

MSTS 2026 50<sup>th</sup> Annual Meeting Integrated-Preliminary Program\*^

(\*As of August 12, 2026; \*Subject to Change; ^Titles are abbreviated)

| Oct 28 (Wed)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Oct 31 (Sat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MSTS 50 <sup>th</sup> 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <div>Innovation Course at MARC<br/>(Optional)<br/>8:00 am - 5:45 pm</div> <div>Technical Workshop</div> <div>1. <u>Pediatric Reconstruction</u></div> <div>Rotationplasty Techniques</div> <div>Expandable Prosthesis</div> <div>Intramedullary Lengthening Implants</div> <div>2. <u>Percutaneous Pelvis Fixation</u></div> <div>Curved Screws</div> <div>Polymer Implants</div> <div>Radiolucent Implants</div> <div>Ablation</div> <div>Surgical Navigation &amp; Imaging</div> <div>3. <u>Arthroplasty &amp; Implants</u></div> <div>Mega-Prostheses</div> <div>Bone Reinforcement Implants</div> <div>Allografts</div> <div>4. <u>Pelvis &amp; Lower Extremity</u></div> | <div>IET – Invited Expert Talks</div> <div>Breakfast - King Ballroom – Exhibit Hall<br/>7:00 – 8:00 am</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <div>IET – Invited Expert Talks</div> <div>Breakfast – King Ballroom – Exhibit Hall<br/>MSTS Business Meeting – No CME<br/>7:00 – 8:00 am</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <div>IET – Invited Expert Talks</div> <div>Breakfast - King Ballroom – Exhibit Hall<br/>7:00 – 8:00 am</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <div>Session 1<br/>Molecular Orthopaedic Oncology<br/>8:10 - 10:00 am</div> <div>Moderators: Thomas Temple, MD, Meagan Tibbo, MD, MS, Susan McDowell, MD, Doug Letson, MD</div> <div>Essential Molecular Oncology &amp; Immuno-Oncology for Orthopaedic Oncologists</div> <div>IET 1. Growth Factors &amp; Kinases in Tumors: CSF1, TK, Wnt5, Others (5 min)<br/>Bang Hoang, MD</div> <div>IET 2. Tumor Microenvironment (5 min)<br/>David Clever, MD (ESI)</div> <div>IET 3. Immuno-Viral-Therapy in Cancer (10 min)<br/>Evanthia Galanis, MD<br/>Presidential Invited Scholar</div> <div>Q&amp;A: 10 min</div> <div>Osteosarcoma I</div> <div>Moderators: William Eward, MD, Nicholas Tedesco, MD, Zachary Burke, MD</div> <div>Paper 1<br/>Poisoning the Clot: Dominant-Negative Fibrinogen Permits Osteosarcoma Metastasis<br/>Stephen Chenard, MSc</div> <div>Paper 2<br/>Age-Stratified Transcriptomic Profiling Reveals Biologically Distinct Molecular Phenotypes Across Pediatric, Adolescent, and Adult Osteosarcoma<br/>David Geller, MD, MBA</div> | <div>Session 7<br/>Metastases<br/>8:00 - 10:00 am</div> <div>Moderators: Matthew Cable, MD, Meredith Bartelstein, MD, Lisa Ercolano, MD, David King, MD</div> <div>IET 11. Metastatic Cancer-Bone-Muscle Interactions (5 min)<br/>Christopher Collier, M.D. (ESI)</div> <div>IET 12. Predicting Pathologic Fracture Risk on Imaging Studies: Translating Biomechanics to Clinical Practice (10 min)<br/>Brian Snyder, MD, PhD (OREF/ORS/POSNA)<br/>Presidential Invited Scholar</div> <div>IET 13. Minimally Invasive Intervention for Skeletal Metastases: Pushing the Limit (5 min)<br/>Francis Y. Lee, MD, PhD</div> <div>Q&amp;A: 5 min</div> <div>Metastases I</div> <div>Paper 31<br/>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<br/>Nicola Fabbri, MD</div> <div>Paper 32<br/>Long-Term Functional Outcomes and Survival Following Intramedullary Nailing of Pathological Diaphyseal Tibial Fractures<br/>Sonia Ubong, MBBS</div> | <div>Session 12<br/>Surgical Techniques<br/>8:00 - 9:30 am</div> <div>Moderators: Tessa Balach MD, David Mohler, MD, Robert Henshaw MD, Albert Aboulafia, MD</div> <div>IET 23. Onco-Plastic Surgery for Primary Oncological Reconstruction (5 min)<br/>Pietro Ruggieri, MD</div> <div>IET 24. Onco-Plastic Surgery for Failed Oncological Reconstructions (5 min)<br/>Adam Levin, MD</div> <div>IET 25. Uni-Articular Knee Arthroplasty in Children<br/>Eduardo Sadao Yonamine, MD (5 min)</div> <div>Q&amp;A: 5 min</div> <div>Paper 64<br/>Expanding Indications for Compress® Mega-prosthetic Reconstruction: Successful Management of High-Risk Patients (Age &gt;50, Cortical Thickness &lt;2.5 mm, or Pre-operative Smoking)<br/>Jungo Imanishi, MD, PhD</div> <div>Paper 65<br/>Multidisciplinary Collaboration in Chest Wall Surgery: Excellent Outcomes with a First of Its Kind Combined Orthopedic and Thoracic Team<br/>Nathan W. Mesko, MD</div> <div>Paper 66<br/>What Factors Are Associated with Instability After Endoprosthetic Reverse Total Shoulder Arthroplasty for Oncologic Reconstruction of the Proximal Humerus?<br/>Alexander Lazaides, MD</div> |

