2015 COMBINED MEETING

ISOLS & MSTS
October 6-10
ORLANDO, FLORIDA

JW Marriott Orlando Grande Lakes

ISOLS

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PROGRAM

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ISOLS MSTS

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WELCOME

It is our pleasure to welcome you to Orlando, Florida and the combined meeting of the International Society of Limb Salvage (ISOLS) and the Musculoskeletal Tumor Society (MSTS). It has been thirty years since ISOLS was in Orlando and six years since the last ISOLS-MSTS combined meeting in Boston.

We have planned a scientific session that should be informative and interesting. We are confident there will be outstanding introductory lectures, excellent podium presentations, and lively discussions. Don't miss the ISOLS presidential presentation on Friday morning, presented by Pietro Ruggieri, MD, PhD and the MSTS presidential speaker, Ching C. Lau, MD, PhD, on Saturday morning. These both should be excellent.

On Friday, there is an all-day Allied Health Symposium that features educational topics, including patient and family discussions. Please interact with our sponsors and check out their exhibits. There are many new and intriguing technologies on display.

The social program is robust and promises to be memorable. On Wednesday evening there is a "Back Yard Florida Party" complete with reptiles, games, dinner, beverages, and a great band. Get up early Thursday morning for a "Fun Run 5K" around the golf course. Thursday afternoon is free time to interact, explore, shop, enjoy the spa, or play in our golf tournament. On Friday evening we have an amazing event planned at the House of Blues. Come for dinner, a Cirque du Soleil show, and the House of Blues band. The attire is casual and there should be plenty of entertainment and dancing.

Thanks to all who have helped bring together this group for a great meeting.

Reinhard Windhager, MD
President, ISOLS

Rick Terek, MD
President, MSTS

Mark T. Scarborough, MD
2015 Program Chair, ISOLS

C. Parker Gibbs Jr., MD
2015 Program Chair, MSTS

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2015 EXHIBITORS

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DePuy Synthes
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Merete Medical, Inc.
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2015 MSTS/ISOLS ANNUAL MEETING PROGRAM COMMITTEE

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Michelle A. Ghert, MD
David D. Greenberg, MD
Patrick P. Lin, MD
Howard G. Rosenthal, MD, FACS
Felasfa M. Wodajo, MD
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Kurt Weiss, MD
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Hiroyuki Tsuchiya
Reinhard Windhager, MD
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Peter F.M. Choong, MD, FRACS
Wei Guo, MD, PhD
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Toshifumi Ozaki, MD
Francis J. Hornicek, MD, PhD
Marco Manfrini, MD
Xiaohui Niu, MD
Ajay Puri, MD
Peter Scheinemann

EDUCATIONAL GOALS & OBJECTIVE

At the conclusion of this CME activity, the attendees should be able to:

1. Improve their understanding of quality of life and outcomes measures in musculoskeletal oncology surgery.
2. Report progress in application of computer navigation to bone sarcoma resection.
3. Identify new approaches for targeted and adjuvant therapies to treat patients with primary or metastatic bone or soft tissue tumors.
4. Report new options for limb salvage surgery for patients with malignant bone and soft tissue tumors and metastatic bone disease.
5. Minimize and better manage complications that occur after limb salvage surgery.
6. Report recent progress in basic and translational research as it relates to the diagnosis, etiology, and/or prognosis of the orthopaedic oncology patient.
7. Update knowledge of imaging and prognostic factors in sarcoma and metastatic bone disease.

MISSIONS & VISION

MSTS

VISION: The Musculoskeletal Tumor Society will be a recognized authority on all aspects of orthopaedic oncology, an influential participant in policy-making for orthopaedic oncology services, and responsive to the needs of orthopaedic oncologists and their patients.

MISSION: The Musculoskeletal Tumor Society will advance the science of orthopaedic oncology and promote high standards of patient care through excellence in education and research.

OBJECTIVES

Membership: Serve and engage current and prospective orthopaedic oncologists.

Education: Serve as the premier provider of education in musculoskeletal oncology.

Research: Encourage and support meaningful, relevant, and timely research for the advancement of knowledge in musculoskeletal oncology.

Organizational Excellence: Become and maintain a healthy and viable Society.

ISOLS

MISSION: The purpose of the Association is to promote research, education and clinical practice related to musculoskeletal tumors and its foremost purpose is to improve patient care related to limb salvage interventions.

It also serves as a forum for intellectual exchange among physicians, engineers, scientists and other persons interested in limb salvage, promotes advances in the field of limb salvage and ongoing education of persons engaged in the field of limb salvage.

ACCREDITATION

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the American Academy of Orthopaedic Surgeons (AAOS) and the Musculoskeletal Tumor Society (MSTS). The AAOS is accredited by the ACCME to provide continuing medical education for physicians.

DISCLAIMER

The material presented at the Annual Meeting has been made available by the MSTS for educational purposes only. This material is not intended to represent the only, nor necessarily the best, methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement or opinion of the faculty, which may be helpful to others who face similar situations.

The Musculoskeletal Tumor Society disclaims any and all liability for injury or other damages resulting to any individual attending a course and for all claims, which may arise out of the use of the techniques, demonstrated there in by such individuals, whether these claims shall be asserted by a physician or any other person.

DISCLOSURE

Each faculty member in the combined meeting has been asked to disclose if he or she has received something of value from a commercial company or institution, which relates directly or indirectly to the subject of their presentation. The AAOS has identified the options to disclose as follows:

n = Respondent answered 'No' to all items indicating no conflicts;
1 = Royalties;
2 = Speakers Bureau (Speakers Bureau or Honorarium);
3 = Consultancies;
4 = Other Financial or Material Support;
5 = Stock or Stock Options;
6 = Research Support (Research or Institutional);
7 = Departmental or Institutional Support (Research or Institutional);
8 = Financial Support from Publishers (Financial or Material);
9 = Department Research or Institutional Support from Publishers;

An indication of the participant's disclosure appears after his or her name as well as the commercial company or institution that provided the support.

The AAOS and the MSTS do not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author's participation in the course.

PRESENTER INFORMATION

The Speaker Ready Room is located in the Coquina Office and will be staffed with a Technician (During Conference Hours) from Tuesday the 6th through Saturday the 10th. Please have the final version of your podium presentation uploaded two hours before your session begins. All moderators and presenters, for their assigned session, need to be present behind the stage before the session begins.

NOTE: Minors are prohibited from being present during educational sessions and within the exhibit hall.

GENERAL INFORMATION

MEETING

Date: **OCTOBER 6 –10, 2015**

Venue: JW Marriott Orlando Grande Lakes
4040 Central Florida Parkway | Orlando, FL 32837
407-206-2301

Ritz Carlton Orlando Grande Lakes
4012 Central Florida Parkway | Orlando, FL 3283
1-800-266-9432

YOUR BADGE IS YOUR TICKET to the all meeting sessions and social events. Accompanying persons must also have a badge to participate.

Website: http://isols-msts.org/

Program Chairs: C. Parker Gibbs Jr., MD; and Mark T. Scarborough, MD

REGISTRATION

The Registration Desk is located in the **Mediterranean Foyer.**

Registration Fees:

Early Rate expired **August 17, 2015**

MSTS or ISOLS Member:	$1050
Non-Member:	$1400
Resident/Fellow RN/PA/ Research/Allied Healthcare Professional:	$450
Guest:	$300

CME

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Orthopaedic Surgeons and the Musculoskeletal Tumor Society. The American Academy of Orthopaedic Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

The American Academy of Orthopaedic Surgeons designates this live activity for a maximum of **21.75 *AMA PRA Category 1 Credits™***. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ABSTRACTS

You may view all of the meeting abstracts and speaker disclosures online. Please visit www.msts.org/education_meetings/annualmeeting to view the electronic Final Program.

EVALUATION FORMS

Please return to the Registration Desk or complete online.

CERTIFICATE OF ATTENDANCE

Certificates will be distributed at the Registration Desk to all registered attendees onsite at the 2015 Combined Meeting.

SCIENTIFIC POSTER EXHIBITION

Coquina Ballroom South
Wednesday, October 7th, 7:00 am–5:00 pm thru Friday, October 9th, 7:00 am–5:00 pm

PRESIDENTIAL GUEST SPEAKERS

MSTS PRESIDENTIAL GUEST SPEAKER

CHING C. LAU, MD, PhD

Ching C. Lau, M.D., Ph.D. is an Associate Professor of Pediatrics at Baylor College of Medicine (BCM), and inaugural Co-Leader of the Pediatrics Program of the Dan L. Duncan Cancer Center at BCM. Dr. Lau graduated from Rice University with a B.A. in Chemistry and subsequently received his Ph.D. in Pharmacology and M.D. from Harvard Medical School. He was a post-doctoral fellow in Cancer Genetics at Dana-Farber Cancer Center. He completed his Pediatrics Residency and Pediatric Hematology-Oncology Fellowship at Texas Children's Hospital, Baylor College of Medicine. He has been the Associate Director of the Pediatric Neuro-oncology Program and the founder of the Cancer Genomics Program at the Texas Children's Cancer Center. He is a member of the Bioinformatics Steering Committee and Biopathology and Translational Research Committee of the Children's Oncology Group. He is also a member of the Steering Committee of the Gulf Coast Consortium in Bioinformatics as well as the Executive Committee of the Structural and Computational Biology and Molecular Biophysics (SCBMB) Program, Baylor College of Medicine. His research interests include the molecular biology of pediatric brain and bone tumors and the clinical applications of genomic technologies. He is a strong advocate for team science research in academia and is experienced in leading NCI-funded multi-disciplinary teams of research including being the principal investigator of the Director's Challenge Project on osteosarcoma and the COG project on genome-based prognostic markers of ependymoma as well as co-principal investigator of the project on the molecular taxonomy of medulloblastoma and a member of the Steering Committee of the NCI's Strategic Partnering to Evaluate Cancer Signatures (SPECS) Program and the NCI Therapeutically Applicable Research to Generate Effective Treatments (TARGET) Consortium. In addition, he is also a key investigator in the Stand Up to Cancer Pediatric Immunogenomics Dream Team. He was also the P.I. of the Genotyping Core for the Gliogene Consortium. Dr. Lau has published more than 110 papers in prestigious peer-reviewed journals on cancer genetics and genomics and is a highly sought after speaker who has given more than 100 invited lectures in international and national meetings.

SATURDAY OCTOBER 10, 2015 • Coquina Hall North • 9:15 am–10:15 am
Can Chemoresistance in Osteosarcoma be Overcome by Deciphering the Complexities of its Genome?

ISOLS PRESIDENTIAL GUEST SPEAKER
PIETRO RUGGIERI, MD, PhD

Pietro Ruggieri, MD, PhD was born in Taranto Italy in 1958. He graduated in Medicine at University of Bologna in 1982, completed his residency and was certified Board of Orthopedics in 1996 at University of Bologna, Istituto Rizzoli 1987 and obtained his PhD in oncology at University of Bologna in 1989. He became Researcher at University of Bologna, Rizzoli Institute in the Department of Orthopedics and in 2005 Professor of Orthopedics. He was a pupil of Prof. Mario Campanacci since 1982 to 1999 and then worked with Mario Mercuri until 2011.

During his education, he was a fellow at University of Florida, Gainesville under the direction of Dr. Enneking and Dr. Springfield in 1987 and was a fellow of Dr. Frank Sim at Mayo clinic in 1991. He is the author of more then 800 Scientific papers or National or International Journals, over 290 of these on PubMed, with an Impact factor over 500, a citation H Index of 39 and a i10 Index of 114.

He as been a speaker or lecturer at more than 500 International congresses. He is a member of several Orthopedic and Oncology societies. He has been President of the ISOLS, is Board Member of the EMSOS, Codirector of the subspecialty of tumors for the SICOT and Scientific Coordinator for the EFORT. He received several awards, including awards from EMSOS, EFORT and N.C.I. He was Erwin Morscher honorary lecture at EFORT in London in 2014.

His main fields of research are musculoskeletal oncology, reconstructive surgery and prostheses in musculoskeletal oncology. Since May 2011 to November 2012 he has been Director of the Department of Orthopedic Oncology at Rizzoli.

Since November 2012 he is Head of Prosthetic reconstructive surgery in Musculoskeletal Oncology, University of Bologna Istituto Rizzoli. He has been appointed Chairman of the Department of Orthopedics and Orthopedic Oncology at the University of Padova, since October 1st 2015.

FRIDAY OCTOBER 9, 2015 • Coquina Hall North • 8:00 am–9:00 am
Pelvic Tumor Surgery: The Rizzoli Institute Experience

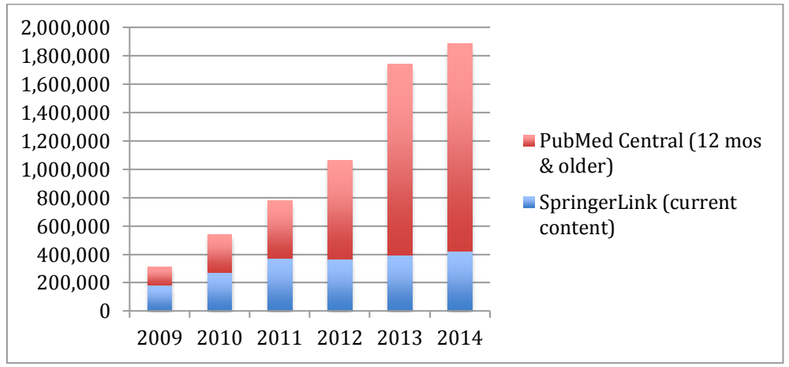
PARTICIPATE IN THE 2015 MSTS/ISOLS PROCEEDINGS SYMPOSIUM IN CORR®

Clinical Orthopaedics and Related Research® is the official journal of the Musculoskeletal Tumor Society and the International Society of Limb Salvage, and we are proud to once again publish this year's MSTS/ISOLS Meeting Proceedings. In the past 3 years we have made many changes to the Journal to make it more author-friendly. These efforts include creating a clinical research article tool to help authors present their work clearly and with less effort, modifying our in-office manuscript flow to reduce our average time from submission to final decision for proceedings symposia manuscripts to 104 days in 2015, and instituting new editorial approaches that have all but eliminated second manuscript revisions.

We hope you will submit your research for review and possible inclusion in the MSTS/ISOLS Proceedings of the issue of CORR®. As always, submission does not guarantee publication; all original research published in our Journal undergoes peer review. To maximize the likelihood that all important information about your study will be available to reviewers, please use one of CORR's article templates, which are available at **www.clinorthop.org**.

Publishing your work in CORR® will ensure that researchers around the world can see it: more than 11,000 institutions worldwide receive CORR® every month, and its articles were downloaded more than 1.8 million times in 2014.

CORR® – *Usage (Downloads) Through 2014*



Papers being considered for MSTS/ISOLS Awards will be converted automatically to *CORR®* submissions; you need do nothing to make this happen. If your paper is not being considered for an award and you would like to submit it for consideration for the Proceedings Symposium, please do so before November 10, 2015 to www.editorialmanager.com/corr.

SCHEDULE-AT-A-GLANCE

LOCATIONS

Scientific Sessions:	*Coquina Hall North*
Breakfast, Refeshments Breaks, Luncheons:	*Coquina Hall South, Mediterranean Salon 5*
Poster Sessions & Exhibition:	*Coquina Hall South*

TUESDAY, OCTOBER 6

2:00 pm–5:30 pm	Registration *Mediterranean Foyer*
2:00 pm–5:00 pm	Poster/Exhibitor Set-up *Coquina Hall South*
3:00 pm–5:00 pm	ISOLS Board Meeting *Marbella 1-2*

WEDNESDAY, OCTOBER 7

7:00 am–8:00 am	BREAKFAST *Coquina Hall South, Overflow in Mediterranean Salon 5*
7:00 am–5:00 pm	Registration *Mediterranean Foyer*
7:00 am–5:00 pm	Poster/Technical Exhibits *Coquina Hall South*
8:00 am–12:00 pm	Scientific Sessions *Coquina Hall North*
12:00 pm–1:00 pm	LUNCH *Coquina Hall South, Overflow in Mediterranean Salon 5*
1:00 pm–5:00 pm	Scientific Sessions *Coquina Hall North*
6:00 pm–9:00 pm	Welcome Reception *Fairways Lawn, Ritz Carlton Golf Club*

THURSDAY, OCTOBER 8

7:00 am–8:00 am	BREAKFAST *Coquina Hall South, Overflow in Mediterranean Salon 5*
6:30 am–7:30 am	Fun Run 5K *Primo Garden*
7:00 am–12:30 pm	Registration *Mediterranean Foyer*
7:00 am–12:30 pm	Poster/Techinical Exhibits *Coquina Hall South*
8:00 am–12:30 pm	Scientific Sessions *Coquina Hall North*
1:00 pm–5:00 pm	MSTS Executive Committee Meeting *Cordova 4*
1:00 pm–6:00 pm	Golf Tournament *Ritz Carlton Golf Club*
1:00 pm–10:00 pm	Free Time to Explore Orlando

FRIDAY, OCTOBER 9

7:00 am–8:00 am	BREAKFAST *Coquina Hall South, Overflow in Mediterranean Salon 5*
6:45 am–8:00 am	MSTS Business Meeting *Coquina North*
7:00 am–5:00 pm	Registration/Hospitality Desk *Mediterranean Foyer*
7:00 am–5:00 pm	Poster/Techinical Exhibits *Coquina Hall South*
8:00 am–12:00 pm	Scientific Sessions *Coquina Hall North*
8:00 am–5:00 pm	PA/ARNP/Allied Health Session *Mediterranean Salon 7*
12:00 pm–1:00 pm	LUNCH *Coquina Hall South, Overflow in Mediterranean Salon 5*
1:00 pm–5:00 pm	Scientific Sessions *Coquina Hall North*
5:00 pm–7:00 pm	MSTS Committee Meeting Meet and Greet *Mediterranean Salon 6*
7:00 pm–10:00 pm	Closing Night Celebration *House of Blues Orlando*

SATURDAY, OCTOBER 10

7:00 am–8:00 am	BREAKFAST *Coquina South Hall & Mediterranean Salons*
7:00 am–8:00 am	ISOLS Member Business Meeting *Coquina North Hall*
7:00 am–8:00 am	MSTS Executive Committee Meeting *Cordova 4*
7:00 am–1:00 pm	Registration/Hospitality Desk *Mediterranean Foyer*
7:00 am–1:00 pm	Scientific Sessions *Coquina Hall North*
7:00 am–1:00 pm	Techincial Exhibits *Coquina Hall South*
7:00 am–1:00 pm	Scientific Sessions *Coquina Hall North*
7:00 am–1:00 pm	Techincial Exhibits *Coquina Hall South*

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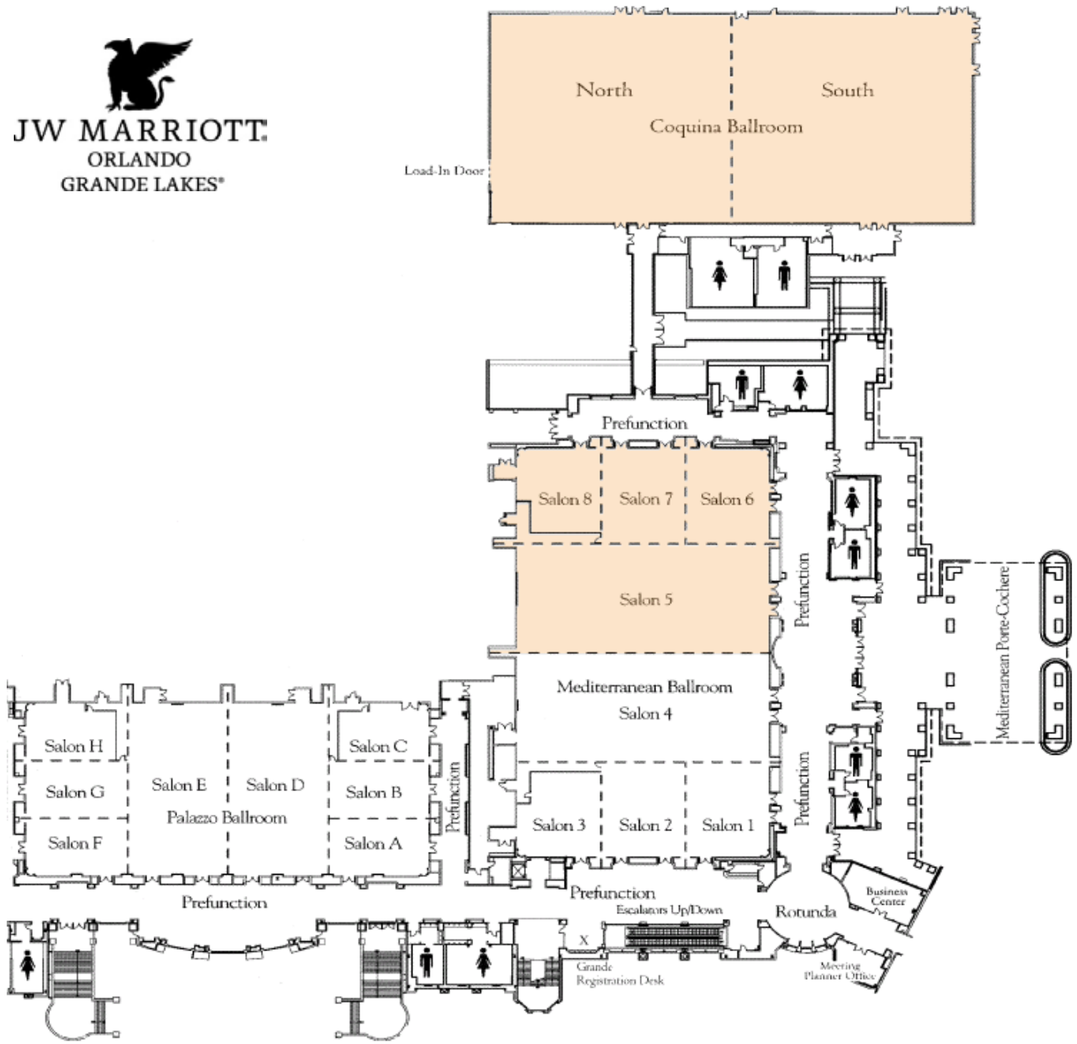
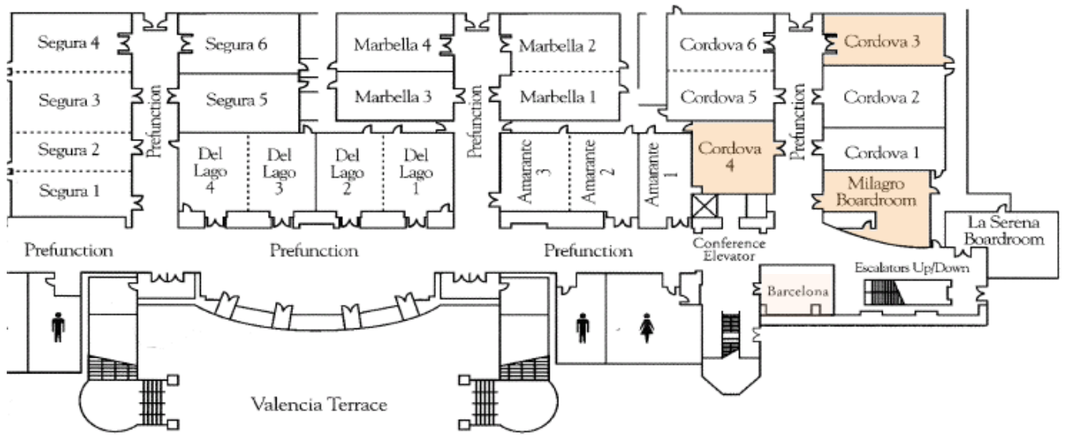




NURSE & ALLIED HEALTH PROFESSIONALS SYMPOSIUM • MSTS & ISOLS

OCTOBER 9, 2015
JW MARRIOTT GRANDE LAKES • ORLANDO, FL

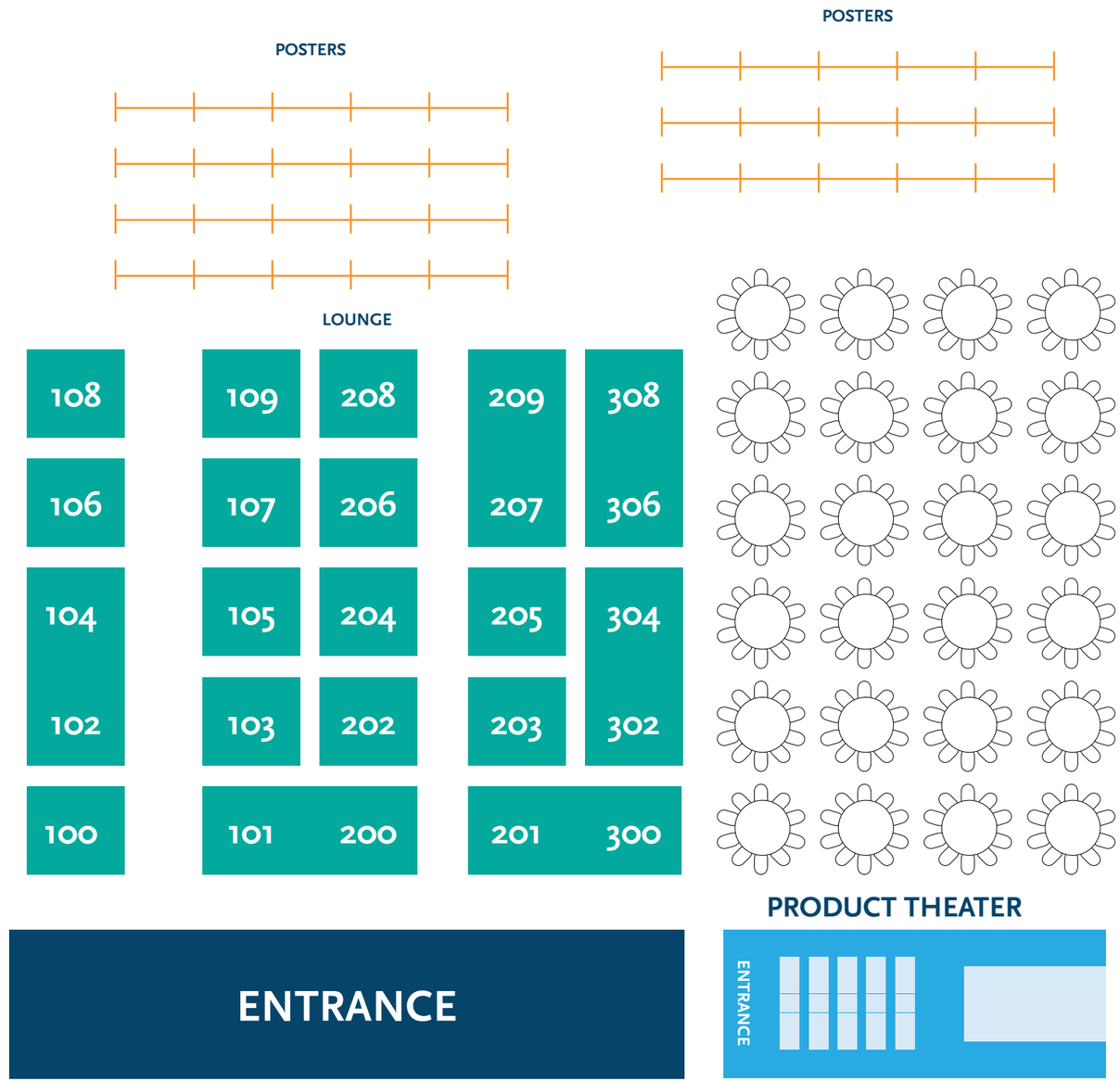
6:30 am–7:45 am	Registration & Breakfast
8:15 am–8:30 am	Welcome, **BRANDI NUNN, RN, BSN**
8:30 am–9:15 am	Imaging In Musculoskeletal Oncology: What Is The Appropriate Evaluation Of This Tumor? **LUKAS NYSTROM, MD**
9:15 am–10:15 am	Fertility Preservation: What Can And Can't Be Done, And What Should You Tell Your Patients **ALICE RHOTON, MD • RACHEL NETTLE, ARNP**
10:15 am–10:30 am	**BREAK**
10:30 am–11:15 am	Providing Psychosocial Care In Oncology **JENNIFER LARSON, LCSW, ACHP-SW**
11:15 am–12:00 pm	Sarcoma Advocacy & Support, **BRAD PALMER, PA-C**
12:00 pm–1:00 pm	**LUNCH**
1:00 pm–1:45 pm	Limb Salvage In The Skeletally Immature, **C. PARKER GIBBS JR., MD**
1:45 pm–2:15 pm	Why Rotationplasty: A Qualitative Study Of The Decision Making Process Of Patient's With Osteosarcoma And Their Parents **CHUNG MIN CHAN, MBBS**
2:15 pm–3:00 pm	Rotationplasty Prosthetics, **STEVE MILLER, CPO**
3:00 pm–3:15 pm	**BREAK**
3:15 pm–4:15 pm	A Personal Touch: Patient & Family Question & Answer Session **BRANDI NUNN, RN, BSN**
4:15 pm–5:00 pm	Round Table: Challenges Of The Orthopaedic Oncology Coordinator **BRANDI NUNN, RN, BSN**
5:00 pm	**Closing Remarks, BRANDI NUNN, RN, BSN**

The Allied Health Program has been submitted to the Oncology Nursing Society (ONS) for approval to award contact hours. ONS is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's COA.

EXHIBITOR INFORMATION

BOOTH	EXHIBITOR	PRODUCT THEATER	
109 204 203 102 & 104	3D Side Biocomposites, Inc. CarboFix Orthopaedics Inc. DePuy Synthes		
205	Exactech, Inc.	**FRI 3:00pm** First Look at a Novel Humeral Reconstruction Prosthesis	
106 103 100	Onkos Surgical Inc. DermaClose®/ Wound Care Technologies IlluminOss Medical Inc.		
302 & 304	implantcast GmbH	**FRI 10:00am** MUTARS® a Modular Tumor and Revision System	
108 208 202	IMPOL Instr e Implantes Ltda Merete Medical, Inc. Musculoskeletal Transplant Foundation		
201 & 300	Stanmore Implants	**WED 2:30pm** The Growing Child – What are Implant Options and Do They Work? Prof. Lee M. Jeys, MSc, FRCS – Royal Orthopaedic Hospital, Birmingham, UK	**THU 10:15am** Limb Salvage – How can Technology Help with Implant Fixation and Infection? Mr. Will Aston – Royal National Orthopaedic Hospital, Stanmore, UK
306 & 308 206 101 & 200 207 & 209	Stryker Orthopaedics Vector Surgical Waldemar Link GmbH & Co KG Zimmer Biomet		

EXHIBIT HALL MAP



SCIENTIFIC PROGRAM

WEDNESDAY, OCTOBER 7, 2015

8:00 am — **WELCOME**
Reinhard Windhager, MD, ISOLS President; Richard M. Terek, MD, FACS, MSTS President;
C. Parker Gibbs Jr., MD, MSTS Program Chair; Mark T. Scarborough, MD, ISOLS Program Chair

8:20 am–12:00 pm MORNING SCIENTIFIC SESSION

8:20 am–8:30 am — **QUALITY INTRODUCTION • BENJAMIN J. MILLER, MD, MS**
Moderators for Session 1:
Benjamin J. Miller, MD, MS; Peter B. Steadman, MBBS, FRACS; Mark T. Scarborough, MD

8:30 am–8:35 am — 1
Patient Reported Outcomes After Sacral Resection Based On The Nerve Roots Sacrificed
Olivier Van Wulfften Palthe, MD; Patrick J. Boland, MD; Peter S. Rose, MD; Francis J. Hornicek, MD; Michael .J Yaszemski, MD, PhD; Franklin H. Sim, MD; John H. Healey, MD, FACS; Joseph Hasbrouck Schwab, MD
Massachusetts General Hospital

8:35 am–8:40 am — 2
Validation Of Eq-5D In Patients Treated For Extremity Sarcoma
Anu Kristiina Suokas, PHD; Gareth Stephens; Lucinda Gosling; **Robert John Grimer, FRCS**
Royal Orthopaedic Hospital NHS Foundation Trust

8:40 am–8:45 am — 3
The Validity, Reliability, And Responsiveness Of Commonly Used Orthopedic Outcome Measures, Cancer Specific Measures, And Patient Reported Functional And Quality Of Life Measures
Justin E. Bird, MD; Joseph Edward Niland, BS; Valerae O. Lewis, MD; Theresa Nalty, PhD, PT
The University of Texas MD Anderson Cancer Center

8:45 am–8:50 am — 4
Patient Reported Outcomes And Clinician Reported Outcomes Commonly Used In Orthopedics And Oncology
Justin E. Bird, MD; Joseph Edward Niland, BS; Valerae O. Lewis, MD; Theresa Nalty, PhD, PT
The University of Texas MD Anderson Cancer Center

8:50 am–8:55 am — 5
Are Sports Activity Levels Reached In Long-Term Survivors Of Bone And Soft-Tissue Sarcomas After Limb Salvage Surgery Associated With Better Quality Of Life?
Gerhard Martin Hobusch, MD; Nikolaus Wilhelm Lang; Paul Kolbitsch; Philipp Theodor Funovics, MD; Puchner Stephan, MD; Michael Hagmann; Reinhard Windhager, MD
Medical University of Vienna, Department of Orthopaedics

8:55 am–9:05 am — **DISCUSSION**

9:05 am–9:08 am — 6
The Impact Of A Communal Multidiscipinary Team On Limb Salvage In Lagos, Nigeria
Oluwaseyi Kayode Idowu; S.O.G Giwa; F.B Abdulkareem
National Orthopaedic Hospital Lagos

9:08 am–9:11 am — 7
Service Redesign For Tertiary Sarcoma Referral Service
Hazem Wafa, MD; Peter S. Young; Ashish Mahendra, MD
Glasgow Royal Infirmary, United Kingdom

9:11 am–9:14 am — 8
Commercial Activity Monitor For Assessing Free-Living Limb Salvage Outcome In Pediatric Lower Extremity Bone Cancer
Ernest U. Conrad III, MD; Kenneth Robert Gundle, MD; Stephanie Punt, BS; Darin Justyn Davidson, MD
University of Washington Medical Center and Seattle Children's Hospital

9:14 am–9:17 am — 9
Visual Analytics For The Integration Of Health Related Quality Of Life Data Into "Point Of Contact" Clinical Care In Orthopaedic Oncology: A Pilot Study
Justin E. Bird, MD; Theresa Nalty PhD; Jing He; Alexander Penny; Kristi K. Posey PA-C; Valerae O. Lewis, MD
The University of Texas MD Anderson Cancer Center

