S. Karhula; Anniina Sipola; Väinö Kurttila; Maarit Valkealahti; Petri Lehenkari; Antti Joukainen; Heikki Kröger; Rami Korhonen; Jaakko Niinimäki; Simo Saarakkala

Poster No. 871

Impact Of Covid-19 Pandemic On Pharmacologic Treatment Of Patients Newly Diagnosed With Osteoporosis

Dagoberto Pina Jr; Micaela Robinson White; Lauren Akiko Hisatomi; Alex Villegas; Alec Garfinkel; Garima Agrawal; Nisha Punatar; Barton Wise; Polly Teng; Hai Le

Poster No. 872

Reliability Of X-ray And 3dct Measurement Parameters At The Distal Radius

Satoshi Matsuura; Yuichi Yoshii

Poster No. 873

Post-Surgical Artifact Correction In MR Imaging By Deep Neural Networks

Dominique A. Barnes; Jillian Green; Connor Uzzo; Ata Kiapour; Martha M. Murray; Braden C. Fleming; Sean W. Flannery

Poster No. 874

Feasibility Of Quantitative Magnetic Resonance Imaging In Patients With Transfemoral Osseointegrated Prostheses

Brecca Gaffney; Galen Roda; Julio Carballido-Gamio; Mohamed E. Awad; Cory L. Christiansen; Dana Carpenter; Danielle H. Melton; Colin D. Strickland; Jason W. Stoneback

Poster No. 875

Detection Of Osteochondritis Dissecans Of Elbow Using Deep Learning On Ultrasound Images

Kenta Takatsuji; Yoshikazu Kida; Kenta Sasaki; Daisuke Fujita; Syoji Kobashi; Yoshihiro Kotoura; Yusuke Kobayashi; Masataka Minami; Tsuyoshi Sukenari; Kenji Takahashi

Poster No. 876

Automated Shoulder Muscle Segmentation Via Deep Learning For 3D Quantitative Shoulder Muscle Evaluation

Mingrui Yang; Bong-Jae Jun; Tammy Owings; Joshua Polster; Carl S. Winalski; Kathleen Derwin; Eric T. Ricchetti; Xiaojuan Li

Poster No. 877

Influence Of Metal Implants On Quantitative Evaluation Of Bone Single-photon Emission Computed Tomography/computed Tomography

Ryota Nishida; Keisuke Oe; Takahiro Niikura; Tomoaki Fukui; Kenichi Sawauchi; Ryo Yoshikawa; Kyohei Takase; Yuya Yamamoto; Tomoyuki Matsumoto; Ryosuke Kuroda

Imaging - Soft Tissue

Poster No. 878

Effect Of Time And Contrast Use For Magnetic Resonance Imaging In Acute Anterior Shoulder Instability: Determining The Accuracy Of Labrum Tear Size

Justin Greiner; Joshua Setliff; Nicholas Drain; Asher Mirvish; Noel Carlos; Lena Vodovotz; Ajinkya Rai; Samantha Ashok; Ian Engler; Ting Cong; Bryson Lesniak; Albert Lin

Poster No. 879

Validation Of Radio-opaque Suture For Soft Tissue Tracking Using Biplane Radiography

Devon M. Scott; Steve Bayer; Tom Gale; William Anderst

Poster No. 880

Liganet: A Multi-modal Deep Learning Approach To Predict The Risk Of Subsequent Anterior Cruciate Ligament Injury After Surgery

Mallika Singh; Mo Han; Davood Karimi; Sean Flannery; Jin-Young Kim; Nazgol Tavabi; Martha M. Murray; Ali Gholipour-Baboli; Braden Fleming; Ata M. Kiapour

Infection - Biomarkers and Outcomes

Poster No. 881

Effects Of High Antibiotic Concentrations On Bone Marrow-derived Cells

Yuya Yamamoto; Takahiro Niikura; Tomoaki Fukui; Keisuke Oe; Kenichi Sawauchi; Ryo Yoshikawa; Kyohei Takase; Ryota Nishida; Akihiro Maruo; Ryosuke Kuroda

Poster No. 882

Development Of A Murine Model Of Minor Trauma-initiated Acute Hematogenous Osteomyelitis

Norman A. Lapin; Naureen Tareen; Bret Evers; Rajiv Chopra; Lawson A. B. Copley

Poster No. 883

Impact Of Social Determinants Of Health In Surgical Site Infection Following Ankle Fracture Repair

Nour Nassour; Alexander M. Tatara; Takahisa Ogawa; Hadley Leatherman; Sumner Jones; Christopher DiGiovanni; Soheil Ashkani Esfahani; Sandra Bliss Nelson

Poster No. 884

Sustained Inflammatory Gene Expression In Human Monocytes Induced By Staphylococcus Aureus Biofilm

Ewurama A. Cann; Richard Bell; Upneet Sokhi; Jack Nisimblat; Bikash Mishra; Christina Chao; Xu Yang; Mathias Bostrom; Alberto Carli; Lionel Ivashkiv

Infection - Treatment and Therapeutics

Poster No. 885

A Comparison Of Three Cold Plasma Devices For Potential Clinical Use In Preventing Or Treating Surgical Site Infection During Orthopedic Procedures

Amanda Connelly; Rachel Grant; Neil Zhao; Thomas P. Schaer; Noreen Hickock; Theresa A. Freeman

Poster No. 886

Introduction Of Airborne Particles Into The Sterile Field During Common Or Maneuvers

Brian P. Crowley; Hugh L. Jones; Jasmine L. Gonzalez; Kenneth B. Mathis; Philip Noble

Poster No. 887

The Potential Of Suspended Chitosan Nanoparticles As A Surgical Irrigation Fluid

Miles D. Holmes; Analisa Narro; Hugh L. Jones; Philip C. Noble; Catherine Ambrose

Poster No. 888

The Influence Of Anti-biofilm Products On Osteogenesis And Healing

Izzy Owen; Boyle Cheng; Isaac Swink; Matthew Myntti

Poster No. 889

Cold Plasma Treatment At Revision Disrupts Staphylococcus Aureus Immune Avoidance Mechanisms

Carly J. Smith; Amanda Watkins; Zoe Katz; Brianna Nissley; Leslie Brewer; Thomas P. Shaer; Theresa A. Freeman

Poster No. 890

Electrophoretic Deposition Of Gentamicin Into Titanium Nanotubes To Prevent And Eradicate Periprosthetic Infection

Adrienn Markovics; John L. Hamilton; Greta Della Fara; Mohammed AbuAlia; Amandine Impergre; Markus A. Wimmer

Poster No. 891

How Do Intraoperative Antiseptic Solutions Fare Against Staphylococcal Biofilms On Different Orthopedic Surfaces? An In Vitro Comparison

Christina A. Chao; Tyler Khilnani; Zachary Coles; Mathias Bostrom; Alberto Carli

Poster No. 892

Verification Of Vancomycin Paste Diffusion From Carbon Fiber Reinforced Polymer (CFRP) Implants With Small Holes Implanted The Ovine Femora

Satoshi Kamihata; Ichiro Nakahara; Wataru Ando; HIDEAKI ENAMI; Kazuma Takashima; Keisuke Uemura; Hidetoshi Hamada; Nobuhiko Sugano

Poster No. 893

Restorative Effect Of Igf-1 On Gentamicin-induced Cytotoxicity Of Osteoblasts

Koki Okuyama; Soichiro Kimura; Kentaro Tsuji; Tateda Kazuhiro; Hiroshi Takahashi

Poster No. 894

External Fixator Pin Sites: Debridement Versus Simple Scrubbing

Johnathan Dallman; Jack Nolte; William Tucker; Erin Christensen; Archie Heddings

Poster No. 895

Combined DAIR And PhotothermAA Gel Decreases Implant Biofilm Burden And Soft Tissue Infection In A Rabbit Model Of PJI, A Pilot Study

Anabelle Visperas; Nicolas Piuze; Nathalie Milbrandt; Pedro Rullan; Yu Hsin Tsai; Zhifei Ye; Dehua Jiang; Alison Klika; Anna Cristina Samia; Carlos Higuera-Rueda

Poster No. 896

In Vivo Ultrasound-triggered Vancomycin Release From A Novel Prophylactic Spinal Device In A Sheep Model

Lauren J. Delaney; Rachel Hilliard; Priscilla Machado; Rachel Evans; Selin Isguven; Steve M. Kurtz; Noreen J. Hickok; Flemming Forsberg; Thomas P. Schaer

Poster No. 897

In Vitro Thermal Stability Of Dalbavancin In Polymethylmethacrylate Bone Cement Models Against Methicillin-sensitive Staphylococcus Aureus

Aaron K. Hoyt; Patrick Lawler; Ashley Levack

Poster No. 898

The Efficacy Of Silver Carboxylate On Multidrug Resistant Acinetobacter Baumannii And Safety In Skeletal Muscle Cells With Translational Potential In Wound Care.

Colin Whitaker; Benjamin Stone; Olive Cooper; Drew Clippert; James Hong; Neel Vishwanath; Valentin Antoci; Christopher Born; Dioscaris Garcia

Poster No. 899

Halicin Kills Staphylococcus Aureus In Biofilms On Orthopaedically-Relevant Substrates

Shota Higashihira; Stefanie J. Simpson; Chris J. Arnold; Roman M. Natoli; Edward M. Greenfield

Poster No. 900

Investigations Of Efficacy And Safety Of Continuous Local Antibiotics Perfusion For Prosthetic Joint Infection Of The Hip.

Yuta Hieda; Hyonmin Choe; Hiroyuki Ike; Taro Tezuka; Yutaka Inaba

Poster No. 901

Minimizing Corrosion And Its Side Effects From Total Hip Replacement (THR) Using Antioxidants.

Sowmya Gurusamy Kamaraj; Hemalatha Kanniyappan; Adriyana Thayer; Yani Sun; Oral Ebru; Mark Barba; Mathew Mathew; Joshua J. Jacobs

Poster No. 902

Analysis Of Adolescent Idiopathic Scoliosis Population For Surgical Site Infection Risk Factors

Jesse Fletcher; John Thometz; Xue-Cheng Liu

Intervertebral Disc - Diseases and Disorders

Poster No. 903

Expression Of Cytoplasmic Activation/proliferation-associated Protein-1 (carpin1) In The Human Nucleus Pulposus

Junichi Yamada; Koji Akeda; Koki Kawaguchi; Takahiro Hasegawa; Norihiko Takegami; Tatsuhiko Fujiwara; Akihiro Sudo

Poster No. 904

Cartilage Endplate Composition And Intervertebral Disc Height: Associations With Disc Degeneration In Patients With Chronic Low Back Pain

Noah B. Bonnheim; Anika Kumar; Jiamin Zhou; Zehra Akkaya; Ann A. Lazar; Xiaojie Guo; Conor O'Neill; Roland Krug; Aaron J. Fields

Poster No. 905

Mechanical Compression In An Ovine Model Of Degenerative Disc Disease

Andres Bonilla; Zach Cartwright; Mitchell Page; Lindsey Burton; Devin von Stade; Daniel Regan; Steven Dow; Brian Johnstone; Christian Puttlitz; Jeremiah Easley

Poster No. 906

Synergy Of The Autoimmune Response In A Model Of Degenerative Disc Disease

Andres Bonilla; Katie Sikes; Lindsey Burton; Lyndah Chow; Kelly Santangelo; Steven Dow; Brian Johnstone; Christian Puttlitz; Jeremiah Easley

Poster No. 907

Understanding The Physiological Behaviour Of Disc Cells In An In Vitro Imitation Of The Healthy And Degenerated Niche

Shaghayegh Basatvat; Exarchos Kanelis; Joseph Snuggs; Rebecca Williams; Marianna Tryfonidou; Leonidas Alexopoulos; Christine Le Maitre

Poster No. 908

Gram Positive Bacteria Within The Disc And Their Potential Influence On Nucleus Pulposus Cells

Andrea Romana Nüesch; Exarchos Kanelis; Leonidas G. Alexopoulos; Frances Williams; Liesbet Geris; Benjamin Gantenbein; Melissa Lacey; Christine Le Maitre

Poster No. 909

Characterization And Modulation Of The Pro-inflammatory Effects Of Immune Cells In The Canine Intervertebral Disc

Mary K. Heimann; Kelly Thompson; Gilian Gunsch; Nina (Shirley) Tang; Benjamin Walter; Kara Corps; Brett Klamer; Sarah Moore; Devina Purmessur

Poster No. 910

Chronic Type 2 Diabetes Impairs Tissue Remodeling And Stimulates Pro-inflammatory And Immune-cell Recruiting Chemokines In The Murine Intervertebral Disc

Christian Gonzalez; Garrett Easson; Sade Clayton; Simon Tang

Poster No. 911

TLR-2 Activation Dysregulates Mir-100-5p And Mir-155-5p Leading To The Downregulation Of C-Fos

Petra Cazzanelli; Mikkael Lamoca; Oliver Nic Hausmann; Addisu Mesfin; Karin Wuertz

Intervertebral Disc - Growth, Development and Aging

Poster No. 912

Increased Glucose Uptake In The Lumbar Discs With Age The Impact Of Spinal Level: A Retrospective ¹⁸F-fdg Pet Imaging Study

Christine Park; Elizabeth Sachs; Julia Visgauss; John Martin

Poster No. 913

The Efficacy Of Adiponectin Receptor Agonist Adiporon Against Intervertebral Disc Degenerationon Rat Tail Puncture Models

Hiroki Ohnishi; Zhongying Zhang; Yoshiaki Hiranaka; Kohei Kuroshima; naotoshi kumagai; masao ryu; Tomoya Matsuo; Kunihiro Miyazaki; Yoshiki Takeoka; Takashi Yurube; Ryosuke Kuroda; Kenichiro Kakutani

Poster No. 914

Integrated Single-cell RNA-sequencing Analysis Of Bovine Intervertebral Disc Enables High-resolution Phenotyping

Levon Rodriguez; Arpit Dave; Robert Sebra; James Iatridis

Poster No. 915

CD-9 As A Novel Marker Of Healthy Late-Stage Nucleus Pulposus Cells

Chenghao Zhang; Yian Khai Lau; Ling Qin; Thomas Schaer; George Dodge; Robert Mauck; Neil Malhotra; Lachlan Smith

Intervertebral Disc - Injury, Healing and Pain

Poster No. 916

Modic Changes Of The Cervical And Lumbar Spine And Their Effect On Neck And Back Pain: A Systematic Review And Meta-analysis

Mark J. Lambrechts; Tariq Z. Issa; Yunsoo Lee; Gregory R. Toci; Meghan M. Schilken; Parker L. Brush; Jose A. Canseco; Gregory D. Schroeder; Alexander R. Vaccaro; Christopher K. Kepler

Poster No. 917

Regenerative Effect Of Platelet-rich Plasma Releasate In The Rabbit Degenerated Disc Induced By Condoliase

Takahiro Hasegawa; Koji Akeda; Junichi Yamada; Koki Kawaguchi; Norihiko Takegami; Tatsuhiko Fujiwara; Natsume Takahiro; Ide Koichiro; Matsuyama Yukihiro; Akihiro Sudo

Poster No. 918

Intradiscal Inflammatory Stimulation Induces Spinal Pain Behavior And Intervertebral Disc Degeneration In Vivo

Lauren Lisiewski; Hayley Jacobsen; Dan Viola; Hagar Kenawy; Daniel Kiridly; Nadeen Chahine

Poster No. 919

In Vitro Screening For Nerve Dieback Compounds In Dorsal Root Ganglia And Evaluating Cytotoxicity On Nucleus Pulposus Cells

Fei San Lee; Uyen N. Nguyen; Rebecca A. Wachs

Poster No. 920

Bilateral Needle Puncture Of Murine Caudal Intervertebral Discs Results In Degeneration, Vascular And Neurite Invasion, And Elevated Pro-inflammatory Cytokines And Immune-cell Recruitment Chemokines

Remy E. Walk; Kaitlyn S. Broz; Lori A. Setton; Munish C. Gupta; Simon Y. Tang

Poster No. 921

Lumbar Intervertebral Disc Injury In Mice Increases Neurite And Vascular Infiltration Into The Annulus Fibrosis

Ryan Potter; Remy Walk; Munish Gupta; Simon Tang

Intervertebral Disc - Structure, Function and Mechanics

Poster No. 922

Expression Of Growth Arrest And Dna Damage 45 Gamma (gadd45g) In Human Nucleus Pulposus

Koki Kawaguchi; Koji Akeda; Takahiro Hasegawa; Junichi Yamada; Norihiko Takegami; Tatsuhiko Fujiwara; Akihiro Sudo

Poster No. 923

Effects Of Glycolytic Enzyme Activities On Proteoglycan Biosynthesis In Intervertebral Disc Cells

Charles Huang; Daniela M. Loo; Weiyong Gu

Poster No. 924

Development Of Treatment For Degenerative Disc Disease By The Selective Gene Silencing Of Mtor Signaling Using The Rna Interference And Crispr-cas9 Systems

Masao Ryu; Takashi Yurube; Zhongying Zhang; Yoshiki Takeoka; Yutaro Kanda; Kunihiro Miyazaki; Hiroki Ohnishi; Naotoshi Kumagai; Kohei Kuroshima; Yoshiaki Hiranaka; Ryosuke Kuroda; Kenichiro Kakutani

Poster No. 925

Resting Supine For 45 Minutes Mitigates Diurnal Changes In Intervertebral Disc Height

Nicole E. Zimmer; James A. Coppock; Charles E. Spritzer; Adam P. Goode; Louis E. DeFrate

Poster No. 926

Disc tissue slice culture—an ex vivo model to probe the biology and pathology of intervertebral disc

Eunha G. Oh; Li (Jasmine) Xiao; Wendy Huang; Parastoo Anabei; Jialun Chi; Rebecca R. Pompano; Li Jin; Xudong (Joshua) Li

Poster No. 927

Finite Element Modeling Enables Improved Design Of 3d-printed Bioabsorbable Cage To Support Tissue-engineered Intervertebral Disc Implants

Byumsu Kim; Ellie Cheong; Maho Koga; Alikhan Fidai; Sertaç Kirnaz; Jacob Goldberg; Branden Medary; Ibrahim Hussain; Roger Hartl; Lawrence Bonassar

Poster No. 928

Secretome Of Mechanically Loaded Intervertebral Discs Influences Stem Cell Immunomodulatory Response

Hagar M. Kenawy; Lauren E. Lisiewski; Clark T. Hung; Nadeen O. Chahine

Poster No. 929

Trpv4 Inhibition Blunts Il-6 Production And Degeneration Of The Nucleus Pulposus Due To Dynamic Loading Of The Intervertebral Disc

Garrett Easson; Alireza Savadipour; Farshid Guilak; Simon Tang

Poster No. 930

Evaluating A Universal Method To Characterize Crack Initiation In Intervertebral Discs Using A Multiaxial Approach

Jill M. Middendorf; Victor H. Barocas

Intervertebral Disc - Treatment and Therapeutics

Poster No. 931

Adhesive And Non-adhesive Hydrogels For Intervertebral Disc Repair In An Ovine Discectomy Model

Christopher J. Panebianco; Caroline Constant; Andrea Vernengo; Andrew Hecht; Alan Seifret; Steven Nicoll; Sibylle Grad; Stephan Zeiter; James Iatridis

Poster No. 932

Effects Of Oxygen Tension And Microenvironmental Stiffness On Human Mesenchymal Stem Cells

Dong Hwa Kim; Chenghao Zhang; George R. Dodge; Neil R. Malhotra; Lachlan Smith; Robert Mauck

Poster No. 933

Mesenchymal Stem Cell Survival And Activity In Low Ph And Tensile Strain Is Dependent On Cell Source

Brendyn J. Miller; Kyle Cannon; Jeremy Mercuri; William Richardson

Poster No. 934

Inhibiting Tnfr1 Pathway Improves Pro-inflammatory Response Of Human Af Cells In A Disc Degeneration Model

Jennifer Gansau; Elena Grossi; Minghui Wang; Saad Chaudhary; Andrew Hecht; Chuanju Liu; James Iatridis

Poster No. 935

Cellular Responses To Hydrostatic Pressure And Deviatoric Stress In Bovine Annulus Fibrosus Cells Mimicking Diurnal Spinal Movement

Ryo Taiji; James D. Kang; Shuichi Mizuno

Poster No. 936

TGF- β 3-Releasing Bioinstructive Constructs Promote AF- And NP-like IVD Cell Phenotypes In 3D Printed Scaffolds

Lauren Lisiewski; Jessica Liu; Sarah Liu; Helen Lu; Nadeen Chahine

Poster No. 937

Rapamycin Ameliorates Age-Associated Intervertebral Disc Degeneration In Marmosets With Sex Specific Effects

Yunting Melissa Tang; Rebecca Kritschil; Dong Wang; Chao-Ming Zhou; qing dong; Danqing Guo; Joon Lee; Gwendolyn Sowa; Nam Vo

Poster No. 938

Notochordal Cells As A Potential Cell Source For Disc Degeneration-associated Low Back Pain

Shaghayegh Basatvat; Theresa Braun; Joseph Snuggs; Rebecca Williams; Markus Templin; Marianna Tryfonidou; Christine Le Maitre

Poster No. 939

Repair Of Intervertebral Disc Herniations With Surgical-fiberlock Technology

Brianna S. Orozco; Esteban Ongini; Andrea Moehl; Ana Peredo; Sonal Mahindroo; Rachel Hilliard; Thomas Schaer; Robert Mauck; Harvey Smith; Mazda Farshad; Jess Snedeker; Sarah Gullbrand

Poster No. 940

Targeting Trpc6 For Chronic Discogenic Backpain

Janitri Venkatachala Babu; Karin Wuertz-Kozak; Addisu Mesfin; James Iatridis

Knee - Diagnostics

Poster No. 941

Effect Of Varus And Valgus Malalignment On The Tibial Tunnel Length And Tunnel Angle

Haji Mohammed Kampli; Kaywan Izadpanah; Floor M. Lambers

Poster No. 942

Accuracy And Reliability Of Ultrasound-assisted Lachman Test In Diagnosing Anterior Cruciate Ligament Injuries

Yuzuru Sakakibara; Vasundhara Mathur; Rohan Bhimani; Soheil Ashkani-Esfahani; David Osei-Hwedieh; Miho Tanaka

Poster No. 943

Intercondylar Notch Volume Difference Between Knees Of ACL Intact And Teared Subjects

Takanori Iriuchishima; Bunsei Goto

Poster No. 944

Relative Differences In Individuals' Left And Right Knee Joint Dimensions And Angles As Risk Estimates For Knee Osteoarthritis Development - Data From The Osteoarthritis Initiative

Mikael J. Turunen; Mika E. Mononen

Poster No. 945

Association Between Infrapatellar Fat Pad Elasticity And Anterior Knee Pain In Patients With Knee Osteoarthritis

Yoshinori Satake; Masashi Izumi; Koji Aso; Masahiko Ikeuchi

Poster No. 946

MRI Detectable Bone Shape Associates With Patient Symptoms In Preosteoarthritis

Ashley A. Williams; Jayme C B Koltsov; Alan Brett; Jade He; Constance R. Chu

Knee - Growth, Development and Aging

Poster No. 947

Progression Of Coronal Varus Knee Deformity Is Related To Pelvic Posterior Tilt And Distal Tibia Varus

Satomi Abe; Hiroshi Ito; Yusuke Sasaki; Keisuke Matsukura

Poster No. 948

Relationship Between Possible Tibiofemoral Osteophytosis And Crepitus And Effusion In Individuals With Knee Symptoms But Without Joint Space Narrowing

Armaghan Mahmoudian; Martin Englund

Poster No. 949

Biologic Sex And Age Influence Quadriceps Strength 6 Months Post-Anterior Cruciate Ligament Reconstruction

Christopher Kuenze; Katherine Collins; Adam Weaver; Nicholas Giampetruzzi; Terry Grindstaff; Brooke Farmer; Michelle Walaszek; Shelby Baez; Matthew Harkey

Knee - Injury and Healing

Poster No. 950

Characterization Of The Human Synovial Response In Anterior Cruciate Ligament Injuries

Shen-Ying (Richard) Ma; Aaron Stoker; James Cook; Keiichi Kuroki

Poster No. 951

A Comparative Analysis Of The Human And Canine Synovial Response To Anterior Cruciate Ligament Ruptures

Shen-Ying (Richard) Ma; Aaron Stoker; James Cook; Keiichi Kuroki

Poster No. 952

Effects Of Hamstring Vibration On Limb Stiffness Following Anterior Cruciate Ligament Reconstruction

Timothy Lowe; Hao-Yuan Hsiao; Neil Dong; Lisa Griffin

Poster No. 953

Withdrawn

Poster No. 954

Concomitant Chondral Injury And ACL Reconstruction

Emily R. Schueppert; S. Ali Ghasemi; DianneMarie Omire-Mayor; Arthur Bartolozzi

Poster No. 955

The Influence Of Gynoid Fat Percentage On Sex Hormone Levels And Knee Laxity

Sandra J. Shultz; Melissa M. Montgomery; Randy J. Schmitz; Laurie Wideman

Poster No. 956

Time Course Of Early Cartilage Response To Injury Following Patellar Dislocation

John Elias; Mei Li; Mingrui Yang; Richard Lartey; Lutul D. Farrow; Carl S. Winalski; Xiaojuan Li

Knee - Structure, Function and Mechanics

Poster No. 957

Effect Of Posterior Tibial Slope And Flexion Angle On Posterior Medial Meniscal Root Forces

Justin Hollenbeck; Justin Brown; Heath Melugin; Brad Fossum; Matthew Provencher

Poster No. 958

Differences In Trochlear Sulcus Geometry Of Contemporary Prosthetic Knee Designs

Marriah Sutton; Shuyang Han; David B. Doherty; David Rodriguez-Quintana; Philip C. Noble

Poster No. 959

A Study On The Relationship Between Varus Thrust And External Knee Flexion Moment During Walking

Rikiya Baba; Yasumitsu Ohkoshi; Tatsunori Maeda; Yui Tateyama; Kota Miura; Kengo Ukishiro; Koji Iwasaki; Tomohiro Onodera; Eiji Kondo; Norimasa Iwasaki

Poster No. 960

Estimation Of Knee Adduction Moment During Gait By Video Image

Kengo Ukishiro; Yasumitsu Ohkoshi; Shuya Chida; Koji Iwasaki; Kensaku Kawakami; Sho'ji Suzuki; Tatsunori Maeda; Yuki Suzuki; Tomohiro Onodera; Eiji Kondo; Norimasa Iwasaki

Poster No. 961

The Morphological Characteristics Of The Medial Patellotibial Ligament And Its Insertion Sites Using Three-dimensional Tomography:a Cadaveric Study

Yasutaka Oya

Poster No. 962

Knee Function Is Associated With Limb Loading Symmetry Among Women 6 Months Following Anterior Cruciate Ligament Reconstruction

Katherine Collins; Matthew Harkey; Shelby Baez; Caroline Lisee; Thomas Birchmeier; Ashley Triplett; Tess McGuire; Christopher Kuenze

Poster No. 963

Hip Adduction Moments And Knee Joint Compressive Force During Sit-to-stand And Stand-to-sit And Their Relationship With Intermuscular Coherence.

Mohsen Alighanbari; Timothy Lowe; Lisa Griffin

Poster No. 964

Knee Anatomy Predicts Native Joint Kinematics Through Flexion

Clare Fitzpatrick; Chadd Clary; Casey Myers; Paul Rullkoetter

Poster No. 965

Biomechanically Recreating The Phantom Foot Ski Injury

Natalia McIver; Benjamin Albertson; Christopher Kurnik; Jessica A. Nelson; Dustin Richter; Christina Salas

Poster No. 966

Markerless Motion Capture Is Sensitive To Biomechanical Changes In Severe Knee OA Patients

Elise Laende; Jereme Outerleys; Kevin Deluzio

Poster No. 967

Functional Knee Bracing Provides Rotatory Protection To The ACL: Cadaveric Study

Sene K. Polamalu; Ehab M. Nazzal; Emri Anil Ozbek; Gian Andrea Lucidi; Andrew L. Sprague; Volker Musahl; Richard E. Debski

Poster No. 968

The Comparison Of Tibial Spine Area Between Knees With And Without Acl Injury

Takanori Iriuchishima; Bunsei Goto

Poster No. 969

Hip-knee Joint Coordination Patterns Are Associated With Pain Severity In Persons With Knee Osteoarthritis

Chun-Hao Huang; Patrick Corrigan; Khara James; Corey Lanois; Joshua Stefanik

Poster No. 970

Unsupervised Clustering Identifies Four Categories Of Knees Based On Contact Force Distribution Across The Medial Plateau During Simulated Gait

Tony Chen; Kalle Chastain; Peter Torzilli; Russell Warren; Suzanne Maher

Poster No. 971

Pain-related Histological Factors In The Subchondral Bone Marrow Lesion Of Osteoarthritic Knees

Koji Aso; Natsuki Sugimura; Hiroyuki Wada; Masahiko Ikeuchi

Poster No. 972

Loading Levels In Patellar Tendon, Quadriceps Tendon, And Patellofemoral Joint Across 35 Rehabilitation Exercises

Ke Song; Rodrigo Scattone Silva; Todd J. Hullfish; Andrew L. Sprague; Karin M G. Silbernagel; Josh R. Baxter

Poster No. 973

A Posterior Tibial Slope In The Plain Radiography Does Not Reproduce The Slope Of The Medial Condyle Accurately In Varus Knees In Patients Undergoing Knee Arthroplasties

Kohei Nishitani; Shinichi Kuriyama; Shinichiro Nakamura; Hiromu Ito; Shuichi Matsuda

Poster No. 974

Comparison Between Bi-cruciate Retaining Total Knee Arthroplasty And Posterior Stabilized Total Knee Arthroplasty For Pre- And Postoperative Rotational Mismatches Of The Femorotibial Bones

Shine Tone; Masahiro Hasegawa; Yohei Naito; Akihiro Sudo

Poster No. 975

A Biomechanical Analysis Of Four Medial Patellofemoral Ligament Reconstruction Techniques

Christopher K. Johnson; Richard L. Amendola; Matthew G. Scuderi; Nathaniel R. Ordway; Frederick W. Werner; John P. Cannizzaro

Poster No. 976

Characterization Of Gait Patterns Of A Non-invasive Post-traumatic Osteoarthritis Model

Tolulope Ajayi

Poster No. 977

Physiological Axial Tibial Rotations Of The Knee During A Weightbearing Flexion

Guoan Li; Chaochao Zhou; Jia Yu; Sophia Li; Timothy Foster; Hany Bedair

Knee - Surgical and Non-surgical Interventions

Poster No. 978

Removal Of The Infrapatellar Fat Pad Demonstrates Benefits For A Female Cohort In A Model Of Primary Osteoarthritis

Maryam F. Afzali; Madeline Sykes; Kayley Patton; Koryn Lee; Angela J. Maolf; Tammy L. Haut Donahue; Kelly Santangelo

Poster No. 979

Taking The Load Off: Effect Of Varus Producing Distal Femoral Osteotomy And High Tibial Osteotomy On Compartment Pressures And Contact Area In Varying Stages Of Knee Flexion

Justin Hollenbeck; Jordan Liles; Justin Brown; Michael Foster; Charles Su; Matthew Vopat; Alexander Garcia; Armando Vidal

Poster No. 980

Early Clinical And Radiographic Outcomes Of Novel Cementless Fixed-Bearing Unicompartmental Knee Arthroplasty System

Tarik Bayoumi; Lindsey Ruderman; Edwin Su; Andrew Pearle

Poster No. 981

Assessing The Changes In Relative Contributions Of Each Moment Components Of The Knee After Medial Open-wedge High Tibial Osteotomy

Yuki Suzuki; Yasumitsu Ohkoshi; Kensaku Kawakami; Shigeyuki Sakurai; Kengo Ukishiro; Tomohiro Onodera; Koji Iwasaki; Tatsunori Maeda; Shoji Suzuki; Eiji Kondo; Norimasa Iwasaki

Poster No. 982

Arthroscopic Surgery Versus Physical Therapy For Treatment Of Patellar Tendinopathy: A Systematic Review

Joseph Bano; Heath Gould; Trevor Wyand; Allen J. Opoka; David A. Boyd; Sean B. Sequeira; Casey M. Imbergamo; John C. Deese

Poster No. 983

Single And Repeat Treatments Of Amniotic Suspension Allograft Improve Pain In A Rat Osteoarthritis Model

Katrina A. Harmon; Kelly A. Kimmerling; Katie C. Mowry

Poster No. 984

Smaller Diameter Femoral Tunnel Interference Screws Provide Adequate Fixation Strength In Anterior Cruciate Ligament Reconstruction: A Cadaveric Study

Jason Ina; Mark Megerian; Derrick Knapik; Jacob Calcei; Clare Rimnac; James Voos

Poster No. 985

Examining Preoperative Magnetic Resonance Imaging For Medial Meniscal Ramp Lesions In Patients Surgically Treated For Acute Grade Iii Combined Posterolateral Corner Knee Injuries

Stephen M. Gillinov; Jay Moran; Andrew E. Jimenez; Lee D. Katz; Annie Wang; William M. McLaughlin; Kyle N. Kunze; Timothy E. Hewett; Michael J. Alaia; Robert F. LaPrade; Michael J. Medvecky

Poster No. 986

A Novel Practical Method To Predict Anterior Cruciate Ligament Hamstring Graft Size Using Pre-operative MRI

Zi Qiang Glen Liao; Matthew Song Peng Ng; Shawn Shao En Low; Brian Zhaojie Chin; Fareed Husain Yusuf Kagda

Poster No. 987

Does Blumensaat's Line Morphology Influence The Femoral Tunnel Position In Anatomical Double-bundle ACL Reconstruction?

Yoshiyuki Yahagi; Takanori Iriuchishima; Genki Iwama; Makoto Suruga; Yusuke Morimoto; Kazuyoshi Nakanishi

Poster No. 988

A Biomechanical Comparison Of Patellar Fixation Techniques In Medial Patellofemoral Ligament Reconstruction

Sean P. Martin; Marco Caiola; Elise Martin; John Marzo; Leslie Bisson

Meniscus - Growth, Development and Aging

Poster No. 989

Reduction In Post-natal Load Bearing Has Negligible Impact On Murine Meniscus Maturation

Natalie L. Fogarty; Talayah Johnson; Bryan Kwok; Alisia Lin; Tonia K. Tsinman; Xi Jiang; Eiki Koyama; Lin Han; Josh Baxter; Robert Mauck; Nathaniel Dymant

Poster No. 990

Gene Expression Profile Of Human Degenerative Meniscus Evaluated With Focus On Its Surface Texture

Shunya Otani; Takashi Kanamoto; Wen Shi; Ryo Miyazaki; Akira Tsujii; Tomoki Ohori; Seiji Okada; Ken Nakata

Poster No. 991

A Novel Rat Knee Osteoarthritis Model Induced By Medial Meniscus Extrusion

Daisuke Fukui; Daisuke Nishiyama; Manabu Yamanaka; Hidenobu Tamai; Naoko Nishio; Hiroshi Yamada

Meniscus - Injury and Healing

Poster No. 992

Inflammation Alters Inner Zone But Not Outer Zone Meniscus Cell Migration Via Nanoscale Histone Reorganization

Yize Zhang; Yujia Zhang; Zizhao Li; Se-Hwan Lee; Lucy Hederick; Joel Boerckel; Robert Mauck; Su-Jin Heo

Poster No. 993

The Role Of Symptom Duration In Shaping Outcome Expectations Of Patients Initiating Nonoperative Treatment For Meniscal Tear

Nomi S. Weiss-Laxer; Leslie J. Bisson; Jeffrey N. Katz; Jeffrey M. Lackner

Poster No. 994

Proinflammatory Cytokines: Role In Medial Meniscus Injury In Patients With Early Medial Knee Osteoarthritis Correlated With Pre-operative Pain

Hideaki Fukuda

Poster No. 995

Characterizing EVs From Cartilage Derived Progenitor Cells And Their Role In Meniscus Repair And Regeneration

Daniel Betensky; Jay Trivedi; Yu-Ting Lin; Salomi Desai; Sicheng Wen; Chathuraka Jayasuriya

Meniscus - Structure, Function and Mechanics

Poster No. 996

Development Of A Pre-clinical Experimental Model To Measure Medial Meniscus Position During A Simulated Gait Cycle Of The Human Knee Joint

Genevieve Pounds; Aiqin Liu; Alison Jones; Louise Jennings

Poster No. 997

Variability In The Redistribution Of Joint Contact Forces After Partial Meniscectomy Is Not Associated With Percent Load Through The Meniscus In The Intact Condition

Kalle Chastain; Ian Hutchinson; Joshua Wright-Chisem; Anil Ranawat; Scott Rodeo; Suzanne A. Maher

Poster No. 998

Direct Measurement Of Three-dimensional Forces At The Posterior Medial Meniscal Root: A Validation Study

Justin Hollenbeck; Justin Brown; Heath Melugin; Scott Tashman; Brad Fossum; Matthew Provencher

Poster No. 999

Aggrecan Sirna Treatment Enhances Collagen Fiber Formation In Tissue Engineered Meniscus

Serafina G. Lopez; Lawrence J. Bonassar

Poster No. 1000

Regional Effect On Viscoelastic Shear Properties Of Porcine Meniscus

Gabi Schwartz; Andy Morejon; Julissa Gracia; Thomas M. Best; Alicia Jackson; Francesco Travascio

Poster No. 1001

Medial Meniscal Posterior Root Tears Lead To Changes In Joint Contact Mechanics At Low Flexion Angles During Simulated Gait

Kalle Chastain; Christopher Brusalis; Amanda Wach; Brett Steineman; Andreas Gomoll; Sabrina Strickland; Suzanne Maher

Poster No. 1002

Histological Analysis Of The Relationship Between The Menisconfemoral Ligament And The Lateral Meniscus Posterior Horn

Tomoki Ohori; Shunya Otani; Takashi Kanamoto; Ken Nakata

Meniscus - Treatment and Therapeutics

Poster No. 1003

A New Biomechanically Enhanced Type I Collagen-based Meniscus Implant

Wei Chang; Shu-Tung Li

Poster No. 1004

In-vitro Knee Joint Model For Investigating Interactions Between Joint Tissues During Meniscus Healing

Hun-Jin Jeong; Solaiman Tarafder; GaYoung Park; Elen Zhu; MD Sarker; Chang Lee

Poster No. 1005

Mechanoactive Anti-inflammatory Drug Delivery To Meniscus Defects

Elisabeth A. Lemmon; Ryan Locke; Brendan Stoeckl; Austin Jenk; Michael Hast; Robert Mauck

Poster No. 1006

Partial Meniscus Transplant To Treat Horizontal Cleavage Tears Restores Contact Pressures And Areas Similar To Partial Meniscectomy

Marshall Haden; Jason Koh; Asher E. Lichtig; Eric Chang; Farid Amirouche

Poster No. 1007

Continuous Vertical Inside-out Versus Traditional Vertical Inside-out Meniscal Repair: A Biomechanical Comparison

Jose Leonardo Rocha de Faria; Arthur Paiva Grimaldi Santos; Mariana Radulski; Douglas Mello Pavão; Ana Carolina Leal Oliveira; Ari Digiacoimo Ocampo More; Alan de Paula Mozella; Joao Antonio Matheus Guimarães; Robert LaPrade; Carlos Rodrigo de Mello Roesler; Rodrigo Salim Salim

Multi-Organ System Crosstalk

Poster No. 1008

A Novel Cranial Bone Transport Technique Alleviates Brain Injury and Enhances Skull Defect In Tbi Rats

Shanshan Bai; Xuan Lu; Yuejun Lin; Xiaoting Zhang; Ming Wang; Zhaowei Jiang; Haixing Wang; Zhixian Zong; Lu Feng; Sien Lin; Wayne YW Lee; Gang Li

Poster No. 1009

Stromal-Immune Crosstalk Via CSF Signaling Orchestrates Synovial Macrophage Speciation In Post-Traumatic Osteoarthritis

Alexander Knights; Easton Farrell; Dennis Farmer; Olivia Ellis; Michelle Song; Chia-Lung Wu; Kurt Hankenson; Tristan Maerz

Poster No. 1010

Genetic Variation And Sex Influence Bone And Muscle Loss From Disuse In Diversity Outbred Mice

Michael Friedman; Yue Zhang; Gabriel Hoppock; Charles Farber; Henry Donahue

Poster No. 1011

In Vitro Bovine Disc Nerve Ingrowth Model Assembled Using Hydrodynamic Forces

Junxuan Ma; Janick Eglauf; Riccardo Tognato; Sibylle Grad; Mauro Alini; Tiziano Serra

Poster No. 1012

Growth Factors And Topography Direct Multi-tissue Regeneration Of Muscle-tendon Units For Rotator Cuff Repair

Ke Li; Xu Zhang; Dan Wang; Rocky Sung-Chi Tuan; Dai Fei Elmer Ker

Poster No. 1013

Patellar Tendon And Tibial Cartilage Viscoelastic Properties Are Inversely Related In Osteoarthritic Knees

Adam Kositsky; Awuniji Linus; Lauri Stenroth; Mika E. Mononen; Ervin Nippolainen; Heikki Kröger; Juha Töyräs; Janne T.A. Mäkelä; Petri Tanska; Isaac O. Afara; Rami K. Korhonen

Poster No. 1014

Aging Rats Performing Intense Work Task Show Increased Inflammatory Cytokines In Peripheral Tissues, Serum And Brain, In Association With Sickness Behaviors And Persistent Pain Behaviors

Mary F. Barbe; Michele Y. Harris; Mamta Amin

Poster No. 1015

Novel Neurological Roles Of A Craniosynostosis-related Osteoinductive Molecule Nell-1

Chenshuang Li; Zhong Zheng; Chia Soo; Kang Ting

Poster No. 1016

Osteosarcopenia In The Spine Beyond Bone Mineral Density: Association Between Paraspinal Muscle Impairment And Advanced Glycation Endproducts

Haffer Henryk; Maximilian Muellner; Erika Chiapparelli; Yusuke Dodo; Jiaqi Zhu; Yi Xin Han; Eve Donnelly; Ek T. Tan; Jennifer Shue; Andrew A. Sama; Frank P. Cammisa; Federico P. Girardi; Alexander P. Hughes

Poster No. 1017

Utilizing Tissue Chip To Elucidate The Crosstalk Between Cartilage And Synovial Tissue In Pain Activation

Hang Lin; Meagan Makarczyk; Jamie Moy; Zhong (Alan) Li; Matias Preisegger; Qi Gao; Bruce Bunnell; Stuart Goodman; Michael Gold

Poster No. 1018

The Effects Of Vagal Tone On Knee Osteoarthritis Symptoms And Joint Cartilage Remodeling In Male Rats

Carlos J. Cruz; Taylor D. Yeater; Kyle D. Allen

Shoulder and Elbow - Arthroplasty

Poster No. 1019

Biomechanical Characteristics Of Inferior Tilt Of The Glenosphere Based On Changes Of The Center Of Rotation In Reverse Shoulder Arthroplasty

Sang-Jin Shin; Jae-Hoo Lee; Thay Q. Lee; Michelle McGarry; Gyurim Baek; Daniel Kwak; Andrew P. Nakla

Poster No. 1020

Effects Of Different Humeral Stem Length On Stem Alignment And Proximal Stress Shielding In Reverse Total Shoulder Arthroplasty

Jae Woo Park; Joo Han Oh; Jian Han; Hyeon Jang Jeong

Poster No. 1021

Development Of A Computational Model For Predicting Wear In Reverse Total Shoulder Arthroplasty With Comparison To In-vitro Wear Simulator Results

Emma C. Badowski; G Daniel Langohr

Poster No. 1022

Comparing Outcomes Of Upper Extremity Ambulators To Controls After Reverse Total Shoulder Arthroplasty

Logan M. Andryk; Benjamin T. Knight; Alexander R. Graf; Steven I. Grindel

Poster No. 1023

Behavior Of Intramedullary Screw Fixation In Humeri And Ulnae For Total Elbow Arthroplasty

Benjamin W. Newell; Ehab M. Nazzal; Luke T. Mattar; Robert A. Kaufmann; Richard E. Debski

Poster No. 1024

Inferior Glenoid Component Inclination Can Reduce Shear Forces In Total Shoulder Arthroplasty

Jonathan Glenday; Lawrence V. Gulotta; David M. Dines; Russell F. Warren; Samuel A. Taylor; Joshua S. Dines; Andreas Kontaxis

Poster No. 1025

Is A Lateralized Humeral Reverse Total Shoulder Prosthesis Equally Effective In Treating Patients Of Shorter Height: A Comparison Of Patients Of Short And Average Height At Short And Long-term Follow-up

Josie A. Elwell; Pierre-Henri Flurin; Joseph Zuckerman; Thomas Wright; Christopher Roche

Poster No. 1026

Humeral Implant Adjustability Requirements For Ideal Short Stem Positioning In Shoulder Arthroplasty

Gregory W. Spangenberg; John Matheson; Oren Zarnett; Kenneth Faber; G Daniel Langohr

Poster No. 1027

The Association Of Rotator Cuff Muscle Morphology And Glenoid Morphology In Glenohumeral Osteoarthritis

Deniz Siso; Hwabok Wee; Padmavathi Ponnuru; Gregory Lewis; Jing Du; April Armstrong; Meghan Vidt

Poster No. 1028

Initial Clinical Results Of A Small, Curved-back Oval Baseplate In Reverse Total Shoulder Arthroplasty

Josie A. Elwell; Sean Grey; Rahul Deshmukh; Jae Chul Yoo; Emilie Cheung; Lynn Crosby; Joseph Zuckerman; Thomas Wright; Pierre-Henri Flurin; Christopher Roche

Poster No. 1029

Effects Of An Inlay Or Onlay Humerus Implant On Passive Range Of Motion In Reverse Total Shoulder Arthroplasty

Jared L. Zitnay; Robert Z. Tashjian; Manuel Urvoy; Gilles Walch; Heath B. Henninger

Poster No. 1030

Method To Comparatively Evaluate The Micromotion Of Reverse Shoulder Baseplates Utilizing Digital Image Correlation

Julian Nowak; Melanie Caba; Ananth Gopalakrishnan

Poster No. 1031

Short-term Functional Outcomes For The Lima Smr Tt Hybrid Glenoid Shoulder System

Alexander I. Edelstein; Daniel J. Sylvestre; Corey Suraci; Margaret E. Jonas; Jeremy Albright; Joseph Choi

Poster No. 1032

The Sensitivity Of The Stability Of Stemless Humeral Implants To Surgical, Patient And Design Factors In Reverse Shoulder Arthroplasty

Kyle Snethen; Christine Mueri; Tom Kriska; Yang Son; Marc Bandi

Poster No. 1033

Risk Of Penetration Of The Baseplate Peg In Reverse Total Shoulder Arthroplasty

Eiji Tashiro; Naohide Takeuchi; Naoya Kozono; Akira Nabeshima; Erina Yamada; Yasuharu Nakashima

Poster No. 1034

Evaluating The Fatigue Performance Of Humeral Stems Based On In-vivo Shoulder Joint Reaction Forces

Saandeep Mani; Ravikumar Varadarajan; Kimberly Mimnaugh; Steven Meulink; Jeff Bischoff

Shoulder and Elbow - Diagnostics

Poster No. 1035

Area-based Methods For Measuring Glenoid Bone Loss Are The Most Reliable And Accurate

Luzia A. Niggli; George S. Athwal; Robert U. Hartzler; Joaquin Sanchez-Sotelo; Floor M. Lambers

Poster No. 1036

Identifying The Inferior Glenohumeral Ligament In 3D MRI Reconstructions

Benjamin W. Newell; Ehab M. Nazzal; Zachary J. Herman; Keishi Takaba; Volker Musahl; Chan Hong Moon; Albert Lin; Richard E. Debski

Shoulder and Elbow - Injury and Healing

Poster No. 1037

Comparison Of Human Glenoid And Acetabular Labrum Regenerative Characteristics

Le Q. Hoang; Bhavya Vaish; Samira Izuagbe; Joseph Borrelli; Liping Tang

Poster No. 1038

Beige Fibro/adipogenic Progenitor (fap) Derived Exosomes Moderate Fap Differentiation And Alleviate Fibrosis And Fatty Infiltration After Rotator Cuff Injury In Mice

Mengyao Liu; Brian Feeley; Martin Ng; Robert Raffai; Hubert Kim; Xuhui Liu

Poster No. 1039

Supraspinatus Myotendinous Junction Contains Higher Amounts Of Fibroadipogenic Progenitors And Tenogenic Precursors That Exhibit Expansion After Rotator Cuff Injury

Prashant Nuthalapati; Steven Garcia; Michael Davies; Xuhui Liu; Brian Feeley

Poster No. 1040

T Cell Populations Are Upregulated Soon After Injury In A Rat Model Of Post-traumatic Joint Contracture

Rebecca F. Reals; Ryan M. Castile; J. Caleb Snider; Aaron M. Chamberlain; Matthew R. Bersi; Spencer P. Lake

Poster No. 1041

Biomechanical Evaluation Of The Modified Lasso Technique For Regan-Morrey Type II Coronoid Fractures

Shelby Rider; Christopher Caldwell; Brad Chauvin; Kevin Perry; Shane Barton; Giovanni F Solitro

Poster No. 1042

Assessment Of Medial Elbow Torque In Junior High School Baseball Pitchers Using Wearable Sensor

Tomoya Yoshikawa; Yutaka Mifune; Atsuyuki Inui; Hanako Nishimoto; Issei Shinohara; TATSUO KATO; Takahiro Furukawa; Kusunose Masaya; Shuya Tanaka; Ryosuke Kuroda

Shoulder and Elbow - Structure, Function and Mechanics

Poster No. 1043

A Study On A Three-dimensional Evaluation Method Of The Scapulohumeral Joint Before And After Arthroscopic Rotator Cuff Repair

Kazuki Noda; Takeshi Shimoto; Toshiki Nishioka; Naoya Kozono; Satoshi Hamai; Yasuharu Nakashima; Hidehiko Higaki

Poster No. 1044

Motion Analysis Of Radial Head And Ecrb Using Ultrasonography

Masaya Kusunose; Yutaka Mifune; Atsuyuki Inui; Hanako Nishimoto; Tomoya Yoshikawa; Issei Shinohara; Tatsuo Kato; Takahiro Furukawa; Shuya Tanaka; Ryosuke Kuroda

Poster No. 1045

Quantifiable Shoulder Exam Measurements Are Related To Throwing Arm Injuries In Collegiate Baseball Pitchers

Hannah L. Stokes; Koco Eaton; Nigel Zheng

Poster No. 1046

Comparing Measurements Of Force Between Hand-held Dynamometer And Luggage Scales

Carver Montgomery; Benjamin Branch; Gabriel Sampognaro; Alex Percle; Kevin Perry; Patrick Massey; Shane Barton

Poster No. 1047

Heterogeneity Of The Supraspinatus Tendons Mechanical Environment

Mason Garcia; Daniela Caro; Kaveh Momenzadeh; Arun Ramappa; Ara Nazarian

Poster No. 1048

Natural Characteristics Of Rotator Cuff Disease In Hypercholesterolemia Patients

Jong Pil Yoon; Dong Hyun Kim; Jee Wook Yoon; Sung Hyuk Yoon

Poster No. 1049

Biomechanical Evaluation Of Transosseous Rotator Cuff Repair With Varying Tendon Thickness And Suture Site.

