

**2019 MSTS Annual Meeting  
Preliminary Program**  
October 2-4, 2019  
Marriott Portland Downtown Waterfront Hotel  
Portland, Oregon

*James B. Hayden, MD, Program Chair*  
*Yee-Chen Doung, MD, Co-Chair*  
*R. Lor Randall, MD, FACS, MSTS President*

**Educational Goals and Objectives**

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

Understand current trends in cancer research and treatment.

Review principles of Limb Salvage surgery.

Update understanding of the pathophysiology of metastatic bone disease.

Review overall management and operative approach to pelvic bone metastases.

Increase understanding of musculoskeletal treatment needs for adolescents and young adult cancer patients.

Update on basic science research in musculoskeletal oncology.

Identify current and future applications of Quality of Life assessments and patient reported outcomes.

**Wednesday, October 2, 2019**

1:00 PM - 6:30 PM	Registration
1:00 PM - 5:00 PM	Poster Set Up
1:00 PM - 5:00 PM	Technical Exhibit Booth Set Up
3:00 PM - 6:00 PM	MORI/MSTS Young Member Session
6:30 PM - 8:30 PM	Welcome Reception - Mt Hood Room - Marriott Portland Downtown Waterfront Hotel

**Thursday, October 3, 2019**

6:30 AM - 5:30 PM	Registration	
7:00 AM - 8:30 AM	Breakfast	
7:00 AM - 5:30 PM	Poster/Technical Exhibits	
7:30 AM	Introduction and Welcome	James Hayden, MD and R. Lor Randall, MD, FACS
7:45 AM - 8:00 AM	Evaluation of New Bone Lesions Discussion	Felasfa Wodajo, MD

**Session I: Registry**

Moderators: TBD

8:00 AM - 8:05 AM	Paper 1	Surveillance After Extremity Tumor Surgery (Safety) Patient Survey: A Patient Centered Approach To The Development Of An International Rct	Michelle Ghert, MD
8:05 AM - 8:10 AM	Paper 2	Update On The American Academy Of Orthopaedic Surgeons Musculoskeletal Tumor Registry	Benjamin J. Miller, MD, MS
8:10 AM - 8:15 AM	Paper 3	Affordable Care Act And Insurance Coverage In Orthopaedic Oncology: An Analysis Of The Seer Database	Azeem Tariq Malik, MBBS
8:15 AM - 8:25 AM		Moderated Discussion	

**Session II: Soft Tissue Sarcoma**

Moderators: TBD

8:25 AM - 8:30 AM	Paper 4	Outcome After Surgical Treatment Of Dermatofibrosarcoma Protuberans (Dfsp): Does It Requires All This Follow Up? How Much Resection Margin Is Enough?	Ibrahim S Alshaygy, MD, MSC
8:30 AM - 8:35 AM	Paper 5	Interval Between Preoperative Radiation And Surgery Is Not Associated With Overall Survival For Soft Tissue Sarcomas: An Analysis Of The National Cancer Database	Christopher Collier, MD
8:35 AM - 8:40 AM	Paper 6	Metastatic Bone Disease At Diagnosis In Extremity Soft-Tissue Sarcomas: Risk Factors And Survival Analysis Using The Seer Registry	Manaf H.S. Younis, MD, MPH
8:40 AM - 8:50 AM		Moderated Discussion	
8:50 AM - 8:55 AM	Paper 7	Early Outcomes Of Preoperative 5-Fraction Radiation Therapy For Soft Tissue Sarcoma With Immediate Resection	Joshua Michael Lawrenz, MD

8:55 AM - 9:00 AM	Paper 8	Improved Survivorship Following Surgical Resection Of The Primary Tumor In Patients With Metastatic Soft Tissue Sarcoma	Sophia A. Traven, MD
9:00 AM - 9:05 AM	Paper 9	Neoadjuvant Combination Immunotherapy / Radiation For High-Risk Soft Tissue Sarcoma (Nexis): Preliminary Results From An Integrated Phase I/II, Single-Arm, Prospective Clinical Trial	Vincent Y. Ng, MD
9:05 AM - 9:15 AM		Moderated Discussion	
9:15 AM - 9:20 AM	Paper 10	Extremity Malignant Peripheral Nerve Sheath Tumor (Mpnst): A Retrospective Analysis Of 185 Cases From Reference Sarcoma Center	Bartek Szostakowski, MD
9:20 AM - 9:25 AM	Paper 11	Vascular Reconstruction In Sarcoma Surgery: Complication, Functional And Vascular Outcomes	Jean-Camille Mattei, MD
9:25 AM - 9:30 AM	Paper 12	Leiomyosarcomas: Recurrence Rates Based On Tumor Depth	Elizabeth Wellings, MD
9:30 AM - 9:40 AM		Moderated Discussion	
9:40 AM - 10:10 AM	Break		
9:40 AM - 10:00 AM	Product Theater- TBD		
9:40 AM - 10:10 AM		Poster Viewing	
<b>Session III: Bone Tumors</b>			
Moderators: TBD			
10:10 AM - 10:15 AM	Paper 13	Does Surgical Resection Of The Primary Tumor In Patients With Metastatic Osteosarcoma Affect Survivorship	Sophia A. Traven, MD
10:15 AM - 10:20 AM	Paper 14	Age Versus Survival In Primary Bone Cancers (Ewing's Sarcoma, Osteosarcoma, And Chondrosarcoma)	William G Ward, MD, FACS
10:20 AM - 10:25AM	Paper 15	Targeted Muscle Reinnervation Decreases Phantom And Residual Limb Pain In Oncologic Amputees	John Alexander, MD