9:17 am–9:30 am — **DISCUSSION**

9:30 am–9:35 am — 10
The Variability In Surgical Margin Reporting In Limb Salvage Surgery For Sarcoma
Benjamin J. Miller, MD, MS; Kevin Hoang; Yubo Gao, PhD
University of Iowa

9:35 am–9:40 am — 11
Long Term Outcomes And Satisfaction Of Rotationplasty Patients In The Treatment Of Lower Extremity Sarcomas
Sean V. McGarry, MD; **Courtney M. Grimsrud, MD**; Sean V. McGarry, MD; Cameron Killen MD
The University of Nebraska Medical Center

9:40 am–9:45 am — 12
The Rate And Causes Of 90-Day Unplanned Re-Admission After Soft-Tissue Sarcoma Resection.
Robert J. Wilson, MD; Jessica R. Wilson MD; Jennifer Lynne Halpern, MD; Herbert S. Schwartz, MD; Ginger E. Holt, MD
Vanderbilt University Medical Center

9:45 am–10:00 am — **DISCUSSION**

10:00 am–10:30 am — **BREAK** *Coquina Hall South*

10:30 am–10:50 am — **NAVIGATION INTRODUCTION • PROFESSOR LEE M. JEYS, MSC, FRCS**
Moderators for Session 2:
John A. Abraham, MD; Xiaohui Niu, MD

10:50 am–10:55 am — 13
Augmented-Reality Assistance In Bone Tumor Surgery
Hwan Seong Cho; Park Yeong Kyoon; Han Ilkyu; Kim Han-Soo
Seoul National University Bundang Hospital

10:55 am–11:00 am — 14
Enhancing Precision And Accuracy In Bone Tumour Treatment; An Experimental Comparison Of Freehand, Computer Assistance (Cas) And A Novel Universal Cas Saw Guide.
Paul C. Jutte, MD, PhD; **Jasper G Gerbers MD**; Nico Verdonschot, MSc;
University of Groningen, University Medical Center Groningen, The Netherlands

11:00 am–11:05 am — 15
3D Surgical Planning And Patient Specific Instruments (Psis) Can Achieve Good Accuracy For Complex Bone Resections In Bone Sarcoma Patients.
Kwok Chuen Wong, FRCS (ORTHO); Kwan Yik Sze; Shekhar Madhukar Kumta
Orthopaedic Oncology, Prince of Wales Hospital, Hong Kong

11:05 am–11:10 am — 16
Standardizing Bony Sarcoma Margin Documentation With Intraoperative Computer-Aided Navigation
Ernest U. Conrad III, MD; Stephanie Punt, BS; Jedediah K. White, BS; Viviana Bompadre, PhD; Alissa Little RN
Seattle Children's Hospital, Seattle, WA

11:10 am–11:25 am — **DISCUSSION**

11:25 am–11:30 am — 17
What Is The Expected Learning Curve In Computer Assisted Navigation For Bone Tumor Resection?
German Luis Farfalli, MD; **Jose Ignacio Albergo, MD**; Lucas Eduardo Ritacco, MD; Miguel Angel Ayerza, MD; Federico Edgardo Milano, BS; Luis Alberto Aponte-Tinao, MD; Viviana Bompadre, PhD; Alissa Little RN
Italian Hospital of Buenos Aires

11:30 am–11:35 am — 18
Computer Navigation Aided Precision Resection Of Sacral Chordomas
Yongkun Yang
Department of Orthopedic Oncology Surgery, Beijing Ji Shui Tan Hospital, Peking University

11:35 am–11:40 am — 19
Can You Improve Outcomes Of P1+S Resections Using Navigation?
Minna Laitinen, MD, PhD; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Jose Ignacio Albergo, MD; Robert John Grimer, FRCS; **Lee M. Jeys, FRCS**
Royal Orthopaedic Hospital

11:40 am–11:45 am — 20
Patient-Specific 3D-Printed Registration And Cutting Guides For Hemicortical Resection And Reconstruction Of Metaphyseal Tumors Around The Knee
Florencio Pablo Segura, MD; **Facundo Segura**; Facundo Pedemonte
SEGURA Centro Privado de Ortopedia y Traumatologia

11:45 am–12:00 pm — **DISCUSSION**

12:00 pm–1:00 pm — **LUNCH** *Coquina Hall South*

1:00 pm–5:00 pm AFTERNOON SCIENTIFIC SESSION

1:00 pm–2:20 pm — **BASIC SCIENCE/CLINICAL TRIALS**
Moderators for Session 3:
C. Parker Gibbs Jr., MD; Toshifumi Ozaki, MD; Kurt Weiss, MD

1:00 pm–1:05 pm — 21 **Mcs110, An Anti-Csf-1 Antibody, For The Treatment Of Pigmented Villonodular Synovitis**
Edward Y. Cheng, MD; Anna Kudlidjian MD; Joel A. Block; Steven Gitelis, MD; Robert Mikael Henshaw, MD; John Alexander Abraham, MD; Ursula Schramm Sr, PhD; Pascale Emilie Pinot, MSc; Yinuo Pang; Marie-Anne Valentin; Babul Borah; Ronenn Roubenoff, MD, MS
University of Minnesota

1:05 pm–1:10 pm — 22 **Long-Term Treatment Of Tenosynovial Giant Cell Tumor (Tgct) With Plx3397, A Selective Colony Stimulating Factor 1 Receptor (Csf1r) Kinase Inhibitor**
Sandra Tong, MD; **John H. Healey, MD, FACS**; Charles Peterfy MD, PhD; Peter Countryman; Bartosz Chmielowski MD, PhD; Vicki L. Keedy MD; Arthur P. Staddon MD; Allen Lee Cohn MD; Carlos R. Becerra MD; Samuel Ejadi MD; William Tap, MD
Memorial Sloan Kettering Cancer Institute and other institutions

1:10 pm–1:15 pm — 23 **Real-Time Tissue Discrimination During Soft Tissue Sarcoma Surgical Resection With Raman Spectroscopy**
Zain Sherali Gowani; John Quan Minh Nguyen, BS, MS; Maggie O'Connor; Isaac James Pence, MS; The-Quyen Nguyen, PhD; Anita Mahadevan-Jansen PhD; Ginger E. Holt, MD
Vanderbilt University

1:15 pm–1:20 pm — 24 **Pet Response Criteria (Percist) Predict Progression-Free Survival And Time To Local Or Distant Progression After Chemotherapy With Regional Hyperthermia For Soft-Tissue Sarcoma**
Alexander Klein, MD; Hans Roland Dürr
Department of Orthopaedic Surgery, Orthopaedic Oncology, Ludwig-Maximilians-University of Munich, Munich, Germany

1:20 pm–1:25 pm — 25 **Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY): A Pilot Multi-Center Randomized Controlled Trial**
Michelle A. Ghert, MD; **Robert E. Turcotte, MD, FRCSC**
McMaster University

1:25 pm–1:30 pm — 26 **Prospective Outcome Study Of Proton Therapy For Chordomas And Chondrosarcomas Of The Spine**
Daniel Indelicato, MD
University of Florida

1:30 pm–1:40 pm — **DISCUSSION**

1:40 pm–1:43 pm — 27 **Today's Challenges In 3D Printing Process Chain Of Custom-Made Implants**
Peter Scheinemann; Lia Schenk
implantcast GmbH

1:43 pm–1:46 pm — 28 **Implantation Of Customized 3-D Printed Titanium Prosthesis In Limb Salvage Surgery: A Case Series And Review Of The Literature**
Zheng Guo; Jun Fu, MD; Hongbin Fan, MD, PhD; Zhen Wang, MD
Department of Orthopaedic Surgery, Xi-Jing Hospital, the Fourth Military Medical University

1:46 pm–1:49 pm — 29 **Raman Spectroscopy Demonstrates Pth Prevention Of Radiation-Induced Damage On Bone Mineral Properties And Blunting Of Bone Matrix Damage In An Irradiated Mouse Model**
Timothy A. Damron, MD; Megan E. Oest, PhD; Kenneth A. Mann; Michael D. Morris, PhD
SUNY Upstate Medical University

1:49 pm–1:52 pm — 30 **Radiofrequency Ablation Of Atypical Cartilaginous Tumors In The Long Bones; Proof Of Principle In 44 Patients.**
Paul C. Jutte, MD, PhD; Edwin Dierselhuis; Jelle Overbosch
University of Groningen, University Medical Center Groningen, The Netherlands.

1:52 pm–2:00 pm — **DISCUSSION**

2:00 pm–2:05 pm — 31 **Identification Of Cd146 As A Marker Of Tumor-Propagating Cells In Human Sarcomas Leads To Novel Treatment Opportunities**
Jay S. Wunder, MD; Yuning Jackie Tang; Qingxia Wei PhD; Heather Whetstone MSc; Ilkyu Han, MD; Benjamin Alman, MD
Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada

2:05 pm–2:10 pm — 32 **Three-Dimensional (3D) Culture Of Bone Derived 786-O Renal Cell Carcinoma Retains Relevant Clinical Characteristics Of Bone Metastases**
Robert L. Satcher Jr, MD; Tianhong Pan; Mariane Martinez; Daniel A. Harrington; Sue-Hwa Lin; *MD Anderson Cancer Center*

2:10 pm–2:15 pm — 33 **Inhibition Of Plk Induces Growth Arrest And Apoptosis In Tumorigenic Os Cells**
Maria V. Guijarro, PHD; Elham Nasri, MD; Ali Zarezadeh, MD; Yuan Lu; Emma Maria Viktoria Hyddmark, BS; Margaret Ellen White; Glyn D. Palmer; Padraic P. Levings; Steven Ghivizzani; C. Parker Gibbs Jr., MD
University of Florida

2:15 pm–2:20 pm — 34 **Drivers Of Mesenchymal-Epithelial Transitions In Sarcomas**
Suzanne Bartholf Dewitt, DVM; Jason Somarelli; Mary Keara Boss; Alexander Hish; Shivee Gilja; William Eward, MD, DVM
Duke University

2:20 pm–2:30 pm — **DISCUSSION**

2:30 pm–3:00 pm — **BREAK** *Coquina Hall South*

3:00 pm–3:10 pm — **INTRODUCTION TO BIOLOGIC RECONSTRUCTION • LUIS APONTE-TINAO, MD**
Moderators for Session 4:
Robert H. Quinn, MD; David D. Greenberg, MD; Olavo Pires De Carmargo, MD, PhD

3:10 pm–3:15 pm — 35 **Clinical Outcomes Of Patients Reconstructed With Heat-Treated Autograft After Resection Of Malignant Musculoskeletal Tumors**
Kunihiro Ikuta, MD; Kozawa Eiji; Hamada Shunsuke; Ueda Takafumi; Ishiguro Naoki
Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine

3:15 pm–3:20 pm — 36 **Extra-Corporeal Irradiated Bone Autografts In Reconstruction Of Diaphyseal Tibial Defects**
Mobolaji Ajekigbe, BS; Czar Louie Gaston, MD; Lee M. Jeys, FRCS; Roger Tillman, FRCS; Simon R. Carter, MD; Robert John Grimer, FRCS; Adesegun Abudu, FRCS, FRCS (Ortho), MSc
Royal Orthopaedic Hospital

3:20 pm–3:25 pm — 37 **Recycled Autograft Augmented With Vascularized Fibular Graft For Reconstruction Of Bone Defects After Tumor Resection**
Min Wook Joo, MD; **Kyung Il Kim**; Yong Koo Kang, MD; Yang Guk Chung, MD; Won-Jong Bahk; Seung Han Shin, MD, PhD; Jin-Woo Kang
Department of Orthopaedic Surgery, The Catholic University of Korea, Republic of Korea

3:25 pm–3:30 pm — 38 **Complications Of Recycled Autograft For Reconstruction After Malignant Musculoskeletal Tumor Resection**
Min Wook Joo, MD; Yong Koo Kang, MD; Yang Guk Chung, MD; Xiaohui Niu, MD; Hiroyuki Tsuchiya, MD
Department of Orthopaedic Surgery, College of Medicine, The Catholic University of Korea, Republic of Korea

3:30 pm–3:45 pm — **DISCUSSION**

3:45 pm–3:48 pm — 39 **Biological Reconstruction After Resection Of Malignant Bone Tumors**
Rainer Baumgart, MD
ZEM-Germany Limb Lengthening Center Munich

3:48 pm–3:51 pm — 40 **Primary Arthroplasty In Healed Osteoarticular Allografts In Patients With History Of Primary Femoral Bone Tumors**
Nuno Rui Cools Paulino Pereira, MD, MSC; **Bianca Monica Verbeek, MD**; Joseph Hasbrouck Schwab, MD; Santiago Lozano Calderon, MD, PhD
Massachusetts General Hospital

3:51 pm–3:54 pm — 41 **Bone-Tendon-Bone Allograft Reconstruction For Peri-Patella Sarcoma Cases**
Jungo Imanishi; Damien Grinsell, FRACS; Peter Choong, MB, BS, MD, FRACS
St. Vincent's Hospital, Melbourne

3:54 pm–3:57 pm — 42 **Functional Neuro-Vascularized Muscle Transfer For Oncological Reconstruction Of Extremity Sarcoma**
Keiichi Muramatu
Yamaguchi University Hospital

3:57 pm–4:05 pm — **DISCUSSION**

4:05 pm–4:10 pm — 43 **Is It The Expandable Prosthesis The Only Reconstructive Option After Distal Femur Resections In Children With High-Grade Bone Sarcomas?**
Laura Campanacci, MD; Davide Donati, MD; Marco Manfrini, MD
Istituto Ortopedico Rizzoli

4:10 pm–4:15 pm — 44 **Lower Limb Recostructions With Bone Massive Allograft In Pediatric Patients**
Daniel Andreas Müller, MD; **Giovanni Beltrami, MD** ; Francesca Totti, MD; Guido Scoccianti; Rodolfo Capanna, MD
Orthopaedic Oncology Unit, Careggi University Hospital, Florence, Italy

4:15 pm–4:20 pm — 45 **Functional Outcome In Children Undergoing Resection-Arthrodesis For Malignant Tumors Around The Knee Joint**
Shah Alam Khan, MS, DNB, MRCSEd, FRCS, **M.Ch.Orth**
All India Institute of Medical Sciences, New Delhi, India

4:20 pm–4:25 pm — 46 **Femoral Physeal Fixation And Growth Abnormalities After Pediatric Limb Salvage**
Ernest U. Conrad III, MD; Tressa Mattioli-Lewis, BS, MPH; John Shapton BS; Stephanie Punt, BS; Bhasanan Sukanthanak
Seattle Children's Hospital, Seattle, WA USA

4:25 pm–4:40 pm — DISCUSSION

4:40 pm–4:45 pm — 47 **A Novel "Homolateral Femur Rotation-Lengthening With Allograft Transplantation Technique" As An Option Of Reconstruction For Huge Defects After Pelvic Tumor Resection: Technical Note And Early Experience**
Xiaohui Niu, MD; Hairong Xu, MD; Yuan Li
Department of Orthopedic Oncology Surgery, Beijing Ji Shui Tan Hospital, Peking University. Beijing, China

4:45 pm–4:50 pm — 48 **Allograft Reconstruction For The Proximal Humerus - Does It Work?**
Daniel Andreas Müller, MD; Giovanni Beltrami, MD; Guido Scoccianti; Rodolfo Capanna, MD
Orthopaedic Oncology Unit, Careggi University Hospital, Florence, Italy

4:50 pm–4:55 pm — 49 **Outcome And Complications Following Free Fibula Reconstruction For Oncologic Defects Of The Extremities**
Matthew Thomas Houdek, MD; Eric R. Wagner, MD; Franklin H. Sim, MD; Allen T. Bishop, MD; Alexander Yong Shik Shin, MD; Steven L. Moran, MD
Mayo Clinic

4:55 pm–5:00 pm — 50 **Massive Pelvic Allograft Reconstruction Of The Acetabular Area: Management Of Hip Mechanical Failure**
Carlo Romagnoli, MD; Federica Mariotti; Matteo Romantini, MD; Massimiliano Depaolis; **Davide Donati, MD**
Istituto Ortopedico Rizzoli

5:00 pm–5:15 pm — DISCUSSION

6:00 pm — **WELCOME RECEPTION** *Fairways Lawn Ritz Carlton Golf Club*

THURSDAY OCTOBER 8, 2015

8:00 am–12:00 pm MORNING SCIENTIFIC SESSION

8:00 am–8:10 am — **INTRODUCTION TO PROSTHETIC RECONSTRUCTION • REINHARD WINDHAGER, MD**
Moderators for Session 5:
Georg Gosheger, MD; Francis R. Patterson, MD

8:10 am–8:15 am — 51 **Revision Surgery Does Not Lead To Increased Rate Of Failure In Proximal Humerus Reconstruction With A Metallic Endoprosthesis: A Multi-Center Study**
John Groundland, MD; Odion Binitie, MD; Michaël Bus, MSc; Sofia Thoma MD; Sander Dijkstra, MD; Tom Cosker; Michiel Van De Sande, MD, PhD; G Douglas Letson, MD
University of South Florida, H. Lee Moffitt Cancer Center, Nuffield Orthopedic Centre, Oxford, UK, Leiden University Medical Center

8:15 am–8:20 am — 52 **The Use Of Reverse Total Shoulder Arthroplasty In Primary And Revision Implants After Resection Of Tumors Of The Proximal Humerus: A Report Of 20 Cases**
Pietro Ruggieri, MD, PhD; Teresa Calabrò; Andrea Angelini, MD; Giulia Trovarelli; Elisa Pala, MD
II Department of Orthopedics, University of Bologna, Istituto Rizzoli, Italy

8:20 am–8:25 am — 53 **Internal Hemipelvectomy Reconstruction With Ice-Cream Cone Type Prosthesis**
Irene Barrientos Ruiz; Eduardo Jose Ortiz Cruz Sr, MD; Manuel Peleteiro Pensado Sr.
University Hospital La Paz

8:25 am–8:30 am — 54 **Managing Large Bone Defects With Custom Spacers In Patients With Musculoskeletal Infections**
Joseph Benevenia, MD; Francis Robert Patterson, MD; Kathleen S. Beebe, MD; Steven Rivero, MD
Rutgers New Jersey Medical School

8:30 am–8:40 am — DISCUSSION

8:40 am–8:43 am — 55 **Gait Analysis In Patients With Endoprosthesis Replacement Around The Knee**
Prof. Dr. Vivek Ajit Singh, MBBS, MD
University Malaya Medical Center

8:43 am–8:46 am — 56 **Extra-Articular Resection Of The Knee For Distal Femur Bone Sarcomas: A Retrospective Review Of 30 Cases**
Nicola Fabbri, MD; **Eleonora Marini, MD**; Rui Yang, MD; Patrick J. Boland, MD; John H. Healey, MD, FACS
Memorial Sloan-Kettering Cancer Center

8:46 am–8:49 am — 57 **Uni- Or Bipolar Proximal Femoral Endoprostheses Following Tumour Reconstruction: Are Acetabular Resurfacings Necessary?**
Jonathan Daniel Stevenson; Venkatesan Kumar
Robert Jones & Agnes Hunt Orthopaedic Hospital, Oswestry

8:49 am–8:52 am — 58 **Endoprosthetic Replacement For Malignant Tumors Of The Proximal Femur: A Consecutive Series Of 211 Patients**
Matthew Thomas Houdek, MD; Benjamin Wilke, MD; Cody Wyles, BS; Peter S. Rose, MD; Michael J. Taunton, MD; Franklin H. Sim, MD
Mayo Clinic

8:52 am–8:55 am — 59 **Two-Institution Experience Of A Non-Invasive Expandable Endoprosthesis In The Pediatric Population**
Odion Binitie, MD; Giulia Trovarelli; Tyag Patel, BS; Pietro Ruggieri, MD, PhD; **G. Douglas Letson, MD**
Moffitt Cancer Center, Istituto Ortopedico Rizzoli

8:55 am–8:58 am — 60 **Intercalary Endoprosthetic Reconstruction For Skeletal Defects Of The Femur, Tibia, And Humerus**
Joseph Benevenia, MD; Rainer Kirchner, DMed; Francis Robert Patterson, MD; Kathleen S. Beebe, MD; Dieter Wirtz, MD; Steven Rivero, MD; Mark James Palma, MS; Max Friedrich
Rutgers New Jersey Medical School

8:58 am–9:10 am — DISCUSSION

9:10 am–9:15 am — 61 **The Lumic Prosthesis For Pelvic Reconstruction After Periacetabular Tumor Resection: Clinical Results From A European Collaborative Study**
Michael P.A. Bus; Michaël Bus, MSc; Andrzej Szafranski; Simen Sellevold; Tomasz Goryn; Paul C. Jutte, MD, PhD; Jos Bramer, MD, PhD; Arne Streitbuerger, MD; Andrzej Pienkowski; Daniel Kotrych, MD, PhD; Joanna Krzywda-Pogorzelska; Magdalena Emilia Rychlowska-Pruszynska, DMed; Georg Gosheger, MD, PhD; Michiel Van De Sande, MD, PhD; **Sander Dijkstra, MD**
Leiden University Medical Center

9:15 am–9:20 am — 62 **X-Ray Predictors Of Osseointegration For Uncemented Oncologic Implants**
Stephanie Punt, BS; Jedediah K. White, BS; Mital Sumankumar Patel, MBBS, MS; **Ernest U. Conrad III, MD**
University of Washington Medical Center

9:20 am–9:25 am — 63 **Very Long Term Outcomes Following Endoprosthetic Replacements**
Robert John Grimer; Kerem Aydin MD; Lee M. Jeys, FRCS; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Hazem Wafa, MD; Roger Tillman, FRCS; Simon R Carter, MD
Royal Orthopaedic Hospital, Birmingham

9:25 am–9:30 am — 64 **Long Term Results Of Cemented, Hydroxyapatite Coated Distal Femoral Replacements. Has Aseptic Loosening Been Abolished And If So, Why Do They Fail?**
Roger Tillman, FRCS; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Seggy Abudu FRCS; Lee M. Jeys, FRCS; Simon R. Carter, MD; Kerem Aydin MD; **Robert John Grimer**

9:30 am–9:35 am — 65 **Silver Coated Endoprosthesis: Short To Medium Term Follow-Up At The Royal Orthopaedic Hospital**
Jose Ignacio Albergo, MD; Czar Louie Gaston, MD; Minna Laitinen, MD; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Lee M. Jeys, FRCS; Simon R. Carter, MD; Roger Tillman, FRCS; Adesegun Abudu, FRCS, FRCS (Ortho), MSc; Robert John Grimer, FRCS
Royal Orthopaedic Hospital

9:35 am–9:45 am — DISCUSSION

9:45 am–9:48 am — 66 **Implant Survivorship And Modes Of Failure For Proximal Femoral, Distal Femoral And Tibial Reconstruction With Compressive Endoprosthetic Osseointegration Fixation**
Yee-Cheen Doung, MD; **Ryland Kagan, MD**; Jacob R. Adams, MD; Caroline Schulman, BS; James B. Hayden, MD
Oregon Health and Sciences University

9:48 am–9:51 am — 67 **Proximal Femoral And Proximal Tibial Compressive Osseointegration: Intermediate Term Outcomes**
Richard J. O'Donnell, MD; **Hwan-Seong Cho, MD**; Lauren Allyson Hackney, MD; Brian Cook, MD; Richard John O'Donnell, MD; Rosanna Lisa Wustrack, MD
UCSF Helen Diller Family Comprehensive Cancer Center

9:51 am–9:54 am — 68 **Reconstruction After Tumor Resection Of The Elbow - What Works Best?**
Daniel Andreas Müller, MD; Guido Scoccianti; Rodolfo Capanna, MD; **Giovanni Beltrami, MD**
Orthopaedic Oncology Unit, Careggi University Hospital, Florence, Italy

9:54 am–9:59 am	69	**Endoprosthetic Failure After Resection Of Primary Or Secondary Bone Tumors In The Proximal Humerus And Reconstruction With The Mutars™ System–A Systematic Analysis** **Arne Streitbuerger**; Jendrik Hardes; Georg Gosheger, MD, PhD; Markus Nottrott, MD, PhD; Jan Niklas Bröking, MD; Marcel-Philipp Henrichs, MD; Dimosthenis Andreou, MD
10:00 am–10:15 am		**DISCUSSION**
10:15 am–10:45 am		**BREAK** *Coquina Hall South*
10:45 am–10:55 pm		**INTRODUCTION TO BENIGN BONE TUMORS • FRANCIS Y. LEE, MD, PHD** **Moderators for Session 6:** **Ajay Puri, MD; Felasfa Wodajo, MD**
10:55 am–11:00 am	70	**Denosumab As Adjuvant Treatment For Giant Cell Tumor Of Bone - Risks And Benefits For The Oncologic Surgeon** Daniel Andreas Müller, MD; **Giovanni Beltrami, MD**; Guido Scoccianti; Rodolfo Capanna, MD *Orthopaedic Oncology Unit, Careggi University Hospital, Florence, Italy*
11:00 am–11:05 am	71	**Is Denosumab Boon Or Bane In Complicated Giant Cell Tumour Treatment? - Single Institution Experience - 72 Cases** Raghavendra Rao, PhD; Nagaraj KR, MBBS, MD; Shilpa Prabhudesai, MD; Navaneeth S. Kamath; **Pramod Chinder** *HCG - Bangalore Institute of Oncology*
11:05 am–11:10 am	72	**The Use Of Denosumab In Giant Cell Tumour (Gct) Of Bone: A Review Of 44 Patients** **Czar Louie Gaston, MD**; Jose Ignacio Albergo, MD; Hazem Wafa, MD; Krishna I. A. Reddy, MBBS, MS, FRCS (Ortho); Robert John Grimer, FRCS *Royal Orthopaedic Hospital NHS Foundation Trust*
11:10 am–11:15 am	73	**Denosumab – A New Bullet In The Armamentarium For Giant Cell Tumor** **Ajay Puri, MD**; Ashish Gulia; Vivek Verma *Tata Memorial Hospital, Mumbai, India*
11:15 am–11:30 am		**DISCUSSION**
11:30 am- 11:33 am	74	**Retrospective Evaluation Of Cartilage Tumors Of Long Bones Under Clinico-Radiological Surveillance** **Venkatesan Sampath Kumar**; Prudencia Tyrrell; Jonathan James Gregory *Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, Shropshire, United Kingdom SY10 7AG*
11:33 am–11:36 am	75	**Osteoarthritis Of The Hip In Fibrous Dysplasia Of The Proximal Femur** **Ilkyu Han**; Seung Bin Im; Han-Soo Kim, MD, PhD *Seoul National University Hospital*
11:36 am–11:39 am	76	**Coralline Hydroxyapatite Reduces Local Recurrence Of Benign Bone Lesions** **Melissa Nicole Zimel, MD**; Alexandra Zindman; John H. Healey, MD, FACS *Memorial Sloan Kettering Cancer Center*
11:39 am–11:42 am	77	**Risk Factors In Allogenous Strut Graft Surgery In Fibrous Dysplasia Of The Proximal Femur.** Sander Dijkstra, MD; **Bas C.J. Majoor MD**; Michiel Van De Sande, MD, PhD; Nevene A.T. Hamdy MD *Leiden University Medical Center*
11:42 am–11:55 am		**DISCUSSION**
11:55 am–12:00 pm	78	**Freezing Nitrogen Ethanol Composite (Fnec), A New Effective Cryoablation Technology As An Adjuvant Modality Treatment For Giant Cell Tumor Of Bone** **Po-Kuei Wu**; Cheng-Fong Chen, MD; Chen Wei-Ming *Taipei Veteran General Hospital*
12:00 pm–12:05 pm	79	**Role Of Bisphosphonates In Giant Cell Tumor Of Bone–A Prospective Randomized Control Study.** **Manoj K. Shishir Rastogi**; Shah Alam Khan; Siddharth Dubey *All India Institute of Medical Sciences*
12:05 pm–12:10 pm	80	**Distal Radius Giant Cell Tumor Resection And Reconstruction With Non-Vascularized Iliac Crest Graft Wrist Arthrodesis** Tao Wang MD; **Chung Ming Chan, MBBS**; Feng Yu MD; Yuan Li MD; Xiaohui Niu, MD *Department of Orthopedic Oncology, Beijing Ji Shui Tan Hospital, Peking University, Beijing, People's Republic of China*
12:10 pm–12:15 pm	81	**Treatment Of Aneurysmatic Bone Cysts** **Johan Pot**; Sander Dijkstra, MD; Michiel Van De Sande, MD, PhD *LUMC Leiden*

12:15 pm–12:30 pm		**DISCUSSION**
		REST OF AFTERNOON FREE

FRIDAY OCTOBER 9, 2015

8:00 am–8:45 am		**PELVIC TUMOR SURGERY: THE RIZZOLI INSTITUTE EXPERIENCE** **ISOLS Presidential Guest Speaker • Pietro Ruggieri, MD, PhD**
8:45 am–9:00 am		**DISCUSSION**
9:00 am–12:00 pm		**MORNING SCIENTIFIC SESSION**
9:00 am–12:00 pm		**PELVIC AND SPINE TUMOR** **Moderators for Session 7:** **G. Douglas Letson, MD; Valerae O. Lewis, MD**
9:00 am–9:05 am	82	**Complications And Outcome After Surgical Treatment Of Pelvic Sarcomas–Does Competing Risk Add To Treatment Considerations?** **Reinhard Windhager, MD**; Puchner Stephan, MD; Philipp Theodor Funovics, MD; Alexandra Kaider, MSc; Madeleine Willegger; Christoph Stihsen; Gerhard Martin Hobusch, MD; Joannis Panotopoulos *Department of Orthopaedics, Medical University of Vienna*
9:05 am–9:10 am	83	**Morbidity, Mortality And Blood Loss Associated With Pelvic And Sacral Tumour Surgery** **Richard Shellard**; Tom Neal, MBChB; Czar Louie Gaston, MD; Robert John Grimer, FRCS; Lee M. Jeys, FRCS *Royal Orthopaedic Hospital, Birmingham, UK*
9:10 am–9:15 am	84	**Resection Of The Acetabulum And Pelvis: Should We Still Offer Reconstructive Options?** **Joseph Benevenia, MD**; Francis Robert Patterson, MD; Kathleen S. Beebe, MD; Steven Rivero, MD *Rutgers New Jersey Medical School*
9:15 am–9:20 am	85	**Functional Outcome Following "No Reconstruction" In Patients Undergoing Periacetabular (Type-Ii) Pelvic Resection** **Shah Alam Khan, MS, DNB, MRCSEd, FRCS, M.Ch.Orth** *All India Institute of Medical Sciences, New Delhi, India*
9:20 am–9:25 am	86	**Male And Female Sexual Dysfunction Following Pelvic Tumor Surgery–Sexual Dysfunction Following Pelvis Surgery** **Ernest U. Conrad III, MD**; Yi Guo, MD; Stephanie Punt, BS *University of Washington, Seattle, WA*
9:25 am–9:40 am		**DISCUSSION**
9:40 am–9:43 am	87	**Intrapelvic And Lumbopelvic Reconstruction Outcomes After Acetabulum-Sparing Tumor Resections** **Bugra Alpan;** Ahmet Salduz, MD; Turgut Akgul, MD; Fatih Dikici *Istanbul University-Istanbul Faculty of Medicine-Dept. of Orthopaedics and Traumatology*
9:43 am–9:46 am	88	**Functional Outcome Following Total Sacrectomies Without Spino-Pelvic Reconstruction** **Piya Kiatisevi**; Chaiwat Piyaskulkaew; Sombat Kunakornsawat; Bhasanan Sukanthanak *Orthopaedic Oncology Service, Institute of Orthopaedic, Lerdsin Hospital, Bangkok, Thailand*
9:46 am–10:00 am		**DISCUSSION**
10:00 am–10:30 am		**BREAK** *Coquina Hall South*
10:30 am–11:25 am		**MODERATORS FOR SESSION 7 CONTINUED** **Davide M. Donati, MD; Peter S. Rose, MD**
10:30 am–10:35 am	89	**Sacral Chordoma: A Clinical Review Of 157 Cases With 30-Year Experience In A Single Institute** **Xin Sun**; Francis J. Hornicek, MD *Massachusetts General Hospital*
10:35 am–10:40 am	90	**Conditional Survival And Functional Outcome Following Surgical Treatment For Sacral Chordoma: A Monocentric Retrospective Review Of 115 Consecutive Cases** **Tao Ji, MD**; Wei Guo, MD, PhD; Xiaodong Tang; Yi Yang, MD *Musculoskeletal Tumor Center, People's Hospital, Peking University*

10:40 am–10:45 am
91 **Surgical Strategies In Patients With Spinal Giant Cell Tumor: Twelve-Year'S Clinical Experience And Outcomes**
Wei Guo, MD, PhD; **Xin Sun**; Rongli Yang; Xiaodong Tang
Musculoskeletal Tumor Center, Peking University People's Hospital, Beijng, China, 100044

10:45 am–10:50 am
92 **Limb Lengthening After Internal Hemipelvectomy With The Fitbone-System**
Rainer Baumgart, MD
ZEM-Germany Limb Lengthening Center Munich

10:50 am–11:05 am
DISCUSSION

11:05 am–11:08 am
93 **Intra-Aortic Balloon Occlusion To Prevent Bleeding In Pelvic Tumours: A Case Control Study**
Michele Boffano, MD; Valentina Rastellino; Stefano Marone; Ugo Albertini; Valter Verna; Maurizio Berardino; Raimondo Piana
AOU Città della Salute e della Scienza, Torino, Italy

11:08 am–11:11 am
94 **Giant Cell Tumor Of The Sacrum Treated With Conservative Surgery: 35 Years' Experience**
Chandhanarat Chandhanayingyong, MD; John H. Healey, MD, FACS; Patrick J. Boland, MD
Memorial Sloan Kettering Cancer Center

11:11 am–11:14 am
95 **Microwave Ablation Of Pelvic Malignant Bone Tumors**
Qingyu Fan; Yong Zhou; Minghua Zhang; Baoan Ma; Tongtao Yang; Hua Long; Zhe Yu; Lianhe Zheng; Zhao Li, MD
Department of Orthopedic Surgery, Tangdu Hospital, Fourth Military Medical University

11:15 am–11:25 am
DISCUSSION

11:25 am–11:35 am
INTRODUCTION TO SOFT TISSUE SARCOMAS • EDWARD Y. CHENG, MD
Moderators for Session 8:
Hiroyuki Tsuchiya, MD, PhD; Gregory F. Domson, MD