| Oct 28 (Wed)                                                                                                                                                                                                        | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Oct 31 (Sat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Hemipelvectomy</p> <p>Cutting Guides</p> <p>Custom-made Implants</p> <p>Research Interest Group Meetings</p> <p>Clinical Study Collaboration Group</p> <p>Career Development Group</p> <p>Committee Meetings</p> | <p>Paper 3<br/>Neuropilin-2 as a Therapeutic Target in Osteosarcoma: Spatial Transcriptomics and in Vivo Testing of a Clinic-Ready Anti-Neuropilin-2 Antibody<br/>Sung-Suk Chae, PhD</p> <p>Paper 4<br/>PNKP Inhibition Demonstrates Selective Activity in PTEN-Deficient Osteosarcoma Is Enhanced by NRF2 Blockade<br/>Joseph Kendal, MD, FRCSC</p> <p>Paper 5<br/>DNA Methylation Analysis of Undifferentiated Pleomorphic Sarcoma of Bone<br/>Duncan Ramsey, MD, MPH</p> <p>Paper 6<br/>Evolution-Informed Extinction Therapy: A Novel Treatment for Osteosarcoma<br/>William Eward, MD, DVM</p> <p>Q&amp;A: 10 min</p> <p>Osteosarcoma II</p> <p>Moderators: Michael Monument, MD, FRCSC, Thomas Scharschmidt, MD, Matthew Hess, MD</p> <p>Paper 7<br/>Translational Evaluation of ALDH and MMP-9 Expression in Osteosarcoma: Insights into Chemotherapy Response and Survival from a Single-Center Cohort<br/>Ana Valeria Rigolino Teixeira, MD</p> <p>Paper 8<br/>Advanced Transcriptomic Analysis of SPP1 in Osteosarcoma: A Potential New Therapeutic Target?<br/>Sung-Suk Chae, PhD</p> <p>Paper 9<br/>Immune Cell Composition and Chronic Inflammation Association in Primary High-Grade Osteosarcoma<br/>Rosanna Wustrack, MD</p> <p>Paper 10<br/>Evolving Toward Precision Oncology in Osteosarcoma<br/>Zachary Burke, MD</p> <p>Paper 11<br/>Pan-Cancer Multi-Omics Identifies SKP2 as a Marker of Immune Exclusion with In Vivo Validation in Osteosarcoma<br/>David Geller, MD, MBA</p> | <p>Paper 33<br/>No Difference in Medical or Surgical Complications after Long and Short Intramedullary Nail Fixation for Pathological Pertrochanteric Femur Fractures<br/>Otitochukwu Ezeonu, MD</p> <p>Paper 34<br/>Predictors of Survival After Prophylactic Femoral Fixation for Metastatic Bone Disease: Where You Live Matters<br/>Brian Benyamini</p> <p>Paper 35<br/>Construct Durability, Revision Burden, and Resource Use After Fixation Versus Endoprosthetic Reconstruction for Appendicular Metastatic Bone Disease<br/>Christopher Hamad, MD</p> <p>Paper 36<br/>The Proximal Femur Reconstruction or Internal Fixation for Metastases (PERFORM) International Randomized Controlled Trial<br/>Michelle Ghert, MD, FRCSC</p> <p>Paper 37<br/>Prophylactic eFLASH Pulmonary Radiation Inhibits Lung Metastases and Improves Survival in Murine Soft-Tissue Sarcoma Metastatic Model<br/>Vincent Ng, MD</p> <p>Q&amp;A: 10 min</p> <p>Metastases II</p> <p>Paper 38<br/>Long-Term Outcomes of Denosumab Therapy and Treatment Discontinuation in Patients with Bone Metastases<br/>Atsushi Mihara, MD</p> <p>Paper 39<br/>A Risk Stratification Tool Based on Inflammatory and Nutritional Biomarkers to Predict Early Mortality After Surgery for Appendicular Bone Metastases<br/>Ana Valeria Rigolino Teixeira, MD</p> <p>Paper 40<br/>PathFx vs Modified Tokuhashi Score for Survival Prediction in Metastatic Bone Disease of the Spine<br/>Divakar N. Lal, MD</p> <p>Paper 41</p> | <p>Paper 67<br/>Adverse Events and Patient-Reported Outcomes with the Osseointegrated Protheses for the Rehabilitation of Amputees (OPRA) Implant in Transfemoral Amputees<br/>Melissa Zimel, MD</p> <p>Paper 68<br/>A Nine-Year Experience with a New Fully Cemented, Hybrid, Splined, Porous-Coated Stem in Oncologic Reconstruction<br/>Christopher Hamad, MD</p> <p>Q&amp;A (10 min)</p> <p>Paper 69<br/>Why Revisions Fail? Risk Factors and Predictors of Reoperation Following Revision Megaprosthesis Reconstruction for Tumors Around the Knee<br/>Taha Aksoy, MD</p> <p>Paper 70<br/>Indocyanine Green Fluorescence for Intraoperative Margin Assessment in Musculoskeletal Tumor Surgery: A Single-Institution Experience<br/>Sonia Ubong, MBBS</p> <p>Paper 71<br/>From Scalpel to Slide: The Impact of Air Exposure and Histologic Processing on Surgical Margins<br/>Christopher Collier, MD</p> <p>Paper 72<br/>Oncological Indication Does Not Portend Worse Outcomes After Proximal Femoral Replacement: Prior Surgical Burden rather than Diagnosis, Drives Revision Risk<br/>Stephen Chenard, MSc</p> <p>Q&amp;A (10 min)</p> |

