



the
International Skeletal Society

45th Annual Meeting

**MUSCULOSKELETAL
IMAGING COURSE**

September 26-28, 2018



InterContinental Berlin | Berlin, Germany | www.internationalskeletalsociety.com

MUSCULOSKELETAL IMAGING COURSE

7:00 - 8:00
7:00 - 17:00

BREAKFAST
REGISTRATION/INFORMATION DESK HOURS

7:00 - 16:00

EXHIBIT HALL HOURS

DAY 1

WEDNESDAY, SEPTEMBER 26, 2018

COMBINED SESSION

- 8:00 - 8:10 INTRODUCTION, *Laura Bancroft, MD, FACR*
- 8:10 - 10:00 Opening Session: Bone Marrow
Moderators: *Lawrence White, MD, Michael Tuite, MD*
- 8:10 - 8:35 Bone Marrow Changes Related to Injury: Anatomy, Pathophysiology, and Terminology
Donald Resnick, MD
- 8:35 - 8:55 Bone Marrow Histopathology, for Correlation with Radiology *Julie Fanburg-Smith, MD*

- 8:55 - 9:15 Pediatric Marrow Disorders *Nancy Chauvin, MD*
- 9:15 - 9:35 Bone Marrow Changes in Arthritis, What Are They and Why Do They Matter? *Frank Roemer, MD*
- 9:35 - 10:00 Bone Tumors with Prominent Marrow Edema: A Useful Sign in Differential Diagnosis *Mark Murphey, MD*

SPORTS MEDICINE IMAGING

- 10:00 - 10:30 **BREAK**
- 10:30 - 12:00 Hot Topics
Moderators: *Michael Recht, MD, Patrick Omoumi, MD, PhD*
- 10:30 - 10:45 AI and MSK Radiology: What is its Role?
Michael Recht, MD
- 10:45 - 11:00 New Pulse Sequences in MSK MR: What, When, and Why?
Garry Gold, MD
- 11:00 - 11:15 MSK MR Imaging: Have We Gone Overboard with Resolution and Image Quality at the Expense of Cost and Speed? *Naveen Subhas, MD*
- 11:15 - 11:30 3D Printing and vr/ar: Do They Have a Role in MSK Imaging? *Benjamin Howe, MD*
- 11:30 - 11:45 Resurgence of MSK CT *Kambiz Motamedi, MD*
- 11:45 - 12:00 Will Metal Artifact Reduction, Low Dose and Dual Energy Lead to a Resurgence of MSK CT Imaging?
Hugue Ouellette, MD
- 12:00 13:30 **LUNCH**
- 13:30 - 15:00 Imaging Sports Injury of the Elbow
Moderators: *Victor Cassar-Pullicino, MD, Simon Ostlere, FRCR*
- 13:30 - 13:50 Mechanics and Injury of the Throwers Elbow
Mark Anderson, MD
- 13:50 - 14:10 Biceps and Triceps, Anatomy and Pathology, Does Knowing the Anatomy Matter? *David Fessel, MD*
- 14:10 - 14:30 Elbow Ligament Anatomy, Injury Patterns and Lesion Visualization *Lynne Steinbach, MD*
- 14:30 - 14:45 Epicondylitis, Imaging Guided Diagnosis and Treatment
Philip O'Connor, MD
- 14:45 - 15:00 Sports Injury of the Pediatric Elbow
Kathryn Stevens, MD, BS (hons)
- 15:00 - 15:30 **BREAK**
- 15:30 - 17:00 Wrist & Hand Sports Injuries: State of the Art Imaging
Moderators: *Hiroshi Yoshioka, MD, PhD, Jean-Denis Laredo, MD*
- 15:30 - 15:45 MRI: State of the Art Diagnosis of Sports Injuries
Michael Tuite, MD
- 15:45 - 16:00 Ultrasound in Hand and Wrist Sports Diagnosis: Advantages, Limitations and Intervention
James Teh, MBBS, MRCP, FRCR
- 16:00 - 16:15 Post-op Hand and Wrist MRI in Sports
Robert Campbell, MD
- 16:15 - 16:30 Sports Specific: Wrist Golf Injuries
Bruce Forster, MD, MSc, FRCPC
- 16:30 - 16:45 Sports Specific: Hand and Wrist Climbing Injuries
Andrea Roszkopf, MD
- 16:45 - 17:00 Sports Specific: Hand and Wrist Tennis Injuries
Jenny Bencardino, MD