11:35 am–11:40 am
96 **The Effect Of Surgical Margins On Local Recurrence And Survival After Resection Of High-Grade Soft Tissue Sarcomas Of The Extremities: Through The Eyes Of A Multi-State Model.**
Michiel Van De Sande, MD, PHD; **Julie J. Willeumier**; Anja Rueten-Budde; PD Sander Dijkstra MD, PhD; Lee M. Jeys, FRCS; Minna Laitinen, MD; Rob Pollock, FRCS; William Aston, FRCS; Peter Ferguson, MD; Anthony M. Griffin, MSc; Jay Wunder, MD; Marta Fiocco, PhD
Leiden University Medical Center

11:40 am–11:45 am
97 **Clinical Outcomes Of Unplanned Soft Tissue Sarcoma Excision In Comparison With Primary Planned Excision At Sarcoma Center; The Impact Of Residual Tumor In Re-Excision Specimen**
Jungo Imanishi; Chris Charoenlap, MD; Samuel Ngan; John Slavin; Sarat Chander; Takaaki Tanaka, MD, PhD; Michelle Maree Dowsey, PhD; Chatar Goyal, MD; Peter Choong, MB, BS, MD, FRACS
St. Vincent's Hospital, Melbourne and Peter MacCallum Cancer Centre, East Melbourne

11:45 am–11:50 am
98 **Locally Recurrent Soft Tissue Sarcoma: Outcomes With Re-Irradiation And/Or Surgical Excision**
Anthony M. Griffin, MSc; Colleen I. Dickie MSc; Peter W. Chung MD; Peter Ferguson, MD; Jay Wunder, MD; Brian O'Sullivan MD; Charles Catton, MD
Mount Sinai Hospital

11:50 am–12:00 pm
DISCUSSION

12:00 pm–1:00 pm
LUNCH *Coquina Hall South*

1:00 pm–5:00 pm AFTERNOON SCIENTIFIC SESSION

1:00 pm–2:05 pm
MODERATORS FOR SESSION 8 CONTINUED
Hiroyuki Tsuchiya; Gregory F. Domson, MD nati, MD; Peter S. Rose, MD

1:00 pm–1:05 pm
99 **What Is The Significance Of A Fungating Soft Tissue Sarcoma?**
Michael Parry, FRCS (ORTHO), MD; Subin Sugath Jr; Hazem Wafa, MD; Czar Louie Gaston, MD; Lee M. Jeys, FRCS; Robert John Grimer, FRCS
Royal Orthopaedic Hospital, Birmingham, UK

1:05 pm–1:10 pm
100 **Fdg Pet-Ct Response After Neoadjuvant Chemotherapy Continues To Predict Progression Free Survival At Mid-Term In Prospective Trial For Soft Tissue Sarcomas**
Edward Y Cheng, MD; Juan C. Manivel, MD; Brenda Weigel; Keith M. Skubitz MD
University of Minnesota

1:10 pm–1:15 pm
101 **Brachy Vac Treatment Of Superficial Malignancies- Results Of A Consecutive Case Series**
Richard Louis McGough, MD; Mark A. Goodman, MD; Kurt Richard Weiss, MD
University of Pittsburgh

1:15 pm–1:20 pm
102 **Retrospective Review Of The Adequacy Of Community Magnetic Resonance Imaging (Mri) For Soft Tissue Sarcoma In The Periphery**
David M. Joyce, MD; Tyag Patel, BS; Jamie T. Caracciolo, MD, MBA; G. Douglas Letson, MD
Moffitt Cancer Center

1:20 pm–1:25 pm
103 **Vancomycin Powder Reduces Risk Of Wound Complication In Orthopaedic Tumor Surgery**
John Alexander Abraham, MD; **Christina J. Gutowski, MD**; Kristin Strogus; Bridget Sayde; Kirsten Ross, BS
Thomas Jefferson University Hospital

1:25 pm–1:40 pm
DISCUSSION

1:40 pm–1:43 pm
104 **Myxofibrosarcoma: A Difficult-To Treat Soft Tissue Sarcoma - Considerations After 85 Patients**
Daniel Andreas Müller, MD; Giovanni Beltrami, MD; Guido Scoccianti; Rodolfo Capanna, MD
Orthopaedic Oncology Unit, Careggi University Hospital, Florence, Italy

1:43 pm–1:46 pm
105 **Intraoperative Differentiation During Soft Tissue Sarcoma Excision Using Near Infrared Autofluorescence Spectroscopy**
John Q Nguyen; Zain Sherali Gowani, BA; Maggie E. O'Connor; Isaac J. Pence BE, MS; The-Quyen Nguyen, PhD; Anita Mahadevan-Jansen PhD; Ginger E. Holt, MD
Vanderbilt University

1:46 pm–1:49 pm
106 **The Influence Of Diabetes, Obesity & Anatomic Location On The Development Of Post-Operative Wound Infections Following Soft Tissue Sarcoma Resection: A Multi-Institutional Study**
Jeremy White, MD; Julie Stoner, PhD; Michael Cassidy Maxted, MD; Benjamin J. Miller, MD, MS; Raffi Stephen Avedian, MD; Tessa Balach, MD; David Daniel Greenberg, MD; Lee Rodney Leddy, MD; Kevin MacDonald, MD; Rajiv Rajani, MD; Andre R do Valle Spiguel, MD
University of Oklahoma Health Sciences Center - Oklahoma City

1:49 pm–1:52 pm
107 **Does The Use Of Wound Vacuum Assisted Closure (Vac) Therapy Increase The Risk Of Local Recurrence After Sarcoma Excision?**
Phillip A. Taylor, MD; Gregory F Domson, MD
Virginia Commonwealth University Health System

1:52 pm–1:55 pm
108 **Treatment Of Sarcoma Lung Metastases With External Beam Radiotherapy: Experience At A Tertiary Referral Center**
Adam Lindsay; Edward Haupt, MD; Mark T. Scarborough, MD; Andre R. do Valle Spiguel, MD; Chung Ming Chan, MBBS; Robert A. Zlotecki, MD; C. Parker Gibbs Jr., MD; Melissa Marie Peters, MD
University of Florida

1:55 pm–2:05 pm
DISCUSSION

2:05 pm–2:15 pm
INTRODUCTION TO BONE SARCOMA • JAY S. WUNDER, MD
Moderators for Session 9:
Francis J. Hornicek, MD, MD; Ginger E. Holt, MD

2:15 pm–2:20 pm
109 **A Novel System For The Surgical Staging Of Primary High-Grade Osteosarcoma: The Birmingham Classification**
Michael Parry, FRCS (ORTHO), MD; **Lee M. Jeys, FRCS**; Chris Thorne; Vaiyapuri P. Sumathi; Robert John Grimer, FRCS
The Royal Orthopaedic Hospital, Birmingham, UK

2:20 pm–2:25 pm
110 **Development And Validation Of A Pretreatment Prognostic Index To Predict Death And Lung Metastases For Extremity Osteosarcoma**
Jian Tu; Bo Wang; Jin Wang, MD; Jingnan Shen, MD, PhD
Bone and Soft Tissue Tumor Center, First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China

2:25 pm–2:30 pm
111 **Post-Metastasis Survival In High-Grade Extremity Osteosarcoma: A Retrospective Analysis Of Prognostic Factors Of 126 Patients.**
Wanlim Kim; Ilkyu Han, MD; Jong Seok Lee; Han-Soo Kim, MD, PhD
Seoul National University Hospital

2:30 pm–2:35 pm
112 **The Role Of 18F-Fdg Pet/Ct For The Detection Of Recurrent Osteosarcoma**
Pietro Ruggieri, MD, PhD; Andrea Angelini, MD; Francesco Ceci, MD; Tiziano Graziani, MD; Giulia Trovarelli; Paolo Castellucci, MD
II Department of Orthopedics, University of Bologna, Istituto Rizzoli, Italy

2:35 pm–2:40 pm
113 **Why Can'T We All Speak The Same Language? An Analysis Of The Definition And Significance Of Margins In The Euramos-1 Trial**
Robert John Grimer; R. Lor Randall, MD; Reinhard Windhager, MD; Otte Brosjö Sr, MD; Gordana Jovic, PhD; Jeremy Whelan, MBBS, MD; Stefan Bielack, MD; Neyssa Marina, MD, MS; Sigbjorn Smeland, MD; Mark Krailo; Trude Butterfass-Bahloul, DMed; Pancras C.W. Hogendoorn, PhD; Mark Lawrence Bernstein, MD; Matthew R. Sydes, MSc
Medical Research Council, Clinical Trials Unit, University College London, United Kingdom

2:40 pm–2:45 pm
114 **The Effect Of Surgical Timing On The Outcome Of Localized Extremity Osteosarcoma**
Soo-Yong Lee; Chang-Bae Kong, MD; Wonseok Song, MD, PhD; Wan Hyeong Cho
Department of Orthopedic Surgery, Korea Cancer Center Hospital, Seoul, Korea

2:45 pm–3:00 pm
DISCUSSION

3:00 pm–3:30 pm
BREAK *Coquina Hall South*

3:30 pm–5:00 pm
MODERATORS FOR SESSION 9 CONTINUED
Gerard J. Powell, MBBS; Nickolas B. Reimer, MD

3:30 pm–3:35 pm
115 **Osteofibrous-Dysplasia-Like-Adamantinoma And Adamantinoma: A Clinical, Radiological And Histological Analysis Of 82 Cases**
Michiel Van De Sande, MD, PhD; **Emile M Schutgens MD**; Sander Dijkstra, MD; Rob Pollock, FRCS; Judith Bovee; Pancras C.W. Hogendoorn, PhD
Leiden University Medical Centre

3:35 pm–3:40 pm
116 **Prognostic Factors And Outcomes Of Dedifferentiated Chondrosarcoma – A Single Institution Experience**
Christopher John Matthews, MD; Andre R. do Valle Spiguel, MD; C. Parker Gibbs Jr., MD
University of Florida Department of Orthopaedics and Rehabilitation

3:40 pm–3:45 pm
117 **Is Radiation Worth The Risk For Diffuse Large B-Cell Lymphoma Of Bone In The Era Of Chop-R Therapy?**
Nicholas Bernthal, MD; William Mendanha; Scott D. Nelson, MD; Kamalesh Sankhala; Sant Chawla
UCLA

3:45 pm–3:50 pm
118 **Is Needle Biopsy Clinically Useful In Pre-Operative Grading Of Central Chondrosarcoma Of Pelvis And Long Bones?**
Luis Alberto Aponte-Tinao, MD; **Pablo Roitman MD**; German Luis Farfalli, MD; Miguel Angel Ayerza, MD; Domingo Luis Muscolo, MD; Federico Edgardo Milano, BS
Italian Hospital of Buenos Aires

3:50 pm–4:00 pm
DISCUSSION

4:00 pm–4:03 pm
119 **Is Pet-Ct An Accurate Method For The Differential Diagnosis Between Chondroma And Chondrosarcoma?**
Reynaldo Jesus-Garcia, MD; Dan CM Viola MD; Marcos Korukian MD
Hospital Israelita Albert Einstein - Sao Paulo - Brazil

4:03 pm–4:06 pm
120 **Tumor Necrosis: Does It Define The Need For Post Operative Radiotherapy In Ewing's Sarcoma?**
Ajay Puri, MD; **Ashish Gulia**; Siddhartha Laskar; Saniya Carmel Crasto, BS, MBA; Nehal Khanna
Tata Memorial Hospital, Mumbai, India

4:06 pm–4:09 pm
121 **Periosteal Osteosarcoma; The University Of Florida Experience**
Chung Chan, MBBS; Adam Douglas Lindsay, MD; John D Reith, MD; Mark T. Scarborough, MD; C. Parker Gibbs Jr., MD
University of Florida

4:09 pm–4:12 pm
122 **Adamantinoma Of The Long Bones_ A Retrospective Study Of 18 Cases**
Zhiping Deng, MD
Department of Orthopaedic Oncology Surgery, Beijing Ji Shui Tan Hospital, Peking University, Beijing, People's Republic of China.

4:12 pm–4:15 pm
123 **Survival In Mesenchymal Chondrosarcoma: 205 Cases From The Seer Database**
Lukas Nystrom, MD; Brian Andrew Schneiderman, MD; Stephanie Kliethermes, PhD; Dariusz Borys
Department of Orthopaedic Oncology Surgery, Beijing Ji Shui Tan Hospital, Loyola University Chicago

4:15 pm–4:25 pm
DISCUSSION

4:25 pm–4:30 pm
124 **Do We Need To Remove The Biopsy Tract In Patients Undergoing Surgery Following Neo- Adjuvant Chemotherapy For Primary Bone Tumors?**
Shah Alam Khan, MS, DNB, MRCSEd, FRCS, M.Ch.Orth
All India Institute of Medical Sciences

4:30 pm–4:35 pm
125 **Patterns Of Local Recurrence And Metastatic Progression Following Treatment Of Bone Sarcomas**
Cara Cipriano; Anthony M. Griffin, MSc; Peter Ferguson, MD; Jay Wunder, MD
Mount Sinai Hospital, University of Toronto

4:35 pm–4:40 pm
126 **Ct Data Evaluation Of Proximal Femur Malignant Tumors**
Oleg Vyrva, MD
Sytenko Institute of Spine and Joint Pathology, Kharkiv, Ukraine

4:40 pm–4:45 pm
127 **Surgical Treatment Of Conventional Primary Central Chondrosarcoma Of Pelvic Bone: A Multicenter Study In 164 Patients**
Michael P.A. Bus; Michaël Bus, MSc; Domenico Campanacci; Jose Ignacio Albergo, MD; Andreas Leithner, MD; Michiel Van De Sande, MD, PhD; Giuseppe Caff; Jan Mettelsiefen; Rodolfo Capanna, MD; Per-Ulf Tunn; Lee M. Jeys, FRCS; **Sander Dijkstra, MD**
Leiden University Medical Center

4:45 pm–4:50 pm
128 **Ewing Sarcoma: Only Patients With 100% Of Necrosis After Adjuvant Chemotherapy Should Be Classified As Good Responders.**
Jose Ignacio Albergo, MD; Czar Louie Gaston, MD; Lee M. Jeys, FRCS; Minna Laitinen, MD; Anna Darbyshire, MBBS; Vaiyapuri P. Sumathi; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Simon R. Carter, MD; Roger Tillman, FRCS; Adesegun Abudu, FRCS, FRCS (Ortho), MSc; Robert John Grimer, FRCS
Royal Orthopaedic hospital, Birmingham, UK

4:50 pm–5:00 pm
DISCUSSION

6:30 pm
CLOSING NIGHT CELEBRATION *House of Blues Orlando*

SATURDAY OCTOBER 10, 2015

8:00 am–8:10 am
INTRODUCTION TO OSTEOSARCOMA • RICHARD M. TEREK, MD, FACS
Moderators for Session 10:
Rex C. Haydon, MD, PhD; Steven C. Ghivizzani, PhD

8:10 am–8:16 am
129 **Distinct And Overlapping Genetic Changes In Ostesarcoma Across Species**
William Eward, MD, DVM; Suzanne Bartholf Dewitt, DVM; Brian E. Brigman, MD; David Kirsch, MD, PhD; Mary-Keara Boss DVM; Jason Somarelli PhD;
Duke University

8:16 am–8:22 am
130 **Intra-Tumoral Heterogeneity In Osteosarcoma And Its Therapeutic Impolications**
Padraic P. Levings, PHD, BS; Emma Maria Viktoria Hyddmark, BS; Ali Zarezadeh, MD; Steven Ghivizzani BS, PhD; C. Parker Gibbs Jr., MD
University of Florida

8:22 am–8:28 am
131 **Microscopic Tumor Emboli As One Of Important Prognostic Factors In Stage-Ii Osteosarcoma**
Piya Kiatisevi, MD; Science Metadilogkul; Worapitak Thaisitti; Akarathan Jitnuyanont; Numphung Numkarunarunrote; Bhasanan Sukanthanak; Voranuch Thanakit
Orthopaedic Oncology Service, Institute of Orthopaedics, Lerdsin General Hospital, Bangkok, Thailand

8:28 am–8:34 am
132 **Three-Dimensional Drug-Screening Platform For Progression Of Osteosarcoma Micrometastases Demonstrates Heterogeneous Response To Map Chemotherapy**
Christopher Collier, MD; Emily Wirtz; William Zachary Morris, MD; Patrick John Getty, MD; Edward M. Greenfield, PhD
Case Western Reserve University

8:35 am–8:45 am
DISCUSSION

8:45 am–8:51 am
133 **Opportunities For Drug Repurposing In Osteosarcoma: A Screen Of Fda-Approved Oncology Drugs In A Micrometastatic Model Of Disease**
Christopher Collier, MD; Patrick John Getty, MD; Edward M. Greenfield, PhD
Case Western Reserve University

8:51 am–8:57 am
134 **Hypomethylation Of Irx1 A Poor Marker In Circulating Tumor Dna And Drives Osteosarcoma Metastasis Via Cxcl14/Nf-Kb Upregulation**
Jin Wang; Jinchang Lu
Department of Musculoskeletal Oncology, the First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, Guangdong, China

8:57 am–9:04 am
135 **Epigenetic Reprogramming Of Osteosarcoma Tumor Initiating Cells Alters Histologic And Metastatic Phenotype**
Emma Maria Viktoria Hyddmark, BS; Padraic P. Levings; Margaret Ellen White; Ali Zarezadeh, MD; Elham Nasri; Maria V. Guijarro, PhD; Steve Ghivizzani; C. Parker Gibbs Jr., MD
University of Florida

9:05 pm–9:15 pm		**DISCUSSION**
9:15 am-10:00 am		**CAN CHEMORESISTANCE IN OSTEOSARCOMA BE OVERCOME BY DECIPHERING THE COMPLEXITIES OF ITS GENOME?** **MSTS Presidential Guest Speaker • Ching C. Lau, MD, PhD**
10:00 am–10:15 am		**DISCUSSION**
10:15 am–10:45 am		**BREAK** *Coquina Hall South*
10:45 am-10:55 am		**INTRODUCTION TO METASTATIC DISEASE • TIMOTHY A. DAMRON, MD** **Moderators for Session 11:** **Patrick P. Lin, MD; Laura Campanacci, MD**
10:55 am–11:00 am	136	**A Health Services Comparison Of Surgery Followed By Radiation Therapy Versus Radiation Therapy Alone For Patients With Metastatic Epidural Spinal Cord Compression** **Justin E. Bird, MD**; Jinhai Huo MD, PhD, MSPH; Sharon Giordano MD, PhD; Beverly A. Guadagnolo MD, PhD *The University of Texas MD Anderson Cancer Center*
11:00 am–11:05 am	137	**Surgical Failure And Disease Progression In A New Era Of Metastatic Skeletal Disease** **Elizabeth Scott**; William Eward, DVM, MD; Mitchell Robert Klement, MD; Brian E. Brigman, MD *Duke University Medical Center*
11:05 am–11:10 am	138	**Prognostic Factors In Breast Carcinoma Patients With Metastatic Disease In The Peripheral Skeleton** **Jonathan Daniel Stevenson**; Mark McNair *Robert Jones & Agnes Hunt Orthopaedic Hospital, Oswestry*
11:10 am–11:15 am	139	**Prognostication Of Survival In Patients Who Underwent Operative Treatment Of Metastatic Spine Disease** **Nuno Rui Cools Paulino Pereira, MD, MSC**; Stein Jasper Janssen, MD; Eva van Dijk; Francis J. Hornicek, MD; Marco Ferrone, MD, FRCSC; Joseph Hasbrouck Schwab, MD *Massachusetts General Hospital*
11:15 am–11:30 am		**DISCUSSION**
11:30 am–11:33 am	140	**Prophylactic Fixation Of Impending Pathologic Fractures: In-Hospital Cost And Complication Analysis As Compared To Acute Fracture Fixation** **Nicole Kellan Behnke, MD**; Thomas Niemeier, MD; Dustin Kyle Baker, BS; Reaves Monroe Crabtree Jr., BA; Brent A. Ponce, MD *The University of Alabama at Birmingham*
11:33 am–11:36 am	141	**Assessing Physical Function In Patients With Lower Extremity Bone Metastases** **Stein Jasper Janssen, MD**; Nuno Rui Cools Paulino Pereira, MD; Kevin A. Raskin, MD; Marco Ferrone, MD, FRCSC; Francis J. Hornicek, MD; Joseph Hasbrouck Schwab, MD *Massachusetts General Hospital*
11:36 am–11:39 am	142	**Thromboembolic Disease In Metastatic Femoral Lesions: A Comparison Between Prophylactic Fixation Versus Fixation After Pathological Fracture** Arun Aneja; Jimmy Jiang MD; **Anna Cohen-Rosenblum MD**; Rex Haydon, MD; Terrance D. Peabody, MD; Hue H. Luu, MD *University of Chicago*
11:39 am–11:42 am	143	**A Simple Model To Predict Survival In Patients With Metastases Of The Long Bones: The Bollen Model** Sander Dijkstra; **Julie J. Willeumier**; Yvette Van Der Linden, MD, PhD; Laurens Bollen; **Sander Dijkstra, MD** *Leiden University Medical Center*
11:42 am–12:00 pm		**DISCUSSION**
12:00 pm–1:00 pm		**CLOSING CEREMONY/AWARDS**

POSTERS

POSTERS ON DISPLAY

No.	DAY	CATEGORY	TITLE	AUTHOR(S)
1	WED	Axial (Spine, Pelvis)	Outcome Of Pelvic/Sacral Resection And Reconstruction For Bone Tumors	**Ahmad Shehadeh**
2	WED	Axial (Spine, Pelvis)	Sacral Giant Cell Tumors - To Operate Or Not To Operate!	Ajay Puri, MD; **Ashish Gulia**; Manish Suresh Bhandare
3	WED	Axial (Spine, Pelvis)	Cervical En Block-Spondilectomy: Planning, Results And Failures (15 Cases)	**Alessandro Luzzati**; Marco Alloisio; Sergio Sessa; Scotto Gennaro
4	WED	Axial (Spine, Pelvis)	Internal Hemipelvectomy - Possibility Of Reconstruction In Children And Youth With Primary Malignant Bone Tumors.	**Andrzej Szafranski**
5	WED	Axial (Spine, Pelvis)	Chondrosarcoma Of The Pelvis: A Review Of Fifty-Six Cases Between 1990 And 2014	**Bugra Alpan**; Kayahan Karaytug; Ahmet Salduz; Natig Valiyev; Bilge Bilgic; Levent Eralp
6	WED	Axial (Spine, Pelvis)	How To Avoid The Metal Invasion? Non-Prosthetic Management Of Partial Acetabular Defects After Primary Malignant And Benign Aggressive Tumor Resection	**Bugra Alpan**; Natig Valiyev; Mustafa Sungur
7	WED	Axial (Spine, Pelvis)	Survival And Quality Of Life After Sacrectomy For Recurrent Colorectal Cancer	**Chandhanarat Chandhanayingyong, MD**; John H Healey, MD, FACS; Patrick J Boland, MD
8	WED	Axial (Spine, Pelvis)	Proximal Femur Epiphysiolysis And Femural Head Necrosis After Radiotherapy In Iliac Ewing Sarcoma: Case Report	**Dan Viola, MBA, MSC**; Reynaldo Jesus-Garcia, MD; Marcos Korukian; Francisco Andrade
9	WED	Axial (Spine, Pelvis)	Epidemiology Of Patients With Pelvic Tumors Underwent Surgical Treatment	**Dan Viola, MBA, MSC**; Reynaldo Jesus-Garcia, MD; Jairo Garcia; Marcos Korukian
10	WED	Axial (Spine, Pelvis)	The Role of 3D Technology In Tumor Surgery Around Pelvis	**Daniel Kotrych, MD, PHD**
11	WED	Axial (Spine, Pelvis)	Pelvic Ewing Sarcoma Survival In The Setting Of Surgery With Radiation	**Ernest U. Conrad III, MD**; Vincent Ng, MD; Stephanie Punt, BS; Viviana Bompadre, PhD
12	WED	Axial (Spine, Pelvis)	An Augmented-Reality Based Navigation System For Pelvic Tumor Resection	**Hwan Seong Cho**; Park Yeong Kyoon; Han Ilkyu
13	WED	Axial (Spine, Pelvis)	What Is The Effect Of Pelvic Ring Disruption On Function And Oncological Outcome Following P1 Resection Of Primary Sarcomas?	**Minna Laitinen, MD, PhD**; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Jose Ignacio Albergo, MD; Vaiyapuri P. Sumathi; Robert John Grimer, FRCS; Lee M. Jeys, FRCS
14	WED	Axial (Spine, Pelvis)	Surgery Of Pelvic Chondrosarcomas: A Review Of 309 Cases From Three Institutions	**Pietro Ruggieri, MD, PhD**; Andrea Angelini, MD; Andreas Mavrogenis, MD; Ulrich Lenze; Giulia Trovarelli; Teresa Calabrò; Ruediger Von Eisenhart-Rothe, MBA, MD; Panagiotis J. Papagelopoulos, MD
15	WED	Axial (Spine, Pelvis)	Preservation Of The Gluteus Maximus Blood Flow Contributes To Reduce Postoperative Complications Following Pelvic And Sacrum Tumor Resection	**Toru Akiyama, MD, PhD**
16	WED	Axial (Spine, Pelvis)	Good Local Control Is Essential In The Treatment Of Non-Metastatic Pelvic Osteosarcoma: Oncological Results Of 68 Pelvic Osteosarcoma Treated With Chemotherapy And Surgical Resection In Peking University People'S Hospital	**Wei Guo**
17	WED	Axial (Spine, Pelvis)	A New Anterior Nasopharyngeal Approach For The Atlas Tumor Biopsy With The Endoscopy And X-Ray Assisted	**Zhenfeng Li**; Jianmin Li Sr, MD; Wei Guo, MD, PhD
18	WED	Axial (Spine, Pelvis)	Our Experience In The Surgical Treatment Of "Hourglass" Pelvic Tumours	**Isidro Gracia, MD**; Laura Trullols; Ana Peiro; Paloma Dehesa; Vicens Artigas; Jean Audrey Arroyo, BA
19	WED	Benign Bone Tumors	Radiofrequency Ablation For Chondroblastomas – The Emergence Of A New Modality Of Treatment	Ajay Puri, MD; **Ashish Gulia**
20	WED	Benign Bone Tumors	Surgical Treatment Of Pathological Fractures Of The Proximal Femur Through Benign Bone Lesions In Children Based On A Prospective Treatment Protocol	**Bulent Erol**; Mert Osman Topkar, MD
21	WED	Benign Bone Tumors	Giant Cell Tumor Of Bone: Casuistic Of One Single Institution In Brazil	**Dan Viola, MBA, MSC**; Reynaldo Jesus-Garcia, MD; Davi Gabriel Bellan; Marcos Korukian
22	WED	Benign Bone Tumors	Denosumab Allows Surgical Resection Of Previously Untreatable Giant Cell Tumours Of Bone	**David McKenna, MA, MBBS, FRCS**; Duncan Whitwell, FRCS; Tom Cosker; Henno Wolfgang Martin, MBChB; Nick Athanasou, MRCP, FRCPath; Max Gibbons, FRCS
23	WED	Benign Bone Tumors	Does Extended Curettage For The Treatment Of Giant Cell Tumor Offer Adequate Therapeutic Profile In The Era Of Latest Adjuvant Options, And What Are The Possible Risk Factors For Local Recurrence ?	**David Nikomarov, MD**; Anthony M. Griffin, MSc; Prakash R. Nayak; Shaneel Deo, MB, ChB, FRACS; Peter Ferguson, MD; Jay Wunder, MD
24	WED	Benign Bone Tumors	Osteochondromas Projecting Into Neurovascular Structures Can Be Safely Resected	James C. Wittig, MD; **Jette Hooper**; Ivan Golub; Alexander P. Decilveo
25	WED	Benign Bone Tumors	21-Year-Old Male Presents With A Giant Periosteal Aggressive Epithelioid Osteoblastoma In The Midshaft Of His Femur	James C. Wittig, MD; **Joel Peterson**; Alexander P. Decilveo; Ivan Golub
26	WED	Benign Bone Tumors	Surgical Hip Dislocation: A Viable Technique For Treatment Of An Aneurysmal Bone Cyst Of The Acetabulum	**David Alan Rush, MD**; Jeremy Russell White, MD
27	WED	Benign Bone Tumors	Primary Aneurismal Bone Cyst Of The Spine In Children: Outcomes Of An Updated Modern Surgical Technique	John P. Dormans, MD; **Emmanouil Grigoriou, MD**; Swamy Kurra, MBBS; Ashley Trocle, BS
28	WED	Benign Bone Tumors	Giant Cell Tumor Of Bone. Surgical Management Of 168 Patients At A Single Institution.	Jose Roberto Cardona Baron; Camilo Soto, MD; **Luis Carlos Gómez**

No.	DAY	CATEGORY	TITLE	AUTHOR(S)
29	WED	Benign Bone Tumors	Giant Cell Tumor Of Bone Treated With Minimal Access Curettage And Perioperative Bisphosphonates: A Mean Follow-Up Of 4.8 Years	**Kwok Chuen Wong, FRCS (ORTHO)**; Shekhar Madhukar Kumta
30	WED	Benign Bone Tumors	Risk Factors For Local Recurrence After Intralesional Curettage For Giant Cell Tumors Of Bone	**Michala Skovlund Sørensen**; Peter Frederik Horstmann; Peter Holmberg Jørgensen; Mathias Rædkjær; Werner Hettwer, MD; Bjarne Hauge Hansen, MD; Tine Nymark; Michael M. Petersen, MD
31	WED	Benign Bone Tumors	Analysis Of Pre-Operative Administration Of Denosumab For Giant Cell Tumor Of Bone	**Michiro Susa**
32	WED	Benign Bone Tumors	Magnetic Resonance Imaging In Symptomatic Children With Hereditary Multiple Exostoses Of The Hip	**Mihir Thacker, MD**; Kenneth J. Rogers, PhD
33	WED	Benign Bone Tumors	Radiographic Analysis Of The Pediatric Hip In Hereditary Multiple Exostoses	**Mihir Thacker, MD**; Kenneth J. Rogers, PhD
34	WED	Benign Bone Tumors	Chondroblastoma: Mimicking Malignant Bone Tumour	**Prof. Dr. Vivek Ajit Singh, MBBS, MD**; Faissal Yasin
35	WED	Benign Bone Tumors	Brown Tumour Mimicking Giant Cell Tumour: Problem Of Diagnosis And Management	**Prof. Dr. Vivek Ajit Singh, MBBS, MD**
36	WED	Benign Bone Tumors	Giant Cell Tumor Of Bone: An Analysis Of 130 Cases.	**Raja Anand**; Mayil Vahanan Natarajan, MD
37	WED	Benign Bone Tumors	Treatment Of Unicameral Bone Cyst: Decompression With Cannulated Hydroxyapatite Screws And Curettage Using Endoscopic-Assisted Technique	**Ryuta Iwanaga**
38	WED	Benign Bone Tumors	Hand Enchondromas In 51 Korean Patients: Clinical Characteristics And Treatment Outcomes Different From Western Reports	**Seung Han Shin, MD, PhD**; Jin-Woo Kang; Yoon Vin Kim; Yang Guk Chung, MD
39	WED	Benign Bone Tumors	Artificial Bone Graft For Benign Bone Lesion	**Takashi Higuchi, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Kato, MD; Yu Aoki; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
40	WED	Benign Bone Tumors	Minimally Invasive Surgery For Simple Bone Cysts Using Hydroxyapatite Cannulated Pin	**Takashi Higuchi, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Kato, MD; Yu Aoki; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
41	WED	Benign Bone Tumors	The Outcome Of Patients With Metastatic Giant Cell Tumor Of Bone	**Valerae O. Lewis, MD**; Risa Reid, BA; Patrick P. Lin, MD; Justin Earl Bird; Robert Stephen Benjamin, MD; Robert L. Satcher Jr., MD; Bryan Scott Moon, MD
42	WED	Benign Bone Tumors	Unicameral Bone Cyst: Does Surgical Technique And Type Of Graft Affect Clinical Outcomes?	**Yale Fillingham, MD**; Michael David Hellman, MD; Brandon Erickson, MD; Alan T. Blank, MD, MS; Steven Gitelis, MD; Matthew Colman, MD
43	WED	Benign Bone Tumors	Multicentric Giant Cell Tumor Of Bone_ A Series Study Of 10 Cases	**Zhiping Deng, MD**
44	WED	Benign Bone Tumors	Osteoid Osteoma Of Acetabulum-How To Avoid Misdiagnosis	**Zhiping Deng, MD**
45	WED	Biologic Reconstruction	Pasteurized Osteo-Articular Autologous Graft For Reconstruction Of The Proximal Humerus After Resection Of Osteosarcoma	**Adel Refaat Ahmed, MBBS, DMED, MD, PhD**
46	WED	Biologic Reconstruction	Bone-In-Bone Allograft In Benign Bone Tumors	Adriana Hernandez, MD; **Carlos Eduardo Cuervo, MD**
47	WED	Biologic Reconstruction	Allografts In Children Aged Under 10 Years Old After Resection Of Malignant Long Bone Tumors. Mid To Long-Term Follow-Up.	**Alfonso Vaquero-Picado, MD**; Jorge De Las Heras, MD
48	WED	Biologic Reconstruction	Ossoscopic Curettage And Allogenic Bone Grafting For The Treatment Of Simple Bone Cyst And Intraosseus Lipoma Of The Calcaneus	**Andreas Toepfer, MD**; Florian Pohlig, MD; Florian Lenze, MD; Ruediger Von Eisenhart-Rothe, MBA, MD; Ulrich Lenze
49	WED	Biologic Reconstruction	Mid-Term Radiological And Functional Results Of Biological Reconstructions Of Extremity-Located Bone Sarcomas In Children And Young Adults	**Bulent Erol**; Mert Osman Topkar, MD; Onur Basci, MD; Emrah Caliskan, MD; Cihangir Tetik, MD
50	WED	Biologic Reconstruction	Patella Cryo-Free Method During Recycled Frozen Autograft Procedure In Treating Proximal Tibia Malignant Bone Tumors - A Comparative Study Of 11 Cases	**Chao-Ming Chen, MD**; Po-Kuei Wu, MD; Po-Kuei Wu, MD; Wei-Ming Chen, MD
51	WED	Biologic Reconstruction	Why Rotationplasty? A Qualitative Study Of Patients Who Decided On Rotationplasty For Osteosarcoma	**Chung Chan, MBBS**; Adam Douglas Lindsay, MD; Brandi Nunn, BSN, RN; Andre R. do Valle Spiguel, MD; C. Parker Gibbs Jr., MD; Mark T. Scarborough, MD
52	WED	Biologic Reconstruction	Proximal Femur Allograft Prosthetic Composite Reconstruction For Long Proximal Femur Segment Following Tumour Resection: A Case Report	**Chungkia Ng; Shuchien Ho, MBBS**; Azid Azuhairy, MD, MS
53	WED	Biologic Reconstruction	The Use Of Vascularized Proximal Fibula Autograft In Reconstruction After Bone Sarcoma Resection Of Proximal Humerus In Children: Preliminary Analysis Of 6 Cases	**Haitao Zhao, MD**
54	WED	Biologic Reconstruction	Clinical Outcome Of Reconstruction Using A Frozen Autograft For A Humeral Bone Tumor	**Hiroaki Kimura, MD, PhD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Kentaro Igarashi; Hiroyuki Inatani, MD; Shingo Shimozaki, MD; Takashi Kato, MD; Yu Aoki; Takashi Higuchi; Takanobu Otsuka, MD; Hiroyuki Tsuchiya, MD
55	WED	Biologic Reconstruction	Skeletally Immature Child With Osteogenic Sarcoma Over Proximal Femur Treated With Adult Humeral Osteochondral Allograft	**Hung-Kai Weng, MD**; Po-Kuei Wu, MD; Cheng-Fong Chen, MD; Wei-Ming Chen, MD
56	WED	Biologic Reconstruction	Unicondylar Allograft Transplantation For Bone Tumors Around The Knee Joint	**Jianmin Li; Qiang Yang, MD**; Jianmin Li Sr, MD; Zhiping Yang, MD; Xin Li, MD; Zhenfeng Li, MD; Wei Guo, MD, PhD
57	WED	Biologic Reconstruction	The Effect Of Supplemental Bone Grafting In Giant Cell Tumor Of The Extremity	**Joseph Benevenia, MD**; Steven Rivero, MD; Jeffrey Moore, MD; Daniel Seigerman, MD; Kathleen S. Beebe, MD; Francis Robert Patterson, MD