10:25 AM - 10:35 AM		Moderated Discussion	
<b>Session IV: Surgical Treatment</b>			
Moderators: TBD			
10:35 AM - 10:40 AM	Paper 16	Revision Rates For Megaprotheses: A Review Of The Literature And Meta-Analysis	Jean-Camille Mattei, MD*
10:40 AM - 10:45 AM	Paper 17	Custom Stem-Sideplate Preserves At-Risk Hip Joint During Endoprosthetic Reconstruction Of The Femur	Alexander Bryant Christ, MD*
10:45 AM - 10:50 AM	Paper 18	Bushing Design And Crosslinked Polyethylene Can Favorably Improve Mechanical Survival Of Rotating Hinge Endoprostheses Around The Knee	Robert M Henshaw, MD*
10:50 AM - 11:00 AM		Moderated Discussion	
11:00 AM - 11:05 AM	Paper 19	Intercalary Endoprosthetic Reconstruction: An Analysis Of Complications	Joseph Benevenia, MD
11:05 AM - 11:10 AM	Paper 20	Comparison Of Reconstructive Techniques Following Oncologic Intraarticular Resection Of Proximal Humerus	Matthew Thomas Houdek, MD
11:10 AM - 11:15 AM	Paper 21	Bone Preservation Following Revision Allograft Prosthetic Composite Reconstruction Of The Proximal Humerus	Taylor James Reif, BS, M*
11:15 AM - 11:25 AM		Moderated Discussion	
11:25 AM - 11:30 AM	Paper 22	Comparison Of Free Vascularized Fibula Grafting To Allograft Strut Grafting To Supplement Spinal Pelvic Reconstruction For Sacral Malignancies	Matthew Thomas Houdek, MD
11:30 AM - 11:35 AM	Paper 23	Outcomes Of Sacral Tumor Resection Based On The Mayo Clinic Classification System	Peter S. Rose, MD

11:35 AM -11:40 AM	Paper 24	Navigation-Assisted In Pelvic And Sacrum Resection Provides Benefit In Minimizing Bony Recurrence	David M. Joyce, MD
11:40 AM -11:50 AM		Moderated Discussion	
11:50 PM - 1:00 PM	Lunch		
11:50 AM - 12:10 PM		Product Theater- TBD	
12:15 PM - 12:35 PM		Product Theater- TBD	
11:50 AM - 1:00 PM		Poster Viewing	
<b>Session V: Panel Discussion: Adolescents and Young Adults</b>			
1:00 PM - 1:40 PM		Adolescents and Young Adults (AYA) Panel Discussion	
<b>Session VI: Young Adults</b>			
Moderators: TBD			
1:40 PM -1:45 PM	Paper 25	Pediatric Sarcoma Patients Have Worse Physical Function But Better Peer Relationships And Depressive Symptoms Than The U.S. General Pediatric Population As Measured By Promis	Anna R Cooper, MD, MPH
1:45 PM - 1:50 PM	Paper 26	Bisphosphonate Therapy For Treating Osteonecrosis In Pediatric Leukemia Patients: A Systematic Review	Shanaz Daneshdoost
1:50 PM - 1:55 PM	Paper 27	Allograft Reconstruction Alone Has An Increased Rate Of Amputation And Worse Functional Outcome When Compared With Vascularized Fibular Reconstruction For Tibial Defects In Pediatric Patients	Amirhossein Misaghi, MD*
1:55 PM - 2:00 PM	Paper 28	Clinical Characteristics Of Masses In Pediatric Hand/Wrist	Carlos D. Pargas, MD
2:00 PM - 2:10 PM		Moderated Discussion	
2:10 PM - 2:15 PM	Paper 29	Low Socioeconomic Status Predicts Metastatic Disease At Presentation In Young Patients With Ewing Sarcoma	Sophia A. Traven, MD