MUSCULOSKELETAL DISEASE

- 10:00 - 10:30 **BREAK**
- 10:30 - 12:00 MSK Intervention
Moderators: *Nicolas Amoretti, MD, Antonio Barile, MD*
- 10:30 - 10:45 PRP: What is it Good For? *Jon Jacobson, MD*
- 10:45 - 11:00 Stem Cells: Ready for Prime Time? *Stacy Smith, MD*
- 11:00 - 11:15 Can We Treat the Joint? *Marnix Van Holsbeeck, MD*
- 11:15 - 11:25 US Guided Percutaneous Treatment for Trigger Finger and Carpal Tunnel Syndrome *David Petrover, MD*
- 11:25 - 11:35 Joint and Soft Tissue Injections: US vs Fluoroscopic Guidance *Georgina Allen, FRCR, MScSEM*
- 11:35 - 11:45 Spine Procedures: CT vs. Flouro
Luca Sconfienza, MD, PhD
- 11:45 - 12:00 Palliative Cementoplasty *Peter Munk, MDCM, FRCPC, FSIR*
- 12:00 13:30 **LUNCH**
- 13:30 - 15:00 MSK Imaging Dilemmas: Evidence-Based Recommendations
Moderators: *Laura Bancroft, MD, FACR, Klaus Bohndorf, MD*
- 13:30 - 13:45 MSK Interventions for Tissue Healing: What Should We Be Injecting and When? *Kenneth Lee, MD*
- 13:45 - 14:00 Subspecialty MSK Teleradiology: Who Does it Help and Hurt? *Andrew Sonin, MD, FACR*
- 14:00 - 14:15 Early Rheumatoid Arthritis: When to Use MR or US
Andrea Klauser, MD
- 14:15 - 14:30 Screening for Osteoporosis: Who to Examine and How?
Wilfred Peh, MD
- 14:30 - 14:45 Follow-up After Treatment of Soft Tissue Sarcomas: How and How Often? *Marc-André Weber, MD, MSc*
- 14:45 - 15:00 Suspected Diabetic Foot Infections: What Imaging Affects Management? *Mark Schweitzer, MD*
- 15:00 - 15:30 **BREAK**
- 15:30 - 17:00 Metabolic and Systemic - (SAM)
Moderators: *Anastasia Fotiadou, MD, PhD, Alberto Bazzocchi, MD, PhD*
- 15:30 - 15:45 Osteoporosis: Pearls and Pitfalls *Giuseppe Guglielmi, MD*
- 15:45 - 16:00 Sarcopenia: Past, Present, and Future *Robert Boutin, MD*
- 16:00 - 16:15 Adiposity: Musculoskeletal Implications
Miriam Bredella, MD
- 16:15 - 16:30 Renal Disease of Bone *Leon Lenchik, MD*
- 16:30 - 16:45 Drug Induced Musculoskeletal Disorders
Michael Richardson, MD
- 16:45 - 17:00 Atypical Infections *Johnny Monu, MB, BS, MS*

