

50th MSTs Annual Meeting and NIAMS/NCI/NIH-AAOS-OREF-MSTS Conference, October 28-31, 2026

50TH ANNIVERSARY MSTs ANNUAL MEETING

J.W. Marriot Turnberry Conference Center, Miami, FL, U.S.A.



Francis Hornicek, MD, PhD
Chair



Francis Y. Lee, MD, PhD
MSTS President

MSTS 2026 50th Annual Meeting Integrated-Preliminary Program*^

(*As of August 14, 2026; *Subject to Change; ^Titles are abbreviated; IET: Invited Expert Talk)

Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
MSTS 50th Annual Meeting and NIAMS/ NCI/ OREF/ AAOS R13 Conference			
Fostering MSTs Early-Stage Investigators, Molecular Orthopaedic Oncology, Overcoming Clinical Challenges, Multidisciplinary Technology & Innovations, Global Collaborations			
Innovation Course at MARC (Optional) 8:00 am - 5:45 pm	Breakfast - King Ballroom – Exhibit Hall 7:00 – 8:00 am	Breakfast – King Ballroom – Exhibit Hall MSTS Business Meeting – No CME 7:00 – 8:00 am	Breakfast - King Ballroom – Exhibit Hall 7:00 – 8:00 am
Technical Innovation Workshop	Session 1 Molecular Orthopaedic Oncology 8:10 - 10:00 am	Session 7 Metastases 8:00 - 10:00 am	Session 12 Surgical Techniques 8:00 - 9:30 am
1. <u>Pediatric Reconstruction</u> Rotationplasty Techniques	Moderators: Thomas Temple, MD, Meagan Tibbo, MD, MS, Susan McDowell, MD, Doug Letson, MD	Moderators: Matthew Cable, MD, Meredith Bartelstein, MD, Lisa Ercolano, MD, David King, MD	Moderators: Tessa Balach MD, David Mohler, MD, Robert Henshaw MD, Albert Aboulafia, MD

Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
Expandable Prosthesis	Essential Molecular Oncology & Immuno-Oncology for Orthopaedic Oncologists	IET 11. Metastatic Cancer-Bone-Muscle Interactions (5 min) Christopher Collier, M.D.	IET 23. Onco-Plastic Surgery for Primary Oncological Reconstruction (5 min) Pietro Ruggieri, MD
Intramedullary Lengthening Implants	IET 1. Growth Factors & Kinases in Tumors: CSF1, TK, Wnt5, Others (5 min) Bang Hoang, MD	IET 12. Predicting Pathologic Fracture Risk on Imaging Studies: Translating Biomechanics to Clinical Practice (10 min) Brian Snyder, MD, PhD (OREF/ORS/POSNA) Presidential Invited Scholar	IET 24. Onco-Plastic Surgery for Failed Oncological Reconstructions (5 min) Adam Levin, MD
2. <u>Percutaneous Pelvis Fixation</u>	IET 2. Tumor Microenvironment (5 min) David Clever, MD	IET 13. Minimally Invasive Intervention & Science for Skeletal Metastases: Pushing the Limit (5 min) Francis Y. Lee, MD, PhD	IET 25. Uni-Articular Knee Arthroplasty in Children Eduardo Sadao Yonamine, MD (5 min)
Curved Screws	IET 3. Immuno-Viral-Therapy in Cancer (10 min) Evanthia Galanis, MD Presidential Invited Scholar	Q&A: 5 min	Q&A: 5 min
Polymer Implants	Q&A: 10 min		Paper 64 Expanding Indications for Compress® Mega-prosthetic Reconstruction: Successful Management of High-Risk Patients (Age >50, Cortical Thickness <2.5 mm, or Pre-operative Smoking) Jungo Imanishi, MD, PhD
Radiolucent Implants	Osteosarcoma I	Metastases I	Paper 65 Multidisciplinary Collaboration in Chest Wall Surgery: Excellent Outcomes with a First of Its Kind Combined Orthopedic and Thoracic Team Nathan W. Mesko, MD
Ablation	Moderators: William Eward, MD, Nicholas Tedesco, MD, Zachary Burke, MD	Paper 31 Minimally Invasive Pelvic Fixation of Pelvic Metastases Using CT-Assisted Surgical Navigation is Associated with Predictable Pain Relief and Durable Restoration of Skeletal Stability and Function Nicola Fabbri, MD	Paper 66 What Factors Are Associated with Instability After Endoprosthetic Reverse Total Shoulder Arthroplasty for Oncologic Reconstruction of the Proximal Humerus? Alexander Lazaides, MD
Surgical Navigation & Imaging	Paper 1 Poisoning the Clot: Dominant-Negative Fibrinogen Permits Osteosarcoma Metastasis Stephen Chenard, MSc	Paper 32 Long-Term Functional Outcomes and Survival Following Intramedullary Nailing of Pathological Diaphyseal Tibial Fractures Sonia Ubong, MBBS	Paper 67 Adverse Events and Patient-Reported Outcomes with the Osseointegrated Protheses for the Rehabilitation of Amputees (OPRA) Implant in Transfemoral Amputees Melissa Zimel, MD
3. <u>Arthroplasty & Implants</u>	Paper 2 Age-Stratified Transcriptomic Profiling Reveals Biologically Distinct Molecular Phenotypes Across Pediatric, Adolescent, and Adult Osteosarcoma David Geller, MD, MBA	Paper 33 No Difference in Medical or Surgical Complications after Long and Short Intramedullary Nail Fixation for Pathological Pertrochanteric Femur Fractures Otitochukwu Ezeonu, MD	Paper 68 A Nine-Year Experience with a New Fully Cemented, Hybrid, Splined, Porous-Coated Stem in Oncologic Reconstruction Christopher Hamad, MD
Mega-Prostheses	Paper 3 Neuropilin-2 as a Therapeutic Target in Osteosarcoma: Spatial Transcriptomics and in Vivo Testing of a Clinic-Ready Anti-Neuropilin-2 Antibody Sung-Suk Chae, PhD	Paper 34 Predictors of Survival After Prophylactic Femoral Fixation for Metastatic Bone Disease: Where You Live Matters Brian Benyamini	Q&A (10 min)
Bone Reinforcement Implants	Paper 4 PNKP Inhibition Demonstrates Selective Activity in PTEN-Deficient Osteosarcoma Is Enhanced by NRF2 Blockade Joseph Kendal, MD, FRCSC	Paper 35 Construct Durability, Revision Burden, and Resource Use After Fixation Versus Endoprosthetic Reconstruction for Appendicular Metastatic Bone Disease Christopher Hamad, MD	Paper 69 Why Revisions Fail? Risk Factors and Predictors of Reoperation Following Revision Megaprosthetic Reconstruction for Tumors Around the Knee Taha Aksoy, MD
Allografts	Paper 5 DNA Methylation Analysis of Undifferentiated Pleomorphic Sarcoma of Bone Duncan Ramsey, MD, MPH		
4. <u>Pelvis & Lower Extremity</u>			
Hemipelvectomy			
Cutting Guides			
Custom-made Implants			
Research Interest Group Meetings			
Clinical Study Collaboration Group			
Career Development Group			

Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
Committee Meetings	Paper 6 Evolution-Informed Extinction Therapy: A Novel Treatment for Osteosarcoma William Eward, MD, DVM Q&A: 10 min Osteosarcoma II Moderators: Michael Monument, MD, FRCSC, Thomas Scharschmidt, MD, Matthew Hess, MD Paper 7 Translational Evaluation of ALDH and MMP-9 Expression in Osteosarcoma: Insights into Chemotherapy Response and Survival from a Single-Center Cohort Ana Valeria Rigolino Teixeira, MD Paper 8 Advanced Transcriptomic Analysis of SPP1 in Osteosarcoma: A Potential New Therapeutic Target? Sung-Suk Chae, PhD Paper 9 Immune Cell Composition and Chronic Inflammation Association in Primary High-Grade Osteosarcoma Rosanna Wustrack, MD Paper 10 Evolving Toward Precision Oncology in Osteosarcoma Zachary Burke, MD Paper 11 Pan-Cancer Multi-Omics Identifies SKP2 as a Marker of Immune Exclusion with In Vivo Validation in Osteosarcoma David Geller, MD, MBA Paper 12 Longitudinal Single-Cell Analysis of Osteosarcoma Defines Pretreatment Chemoresistance and an Actionable PI3K Target David Geller, MD, MBA Q&A (10 min):	Paper 36 The Proximal Femur Reconstruction or Internal Fixation for Metastases (PERFORM) International Randomized Controlled Trial Michelle Ghert, MD, FRCSC Paper 37 Prophylactic eFLASH Pulmonary Radiation Inhibits Lung Metastases and Improves Survival in Murine Soft-Tissue Sarcoma Metastatic Model Vincent Ng, MD Q&A: 10 min Metastases II Paper 38 Long-Term Outcomes of Denosumab Therapy and Treatment Discontinuation in Patients with Bone Metastases Atsushi Mihara, MD Paper 39 A Risk Stratification Tool Based on Inflammatory and Nutritional Biomarkers to Predict Early Mortality After Surgery for Appendicular Bone Metastases Ana Valeria Rigolino Teixeira, MD Paper 40 PathFx vs Modified Tokuhashi Score for Survival Prediction in Metastatic Bone Disease of the Spine Divakar N. Lal, MD Paper 41 Integrated Patient-Reported Outcomes and Passive Mobility Monitoring Following Metastatic Bone Disease Surgery: A Prospective Study of Feasibility and Early Recovery Patterns Joseph Kendal, MD, FRCSC Paper 42 Central Nervous System Tropism in CIC-Rearranged Sarcoma: A Rationale for Upfront Screening Aron Mebrahtu Paper 43 Impact of Radiation Therapy on Skeletal-Related Events in Renal Cell Carcinoma Patients Receiving Immune Checkpoint Inhibitors: A Retrospective Cohort Study Alan T. Blank, MD, MS Paper 44	Paper 70 Indocyanine Green Fluorescence for Intraoperative Margin Assessment in Musculoskeletal Tumor Surgery: A Single-Institution Experience Sonia Ubong, MBBS Paper 71 From Scalpel to Slide: The Impact of Air Exposure and Histologic Processing on Surgical Margins Christopher Collier, MD Paper 72 Oncological Indication Does Not Portend Worse Outcomes After Proximal Femoral Replacement: Prior Surgical Burden rather than Diagnosis, Drives Revision Risk Stephen Chenard, MSc Q&A (10 min) Session 13 Benign Tumors 9:30 – 10:00 am Moderators: Christina J. Gutowski, MD, MPH, Steven Gitelis, MD Paper 73 Diminished Remaining Subchondral Bone Predicts Risk for Fracture or Arthritis Following Treatment of Giant Cell Tumor of Bone at the Knee Joseph Ippolito, MD Paper 74 Patterns and Timing of Local Recurrence in Benign Bone Tumors Bradley Melvin Paper 75 Pimicotinib in Tenosynovial Giant Cell Tumor (TGCT): Long-Term Efficacy, Safety, and Patient-Reported Outcomes from the Phase 3 MANEUVER Trial Vinod Ravi, MD Paper 76 MRI Characteristics to Differentiate Benign versus Malignant Bone Lesions Ava Brozovich, MD