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58	WED	Biologic Reconstruction	Combined Use Of Extracorporeally-Irradiated Autograft And Free Vascularized Bone Graft For The Reconstruction Of Massive Skeletal Deficiencies After Malignant Tumor Resection Of The Extremities.	**Keitaro Umehara**
59	WED	Biologic Reconstruction	Proximal Femur Reconstruction In The First Decade Of Life: The Challenge Of Hip Reconstruction In A Growing Patient	**Laura Campanacci, MD**; Marco Manfrini, MD; Davide Donati, MD
60	WED	Biologic Reconstruction	The Vascularised Free-Fibular Graft For Limb Salvage After Bone Tumour Surgery: A Multi-Centre Study.	Lee Bayliss; Lee Bayliss, MBBS; Tom Cosker; Sander Dijkastra; Paul C. Jutte, MD, PhD; I. lahoda; Gerard Rens Schaap; **Duncan Whitwell, FRCS**; Max Gibbons, FRCS; Henk Giele, FRACS, FRCS, MBBS, MS; Michiel Van De Sande, MD, PhD
61	WED	Biologic Reconstruction	Proximal Tibia Reconstruction After Bone Tumor Resection: Endoprosthetic Replacement Versus Osteoarticular Allograft.	Luis Aponte-Tinao, MD; **Jose I. Albergo**; Czar L. Gaston; Luis Alberto Aponte-Tinao, MD; German Luis Farfalli, MD; Miguel Angel Ayerza, MD; Domingo Luis Muscolo, MD; Lee M. Jeys, FRCS; Simon R. Carter, MD; Roger Tillman, FRCS; Adesegun Abudu, FRCS, FRCS (Ortho), MSc; Robert John Grimer, FRCS
62	WED	Biologic Reconstruction	Limb Salvage: Nonunion On Reconstructions Of Bone Defects Using Structural Allografts.	Luis Gomez Mier; **Camilo Soto, MD**; Felipe Sebastián Criollo; Margarita M. Maldonado MD; Ricardo Sánchez, MD, MSc
63	WED	Biologic Reconstruction	Extracorporeal Radiation Therapy In Malignant Bone Tumours-Short Term Clinical And Functional Outcome	Manoj K; Shishir Rastogi; Shah Alam Khan; D.N Sharma; Anamika Prasad; Sakshi Chauhan
64	WED	Biologic Reconstruction	Large Segment Allografts In Limb Salvage	**Joseph Benevenia, MD**; Maximilian Martinez, MD; Kathleen S. Beebe, MD; Francis Robert Patterson, MD
65	WED	Biologic Reconstruction	Functional Outcomes Of Internal Pelvectomy Without Reconstruction For Periacetabular Maligmant Bone Tumors	**Min Wook Joo, MD**; Yong Koo Kang, MD; Yang Guk Chung, MD; Seung Han Shin, MD, PhD; Jin-Woo Kang
66	WED	Biologic Reconstruction	Joint Preservation Surgery For Osteosarcoma Using A Recycled Tumor-Bearing Autograft Treated With Liquid Nitrogen	**Norio Yamamoto**; Takashi Higuchi; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Yu Aoki; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
67	WED	Biologic Reconstruction	Factors Associated With Infection After Reconstructive Shoulder Surgery For Proximal Humerus Tumors	**Nuno Rui Cools Paulino Pereira, MD, MSC**; Sjoerd Theodoor Meijer; Sjoerd Nota, MD; Joseph Hasbrouck Schwab, MD; Santiago Lozano Calderon, MD, PhD
68	WED	Biologic Reconstruction	Effect Of Composite Gel Cryoprotectant On Cryopreservation Of Cartilage Tissues During Biological Reconstruction With Frozen Osteochondral Autograft	**Po-Kuei Wu**; Chen Cheng-Fong; Chen Wei-Ming
69	WED	Biologic Reconstruction	Union Rates Using Compression Technique With Minimal Screw Fixation For Bulk Allograft Reconstruction	**Justin William Langan, MD**; Richard William Gurich Jr, MD; Kyle James Jeray, MD; Michael S Sridhar, MD; Stephanie Lewis Tanner, MS; Scott Edward Porter, MD
70	WED	Biologic Reconstruction	Joint Preservation Limb Sparing Surgery In Children With Malignant Bone Tumors: The Biological Solution.	**Samuel Kenan, MD**
71	WED	Biologic Reconstruction	"Double Stacked" Plate Fixation At The Proximal Allograft-Host Bone Interface Following Segmental Resection For Malignant Bone Tumors	**Samuel Kenan, MD**; Ryan F. Michels, MD; Shachar Kenan, MD
72	WED	Biologic Reconstruction	Combined Alograft/Prosthesis Replacement For Benign And Malignant Bone Tumors Proximal Humerus	**Samuel Kenan, MD**; Shachar Kenan, MD
73	WED	Biologic Reconstruction	Intercalary Tibial Allograft Reconstruction Following Wide Segmental Resection Of Malignant Bone Tumors: A Case Series Study	**Samuel Kenan, MD***; Ryan F. Michels, MD
74	WED	Biologic Reconstruction	Clinical And Functional Outcomes Of Resection And Arthrodesis Of The Radiocarpal Joint For Tumours Of The Distal Radius Utilising Autologous Non Vascularised Fibula Graft.	**Scott Evans**; Zeeshan Khan, FRCS (Ortho), MBBS; Roger Tillman, FRCS; Simon R. Carter, MD; Lee M. Jeys, FRCS; Robert John Grimer, FRCS
75	WED	Biologic Reconstruction	Longterm Outcomes Following Lower Extremity Reconstruction For Sarcoma With Vascularised Fibulae In Children	**Sevan Hopyan, MD**
76	WED	Biologic Reconstruction	Reconstruction Of Oncologic Bony Defects Of The Distal Radius	Stephanie Malliaris, MD; **Edward A. Athanasian, MD**; Peter Cordeiro, MD
77	WED	Biologic Reconstruction	Reconstruction Using Liquid Nitrogen Treated Tumour Bearing Autograft: Our Experience	**Sudhir Kumar Garg, MD**; Purnima Aggarwal, MD; Rohit Jindal, MD
78	WED	Biologic Reconstruction	Reconstruction Using Frozen Autograft Combined With Iodine-Coated Implants For Malignant Bone Tumors: Comparison With Non-Coated Implants	**Toshiharu Shirai, MD, PhD**; Hiroyuki Tsuchiya, MD; Ryu Terauchi, MD, PhD; Shinji Miwa, MD; Akihiko Takeuchi, MD; Hiroaki Kimura, MD, PhD; Katsuhiro Hayashi, MD; Norio Yamamoto, MD; Toshikazu Kubo, MD
79	WED	Biologic Reconstruction	Functional Limb Reconstruction After Calcanectomy For Ewing Sarcoma Using A Composite Of An Allograft And A Pedicled Vascularised Osteocutaneous Fibula Graft.	**Werner Hettwer, MD**; Christian Bonde, MD, PhD; Lisa Toft Jensen, MD; Michael M. Petersen, MD
80	WED	Biologic Reconstruction	Reconstruction Of Periacetabular Bone Tumor By Irradiated Autograft	**Yasuhiro Tominaga, MD**
81	WED	Biologic Reconstruction	Reconstruction After Hemicortical Resection Of Osteosarcoma Using Recycled Frozen Autograft Treated With Liquid Nitrogen	**Yu Aoki, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD

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82	WED	Biologic Reconstruction	Pelvic Reconstruction Using Recycled Frozen Autograft Treated With Liquid Nitrogen After Resection Of Malignant Pelvic Bone Tumor	**Yu Aoki, MD**; Norio Yamamoto, MD; Toshiharu Shirai, MD; Hideji Nishida, MD; Katsuhiro Hayashi, MD; Hiroaki Kimura, MD, PhD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
83	WED	Biologic Reconstruction	Three-Dimensional Virtual Bone Bank System For Selecting Massive Bone Allograft In Orthopaedic Oncology	**Zheng Guo**; Zhen Wang, MD; Hongbin Fan
84	WED	Local Adjuvant	Microwave Ablation Of Malignant Extremity Bone Tumors	**Qingyu Fan**; Yong Zhou; Minghua Zhang; Baoan Ma; Tongtao Yang; Hua Long; Zhe Yu; Lianhe Zheng; Zhao Li, MD
85	WED	Local Adjuvant	Extended Curettage, Bone Grafting And Spanning External Fixation For The Treatment Of Giant Cell Tumor Of Bone Around The Knee	**Adel Refaat Ahmed, MBBS, DMED, MD, PhD**
86	WED	Local Adjuvant	The Outcomes And Prognostic Factors Of Giant Cell Tumor Of The Sacrum	Apichat Asavamongkolkul; Krit Boontanapibul, MD; **Chandhanarat Chandhanayingyong, MD**; Rapin Peter Phimolsarnti
87	WED	Local Adjuvant	Zoledronic Acid-Loaded Bone Cement As A Local Adjuvant Therapy For Giant Cell Tumor Of The Sacrum After Intralesional Curettage	**Hung-Kai Weng, MD**; Po-Kuei Wu, MD; Kun-Hui Chen, MD; Cheng-Fong Chen, MD; Wei-Ming Chen, MD
88	WED	Local Adjuvant	The Role Of Magnectic Resonance Guided Focused Ultrasound (Mrgfus), Safety And Efficacy In Treatment Of Primary Bone Tumours And Metastatic Bone Disease.	**Prof. Dr. Vivek Ajit Singh, MBBS, MD**
89	WED	Local Adjuvant	Combination Of Serial Embolization And Denosumab For Large Pelvic And Sacral Giant Cell Tumor	**Tao Ji, MD**; Yi Yang, MD; Xiaodong Tang; Wei Guo, MD, PhD
90	WED	Local Adjuvant	Early Clinical Experience With Local Bisphosphonate Delivery For Bone Defect Reconstruction In Aggressive Benign Bone Tumors	**Werner Hettwer, MD**; Peter Frederik Horstmann; Michael M. Petersen, MD
91	WED	Local Adjuvant	Use Of Intraoperative Radiotherapy For Primary Soft Tissue Sarcomas In The Extremities: Analysis Of Disease Outcomes And Toxicity	**Peter S. Rose, MD**; Hilal Maradit Kremers; Franklin H. Sim, MD
92	WED	Local Adjuvant	Histologic Response Of Infiltrative Myxofibrosarcomas And Undifferentiated Pleomorphic Sarcomas To Pre-Operative Radiotherapy	**Jungo Imanishi**; John Slavin; Samuel Ngan; Marcus John Pianta, MD; Chris Charoenlap, MD; Takaaki Tanaka, MD, PhD; Claudia Di Bella, FRACS, PhD; Peter Choong, MB, BS, MD, FRACS
93	WED	Local Adjuvant	Successful Pre-Operative Local Control Of Skin Exposure By A Sarcoma Using A Combination Of Systemic Chemotherapy And Mohs' Chemosurgery	**Manabu Hoshi**
94	WED	Research – Basic Science/ Molecular	The Use Of A Novel Laser Sintered Porous Collar In Optimising Osteointegration Of Endoprostheses	**Aadil Mumith**; Melanie Coathup; Paul Fromme; William Aston, FRCS; Tim Briggs, FRCS; Anand Shah; Gordon W. Blunn, MD
95	WED	Research – Basic Science/ Molecular	Microct Analysis Revealed Niche-Specific Localization Of Osteolytic Versus Osteoblastic Lesions In Pcsd1, A New Patient-Derived Xenograft Model Of Bone Metastatic Prostate Cancer.	Anna Andranik Kulidjian, MD*; Tamonori Yamaguchi, BS; Christina C.N. Wu, PhD; Michelle Taleon Muldong, BS; Takeshi Hirata; Seung Chol Park; Koichi Masuda, MD; Christina Jamieson, PhD
96	WED	Research – Basic Science/ Molecular	Evidence Over Time: Has The Msts Moved Towards Higher Level Of Evidence?	**Daniel Macht Lerman, MD**; Matthew Cable, MD; Patrick Thornley; Nathan Evaniew, MD; Gerard Slobogean, MD, MPH, FRCSC; Mohit Bhandari, MD, FRCSC, PhD; John H. Healey, MD, FACS; R. Lor Randall, MD; Michelle A. Ghert, MD, FRCSC
97	WED	Research – Basic Science/ Molecular	Knockdown Of The Oncoprotein, Ss18–Ssx1, Suppresses Cell Growth And Metastasis In The Protein Kinase B-Dependent Signaling Pathway In Synovial Sarcom	**Dasen Li**; Wei Guo, MD, PhD
98	WED	Research – Basic Science/ Molecular	Antibacterial And Biocompatible Titanium-Copper-Oxide Nanocoating	**Germán Arsenio Norambuena, MD**; Robin Patel, MD; Arlen D. Hanssen, MD; Rafael Jose Sierra, MD; Melissa Jean Karau, BS
99	WED	Research – Basic Science/ Molecular	The Comparative Analysis Of Differentiation Potency Between The Mesenchymal Stem Cells Derived From The Same Human Normal Fat And Atypical Lipomatous Tumor	**Hiroyuki Inatani, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Hiroaki Kimura, MD, PhD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Shingo Shimozaki, MD; Yu Aoki; Takashi Higuchi; Kensaku Abe, MD; Takanobu Otsuka, MD; Hiroyuki Tsuchiya, MD
100	WED	Research – Basic Science/ Molecular	Sodium Hydrosulfide Attenuates Cisplatin-Induced Cell Death In Human Bone Marrow-Derived Mesenchymal Stem Cells	Jian Tu; **Gang Huang**; Hai-hua Guo; Bi-cheng Yong; Zhong Xin Dong; Jing-nan Shen
101	WED	Research – Basic Science/ Molecular	Bone Allograft Coupled With Doxycycline Provides Protection Against Bacterial Colonization And Biofilm	John Alexander Abraham, MD; **Constantinos Ketonis, MD, PhD**; Isabelle Mortalena, DDS; Javad Parvizi, MD, FRCS; Christopher S. Adams, PhD; John Alexander Abraham, MD; Noreen J. Hickok, PhD
102	WED	Research – Basic Science/ Molecular	A Novel Method To Apply Adipose-Derived Stem Cells To Bone And Soft Tissue Defects After Tumor Excision	**Katsuhiro Hayashi, MD, PhD**; Norio Yamamoto, MD; Toshiharu Shirai, MD; Akihiko Takeuchi, MD; Hiroaki Kimura, MD, PhD; Shinji Miwa, MD; Seigo Suganuma, MD; Issei Nomura; Hiroyuki Inatani, MD; Yu Aoki; Xiang Fang, MD; Hiroyuki Tsuchiya, MD
103	WED	Research – Basic Science/ Molecular	Protein Expression Profiling Of Giant Cell Tumors Of Bone Treated With Denosumab	**Kenta Mukaihara**; Yoshiyuki Suehara; Daisuke Kubota; Shinji Kohsaka; Midori Ishii; Tatsuya Takagi, MD, PhD; Kazuo Kaneko, MD; Yasuo Yazawa, MD; Tsuyoshi Saito
104	WED	Research – Basic Science/ Molecular	Thermal Conductivity Of Human Bone In Cryoprobe Freezing As Related To Density	**Kyle Walker, MD, BS**; Todd H Baldini; Bennie G. P. Lindeque, MD, PhD

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105	WED	Research – Basic Science/ Molecular	Epigenetic Regulation Of Anoikis-Resistance In Human Osteosarcoma Is Targetable With Vorinostat And 5-Azacytidine	**Matthew Steensma, MD**; Donald Jay Scholten Jr, BA; Mary Winn PhD
106	WED	Research – Basic Science/ Molecular	Polyostotic Non-Ossifying Fibromas In Oculoectodermal Dysplasia Harbor Activating Mutations In Kras	**Matthew Steensma, MD**; Jacqueline D. Peacock, PhD; Helga Toriello PhD; Donald Jay Scholten Jr, BA; Mary Winn PhD; Bart Williams, PhD
107	WED	Research – Basic Science/ Molecular	Are Polychlorinated Biphenyls (Pcbs) Plasmatic Levels Related To The Development Of Soft Tissue Sarcomas? A Case Control Study	**Michele Boffano, MD**; Federica Cristina Verga; Alessandra Linari; Enrico Pira, MD; Canzio Romano; Alessandro Comandone Sr, MD; Giovanni Grignani Sr, MD; Raimondo Piana
108	WED	Research – Basic Science/ Molecular	Development Of A Novel Molecular-Targeted Therapy For Osteosarcoma	**Norio Yamamoto**; Shingo Shimozaki, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Yu Aoki; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
109	WED	Research – Basic Science/ Molecular	Genetics In Orthopaedic Oncology - Sarcoma With Challenging Pedigree Of Li Fraumeni Syndrome: First Case Study From India.	**Pramod S. Chinder, MD**; Sedeeq Basheer Younus Sr, ATC; Mithua Ghosh, PhD; Sheela ML, PhD
110	WED	Research – Basic Science/ Molecular	Preclinical Study On The Effect Of Neoadyuvant Radiotherapy On Microvascular Anastomosis	**Roberto Velez, PhD, MD**
111	WED	Research – Basic Science/ Molecular	Effects Of Amifostine And Zoledronic Acid On Radiation-Associated Bone Damage In A Pediatric Mouse Model	**Timothy A. Damron, MD**; Megan E. Oest, PhD; Kenneth A. Mann; Jacklyn R. Goodheart
112	WED	Research – Basic Science/ Molecular	The Therapeutic Effect Of Tumor-Specific Oncolytic Adenovirus In Combination With Systemic Chemotherapy For Osteosarcoma	Tomohiro Fujiwara, MD, PhD; **Toshifumi Ozaki, MD**; Toshinori Omori; Shuhei Osaki; Ken Takeda, MD, PhD; Toshiyuki Kunisada, MD
113	WED	Research – Basic Science/ Molecular	The Healing Process Of Intracorporeally And In Situ Devitalized Distal Femur By Microwave In A Dog Model And The Biomechanics Of The Dog And Human Cortical Bone Treated By Microwave In Vitro	**Tongtao Yang**
114	WED	Research – Basic Science/ Molecular	Perioperative Immunological Function In Patients Undergoing Primary Malignant Bone Tumor Resection.	Valerae O. Lewis, MD; **Jose F. Velasquez, PhD**; Juan P. Cata MD
115	WED	Research – Basic Science/ Molecular	A Liquid Biopsy-Based Method For The Detection And Quantification Of Circulating Tumor Cells In Surgical Osteosarcoma Patients	Wei Guo; **Zhen Wang, MD, PhD**
116	WED	Research – Basic Science/ Molecular	Imaging The Interaction Of Integrin-Gfp In Osteosarcoma Cells With Rfp-Expressing Host Stromal Cells In Nude Mice	**Yasunori Tome, MD, PhD**; Fuminari Uehara, MD; Hiroki Maehara, PhD; Hiroaki Kimura, MD, PhD; Hiroyuki Tsuchiya, MD; Fuminori Kanaya, MD
117	WED	Research – Basic Science/ Molecular	Adiponectin Promotes Vegf-Dependent Angiogenesis In Human Chondrosarcoma Through Pi3k, Akt, Mtor, And Hif-? Pathway	**Yi-Chin Fong**; Chih-Hsin Tang
118	WED	Research – Basic Science/ Molecular	Ccl3 Promotes Tumor Angiogenesis By Dysregulation Of Mir-374B/Vegf Axis In Human Osteosarcoma	**Yu-Min Lin, MD**
119	WED	Research – Biomechanical	Bio Feed Back Based On Gait Analysis Can Reduce Mechanical Load On Tumor Prosthesis Around The Knee.	**Burkhard Lehner**
120	WED	Research – Biomechanical	Mechanical Multidirectional Instability After Primary Or Revision Knee Arthroplasties Associated With Metal Ion Release And Allergies	**Gerhard E. Maale, MD**
121	WED	Research – Biomechanical	A Novel Mechanotronic Orthosis Enables Symmetrical Gait Kinematics In A Patient With A Femoral Nerve Palsy - Case Report	**Gerhard Martin Hobusch, MD**; Timothy Hasenoehrl; Karin Pieber; Sara Dana; Clemens Ambrozy; Hans Dietl; Christian Hofer, PhD; Roland Auberger; Reinhard Windhager, MD
122	WED	Research – Biomechanical	Nano Mechanical Investigation Of Extracorporeal Irradiation And Re-Implantation Therapy In Malignant Bone Tumors	**Manoj K**; Shishir Rastogi; Shah Alam Khan; Anamika Pasad; Sakshi Chauhan; D.N. Sharma
123	WED	Research – Biomechanical	Experimental Substantiation Study Of Modular Endoprosthesis Diaphysal Fixation	**Oleg Vyrva, MD**
124	WED	Research – Biomechanical	Experimental Modeling Of Children Knee Bones Growing Zones Damage	**Oleg Vyrva, MD**; Vitaly Baev
125	WED	Research – Biomechanical	A Study On Mechanical And Antibacterial Properties Of Increasing Concentration Of Antibiotic In Bone Cement.	**Prof. Dr. Vivek Ajit Singh, MBBS, MD**; Cindy Teh
126	WED	Research – Clinical (prospective trials)	Barriers To Patient Accrual On Arst1321	**Daniel Indelicato, MD**; Robin Lewis Jones, MBBS, MD; Kevin R. Kozak MD, PhD; Kelly K. Curtis, MD; Scott H. Okuno; Sanjay P. Bagaria; Nicholas Paul Webber, MD; Steven Attia DO
127	WED	Research – Clinical (prospective trials)	Inter-Rater Agreement Of The Central Adjudication Committee Of The Parity Trial In The Diagnosis Of Surgical Site Infection Following Limb-Salvage Surgery With Endoprosthetic Reconstruction	**James Rekai Nuttall, MD, BA**; Nathan Evaniew, MD; Patrick Thornley, BS; Anthony M. Griffin, MSc; Tim O'Shea MD; R. Lor Randall, MD; Robert Emile Turcotte, MD FRCSC; Peter Ferguson, MD; Jay Wunder, MD; Mohit Bhandari, MD, FRCSC, PhD; Michelle A. Ghert, MD, FRCSC
128	WED	Research – Clinical (prospective trials)	Nomogram For Predicting The Overall Survival Of Osteosarcoma Patients	**Jian Tu; Gang Huang**; Junqiang Yin; Xian-Biao Xie; Zhong Xin Dong; Hai-hua Guo; Jing-Nan Shen; Wang Yongqian; Bi-cheng Yong
129	WED	Research – Clinical (prospective trials)	Is Dvt Prophylaxis Necessary After Oncology Lower Limb Surgery?	**Prof. Dr. Vivek Ajit Singh, MBBS, MD**
130	WED	Surgical Treatment – Margins, Local Recurrence	Variations In Surgeon Treatment Preferences For Soft Tissue Sarcoma: Preference-Based Utility Values For Margin Vs. Function Health States	**Amy M. Cizik, MPH**
131	WED	Surgical Treatment – Margins, Local Recurrence	Predicting Limb Salvage Tumor Margins With Preoperative Imaging And The Significance Of Those Margins	**Ernest U Conrad III, MD**; Yi Guo, MD; John Clayton Shapton, BS; Tressa Mattioli-Lewis, BS, MPH; Bhasanan Sukanthanak; Stephanie Punt, BS; Joseph Rutledge MD
132	WED	Surgical Treatment – Margins, Local Recurrence	Outcome After Inadvertent Excision Of Foot And Ankle Sarcoma	Hamish Ian Macdonald; Abtin Alvand, MBBS, PhD; George A Grammatopoulos, MRCS; Paul Cooke; Henk Giele, FRACS, FRCS, MBBS, MS; **Duncan Whitwell, FRCS**; Maxime Gibbons, FRCS, FRCS (Ortho), MA

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133	WED	Surgical Treatment – Margins, Local Recurrence	Impact Of Surgical Margin On Survival In Extremity Soft Tissue Sarcoma: A Systematic Review And Meta-Analysis	**Ilkyu Han**; Woo Young Jang; Han-Soo Kim, MD, PhD
134	WED	Surgical Treatment – Margins, Local Recurrence	Re-Excision Of Residual Sarcomas ("Second-Look Surgery"): Analysis Of Our Results	**Isidro Gracia, MD**; Camila Chanes; Oscar Buezo; Laura Trullols; Antonio Garcia; Ana Peiro
135	WED	Surgical Treatment – Margins, Local Recurrence	Is Superior Tibiofibular Joint Resection Necessary In Extraarticular Knee Resection For Sarcomas?	**Magdalena Maria Gilg**; Dimosthenis Andreou, MD; Georg Gosheger, MD, PhD; Andreas Leithner, MD; Christine Wibmer
136	WED	Surgical Treatment – Margins, Local Recurrence	Oncological And Patient Reported Outcomes After Primary Chondrosarcoma Resection Of The Mobile Spine In 33 Patients	**Nuno Rui Cools Paulino Pereira, MD, MSC**; Nicky Stoop, BS; Stefan Hartveldt, BS; Stein Jasper Janssen, MD; Francis J. Hornicek, MD; Joseph Hasbrouck Schwab, MD
137	WED	Surgical Treatment – Margins, Local Recurrence	Planned Preservation Surgery For Soft Tissue Sarcomas Adjacent To Critical Structures.	**Satoshi Tsukushi**; Masahiro Yoshida; Hiroaki Hasegawa; Takafumi Ueda, MD; Naoki Ishiguro, MD; Yoshihiro Nishida
138	WED	Surgical Treatment – Margins, Local Recurrence	Evaluation And Comparison Of Factors Associated With Local Recurrence In Operated Cases Of Osteosarcomas- A Retrospective Study	**Shah Alam Khan, MS, DNB, MRCSEd, FRCS, M.Ch.Orth**; Rishi Ram Poudel
139	WED	Surgical Treatment – Margins, Local Recurrence	Oncologic Outcomes For Patients With Myxofibrosarcoma.	**Shaneel Deo, MB, ChB, FRACS**; Anthony M. Griffin, MSc; Prakash R. Nayak; David Nikomarov, MD; Stephanie Leung; Colleen Dickie; Jay Wunder, MD; Peter Ferguson, MD
140	WED	Surgical Treatment – Margins, Local Recurrence	A Novel Imaging System Distinguishes Neoplastic From Normal Tissue During Resection Of Soft Tissue Sarcomas And Mast Cell Tumors In Dogs	**Suzanne Bartholf Dewitt, DVM**; William Eward, MD, DVM; Alexander Leandros Lazarides, BS; David Kirsch, MD, PhD; Brian E. Brigman, MD; Jorge Ferrer, PhD; John Berg
141	WED	Surgical Treatment – Margins, Local Recurrence	Local Control After Tissue Preservation Using "In Situ Preparation" For Sarcoma Resection	**Toshiyuki Kunisada**; Ken Takeda, MD, PhD; Tomohiro Fujiwara; Toshifumi Ozaki, MD
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143	WED	Surgical Treatment – Margins, Local Recurrence	The Preliminary Optimistic Outcomes Of Extensive Curettage For Extremity Giant Cell Tumors With Pathological Fracture	**Weifeng Liu, MD**; Yuan Li; Bin Li MD; Xiaohui Niu, MD
144	THU	Benign Soft Tissue Tumors	Clincopathological Study Of Soft Tissue Tumours And Tumour Like Conditions Around The Wrist And The Hand	**Adel Refaat Ahmed, MBBS, DMED, MD, PhD**
145	THU	Benign Soft Tissue Tumors	Feasibility As Novel Treatment Of Zaltoprofen In Pigmented Villonodular Synovitis (Pvns): A Pilot Study.	**Akihiko Takeuchi**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Hiroyuki Inatani, MD; Yu Aoki; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
146	THU	Benign Soft Tissue Tumors	Retrospective Analysis Of 21 Patients With Schwannomas: MRI Characteristics, Pain And Outcomes Following Excision	James C .Wittig, MD; **Jette Hooper**; Ivan Golub; Alexander P. Decilveo; James C Wittig, MD
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148	THU	Benign Soft Tissue Tumors	Aggressive Fibromatosis: Outcomes Of Definitive Treatment With Radiation	**Melissa Marie Peters, MD**; Andre R. do Valle Spiguel, MD; Robert A. Zlotecki, MD; C. Parker Gibbs Jr., MD; Mark Thomas Scarborough, MD; Hernan Prieto, MD
149	THU	Benign Soft Tissue Tumors	Sporadic Extra-Abdominal Desmoid-Type Fibromatosis: High Relapse Rates After Surgical Treatment	Michael P.A. Bus; Michaël Bus, MSc; Nicolette Leijerzapf; Pepijn Sun; Augustinus Krol, MD, PhD; Marjan Van Hezewijk; Michiel Van De Sande, MD, PhD; **Sander Dijkstra, MD**
150	THU	Benign Soft Tissue Tumors	Extra-Abdominal Desmoid Tumor: Prognostic Factors And Clinical Outcome In A Surgical Series	**Min Wook Joo, MD**; Yong Koo Kang, MD; Yang Guk Chung, MD; Won-Jong Bahk; Seung Han Shin, MD, PhD; Jin-Woo Kang
151	THU	Benign Soft Tissue Tumors	Factors Influencing Local Recurrence And Osteochondral Destruction In Pigmented Villonodular Synovitis	**Takehiro Ota**; Hiroshi Urakawa; Eiji Kozawa, MD; Kunihiro Ikuta; Shunsuke Hamada; Satoshi Tsukushi, MD; Hideshi Sugiura, MD; Kenji Yamada; Yoshihisa Yamada; Takafumi Ueda, MD; Naoki Ishiguro, MD; Yoshihiro Nishida
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153	THU	Diagnostics	Percutaneous Image Guided Bone Biopsy In Diagnosis Of Neoplastic Bony Lesions	**Adel Refaat Ahmed, MBBS, DMED, MD, PhD**
154	THU	Diagnostics	The One Hundred And One Most Cited Oncology Articles In Orthopaedic Literature	**Brent G. Witten, MD**; Jonathan Karnes, MD; Brock A Lindsey, MD
155	THU	Diagnostics	Avoid Misdiagnosis Of Sarcoma As Benign Nerve Sheath Tumor By Using Multiple Magnetic Resonance Imaging Features	**Chris Charoenlap, MD**; Marcus John Pianta, MD; Warren Perera; Jungo Imanishi; Takaaki Tanaka, MD, PhD; Peter Choong, MB, BS, MD, FRACS
156	THU	Diagnostics	Has Identification Of Pathognomonic Translocations Increased The Reported Incidence Of Translocation Associated Sarcomas Over Time?	**George T. Calvert, MD**; Phillip Ituarte PhD; Warren Chow MD; J. Dominic Femino, MD
157	THU	Diagnostics	Changes In Diagnosis And Management In Tumor Patients Participating In Multidisciplinary Tumor Board	**Jared L. Harwood**; Zachary A. Goodman, BS; Thomas Schaschmidt MD
158	THU	Diagnostics	Bone And Soft Tissue "Tumor Mimickers": It's Not Always Neoplastic Disease!	**Jordan Scott Gross, MD**; Benjamin D. Levine MD; Michelle McNee MD; Benjamin Plotkin, MD; Leanne L. Seeger, MD; Kambiz Motamedi, MD; Nicholas Bernthal, MD
159	THU	Diagnostics	Enchondroma Versus Low-Grade Chondrosarcoma In Long Bones: Clinical And Radiological Criteria	Min Wook Joo, MD; **Kyung Il Kim**; Yong Koo Kang, MD; Yang Guk Chung, MD