Masahiro Kirisawa; Katsunobu Sakaguchi; Kentaro Ito; Hiroshi Sekihata; Naoki Sugita; Yuho Kadono

Shoulder and Elbow - Surgical and Non-Surgical Interventions

Poster No. 1050

Withdrawn

Poster No. 1051

Withdrawn

Poster No. 1052

Withdrawn

Poster No. 1053

Dual Plate Fixation Of Midshaft Clavicle Fractures May Reduce Reoperation Rates Compared To Single Plating With Anterior Or Superior Fixation Techniques

Rajiv P. Reddy; Shaquille Charles; Stephen Chen; Peter Mittwede; Ajinkya Rai; Matthew Como; Gele Moloney; Soheil Sabzevari; Albert Lin

Poster No. 1054

Efficacy Of Tenex And Platelet-rich Plasma Injections For Lateral Elbow Tendinopathy

Marshall Rupe; Ignacio Garcia Fleury; Natalie Glass; Ryan Kruse; Joseph Buckwalter V

Poster No. 1055

The Efficacy Of Proteasome Inhibitors In Preventing Pediatric Muscle Contractures Following Neonatal Brachial Plexus Injury

Indranshu Das; Qingnian Goh; Roger Cornwall; Kritton Shay-Winkler

Poster No. 1056

Biomechanical Analysis Of A Suture Cerclage Technique For Coracoclavicular Reconstruction

Andrew Kleven; Jacob Talhelm; Spencer Moore; Steven Grindel; Cameron Best; Mei Wang

Poster No. 1057

Open Acromioclavicular Repair With A Suture Cerclage Tensioning System: A Case Series

Alvarho Guzman; Therese Dela Rueda; Shane Rayos Del Sol; Sarah Jenkins; Caleb Shin; Patrick McGahan; James Chen

Poster No. 1058

Lacertus Fibrosus Release Alone May Provide Sufficient Decompression Of Proximal Median Nerve Entrapment

Justin A. Cline; Lisa M. Frantz; Shang-You Yang; Jessica M. Adams; Bernard F. Hearon

Skeletal Muscle - Diseases and Disorders

Poster No. 1059

Fyn Regulates The Interleukin-6/stat-3/autophagy Axis In Sarcopenia

Tsuyoshi Sasaki; Eijiro Yamada; Ryota Uehara; Shuichi Okada; Hirotaka Chikuda; Masanobu Yamada

Poster No. 1060

Balance And Muscle Weakness Assessment Chair

Andreea R. Lucaciu; Avirath Dodabele; David Simiele; Ishatou Diambou; Christopher Ray; Hamid Ghaednia; Joseph Schwab; Soheil Ashkani Esfahani

Poster No. 1061

Skeletal Muscles From Chronic Stroke Patients Show Epigenetic And Structural Modifications

Raji Pichika; Olga Politikou; Andrea (Andy) Domenighetti; Oskar Aszmann; Richard L. Lieber

Skeletal Muscle - Injury and Healing

Poster No. 1062

Heterogeneous Human Fibroadipogenic Cell Subpopulations Are Altered In Chronic Injury

Steven M. Garcia; Justin Lau; Agustin Diaz; Hubert Kim; Xuhui Liu; Brian Feeley

Poster No. 1063

Immobilization Is A Key Determinant For Heterotopic Ossification Formation

La Li; Dai Li; Shuang Ren; Xiaoqing Hu; Yingfang Ao

Poster No. 1064

Effects Of Circumferential Compressive Trauma On Peripheral Nerve Function

Rade R. Jibawi Rivera; Mohammed N. Hamad; Mark H. Gonzalez; Farid M.L. Amirouche

Poster No. 1065

Early Edema Formation After Release Of The Infraspinatus Muscle As An Experimental Model Of Rotator Cuff Lesions In Sheep - A Histological Analysis

Brigitte von Rechenberg; Alexander Laedermann; Karl Wieser

Poster No. 1066

Acute Compartment Syndrome Model Using Turkey Tibialis Cranialis Muscle

Ichiro Tsukamoto; Naoya Iida; Farbod Yousefi; Elameen Adam; Omar Selim; Gogyin Zhao; Tomoyuki Kuroiwa; Rou Wan; Aida Sarcon; Mohammed Abozaid; Ramona Kirk Reisdorf; Chunfeng Zhao

Poster No. 1067

Muscle Regeneration Effect Of Platelet-rich Plasma Therapy For Eccentric Contraction-induced Muscle Damage

Hiroyori Fusagawa; Takashi Yamada; Tatsuya Sato; Nobutoshi Ichise; Atsushi Teramoto; Noritsugu Tohse; Toshihiko Yamashita

Poster No. 1068

Rna Sequencing Analysis Of Muscle-nerve Cross-talk In A Transwell Co-culture Model

James T. Redden; David Cohen; Zvi Schwartz; Michael McClure

Poster No. 1069

AGEs On Decellularized Muscle Matrix Promote Chronic RAGE Expression In Volumetric Muscle Injury Despite FPS-ZM1 Treatment

Lucas C. Olson; Scott E. Pennebaker; Eirian S. Crocker; Ammar Y. Jawad; Joshua D. Cohen; Zvi Schwartz; Michael J. McClure

Poster No. 1070

Skeletal Muscle Atrophy After ACL Rupture Can Be Mitigated By ERR γ Overexpression In Skeletal Muscle

Aiping Lu; Katie Sikes; Ping Guo; Matthieu Huard; Kelly Santangelo; Scott Tashman; Vihang Narkar; Johnny Huard

Skeletal Muscle - Structure, Function and Mechanics

Poster No. 1071

ADAMTSL2 Limits Differentiation Of Fibroadipogenic Progenitor Cells Into Fibroblasts By Regulating TGFB Signaling

Charlene I. Redhead; Nandaraj Taye; Dirk Hubmacher; Woojin Han

Poster No. 1072

Scaling Of Maximum Muscle Force With Skeletal Muscle Mass For A Subject-specific Musculoskeletal Model

Ailian Chi; Seungbum Koo

Poster No. 1073

Excess Intramyocellular Lipid Does Not Physically Disrupt Muscle Contraction Or Mechanical Properties

Karen C. Shen; Kelsey H. Collins; Farshid Guilak; Gretchen Meyer

Poster No. 1074

Muscle Function Restoration In Daily Living Activities For Total Knee Arthroplasty Patients

Fangjian Chen; Hannah Stokes

Skeletal Muscle - Treatment and Therapeutics

Poster No. 1075

Wnt7a Suppresses Adipogenesis Of Skeletal Muscle Fibro-adipogenic Progenitors Through Rho-yap Signaling Axis

Chengcheng Fu; Britney Chin-Young; Woojin Han

Poster No. 1076

Purified Exosomes Products For Volumetric Muscle Loss And Functional Recovery

Iorenzo Mazzucchelli; Aida Sarcon; Tony Huang; Matthew Houdek; Chunfeng Zhao; Steven Moran

Poster No. 1077

Ucp-1+ Progenitors Are Not Required For The Development And Expansion Of Intramuscular Adipose Tissue

Jacob Parson; Xiao Zhang; Erica Scheller; Gretchen Meyer

Spine - Diagnostics

Poster No. 1078

Validation Of The Clavien-Dindo-Sink Complication Classification System For Adult Spine Surgery

Dominic Ridolfi; Anthony Oyekan; Stephen Chen; Emmett J. Gannon; Keith L. Jackson; Jesse E. Bible; Christopher Kowalski; Joseph de Groot; Yunting Tang; William F. Donaldson III; Joon Y. Lee; Jeremy D. Shaw

Poster No. 1079

Drug Therapy For Chronic Low Back Pain: A Network Meta-analysis

Oluwasegun Aremu; Ajibola Oladiran; Imonichie Adeoye-Sunday; Olusegun Ogunlade; Mosi Balogun

Poster No. 1080

Errors In Measuring Overall Lumbar Spine Kinematics Using A Limited Marker Set And Traditional Motion Capture Are Dependent Upon Plane Of Movement As Well As Patient Pain And Age

Caroline Pellegrini; Clarissa LeVasseur; Tom Gale; Sabreen Megherhi; Joseph Shoemaker; Marit Johnson; Gina McKernan; William Anderst

Poster No. 1081

Abdominal Aortic Calcification As A Screening Tool For Osteoporosis In Spine Surgery

Maximilian Muellner; Henryk Haffer; Erika Chiapparelli; Yusuke Dodo; Jennifer Shue; Andrew A. Sama; Frank P. Cammisa; Federico P. Girardi; Alexander Hughes

Spine - Injury, Repair and Pain

Poster No. 1082

Enhanced Network In Corticospinal Tracts After Infused Mesenchymal Stem Cells In Spinal Cord Injury

Ryosuke Hirota; Masanori Sasaki; Osamu Honmou; Toshihiko Yamashita

Poster No. 1083

Influence Of Baseline Patient Reported Outcome Measures On Hospital Experience Scores After Elective Cervical Spine Surgery

Anthony Oyekan; Yunting Tang; Dominic Ridolfi; Stephen Chen; Amir M. Abtahi; Mitchell Fourman; William F. Donaldson; Joon Lee; Jeremy D. Shaw

Poster No. 1084

Algorithm Validation For Quantifying Actigraph Physical Activity Metrics In Participants With Chronic Low Back Pain And Healthy Controls

Jordan Hoydick; Marit Johnson; Kevin Bell

Poster No. 1085

Analysis Of Risk Factors For Correction Loss After Percutaneous Posterior Spinal Fixation For Traumatic Thoracolumbar Vertebral Fractures. -usefulness Of Preoperative Vertebral Hounsfield Unit Value Measurement On Ct Images-

Takeru Akabane; Tomoto Suzuki; Yuki Konno; Hiromori Sagae; Michiaki Takagi

Poster No. 1086

Activated Neutrophils Degrade Human Cartilage Endplates

Irina Heggli; Mohamed Habib; Justin Scheer; Nick Herger; Mengis Tamara; Christoph Laux; José Miguel Spirig; Florian Wanivenhaus; Betz Michael; Christopher Ames; Mazda Farshad; Oliver Distler; Aaron Fields; Stefan Dudli

Poster No. 1087

Modic Type 2 Changes Are Inflammatory Changes With Complement System And Macrophage Involvement

Irina Heggli; Tamara Mengis; Laux Christoph; Frédéric Cornaz; Agnieszka Karol; Nick Herger; Jonas Widmer; Nadja Farshad-Amacker; Mazda Farshad; Oliver Distler; Stefan Dudli

Poster No. 1088

Use Of Random Forest Machine Learning Algorithm To Predict Short Term Outcomes Following Posterior Cervical Decompression With Instrumented Fusion

Andrew Cabrera; Alexander Bouterse; Michael Nelson; Jacob Razzouk; Omar Ramos; David Chung; Wayne Cheng; Olumide Danisa

Poster No. 1089

The Effects Of A Distractive And Mobility-Enabling Orthosis On Paraspinal Muscle Activity During Lifting Exercises

Lyndsey Bouve; Alexis Nelson; William Crosslin; Douglas Powell; Denis DiAngelo

Spine - Structure, Function and Mechanics

Poster No. 1090

Withdrawn

Poster No. 1091

Histological Validation Of Lumbar Cartilaginous Endplate Thickness Distribution Measured With UTE MRI

Mara Marciante; Saurav Sumughan; Brandon P. Williams; Deborah J. Hall; Ana Chee; Luigi La Barbera; Alejandro A. Espinoza Orias

Poster No. 1092

Validity Of Evaluating Spinal Kinetics Without Participant-Specific Kinematics

Chenxi Yan; Andrew Lynch; Mohammad Alemi; Jacob Banks; Mary Boussein; Dennis Anderson

Poster No. 1093

A Lateral Expandable Cage With Independently Adjustable Anterior-Posterior Heights Can Improve The Pressure Distribution At The Cage-Endplate Interface

Jonathan Kusins; Scott Uyekawa; Gurpreet Singh; Yun Peng; Chase McQuarrie; Michael Jekir

Poster No. 1094

3D-Printed Biomimetic Cervical Vertebral Body For Spinal Arthroplasty Testing

Jenna M. Wahbeh; John Lama; Erika Hookasian; Sang-Hyun Park; Edward Ebramzadeh; Sophia Sangiorgio

Poster No. 1095

Mechanical Behaviors Of The Sacroiliac Joint

Dai-Soon Kwak; Tae Soo Bae; Yi-Suk Kim

Poster No. 1096

Lumbar Cartilaginous Endplate Thickens With Advancing Disc Degeneration As Characterized By UTE MRI

Rade R. Jibawi Rivera; Dino Samartzis; Howard S. An; Nozomu Inoue; Alejandro A. Espinoza Orias

Poster No. 1097

The Effects Of Cervical Orthoses On Head And Intervertebral Range Of Motion

Anthony Oyekan; Clarissa LeVasseur; Stephen Chen; William Donaldson; Joon Lee; Jeremy Shaw; William Anderst

Spine - Surgical and Non-surgical Interventions

Poster No. 1098

In Vivo Assessment Of AMP2, A Novel Ceramic-binding BMP-2 In Two Spinal Fusion Models

David H. Stewart; Douglas Fredericks; Todd Heil; Sarah Leifeld; David (Hyeon) Park; John Greenbaum; Luis Alvarez

Poster No. 1099

Adjacent Segment Motion Does Not Increase Three Years After Cervical Arthrodesis

Yunting Tang; Clarissa LeVasseur; Samuel Pitcairn; David O. Okonkwo; Adam S. Kanter; Jeremy D. Shaw; William F. Donaldson; Joon Lee; William J. Anderst

Poster No. 1100

Novel 3d Printed Lattice Structure Titanium Cages Evaluated In An Ovine Model Of Interbody Fusion

James W. Johnson; Benjamin Gadowski; Kevin Labus; Holly Stewart; Brad Nelson; Howard Seim; Dan Regan; Devin von Stade; Cambre Kelly; Phillip Horne; Ken Gall; Jeremiah Easley

Poster No. 1101

Longer Constructs Do Not Increase Revisions Rates In Posterior Cervical Decompression And Fusion

Aaron Zheng; Joshua Adjei; Anthony Oyekan; Yunting Tang; Dominic Ridolfi; Tito Onyekweli; Warren Austin Jr; Brandon Couch; Stuti Patel; Spencer Talentino; Michael Buldo-Licciardi; Thomas Evashwick-Rogler; Emmett Gannon; Jeremy D. Shaw; William Donaldson; Joon Lee

Poster No. 1102

Outcomes Of Non-operative Management Of Jefferson Fractures: A Case Series

Michael F. Shannon; Anthony Oyekan; Yunting Tang; Stephen Canton; Joon Lee; Jeremy Shaw

Poster No. 1103

Design Validation Of A Compliant Mechanism, Mis, Expandable Spinal Fusion Cage With Adjustable Lordotic Angle

Daniel Orr; Christian Payne; Hailey Jones; Brandon Sargent; James Anderson; Larry Howell; Anton E. Bowden

Poster No. 1104

A Multi-patient Study For Correlation Of Growth-rod Fracture Data With Predicted High Stress Regions In Pediatric Scoliosis Using A Patient-specific Finite Element Approach

Daksh Jayaswal; Manoj Kodigudla; Amey Kel; Vijay Goel; Vivek Palepu

Poster No. 1105

Effects Of Cannula Geometry On Flowability Of Interbody Graft Material In Spinal Interbody Fusion

Jeff Kleiner; Greg Causey; Alan Burkholder

Poster No. 1106

Are All Cervical Cages Created Equal? An Analysis Of A Decade Of Adverse Events In The United States

Oluwatodimu Richard Raji; Victor Ungurean; Amit Piple; Andrea Rowland; Adam Schlauch; Dimitriy Kondrashov; Ken hsu; Jim Zucherman

Poster No. 1107

Accuracy Of Spine Pedicle Screw Placement With Robotic Assistance Versus Fluoroscopic Guidance: A Meta Analysis

Bongseok Jung; Shaya Shasavarani; Peter Boucas; Gerald Gutwein; Gabriel Zavurov; Austen Katz; Rohit Verma

Poster No. 1108

Factors Associated With Neurological Deterioration After Radiotherapy For Severe Spinal Cord Compression In Patients With Multiple Myeloma

Hester Zijlstra; Brendan M. Striano; Alexander Crawford; Nienke Wolterbeek; Diyar Delawi; Diederik H. R. Kempen; Jorrit-Jan Verlaan; Joseph Schwab

Poster No. 1109

Biomechanical Testing Of Multiaxial Pedicle Screw Loosening In Human Vertebral Bone

Martine E. McGregor; Jonah Leinwand; Renan Fernandes; Parham Rasoulinejad; Stewart McLachlin

Poster No. 1110

Is Bone Ongrowth In Total Disc Replacements Necessary For Clinical Fixation?

Jenna M. Wahbeh; Sang-Hyun Park; Edward Ebramzadeh; Sophia Sangiorgio

Poster No. 1111

Biomechanical Analysis Of A Modified Triangular Osteosynthesis Technique For Treatment Of Spinopelvic Dissociation

Augustine Saiz; Ed O'Donnell; Tanya Garcia-Nolan; Max Haffner; Wyatt Vander Voort; Hai Le; Eric Klineberg; Jonathan Eastman

Poster No. 1112

Effects of Multi-Level Cervical Disc Arthroplasty on Facet Joint Forces & Motion Distribution

Nicole Mottole; Todd Lanman; Jason Cuellar; Michael Wernke; Elizabeth Carruthers; Antonio Valdevit

Poster No. 1113

Effects Of Single- And Multi-level Cervical Disc Arthroplasty On The Motion Of The Intervertebral Disc Space

Nicole Mottole; Todd Lanman; Jason Cuellar; Michael Wernke; Elizabeth Carruthers; Antonio Valdevit

Poster No. 1114

Intraoperative Blood Loss With Use Of High Or Low Dose Tranexamic Acid In Metastatic Spine Tumor Surgery, A Matched Case Control Study

Mark Lawlor; Mina Botros; Clarke Cady-McCrea; Gabriel Ramirez; Addisu Mesfin

Poster No. 1115

Frequency and Contact Response of 3D-Printed Implants with Additive Surface Features

Antonio Valdevit; Abby Harrell; Nicole Mottole; Robert Hirschl

Poster No. 1116

Effects Of Spinal Interbody Implant Framework And Anti-migration Geometry On Vertebral Endplate Subsidence Resistance Due To Cyclic Loading

Nicole Mottole; Antonio Valdevit; Robert Hirschl

Poster No. 1117

Anterior Lumbar Interbody Fusion Construct Strength In Relation To Bone Density And Number Of Screws Used: An Experimental Study On Bone Surrogates.

Ross Dies; Jay Manuel; Milan Mody; Andrew Zhang; Seok Gi Lee; Mathew Root; Chukwuemeka Mbagwu; Giovanni Solitro

Poster No. 1118

Cyclic Loading Comparison Between Standard Ultra-high Molecular Weight Polyethylene Blocks And Biofidelic Solid Rigid Polyurethane Blocks For Astm Pedicle Screw Testing

Jeremy G. Loss; Robb W. Colbrunn; Kevin J. Lawson

Tendon and Ligament - Diseases and Disorders

Poster No. 1119

An Extensive Gene Expression Analysis Of Rotator Cuff Tendinopathy In A Rat Subacromial Impingement Model

Tomohiro Iuchi; Toshiro Ijuin; Hiroki Tawaratsumida; Yusuke Masuda; Shingo Maeda; Noboru Taniguchi

Poster No. 1120

The Shoulder Capsule Informs A Cellular Basis For Resolving Inflammatory Fibrosis

Michael Ng; Hamez Gacaferi; Mark Coles; Andrew Carr; Christopher D. Buckley; Stephanie G. Dakin

Poster No. 1121

In Human Ligamentum Flavum-derived Cells, Interleukin-1 Stimulates Interleukin-6 Secretion Through MAP Kinases

Yuta Goto; Kenji Kato; Kiyoshi Yagi; Koshimae Tomoko; Murakami Hideki; Suzuki Nobuyuki

Poster No. 1122

Relaxin-2 Receptor Expression Increased In Anterior Cruciate Ligament Of Swine PTOA Model

Li Yue; Neehar Desai; Matthew Mu; Lei Wei; Brett D. Owens

Tendon and Ligament - Growth, Development and Aging

Poster No. 1123

The Ultrastructure Of The Developing Human Anterior Cruciate Ligament:a Preliminary Analysis Using Scanning Electron Microscopy

Tyler J. Uppstrom; Sofia Hidalgo Perea; Kenneth M. Lin; Lionel Lazaro; Stephan Doty; Craig E. Klinger; Kevin G. Shea; Daniel W. Green; Scott A. Rodeo

Poster No. 1124

The Mechanosensor Focal Adhesion Kinase Regulates Cell Shape And Tendon Development

Thomas P. Leahy; Srish S. Chenna; Lou Soslowsky; Nathaniel Dymant

Poster No. 1125

Knockdown Of Biglycan Reveals An Important Role In Maintenance Of Structural And Cellular Properties During Tendon Aging

Christelle Darrieutort-Laffite; Zakary M. Beach; Stephanie N. Weiss; Jeremy D. Eekhoff; Lou J. Soslowsky

Poster No. 1126

The Effect Of Mechanical Stress On Enthesis Homeostasis In A Rat Enthesis Organ Culture Model

Taichi Saito; Aki Yoshida; Ryo Nakamichi; Yasunori Shimamura; Yasunori Shimamura; Takayuki Furumatsu; Toshifumi Ozaki

Poster No. 1127

Senescence Contributes To Death Resistance Of Aged Tenocytes In A Model Of Secondary Joint Damage

Emma J. Stowe; Brianne K. Connizzo

Poster No. 1128

Primary Cilia Regulate Tendon Enthesis Stem Cell Mechanoresponsiveness During Development

Matthew Casserly; Stavros Thomopoulos; Fei Fang

Poster No. 1129

Crosstalk Between Hematopoietic And Mesenchymal Lineage Cells In The Developing Enthesis

Valia P. Leifer; Fei Fang; Lee Song; Stavros Thomopoulos

Tendon and Ligament - Injury and Healing

Poster No. 1130

Withdrawn

Poster No. 1131

The Periostin Niche As A Novel Anti-fibrotic Target To Modulate Myofibroblast Differentiation And Persistence During Tendon Healing

Jessica Ackerman; Antonion Korcari; Alayna Loiselle

Poster No. 1132

Tppp3⁺ 'Tendon Sheath Progenitor Cells' Contribute To Heterotopic Ossification After Traumatic Injury

Ji-Hye Yea; Mario Gomez-Salazar; Sharon Onggo; Stefano Negri; Zhao Li; Robert Tower; Chen-Ming Fan; Benjamin Levi; Aaron James

Poster No. 1133

Isokinetic Knee Extension Strength Testing Post Anterior Cruciate Ligament Reconstruction: Do We Need To Test At Multiple Angular Velocities?

Hunter A. O'Connor; Colin W. Bond; Lisa N. MacFadden; Nathan Wm. Skelley; Benjamin C. Noonan

Poster No. 1134

Establishing Catwalk XT Gait Parameters For Mouse Achilles Tendon Injury And Healing

Giulia Crosio; Alice Huang

Poster No. 1135

Identifying Specific Effects Of S100a4 Conditional Deletion On Scar Tissue Formation After Flexor Tendon Injury

Stefanie H. Korntner; Alayna E. Loiselle

Poster No. 1136

Ct Evaluation About The Influence Of The Graft Tunnel Position To Formulation Of Cyclops On The Acl Reconstruction.

Yusuke Sasaki; Satomi Abe; Keisuke Matsukura; Hiroshi Ito

Poster No. 1137

Modulating The MSC Microenvironment Alters Exosome Content And Ligament Healing Capacity

Peng Jiang; Archana Prabakar; John A. Kink; Peiman Hematti; Ray Vanderby; Brian Walczak; Connie S. Chamberlain

Poster No. 1138

The Specificity And Therapeutic Potential Of Enthesis Gli1-Lineage Cells For Enthesis Repair

Fei Fang; Stavros Thomopoulos

Poster No. 1139

The Effect Multiple Strand Repairs Have On Two-strand-overhand-locking (tsol) Knot Strength

Liliann R. Linden; Ramona Kirk Reisdorf; Omar Selim; Lawrence Berglund; Chunfeng Zhao

Poster No. 1140

The Role Of IL33 In Tendon Healing And Inflammation

Giulia Crosio; Alice Huang; Varun Arvind

Poster No. 1141

Withdrawn

Poster No. 1142

Effect Of Collagen Mutations On 3D Fiber Organization In Achilles And Tail Tendons

Lander manrique; Anxhela Docaj; Asier Munoz; Alessandra Carriero

Poster No. 1143

Withdrawn

Poster No. 1144

Extracellular Vesicles Derived From Acl Remnant Cells And Bone Marrow Stromal Cells Coculture Medium Enhance The Proliferation, Migration And Collagen Synthesis Of Acl Remnant Cells And BMSCs

Cheng-Chang Lu; Shih-Hsiang Chou; Zi-Miao Liu; Paul Pei-Hsi Chou; Chunfeng Zhao; Mei-Ling Ho

Poster No. 1145

Potential Of Umbilical Cord Mesenchymal Stromal Cell-derived Extracellular Vesicles To Improve Rotator Cuff Healing - A Pilot Ovine Study

Florien Jenner; Andrea Wagner; Iris Ribitsch; Eberhard Ludewig; Robert Trujanovic; Eva Rohde; Brigitte von Rechenberg; Mario Gimona; Andreas Traweger

Poster No. 1146

Inhibition Of Glucose Use Stimulates The Actin Cytoskeletal Signaling Pathway In Injured Mouse Achilles Tendons

Motomi Enomoto-Iwamoto; Soutarou Izumi; Kairui Zhang; Weiliang Huang; Takeshi Oichi; Maureen Kane; Masahiro Iwamoto; Catherine K. Kuo

Tendon and Ligament - Structure, Function and Mechanics

Poster No. 1147

Earlier Proteoglycan Turnover Promotes Higher Efficiency Matrix Remodeling In MRL/MpJ Tendons

Anthony N. Aggouras; Brianne K. Connizzo

Poster No. 1148

Comparison Of Tenogenic Differentiation Of Adipose-derived Stem Cell In Various Cell Culture Platform

Hong Seok Kim; Jinwoo Nam; Jung-Wee Park; Sunhyung Lee; Jae Youn Yoon; Jeong Joon Yoo

Poster No. 1149

Effect Of Cruciate Ligament Rupture On Knee Joint Kinematics With Forward Dynamics Gait Simulation

Beomsoo Shin; Seungbum Koo; Joon Ho Wang

Poster No. 1150

Assessing Histological Scoring Systems For 'Normal' Tendon Characterization

Sam A. Hefferan; Carina L. Blaker; Dylan M. Ashton; Christopher B. Little; Elizabeth C. Clarke

Poster No. 1151 (Guest Nation-Ireland)



Implicating YAP Signaling In The Developing Tendon

Rebecca A. Rolfe; Grace Morris; Benjamin Peterson; Ahmed Elkashif; Nicholas Dunne; Niamh Buckley; Helen McCarthy; Spencer Szczesny; Paula Murphy

Poster No. 1152

Novel Arthrometer Provides Quantitative And Objective Measures Of Uniplanar And Multiplanar Knee Laxity

Erin Berube; Akinola Oladimeji; David Shamritsky; Deborah Jones; Michael Parides; Danyal Nawabi; Andrew Pearle; Thomas Wickiewicz; Carl Imhauser

Poster No. 1153

Analysis Of Knee Joint Rotational Instability Associated With Anterior Cruciate Ligament And Medial Collateral Ligament

Himari Miyamoto; Saaya Enomoto; Riku Saitou; Yuna Usami; Kohei Arakawa; Takanori Kokubun

Poster No. 1154

Scleraxis Targeted Deletion Of Collagen XI Impairs Tendon Mechanical Function During Postnatal Development

Jordan S. Cohen; Ashley K. Fung; Stephanie N. Weiss; Nathaniel A. Dymment; Lou J. Soslowsky

Poster No. 1155

Influence Of Syndecan-4 Knockout On Biomechanical Properties And Structuring Of Mouse Achilles Tendon

Daniel Kronenberg; Lennart Wiehenkamp; Andre Frank; Uwe Hansen; Adelheid Korb-Pap; Richard Stange

Poster No. 1156

Collagen III Haploinsufficiency Alters Fibril Size But Not Mechanical Properties In Uninjured, Young Adult Male Murine Tendons

Margaret K. Tamburro; Jaclyn A. Carlson; Stephanie N. Weiss; Susan W. Volk; Lou J. Soslowsky

Poster No. 1157

Age-specific Size And Biomechanical Properties Of Deep Digital Flexor Tendon During Skeletal Growth In A Porcine Model: Implications For ACL Reconstruction

Yukun Zhang; Jeffrey T. Spang; Matthew B. Fisher

Poster No. 1158

In Vivo Collagen Denaturation Following Submaximal Fatigue Loading Decreases Strength And Increases Stiffness Of The Anterior Cruciate Ligament In Mice

Ben Loflin; Taeyong Ahn; Kaitlyn Colglazier; Stephen Schlecht

Poster No. 1159

Evidence For An Axial Load- And Fiber Alignment-dependent Shear Modulus In Ligament

Jonathon Blank; Sarah Edwards; Darryl Thelen; Joshua Roth

Poster No. 1160

Optimizing Graft Selection For A Common Large Animal Preclinical Model Of ACL Reconstruction: A Biomechanical Comparison Of Five Different Canine Tendons

Jonathan C. Williams; João Bourbon de Albuquerque II; Shen-Ying (Richard) Ma; Will Bezold; Aaron Stoker; James L. Cook

Poster No. 1161

Effect Of Fatigue Loading On Microstructural And Diffusion Imaging Properties Of Ligament-mimicking Fibers

Roberto A. Pineda Guzman; Mariana E. Kersh; Noel Naughton; Majumdar Shreyan

Poster No. 1162

Biomechanical Analysis Of A Novel Tendon Allograft Storage Method

Jonathan C. Williams; João Bourbon de Albuquerque II; Sebastian Cardona Ramirez; Shen-Ying (Richard) Ma; Will Bezold; Aaron Stoker; James L. Cook

Poster No. 1163

Fatigue Loading Of Mouse Achilles Tendon Explants Leads To Degenerative Changes Without Collagen Denaturation

Krishna Pedaprolu; Spencer Szczesny

Poster No. 1164

Patellar Fixation Using All-Suture Versus Solid Suture Anchors In Medial Patellofemoral Ligament Reconstruction: A Biomechanical Analysis

Kevin Credille; Zachary Wang; Tristan J. Elias; Elizabeth Frankenburg Shewman; Navya Dandu; William Cregar; Erik Haneberg; Adam B. Yanke

Poster No. 1165

The Influence Of Metabolic Factors On Symptoms And Function In Patients With Achilles Tendinopathy

Hayley Powell Smitheman; Kayla Seymore; Ryan Pohlig; Brian Honick; Karin M Silbernagel

Poster No. 1166

Exploring The Biologic Sequelae Of Achilles Tendon Impingement Using A Novel Murine Hind Limb Explant Model

Brian C. Wise; Whasil Lee; Mark R. Buckley

Tendon and Ligament - Treatment and Therapeutics

Poster No. 1167

Comparing The Postoperative Adhesion Prevention Effectiveness Of Collagen-glycosaminoglycan (gag), Hyaluronic Acid (ha), And Pentamidine Using A Turkey In Vivo Model

Rou Wan; Gongyin Zhao; Elameen Adam; Omar Selim; Ramona Kirk Reisdorf; Tomoyuki Kuroiwa; Abigayle Johnson; Alexander Meves; Chunfeng Zhao; Steven Moran

Poster No. 1168

Withdrawn

Poster No. 1169

Targeted Delivery Of Peptide Functionalized Nanoparticles To Improve Tendon Healing

Emmanuella A. Adjei-Sowah; Danielle Benoit; Alayna Loiselle

Poster No. 1170

Layer-by-layer Nanofabrication For Timely Orchestrated Interplay Between Macrophages And Tendon Stem/progenitor Cells

MD Sarker; Solaiman Tarafder; GaYoung Park; Chang Lee

Poster No. 1171

Soft Tissue-to-bone Repair Integrity Is Not Impaired By Bisphosphonate Chaperones

Brendan Shi; Shannon Wu; Dave Huang; Varun Sriram; Oskar Sundberg; Weiguang Wang; Charles McKenna; Melodie Metzger; Karen Lyons; Ichiro Nishimura; Thomas Kremen

Poster No. 1172

Investigating A Tendon Extracellular Matrix-enriched, Mechanically-robust Scaffold For Repair Of Large Tendon Defect

Shuting Huang; Dai Fei Elmer Ker; Rocky Tuan; Dan Wang

Poster No. 1173

Targeting Tendon Biomimetic Niche Via A Biochemically And Biomechanically Functionalized Biomaterial For Precision Tendon Regeneration

Wanqi Zhang; Ying Rao; Dai Fei Elmer Ker; Sung Chi Rocky Tuan; Dan Wang

Poster No. 1174

Biomechanical Analysis Of Syndesmotic Stability For AITFL Augmentation With Fibular Plate

Katsunori Takahashi; Atsushi Teramoto; Yasutaka Murahashi; Shogo Nabeki; Kosuke Shiwaku; Tomoaki Kamiya; Kota Watanabe; Toshihiko Yamashita

Poster No. 1175

The Effects Of Fibroblast Growth Factor-2 (fgf-2) On Achilles Tendon Injury

Yuki Fujikawa; Yoshiyuki Senga; Akinobu Nishimura; Akihiro Sudo

Poster No. 1176

The Ct Evaluation Of The Distal Femoral Epiphyseal Growth Plate In Anterior Cruciate Ligament Reconstruction Of Skeletally Immature Children

Yusuke Sasaki; Satomi Abe; Keisuke Matsukura; Hiroshi Ito

Poster No. 1177

Investigating The Efficacy Of RepareL® Compression Sleeves In Alleviating Tendinopathy: An In Vivo Study

Jorden Xavier; Rhea Rasquinha; Henintsoa Fanjaniania; Hudson Liang; Daniel Grande; James Paci; Seth Sherman; Kenneth Zaslav

Tumors - Metastatic

Poster No. 1178

Sociodemographic Characteristics Of Patients Undergoing Surgery For Metastatic Disease Of The Spine

Dagoberto Pina Jr; Venina Svetli Kalistratova; Zachary Booze; Joseph Holland; Joseph Wick; Wyatt Vander Voort; Yashar Javidan; Rolando Roberto; Eric Klineberg; Shaina Lipa; Hai Le

Poster No. 1179

Perioperative Cardiopulmonary Complications Of Long-stem Cemented Femoral Arthroplasty In Metastatic Bone Disease

Timothy A. Damron; Julia A. Reiser

Poster No. 1180

Clinical Characteristics in Patients With Cancer Of Unknown Primary And Bone Metastasis

Masatake Matsuoka; Tomohiro Onodera; Isao Yokota; Koji Iwasaki; Yuki Suzuki; Masanari Hamasaki; Eiji Kondo; Norimasa Iwasaki

Poster No. 1181

Mirels' Criteria Poorly Correlates With Post-operative Survival In Orthopaedic Oncology Patients

Jaron P. Wilson

Tumors - Primary Tumors

Poster No. 1182

Identification Of Slow-cycling Cells In Ewing Sarcoma

Shunsuke Yahiro; shuichi fujiwara; Teruya Kawamoto; Hitomi Hara; Naomasa Fukase; Ryoko Sawada; Toshiyuki Takemori; Tomohiro Miyamoto; Michiyo Koyanagi-Aoi; Takashi Aoi; Ryosuke Kuroda; Toshihiro Akisue

Poster No. 1183

Roles Of Sprr1a In Osteosarcoma Cells

Tomohiro Miyamoto; Shuichi Fujiwara; Teruya Kawamoto; Hitomi Hara; Naomasa Fukase; Ryoko Sawada; Shunsuke Yahiro; Takashi Aoi; Michiko Koyanagi-Aoi; Ryosuke Kuroda; Toshihiro Akisue

Poster No. 1184

The Assessment Of Overall Survival In Soft-tissue Sarcoma Using Prognostic Nutritional Index

Keiju Saito; Yusuke Kawabata; Kato Ikuma; Kenta Hayashida; Tomotaka Yoshida; Takehiro Yamamoto; Shintaro Fujita; Hyonmin Choe; Masanobu Takeyama; Yutaka Inaba

Poster No. 1185

Prognostic Nutritional Index Is Useful For Predicting The Prognosis Of Patients With Myxofibrosarcoma

Megumi Uzu; Keiju Saito; Yusuke Kawabata; Ikuma Kato; Tomotaka Yoshida; Yamamoto Takehiro; Shintaro Fujita; Hyonmin Choe; Masanobu Takeyama; Yutaka Inaba

Poster No. 1186

The Role Of Surveillance In Predicting Fracture In Pediatric Patients With Incidentally Discovered Non-ossifying Fibromas And Fibrous Cortical Defects: Is It Worth It?

Rohan R. Patel; Timothy A. Damron

Poster No. 1187

Circulating CSF-1 Predicts Infiltration Of Tumor-associated Macrophage And Prognosis In Patients With Myxofibrosarcoma And Undifferentiated Sarcoma

Toshiaki Hata; Tomohiro Fujiwara; Aki Yoshida; Ayana Kondo; Hiroya Kondo; Eiji Nakata; Toshiyuki Kunisada; John Healey; Toshifumi Ozaki

Tumors - Treatment and Therapeutics

Poster No. 1188

Short-term Results Of Endoprosthetic Proximal Femur Replacement For Malignant Bone Tumors

Tomotaka Yoshida; Yusuke Kawabata; Keiju Saito; Hyonmin Choe; Masanobu Takeyama; Yutaka Inaba

Poster No. 1189

Csf1/csf1r Blockade Inhibits Osteosarcoma Growth And Metastasis By Reprograming Tumor-associated Macrophages In The Osteosarcoma Microenvironment

Tomohiro Fujiwara; Mohamed Yakoub; Andrew Chandler; Guangli Yang; Ouathek Ouerfelli; Rajasekhar Vinagolu; Aki Yoshida; Hiroya Kondo; Toshiaki Hata; Ayana Kondo; Eiji Nakata; Toshiyuki Kunisada; Toshifumi Ozaki; Edward Purdue; John Healey

Poster No. 1190

Blue Light Induces Apoptosis And Autophagy By Promoting ROS-mediated Mitochondrial Dysfunction In Synovial Sarcoma

Makoto Takeuchi

Poster No. 1191

CSF-1/CSF-1R Blockade As A Novel Therapeutic Strategy Targeting Tumor-Associated Macrophage In Soft-tissue Sarcomas

Ayana Kondo; Tomohiro Fujiwara; Aki Yoshida; Toshiaki Hata; Eiji Nakada; Toshiyuki Kunisada; John Healey; Toshifumi Ozaki

Poster No. 1192

The Hdac Inhibitor Romidepsin Blocks Growth Of Metastatic Osteosaroma By Inducing Cell Cycle Arrest

Emily E. Seiden; Spencer M. Richardson; Anthony L. Sinn; Maegan L. Capitano; Patrick J. Getty; Karen E. Pollok; Christopher D. Collier; Ed M. Greenfield

Poster No. 1193

A Cell-based Compound Screening Identify Agents Synergize With Everolimus In Osteosarcoma

Robert Lee; Gina D'Amato; Jonathan Trent; Francis Hornicek; Zhenfeng Duan

Late Breaking Poster Session 1

Poster No. 2036

Effects Of Functionalized Poly(e-caprolactone) Film-guided Raav Tgf-b Gene Vector Delivery On The Cellular Responses In Human Anterior Cruciate Ligament Lesions

Mahnaz Amini; Jagadeesh Venkatesan; Amélie Leroux; Henning Madry; Véronique Migonney; Magali Cucchiarini

Poster No. 2037

Initiation Of Acl Cell Differentiation Pathways In Human Mesenchymal Stromal Cells Via Pnass-grafted Poly(e-caprolactone) Film-guided Therapeutic Raav Fgf-2 And Tgf-b Gene Transfer For Acl Repair

Meret Stehle; Mahnaz Amini; Jagadeesh Venkatesan; Amélie Leroux; Henning Madry; Véronique Migonney; Magali Cucchiarini

Poster No. 2038

Functionally Graded Lattices In Additively Manufactured Rib Implants Result In Similar Biomechanics

Richa Gupta; Lauren Judkins; Chet Friday; Joseph B. Ulsh; Stephen Kovach; Samir Mehta; Charles Tomonto; Guha Manogharan; Michael W. Hast

Poster No. 2039

Electrochemical Semiconductor Behavior Of CoCrMo Passive Films In In Vivo Simulated Inflammatory Environment

Hwaran Lee; Michael A. Kurtz; Jeremy L. Gilbert

Poster No. 2040

In Vivo Response To Molded Polycarbonate Urethane Wear Debris

Ryan Siskey; Jane Gruisen; Ilona Punt; Pieter Emans; Martijn Poeze; Aylvin Dias; Alex Roth

Poster No. 2041 (Guest Nation-Ireland) 

A Biomimetically Inspired Adhesive For Bone Stabilization And Regeneration

Antzela Tzagiollari; Gerard Insley; Philip Procter; Benjamin Pippenger; Ole Z. Andersen; Helen O. McCarthy; Tanya J. Levingstone; Nicholas Dunne

Poster No. 2042

A Natural Human Tibiofemoral Joint Model To Investigate The Wear Of Decellularised Osteochondral Grafts

Blake McCall; Raelene Cowie; Hazel Fermor; Louise Jennings

Poster No. 2043

Chondrogenesis Of Mesenchymal Stem Cells Using Electrospraying

Nasim Nosoudi; Joshua Conrad; Baylee Weaver

Poster No. 2044

Polyester-based Artificial Tendon Preserves Muscle Mass And Length In Rabbits

Obinna P. Fidelis; Katrina L. Easton; Kristin M. Bowers; Darryl L. Millis; Cheryl B. Greenacre; David E. Anderson; Dustin L. Crouch

Poster No. 2045

Tissue-engineered Cryogel-mediated Bone Regeneration At Bone-metallic Implant Interfaces As An Improved Treatment Method For Patients Following Bone Tumor Resection

Peter M. Bertone; Adelaide Cagle; Eric R. Henderson; Katie Hixon

Poster No. 2046

Bi-material Biomaterials: Direct Integration Of 3D Printing And Cryogels

Levi M. Olevsky; Amritha Anup; Mason Jacques; Nadia Keokominh; Eric P. Holmgren; Katherine R. Hixon

Poster No. 2047

Synthesis And Characterization Of Poly (1,2-butylene Fumarate) As 3d Printable Bioinkfor Bone Tissue Engineering Applications

Jasmine J. Jackson; Natalia McIver; Matthew N. Rush; Mihee Kim; Christina Salas

Poster No. 2048 (Guest Nation-Ireland)



A Longitudinal Analysis Of The Microarchitecture And Turnover Of Trabecular And Cortical Femoral Bone In A Zucker Diabetic Fatty (zdf) Rat Using Micro-computed Tomography And Serum Biochemical Assays

Genna E. Monahan; Jessica Schiavi-Tritz; Stéphane Jaisson; Anais Okwieka; Halima-Assia Kerdjoudj; Ted Vaughan

Poster No. 2049

Probiotic Protects Mice With Bone Loss Caused By Colitis Via Gut Inflammation And Gut Microbiota Regulation.