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		Bone Metastases in Soft Tissue Sarcoma: Natural History, Prognostic Factors, and Genomic Characterization in a Modern Cohort Madeline Rieker, MD Q&A (10 min)	Q&A: 10 MIN
	Exhibits & Poster Viewing 10:00 – 10:30 am	Exhibits & Poster Viewing 10:00 – 10:30 am	Exhibits & Poster Viewing 10:00 – 10:30 am
Innovation Course at MARC (Continued) 8:00 am - 5:45 pm	Session 2 NIAMS/NCI/MSTS/OREF/AAOS Early-Stage Investigator Session 10:30 - 11:30 am Moderators & Mentors: Francis Lee MD, PhD, Nicholas Bernthal MD, Regis O'Keefe MD, PhD, Eric Henderson MD IET 4: Introduction of MSTS ESI Programs & Traveling Award Recipients (5 min) Francis Y. Lee, MD, PhD, NIH R13 Grant Principal Investigator, MSTS President IET 5: Clinician Scholarly Pathway (7 min) Regis O'Keefe, MD, PhD IET 6: Advocacy for Early-Stage Investigators (7 min) Brian Snyder, MD IET 7: Developing Clinical Proficiency for Complex Cases at Your First Job (7 min) Nathan Mesko, MD IET 8: Building Academic Orthopaedic Oncology Practice: Chair's & ESI's Perspectives? (7 min) Nicholas Bernthal, MD Discussion: Panel & Audience (25 min) MSTS ESI Traveling Award Recipient Panelists: 1. Julia Visgauss, MD	Session 8 Pelvis & Spine 10:30 - 11:40 am Moderators: Lukas Nystrom, MD, Raffi Avedian, MD, Robert Weinschenk MD IET 14. Minimizing Complications: Pelvis Skin Incisions, Soft Tissue Handling, and Optimal Prosthesis Ran Wei, MD (5 min) IET 15. En Bloc Resection of Spine Tumors Xiaodong Tang, MD (5 min) IET 16. Molecular Oncology of Chordoma Francis Hornicek, MD, PhD (5 min) IET 17. Pelvic Reconstruction Using In-House Designed Implants (5 min) Krista Goulding, MD, MPH (5 min) IET 18. Salvage of Failed Pelvis Reconstruction Panos Papagelopoulos, MD, FACS (5 min) Q&A: 5 min 4 Abstracts + 10 min Q&A = 30 min Paper 45 3D-Printed Hemipelvic Endoprostheses Improve Long-term Function and Sacroiliac Stability after Enneking Type II/II+III Periacetabular Tumor Resection: A Matched Cohort Study David Geller, MD, MBA Paper 46	Session 14 Disasterplasty & Complications 10:30 - 12:00 pm Moderators: Joseph Ippolito MD, Joel Mayerson MD IET 26. Salvaging Failed Arthroplasty Implants Herrick Siegel. MD (5 min) IET 27. Management of Massive Bone Loss Nicola Fabbri, MD (5 min) IET 28. Management of Disastrous Complications Joseph Benevenia, MD (5 min) Q&A: 5 min 10 Abstracts + 20 min Q&A Paper 77 Microbiologic Spectrum and Risk Factors for Surgical Site Infection Following Soft Tissue Sarcoma Resection Aaron Gazendam, MD, FRCSC Paper 78 Comparing Early Outcomes of Antibacterial-coated vs Uncoated Endoprostheses: A Single Institution's Experience with Nanocept Technology Danielle Rider, MD Paper 79 Risk Factors and Reconstructive Consequences of Infection After Proximal Humeral Endoprosthetic Reconstruction: A Multi-Institutional Study Alexander Lazarides, MD Paper 80

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	2. Joshua Lawrenz, MD 3. Zachary Burke, MD 4. Michael Colello, MD 5. Drew Ormseth, MD 6. Duncan Ramsey, MD, MPH 7. Alexander Christ, MD 8. Ahmed Aoude, MD, FRCSC 9. Christopher Collier, MD 10. Anthony Bozzo, MD, PhD, FRCSC 11. Alexander Lazarides, MD 12. Stephen Chenard, MSc 13. David Clever, MD 14. Cecelia Belzarena, MD, MPH, MBA, PhD 15. Joseph Ippolito, MD	Custom 3D-Printed Pelvic Reconstruction Versus No Implant Reconstruction Following Oncologic Periacetabular Resection: A Multi-Institutional Study Alexander Lazarides, MD Paper 47 Functional Recovery Trajectories Following Internal Hemipelvectomy: Custom 3D-Printed Reconstruction vs. Non-Reconstruction William Eward, MD, DVM Paper 48 Sacral Chordoma Resection: Anterior Video-Assisted Laparoscopic Approach Eduardo Sadao Yonamine, MD Q&A (10 min)	Synovial Calprotectin Accurately Detects Periprosthetic Joint Infection in Tumor Megaprotheses: A Prospective Cohort Study Panayiotis Gavriil, MD Paper 81 Distal Femoral Replacement for Oncologic Versus Non-Oncologic Indications: Comparative Outcomes and Predictors of Failure Stephen Chenard, MSc Paper 82 Prospective Validation of Intraoperative ICGA Perfusion Thresholds for Predicting Wound Complications Following Resection of Preoperatively Irradiated Soft Tissue Alexander Lazarides, MD Q&A (10 min) Paper 83 Results of the First 700 Patients Treated with a One-Stage Revision for PJI Gerhard Maale, MD Paper 84 NexGen Sequencing (NGS) is More Accurate Than Culture and Sensitivity (CS) in PJI Gerhard Maale, MD Paper 85 Results of Lymphocyte Transformation Testing in Known Cases of PJI Gerhard Maale, MD Paper 86 Hydrolyzed Collagen Augmentation is Associated with Reduced Wound Complications Following Resection of Preoperatively Irradiated Extremity Soft Tissue Sarcomas Alexander Lazarides, MD Q&A (10 min)
	Session 3 Grantsmanship & NIH/OREF Mock Study Section: Untold Inside Stories of the Grant Review Panels 11:30 am – 12:00 pm Study Section Chair: Regis O’Keefe, MD, PhD	Session 9 Interactive Multi-Disciplinary Tumor Board 2 Unknown Cases	Announcement of Awards (Best Paper, 1st, 2nd, and 3rd ESI & Established Investigators; Best Poster, 1st, 2nd, and 3rd ESI & Established Investigators)