2:15 PM - 2:20 PM	Paper 30	The Sarcoma-Specific Quality Of Life Study (Sarc-Qol) (Phase 1): Identifying Key Domains Of Health-Related Quality Of Life In Adult Patients With Extremity Soft Tissue Sarcoma	Krista Anne Goulding, MD, FRCSC, MPH
2:20 PM - 2:25 PM	Paper 31	The Sarcoma-Specific Quality Of Life Study (Phase 1): A Qualitative Study Of Psychological Functioning And Coping Styles In Adult Extremity Soft Tissue Sarcoma Patients	Krista Anne Goulding, MD, FRCSC, MPH
2:25 PM - 2:35 PM		Moderated Discussion	
2:35 PM - 3:05 PM		Break	
2:35 PM - 2:55 PM		Product Theater - TBD	
2:35 PM - 3:05 PM		Poster Viewing	
3:05 PM - 3:50 PM		MSTS Business Meeting - MSTS Members Only	
<b>Session VII: Research</b>			
Moderators: TBD			
3:50 PM - 3:55 PM	Paper 32	A Cross-Species Personalized Medicine Pipeline Identifies The Crm1 Export Pathway As A Potentially Novel Treatment For Osteosarcoma	Alexander Leandros Lazarides, MD
3:55 PM - 4:00 PM	Paper 33	Comparison Of Cachectic And Non-Cachectic Sarcoma Patients Reveals Differences In The Notch Pathway But Similarities In Myogenesis Inhibition	Jonathan Mandell, BS
4:00 PM - 4:05 PM	Paper 34	Systems-Wide Immunophenotyping Defines Distinct Malignancy-Induced Immunological Changes That Follow Disease Burden In An Immunocompetent K7m2 Orthotopic Murine Model Of Osteosarcoma	Brock A Lindsey, MD
4:05 PM - 4:15 PM		Moderated Discussion	
4:15 PM - 4:20 PM	Paper 35	Developing A Novel Spheroid Model For Chondrosarcoma Research And Drug Screening	Ruichen Ma

4:20 PM - 4:25 PM	Paper 36	Copper Levels And Aldh1a1 Expression Varies Between Low And Highly Metastatic Human Osteosarcoma Cell Lines And Human Samples	Jonathan Mandell
4:25 PM - 4:30 PM	Paper 37	Cell Cycle Checkpoints P16 And P21 – Strong Predictors Of Clinicopathologic Outcome In High-Grade Osteosarcoma	Elham Nasri, MD
4:30 PM - 4:40 PM		Moderated Discussion	
4:40 PM - 4:45 PM	Paper 38	Safety And Feasibility Of The Civo Phase 0 Platform For Simultaneous Evaluation Of Multiple Drugs And Drug Combinations In The Tumor Microenvironment (Tme) Of Cancer Patients	Kenneth Gundle, MD
4:45 PM - 4:50 PM	Paper 39	Mitigation Of Post-Radiation Muscle Fibrosis Using Tgf-Beta	Carol D Morris, MD, MS
4:50 PM - 4:55 PM	Paper 40	Treatment Of Soft Tissue Sarcoma With A Novel Cold Plasma Jet	Alan T. Blank, MD, MS
4:55 PM - 5:05 PM		Moderated Discussion	

### Session VIII: Miscellaneous

Moderators: TBD

5:05 PM - 5:10 PM	Paper 41	The Downstream Revenue Impact Of A Dedicated Orthopaedic Oncologist	Zeke Walton, MD
5:10 PM - 5:15 PM	Paper 42	Are We Training Too Many Orthopaedic Oncologists?	Frank Chiarappa, MD
5:15 PM - 5:20 PM	Paper 43	Statistical Fragility Of Surgical And Procedural Clinical Trials In Orthopedic Oncology As Quantified By The Fragility Index: A Systematic Review	Eugene Jang, MD, MS
5:20 PM - 5:30 PM		Moderated Discussion	
5:30 PM		Meeting Adjourns	

Social Event - Portland World Trade Center

**Friday, October 4, 2019**

6:30 AM- 8:30 AM	Registration	
7:00 AM - 8:30 AM	Breakfast	
7:00 AM - 11:45 AM	Posters/Technical Exhibits	

