

2021 MSTS Annual Meeting
Final Program as of 9/27/2021
October 6-8, 2021
Four Seasons Baltimore Hotel
Baltimore, MD

Odion Binitie, MD Program Chair

Carol D. Morris, MD, MS, MSTS President

2021 Educational Goals and Objectives

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

Update understanding of the pathophysiology of Sarcoma and metastatic bone disease.

Review overall management and operative approach to long bone and pelvic bone metastases.

Understand current trends in cancer research

Review principles of limb salvage surgery

Understand the effects of disparities in cancer research

Increase knowledge in the management and prevention of infections in musculoskeletal surgeries

Wednesday, October 6, 2021

1:00 PM - 6:00 PM	Registration
12:00 PM - 4:00 PM	Executive Committee Meeting
1:00 PM - 6:00 PM	Poster Set Up
3:00 PM - 6:00 PM	MORI/MSTS Young Member Session
6:00 PM - 8:00 PM	Welcome Reception - Grand Ballroom Pre-Function - Four Seasons Baltimore Hotel
1:00 PM - 6:00 PM	Technical Exhibit Booth Set Up

Thursday, October 7, 2021

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- 7:35 AM		Introduction and Welcome	
Session I: Soft Tissue Sarcoma			
Moderators: Wakenda K. Tyler, MD, MPH and Juan A. Pretell, MD			
7:35 AM - 7:40 AM	Paper 1	Assessment of Time to Treatment Data in Soft Tissue Sarcoma: Are We Defining and Reporting This Appropriately?	Joshua M. Lawrenz, MD
7:40 AM - 7:45AM	Paper 2	Lack of Radiosensitivity Predicts Poor Oncologic Outcome in Extremity Myxoid Liposarcoma	Matthew Houdek, MD
7:45 AM - 7:50 AM	Paper 3	Marginal Excision of the Well-differentiated Component of Dedifferentiated Liposarcoma of the Extremity may be Associated with Worse Oncologic Outcome	Erica Kao, MD
7:50 AM - 8:00 AM		Moderated Discussion	
8:00 AM - 8:05 AM	Paper 4	Does Presence of Residual Tumor After Unplanned Excision of Soft Tissue Sarcomas Affect Oncologic Outcomes After Radiation Therapy?	John deVries, MD MS
8:05 AM - 8:10 AM	Paper 5	Is Mohs Micrographic Surgery Really Superior to Wide Local Excision for Dermatofibrosarcoma Protuberans (DFSP)? A Multicenter International Study.	Katherine Mallett, MD
8:10 AM - 8:15 AM	Paper 6	What are Preoperative Risk Factors for Fibrosarcomatous Transformation in Dermatofibrosarcoma Protuberans (DFSP)	Katherine Mallett, MD
8:15 AM - 8:25 AM		Moderated Discussion	
Moderators: Corey Montgomery, MD and Nicholas Bernthal, MD			
8:25 AM -8:30 AM	Paper 7	The addition of anaerobic coverage to perioperative antibiotic prophylaxis during soft tissue sarcoma resection decreases the rate of wound complications	Duncan C. Ramsey, MD, MPH