WELCOME RECEPTION
18:30 - 20:30

MUSCULOSKELETAL IMAGING COURSE

DAY 2

THURSDAY, SEPTEMBER 27, 2018

SPORTS MEDICINE IMAGING

8:00 - 10:00	Shoulder: ISS Meets DGMSR Moderators: <i>Andreas Heuck, MD, Klaus Bohndorf, MD</i>
8:00 - 8:15	Rotator Cuff: Current Concepts in Anatomy and Classification <i>Simone Waldt, MD</i>
8:15 - 8:30	Biceps Pulley and Rotator Interval <i>Rainer Schmitt, MD, PhD</i>
8:30 - 8:45	External and Internal Impingement Syndromes <i>Andreas Heuck, MD</i>
8:45 - 9:00	Shoulder Instability <i>Karl-Friedrich Kreitner, MD</i>
9:00 - 9:15	Calcific Tendinitis <i>Christian Glaser, MD</i>
9:15 - 9:30	Pectoralis, Latissimus and Teres Major <i>Marco Zanetti, MD</i>
9:30 - 9:45	Sick Scapula Syndrome, Scapular Impingement and Periscapular Bursitis <i>Christoph Schaeffeler, MD</i>
9:45 - 10:00	Post-Operative Shoulder <i>Reto Sutter, MD</i>
10:00 10:30	BREAK
10:30 - 12:00	Trauma/Stress Injuries (ARS) Moderators: <i>Howard Galloway, FRANZCR, Thomas Pope, Jr, MD, FACR</i>
10:30 - 10:45	Upper Extremity Stress Injuries <i>Lionel Pesquer, MD</i>
10:45 - 11:00	Axial Skeleton Stress Injuries <i>Radhesh Lalam, MBBS, MRCS, FRCR</i>
11:00 - 11:15	Sacral Stress Fractures <i>Mary Hochman, MD</i>
11:15 - 11:30	Hip and Knee Stress Injuries How Did I Break My Hip Running? <i>Mini N. Pathria, MD</i>
11:30 - 11:45	Tibia Stress Injuries in Athletes and Military Recruits <i>Nogah Shabshin, MD, MBA, BSc</i>
11:45 - 12:00	Ankle and Foot How Did I Break My Foot Sightseeing in Berlin?? <i>Daniel M. Walz, MD</i>
12:00 13:30	LUNCH
13:30 - 15:00	Muscle Injury, Edema and Beyond Moderators: <i>Atul Taneja, MD, PhD, Mini N. Pathria, MD</i>
13:30 - 13:45	Patterns of Muscle Abnormalities on MR Imaging <i>Robert Boutin, MD</i>
13:45 - 14:00	Imaging of Muscle Trauma: Role of MR and US <i>Michel Crema, MD</i>
14:00 - 14:15	Muscle Injuries of the Hip and Thigh <i>Marc-André Weber, MD, MSc</i>
14:15 - 14:30	Grading of Muscle Injury: Current Concepts <i>Steven James, MB, ChB, FRCR</i>
14:30 - 14:45	Skeletal Muscle Imaging in Children <i>Hee Kyung Kim, MD</i>
14:45 - 15:00	Novel Imaging Techniques for Assessment of Muscle <i>Jim Wu, MD</i>
15:00 - 15:30	BREAK
15:30 - 17:00	Core Curriculum: Sports Injuries in the Pelvis & Trunk Moderators: <i>David Rubin, MD, Antoine Moraux, MD</i>
15:30 - 15:45	Groin and Trunk Muscle Injuries: Imaging Approach <i>Eugene McNally, MD</i>
15:45 - 16:00	Acute Athletic Groin Injuries: Flexors and Adductors <i>James Linklater, MBBS</i>
16:00 - 16:15	Lateral Pelvic and IT Band Injuries <i>Miriam Bredella, MD</i>
16:15 - 16:30	Pelvic Apophyseal Injuries <i>Julia Crim, MD</i>
16:30 - 16:45	Nerve Blocks & Injections for Pelvic Sports Injuries <i>Jan Fritz, MD</i>
16:45 - 17:00	Thoracic & Abdominal Wall Muscle Injuries Outside the Groin <i>Lawrence White, MD</i>