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	Panel Members: Francis Lee, MD, PhD, Nicholas Bernthal, MD, Michelle Ghert, MD, FRCSC, Kurt Weiss, MD, Eric Henderson, MD, Bang Hoang, MD, Richard Terek, MD, FACS, Parker Gibbs, MD, Brian Snyder, MD, PhD, Evanthia Galanis, MD IET 9: How to write the Best Translational Research Grant Proposal? (5 min) Kurt Weiss, MD (Confirmed) IET 10: How to prepare the best real-world clinical research grant? (5 min) Michelle Ghert MD, FRCSC (Confirmed) Discussion and Q&A (5 min) Mock Study Section for ESI (3 min Presentation & 12 min discussion] = 15 min) Paper 13 (Research Grants: Specific Aim + 6 Page Approach) Tumor-Related Fibrinolysis as a Mechanism and Therapeutic Target in Osteosarcoma Metastases Stephen Chenard, MSc	11:40 am – 12:00 pm Case Presenter: Drew Ormseth, MD Moderator: Francis Y. Lee, MD, PhD Orthopaedic Oncologist Panelists: Eduardo Ortiz-Cruz, MD PhD, Patrick Lin, MD, Andre Spiguel, MD, Michiel van de Sande, MD, Ginger Holt, MD Pathologist: Elham Nasri, MD Paper 49 Unknown Case 1 Drew Ormseth, MD Paper 50 Unknown Case 2 Drew Ormseth, MD	
	Industry Innovation Symposium I 12:00 - 12:40 pm No CME, Exhibit Hall Moderators: Julia Visgauss, MD, Richard Terek, MD, FACS, Francis Lee, MD, PhD, Matthew DiCaprio, MD D1. Inhibrx Speaker: TBD (8 min) D2. Deciphera Pharmaceuticals Speaker: TBD (8 min) D3. US WorldMeds Speaker: Dr. TBD: (8 min) D4. Zimmer-Biomet Speaker: Dr. TBD (8 min) Discussion (8 min)	Industry Innovation Symposium II 12:00 - 12:40 pm No CME, Exhibit Hall Moderators: David Geller, MD, MBA, Edward Cheng, MD, Felasfa Wodajo MD, Juan Pretell, MD D5. EMD Serono Speake: TBD (8 min) D6. SpringWorks Therapeutics, Inc. Speaker: TBD (8 min) D7. Daichi Sankyo, Inc Speaker: TBD: (8 min) D8. Stryker Speaker: TBD (8 min) Discussion (8 min)	Lunch & Poster Viewing MSTS Global Networking 12:10 - 2:00 pm MSTS-Industry-Global Networking
Lunch	Lunch, Poster Viewing, and Exhibits 12:40 – 1:30 pm	Lunch, Poster Viewing, and Exhibits 12:40 – 1:30 pm	