8:30 AM - 8:35 AM	Paper 8	Assessing the Safety and Utility of Wound VAC Temporization of the Sarcoma or Benign Aggressive Tumor Bed Until Final Margins are Achieved	Mitchell S. Fourman, MD
8:35 AM - 8:40 AM	Paper 9	Cost Variance in Soft Tissue Sarcoma Patients Who Develop Postoperative Wound Complications	Benjamin Wilke, MD
8:40 AM - 8:50 AM		Moderated Discussion	
8:50 AM - 8:55 AM	Paper 10	Challenges and Patterns of Registry Research in Sarcoma	Joshua M. Lawrenz, MD
8:55 AM - 9:00 AM	Paper 11	Do "Whoops" procedures in soft tissue sarcomas of the limbs affect patients' prognosis?	Jose Ignacio Albergo MD
9:00 AM - 9:05 AM	Paper 12	Adjuvant Radiation after Resection of Atypical Lipomatous Tumors is Associated with Improved Local Control but Increased Complications: A Multicenter Evaluation	Joshua M. Lawrenz, MD
9:05 AM - 9:15 AM		Moderated Discussion	
Session II: Practice Management			
Moderator: Felasfa Wodajo, MD			
9:15 AM - 9:20 AM	Paper 13	Understanding Expectations: Analysis of the MSTs Practice Management Compensation and Budget Target Survey	Adam S. Levin, MD
9:20 AM - 9:25 AM	Paper 14	The Prevalence of Burnout in Orthopaedic Oncology	Leah Herzog, MD

9:25 AM - 9:30 AM	Paper 15	Surgical Techniques and Principles in Orthopaedic Oncology on Management of Primary Soft Tissue Sarcomas: A Survey of Orthopaedic Oncologists Practices	Christa LiBrizzi, MD
9:30 AM - 9:40 AM		Moderated discussion	
9:40 AM - 10:10 AM	Break		
9:40 AM - 10:00 AM		Product Theater - Onkos Surgical	
9:40 AM - 10:10 AM		Poster Viewing	
Session III: Reconstruction			
Moderators: Rosanna Wustrack, MD and Eric R. Henderson, MD			
10:10 AM - 10:15 AM	Paper 16	Functional and surgical outcomes of tibial turn-up to achieve limb salvage in the setting of massive femoral bone loss	Duncan C. Ramsey, MD, MPH
10:15 AM - 10:20 AM	Paper 17	Long-term Durability of Proximal Femur Replacements for Oncologic Diagnoses: A Forty Year Experience	Danielle E. Greig, MD
10:20 AM - 10:25 AM	Paper 18	Rotated Massive Autograft Reconstruction for Bone Tumors: A Safe and Reproducible Technique	Pablo Stoppiello, MD
10:25 AM - 10:35 AM		Moderated Discussion	
10:35 AM - 10:40 AM	Paper 19	Long Bone Allograft Reconstructions after Oncologic Resection: Does Degree of Cortical Contact Affect Healing Time?	Robert C. Weinschenk, MD
10:40 AM - 10:45 AM	Paper 20	Structural Allografts: Plate versus Nail Fixation	Amanda Goldin, MD
10:45 AM - 10:50AM	Paper 21	Allograft Prosthetic Composite Reconstruction Using a Reverse Total Shoulder Arthroplasty for Failed Oncologic Proximal Humerus Reconstruction	Matthew Houdek, MD
10:50 AM - 11:00 AM		Moderated Discussion	
Moderators: Lee R. Leddy, MD and Tae W. Kim, MD			
11:00 AM - 11:05AM	Paper 22	Functional Evaluation of Spherocentric Total Elbows and Shoulders	Gerhard Maale, MD

11:05 AM - 11:10 AM	Paper 23	Implant Survivorship and Complications Following First Revision of Distal Femoral Replacements for Primary Tumors of the Extremities	Danielle E. Greig, MD
11:10 AM -11:15 AM	Paper 24	Outcomes Following Oncologic Reverse Total Shoulder Arthroplasty	Caroline Vonck, MD
11:15 AM -11:20 AM	Paper 25	Determinants of Functional Outcome After Limb-Preserving Oncologic Periacetabular Resections	Robert C. Weinschenk, MD
11:20 AM -11:30 AM		Moderated Discussion	
Session IV: Infection			
11:30 AM -11:35 AM	Paper 26	Antibiotic Calcium Sulphate Beads Lower Bacterial Burden and Prevent Infection in Mouse Model of PJI	Danielle E. Greig, MD
11:35 AM -11:40 AM	Paper 27	Infection resistance and soft tissue integration of additively manufactured titanium devices implanted percutaneously into pigs	Ian D Dickey, MD
11:40 AM- 11:45 AM	Paper 28	Transcutaneous oxygen as a predictor of wound healing complications in preoperatively radiated soft tissue sarcoma	Lukas Nystrom, MD
11:45 AM -11:55 AM		Moderated Discussion	
11:55 AM - 1:10 PM	Lunch		
11:55 AM - 12:15 PM	Product Theater - Medtronic		
11:55 AM - 1:10 PM		Poster Viewing	
Session V: MSTS Collaborative Studies			
Moderator: Kurt R. Weiss, MD			
1:10 PM - 2:10 PM		Updates on MSTS Collaborative Studies and Research Projects	