Jyotirmaya Behera; Yuting Zheng; Neetu Tyagi

Poster No. 2050

Alterations Of Nanoscale Collagen Behavior With Non-enzymatic Glycation In Mineralized Versus Demineralized Bovine Bone

James Rosenberg; Eric Schaible; William Woolley; Claire Acevedo

Poster No. 2051

Post-radiotherapy Changes In Bone Strength Vary Across Mouse Strains

Wyatt H. Buchalter; Amy E. Biggs; Megan E. Oest

Poster No. 2052

Loss Of Notch Signaling In Skeletal Stem Cells Enhances Bone Formation With Aging

Lindsey H. Remark; Kevin Leclerc; Sophie M. Morgani; Malissa Ramsukh; Ziyang Lin; Sooyeon Lee; Lauren Gillinov; Paulo EL Parente; Margaux Sambon; Aristotelis Tsirigos; Philipp Leucht

Poster No. 2053

Investigating The Cellular Mechanism Of Age-related Stem Cell Dysfunction

Malissa Ramsukh; Sophie Morgani; Kevin Leclerc; Lindsey Remark; Margaux Sambon; Philipp Leucht

Poster No. 2054

YAP activates and represses defined transcriptional programs to promote periosteal activation for fracture repair

Madhura Nijssure; Gabrielle Tanner; Miriam Baitner; Annemarie Lang; YASAMAN MOHARRER; Dakota Jones; Annapurna Pranatharthi-Haran; Nathaniel Dymont; Joel Boerckel

Poster No. 2055

Mitochondrial Function Regulates Ros-mediated Patterning Following Injury

Mimi C. Sammarco; Anyonya Guntur; Robert J. Tower

Poster No. 2056

Osteolectin Produced By The Periosteum Promotes Fracture Healing

Elise C. Jeffery; Sean Morrison

Poster No. 2057

Evaluating Fracture Repair Through Novel VEGF Binding Peptide PR1P

Diana Yeritsyan; Kaveh Momenzadeh; Nadim Kheir; Daniela Caro; Anver Adini; Benjamin Matthews; Ara Nazarian

Poster No. 2058

Periprosthetic Bone Adaptation In Mandibular Subcondylar Fracture Fixation: A Numerical Investigation

Gunsagar Singh; Kushal Jignesh Shah; Anoushka Gupta; Abir Dutta; Kaushik Mukherjee

Poster No. 2059

Quantifying Post-radiotherapy Bone Fatigue Strength Using A Cadaveric Rat Model

Tara E. Carney; Amy E. Biggs; Mark A. Miller; Kenneth A. Mann; Megan E. Oest

Poster No. 2060

Prostate Cancer Engages Osteoblasts And Osteocytes Via Soluble Signals

Kristina V. Wells; Stephen P. Wilson; Aimy Sebastian; Gabriela G. Loots; Damian C. Genetos

Poster No. 2061

Subchondral Bone Adaptation In Thoroughbred Racehorses Protects Sites Of Fatigue Injury In The Distal End Of The Cannon Bone From Elevated Stress

Soroush Irandoust; Christina Stevenson; Faith Franseen; Christopher Whitton; Corinne Henak; Peter Muir

Poster No. 2062

Dynamic Bone-implant Interface Loading In Transtibial Osseointegrated Prostheses During Activities Of Daily Living

Jake Tinsley; Dana Carpenter; Amanda Vinson; Brecca Gaffney; Jason Stoneback

Poster No. 2063

Validating A Biomechanical Preclinical Animal Model For The Human Wrist

Madison K. Altieri; Trey Crisco; Rohit Badida; Edward Akelman

Poster No. 2064

Influence Of Mouse Femur Positioning And Orientation In 3-point Bending Framework: A Finite Element Study

Isabella A. Stewart; Maria Buzo Mena; Mason J. Garcia; Ara Nazarian

Poster No. 2065

A Novel Selective Prostaglandin-Receptor EP4-Agonist Promotes Posterolateral Spinal Fusion In A Rat Model

Corina Vater; Xinggui Tian; Lisa Findeisen; Deepak Raina; Hannes Kern; Julia Bolte; Luisa Strassburger; Lucas-Maximilian Matuszewski; Alexander C. Disch; Stefan Zwingenberger

Poster No. 2066

Growth Hormone-receptor Knockout Inhibits Osteoarthritis Development In Mice

Trent Davis; Shouan Zhu

Poster No. 2067

A Nanoindentation Study To Assess The Effects Of Early Degenerative Changes In A Guinea Pig Model Of Spontaneous Osteoarthritis

Sarah Davis; Jurgita Zekonyte; Marta Roldo; Gordon Blunn

Poster No. 2068

Sex-based Differences In The Interleukin-1 β Response Of Tissue-engineered Cartilage

Maria I. Nunez; Hagar M. Kenawy; Lianna R. Gangi; Aaron M. Stoker; James L. Cook; Gerard A. Ateshian; Nadeen O. Chahine; Clark T. Hung

Poster No. 2069

Cartilage Articulation Immediately Following Impact Injury Mitigates Surface Zone Chondrocyte Death In-vitro

Caroline Thompson; Lawrence Bonassar

Poster No. 2070

A Novel Equine In Vitro Model Of Osteoarthritis Utilizing Fibronectin Fragment Stimulated Synovial Fibroblasts And Chondrocytes.

Rachel Gagliardi; Drew Koch; Richard Loeser; Lauren Schnabel

Poster No. 2071

Developmental Cartilage Progenitor Cells In The Repair Of Osteochondral Defects

Bruno C. Menarim; Chan Hee Mok; Kirsten Scoggin; Gornik Alexis; Gornik Alexis; Shavahn C. Loux; Emma Adam; James N. MacLeod

Poster No. 2072

Mast Cells Promote Cartilage Injury In An Impact Model Of Osteoarthritis

Abigail R. Loucks; Alexander J. Knights; Lindsey Lammlin; Kurt D. Hankenson; Adam J. Moeser; Tristan Maerz; Aimee C. Colbath

Poster No. 2073

Chondroprotection During Human Articular Cartilage Cutting Using An Ultrasonic Scalpel: An In Vitro Study

Nisreen Mohammed Nagi Al-Namnam; Aneta Luczak; Irene Yang; Xuan Li; Margaret Lucas; Andrew C Hall; Hamish Simpson

Poster No. 2074

Disruption Of Articular Cartilage Extra Cellular Matrix Following Mechanical Trauma In An In-vitro Model

Alex Pieters; Renato Castillo; Rodrigue Caron; Colleen Mathieu; Sotcheadt Sim; Martin Garon

Poster No. 2075

Exercise Mediates Changes To Synovial Membrane Transcriptomics Due To Unloading

Meghana Pendyala; Angela J. Kubik; Noah G. Allen; Margareth A. Cheng-Campbell; Deva D. Chan; Elizabeth A. Blaber

Poster No. 2076

Cdc42 Or Tropomyosin 3.1 Inhibition Represses F-actin Stress Fibers And Primes The Redifferentiation Of Passaged Chondrocytes

Mandy M. Schofield; Alissa Rzepski; Justin Parreno

Poster No. 2077

Assessing The Utility Of Decellularized Synovial Membrane As A Scaffold For Tissue Engineering

Athena D. Pagon; Matthew J. Pellicore; Neeraj Sakhrani; James Rogot; Clark Hung

Poster No. 2078

Articular Cartilage Wear Is Caused By Cyclic Compressive Stresses And Not By Frictional Sliding

Courtney A. Petersen; C.V. Sise; Jonah X. Dewing; Brenna Carbone; Justin Yun; Clark T. Hung; Gerard A. Ateshian

Poster No. 2079

Auto-regulated RUNX2 Suppression To Improve Mesenchymal Stem Cell-based Cartilage Regeneration In Complex Pathological Microenvironments

Gurcharan Kaur; Rhima Coleman

Poster No. 2080

Erythrocyte Removal From Bone Marrow Aspirate Concentrate Improves Efficacy As Intra-articular Cellular Therapy In A Rodent Osteoarthritis Model

Lynn Pezzanite

Poster No. 2081

“Do All Bunions Need Surgery?” An Investigation Of Google Searches For Hallux Valgus

Cole R. Phelps; Griffin Hughes; Jon Gurule; Jared Scott; Wesley Stotler

Poster No. 2082

What Are Patients Asking About Shoulder Arthroplasty? An Investigation Of Google Searches

Samuel Shepard; Michael Anderson; Jeremy Scott; Jake X. Checketts; Chad Hanson; Clint Basener; Brian Chalkin

Poster No. 2082A

Impact Of A Dedicated Orthopedic Trauma Room On Elective Arthroplasty Case Volume

Austin Smith; Rishi Chatterji; Benjamin Diedring; Rajan Sharma; Adam Fahs; David Knesek; Alan Klein; Benjamin Best

Poster No. 2083

Withdrawn

Poster No. 2084

Personalized 3d-printed Titanium Shelf Implants To Restore Femoral Head Coverage And Improve The Stability Of Dysplastic Hips In Young Dogs: Short-term Clinical Trial Results

Irin Kwananocha; Joëll Magré; Koen Willemsen; Marianna Tryfonidou; Harrie Weinans; Ralph J.B. Sakkars; Bart C.H. van der Wal; Femke Verseijden; Björn P. Meij

Poster No. 2085

CT Based Migration Analysis Is More Precise Than Radiostereometric Analysis In Total Knee Arthroplasty - A Phantom Study On A Porcine Cadaver And Clinical Results

Lars Harald William H. Engseth; Anselm Schulz; Are Hugo H. Pripp; Frank-David D. Øhrn; Stephan Maximilian Herbert M. Röhrli

Poster No. 2086

Feasibility Of Using Electrocardiography (ECG) Data To Quantify Surgeon's Burden Within Manual And Automated THA: Results From A Prospective Randomized Controlled Trial

Elisabetta Ferrari; John Redmond; Clayton Thomason; Craig Morrison; Charlie Yang; David Fawley; Brian Gladnick

Poster No. 2087

Minimally Important Difference For The KOOS-JR In Tka Patients

Joel J. Gagnier; Tyler Spiering; Andrew Firth; Brian Hallstron

Poster No. 2088

Iliopsoas Muscle Size Decreases Following Surgery For Ischiofemoral Impingement

Richard Feng; Munif Hatem; Hal David Martin

Poster No. 2089

Rate Of Torque Development Deficits Of The Quadriceps Femoris Muscle Before And After ACLR: A Prospective Cohort Study With A 9-month Follow-up

Beyza Tayfur; Alexa Johnson; Riann Palmieri-Smith

Poster No. 2090

Correlation Of PROMIS Metrics Among CLBP Patients And A Control Population

Spencer A. Baker; Kelsey A. Clark; Andrew K. Gibbons; Anton E. Bowden; Ulrike H. Mitchell; David T. Fullwood

Poster No. 2091

Effects Of Postoperative Intravenous Tylenol In Geriatric Hip Fracture Patients

William H. Young; Benjamin Akande; Jack Parker; Gautham Prabhakar; Ravi Karia

Poster No. 2092

Meta-analysis Of Demographic Risk Factors Associated With Osteoporotic Hip Fractures

Diana Yeritsyan; Amin Mohamadi; Sharri J. Mortensen; Indeevar R. Beeram; Kaveh Momenzadeh; Daniela Caro; Nadim Kheir; Arvind von Keudell; Ara Nazarian

Poster No. 2093

Designing A Workshop To Improve Graduate Student Teaching Efficacy And Better Prepare Future Faculty

Emily E. Seiden; Andrew S. Cale; Jessica N. Byram; Margaret A. McNulty; Lauren A. Easterling

Poster No. 2094

Development Of A Comprehensive Medical Student Summer Research Program In Orthopaedic Surgery

Stephanie N. Moore-Lotridge; Rogelio A. Coronado; Craig Louer; Nathaniel Lempert; Amir Abtahi; Philip Mitchell; Eric Bowman; William T. Obremskey; Jonathan G. Schoenecker; Rick W. Wright; Kristin R. Archer

Poster No. 2095

Limb Amputation Vs Salvage: How Reliable Is Youtube As A Source For Patient Education?

Samuel Zverev; Christina Moawad; Trevor Simcox; Nicole Stevens; Meelan Patel

Poster No. 2096

Functional Anatomy Of The First MTP Joint In Relation To Hallux Valgus

Hiroki Yabiku; Kotaro Higa; Fuminari Uehara; Takashi Toma; Chinatsu Azuma; Takumi Okunuki; Toshihiro Maemichi; Hajime Ishida; Kotaro Nishida; Tsukasa Kumai

Poster No. 2097

Effects Of Non-surgical Treatment For Progressive Collapsing Foot Deformity: A Systematic Review

Anya Chaudhry; Daniel Latt

Poster No. 2098

Achilles Insertional Repair: A Comparison Of A Rip-stop Technique In Increasing Construct Strength Of Haglund's Deformity Repairs

Sarah J. McClish; Maria Withrow; Anthony Khoury; Anand Vora

Poster No. 2099

Alternative K-wire Configuration In The Treatment Of Scaphoid Fractures

Francie E. Sharpe; Saeed Mohammad; Jenna Wahbeh; Erika Hookasian; Sumant S. Iyer; Milan Stevanovic; Sang-Hyun Park; Sophia N. Sangiorgio; Edward Ebramzadeh

Poster No. 2100

Regional Multi-scale Analysis Of Osteoarthritis Progression Across The Human Trapezium

Brendan D. Stoeckl; Kendall M. Masada; Lorie G. Laforest; Robert L. Mauck; David R. Steinberg

Poster No. 2101

Withdrawn

Poster No. 2102

Inducible Displacement Ct Increases The Diagnostic Accuracy Of Aseptic Loosening In Primary Total Hip Arthroplasty

Olof Sandberg; Per Wretenberg

Poster No. 2103

The Influence Of Hip-spine Syndrome On Outcomes Following Hip Arthroscopy: A Matched Control Study With Minimum 2-year Follow-up

Kaveh A. Torabian; Nathan J. Cherian; Christopher T. Eberlin; Kieran S. Dowley; Michael C. Dean; Zachary L. LaPorte; Scott D. Martin

Poster No. 2104

Change In Leg Length And Its Influence On Patient-reported Outcomes Following Medial Unicompartmental Knee Arthroplasty

Tarik Bayoumi; Gaby Ten Noever de Brauw; Lindsey Ruderman; Hendrik A. Zuiderbaan; Andrew D. Pearle

Poster No. 2105

Volume Versus Concentration: Clinical Effectiveness Of Single Shot Quadratus Lumborum Block Using Either A High Volume/low Concentration Or Low Volume/high Concentration Injectate For Total Hip Arthroplasty

Elizabeth Plakseychuk; Gabriella Nutter; Brian Rosario; Bruce Ben-David; Anna Uskova

Poster No. 2106

The Effect Of Muscle Forces On Fixation Durability Of Custom-made Pelvic Implants: A Computational Investigation

Yuhui Zhu; Geng Li; Ata Babazadeh-Naseri; Nicholas Dunbar; Mohammad Sharif Shourijeh; Matthew R. W. Brake; Valerae O. Lewis; BJ Fregly

Poster No. 2107

Analysis Burden And Accuracy For Evaluating RF-induced Heating Of Medical Devices In MRI Scanners

Derek T. Holyoak; Andrew D. Dillon; William M. Torres; Autumn J. Bullard; Ryan L. Siskey

Poster No. 2108

A Combinatorial Approach To Evaluate Fixation Methods In Cementless Unicompartmental Knee Replacements

Derek T. Holyoak; William M. Torres; Ryan L. Siskey; Andrew Pearle; Edwin Su

Poster No. 2122

Homeostasis Of Extracellular Matrix In The Intervertebral Dis Cells By Activation Of Protein Kinases C

YoungMi Kang; Sang-Jun Park; Jae-Won Shin; Seong-Hwan Moon; Ji-Hye Kim; Hak-Sun Kim; Sub-Rlee Park; Byung-Ho Lee; Ji-Won Kwon; Su-Bin Lee; Si-Young Park; Sa-Hyun Sung; Sun-Kyu Kim; Min-Ji Kim

Poster No. 2109

Does Peri-operative Zoledronic Acid Decrease Bone-implant Micromotion In A Rat Model Of Cemented Knee Arthroplasty?

Sachin Gandhi; Mark Miller; Jace Kusler; Amy Biggs; Megan Oest; Kenneth Mann

Poster No. 2110

Quantitative Computed Tomography Shows Sustained Trabecular Bone Density Loss Compared To Dual X-ray Absorptiometry In A Sheep Model Of Osteoporosis

Katie Bisazza; Brad B. Nelson; Katie J. Sikes; Jeremiah T. Easley

Poster No. 2111

A Sacroiliac Periosteal Avulsion Is Associated With Pelvic Instability And Better Outcomes After Operative Treatment In Patients ≤ 13 Years Of Age

Nicole A. Griffin; Mohamed E. Awad; Nicholas A. Alfonso; Jason W. Stoneback

Poster No. 2112

Deep Learning Approach To Automated Segmentation Of Tibiofemoral Bone Shape From Clinical MRI Sequences Yields Comparable Shape Analysis To Manual Segmentation From CT

Karsyn N. Bailey; Kenneth T. Gao; Jacob F. Oeding; Francesco Caliva; Valentina Pedoia; Drew A. Lansdown

Poster No. 2113

Mapping The Accuracy Of Diffusion Weighted Imaging Near Total Hip Implants

John Neri; Matthew Koff; Kevin Koch; Ek Tan

Poster No. 2114

Image-based Characterization Of Calcific Lesions In Hyperphosphatemic Familial Tumoral Calcinosis Using Sodium Fluoride (^{18}F -NaF) PET/CT: Spatial Heterogeneity Profiling Through Radiomics And Nuclear Medicine

Aaron J. Sheppard; Rachel Gafni; Sriram Paravastu; Iris Hartley; Kelly Roszko; Michael T. Collins; Babak Saboury

Poster No. 2115

Appropriate Hinge Position To Prevent Hinge Fracture For Open Wedge Distal Tuberosity Tibialosteotomy

Atsuki Tanaka; Daisuke Araki; Takahiro Yamashita; Shohei Sano; Ryo Okada; Yasushi Hashimoto

Poster No. 2116

A Novel Ultrashort Echo Time Rosette K-space Trajectory Sodium MRI Technique As A Promising Practical Tool For Detecting Early Cartilage Degeneration

Cameron X. Villarreal; Xin Shen; Xiaopeng Zhou; Ahmad Ahluhail; Nicholas Buffo; Evan Pogue; Armin Nagel; Ali Caglar Özen; Serhat Ilbey; Uzay Emir; Deva D. Chan

Poster No. 2117

Evaluation Of Host Immune Response In Staphylococcus Aureus Diabetic Foot Ulcer Infection Using Transcriptome Approach

Taiwo S. Agidigbi; Hyuk-Kwon Kwon; Francis Y. Lee; Irvin Oh

Poster No. 2118

Risk Factors For Recurrent Osteomyelitis Following Traumatic Fracture. A Neural Network And Multivariate Analysis

Nicole A. Griffin; Mohamed E. Awad; Jason W. Stoneback; Nicholas A. Alfonso

Poster No. 2119

Clinical And Scientific Significance Of Elevated Lactic Acid Level In Mrsa-induced Septic Arthritis

Francis Y. Lee; Hyuk-Kwon Kwon; Sean Cahill; Kristin Yu; Christopher M. Dussik; Jungho Back; Jacob Edward Howard; William M. Jiang; Irvin Oh

Poster No. 2120

Non-invasive Treatment For Prosthetic Knee Implant Infections Using Alternating Magnetic Fields

David Greenberg; Bibin Prasad; John Tepper; James Lancaster; Rajiv Chopra

Poster No. 2121

Adding Vancomycin To Liquid Monomer Instead Of Powder Significantly Alters Its Elution From Polymethylmethacrylate Cement: A Detailed Analysis.

Zachary J. Coles; Suenghwan Jo; Christina Chao; Mathias P. Bostrom; Alberto Carli

Poster No. 2123

A Novel Material Model Of The Annulus Fibrosus With Applications In Long-duration Loading

Lance Frazer; John Seifert; Brian Stemper; Timothy Bentley; Daniel Nicoletta

Poster No. 2124

Tibiofemoral Cartilage Changes In The First Year Following ACL Reconstruction Using Advanced T2* MRI

Lauren A. Graham; Alonso Figueroa Fernandez; Manickam Kumaravel; Ponnada Narayana; Michael A. Jacobs; Walter R. Lowe; Payam Zandiyeh

Poster No. 2125

Posterior Cruciate Ligament Injury Induces Cartilage Degeneration Depending On The Rotational Instability

Saaya Enomoto; Kohei Arakawa; Kei Takahata; Yuna Usami

Poster No. 2126

Withdrawn

Poster No. 2127

Deficiency Of The Pattern-recognition Receptor Cd14 Modulates Osteoclast Differentiation In Vitro

Lance A. Murphy; Baofeng Hu; Kevin Burt; Magnolia Wang; Vu Nguyen; Robert Mauck; Carla Scanzello

Poster No. 2128

The Effect Of Femoral Rotation On Flexion Gap Balance Of Fixed Bearing Unicompartmental Knee Arthroplasty

David Wolfson; Kevin Amesbury; Mathew Walkington; Sheetal Sanak; Robert Freeman; Mark Reason

Poster No. 2129

Collagen Dependent Viscoelastic & Structural Response Of Human OA Meniscus

Amit Kumar; Karanvir Saini; Justin Jacob; Mayank Sharma; Anjali Aggarwal; Navin Kumar

Poster No. 2130

Il-1ra Delivery Restores Phenotype And Preserves Matrix In Inflammatory Meniscus Micro-tissues

Elizabeth R. Bernstein; Elisabeth A. Lemmon; Austin C. Jenk; Sereen S. Assi; Robert L. Mauck

Poster No. 2131

Alginate Hydrogel-guided Raav-mediated Fgf-2 And Tgf- β Overexpression Activates The Reparative Properties In Human Meniscal Lesions

Jagadeesh Venkatesan; Patrick Orth; Henning Madry; Magali Cucchiari

Poster No. 2132

Dietary Prune Supplementation Improves Bone Volume In Healthy Female Mice And Is Associated With Distinct Shifts In Gut Microbiota Composition

Nicholas Chargo; Kerri Neugebauer; Leon Regnery; Kavisha Patel; Narayanan Parameswaran; Robert Quinn; Laura McCabe

Poster No. 2133

Increasing Recognition Of Generalized Joint Hypermobility As A Comorbidity Across Clinical Specialties

Christopher Papatheofanis; Robert Healey; Brian Barlow; Richard Santore

Poster No. 2134

The Effects Of Mental Health And Pain Catastrophizing On Opioid Utilization And Pain Control Following Total Shoulder Arthroplasty

Joshua Uffer; Alexander Macfarlane; Benjamin Ritter; Lin Feng; Alexa Schenk; Mohammad N. Haider; Thomas Duquin

Poster No. 2135

Atrophy Of The Torn Supraspinatus Muscle Evaluated By Muscle Belly Ratio

Kyosuke Hoshikawa; Takuma Yuri; Ryuta Oishi; Tomohiro Uno; Jun Nagai; Hugo Giambini; Nariyuki Mura

Poster No. 2136

Biomechanics Of Superior Capsular Reconstruction For Treatment Of Irreparable Rotator Cuff Tears: A Systematic Review And Meta-analysis

Ronak Mahatme; Maxwell Modrak; Christopher Wilhelm; Michael Lee; Jade Owens; Stephen Gillinov; Wasif Islam; Nicholas Pettinelli; Andrew E. Jimenez

Poster No. 2137

The Effect Of Hypothermic Ex Vivo Perfusion In Porcine Limb Vascularized Composite Allograft On Survival Up To 72 Hours With Buffered Extracellular Solution

Kevin Cobbol; Charles Jehle; Dominik Kaiser; Foteini Mourkioti; L. Scott Levin

Poster No. 2138

Time Of Day And Muscle Stem Cells Differentially Affect Contractile Function

Ryan E. Kahn; Sudarshan Dayanidhi; Richard L. Lieber; John Hawley; Orly Lacham-Kaplan

Poster No. 2139

IL-12 Attenuates Muscle Wasting While Improving Survival In A Murine Model Of PDAC

Zachary Sechrist; Edward Schwarz; Calvin Cole

Poster No. 2140

Quantifying Impairments In Whiplash-Associated Disorders And Association With Patient-Reported Outcomes

Harpa Ragnarsdóttir; Magnus K. Gislason; Kristin Briem; Gudny L. Oddsdottir

Poster No. 2141

Prediction Of Curve Correction In Adolescent Idiopathic Scoliosis Patients After Anterior Vertebral Body Tethering Surgery Using Machine Learning

Ausilah Alfraihat; Amer Samdani; Sriram Balasubramanian

Poster No. 2142

The Contribution Of Muscle And Ligament Health To Risk For Proximal Junctional Failure In Individuals With Adult Spinal Deformity: An Imaging, Biomechanical, And Biochemical Investigation

Bahar Shahidi; Estefania Lima Duran; Bradley J. Anderson; Micah Blais; Eric Chang; Ya-Jun Ma; Jiang Du; Alecio Lombardi; Saeed Jerban; Robert K. Eastlack; Gregory M. Mundis

Poster No. 2143

Gene Expression Changes With Short And Long Term Cannabinoid Treatments In A Spinal Fusion Model

Diana Yeritsyan; Kaveh Momenzadeh; Nadim Kheir; Mohammadreza Abbasian; Edith Martinez Lozano; Caleb Yeung; Harold Fogel; Ara Nazarian

Poster No. 2144

Progenitor Cells Derived From Iliac Crest Autograft Survive, Induce Endochondral Ossification, And Contribute To Lumbar Fusion.

Takuya Oyaizu; Atsuyuki Kawabata; Satoru Egawa; Shannon Kelty; J. Court Reese; Rachel Mckee; Lauren Schinitkey; Toshitaka Yoshii; Stephanie Moore-Lotridge; Jonathan Schoenecker

Poster No. 2145

The Novel Role Of Osteoactivin/GPNMB In Bone Regeneration In An Osteoporotic Spinal Fusion Rat Model

Andrew L. Alejo; Hope Ball; Yusuf Khalil; Ernesto Solorzano; Gabrielle Robinson; Jacob Douglas; Trinity Samson; Thomas Mbimba; Scott McDermott; Edwin Chou; Fayez Safadi

Poster No. 2146

Physical Movement Related To Tendon Development During Embryo To Postnatal Mice

Yuna Usami; Takanori Kokubun

Poster No. 2147

Collagen III Deficiency Following Injury In Female Murine Tendons Alters Mechanical And Structural Tendon Properties

Jaclyn Carlson; Stephanie Weiss; Susan W. Volk; Lou J. Soslowsky

Poster No. 2148

Increasing Mechanical Stress In The Spontaneous Healing Process Of Completely Ruptured Anterior Cruciate Ligament Does Not Inhibit Ligamentation In A Mouse Model

Riku Saito; Yukina Aizawa; Yuna Usami; Kohei Arakawa; Saaya Enomoto; Takanori Kokubun

Poster No. 2149

The Role Of Tunnel Size In Tendon-to-Bone Integration And Fluid Effusion Following ACL Reconstruction

Sinaia Keith Lang; Keitaro Fujino; Timur Kamalitinov; Xi Jiang; Andrew Kuntz; Nathaniel Dymant

Poster No. 2150

Repetitive Fatigue Loading Causes Changes In Tendon Mechanical, Structural, And Biological Markers

Pooja Chainani; Maria Buzo Mena; Diana Yeritsyan; Daniela Caro; Kaveh Momenzadeh; Joseph P. DeAngelis; Arun J. Ramappa; Ara Nazarian

Poster No. 2151

YAP/TAZ Signaling Is Activated During Late Embryonic Tendon Development

Maria Laura Canonico Castro; Benjamin E. Peterson; Spencer E. Szczesny

Poster No. 2152

Tendon-Targeted Collagen XII Knockout Attenuates Male And Female Achilles Tendon Function Similarly

Michael S. DiStefano; Lou J. Soslowsky

Poster No. 2153

Heterogeneous Extracellular Vesicles From Adipose-derived Stem Cells Differentially Regulate Mouse Achilles Tendon Healing After Acute Injury And Repair

Hua Shen; Ryan Lane

Poster No. 2154

Localized Release Of A Hedgehog Signaling Agonist For Improving Tendon-to-Bone Integration

Rashad Madi; Jonathan Marcelin; Timur Kamaliddinov; Xi Jiang; Sereen Assi; Dong Hwa Kim; Sinaia Keith Lang; Robert Mauck; Andrew Kuntz; Nathaniel Dymant

Poster No. 2155

Eribulin Induces Bone Loss Through Promoting Osteoclastic Bone Resorption

Takahiro Ishizaka; Keisuke Horiuchi; Shinya Kondo; Masashi Isaji; Takahiro Nakagawa; Michiro Susa; Kazuhiro Chiba

Poster No. 2156

Outcomes Of Osseointegrated Transfemoral Prosthesis Implantation Limb Reconstruction After Radical Amputation For Lower Extremity Tumors

Nicole A. Griffin; Mohamed E. Awad; Hope Davis-Wilson; Brecca M. Gaffney; Cory Christiansen; Esosa Enabulele; Guy Lev; Jason W. Stoneback

Monday, February 13 and Tuesday, February 14

10:00 AM - 7:00 PM (Monday) and 10:00 AM – 2:15 PM (Tuesday)

Even Number posters will have presenters at poster on Monday from 10:15 am – 11:15 am

Odd Number posters will have presenters at posters on Tuesday from 9:15 am – 10:15 am

POSTER SESSION 2

Room # Trinity I and II

Biomaterials - Controlled Release

Poster No. 1194

Slowly Release Tpe2 Is Capable To Attenuate Oa By Reducing Cellular Senescence In A Progeria Mouse Model

Ping Guo; Xueqin Gao; Matthieu Huard; Aiping Lu; Yadong Wang; Johnny Huard

Poster No. 1195

Content Characterization Of An Injectable Amniotic Suspension Allograft For The Treatment Of Knee Osteoarthritis

Kevin Credille; Navya Dandu; Zachary Wang; Lakshmanan Sivasundaram; Katie M. Mowry; Kelly Kimmerling; Adam B. Yanke

Poster No. 1196

MTX And Sulforaphane-loaded PBA-G5-PAMAM Dendrimers Inhibit Inflammation Of Albumin-induced Arthritis In The Intra-articular Joint Of Wistar Rats

Edidiong Essien; Vishal Khatri; Geoffrey Van Thiel; Divya Bijukumar

Poster No. 1197

The Efficacy Of Pain Relief By Analgesic-eluting Polyethylene After Total Joint Arthroplasty In A Rat Model

Madeline J. McCanne; Yingfang Fan; Sashank Lekkala; Jean Yuh; Nicoletta Inverardi; Orhun Muratoglu; Jamie Collins; Mark Randolph; Ebru Oral

Poster No. 1198

A Dual-Purpose Collagen Vitrigel Wrap As A Surrogate Synovial Sheath For Primary Acl Repair And Intra-articular Drug-delivery System

James Rogot; Andy J. Lee; Joshua Ou; Caroline N. Fedor; Kacey G. Marra; Aaron M. Stoker; James L. Cook; Gerard A. Ateshian; Clark T. Hung

Poster No. 1199

Nutrient Delivery By Controlled-release Microparticles Improves Autograft Performance In Rat Posterolateral Lumbar Spinal Fusion

Ting Cong; Kyle Morse; Janice Havasy; Maximilian Korsun; Alexander Koo; Sheeraz Qureshi; Matthew Cunningham

Poster No. 1200

Targeted Delivery Of Zoledronate-loaded Microparticles To Activated Macrophages For Osteoarthritis Treatment

Era Jain; Paul N. Sagoe

Biomaterials - Orthopaedic Implant Materials

Poster No. 1201

A Novel Use Of The Particle Induced Osteolysis Murine Model To Study Coccrmo Trafficking To Brain Tissue

Stephanie M. McCarthy; Lauryn Samelko; Deborah J. Hall; Robin Pourzal; Nadim J. Hallab

Poster No. 1202

Osteogenic Potential Of A Novel Periosteum Mimicking Scaffold In A Rat In Vivo Model

Matthew Morris; Andrew Wong; Haixiang Liang; Howard Goodman; Daniel Grande

Poster No. 1203

Variation In DNA Fork Progression And Termination Induced By CoCrMo Particles Via ATM-chk2 Pathway In Neurons

Ananya Sangineni; Paul Chastain; Mathew Mathew; Divya Bijukumar

Poster No. 1204

Injectable Chitosan-based Stimuli-responsive Hydrogels Loaded With Peptide-hydroxyapatite Nanoparticles For Enhanced Bone Regeneration.

Helen O. McCarthy

Poster No. 1205

Osteolytic Activities Of Polyethylene Liner Wear Debris After Exposure To Different Dosages Of Radiation

Junki Shiota; Alaa Terukawa; Daisuke Takahashi; Tomohiro Shimizu; Gen Matsumae; Taku Ebata; Shunichi Yokota; Yoshio Nishida; Keita KITAHARA; Taiki Tokuhiko; Tsutomu Endo; Norimasa Iwasaki

Poster No. 1206

Accelerated Aging And Material Characterization Of 115 Kgy Irradiated Aox™-uhmwpe Hip Liners

Elizabeth Laskowski; Leandra Bowsman; Katie Burkhead; Ariana Aghevli; Bharat Patel

Poster No. 1207

Super Gradient Crosslinked Polyethylene Verification Via Swell Ratio And Crosslink Density Testing

Nolan Lacombe; Imants Liepins; Sydney Zoretic; Zongtao Zhang

Poster No. 1208

Small Punch Study Of Super-Gradient Crosslinked UHMWPE

Zongtao Zhang; Sydney Zoretic; Imants Liepins

Poster No. 1209

Effect Of Surface Treatments On The Corrosion Behavior Of Titanium In Simulated Diabetic Environment

Anthony Reyes; Shrutha Keerthi Shabarish; Daniel Buckelew; Alexandra Arteaga; Danieli Rodrigues

Poster No. 1210

Hierarchical Surface Roughness Using A 3D Printed Interbody Implant Promotes Optimal Bone Formation And Integration On Fluorescence Image Cytometry

Ali Kiapour; Xiaonan Xin; Elie Massaad; John H. Shin; David W. Rowe

Poster No. 1211

Bioactive Anti-infective Photocurable Hydrogel For Improved Durability Of The Skin/implant Interface

Isha Mutreja; Dhiraj Kumar; Conrado Aparicio

Poster No. 1212

3-D Printed PLGA Implants Lose Mechanical Properties Between 8 And 16 Weeks

Anna N. Smith; Richa Gupta; My My Tang; Tim D. Teinturier; Ana P. Peredo; Michael W. Hast

Poster No. 1213

Surface And Antimicrobial Characterization Of Silorane-based Bone Cement

Kara A. Hageman; Amanda J. Varner; Grahmm A. Funk; Elizabeth M. Menuey; Kathleen V. Kilway; Terence E. McIlff

Poster No. 1214

Nanoparticle-functionalized Bone Cement For The Local Therapeutic Delivery To Spine Metastases

Ateeque Siddique; Megan Cooke; Michael Weber; Derek Rosenzweig

Poster No. 1215

Development Of Smart Metallic Orthopedic And Dental Implants Based On Biomimetic Design

Rupak Dua; Jagasivamani Vadivel; Gabryelle Mcdaniel

Poster No. 1216

Fabrication Of Patient-specific Biodegradable 3d Printed Implants With Superior Mechanical And Inherent Antimicrobial Properties For Repair And Replacement Of Bone Tissue

Femi B. Alakija; David K. Mills

Poster No. 1217

Healthy And Diabetic Primary Human Osteoblasts Exhibit Varying Gene Expression Profiles On 3d-printed Titanium Surfaces In High And Low Glucose Environments

Nicholas Allen; Bijan Abar; Kian Bagheri; Samuel Adams

Poster No. 1218

Is Accurate Geometric Modelling Of Ccs Required For Biomechanical Evaluation Of Fractured Femur?

Laureb Rao; Samarth Mittal; Apoorva Kabra; Vivek Trikha; Anoop Chawla; Kaushik Mukherjee

Poster No. 1219

Influence Of Implant Materials On Fixation Of Mandibular Subcondylar Fracture: An In Silico Assessment

Anoushka Gupta; Abir Dutta; Kaushik Mukherjee

Poster No. 1220

Synergism Of Kartogenin And Porous Scaffold In Cartilage Tissue Engineering

Chih-Hsiang Fang; Yi-Wen Lin; Jui-Sheng Sun

Poster No. 1221

Metformin-incorporated Electrospinning Scaffold Promoting Critical-sized Bone Tissue Engineering In Rat

Yi-Wen Lin; Chih-Hsiang Fang; Jui-Sheng Sun

Poster No. 1222

A Novel High-Inductivity DBM-based Bone Graft

John F. Kay

Poster No. 1223

Fatigue Crack Propagation Of Extruded And Additively Manufactured Peek Using A Compliance Approach

Mitchell Melander; Catherine Mohme; Harsha Naganaboyina; Vijay Bokam; Prabaha Sikder; Jay Bensusan; Clare Rimnac

Poster No. 1224

Silver Carboxylate Cytotoxicity In Human Osteoblasts, Keratinocytes, And Skeletal Muscle Cells Compared To Commonly Used Antibiotics And Crude Silver: An Early Characterization Of The Safety Profile

Benjamin K. Stone; Colin Whitaker; Olive Cooper; Drew Clippert; James Hong; Neel Vishwanath; Valentin Antoci; Christopher Born; Dioscaris Garcia

Poster No. 1225

Antimicrobial Efficacy Of Silver-carboxylate Against Drug-resistant Pathogens In The Context Of Prevention Of Lower Spinal Infections By Vancomycin-resistant Enterococcus Faecalis

William Connolly; Ben Stone; Colin Whitaker; Makena Mette; Jacob Eberson; Madison Liesching; Valentin Antoci; Christopher Born; Dioscaris Garcia

Poster No. 1226

Characterization Of 85 Kgy Gamma-irradiated Antioxidant Stabilized Uhmwpe (aox™) Finished Products After 1 To 10 Weeks Of Accelerated Aging

Leandra Bowsman; Elizabeth Laskowski; Ariana Aghevli; Katie Burkhead; Bharat Patel

Poster No. 1227

In Vivo Wear Analysis Of Altrx Vs Marathon Moderately Crosslinked Polyethylene Liners In Total Hip Arthroplasty

Collin W. Blackburn; Isaac Grinberg; Bhargavi Maheshwer; Rebecca Moore; Clare Rimnac; Matthew Kraay

Biomaterials - Repair/Replacement of Hard Tissues

Poster No. 1228

Reconstruction Of Large Segmental Defects At The Femur: How Does Reconstruction Method Affect Mechanical Properties? A Biomechanical Analysis

Yazan Kadkoy; Gregory Schneider; Joseph Ippolito; Thomas Helbig; Jonathan Lopez; David Paglia; Joseph Benevenia

Poster No. 1229

Fabrication Of Injectable Bone-like Microdots Using Robot Assisted Bioprinting

Genevieve E. Romanowicz; Ethan Dinh; Kelly Leguineche; Samuel Lester; Ella Leeson; Angela Lin; Ramesh Subbiah; Luiz E. Bertassoni; Robert E. Guldberg

Poster No. 1230

Poly(lactic-co-glycolic) Acid Fiber Incorporation In A Bone Cement System With Long-term In Vitro Incubation

Oliver A. Darwish; Caroline S. Lauer; Douglas W. Van Citters

Poster No. 1231

Influence Of Surgical Variables In Compression Plate Fracture Repair Mechanics

Zachary Koroneos; Jacob Staub; Hwa Bok Wee; Shaun Manatt; J. Spence Reid; Gregory Lewis

Poster No. 1232

Early Cast Cutting Of Fiberglass Casting Tape Is Safe

Jay J. Byrd; Matthew A. Halanski

Poster No. 1233

Finite Element Modeling With Validation Of Dynamic Compression Plate Fracture Fixation

Hwa Bok Wee; Zachary Koroneos; Jacob Staub; J. Spence Reid; Gregory Lewis

Poster No. 1234

Finite Element Analysis Of Intramedullary Nail Diaphyseal Fracture Fixation

Shaun Manatt; Zachary Koroneos; Hwa Bok Wee; J. Spence Reid; Gregory Lewis

Biomaterials - Repair/Replacement of Soft Tissues

Poster No. 1235

Comparative Dynamic Mechanical Analysis Of Collagen Fibrils And PLLA Nanofibers

Mathis Nalbach; Alberto Sensini; Naoki Motoi; Manuel Rufin; Maria Letizia Focarete; Orestis Andriotis; Andrea Zucchelli; Georg Schitter; Luca Cristofolini; Philipp J. Thurner

Poster No. 1236

Hyaluronic Acid And Human Amniotic Mesenchymal Stem Cells Show Therapeutic Effect On Post-traumatic Osteoarthritis In A Rodent Model

Mario Krussig; Mehrzad Namiranian; Jeremy Mercuri

Poster No. 1237

Effect Of Cyclic Stretch In Engineered Ligaments Depends On Degree Of Hierarchical Collagen Organization

Leia D. Troop; Jenny Puetzer

Poster No. 1238

Reaction-diffusion Predictions Of TGF- β -mediated Goldilocks Growth Profiles In Engineered Cartilage
Sedat Dogru; Tianbai Wang; Michael Albro

Poster No. 1239

Pivotal Analysis Of A Biphasic Interpositional Allograft For Rotator Cuff Repair Augmentation

Kevin Credille; Zachary Wang; Nolan S. Horner; Daniel Regan; Benjamin C. Gadowski; Jeremiah Easley; Grant Garrigues; Adam B. Yanke

Poster No. 1240

Biomechanical Comparison Of Open Versus Percutaneous Techniques For Primary Mid-substance Achilles Tendon Repair: A Systematic Review And Meta-analysis

Jonathan Lawson; Sean B. Sequeira; Casey M. Imbergamo; Gregory P. Guyton; Walter C. Hembree; Heath P. Gould

Poster No. 1241

Cell Death Characterization Of Bone In Osteochondral Allografts

Krishna K. Anand; Mark Langhans; Liang Yang; Scott Rodeo

Biomaterials - Scaffolds

Poster No. 1242

3d Printable Carboxymethyl Chitosan-amorphous Calcium Phosphate Nanoparticles Inhibit Osteoclast Maturation And Activity

Ming Yan; Hani Awad

Poster No. 1243

T-MSC-dcECM Increased Tenocytes And Collagen Proliferation Without Additional Growth Factors

Saerom Jeong; Hyang Kim; Seung Yeol Lee; Sang-Jin Shin

Poster No. 1244

Novel Collagen-based Inks For Tissue Engineering

Kevin Caparino; Shu-Tung Li

Poster No. 1245

In Situ Delivery Of Microspheres To Promote Vascularization In Composite Structures

Matthew Fainor; Janai Augustin; Robert Mauck; Sarah Gullbrand

Poster No. 1246

Evaluating Adipose Stromal Cell Seeded Polyurethane Polymers As Tissue Engineered Implantable Ligament Substitutes

Gargi Goel; Atma Adoungotchodo; Sophie Lerouge; Julie Fradette; Joshua Vorstenbosch; Rahul Gawri; Derek Rosenzweig

Poster No. 1247

Cell Adhesive And Growth Factor Peptide Mimetics Work Synergistically To Influence Osteogenic Activity

Sydney M. Neal; Era Jain; Xiaohong Tan; Lori Setton; Nathaniel Huebsch

Poster No. 1248

Crosslinking Method Of Aligned Direct-write, Near-field Electrospun Gelatin Fibers Alters Stiffness As Well As Tenocyte Viability And Morphology

Zachary G. Davis; Grant M. Scull; Drew W. Koch; Lauren V. Schnabel; Ashley C. Brown; Matthew B. Fisher

Poster No. 1249

Fluorapatite Scaffolds For The Craniofacial Bone Regeneration

Samantha Steyl; Alec Griffin; Jill Shea; Clark Nielson; James Beck; Sujee Jeyapalina

Poster No. 1250

Histology And Histomorphometry Of Bone Regenerating Composite Polymer Ceramic Scaffolds In A Rat Model

Robert Childers; Anthony Nunez Romero; Gerardo Figueroa; David Gonzales; Luis Arciniaga; Douglas Loy; Krishna Muralidharan; Barrett Potter; John Szivek; David Margolis

Poster No. 1251

Biomimetic Sensate 3d Printed Scaffolds Support Rapid Bone Regeneration And Full Weight Bearing For 2 Years In A Large Segmental Femoral Defect Model In Sheep

David Margolis; Gerardo Figueroa; David Gonzales; John Szivek

Poster No. 1252

Withdrawn

Poster No. 1253

A Tunable Chitosan Hydrogels Encapsulating Aloe Barbadensis Miller Extract With Self-antibacterial And Antioxidant Properties For Biomedical Applications

Thi Thai Thanh Hoang; Yunki Lee; Dai Hai Nguyen; Young Jang

Poster No. 1254

Visible Light-induced 3d Printed Hybrid Hydrogel Scaffolds For Tissue Engineering

Maryam Tilton; Emily Camilleri; Maria Astudillo Potes; Lichun Lu

Poster No. 1255

Development Of Poly(octamethylene Citrate)/bioglass Composite Scaffolds For Osteochondral Repair And Regeneration

Zizhao Li; Audrey Azeez; Margaret Gibson; Richard Tran; Su-Jin Heo

Poster No. 1256

Novel Bioresorbable Hematene-doped Monetite Scaffold For Bone Repair

Rachel Monk; Justin Matta; Geraldine Merle; Edward Harvey

Poster No. 1257

An Addressable Microfluidic Scaffold For Bone Tissue Engineering

Anh Tong; Quang Long Pham; Vatsal Shah; Akshay Naik; Paul Abatemarco; Mark Volosov; Jessica Maffei; Freeman Joseph; Roman Voronov

Bone - Diseases and Disorders

Poster No. 1258

An Ovariectomized Model Of Aged Rats

Minji Kim; Jie Liu; Christine Lee; Ameer Hassouna; Beth Lee; Do-Gyoon Kim

Poster No. 1259

Static Markers Of Bone Turnover In Children And Adults

Jan M. Hughes-Austin; Renata C. Pereira; Isidro B. Salusky; Vanda Jorgetti; Joachim H. Ix

Poster No. 1260

Digital Wrist Tomosynthesis (dwt)-based Finite Element Analysis Of Ultra-distal Radius Differentiates Patients With And Without A History Of Osteoporotic Fracture

Ram N. Yadav; Daniel Oravec; Sudhaker D. Rao; Yener N. Yeni

Poster No. 1261

Subchondral Bone Changes In A Longitudinal Study Of Guinea Pig Osteoarthritis

A. Teodora Dinescu; Justin Liu; Guanzhong Hu; X. Edward Guo

Poster No. 1262

Structural And Cellular Characterisation Of The Osteochondral Tissue In Hip And Knee Osteoarthritis

Dzenita Muratovic; David M. Findlay; Gerald J. Atkins

Poster No. 1263

Cortical Bone Micro-porosity Varies Based On Genetic Mutation In Osteogenesis Imperfecta

Owen Blanchard; Camden Felgner; Christopher Stephan; Kenneth Kozloff

Poster No. 1264

Fully Reduced HMGB1 Enhances Nonunion Healing In Diabetic Rats

Jianying Zhang; MaCalus V. Hogan; James H-C. Wang; Jarrett Cain

Poster No. 1265 (Guest Nation-Ireland) 

Microarray Gene Expression Analysis Of Cortical Bone From Ovariectomised Rats (ovx) Reveals Temporal Changes In Matrix Mineralisation And Mechanotransduction Genes That Explain Secondary Mineralisation In Long-term Estrogen Deficiency

Syeda Masooma Naqvi; Laoise McNamara; Vincent Casey; Jessica Schiavi

Poster No. 1266 (Guest Nation-Ireland) 

Osteogenic Factors Alter The Effects Of Estrogen Withdrawal In Post-menopausal Osteoporotic Models: A Long-term In-vitro Study.