MUSCULOSKELETAL DISEASE

8:00 10:00	Arthritis for Residency and Beyond Moderators: <i>Anne Jurik, DMSc, Neils Egund, MD, DMSc</i>
8:00 - 8:15	Hands and Feet Pitfalls for Diagnosis <i>Anne Cotten, MD</i>
8:15 - 8:30	What Crystals Do and What They Look Like <i>George Hermann, MD</i>
8:30 - 8:45	What Does MRI Tell Us About the Pathophysiology of Rheumatoid Arthritis <i>Monique Reijnen, MD, PhD</i>
8:45 - 9:00	What Does MRI Tell Us About the Pathophysiology of Osteoarthritis <i>Ali Guerhazi, MD, PhD</i>
9:00 - 9:15	Synovial Masses Presenting as Monoarthritis <i>Iris-Melanie Noebauer-Huhmann, MD</i>
9:15 - 9:30	CRMO, SAPHO and SCCH: Unravelling the Rheumatological Alphabet Soup <i>Robert Lambert, MB, FRCPC</i>
9:30 - 9:45	MRI of the Axial Spine: When is it Spondyloarthritis and When is it Not? <i>Winston Rennie, MB, MSc(SEM), FRCR</i>
9:45 - 10:00	Sacroiliac Joint: Degenerative Versus Inflammatory Arthritis <i>Jean-Denis Laredo, MD</i>
10:00 - 10:30	BREAK
10:30 - 12:00	Spine Imaging (SAM) Moderators: <i>David Wilson, FRCP, FRCR, E. Remide Arkun, MD</i>
10:30 - 10:45	CT Spine Imaging Pitfalls <i>Tudor Hughes, FRCR</i>
10:45 - 11:00	MR Spine Imaging Pitfalls <i>Marcelo De Abreu, MD</i>
11:00 - 11:15	Imaging of Spinal Trauma <i>D. Lee Bennett, MD, MA, MBA</i>
11:15 - 11:30	Spine Infection <i>Suphaneewan Jaovisidha, MD</i>
11:30 - 11:45	Osteoporotic Fractures <i>James Griffith, MB, BCh, BAO, MD</i>
11:45 - 12:00	Degenerative Disk Disease <i>Prudencia Tyrrell, MD</i>
12:00 13:30	LUNCH
13:30 - 15:00	Rapid Fire ST Tumors (ARS) Moderators: <i>Hassan Douis MD, MRCP, FRCR, Frederic LeCouvret, MD</i>
13:30 - 13:40	What's New from the WHO Classification in Soft Tissue Tumors <i>Julie Fanburg-Smith, MD</i>
13:40 - 13:50	High Water Content Masses: When Do I Need to Worry? <i>Mark J. Kransdorf, MD</i>
13:50 - 14:00	Benign versus Malignant Peripheral Nerve Sheath Tumors: Radiologic Rules of the Road <i>Laura Fayad, MD</i>
14:00 - 14:15	Lipoma vs. Well-Differentiated Liposarcoma: Imaging Distinction <i>Francesca D. Beaman, MD</i>
14:15 - 14:30	Surgical Implications of Lipoma vs. Well-Differentiated Liposarcoma: What are the Options? <i>Carol D. Morris, MD, MS</i>
14:30 - 14:40	Biopsy Technique: Does it Matter Where I Biopsy? <i>Jeffrey Peterson, MD</i>
14:40 - 14:50	Soft Tissue Tumor Local Recurrence: Tricks of the Trade <i>David M. Panicek, MD</i>
14:50 - 15:00	Imaging of Synovial Neoplasms <i>Hillary W. Garner, MD</i>
15:00 - 15:30	BREAK
15:30 - 17:00	Rapid Fire Bone Tumors (ARS) Moderators: <i>Violeta Vasilevska Nikodinovska MD, PhD, MSc, Paul O'Donnell, MBBS, FRCP, FRCR</i>
15:30 - 15:40	What's New in the WHO Classification in Bone Tumors? <i>S. Fiona Bonar, MB, FRCPath, FRCPA</i>
15:40 - 15:50	Radiology Report for Bone Neoplasms: What's Important for Staging? <i>Leanne L. Seeger, MD, FACR</i>
15:50 - 16:00	Whole Body MRI for Tumor Imaging <i>Koenraad Verstraete, MD</i>
16:00 - 16:10	Enchondroma vs. Chondrosarcoma: Imaging Criteria <i>Hakan Ilaslan, MD</i>
16:10 - 16:20	Enchondroma vs. Chondrosarcoma: Surgical Perspective <i>Earl W. Brien, MD</i>
16:20 - 16:30	Update on Multiple Myeloma <i>Michael E. Mulligan, MD</i>
16:30 - 16:40	Imaging of Surface Bone Tumors <i>Daniel Vanel, MD</i>
16:40 - 16:50	Bone Tumor or Not That is the Dilemma <i>Rainer Erlemann, MD</i>
16:50 - 17:00	Vertebral Bone Marrow: Metastasis or Mimicker <i>Andrea Baur-Melnyk, MD</i>