| Oct 28 (Wed) | Oct 29 (Thu)                                                                                                                                                                                | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Oct 31 (Sat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Paper 12<br/>Longitudinal Single-Cell Analysis of Osteosarcoma Defines Pretreatment Chemoresistance and an Actionable PI3K Target<br/>David Geller, MD, MBA</p> <p>Q&amp;A (10 min):</p> | <p>Integrated Patient-Reported Outcomes and Passive Mobility Monitoring Following Metastatic Bone Disease Surgery: A Prospective Study of Feasibility and Early Recovery Patterns<br/>Joseph Kendal, MD, FRCSC</p> <p>Paper 42<br/>Central Nervous System Tropism in CIC-Rearranged Sarcoma: A Rationale for Upfront Screening<br/>Aron Mebrahtu</p> <p>Paper 43<br/>Impact of Radiation Therapy on Skeletal-Related Events in Renal Cell Carcinoma Patients Receiving Immune Checkpoint Inhibitors: A Retrospective Cohort Study<br/>Alan T. Blank, MD, MS</p> <p>Paper 44<br/>Bone Metastases in Soft Tissue Sarcoma: Natural History, Prognostic Factors, and Genomic Characterization in a Modern Cohort<br/>Madeline Rieker, MD</p> <p>Q&amp;A (10 min)</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|              |                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b>Session 13</b><br/><b>Benign Tumors</b><br/>9:30 – 10:00 am</p> <p><b>Moderators:</b> Christina J. Gutowski, MD, MPH, Steven Gitelis, MD</p> <p>Paper 73<br/>Diminished Remaining Subchondral Bone Predicts Risk for Fracture or Arthritis Following Treatment of Giant Cell Tumor of Bone at the Knee<br/>Joseph Ippolito, MD</p> <p>Paper 74<br/>Patterns and Timing of Local Recurrence in Benign Bone Tumors<br/>Bradley Melvin</p> <p>Paper 75<br/>Pimicotinib in Tenosynovial Giant Cell Tumor (TGCT): Long-Term Efficacy, Safety, and Patient-Reported Outcomes from the Phase 3 MANEUVER Trial<br/>Vinod Ravi, MD</p> <p>Paper 76<br/>MRI Characteristics to Differentiate Benign versus Malignant Bone Lesions<br/>Ava Brozovich, MD</p> <p>Q&amp;A: 15 MIN</p> |
|              | <p><b>Exhibits &amp; Poster Viewing</b><br/>10:00 – 10:30 am</p>                                                                                                                            | <p><b>Exhibits &amp; Poster Viewing</b><br/>10:00 – 10:30 am</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p><b>Exhibits &amp; Poster Viewing</b><br/>10:00 – 10:30 am</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Oct 28 (Wed)                                                             | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Oct 31 (Sat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Innovation Course at MARC (Optional)</b><br/>8:00 am - 5:45 pm</p> | <p><b>Session 2</b><br/><b>NIAMS/NCI/MSTS/OREF Early-Stage Investigator Session</b><br/>10:30 - 11:30 am</p> <p>Moderators &amp; Mentors: Francis Lee MD, PhD, Nicholas Bernthal MD, Regis O’Keefe MD, PhD, Eric Henderson MD</p> <p>IET 4. Introduction of MSTS ESI Programs &amp; Traveling Award Recipients (5 min)<br/>Francis Y. Lee, MD, PhD, NIH R13 Grant Principal Investigator, MSTS President</p> <p>IET 5: Clinician Scholarly Pathway (7 min)<br/>Regis O’Keefe, MD, PhD</p> <p>IET 6: Advocacy for Early-Stage Investigators (7 min)<br/>Brian Snyder, MD</p> <p>IET 7: Developing Clinical Proficiency for Complex Cases at Your First Job (7 min)<br/>Nathan Mesko, MD</p> <p>IET 8: Building Academic Orthopaedic Oncology Practice: Chair’s &amp; ESI’s Perspectives? (7 min)<br/>Nicholas Bernthal, MD</p> <p>Discussion: Panel &amp; Audience (25 min)</p> <p>ESI Traveling Award Recipient Panelists: Julia Visgauss, MD, Joshua Lawrenz, MD, Zachary Burke, MD, Michael Colello, MD, Drew Ormseth, MD, Duncan Ramsey, MD, MPH, MD, Alexander Christ, MD, Ahmed Aoude, MD, FRCSC, Christopher Collier, MD, Anthony Bozzo, MD, PhD, FRCSC, Alexander Lazarides, MD, Stephen Chenard, MSc, David Clever, MD, Cecelia Belzarena, MD, MPH, MBA, PhD, Joseph Ippolito, MD</p> | <p><b>Session 8</b><br/><b>Pelvis &amp; Spine</b><br/>10:30 - 11:40 am</p> <p>Moderators: Lukas Nystrom, MD, Raffi Avedian, MD, Robert Weinschenk MD</p> <p>IET 14. Minimizing Complications: Traditional Pelvis Incision &amp; Modular Prosthesis<br/>Ran Wei, MD (5 min)</p> <p>IET 15. En Bloc Resection of Spine Tumors<br/>Xiaodong Tang, MD (5 min)</p> <p>IET 16. Molecular Oncology of Chordoma<br/>Francis Hornicek, MD, PhD (5 min)</p> <p>IET 17. Pelvic Reconstruction Using In-House Designed Implants (5 min)<br/>Krista Goulding, MD, MPH (5 min)</p> <p>IET 18. Salvage of Failed Pelvis Reconstruction<br/>Panos Papagelopoulos, MD, FACS (5 min)</p> <p>Q&amp;A: 5 min</p> <p><b>4 Abstracts + 10 min Q&amp;A = 30 min</b></p> <p>Paper 45<br/>3D-Printed Hemipelvic Endoprostheses Improve Long-term Function and Sacroiliac Stability after Enneking Type II/II+III Periacetabular Tumor Resection: A Matched Cohort Study<br/>David Geller, MD, MBA</p> <p>Paper 46<br/>Custom 3D-Printed Pelvic Reconstruction Versus No Implant Reconstruction Following Oncologic Periacetabular Resection: A Multi-Institutional Study<br/>Alexander Lazarides, MD</p> <p>Paper 47<br/>Functional Recovery Trajectories Following Internal Hemipelvectomy: Custom 3D-Printed Reconstruction vs. Non-Reconstruction<br/>William Eward, MD, DVM</p> <p>Paper 48<br/>Sacral Chordoma Resection: Anterior Video-Assisted Laparoscopic Approach<br/>Eduardo Sadao Yonamine, MD</p> | <p><b>Session 14</b><br/><b>Disasterplasty &amp; Complications</b><br/>10:30 - 12:00 pm</p> <p>Moderators: Joseph Ippolito MD, Joel Mayerson MD</p> <p>IET 26. Salvaging Failed Arthroplasty Implants<br/>Herrick Siegel. MD (5 min)</p> <p>IET 27. Management of Massive Bone Loss<br/>Nicola Fabbri, MD (5 min)</p> <p>IET 28. Management of Disastrous Complications<br/>Joseph Benevenia, MD (5 min)</p> <p>Q&amp;A: 5 min</p> <p><b>10 Abstracts + 20 min Q&amp;A</b></p> <p>Paper 77<br/>Microbiologic Spectrum and Risk Factors for Surgical Site Infection Following Soft Tissue Sarcoma Resection<br/>Aaron Gazendam, MD, FRCSC</p> <p>Paper 78<br/>Comparing Early Outcomes of Antibacterial-coated vs Uncoated Endoprostheses: A Single Institution’s Experience with Nanocept Technology<br/>Danielle Rider, MD</p> <p>Paper 79<br/>Risk Factors and Reconstructive Consequences of Infection After Proximal Humeral Endoprosthetic Reconstruction: A Multi-Institutional Study<br/>Alexander Lazarides, MD</p> <p>Paper 80<br/>Synovial Calprotectin Accurately Detects Periprosthetic Joint Infection in Tumor Megaprotheses: A Prospective Cohort Study<br/>Panayiotis Gavriil, MD</p> <p>Paper 81<br/>Distal Femoral Replacement for Oncologic Versus Non-Oncologic Indications: Comparative Outcomes and Predictors of Failure<br/>Stephen Chenard, MSc</p> <p>Paper 82<br/>Prospective Validation of Intraoperative ICGA Perfusion Thresholds for Predicting Wound Complications Following Resection of Preoperatively Irradiated Soft Tissue<br/>Alexander Lazarides, MD</p> |

| Oct 28 (Wed) | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Oct 31 (Sat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Q&A (10 min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Q&A (10 min)<br><br>Paper 83<br>Results of the First 700 Patients Treated with a One-Stage Revision for PJIs<br>Gerhard Maale, MD<br><br>Paper 84<br>NexGen Sequencing (NGS) is More Accurate Than Culture and Sensitivity (CS) in PJIs<br>Gerhard Maale, MD<br><br>Paper 85<br>Results of Lymphocyte Transformation Testing in Known Cases of PJI<br>Gerhard Maale, MD<br><br>Paper 86<br>Hydrolyzed Collagen Augmentation is Associated with Reduced Wound Complications Following Resection of Preoperatively Irradiated Extremity Soft Tissue Sarcomas<br>Alexander Lazarides, MD<br><br>Q&A (10 min) |
|              | <p>Session 3<br/>Grantsmanship &amp; NIH/OREF Mock Study Section:<br/>Untold Inside Stories of the Grant Review Panels<br/>11:30 am – 12:00 pm</p> <p>Moderator (Study Section Chair): Regis O’Keefe, MD, PhD</p> <p>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</p> <p>IET 9: How to write the Best Translational Research Grant Proposal? (5 min)<br/>Kurt Weiss, MD (Confirmed)</p> <p>IET 10: How to prepare the best real-world clinical research grant? (5 min)<br/>Michelle Ghert MD, FRCSC (Confirmed)</p> <p>Discussion and Q&amp;A (5 min)</p> | <p>Session 9<br/>Interactive Multi-Disciplinary Tumor Board<br/>2 Unknown Cases<br/>11:40 am – 12:00 pm</p> <p>Case Presenter: Drew Ormseth, MD</p> <p>Moderator: Francis Y. Lee, MD, PhD</p> <p>Orthopaedic Oncologists: Eduardo Ortiz-Cruz, MD PhD, Patrick Lin, MD, Andre Spiguel, MD, Michiel van de Sande, MD, Ginger Holt, MD</p> <p>Pathologist: Elham Nasri, MD</p> <p>Paper 49<br/>Unknown Case 1<br/>Drew Ormseth, MD</p> <p>Paper 50<br/>Unknown Case 2<br/>Drew Ormseth, MD</p> | <p>Announcement of Awards</p> <p>(Best Paper, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> ESI &amp; Established Investigators; Best Poster, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> ESI &amp; Established Investigators)</p>                                                                                                                                                                                                                                                                                                                                                            |