Tanya M. O'Brien; Laoise M. McNamara

Poster No. 1267

Detecting Osteoporosis And Predicting Distal Radius Fracture Strength Using Raman Spectroscopy In Human Fingers - A Cadaveric Study

Christine Massie; Keren Chen; Emma Knapp; Andrew J. Berger; Hani A. Awad

Poster No. 1268

Bound Water Is Lower In Brittle Bone Caused By Osteogenesis Imperfecta And Separately By A Loss Of Atf4 But Not In Brittle Bone Due To A Loss Of Mmp9

Sasidhar Uppuganti; Amy Creecy; Julie Schnur; Ben Greene; Mark Does; Jeffry Nyman

Poster No. 1269

Enhancing Micro-computed Tomography Image Resolution Via Deep Learning

Michael David; Tillman James; Douglas Adams

Poster No. 1270

Point Mutations In Dnmt3a Dysregulate Post-natal Bone Homeostasis

Austin P. Bell-Hensley; Diana Christian; Hongjun Zheng; Xiyun Zhang; Audrey McAlinden; Harrison Gabel

Poster No. 1271

The Effect Of Zbtb40 Down-regulation On Adipocyte Maturation

Gregory Ottenberg; Robert Maynard; Cheryl L. Ackert-Bicknell

Poster No. 1272

Glenoid Bone Loss Evaluation: Utilization Of Current Methods

Hailey P. Huddleston; Kevin Credille; Zachary Wang; William Cregar; Drew Lansdown; Nikhil Verma; Grant Garrigues; Adam B. Yanke

Poster No. 1273

Engineering 3d Glucocorticoid-induced Osteoporosis Models

Styliani Alimpertis; Lee EunJin; Paul Salipante

Poster No. 1274

Ubiquitin Specific Peptidase 53 Promotes The Activity And Maturation Of Osteoclasts

Eunji Kim; Dong Suk Yoon; Kyungmi Lee; Eunae Ko; Jin Woo Lee; Kwang Hwan Park

Poster No. 1275

T1DM Causes Microstructural And Mechanical Changes In Femurs From Female NOD Mice

Diego Vargas; Jacob Jeong; Mark Ciccaglione; Richard Benninger; Virginia Ferguson

Poster No. 1276

Nf1 Regulates Wnt Signaling In Bone Marrow Skeletal Stem Cells To Maintain The Adult Skeleton

Aysha B. Khalid; Nandina Paria; Bo Shen; Ila Oxendine; Reuel Cornelia; Carol A. Wise; Jonathan J. Rios

Poster No. 1277

Profiling Of Osteal Macrophages Identified Two Subsets Involved In Impairing Bone Remodeling Process In Postmenopausal Osteoporosis

Shunichi Yokota; Gen Matsumae; Taku Ebata; Hend Alhasan; Tsutomu Endo; Tomohiro Shimizu; Daisuke Takahashi; Alaa Terkawi; Ken Kadoya; Norimasa Iwasaki

Poster No. 1278

Novel Pre-clinical Model Demonstrates Osteogenic Defects Associated With Osteofibrous Dysplasia

Aysha B. Khalid; Nandina Paria; Kristin Denton; Carol A. Wise; Jonathan J. Rios

Bone - Growth, Development and Aging

Poster No. 1279

Influence Of Genetic Variation Within The Wnt16 Gene On Musculoskeletal Phenotypes In Young Adults

Leah Shephard; Stephanie Vu; Kendall Reid; Elmer Rajah; Karuna Panchapakesan; Dustin Hittel; Eric Hoffman; Heather Gordish-Dressman; Laura Tosi

Poster No. 1280

Syndecan-1 In Bone And Angiogenesis: Sex Matters

Melanie Timmen; Christian Arras; Nils Roters; Daniel Kronenberg; Gabriele Bixel; Ralf H. Adams; Richard Stange

Poster No. 1281

Protein A Induced Cancellous Bone Loss By Regulating Osteoblast/osteocyte Autophagy And Apoptosis

Chung-Hwan Chen; Hsin-Chiao Chou; Sung-Yen Lin; Liang-Yin Chou; Shu-chun Chuang; Chau-zen Wang

Poster No. 1282

Defining Imminent Risk Using FRAX Score Multipliers For Patients With Recent Non-hip Fragility Fractures

Kaja Matovinovic; Scott Willms; Leah Kennedy; Stephanie Yee; Emma Billington; Prism Schneider

Poster No. 1282A

Genetic Variation In Vitamin-d Binding Protein (vdbp) Rs4588 Influences Musculoskeletal Phenotypes

Stephanie Vu; Leah Shephard; Kendall Reid; Elmer Rajah; Karuna Panchapakesan; Dustin Hittel; Eric Hoffman; Heather Gordish-Dressman; Laura Tosi

Poster No. 1283

Gender Associated Differences In Bone Quality As A Manifestation Of The Homeostatic Levels Of Immune Cells In The Bone Marrow, Blood And Spleen Of Males Versus Females

Jerrold Hammes; Andrew S. Cuthbert; Luke Dillard; John Moore; Xizhao Chen; Zhiwen Xu; Kailo Schlegel; Nathan Swami; Peter Lobo; Charles Farber; Qunjun Cui; Abhijit Dighe

Poster No. 1284

Low-density Lipoprotein Particles Inhibit The Osteogenic Potential Of Human Osteoblasts Through Mirna-200a

Adil Akkouch; Lilly Ruell; Hong Phan; James Springstead

Poster No. 1285

Yap And Taz Regulate Vessel-associated Osteoblast Precursors And Angiogenic Coupling In Embryonic Bone

Joseph Collins; Nathaniel Dymont; Ling Qin; Joel Boerckel

Poster No. 1286

Combinatorial Drug Treatment Of Losartan And Fisetin To Enhance The Regenerative Potential Of Bone Marrow-derived Mesenchymal Stem Cells

Haruki Nishimura; Jacob Singer; Charles Huard; Yoichi Murata; Michael Mullen; Kohei Yamaura; Sudheer Ravuri; Sealy Hambright; Chelsea Bahney; Marc Philippon; Johnny Huard

Poster No. 1287

CaMKK2 Complexes With Gamma-tubulin Complex To Inhibit Osteoprogenitor Proliferation And Differentiation

Yong Li; Xinchun Ding; Janet Rubin; Uma Sankar

Poster No. 1288

Three-dimensional Visualization Of Neural Networks Inside Bone By Modified Optical Clearing Technique (osteo-disco Protocol) And Alteration Of Bone Remodeling By Surgical Nerve Ablation

Kurando Utagawa; Takaei Shin; Hironori Yamada; Hiroki Ochi; Aiko Unno; Satoko Sunamura; Toshitaka Yoshii; Atsushi Okawa; Shingo Sato

Bone - Injury and Healing

Poster No. 1289

Adenosine Delivery Augments Aged Fracture Healing

Hunter Newman; Yuru Shih; Jiaul Hoque; Yuze Zeng; Gavin Gonzales; Wendi Guo; Colleen Wu; Shyni Varghese

Poster No. 1290

Calvarial Bone Defects Heal Better In Ovariectomy-Induced Osteoporotic Rats Than In Healthy Rats

Auden P. Balouch; Jasmine Bogle; Varsha V. Rao; Samantha J. Wojda; Kristi S. Anseth; Seth W. Donahue

Poster No. 1291

Porcine Model Of Costochondral Graft For Mandibular Condyle Reconstruction

Mandi Lopez; Angela Fang; Catherine Takawira; Takashi Taguchi; J. D. Luck; Joseph Lopez

Poster No. 1292

Ultrasonic Cutting Tools For Orthopaedic Surgery: Mechanical Test Rig Design And Preliminary Testing In Human Bone

Irene Yang; Nisreen Al-Namnam; Aleksander Marek; Xuan Li; Margaret Lucas; Hamish Simpson

Poster No. 1293

Absence Of Cd47 Leads To Stromal Cell Reduction And Impaired Bone Healing

Christina Capobianco; Robert Zondervan; Michelle Song; Easton Farrell; Alexis Donneys; Alexander Knights; Karen Kessell; Heather Wilson; Jaimo Ahn; Ralph Marcucio; Tristan Maerz; Kurt Hankenson

Poster No. 1294

Systemic Immune Modulation Alters Local Bone Regeneration In A Delayed Treatment Composite Model Of Non-union Extremity Trauma

Tyler Guyer; Casey Vantucci; Kelly Leguineche; Paramita Chatterjee; Angela Lin; Kylie E. Nash; Molly Hastings; Travis Fulton; Clinton Smith; Drishti Maniar; David A. Frey Rubio; Kaya Peterson; Julia Harrer; Nick Willett; Krishnendu Roy; Robert E. Guldberg

Poster No. 1295

Implementing A Novel Orthopedic Polytraumatic Injury Model In Laboratory Mice

Nathan Lamb; Taylor Luster; Larry Chen; Wenwu Zhang; Aamir Tucker; Murad Nazzal; Kayla Gates; Nada Alakhras; Michelle Chu; Abigail Pajulas; Rachel Blosser; Mark Kaplan; Melissa Kacena; Todd McKinley

Poster No. 1296

Trends And Epidemiology Of Lower Trunk Fractures In The Super-elderly Population In The United States From 2011 To 2020

Hayden M. Jaworski; Joseph M. Stefko; Charles T. Cush; Joseph G. Lyons

Poster No. 1297

Post-operative Infection Outcomes In Short Vs Extended Antibiotic Prophylaxis And Associated Projected Cost Following Adult Spinal Surgery: A Stratified Meta-analysis And Probability-based Cost Projection

Nicole A. Griffin; Mohamed Awad; Jason Stoneback; Nicholas Alfonso; David Ou-Yang

Poster No. 1298

Acute Application Of Antibiotic Powder In Open Fracture Wounds (APOW): A Pilot Project

Nicholas Alfonso; Nicole A. Griffin; Mohamed Awad; Jason Koerner; Melissa Gorman; Jason Stoneback; Cyril Mauffrey

Poster No. 1299

GSTT1 Enhances The Osteogenic Differentiation Of Human Adipose Stem Cells

Eugene Lee; Ji-Yun Ko; Jae Yeon Moon; Seo-Young Park; Gun-Il Im

Poster No. 1300

R-spondin-2 Is A Contextual Regulator Of Fracture Healing

Kyle P. Maas; Alexander Knights; Alexis Donneys; Tristan Maerz; Archana Sanjay; Kurt D. Hankenson

Poster No. 1301

Comparison Of Adipose- Vs. Bone Marrow-derived Mesenchymal Stem Cells Transduced To Overexpress Bone Morphogenetic Protein 2: Implications For Ex Vivo Gene Therapy For Bone Loss

Cory K. Mayfield; Jennifer A. Bell; Elizabeth Lechtholz-Zey; Mina Ayad; Osamu Sugiyama; Amy Tang; Donald B. Longjohn; Daniel A. Oakes; Jay R. Lieberman

Poster No. 1302

Surgical Stability According To Screw Insertion Position In Distal Femur Fractures Treated With Anatomical Locking Plate Through Finite Element Analysis

Hyun-Ji Lee; Sung-Jae Lee; Emmanuel Eghan-Acquah; Dae-Kyung Kwak; Je-Hyun Yoo

Poster No. 1303

Characterization Of Apoptosis During Murine Skeletal Regeneration

Nadine Areikat; Christina Rymond; Edie Duque; Sardar Uddin; David Komatsu

Poster No. 1304

Surgical Stability According To Insertion Position Of Cannulated Screws In Femoral Neck Fracture

Ye-Ji Lee; Sung-Jae Lee; Dae-Kyung Kwak; Je-Hyun Yoo

Poster No. 1305

Allogeneic Bone Grafts Hydrated With Platelet-rich Plasma Have Superior Graft Handling Compared To Grafts Hydrated With Saline

Khoa Vu; Jillian Brenner; Dalip Sethi

Poster No. 1306

Effects Of Vaping On Osseointegration In Mice: A Proof Of Concept Study

Geraldine D. Sturz; Emile-Victor Kuyl; Mironenko Christine; Anastasia Oktarina; Reinhard Windhager; Mathias P. Bostrom; Xu Yang

Poster No. 1307

P21 Deficiency Exhibits Delayed Endochondral Ossification During Fracture Healing

Kenichi Kikuchi; Masahiko Haneda; Shinya Hayashi; Tomoyuki Matsumoto; Toshihisa Maeda; Naoki Nakano; Yuichi Kuroda; Masahiro Fujita; Kemmei Ikuta; Kensuke Anjiki; Yuma Onoi; SHOTARO TACHIBANA; Ryosuke Kuroda

Poster No. 1308

β -TCP From 3D-printed Scaffold Can Act As An Effective Phosphate Source During The Osteogenic Differentiation Of Human Mesenchymal Stromal Cells

Luan P. Hatt; Angela Rita R. Armiento; Martin J. Stoddart

Poster No. 1309

Human Non-hypertrophic Nonunion Tissue Contains Osteoblast Lineage Cells and E-bmp-2 Activates Osteogenic And Chondrogenic Differentiation

Ryo Yoshikawa; Takahiro Niikura; Tomoaki Fukui; Keisuke Oe; Yohei Kumabe; Takahiro Oda; Kenichi Sawauchi; Kyohei Takase; Yuya Yamamoto; Ryota Nishida; Yoshitada Sakai; Ryosuke Kuroda

Poster No. 1310

Atsttrin-loaded Injectable Chitosan-based Hydrogel Stimulates Diabetic Fracture Healing In Mice

Lida Moradi; chuanju Liu

Poster No. 1311

Subchondral Bone Injury Of The Distal End Of The Cannon Bone In Thoroughbred Racehorses Exacerbates Strain Concentration In A Site-specific Manner

Soroush Irandoust; Elijah P. McCoy; Christina M. Stevenson; Faith M. Franseen; Joshua D. Roth; Chris Whitton; Corinne R. Henak; Peter Muir

Poster No. 1312

Spatial Transcriptomic And Single-cell Analyses Of NF1-deficient Fractures In Pre-clinical And Patient-derived Experimental Models

Jonathan J. Rios; Nandina Paria; Carol Wise; Robert Tower

Poster No. 1313

Effects Of Intermediate Dose Radiation On Infield And Adjacent Outfield Vertebrae Using 3D CT Based Models

Omoriegide Aideyman; Pritesh Patel; Eitan Katz; Asher E. Lichtig; Farid Amirouche

Poster No. 1314

High-energy Trauma Model For Fluorescence-guided Bone Perfusion Evaluation In Orthopaedic Surgery

Valentin V. Demidov; Megan A. Clark; Samuel S. Streeter; J. Scott Sottosanti; Ida Leah Gitajn; Jonathan T. Elliott

Poster No. 1315

A Novel Mouse Model To Study Tibial Distraction Osteogenesis

Sarah E. Dilorio; Ruth Tevlin; Harsh N. Shah; Ankit Salhotra; Michelle Griffin; Michael Januszyk; Derrick C. Wan; Michael T. Longaker

Poster No. 1316

Mechanistic Propensities Of Cryotherapy In A Bone Injury Site

Matthew Zakaria; Yazan Honjol; Drew Schupbach; Geraldine Merle; Edward Harvey

Poster No. 1317

Facilitated Femoral Fracture Repair Via Noninvasive Localized Cold Therapy

Matthew Zakaria; Yazan Honjol; Jose Garcia; Geraldine Merle; Edward Harvey

Poster No. 1318

Axon Guidance Signalling Is Regulated By Mechanical Loading And Inflammation In A 3-dimensional Model Of Human Stem Cell Derived Osteocytes

Ryan Jones; Sophie Gilbert; Deborah Mason

Poster No. 1319

Plasmin Activation By Tissue-type Plasminogen Activator Or Urokinase-type Plasminogen Activator Is Indispensable For Fracture Repair.

Takuya Oyaizu; Stephanie Moore-Lotridge; Jonathan Schoenecker; Satoru Egawa; Atsuyuki Kawabata; Toshitaka Yoshii; Matthew Flick

Bone - Mechanobiology

Poster No. 1320 (Guest Nation-Ireland) 

The Role Of Gpr-161 In Osteocyte Mechanosignaling And Osteoclastogenic Paracrine Signaling

Morgan Cobban; Carolina Martins; Mimma Maggio; David Hoey

Poster No. 1321 (Guest Nation-Ireland) 

Targeting Mechanosignaling To Modulate The Immune Environment For Bone Repair

Stéphane Petrousek; Daniel Kelly; David Hoey

Poster No. 1322

In Vitro Model To Study Confined Osteocyte Networks Exposed To Flow-induced Mechanical Stimuli

Kairui Zhang; Courtney Ogando; Alex B. Filip; Pranav Soman; Jason A. Horton

Poster No. 1323

Bone's Response To Mechanical Loading In Female And Male Mice Varies Across Eight Inbred Strains

Nicole Migotsky; Surabhi Kumar; John T. Shuster; Charles R. Farber; Matthew J. Silva

Poster No. 1324

Wnt1 Promotes Osteoblast Differentiation During Mechanical Stimulation Through Plat

Mubashir Ahmad; Melanie Haffner-Luntzer; Astrid Schoppa; Timur Alexander Yorgan; Michael Amling; Thorsten Schinke; Anita Ignatius

Poster No. 1325

Mechanical Loading May Be A Switch Controlling IL-1R2 Gene Expression In Osteocytes

Meghana Machireddy; Lucas DeBiase; Glen Niebur

Poster No. 1326

Identifying Mechanisms Of Altered Bone Remodeling Induced By Differential Loading

Kaitlin M. Farrell; Isaiah T. Taylor; Sardar Uddin; David Komatsu

Poster No. 1327

Ex Vivo Trabecular Bone Adaptation To Load Is Predicted By Micro Finite Element Analysis

Kail Beloglowka; Brian Kunath; Keith Pilkey; Brent Lievers; Roshni Rainbow; Heidi-Lynn Ploeg

Bone - Structure, Function and Mechanics

Poster No. 1328

E-cigarette And Wildfire Smoke Exposure Effect On Bone Biomechanical Properties In Murine Models

Meagan J. Morgan; Jacqueline Matz; Yasmeen Farra; Alexandra Vergara-Anglim; Chiara Bellini; Jessica Oakes; Sandra Shefelbine

Poster No. 1329

Osteocytic Connexin 43 Deficiency Protects Against Hls-induced Bone Loss In Female C57bl/6j Mice

Gabriel A. Hoppock; Jolene J. Windle; Henry J. Donahue

Poster No. 1330

Deep Transfer Learning For Prediction Of Mechanical Behavior Of Trabecular Bone

Pengwei Xiao; Tinghe Zhang; Yufei Huang; Xiaodu Wang

Poster No. 1331

Ex Vivo Bovine Trabecular Bone Mechanical Loading In 3d Printed Bioreactors

Brian A. Kunath; Kail Beloglowka; Heidi-Lynn Ploeg; Roshni Rainbow

Poster No. 1332

Identification Of Water Compartment In Bone Using ATR-FTIR Spectroscopy

Bowen Wang; Samuel Stephen; Deepak Vashishth

Poster No. 1333

Modifications Of Gut Microbiome Alter Quantity Of Noncollagenous Matrix Proteins And Bone Tissue-level Toughness

Grazyna E. Sroga; Bowen Wang; Samuel J. Stephen; Christopher J. Hernandez; Deepak Vashishth

Poster No. 1334

Crack Growth In Human Cortical Bone: In-situ Loading With 3D Imaging

Glynn E. Gallaway; Rachel Surowiec; Matthew Allen; Joseph Wallace; Laura J. Pyrak-Nolte; Thomas Siegmund

Poster No. 1335

Animal-specific Finite Element Modeling For The Prediction Of Fracture Risk In A Canine Model Of Osteosarcoma

Chloe Brekhus; Kevin Labus; Benjamin Gadowski; Christian Puttlitz; Bernard Seguin

Poster No. 1336

Predicting Macroscale Bone Growth With And Without Mechanical Loading Data

Alexander J. Teague; Samuel E. Mircoff; Griffin C. Sipes; Sara G. Moshage; Annette M. McCoy; Mariana E. Kersh

Poster No. 1337

A Round-robin Three- And Four-point Bending Test Of A Bone Surrogate With Finite Element Analysis

Mahsa Zojaji; Lesley Arant; Joshua Roth; Ifaz Haider; Cheryl Quenneville; Daniel Kluess; Gabriella Epasto; Fabio Distefano; Salvatore Pasta; Michael Saemann; Heidi-Lynn Ploeg

Poster No. 1338

Whole-bone Mechanical Properties And Microstructural Changes In Diabetic Rat Femurs

William John Woolley; Yoshihiro Obata; Katy Martin; Claire Acevedo

Poster No. 1339

A Qct-based Computational Fracture Risk Assessment Of The Equine Third Metacarpal Updated With Mri-derived Hidden Microporosity

Samuel McPhee; Lucy Kershaw; Carola Daniel; Marta Pena Fernandez; Sarah E. Taylor; Uwe Wolfram

Poster No. 1340

Mechanical Loading Magnitudes During Normative Gait Is Not Associated With Periosteal Formation Rates In Developing Foals

Samuel E. Mircoff; Alexander J. Teague; Griffin C. Sipes; Sara G. Moshage; Annette M. McCoy; Mariana E. Kersh

Poster No. 1341

The Effect Of Micro-ct Scan Resolution On The Geometric Accuracy Of 3d Models Of Human Trabecular Bone

McKinley Van Klei

Poster No. 1342

The Demographic Variability Of The Humeral Intramedullary Canal Anatomy

Jason N. Chen; Caleb Gottlich; Livia Frost; Kyla A. Petrie; Duke Appiah; Brendan MacKay

Poster No. 1343

Compression Of Cancellous Bone Under Cementless Tibial Tray Depending On The Activity Undertaken: A Time-elapsd Internal Strain Distribution Analysis Through Micro-CT And Digital Volume Correlation

Lauren S. Wearne; Sophie Rapagna; Maged Awadalla; Greg Keene; Mark Taylor; Egon Perilli

Poster No. 1344

Biomechanical Comparison Of Two Different Techniques Of Bioresorbable Cement Application In Pedicle Screw Augmentation

Xinggui Tian; Deepak Raina; Yang Liu; Jens Goronzy; Rudi Apolle; Corina Vater; Magnus Tagil; Lars Lidgren; Alexander Thomas; Uwe Platz; Klaus-Dieter Schaser; Alexander C. Disch; Stefan Zwingenberger

Bone - Treatment and Therapeutics

Poster No. 1345

Efficient Osteogenic Conversion Of Endothelial Cells Via Penetrable Oct4-30kc19 Protein And Bmp4 Growth Factor

Nathaniel Hwang; Seoyeon Kim

Poster No. 1346

A Novel, Shelf-stable Complete Autograft Substitute Based On Innovative Allograft Preservation Technology

Huy Truong; Michael Kubik; Subha Bhattacharyya; Eric Semler

Poster No. 1347

Amino Acids Based Urethane Adhesive Enhances Rat Bone Fracture Healing

Jianying Zhang; MaCalus V. Hogan; Alejandro J. Almarza; Juan M. Taboas; James H-C. Wang

Poster No. 1348

Anti-inflammatory Activities Of Two New Deoxygenated N-acetyl Glucosamines In Lipopolysaccharide-activated Mouse Macrophage Raw264.7 Cells

Xinlin Yang; Quang Le; Quanjun Cui; Ameer E. Hassan

Poster No. 1349 (Guest Nation-Ireland) 

A Comparative Analysis Of The Human Skeletal Stem Cell And Mesenchymal Stromal Cell In Bone Tissue Regenerative Medicine

David A. Hoey; Barry Moran; Joseph Butler; Daniel Ahern

Poster No. 1350

Targeted Delivery Of Hif-2 α Inhibitors To The Bone Ameliorates Radiation-induced Bone Loss

Wendi Guo; Jiaul Hoque; Kassandra V. Spiller; Carolina Garcia; Tara N. Fujimoto; Denae W. Johnson; Nerissa Williams; David G. Kirsch; Shyni Varghese; Cullen Taniguchi; Colleen Wu

Poster No. 1351

Novel Raloxifene Analogs As Extracellular Bone Therapeutics In The Col1a2^{G610c/+} Murine Model Of Osteogenesis Imperfecta

Rachel Kohler; Amy Creecy; Claudia Medeiros; Levin W. Taylor; David R. Williams; Matthew R. Allen; Joseph M. Wallace

Poster No. 1352

Delivery Of The Matricellular Growth Factor Cyr61 Promotes Angiogenesis During Bone Fracture Repair

Annemarie Lang; Emily Eastburn; Carly Siciliano; Annapurna Pranatharthi Haran; Madhura Nijsure; Riccardo Gottardi; Joel D. Boerckel

Poster No. 1353

Extracellular Matrix Proteins Of Demineralized Bone Matrix Attenuate The Inflammatory Response

Peter R. Supronowicz; Julia Pittaluga; Abby Barlow; Jerry Chang

Poster No. 1354

Cost Comparison Between Open Reduction And Internal Fixation And Functional Bracing For Humeral Diaphyseal Fracture Management

Prism Schneider; Ahmed Negm; Stephanie Yee; Kyle Goldstein; Mary Amedeo; Rudy Reindl; Greg Berry; Herman Johal

Poster No. 1355

Effects Of Yoda1-augmented Whole-body Vibration On Adult Skeleton After Radiotherapy

Tiankuo Chu; Jason Jiang; Wiley Gong; Murtaza Wasi; Rosa Guerra; Shubo Wang; Lidan You; Liyun Wang

Poster No. 1356

A Finite Element Analysis On The Effects Of External Fixation Pin Configurations On Bone Stress, Pin Stress, And Pin Loosening

Michael J. Poland; Yunzhi Yang; Jeremiah Easley; Jeffrey Young; Holly Stewart; Chloe Brekhus; Christian Puttlitz; Benjamin Gadowski

Poster No. 1357

Small Molecule Enhancement Of FK506-Induced Osteogenesis

Nicholas Huffman; Jason Bariteau; Jay Patel; Joseph Jacobson

Poster No. 1358

Outcomes Of Extra-articular Distal Femur Fracture Fixation: A Network Meta-analysis Comparing Different Fixation Techniques

Nicole A. Griffin; Mohamed Awad; Dylan Rakowski; Jason Stoneback; Nicholas Alfonso

Poster No. 1359

Rapamycin Does Not Alter Bone Quality In Young Adult And Early Old Age C57Bl/6 Mice

Connor C. Devine; Kat O. Paton; Chelsea M. Heveran; Stephen A. Martin

Poster No. 1360

Prophylactic Intrawound Antibiotics Significantly Reduce The Risk Of Deep Infections In Fracture Fixation: Subgroup Meta-analysis Of The Type Of Fracture, Antibiotics, And Organism

Nicole A. Griffin; Mohamed Awad; Julia Chung; Jason Stoneback; Nicholas Alfonso

Poster No. 1361

Initial Intravenous Antibiotic Prophylaxis Regimens For Open Fractures: Meta Analysis And Evaluation Of Current Protocols

Nicole A. Griffin; Mohamed Awad; Jason Stoneback; Nicholas Alfonso

Poster No. 1362

Strontium And Niobium: Bone Generating Elements?

Suhaib M. Ellythy

Cartilage and Synovium - Diseases and Disorders

Poster No. 1363

Discovery And Functional Analysis Of OA Susceptibility Genes Using Families From A Large Population-based Cohort

Nikolas Kazmers; Matthew Honeggar; Kendra Novak; Ying Ma; Kazuyuki Hoshijima; David Grunwald; Mick Juryne

Poster No. 1364

Synovial Fluid Proteomics Identifies Potential Biomarkers For Equine Post-traumatic Osteoarthritis

Erica Secor; Sydney Womack; Julia Schayes; Heidi Reesink

Poster No. 1365

Plastin 3 Deficiency And Overexpression Impairs Cartilage Health

Anja Niehoff; Daniela Maehlich; Ilka Maus; Maren Dreiner; Miriam Weyers; Thomas Li; Lin Han; Brunhilde Wirth

Poster No. 1366

The Orphan Receptor Gpr68 Is Expressed In Chondrocytes And Involved In Novel Regulation Of Inflammation During Osteoarthritis Progression

Mohd Nazir Khan; Martha Elena Diaz Hernandez; Samir Chihab; Hicham Drissi

Poster No. 1367

Are Intracellular Signaling Pathways Associated With Biomarker Profiles Of Passaged Osteoarthritic Chondrocytes?

Anna N. Sullentrop; Aaron M. Stoker; Allyson B. Caisley; Harjeev Singh; James A. Keeney; James L. Cook

Poster No. 1368

Single Cell Rna-seq Analysis Identifies Two Novel Chondroprotective Subpopulations In Human Chondrocytes From Young Adult Healthy Donors

Debasis Sahu

Poster No. 1369

MicroRNA-365 Acts As The Inflamma-stat To Regulate Interleukin 6 Homeostasis In Knee Joint And Causes Sex Specific Differences In Cartilage Degeneration In Mice

Yajun Liu; Jing Ding; Qian Chen

Poster No. 1370

Distinct Phenotypes And Fate Of Synovial Macrophages In Injury-induced OA

Natalia S. Harasymowicz; Zainab Harissa; Neda Rashidi; Kristin Lenz; Ruhang Tang; Farshid Guilak

Poster No. 1371

A Xeno-free In Vitro 3D Synovial Membrane Model Mimicking The Pathogenesis Of Arthritis

Alexandra Damerau; Moritz Pfeiffenberger; Julia Beißel; Frank Buttgereit; Timo Gaber

Poster No. 1372

Regional Differences In Cartilage Biomarker Content Related To Histological Assessment Of Tissue Degradation

Umer Mallick; Aaron M. Stoker; Grace Brentlinger; Chantelle C. Bozynski; James A. Keeney; James L. Cook

Poster No. 1373

Gene Transcription In End Stage Ankle Osteoarthritis: Assessing The Role Of Synovium Through Rna-sequencing

Sara Buckley; Mary Hamati; Michael A. Hewitt; Cheryl Ackert-Bicknell; Michael Zuscik; Joshua Metzl; Daniel Moon; Kenneth J. Hunt

Poster No. 1374

Regional Differences In Cartilage Tissue Histological And Biomarker Correlations In The Osteoarthritic Knee

Grace Brentlinger; Aaron M. Stoker; Umer H. Mallick; Chantelle C. Bozynski; James A. Keeney; James L. Cook

Poster No. 1375

Nerve Growth Factor Receptor Promotes Bony Remodeling In Osteoarthritic Joints By Restricting Inflammatory Responses

Jian Huang; Lan Zhao; Lai Yumei

Poster No. 1376

Mechanism Of Interleukin-1 Beta Induced Expression Of Complement Component 3 In Human Chondrocytes And Its Pathogenesis In Osteoarthritis

Jen Xu; frank xu; patrick woster

Poster No. 1377

Lrrc15-positive Fibroblast And Profibrotic Signatures Are Enriched In Infrapatellar Fat Pads In Knee Osteoarthritis

Purva Singh; David Oliver; Samantha Lessard; Samuel Green; Peter Sculco; Scott Rodeo; Tania Pannellini; Susan Goodman; Bella Mehta; Miguel Otero

Poster No. 1378

Metabolomic Profiles Of Synovial Fluid From Osteoarthritic Patients With Normal And Overweight Body Mass Indices: A Pilot Study

Alyssa Hahn; Matthew Glimm; Eden Houske; McKenna Payne; Aiden Mozer; Hope Welhaven; Ron June

Poster No. 1379

Ca²⁺/calmodulin-dependent Protein Kinase Kinase 2 Plays A Key Role In Pathogenesis Of Osteoarthritis And Its Inhibition Protects Against Chondrocyte Death And Cartilage Degradation In Human Articular Cartilage

Julian E. Dilley; Abhijit Seetharam; Xinchun Ding; Margaret Bello; Roman Natoli; Todd McKinley; Uma Sankar

Poster No. 1380

Effect Of Cartilage-Derived ECM On Redifferentiation Of Osteoarthritic Chondrocytes

Ciara Davis; Rhima Coleman

Poster No. 1381

Predicting Pain Progression In Patients With Knee Osteoarthritis Using Machine Learning

Aysha I. Zahid; Gareth G. Jones; Hadi Alagha

Poster No. 1382

Screening Of Novel Long-noncoding Rnas In Development Of Gene Therapy For Osteoarthritis

SeungEun Oh; Kyungmi Lee; Dong Suk Yoon; Kwang Hwan Park; Jin Woo Lee

Poster No. 1383

Machine Learning Pipeline For Analyzing Magnetic Resonance Images Of Healthy And Contracted Joint Capsules

Michael David; Tillman James; Rebecca Reals; James Quirk; Weijie Gan; Ryan Castile; Aaron Chamberlain; Ulugbek Kamilov; Spencer Lake

Poster No. 1384

Link N Regulates Il-1 β Activation And Drg Neuronal Hypersensitivity In Osteoarthritis

Michael Grant; Muskan Alad; Laura Epure; John Antoniou; Fackson Mwale

Cartilage and Synovium - Growth, Development and Aging

Poster No. 1385

Genetically Modified Decm Modulates The Quality Of Regenerated Cartilage

Ming Pei; Elmira Mikaeiliagah; Bin Wang

Poster No. 1386

Age-related Changes In Chondrocytes Result In Altered Mechanoresponsiveness And Modulation Of Pathways Implicated In OA Development

Vianna G. Martinez; Noelani Ho; Dawn Chasse; Amy McNulty

Poster No. 1387

Type V Collagen Regulates Progenitor Cell Fate And Matrix Formation In TMJ Condylar Cartilage

Abdulaziz Alanazi; Prashant Chandrasekaran; Bryan Kwok; Chao Wang; David Frank; David Birk; Robert Mauck; Nathaniel Dymont; Eiki Koyama; Lin Han

Poster No. 1388

DNA Damage-induced Proinflammatory Signaling And DNA Repair In Chondrocytes

Mark N. James; Eduardo Peralta-Herrera; Danielle Benoit; Jennifer Jonason

Poster No. 1389

Human Cartilage Progenitor Cells From Ear, Nose, Rib, And Joint Have A Robust, Stable Phenotype For Cartilage Repair

Paul Gehret; Soheila Ali Akbari Ghavimi; Terri Giordano; Kyra Smith; Brian Johnstone; Riccardo Gottardi

Poster No. 1390

Cartilage-specific Sirt6 Loss Increases Surgery-induced And Age-associated OA In Mice

Cheeho Kim; Ashley Coleman; Abreah Little; Kathryn Kelley; Susanna Chubinskaya; Mandy Peffers; Theresa Freeman; Richard Loeser; John A. Collins

Cartilage and Synovium - Injury and Healing

Poster No. 1391

Effect Of Platelet-rich Plasma Injections On Cartilage T1rho In Knee Osteoarthritis

Favian Su; Michelle W. Tong; Anthony Luke; Brian Feeley; Sharmila Majumdar; Drew Lansdown; Alan Zhang

Poster No. 1392

Collagen Content, But Not Integrity, Decreases Near Cartilage Injuries Compared To Adjacent Intact Cartilage In An In Vitro Model Of Post-traumatic Osteoarthritis

Moustafa Hamada; Atte Eskelinen; Cristina Florea; Alan Grodzinsky; Petri Tanska; Rami Korhonen

Poster No. 1393

Despite Unique Wound Healing Abilities, African Spiny Mice (Acomys) Are Not Protected From Osteoarthritis Development Following Meniscal Injury

Kiara M. Chan; Nat A. Thurlow; Malcolm Maden; Kyle D. Allen

Poster No. 1394

Voluntary Wheel Running Exacerbates Joint Damage, But Not Physical Activity Levels, Following Meniscal Injury

Kiara M. Chan; Jacob L. Griffith; Kyle D. Allen

Poster No. 1395

Chondroprotective Effect Of Trimethylamine N-Oxide Against Heat Injury Is Mediated By Potential Cooperation With Heat Shock Protein 70

Andy L. Garcia; Matthew J. Pellicore; Neeraj Sakhrani; Tsunagu Ichikawa; CV Sise; Andy J. Lee; Justin E. Hellwinkel; David P. Trofa; Gerard A. Ateshian; Clark T. Hung

Poster No. 1396

The Effect Of Mechanical Loading On Engineered Cartilage Constructs Derived From Human Bone Marrow-derived Mesenchymal Stromal Cell Of Early Or Late Passage

Hecheng Zhou; Karen L. Clark; Hang Lin; Peter G. Alexander

Poster No. 1397

Single-cell RNA-sequencing Reveals Contact-dependent Changes Caused By Direct Interactions Between Fibroblast-like Synoviocytes And Articular Chondrocytes

Matthew J. Pellicore; Anna Schoonen; Joanna Smeeton; José McFaline-Figueroa; Clark Hung

Poster No. 1398

Preventing Lipid Peroxidation Stimulates Loss Of Glutathione Reduction Potential Coincident With Increased Mitochondrial Staining

Madeline R. Hines; Piedad C. Gomez-Contreras; Samuel N. Rodman III; Suryamin Liman; Jessica E. Goetz; Mitchell C. Coleman

Poster No. 1399

Targeting Hemoproteins With Carbon Monoxide Prevents Hyperoxia-induced Cartilage Injury

Suryamin Liman; Paige Kluz; Piedad C. Gomez-Contreras; Madeline R. Hines; Elise L. Femino; Maxwell Y. Sakyi; James D. Byrne; Jessica E. Goetz; Mitchell C. Coleman

Poster No. 1400

Inhibition Of Ca^{2+} /calmodulin-dependent Protein Kinase Kinase 2 And Mitochondria-derived Oxidative Stress Attenuates Ptoa In A Rabbit Model Of Ligamentous Instability

Julian Dilley; Abhijit Seetharam; Margaret Bello; Aaron Nanavaty; Roman Natoli; Todd McKinley; Uma Sankar

Poster No. 1401

The Long Non-coding Rnas Linc02035 And Loc100130207 Contribute Chondrocyte Hypertrophy And Cartilage Matrix Degradation Through Stabilizing Runx2 Protein

Eunji Kim; Dong Suk Yoon; Kyungmi Lee; Kwang Hwan Park; Jin Woo Lee; Sung-Hwan Kim

Poster No. 1402

Re-routed Il-6 Signaling To Mitigate Inflammatory Arthropathies Via Cell Design And Biomaterial Engineering

Jhanvi Sharma; Jonathan Brunger

Poster No. 1403

Mussel Adhesive Protein-based Adhesive To Retain Stem Cells For Cartilage Regeneration

Gun-Il Im; Ji-Yun Ko; Sang-Jun Han; Seong-Woo Maeng; Hyung Joon Cha

Poster No. 1404

Arthritic Synovium Induces Phenotypic Change In Cartilage Tissue Analogs

Lindsey Johnson; Nicholas Allen; Bijan Abar; Kian Bagheri; Michael Bolognesi; Samuel Adams

Poster No. 1405

Early Postoperative Increase Of Il-1a In Synovial Fluid Correlates With Worse Short-term Patient-reported Outcomes After Cartilage Transplantation In The Knee

Navya Dandu; Zachary Wang; Kevin Credille; Reem Darwish; Brian J. Cole; Adam B. Yanke

Poster No. 1406

Attenuation Of Cartilage Damage In The Presence Of Intra-articular Fracture Synovial Fluid With Hematoma Using Common Anti-inflammatory Agents

Mark Montgomery; Nicholas Allen; Bijan Abar; Richard Danolkowicz; Samuel Adams

Cartilage and Synovium - Mechanobiology

Poster No. 1407

Reorganization Of F-actin In Human Osteoarthritic Chondrocytes Cultured In 3D Viscoelastic Alginate Hydrogels

William T. Yu; Pranay Agarwal; Ovijit Chaudhuri; Nidhi Bhutani

Poster No. 1408

High Molecular Weight Hyaluronan Suppresses IRAK4 In The NF- κ B Pathway

Hironobu Kosugiyama

Poster No. 1409

Identification Of Novel Metabolomic Endotypes Of Osteoarthritis Using Ensemble Clustering

Brady Hislop; Ron June

Poster No. 1410

Is The Caprine Model A Valid Choice For Evaluating Osteochondral Defect Biomechanics?

Asher E. Lichtig; Jason Koh; Farid Amirouche

Poster No. 1411

Validation Of A Physiologically-relevant Human Osteochondral Explant Mechanical Loading Model For Osteoarthritis

William Giles; Endre Kiss-Toth; Christine Le Maitre; J Mark Wilkinson

Cartilage and Synovium - Structure, Function and Mechanics

Poster No. 1412

Epigenetic Dysregulation During The OA Progression In Hip FAI

Tomoyuki Kamenaga; Jie Shen; May Wu; Robert H. Brophy; Regis J. O'Keefe; John C. Clohisy; Cecilia Pascual-Garrido

Poster No. 1413

Influence Of Graft Location On Primary Stability Of Osteochondral Grafts Implanted Into Cadaveric Human Knee Joint

Blake McCall; Raelene Cowie; Louise Jennings

Poster No. 1414

The Regulation Of Proteoglycan-4 Via F-actin Reorganization In Native Superficial Zone Chondrocytes

Sofia Gonzalez-Nolde; Cameron Schweiger; Zsanaia Badiang; Justin Parreno

Poster No. 1415

Regional Differences Of Porcine Articular Cartilage Failure Properties

Josephine R. Hall; Jingyi Wang; Alexandria K. Thao; Brittney P. Kokinos; Thomas D. Crenshaw; Corinne Henak

Poster No. 1416

Depth-dependent Strain Calculations Of Anisotropic Fibril Structures In Articular Cartilage By Finite Difference Methods

Syeda Batool; Bradley J. Roth; Yang Xia

Poster No. 1417

Pinpointing And Localizing Matrix Metalloproteinase Activities And Involvement In The Pericellular Environment Remodeling

Marina Danalache; Cyril Daniel; Maik Schwitalle; Ulf Krister Hofmann

Poster No. 1418

Characteristics Of Femoral Cartilage In The Rabbit Model Six Weeks Post-trauma By μ Mri And Plm

Hannah Mantebea; Farid Badar; Amanveer Singh; Michael Newton; Yang Xia

Poster No. 1419

Quantitative Distribution Of A Fluorescently Labeled Polyacrylamide Hydrogel Viscosupplement In Equine Fetlocks

Karan Vishwanath; Scott R. McClure; Lawrence J. Bonassar

Poster No. 1420

Bioengineered Lubricin Alters The Dominant Lubrication Mode Of Articular Cartilage In A Dose-dependent Manner

Karan Vishwanath; Jin Su; Marshall J. Colville; Matthew Paszek; Heidi Reesink; Lawrence J. Bonassar

Poster No. 1421

Spatial Proteoglycan Content Of The Cell Microenvironment Is Mostly Affected In The Mid-Zone Cartilage In Very Early Post-traumatic Osteoarthritis

Rasmus K. Hiltunen; Kalle Karjalainen; Simo Ojanen; Mikko Finnila; Walter Herzog; Simo Saarakkala; Rami K. Korhonen; Petri Tanska

Poster No. 1422

Estimation Of Material Properties Of Cartilage In Regenerating Axolotl Limbs Using Inverse Finite Element Analysis

Vineel Kondiboyina; Timothy Duerr; James Monaghan; Sandra Shefelbine

Poster No. 1423

The Effect Of Postmenopausal Osteoporosis On The Subchondral Bone Pathology Of Knee Osteoarthritis In Rats

Hiroyuki Wada; Koji Aso; Masashi Izumi; Masahiko Ikeuchi

Poster No. 1424

^{13}C -Metabolic Flux Analysis In Bovine Chondrocytes Characterizes A Novel Metabolic Effect

Roberto Tarantino; Stephen D. Waldman

Poster No. 1425

Integrating Elastic Foundation Ankle Joint Contact In Musculoskeletal Dynamics Simulation

Kathryn Strand; Amir Esrafilian; Lucinda Williamson; Jason M. Wilken; Donald D. Anderson

Cartilage and Synovium - Treatment and Therapeutics

Poster No. 1426

Connexin 43 Mediates Mitochondrial Transfer From Mesenchymal Stromal Cells To Chondrocytes

Rebecca M. Irwin; Matthew A. Thomas; Megan J. Fahey; María D. Mayán; Michelle L. Delco

Poster No. 1427

High Tibial Osteotomy Reduces Symptoms And Synovial Inflammation In Knee Osteoarthritis By Changing Macrophage Polarization To Pro-healing Phenotype

Shigeo Yoshida; Kohei Nishitani; Yu Kobori; Shinichi Kuriyama; Shinichiro Nakamura; Takayuki Fujii; Koichi Murata; Hiromu Ito; Hiroyuki Yoshitomi; Shuichi Matsuda

Poster No. 1428

Inhibitory Effect Of Tankyrase Inhibitor On Mechanical Stress-induced Protease Expression By Human Articular Chondrocytes

Yoshifumi Hotta; Keiichiro Nishida; Aki Yoshida; Lin Deting; Noriyuki Shimizu; Shuichi Naniwa; Yoshihisa Nasu; Ryuichi Nakahara; Toshifumi Ozaki

Poster No. 1429

A₂-Macroglobulin Reduces Post-traumatic Osteoarthritis Cartilage Degeneration By Inhibiting Catabolic Pathways

Kenny Chang; Changqi Sun; Braden Fleming; Brett D. Owens; Jillian Beveridge; Scott McAllister; Meggin Costa; Megan Pinette; Janine Molino; Lei Wei

Poster No. 1430

Extracellular Vesicles Derived From Neutrophils Suppress Catabolic Process Induced By Il-1 β Stimulation In Chondrocytes

Keita Kitahara; Taku Ebata; Mohamad Alaa Terkawi; Yoshio Nishida; Hend Alhasan; Shunichi Yokota; Junki Shiota; Taiki Tokuhira; Tsutomu Endo; Tomohiro Shimizu; Tsuyoshi Asano; Daisuke Takahashi; Norimasa Iwasaki

Poster No. 1431

Effects Of Triamcinolone Acetonide On Metabolic Activities Of Young Cartilage

Annie Porter; Emily Newcomb; Jacob Poplawski; Michael Axe; X. Lucas Lu

Poster No. 1432

Donor-to-donor Characteristics Variation Of Human Juvenile Cartilage-derived Chondrocyte Sheets Revealed By Combined Histological Evaluation In A Nude Rat Chondral Defect Transplantation Model

Keisuke Matsukura; Makoto Kondo; Metzler F. Nicolas; Travis G. Maak; David Grainger; Okano Teruo

Poster No. 1433

Synthetic Receptors Enable Regenerative Engineering For The Treatment Of Osteoarthritis

Bonnie L. Walton; David D. Brand; Karen A. Hasty; Craig L. Duvall; Jonathan M. Brunger

Poster No. 1434

The Effect Of Tranexamic Acid On Cartilage In A Meniscal Defect Rabbit Model

Janice Havasy; Ryan Healy; Ronak Patel; Alexander Piacentini; Liang Ying; Vincent Yao; Nicholas Couchara; Jonathan Strong; Michael Sama; Xianghua Deng; Scott Rodeo

Poster No. 1435

Subchondral Bone Mismatches In Osteochondral Allograft Transplants For Large Oval Defects Of The Medial Femoral Condyle: Comparison Of Lateral Vs. Medial Femoral Condyle Donors

Kelly M. Rogers; Conor Locke; Timothy Mologne; William Bugbee; John A. Grant

Poster No. 1436

Low-dose Irradiation Could Mitigate Osteoarthritis Progression Via Anti-inflammatory Action That Modulates Mitochondrial Function

Sung Eun Kim; Sun Young Wang; Won-Young Cho; Byoung Hyuck Kim; Hyun Cheol Bae; Hak Jae Kim; Hyuk Soo Han

Poster No. 1437

Cartilage Thickness Does Not Differ Between Lateral And Medial Femoral Condyle Donors When Treating Large Defects Of The Medial Femoral Condyle With Oval Osteochondral Allograft Transplants

Conor Locke; Kelly M. Rogers; Timothy S. Mologne; William Bugbee; John A. Grant

Poster No. 1438

Development Of A Patient Specific Cartilage Graft Using Magnetic Resonance Imaging And 3d Printing

Matthew Kolevar; Jeffrey Hirsch; Jocelyn Wu; Robert Choe; Michael Rocca; Antoan Kosar; Shannon McLoughlin; John Fisher; Jonathan Packer

Poster No. 1439

Dpp4⁺ Chondrocytes Have Senescent Phenotypes And Exacerbate Osteoarthritis

Byung Sun Choi; Hyun Cheol Bae; Won-Young Cho; Sun Young Wang; Hyuk Soo Han

Poster No. 1440

Bendable Osteochondral Allografts For Patellar Resurfacing: A Cadaveric Analysis Of Congruence

Katherine A. Spack; Courtney A. Petersen; Peter T. Shyu; X. Edward Guo; Thomas R. Gardner; James L. Cook; Clark T. Hung; Melvin P. Rosenwasser; Gerard A. Ateshian

Poster No. 1441

Intra-articular Injection Of Suramin Attenuates The Synovitis And Osteoarthritis Development In Act1 Rat Model

Po-Chih Shen; Cheng-Chang Lu; Zi-Miao Liu

Poster No. 1442

Sex And Entourage Dependent Chondroprotective And Analgesic Effect Of Cannabinoids In Murine PTOA

Vengadeshprabhu Karuppa gounder; Amy Thompson; Christopher Howell; Kamalesh Verma; William Pinamont; Natalie Yoshioka; Wesley Raup-Konsavage; Kent E Vrana; Reyad Elbarbary; Fadia Kamal

Poster No. 1443

Development Of An In-vitro Early Stage Post-traumatic-osteoarthritis Model: Continuous Low Intensity Ultrasound As Preventative Measure For Its Progression

Shahid Khan; Sarayu Bhogoju; Anu Subramanian

Poster No. 1444

Meclozine Ameliorates Fgf2-induced Craniofacial Bone Hyperossification Of Larval Zebrafish By Attenuating Mapk Pathway

Genta Takemoto; Masaki Matsushita; Kinji Ohno; Shiro Imagama

Poster No. 1445

Mechanoresponsive Cartilage-resident Mesenchymal Stem Cells Contributes To Endogenous Cartilage Repair In Varus Malaligned Knee Osteoarthritis

Meng Feng; Wenguang Liu; Genwen Mao; Haiquan Yu; Jianlong Ni; Xiaoqian Dang; Yusheng Qiu; Zhibin Shi

Poster No. 1446

Subsequent Surgeries Following Osteochondral Allograft And Osteochondral Autograft At Up To Ten Years: An Analysis Of Over 2,000 Patients

Stephen M. Gillinov; Patrick J. Burroughs; Joseph B. Kahan; Jay Moran; Peter Joo; Christopher A. Schneble; Harold G. Moore; Jonathan N. Grauer; Michael J. Medvecky

Poster No. 1447

Hydrogel Encapsulation Of Genome-Engineered Stem Cells As An Injectable Self-Regulating Anti-Cytokine Therapy

Kelsey H. Collins; Robert J. Nims; Lara Pferdehirt; Leila S. Saleh; Alireza Savadipour; Luke E. Springer; Kristin L. Lenz; Dominic M. Thompson, Jr.; Christine TN Pham; Farshid Guilak

Poster No. 1448

Simvastatin And Zoledronic Acid Inhibit Contraction In Collagen Gel Model Of Fibrotic Tissue Contracture

Rebecca F. Reals; Michael A. David; Leanne E. Iannucci; Spencer P. Lake

Poster No. 1449

Intrinsic Differences Between Human Mesenchymal Stromal Cells And (i)PSC-derived Multipotent Cells In Generating Cartilage Tissue

Shiqi Xiang; Zixuan Lin; Meagan Makarczyk; Zhong (Alan) Li; Silvia Liu; Peter Alexander; Hang Lin

Poster No. 1450

Accuracy Of Distal Femoral Condyle Osteochondral Allograft Transplantation Using Patient-specific Instrumentation

Kevin Credille; Zachary Wang; Tristan J. Elias; Erik C. Haneberg; Mario Hevesi; Nozomu Inoue; Alejandro A. Espinoza Orias; Brian J. Cole; Adam B. Yanke

Poster No. 1451

Characterization Of Scaavil-1ra/igf-1 Combination Gene Therapy In Equine Chondrocytes And Synoviocytes

Parvathy Thampi; R. Jude Samulski; Joshua C. Grieger; Jennifer N. Phillips; C. Wayne McIlwraith; Laurie R. Goodrich

Poster No. 1452

Microwave Irradiation Combined With Intra-articular Glutamine Administration Prevents Progression Of Osteoarthritis In Rats Via Hsp70 Expression

Ryota Cha; Shuji Nakagawa; Yuji Arai; Atsuo Inoue; Yoichiro Kamada; Kenta Kaihara; Shinya Fujita; Osam Mazda; Kenji Takahashi

Poster No. 1453

Synovial Fluid Mesenchymal Stem Cell-derived Exosomes Combined With Platelet-rich Plasma Reduce Inflammatory Gene Expression In Chondrocytes And Promote Anabolic Activity

Rhea Rasquinha; Pooja Swami; Haixiang Liang; Steven Rokito; Kenneth Zaslav; Daniel Grande

Poster No. 1454

Direct Actions Of Senolytic Drugs On Human Mesenchymal Stromal Cell Chondrogenesis

Landon B. Gatrell; Luke Childress; Hong Wu; Elisabeth Ferreira; Ryan M. Porter

Clinical Research - Big Data Research

Poster No. 1455

Trends In Basketball-Related Fractures By Race And Sex Among U.S. Hospitals

Emily Tu; Scott Epsley; Chamith S. Rajapakse

Poster No. 1456

Characterizing Gabapentinoid Use Among Patients With Isolated Low Back Pain

Gwyneth C. Maloy; Scott Halperin; Philip Ratnasamy; Jonathan N. Grauer

Poster No. 1457

The Sex-specific Risks Of Knee Arthroplasty And Osteoarthritis-related Comorbidities Are Independent Of The Osteoarthritis Etiology

Paula A. Hernandez; Sophia M. Canga; Roberto Gonzalez; Suvra Pal; Robert Weinschenk

Poster No. 1458

Readmissions, Adverse Events, And Utilization Trends: Total Shoulder Versus Hip And Knee Arthroplasties

Michael C. Dean; Nathan J. Cherian; Christopher T. Eberlin; Samuel S. Rudisill; Zachary L. LaPorte; Kaveh A. Torabian; Kieran S. Dowley; Matthew J. Best; Scott D. Martin

Poster No. 1459

Calcium Pyrophosphate Deposition Disease (pseudogout) Of The Lumbar Spine Predisposes To Higher Rates Of Dural Tears And 90-day Reoperations: Results Of A Propensity Score Matched Analysis

David O. Osei-Hwedieh; Mitchell Fourman; Tom M. de Groot; David Shin; Joseph Schwab

Poster No. 1460

Are Meniscus Repairs Performed Earlier Than Meniscectomies With A Concurrent Anterior Cruciate Ligament Reconstruction?