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162	THU	Diagnostics	Possibility Of Predicting Whether The Tumor Is Benign Or Malignant From Laboratory Data	**Taketsugu Fujibuchi**; Joji Miyawaki Sr, MD, PhD; Teruki Kidani; Hiromasa Miura, MD
163	THU	Diagnostics	Delayed Diagnosis Of Primary Bone And Soft Tissue Tumors Treated As Degenerative Spinal Disorders	**Toshihiko Nishisho, MD, PhD**; Toshinori Sakai, MD; Koichi Sairyo, MD
164	THU	Diagnostics	Inter-Observer And Intra-Observer Reproducibility In Histologic Evaluation Of Necrosis Rate Induced By Neo-Adjuvant Chemotherapy For Osteosarcomas	**Yang Guk Chung, MD**; Yong-Koo Park; Chan-Kwon Jung; Seung Han Shin, MD, PhD; Jin-Woo Kang
165	THU	Diagnostics	Usefulness Of Percutaneous Core Needle Biopsy In The Diagnosis Of Bone Tumor	**Yoshikuni Mimata**; Jun Nishida, MD; Hiroshi Tada, MD, PhD; Minoru Doita, MD, PhD
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167	THU	Extremity (appendicular)	Distribution Patterns Of Foot And Ankle Tumors	**Andreas Toepfer, MD**; Maximiliane Recker; Ulrich Lenze; Florian Pohlig, MD; Ruediger Von Eisenhart-Rothe, MBA, MD
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169	THU	Extremity (appendicular)	Treatment Outcomes Of Biological And Non-Biological Reconstruction Methods In Patients With Osteosarcoma Around The Knee Joint	**Bugra Alpa**n; Mustafa Caglar Kir
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172	THU	Extremity (appendicular)	Vascular Reconstructions After Wide Resection Of Extremity Sarcoma	**Onder Ofluoglu, MD**
173	THU	Extremity (appendicular)	The 30 Year Experience Of Malignant Foot Tumours	**Scott Evans**; Arul Ramasamy; Navi Bali, FRCS (Ortho); Lee M. Jeys, FRCS; Robert John Grimer, FRCS
174	THU	Extremity (appendicular)	Osteosarcoma Of The Humerus: Surgical Treatment And Functional Outcome	**Christoph Böhler, MD**; Stephan Puchner; Reinhard Windhager, MD; Philipp Theodor Funovics, MD
175	THU	Functional Evaluation	Strength Measurements Using An Isokinetic Dynamometer And Functional Evaluations In Patients With Soft-Tissue Sarcoma Of The Thigh Who Underwent Knee Flexor Muscle Resection	**Atsushi Tanaka, MD**; Yasuo Yoshimura, MD; Masanori Okamoto, MD, PhD; Munehisa Kito; Hiroyuki Kato, MD
176	THU	Functional Evaluation	Cross-Cultural Adaptation And Validation Of The Toronto Extremity Salvage Score For Lower Extremity Aggressive Benign Tumors And Sarcomas In Mexico	**Erland Dario Villanueva Fernandez, MD**; Ernesto Delgado, Prof; Luis Miguel Linares-Gonzalez, MD; Roberto Gonzalez; Laura Alvarez; Genaro Rico, MD
177	THU	Functional Evaluation	Sports Activity Levels In Survivors Of Soft-Tissue Sarcoma Of The Lower Extremity	**Gerhard Martin Hobusch, MD**; Miroslava Cernakova; Nikolaus Wilhelm Lang; Joannis Panotopoulos; Philipp Theodor Funovics, MD; Reinhard Windhager, MD
178	THU	Functional Evaluation	Functional Results After Scapula Resections	**Hans Roland Dürr**; Alexander Klein; Falk Roeder
179	THU	Functional Evaluation	Cross-Cultural Adaptation And Validation Of The Korean Toronto Extremity Salvage Score For Extremity Sarcoma	**Ilkyu Han**; Seungcheol Kang, MD; Hwan-Seong Cho, MD; Han-Soo Kim, MD, PhD
180	THU	Functional Evaluation	Funtional Outcomes For Three Different Reconstruction Techniques After Proximal Humerus Resections	Luis Aponte-Tinao, MD; **Jose Ignacio Albergo, MD**; German Luis Farfalli, MD; Miguel Angel Ayerza, MD; Luis Alberto Aponte-Tinao, MD
181	THU	Functional Evaluation	Decreasing Patellar Height Following Distal Femur Resection And Its Relation To Functional Parameters.	**Mauricio Etchebehere, MD, PhD**; Justin Earl Bird; Patrick P. Lin, MD; Robert L. Satcher Jr, MD; Bryan Scott Moon, MD; Liang Li PhD; Jun Yu MS; Valerae O. Lewis, MD
182	THU	Functional Evaluation	Patellar Height And Function Following Proximal Tibia Resection And Endoprosthesis Reconstruction. A Retrospective Analysis Based In 43 Patients.	**Mauricio Etchebehere, MD, PhD**; Justin Earl Bird; Patrick P. Lin, MD; Robert L. Satcher Jr, MD; Bryan Scott Moon, MD; Jun Yu MS Liang Li PhD; Valerae O. Lewis, MD
183	THU	Functional Evaluation	Return To Sport & High Level Function Post Insertion Of Mega Prosthesis In Adolescents And Young Adults – Research Requirements And Methodological Challenges	Paula Jane Wilson, PT; **Peter B. Steadman, MBBS, FRACS**; Christopher P. Carty PhD; Emma M. Beckman PhD; Sean M. Tweedy PhD
184	THU	Functional Evaluation	Postoperative Lower Limbs Functional Outcomes In Patients Of Pelvic Bone Sarcoma.	**Ryu I. Terauchi, PhD, MD**; Toshiharu Shirai, MD; Shinji Tsuchida, MD, PhD; Naoki Mizoshiri MD.; Mori Yuki, MD; Toshikazu Kubo, MD
185	THU	Functional Evaluation	Long-Term Follow-Up Study Of Functional Outcome After Surgery In Patients With Bone Sarcoma Around The Knee	Sander Dijkstra; Janneke C. Van Egmond-Van Dam, PT; W. Peter Bekkering, PhD, PT; Jos Bramer, MD, PhD; Auke Beishuizen; Marta Fiocco, PhD; **Sander Dijkstra, MD**
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187	THU	Functional Evaluation	Functional Assessment Of Endoprosthetic Knee Reconstructions After Bone Tumor Resection	Sung Taek Jung; **Young-Woo Chung**; Bo-Ram Na; Sung-Taek Jung, MD
188	THU	Functional Evaluation	A Proposed Scoring System For Evaluating Neurologic Deficit After Sacral Resection: Functional Outcomes Of 170 Consecutive Patients	**Tao Ji, MD**; Lin Huang, MD; Xiaodong Tang; Wei Guo, MD, PhD
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190	THU	Soft Tissue Sarcoma	Robot-Assisted Resection Of A Pelvic Sarcoma: A Case Report	**Adam Schwartz, MD**; David Etzioni; Daniel Schneider; Jonathan Ashman; Christopher Paul Beauchamp, MD, FRCS (Ortho)

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193	THU	Soft Tissue Sarcoma	Oncological Outcome Of Extremity Synovial Sarcomas Treated With Multimodality Management	**Ashish Gulia**; Vishwas Pai; Ajay Puri, MD
194	THU	Soft Tissue Sarcoma	Vascular Resections In Extremity Sarcomas: Retrospective Audit Of Survival And Morbidity	**Ashish Gulia**; Shubham Garg; Ajay Puri, MD
195	THU	Soft Tissue Sarcoma	Skeletal Versus Extraskeletal Ewings Sarcoma: Treatment Stratergies To Oncological Outcomes: Are They Comparable Or Divergent	**Ashish Gulia**; Pavan Sugoor; Ajay Puri, MD
196	THU	Soft Tissue Sarcoma	Soft Tissue Sarcomas: Delay In Diagnosis Does Not Affect Survival	**Alexandra Callan, MD**; Schuyler J. Halverson, MD; Vignesh Alamanda, MD; Jennifer Lynne Halpern, MD; Herbert S. Schwartz, MD; Ginger E. Holt, MD
197	THU	Soft Tissue Sarcoma	Post-Traumatic Sarcomas: Do They Exist?	**Corey Montgomery, MD**; Park Kevin; Jerad Gardner
198	THU	Soft Tissue Sarcoma	The Influence Of Unplanned Excision In Stage Iii Soft Tissue Sarcoma.	**Frank Traub**; Anthony M Griffin, MSc; Peter Ferguson, MD; Jay Wunder, MD
199	THU	Soft Tissue Sarcoma	Vascular Leiomyosarcomas Of The Lower Extremity	**Hazem Wafa, MD**; Ashish Mahendra, MD
200	THU	Soft Tissue Sarcoma	Soft Tissue Sarcomas Abutting The Femur: Does Bone Resection Improve The Oncological Outcome?	**Rebecca Lewis; Hazem Wafa, MD**; Czar Louie Gaston, MD; Jose Ignacio Albergo, MD; Robert John Grimer, FRCS; Ashish Mahendra, MD
201	THU	Soft Tissue Sarcoma	Outcomes After Flap Reconstruction For Extremity Soft Tissue Sarcoma: A Case-Control Study Using Propensity Score Analysis	Ilkyu Han*; Seungcheol Kang, MD; Han-Soo Kim, MD, PhD
202	THU	Soft Tissue Sarcoma	Unplanned Excision Of Extremity Soft-Tissue Sarcoma In Korea: A Nationwide Study Based On A Claims Registry	**Ilkyu Han**; Seungcheol Kang, MD; Han-Soo Kim, MD, PhD
203	THU	Soft Tissue Sarcoma	Clear-Cell Sarcoma. A Rare Type Of Soft Tissue Sarcoma	**Isidro Gracia, MD**; Angelica Millan; Camilla Chanes; Laura trullols; Ana Peiro; Rocio Gabriele, MD
204	THU	Soft Tissue Sarcoma	Soft Tissue Sarcomas Of The Foot And Ankle: Recommendations Based On A Retrospective Series Treated By A Single Surgeon	**Drew E. Murray, BS**; Alexander P. Decilveo; Ivan Golub; James C. Wittig, MD
205	THU	Soft Tissue Sarcoma	Rotational Muscle Flaps For High Grade Soft Tissue Sarcomas Around The Knee Provides Great Function	**Joel Peterson**; Ivan Golub; Alexander P. Decilveo; James C. Wittig, MD
206	THU	Soft Tissue Sarcoma	The Variability Of Margin Definitions Used In The Clinical Treatment Of Soft Tissue Sarcomas: A Multi-Institutional Study	**Jeremy White, MD**; Julie Stoner, PhD; Kevin MacDonald, MD; Rajiv Rajani, MD; Lee Rodney Leddy, MD; Raffi Stephen Avedian, MD; Tessa Balach, MD; Andre R. do Valle Spiguel, MD; David Daniel Greenberg, MD; Benjamin J. Miller, MD, MS
207	THU	Soft Tissue Sarcoma	Tailored Therapy On The Basis Of Screening For Therapeutic Targets For Advanced Solid Sarcoma Patients	**Junqiang Yin**; Jian Tu; Jingnan Shen, MD, PhD
208	THU	Soft Tissue Sarcoma	A Move Towards Eradicating Incompletely Excised Sarcomas - "A Tale Of Two Cities"	**Krishna I. A. Reddy, MBBS, MS, FRCS (ORTHO)**; Ginger E. Holt, MD; Robert John Grimer, FRCS; Herbert S. Schwartz, MD; Jennifer Lynne Halpern, MD
209	THU	Soft Tissue Sarcoma	Evaluation Of The "Two-Week-Wait" Referral System For Possible Sarcomas In The United Kingdom.	**Maria Anna Smolle**; Andreas Leithner, MD; Robert John Grimer, FRCS
210	THU	Soft Tissue Sarcoma	How Wide Should An Ro Resection Be In Soft Tissue Sarcoma Surgery?	**Maria Anna Smolle**; Valentin Kainhofer; Joanna Szkandera; Bernadette Liegl-Atzwanger; Werner Maurer-Ertl; Armin Gerger; Andreas Leithner, MD
211	THU	Soft Tissue Sarcoma	Soft Tissue Sarcomas Of The Hand: Size Matters	**Matthew Thomas Houdek, MD**; Brian Walczak, DO; Benjamin Wilke, MD; Sanjeev Kakar, MD; Peter S Rose, MD; Alexander Yong Shik Shin, MD
212	THU	Soft Tissue Sarcoma	Soft Tissue Sarcomas Of The Foot And Ankle: An Analysis Of Risk Factors For Disease Free And Overall Survival	**Matthew Thomas Houdek, MD**; Benjamin Wilke, MD; Peter S. Rose, MD; Norman S. Turner III, MD
213	THU	Soft Tissue Sarcoma	Primary Tumor Resection May Improve Overall And Progression-Free Survival In Patients Who Present With Metastatic Soft Tissue Sarcomas Of The Extremity And Chest-Wall	**Meena Bedi, MD**; David M. King, MD; John Curtis Neilson, MD; Donald A. Hackbarth Jr, MD; John Charlson, MD
214	THU	Soft Tissue Sarcoma	Pre-Operative Radiation Therapy Followed By Re-Excision May Improve Local Control And Progression-Free Survival In Unplanned Excisions Of Sts Of The Extremity And Chest-Wall.	**Meena Bedi, MD**; David M. King, MD; John Curtis Neilson, MD; Donald A. Hackbarth Jr, MD
215	THU	Soft Tissue Sarcoma	Does The Early Development Of Metastases Carry The Same Significance As Metastases At Diagnosis?	**Michael Parry, FRCS (ORTHO), MD**; Robert John Grimer, FRCS; Lee M. Jeys, FRCS
216	THU	Soft Tissue Sarcoma	Clinicopathological Characteristics And Prognostic Factors Of Malignant Melanoma In A Korean Population	**Min Wook Joo, MD**; Yang Guk Chung, MD; Yong Koo Kang, MD; Won-Jong Bahk; Seung Han Shin, MD, PhD; Jin-Woo Kang
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220	THU	Soft Tissue Sarcoma	Prognosis Of Small (T1) Localized Synovial Sarcoma Depends Primarily Upon Re-Excision And Definitive Surgery By Trained Orthopaedic/Surgical Oncologists	**Marc El Beaino MD**; Dejka Araujo MD; Vancheswaran Gopalakrishnan MPH; Alexander Lazar, MD, PhD; Valerae O. Lewis, MD; Patrick P. Lin, MD

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222	THU	Soft Tissue Sarcoma	C-Reactive Protein (Crp) At Diagnosis Does Not Correlate With Crp At Local Recurrence Of Soft-Tissue Sarcoma.	**Robert J. Wilson, MD**; Alexandra Kathleen Callan, MD; Jessica Rose Wilson, MD; Jennifer Lynne Halpern, MD; Ginger E. Holt, MD; Herbert S. Schwartz, MD
223	THU	Soft Tissue Sarcoma	5-Ala Tumor Paint In Myxofibrosarcoma: An In Vitro Study	**Shachar Kenan, MD**; Adam S. Levin, MD; Andrew Jacobs; Daniel A Grande, PhD; Amanda Chan, PhD; Haixiang Liang, MD, MS
224	THU	Soft Tissue Sarcoma	A Scoring System For Lipomatous Tumors– Can We Exclude Malignancy?	**Shiyao Wang, MD**; Lester Wai Mon Chan; Wei Guo, MD, PhD
225	THU	Soft Tissue Sarcoma	Outcome Following Resection Of Synovial Sarcoma – Analysis Of Prognostic Factors With A Minimal Follow Up Of 5 Years	Ulrich Lenze; Elisabeth Hylla; Florian Lenze; Johannes Schauwecker; **Rüdiger von Eisenhart-Rothe**
226	THU	Soft Tissue Sarcoma	The Utility Of Intraoperative Ultrasound-Guided Resection Of Musculoskeletal Soft Tissue Tumors	**Kenneth Lee Caldwell, MD**; Beth Edeiken-Monroe BS,MD; Bryan Scott Moon, MD; Robert L. Satcher Jr, MD; Patrick P. Lin, MD; Valerae O. Lewis, MD
227	THU	Soft Tissue Sarcoma	Prognostic Factors Predictive Of Survival In Advanced Synovial Sarcomas.	**Wanlim Kim**; Han-Soo Kim, MD, PhD; Ilkyu Han, MD
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233	THU	Surgical Treatment – Amputation	Disparities Among Limb-Salvage Rates In Pediatric Sarcoma Patients	**Isaac Kim**; Jeremy S. Somerson, MD; Rajiv Rajani, MD
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241	THU	Surgical Treatment – Complications	Proximal Placement Of The Knee Joint In One Stage Revision For Infected Total Knees With Large Soft Tissue Anteriorly To Preserve Extension	**Gerhard E. Maale, MD**
242	THU	Surgical Treatment – Complications	Failure To Disassociate Stems In Patients With Titanium-Titanium Morris Tapers In Revision Of Failed Segmental Megaprosthesis	Gerhard E. Maale, MD; **Daniel K. Mohammadi MS**
243	THU	Surgical Treatment – Complications	Risk Factors For Periprosthetic Infection Following Endoprosthetic Replacement For Bone Tumours	**Hazem Wafa, MD**; Robert John Grimer, FRCS; Simon R. Carter, MD
244	THU	Surgical Treatment – Complications	Synthetic Mesh Augmentation Decreases Soft Tissue Failure In Metallic Endoprosthesis Proximal Humerus Reconstructions: A Multi-Center Study	**John Groundland, MD**; Odion Binitie, MD; Michaël Bus, MSc; Sofia Thoma MD; Sander Dijkstra, MD; Tom Cosker; G. Douglas Letson, MD; Michiel Van De Sande, MD, PhD
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249	THU	Surgical Treatment – Complications	Vitamin D: A Modifiable Risk Factor For Endoprosthetic Implant Infection	**Nicholas Bernthal, MD**; Erik Dworsky, MD; Alexandra Stavrakis, MD; Amanda Loftin; Yan Hu; Sherif Richman

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251	THU	Surgical Treatment – Complications	Revision Endoprosthetic Megareconstruction After Tumor Prosthesis Replacement	**Oleg Vyrva, MD**
252	THU	Surgical Treatment – Complications	Outcome After Reconstruction Of The Proximal Tibia – Complications And Competing Risk Analysis	**Philipp Theodor Funovics, MD**; Puchner Stephan, MD; Paul Kutscha-Lissberg; Alexandra Kaider, MSc; Joannis Panotopoulos; Christoph Böhler, MD; Gerhard Martin Hobusch, MD; Reinhard Windhager, MD
253	THU	Surgical Treatment – Complications	The Posterior Location Of The Flap And Larger Tumor Size Were Significant Risk Factors For Morbidity After Microvascular Free Flap Surgery In Musculoskeletal Sarcomas.	**Satoshi Tsukushi**; Masahiro Yoshida; Hiroaki Hasegawa; Yoshihiro Nishida; Takafumi Ueda, MD; Naoki Ishiguro, MD
254	THU	Surgical Treatment – Complications	Unplanned Intramedullary Fixation Through Bone Sarcomas Is Associated With Late Metastasis.	Scot Brown, MD; **Patrick P. Lin, MD**; Justin E. Bird; Bryan Scott Moon, MD; Robert L. Satcher Jr, MD; Valerae O. Lewis, MD
255	THU	Surgical Treatment – Complications	Are We Aggressive In Performing Two-Stage Reimplantation For Periprosthetic Infection After Tumour Resection Around Knee?	**Srimanth Srinivas Bindiganavile**; Massimiliano Depaolis; Carlo Romagnoli, MD; Matteo Romantini, MD; Tommaso Frisoni, MD; Davide Donati, MD
256	THU	Surgical Treatment – Complications	Mortality And Morbidity Following Surgical Treatment For Sarcoma In The Pelvis And Limbs	**Toru Akiyama, MD, PhD**
257	THU	Surgical Treatment – Complications	Neurologic Deficits After Surgical Enucleation In Patients With Schwannoma	**Jin-Woo Kang**; Yang Guk Chung, MD; Seung Han Shin, MD, PhD;
258	THU	Surgical Treatment – Imaging	Ultrasonography-Guided Tumor Excision For Small Soft Tissue Tumor	**Akihiko Takeuchi**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Yu Aoki; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
259	THU	Surgical Treatment – Imaging	Accuracy Of Pre-Operative Mri And Radiography In The Prediction Of Intraosseous Margins In High-Grade Bone Sarcoma	**Benjamin J. Miller, MD, MS**; Tomas Zamora
260	THU	Surgical Treatment – Imaging	Navigated Complex Bone Tumor Resections In The Hands Of Non-Tumor Surgeons A Skill Translation Study	**Amir Sternheim**; Harley Chan; Michael Daly, Ph.D. Candidate; Robert A. Weersink, PhD; Aidin Kashigar, MD; Peter Ferguson, MD; Jay Wunder, MD
261	THU	Surgical Treatment – Imaging	Proximal Femoral Osteochondroma Excision Aided By Computer Navigation; Surgical Technique And Case Series	**Chung Chan, MBBS**; Yang Sun MD; Yuan Li MD; Tao Wang MD; Feng Yu MD; Xiaohui Niu, MD
262	THU	Surgical Treatment – Navigation	Computer-Assisted Spinopelvic Tumor Resection Using Ultrasonic Osteotome Integrated Stereotactic Navigation	**Justin E. Bird, MD**; Patrick P. Lin, MD; Robert L. Satcher Jr, MD; Bryan Scott Moon, MD; Valerae O. Lewis, MD
263	THU	Surgical Treatment – Navigation	Minimally Invasive Excision Of Osteoid Osteoma Using O-Arm Navigation And Intraopearative Ct.	**Ken Takeda, MD**; Toshiyuki Kunisada, MD; Koji Uotani, MD; Kazuhisa Sugiu; Takenori Uehara, MD; Toshinori Omori, MD; Tomohiro Fujiwara; Toshifumi Ozaki, MD
264	THU	Surgical Treatment – Navigation	Patient Specific Instrument Can Achieve Same Accuracy With Less Resection Time Than Navigation Assistance In Periacetabular Pelvic Tumor Surgery: A Cadaveric Study	**Kwok Chuen Wong, FRCS (ORTHO)**; Kwan Yik Sze; Irene Oi Ling Wong; Chug Ming Wong; Shekhar Madhukar Kumta
265	THU	Surgical Treatment – Navigation	Navigation Assistance Allows An En-Block Resection With Minimum Bone Loss In Metaphyseal Local Aggressive Bone Tumors	Luis Aponte-Tinao, MD; German Luis Farfalli, MD; **Nicolas Santiago Piuzzi, MD**; Lucas Eduardo Ritacco, MD; Miguel Angel Ayerza, MD; Federico Edgardo Milano, BS; Luis Alberto Aponte-Tinao, MD
266	THU	Surgical Treatment – Navigation	Computer-Assisted Surgery For Recurrent Sacral Tumors. Presentation Of Two Cases As Initial Experience.	**Luis Bahamonde**; Lucas Eduardo Ritacco, MD
267	THU	Surgical Treatment – Navigation	Comparative Study Between Conventional And Computer-Assisted Preoperative 3D Planning Methods For Bone Sarcoma Resection	Lucas Eduardo Ritacco, MD; Luis Alberto Aponte-Tinao, MD; Miguel Angel Ayerza, MD; Domingo Luis Muscolo, MD; German Luis Farfalli, MD; Federico Edgardo Milano, BS
268	THU	Surgical Treatment – Navigation	Computer Assisted Surgery (Cas) In Pelvic Bone Tumors.	**Paul C. Jutte, MD, PhD**; Jasper G. Gerbers MD
269	THU	Surgical Treatment – Navigation	Techniques To Reduce Blood Loss In Orthopaedic Pelvic Tumors – A Single Institution Experience Of Twenty Five Cases.	**Pramod S. Chinder, MD**; Rohit Madhurkar; Shivakumar Swamys, MD; Indushekar Subbanna; Raghunandan Madhavamurthy, MD
270	THU	Surgical Treatment – Navigation	Registration Techniques Simplified In Computer Assisted Tumour Surgery.	**Pramod S. Chinder, MD**; Arpit Paliwal
271	THU	Surgical Treatment – Navigation	Outcomes Of Computer Assisted Surgical Modeling In Orthopaedic Oncology: A Single Institutional Experience With A New Surgical Technique.	**Alan T. Blank, MD, MS**; Richard S. Yoon, MD; John Haskoor, MD; Timothy Rapp, MD
272	THU	Surgical Treatment – Navigation	Hip Sparing Resection In Peri-Acetabular Primary Malignancy	**Ying-Lee Lam**; Wai Yip Ho; Ka Lok Mak; Sin Tak Fong; Timothy YC So
273	THU	Surveillance	Improved Evaluation Around Oncologic Reconstructions Using A Novel Metal Artifact Reduction Mr Imaging Technique	**Adam S. Levin, MD**; Carol D. Morris, MD, MS; Laura Fayad, MD; Paul Khanuja MD; Jan Fritz, MD
274	THU	Surveillance	Does Intensity Of Surveillance Affect Outcomes After Surgery For Sarcomas? Results Of A Randomized Trial	Ajay Puri, MD; **Ashish Gulia**; Rohini Hawaldar
275	THU	Surveillance	Assessing Post-Surgical Cancer Risk Using Time-Dependent Survival Curves	**Amanda Goldin, MD**; David Schkade, PhD; Terrence August; Anna Andranik Kulidjian, MD
276	THU	Surveillance	Sarcomatous Brain Metastases; Recent University Of Florida Experience	**Chung Chan, MBBS**; Adam Douglas Lindsay, MD; Brandi N. Nunn RN, BSN; Andre R. do Valle Spiguel, MD; Mark Thomas Scarborough, MD; C. Parker Gibbs Jr., MD
277	THU	Surveillance	Surveillance Strategies For Sarcoma: Results Of A Survey Of Members Of The Musculoskeletal Tumor Society	**David D. Greenberg, MD**; Brooke M. Crawford, MD

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279	THU	Surveillance	Malignant Transformation Of Dysplasia Epiphysealis Hemimelica (Trevor's Disease): The First Reported Case And Recommendations For Surveillance	**George T. Calvert**, Arun Singh; Noah Federman; J. Dominic Femino, MD
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281	THU	Surveillance	Dedifferentiated Chondrosarcoma: Survival Analysis Of 179 Cases From The Seer Database	**Patrick K. Strotman**; Stephanie Kliethermes, PhD; Brian Andrew Schneiderman, MD; Dariusz Borys, MD; Lukas M. Nystrom, MD
282	THU	Surveillance	Prognostic Factors Of Aged Patients With Primary Malignant Bone And Soft Tissue Tumors	**Tadashi Iwai, MD**
283	THU	Surveillance	Specialty For Patient With Trunk Or Extremity Soft Tissue Tumors: Referral Pattern At Local Base Hospital In Central Japan	**Yoshihiro Nishida**; Satoshi Tsukushi, MD; Hiroshi Urakawa; Eiji Kozawa, MD; Kunihiro Ikuta; Shunsuke Hamada; Takafumi Ueda, MD; Naoki Ishiguro, MD
284	THU	Systemic Treatment – Bone	Chemotherapy Induced Necrosis As A Prognostic Marker In Osteosarcoma - Do We Need To Raise The Bar?	Ajay Puri, MD; **Ashish Gulia;** Bhanupriya Pundarikam Sandupatla, BS, MBA
285	THU	Systemic Treatment – Bone	Primary Bone Lymphomas: Analysis Of 42 Cases Of A Single Institution In 15 Years (1999-2014)	**Andre Mathias Baptista, MD, PhD**; Telma Santos, MD; Juan Pablo Zumarraga, MD, MSc; Renee Zon Filippi, MD, MBA, PhD; Olavo Pires Camargo, MD
286	THU	Systemic Treatment – Bone	Role Of Bisphosphonates As An Adjuvant Therapy In The Management Of Giant Cell Tumours	**Sudhir Kumar Garg, MD**; Purnima Aggarwal, MD; Rohit Jindal, MD; Sandeep Gupta
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288	FRI	Bone Sarcoma	Chondrosarcoma In Children And Adolescents – Are They Different?	**Ajay Puri, MD**; Ashish Gulia; Vishnu Ramanujan
289	FRI	Bone Sarcoma	Periosteal Osteosarcoma – Does Intramedullary Extension Portend More Aggressive Biology?	Ajay Puri, MD; **Ashish Gulia**; Bharat Rekhi, MBBS, MD
290	FRI	Bone Sarcoma	Tibial Periosteal Ewing Sarcoma	Alfonso Vaquero-Picado, MD; **Eduardo Jose Ortiz Cruz Sr, MD**
291	FRI	Bone Sarcoma	Proteasome Inhibitors Induce Differentiation, Cell Cycle Arrest And Apoptosis In Osteosarcoma.	**Ali Zarezadeh, MD**; Maria V. Guijarro, PhD; Padraic P. Levings; Elham Nasri, MD; Emma Maria Viktoria Hyddmark, BS; Margaret Ellen White; Glyn Palmer, PhD; Steven Ghivizzani; C. Parker Gibbs Jr., MD
292	FRI	Bone Sarcoma	Socioeconomic Measures Influence Survival In Osteosarcoma: An Analysis Of The National Cancer Data Base	**Benjamin J. Miller, MD, MS**; Josef Nevers Tofte, MD; Yubo Gao, PhD; Kyle Duchman, MD
293	FRI	Bone Sarcoma	Chondrosarcoma Of The Extremities: A Review Of 128 Cases Between 1990 And 2014	Ahmet Salduz; Kayahan Karaytug; **Bugra Alpan**; Bilge Bilgic; Levent Eralp
294	FRI	Bone Sarcoma	A Review Of Three Puzzling Cases: Osteoblastoma – Like Osteosarcoma	**Bugra Alpan**; Bilge Bilgic; Basak Kumbasar Sirin;
295	FRI	Bone Sarcoma	Characteristics And Oncologic Outcomes Of Patients With Ewing Sarcoma Of The Shoulder	**Caleb Yeung, BA**; Courtney Kaiser, BA; Christine Park, BS; Santiago Lozano Calderon, MD, PhD
296	FRI	Bone Sarcoma	Growth Pattern Of Tibia After Passive Implant Insertion In Adolescent Patients With Sarcoma In Femur	**Changye Zou**; Jingnan Shen, MD, PhD
297	FRI	Bone Sarcoma	Intercalary Custom-Made Compressive® Implants For The Reconstruction Of Malignant Femoral Diaphysis Tumors – Cases Report And Three-Dimensional Finite Element Analysis	**Chunlin Zhang, MD**
298	FRI	Bone Sarcoma	Intra-Arterial Chemotherapy For Osteosarcoma 10 Year Follow Up	**Cynthia M. Kelly, MD**; Ross M Wilkins, MD
299	FRI	Bone Sarcoma	Primary Osseous Leiomyosarcoma: A Comparison With Its Somatic Soft-Tissue Counterpart	**Daniel Burczak, BS**; David M. Levy, MD; Matthew Colman, MD; Brett Mahon, MD; Steven Gitelis, MD
300	FRI	Bone Sarcoma	Tumorigenic And Non-Tumorigenic Osteosarcoma Cell Subpopulations Exhibit Distinct Mirna Expression Profiles.	**Elham Nasri, MD**; Padraic P Levings; Maria V. Guijarro, PhD; Ali Zarezadeh, MD; Emma Maria Viktoria Hyddmark, BS; Margaret Ellen White; Yuan Lu; Glyn Palmer; Steven Ghivizzani; C. Parker Gibbs Jr., MD
301	FRI	Bone Sarcoma	Differential Osteosarcoma Growth In Loose Areolar, Musculofascial, And Bone Compartments: Importance Of Microenviromental Stiffness	**Francis Young Lee, MD, PhD**; Chandhanarat Chandhanayingyong, MD; Christopher Midtling, BS; Saqib Nizami; Jon-Michael Etienne Caldwell, MD; Danielle Stamer; Do Yu Soung; Jungho Back, PhD; Lee Song, PhD
302	FRI	Bone Sarcoma	Ifosfamide/Etoposide Without Map In Adult Osteosarcoma Patients With Poor Necrosis Rates Post Neoadjuvant Chemotherapy	**Gary C. O'Toole, FRCS (ORTHO)**
303	FRI	Bone Sarcoma	Osteosarcoma Of The Pelvis: Change In Outcomes Over 40 Years	**Hernan Prieto, MD**; Eric Alan Silverstein, MD; Timothy Gooldy, BS; Andre R. do Valle Spiguel, MD; Mark T. Scarborough, MD; C. Parker Gibbs Jr., MD
304	FRI	Bone Sarcoma	Extra-Skeletal Tumor Invasion In Chondrosarcoma	**Hiroshi Urakawa, MD**; Satoshi Tsukushi, MD; Satoko Shimada; Eiji Kozawa, MD; Kunihiro Ikuta; Shunsuke Hamada; Takafumi Ueda, MD; Naoki Ishiguro, MD; Yoshihiro Nishida
305	FRI	Bone Sarcoma	Oncologic Outcome After Local Recurrence Of Chondrosarcoma: Analysis Of Prognostic Factors	**Ilkyu Han**; Srimanth Bindiganavile; Han-Soo Kim, MD, PhD
306	FRI	Bone Sarcoma	Our Experience With Chondrosarcoma Affecting Hand Bones	**Isidro Gracia, MD**; Oscar Buezo; Antonio Garcia; Laura Trullols; Paloma Dehesa; Ana Peiro
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309	FRI	Bone Sarcoma	Predictive Value Of Dynamic Change Of Hemoglobin Levels During Therapy On Treatment Outcomes In Patients With Extremity Osteosarcoma	**Xianbiao Xie, MD**; Jian Tu; Jin Wang, MD; Jingnan Shen, MD, PhD
310	FRI	Bone Sarcoma	Clinical Diagnosis And Treatment Of Easy-To-Misdiagnosis Telangiectatic Osteosarcoma	Jian Tu; **Junqiang Yin**; Weihai Liu; Jin Wang, MD; Jingnan Shen, MD, PhD
311	FRI	Bone Sarcoma	Detection Of Circulating Tumor Cells In Sarcoma Patients	Jian Tu; **Junqiang Yin**; Weihai Liu; Jin Wang, MD; Jingnan Shen, MD, PhD
312	FRI	Bone Sarcoma	The Anti-Tumor Potential Of Some Naturally Active Substances Isolated From Chinese Medicinal Herbs In Osteosarcoma	Jian Tu; **Jingnan Shen, MD, PhD**; Junqiang Yin; Zhiqiang Zhao; Xianbiao Xie; Jin Wang, MD; Changye Zou; Qinglian Tang; Gang Huang
313	FRI	Bone Sarcoma	Predictive Value Of Platelet During Chemotherapy For Patients With Extremity Osteosarcoma	**Xianbiao Xie, MD**; Jian Tu; Jingnan Shen, MD, PhD
314	FRI	Bone Sarcoma	Pulmonary Metastasectomy In Osteosarcoma Patients	**Jin Wang**
315	FRI	Bone Sarcoma	Sarcomas In Children Under 5 Years Old: General Characteristic And Oncologic Outcomes.	**Jose Ignacio Albergo, MD**; Anna Darbyshire, MBBS; Geraldine Goh, MBBS; Peter B. Steadman, MBBS, FRACS; William Steadman; Richard Lovel Carey Smith, FRACS, FRCS (Ortho), MBBS; Lee M. Jeys, FRCS
316	FRI	Bone Sarcoma	Outcomes For Osteosarcoma In Adults, 70 Years Of Age And Older: A Retrospective Comparative Study At A Single Institution	**Justin E. Bird**; Liang Li, PhD; Bryan Scott Moon, MD; Patrick P. Lin, MD; Robert L. Satcher Jr, MD; Valerae O. Lewis, MD
317	FRI	Bone Sarcoma	Carbon Ion Radiotherapy For Bone And Soft Tissue Sarcoma And Its Histological Findings	**Katsuhiro Hayashi, MD, PhD**; Norio Yamamoto, MD; Toshiharu Shirai, MD; Akihiko Takeuchi, MD; Hiroaki Kimura, MD, PhD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Yu Aoki; Takashi Higuchi; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
318	FRI	Bone Sarcoma	Treatment Outcomes Of Grade 2 Chondrosarcoma In Our Hospital And The Potential For Reconstruction Using Frozen Autografts	**Kensaku Abe, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Kato, MD; Yu Aoki; Takashi Higuchi; Hiroyuki Tsuchiya, MD
319	FRI	Bone Sarcoma	Management And Oncologic Outcomes Of Proximal Humerus Chondrosarcoma	**Jose Ignacio Albergo, MD**; German Luis Farfalli, MD; Miguel Angel Ayerza, MD; Luis Alberto Aponte-Tinao, MD
320	FRI	Bone Sarcoma	Forced Induction Of Differentiation In Osteosarcoma Tumor Initiating Cells	**Margaret Ellen White**; Emma Maria Viktoria Hyddmark, BS; Yuan Lu; Ali Zarezadeh, MD; Elham Nasri, MD; Maria V. Guijarro, PhD; Alfonso Martin-Pena PhD; Padraic P. Levings; Glyn Palmer PhD; Steven Ghivizzani PhD; C. Parker Gibbs Jr., MD
321	FRI	Bone Sarcoma	What Is The Proportion Of Patients With Multiple Hereditary Exostoses Who Undergo Malignant Degeneration?	**Matthew R. DiCaprio, MD**; Cory M. Czajka MD
322	FRI	Bone Sarcoma	What Are Your Patients Reading?: Assessment Of Common Orthopedic Oncology Websites	**Matthew R. DiCaprio, MD**; Ralph Zade, MD; Jason Tartaglione, MD; Ernest Chisena; Shazaan Hushmendy, MD
323	FRI	Bone Sarcoma	Osteosarcoma Of The Pelvis	Michael Parry, FRCS (ORTHO), MD; **Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho)**; Minna Laitinen, MD; Jose Ignacio Albergo, MD; Lee M. Jeys, FRCS; Simon R. Carter, MD; Czar Louie Gaston, MD; Vaiyapuri Sumathi; Robert John Grimer, FRCS
324	FRI	Bone Sarcoma	Does Local Recurrence Affect Prognosis For Ewing'S Sarcoma?	**Michael Parry, FRCS (ORTHO), MD**; Jose Ignacio Albergo, MD; Minna Laitinen, MD; Simon R. Carter, MD; Roger Tillman, FRCS; Lee M. Jeys, FRCS; Robert John Grimer, FRCS
325	FRI	Bone Sarcoma	The Secondary Osteosarcomas Arising From Giant Cell Tumor Of The Long Bone	**Kyung Il Kim**; Min Wook Joo, MD; Yong Koo Kang, MD; Yang Guk Chung, MD; Won-Jong Bahk; Seung Han Shin, MD, PhD; Jin-Woo Kang
326	FRI	Bone Sarcoma	Outcome Of Pelvic Bone Sarcomas In Children	**Minna Laitinen, MD, PhD**; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Jose Ignacio Albergo, MD; Lee M. Jeys, FRCS; Vaiyapuri P. Sumathi; Robert John Grimer, FRCS
327	FRI	Bone Sarcoma	Clinical Behaviour Of Parosteal Osteosarcoma	**Minna Laitinen, MD, PhD**; Michael Christopher Parry, MB, ChB, MD, FRCS (Ortho); Vaiyapuri P. Sumathi; Jose Ignacio Albergo, MD; Lee M. Jeys, FRCS; Simon R. Carter, MD; Robert John Grimer, FRCS
328	FRI	Bone Sarcoma	Cisplatin Ameliorates The Diminished Survival Seen With Intravenously-Delivered Mscs In A Murine Model Of Osteosarcoma Pulmonary Micrometastasis	**Nicole Ehrhart, VMD, MS**; Megan Aanstoos, MS, BS; Ruth Rose, DVM
329	FRI	Bone Sarcoma	Malignant Transformation Of Ollier'S Disease In The Hand	**Noriko Yamagata**
330	FRI	Bone Sarcoma	Pathologic Fractures As Prognostic Factors For Survival, Local Recurrence And Distant Metastases In Osteosarcoma Of The Extremities	**Olivier Van Wulfften Palthe**; Timion Meijs, BS; Manahil Natasha Naqvi, BS; Megan E. Anderson, MD; Mark C Gebhardt, MD; Marco Ferrone, MD, FRCSC; John E. Ready, MD; Joseph Hasbrouck Schwab, MD; Kevin A Raskin, MD; Francis J. Hornicek, MD; Santiago Lozano Calderon, MD, PhD