| Oct 28 (Wed) | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                            | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                 | Oct 31 (Sat)                                                                                                                              |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Mock Study Section for ESI<br/>(3 min Presentation &amp; 12 min discussion] = 15 min)</p> <p>Paper 13<br/>Tumor-Related Fibrinolysis as a Mechanism and Therapeutic Target in Osteosarcoma Metastases<br/>Stephen Chenard, MSc</p>                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                           |
|              | <p><b>Industry Innovation Symposium I</b><br/>12:00 - 12:40 pm<br/>No CME, Exhibit Hall</p> <p>Moderators: Julia Visgauss, MD, Richard Terek, MD, FACS, Francis Lee, MD, PhD, Matthew DiCaprio, MD</p> <p>D1. Inhibrx<br/>Speaker: TBD (8 min)</p> <p>D2. Deciphera Pharmaceuticals<br/>Speaker: TBD (8 min)</p> <p>D3. US WorldMeds<br/>Speaker: Dr. TBD: (8 min)</p> <p>D4. Zimmer-Biomet<br/>Speaker: Dr. TBD (8 min)</p> <p>Discussion (8 min):</p> | <p><b>Industry Innovation Symposium II</b><br/>12:00 - 12:40 pm<br/>No CME, Exhibit Hall</p> <p>Moderators: David Geller, MD, MBA, Edward Cheng, MD, Felasfa Wodajo MD, Juan Pretell, MD</p> <p>D5. EMD Serono<br/>Speake: TBD (8 min)</p> <p>D6. SpringWorks Therapeutics, Inc.<br/>Speaker: TBD (8 min)</p> <p>D7. Daichi Sankyo, Inc<br/>Speaker: TBD: (8 min)</p> <p>D8. Stryker<br/>Speaker: TBD (8 min)</p> <p>Discussion (8 min):</p> | <p><b>Lunch &amp;<br/>Poster Viewing<br/>MSTS Global Networking</b><br/>12:10 - 2:00 pm</p> <p><b>MSTS-Industry-Global Networking</b></p> |
|              | <p><b>Lunch, Poster Viewing, and Exhibits</b><br/>12:40 – 1:30 pm</p>                                                                                                                                                                                                                                                                                                                                                                                   | <p><b>Lunch, Poster Viewing, and Exhibits</b><br/>12:40 – 1:30 pm</p>                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                           |

|                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                  |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Innovation Course at MARC<br/>Continued<br/>8:00 am - 5:45 pm</b> | <b>Session 4<br/>Poster Award Finalist Presentations<br/>1:30 - 2:40 pm</b><br><br><u><b>Top 8 Posters by Early-Stage Investigators</b></u><br><br><b>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</b><br><br><b>Moderators will re-grade the finalist abstracts to decide top 3 ESI Poster Awards</b><br><br><b>Poster 1</b><br><b>Reconstructing the Irreparable: A Novel Approach to Femoral Head Defects After Chondroblastoma Curettage</b><br><b>Ceceilia Belzarena, MD, MPH, MBA</b><br><br><b>Poster 2</b><br><b>What Factors are Associated with Amputation Versus Continued Limb Salvage Following Implant Removal in Lower Extremity Endoprosthetic Reconstruction?</b><br><b>Michael Colello, MD</b><br><br><b>Poster 3</b><br><b>Venous Thromboembolism (VTE) in Patients with Metastatic Bone Disease Versus Malignant Primary Bone or Soft Tissue Tumors</b><br><b>Pablo Andres Patino, MD</b><br><br><b>Poster 4</b><br><b>Diagnostic Performance of Interventional Radiology and Surgical Biopsies for Musculoskeletal Lesions</b><br><b>Danielle Brown, MD</b><br><br><b>Poster 5</b><br><b>MRI Misses Residual Sarcoma: Pathologic Correlation After Re-Excision of Tumor Bed</b><br><b>Drew Ormseth, MD</b><br><br><b>Poster 6</b><br><b>When Cartilage Misleads: Fibrocartilaginous Mesenchymoma Mimicking Chondrosarcoma on Core Biopsy</b><br><b>Julian Emerson Dilley, MD</b><br><br><b>Poster 7</b><br><b>When the Implant Is Not the Problem: Decision Points to Prevent Soft-Tissue Failure After Hemipelvic Endoprosthetic Reconstruction</b><br><b>Ziyi Zhao, MD</b> | <b>Session 10<br/>Digital Health, AI, Robotics, Engineering<br/>1:30 - 2:35 pm</b><br><br><b>Moderators: Anna Cooper MD, MPH, Kyle Sweeney MD, Alexandra Callan MD</b><br><br><b>IET 19. Big data analysis in cancer biomarkers and outcomes (5 min)</b><br><b>Brooke Crawford, MD</b><br><br><b>IET 20. AI in Orthopaedic Oncology: Machine Learning, Generative AI, Agentic AI, and Physical AI (5 min)</b><br><b>Tae Kim, MD</b><br><br><b>Paper 51</b><br><b>Immune Phenotype-Dependent Pembrolizumab Effects in High-Risk Localized Soft Tissue Sarcoma: A Multimodel and Explainable Machine Learning Analysis of SARCo32 Trial Data</b><br><b>Anthony Bozzo, MD, PhD, FRCSC (ESI)</b><br><br><b>Paper 52</b><br><b>AR for Sarcoma Surgery – The Future is Here</b><br><b>Ahmed Aoude, MD, FRCSC</b><br><br><b>Paper 53</b><br><b>An End-to-End Deep Learning Framework and Multicenter Validation for the Diagnosis of Retroperitoneal Soft Tissue Sarcoma</b><br><b>Tong Meng, MD</b><br><br><b>Paper 54</b><br><b>Augmented Reality Guidance for Targeted Re-Resection of Positive Margins in Sarcoma</b><br><b>Michael Colello, MD</b><br><br><b>Paper 55</b><br><b>Preoperative Surgical Margin Assessment Using a Three-Dimensional-Printed Model for Simulated Surgery of Periaricular Malignant Bone Tumors</b><br><b>Shachar Kenan, MD</b><br><br><b>Paper 56</b><br><b>Development and Optimization of In-Situ Local Tumor Ablation and Recycling System for Consistent Heating and Clinical Translation</b><br><b>Min Wook Joo, MD, PhD</b><br><br><b>Paper 57</b><br><b>Sarcoma Resection Guided by Intraoperative Indocyanine Green Dye Fluorescence Angiography</b><br><b>Mikaela Sullivan, MD</b><br><br><b>Q&amp;A (15 min)</b> | <b>Session 15<br/>Interactive Group Discussion, Meetings,<br/>and Activities</b> |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  | <p>Poster 8<br/>Hemiarthroplasty Versus Total Hip Arthroplasty for Metastatic Bone Disease of the Proximal Femur<br/>Matthew Yeager</p> <p>Q&amp;A + Discussion: 14 min</p> <p><a href="#">Top 8 Posters by Established Investigators</a></p> <p>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</p> <p>Poster 9<br/>Posterior Chest Wall Angiosarcoma with Dynamic Scapular Reconstruction using a Trapezius Osteo-muscular Rotational Flap<br/>Adeem Nachabe. MD</p> <p>Poster 10<br/>Deltoid Reconstruction with Functional Pedicled Bipolar Pectoralis Major Muscle Flap for Shoulder Abduction and Flexion<br/>Lahin Amlani, MD</p> <p>Poster 11<br/>Modified Compress Technique for Intercalary Limb Salvage in Children with Bone Sarcomas<br/>Raffi Avedian, MD</p> <p>Poster 12<br/>Successful Glenoid Reconstruction using a Distal Tibial Osteochondral Allograft Following Wide Resection of a Scapular Chondrosarcoma: A Case Report<br/>Anna A. Khachatrian, MD</p> <p>Poster 13<br/>3D-Printed Cutting Guides for Joint Preservation of a Rare Juxtarticular BCOR Sarcoma of the Proximal Tibia and Multidisciplinary Care Approach<br/>Shachar Kenan, MD</p> <p>Poster 14<br/>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<br/>Amy Zeller, MD</p> <p>Poster 15<br/>Primary versus Secondary Patellar Resurfacing in Oncologic Megaprosthesis Knee Reconstruction: A Multi Institutional Retrospective Cohort Analysis<br/>Alan T. Blank, MD, MS</p> |  |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

| Oct 28 (Wed)                                                                                                                | Oct 29 (Thu)                                                                                                                                                               | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Oct 31 (Sat)                        |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <p>Innovation Course at MARC<br/>Continued<br/>8:00 am - 5:45 pm</p> <p>Committee Meeting</p> <p>Interest Group Meeting</p> | <p>Poster 16<br/>Surgical Management of Metastatic Bone Disease: En bloc Resection with or without Reconstruction<br/>Young Ho Lee</p> <p>Q&amp;A + Discussion: 14 min</p> | <p>Session 11<br/>Controversies in Soft Tissue Tumors<br/>2:40 – 4:10 pm</p> <p>Moderators: Dieter Lindskog MD, Herbert Schwartz MD, Lee Leddy MD, Rajiv Rajani MD</p> <p>Invited Expert Talk (IET) (15 min)</p> <p>IET 21: Management of High-Grade Soft Tissue Sarcomas without Adjuvant Radiation Therapy<br/>Shintaro Iwata, MD (5 min)</p> <p>IET 