Zachariah Samuel; Charles Lin; Utkarsh Anil; Joie Cooper; Cordelia W. Carter

Poster No. 1461

Lumbar Laminotomy: Variables Affecting Postoperative Reimbursement

Scott J. Halperin; Meera M. Dhodakpar; Michael Gouzoulis; Maxwell Laurans; Arya G. Varthi; Jonathan N. Grauer

Poster No. 1462

Examining National Trends In Elective And Nonelective Total Hip Arthroplasty

Gregory Benes; Vinod Dasa; Peter C. Krause; Andrew G. Chapple

Poster No. 1463

Predictive Factors For Wound Complications Following Primary Total Knee Arthroplasty

Raheel Yaseen Yaseen; Reniell Iniguez; Michael Foy; Anshum Sood; Mark Gonzalez

Poster No. 1464

Unsupervised Machine Learning Of The Combined Danish And Norwegian Knee Ligament Registers Identifies Five Discreet Patient Groups With Differing ACL Revision Rates

R. Kyle Martin; Solvejg Wastvedt; Ayoosh Pareek; Andreas Persson; Håvard Visnes; Anne Marie Fenstad; Gilbert Moatshe; Julian Wolfson; Martin Lind; Lars Engebretsen

Poster No. 1465

Withdrawn

Poster No. 1466

Market Resilience Of Orthopaedic Hip/knee Arthroplasty Sales During Covid-19

Mitchell K. Ng; Aaron Lam; Ahmed Emara; Ariel N. Rodriguez; William Kridel; Afshin Razi; Che Hang Jason Wong; Michael A. Mont; Nicolas S. Piuze

Clinical Research - Clinical Research Methods

Poster No. 1467

Characteristics Of Sports Trauma And Disability In The Japanese National Blind Foot Ball Team

Yusuke Kawabata; Takahiro Fujisawa; Kazuma Miyatake; Yohei Kusaba; Keiju Saito; Tomotaka Yoshida; Masanobu Takeyama; Yutaka Inaba

Poster No. 1468

Diagnostics Of Osteoarthritis And Rheumatoid Arthritis From Blood Serum Samples Using Fourier Transform Infrared (FTIR) Spectroscopy

Minna Mannerkorpi; Reeta Nissinen; Lassi Rieppo; Simo Saarakkala

Poster No. 1469

An Approach To Using Patient-identified Quality Of Life Priorities To Inform Outcomes Assessment

Jenny M. Dorich; Vicki Plano Clark; Richard Ittenbach; Jordyn Whiting; Roger Cornwall

Poster No. 1470

Compass Stretching: A New Dynamic Stretching Expands The Hip Range Of Motion In All Directions And Is Effective For Low Back Pain

Tomohiko Sano; Akihiro Sudo

Poster No. 1471

Prediction Of Re-tear After Arthroscopic Rotator Cuff Repair Using Machine Learning

Issei Shinohara; Atsuyuki Inui; Yutaka Mifune; Hanako Nishimoto; Tomoya Yoshikawa; TATSUO KATO; Takahiro Furukawa; Shuya Tanaka; Masaya Kusunose; Ryosuke Kuroda

Clinical Research - Observational Studies

Poster No. 1472

Load-to-strength Ratio Predicts Wrist Fracture In Women

Jennifer C. Coulombe; Alyssa B. Dufour; Elizabeth J. Samelson; Marian T. Hannan; Douglas P. Kiel; Mary L. Bouxsein

Poster No. 1473

The Impact Of An Integrated Care Team On Postoperative Failure Rates Following Osteochondral Allograft Transplantation In The Knee

Kylee Rucinski; Renee Stucky; James P. Stannard; Clayton Nuelle; James Cook

Poster No. 1474

Characterizing Negative Online Reviews Of Spine Surgeons

Nicholas Artz; Rahul Ramanathan; Vivian Li; Josephine Nwankow; Emma Humphrey; Anthony Oyekan; Yunting Tang; Jonathan Dalton; Joon Lee; Jeremy Shaw

Poster No. 1475

TKA Can Decrease Pain Catastrophizing Scores And Increase Range Of Motion In Patients Prone To Catastrophic Thinking: A Prospective Analysis

Abhishek Deshpande; Lucas Paladino; Ethan Taira; Leena Abbas; Omeregide Aideyman; Idris Hanidu; Aisha Suhaiba; Nicolas Kaplan; Maxwell Davison-Kerwood; Asher Lichtig; Ye Lin; Julio Castillo Tafur; Michael Patetta; Joseph Karam; Samuel Chmell; Mark Gonzalez

Poster No. 1476

Utility Of Preoperative Range Of Motion In Predicting Postoperative Range Of Motion After TKA: A Prospective Study

Ethan Taira; Abhishek Deshpande; Lucas Paladino; Asher Lichtig; Ye Lin; Julio Castillo Tafur; Maxwell Davison-Kerwood; Leena Abbas; Idris Hanidu; Omeregide Aideyman; Aisha Suhaiba; Nicolas Kaplan; Michael Patetta; Samuel Chmell; Joseph Karam; Mark Gonzalez

Poster No. 1477

Factors Influencing Postoperative Physical Therapy Utilization In Patients Who Have Undergone Shoulder Surgery - A Prospective Study

Benjamin T. Johnson; Idris Hanidu; Lucas Paladino; Abhishek Deshpande; Ye Lin; Julio Castillo Tafur; Gautam Malhotra; Benjamin Goldberg

Poster No. 1478

Smartphone Ownership, Digital Media Use, And Neck Pain Incidence Have All Increased In Kids During The Coronavirus Pandemic

Zachariah Samuel; Charles Lin; Utkarsh Anil; Joie Cooper; Cordelia W. Carter

Poster No. 1479

Elevated Skin Surface Temperature Associated With Decreased Range Of Motion After Total Knee Arthroplasty, A Prospective Study

Aisha Suhaiba; Lucas Paladino; Abhishek Deshpande; Omoregie Aideyman; Idris Handiu; Leena Abbas; Ethan Taira; Nicolas Kaplan; Asher Lichtig; Ye Lin; Julio Castillo Tafur; Joseph A. Karam; Samuel J. Chmell; Mark Gonzalez

Poster No. 1480

Using The AAOS Appropriateness Criteria To Examine Utilization Of TKAs

Leena J. Abbas; Ethan Taira; Abhishek Deshpande; Lucas Paladino; Ye Lin; Julio Castillo Tafur; Michael Redondo; Mark Gonzalez

Poster No. 1481

Meniscus Transplants In Patients Over 50 Years Of Age

Kevin R. Stone; Ann Walgenbach; Shadera Slatter; Thomas J. Turek; Caroline Ferguson-Dryden; Marie Dicker; Emma Miltenberger; Stephanie Wu; Vivian Liu; Mani Vessal

Poster No. 1482

Patients With Surgically Treated Metastatic Bone Disease Have Prolonged Platelet-mediated Hypercoagulability And High Venous Thromboembolism Rates

Lisa Yamaura; Leslie Skeith; Michael Monument; Prism Schneider

Poster No. 1483

Quantification Of Stem Cell Number, Their Secretome, And Cellular Senescence In Fractionated Clinical Bone Marrow

Adam D. Goff; Chelsea S. Bahney; Alex W. Goff; Matthew L. Vopat; Kaitie Whitney; Verena Oberlohr; Heidi Kloser; Sealy Hambright; Matt Provencher; Thos A. Evans; Johnny Huard

Poster No. 1484

Defining A Population Norm For Kinesiophobia Values In Highly Competitive Division One Athletes

Sanjiv Gopalkrishnan; Joshua Harris; Robert Jack; Bradley Lambert; Haley Goble; Patrick McCulloch

Poster No. 1485

Geriatric Nutritional Index Predicts Short-Term Complications Following Posterior Cervical Fusion

Dhruv Mendiratta; Ashok Para; Amanda Azer; Ari Berg; Michael Vives

Poster No. 1486

Outcomes In Outpatient Vs Inpatient Revision Total Hip Replacement: A Propensity-score Matched Analysis

Dhruv Mendiratta; Isabel Herzog; Amanda Azer; Ashok Para; Brian Batko; Oscar Vazquez

Poster No. 1487

Financial Burden Of E-Scooter Related Injuries At A Level 1 Trauma Center

Emily Skarda; Breann Tisano; Jaclyn Kapilow; Kendall Anigian; Holt Cutler; Dustin Rinehart; Tyler Youngman; Drew Sanders

Poster No. 1488

Etiology And Rescheduling Of Total Joint Arthroplasty Cancellations Over A Two-year Period At An Urban, Academic Institution

Daniel Deysher; Abhishek Deshpande; Lucas Paladino; Ye Lin; Julio Castillo Tafur; Ghassan Farah; Michael Redondo; Samuel Chmell; Mark Gonzalez

Poster No. 1489

Injection Utilization Between Patients With Idiopathic And Post-traumatic Knee Osteoarthritis By Sex And Type

Lucas Steele; Cale Jacobs; Caitlin Conley

Poster No. 1490

Modified Frailty Index As A Predictor Of Adverse Outcomes In Surgical Management Of Rotator Cuff Repair

Dhruv Mendiratta; Isabel Herzog; Amanda Azer; Ashok Para; Brian Batko; Oscar Vazquez

Poster No. 1491

Bioimpedance Derived Whole-body Phase Angle Correlates With Pre-operative Risk Markers

Michael C. Marinier; Ayobami S. Ogunola; Jacob M. Elkins

Poster No. 1492

Does The Use Of A Smoke Evacuation Device Reduce Smoke Exposure In The OR? A Prospective Study

James RL Hall; Joshua M. Eisenberg; Alex Coffman; Catherine Olinger; Cassim M. Igram; Andrew J. Pugely

Poster No. 1493

Effect Of An Eight Week Neuromuscular Training Program On Female Youth Soccer Players Physical Performance

Jordan Jackson; Brenden Holderread; Corbin Hedt; Lucila Beuses; Haley Goble; Bradley Lambert; Jordan Ankersen; Shari Liberman

Poster No. 1494

Factors Affecting Long Term Core Decompression Efficacy In The Treatment Of Osteonecrosis Of The Femoral Head

Jhunnelle Walters; Julio Castillo Tafur; Abhishek Deshpande; Michael Patetta; Diego Barragan Echenique; Michael Denz; Anshum Sood; Awais Hussain; Mark Gonzalez

Clinical Research - Omics, Biomarkers and Genetics

Poster No. 1495

Identification Of Circulating Micro Rnas To Predict Osteoarthritis Subtypes By Whole Transcriptomic Data Integration And Matching Druggable Targets

Margo Tuerlings; Ilja Boone; Eka Suchiman; Nico Lakenberg; Robert van der Wal; Rob Nelissen; Yolande F. M. Ramos; Rodrigo Coutinho de Almeida; Ingrid Meulenbelt

Poster No. 1496

Factors Associated With Genetic Markers For Rotator Cuff Disease In Patients With Atraumatic Rotator Cuff Tears

Elizabeth L. Yanik; Nancy L. Saccone; Alexander W. Aleem; Aaron M. Chamberlain; Benjamin Zmistowski; Julianne A. Sefko; Jay D. Keener

Poster No. 1497

Untargeted Serum Proteomics Profiling In Females With Adolescent Scoliosis Identifies A Bone Morphogenetic Protein Antagonist (alpha 2-hs Glycoprotein) As A Candidate For Follow-up

Patrick M. Carry; Elizabeth Terhune; Anna Monley; Cambria Wethey; Melissa Cuevas; Nancy Hadley-Miller

Poster No. 1498

A Comparative Analysis Of 5-hydroxymethylation In Knee, Hip And Hand Osteoarthritis

Yudhishtar S. Bedi; Fiorella C. Grandi; Faes D. Kerkhof; Amy L. Ladd; William J. Maloney; Nidhi Bhutani

Poster No. 1499

Biomarkers Of Periprosthetic Osteolysis

Adam Pearl

Clinical Research - Systematic Review/Meta-analyses

Poster No. 1500

A Systematic Review: Comparing Efficacy Of Virtual Reality And Video Game Therapy To CIMT For Pediatric Upper Extremity CP

Matthew Weintraub; David Ahn; Justin Lee; Siraj Shaikh; Hutnik Lauren; Amy Song; Vaishali Ravikumar; Anugya Mittal; Aleksandra McGrath; Alice Chu

Poster No. 1501

MRI Findings Of Core Muscle Injuries

Cooper M. Root; Dylan Wentzel; Bryan Vopat; Jason Smoak; Steven Clary; Bryan Vopat; Scott Mullen; Brian Everist

Poster No. 1502

Analysis Of Graft Types Used With Internal Brace Augmentation For ACL Reconstruction: A Systematic Review

Cooper M. Root; Connor Maginnis; Julie H. Schiavo; Bryan Vopat; Mary K. Mulcahey

Poster No. 1503

The Need For Standardized Pain Measurements In Orthopaedic Biomechanics Research: A Systematic Review Of The Hand Osteoarthritis Literature

Kevin A. Hao; Tamara Ordonez Diaz; Taylor R. Rakauskas; Jennifer A. Nichols

Poster No. 1504

Complications Associated With Proximal Hamstring Tendon Repair: A Systematic Review

Jonathan Lawson; Eliza Abraham; Casey M. Imbergamo; Sean B. Sequeira; James C. Dreese; Heath P. Gould

Poster No. 1505

Trends In Reporting Outcomes For Different Therapeutic Measures In Patients With Cerebral Palsy

Siraj Shaikh; Justin Lee; David Ahn; Matthew Weintraub; Lauren Hutnik; Amy Song; Vaishali Ravikumar; Anugya Mittal; Mark Fisher; Aleksandra McGrath; Alice Chu

Poster No. 1506

Complications Associated With Proximal Hamstring Tendon Repair: A Systematic Review

Jonathan J. Lawson; Eliza A. Abraham; Casey M. Imbergamo; Sean B. Sequeira; James C. Dreese; Heath Gould

Poster No. 1507

Return To Play Following Lateral Ankle Ligament Repair: A Systematic Review

Matthew D. Civilette; Trevor Wyand; Heath Gould; Gregory Guyton

Poster No. 1508

Medial Patellofemoral Ligament Reconstruction In The Skeletally Immature: A Systematic Review Of Outcomes By Fixation Technique

Kevin Credille; Alec Warrier; Zachary Wang; Vince Morgan; Adam B. Yanke

Education and Outreach - Clinical Education

Poster No. 1509

Characteristics Of Surgeons Retained, Leaving, And New To Academic Orthopaedics From 2016 To 2022

David Ahn; Matthew Weintraub; Isabel Herzog; Dhruv Mendiratta; Daniel Liggio; Mark Fisher; Neil Kaushal; Michael Vosbikian; Kathleen Beebe; Alice Chu

Poster No. 1510

Athlete SARMs Abuse: A Systematic Review

Nikhil Vasireddi; Henrik Hahamyan; Heath Gould; Andrew Gregory; Christopher Dodson; James Voos; Jacob Calcei

Poster No. 1511

Gender-specific Influences On Subspecialty Selection Among Orthopedic Surgeons

Amelia Hurley-Novatny; Katelyn Paulsen; Alex Coffman; Catherine R. Olinger

Poster No. 1512

Is A University Program Necessary For High Academic Productivity In Orthopaedic Training? A National Resident Assembly Research Committee Study

Eli B. Levitt; Heath Gould; Christopher L. Camp; Seth L. Sherman; Michael J. Alaia; Riley J. Williams; Aaron Krych; Ayoosh Pareek

Poster No. 1513

Utilizing Healthcare Provider Feedback To Validate A Clinical Screening Tool For Identifying And Assisting Perpetrators Of Violence

Tanya Cherppukaran; Kaitlyn Dillabough; Claire Temple-Oberle; Brienne McLane; Prism Schneider

Poster No. 1514

Analysis Of The Impact Of Sociocultural Factors And Demographics On Medical Students' Perception Of Orthopaedic Surgery

Jose Jesurajan; Madeline M. Carritte; De'Andre W. Brown; Tadiwanashe C. Chirongoma; Hannah R. Curtis; Sarah E. Walker; Wesley P. Phipatanakul

Foot and Ankle - Diagnostics

Poster No. 1515

A Cadaveric Validation Of Weightbearing Ct Imaging Techniques For Improved Foot And Ankle Image Analysis And Diagnostics

Katee N. Perez; Rich J. Lisonbee; Kas Knutson; Amy L. Lenz

Poster No. 1516

Syndesmotic Malreduction Assessment Using Three Dimensional Distance Mapping: A Cadaveric WBCT Study

Cesar de Cesar Netto; Nacime Salomao Barbachan Mansur; Grayson Talaski Talaski; Kwon John; Aly Fayed; Matthieu Lalevee; Schmidt Eli; Ki Chun Kim; Andrew Behrens; Kepler Carvalho; Kevin Dibbern

Poster No. 1517

The Use Of Deep Learning Enables High Diagnostic Accuracy In Detecting Lisfranc Instability On Weight-bearing Ct Scanning

Karina R. Mirochnik; Alireza Borjali; Rohan Bhimani; Daniel Guss; Orhun K. Muratoglu; Christopher DiGiovanni; Soheil Ashkani-Esfahani

Poster No. 1518

Peritalar Compensation In Patients With Varus Ankle Osteoarthritis: A Morphologic Assessment

Zachary J. Eatough; Rich J. Lisonbee; Nicola Krähenbühl; Megan K. Mills; Charles L. Saltzman; Amy L. Lenz

Poster No. 1519

Surgical Correction Of Peritalar Subluxation And Subtalar Joint Articular Coverage Improves Patient-report Outcomes In Progressive Collapsing Foot Deformity

Cesar de Cesar Netto; Kepler Alencar Mendes De Carvalho; Kevin Dibbern; Andrew Behrens; Grayson Talaski Talaski; Vineel Mallavarapu; Ryan Jasper; Hannah Stebral; Nacime Salomao Barbachan Mansur; Ki Chun Kim; Eli Schmidt; Don Anderson

Poster No. 1520

The Impact Of 3d Foot Alignment On Detection Of Distal Tibiofibular Syndesmotic Widening After Injury Using Comparative Contralateral Distance Mapping

Grayson Talaski Talaski; Nacime Mansur; Kepler Carvalho; Andrew Behrens; Vineel Mallavarapu; Ryan Jasper; Cesar de Cesar Netto; Kevin Dibbern

Foot and Ankle - Injury and Healing

Poster No. 1521

Registry-based Evidence Supports The Effectiveness Of Cannulated Compression Headless Screws In Traumatic And Reconstructive Foot And Ankle Applications

Hallie Murray; Jillian Mohn; Madilyn Riegel; Paul DeFrino; Blake Moore; Richard Myers

Poster No. 1522

Contact Stress Alterations In Patients With "simple" Low-Energy Rotational Ankle Fractures

Bryan Mouser; Don Anderson; Cesar de Cesar Netto; Jason Wilken

Poster No. 1523

Understanding The Biomechanics Of Cast-induced Heel Pressures Sores Using A Sensor Model:novel Device Significantly More Effective At Alleviating Pressure Compared To Other Interventions

Ruchika Khot; Max H. Twedt; Matthew Halanski

Foot and Ankle - Structure, Function and Mechanics

Poster No. 1524

Medialization Of Tibiotalar Contact Forces After Calcaneal Osteotomy For Flexible Flatfoot During Walking: A Simulation Study

YooHa Son; Kyungmin Lee; Seungbum Koo

Poster No. 1525

Ankle And Hindfoot Center Of Rotation Is Consistent During Walking And Running

Paige Paulus; Tom Gale; Joshua Setliff; Tetsuya Yamamoto; Shumeng Yang; MaCalus Hogan; William Anderst

Poster No. 1526

Traditional Cop-based Sway Parameters May Be Significantly Limited In Characterizing Subclinical Postural Instability In The Elderly

Lewen Qian; Xionggang Yang; Xiang Geng; Xin Ma; Wen-ming Chen

Poster No. 1527

Talar And Calcaneal Coordinate Axes Definitions Across Foot Pathologies

Kas Knutson; Thomas E. Leonard; Katelyn C. Aragon; Erika P. Muhlrad; Abigail M. Anderson; Zachary J. Eatough; Bruce A. MacWilliams; Karen M. Kruger; Amy L. Lenz

Poster No. 1528

Withdrawn

Poster No. 1529

Plantar Loading Of Asymptomatic Healthy Individuals With First Ray Hypermobility During Gait

Howard Hillstrom

Poster No. 1530

Development Of An In-vivo Imaging Protocol To Measure The Kinematics Of The Ankle Complex

David E. Williams; Rebecca Reddiough; Lauren Swain; Dionne Shillabeer; Graham Chapman; Claire Brockett

Poster No. 1531

A Pilot Study Evaluating Associations Between Functional Performance, Pain, And Hindfoot Kinematics In Patients With Patellofemoral Pain Syndrome

Kimberly Hua; Paige Paulus; Romano Sebastiani; Maria Munsch; Keelan Enseki; Sara Piva; William Anderst

Poster No. 1532

Three-dimensional Weight Bearing CT Distance And Coverage Mapping Assessment Of Hallux Valgus Deformity. A Case-control Study.

Andrew Behrens; Vineel Mallavarapu; Grayson Talaski Talaski; Eli Schmidt; KEPLER CARVALHO; Ki Chun Kim; Nacime Mansur; Kevin Dibbern; Cesar de Cesar Netto

Foot and Ankle - Surgical and Non-Surgical Interventions

Poster No. 1533

Anterior Ankle Skin Surface Pressures In Lower Extremity Splints - Minimizing Insult After Injury

Kempland C. Walley; Nicholas Farrar; Kameron Shams; Albert Anastasio; Kristopher Mell; David Walton; James R. Holmes; Paul G. Talusan

Poster No. 1534

Advances In Tissue Preservation, Transplantation Techniques, And Patient Management Lead To Good Short-term Outcomes Following Bipolar Ankle Osteochondral Allograft Transplantation

Kylee Rucinski; James Cook; Kyle Schweser; Brett Crist

Poster No. 1535

Passive Eversion Assessment For Progressive Collapsing Foot Deformity After Lateral Column Lengthening

Jaeyoung Kim; Jeffrey Hoffman; Scott Ellis; Jonathan Deland; Brett Steineman

Poster No. 1536

Biomechanical Comparison Of Nitinol Compression Staples Versus Fully Threaded Lag Screws For Talonavicular Arthrodesis

Ashwin Garlapaty; prati reddy; Blaine Manning; Will Bezold; James Cook; Kyle Schweser

Poster No. 1537

Biomechanical Comparison Of Static Vs Sustained Dynamic Compression Devices On Simulated First Metatarsophalangeal Joint Arthrodesis

Shannon King; Kristen Gregory; David Safranski

Poster No. 1538

Horseshoes As A Biomechanical Solution For Laminitis: Effects Of Shoe Configuration On Third Phalanx Motion In Unaffected Versus Laminitic Equine Hooves

Rita Aoun; Iyana Charles; Abby Williams; Catherine Takawira; Mandi Lopez

Poster No. 1539

The Causal Effect Of Statins And Chemoprophylaxis On Venous Thromboembolism After Ankle Fractures

Richard Fischer; Bardiya Akhbari; Nour Nassour; Joseph Schwab; Hamid Ghaednia; Soheil Ashkani Esfahani

Poster No. 1540

Toe Clearance And Swing Time Improve With Total Ankle Arthroplasty But Still Differ Between Limbs

James Mckendrick; Mason Dooley; Sara L. Arena; Robin Queen

Poster No. 1541

Internal Brace Vs. Screw Fixation For Lisfranc Injuries: A Biomechanical Study

Christina Salas; Natalia McIver; Jessica Nelson; Aamir Ahmad; Tyler Chavez; Katherine Gavin

Hand and Wrist - Biomechanics

Poster No. 1542

Thumb Carpometacarpal Joint Traction Evaluated By CT

Ricardo Ocampo; David Jordan; Kent Kwoh; Zong-Ming Li

Poster No. 1543

The Effect Of Lunate Morphology And Radiographic Parameters On Wrist Instability Following Simulated Injury

James Aglio; Frederick W. Werner

Poster No. 1544

Force Analysis Of The Index Fingers Of Baseball Players And Utilization Of Novel Index Shield

Benjamin T. Johnson; Zachary Ward; Scott Telfer; Winston J. Warme; Seth S. Leopold; Dave Gothard

Poster No. 1545

Study Of Fixation Strength Of Phalangeal Osteosynthesis Using Kirschner Wire- Additional Finite Element Analysis Report On Variation Of Insertion Angle

Yukinori Hayashi; Takashi Ajiki; Hirokazu Inoue; Katsushi Takeshita

Poster No. 1546

Computational Analysis Of Bone-implant Load Transfer At The Distal Radius After Total Wrist Arthroplasty In Flexion And Extension

Elizabeth Norman; Nina Suh; G Daniel Langohr

Hand and Wrist - Imaging

Poster No. 1547

Identification Of The Optimum Entry Point On Capitate To Insert Intramedullary Implant Into Third Metacarpal Bone In Patients With Rheumatoid Arthritis

Takeshi Endo; Daisuke Kawamura; Yuichiro Matsui; Daisuke Momma; Yuki Matsui; Hideyuki Kobayashi; Suzuki Tomoaki; Norimasa Iwasaki

Poster No. 1548

Skin Motion Artifact Of Radiopaque Bead Tracking Relative To Markerless Bone Tracking

Quianna Vaughan; Amy Morton; Taissa Hayda; Trey Crisco

Poster No. 1549

The Effect Of Full-Body Weight-Bearing On Ulnar Variance: An Upper Extremity WBCT Study

Noah M. Scigliano; Ignacio Garcia Fleury; Kevin Dibbern; Jessica Goetz; Nicole DeVries Watson; Natalie A. Glass; Grayson Talaski Talaski; Joseph A. Buckwalter

Hand and Wrist - Surgical and Therapeutic Innovation

Poster No. 1550

Development Of A Novel Animal Of Chronic Entrapment Neuropathy

Yasuhiro Yamamoto

Poster No. 1551

Axon Regeneration Induced By Cell Adhesion Molecule Lfa-1 After Peripheral Nerve Injury

Tomoaki Suzuki; ken Kadoya; Takeshi Endo; Norimasa Iwasaki

Poster No. 1552

Radiography And Subjective Outcome In Superelderly After Distal Radius Fracture. A Register Study.

Magnus Tagil; Linnea Arvidsson; Landgren Marcus; Anna Kajsa Harding

Poster No. 1553

Bio-integrative, Fiber-reinforced Ossiofiber® Fixation Device For Second To Fifth Carpometacarpal Joint Fusion In Carpal Boss

Elizabeth A. Ouellette; Claire Callan; Marla Geltner; Anna-Lena Makowski

Poster No. 1554

Withdrawn

Hand and Wrist - Tendon, Ligament and Neuromuscular Disorders

Poster No. 1555

Histological Characterization Of Painful Neuroma: Clinical And Rat Sciatic Nerve Samples

Yuki Matsui; ken Kadoya; Takeshi ENDO; Yuichiro Matsui; Daisuke Kawamura; Norimasa Iwasaki

Poster No. 1556

Impact Of High Fat Diet And Sex In A Rabbit Model Of Carpal Tunnel Syndrome

Tomoyuki Kuroiwa; Hayman Lui; Koichi Nakagawa; Rou Wan; Elameen Adam; Peter Amadio; Anne Gingery

Poster No. 1557

Why Do Infants And Children Recover From Nerve Injury Better Than Adults? Differential Expression Of Acetylcholine Receptor Subunits And Localization Of Motor Endplates

Luigi P. Gonzales; Vivian Y. Chen; Arjun T. Gupta; Amanda N. Tedesco; Tyler R. Johnston; Oswald Steward

Poster No. 1558

Nerve Recovery After Compression In A Diabetic Rat Model

Ignacio Garcia Fleury; Jessica Goetz; Douglas Fredericks; Emily Petersen; Joseph A. Buckwalter V

Poster No. 1559

What Happens After Nerve Injury: Understanding Post-traumatic Human Motor Endplate Degeneration

Luigi P. Gonzales; Vivian Y. Chen; Amanda N. Tedesco; Tyler R. Johnston; Oswald Steward; Ranjan Gupta

Hip - Diagnostics

Poster No. 1560

What Is The Value Of Pre-operative Mri Before Periacetabular Osteotomy

Paul Beaulé; Kenneth Milligan; Cheryl Kreviazuk; Kawan Rakhra

Poster No. 1561

Increased Hip Translation Can Increase Impingement Free Range Of Motion And Reduce Impingement Risk

Mohammadreza Movahhedi; Mojtaba Yousefi; Nazgol Tavabi; Tarah Wagner; Eduardo N. Novais; Young-Jo Kim; Ata M. Kiapour

Poster No. 1562

Withdrawn

Hip - Growth, Development and Aging

Poster No. 1563

Hemoglobinopathy Is Associated With Total Hip Arthroplasty Indication Even Beyond Sickle Cell Disease

David C. Landy

Poster No. 1564

Estimation Of The Infant Hip Joint Center Using Mr Imaging: A Case Study

Abby R. Brittain; Ella Frank; Clare Fitzpatrick; Tyler Brown; Vidyadhar Upasani; Erin Mannen

Hip - Injury and Healing

Poster No. 1565

Geriatric Hip Fracture Patients Are At Greatest Risk Of Contralateral Hip Fracture In The First Years

Philip P. Ratnasamy; Katelyn E. Rudisill; Oghenewoma P. Oghenese; Matthew D. Riedel; Jonathan N. Grauer

Poster No. 1566

Viability And Expression Of Chondrocytes Harvested During Arthroscopic Treatment Of Femoroacetabular Impingement

Steven DeFroda; Preston Wolfe; Joao Bourbon de Albuquerque II; Caleb Bischoff; Brett Crist; Aaron Stoker; James Cook

Poster No. 1567

Biomechanical Evaluation Of Femoral Neck Fracture Fixation: Ccs Vs Dhs Vs Fns

Laureb Rao; Samarth Mittal; Apoorva Kabra; Vivek Trikha; Anoop Chawla; Kaushik Mukherjee

Poster No. 1568

Factors Predicting Hip Fracture 1 Year Mortality Rates

George Asrian; Chamith Rajapakse

Hip - Structure, Function and Mechanics

Poster No. 1569

Different CT Measurement Methods Result In Different Values Of Rotational Alignment Of The Lower Extremity

Sotaro Kono; Keisuke Uemura; Hidetoshi Hamada; Kazuma Takashima; Nobuhiko Sugano

Poster No. 1570

Hip Muscle Quality In Patients With Unilateral Transfemoral Amputation

Galen Roda; Taylor Wittwer; Jason Stoneback; Mohamed Awad; Brecca Gaffney

Poster No. 1571

Hip And Pelvis Movement Patterns During A Step-down Pivot-turn Task Change After Hip Arthroscopy For Femoroacetabular Impingement Syndrome And Differ From Controls After Surgery

Thomas W. Fenn; Thomas Alter; Daniel M. Wichman; Alejandro Espinoza Orias; Shane Nho; Philip Malloy

Poster No. 1572

Marker-based Motion Capture Error In Measuring Hip Joint Center Location Is Greater During High-flexion Activities

Sarah A. Lopez; Camille Johnson; Ethan Ruh; Naomi Frankston; Shaquille Charles; Craig Mauro; Michael McClincy; William Anderst

Poster No. 1573

Hip Joint Contact Forces In Patients With Femoroacetabular Impingement Syndrome Differ From Both Healthy Controls And The Uninvolved Hip During A Single-leg Squat

Mattia Perrone; Martina Guidetti; Shane Nho; Markus Wimmer; Philip Malloy

Poster No. 1574

3d Joint Space Width Changes Are Associated With Weight-bearing And Rotational Stance In Hip Dysplasia Patients

Dominic J.L. Rivas; Holly D. Aitken; Kevin N. Dibbern; Jessica E. Goetz; Robert W. Westermann; Michael C. Willey

Poster No. 1575

Identification Of 3d Anatomic Structures That Form 2d Radiographic Features Used In Hip Dysplasia Diagnosis

Dominic J.L. Rivas; Marcus M. Tatum; Holly D. Aitken; Jessica E. Goetz; Michael C. Willey; Stuart L. Weinstein

Poster No. 1576

Normative Spinopelvic And Sagittal Hip Motion Amongst Healthy Volunteers: Implications For Total Hip Arthroplasty

Mary K. Richardson; Emily S. Mills; Brian C. Chung; Jennifer C. Wang; Lucas W. Mayer; Matthew C. Gallo; Raymond J. Hah; Nathanael D. Heckmann

Poster No. 1577

Sex Differences In Drop Jump Biomechanics Amongst Hip Osteoarthritis Participants

Koren E. Roach; Valentina Pedita; Sharmila Majumdar; Richard B. Souza

Poster No. 1578

Investigating The Effects Of Mechanical Damage On The Microstructure At The Chondro-labral Junction In The Hip

Mudit Dubey; David Jimenez-Cruz; Jessica C. Mansfield; Ellen M. Green; Ben Sherlock; Peter Winlove; Hazel Fermor; Alison C. Jones; Lin Wang; Sophie D. Williams

Hip - Surgical and Non-Surgical Interventions

Poster No. 1579

Markov Chain Monte Carlo Bayesian Modeling Of Femoral Head Coverage After Periacetabular Osteotomy

Bowen Song; Shuyang Han; Omar G. Stocks; Jennifer Cheng; Sabir K. Ismail; Philip C. Noble; Alfred A. Mansour

Poster No. 1580

Preoperative Anterolateral Acetabular Coverage Is Significantly Decreased In Dysplastic Hips Undergoing Hip Arthroscopy And Periacetabular Osteotomy As Compared To Controls

Jordan Larson; Christopher Ephron; Lyla A. Handoklow; Martina Guidetti; Mario Hevesi; Alejandro A. Espinoza Oria; Joel Williams; Shane J. Nho

Poster No. 1581

Is The Use Of A Postoperative Hip Orthosis Beneficial Following Routine Arthroscopy Of The Hip? A Retrospective Cohort Study

Dylan Wentzel; Jake S. Enos; Scott Mullen; J. Paul Schroepel; Damon Mar; Jason Smoak; Ian Goodman

Poster No. 1582

Biomechanical Evaluation Of Transiliac-transsarcular Screw Fixations Of Anterior Posterior Compression Injuries

Carolyn Meinerz; Maxwell Cardwell; Jill Martin; Chad J. Beck; Mei Wang; Gregory J. Schmeling

Poster No. 1583

Billing Rules/Global Period Affect Postoperative Follow-Up Following Total Hip Arthroplasty

Philip P. Ratnasamy; Oghenewoma P. Oghenesume; Peter Y. Joo; Jonathan N. Grauer

Poster No. 1584

Efficacy And Safety Of Orally And Intravenously Administration Of Tranexamic Acid In Elderly Femoral Neck Fracture Patients

Ya Kuan Zhao; Cheng Zhang; Yuan-Wei Zhang; Ru-Ya Li; Tian Xie; Li-Yong Bai; Hui Chen; Yun-Feng Rui

Poster No. 1585

A Novel System For Near Real-time Markerless Intra-operative Assessment Of Joint Contact Stress During Periacetabular Osteotomy: A Proof-of-concept Study

Marcus Tatum; Jessica Goetz; Holly Aitken; Michael Willey

Poster No. 1586

Trochanteric Fixation Using Cable Plate Devices In Complex Primary And Revision Total Hip Arthroplasty

Patrick Schafer; Thomas Sullivan; Bradley Lambert; Kwan Park; Timothy Brown; Terry Clyburn; Stephen Incavo

Poster No. 1587

Trends In Surgical Management Of Osteonecrosis Of The Femoral Head: A 2010 To 2020 Nationwide Study

Mitchell K. Ng; Aaron Lam; Ariel N. Rodriguez; Nicolas Piuze; Che Hang Jason Wong; Lynne Jones; Michael A. Mont

Poster No. 1588

Surgeon Delay In Geriatric Hip Fractures: Overall Time To Surgery Matters, But Not Time From Optimization To Surgery

Mitchell K. Ng; Jordan B. Pasternack; Paul G. Mastrokostas; Ariel N. Rodriguez; Kevin K. Kang

Poster No. 1589

Outcomes Of Concomitant Hip Arthroscopy And Periacetabular Osteotomy: A Systematic Review

Michael S. Lee; Scott Fong; Jade S. Owens; Ronak J. Mahatme; David N. Kim; Stephen Gillinov; Jay Moran; Jacquelyn Simington; Seyi Abu; Andrew Jimenez

Poster No. 1590

Does Duration Of Symptoms Affect Outcomes After Hip Arthroscopy: A Systematic Review

David N. Kim; Michael S. Lee; Jade S. Owens; Stephen Gillinov; Ronak J. Mahatme; Seyi Abu; Andrew Jimenez

Hip and Knee Arthroplasty - Clinical Outcomes

Poster No. 1591

Risk Factors Associated With Venous Thromboembolism Following Total Knee Arthroplasty

Mary K. Richardson; Nick Kusnezov; Avinash Iyer; Amit S. Piple; Jennifer C. Wang; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 1592

Rotational Alignment Of The Lower Extremity: Implications For The Management Of Patellar Instability

Matthew C. Gallo; Jennifer A. Bell; Caroline E. Vonck; Jennifer C. Wang; Amit S. Piple; Nathanael D. Heckmann; George F "Rick" Hatch

Poster No. 1593

Degeneration Of Erector Spinae Muscle Associate With Sagittal Postural Imbalance In Hip Osteoarthritis Patient

Kenta Kanai; Hyonmin Choe; Taro Tezuka; Hiroyuki Ike; Gousuke Akiyama; Yutaka Inaba

Poster No. 1594

Comparison Of Femoral Bmd Changes After Tha With Cementless Short Tapered Wedge Stem And Fully Ha-coated Stem

Yohei Naito; Masahiro Hasegawa; Shine Tone; Hiroki Wakabayashi; Akihiro Sudo

Poster No. 1595

Knee Joint Synovitis After Total Knee Arthroplasty Is Not Correlated To Patient Satisfaction Score

Kristen Barton; Alexandra Rocha; Robert Dima; Kevin Boldt; Holly Philpott; Lyndsay Somerville; Tom Appleton; Brent Lanting

Poster No. 1596

Factors Associated With Failure Of Proximal Femoral Replacement In Revision Hip Surgery

Kevin C. Liu; Nathanael D. Heckmann; Julian Wier; Amit S. Piple; Daniel A. Oakes; Donald B. Longjohn; Alexander B. Christ

Poster No. 1597

Decreased Opioid Utilization After Total Knee Arthroplasty With Peripheral Blocks

Jennifer C. Wang; Amit S. Piple; Cory K. Mayfield; Brian C.H. Chung; Daniel A. Oakes; Gligor Gucev; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 1598

Increased Risk Of Venous Thromboembolism In Total Joint Arthroplasty Patients With Anemia: Are Transfusions To Blame?

Kevin C. Liu; Amit S. Piple; Mary K. Richardson; Lucas Mayer; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 1599

Can Preoperative PROMIS Scores Predict 90-Day Readmission Following Primary Total Knee Arthroplasty? A Propensity Score-Matched Analysis

Anirudh Buddhiraju; Murad A. Subih; Tony Lin-Wei Chen; Mehdi S. Salimy; Pete Tuchinda; Michelle Shimizu; Hojoon Seo; On-Jak Kwon; Jillian C. Burns; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 1600

Machine Learning Algorithms Predict 30-day Readmission Following Revision Hip And Knee Total Joint Arthroplasty: An Acs-nsqip Database Analysis

Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad A. Subih; On-Jak Kwon; Michelle Shimizu; Hojoon Seo; Pete Tuchinda; Mehdi S. Salimy; Christian Pean; John G. Esposito; Young-Min Kwon

Poster No. 1601

Artificial Intelligence Algorithms Predict Post-operative Readmissions And Extended Length Of Stay In Primary Total Hip And Total Knee Arthroplasty: A National Database Analysis

Christian A. Pean; Tony Lin-Wei Chen; Murad A. Subih; Anirudh Buddhiraju; Mehdi S. Salimy; Pete Tuchinda; Michelle Shimizu; Hojoon Seo; On-Jak Kwon; John G. Esposito; Young-Min Kwon

Poster No. 1602

Can Machine Learning Models Predict 30-day Risk Of Reoperation In Patients Undergoing Primary Total Knee Arthroplasty? A National Inpatient Database Analysis

Murad A. Subih; Anirudh Buddhiraju; Tony Lin-Wei Chen; Pete Tuchinda; Michelle Shimizu; Hojoon Seo; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 1603

Predicting Surgical Site Infection Following Primary Total Hip Arthroplasty: An Artificial Intelligence Approach Using The ACS-NSQIP Database

Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad A. Subih; Pete Tuchinda; Hojoon Seo; Michelle Shimizu; On-Jak Kwon; Mehdi S. Salimy; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 1604

Analysis Of Racial Disparities In Orthopaedic Outcomes

Maveric Abella; Tyler Thorne; Jeffrey Hayashi; Andrea Finlay; Derek Amanatullah

Poster No. 1605

Predicting Blood Transfusion After Revision Total Hip Arthroplasty: An Artificial Intelligence Approach Using ACS-NSQIP Database

Anirudh Buddhiraju; Murad A. Subih; Tony Lin-Wei Chen; Michelle Shimizu; Mehdi S. Salimy; Hojoon Seo; Pete Tuchinda; On-Jak Kwon; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 1606

Identification Of Patients At Risk Of Discharge To Rehabilitation Facilities After Revision Total Knee Arthroplasty: An Artificial Intelligence Based Study

Murad A. Subih; Tony Lin-Wei Chen; Anirudh Buddhiraju; Michelle Shimizu; Hojoon Seo; Mehdi S. Salimy; Pete Tuchinda; On-Jak Kwon; Christian A. Pean; John G. Esposito; Young-Min Kwon

Poster No. 1607

Sex-Based Differences In The In Vivo Patellofemoral Kinematics Of The Native Knee During Sit-to-Stand Motion

Tony Lin-Wei Chen; Anirudh Buddhiraju; Murad A. Subih; Michelle Shimizu; Pete Tuchinda; Hojoon Seo; On-Jak Kwon; Miho Tanaka; Young-Min Kwon

Poster No. 1608

Sex-Based Differences In The Native Knee During Kneeling: The In Vivo 6 Degrees Of Freedom Patellofemoral Kinematics Analysis

Tony Lin-Wei Chen; Murad A. Subih; Anirudh Buddhiraju; Pete Tuchinda; Hojoon Seo; Michelle Shimizu; On-Jak Kwon; Miho Tanaka; Young-Min Kwon

Poster No. 1609

Comparing Muscle Forces And Knee Contact Forces Between Implant Designs After Total Knee Arthroplasty- Preliminary Outcomes

Erik Kowalski; Nicholas S. Ryan; Alexandre Pelegrinelli; Geoffrey Dervin; Mario Lamontagne

Poster No. 1610

The Effectiveness Of Lipped Acetabular Liners In Anterior Total Hip Arthroplasty On Instability

Joseph Genualdi; Alaka Gorur; Matthew LaVelle; Roshan Shah; Alexander L. Neuwirth; H. John Cooper; Jeffrey A. Geller

Poster No. 1611

Intraoperative Dexamethasone And Venous Thromboembolism Following Total Joint Arthroplasty

Mary K. Richardson; Amit S. Piple; Ian A. Jones; Kevin C. Liu; Jay R. Lieberman; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 1612

Comparison Of 3-Dimensional Versus 2-Dimensional Pre-Operative Planning For Total Hip Arthroplasty

James Crutcher; Emily Hampp; Melanie Caba; Michael Mont

Poster No. 1613

Evaluating The Effect Of Posterior Tibial Slope On Postoperative ROM And Complications After TKA, A Two-year Follow-up

Daniel Paku; Abhishek Deshpande; Lucas Paladino; Michael Redondo; Samuel Chmell

Poster No. 1614

Decreased Preoperative Hip Motion Predicts Postoperative Spinopelvic Changes

Brandon S. Gettleman; Jennifer C. Wang; Joshua G. Sanchez; Mary K. Richardson; Kamran Movassaghi; Emily S. Mills; Taro Tezuka; Alexander B. Christ; Nathanael D. Heckmann

Poster No. 1615

Does Spinopelvic Mobility Impact Characterization Of Impingement And Component Functional Positioning To Avoid Impingement? A Multi-center Analysis

Jonathan Vigdorchik; Robert Marchand; Ajay Lall; Geoffrey Westrich; Benjamin Domb; Laura Scholl; Seth Jerabek

Poster No. 1616

The Use Of Advanced Navigation Tools In Obese Total Knee Arthroplasty

Mary K. Richardson; Ryan DiGiovanni; Brian K. McCrae Jr.; Wes Cooperman; John Ludington; Nathanael D. Heckmann; Daniel A. Oakes

Poster No. 1617

Decreasing Trend In Mortality Rates Of Aseptic Versus Septic Revision Total Hip Arthroplasty: An Analysis Of 681,034 Cases

Mitchell K. Ng; Matthew Magruder; Andriy Kobrin; Aaron Lam; Ariel N. Rodriguez; Afshin Razi; Orry Erez; Che Hang Jason Wong; Michael Mont; Nicolas Piuze

Poster No. 1618

Multi-Center Study To Assess Influence Of Surgical Approach On Hip Functional Implant Placement

Ajay Lall; Seth Jerabek; Robert Marchand; Geoffrey Westrich; Benjamin Domb; Laura Scholl; Jonathan Vigdorchik

Poster No. 1619

The Utility Of Lateral Standing And Sitting Radiographs To Assess Spinopelvic Motion

Seth Jerabek; Jonathan Vigdorchik; Robert Marchand; Ajay Lall; Benjamin Domb; Laura Scholl; Geoffrey Westrich

Poster No. 1620

The Utility Of Robotic Assisted Total Hip Arthroplasty With The Incorporation Of Virtual Range Of Motion On Intraoperative Implant Positioning

Seth Jerabek; Jonathan Vigdorchik; Ajay Lall; Benjamin Domb; Robert Marchand; Laura Scholl; Geoffrey Westrich

Poster No. 1621

Clinical And Radiographic Outcomes Of Uncemented Total Knee Arthroplasty Performed In Patients With Severe Varus Or Valgus Knee Deformity

Andrew P. Stegemann; Andrey Galper; Justin Bird; Hailley Pearson; Mary Bayers-Thering; Sonja Pavlesen; Matthew J. Phillips; Sridhar Rachala

Poster No. 1622

Increased Operative Time Leads To Less Reinfections In DAIR Procedures

Michael C. Marinier; Bryan Mouser; Ayobami S. Ogunsola; Jacob M. Elkins

Poster No. 1623

Superficial Wound Complications Following Direct Anterior Total Hip Arthroplasty

Arman C. Hlas; Michael Marinier; Ayobami S. Ogunsola; Jacob M. Elkins

Poster No. 1624

Withdrawn

Poster No. 1625

Withdrawn

Poster No. 1626

Patient Perception Of Their Same Day Discharge Versus Their Overnight Stay After Total Joint Arthroplasty

Daniel O'Brien; Thomas Sullivan; Bradley Lambert; Timothy Brown; Stephen Incavo; Kwan Park

Poster No. 1627

The Contribution Of Operative Time To Obesity-related Outcomes In Arthroplasty

Maveric Abella; John P. Angeles; Andrea Finlay; Derek Amanatullah

Poster No. 1628

Novel Methodology For Measuring The Medial Proximal Tibial Angle In Total Knee Arthroplasty

William Walter; Evan Jenkins; David Lin; Matthew Lim; Ishaan Jagota; Joshua Twiggs; Brad Miles

Poster No. 1629

Determinants Of Opioid Usage Following Inpatient Versus Outpatient Total Joint Arthroplasty

Ankur Khanna; Peter C. Krause; Vinod Dasa; Lauren Leslie; Deryk G. Jones; Andrew G. Chapple

Poster No. 1630

Incidence Of Heterotopic Ossification For Hip Approaches In Primary Total Hip Arthroplasty

Mary Bayers-Thering; Joe Kocan; Joseph Bengart; Hailley Pearson; Jeremy Walsh; Nadir Haider; Matthew Phillips

Poster No. 1631

Total Knee Axial Component Rotation With Gap Balancing - Role Of Tibial Torsion And Femoral Version

Jacob Elkins; Jason Jennings; Thomas Parisi; Anna Brady; Roseann Johnson; Douglas Dennis

Hip and Knee Arthroplasty - Complications/Infections

Poster No. 1632

Are Pre-Osseointegration Periprosthetic Femur Fractures Associated With Greater Incidence Of Periprosthetic Joint Infection Following Surgical Treatment?