Innovation Course at MARC Continued 8:00 am - 5:45 pm	Session 4 Poster Award Finalist Presentations 1:30 - 2:40 pm <u>Top 8 Posters by Early-Stage Investigators</u> Moderators (Program Committee Judges): Brooke Crawford, MD (Chair), Julia Visgauss, MD, Steven Thorpe, MD, FACS, Shervin Oskouei, MD, Melissa Zimel, MD, Santiago Lozano-Calderon, MD, PhD Moderators will re-grade the finalist abstracts to decide top 3 ESI Poster Awards Poster 1 (2 min) Reconstructing the Irreparable: A Novel Approach to Femoral Head Defects After Chondroblastoma Curettage Cecelia Belzarena, MD, MPH, MBA Poster 2 (2 min) What Factors are Associated with Amputation Versus Continued Limb Salvage Following Implant Removal in Lower Extremity Endoprosthetic Reconstruction? Michael Colello, MD Poster 3 (2 min) Venous Thromboembolism (VTE) in Patients with Metastatic Bone Disease Versus Malignant Primary Bone or Soft Tissue Tumors Pablo Andres Patino, MD Poster 4 (2 min) Diagnostic Performance of Interventional Radiology and Surgical Biopsies for Musculoskeletal Lesions Danielle Brown, MD Poster 5 (2 min) MRI Misses Residual Sarcoma: Pathologic Correlation After Re-Excision of Tumor Bed Drew Ormseth, MD Poster 6 (2 min) When Cartilage Misleads: Fibrocartilaginous Mesenchymoma Mimicking Chondrosarcoma on Core Biopsy Julian Emerson Dilley, MD Poster 7 (2 min) When the Implant Is Not the Problem: Decision Points to Prevent Soft-Tissue Failure After Hemipelvic Endoprosthetic Reconstruction Ziyi Zhao, MD	Session 10 Digital Health, AI, Robotics, Engineering 1:30 - 2:35 pm Moderators: Anna Cooper MD, MPH, Kyle Sweeney MD, Alexandra Callan MD IET 19. Big data analysis in cancer biomarkers and outcomes (5 min) Brooke Crawford, MD IET 20. AI in Orthopaedic Oncology: Machine Learning, Generative AI, Agentic AI, and Physical AI (5 min) Tae Kim, MD Paper 51 Immune Phenotype-Dependent Pembrolizumab Effects in High-Risk Localized Soft Tissue Sarcoma: A Multimodel and Explainable Machine Learning Analysis of SARCo32 Trial Data Anthomy Bozzo, MD, PhD, FRCSC (ESI) Paper 52 AR for Sarcoma Surgery – The Future is Here Ahmed Aoude, MD, FRCSC Paper 53 An End-to-End Deep Learning Framework and Multicenter Validation for the Diagnosis of Retroperitoneal Soft Tissue Sarcoma Tong Meng, MD Paper 54 Augmented Reality Guidance for Targeted Re-Resection of Positive Margins in Sarcoma Michael Colello, MD Paper 55 Preoperative Surgical Margin Assessment Using a Three-Dimensional-Printed Model for Simulated Surgery of Periarticular Malignant Bone Tumors Shachar Kenan, MD Paper 56 Development and Optimization of In-Situ Local Tumor Ablation and Recycling System for Consistent Heating and Clinical Translation Min Wook Joo, MD, PhD Paper 57	Session 15 Interactive Group Discussion Group Meetings
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	Poster 8 (2 min) Hemiarthroplasty Versus Total Hip Arthroplasty for Metastatic Bone Disease of the Proximal Femur Matthew Yeager Q&A + Discussion: 14 min Top 8 Posters by Established Investigators Moderators (Program Committee/Judges): Nicola Fabbri, MD (Chair), Ginger Holt, MD, Eugene Jang, MD, Yvette Ho, MD, Thomas Scharschmidt, MD, Chris Collier, MD, Joshua Lawrenz, MD Poster 9 (2 min) Posterior Chest Wall Angiosarcoma with Dynamic Scapular Reconstruction using a Trapezius Osteo-muscular Rotational Flap Adeem Nachabe, MD Poster 10 (2 min) Deltoid Reconstruction with Functional Pedicled Bipolar Pectoralis Major Muscle Flap for Shoulder Abduction and Flexion Lahin Amlani, MD Poster 11 (2 min) Modified Compress Technique for Intercalary Limb Salvage in Children with Bone Sarcomas Raffi Avedian, MD Poster 12 (2 min) Successful Glenoid Reconstruction using a Distal Tibial Osteochondral Allograft Following Wide Resection of a Scapular Chondrosarcoma: A Case Report Anna A. Khachatrian, MD Poster 13 (2 min) 3D-Printed Cutting Guides for Joint Preservation of a Rare Juxtarticular BCOR Sarcoma of the Proximal Tibia and Multidisciplinary Care Approach Shachar Kenan, MD Poster 14 (2 min) A Propensity Matched Analysis of 1,101 Patients with Tenosynovial Giant Cell Tumor Undergoing TKA: Impact of Prior Surgical Resection and Pexidartinib Usage on Complications Amy Zeller, MD	Sarcoma Resection Guided by Intraoperative Indocyanine Green Dye Fluorescence Angiography Mikaela Sullivan, MD Q&A (15 min)	
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Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
Innovation Course at MARC Continued 8:00 am - 5:45 pm Committee Meeting Interest Group Meeting	Poster 15 (2 min) Primary versus Secondary Patellar Resurfacing in Oncologic Megaprosthesis Knee Reconstruction: A Multi Institutional Retrospective Cohort Analysis Alan T. Blank, MD, MS Poster 16 (2 min) Surgical Management of Metastatic Bone Disease: En bloc Resection with or without Reconstruction Young Ho Lee Q&A + Discussion: 14 min	Session 11 Controversies in Soft Tissue Tumors 2:40 – 3:40 pm Moderators: Dieter Lindskog MD, Herbert Schwartz MD, Lee Leddy MD, Rajiv Rajani MD IET 21: Management of High-Grade Soft Tissue Sarcomas without Adjuvant Radiation Therapy Shintaro Iwata, MD (5 min) IET 22: Management of High-Grade Soft Tissue Sarcomas with Adjuvant Radiation Therapy Jay Wunder, MD, FRCSC (5 min) Q&A: 5 min Paper 58 Impact of Neoadjuvant Radiation on Pathogen Profiles and Cefazolin Coverage in Soft Tissue Sarcoma Resection William Eward, MD, DVM Paper 59 Plantar Fibromatosis: Surgical Approach for a Tumor with a Tissue-Specific Propensity for Recurrence William Ward, MD, FACS Paper 60 An In Vivo Platform Enables Evaluable Drug Responses in Patients with Soft Tissue Sarcoma Kenneth Gundle, MD Paper 61 The Surveillance After Extremity Tumor Surgery (SAFETY) International Randomized Controlled Trial Michelle Ghert, MD, FRCSC Paper 62 Quantitative Margin Assessment Predicts Local Recurrence in Myxofibrosarcoma Jun Iwatsu, MD Paper 63 Beyond the Biopsy: High Rates of Grade and Diagnostic Discrepancy in Myxofibrosarcoma - A Single-Center Analysis Paniz Eizadkhah, BS Q&A: 10 min	Interactive Group Discussion