22: Management of High-Grade Soft Tissue Sarcomas with Adjuvant Radiation Therapy<br/>Jay Wunder, MD, FRCSC (5 min)</p> <p>Q&amp;A: 5 min</p> <p>Paper 58<br/>Impact of Neoadjuvant Radiation on Pathogen Profiles and Cefazolin Coverage in Soft Tissue Sarcoma Resection<br/>William Eward, MD, DVM</p> <p>Paper 59<br/>Plantar Fibromatosis: Surgical Approach for a Tumor with a Tissue-Specific Propensity for Recurrence<br/>William Ward, MD, FACS</p> <p>Paper 60<br/>An In Vivo Platform Enables Evaluable Drug Responses in Patients with Soft Tissue Sarcoma<br/>Kenneth Gundle, MD</p> <p>Paper 61<br/>The Su1veillance After Extremity Tumor Surgery (SAFETY) International Randomized Controlled Trial<br/>Michelle Ghert, MD, FRCSC</p> <p>Paper 62<br/>Quantitative Margin Assessment Predicts Local Recurrence in Myxofibrosarcoma<br/>Jun Iwatsu, MD</p> <p>Paper 63<br/>Beyond the Biopsy: High Rates of Grade and Diagnostic Discrepancy in Myxofibrosarcoma - A Single-Center Analysis<br/>Paniz Eizadkhah, BS</p> <p>Q&amp;A: 10 min</p> | <p>Interactive Group Discussion</p> |

| Oct 28 (Wed)                                                                | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Oct 30 (Fri)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Oct 31 (Sat) |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| <p><b>Innovation Course at MARC<br/>Continued</b><br/>8:00 am - 5:45 pm</p> | <p><b>Session 5<br/>Chondrosarcoma</b><br/>2:50 – 3:40 pm</p> <p>Moderators: Yvette Ho, MD, Gregory Domson, MD,<br/>Daniel Wurtz, MD</p> <p><b>Chondrosarcoma</b></p> <p>Paper 14<br/>Prognostic Role of TERT Mutations in Chondrosarcoma:<br/>Association with Dedifferentiated Tumors and Survival<br/>Outcomes<br/>Thomas Temple, MD</p> <p>Paper 15<br/>ASPH Blockade Abrogates Doxorubicin Induced<br/>Chemoresistance in Chondrosarcoma<br/>Richard Terek, MD, FACS</p> <p>Paper 16<br/>Targeting DNMT3B Reveals an Epigenetic Vulnerability in<br/>Chondrosarcoma<br/>David Clever, MD (ESI)</p> <p>Paper 17<br/>Impact of Surgical Margins in Chest Wall Chondrosarcomas:<br/>A CanSaRCC Study<br/>Aaron Gazendam, MD, FRCSC</p> <p>Paper 18<br/>When an Intra-Articular Process is More Than It Appears:<br/>Malignant Transformation of Synovial Chondromatosis to<br/>Chondrosarcoma<br/>Julian Emerson Dilley, MD (ESI)</p> <p>Paper 19<br/>The Tetravalent Death Receptor 5 (DR5) Agonist Ozekibart<br/>(INBRX-109) in Conventional Chondrosarcoma: Secondary<br/>Efficacy Endpoints from the Randomized, Registrational,<br/>Phase 2 ChonDRAGON study<br/>Robin L. Jones, MD</p> <p>Paper 20<br/>Does Pain Signal Malignancy?: Investigating the Reliability of<br/>Pain Symptoms in Predicting Chondrosarcoma.<br/>Alexander Lazarides, MD (ESI)</p> <p>Q&amp;A: 15 min</p> | <p><b>Celebrating 50 Years</b><br/>4:30 – 5:30 pm<br/>Francis Hornicek, MD, PhD and<br/>Francis Lee, MD, PhD</p> <p>National Anthem</p> <p>Long-Standing Industry Partnership Awards</p> <p>Honoring Founders &amp; MSTs Members</p> <p>International Society President Session<br/>(4 min; 5 Slides, 1<sup>st</sup> Slide, Introduction of Self; 2<sup>nd</sup> Slide:<br/>Society Overview; 3<sup>rd</sup>-5<sup>th</sup> Slides: Research Accomplishment<br/>of the Self or Society)</p> <p>MSTs: Francis Lee, MD, PhD<br/>CTOS: Robin Jones, MD<br/>ISOLS: Peter Steadman, MD<br/>EMSOS: Michiel van de Sande, MD<br/>SLATME: TBD<br/>APMSTs: Yang-Guk Chung, MD<br/>Brazil: Ricardo Becker, MD<br/>India: Ashish Gulia, MD</p> <p>Closing</p> |              |

| Oct 28 (Wed)                                                                                                                                                                        | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Oct 30 (Fri) | Oct 31 (Sat) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
|                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |              |