Nikhil Vasireddi; Simarjeet Puri; Neitzke Colin; Sonia Chandi; Agnes Cororaton; Brian Chalmers; Peter Sculco; Elizabeth Gausden

Poster No. 1633

Low Incidence But Similar Outcomes For Patients Who Satisfy Typical Indications For One-stage Revision Arthroplasty For Chronic Periprosthetic Joint Infection

Michael M. Kheir; Christopher Anderson; Yu-fen Chiu; Alberto Carli

Poster No. 1634

Postoperative Glucose Levels Do Not Predict Infection After Revision Total Joint Arthroplasty

Michael Kheir; Yu-fen Chiu; Alberto Carli

Poster No. 1635

Impact Of Bone Health On The Mechanics Of Plate Fixation For The Vancouver Type B1 Periprosthetic Femoral Fracture

Xiang Chen; Casey Myers; Chadd Clary; Peter Varga; Dana Coombs; Ryan DeWall; Bryan Fritz; Paul Rullkoetter

Poster No. 1636

Contribution Of The Medial Iliofemoral Ligament To Hip Stability After Total Hip Arthroplasty Through Direct Anterior Approach

Fernando J. Quevedo Gonzalez; Kathleen Meyers; Jennifer Bido; Jose Rodriguez

Poster No. 1637

Identification Of Causative Organisms In Periprosthetic Joint Infections Using The Nanopore Sequencer

Koki Abe; Hyonmin Choe; Yuta Hieda; Naomi Kobayashi; Hiroyuki Ike; Taro Tezuka; Yutaka Inaba

Hip and Knee Arthroplasty - Implant Materials, Fixation and Wear

Poster No. 1638

Characterization Of The Micromotion Of A Cementless TKA Femoral Component In A Cadaveric Model

Boon Him Lim; Steve Swope; Shouchen Dun; Thiago Amaral; Alasdair Mercer; David Wolfson; Dan Huff; Daniel Hoeffel

Poster No. 1639

Synovial Fluid May Affect Ti-6Al-4V And CoCrMo Ion Release

Michael A. Kurtz; Lisa Phan; Hwaran Lee; Charley M. Goodwin; Lilliana M. Taylor; Jeremy L. Gilbert; William M. Mihalko

Poster No. 1640

Corrosion Characteristics Of Orthopedic Alloys: Effects Of Retrieved Synovial Fluid And Artificial Physiological Solutions

Charley M. Goodwin; Annsley O. Mace; Piyush Khullar; Zeke J. Walton; Jeremy L. Gilbert

Poster No. 1641

Development Of A Shear Fatigue Test Method For A Novel Additive Manufactured Porous Tibial Baseplate

Erik Woodard

Poster No. 1642

A Method To Characterize The Deformations Of Acetabular Shell

Boon Him Lim; Steve Swope; Dustin Albert; Shouchen Dun

Poster No. 1643

Wear And Tensile Studies Of Super-gradient Crosslinked Uhmwpe

Zongtao Zhang; Imants Liepins

Poster No. 1644

Super Gradient Crosslinked Polyethylene Wear Particle Analysis

Sydney Zoretic; Imants Liepins; Zongtao Zhang

Poster No. 1645

An Innovative Test Method To Characterize The Effort To Seat An Orthopaedic Implant

Steve Swope; Boon Him Lim; Shouchen Dun; Dan Huff; Alasdair Mercer; David Wolfson; Thiago Amaral

Poster No. 1646

Different Pore Morphology Evaluation Methods Of Various Porous Structures

Aline Elquist; Hannah Frankel

Poster No. 1647

Biomechanical Comparison Of Impaction Techniques And Cross-sectional Femoral Stem Shapes For Cementless Total Hip Arthroplasty

Vanessa R. Richardson; Alexander Chong; Anthony N. Brown

Poster No. 1648

AI-based Non-invasive Diagnosis Of Aseptic Implant Loosening Using Ultrasound Cuff

Amirhossein Yazdekhesti; Miao Yu; Joseph Schwab; Soheil Ashkani Esfahani; Hamid Ghaednia; Elizabeth Hughes; Joshua Norton; Casey Lam

Poster No. 1649

A Novel Dual-mobility Hip System With An Advanced Bearing Material: Outcomes From A Prospective, Multicenter Trial

Vinaya Rajahraman; Daniel Waren; Kyle Lawrence; Weston Buehring; Jeremiah Thomas; Ran Schwarzkopf; Sanjai Shukla; Simon Journeaux; Henry Fu; William Blakeney; Amir Khoshbin; Edwin P. Su

Poster No. 1650

Wear Of Antioxidant UHMWPE In A Hip Simulation Under Normal And Accelerated Aged Condition

Elizabeth Hippensteel; Corey Laukhuf; Casey Wise

Poster No. 1651

Two Methods To Evaluate Mode 3 Wear Of Antioxidant UHMWPE In A Hip Simulation

Elizabeth Hippensteel

Poster No. 1652

Surgical Impaction Force In Benchtop Head-stem Tha: Effect Of Surgeon Experience And Assembly Technique

Michael Godoy; Kirsten Sipek; Jonathan Gustafson; Brett Levine; Robin Pourzal; Hannah Lundberg

Poster No. 1653

The Effect Of Implant Size On Fretting Currents Of Acetabular Cup-liner Tapers During In Vitro Cyclic Loading

Peter Kurtz; Annsley Mace; Jeremy Gilbert

Poster No. 1654

Influence Of Loading On Tissue Differentiation And Bone Ingrowth In A Porous Scaffold Using A Mechanoregulation Algorithm

Yunyang Gu; Wade (Weidong) Tong; Glen L. Niebur

Poster No. 1655

Radiographic Assessment Of Two Femoral Stem Implants Used During Total Hip Arthroplasty Via Direct Anterior Approach

Maveric Abella; Ruixue Zhang; Scott Nishioka; Samantha Andrews; Cass Nakasone

Hip and Knee Arthroplasty - Kinematics and Computational Modeling

Poster No. 1656

An Advanced Knee Simulator Model Can Reproducibly Be Used For Ligament Balancing Training During Tka

Ahmad Faizan; Scott Logan; James Crutcher; Michael Mont; Ormonde Mahoney

Poster No. 1657

Sensor Sensitivity Assessment During A Passive Knee Drop Test In A Surrogate Knee Model

Kevin M. Abbruzzese; Andre Freligh; Catherine Peluso

Poster No. 1658

Investigating Quadriceps Muscle Activity And Pain Level Climbing Stairs For Total Knee Arthroplasty Patients

Hannah L. Stokes; Fangjian Chen; Ronald Singer; Michael Bates; Nigel Zheng

Poster No. 1659

Learning Curve Associated With Computed Tomography-based Navigation In Muscle-sparing Total Hip Arthroplasty

Hiroshi Watanabe; Takuya Uematsu; Yasushi Oshima; Tokifumi Majima

Poster No. 1660

Asymmetry In The Tibiofemoral Axis Of Rotation During Activities Of Daily Living May Not Affect Patient Satisfaction After Knee Arthroplasty

Tom Gale; Elizabeth Copp; Kal Byrapogu; Kenneth Urish; William Anderst

Poster No. 1661

Is Standardized Total Knee Arthroplasty Loading Profiles Appropriate For All Implant Designs?

Yashar A. Behnam; Ahilan Anantha Krishnan; Chadd W. Clary

Poster No. 1662

Algorithm For Generation Of Patient-specific Capsule Models Of The Implanted Hip

Ahilan Anantha Krishnan; Casey Myers; Chadd Clary

Poster No. 1663

Biomechanical Comparison Of Kinematic And Mechanical Alignment Methods In Bi-cruciate Ligament Retaining Total Knee Arthroplasty

Shogo Nabeki; Yohei Okada; Atsushi Teramoto; Katsunori Takahashi; Kosuke Shiwaku; Kota Watanabe; Hiromichi Fujie; Toshihiko Yamashita

Poster No. 1664

Simulation Of 3D Active Muscles: A Computational Framework Considering Muscle Fibers And Multiple Muscle Interactions

Wei Zeng; Clare Fitzpatrick; Colton Babcock; Casey Myers; Paul Rullkoetter; Kevin Shelburne

Poster No. 1665

Novel Approach For Non-Invasive Prediction Of Body Shape And Habitus

Emma Young; Casey Myers; Abigail Eustace; Paul Rullkoetter; Peter Laz

Poster No. 1666

Intra-operative Registration Of Knee Articulating Surface Utilizing A Portable Hand-held Scanner

Morteza Meftah; Brock Overmiller; Irina Benimovich; Jonathon Greenwald; Gordon Goodchild

Poster No. 1667

Over 50% Of Patients At Risk Of Impingement After THA Surgery Are Not Captured With Neutral Bony Alignment

Max Hardwick-Morris; Joshua Twiggs; Brad Miles; Warwick Bruce; William L. Walter

Poster No. 1668

Experimental Validation Of A Computational Knee Model Of Tka Implant Placement

Aaron Henry; Gordon Goodchild; Jon Greenwald; Morteza Meftah; Michael Moreno; Andrew Robbins

Poster No. 1669

Limb Symmetry Of The Knee Joint Kinematics During Daily Activities For Total Knee Arthroplasty Patients

Fangjian Chen; Hannah Stokes

Poster No. 1670

A Comparison Of Manual Assessment Versus Distraction-induced Ligament Loads During Knee Arthroplasty Assessment Of Ligament Constraint

Jason Halloran; Azhar Ali; Xiangyi (Cheryl) Liu

Poster No. 1671

Effect Of Surgical Drapes On Signal Strength Of A Novel Radar Tracking System

Morteza Meftah; Alex Goodchild; Brock Overmiller; Jonathon Jonathon; Gordon Goodchild

Poster No. 1672

Staggered Stance Sit-to-stand As A Functional Assessment For Total Hip Arthroplasty Patients

Karim Khattab; Hervé Ngwe; Robert Matthew; Jeffrey Lotz; Thomas Vail; Jeannie Bailey

Poster No. 1673

Real-time Prediction Of Tka Kinematics And Contact Mechanics

Clare Fitzpatrick; Chadd Clary; Casey Myers; Paul Rullkoetter

Poster No. 1674

More Posterior Contact Position In Posterior-stabilized Than Medial-pivot Total Knee Arthroplasty During In-vivo Lunge Activity

Diyang Zou; Nan Zheng; Jiaqi Tan; Zhi Ling; Yunsu Chen; Tsung-Yuan Tsai

Hip and Knee Arthroplasty - Robotics and AI

Poster No. 1675

Does Femoral Component Sizing Differ Between Robotic-assisted Versus Manual Total Knee Arthroplasty?

Daniel Lamanna; Nattaly Greene; Prabhavi Denagamage; Arthur Malkani; Laura Scholl; Antonia Chen

Poster No. 1676

Computer-Assisted Total Knee Arthroplasty Accuracy Influenced By Anatomic Landmark Identification

Carter Sorensen; Chadd Clary

Poster No. 1677

Learning Curve For VELYS Robotic-assisted TKA System

Jonathan S. Lall; Alexandra L. McLennan; Stephen Mucher; Corey F. Hryc; Ugonna N. Ihekweazu

Poster No. 1678

Cementless Robotic-Assisted Total Knee Arthroplasty. Minimum 2-year Follow-up

Charles M. Granade; Paul T. Eapen; Michael J. Stoltz; Langan S. Smith; Madhusudhan R. Yakkanti; Arthur L. Malkani

Poster No. 1679

Results Of Robotic-Assisted Total Knee Arthroplasty. Minimum 5-year Follow-up

Charles M. Granade; Michael Ziegele; Nolan S. Smith; Michael J. Stoltz; Langan S. Smith; Madhusudhan R. Yakkanti; Arthur L. Malkani

Poster No. 1680

Assessing Surgeon Confidence And Efficiencies When Utilizing Robotic Assisted Total Knee Arthroplasty

Alexandra Valentino; Laura Scholl; Melanie Caba; Emily Hampp; Michael Mont

Poster No. 1681

Improved Mediolateral Gap Balance Achievement With Instrumented Navigated Total Knee Arthroplasty Compared To Conventional Instrumentation

Laurent Angibaud; Wen Fan; Florian Kerveillant; Philippe Dubard; Marine Torrollion; Matthew Rueff; Alexander Sah; James Huddleston

Poster No. 1682

Target Loads And Laxities During Gap Balancing In Total Knee Arthroplasty

Azhar A. Ali; Emily Hampp; Cheryl Liu; Jerry D'Alessio; Martin W. Roche; Michael A. Mont; James P. Crutcher

Poster No. 1683

Robotic-Assisted Total Knee Arthroplasty Technology Helps Provide A Repeatable And Reproducible Method Of Assessing Soft Tissue Balance.

Laura Scholl; Melanie Caba; Emily Hampp; Azhar Ali; James Crutcher; Michael Mont; Ormonde Mahoney

Poster No. 1684

Reliability Of Laxity Acquisitions During Navigated Total Knee Arthroplasty - Comparison Of Two Techniques

Laurent Angibaud; Wen Fan; Philippe Dubard; Matthew Rueff; Hernan Prieto; Hari Parvataneni

Imaging - Hard Tissue

Poster No. 1685

Raman Sensitivity Of Raman Micro-spectroscopy And Fiber Optic Raman Spectroscopy To Bone Matrix Manipulation

Rafay Ahmed; Mustafa Unal; Rekha Gautam; Sasidhar Uppuganti; Anita Mahadevan-Jansen; Jeffry Nyman

Poster No. 1686

Safe Angular Region: A Standardized Metric To Describe Amplitude Of Bone Screw Safe Corridors

Giovanni Solitro; Drayton Daily; Brad Chauvin; Kevin Perry; Camryn Keller; Shane Barton

Imaging - Image Analysis

Poster No. 1687

Non-invasive Mri Assessment Of Infrapatellar Fat Pad In Adult Mice With Post-traumatic Osteoarthritis.

Aurea V. Mohana-Borges; Sanique M. South; Sheronda Statum; Karen Cheng; Saeed Jerban; Eric Chang; Yajun Ma; Tim Griffin; Christine Chung

Poster No. 1688

Towards Fully Automated Segmentation Of Proximal Femur MRI With Developmental Dysplasia Of The Hip

Mahdis Khodadadi Jokar; Jasper Kwasny; Cynthia Fantini Pagani; Alexander Zimmerer; Leon Robertz; Kevin Bill; Uwe Kersting; Bhushan Borotikar

Poster No. 1689

Autonomous Autosegmentation And Landmark Detection Platform For Large Scale Analysis Of Clinically Obtained Hip CT Scans

Mallika Singh; Charles Mitchell; Jin-Young Kim; Mohammadreza Movahhedi; Nazgol Tavabi; Tarah Wagner; Ata Kiapour

Poster No. 1690

Machine Learning-based Classifier Model For Predicting The Progression Of Knee Osteoarthritis Based On Knee Dimensions And Angles From Knee Radiographs - Data From The Osteoarthritis Initiative

Teemu A.T. Nurmirinta; Mika E. Mononen; Mikael J. Turunen; Jussi Tohka

Poster No. 1691

The Use Of Advanced Navigation Tools In Complex Deformity Total Knee Arthroplasty

Ryan DiGiovanni; Jennifer C. Wang; Wes Cooperman; Christian Au; John Ludington; Nathanael D. Heckmann; Daniel A. Oakes

Poster No. 1692

Mizzou 3D SPinE: Improving Evidence-based Patient Care For Pediatric Spinal Deformities

Emily V. Leary; Jinpu Li; Melanie Boeyer

Poster No. 1693

From Orthopaedic Imaging Summaries To Evidence-based Patient Care - Aggregating Data Efficiently With AI

Jinpu Li; Breanne S. Baker; Melanie Boeyer; Emily V. Leary

Poster No. 1694

Validity Of Automated Thresholding Approaches For Predicting Fat Infiltration Of The Paraspinal Muscles From Clinical Mri Sequences

Jessica N. Ornowski; Madeline Hess; Lucas Dzieszinski; Abel Torres Espin; Roland Krug; Maryse Fortin; Sharmila Majumdar; Jeannie Bailey

Poster No. 1695

Reliability And Validity Of A Mobile Application For Measuring Femoral Anteversion In Adult Patients

Moon Chul Seok; Oh Minjoon; Hyang Kim; Junghwa Choi; Seul-Ki Kim; Saerom Jeong; Bo Young Park; Seung Yeol Lee

Poster No. 1696

Clinical Applications Of Plantar Pressure Measurement: A Review

Harrison S. Wilson; Shanni Zhou; Jessica Rosendorf; Kelsey Detels; David Shin; Bardiya Akhbari; Andrew Chen; Hamid Ghaednia; Soheil Ashkani Esfahani; Joseph Schwab

Poster No. 1697

Comparison Of Foot Center Axis And Ankle Rotation Using Weight-bearing CT: Implications For Total Ankle Arthroplasty

Alexander Rascoe; Alexandra Aitchison; Ryan Ridenour; Miqi Wang; Samuel Adams

Poster No. 1698

Relationship Between Radiographic Evaluation Of Lower Extremity Alignment Including Calcaneal Bone And Knee Adduction Moment

Junki Shiota; Yasumitsu Ohkoshi; Koji Iwasaki; Takahiro Inoue; Kengo Ukishiro; Kensaku Kawakami; Tatsunori Maeda; Tomohiro Onodera; RIKIYA BABA; Yuki Suzuki; Eiji Kondo; Norimasa Iwasaki

Poster No. 1699

A Substantial Number Of Total Knee Arthroplasty Patients Undergo Magnetic Resonance Imaging In The Year Prior To Surgery--a Potential Overutilization Of Healthcare Resources

Katelyn E. Rudisill; Philip P. Ratnasamy; Peter Y. Joo; Lee E. Rubin; Jonathan N. Grauer

Poster No. 1700

Joint Space Narrowing Compared To The Contralateral Side During Hip Arthroscopy: Predictor Of Conversion To THA?

Nathan J. Cherian; Christopher T. Eberlin; Zachary L. LaPorte; Michael P. Kucharik; Kaveh A. Torabian; Kieran S. Dowley; Michael C. Dean; Scott D. Martin

Poster No. 1701

Analysis Of Stress Distribution On S1 Pedicle And Iliac Fixation Screw In Adult Spinal Deformity Correction Using Finite Element Model

Hiroyuki Tachi; Terufumi Kokabu; Katsuhisa Yamada; Norimasa Iwasaki; Hideki Sudo

Poster No. 1702

Histopathologic Diagnosis Of Primary Bone Tumors And Tumor-like Lesions With A Deep Neural Network

Logan Nye; Soheil Ashkani Esfahani; Hamid Ghaednia; Santiago Lozano-Calderon; Joseph Schwab

Poster No. 1703

Age And Anatomical Region Related Differences In Meniscal Vascularization Of Swine Using Micro-computed Tomography Imaging

Ville-Pauli Karjalainen; Valentina R. Herrera; Khaled Elkhoully; Silvia Modina; Simo Saarakkala; Ali Mobasheri; Alessia Di Giancamillo; Mikko Finnila

Imaging - Soft Tissue

Poster No. 1704

Effect Of Depth-dependent Variation In Articular Cartilage Composition On Nanoparticle Diffusion

Jiri Jäntti; Anisha Joenathan; Maria C. Fugazzola; René van Weeren; Brian D. Synder; Mark W. Grinstaff; Juha Töyräs; Hanna Matikka; Janne T.A. Mäkelä

Poster No. 1705

Use Of [18f]feppa Pet/mri To Measure Knee Synovial Inflammation

Zachary J. Koudys; Thomas Appleton; Brent A. Lanting; Jonathan D. Thiessen; Matthew G. Teeter

Poster No. 1706

Contrast-enhanced μ CT Enables 3D Structural Evaluation Of Tissue Engineered Cartilage

Heta Orava; Stephen Pahoff; Christoph Meinert; Mark W. Grinstaff; Travis J. Klein; Juha Töyräs; Janne T. A. Mäkelä

Poster No. 1707

MRI-based Texture Analysis To Track Anterior Cruciate Ligament Healing Within Two Years After Surgery

Shankar G. Kaushal; Jin-Young Y. Kim; Mallika Singh; Sean W. Flannery; Martha M. Murray; Braden C. Fleming

Infection - Biomarkers and Outcomes

Poster No. 1708

Predicting Outcomes In Two-stage Exchange Arthroplasty For PJI: A Retrospective Review Of Neutrophil-to-Lymphocyte Ratio And C-Reactive Protein

Dominic A. Lombardo; Amanda Stewart; Paul R. LaSala; Matthew J. Dietz

Poster No. 1709

Localized Temporal Inflammatory Response Of A In Vivo Prosthetic Joint Infection Model

Matthew J. Dietz; Elizabeth Stewart; Nour Bouji; Paris E. Taylor; Benjamin Giertych; Jonathan W. Boyd

Poster No. 1710

Preoperative Diagnosis Of Infected Nonunion Of Femur Or Tibia With Targeted Proteomics From Blood Plasma

Ferdinand Weisemann; Claudia Siverino; Katharina Trenkwalder; Anja Heider; Fintan Moriarty; Simon Hackl

Poster No. 1711

Development Of An Ovine Model Of Implant-associated Spine Infection Using Biofilm Inocula

Nicholas N. Ashton

Infection - Treatment and Therapeutics

Poster No. 1712

The Majority Of Biofilm Studies In Orthopedic Surgery Lack Direct Visualization Of Biofilm And Utilize An In Vitro Study Design: Results Of A Systematic Review

Daniel A. Driscoll; Tyler K. Khilnani; Ajay Premkumar; Sita Nirupama Nishtala; Mathias Bostrom; Alberto Carli

Poster No. 1713

Optimization Of Vascular Calcification And Survival Rate In Adenine Rat Models

Ho Won Kang; Linying Cao; Youngsik Yoon; Dae-Yoo Kim; Min Gyu Kyung; Dongyeon Lee

Poster No. 1714

Equine Bone-marrow Derived MSC Reduce Matrix Of Established Biofilms In Vitro

Sarah M. Khatibzadeh; Linda A. Dahlgren; Clayton C. Caswell; William D. Ducker; Stephen R. Werre; Sophie H. Bogers

Poster No. 1715

High Rate Of Failure Of One-stage Irrigation And Debridement Of Spine Surgical Site Infections

Meera M. Dhodapkar; Anoop R. Galivanche; Scott J. Halperin; Ali Elaydi; Jonathan N. Grauer

Poster No. 1716

Bone Defect Healing Using The Induced-membrane Technique After Chronically Infected Non-union In A Novel Rabbit Model

Claudia Siverino; Daniel Arens; Stephan Zeiter; GEOFF RICHARDS; Fintan Moriarty

Poster No. 1717

A Comparison Of Dosing Levels Required To Kill Staphylococcal Aureus Biofilms Verses Planktonic Bacteria Using Antimicrobial Blue Light (abl), Levofloxacin, And Rifampin

Jemi Ong; Rose Godfrey; Dustin Williams

Poster No. 1718

Decanoyl-modified Electrospun Chitosan Membranes Loaded With 2-decenoic Acid Analogs Inhibit S. Aureus

Rabeta Yeasmin; Daniel L. Baker; Brian C. Hoffman; Rachel Wiley; Jessica A. Jennings

Poster No. 1719

Wear And Antibiotic Release Kinetics Of Novel Gentamicin-loaded UHMWPE Knee Implant Spacer For Treatment Of Peri-prosthetic Joint Infection

Cecilia M. Nepple; Meghna Krishnagiri Tupal; Keith K. Wannomae; Brad Micheli; Alireza Borjali; Mehmet D. Asik; Rachel L. Connolly; Ali Atici; Ebru Oral; Orhun Muratoglu

Poster No. 1720

Characterization Of Antibiofilm Activity Of Gentamicin And Ketorolac Against Staphylococcal Biofilms

Peyton Tierney; Amita Sekar; Dmitry Gil; Madeline McCanne; Ebru Oral

Poster No. 1721

Bacterial Attachment On Bioactive Glass Induced Hydroxyapatite-like Layer Over Poly(methyl-methacrylate) Bone Cement

Kara A. Hageman; Rebekah L. Blatt; Richard K. Brow; Terence E. McIlff

Poster No. 1722

Effects Of Electrical Stimulation With Bactericidal Washes On Treating Orthopaedic Implant Infections

Jacob Opalinski; Bernadette Zumpano; Nathan Winter; Mary Canty

Poster No. 1723

The Addition Of Bupivacaine Enhances The Antibiofilm Activity Of Gentamicin Against Staphylococci

Amita Sekar; Julian Gonzalez; Jean Yuh; Vikram Daesety; Ebru Oral

Poster No. 1724

The Effects Of Media On The Antibiofilm Activity Of Gentamicin And Vancomycin

Jean Yuh; Amita Sekar; Peyton Tierney; Satveer Jagwani; Mehmet Asik; Madeline McCanne; Ebru Oral

Poster No. 1725

A Reloadable Antibiofilm Technology Manages Polymicrobial Infection Better Than Clinical Standards Of Care In A Sheep Model Of Open Fracture

Robert Falconer; Walker Kay; Connor Hunt; Jacob Adams; Alice Miller; Korinna Hylen; Tyler Smith; Lisa Nehring; Nicholas Ashton; Dustin Williams

Poster No. 1726

A Novel Method To Determine The Time-dependent Antibacterial Activity Of Drug-eluting Surfaces

Amita Sekar; Sashank Lekkala; Ebru Oral

Poster No. 1727

In Vivo Growth Dynamics Of Staphylococcal Biofilms In Tissue And On Devices In A Rat Model

Amita Sekar; Yingfang Fan; Peyton Tierney; Madeline McCanne; Jean Yuh; Ebru Oral

Poster No. 1728

Efficacy Of Novel Hip Stem With Sustained Antibiotics Release Mechanism For Treatment Of Periprosthetic Joint Infection Through One-stage Revision Surgery

Hideaki Enami; Ichiro Nakahara; Satoshi Kamihata; Wataru Ando; Kazuma Takashima; Keisuke Uemura; Hidetoshi Hamada; Nobuhiko Sugano

Intervertebral Disc - Diseases and Disorders

Poster No. 1729

Use Of Shock Waves In A Large Animal Model Of Degenerative Disc Disease

Andres Bonilla; Jaiden Oropallo; Lindsey Burton; Devin von Stade; Daniel Regan; Steven Dow; Brian Johnstone; Christian Puttlitz; Jeremiah Easley

Poster No. 1730

Metabolic Profiles Of Intervertebral Discs: Symptomatic Versus Asymptomatic Distinguishers

Jacob S. Kramer; Aaron M. Stoker; Chantelle C. Bozynski; Abigail F. Baumann; Theodore J. Choma; Don Moore; James L. Cook

Poster No. 1731

Terminal Uridylyl Transferase 7 (tut7) Deletion Suppressed P16ink4a Expression And Reduced Aging-related Intervertebral Disc Degeneration In A Mouse Model

Mohammad Y. Ansari; Tariq M. Haqqi; Kim Novak

Poster No. 1732

Role Of Mof-mediated Histone Lactylation In Nucleus Pulposus (NP) Cell Function And Survival

Trudy Zou; Dong Wang; Joon Lee; Gwendolyn Sowa; Nam Vo

Poster No. 1733

Physiological Measurement Of Nucleus Pulposus Oxygen, Glucose, And Lactate In A Large Animal Model Of Disc Degeneration: Preliminary Findings

Karthikeyan Rajagopal; Thomas P. Schaer; Chenghao Zhang; Kyle D. Meadows; Rachel Hilliard; John C. O'Donnell; George R. Dodge; Dmitriy Petrov; Dawn M. Elliott; Robert L. Mauck; Lachlan J. Smith; Neil R. Malhotra

Poster No. 1734

Effects Of Lactate And Histone Lactylation On Aggrecan Expression In Rat Nucleus Pulposus Cells

Trudy Zou; Dong Wang; Joon Lee; Gwendolyn Sowa; Nam Vo

Poster No. 1735

Calcium Pyrophosphate Dihydrate Crystal Deposition (Pseudogout) Develops In Symptomatic Degenerated Intervertebral Discs Of Patients

Songyun Liu; Deborah J. Hall; Ana V. Chee; KHALED ABOUSHAALA; Catherine Yuh; Chundo Oh; Uruj Zehra; Alejandro Espinoza Orias; Howard An; Robin Pourzal; Dino Samartzis

Poster No. 1736

Activation Of Creb Signaling Controls The Homeostasis Of Connective Tissues Of The Spine

Valeria Aceves; Zhaoyang Liu; Ryan S. Gray

Poster No. 1737

A Role Of Biglycan C-terminal Peptide In Regulating Intervertebral Disc Homeostasis

Manyu Zhu; Chun Ming Wu; Wai Kit Tam; Kenneth Cheung; Kathryn Cheah; Danny Chan; Victor Leung

Intervertebral Disc - Growth, Development and Aging

Poster No. 1738

Histone Lysine Demethylases KDM2A And KDM4A Regulates Cell Commitment Of Human IPS Cell Towards Notochordal Cells Via Activation Of FOXA2 Signaling

Martha Elena Diaz Hernandez; Shizumasa Murata; Kimihide Murakami; Sreekala Shenoy; Mohd Nazir Khan; Hicham Drissi

Poster No. 1739

Visualizing Human Intervertebral Disc Structure And Degeneration With 'RGB' Histology

Marina Barankevich; Sarah Romereim; Bailey Fearing

Poster No. 1740

Age-related Changes In Lumbar Disc Degeneration Differ Between Those With And Without Chronic Low Back Pain

Noah B. Bonnheim; Anika Kumar; Ann A. Lazar; Jiamin Zhou; Xiaojie Guo; Conor O'Neill; Jeffrey Lotz; Roland Krug; Aaron J. Fields

Intervertebral Disc - Injury, Healing and Pain

Poster No. 1741

HMGB1 Mediates Macrophage Recruitment And Regional Intervertebral Disc Properties Following Injury

Kevin Burt; Mark (Min Kyu) Kim; Dan Viola; Gerard Marciano; Joseph Genualdi; Clark Hung; Nadeen Chahine

Poster No. 1742

Regenerative Healing In Neonatal Mouse Intervertebral Discs Only Occurs Before Postnatal Day 28

Danielle N. D'Erminio; Ashley Rosenberg; Yashna Patel; Woojin Han; Alice H. Huang; James C. Iatridis

Poster No. 1743

Females Activate More Inflammatory Pathways Than Males And Wnt Signaling-deficiency In Aging Attenuates Inflammatory Pathways In Response To Disc Injury

Tori Kroon; Nilsson Holguin

Poster No. 1744

Annulus Fibrosus And Nucleus Pulposus Expression Of Tnfr1 And Tnfr2 With Tnf α Challenge In Rat IVDs In Vitro

Olga Yiantsos; Timothy Jacobsen; Jennifer Gansau; Brian Bueno; Damien Laudier; James Iatridis

Poster No. 1745

Down Regulation of the Antiapoptotic Protein BCL-XL in Early Stage IVD Injury Promotes Intervertebral Disc Degeneration

Mulati Mieradili; Kya Vaughn; Evan Polsky; Matthew Silva; Regis O'Keefe; Matthew Goodwin

Poster No. 1746

Moderate Sciatic Nerve Constriction Injury Increases Persistent Mechanical And Cold Temperature Sensitivity Versus Lumbar Disc Injury In Rats

Mary F. Barbe; Michele Y. Harris; Regina Loomis; Frank Lui-Chen; Elizabeth McGonagle; Mansi Bharatkumar Babariya; Brendan A. Hilliard; Mamta Amin; Patrice Joiner; Laura S. Stone; David M. Klyne

Intervertebral Disc - Structure, Function and Mechanics

Poster No. 1747

Development And Validation Of The New Generation Of Bioreactors For Long-term Intervertebral Disc Organ Culture Under Multiaxial Loading

Amra Secerovic; Aapo Ristaniemi; Shangbin Cui; Zhen Li; Mauro Alini; Francesco Crivelli; Sarah Heub; Gilles Weder; Stephen Ferguson; Diane Ledroit; Sibylle Grad

Poster No. 1748

Geometric Determinants Of The Mechanical Behaviour Of Intervertebral Disc Models

Ingmar Fleps; Harrah Newman; Dawn Elliott; Elise Morgan

Poster No. 1749

Chondroitin Sulfate-associated High Osmotic Pressure Stimulates Anabolism But Suppresses Catabolism In Bovine And Human Nucleus Pulposus Explants

Yutaro Kanda; Mizuno Shuichi; James Kang

Poster No. 1750

Chondroitin Sulfate Supplementation Stimulates Extracellular Matrices In Bovine Nucleus Pulposus Explants Under Physiologically Relevant High Osmotic Pressure And Cyclic Hydrostatic Pressure Mimicking Spinal Loading

Yutaro Kanda; Shuichi Mizuno; James Kang

Poster No. 1751

Effect Of Cigarette Smoke Exposure On Intervertebral Disc Biomechanical Properties: A Rat Model

Joshua Kelley; Nathan Buchweitz; Hongming Fan; Shangping Wang; Glenn Hepfer; Charles Reitman; Tong Ye; Hai Yao; Yongren Wu

Poster No. 1752

Modeling The Effects Of Hydration On Viscoelastic Properties Of Nucleus Pulposus Tissue In Shear And Compression Using The Fractional Zener Model

Megan Co; Ke Ding; Zachary Osborn; Chelsea Pack; Sarah Bentil; Benjamin Walter

Poster No. 1753

Lumbar Segmental Motion: Implications For Lumbar Fusion

Mary K. Richardson; Emily S. Mills; Brian C. Chung; Jennifer C. Wang; Lucas W. Mayer; Matthew C. Gallo; Raymond J. Hah; Nathanael D. Heckmann

Intervertebral Disc - Treatment and Therapeutics

Poster No. 1754

Intervertebral Disc Regenerative Therapy Using Bone Marrow Aspirate Concentrate Combined With In Situ Forming Bioresorbable Ultra-purified Alginate Gel

Daisuke Ukeba; Yoko Ishikawa; Katsuhisa Yamada; Khin Khin Tha; Norimasa Iwasaki; Hideki Sudo

Poster No. 1755

On-chip Disc-macrophage Interactions: A Vicious Or Virtuous Cycle?

Li (Jasmine) Xiao; Yi He; Yuan Xing; Grace Oh; Yong Wang; Li Jin; Xudong (Joshua) Li

Poster No. 1756

O-vanillin Enhanced Extracellular Vesicle Modulation Of Human Mesenchymal Stem Cell Differentiation And Disc Cell Phenotype

Li Li; Kai Sheng; Matthew Mannarino; Peter Jarzem; Hosni Cherif; Lisbet Haglund

Poster No. 1757

Phlpp Inhibition Promotes Nucleus Pulposus Cell Regeneration: Differential Effects Of Two Inhibitors

Changli Zhang; Katherine Joseph; Madeleine Gordon; Martha Elena Diaz Hernandez; Hicham Drissi; Svenja Illien-Junger

Poster No. 1758

Mesenchymal Stem Cell Survival In Intervertebral Disc-like Ph Is Cell Source Dependent

Kyle Cannon; Jeremy Mercuri

Poster No. 1759

Extracellular Matrix Hydrogel Derived From Porcine Nucleus Pulposus Restores Disc Volume And Alleviates Axial Hypersensitivity

David J. Lillyman; Kayla E. Ney; Sydney M. Caparaso; Evie C. Barnett; Adan L. Redwine; Fei San Lee; Rebecca A. Wachs

Poster No. 1760

In Vitro Screening For Neuronal Ion Channel Agonists And Antagonists To Parse Contribution Of Mechanics And Inflammation In Disc-Associated Low Back Pain

Sydney M. Caparaso; Evie C. Barnett; Rebecca A. Wachs

Poster No. 1761

Hyaluronic Acid Hydrogel And PDGFbb Support Efficient Maturation Of Notochordal Cells Derived From Human Induced Pluripotent Stem Cells

Shizumasa Murata; Martha E Diaz-Hernandez; Kimihide Murakami; Jay Patel; Svenja Illien-Junger; Hicham Drissi

Poster No. 1762

Operative Time Associated With Increased Length Of Stay After Single-level Cervical Disc Arthroplasty: An Analysis Of 3,681 Surgeries

Mitchell Ng; Olivia Tracey; Nikhil Vasireddi; Ahmed Emara; Aaron Lam; Ariel N. Rodriguez; Nicholas Ahn; John Houten; Ahmed Saleh; Afshin Razi

Poster No. 1763

A Biomechanical Analysis Of Novel Integrated 3-d Printed Porous Anchors Vs. Integrated Screws In A Stand-alone Cervical Cadaveric Model

Miguel A. Diaz; Peter Simon; Lauren Wilder; Derrick Dupre; Marc A. Weinstein

Knee - Diagnostics

Poster No. 1764

Fast-feedback On Joint Biomechanics For Team Sport Athletes: A Feasibility Study With Implications For Injury Risk

Patrick Mai; Kevin Bill; Lasse Mausehund; Steffen Willwacher; Tron Krosshaug; Uwe G. Kersting

Poster No. 1765

Fast Feedback On Foot Strike Angle To Reduce Knee Abduction Moments In Cutting Maneuvers

Kevin Bill; Patrick Mai; Lasse Mausehund; Tron Krosshaug; Uwe G. Kersting

Poster No. 1766

Does The Traditional TT-TG Distance Accurately Reflect The Relative Position Of The Tibial Tubercle To The Trochlear Groove? A Three-dimensional Analysis

Navya Dandu; Tristan J. Elias; Mario Hevesi; Kevin Credille; Zachary Wang; Erik Haneberg; Nozomu Inoue; Adam B. Yanke

Poster No. 1767

Registration-based Variability In Statistical Shape Models For Patella Dislocation

James R. Peters; Mingrui Yang; Sibaji Gaj; Richard Lartey; Mei Li; Carl Winalski; Lutul Farrow; John Elias; Xiaojuan Li

Poster No. 1768

Effect Of Reader Bias On The Development Of Patient Cohorts Using The Kellgren-lawrence Radiographic Grading System On The Identification Of Biomarkers Related To Osteoarthritis

Jordan Schafer; Aaron Stoker; harjeev singh; Anna Sullentrop; cristi cook; james Keeney; Emily Leary; James Cook

Poster No. 1769

Raman Probe Monitoring Of Patient Specific Cartilage Regeneration Profiles

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Knee - Injury and Healing

Poster No. 1770

The Effects Of Low-intensity Pulsed Ultrasound On Expression Of Inflammatory Factors For Preventing Knee Joint Adhesion In Rats

Ryo Nakahara; Akira Ito; Momoko Nagai-Tanima; Hideki Kawai; Chia Tai; Tomoki Aoyama; Hiroshi Kuroki

Poster No. 1771

The Relationship Between Preoperative Static Anterior Tibial Subluxation And Graft Maturation On Mri After Double-bundle Anterior Cruciate Ligament Reconstruction

Shigehiro Asai; Hideaki Fukuda; Takahiro Ogura; Kenji Takahashi

Poster No. 1772

Primary Repair For Femoral-side Anterior Cruciate Ligament Tears: A Preclinical Murine Model

Xueying Zhang; Shenghao Wang; Jiebo Chen; Daoyun Chen

Poster No. 1773

Distinct Profiles Of Bone Marrow- And Infrapatellar Fat Pad-derived Mesenchymal Stem Cells Expanded In Regulatory-complaint Media: Towards The Effective Translation Of Cell-based Products To Musculoskeletal Therapies

Daniel Quintero; Lee Kaplan; Thomas Best; Dimitrios Kouroupis

Poster No. 1774

Unloading Prior To Surgical Restabilization After Acl Rupture In Mice Slows Post-traumatic Osteoarthritis Progression

Yu-Yang Lin; Elias Jbeily; Cassandra Lee; Blaine Christiansen

Poster No. 1775

Predictive Value Of Examination Under Anesthesia In Patients Undergoing Isolated Medial Patellofemoral Ligament Reconstruction

Zachary Wang; Navya Dandu; Kevin Credille; Tristan J. Elias; Erik Haneberg; Vince Morgan; Adam B. Yanke

Poster No. 1776

Novel In Vitro Osteochondral Allograft Immune Response Model

Josephine Luk; Emma Teixeira; Aaron Stoker; James Stannard; James Cook

Poster No. 1777

Blood Flow Restriction After Acl Reconstruction Does Not Accelerate Quadriceps Strengthening

Justin J. Greiner; Janina Kaarre; Zachary J. Herman; Nicholas P. Drain; Joshua Setliff; Jonathan D. Hughes; Bryson Lesniak; Volker Musahl

Poster No. 1778

Factors Associated With Knee Extension Strength Symmetry Following Anterior Cruciate Ligament Reconstruction With Quadriceps Tendon Autograft

Justin Greiner; Nicholas P. Drain; Joshua Setliff; Romano Sebastiani; Zachary J. Herman; Volker Musahl; Bryson Lesniak; Jonathan D. Hughes

Knee - Structure, Function and Mechanics

Poster No. 1779

A Novel Procedure For Personalized High Tibial Osteotomy. Clinical And Instrumental Evaluations From A Preliminary Clinical Trial.