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332	FRI	Bone Sarcoma	An Institution Experience Of Pelvic Bone Resections For Pelvic Bone Tumours: Retrospective Analysis.	**Raja Anand**; Mayil Vahanan Natarajan, MD
333	FRI	Bone Sarcoma	Local Recurrence In The Euramos-1 Trial – Risk Factors, Management And Outcome	**Robert John Grimer**; R. Lor Randall, MD; Reinhard Windhager, MD; Otte Brosjö MD; Gordana Jovic, PhD; Jeremy Whelan Professor MD; Stefan Bielack Professor; Neyssa Marina, MD, MS; Sigbjørn Smeland Professor; Mark Krailo; Trude Butterfass-Bahloul Dr; Pancras C.W. Hogendoorn Professor; Mark Bernstein Professor; Matthew R. Sydes, MSc
334	FRI	Bone Sarcoma	How Good Are Surgeons At Predicting Response To Chemotherapy And How Did That Affect Their Decision Making On Surgery? Euramos-1, European Osteosarcoma Intergroup Patients	**Robert John Grimer**; R. Lor Randall, MD; Reinhard Windhager, MD; Otte Brosjö Sr, MD; Gordana Jovic, PhD; Jeremy Whelan, MBBS, MD; Stefan Bielack, MD; Neyssa Marina, MD, MS; Sigbjørn Smeland, MD; Mark Krailo; Trude Butterfass-Bahloul, DMed; Pancras C.W. Hogendoorn, PhD; Mark Lawrence Bernstein, MD; Matthew R. Sydes, MSc
335	FRI	Bone Sarcoma	Demographic Profile Of Ewing'S Sarcoma From A Tertiary Care Centre In A Developing Country- Retrospective Data From Last Ten Years	**Shah Alam Khan, MS, DNB, MRCSEd, FRCS, M.Ch.Orth**; Rishi R. Poudel
336	FRI	Bone Sarcoma	Clinical Outcome Of Periosteal Osteosarcoma: A Single Institutional Study	**Shigeki Kakunaga, MD, PhD**; Takafumi Ueda, MD; Norifumi Naka, MD, PhD; Akira Myoui, MD, PhD; Nobuhito Araki, MD; Hideki Yoshikawa, MD
337	FRI	Bone Sarcoma	Human Leukocyte Antigen (Hla) Expression And Immunological Events In Chondrosarcoma	**Sjoerd Nota, MD**; Francesco Sabbatino Sr, MD, PhD; G. Petur Nielsen; Vikram Deshpande; Soldano Ferrone, MD, PhD; Joseph Hasbrouck Schwab, MD
338	FRI	Bone Sarcoma	The Strategy Treatment Of Osteosarcoma	**Wei Guo**
339	FRI	Bone Sarcoma	Is It Suitable Of Limb-Salvage Surgery For Primary Bone Sarcoma In The Forearm?	**Weifeng Liu, MD**; Yuan Li; Bin Li; Xiaohui Niu, MD
340	FRI	Bone Sarcoma	Preoperative Histological Evaluation Of Chondrosarcoma Biopsy Specimens: Radiological Features And Their Correlations With Pathological Data	**Yasuo Yoshimura, MD**; Munehisa Kito; Atsushi Tanaka, MD; Masanori Okamoto, MD, PhD; Hiroyuki Kato, MD
341	FRI	Bone Sarcoma	Infarct Associated Sarcoma; A Possible Pathogenesis Based On Histological Observation And Clinical Course In 6 Cases	Youngwoo Kim; **Won-Jong Bahk**
342	FRI	Bone Sarcoma	Targeting Adeno-Associated Virus To Osteosarcoma Tumor-Initiating Cells	**Yuan Lu**; Maria V. Guijarro, PhD; Padraic P. Levings; Emma Maria Viktoria Hyddmark, BS; Margaret Ellen White; C. Parker Gibbs Jr., MD
343	FRI	Bone Sarcoma	Treatment Of Osteosarcoma With Microwave Thermal Ablation Inducing Immunogenic Cell Death	**Zhe Yu**
344	FRI	Bone Sarcoma	High Grade Surface Osteosarcoma-Jst Hospital Experience	**Zhiping Deng, MD**
345	FRI	Metastatic Bone Disease	Outcome Of Operative Stabilization For Metastatic Pathological Diaphyseal Femoral Fracture, A Thai Musculoskeletal Tumor Society Study	**Chindanai Hongsaprabhas, MD, MSc**; Varah Yuenyongviwat, MD; Saran Subhadrabandhu; Taweechok Wisanuyotin, MD; Taninnit Leerapun, MD; Apichat Asavamongkolkul
346	FRI	Metastatic Bone Disease	Presentation Of The First Uses Of The Illuminoss Lightfix Implant In The United States.	Felix Ho-Ming Cheung, MD; **Sinan Ozgur, MD**; Franklin David Shuler, MD
347	FRI	Metastatic Bone Disease	Erk1/2 Activation Is Essential For Aggressive Growth And Bone Destruction In Osteolytic Metastatic Breast Cancers: Clinical And Translational Study	**Francis Young Lee, MD, PhD**; Back Jungho; Hyunwoo P. Kang; Saqib A. Nizami; Danielle Stamer; Compton T. Jocelyn
348	FRI	Metastatic Bone Disease	Porous Tantalum Reconstruction In Periacetabular Metastatic Bone Disease	**Germán Arsenio Norambuena, MD**; Matthew P. Abdel, MD; Ahmet Salduz, MD; Peter S. Rose, MD; David G. Lewallen, MD; Franklin H. Sim, MD
349	FRI	Metastatic Bone Disease	Two Cases Of Patients With A Pathological Fracture Of The Proximal Femur That Achieved Bone Union After Surgical Treatment By Internal Fixation Combined With Radiotherapy	**Hideto Obata, MD, PhD**
350	FRI	Metastatic Bone Disease	Prediction Of The Skeletal-Related Events In Patients With Non-Small Cell Lung Cancer	**Hisaki Aiba, MD***; Takaya Yamagami MD, PhD; Yasuhiro Nishimori MD, PhD; Shingo Shimozaki, MD; Nobuyuki Watanabe; Takanobu Otsuka, MD
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352	FRI	Metastatic Bone Disease	Optimal Pain Control Following Im Nailing Or Plate Fixation For Pathological Fractures Of The Proximal Humerus	**Ivan Golub**; Alexander P. Decilveo; James C. Wittig, MD
353	FRI	Metastatic Bone Disease	Long Stem Hemiarthroplasty For Metastatic Cancer Of The Proximal Femur Provides Optimal Palliation And Function	**Joel Peterson**; Alexander P. Decilveo; Ivan Golub; James C. Wittig, MD
354	FRI	Metastatic Bone Disease	Lightfix; A Prospective, Multi-Center Study Of The Photodynamic Bone Stabilization System For The Treatment Of Impending And Actual Pathological Fractures From Metastatic Bone Disease In The Humerus.	**Alexander P. Decilveo**; Ivan Golub; James C. Wittig, MD
355	FRI	Metastatic Bone Disease	Can A Single Tool Provide One, Three, Six, And 12-Month Survival Estimates In Patients With Metastatic Bone Disease?	**Jonathan Agner Forsberg, MD, PhD**; Rikard C. Wedin, MD, PhD; Patrick J. Boland, MD; John H. Healey, MD, FACS

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357	FRI	Metastatic Bone Disease	Plate And Cement V/S Nail And Cement For Pathological Fractures Of The Humerus. A Comparative Study Of Clinical Results.	**Luis Bahamonde**; James C. Wittig, MD
358	FRI	Metastatic Bone Disease	How Do We Estimate Survival? Decision Analysis And Comparison Of Three International Patient Populations With Metastatic Bone Disease.	Andrea Piccioli; **Spinelli M. Silvia**; Rikard C. Wedin, MD, PhD; John H. Healey, MD, FACS; Vincenzo Ippolito, MD; Pietro Ruggieri, MD, PhD; Giulio Maccauro; Franco Gherlinzoni; Alessandro Gasbarrini, MD; Raimondo Piana; Alberto Di Martino, MD, PhD; Francesco Nicolosi; Francesco Camnasio; Michele Attilio Rosa, MD, PhD; Vincenzo Denaro, MD; Rodolfo Capanna, MD
359	FRI	Metastatic Bone Disease	Arthroplasty For The Treatment Of Pathologic Fracture In The Setting Of Metastatic Disease Of The Proximal Femur	**Matthew Thomas Houdek, MD**; Benjamin Wilke, MD; Cody Wyles, BS; Peter S. Rose, MD; Michael J. Taunton, MD; Franklin H. Sim, MD
360	FRI	Metastatic Bone Disease	Risk Factors For 30-Day Mortality In Patients Treated With Joint Replacement Surgery Due To Metastatic Bone Disease.	**Michala Skovlund Sørensen**; Michael M. Petersen, MD; Klaus Hindso, MD, PhD
361	FRI	Metastatic Bone Disease	Can Inflammatory Markers Be Included Into Models Predicting Survival After Treatment For Metastatic Lesions In The Extremities?	**Michala Skovlund Sørensen**; Jonathan A. Forsberg, MD; Klaus Hindso, MD, PhD; Michael M. Petersen, MD
362	FRI	Metastatic Bone Disease	A New Radiotrasparent Minimally Invasive System To Stabilize Bone Metastatic Lesions In The Upper Limb	**Michele Boffano, MD**; Ugo Albertini; Stefano Marone; Elena Boux; Stefano Mortera; Riccardo Ferracini, FRCS (Ortho), MD; Raimondo Piana
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364	FRI	Metastatic Bone Disease	Local Progression Is Most Common Cause For Revision Surgery In Metastatic Bone Disease	Nicola Fabbri, MD; **Rui Yang, MD**; Eleonora Marini, MD; Daniel Andreas Mueller, MD; Patrick J. Boland, MD; John H. Healey, MD, FACS; Nicola Fabbri, MD
365	FRI	Metastatic Bone Disease	Risk Factors For Mortality After Pathologic Fracture Secondary To Metastatic Cancer	**Nicole Kellan Behnke, MD**; Dustin Kyle Baker, BS; Shin Xu, BS; Thomas Niemeier, MD; Brent A. Ponce, MD
366	FRI	Metastatic Bone Disease	Cemented Vs. Uncemented Hip Arthroplasty For Metastatic Bone Disease	**Raj Gopesh Patel**; Christina J. Gutowski, MD; Atif Khalid Ahmed, MD; Bang H. Hoang, MD; David Samuel Geller, MD; John Alexander Abraham, MD
367	FRI	Metastatic Bone Disease	Usefulness Of The Scoring System Of Mirels In The Present Day	**Shingo Shimozaki, MD**; Hiroaki Kimura, MD, PhD; Hisaki Aiba, MD; Hiroyuki Tsuchiya, MD; Takanobu Otsuka, MD
368	FRI	Metastatic Bone Disease	Structural Analysis Of Metastatic Femoral Lesions Using Clinical Computed Tomography Scans	**Stein Jasper Janssen, MD**; Nuno Rui Cools Paulino Pereira, MD; Timion Meijs, BS; Marco Ferrone, MD, FRCSC; Kevin A. Raskin, MD; Francis J. Hornicek, MD; Joseph Hasbrouck Schwab, MD
369	FRI	Metastatic Bone Disease	Does Segmental Replacement Prosthesis Provide A Better Option For Treatment Of Impending Or Established Pathologic Fracture Of The Humeral Shaft Than Intramedullary Locking Nail Or Plate?	**Taiqiang Yan**; Wei Guo, MD, PhD; Rongli Yang; Yi Yang, MD
370	FRI	Metastatic Bone Disease	The Efficacy Of Radical Resection For Bone And Soft Tissue Metastatic Lesions Of Renal Cell Carcinoma	**Takashi Higuchi, MD**; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Hiroyuki Inatani, MD; Takashi Kato, MD; Yu Aoki; Kensaku Abe, MD; Hiroyuki Tsuchiya, MD
371	FRI	Metastatic Bone Disease	Survival Analysis Of 121 Patients With Spinal Metastases From Single Center	Wei Guo; **Guowen Wang**
372	FRI	Metastatic Bone Disease	Evaluation Of Surgical Techniques And Treatment Outcome Of Pelvic Metastases	**Wei Guo**
373	FRI	Metastatic Bone Disease	Reconstruction Of Metastatic Bone Defects With A Bisphosphonate Eluting Bone Graft Substitute	**Werner Hettwer, MD**; Peter Frederik Horstmann; Michael M. Petersen, MD
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376	FRI	Quality	Publication Rates Of Podium Presentations And Posters From The Annual Musculoskeletal Tumor Society Meetings: The 2014 Meeting Leading The Way	Tae Won Benjamin Kim, MD; **Steven D. Kozusko, MD, MEd**
377	FRI	Quality	A Facebook Based Survey On Psychosocial Distress Levels In Patients With Osteo-, Ewing- And Liposarcoma	**Florian Pohlig, MD**; Ulrich Lenze; Florian Lenze, MD; Alexandra Nest; Peter Herschbach; Ruediger Von Eisenhart-Rothe, MBA, MD
378	FRI	Quality	Anxiety And Fear Of Death Communication-Related: Do They Affect Quality Of Life In Bone And Soft Tissue Sarcoma Patients?	**Michele Boffano, MD**; Alessandra Giordano; Cecilia Boglione; Ugo Albertini; Stefano Marone; Elena Boux; Alessandro Cicolin; Raimondo Piana
379	FRI	Quality	Analysis Of The Sacral Tumor Survey And Recommendation For Future Development	**Olivier Van Wulfften Palthe, MD**; Patrick J. Boland, MD; Peter S. Rose, MD; Michael J. Yaszemski, MD, PhD; Franklin H. Sim, MD; Francis J. Hornicek, MD; John H. Healey, MD, FACS; Joseph Hasbrouck Schwab, MD

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381	FRI	Quality	Quality Of Life After Malignant Bone Cancer Surgery: A Long Term Follow-Up Study	W. Peter Bekkering PT, PhD; Janneke C. Van Egmond- Van Dam, PT; Jos Bramer, MD, PhD; Auke Beishuizen MD, PhD; Marta Fiocco, PhD; **Sander Dijkstra, MD**
382	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Modular Megaprosthesis For Proximal Femoral Tumors	**Adel Refaat Ahmed, MBBS, DMED, MD, PhD**
383	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Joint Sparing Limb Salvage Surgery, Techniques And Outcome,Khcc Experience.	**Ahmad Shehadeh**
384	FRI	Surgical Treatment – Endoprosthetic Reconstruction	The Outcome Of Limb Salvage Surgery In Developing Country, Khcc Experience.	**Ahmad Shehadeh**; Sameer Yaser; Iyad Sultan
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386	FRI	Surgical Treatment – Endoprosthetic Reconstruction	The Challenge Of Multiple Revision Hip Arthroplasty: A Pilot Study	**Anil Robindra Haldar**; Jerome Davidson, MD; Shahnawaz Khan; Shanjitha Kantharuban, MBChB; Aadhar Sharma, MBBS; Jonathan Miles, FRCS (Ortho), MBBS; Jakub Maurycy Jagiello; Rob Pollock, FRCS; Richard Carrington, MD; William Aston, FRCS; John Skinner, FRCS; Tim Briggs, FRCS
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388	FRI	Surgical Treatment – Endoprosthetic Reconstruction	The Use Of Rapid Prototyping Pelvic Custom Made Prosthesis Associated To Bone Cutting Jigs In Pelvic Tumor Resection	Massimiliano Depaolis; Carlo Romagnoli, MD; Matteo Romantini, MD; Tommaso Frisoni, MD; **Davide Donati, MD**
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391	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Systemic Silver Ion Levels And Clinical Results In Silver-Coated Megapros-theses	Daniel Andreas Müller, MD; **Giovanni Beltrami, MD**; Guido Scoccianti; Rodolfo Capanna, MD
392	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Scratch Fit At Stem Implantation Predicts Mechanical Implant Stability	Antoinette W. Lindberg, MD; Jedediah K. White, BS; **Stephanie Punt, BS**; Randal P. Ching; Ernest U. Conrad III, MD
393	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Massive Pelvic Bone Defect Reconstruction With A 3D-Printed Patient-Specific Endoprosthesis (A Case Report)	**Florencio Pablo Segura, MD**; Facundo Segura; Facundo Pedemonte
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396	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Mid-Term Survival And Function Of Hip Endoprosthetic Replacement For Non-Tumour Indications	**Henno Wolfgang Martin, MBChB**; George A. Grammatopoulos, MRCS; Abtin Alvand, MBBS, PhD; Frederick Robert Eugene Quiney, MBChB; Max Gibbons, FRCS; Duncan Whitwell, FRCS
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399	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Reconstruction Of Large Defects After Tumor Resection In Proximal Tibia With Modular Prosthesis.	**Isidro Gracia, MD**; Christian Wilches; Oscar Buezo; Ana Peiro; Laura Trullols
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410	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Salvage Of The Limb Salvage: Revision Of A Tumor Prostheses For Malignant Processes Of The Proximal Femur	**Matthew Thomas Houdek, MD**; Benjamin Wilke, MD; Cody Wyles, BS; Peter S. Rose, MD; Michael J. Taunton, MD; Franklin H. Sim, MD
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430	FRI	Surgical Treatment – Endoprosthetic Reconstruction	The Outcome Of Iodine-Coated Endprostheses	**Toshiharu Shirai, MD, PhD**; Hiroyuki Tsuchiya, MD; Norio Yamamoto, MD; Katsuhiro Hayashi, MD; Hiroaki Kimura, MD, PhD; Akihiko Takeuchi, MD; Shinji Miwa, MD; Ryu Terauchi, MD, PhD; Toshikazu Kubo, MD
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433	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Semi-Knee Tumor Prosthesis For Pediatric Osteosarcomas Around The Knee	**Dasen Li, MD, PhD**; Wei Guo, MD, PhD; Xiaodong Tang; Rongli Yang; Tao Ji, MD
434	FRI	Surgical Treatment – Endoprosthetic Reconstruction	Synthetic Mesh Improves Shoulder Function After Intraarticular Resection And Prosthetic Replacement Of Proximal Humerus	**Xiaodong Tang**; Wei Guo, MD, PhD; Rongli Yang; Shun Tang; Tao Ji, MD
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SOCIAL PROGRAMS

WEDNESDAY, OCTOBER 7

6:00pm–9:00pm

Fairways Lawn at The Ritz Carlton Golf Club

YOUR BADGE IS YOUR TICKET to the all meeting sessions and social events. Accompanying persons must also have a badge to participate.

WELCOME RECEPTION

Come enjoy "The Best of Florida" at the ISOLS/MSTS Welcome Reception. Experience the beautiful Orlando landscape while tasting a Floridian inspired menu. Enjoy the sounds of "The Current" and mingle with exotic guests! Casual attire.

THURSDAY, OCTOBER 8

6:30am–7:30am • Primo Garden *(Registration is located outside Cintron on the JW Marriott side)*

Registration begins at 6:00am.

FUN RUN 5K

The Fun Run 5K is the perfect early morning networking event! Join friends and colleagues for a fun early morning run. The first 100 people to register will receive a t-shirt.

ON-SITE REGISTRATION AVAILABLE

1:00pm–6:00pm • Ritz Carlton Golf Club

GOLF TOURNAMENT

Embark on an 18-hole course with your colleagues on the beautiful Ritz Carlton Golf Course. A certified Audubon Cooperative Sanctuary, the golf course blends into the natural Central Florida landscape. The course blends a variety of hazards to provide a challenging but fair test of a golfer's abilities.

Sign up to play at Registration located in the Mediterranean Foyer.

- Cost is $120 per player
- Club rentals available, $50 each
- Format: 4 man scramble
- Shotgun start at 1:00pm

FRIDAY, OCTOBER 9

7:00pm–10:00pm • House of Blues Orlando

CLOSING NIGHT CELEBRATION AT HOUSE OF BLUES ORLANDO

You are invited to the House of Blues for the final social event of the meeting. Come enjoy international inspired cuisine and live entertainment, and celebrate the success of a great meeting. Shuttles will begin from the Mediterranean Porte Cochere starting at 6:30pm and will be available the duration of the event. Casual attire.

ACCOMPANYING PERSONS' SOCIAL PROGRAMS

SHOPPING EXCURSIONS:

- Wednesday, October 7: Mall at Millenia Experience
- Thursday, October 8: The Florida Mall
- Friday, October 9: Orlando Premium Outlets–International Drive

Please visit the Registration Desk for details and to register.

THE RITZ CARLTON SPA IS ALSO AVAILABLE FOR ACCOMPANYING PERSON PAMPERING.

Receive a 10% discount on your spa visit!

- Call Spa Reservations (407) 393-4200
- Mention you are with **ISOLS and MSTS**

DISCLOSURES

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NAME:	PAPER(S)
Aanstoos, Megan	(n) Nothing
Abdel, Matthew P.	8 (European Journal of Orthopaedic Surgery and Traumatology; Journal of Bone and Joint Surgery - British; Journal of Orthopaedic Research; Journal of Orthopaedics and Traumatology); 9 (Minnesota Orthopaedic Society)
Abdulkareem, Fatimah Biade	(n) Nothing
Abdullah, Sameer Yaser	(n) Nothing
Abe, Kensaku	(n) Nothing
Abraham, John Alexander	3B (Biomet); 5 (Norvartis)
Abudu, Adesegun	8 (Sarcoma)
Adams, Christopher S.	(n) Nothing
Adams, Jacob R.	(n) Nothing
Aggarwal, Purnima	(n) Nothing
Ahmed, Adel Refaat	(n) Nothing
Ahmed, Atif Khalid	(n) Nothing
Aiba, Hisaki	(n) Nothing
Ajekigbe, Mobolaji	(n) Nothing
Ajit Singh, Vivek	(n) Nothing
Akaike, Keisuke	(n) Nothing
Akgul, Turgut	(n) Nothing
Akiyama, Toru	2 (Eli Lilly; Hisamitsu; Johnson & Johnson)
Alamanda, Vignesh	(n) Nothing
Albergo, Jose	(n) Nothing
Albertini, Ugo	(n) Nothing
Alessandro, Luzzati	(n) Nothing
Alloisio, Marco	(n) Nothing
Alman, Benjamin	4 (ScarX); 9 (shrine research advisory board)
Alpan, Bugra	(n) Nothing
Alvand, Abtin	(n) Nothing
Alvarez, Laura	(n) Nothing
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Aneja, Arun	(n) Nothing
Angelini, Andrea	(n) Nothing
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Ashman, Jonathan	(n) Nothing
Aston, William	2 (Stanmore Implants Worldwide)
Atalar, Ata Can	8 (Acta Orthopaedica et Traumatologica Turcica); 9 (Executive Board Member of Turkish Shoulder and Elbow Surgery Society)
Athanasian, Edward A.	(n) Nothing
Athanasou, Nick	(n) Nothing
Attar, Samer	(n) Nothing
Attia, Steven	5 (AB Science; Bayer; CytRx; Merck; Morphotek; TRACON); 6 (Karyopharm)
Auberger, Roland	3A (Ottobock Healthcare Products GmbH)
August, Terrence	(n) Nothing
Avedian, Raffi Stephen	3B (Plexicon)
Aydin, Bahattin Kerem	(n) Nothing
Ayerza, Miguel Angel	8 (Clinical Orthopaedics and Related Research); 9 (Association of Bone and Joint Surgeons)
Azuhairy, Azid	(n) Nothing
Back, Jungho	(n) Nothing
Bagaria, Sanjay	(n) Nothing
Bahk, Won-Jong	(n) Nothing
Baker, Dustin Kyle	(n) Nothing
Balach, Tessa	(n) Nothing
Baldini, Todd H.	6 (Endocare; Synthes; Stryker)
Bali, Navi	(n) Nothing
Baptista, Andre Mathias	(n) Nothing
Barrientos-Ruiz, Irene	(n) Nothing
Bartholf Dewitt, Suzanne	(n) Nothing
Basci, Onur	(n) Nothing
Baumgart, Rainer Paul	1 (implantcast; Wittenstein intens); 2 (implantcast; Wittenstein intens); 3B (implantcast; Wittenstein intens); 9 (Gesellschaft für Extremitaetenverlaengerung und -rekonstruktion)
Bayliss, Lee	(n) Nothing
Beauchamp, Christopher Paul	(n) Nothing
Becerra, Carlos R.	2 (Eli Lilly)
Beckman, Emma M.	(n) Nothing
Bedi, Meena	(n) Nothing
Beebe, Kathleen S.	(n) Nothing
Behnke, Nicole Kellan	(n) Nothing
Beishuizen, Auke	(n) Nothing
Bekkering, W. Peter	(n) Nothing
Bellan, Davi Gabriel	(n) Nothing
Beltrami, Giovanni	(n) Nothing
Benevenia, Joseph	1 (Rutgers University/Creosso LLC); 2 (Musculoskeletal Transplant Foundation); 3C (Implant Cast; Merete,NJOS); 4 (Creosso LLC); 5 (Biomet; Musculoskeletal Transplant Foundation, Synthes); 8 (AAOS/OKU Tumors 2, 3, Musculoskeletal Tumor Society); 9 (AAOS, Musculoskeletal Transplant Foundation, Musculoskeletal Tumor Society)
Benjamin, Robert Stephen	3B (Karyopharm Therapeutics; Norvartis); 3C (Eli Lilly); 4 (Gillead Science; Johnson & Johnson; Merck; Pfizer)
Berardino, Maurizio	(n) Nothing
Berg, John	(n) Nothing
Bergovec, Marko	(n) Nothing
Bernstein, Mark Lawrence	5 (Merck)
Bernthal, Nicholas	3B (daiichi sankyo)
Bhandare, Manish Suresh	(n) Nothing
Bhandari, Mohit	3B (Amgen Co; Eli Lilly;Stryker; Smith & Nephew; Zimmer; Stryker; Moximed; Bioventus); 5 (Smith & Nephew; DePuy, A Johnson & Johnson Company; Eli Lily; Bioventus)
Bielack, Stefan	3B (Clinigen; Eli Lilly); 8 (Cancer treatment reviews; JAYAO); 9 (ESMO; SIOP; SIOP Europe)
Bilgiç, Bilge	(n) Nothing
Bindiganavile, Srimanth Srinivas	(n) Nothing
Binitie, Odion	(n) Nothing
Bird, Justin Earl	2 (Brainlab; Synthes)
Bishop, Allen T.	9 (American society for reconstructive microsurgery)
Blank, Alan T.	(n) Nothing

ALPHABETICAL DISCLOSURE LISTING/AUTHOR INDEX

Block, Joel A.	1 (Agios, Inc.; Daiichi Sankyo, Inc.; GlaxoSmithKline); 4 (Gilead, Inc.); 5 (Abbvie; GlaxoSmithKline; Norvartis; Pfizer); 7 (inPractice Resources LLC); 8 (Journal of Clinical Rheumatology; Osteoarthritis and Cartilage); 9 (American College of Rheumatology)
Blunn, Gordon W.	1 (Stanmore implants); 2 (baxter,stanmore implants); 3B (stanmore implants); 4 (stanmore implants); 5 (Biomet; lima; Medacta); 7 (stanmore implant); 8 (journal of biomaterial reserach); 9 (British orthopaedic research society)
Boffano, Michele	(n) Nothing
Boglione, Cecilia	(n) Nothing
Böhler, Christoph	(n) Nothing
Boland, Patrick J.	1 (none)
Bollen, Laurens	(n) Nothing
Bollmann, Jakob	(n) Nothing
Bompadre, Viviana	(n) Nothing
Bonde, Christian	(n) Nothing
Boontanapibul, Krit	(n) Nothing
Borah, Babul	3A (Norvartis); 4 (Norvartis)
Borys, Dariusz	(n) Nothing
Boss, Mary-Keara	(n) Nothing
Boukhemis, Karim	(n) Nothing
Boux, Elena	(n) Nothing
Bovee, Judith	(n) Nothing
Bramer, Jos	(n) Nothing
Briggs, Tim	5 (Biomet); 8 (Journal of Bone and Joint Surgery-British, Journal of Arthroplasty); 9 (British Orthopaedic Association,British Orthopaedic Oncology Society,Board member of Royal National Orthopaedic Hospital Trust)
Brigman, Brian E.	2 (Musculoskeletal Transplant Foundation); 3B (Musculoskeletal Transplant Foundation; Plexxicon); 5 (Lumicell Diagnostics; Musculoskeletal Transplant Foundation); 9 (Musculoskeletal Tumor Society)
Bröking, Jan Niklas	(n) Nothing
Brosjö, Otte	9 (Scandinavian Sarcoma Group)
Brown, Scot	(n) Nothing
Buezo, Oscar	(n) Nothing
Burczak, Daniel	(n) Nothing
Bus, Michaël	(n) Nothing
Butterfass-Bahloul, Trude	(n) Nothing
Cable, Matthew	(n) Nothing
Caff, Giuseppe	(n) Nothing
Calabrò, Teresa	(n) Nothing
Caldwell, Jon-Michael	(n) Nothing
Caldwell, Kenneth Lee	(n) Nothing
Caliskan, Emrah	(n) Nothing
Callan, Alexandra Kathleen	(n) Nothing
Calvert, George T.	9 (AAOS; Musculoskeletal Tumor Society)
Camargo, Olavo Pires	(n) Nothing
Camnasio, Francesco	(n) Nothing
Campanacci, Domenico	(n) Nothing
Campanacci, Laura	(n) Nothing
Çamurdan, Vedat Burkay	(n) Nothing
Capanna, Rodolfo	1 (Link Orthopaedics); 2 (Link Orthopaedics); 3B (Link Orthopaedics); 5 (Link Orthopaedics);9 (societa italiana di ortopedia e traumatologia)
Caracciolo, Jamie T.	(n) Nothing
Cardona, Jose Roberto	(n) Nothing
Carey Smith, Richard Lovel	2 (DePuy, A Johnson & Johnson Company; Smith & Nephew; Zimmer); 5 (DePuy, A Johnson & Johnson Company; Smith & Nephew); 8 (Journal of Bone and Joint Surgery - British); 9 (Plus Life (Perth Bone and Tissue Bank)
Carrington, Richard	2 (Smith & Nephew)
Carter, Simon R.	2 (Biomet); 3B (Biomet); 5 (Biomet)
Carty, Christopher P.	(n) Nothing
Castellucci, Paolo	(n) Nothing
Cata, Juan	(n) Nothing
Catton, Charles	2 (Abbott); 3B (Abbott); 5 (Abbott)
Ceci, Francesco	(n) Nothing
Cernakova, Miroslava	(n) Nothing
Chan, Amanda	(n) Nothing
Chan, Chung Ming	(n) Nothing
Chan, Harley	(n) Nothing
Chan, Wai Mon Lester	(n) Nothing
Chander, Sarat	(n) Nothing
Chandhanayingyong, Chandhanarat	(n) Nothing
Chanes, Camila	(n) Nothing
Charles, Peterfy	2 (Amgen Co); 3B (Abbott; Bristol-Myers Squibb; Eli Lilly; Genzyme; Merck; Norvartis; Roche)
Charlson, John	(n) Nothing
Charoenlap, Chris	(n) Nothing
Chauhan, Sakshi	(n) Nothing
Chawla, Sant	(n) Nothing
Chen, Chao-Ming	(n) Nothing
Chen, Cheng-Fong	(n) Nothing
Chen, Kun-Hui	(n) Nothing
Chen, Wei-Ming	(n) Nothing
Cheng, Edward Y.	1 (Innomed); 3B (BONESUPPORT AB); 5 (Novartis); 6 (Musculoskeletal Transplant Foundation); 8 (Journal of Bone and Joint Surgery - American)
Cheng-Fong, Chen	(n) Nothing
Cheung, Felix Ho-Ming	5 (Illuminoss); 9 (West Virginia Orthopaedic Society)
Chinder, Pramod S.	(n) Nothing
Ching, Randal P.	(n) Nothing
Chisena, Ernest	4 (Bio-Chem Bracing Corp.)
Chmielowski, Bartosz	2 (Genentech); 3B (Amgen Co; Astellas; Lilly)
Cho, Hwan-Seong	(n) Nothing
Cho, Wan Hyeong	(n) Nothing
Choong, Peter	1 (Johnson & Johnson); 3B (Stryker); 5 (Johnson & Johnson; Medacta); 8 (Australian & New Zealand Journal of Surgery; Frontiers in Surgery); 9 (Australian Orthopaedic Association)
Chow, Warren A.	2 (Norvartis); 5 (MedImmune)
Chun, Young Soo	(n) Nothing
Chung, Peter	(n) Nothing
Chung, Yang Guk	3C (Acumed, LLC)
Chung, Young Woo	(n) Nothing
Chungkia, NG	(n) Nothing
Cicolin, Alessandro	2 (Angelini; Servier; Valeas); 6 (Technogel)
Cipriano, Cara A.	(n) Nothing
Cizik, Amy M.	3B (FivePrime Therapeutics, Inc); 6 (Synthes)
Coathup, Melanie	(n) Nothing
Cohn, Allen	2 (Celgene)
Colanese, Justin Patrick	(n) Nothing
Collier, Christoper	(n) Nothing
Colman, Matthew	(n) Nothing
Comandone, Alessandro	(n) Nothing
Compton, Jocelyn Traina	(n) Nothing
Conrad, Ernest U.	3C (Stryker consultant); 6 (LifeNet Health Northwest Tissue Division,Medical Director)
Cook, Brian	(n) Nothing
Cooke, Paul Hamilton	1 (OrthoSolutions); 3B (OrthoSolutions)
Cool, Paul	9 (British Orthopaedic Oncology Society)
Cools Paulino Pereira, Nuno Rui	(n) Nothing
Cordeiro, Peter	(n) Nothing
Cosker, Tom	(n) Nothing
Coskun, Sina	(n) Nothing
Countryman, Peter J.	4 (Merck)
Crabtree, Reaves Monroe	(n) Nothing
Crasto, Saniya Carmel	(n) Nothing
Crawford, Brooke M.	(n) Nothing
Cribb, Gillian	(n) Nothing
Criollo, Felipe Sebastián	(n) Nothing
Cuervo, Carlos Eduardo	(n) Nothing
Curi, Michael	(n) Nothing