| <p><b>MSTS Board Meeting</b><br/><b>(4:30 – 6:00 pm)</b></p> <p><b>President Report</b></p> <p><b>Committee Report</b></p> <p><b>Active Business</b></p> <p><b>New Business</b></p> | <p><b>Session 6</b><br/><b>Pediatric Orthopaedic Oncology &amp; Biological Reconstruction</b><br/><b>3:45 – 4:50 pm</b></p> <p><b>Moderators: Valerae Lewis, MD, Lee Zuckerman, MD</b></p> <p>Paper 21<br/>EWSR1-FLI1-Associated Cohesin and DNA Damage Response Dependencies Identified by Pan-Cancer CRISPR Profiling in Ewing Sarcoma<br/>Brandon Gettleman, MD</p> <p>Paper 22<br/>Targeting Glutamine Metabolism to Enhance Radiosensitivity in Ewing<br/>Brittany Simone, DO</p> <p>Paper 23<br/>Characterization of the NK Regulatory Landscape in the Tumor Environment of Pediatric Sarcomas<br/>Adrian Ibanez-Navarro, MD</p> <p>Paper 24<br/>Beyond RECIST: Prognostic Value of Soft-Tissue Volume Reduction in Ewing Sarcoma<br/>Julian Emerson Dilley, MD</p> <p>Paper 25<br/>Compression of Intercalary Allografts with Magnetic Lengthening Nails, Mid-Term Results with a Comparison of Techniques<br/>Lee Zuckerman, MD</p> <p>Paper 26<br/>All Internal Distraction Osteogenesis after Tumor Resection with Magnetic Intramedullary Nails<br/>Lee Zuckerman, MD</p> <p>Paper 27<br/>Appositional Bone Growth is a Risk for Aseptic Loosening Following Lower Extremity Endoprosthetic Reconstruction in Pediatric Bone Sarcoma Patients<br/>Michael Colello. MD</p> <p>Paper 28<br/>Reverse Total Shoulder Arthroplasty Improves Function Compared to Hemiarthroplasty in Pediatric Proximal Humerus Tumor Reconstruction: A Multicenter Study<br/>Spencer M. Richardson, MD</p> |              |              |

| Oct 28 (Wed)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Oct 29 (Thu)                                                                                                                                                                                                                                                                                                                                                    | Oct 30 (Fri)                                                                                                                                                                  | Oct 31 (Sat) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Paper 29<br/>True Infection is Rate Despite Extensive Workup for Postoperative Fever After Pediatric Extremity Sarcoma Surgery<br/>Rajul Gupta, MD</p> <p>Paper 30<br/>Why the Rotationplasty Patient-Powered Registry Is Crucial for Shared Decision Making: “We Need as Much Research as We Can Get!”<br/>Janet E. Panoch, PhD</p> <p>Q&amp;A (15 min)</p> |                                                                                                                                                                               |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Break, Poster Viewing, and Exhibits<br>5:00 – 6:00 pm                                                                                                                                                                                                                                                                                                           | Break, Poster Viewing, and Exhibits<br>5:30 – 6:30 pm                                                                                                                         | Adjourn      |
| <p><b>MSTS/NIAMS/NCI/OREF/AAOS<br/>Dinner Reception:<br/>Bridging the Past, Present, and<br/>Future</b></p> <p><b>Magnolia Courtyard<br/>6:00 – 8:00 pm<br/>(No additional Fee)</b></p> <p><b>NIAMS/NCI/OREF/AAOS R13 Program<br/>Honoring MSTS Early-Stage<br/>Investigators, AAOS Members,<br/>NIAMS/NCI, OREF International<br/>Attendees, and Industry Innovators</b></p> <p><b>Introduction &amp; Acknowledgement</b></p> <p><b>NIAMS/NCI</b></p> <p><b>OREF</b></p> <p><b>AAOS</b></p> <p><b>Clinician Scholar Address</b></p> | <p><b>MSTS 50<sup>th</sup> Anniversary Reception:<br/>Celebrating 50 Years</b></p> <p><b>Cascata Pool<br/>6:00 – 8:00 pm<br/>(No additional Fee)</b></p>                                                                                                                                                                                                        | <p><b>MSTS 50<sup>th</sup> Anniversary Gala Dinner:<br/>Towards the 100<sup>th</sup> Year</b></p> <p><b>Magnolia Courtyard<br/>6:30 – 9:00 pm<br/>(No additional Fee)</b></p> |              |

| Oct 28 (Wed)                                                                                                                                                                                                                                 | Oct 29 (Thu) | Oct 30 (Fri) | Oct 31 (Sat) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|
| <p>Announcement &amp; Introduction of MSTS<br/>Early-Stage-Investigator Traveling<br/>Award Recipients</p> <p>Working Dinner Reception</p> <p><b>Innovation Course Reception</b><br/><b>Interactive Discussion</b><br/>6:00 pm – 8:00 pm</p> |              |              |              |