Claudio Belvedere; Harinderjit Singh Gill; Alisdair MacLeod; Alberto Grassi; Giacomo Dal Fabbro; Stefano Zaffagnini; Alberto Leardini

Poster No. 1780

Injury To Anterolateral Ligament And Kaplan Fibers Do Not Significantly Affect Preoperative Pivot-shift Test In Anterior Cruciate Ligament Injury

Takeo Tokura; Kanto Nagai; Shu Watanabe; Kyohei Nishida; Noriyuki Kanzaki; Yuichi Hoshino; Takehiko Matsushita; Ryosuke Kuroda

Poster No. 1781

A Physiological Flexion Axis Of The Knee That Maintains Heights Along The Flexion Path

Jia Yu; Chaochao Zhou; Tsung-Yuan Tsai; Sophia Li; Timothy Foster; Hany Bedair; Hany Bedair; Guoan Li

Poster No. 1782

The Change In Center Of Gravity And Knee Adduction Moment Of Contralateral Knee Joint After High Tibial Osteotomy

Koji Iwasaki; Yasumitsu Ohkoshi; Kazuki Sasaya; Shigeyuki Sakurai; Kengo Ukishiro; Kensaku Kawakami; Shoji Suzuki; Tatsunori Maeda; Tomohiro Onodera; Eiji Kondo; Norimasa Iwasaki

Poster No. 1783

Longitudinal Changes Of Synovial Fluid In Oa Progression Induced By Mechanical Stress

Kei Takahata; Kohei Arakawa; Haruna Takahashi; Moe Yoneno; Yuna Usami; Saaya Enomoto; Takanori Kokubun

Poster No. 1784

Deformation Analysis Of Anterior Cruciate Ligament Using 3d Laser Scanner: A Preliminary Study

Shoji Konda; Satoshi Yamakawa; Issei Ogasawara; Akira Tsujii; Tomoki Ohori; Tatsuo Mae; Ken Nakata

Poster No. 1785

Quantifying Stability Of The Native Knee Via Dynamic System Analysis

Reza Pourmodheji; Brian Frondorf; Erin Berube; Aditya Jain; Joseph Manzi; Jacob Hirth; Swithin Razu; Danyal Nawabi; Andrew Pearle; Thomas Wickiewicz; Carl Imhauser

Poster No. 1786

An Automated Approach To Define Femoral And Tibial Coordinate Systems With Limited Diaphysis Length

William Zaylor; James R. Peters; Snehal K. Chokhandre; Ellen M. Klonowski; Ahmet Erdemir; Jillian Beveridge; Xiaojuan Li

Poster No. 1787

The Development Of A Virtual Reconstruction Of Anterior Cruciate Ligament To Assess Biomechanical Contribution Of Anterolateral Complex Of The Knee

Samira Vakili; THIAGO VIVACQUA; Alexandre Galley; Emma Donnelly; Alan Getgood; Ryan Willing

Poster No. 1788

Development Of In-vivo Imaging Protocol To Measure Tibiofemoral Kinematics During Dynamic Activities

Lauren Swain; Dionne Shillabeer; Hayley Wyatt; Ilse Jonkers; Cathy Holt; David E. Williams

Poster No. 1789

The Anterior Cruciate Ligament Injury Increased Axial Rotational Laxity Of The Knee Joint

Kenjiro Okimura; Yuichi Hoshino; Kyohei Nishida; Kanto Nagai; Noriyuki Kanzaki; Takehiko Matsushita; Ryosuke Kuroda

Poster No. 1790

Probabilistic Modeling Framework To Generate Virtual Subject Cohorts For Population-wide Studies Of Knee Mechanics

Matthew Blomquist; Joshua Roth

Poster No. 1791

Knee Flexion Angle At The Time Of Medial Patellofemoral Ligament (MPFL) Reconstruction Significantly Affects Patellar Rotational Kinematics

Navya Dandu; Mario Hevesi; Tristan J. Elias; Erik Haneberg; Jeffrey Lee; Steven F. DeFroda; William M. Cregar; Athan G. Zavras; Nozomu Inoue; Adam B. Yanke

Poster No. 1792

Determining The Minimal Diameter Of The Patellar And Quadriceps Tendon Autografts For Anterior Cruciate Ligament Reconstruction: A Biomechanical Analysis Using Finite Element Modeling

Brandon Z. Gligor; Farid Amirouche; Giovanni Solitro

Poster No. 1793

In Silico Biomechanical Analysis For Optimization Of Osteochondral Allograft Preimplantation Subchondral Drilling

Josephine Luk; James Stannard; James Cook

Poster No. 1794

Biomechanical Contributions Of The Lde And Acl In The Ovine Stifle: Implications For A Novel Model Of Post-traumatic Osteoarthritis

Katie Sikes; James Johnson; Bridget Michalko; Chloe Brekhus; Travis Montoya; Jeremiah Easley; Brad Nelson

Poster No. 1795

The Effect Of Biological Sex On Knee Joint Functional Demand During A Double-legged Drop Vertical-jump: Implications For Anterior Cruciate Ligament Injury Risk

Brianna Lupo; Colin Bond; Lisa MacFadden; Nathan Skelley; Benjamin Noonan

Poster No. 1796

Relation Between Knee Extension Strength Limb Symmetry Index And Absolute Strength: Implications For Anterior Cruciate Ligament Reconstruction Return To Play Testing

Benjiman J. Wilebski; Colin W. Bond; Lisa N. MacFadden; Nathan Wm. Skelley; Benjamin C. Noonan

Poster No. 1797

3D-Analysis For The Quantification Of Weight-Bearing Knee Cartilage Deformation: A Comparison With Pseudo-Contact Area

Hyo-Bin Lee; Jang-Hwan Choi

Poster No. 1798

Point-of-Care Kinematic Motion Capture And Postural Assessment After ACL Reconstruction Related To Patient Reported Outcomes

Aidan Foley; Ryan T. Halvorson; Anika Kumar; Drew Lansdown; Jeannie Bailey; Brian Feeley

Poster No. 1799

Biomechanical Analysis Of The Distal Femoral Fracture Fixation Techniques: A Finite Element Study

Laureb Rao; Pradip Kumar; Samarth Mittal; Apoorva Kabra; Vivek Trikha; Atin Kumar; Anoop Chawla; Kaushik Mukherjee

Knee - Surgical and Non-Surgical Interventions

Poster No. 1800

The Safety Of Adipor1 And Adipor2 Peptide-Agonist Adiporon In A Surgically-Stressed Rabbit Model Of Arthrofibrosis

Harold I. Salmons; Christopher K. Gow; Afton K. Limberg; Jacob W. Bettencourt; Mason F. Carstens; Ashley N. Payne; Mark E. Morrey; Joaquin Sanchez-Sotelo; Daniel J. Berry; Matthew P. Abdel

Poster No. 1801

Inhibition Of A New Fullerene Derivative Against Activation Of Mouse Raw264.7 Macrophages

Xinlin Yang; Zhichang Zhang; Peng Xu; Jialun Chi; Qunjun Cui

Poster No. 1802

Over 11% Of Patellofemoral Arthroplasty Patients Visit The Emergency Department Within 90 Days Of Surgery

Philip P. Ratnasamy; Scott Halperin; Meera Dhodapkar; Alexander J. Kammien; Lee E. Rubin; Jonathan N. Grauer

Poster No. 1803

Ability Of A “Smart” Knee Brace To Accurately Monitor Knee Range Of Motion And Velocity During An Exergame For Knee Rehabilitation

Michelle Riffitts; Michael McClincy; Kevin Bell

Poster No. 1804

Biomechanical Comparison Of Spacer Pin To Two Established Methods Of Stabilization Of Tibial Tuberosity Transposition In Dogs

Anna Lia Sullivan; Nathaniel R. Ordway; Glenn Swan; Selena Tinga

Poster No. 1805

Exploring Strategies For Reducing Knee Medial Compartment Loading In Medial Knee Osteoarthritis

Raziyeh Baghi; Subham Badhyal; Ahmed Ramadan; Frank Henn; Jonathan Packer; Peter Bowman; Marc Hochberg; Li-Qun Zhang

Poster No. 1806

Biomechanical Analysis Evaluating Meniscal Extrusion Following Knotless Suture Anchor Fixation For Segmental Meniscus Transplantation

Justin Hollenbeck; Phob Ganokraj; Brad Fossum; Ryan Whalen; Alexander Garcia; Michael Foster; Matthew Provencher

Poster No. 1807

Usability And Performance Evaluation Of A Novel Surgical Suture Needle In A Cadaveric Tendon Model

Miguel A. Diaz; Eric A. Branch; Jake Dunn; Anthony Brothers; Steve Jordan

Poster No. 1808

Biomechanical Properties Of Various Surgical Suture Needles In A Cadaveric Quadriceps Tendon Model

Miguel A. Diaz; Eric A. Branch; Jake Dunn; Anthony Brothers; Steve Jordan

Poster No. 1809

Lateral Extra-articular Tenodesis Increases Anterior Tibial Restraint With Valgus Loading

Brian Frondorf; Erin Berube; Danyal Nawabi; Andrew Pearle; Thomas Wickiewicz; Carl Imhauser

Poster No. 1810

Surgical Trends For Managing Knee Osteonecrosis: A 2010-2020 United States Nationwide Study

Mitchell K. Ng; Matthew Magruder; Ariel N. Rodriguez; Nicolas Piuze; Orry Erez; Giles Scuderi; Michael A. Mont

Meniscus - Injury and Healing

Poster No. 1811

A Systematic Review Of Current Definitions Of Meniscus Failure

Logan McKinney; Erik Henkelman; Jeff Randall; Jacob Rooker; Armin Tarakemeh; Jacob White; Bryan Vopat

Poster No. 1812

Differential Regulation Of Sdf1/cxcr4 Signaling In Cartilage-derived Progenitor Cells Inhibits Inflammation And May Accelerate Cell-based Meniscus Healing In Vivo.

Jay Trivedi; Salomi Desai; Daniel Betensky; Chathuraka Jayasuriya

Poster No. 1813

Blood-induced Meniscus Catabolism: Investigating The Role Of Iron And Anti-oxidant Therapeutics

Kevin Betsch; J. Brice Weinberg; Jocelyn Wittstein; Amy McNulty

Poster No. 1814

Novel Meniscectomy Mouse Model To Assess Knee Joint Pain, Structure And Function In Post-traumatic Osteoarthritis

Manish V. Bais

Poster No. 1815

Medial Tibia Bone Marrow Edema On Preoperative MRI Predicts Inferior Patient Outcomes Following Posterior Medial Meniscus Root Repair

Sergio E. Flores; Rawee Manatrakul; Christopher Anigwe; Brian T. Feeley; Benjamin C. Ma; Thomas M. Link; Drew A. Lansdown

Poster No. 1816

A Systematic Review Of Preoperative Risk Factors For Meniscal Allograft Transplant Failure

Zachary Wang; Kevin Credille; Alzein Mohamad; Azad Darbandi; Johnathan McCormick; Dhanur Damodar; Hasani Swindell; Brian J. Cole; Adam B. Yanke

Poster No. 1817

The 100 Most Impactful Articles On The Meniscus: An Altmetric Analysis Of Online Media

Alex Strait; Matthew Civilette; William Rate; Brett Haislup; Andrew Cohen; Blake Bodendorfer; Heath Gould

Meniscus - Structure, Function and Mechanics

Poster No. 1818

Shear Stress In The Medial Meniscus Posterior Root During Daily Activities

Koki Ouchi; Yoichiro Yamaguchi; Takuji Yokoe; Etsuo Chosa; Takuya Tajima

Poster No. 1819

High Angular Resolution Diffusion Imaging Of Porcine Meniscus

Nian Wang; Qi Zhao; Abigail Holt; Yi Qi; Charles Spritzer; Louis DeFrate; Amy McNulty

Poster No. 1820

Effect Of Fiber Reinforcement On Dynamic And Quasi-static Tensile Mechanical Properties Of Porcine Meniscus

Andy Morejon; Pedro L. Balabuch; Alicia R. Jackson; Thomas M. Best; Francesco Travascio

Poster No. 1821

Effect Of Test Conditions On The Biomechanical Properties Of Porcine Menisci In Confined Compression - A Comparative Study At Two Laboratories

Andy Morejon; Luisa de Roy; Andreas M. Seitz; Alicia R. Jackson; Francesco Travascio

Poster No. 1822

The Effect Of Meniscotibial Ligament Disruption And Repair On Posterior Medial Meniscal Root Forces

Justin Hollenbeck; Heath Melugin; Phob Ganokroj; Justin Brown; Bradley Fossum; Annalise Peebles; Matthew Provencher

Poster No. 1823

Loss Of The Meniscal Inner Part By Partial Meniscectomy For Radial Meniscal Tear Increases The Meniscal Deformation And Extrusion

Satoshi Yamakawa; Tomoki Ohori; Issei Ogasawara; Akira Tsujii; Shoji Konda; Seira Sato; Takashi Kanamoto; Ken Nakata

Poster No. 1824

Ultrasound-assessed Medial Meniscal Extrusion Is Greatest In A Weight-bearing Stance In Asymptomatic Knees

Maria E. Dey Hazra; Rony-Orijit Dey Hazra; Amelia Kruse; Adam Bradshaw; Justin Hollenbeck; Peter J. Millett; Tashman Scott; Lauren E. Watkins

Meniscus - Treatment and Therapeutics

Poster No. 1825

Biomechanical Effectiveness Of Centralization Using Knotless Anchors In A Porcine Chronic Medial Meniscus Posterior Root Tear Model

Yusuke Amano; Nobutake Ozeki; Junpei Matsuda; Kunikazu Tsuji; Tomomasa Nakamura; Kazumasa Miyatake; Hiroki Katagiri; Yusuke Nakagawa; Ichiro Sekiya; Hideyuki Koga

Poster No. 1826

Resveratrol Protects Meniscus From Inflammatory Damage By Strengthening Collagen Fibers <And > For> Inhibiting Matrix Metalloproteinases Activity

Ying Peng; Asma Arshad; Shuo Wei; X. Lucas Lu

Poster No. 1827

Micro-scale Cellular Mechano-response In Composite Scaffolds For Meniscus Replacement

Saitheja A. Pucha; Gail E. McColgan; Sebastian L. Vega; Jay M. Patel

Poster No. 1828

Biomechanical Analysis Of Meniscotibial Ligament Tenodesis To Treat Meniscal Extrusion

Justin FM Hollenbeck; Kent Doan; Maria Dey-Hazra; Rony Dey-Hazra; Justin Brown; Donovan Johnson; Bradley Fossum; Armando Vidal

Multi-Organ System Crosstalk

Poster No. 1829

Effects Of Fisetin Treatment On Cellular Senescence In Multiple Organs Of Aged Sheep

Charles Huard; Xueqin Gao; Maria Dey Hazra; Rony-Orijit Dey Hazra; Kimberly Lebsock; Peter J. Millett; Johnny Huard

Poster No. 1830

Human Tendon-on-a-chip (htoc) Platform For Modeling Fibrotic Disease And Screening Therapeutic Candidates

Raquel Ajalik; Rahul Alenchery; James McGrath; Hani Awad

Poster No. 1831

Age-based Differences In Bone And Muscle Adaptation During Unloading In Mice Undergoing Alendronate Treatment

Sophie Orr; Surak Pathak; Henning Langer; Keith Baar; Blaine Christiansen

Poster No. 1832

Mass Spectrometry High-throughput Proteomic Profiling Identifies Repressed Extracellular Matrix Remodeling And Degenerative Disease Pathways In Bone Of Genetic Models Of Aging

Charles A. Schurman; Jacob Rose; Christina D. King; Joanna Bons; Jordan B. Burton; Sandip Patel; Amy O'Broin; Lisa M. Ellerby; Tamara Alliston; Birgit Schilling

Poster No. 1833

Endplate Injury Induces Disc Degeneration, Gut Microbiome And Brain Changes, And Back Pain In The Rat Model

Ana V. Chee; Songyun Liu; Catherine Yuh; Robin Pourzal; Meghan Moran; Ankur Naqib; Stefan Green; Brandon Williams; Amanda L. Persons; T. C. Napier; Dino Samartzis; Howard S. An

Poster No. 1834

Global Deletion Of Serpina1a-e Impairs Macrophage Recruitment To Injured Discs By Reducing Cytokines And Enhancing Bone Marrow-derived Osteoclastogenesis

Neharika Bhadouria; Mizuho Kittaka; Justin Williams; Yasuyoshi Ueki; Uma Sankar; Nilsson Holguin

Poster No. 1835

Macrophage Depletion Alleviates Pain-like Behaviors In Osteoarthritic Mice Of Both Sexes

Terese Geraghty; Shingo Ishihara; Alia M. Obeidat; Jun Li; Lai Wang; Natalie Adamczyk; Anne-Marie Malfait; Rachel Miller

Poster No. 1836

Sex-dependent Joint Damage In A Rat Model Of Comorbid Hypertension And Osteoarthritis

Taylor Yeater; Jacob Griffith; Carlos Cruz; Folly Patterson; Jessica Aldrich; Kyle Allen

Poster No. 1837

Heterochronic Parabiosis On 3D Microphysiological System

Yunki Lee; Jeongmoon J. Choi; Young Jang

Poster No. 1838 (Guest Nation-Ireland) 

A Novel Rat Patellar Explant Model To Study Damage Response In PTOA

Isabel Amado; Tom Hodgkinson; Neashan Mathavan; Ciara M. Murphy; Oran D. Kennedy

Shoulder and Elbow - Arthroplasty

Poster No. 1839

Complications, Comorbidities, And Readmissions Following Total Shoulder Arthroplasty In Wheelchair Users

Kevin Prabhu; Alison Cabrera; Yen-Sheng Lin

Poster No. 1840

Reverse Shoulder Arthroplasty With A Preserved Rotator Cuff: A Comparison To Reverse Shoulder Arthroplasty With A Deficient Rotator Cuff And Anatomic Total Shoulder Arthroplasty

Rajiv P. Reddy; Ehab Nazzal; Justin Greiner; Ajinkya Rai; Matthew Como; Albert Lin

Poster No. 1841

Prosthesis Design And Surgical Technique Impact In-vivo Contact Patterns After Reverse Shoulder Arthroplasty During Abduction

Gillian Kane; Clarissa LeVasseur; Ajinkya Rai; Maria Munsch; Jonathan Hughes; William Anderst; Albert Lin

Poster No. 1842

Clinical And Radiographic Outcomes Of Three Different Glenoid Designs With Anatomic Total Shoulder Arthroplasty At Short-term, Mid-term, And Long-term Follow-up

Richard Friedman; Marissa Boettcher; Sean Grey; Pierre-Henri Flurin; Thomas Wright; Joseph Zuckerman; Josef Eichinger; Christopher Roche

Poster No. 1843

Comparison Of Survivorship & Failure Modes Between Anatomic And Reverse Total Shoulder Arthroplasty Across Multiple Government Joint Registries For A Single Platform Shoulder System

Christopher Roche; Pierre-Henri Flurin; Thomas Wright; Joseph Zuckerman

Poster No. 1844

Glenoid Tilt Affects Kinematics During Internal Rotation That Are Associated With Clinical Outcomes After Reverse Shoulder Arthroplasty

Ajinkya Rai; Clarissa LeVasseur; Gillian Kane; Maria Munsch; Jonathan Hughes; William Anderst; Albert Lin

Poster No. 1845

Latissimus Dorsi Tendon Transfer And Reverse Shoulder Arthroplasty: Restoring Mechanical Advantage By Transfer Posterior To The Long Head Of The Triceps Tendon

Aimee Bobko; Andreas Kontaxis; Amirhossein Jahandar; Lawrence V. Gulotta; David M. Dines; Michael C. Fu; Russell F. Warren; Allen Nicholson; Samuel A. Taylor; Theodore A. Blaine

Poster No. 1846

Associations Of Patient, Disease-specific, And Surgical Factors With Postoperative Patient Reported Outcomes In Patients Undergoing Primary Anatomic And Reverse Total Shoulder Arthroplasty

Sambit Sahoo; Vahid Entezari; Jason Ho; Bong-Jae Jun; Strnad Greg; Kurt Spindler; Yuxuan Jin; Peter B. Imrey; Kathleen Derwin; Joseph Iannotti; Eric T. Ricchetti

Poster No. 1847

Elliptical Vs. Spherical Humeral Heads In Shoulder Arthroplasty: Comparison Of Expected Cortical Bone Response

Courtney Lacroix; Gregory Spangenberg; Faber J. Kenneth; G Daniel Langohr

Poster No. 1848

The Effect Of Total Shoulder Arthroplasty Operation Time On Post-operative Surgical Site Infections

Mark Schmitt; Parker Chenault; Linsen Samuel; John Tuttle

Poster No. 1849

Humeral Osteophyte Size And Clinical Outcomes After Anatomic Total Shoulder Arthroplasty

Youssef Galal; Anup Shah; Evan Lederman; Rueben Gobezie; Pattrick Denard; Jalen Broome; Brian Werner

Poster No. 1850

Effect Of Torque-compression And Rsa Baseplate Design On Implant Stability: A Micromotion Study

Miguel A. Diaz; Eric T. Ricchetti; Grant E. Garrigues; Jason E. Hsu; Adam Hutchinson; Sergio Gutierrez; Mark A. Frankle

Poster No. 1851

Superior Migration Of The Humeral Head Does Not Significantly Affect Outcomes At An Average Of 11 Years After Total Shoulder Arthroplasty

Akiro H. Duey; James D. Dieterich; Akshar V. Patel; Christopher A. White; Troy Li; Bradford O. Parsons; Evan L. Flatow; Paul J. Cagle

Poster No. 1852

Abnormal Preoperative Leukocyte Counts And Postoperative Complications Following Total Shoulder Arthroplasty

Kenny Ling; Emma Smolev; Matthew Kim; Edward D. Wang

Poster No. 1853

Postoperative Complications Associated With Non-elective Total Shoulder Arthroplasty

Kenny Ling; Emma Smolev; Matthew Kim; Edward D. Wang

Shoulder and Elbow - Growth, Development and Aging

Poster No. 1854

Ai-based Wearable Device For Tracking Shoulder Joint Kinematics And Muscle Activity In Subjects With Fshd Disease

Rabeeh Majidi; Mehdi Ghasemi; Ziming Zhang; Edward A. Clancy; Vahid Entezari; Ali Kiapour

Poster No. 1855

Effects Of Glutaminase 1 Inhibitor On Rotator Cuff Derived Cells

Tatsuo Kato; Yutaka Mifune; Atsuyuki Inui; Hanako Nishimoto; Tomoya Yoshikawa; Issei Shinohara; Takahiro Furukawa; Shuya Tanaka; Masaya Kusunose; Ryosuke Kuroda

Shoulder and Elbow - Injury and Healing

Poster No. 1856

Change In Tear Size And Location Of Isolated Supraspinatus After Exercise Therapy - Up To 24 Months Sonographic Assessment

Keishi Takaba; Satoshi Takeuchi; Luke Mattar; Kentaro Onishi; Andrew Cordle; James Irrgang; Volker Musahl; Richard Debski

Poster No. 1857

Injury Specific Capsular Plication Following Multiple Anterior Dislocations Of The Glenohumeral Joint

Keishi Takaba; Sene Polamalu; Ehab Nazzal; Zachary Herman; Satoshi Takeuchi; Volker Musahl; Richard Debski; Albert Lin

Poster No. 1858

Engineered Tendon Grafts For Rotator Cuff Repair In An Ovine Model

Christopher S. Kennedy; Carla N. Villacis Nunez; Andrea Poli; Emmanuel Vega-Soto; Ellen Arruda; Lisa Larkin

Poster No. 1859

Humeral Diaphyseal Nonunion Occurs More Commonly With Elevated Body Mass Index And Simple Fracture Types

Prism S. Schneider; Mary Amedeo; Stephanie Yee; Kim Rondeau; Rudy Reindl; Greg Berry

Poster No. 1860

Preservation Of Osteochondral Autografts For Delayed Re-implantation In A Novel Preclinical Canine Model

Gregory Della Rocca; Julia N. Nuelle; Chantelle Bozynski; Aaron Stoker; Anna Sullentrop; James Cook

Poster No. 1861

Biomechanical Analysis Of Anteroinferior Bankart Repair Anchor Types: Has Technology Surpassed Surgeon Technique?

Kevin Credille; Zachary Wang; Sachin Allahabadi; Elizabeth Frankenburg Shewman; Joao Artur Bonadiman; Tristan J. Elias; Mario Hevesi; Grant Garrigues; Nikhil Verma; Adam B. Yanke

Poster No. 1862

Ultrasound Evaluation Of Massive Rotator Cuff Tears Is Comparable To MRI Measurements

Maria E. Dey Hazra; Rony-Orijit Dey Hazra; Amelia Kruse; Peter J. Millett; Lauren E. Watkins

Shoulder and Elbow - Structure, Function and Mechanics

Poster No. 1863

Comparison Of Long Head Of The Biceps Autograft Versus Human Dermal Allograft For Superior Capsule Reconstruction After Rotator Cuff Tear

Pranav Krishnan; Nicholas Maassen; Cody Lee; Hayden Baker; Jason Koh; Farid Amirouche; Aravind Athiviraham

Poster No. 1864

Biomechanical Consequences Of Glenoid And Humeral Lateralization In Reverse Total Shoulder Arthroplasty

Joo Han Oh; Bei Liu; Young Kyu Kim; Andrew Nakla; Min-Shik Chung; Daniel Kwak; Michelle H. McGarry; Thay Q. Lee

Poster No. 1865

Glenohumeral And Scapulothoracic Kinematics During The Belly Press Test Using Four-dimensional Computed Tomography

James Hunter; Emily Lalone

Poster No. 1866

Ulnar Collateral Ligament Reconstruction Using Knee Medial Collateral Ligament

Michael Stone; Linda Chao; Dave T. Huang; David Kulber; Melodie F. Metzger

Poster No. 1867

Strain Distribution Inside Non-arthritic And Arthritic Human Shoulder Under Eccentric Loading

Yuxiao Zhou; Chujie Gong; Gregory Lewis; April Armstrong; Jing Du

Poster No. 1868

Mathematical Modeling Of Deltoid Muscle Excursion Using Moment Arm During Abduction

Eric Hu; Nicole Tueni; Jason Koh; Farid Amirouche

Shoulder and Elbow - Surgical and Non-Surgical Interventions

Poster No. 1869

Validation Of Joint Reaction Forces Predicted By Musculoskeletal Models In Individuals With Rotator Cuff Tears Following Exercise Therapy

Luke T. Mattar; Adam J. Popchak; William J. Anderst; Volker Musahl; James J. Irrgang; Richard E. Debski

Poster No. 1870

Top 50 Most Highly Cited Publications On Massive Rotator Cuff Tears

Marcheta J. Hill; Christian B. Allen; Tyler K. Williamson; Victor H. Martinez; Sydney Vangeli; Aroob Zaheer; Matthew Kingery; Jake X. Checketts

Poster No. 1871

Biomechanical Comparison Of UCL Reconstruction With Single-tunnel Proximal Endobutton Fixation Versus Modified Docking Technique

Justin Hollenbeck; Matthew Vopat; Brad Fossum; Justin Brown; Charles Su; Alexander Garcia; Thomas Hackett; Randall Viola

Poster No. 1872

Biomechanical Properties Of Suprapectoral Biceps Tenodesis With Two Luggage Tag Sutures Versus Subpectoral Biceps Tenodesis With One Whipstitched Suture Using All-suture Anchors

Amirhossein Jahandar; Richard Nicolay; Julia Retzky; Andreas Kontaxis; Michael Fu

Poster No. 1873

Proximal Shoulder Muscle Recruitment With Blood Flow Restriction Exercise Under Various Occlusion Conditions

Tyler Roehl; Corbin Hedt; Jordan Ankersen; Karen Hernandez; Patrick McCulloch; Bradley Lambert

Poster No. 1874

Utility Of Talus Osteochondral Allograft Augmentation For Varying Size Of Hill-sachs Lesion: A Cadaveric Study

Justin FM Hollenbeck; Phob Ganokroj; Alexander Garcia; Bradley Fossum; Annalise Peebles; Ryan Whalen; Matthew Provencher

Poster No. 1875

Thresholds For Preoperative Opioid Use In Arthroscopic Rotator Cuff Repair That Negatively Influence Postoperative Clinical Outcomes

Justin Greiner; Michael Fox; Noel Carlos; Zachary Herman; Nicholas P. Drain; Shaquille Charles; Bryson P. Lesniak; Albert Lin

Poster No. 1876

The Effect Of Injectable Calcium Phosphate Bone Graft Substitute On Pull Out Strength Of Various Suture Anchor Designs In An Osteoporotic Model

Miguel A. Diaz; Steven Munassi; David E. Teytelbaum; Anthony Pipitone; Christopher E. Baker

Poster No. 1877

The Anterior Labral Circumferential Onlay Technique (ALCOT) Serves To Reconstruct The Anterior Labrum And Biomechanically Restores Anterior Glenohumeral Joint Stability

Alex W. Brady; Maria Dey Hazra; Rony Dey Hazra; Justin R. Brown; Phob Ganokroj; Matthew T. Provencher; Peter J. Millett

Skeletal Muscle - Diseases and Disorders

Poster No. 1878

Effects Of Pirfenidone On Coculturing Fibroblast And Myoblast Modelin Vitro

Kumail Naqvi; Brody Scholl; Nicholas Jacus; Juliana Overybey; Son Tran; Andre Ksajikian; Isabel Chiang; Haiying Pan; Yong Li

Poster No. 1879

Fibro-adipogenic Progenitors (faps) In Heart, Diaphragm And Muscle In A Novel Pdgfra-reporter Duchenne'S Muscular Dystrophy (dmd) Mouse Model

Mengyao Liu; Brian Feeley; Hubert Kim; Xuhui Liu

Skeletal Muscle - Growth, Development and Aging

Poster No. 1880

Detection Of Novel Myokines Commonly Down-regulated Both In Hindlimb Unloading And Aged Sarcopenia Mice

Hiroki Tawaratsumida; Toshiro Ijuin; Yusuke Masuda; Tomohiro Iuchi; Hiroyuki Tominaga; Shingo Maeda; Noboru Taniguchi

Poster No. 1881

Anti-rankl Treatment Attenuates Sarcopenia Via Suppressing Macrophage Infiltration

Can Cui; Yufeng Long; Chaoran Liu; Wujian Lin; Ronald Man Yeung Wong; Simon Kwoon-Ho Chow; Wing-Hoi Cheung

Poster No. 1882

SMARTfit Dual-task Training Improves Cognition And Physical Function In Older Adults With Mild Cognitive Impairment

Paul Mercado; Sameer Jhaveri; Matthew Romanyk; Nikhil Satchidanand

Poster No. 1883

Pdzn3 Suppresses Adipogenic Differentiation Of Fibro/adipogenic Progenitors By Regulating Sfrp4.

Hiroki Iida

Poster No. 1884

Ageing-related Sarcopenia Along With Mitochondrial Degeneration In Samp8 Mice Model

Yu-Feng Long; Can Cui; Simon Kwoon-Ho Chow; Wing-Hoi Cheung

Skeletal Muscle - Injury and Healing

Poster No. 1885

Regenerative Rehabilitation For Enhancing Muscle Recovery Following Volumetric Muscle Loss

David L. Johnson; Jeffrey Au; Connor Tobo; Aakash Nagarapu; Natalia Ziemkiewicz; Hannah Chauvin; Jessica Robinson; Saloni Shringapure; Allison Paoli; Charles West; Colin A. Flaveny; Koyal Garg

Poster No. 1886

Combined Application Of Biosponges And An Anti-fibrotic Agent For The Treatment Of Volumetric Muscle Loss

Charles West; Jeffrey Au; David Johnson; Connor Tobo; Jessica Robinson; Saloni Shringarpure; David Griggs; Koyal Garg

Poster No. 1887

Injury Is Needed To Activate And Induce Bone Formation From The Muscle Derived Prx1 Cell Population

Yu Liu; Louis Gerstenfeld; Beth Bragdon

Poster No. 1888

Effects Of Continuous And Time-varying Oxygen Concentration On Vascular Growth In Vitro

Samuel Lester; Ethan Dinh; Angela Lin; Genevieve Romanowicz; Kelly Leguineche; Robert Guldberg

Poster No. 1889

Repairing Volumetric Muscle Loss With Commercially Available Hydrogels In The Ovine Peroneus Tertius Muscle

Eileen Y. Su; Christopher S. Kennedy; Emmanuel E. Vega-Soto; Samantha N. Lukpat; Celeste E. Forester; Derek H. Hwang; Claudia Loebel; Lisa M. Larkin

Poster No. 1890

Novel Anti-inflammatory Benefits Of Aquatic Treadmill Use With Considerations For Rehabilitation

Bradley Lambert; Sarah Parker; Corbin Hedt; Patrick McCulloch; Nicholas Greene; Dustin Joubert; Steven Martin; Aaron Carbuhn; Steven Reichman; James Fluckey; Stephen Crouse

Poster No. 1891

Epi-Muscular Adipose Stem Cells Are Less Mechanosensitive And More Pro-myogenic Than Subcutaneous

Dakota R. Kamm; Kathryn L. Bohnert; Jay D. Keener; Gretchen A. Meyer

Poster No. 1892

Damaged Peripheral Nerves Attenuate Myogenic Differentiation

Leah Liu; Brody Scholl; Isabel Chiang; Michael Lichomski; Genevieve Abd; Haiying Pan; Yong Li

Poster No. 1893

Transcriptional Evidence For Paracrine Signaling Between Brown Adipose Tissue And Regenerating Muscle

Chang Gui; Gretchen Meyer

Skeletal Muscle - Structure, Function and Mechanics

Poster No. 1894

Neural-driven Activation Of 3D Muscle In A Finite Element Framework

Colton Babcock; Victoria Volk; Wei Zeng; Kevin Shelburne; Clare Fitzpatrick

Poster No. 1895

Development Of A Finite Element Birthing Model To Assess Pelvic Floor Biomechanics

Marc Mounzer; Sriram Balasubramanian; Anita Singh

Poster No. 1896

Three-dimensional Morphology Of The Diaphragm In Normative Pediatric Subjects

Marc Mounzer; Sriram Balasubramanian; Cahill Patrick

Poster No. 1897

Proof-of-concept For A Novel Force-reproduction Platform Mimicking Multiple Muscle Forces During In-vivo Functional Activities

Yangyang Yang; Yufan Wang; Rongshan Cheng; Jie Zhao; Tsung-Yuan Tsai

Skeletal Muscle - Treatment and Therapeutics

Poster No. 1898

Systemic Analysis Of Genomic Changes In Muscle Stem Cells Under Hypoxic Conditions Using Single Cell Sequencing

Genevieve Abd; Haiying Pan; Peter Pioli; Yong Li

Poster No. 1899

Adjunctive Pharmaceuticals To Improve The Myogenic Potential And Muscle Quality In A Mouse Model Of Volumetric Muscle Loss Injury

Shefali R. Bijwadia; Christiana J. Raymond-Pope; Alec M. Basten; Thomas J. Lillquist; Jarrod A. Call; Sarah M. Greising

Poster No. 1900

Selective PKC β II Inhibition Attenuates Oxidative Stress In Murine Myoblasts

Tameka C. Dean; Kaitlin Henry; Maria De Los Santos; T. L. Cunningham; Holly Pilson; Xue Ma

Poster No. 1901

Limited Gender Differences In Gastrocnemius Structure And Cytokine Expression After Lipus Or Pfus Treatment

Chelsey L. Dunham; Scott R. Burks; Joseph A. Frank

Spine - Diagnostics

Poster No. 1902

Impact Of Health Literacy On Self-reported Health Outcomes In Spine Patients

Amanda Lans; John R. Bales; Pranati Borkhetaria; Joseph Schwab; Jorrit-Jan Verlaan; Laura P. Rossi; Daniel G. Tobert

Poster No. 1903

Motion-based Phenotype Identification Among Clbp Patients And Clinical Significance

Spencer A. Baker; Tyler Hutchinson; Ulrike H. Mitchell; David T. Fullwood; Anton Bowden

Poster No. 1904

Automated Patient-specific Finite Element Analysis Of Vertebral Compression From CT

William Burton; Casey Myers; Victoria Volk; Christopher Cain; Jill Fattor; Chadd Clary; Clare Fitzpatrick; Paul Rullkoetter

Poster No. 1905

Improvement Of An Algorithm For Using Deep Learning With Three Dimensional Depth Sensor Imaging In Scoliosis Detection - In Order To Enhance The Detection Performance Of Scoliosis With Mild And Moderate Curves -

Terufumi Kokabu; Norimasa Iwasaki; Hideki Sudo

Poster No. 1906

The Prediction Of Lumbar Spine Surgery Outcomes Based On Computed Tomography- Finite Element Analysis Of Lumbar Vertebrae

Thomas Statchen; Rashad Madi; Dilini Ranaweera; Anika Basu; Winnie Xu; Leilei Hao; Charis Gao; Gregory Chang; Chamith Rajapakse

Spine - Growth, Development and Aging

Poster No. 1907

Large Animal Model Of Thoracic Insufficiency In Two Yucatan Mini Pigs

Madeline Boyes; Klaus Hopster; Benjamin Sinder; Brian Snyder; Thomas Schaer; Patrick Cahill

Poster No. 1908

Osteophyte Location And Severity In Individuals With Chronic Low Back Pain

Sabreen Megherhi; Clarissa LeVasseur; Joseph Shoemaker; Yunting Tang; Jeremy Shaw; Joon Lee; William Donaldson; Gina McKernan; William Anderst

Poster No. 1909

Novel High-Resolution Optical Pressure Mapping Device And Its Clinical Applications

Shanni Zhou; Harrison Wilson; Jessica Rosendorf; Kelsey Detels; David Shin; Bardiya Akhbari; Andrew Chen; Soheil Ashkani Esfahani; Joseph Schwab; Hamid Ghaednia

Poster No. 1910

Patient-specific Finite Element Modeling Of Scoliotic Curve Progression Using Region-specific Stress-modulated Vertebral Growth

Christian D'Andrea; Amer Samdani; Sriram Balasubramanian

Poster No. 1911

Evidence Of Histone Lactylation And Its Role In MMP-13 Epigenetic Regulation In Intervertebral Discs

Dong Wang; Joon Lee; Gwendolyn Sowa; Nam Vo

Spine - Injury, Healing and Pain

Poster No. 1912

Stromal Cells In Modic Type 1 Change Bone Marrow Promote Neurite Outgrowth

Tamara Mengis; Irina Heggli; Nick Herger; Florian Brunner; Mazda Farshad; Oliver Distler; Stefan Dudli

Poster No. 1913

Association Between Chronic Low Back Pain And Psychological Stress Responses: A Population-based Cohort Study

Norihiko Takegami; Koji Akeda; Koki Kawaguchi; Takahiro Hasegawa; Junichi Yamada; Tatsuhiko Fujiwara; Akinobu Nishimura; Akihiro Sudo

Poster No. 1914

Spinal Cord Injury-Associated Neurogenic Heterotopic Ossification: A Novel Mouse Model

Rachad Aita; Joseph Petrucci; Rahul Gawri; Chan Gao

Poster No. 1915

Increased Proteolytic Activity In 'Modic Disc' Yields More Pro-inflammatory Acting ECM Fragments

Tamara Mengis; Irina Heggli; Nick Herger; Florian Brunner; Mazda Farshad; Stefan Dudli

Poster No. 1916

Preoperative Serum Albumin Level Predicts Length Of Stay And Perioperative Complications Following Vertebral Corpectomy And Posterior Stabilization For Metastatic Spinal Pathology

Comron Saifi; Takashi Hirase; Khaled M. Taghlabi; Amir Faraji; Jesus Cruz-Garza; Rex Marco

Poster No. 1917

The Potential Role Of Intraoperative Ketamine Administration In Reducing Postoperative Opioid Consumption In Among Chronic Opioid Users In Outpatient Spine Surgery

Comron Saifi; Jennifer Liu; Carol Wang; Thomas Sullivan; Kevin J. Bondar

Poster No. 1918

Subsidence Performance Of A Novel 3d Printed Cervical Cage: An In Vitro Biomechanical Investigation

Kai Xu; Jing Zhang; Lu Sun; Yuanqiao Wu; Xuewei Ma; Jenny Lei; Ali Kiapour; Kaiwei Chen; Hao Liu; Siyi Cai

Spine - Structure, Function and Mechanics

Poster No. 1919

Development Of Finite Element Models Of The Lumbar Spine With Multiple Motion Segment Spanning Anterior Longitudinal Ligaments

Wonman Park; Thomas Cha; Guoan Li

Poster No. 1920

Effect Of Multiple Motion Segment Spanning Fibers Of The Anterior Longitudinal Ligaments On The Biomechanical Behavior Of The Lumbar Spine - A Parametric Fe Investigation

Wonman Park; Thomas Cha; Guoan Li

Poster No. 1921

Morphological Evaluation Of The Lumbar Curve In Adolescent Idiopathic Scoliosis Lenke Type 1

Yuichi Shimizu; Ryota Takatori; Daisuke Fukuhara; Tomohisa Harada; Nobuaki Takeura; Hitoshi Tonomura; Masateru Nagae; Nozomu Inoue; Kenji Takahashi

Poster No. 1922

Voltage-gated Calcium Channels Play An Important Role Of Impulse Generation In Slowly Adapting Type Mechanoreceptors

Mayumi Sonekatsu; Jianguo G. Gu; Manabu Yamanaka; Naoko Nishio; Takashi Shimoe; Seiji Kanno; Yusuke Kido; Yuki Matsuyama; Akimasa Murata; Hiroshi Iwasaki; Hiroshi Yamada

Poster No. 1923

Spinal Anterior Cervical Plate Evaluation in Non-Corpectomy Model

Valerie Coldren; NaveenKumar Kanchi Subramani; David Nuckley

Poster No. 1924

Automated Vertebral Segmentation Using A Convolutional Neural Network

Girish Viraraghavan; Ausilah Alfraihat; Amir Samdani; Sriram Balasubramanian

Poster No. 1925

Morphological Comparisons Between Bovine Tail And Human Lumbar Vertebral Bony Endplates

Danni Porter; Megan Stickley; Brian D. Jensen; Anton E. Bowden

Poster No. 1926

Sexual Differentiation In Sacroiliac Joint Shear Motion Zones, Asymmetry, And Stability During In-situ Multidirectional Bending: Implications For Low Back And Pelvic Girdle Pain Therapies

Oluwatodimu Richard Raji; Jeremi Leasure

Poster No. 1927

Pre And Post-operative Gait Analysis Of Adolescent Idiopathic Scoliosis Patients

Rounak Bhattacharya; Bhavuk Garg; Manish Gupta; Rajesh Malhotra; Anoop Chawla; Kaushik Mukherjee

Spine - Surgical and Non-Surgical Interventions

Poster No. 1928

Relevance Of Epiphysial Rim Contact In Anterior Lumbar Interbody Fusion: A Study On Bone Surrogates Reconstructed From Computer Tomography

Jay Manuel; Tunde Abubakar; Caroline Hannigan; Milan Mody; Chukwuemeka Mbagwu; Giovanni Solitro

Poster No. 1929

Suction-based Localized Autograft Bone Collection Reduces Allograft Use And Patient Cost In Tlif Surgeries

Jennifer A. Bowden; Jake Reed; Seth Wilson; Kai Barlow; John R. Edwards

Poster No. 1930

Predicting Survival For Patients Undergoing Spinal Surgery For Metastatic Spine Disease

Venina S. Kalistratova; Dagoberto Piña Jr.; Jeffrey Robert Fine; Zachary Boozé; Joseph Holland; Joseph Wick; Wyatt Vander Voort; Lauren Hisatomi; Alex Villegas; Yashar Javidan; Rolando Roberto; Eric Klineberg; Hai Le

Poster No. 1931

Preclinical Evaluation Of Marrow Cellution Needle Compared To Traditional Aspiration And Biocue Centrifugation System

Jeremiah T. Easley; Katie Sikes; Katie Bisazza; Mindy Meyers; Holly L. Stewart; Benjamin Reves

Poster No. 1932

Rheumatoid Arthritis Patients Are At Increased Risk For Adverse Events Following Lumbar Discectomy

Philip P. Ratnasamy; Katelyn E. Rudisill; Michael J. Gouzoulis; Alexander J. Kammien; Jonathan N. Grauer

Poster No. 1933

The Fading Gold Standard: The Decline In Separate Incision Autograft For Spine Surgery Over The Past Decade

Katelyn E. Rudisill; Philip P. Ratnasamy; Gwyneth C. Maloy; Jonathan N. Grauer

Poster No. 1934

Cervical Disc Arthroplasty Usage Leveling Out 2010 To 2021

Philip P. Ratnasamy; Katelyn E. Rudisill; Gwyneth C. Maloy; Jonathan N. Grauer

Poster No. 1935

More Rigid Fixation Of Pelvis In Adult Spinal Deformity Increased The Stress And Angular Motion At Hip Joint:finite Element Analysis

Takuhei Kozaki; Hannah J. Lundberg; Steven P. Mell; Nozomu Inoue; Howard S. An; Hiroshi Yamada

Poster No. 1936

Defining The Stiffness Decay Coefficient Of Pedicle Screws To Estimate The Effect Of Toggling On Pedicle Screw Stiffness In The Lumbar Spine

Farid Amirouche; Eric Hu; Brandon Gligor; Sureshkumar Senthilkumar; Roberto Diaz

Poster No. 1937

Glp-1 Receptor Agonist Exenatide Reduces Endoplasmic Reticulum Stress And Improves Function In A Rat Spinal Cord Injury Model

Hiroyuki Katoh; Toshihiro Noguchi; Keiko Okada; Satoshi Nomura; Masahiko Watanabe

Poster No. 1938

Evaluation Of Radiation Exposure During Minimally Invasive Spine Surgery; How High Is The Exposure Dose? A Cadaveric Study

Kazuta Yamashita; Fumitake Tezuka; Masatoshi Morimoto; Kosuke Sugiura; Koichi Sairyo

Poster No. 1939

Novel Augmented Reality Navigation Technology For Spinal Cord Tumor Resection

Fumitake Tezuka; Kosuke Sugiura; Shunichi Toki; Shunsuke Tamaki; Makoto Takeuchi; Masatoshi Morimoto; Hiroaki Manabe; Kazuta Yamashita; Koichi Sairyo

Poster No. 1940

Diverging Effects Of Friction And Contact Stiffness On Global And Local Mechanical Response Of Lumbar Interbody Fusion Device Computational Models

Snehal S. Shetye

Poster No. 1941

Many Minds: A Collaborative Approach To Patient Care And Developing Provider Interrelationships

John R. Edwards; Jennifer A. Bowden

Poster No. 1942

Anterior Cervical Discectomy And Fusion (ACDF) Surgery Using A Local Source For Cancellous Autograft: A Prospective Study

Mark Schmitt; Conor O'Neil; Zakk Walterscheid; Jonathan Carmouche

Poster No. 1943

Perioperative Outcomes Of Single-level Cervical Disc Arthroplasty: No Difference Between Orthopaedic And Neurologic Surgeons

Mitchell Ng; Morad Chughtai; Ahmed Emara; Dominic Pelle; Ariel N. Rodriguez; Thomas Mroz; Nicolas Ahn; John Houten; Ahmed Saleh; Afshin Razi

Poster No. 1944

Withdrawn

Poster No. 1945

Multi-level Posterior Cervical Foraminotomy Associated With Increased Post-operative Infection Rates And Overall Re-operation Relative To Anterior Cervical Discectomy With Fusion Or Cervical Disc Arthroplasty

Mitchell Ng; Aaron Lam; Andriy Kobryn; Joydeep Baidya; Patrick Nian; Ariel N. Rodriguez; Nicholas Ahn; John Houten; Ahmed Saleh; Afshin Razi

Poster No. 1946

Percutaneous Versus Open Pedicle Screw Fixation For The Management Of Metastatic Spine Disease: A Matched-cohort Study

Mina Botros; Clarke Cady-McCrea; Takaki Shimizu; Addisu Mesfin

Poster No. 1947

Biomechanical Comparison Of Lumbar Spine Instrumented With Stand-alone Interbody Fixation Constructs Versus Interbody With Supplemental Fixation

Ali Kiapour; Elie Massaad; Vijay Goel; John H. Shin

PS2-159 Tendon and Ligament - Diseases and Disorders

Poster No. 1948

Hmgb1 Mediates High Glucose Induced Apoptosis And Pyroptosis Of Tendon Stem/progenitor Cells

Panpan Lu; Yingjuan Li; Guangchun Dai; Yuanwei Zhang; Liu Shi; Ming Zhang; Hao Wang; Yunfeng Rui

Poster No. 1949

Tendinopathic Changes To The Murine Patellar Tendon In Response To Ciprofloxacin Treatment

Nicole A. Chittim; Nicolo Dubacher; Gabor Matyas; Jess G. Snedeker

Poster No. 1950

Mechanism Of Hyperoxia-induced Oxidative Stress Mediating Hif-1a Ubiquitination In Diabetic Tendon Calcification

Ming Zhang

Poster No. 1951

Relationship Between Patellar Tendon Biomechanical And Morphologic Properties To Serum Clinical Variables In Persons With Pre-diabetes And Type 2 Diabetes

Chad C. Carroll; Shivam H. Patel; Nathan WC Campbell; Chinonso E. Emenim; Dominick O. Farino; Joseph V. Rispoli; Craig J. Goergen; Jacob M. Haus; Arman Sabbaghi

Tendon and Ligament - Growth, Development and Aging

Poster No. 1952

The Activation Of Ampk-mtor Axis Mitigates Tendon Stem/progenitor Cells Senescence And Delays Tendon Aging

Guangchun Dai; Ying-juan Li; Ming Zhang; Hao Wang; Panpan Lu; Yuanwei Zhang; Yunfeng Rui

Poster No. 1953

The Inhibitory Function Of MTORC1 Signaling In Tenocyte Maturation And Fibrochondrocyte Expansion

Yeonju Lee; Melanie Bates; Nathaniel Dymment; Kyu-Sang Joeng

Poster No. 1954

Collagen XII Regulates Cell And Matrix Organization And Structure During Postnatal Tendon Development

Ashley K. Fung; Nathaniel A. Dymment; Lou J. Soslowsky

Poster No. 1955

Optogenetic Contraction Of Muscle Leads To Elevated Gene Expression Of Metabolic And Inflammatory Pathways In Tendon And Bone

Syeda Lamia; Elahe Ganji; Matthew Stepanovich; Noelle Whyte; Adam C. Abraham; Megan L. Killian

Poster No. 1956

Differential Roles Of Non-muscle Myosin Isoforms In Skeletal And Connective Tissue Formation

Mary Kate Evans; Tonia Tsinman; Ellie Ferguson; Xi Jiang; Joel Boerckel; Lin Han; Eiki Koyama; Robert Mauck; Nathaniel Dymment

Poster No. 1957

Defining A Tendon Stem/progenitor Cell Subpopulation Responsive To Increased Ca²⁺ Signaling

Haiyin Li; David Ciufo; Chike Cao

Poster No. 1958

Developmental-like Slow Stretch Drives Hierarchical Fiber Formation In A Dose And Organization Dependent Way

Kelly R. Ott; Jennifer L. Puetzer

Tendon and Ligament -Injury and Healing

Poster No. 1959

PAI-1 Mediates TGF- β 1 Induced Myofibroblast Activation And Senescence In Tenocytes Via MTOR Signaling

Rahul Alenchery; Raquel Ajalik; Kyle Jerreld; Hani Awad

Poster No. 1960

Dose-dependent Metabolic Responses Of Patellar Tendon To Cytokine Stimulation

Hailee Coleman; Aaron Stoker; Shen-Ying (Richard) Ma; James Cook

Poster No. 1961

Inducible Rosa, But Not Alpha-SMA Or Scx, Cre Driven Excision Achieves Substantial Col12a1 Knockdown In Tendon Healing

Alexander J. Bein; Ashley K. Fung; Stephanie N. Weiss; Nathaniel A. Dymment; Lou J. Soslowsky

Poster No. 1962

Nontoxic Peptide Based Polyurethane Adhesive Enhances Multiple Tissue Wound Healing

Jianying Zhang; Kentaro Onishi; MaCalus V. Hogan; James H-C. Wang

Poster No. 1963

Neutrophil And Netosis Modulation In Traumatic Heterotopic Ossification

Johanna H. Nunez; Jonathon Hong; Alec Bancroft; Jessica Marie R. Medrano; Robert J. Tower; Benjamin Levi

Poster No. 1964

Effects of Activity Level on Metabolic Responses of ACL and Common ACL Autografts Fibroblasts

Gillian Hark; Aaron M. Stoker; James L. Cook; Shen-Ying (Richard) Ma

Poster No. 1965

Treatment Of Healthy Tendon-derived Cells With Serum From Rats With Streptozotocin-induced Diabetes Impairs Cell Proliferation, Migration, And Metabolic Activity

Nathan WC Campbell; Harrison Cottingham; Chris Kargl; Chad C. Carroll

Poster No. 1966

Plantar Flexor Functional Deficits Are Reduced Following Surgical Repair Of Achilles Tendon Ruptures In A Rat Model

My M. Tang; Courtney A. Nuss; Natalie Fogarty; Josh R. Baxter

Poster No. 1967

IKK- β Inhibition Facilitates Early Healing Following Intrasynovial Tendon Repair In A Canine Model

Ryan A. Lane; Richard H. Gelberman; Hua Shen; Shelly E. Sakiyama-Elbert; Stavros Thomopoulos

Poster No. 1968

ASC Activation By Macrophages And Tendon Fibroblasts

Astia Innis; David Roberts; Brittany Marshall; Lee Song; Stavros Thomopoulos

Poster No. 1969

Elucidating Sex Differences In The Response To Anterior Cruciate Ligament Injury Following Mechanical Ligament Rupture

Emily M. Van Zeeland; Jeremiah T. Easley; Brandon S. Kassel; Sara Wist; Kelly Santangelo; Katie Sikes

Poster No. 1970

Ferroptosis As A Potential Mechanism For Blood-induced Cell Death In ACL Injury

Howard Nicholson; Andy Lee; Neeraj Sakhrani; Beth G. Ashinsky; Stavros A. Thomopoulos; Gerard A. Ateshian; Clark T. Hung

Poster No. 1971

Characterization Of Collagen Content And Maturity During Chick Embryo Tendon Healing

Christoph D. Hart; Phong K. Nguyen; Sophia R. D'Amico; Ananthakrishnan Nair; Likhith R. Bomma; Catherine K. Kuo

Poster No. 1972

The Biomechanical Effects Of Vincular Disruption Following Flexor Tendon Repair In A Turkey Model

Omar A. Selim; Ramona Kirk Reisdorf; Koichi Nakagawa; Farbod Yousefi; Rou Wan; Peter Amadio; Steven L. Moran; Chunfeng Zhao

Poster No. 1973

Effect Of Infrapatellar Fat Pad Fibrosis On The Mechanical Properties Of The Anterior Cruciate Ligament

Hidenobu Terada; Chiharu Takasu; Takuma Kojima; Sora Kawabata; Takuma Kano; Kyomi Takayanagi; Naohiko Kanemura; Kenji Murata

Poster No. 1974

Physical And Biochemical Microenvironmental Cues Potentiate Tgf β -mediated Scleraxis Expression

Robert N. Kent; Mohamed Said; Megan E. Busch; Ariane Tsai; Jewett E. Maggie; Daniel L. Matera; William Y. Wang; Samuel J. DePalma; Harrison L. Hiraki; Megan L. Killian; Adam C. Abraham; Alice H. Huang; Ariella Shikanov; Brendon M. Baker

Poster No. 1974A

Biomechanical Analysis On Regeneration In Digital Flexor Tendon Of Iberian Ribbed Newt Following Complete Transection

Fumiya Sato; Yu Masuda; Daisuke Suzuki; Toshinori Hayashi; Jeonghyun Kim; Takeo Matsumoto; Eijiro Maeda

Poster No. 1975

Magnetic Cell Sheet Patches Potential In Tendon Regeneration

Ana I. Gonçalves; Márcia T. Rodrigues; Manuela E. Gomes

Tendon and Ligament - Structure, Function and Mechanics

Poster No. 1976

Analyses Of Biopsied Tissues In Autologous Tenocyte Therapy For Treatment Of Tendinopathy

Maurizio Damiani; Tak Cheng; Euphemie Bassonga; Clair Lee; Ming H. Zheng

Poster No. 1977

Biomechanical Properties Of Medial Knee Collateral Ligament Allografts Compared To Palmaris Longus Autografts For Ucl Reconstruction

Dave T. Huang; Lukas Foster; Michael Stone; David Kulber; Melodie F. Metzger

Poster No. 1978

Aponeurosis Structure-function Mechanisms: Inhomogeneity Of Microstructure Waviness And Materials Properties

Benjamin Wheatley; Olivia Dyer; Mark Seeley

Poster No. 1979

Characterization Of The Fiber-matrix Interaction In A Fiber Composite Hydrogel For Use As An In Vitro Tendon Model

Annalisa P. Ugarte; Stephanie Bryant

Poster No. 1980

Collagen Denaturation During Mechanical Overload Of Tendon Fibrils From Positional And Energy-storing Tendons

Allen Lin; Christopher Slater; Callie-Jo Martinez; Steven Eppell; Seungju Michael Yu; Jeffrey Weiss

Poster No. 1981

Short-term Buffer And Antibiotic Soaking Does Not Affect Tendon Modulus And Toe-region Length

Olivia Dyer; Mark Seeley; Benjamin Wheatley

Poster No. 1982

Shear Wave Tensiometers Can Measure In Situ Ligament Tension And Engagement Length With Low Bias Errors

Lesley Arant; Mary Laudon; Josh Roth

Poster No. 1983

Withdrawn

Poster No. 1984

Brillouin Microscopy As A Contact-free, All-optical Method To Measure Embryonic Tendon Material Properties

Aniket Jana; Phong K. Nguyen; Giuliano Scarcelli; Catherine K. Kuo

Poster No. 1985

Recreating Ligament Mechanics Using 3d Printing

Natalia Mclver; Mahmoud Reda Taha; Christina Salas

Poster No. 1986

Gracilis Tendon And Aponeurosis Strain Measured Using Digital Image Correlation.