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Innovation Course at MARC Continued 8:00 am - 5:45 pm	Session 5 Chondrosarcoma 2:50 – 3:40 pm Moderators: Yvette Ho, MD, Gregory Domson, MD, Daniel Wurtz, MD Chondrosarcoma Paper 14 Prognostic Role of TERT Mutations in Chondrosarcoma: Association with Dedifferentiated Tumors and Survival Outcomes Thomas Temple, MD Paper 15 ASPH Blockade Abrogates Doxorubicin Induced Chemoresistance in Chondrosarcoma Richard Terek, MD, FACS Paper 16 Targeting DNMT3B Reveals an Epigenetic Vulnerability in Chondrosarcoma David Clever, MD (ESI) Paper 17 Impact of Surgical Margins in Chest Wall Chondrosarcomas: A CanSaRCC Study Aaron Gazendam, MD, FRCSC Paper 18 When an Intra-Articular Process is More Than It Appears: Malignant Transformation of Synovial Chondromatosis to Chondrosarcoma Julian Emerson Dilley, MD (ESI) Paper 19 The Tetravalent Death Receptor 5 (DR5) Agonist Ozekibart (INBRX-109) in Conventional Chondrosarcoma: Secondary	Ceremony: Celebrating 50 Years 3:50 – 4:50 pm Francis Hornicek, MD, PhD (Program Chair) Francis Lee, MD, PhD (MSTS President) Opening Remarks National Anthem Honoring Founders & MSTS Members Long-Standing Industry Partnership Awards Bringing Global Musculoskeletal Tumor Societies Together International Society President Session (4 min; 6 Slides, 1 st Slide, Introduction of Self; 2 nd Slide: Society Overview; 3 rd -6 th Slides: Research Accomplishment of the Self or Society) MSTS: Francis Lee, MD, PhD CTOS: Robin Jones, MD ISOLS: Peter Steadman, MD EMSOS: Michiel van de Sande, MD SLATME: Juan Pablo Zumarraga, MD APMSTS: Yang-Guk Chung, MD Brazil: Ricardo Becker, MD India: Ashish Gulia, MD	