1:10 PM - 1:35 PM		Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY): An International, Multi-Center RCT Comparing Alternative Antibiotic Regimens in Patients Undergoing Tumor Resection and Endoprosthetic Reconstruction of the Lower Extremity	Michelle Ghert, MD, FRSCS
1:35 PM - 1:40 PM		The Surveillance After Extremity Tumor Surgery (SAFETY) Trial: Results of the Pilot Study and Successful International Expansion	Michelle Ghert, MD, FRSCS
1:40 PM - 1:50 PM		Registry Update	Benjamin Miller, MD, MS
1:50 PM - 2:00 PM		MORI Update	Lukas Nystrom, MD
2:00 PM - 2:10 PM		Evidence Based Medicine Update	Felasfa Wodajo, MD
2:10 PM - 2:20 PM		Q & A Session	
Session VI: Malignant Bone Tumors			
Moderators: Matthew T. Houdek, MD and Will Eward, MD, DVM			
2:20 PM - 2:25 PM	Paper 29	Can low-grade chondrosarcoma in flat bones be treated with intralesional curettage and cryotherapy?	Kwangwon Park, MD
2:25 PM - 2:30 PM	Paper 30	Upregulation of LCP1 in Chondrosarcoma Correlates with Aggressive Behavior and Poor Prognosis.	Caleb Watson, MD
2:30 PM - 2:35 PM	Paper 31	Investigating the role of Androgen receptor and ALDH in Osteosarcoma lung metastases	Nerone Douglas
2:35 PM - 2:45 PM		Moderated Discussion	
Session VII: Basic Science			
2:45 PM - 2:50 PM	Paper 32	A targeted inhibition of the E3 ligase SCFSkp2/Cks1 has survival benefit and antitumor activity in osteosarcoma	Jichuan Wang, MD
2:50 PM - 2:55 PM	Paper 33	Systemic Administration of IL-12 Loaded PLGA Nanoparticles has Substantial Cure Rate in A Murine Osteosarcoma Model	Brock Lindsey, MD
2:55 PM - 3:00 PM	Paper 34	Targeted Inhibition of SCF SKP2 Complex Has Antitumor Activity on Osteosarcoma Organoids	Swapnil Singh, MD
3:00 PM - 3:10 PM		Moderated Discussion	

3:10 PM - 3:40 PM		Break	
3:10 PM - 3:30 PM		Product Theater - Stryker	
3:10 PM - 3:40 PM		Poster Viewing	
3:40 PM - 4:40 PM		MSTS Business Meeting - MSTS Members Only	
Session VIII: Benign Bone Tumors			
Moderators: Nicole I. Montgomery, MD and Felasfa M. Wodajo, MD			
4:40 PM - 4:45 PM	Paper 35	Sclerotherapy for Aneurysmal Bone Cysts: Scale for Response	Megan E. Anderson, MD
4:45 PM - 4:50 PM	Paper 36	Benign Bone Lesions: Do They Warrant Follow-Up?	Harrison Volaski
4:50 PM - 4:55 PM	Paper 37	What is the prevalence of clinically important findings among incidentally found osseous lesions?	Collin Blackburn, MD MBA
4:55 PM - 5:05 PM		Moderated Discussion	
Session IX: Benign Soft Tissue Tumors			
5:05 PM - 5:10 PM	Paper 38	A Pilot study of Intralesional injection of Triamcinolone Acetonide for Desmoid tumors: One year outcomes	Benjamin Wilke, MD
5:10 PM - 5:15 PM	Paper 39	Single-cell RNA sequencing of a Tenosynovial Giant Cell Tumor (TGCT)	Robert Steffner, MD
5:15 PM - 5:25 PM		Moderated Discussion	
5:25 PM		Meeting Adjourns	
6:30 PM - 10:30 PM	Social Event - Maximon Restaurant - Four Seasons Hotel		