Lomas S. Persad; Alexander W. Hooke; Alexander Y. Shin; Richard L. Lieber; Kenton R. Kaufman

Poster No. 1987

Fluorescent Labeling With 5-DTAF Reduces Fiber Uncrimping In Loaded Tendons

Gianna T. Voce; Art Michalek

Poster No. 1988

Metabolic Factors Impact Structural Adaptations During Exercise Treatment In Patients With Achilles Tendinopathy

Kayla D. Seymore; Hayley Powell Smitheman; Brian Honick; Andy K. Smith; Morgan N. Potter; Karin M Silbernagel

Poster No. 1989

Strain Characteristics Of The Uncalcified Fibrocartilage In The ACL Femoral Enthesis

Shiho Sato; Daichi Ishii; Hiromichi Fujie

Poster No. 1990

Aging And Injury Affect Nuclear Shape Heterogeneity In Tendon

Benjamin R. Freedman; Vivian Shi; Yann Tinguely; Franka Klatte-Schulz; Georg Duda; David J. Mooney

Poster No. 1991

Morphology Of The Proximal Tibiofibular Joint And Ligament using Three-dimensional Computed Tomography: A Cadaveric Study

Ken Hayashi; Goro Tajima; Ryunosuke Oikawa; Moritaka Maruyama; Atsushi Sugawara;
Shinya Oikawa; Koichiro Mizuno; Yasutaka Oya; Minoru Doita

Poster No. 1992

Collagen XII Is A Critical Regulator Of Supraspinatus Tendon Mechanics And Collagen Fiber Realignment Across Sex

Michael S. DiStefano; Stephanie N. Weiss; Andrew F. Kuntz; Lou J. Soslowsky

Poster No. 1993

Shear Wave Velocity Of Transverse Carpal Ligament Increased With Carpal Tunnel Pressure: A Cadaveric Study

Hui Zhang; Jocelyn Hawk; Zong-Ming Li

Poster No. 1994

Challenging The Assumption Of Uniformity With In Vivo Measurements Of Patellar Tendon Structure

Naoaki Ito; Rodrigo Scattone Silva; Haraldur B. Sigurdsson; Daniel Cortes; Karin M Silbernagel

Tendon and Ligament - Treatment and Therapeutics

Poster No. 1995

2-year Outcomes For Transtibial Versus Tibial Inlay Double Bundle Posterior Cruciate Ligament Reconstructions

João Bourbon de Albuquerque II; Temperato Joe; Kylee Rucinski; James Cook; James Stannard

Poster No. 1996

Tunable Extracellular Matrix-based Multiphasic Nanofibrous Scaffold Systems For Rotator Cuff Entesis Repair

Zizhao Li; Se-Hwan Lee; Dong Hwa Kim; Yujia Zhang; Richard Tran; Jason Burdick; Robert Mauck; Su-Jin Heo

Poster No. 1997

Non-terminal Equine Model For Tendon And Ligament Regeneration

Takashi Taguchi; Catherine Takawira; Mustajab H. Mirza; Rita Aoun; Mandi Lopez

Poster No. 1998

Patients With Insertional Achilles Tendinopathy Tolerated Increasing Intensity Of Shockwave Treatment

Brian Honick; Andy Smith; Karin M Silbernagel

Poster No. 1999

Impact Of Post-mortem Time And Temperature On Biomaterial Properties Of Human Peroneus Longus Tendons

Shangping Wang; Peng Chen; Dustin Mueller; Richard Hepfer; Alyce Linthurst-Jones; Lia Campbell; Yongren Wu; Kelvin Brockbank; Hai Yao

Poster No. 2000

Compliance With A Home Exercise Program During Physical Therapy Treatment Affects Achilles Tendon Structure In Patients With Achilles Tendinopathy

Andy K. Smith; Hayley Smitheman; Kayla Seymore; Rodrigo Scattone Silva; Karin M Silbernagel

Poster No. 2001

Enhanced Clotting In Synovial Fluid With Colloidal-Composite Gels For Partial Anterior Cruciate Ligament Tears

Jacob D. Thompson; Grant Scull; Lauren V. Schnabel; Matthew Fisher; Ashley C. Brown

Poster No. 2002

Fisetin Treated Human Bone Marrow Aspirate Reduces Senescence Signatures

Jacob Singer

Poster No. 2003

Muscle Contraction Exercise Promotes Both Muscle Function Recovery And Tendon Healing After Achilles Tendon Rupture And Suture Surgery On Rodent Model

Moe Yoneno; Yuki Minegishi; Haruna Takahashi; Kei Takahata; Yuna Usami; Himari Miyamoto; Takanori Kokubun

Poster No. 2004

The Efficacy And Interaction Of PRP And ASA In A Murine Model Of Subacromial Impingement

Sarah Caughey; Matthew Magruder; Camila Carballo; Claire Eliasberg; Janice Havasy; Alexander Piacentini; Scott Rodeo

Poster No. 2005

Developmental Mechanical Cues Drive Improved Maturation And Stem Cell Differentiation In Engineered Entheses

Michael E. Brown; Jenny L. Puetzer

Poster No. 2006

Mrl Informed Protein Therapeutics Are Effective In Tendon In A Dose Dependent Manner

Marguerite A. Pacheco; Rebecca Bell; Nelly Andarawis-Puri

Tumors - Genetics

Poster No. 2007

Outcome of cancer genomic profiling for patients with advanced bone and soft tissue sarcomas, a single institute study of Japan

Shin Ishihara; Eisuke Kobayashi; Takafumi Koyama; Kuniko Sunami; Shintaro Iwata; Kazuki Sudo; Tatsunori Shimoi; Kan Yonemori; Akira Kawai

Tumors - Metastatic

Poster No. 2008

Targeting Senescent Cancer Cells Using Senolytic Drugs To Prevent Breast-to-bone Metastasis

Eleane C. Hamburger; Lisbet Haglund; Derek Rosenzweig

Poster No. 2009

Overexpression Of Enolase 2 & Dopa Decarboxylase In Bone Metastases Of Patients With Lung Or Prostate Cancer

Xiaoyu Ma; Mengting Sun; Ping Tang; Cong Wu; Jiamin Mao; Quanming Wang; Lei Ding

Poster No. 2010

Bone Cell Influence On Breast Cancer Tumor Spheroid Formation Via CXCL5/CXCR2 Signaling

Sarah Nano; Syeda Masooma Naqvi; Laurie Littlepage; Laoise M. McNamara; Glen Niebur

Poster No. 2011

Factors Associated With Skeletal Related Events In Bone-metastatic Melanoma

Tom M. de Groot; Michelle R. Shimizu; Peter K. Twining; Paul C. Jutte; Joseph H. Schwab

Poster No. 2012

Quantifying Osteosarcopenia In A Preclinical Model Of Metastatic Cancer Using Imaging Biomarkers

Christine Huang; Margarete Akens; Cari Whyne; Michael Hardisty

Tumors - Primary Tumors

Poster No. 2013

Ki-67 Index As An Adjunct Histological Marker For Cartilage Tumor Grade Evaluation: A Pilot Study

Benjamin Sanders; Manisha Koneru; Krystal Hunter; Pietro M. Gentile; Gord G. Zhu; Tae Won B. Kim; Christina J. Gutowski

Poster No. 2014

Medicare Advantage May Be Associated With Worse Outcomes In Patients With Soft Tissue Sarcoma

Brandon S. Gettleman; Jennifer C. Wang; Amit S. Piple; Matthew S. Chen; Lawrence Menendez; Nathanael D. Heckmann; Alexander B. Christ

Poster No. 2015

Chondroitin Sulfate Proteoglycan 4(cspg4) CAR T Cell Therapy Combined With Irradiation Is Effective In Targeting Bulk And Radiation-resistant Chordoma Cancer Cells

David O. Osei-Hwedieh; Kun Wang; Yufeng Wang; Xinhui Wang; Soldano Ferrone; Joseph H. Schwab

Poster No. 2016

Characterization Of The Gut Microbiome In Osteosarcoma Mouse Model

David Le; MaKenzie Chambers; Lamya'a Dawud; John D. Sterrett; Christopher A. Lowry; Manoj Pandey; Sangita Phadtare; Kayla Mercado; Christina Gutowski

Poster No. 2017

The Association Of Mental Health Disorders On Postoperative Outcomes In Orthopaedic Sarcoma Patients

MaKenzie M. Chambers; Caroline T. Gutowski; Tae Won B. Kim; Christina J. Gutowski

Tumors - Treatment and Therapeutics

Poster No. 2018

Chondroitin Sulfate Proteoglycan 4 Expression In Chondrosarcoma: A Potential Target For Antibody-based Immunotherapy.

David O. Osei-Hwedie; Sjoerd P.F.T Nota; David L. Drum; Xinhui Wang; Soldano Ferrone; Joseph Schwab

Poster No. 2019

Cost-effectiveness Of Treatment Of Impending And Pathologic Fractures Of The Long Bones: A Propensity-score Matched Study Of 323 Patients

Tom M. de Groot; Michelle R. Shimizu; David Shin; Olivier Q. Groot; Stein J. Janssen; Paul C. Jutte; Joseph H. Schwab

Poster No. 2020

Combined Therapy Using B7-H3 Specific CAR T Cells And HDAC Inhibitor Is Effective In Killing Chondrosarcoma Tumors In Vitro And Prolong Survival In A Mouse Model.

David O. Osei-Hwedie; Lile He; Yida Zhang; Song Fan; Xinhui Wang; Soldano Ferrone; Joseph Schwab

Poster No. 2021

The Effects Of 24r,25-dihydroxyvitamin D3 On Laryngeal Cancer Cell Proliferation And Apoptosis Are Dependent On The Level Of Estrogen Receptor Alpha 66 And Are Mediated By Phospholipase D Activation

Cydney Dennis; David J. Cohen; Zvi Schwartz; Barbara Boyan

Poster No. 2022

Hydralazine Modulates Radiotherapy-induced Senescence By Quenching Reactive Lipid aldehydes In A Murine Bone Marrow Stromal Cell Line

Mia R. diFrancesco; Jason A. Horton

Poster No. 2023

Prediction Of Hematologic And Non-hematologic Toxicity By Serum Nutritional Parameters And Inflammatory Response Parameters A Study Of Trabectedin Therapy In Advanced Soft Tissue Sarcoma

Masanobu Takeyama; Yusuke Kawabata; Keijyu Saito; Tomotaka Yoshida; Shintaro Fujita; Yutaka Inaba

Late Breaking Poster Session 2

Poster No. 2157

Effects Of Vancomycin (VAN) And Tobramycin (TOB) Doping Of PVA Composite On Infection Inhibition Of Staphylococcus Aureus Infected Medical Device- A Rat Femoral Implantation Model

Fadi Aboona; Therese Bou-Akl; Adam Miller; Mike Fry; Bin Wu; Paula Dietz; Weiping Ren; David Markel

Poster No. 2158

Fabrication Of Inorganic Polyphosphate-loaded Thermoresponsive Hydrogel For Enhanced Fracture Healing

Rayan Ben Letaifa; Deepak Chauhan; Araceli Garcia; Hu Zhang; Derek Rosenzweig; Paul Martineau; Xavier Banquy; Rahul Gawri

Poster No. 2159

In Vivo Assessment Of Sulfonation Followed Precipitation Of Amorphous Calcium Phosphate On Bone-bonding Strength Of Carbon-fiber-reinforced Peek

Yusuke Takaoka

Poster No. 2160

Does MOPS Preservation Maintain Viability Of Nerve Allografts At Shelf-stable Conditions?

Bryce T. Fletcher; Rachel D. Phillips; Supriya Vuda; Jack Baumann; Sasidhar Karuparti; Aaron Stoker; Chantelle Bozynski; James Cook; Julia AV Nuelle

Poster No. 2161

Preventing Arthroplasty Infections Using A New Generation Of Antimicrobial Cement: Cemsat

Cyrus Talebpour; Hossein Salimnia; Fereshteh Fani; Houshang Alamdari

Poster No. 2162

Magnesium Containing Hybrid Fixation System Promotes The Healing Of Long Bone Fractures: A Large Animal Study

Yuantao Zhang; Lizhen Zheng; Wenxue Tong; Dick Ho Kiu Chow; Jiankun Xu; Ling Qin

Poster No. 2163

Multi-structured Composite For Endogenous Healing Of The Myotendinous Junction

Kariman A. Shama; Elizabeth Aikman; Marisa Pacheco; Whitney Stoppel; Brittany Taylor

Poster No. 2164

Myogenic And Vasculogenic Responses To Hypoxia In A Novel Coculture Model Of Muscle Cells And Endothelial Cells

Kevin Chen; Siobhan West; Justin Lee; Haiying Pan; Yong Li

Poster No. 2165

Assessment Of Chondrogenesis In Collagen-Alginate Composite Hydrogel Tracheal Constructs In Vitro

Mathew I. Saleem; Travis Peng; Pooja Swami; Andrew Wong; Vaughn Greene Jr.; Carol Wang; Daniel Grande

Poster No. 2166

Plant-Derived Zein Scaffold Containing Glutamine For Bone Repair

Apurva Limaye; Courtney Karner; Treena Arinzech

Poster No. 2167 (Guest Nation-Ireland) 

Multifunctional Bone Scaffolds Materials For Segmental Bone Defect Repair Fabricated Via Layer-by-layer Assembly

Mohammadali Sahebalzamani; Tanya Levingstone; Helen O. McCarthy; Nicholas Dunne

Poster No. 2168

Examining The Role Of CCL20/CCR6 Chemokine Signaling In Staphylococcus Aureus Osteomyelitis

Kyra M. Sandercock; Motoo Saito; Himanshu Meghwani; Edward M. Schwarz; Jennifer H. Jonason; Gowri Muthukrishnan

Poster No. 2169

Negative Effects Of Excess Polyamines On Osteogenesis Within Mesenchymal Stromal Cells Can Be Rescued With Ornithine Decarboxylase Inhibitor

Amin Cressman; David Morales; Zhang Zhenyang; Fernando Fierro

Poster No. 2170

Cutibacterium Acnes From A Commensal To Opportunistic Pathogen: Displaying A More Vasculotropic Affinity Rather Than Osteogenic Properties In Implant Associated Infection.

Mina Botros; Derek Schloemann; Karen De Mesy-Bentley; Motoo Saito; Edward Schwarz; Benjamin Ricciardi; Gowri Muthukrishnan

Poster No. 2171

Sexually Divergent Differentiation And Inflammatory Response Of Osteoclasts

Lilijanna Cummings; Jason Ashley

Poster No. 2172

Mimicking Gender-affirming Treatment Of Pubertal Suppression Followed By Testosterone On Bone Growth In Female-born Mice

Brandon W. Henry; Cynthia Dela Cruz; Bonnie T. Nolan; Robert Goulet; Vasantha Padmanabhan; Molly Moravec; Ariella Shikanov; Megan L. Killian

Poster No. 2173

Inhibiting Microrna-141-3p Improves Musculoskeletal Health In Aged Mice

Sagar Vyavahare

Poster No. 2174

Immunodeficiency Rescues The Impaired Skeletal Growth Of SHIP1-deficient Mice

Fatemeh Safari; Jeremy Yeoh; Mark Siegrist; Silvia Dolder; Willy Hofstetter; Philippe Krebs

Poster No. 2175

Spatial Transcriptomics Of Musculoskeletal Tissues During Bone Healing In Mice

Esther Wehrle; Denise Günther; Neashan Mathavan; Francisco Correia Marques; Amit Singh; Ralph Müller

Poster No. 2176

Effect Of Strain On Naïve MSC Differentiation Fate, A 3D In Vitro Study.

Priscilla Füllemann; Thomas Jörimann; Romano Matthys; Martin J. Stoddart; Sophie Verrier

Poster No. 2177

In Vivo Microdamage In Cortical Bone Of Osteoporotic Rat

Bohao Ning; Irène Londono; Catherine Laporte; Isabelle Villemure

Poster No. 2178

Lgr6 Controls Osteoblastogenesis Through Differential Pathways Activation

Justin King; Matthew Wan; Ivo Kalajzic; Kurt Hankenson; Archana Sanjay

Poster No. 2179

Effects Of Early Rehabilitation On Functional Recovery Following Femoral Bone Defect

Julia Andraca Harrer; Annemarie Lang; Sanique M. South; Kait Link; Joel D. Boerckel; Nick J. Willett

Poster No. 2180 (Guest Nation-Ireland) 

Development Of 3D Vascularized And Humanized Models Of Healthy And Osteoporotic Human Bone

Muhammad Munam Mustafa Bukhari; Syeda Masooma Naqvi; Laoise Maria McNamara

Poster No. 2181

Custom Perfusion-Compression Bioreactor For Precise, Dynamic Compressive Loading Of Bone Explants

Alexis V. Graham; Sophie Jones; Charlotte Thompson; Darrock Flynn; Matthew W. Priddy; Lauren B. Priddy

Poster No. 2182

Diabetes Impairs Fracture Healing Through Foxo1 Mediated Disruption Of Ciliogenesis

Shuying Yang

Poster No. 2183

Prediction Of Mechanical Properties Of Trabecular Bone By Lattice Element Method Using A Fast Open-source Package

Keyvan Ferasat; Alex Hadwen; Hao Sun; Roshni Rainbow; Heidi-Lynn Ploeg; Laurent Karim Béland

Poster No. 2184

Validating Stiffness Of Bovine Trabecular Bone Cores From FEA Simulations In Abaqus With 3D Printed Models

Roxolana Smyk; Kail Beloglowka; Alex Hadwen; McKinley Van Klei; Lauren Windover; Heidi-Lynn Ploeg

Poster No. 2185

Change In Model Morphology Evaluated Throughout The Modeling Process Of Humantrabecular Bone To Identify And Quantify Sources Of Error In Methodology

McKinley SM Van Klei; Alexander Hadwen; Lauren Windover; Roxolana Smyk; Heidi-Lynn Ploeg

Poster No. 2186

Verification Of The Optimal Position Of Grafted Shelf For Acetabular Dysplasia By Finite Element Analysis

Yohei Yukizawa; Naomi Kobayashi; Shunsuke Miyajima; Shu Takagawa; Hideki Honda; Kunihiro Hiroto; Yutaka Inaba

Poster No. 2187

Efficacy Of A Pharmacologic Iron Chelator For Reducing Cartilage Lesions Varies Between Sexes In The Dunkin-Hartley Model Of Spontaneous Osteoarthritis

Lindsey H. Burton; Maryam F. Afzali; Margaret A. Campbell; Christine S. Olver; Kelly S. Santangelo

Poster No. 2188

Using Machine Learning To Predict Factors Associated With A Worsening Physical Function In Patients With Or At Risk Of Hip And Knee OA.

Trevor Lopez; Hadi Alagha; Chinmay Gupte

Poster No. 2189

Using Contrast Enhanced X-ray Computed Tomography And Digital Volume Correlation To Assess Strain Distribution Across The Cartilage-bone Interface In A Guinea Pig Model Of Spontaneous Osteoarthritis

Sarah Davis; Aikaterina Karali; Jurgita Zekonyte; Marta Roldo; Gordon Blunn

Poster No. 2190

Inhibition Of Myd88 Dimerization Mitigates The Aggressiveness Of Arthritic Synovial Fibroblasts

Pallavi Bhattaram; Sergio Ramirez-Perez

Poster No. 2191

Functional Follow-up Of Chondroadherin-like (CHADL) As A Genetic Risk Factor For Osteoarthritis

Brian O. Diekman; Tanner M. Orders; Matthew J. Rich; Jack R. Felkner; Carson D. Shepler; Garrett A. Sessions; Susan D'Costa

Poster No. 2192

Chronic Senescence Contributes To Fibrocartilage Repair In A Preclinical Model Of Bone Marrow Stimulation

Luke Childress; Landon Gatrell; Hong Wu; Intawat Nookaew; Elisabeth Ferreira; Ryan Porter

Poster No. 2193

Computational Biodynamics Of The Knee Joint And Soft Tissue Damage Prediction At The Peak Landing Loading

Malek Adouni; Fadi Alkahtib; Afif Gouisse; Tanvir Faisal

Poster No. 2194

Retention Of Human Ipsc-derived Or Primary Cells Following Xenotransplantation Into Rat Immune-privileged Sites

Thomas Spaeter; Melissa Chavez; Giselle Kaneda; Dave Huang; Melodie Metzger; Victoria Yu; Julia Sheyn; Wafa Tawackoli; Dmitriy Sheyn

Poster No. 2195

Dynamic Reciprocity Of Age-related Matrix Stiffening And Mitochondrial Dysfunction In Regulating Cartilage Health: In Silico Network Inference Approach

Hirota Iijima; Yusuke Matsui

Poster No. 2196

Involvement Of Sirt1 Regulation In The Acute Chondrocyte Response To Traumatic Cartilage Overload

Taylor Williams; Sonali Karnik; Hessam Noori-Dokht; Amin Joukar; Stephen Trippel; Uma Sankar; Diane Wagner

Poster No. 2197

Cartilage Condition Of The Injured Knee On MRI Is A Prognostic Factor Affecting Postoperative Outcomes Following Knee Cartilage Restoration Surgery

Dai Sato; Chotigar Ngarmsrikam; Rawee Manatrakul; Brian Feeley; Benjamin Ma; Thomas Link; Drew Lansdown

Poster No. 2198

Non-destructive Near-infrared Spectroscopy Differentiates Cartilage Properties Related To Meniscal Coverage

Awuniji Linus; Brendan Stoeckl; William Querido; Miltiadis Zgonis; Thomas Schaer; Dawn Elliott; Robert Mauck; Nancy Pleshko

Poster No. 2199

Intraarticular Injection Of Adenosine Containing Liposomes Provides Significant Pain Relief, Improves Comfortable Range Of Motion And Prevents Radiologic Progression Of Osteoarthritis In A Preclinical Canine Model

Ding Li; Bruce N. Cronstein; James L. Cook; Chantelle C. Bozynski; Siddhesh R. Angle

Poster No. 2200

Mitochondrial Protectants Improve Chondrocyte Stress Response To Injury

Kaylee L. Montney; Rebecca M. Irwin; Hazel H. Szeto; Michelle L. Delco

Poster No. 2201

Effect Of Curcuma Longa Extract On Serum Inflammatory Markers And Mri-based Synovitis In Knee Osteoarthritis: Secondary Analyses From The Curkoa Randomised Trial

Benny Antony; Zhiqiang Wang; Tania Winzenberg; Ambrish Singh; Dawn Aitken; Mikael Boesen; Edwin Oei; Robert Jones

Poster No. 2202

Overcoming Limited Generalizability And Interpretability Of Predictive Machine Learning Models: An External Validation Analysis Using A National Database

Anirudh Buddhiraju; Tony Lin-Wei Chen; Murad Abdullah Subih; Henry Hojoon Seo; Pete Tuchinda; Michelle Shimizu; Oh-Jak Kwon; Young-Min Kwon

Poster No. 2203

Withdrawn

Poster No. 2203A

Predictive Factors And 10-year National Trend Analysis Of Opioid Prescriptions After Arthroscopic Rotator Cuff Repair

Wesley Day; Kevin Tang; Peter Y. Joo; Jonathan N. Grauer; Christopher V. Wilhelm; Sercan Yalcin; Michael J. Medvecky

Poster No. 2204

Characterization Of Lumbar Disc Herniation Prognosis Predictors Using Magnetic Resonance Imaging

Maria Astudillo Potes; Areonna Schreiber; Maryam Tilton; harrison gottlich; Paige Cummings; Adriana Gregory; Timothy Kline; Benjamin Elder; Lichun Lu

Poster No. 2205

Random Forest Predicts Discharge Destination Following Pelvis Trauma Surgery

Jun Ho Chung; Brittany McPhee; Richard Rice; Olumide Danisa; Rebecca Rajfer

Poster No. 2206

Development Of Methodology For Biomechanical Evaluation Of A Novel Equine Hock Arthrodesis Technique

Michael M. Singh; Zachary T. Lawson; Karyn A. Labbe; Ashlee E. Watts; Andrew B. Robbins

Poster No. 2207

Comparison Of One-Year Postoperative Patient-Reported Outcomes Measures Response Among Rotator Cuff Repair Patients

Nomi S. Weiss-Laxer; Sonja Pavlesen; Alfonso Arevalo; Kyle Carlock; Joycelyn Jeffords; Mohammad N. Haidir; Leslie Bisson

Poster No. 2208

Thrombelastography-defined Duration Of Hypercoagulability Following Primary Total Hip And Total Knee Arthroplasty: A Pilot Study

Daniyya Chaudhry; Ahmed Negm; Paul Duffy; Kelly Zarnke; Prism S. Schneider

Poster No. 2209

Measurement Properties Of The Star Excursion Balance Test For Patients With Chronic Patellar Instability

Andrew D. Firth; Diane M. Bryant; Greg Alcock; Jim P. Dickey; Alan M.J Getgood

Poster No. 2210

An Investigation Of Google Searches For Lumbar Spine Interventions

Jessica D. Hardin; Madison Blackwell; Amar Patel; Jake X. Checketts; Richard L. Drake

Poster No. 2212

Autograft Versus Allograft For Posterolateral Corner Reconstructions: A Systematic Review And Meta-analysis

Kent Kern; Ryan Sanii; James Peterson; Travis Menge

Poster No. 2211

Distribution Of Paycheck Protection Program To Orthopedic Practices During The Covid-19 Pandemic

Rajwinder Singh

Poster No. 2214

Immersive Virtual Reality Is Superior To Conventional Training For Novice Scrub Nurses Learning Anterior Approach Total Hip Arthroplasty: A Randomised Controlled Trial

Thomas C. Edwards; Francesca Kablean-Howard; Jonathan Edwards; Isabelle Poole; Monil Karia; Kathryn King; Julie Bliss; Alexander Liddle; Justin P. Cobb; Kartik Logishetty

Poster No. 2213

Use Of Robotic Automation To Improve Efficiency And Accuracy In Medical Offices

Rajwinder Singh

Poster No. 2215

Applicant Characteristics Influencing The Orthopaedic Surgery Residency Match Results From 2016-2022

Daniel OConnell; Olivia de Araujo; Austin Allen; Stuart Mitchell

Poster No. 2216

Scaffolded And Iterative Course Design In A Biomechanics Laboratory Class

Sonia Bansal; Jamie Benson; Seth Sullivan; Elise Corbin

Poster No. 2217

Effect Of Windlass Mechanism Engagement On Hindfoot And Midfoot Kinematics Within A Robotic Driven Tibial Movement Envelope: A Preliminary Study

Anthony H. Le; Rich J. Lisonbee; Jordy A. Larrea Rodriguez; Amy L. Lenz

Poster No. 2218

Tracking Bone Resorption With Sustained Dynamic Compression In A Novel Large Animal Model Of Tarsal Fusion

Erin E. Estrada; Jeremiah T. Easley; David L. Safranski; Daniel Latt; Naohiro Shibuya; Christian M. Puttlitz; Benjamin C. Gadowski

Poster No. 2219

Don't Screw Up: Can Insertion Torque Predict Interfragmentary Compression And Screw Pushout Force?

Shannon King; Claudia Vitale; Rachel Grosswald; Taylor Filicette; Greg Berlet; David Safranski

Poster No. 2220

In Vivo Displacement And Strain Mapping Using MRI With Relaxometry Measures In Wrist Rheumatoid Arthritis

Hongtian Zhu; Woowon Lee; Emily Y. Miller; Jennifer Seifert; Andrew Clauw; Larry W. Moreland; Corey P. Neu

Poster No. 2221

Prevalence Of Intimate Partner Violence Among Vulnerable Populations Presenting To Orthopaedic Hand Clinic

Miriyaam Ghali; Nicolette Schurhoff; Nikhil Patel; Seth Dodds; Giselle Hernandez; John Marshall; Danielle Marshall

Poster No. 2222

Three-dimensional Statistical Shape Modeling Of Hip Morphology Is More Predictive Of Femoroacetabular Impingement Syndrome Compared To Traditional Two-dimensional Radiographic Metrics

Shaquille Charles; Clarissa LeVasseur; Camille Johnson; Andrew Curley; Ethan Ruh; Kathleen Inman; Craig Mauro; Michael McClincy; William Anderst

Poster No. 2223

Relationship Between Iliocapsularis And Surrounding Musculature Using MRI And Cadaveric Dissection

Erinn M. Brown; Angela M. Pecyna; Joe S. Gati; Brent A. Lanting; Geoffrey Ng

Poster No. 2224

Comparing The Efficacy Of Intra-articular Multiple Platelet-rich Plasma Versus Hyaluronic Acid For Hip Osteoarthritis With Developmental Dysplasia Of The Hip: A Prospective, Double-blind, Randomized Controlled Trial

Yusuke Okanou; Daiki Kishi; Yuki Teranishi; Masahiko Ikeuchi

Poster No. 2225

A Cluster Analysis Of Risk Factors Influencing Total Knee Replacement Outcomes

Jake Littman; Janine Molino; Roy K. Aaron

Poster No. 2226

Length Of Stay And Discharge Dispositions After Total Hip Arthroplasty: A Comparison Of Robotic Assisted And Manual Techniques

Diviya A. Rajesh; Sietske Witvoet; Andrea Coppolecchia; Laura Scholl; Antonia F. Chen

Poster No. 2227

Experimental Anatomical Hip Simulator Assessment Of Hip Hemi-arthroplasty

Roberto Leonardo Diaz; David Jimenez-Cruz; Sophie Williams

Poster No. 2228

Micromotion And Extraction Force Of A 3D Printed Cementless Keeled Tibia For Total Knee Arthroplasty

John Kyle Mueller; Cory Trischler; Charlie Parduhn; Eik Siggelkow; Jeff Bischoff; Marc Bandi

Poster No. 2229

Effect Of Varying Materials And Loading Frequencies On Femoral Component Fatigue Testing

Gregory Pepe; Akeem Downer; Ananth Gopalakrishnan; Gregg Schmidig

Poster No. 2230

Experimental Characterization And Finite Element Modelling Of Total Hip Replacement Liners Under Edge Loading.

Nicholas B. Cooper; Lee Etchels; Oscar O'Dwyer Lancaster-Jones; Sophie Williams; Ruth Wilcox

Poster No. 2231

T2 And T1rho Mapping Of Equine Metacarpophalangeal Joint Cartilage

Carly Lockard; Brad Sutton; Bruce Damon; Xiaojuan Li; Annette M. McCoy

Poster No. 2232

Identifying Image Texture Biomarkers Of Non-specific Low Back Pain Using Quantitative Ultrasound Imaging

Georgina Flynn-Smith; Alicia Roldan; P. Gunnar Brolinson; David Redden; Connor Barrand; Valerie Daniels; Kevin White; Albert Kozar; Vincent Wang

Poster No. 2233

Emergence Of A Deep Learning Model For Preoperative Surgical Planning In Orthopaedic Trauma

Young Dae Jeon; Ki-Bong Park; Kwang-Hwan Jung; Moo-Sub Kim; Hyo-Hun Kim; Do-Kun Yoon

Poster No. 2234

Predicting Diagnosis In Myxoid Soft Tissue Tumors: Performance Of Radiomics Vs. Radiologists

Katherine S. Hajdu

Poster No. 2235

Complementary In Vivo Quantitative Characterization Of Knee Osteoarthritis By Integrating MRI And Cone-beam CT

Bong-Jae Jun; Richard Lartey; Sibaji Gaj; Mei Li; Tyce Marquez; Donald D. Anderson; Carl S. Winalski; Morgan H. Jones; Xiaojuan Li

Poster No. 2236

A Quantitative Characterization Of Tibial And Fibular Stress Fractures Using Computed Tomography

Rashad Madi; Rasleen Grewal; Scott Epsley; Chamith Rajapakse

Poster No. 2237

Posterior Femoral Cutaneous Nerve Mapping To Optimize Proximal Hamstring Repair

Angela M. Pecyna; Erinn M. Brown; Joe S. Gati; Brent A. Lanting; Ryan M. Degen; Geoffrey Ng

Poster No. 2238

A Minimal Screening Method To Determine Antibacterial Efficacy Of Orthopedic Materials

Rajendra Kasinath; Ariana Aghevli; Haley Rickey; Max Nye; Melanie Henault

Poster No. 2239

Does The Addition Of Perioperative Vancomycin To Cefazolin Decrease The Rate Of Deep Infections In Lower Extremity Endoprosthesis Reconstruction?

Katherine Hajdu

Poster No. 2240

Anti-biofilm Efficacy Of A Novel Activated Zinc Irrigant And Comparison To Commercially-available Irrigants: A Multi-organism, Multiple Timepoint Kinetic Time-kill Study

Derek L. Hill; Nash Reigle; Brandon Nutt; Paul Attar; Ahmed Siddiqi

Poster No. 2241

Efficacy Of Commercially Available Irrigation Solutions On Removal Of Staphylococcus Aureus Infected Porous Titanium Implants- An In-vitro Study

Joseph Seta; Paula Dietz; Fadi Aboona; Martin Weaver; Therese Bou-Akl; Weiping Ren; David Markel

Poster No. 2242

The Infected Marlex Mesh: Which Antiseptic Solution Most Effectively Removes Biofilm?

Suenghwan Jo; Christina Chao; Tyler Khilnani; Zachary Coles; Mathias P. Bostrom; Alberto Carli

Poster No. 2243

Distribution Of Intradiscal Pressure In Degenerated Intervertebral Discs: A Cadaveric Study

Asghar Rezaei; Maria Astudillo Potes; Babak Dashtdar; Chih-Hsiu Cheng; Kenton Kaufman; Lichun Lu

Poster No. 2244

Injectable Hydrogel-encapsulated Porcine Notochordal Cells Implanted Into An Ex Vivo Model Of Intervertebral Disc Degeneration

Andrea Vernengo; Helen Bumann; Nadine Kluser; Astrid Soubrier; Amra Secerovic; Daniele Zuncheddu; Joseph Snuggs; Ronak Janani; Chris Sammon; Jan Jansen; Cornelia Neidlinger-Wilke; Hans-Joachim Wilke; Christine Le Maitre; Sibylle Grad

Poster No. 2245

Anakinra Reduces Inflammatory Pathways Activated In Canine Synovium After Cranial Cruciate Ligament Injury

Elisabeth Lemmon; Kevin Burt; Elizabeth Bernstein; Emily Sharp; Brendan Stoeckl; Lorie Laforest; Carla Scanzello; Robert Mauck; Kimberly Agnello

Poster No. 2246

Lateral Extra Articular Tenodesis Reduces Laxity In An ACLR Knee With Partial Meniscectomy Of Medial Meniscus

Emre Anil Ozbek; Armin Runer; Sahil Dadoo; Michael Dinenna; Monica Linde; Patrick Smolinski; Volker Musahl; Michael McClincy

Poster No. 2247

Auto-Segmentation Of The Distal Femur Produces Accurate And Repeatable 3-D Bone Models

Patrick X. Bradley; Sophia Y. Kim-Wang; Hattie C. Cutcliffe; Amber T. Collins; Bryan S. Crook; Chinmay S. Paranjape; Charles E. Spritzer; Louis E. DeFrate

Poster No. 2248

Evaluating Cartilage Relaxation And Joint Health 2-years Post-anterior Cruciate Ligament Reconstruction With Or Without A Lateral Extra-articular Tenodesis

Andrew D. Firth; Stephany L. Pritchett; Jaques S. Milner; Hayden F. Atkinson; Diane M. Bryant; David W. Holdsworth; Alan M.J. Getgood

Poster No. 2249

Increasing Age Impacts Presence Of The Medial Meniscus Posterior Root Tear Prodrome

Allie Barber; Janelle Cross; Carole Vetter

Poster No. 2250

Age-Related Changes In The Structure-Function Relationship Of Human Menisci

Graciosa Q. Teixeira; Jonas Schwer; Anita Ignatius; Lutz Dürselen; Andreas M. Seitz

Poster No. 2251

Posterior Root Repair And Centralization With Two All-suture Anchors Reduces Medial Meniscus Extrusion In A Cadaveric Proof-of-concept Study

Benjamin Smith; Patrick A. Smith; Aaron J. Krych; Andrew K. Osika; Coen Wijdicks

Poster No. 2252

Investigating The Relationship Between Chronic Low Back Pain And The Gut Microbiome

Adan Redwine; Anna Levorson; David Lillyman; Sydney Caparaso; Kayla Ney; Barnett Evie; Rebecca Wachs

Poster No. 2253

Impact Of Accumulating Risk Factors On The Acromial And Scapular Fracture Rate After Reverse Total Shoulder Arthroplasty

Christopher Roche; Ryan Simovitch; Thomas Wright; Pierre-Henri Flurin; Joseph Zuckerman; Howard Routman

Poster No. 2254

Extreme Bending Fatigue Testing Of A New Hybrid Anatomic Glenoid Implant

Thomas M. Vanasse; Zachary Bryan; Sean Grey; Stephen Brockmeier; Joseph Zuckerman; Thomas Wright; Pierre-Henri Flurin; Bradley Schoch

Poster No. 2255

Three-Dimensional Strains In An Animal Model Of The Rotator Cuff With Artificially Created Partial-Thickness Tears

Carla Nathaly Villacis Nunez; Ulrich Scheven; Asheesh Bedi; Ellen Arruda

Poster No. 2256

The Role Of Hif-1 α In Fibro-adipogenic Progenitors, Satellite Cells, And Myofibers In Rotator Cuff Tear Injury

Austin J. Lee; Sankalp Sharma; Mengyao Liu; Brian T. Feeley; Xuhui Liu; Hubert Kim

Poster No. 2257

Enhanced Yellow Fluorescent Protein Causes Contractile Dysfunction In Skeletal Muscle With Electrical And Optogenetic Induced Stimulation

Syeda N. Lamia; Carol S. Davis; Peter C.D. Macpherson; T. Bradley Willingham; Yingfan Zhang; Chengyu Liu; Brian Glancy; Susan V. Brooks; Megan L. Killian

Poster No. 2258

Full-field Strain Measurements Of Muscle Tendon Junction Using X-ray Computed Tomography And Digital Volume Correlation

Nodoka Iwasaki; Katerina Karali; Marta Roldo; Gordon Blunn

Poster No. 2259

Murine Fibro/adipogenic Progenitor Cell Browning Following Bmp-7 Treatment Via P38 Mapk Pathway

Agustin Diaz; Yusef Samimi; Steven M. Garcia; Hubert Kim; Xuhui Liu; Brian T. Feeley

Poster No. 2260

Association Of Inflammation, Ectopic Bone Formation, And Sacroiliac Joint Variation In Ossification Of The Posterior Longitudinal Ligament

Tran Canh Tung Nguyen; Zhongyuan He; Hiroto Makino; Taketoshi Yasuda; Shoji Seki; Kayo Suzuki; Kenta Watanabe; Hayato Futakawa; Katsuhiko Kamei; Yoshiharu Kawaguchi

Poster No. 2261

Astrocyte Elimination Attenuates Neuropathic Pain Associated With Type I IFNs Activation After Spinal Cord Injury

Qing Zhao; Yanjing Zhu; Yilong Ren; Lijuan Zhao; Shuai Yin; Haoifei Ni; Rongrong Zhu; Liming Cheng; Ning Xie

Poster No. 2262

IL-6 And Tm100 In Lumbar Discogenic Pain And The Mechanism Of Glycine-serine-threonine Metabolic Axis: Animal Behaviors And Associated Metabolomic Studies

Xiaolin Wu; Hongfei Xiang; Zhu Guo; Shang-You Yang; Bohua Chen

Poster No. 2263

Linking Paraspinal Muscle Quality And Biomechanical Function During Dynamic Tasks In Chronic Low Back Pain Patients

Karim Khattab; Lucas K. Dziesinski; Jessica Ornowski; Conor W. O'Neill; Jeffrey C. Lotz; Jeannie F. Bailey

Poster No. 2264

Effect Of Anterior Vertebral Body Tether Breakage On Curve Correction In Adolescent Idiopathic Scoliosis Patients

Ausilah Alfraihat; Amer Samdani; Sriram Balasubramanian

Poster No. 2265

Hif1a Regulates Cell Survival And Vascularization In The Mouse Achilles Tendon Enthesis

Tessa Phillips; LeeAnn Flowers; Steph S. Steltzer; Paige Cordts; Adam C. Abraham; Megan L. Killian

Poster No. 2266

Roles Of H3k4me3 And H3k27me3 In Regulating Cellular Phenotype And Homeostasis Of Murine Tenocytes During Tendon Development

Yujia Zhang; Saeed Ahmed; Parisha Shah; Rajan Jain; Robert Mauck; Nathaniel Dymant; Su-Jin Heo

Poster No. 2267

Unraveled Collagen In The Murine Anterior Cruciate Ligament Following In Vivo Fatigue Loading

Khang Phan; Roufael Hanna; Adam Carter; Ben Loflin; Taeyong Ahn; Stephen Schlecht

Poster No. 2268

Improving Tendon-to-Bone Healing By Tendon Inversion: Investigation Using A Rat Biceps Tenodesis Model

Ting Cong; Dustin Buller; Varun Arvind; Thomas Li; Philip Nasser; Damien Laudier; Harrison Ferlauto; Alice Huang; Paul Cagle; Leesa Galatz; Michael Hausman

Poster No. 2269

Age And Sex-related Effects On Myotendinous Junction Injury In Rats

Brandon Kassel; Travis Montoya; Jeremiah Easley; Kelly Santangelo; Katie Sikes

Poster No. 2270

Cyclic Loading Modulates Apoptotic Cell Clustering And Cluster Size In Tendon

Benjamin B. Johnston; Channele A. Moise; Nelly Andarawis-Puri

Poster No. 2271

Examining The Role Of Elastin In Functionally Distinct Tendons Via A Novel Murine Model Of Elastin Knockdown

Shawn N. Pavey; Jeremy Eekhoff; Jessica Wagenseil; Spencer Lake

Poster No. 2272

Characterizing The Cell Phenotypes Of The Anterior Cruciate Ligament Sheath: Implications For Repair Strategies

Beth G. Ashinsky; James Rogot; Minkyu M. Kim; McKenzie E. Sup; Roshan P. Shah; Nadeen O. Chahine; Clark T. Hung; Stavros A. Thomopoulos

Poster No. 2273

Untethered Hybrid Nanotechnology Vehicles For RNA-Based Therapeutics To Manage Chronic Inflammation

Marcia T. Rodrigues; Ana F. Almeida; Margarida S. Miranda; Manuela E. Gomes

Poster No. 2274

PATHFx Versus Tokuhashi Score For Prediction Of Survival In Metastatic Spine Disease

James Buschbach; William Lavelle; Kenneth Mann; Timothy Damron

Poster No. 2275

Cold Plasma-based Redox Therapy For Bone Tumor Growth Control And Bacteria Inactivation

Laura M. Bouret; Jean-Baptiste Billeau; Derek H. Rosenzweig; Michael H. Weber; Dao Nguyen; Stephan Reuter