<b>Session IX: Metastatic</b>			
Moderators: TBD			
7:30 AM - 7:35 AM	Paper 44	Outcomes In Metastatic Bone Disease: A Comparison Of Academic And Community Programs Using The National Cancer Database	Frank Chiarappa, MD
7:35AM - 7:40 AM	Paper 45	Survival In Patients With Carcinomas Presenting With Bone Metastasis At Diagnosis: A Seer Population-Based Cohort Study	Manaf H.S. Younis, MD, MPH
7:40 AM - 7:45 AM	Paper 46	Survival After Surgery For Skeletal Metastases Is Associated With Preoperative Patient-Reported Assessments	Meredith Bartelstein, MD
7:45 AM - 7:55 AM		Moderated Discussion	
7:55 AM - 8:00 AM	Paper 47	Multicenter Retrospective Comparison Of Failure Rates, Outcomes And Complications Between Plate And Nail Fixation For Metastatic Lesions Of The Humerus	James Norris, MD
8:00 AM - 8:05 AM	Paper 48	Finite Element Fracture Predictions For Patients With Metastatic Lesions Of The Proximal Femur	Timothy A Damron, MD
8:05 AM - 8:10 AM	Paper 49	Can We Do Better Than Mirels In Predicting Fracture Risk For Patients With Multiple Myeloma? Evaluation Of A Novel Scoring System	Gregory Toci, BS
8:10 AM - 8:20 AM		Moderated Discussion	
8:20 AM - 8:25 AM	Paper 50	The Use Of Arthroplasty When Treating Proximal Femur Metastatic Lesions Is Associated With Increased Patient Survival When Compared To Intramedullary Nailing In The Va Healthcare System	Kenneth Gundle, MD



8:25 AM - 8:30 AM	Paper 51	Beyond Bisphosphonates And Denosumab To Protect Bone From Cancer-Induced Bone Loss: Mechanism-Based Therapeutic Targets	Francis Young Lee, MD, PhD
8:30 AM - 8:35 AM	Paper 52	Does Nailing Of Pathologic Fractures Increase Systemic Tumor Burden?	Carol D Morris, MD, MS
8:35 AM - 8:45 AM		Moderator Discussion	
8:45 AM - 9:45 AM		Presidential Guest Lecturer - Cancer, bone, muscle and metabolism: What's the connection?	Theresa Guise, MD
9:45 AM - 10:15 AM			
9:45 AM - 10:05 AM		Product Theater - TBD	
9:45 AM - 10:15 AM		Poster Viewing	
10:15 AM - 10:20 AM	Paper 53	Comparative Efficacy Of Receptor Tyrosine Kinase Inhibitors (Rtkis) And Immunotherapy (Anti-Pd-1/Pd-L1) For Treatment Of Osseous Versus Soft Tissue Metastases In Metastatic Renal Cell Carcinoma (Mrcc)	Katherine Tai
10:20 AM - 10:25 AM	Paper 54	Mutation Status And Treatment With Tyrosine Kinase Inhibitors Improves Survival Estimates In Patients With Metastatic Non-Small Cell Lung Cancer	Jonathan Agner Forsberg, MD, PHD
10:25 AM - 10:30 AM	Paper 55	Reamed Versus Unreamed Intramedullary Nailing For The Treatment Of Impending And Pathological Humeral Shaft Fractures: A Retrospective Comparative Study	Manaf H.S. Younis, MD, MPH
10:30 AM - 10:35 AM		Moderator Discussion	
10:35 AM - 10:40 AM	Paper 56	Comparison Of Porous Tantalum Acetabular Implants Versus Harrington Reconstruction For Metastatic Disease Of The Acetabulum	Joshua Johnson, MD
10:40 AM - 10:45 AM	Paper 57	A Novel Percutaneous Osseous Pathway Screw Fixation Technique For Management Of Periacetabular Metastatic Disease	Sahitya Denduluri, MD

10:45 AM - 10:50 AM	Paper 58	Ambulatory Minimally Invasive Image-Guided Ablation-Osteoplasty-Reinforcement-Internal Fixation (Aorif) Reconstruction For Osteolytic Metastatic Cancers In Weight Bearing Bones	Francis Young Lee, MD, PhD
10:50 AM - 11:00 AM		Moderated Discussion	
11:00 AM - 11:05 AM	Paper 59	Pexidartinib For Locally Advanced Tenosynovial Giant Cell Tumor (Tgct): Overall Long-Term Pooled Efficacy And Safety With Characterization Of Hepatic Adverse Reactions (Ars) From Enliven And Other Studies	John H Healey, MD, FACS
11:05 PM - 11:10 AM	Paper 60	Pvns Of The Knee: A Consecutive Series Of 54 Patients Treated Either Arthroscopically Or With Open Synovectomy	Jennifer Thomson
11:10 AM - 11:15 AM	Paper 61	Retrospective Review Of Venous Thromboembolism Prophylaxis In Surgical Resection Of Benign And Malignant Tumors Of Bone And Soft Tissue	Peter Kyriakides
11:15 AM - 11:25 AM		Moderated Discussion	
<b>Session X: Panel Discussion: Teach the Teacher</b>			
11:30 AM - 12:30 PM		Teach the Teacher -Panel Discussion	
12:30 PM		Meeting Adjourns	

*Thank you for attending the 2019 MSTs Annual Meeting.*