Friday, October 8, 2021

6:30 AM- 8:30 AM	Registration		
7:00 AM - 8:30 AM	Breakfast		
7:00 AM - 12:00 PM	Posters/Technical Exhibits		
7:30 AM - 7:35 AM	Announcements		
Session X: Malignant Bone Tumors			
Moderators: Tessa Balach, MD and Alexandra K. Callan, MD			
7:35 AM - 7:40 AM	Paper 40	Impact of Insurance Status on Chondrosarcoma Diagnostic Stage in the United States: Implications for Detection and Outcomes	Jacklyn Garcia, BS
7:40AM - 7:45 AM	Paper 41	A Retrospective Comparative Analysis of Outcomes and Prognostic Factors in Adult and Pediatric Patients with Osteosarcoma	Stefano Testa, MD
7:45 AM - 7:50 AM	Paper 42	The Prognostic Significance of Lymphovascular Tumor Invasion in Localized High-Grade Osteosarcoma: Outcomes of a Single Institution over Ten Years	Charles A. Gusho, BS
7:50 AM - 8:00 AM		Moderated Discussion	
8:00 AM - 8:05 AM	Paper 43	Outcomes Including Late Amputation after Treatment for Lower Extremity Sarcoma: A Report from the Childhood Cancer Survivor Study	Rosanna Wustrack, MD
8:05 AM - 8:10 AM	Paper 44	Concurrent Validity of Q-TFA with PROMIS & Prosthetic Wear Time in Transfemoral Amputees	Samir Sabharwal, MD, MPH
8:10 AM - 8:15 AM	Paper 45	Psychiatric Comorbidities in the First Year after Diagnosis of Pediatric Bone or Soft Tissue Sarcoma	Roberto Gonzalez, BSA
8:15 AM - 8:25 AM		Moderated Discussion	
8:25 AM - 9:25 AM		Cancer Control in the 21st Century	Presidential Speaker - Otis W. Brawley, MD, MACP, FRCP(L), FASCO, FACE
9:25 AM - 9:55 AM		Break	

9:25 AM - 9:45 AM		Product Theater - Daiichi Sankyo, Inc (DSI)	
9:25 AM - 9:55 AM		Poster Viewing	
Session XI: Basic Science 2			
Moderators: Cara A. Cipriano, MD and Alan T. Blank, MD, MS			
9:55 AM - 10:00 AM	Paper 46	Scleoristin expression in Giant cell tumor of bone and correlation to patient factors	Sean P. Kelly, MD
10:00 AM - 10:05 AM	Paper 47	Clinical and Histopathologic Effects of Radiotherapy on the Sciatic Nerve in a Rat Model	Christina Gutowski, MD MPH
10:05 AM - 10:10 AM	Paper 48	Impaired Fracture Healing in Metastatic Breast Cancer: A Murine Model Illustrating Molecular Mechanisms and a Targeted Therapeutic Approach in the Era of Precision Medicine	Francis Lee, MD, PhD
10:10 AM - 10:20 AM		Moderated Discussion	
Session XII: Metastatic Disease			
10:20 AM - 10:25 AM	Paper 49	Clinical Metrics of Fracture Risk Correlate Poorly with Computationally Derived Mechanical Outcomes in Femurs with Metastatic Disease	Benjamin Miller, MD, MS
10:25 AM - 10:30 AM	Paper 50	Assessing Outcomes of Pathologic Acetabular Fracture Management in Metastatic Bone Disease: A Retrospective Analysis	Christopher R. Leland, BS
10:30 AM - 10:35 AM	Paper 51	The Pathologic Fracture Mortality Index: Delineating Utility in Predicting 30-day Postoperative Morbidity	Ashish Vankara, BS
10:35 AM - 10:45 AM		Moderated Discussion	
Moderators: Megan E. Anderson, MD and Adam S. Levin, MD			
10:45 AM - 10:50 AM	Paper 52	Nailing of Multiple Synchronous Long Bones in Metastatic Disease: Single- or Multi- Staged Surgeries?	Marc El Beaino, MD, MSc
10:50 AM - 10:55 AM	Paper 53	Increased risk of venous thromboembolism with aspirin versus low molecular weight heparin for chemoprophylaxis in patients undergoing surgery for metastatic bone disease	Mohammed Karim, MD