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	Efficacy Endpoints from the Randomized, Registrational, Phase 2 ChonDRAGON study Robin L. Jones, MD Paper 20 Does Pain Signal Malignancy?: Investigating the Reliability of Pain Symptoms in Predicting Chondrosarcoma. Alexander Lazarides, MD (ESI) Q&A: 15 min	Closing Remarks	
MSTS Board Meeting (4:30 – 6:00 pm) President Report Committee Report Active Business New Business	Session 6 Pediatric Orthopaedic Oncology & Biological Reconstruction 3:45 – 4:50 pm Moderators: Valerae Lewis, MD, Lee Zuckerman, MD Paper 21 EWSR1-FLI1-Associated Cohesin and DNA Damage Response Dependencies Identified by Pan-Cancer CRISPR Profiling in Ewing Sarcoma Brandon Gettleman, MD Paper 22 Targeting Glutamine Metabolism to Enhance Radiosensitivity in Ewing Brittany Simone, DO Paper 23 Characterization of the NK Regulatory Landscape in the Tumor Environment of Pediatric Sarcomas Adrian Ibanez-Navarro, MD Paper 24 Beyond RECIST: Prognostic Value of Soft-Tissue Volume Reduction in Ewing Sarcoma Julian Emerson Dilley, MD Paper 25 Compression of Intercalary Allografts with Magnetic Lengthening Nails, Mid-Term Results with a Comparison of Techniques Lee Zuckerman, MD Paper 26 All Internal Distraction Osteogenesis after Tumor Resection with Magnetic Intramedullary Nails Lee Zuckerman, MD		

Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
	Paper 27 Appositional Bone Growth is a Risk for Aseptic Loosening Following Lower Extremity Endoprosthetic Reconstruction in Pediatric Bone Sarcoma Patients Michael Colello, MD Paper 28 Reverse Total Shoulder Arthroplasty Improves Function Compared to Hemiarthroplasty in Pediatric Proximal Humerus Tumor Reconstruction: A Multicenter Study Spencer M. Richardson, MD Paper 29 True Infection is Rate Despite Extensive Workup for Postoperative Fever After Pediatric Extremity Sarcoma Surgery Rajul Gupta, MD Paper 30 Why the Rotationplasty Patient-Powered Registry Is Crucial for Shared Decision Making: “We Need as Much Research as We Can Get!” Janet E. Panoch, PhD Q&A (15 min)		
	Break, Poster Viewing, and Exhibits 5:00 – 6:00 pm	Break, Poster Viewing, and Exhibits 4:50 – 5:50 pm	Adjourn
MSTS/NIAMS/NCI/OREF/AAOS Dinner Reception: Bridging the Past, Present, and Future Magnolia Courtyard 6:00 – 8:00 pm (No additional Fee) NIAMS/NCI/OREF/AAOS R13 Program Honoring MSTS Early-Stage	MSTS 50th Anniversary Reception: Celebrating 50 Years Cascata Pool 6:00 – 8:00 pm (No additional Fee)	MSTS 50th Anniversary Gala Dinner: Towards the 100th Year Magnolia Courtyard 6:30 – 9:00 pm (No additional Fee)	

Oct 28 (Wed)	Oct 29 (Thu)	Oct 30 (Fri)	Oct 31 (Sat)
Investigators, AAOS Members, NIAMS/NCI, OREF International Attendees, and Industry Innovators Introduction & Acknowledgement NIAMS/NCI OREF AAOS Clinician Scholar Address Announcement & Introduction of MSTs Early-Stage-Investigator Traveling Award Recipients Working Dinner Reception Innovation Course Reception at MARC Workshop Participants & Faculty Interactive Discussion 6:00 – 8:00 pm			

Special Acknowledgements:

- Members & Supporters of the Musculoskeletal Tumor Society
- National Institutes of Health, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Cancer Institute
- American Academy of Orthopaedic Surgeons (AAOS)
- Orthopaedic Research & Education Foundation (OREF)
- Industry Innovation Partners & Supporters