Curtis, Kelly K.	(n) Nothing
Czajka, Cory	(n) Nothing
Dabak, Nevzat	(n) Nothing
Daly, Michael	(n) Nothing
Damron, Timothy A.	5 (Cempra, Inc; Wright Medical Technology, Inc.,Genentech, Inc.,Orthovita, Inc.; Stryker,Zetrox, Inc); 6 (Stryker); 7 (Lippincott, Williams, and Wilkins; Wolters Kluwer Health - ,eMedicine,UpToDate); 8 (Journal of Surgical Oncology,eMedicine; World Surgical Journal); 9 (Musculoskeletal Tumor Society; American College of Surgeons; AAOS)
Dana, Sara	(n) Nothing
Darbyshire, Anna	(n) Nothing
Davidson, Darin Justyn	(n) Nothing
Davidson, Jerome	(n) Nothing
De La Dehesa, Paloma	(n) Nothing
De Las Heras, Jorge	(n) Nothing
Decilveo, Alexander P.	(n) Nothing
Delgado, Ernesto	(n) Nothing
Denaro, Vincenzo	(n) Nothing
Deo, Shaneel	(n) Nothing
Depaolis, Massimiliano	(n) Nothing
Deshayes, Stephanie	(n) Nothing
Deshpande, Vikram	(n) Nothing
Di Bella, Claudia	(n) Nothing
Di Martino, Alberto	8 (European Spine Journal; Musculoskeletal Surgery- La Chirurgia degli Organi di Movimento/Springer; Springer)
DiCaprio, Matthew R.	(n) Nothing
Dickie, Colleen	(n) Nothing
Dierselhuis, Edwin	9 (VOCA)
Dietl, Hans	1 (Otto Bock Healthcare Products GmbH); 3A (Otto Bock Healthcare Products GmbH)
Dijkstra, Sander	3C (Implantcast); 9 (European Musculo-Skeletal Oncology Society (EMSOS))
Dikici, Faith	9 (turkish society of orthopedics and traumatology)
Dodd, Christopher A.F.	1 (Biomet); 2 (Biomet); 3B (Biomet); 5 (Stryker, Biomet, Zimmer); 7 (Oxford University Press); 9 (Knee Society)
Doita, Minoru	(n) Nothing
Domson, Gregory F.	(n) Nothing
Donati, Davide	8 (Journal of Orthopaedics and Traumatology)
Dong, Zhong Xin	(n) Nothing
Dormans, John P.	7 (Elsevier; Mosby; Brooke's Publishing); 8 (Journal of Pediatric Orthopedics); 9 (SICOT USA; Scoliosis Research Society; SICOT Foundation; World Orthopaedic Concern)
Doung, Yee-Cheen	(n) Nothing
Dowsey, Michelle Maree	5 (DePuy, A Johnson & Johnson Company; Medacta International)
Dubey, Siddharth	(n) Nothing
Dubina, Andrew G.	(n) Nothing
Duchman, Kyle	(n) Nothing
Duerr, Hans R.	2 (Amgen Co)
Dworsky, Erik	(n) Nothing
Eckardt, Jeffrey John	(n) Nothing
Edeiken-Monroe, Beth Sue	(n) Nothing
Eggers, John Paul	(n) Nothing
Ehrhart, Nicole	2 (Allosource, Inc)
Eilber, Fritz C.	(n) Nothing
Ejadi, Samuel	(n) Nothing
El Beaino, Marc	(n) Nothing
Endo, Naoto	(n) Nothing
Epley, Chad Thomas	3A (Norvartis); 4 (Norvartis)
Eralp, Levent	(n) Nothing
Erickson, Brandon	(n) Nothing
Erol, Bulent	(n) Nothing
Etchebehere, Mauricio	8 (Acta Ortopedica Brasileira; Clinics); 9 (Sociedade Brasileira de Ortopedia e Traumatologia Regional São Paulo)
Etzioni, David	(n) Nothing
Evaniew, Nathan	(n) Nothing
Evans, Scott	(n) Nothing
Eward, Will	(n) Nothing
Eward, William Curtis	(n) Nothing
Fabgri, Nicola	(n) Nothing
Fan, Hongbin	(n) Nothing
Fan, Qingyu	(n) Nothing
Fang, Xiang	(n) Nothing
Farfalli, German Luis	(n) Nothing
Fayad, Laura	5 (GE Healthcare; Siemens Healthcare)
Federman, Noah	(n) Nothing
Femino, J. Dominic	(n) Nothing
Feng, Yu	(n) Nothing
Ferguson, Peter	(n) Nothing
Ferracini, Riccardo	(n) Nothing
Ferrer, Jorge	3A (Lumicell); 4 (Lumicell)
Ferrone, Marco	(n) Nothing
Ferrone, Soldano	(n) Nothing
Filippi, Renee Zon	(n) Nothing
Fillingham, Marta	(n) Nothing
Fong, Benjamin Sin Tak	(n) Nothing
Fong, Yi-Chin	(n) Nothing
Forsberg, Jonathan A.	3B (Clementia Pharmaceuticals, Inc.); 5 (Biomet)
Friedrich, Max	(n) Nothing
Frisoni, Tommaso	(n) Nothing
Fritz, Jan	2 (Siemens AG); 3C (Siemens AG); 5 (Siemens AG)
Fromme, Paul	(n) Nothing
Fu, Jun	(n) Nothing
Fujibuchi, Taketsugu	(n) Nothing
Fujiwara, Tomohiro	(n) Nothing
Funovics, Philipp Theodor	(n) Nothing
Gabriele, Rocio	(n) Nothing
Gao, Yubo	(n) Nothing
García Jiménez, Antonio	(n) Nothing
Gardner, Jerad	4 (GlaxoSmithKline; Johnson & Johnson); 8 (Archives of Pathology and Laboratory Medicine; Annals of Pathology and Laboratory Medicine; Head and Neck Pathology); 9 (American Society of Dermatopathology; Arkansas Dermatological Society; United States and Canadian Academy of Pathology)
Garg, Shubham	(n) Nothing
Garg, Sudhir	(n) Nothing
Gasbarrini, Alessandro	(n) Nothing
Gaston, Czar Louie	(n) Nothing
Gebhardt, Mark C.	7 (Clinical Orthopaedics and Related Research; Up to Date;); 8 (Clinical Orthopaedics and Related Research;); 9 (International Society of Limb Salvage; Massachusetts Orthopaedic Association; New England Orthopaedic Society;)
Geller, David Samuel	9 (AAOS)
Gerbers, Jasper	(n) Nothing
Gerger, Armin	(n) Nothing
Getty, Patrick John	6 (Musculoskeletal Transplant Foundation); 9 (American Board of Orthopaedic Surgery, Inc.)
Gherlinzoni, Franco	(n) Nothing
Ghert, Michelle A.	3B (Wright Medical Technology, Inc.); 8 (Bone and Joint Research); 9 (Musculoskeletal Tumor Society; Orthopaedic Research Society)
Ghivizzani, Steven	(n) Nothing
Ghosh, Mithua	(n) Nothing
Gibbons, Max	3B (Biomet); 3C (Biomet)
Gibbons, Maxime	9 (British Orthopaedic Oncology Society)
Gibbs, C. Parker	3B (Exactech, Inc); 8 (Journal of Bone and Joint Surgery - American; Orthopedics); 9 (American Orthopaedic Association; Musculoskeletal Tumor Society)
Giele, Henk	7 (Journal of Hand Surgery - British ,Oxford university press)
Gilg, Magdalena Maria	(n) Nothing
Gilja, Shivee	(n) Nothing
Gilotra, Mohit	(n) Nothing
Giordano, Alessandra	(n) Nothing
Giordano, Sharon	8 (Cancer, Journal of Clinical Oncology); 9 (American Society of Clinical Oncology)
Gitelis, Steven	3B (Stryker; Wright Medical Technology, Inc.); 4 (Wright Medical Technology, Inc.;)
Giwa, Suleiman Olayiwola	(n) Nothing

Gocer, Hasan	(n) Nothing
Goh, Geraldine	(n) Nothing
Goldin, Amanda	(n) Nothing
Golub, Ivan	(n) Nothing
Gómez, Luis Carlos	(n) Nothing
Gonzalez, Roberto	(n) Nothing
Goodheart, Jacklyn	(n) Nothing
Goodman, Mark A.	(n) Nothing
Goodman, Zachary A.	(n) Nothing
Gooldy, Timothy	(n) Nothing
Gopalakrishnan, Vancheswaran	(n) Nothing
Gorgun, Baris	(n) Nothing
Goryn, Tomasz	(n) Nothing
Gosheger, Georg	(n) Nothing
Gosling, Lucinda Charlotte	3A (DJ Orthopaedics)
Gowani, Zain Sherali	(n) Nothing
Goyal, Chatar	(n) Nothing
Gracia, Isidro	(n) Nothing
Grammatopoulos, George A.	(n) Nothing
Grande, Daniel A.	9 (ICRS)
Graziani, Tiziano	(n) Nothing
Greenberg, David Daniel	9 (Musculoskeletal Tumor Society)
Greenfield, Edward M.	8 (Journal of Biological Chemistry; Journal of Orthopaedic Research)
Gregory, Jonathan James	(n) Nothing
Griffin, Anthony M.	(n) Nothing
Grignani, Giovanni	2 (Norvartis); 5 (PharaMar, Bayer, Novartis)
Grigoriou, Emmanouil	(n) Nothing
Grimer, Robert John	5 (Amgen Co); 8 (Sarcoma)
Grimsrud, Courtney M.	(n) Nothing
Grinsell, Damien	(n) Nothing
Gross, Jordan Scott	(n) Nothing
Groundland, John	(n) Nothing
Guadagnolo, Ashleigh	(n) Nothing
Guijarro, Maria V.	(n) Nothing
Gulia, Ashish	(n) Nothing
Gundle, Kenneth Robert	(n) Nothing
Guo, Hai Hua	(n) Nothing
Guo, Wei	(n) Nothing
Guo, Yi	(n) Nothing
Guo, Zheng	(n) Nothing
Gupta, Sandeep	(n) Nothing
Gurich, Richard William	(n) Nothing
Gutowski, Christina J.	(n) Nothing
Hackbarth, Donald A.	6 (Musculoskeletal Transplant Foundation (Serve on Board of Directors of MTF))
Hackney, Lauren Allyson	(n) Nothing
Hagmann, Michael	(n) Nothing
Haldar, Anil	(n) Nothing
Halpern, Jennifer	(n) Nothing
Halverson, Schuyler J.	(n) Nothing
Hamada, Shunsuke	(n) Nothing
Hamdy, Neveen Agnes Therese	5 (Amgen Co)
Han, Ilkyu	9 (Connective Tissue Oncology Society)
Hanselman, Andrew	(n) Nothing
Hansen, Bjarne Hauge	(n) Nothing
Hanssen, Arlen D.	1 (Stryker); 5 (Stryker); 7 (Elsevier); 9 (International Congress for Joint Reconstruction (ICJR))
Hardes, Jendrik	(n) Nothing
Harimaya, Katsumi	(n) Nothing
Harrington, Daniel A.	4 (Polyvascular)
Hartley, Katherine G.	(n) Nothing
Harveldt, Stefan	(n) Nothing
Harwood, Jared L.	(n) Nothing
Hasan, Syed Ashfaq	9 (AAOS)
Hasegawa, Hiroaki	(n) Nothing
Hasenoehrl, Timothy	(n) Nothing
Haskoor, John	(n) Nothing
Haupt, Edward	(n) Nothing
Hawaldar, Rohini	(n) Nothing
Hayashi, Katsuhiro	(n) Nothing
Hayden, Brett	(n) Nothing
Hayden, James B.	1 (Biomet); 9 (AAOS)
Haydon, James B.	8 (Current Orthopaedic Practice); 9 (American Orthopaedic Association)
He, Jing	(n) Nothing
Healey, John H.	3B (Daiichi- Sankyo); 3C (Illuminoss); 7 (Clinical Orthopaedics and Related Research;); 8 (Clinical Orthopaedics and Related Research; Journal of Orthopaedic Science); 9 (Association of Bone and Joint Surgeons; Musculoskeletal Tumor Society; Orthopaedic Research Society; Orthopaedic Research and Education Foundation; Musculoskeletal Transplant Foundation ; AAOS)
Hellman, Michael David	(n) Nothing
Henrichs, Marcel-Philipp	(n) Nothing
Henshaw, Robert Mikael	5 (Amgen Co; Norvartis); 9 (Member, Sarcoma Education Committee American Society of Clinical Oncology, Board member, Mattie Miracle Cancer Foundation; Musculoskeletal Tumor Society)
Hernandez, Adriana	(n) Nothing
Herschbach, Peter	(n) Nothing
Hettwer, Werner	(n) Nothing
Hickok, Noreen J.	3B (AstraZeneca/MedImmune); 4 (Pfizer); 5 (Synergy Medical; Zimmer)
Higuchi, Takashi	(n) Nothing
Hindso, Klaus	7 (FADL's forlag, Copenhagen (Danish)); 9 (Danish Orthopaedic Society)
Hirata, Takeshi	(n) Nothing
Hish, Alexander	(n) Nothing
Hiz, Murat	(n) Nothing
Ho, Kenneth	(n) Nothing
Ho, Shuchien	(n) Nothing
Hoang, Bang H.	8 (Sarcoma, Clinics in Orthopaedic Surgery); 9 (Musculoskeletal Tumor Society)
Hoang, Kevin	(n) Nothing
Hobusch, Gerhard Martin	(n) Nothing
Hofer, Christian	3A (Otto Bock Healthcare Products GmbH)
Hogendoorn, Pancras C.W.	(n) Nothing
Holt, Ginger E.	9 (American Orthopaedic Association; Musculoskeletal Tumor Society)
Hongsaprabhas, Chindanai	(n) Nothing
Hopper, Jette	(n) Nothing
Hopyan, Sevan	9 (Pediatric Orthopaedic Society of North America)
Hornicek, Francis J.	3B (BioMedValley Discoveries; Stryker); 5 (Stryker); 6 (Biomet); 7 (Amyrsis; McGraw Hill; UpToDate; Wiley); 8 (Journal of Orthopedic Surgery; Journal Surgical Oncology); 9 (American Association of Tissue Banks; FDA; ISOLS)
Horstmann, Peter Frederik	(n) Nothing
Hoshi, Manabu	(n) Nothing
Houdek, Matthew	(n) Nothing
Hu, Yan	(n) Nothing
Huang, Gang	(n) Nothing
Huang, Lin	(n) Nothing
Huo, Jinhai	(n) Nothing
Hushmendy, Shazaan	(n) Nothing
Hyddmark, Emma Maria Viktoria	9 (AACR-American Association for Cancer Research)
Hylla, Elisabeth	(n) Nothing
Iamthanaporn, Khanin	(n) Nothing
Idowu, Oluwaseyi	(n) Nothing
Igarashi, Kentaro	(n) Nothing
Ikuta, Kunihiro	(n) Nothing
Imanishi, Jungo	(n) Nothing

Inatani, Hiroyuki	(n) Nothing
Ippolito, Joseph Anthony	(n) Nothing
Ippolito, Vincenzo	(n) Nothing
Ishiguro, Naoki	2 (Chugai Pharmaceutical Co Ltd; Abbott; Astellas Pharma Inc; Bristol-Myers Squibb; Daiichi-Sankyo; Eisai Co Ltd; Hisamitsu Pharmaceutical Co Inc; Janssen Pharmaceutical K.K; Kaken Pharmaceutical Co Ltd; Mitsubishi Tanabe Pharmaceutical; Otsuka Pharmaceutical Co Ltd; Pfizer; Taisho Toyama Pharmaceutical Co Ltd; Takeda Pharmaceutical Co Ltd)
Ishii, Midori	(n) Nothing
Ituarte, Philip H.G.	(n) Nothing
Iwai, Tadashi	(n) Nothing
Iwamoto, Yukihide	8 (Journal of Orthopaedic Science); 9 (Japanse Orthopaedic Association)
Iwanaga, Ryuta	(n) Nothing
Iwata, Shintaro	(n) Nothing
Jackson, William	2 (Biomet; Smith & Nephew; Stryker; DePuy, A Johnson & Johnson Company); 3B (Biomet); 4 (Smith & Nephew); 9 (BASK)
Jacobs, Andrew	(n) Nothing
Jagiello, Jakub Maurycy	(n) Nothing
Jamieson, Christina	5 (AMBRX)
Jang, Woo Young	(n) Nothing
Janssen, Stein Jasper	(n) Nothing
Jensen, Lisa Toft	(n) Nothing
Jeray, Kyle James	3B (Zimmer); 5 (Synthes); 8 (Journal of Bone and Joint Surgery - American; Journal of Orthopaedic Trauma); 9 (American Orthopaedic Association; Orthopaedic Trauma Association; Southeastern Fracture Consortium)
Jesus-Garcia, Reynaldo	(n) Nothing
Jeys, Lee	2 (Biomet); 3B (Biomet); 5 (Biomet)
Ji, Tao	(n) Nothing
Jiang, Jimmy	(n) Nothing
Jinchang, Lu	(n) Nothing
Jindal, Rohit	(n) Nothing
Jitnuyanont, Akarathan	(n) Nothing
Jones, Kevin Bruce	7 (My wife is the managing member of a small publisher, Tallow Book LLC, which publishes one book related to medical uncertainty.)
Jones, Robin Lewis	3A (Seattle Genetics); 4 (Wife: Seattle Genetics)
Joo, Min Wook	(n) Nothing
Jørgensen, Peter Holmberg	(n) Nothing
Jovic, Gordana	(n) Nothing
Joyce, David	(n) Nothing
Jung, Sung-Taek	(n) Nothing
Jutte, Paul C.	3B (Philips)
K Manoj	(n) Nothing
Kagan, Ryland	(n) Nothing
Kaider, Alexandra	(n) Nothing
Kainhofer, Valentin	(n) Nothing
Kaiser, Courtney	(n) Nothing
Kakar, Sanjeev	1 (Arthrex, Inc); 3B (Arthrex, Inc; Skeletal Dynamics); 5 (Arthrex, Inc)
Kakunaga, Shigeki	(n) Nothing
Kamath, Navaneeth S.	(n) Nothing
Kanamarlapudi, Manoj	(n) Nothing
Kanaya, Fuminori	(n) Nothing
Kaneko, Kazuo	(n) Nothing
Kang, Hyunwoo Paco	(n) Nothing
Kang, Jin-Woo	(n) Nothing
Kang, Seungcheol	(n) Nothing
Kang, Yong Koo	(n) Nothing
Kantharuban, Shanjitha	(n) Nothing
Karau, Melissa Jean	(n) Nothing
Karaytug, Kayahan	(n) Nothing
Karnes, Jonathan	5 (Amniox Medical, Inc)
Kashigar, Aidin	(n) Nothing
Kasko, Andrea	(n) Nothing
Katagiri, Hirohisa	(n) Nothing
Kato, Hiroyuki	(n) Nothing
Kato, Takashi	(n) Nothing
Kawai, Akira	(n) Nothing
Kawashima, Hiroyuki	(n) Nothing
Keedy, Vicki	5 (Eli Lilly; Johnson & Johnson; Pfizer)=
Kelly, Cynthia M.	(n) Nothing
Kenan, Samuel	(n) Nothing
Kenan, Shachar	(n) Nothing
Ketonis, Constantinos	(n) Nothing
Khan, Shah Alam	(n) Nothing
Khan, Shahnawaz	(n) Nothing
Khan, Zeeshan	(n) Nothing
Khanna, Nehal	(n) Nothing
Khanuja, Harpal Singh	8 (Journal of Arthroplasty); 9 (AAOS; American Association of Hip and Knee Surgeons)
Kiatisevi, Piya	(n) Nothing
Killen, Cameron	(n) Nothing
Kim, Han-Soo	(n) Nothing
Kim, Isaac	(n) Nothing
Kim, Kyung II	(n) Nothing
Kim, Tae	(n) Nothing
Kim, Wanlim	(n) Nothing
Kim, Yongji	(n) Nothing
Kim, Yoon Vin	(n) Nothing
Kim, Youngwoo	(n) Nothing
Kimura, Hiroaki	(n) Nothing
King, David M.	(n) Nothing
Kir, Mustafa Caglar	(n) Nothing
Kirchner, Rainer	2 (Alphatec Spine; Merete medical); 3B (Alphatec Spine; Arthrocare); 5 (Alphatec Spine)
Kirsch, David	1 (Lumicell Inc); 3B (Lumicell Inc); 4 (Lumicell Inc); 5 (Lumicell Inc); 7 (UpToDate); 9 (SARC)
Kito, Munehisa	(n) Nothing
Klein, Alexander	(n) Nothing
Klement, Mitchell Robert	(n) Nothing
Kliethermes, Stephanie	(n) Nothing
Kobayashi, Eisuke	(n) Nothing
Kohsaka, Shinji	(n) Nothing
Kolbitsch, Paul	(n) Nothing
Kong, Chang-Bae	(n) Nothing
Kortlever, Joost	(n) Nothing
Korukian, Marcos	(n) Nothing
Kotrych, Daniel	(n) Nothing
Kozak, Kevin R.	3B (Cellectar Biosciences, Inc); 4 (Cellectar Biosciences, Inc; Co-D Therapeutics, Inc)
Kozawa, Eiji	(n) Nothing
Kozusko, Steven D.	(n) Nothing
KR, Nagaraj	(n) Nothing
Krailo, Mark	(n) Nothing
Krol, Augustinus	(n) Nothing
Krzywda-Pogorzelska, Joanna	(n) Nothing
Kubo, Toshikazu	(n) Nothing
Kubota, Daisuke	(n) Nothing
Kulidjian, Anna Andranik	2 (Stryker); 3B (Stryker); 8 (SICOT)
Kumagai, Kenji	(n) Nothing
Kumbasar Sirin, Basak	(n) Nothing
Kumta, Shekhar M.	8 (Biomed Central, Journal of Orthopaedics)
Kunakornsawat, Sombat	(n) Nothing
Kunisada, Toshiyuki	(n) Nothing
Kurra, Swamy	(n) Nothing
Kutscha-Lissberg, Paul	(n) Nothing
Lahoda, Lars-Uwe	(n) Nothing
Laitinen, Minna	(n) Nothing
Lajoie, Lidie	(n) Nothing
Lalli,Trapper	(n) Nothing
Lam, Ying Lee	9 (Hong Kong Society of Myeloma)
Lang, Nikolaus Wilhelm	(n) Nothing
Langan, Justin William	(n) Nothing

Laskar, Siddhartha	(n) Nothing
Lazar, Alexander	2 (Norvartis; Merck; GlaxoSmithKline; Pfizer; Astra Zeneca); 3A (GE Healthcare); 4 (GE Healthcare; 3M Healthcare; Johnson & Johnson; Medco; Teva Pharmaceuticals; Zimmer Holdings Inc); 7 (Saunders/Mosby-Elsevier); 8 (Journal of Cutaneous Pathology (Wiley-Blackwell); Laboratory Investigation (Nature))
Lazarides, Alexander Leandros	(n) Nothing
Leddy, Lee Rodney	(n) Nothing
Lee, Francis Young-In	5 (Musculoskeletal Transplant Foundation; National Institutes of Health (NIAMS & NICHD); OREF); 9 (Musculoskeletal Tumor Society)
Lee, Jong Seok	(n) Nothing
Lee, Stella	(n) Nothing
Leerapun, Taninnit	2 (Eli Lilly; Smith & Nephew)
Lehner, Burkhard	2 (KCI)
Leijerzapf, Nicolette	(n) Nothing
Leithner, Andreas	5 (Johnson & Johnson); 9 (European Muskuloskeletal Oncology Society (EMSOS))
Lenze, Florian	(n) Nothing
Lenze, Ulrich	(n) Nothing
Lerman, Daniel M.	(n) Nothing
Letson, G. Douglas	3B (Stryker)
Leung, Stephanie	(n) Nothing
Levin, Adam S.	(n) Nothing
Levine, Benjamin	(n) Nothing
Levings, Padraic P.	(n) Nothing
Levy, David M.	(n) Nothing
Lewallen, David G.	1 (Mako/Stryker; Pipeline; Zimmer); 2 (Zimmer); 3B (pipeline biomedical holdings; Zimmer); 3C (Ketai Medical Devices); 4 (Ketai Medical Devices); 9 (American Joint Replacement Registry; Orthopaedic Research and Education Foundation)
Lewis, Rebecca	(n) Nothing
Lewis, Valerae O.	5 (Stryker); 8 (Hindawi Publishing Corporation; Orthopedics Today); 9 (AAOS; AAOS; Western Orthopaedic Association)
Li, Bin	(n) Nothing
Li, Dasen	(n) Nothing
Li, Jianmin	8 (Chinese Journal of Orthopaedics); 9 (The Orthopaedic Branch of Chinese Medical Association)
Li, Liang	(n) Nothing
Li, Xin	(n) Nothing
Li, Yuan	(n) Nothing
Li, Zhao	(n) Nothing
Li, Zhenfeng	(n) Nothing
Liang, Haixiang	(n) Nothing
Liegl-Atzwanger, Bernadette	(n) Nothing
Lin, Patrick P.	(n) Nothing
Lin, Sue-Hwa	(n) Nothing
Lin, Yu-Min	(n) Nothing
Linares-Gonzalez, Luis Miguel	(n) Nothing
Linari, Alessandra	(n) Nothing
Lindberg, Antoinette W.	3A (Oppo Medical)
Lindeque, Bennie G.P.	8 (Orthopedics)
Lindsay, Adam Douglas	(n) Nothing
Lindsey, Brock A.	5 (Biomet)
Little, Alissa Beth	(n) Nothing
Liu, Wei Feng	(n) Nothing
Liu, Weihai	(n) Nothing
Loftin, Amanda	(n) Nothing
Long, Hua	(n) Nothing
Lozano Calderon, Santiago	(n) Nothing
Lu, Yuan	(n) Nothing
Lukaszewski, Bartosz	(n) Nothing
Luu, Hue H.	3B (Stryker); 9 (Musculoskeletal Tumor Society)
Lye Hock, Tan	(n) Nothing
Ma, Baoan	(n) Nothing
Maale, Gerhard E.	1 (biocomposites; Smith & Nephew); 4 (NRG)
Maccauro, Giulio	(n) Nothing
Macdonald, Hamish Ian	(n) Nothing
Macdonald, Kevin	(n) Nothing
Madhavamurthy, Raghunandan	(n) Nothing
Madhurkar, Rohit	(n) Nothing
Maehara, Hiroki	(n) Nothing
Mahadevan-Jansen, Anita	(n) Nothing
Mahendra, Ashish	(n) Nothing
Mahon, Brett	(n) Nothing
Majoor, Bastiaan Cornelis Jules	(n) Nothing
Mak, Ka Lok	(n) Nothing
Maldonado, Margarita Maria	(n) Nothing
Malliaris, Stephanie	(n) Nothing
Manivel Juan C	(n) Nothing
Mann, Kenneth A.	(n) Nothing
Maradit-Kremers, Hilal	(n) Nothing
Marina, Neyssa	6 (Jazz Pharmaceuticals)
Marini, Eleonora	(n) Nothing
Mariotti, Federica	(n) Nothing
Marone, Stefano	(n) Nothing
Martin, Henno Wolfgang	(n) Nothing
Martinez, Mariane	(n) Nothing
Martinez, Maximilian	(n) Nothing
Martin-Pena, Alfonso	(n) Nothing
Masuda, Koichi	5 (Anges MG; Biotime; Nipppon Zoki)
Matsunobu, Tomoya	(n) Nothing
Matthews, Christopher	9 (AAOS)
Mattioli-Lewis, Tressa	(n) Nothing
Maurer-Ertl, Werner	(n) Nothing
Mavrogenis, Andreas	(n) Nothing
Maxted, Michael Cassidy	(n) Nothing
Mayo Clinic	(n) Nothing
McGarry, Sean V.	3B (DePuy, A Johnson & Johnson Company; Musculoskeletal Transplant Foundation); 5 (Musculoskeletal Transplant Foundation); 9 (National Comprehensive Cancer Center Bone Committee and Soft Tissue Committee)
McGough, Richard Louis	3B (Stryker); 5 (DePuy, A Johnson & Johnson Company); 9 (Musculoskeletal Tumor Society)
McKenna, David	6 (Stanmore Implants Worldwide)
McNair, Mark William	(n) Nothing
Meijer, Sjoerd Theodoor	(n) Nothing
Meirjs, Timion	(n) Nothing
Mendanha, William	(n) Nothing
Mesko, Nathan Wesley	(n) Nothing
Metadilogkul Science	(n) Nothing
Mettelsiefen, Jan	(n) Nothing
Michels, Ryan F.	(n) Nothing
Midtling, Christopher	(n) Nothing
Milano, Federico Edgardo	(n) Nothing
Miles, Jonathoan	2 (Biomet; Smith & Nephew); 3C (Link Orthopaedics; Smith & Nephew); 7 (Hodder Arnold publishing London, UK); 8 (Grand Rounds)
Millan, Angelica	(n) Nothing
Miller, Benjamin J	9 (Musculoskeletal Oncology Research Initiative; Musculoskeletal Tumor Society)
Mimata, Yoshikuni	(n) Nothing
Miura, Hiromasa	1 (Senko Medical Instrument Mfg. Co., Ltd.); 3B (Zimmer)
Miwa, Shinji	(n) Nothing
Miyawaki, Joji	(n) Nothing
Mizoshiri, Naoki	(n) Nothing
ML, Sheela	(n) Nothing