10:55 AM - 11:00 AM	Paper 54	Indication for Proximal Femoral Replacement is Associated with Risk of Failure	Athan Zavras, BA
11:00 AM - 11:10 AM		Moderated Discussion	
11:10 AM - 11:15 AM	Paper 55	Renal cell carcinoma bone metastasis treatment resistance is partly dependent on osteocyte apoptosis	Robert L Satcher MD PhD
11:15 AM - 11:20 AM	Paper 56	Serum DKK1 levels and CD15+ granulocytes are associated with progression of skeletal metastases	David Clever, MD
11:20 AM - 11:25 AM	Paper 57	Photoacoustic Microscopy of Undecalcified Bone	Brooke Crawford, MD
11:25 AM - 11:35 AM		Moderated Discussion	
11:35 AM - 11:55 AM		Break	
11:35 AM - 11:55 AM		Poster Viewing	
Moderators: David M. Joyce, MD and David S. Geller, MD			
11:55 AM - 12:00 PM	Paper 58	Percutaneous Stabilization of Symptomatic Sacral and Acetabular Column Metastatic Lesions with Photodynamic Nails	Mitchell S. Fourman, MD
12:00 PM - 12:05 PM	Paper 59	Maintenance and Restoration of Ambulatory Status with Pain Reduction by Percutaneous Ablation, Osteoplasty, Reinforcement, and Internal Fixation (AORIF): A Clinical Outcome Study in 44 Patients	Francis Lee, MD, PhD
12:05 PM - 12:10 PM	Paper 60	A Prospective Randomized Surgical Trial of Intramedullary Nailing Versus Long-Stem Hemiarthroplasty for Impending or Fractured Pertrochanteric Metastases: Quality of Life and Functional Outcome at 3 and 12 Months	John H. Healey, MD
12:10 PM - 12:20 PM		Moderated Discussion	
Session XIII: Sacrum/Spine			
12:20 PM - 12:25 PM	Paper 61	Microbiologic Profile and Risk Factors for Infection after Oncologic Sacral Resections	Mohammed Karim, MD

12:25 PM - 12:30 PM	Paper 62	Preoperative Sarcopenia is Associated with Local Tumor Recurrence but not Wound Complications Following Sacral Tumor Resection	Elyse Brinkmann, MD
12:30 PM - 12:35 PM	Paper 63	Triple Negative Disease, Loss of Hormone Status, and ECOG Score >2 are Associated with a 90-Day Event after Open Decompression/Stabilization of Metastatic Breast Cancer to the Spine	Mitchell S. Fourman, MD
12:35 PM - 12:45 PM		Moderated Discussion	
12:45 PM - 1:00 PM		Award Presentations	
1:00 PM		Meeting Adjourns	

Thank you for attending the 2021 MSTS Annual Meeting.