Mohammadi, Daniel Kazemi	(n) Nothing
Montgomery, Corey O.	(n) Nothing
Moon, Bryan Scott	9 (AAOS; Western Orthopaedic Association)
Moore, Jeffrey	(n) Nothing
Moran, Steven L.	1 (Integra,); 3B (Integra); 3C (Axogen; Conventus); 4 (Conventus, Axogen); 8 (Hand)
Morris, Carol D.	9 (AAOS; Musculoskeletal Tumor Society)
Morris, Michael D.	(n) Nothing
Morris, William Zachary	(n) Nothing
Mortalena, Isabelle	(n) Nothing
Mortera, Stefano	(n) Nothing
Motamedi, Stefano	(n) Nothing
Motamedi, Kambiz	(n) Nothing
Mueller, Daniel Andreas	8 (Musculoskeletal Regeneration)
Mukaihara, Kenta	(n) Nothing
Muldong, Michelle Taleon	(n) Nothing
Mueller, Daniel Andreas	8 (Musculoskeletal Regeneration)
Mumith, Aadil	(n) Nothing
Munoz, Alberto	6 (Link Orthopaedics)
Muramatsu, Keiichi	(n) Nothing
Murray, Drew E.	(n) Nothing
Muscolo, Domingo Luis	8 (Clinical Orthopaedics and Related Research; Orthopedics)
Myoui, Akira	4 (MMT, Co, Ltd.); 8 (Journal of Artificial Organs; Journal of Orthopaedic Science)
Na, Bo Ram	(n) Nothing
Naka, Norifumi	(n) Nothing
Nagai, Taro	(n) Nothing
Nalty, Theresa	(n) Nothing
Naqvi, Manahil Natasha	(n) Nothing
Nasri, Elham	(n) Nothing
Natarajan, Mayil Vahanan	(n) Nothing
Nayak, Prakash R.	(n) Nothing
Neal, Tom	(n) Nothing
Neilson, John Curtis	6 (Musculoskeletal Transplant Foundation)
Nelson, Scott D.	(n) Nothing
Nest, Alexandra	(n) Nothing
Ng, Vincent	(n) Nothing
Ngan, Samuel	(n) Nothing
Nguyen, John Quan Minh	(n) Nothing
Nguyen, The-Quyen	(n) Nothing
Nielsen, G. Petur	(n) Nothing
Niemeier, Thomas	(n) Nothing
Nikomarov, David	(n) Nothing
Niland, Joseph Edward	(n) Nothing
Nishida, Hideji	(n) Nothing
Nishida, Yoshihiro	2 (Eli Lilly; Stryker); 3B (Seikagaku); 5 (Pfizer)
Nishimori, Yasuhiro	(n) Nothing
Nishisho, Toshihiko	6 (MSD)
Niu, Xiaohui	(n) Nothing
Nizami, Saqib	(n) Nothing
Nomura, Issei	(n) Nothing
Norambuena, German Arsenio	(n) Nothing
Nordin, Ahmad	(n) Nothing
Nota, Sjoerd	(n) Nothing
Nottrott, Markus	(n) Nothing
Numkarunarunrote, Numphung	(n) Nothing
Nunn, Brandi	(n) Nothing
Nuttall, James	(n) Nothing
Nymark, Tine	(n) Nothing
Nystrom, Lukas M.	(n) Nothing
Obata, Hideto	8 (Japanese Journal of Clinical Oncology)
O'Connor, Maggie	(n) Nothing
O'Donnell, Richard John	9 (National Comprehensive Cancer Network; Northern California Orthopaedic Society; Orthopaedic Surgical Osseointegration Society; Sarcoma Alliance)
Oebisu, Naoto	(n) Nothing
Oest, Megan E.	(n) Nothing
Ofluoglu, Onder	(n) Nothing
Oh, Kyung-Il	(n) Nothing
Okamoto, Masanori	(n) Nothing
Okuno, Scott	(n) Nothing
Omori, Toshinori	(n) Nothing
Ortiz Cruz, Eduardo Jose	8 (Revista Española De Cirugia Ortopedica y Traumatologia)
Osaki, Shuhei	(n) Nothing
O'Shea, Timothy	3B (ApoPharma); 6 (Norvartis)
O'Sullivan, Brian	(n) Nothing
Ota, Takehiro	(n) Nothing
O'Toole, Gary C.	(n) Nothing
Otsuka, Takanobu	(n) Nothing
Overbosch, Jelle	(n) Nothing
Ozaki, Toshifumi	(n) Nothing
Ozgur, Sinan	(n) Nothing
Pai, Vishwas D.	(n) Nothing
Pala, Elisa	(n) Nothing
Paliwal, Arpit	3A (Happy Reliable Surgeries Pvt. Ltd.); 4 (Happy Reliable Surgeries Pvt. Ltd.)
Palma, Mark James	3A (Bayer); 4 (Merck; Merck)
Palmer, Glyn	(n) Nothing
Pan, Tianhong	(n) Nothing
Pang, Yinuo	3A (Norvartis); 4 (Norvartis)
Panotopoulos, Joannis	(n) Nothing
Papagelopoulos, Panagiotis J.	(n) Nothing
Park, Christine	(n) Nothing
Park, Kwan	(n) Nothing
Park, Seung Chol	(n) Nothing
Park, Yeong Kyoon	(n) Nothing
Parry, Michael Christopher	(n) Nothing
Parvizi, Javad	3B (Smith & Nephew; Zimmer); 4 (CD Diagnostics; Hip Innovation Technology; PRN); 5 (3M; Cempra; CeramTec; DePuy, A Johnson & Johnson Company; National Institutes of Health (NIAMS & NICHD); OREF; Smith & Nephew; StelKast; Stryker; Zimmer); 7 (Datatrace; Elsevier; Jaypee Publishing; SLACK Incorporated; Wolters Kluwer Health - Lippincott Williams & Wilkins); 8 (Journal of Arthroplasty; Journal of Bone and Joint Surgery - American; Journal of Bone and Joint Surgery - British); 9 (Eastern Orthopaedic Association; Muller Foundation)
Patel, Mital Sumankumar	(n) Nothing
Patel, Raj G.	(n) Nothing
Patel, Robin	1 (Up-to-Date); 3B (Curetis (Monies paid to Mayo Clinic)); 5 (3M; Actavis; Cubist; Curetis; HBMS; nanoMR); 8 (Journal of Clinical Microbiology); 9 (Infectious Diseases Society of America; American Society for Microbiology)
Patel, Tyag	(n) Nothing
Patterson, Francis Robert	3C (Merete); 5 (Biomet; Synthes)
Peabody, Terrance D.	8 (Journal of Bone and Joint Surgery - American; South African orthopaedic Journal); 9 (American Orthopaedic Association; American Board of Orthopaedic Surgery, Inc.)
Peacock, Jacqueline D.	(n) Nothing
Pedemonte, Facundo	(n) Nothing
Peiró, Ana	(n) Nothing
Peleteiro Pensado, Manuel	(n) Nothing
Pence, Isaac James	(n) Nothing
Penny, Alexander	(n) Nothing
Perera, Warren	(n) Nothing
Peters, Melissa Marie	(n) Nothing
Petersen, Michael M.	5 (Biomet; Zimmer)
Peterson, Joel	(n) Nothing
Phimolsarnti, Rapin Peter	9 (Administrative secretary of the Thai Musculoskeletal Tumor Society)

Piana, Raimondo	(n) Nothing
Pianta, Marcus John	(n) Nothing
Picado, Alfonso Vaquero	(n) Nothing
Piccioli, Andrea	8 (Injury - Elsevier)
Pieber, Karin	(n) Nothing
Pienkowski, Andrzej	(n) Nothing
Pinot, Pascale Emilie	3A (Norvartis); 4 (Norvartis)
Pira, Enrico	(n) Nothing
Piraino, Ilaria	(n) Nothing
Piuzzi, Nicolas Santiago	(n) Nothing
Piyaskulkaew, Chaiwat	(n) Nothing
Plotkin, Benjamin	(n) Nothing
Pohlig, Florian	(n) Nothing
Pollock, Rob	2 (Stanmore Implants Worldwide); 9 (British Orthopaedic Oncology Society)
Ponce, Brent A.	2 (Mitek; Tornier); 3B (Acumed, LLC; Tornier); 4 (VIPAAR); 5 (Arthrex, Inc; Tornier)
Porter, Scott Edward	9 (American Orthopaedic Association)
Posey, Kristi Kay	(n) Nothing
Pot, Johan	(n) Nothing
Poudel, Rishi	(n) Nothing
Prabhudesai, Shilpa	(n) Nothing
Prasad, Anamika	(n) Nothing
Price, Andrew J.	2 (Biomet; Smith & Nephew; Stryker; DePuy, A Johnson & Johnson Company); 3B (Biomet; DePuy, A Johnson & Johnson Company; Smith & Nephew; Stryker); 5 (Biomet; Genzyme; Smith & Nephew;); 9 (British Orthopaedic Association; International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine; British Association of Surgery for the Knee ;)
Prieto, Hernan	(n) Nothing
Puchner, Stephan	(n) Nothing
Punt, Stephanie	(n) Nothing
Puri, Ajay	8 (Bone and Joint 360; Sarcoma)
Quiney, Frederick, Robert Eugene	7 (Oxford University press. Jane Hurst (mother) receives royalties for publication of reference books (subject - clinical genetics))
Rædkjær, Mathias	(n) Nothing
Raja, Anand	(n) Nothing
Rajani, Rajiv	3A (Avicenna Media LLC); 4 (Johnson & Johnson; Pfizer); 8 (Annals of Orthopaedics and Rheumatology; Austin Journal of Orthopaedics); 9 (AAOS; AAOS; AAOS)
Ramanujan, Vishnu	(n) Nothing
Ramasamy, Arul	8 (Case Reports in Orthopaedics)
Randall, R. Lor	2 (Biomet); 5 (Musculoskeletal Transplant Foundation); 8 (Annals of Surgical Oncology; Clinical Orthopaedics and Related Research; Journal of Surgical Oncology; Peer Case; World Journal of Orthopaedics); 9 (AAOS; American Orthopaedic Association; American Society of Clinical OncologyASCO; Association of Bone and Joint Surgeons; Children's Oncology Group; Children's Oncology Group (COG); Connective Tissue Oncology Society; Musculoskeletal Transplant Foundation; Musculoskeletal Transplant Foundation; Musculoskeletal Tumor Society; National Cancer Institute; National Cancer Institute, National Institute of Health; National Comprehensive Cancer Network; National Comprehensive Cancer Network; Sarcoma Foundation of America; The MHE Research Foundation)
Rao, Raghavendra	(n) Nothing
Rapp, Timothy	5 (Research or Institutional Support- Department of Orthopaedic Surgery, Hospital for Joint Diseases at NYU Langone Medical Center:, AO Spine,Arthrex,Arthritis Foundation–NY,Chapter,Arthritis National ,Research F oundation,Asterland,Biomet,Depuy,Encore,Exactech/ DJO,Ferring Pharmaceuticals,Geisinger ,Integra,Johnson & Johnson,KCI,Medtronic,NIH,OMEGA,OREF ,Orthopaedic Trauma Association,Osteosynthesis and Trauma Care Foundation,Paradigm Spine,Progenics,Sbi,Smith and Nephew,Stryker,Surgix,Synthes,); 8 (Clinical Orthopaedics and Related Research,Bulletin of the NYU Hospital for Joint Diseases,American Journal of Orthopaedics); 9 (AAOS; American Board of Orthopaedic Surgery, Inc.)
Raskin, Kevin A.	(n) Nothing
Rastellino, Valentina	(n) Nothing
Rastogi, Shishir	(n) Nothing
Ready, John E.	3B (Smith & Nephew; Stryker)
Recker, Maximiliane	(n) Nothing
Reddy, Krishna I.A.	(n) Nothing
Reid, Risa	(n) Nothing
Reith, John D.	8 (Archives of Pathology and Laboratory Medicine)
Rekhi, Bharat	8 (Case Reports in Urology; Journal of Molecular Biomarkers and Diagnosis; World Journal of Epidemiology and Cancer Prevention)
Rico, Genaro	(n) Nothing
Ritacco, Lucas Eduardo	(n) Nothing
Rivero, Steven	(n) Nothing
Roeder, Falk	(n) Nothing
Rogers, Kenneth J.	(n) Nothing
Roitman, Pablo Daniel	(n) Nothing
Romagnoli, Carlo	(n) Nothing
Romano, Canzio	(n) Nothing
Romantini, Matteo	(n) Nothing
Rosa, Michele Attilio	(n) Nothing
Rose, Peter S.	8 (Journal of Surgical Oncology; Journal of the American Academy of Orthopaedic Surgeons; Yearbook of Orthopedics); 9 (Collaborative Spine Research Foundation)
Rose, Ruth	(n) Nothing
Rosenblum, Anna	(n) Nothing
Rosenthal, Howard G.	2 (Medtronic; Zimmer); 3B (Zimmer); 3C (Carbo-Fix)
Ross, Kirsten	(n) Nothing
Roubenoff, Ronenn	3A (Norvartis); 4 (Norvartis)
Rueten-Budde, Anja	(n) Nothing
Ruggieri, Pietro	3B (Exactech, Inc); 9 (International Society of Limb Salvage)
Rush, David Alan	(n) Nothing
Rutledge, Joe	(n) Nothing
Rychlowska-Pruszynska, Magdalena Emilia	5 (Isofol Medical AB); 9 (Polskie Towarzystwo Hematoonkologii Dzieciecej)
S, Shivakumar Swamy	(n) Nothing
Sabbatino,Francesco	(n) Nothing
Sairyo, Koichi	2 (Alcare; Alphatec Spine; DePuy, A Johnson & Johnson Company; Eli Lilly; Pfizer); 8 (Spine)
Saito, Tsuyoshi	(n) Nothing
Salduz, Ahmet	(n) Nothing
Sampath Kumar, Venkatesan	(n) Nothing
Sánchez, Ricardo	8 (Revista Colombiana de Cancerología)
Sanchez-Sotelo, Joaquin	1 (Stryker); 2 (Merck); 3B (Tornier); 5 (Stryker); 7 (Elsevier; Journal of Shoulder and Elbow Surgery); 8 (Journal of Shoulder and Elbow Surgery); 9 (AAOS - International Committee; American Shoulder and Elbow Surgeons)
Sandupatla, Bhanupriya Pundarikam	(n) Nothing
Sankhala, Kamalesh Kumar	(n) Nothing
Santos, Telma	3A (Johnson & Johnson)
Satcher, Robert L.	9 (AAOS)
Say, Ferhat	(n) Nothing
Sayde, Bridget	(n) Nothing
Scarborough, Mark T.	3B (Exactech, Inc; Exactech, Inc); 7 (Up to date); 9 (International society of limb salvage)
Schaap, Gerard	(n) Nothing
Scharschmidt, Thomas J.	5 (Millenium Pharmaceuticals); 8 (BMC Cancer; Journal of Surgical Oncology)
Schauwecker, Johannes	(n) Nothing
Scheinemann, Peter	3A (implantcast); 9 (ISOLS)
Schenk, Lia Sabrina	3A (implantcast GmbH)
Schkade, David	(n) Nothing
Schneiderman, Brian Andrew	1 (DePuy, A Johnson & Johnson Company; Medtronic)
Scholten, Donald Jay	(n) Nothing
Schramm, Ursula	3A (Norvartis); 4 (Norvartis)
Schulman, Caroline	(n) Nothing
Schutgens, Emile	(n) Nothing
Schwab, Joseph Hasbrouck	2 (Synthes,Stryker Spine); 3B (biom'up); 6 (Globus Medical,stryker); 9 (Biom'up)
Schwartz, Adam	(n) Nothing
Schwartz, Herbert S.	6 (Musculoskeletal Transplant Foundation); 9 (American Board of Orthopaedic Surgery, Inc.)
Scoccianti, Guido	(n) Nothing

Scott, Elizabeth	(n) Nothing
Scotto, Gennaro Maria	(n) Nothing
Seeger, Leanne L.	(n) Nothing
Segura, Facundo	(n) Nothing
Segura, Florencio Vicente	(n) Nothing
Segura, Florencio Pablo	(n) Nothing
Segura, Tatiana	(n) Nothing
Seigerman, Daniel	(n) Nothing
Sellevold, Simen	(n) Nothing
Sessa, Sergio	(n) Nothing
Shah, Anand	(n) Nothing
Shapton, John Clayton	(n) Nothing
Sharma, Aadhar	(n) Nothing
Sharma, DN	(n) Nothing
Shehadeh, Ahmad	(n) Nothing
Shellard, Richard	(n) Nothing
Shen, Jingnan	(n) Nothing
Shimada, Satoko	(n) Nothing
Shimozaki, Shingo	(n) Nothing
Shin, Alexander Yong Shik	1 (Trimed); 8 (Techniques in Hand and Upper Extremity Surgery)
Shin, Seung Han	(n) Nothing
Shirai, Toshiharu	(n) Nothing
Shiu, Brian	5 (Synthes)
Shuler, Franklin David	3B (Lilly)
Sierra, Rafael Jose	1 (Biomet,); 2 (Biomet:); 3B (Biomet); 5 (DePuy, A Johnson & Johnson Company; Zimmer; Stryker, Biomet); 8 (Journal of Arthroplasty); 9 (Midamerica orthopedic society, Maurice Mueller Foundation,; American Association of Hip and Knee Surgeons)
Silverstein, Eric Alan	(n) Nothing
Sim, Franklin H.	7 (Saunders/Mosby-Elsevier)
Singh, Arun	(n) Nothing
Skinner, John	3B (MEDACTA); 5 (MEDACTA); 6 (Codirector London Implant Retrieval Centre. The LIRC has received funding from Depuy, Stryker, Zimmer, Biomet, Matthys, Zimmer, Finsbury . All have funded retrieval analysis at LIRC in the last 10 years); 9 (President British Hip Society)
Skubitz, Keith	4 (investments directed by financial manager and may own various pharmaceutical stocks from time to time); 5 (Amgen Co; GlaxoSmithKline)
Slavin, John Leonard	(n) Nothing
Slobogean, Gerard	8 (Journal of Orthopaedic Trauma); 9 (Orthopaedic Trauma Association)
Slullitel, Pablo Ariel	(n) Nothing
Smeland, Sigbjorn	(n) Nothing
Smolle, Maria Anna	(n) Nothing
So, Timothy	(n) Nothing
Somarelli, Jason	(n) Nothing
Somerson, Jeremy S.	(n) Nothing
Song, Lee	(n) Nothing
Song, Wonseok	(n) Nothing
Sørensen, Michala Skovlund	(n) Nothing
Soto, Camilo	(n) Nothing
Soung, Do Yu	(n) Nothing
Sozbilen, Murat Celal	(n) Nothing
Sperling, John William	1 (Biomet; DJ Orthopaedics;); 3B (Tornier;); 8 (Journal of Shoulder and Elbow Surgery; SLACK Incorporated;)
Spiguel, Andre R. do Valle	(n) Nothing
Spinelli, Maria Silva	(n) Nothing
Sridhar, Michael S.	(n) Nothing
Staddon, Arthur P.	5 (Plexicon)
Stamer, Danielle	(n) Nothing
Stavrakis, Alexandra	(n) Nothing
Steadman, Peter B.	(n) Nothing
Steadman, William	(n) Nothing
Steensma, Matthew R.	(n) Nothing
Stephens, Gareth	(n) Nothing
Sternheim, Amir	(n) Nothing
Stevenson, Jonathan Daniel	(n) Nothing
Stihsen, Christoph	(n) Nothing
Stoner, Julie	(n) Nothing
Stoop, Nicky	(n) Nothing
Streitbuerger, Arne	(n) Nothing
Strogus, Kristin	(n) Nothing
Strotman, Patrick	(n) Nothing
Subbanna, Indusekhara	(n) Nothing
Subhadrabandhu, Saran	(n) Nothing
Suehara, Yoshiyuki	(n) Nothing
Suganuma, Seigo	(n) Nothing
Sugath, Subin	(n) Nothing
Sugiu, Kazuhisa	(n) Nothing
Sugiura, Hideshi	(n) Nothing
Sugoor, Pavan Thulasi	(n) Nothing
Sukanthanak, Bhasanan	(n) Nothing
Sultan, Iyad	(n) Nothing
Suman, Byregowda Mambally	(n) Nothing
Sumathi, Vaiyapuri P.	(n) Nothing
Sun, Pepijn	(n) Nothing
Sun, Xin	(n) Nothing
Sun, Yang	(n) Nothing
Sungur, Mustafa	(n) Nothing
Suokas, Anu	(n) Nothing
Susa, Michiro	(n) Nothing
Sydes, Matthew R.	(n) Nothing
Szafranski, Andrzej	(n) Nothing
Szczech, Bartlomiej	(n) Nothing
Sze, Kwan Yik	(n) Nothing
Szkandera, Joanna	(n) Nothing
Tada, Hiroshi	(n) Nothing
Tada, Kaoru	(n) Nothing
Takagi, Tatsuya	(n) Nothing
Takahashi, Mitsuru	(n) Nothing
Takeda, Ken	(n) Nothing
Takeuchi, Akihiko	(n) Nothing
Tanaka, Atsushi	(n) Nothing
Tanaka, Takaaki	(n) Nothing
Tang, Chih-Hsin	(n) Nothing
Tang, Qinglian	(n) Nothing
Tang, Shun	(n) Nothing
Tang, Xiaodong	(n) Nothing
Tanner, Stephanie Lewis	(n) Nothing
Tanzawa, Yoshikazu	(n) Nothing
Tap, William	3B (Eli Lilly; EMD Serono; Janssen; Norvartis; Plexxikon)
Tartaglione, Jason	(n) Nothing
Taunton, Michael J.	3B (DJ Orthopaedics); 5 (Stryker); 8 (Journal of Arthroplasty); 9 (AAOS; Minnesota Orthopedic Society)
Taylor, Adrian	2 (Corin U.S.A.); 3C (Corin U.S.A.)
Taylor, Phillip A.	(n) Nothing
Tedesco, Nicholas S.	(n) Nothing
Teh, Cindy Shuan Ju	(n) Nothing
Terauchi, Ryu	(n) Nothing
Tetik, Cihangir	(n) Nothing
Teunis, Teun	(n) Nothing
Thacker, Mihir	6 (Biomarin- travel and lodging for presentation at a conference); 9 (Pediatric Orthopaedic Society of North America)
Thaisitti, Worapitak	(n) Nothing
Thanakit, Voranuch	(n) Nothing
Thoma, Sofia	(n) Nothing
Thorne, Christopher James	(n) Nothing
Thornley, Patrick	(n) Nothing
Tillman, Roger	(n) Nothing
Toepfer, Andreas	(n) Nothing
Tofte, Josef Nevers	(n) Nothing
Tome, Yasunori	(n) Nothing
Tong, Sandra	3A (Plexxikon Inc.)
Topkar, Mert Osman	(n) Nothing
Toriello, Helga	7 (Oxford University Press); 8 (American Journal of Medical Genetics); 9 (American College of Medical Genetics and Genomics)

Totti, Francesca	(n) Nothing
Traub, Frank	(n) Nothing
Trocle, Ashley	(n) Nothing
Trovarelli, Giulia	(n) Nothing
Trullols Tarragó, Laura	(n) Nothing
TS, Subi	(n) Nothing
Tscuchida, Shinji	(n) Nothing
Tsuchiya, Hiroyuki	5 (Nippon Chemiphar); 8 (International Journal of Clinical Oncology); 9 (International Society of Limb Salvage; Japanese Orthopaedic Association)
Tsukushi, Satoshi	(n) Nothing
Tu, Jian	(n) Nothing
Tucker, Kimberly Victoria	3A (Bristol-Myers Squibb)
Tunn, Per-Ulf	(n) Nothing
Turcotte, Robert Emile	9 (Canadian Orthopaedic Association; Musculoskeletal Tumor Society, Quebec orthopaedic Association. International society of limb salvage)
Turner, Norman S.	(n) Nothing
Tweedy, Sean M.	(n) Nothing
Tyrrell, Prudencia	(n) Nothing
Ueda, Takafumi	2 (Daiichi-Sankyo Company, and Taiho Pharmaceutical); 5 (Taiho Phamaceutical, Eizai, Daiichi-Sankyo Company, MSD and GSK)
Uehara, Fuminari	(n) Nothing
Uehara, Takenori	(n) Nothing
Umehara, Keitaro	(n) Nothing
Uotani, Koji	(n) Nothing
Urakawa, Hiroshi	(n) Nothing
Valentin, Marie-Anne	3A (Norvartis); 4 (Norvartis)
Van De Sande, Michiel	6 (Daiichi; Implantcast); 8 (Current Orthopaedic Practice)
Van Der Linden, Yvette	(n) Nothing
Van Dijk, Eva Catharine	(n) Nothing
Van Egmond-Van Dam, Janneke C.	(n) Nothing
Van Hezewijk, Marjan	(n) Nothing
Van Wulfften Palthe, Olivier	(n) Nothing
Velasquez, Jose Fernando	(n) Nothing
Veldore, Vidya H.	(n) Nothing
Velez, Roberto	(n) Nothing
Verbeek, Bianca Monica	(n) Nothing
Verdonschot, Nico	3B (Exactech, Inc; Invibio); 5 (Biomet; DePuy, A Johnson & Johnson Company; invibio)
Verga, Federica Cristina	(n) Nothing
Verma, Vivek	(n) Nothing
Verna, Valter	(n) Nothing
Villanueva Fernandez, Erland Dario	(n) Nothing
Viola, Dan C.M.	(n) Nothing
Von Eisenhart-Rothe, Ruediger	2 (Johnson & Johnson); 3B (Johnson & Johnson); 9 (german knee society)
Vyrva, Oleg	8 (Orthopaedics, Traumatology and Prostetics, Ukraine); 9 (EMSOS)
Wafa, Hazem	(n) Nothing
Wagner, Eric R.	(n) Nothing
Walczak, Brian	(n) Nothing
Walker, Kyle	(n) Nothing
Wang, Bo	(n) Nothing
Wang, Jin	(n) Nothing
Wang, Shiyao	(n) Nothing
Wang, Tao	(n) Nothing
Wang, Zhen	(n) Nothing
Watanabe, Nobuyuki	(n) Nothing
Webber, Nicholas Paul	(n) Nothing
Wedin, Rikard C.	(n) Nothing
Weersink, Robert A.	(n) Nothing
Wei, Quigxia	(n) Nothing
Weigel, Brenda	3C (Merck; Nektar; Roche)
Wei-Ming, Chen	(n) Nothing
Weiss, Kurt Richard	3C (I am on the scientific advisory board of Eleison pharmaceuticals. I have received exactly $0.00 thus far from this position.)
Weng, Hung-Kai	(n) Nothing
Whelan, Jeremy	(n) Nothing
Whetstone, Heather Catherine	(n) Nothing
White, Jedediah K.	(n) Nothing
White, Jeremy Russell	(n) Nothing
White, Margaret Ellen	(n) Nothing
Whitwell, Duncan	2 (Zimmer)
Wibmer, Christine	(n) Nothing
Wilches, Christian	(n) Nothing
Wilhelmy, Julia	(n) Nothing
Wilke, Benjamin	(n) Nothing
Wilkins, Ross M.	2 (allosource,); 3B (allosource,; Stryker); 9 (AAOS,AATB)
Willegger, Madeleine	(n) Nothing
Willeumier, Julie J.	(n) Nothing
Williams, Bart	3B (Amgen Co); 5 (Roche (Genentech))
Willis, Alexander	(n) Nothing
Wilson, Jessica Rose	(n) Nothing
Wilson, Paula Jan	(n) Nothing
Wilson,Robert Jewell	(n) Nothing
Windhager, Reinhard	2 (Johnson & Johnson, Boehringer Ingelheim); 5 (Johnson & Johnson, Depuy, Stryker; Johnson & Johnson); 6 (Depuy, Stryker); 9 (ISOLS)
Winn, Mary E.	(n) Nothing
Wirtz, Dieter	8 (Der Orthopäde /,Zeitschrift für Orthopädie und Traumatologie, ZfOU - Zeitschrift für Orthopädie und Unfallchirurgie); 9 (DGOOC,Efort)
Wirtz, Emily	(n) Nothing
Wisanuyotin, Taweechok	(n) Nothing
Witten, Brent	(n) Nothing
Wittig, James C.	(n) Nothing
Wong, Chung Ming	(n) Nothing
Wong, Gerard C.L.	(n) Nothing
Wong, Irene Oi Ling	(n) Nothing
Wong, Kwok Chuen	(n) Nothing
Wu, Christina C.N.	(n) Nothing
Wu, Po-Kuei	(n) Nothing
Wunder, Jay	(n) Nothing
Wurtz, L. Daniel	(n) Nothing
Wustrack, Rosanna Lisa	(n) Nothing
Wyles, Cody	(n) Nothing
Xie, Xianbiao	(n) Nothing
Xu, Hairong	(n) Nothing
Xu, Shin	(n) Nothing
Yamada, Kenji	(n) Nothing
Yamada, Yoshihisa	(n) Nothing
Yamagami, Takaya	(n) Nothing
Yamagata, Noriko	(n) Nothing
Yamaguchi, Tamonori	(n) Nothing
Yamamoto, Norio	(n) Nothing
Yan, Taiqiang	(n) Nothing
Yang, Qiang	(n) Nothing
Yang, Rongli	(n) Nothing
Yang, Rui	(n) Nothing
Yang, Tongtao	(n) Nothing
Yang, Yi	(n) Nothing
Yang, Yongkun	(n) Nothing
Yang, Zhiping	(n) Nothing
Yasin, Nor Faissal	(n) Nothing
Yasuhiro, Tominaga	(n) Nothing
Yaszemski, Michael J.	3B (K2M, Inc.; Medtronic); 8 (Journal of Biomedical Materials Research-J. Wiley, Inc.; Techniques in Orthopedics); 9 (AAOS; Society of Military Orthopaedic Surgeons)
Yazawa, Yasuo	(n) Nothing
Yeung, Caleb	(n) Nothing
Yin, Junqiang	(n) Nothing
Yong, Bicheng	(n) Nothing
Yongqian, Wang	(n) Nothing
Yoon, Richard S.	(n) Nothing

ALPHABETICAL DISCLOSURE LISTING/AUTHOR INDEX

Yoshida, Masahiro	(n) Nothing
Yoshikawa, Hideki	(n) Nothing
Yoshimura, Yasuo	(n) Nothing
Young, Peter S.	(n) Nothing
Younus, Sedeeq Basheer	(n) Nothing
Yu, Jun	(n) Nothing
Yu, Zhe	(n) Nothing
Yuenyongviwat, Varah	(n) Nothing
Yuki, Mori	(n) Nothing
Yuning Jackie, Tang	(n) Nothing
Zade, Ralph	(n) Nothing
Zamora, Helo	(n) Nothing
Zarezadeh, Ali	(n) Nothing
Zhang, Chunlin	(n) Nothing
Zhang, Minghua	(n) Nothing
Zhao, Haitao	(n) Nothing
Zhao, Zhiqiang	(n) Nothing
Zheng, Lianhe	(n) Nothing
Zhiping, Deng	(n) Nothing
Zhou, Yong	(n) Nothing
Zhu, Suwei	1 (Grandhope Biotech); 3A (Grandhope Biotech); 4 (Grandhope Biotech)
Zimel, Melissa Nicole	(n) Nothing
Zindman, Alexandra	(n) Nothing
Zlotecki, Robert A.	(n) Nothing
Zou, Changye	(n) Nothing
Zucchini, Riccardo	(n) Nothing
Zumarraga, Juan Pablo	(n) Nothing

KEY

Item (1). Royalties from a company or supplier

Item (2). Speakers bureau/paid presentations for a company or supplier

Item (3A). Paid Employee for a company or supplier

Item (3B). Paid consultant for a company or supplier

Item (3C). Unpaid consultant for a company or supplier

Item (7). Royalties, financial or material support from publishers

Item (5). Research support from a company or supplier as a PI

Item (4). Stock or stock options in a company or supplier

Item (8). Medical/Orthopaedic publications editorial/ governing board

Item (6). Other financial or material support from a company or supplier

Item (9). Board member/committee appointments for a society

OREF/MSTS CLINICAL RESEARCH GRANT IN ORTHOPAEDIC ONCOLOGY

Funding

$98,000 grant over 1-2 years.

Grant Description

Musculoskeletal Tumor Society (MSTS) in collaboration with the Orthopaedic Research and Education Foundation (OREF) is offering grants to clinician researchers focused on clinical topics in orthopaedic oncology.

Criteria

1. Prospective clinical study involving multi-center collaboration.
2. Established infrastructure in place.
3. MSTS clinical research priorities focus on randomized trials.

Applications and more information are available on the MSTS website.

GRANT DEADLINE: JANUARY 15, 2016

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MSTS and OREF would like to thank the following donors:

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Vienna, Austria

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e-mail: office@isols.info

BYLAWS

1: Name, domicile and scope of activities

1) The name of the Association shall be "INTERNATIONAL SOCIETY OF LIMB SALVAGE".
2) The association shall locate its headquarters at Vienna. It is domiciled in Vienna and has worldwide activities.

2: Purpose

1) The association is a non-profit organization. The purpose of the Association is to promote research, education and clinical practice related to musculoskeletal tumors and its foremost purpose is to improve patient care related to limb salvage interventions. It also serves as a forum for intellectual exchange among physicians, engineers, scientists and other persons interested in limb salvage, promotes advances in the field of limb salvage and ongoing education of persons engaged in the field of limb salvage.

3: Means for achieving the purpose of the Association

1) The purpose of the Association is to be achieved by both the intangible and tangible means as specified in paragraphs 2 and 3.
2) Intangible means are obtained by:
    a) organizing symposiums or conventions of scientists from different countries and of multiple disciplines;
    b) publishing scientific papers in a number of media;
    c) creating and maintaining a web site;
    d) promoting cooperation among persons interested in limb salvage and promoting exchange of information among them;
    e) prompting relationships with related fields of medicine and other professional and scientific associations;
    f) producing guidelines.
3) The tangible means shall be raised through
    a) registration fees and membership dues;
    b) incidental profits resulting from organizing scientific conventions and other events and undertakings of the association itself;
    c) grants awarded to the association by manufacturing industries or other entities;
    d) donations, fund raising drives, bequests and other contributions to the association.

4: Categories of membership

1) There shall be two membership classifications as set forth below.
2) Regular members are assigned all membership rights and duties.
3) Honorary members are awarded this status based on a history of significant contributions to the field of musculoskeletal oncology. BYLAWS OF THE ASSOCIATION INTERNATIONAL SOCIETY OF LIMB SALVAGE Page 2 of 7

5: Becoming a member

1) Medical doctors, researchers, engineers and other persons with medically related qualifications, knowledge and expertise in musculoskeletal tumors and limb salvage techniques can apply for regular membership. The Board shall decide on admission of members. The application for regular membership is to be addressed to the Membership Chair of the Association and shall be accompanied by letters of recommendation from two regular members of the association. Admission may be refused without giving reason.
2) Honorary members are endorsed by the Membership Chair and the Board upon recommendation by the President, a member of the Board or a member of the society.

ISOLS International Society Of Limb Salvage http://www.isols.info/web/images/doc/ISOLS_BYLAWS.pdf

ISOLS International Society Of Limb Salvage

Invitation to the General Assembly

Date: Saturday, October 10, from 7-8 am
Place: Coquina North, at JW Marriott Orlando
Grande Lakes 4040 Central Florida Parkway, Orlando, FL 32837

AGENDA

1. Welcome and determination of a quorum (Windhager)
2. Approval of the Agenda (Windhager)
3. Report of the President (Windhager)
4. Report of the Secretary (Letson)
5. Report of the Treasurer (Funovics)
6. Approval of the annual account
7. Discharge of the Treasurer and the Board
8. Election of the Board for the Period 2016/2017
9. Report of the Membership Chair (Ruggieri)
    - Approval of new membership Applications
10. ISOLS Meeting 2017 (Tsuchiya)
11. ISOLS Meeting 2019
12. Miscellaneous

Reinhard Windhager, MD, PhD
President

G. Douglas Letson, MD
Secretary

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For information on current or future MSTS Meetings, please contact Rachel Rusch, rusch@aaos.org

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