MUSCULOSKELETAL IMAGING COURSE

DAY 3

FRIDAY, SEPTEMBER 28, 2018

SPORTS MEDICINE IMAGING

8:00 - 10:00	Knee Moderators: <i>Ian Beggs, FRCPE, FRCR</i> <i>Andrea Rosskopf, MD</i>
8:00 - 8:15	Bone/OCD <i>Klaus Bohndorf, MD</i>
8:15 - 8:30	Cruciate Ligaments <i>Nancy Major, MD</i>
8:30 - 8:45	Post-Op ACL <i>Philip Robinson, FRCR</i>
8:45 - 9:00	Menisci <i>Andrew Grainger, BM, BS, MRCP, FRCR</i>
9:00 - 9:15	Posterolateral Corner <i>William Palmer, MD</i>
9:15 - 9:30	Soft Tissue, Nerves, and Vascular Structures <i>John Crues, MD, MS</i>
9:30 - 9:45	Extensor Mechanism <i>David Rubin, MD</i>
9:45 - 10:00	Lesions About the Proximal Tibiofibular Joint <i>Josef Kramer, MD</i>
10:00 - 10:30	BREAK
10:30 - 12:00	Hip Moderators: <i>Suzanne Anderson, MD, PhD</i> <i>Hema Choudur, MBBS, FRCPC</i>
10:30 - 10:45	Hip Joint MRI Assessment: Pitfalls, Variation and Myths <i>Bruno Vande Berg, MD, PhD</i>
10:45 - 11:00	Pediatric Hip Imaging <i>Filip Vanhoenacker, MD, PhD</i>
11:00 - 11:15	MRI of FAI: How to Assess and What to Report <i>Donna Blankenbaker, MD</i>
11:15 - 11:30	Hip Surgery: How Does Imaging Help? <i>Michael Dienst, MD</i>
11:30 - 11:45	Post-op Hip MRI: Differentiating Normal from Abnormal <i>Tobias Dietrich, MD</i>
11:45 - 12:00	Hip Intervention: Its Role in Diagnosis and Treatment <i>Luca Sconfienza, MD</i>
12:00 - 13:30	LUNCH
13:30 - 15:00	Foot/Ankle: An MRI Alone Will Make the Diagnosis - Or Will It? Moderators: <i>Joseph Craig, MB, ChB, Charles Bush, MD</i>
13:30 - 13:45	Lateral Ankle Ligament Anatomy and Injuries <i>Maryam Shahabpour, MD</i>
13:45 - 14:00	Medial Sided Ankle Pain: Deltoid Ligament and Beyond <i>Julia Crim, MD</i>
14:00 - 14:15	Midfoot Sprains - More than Just the Lisfranc Ligament <i>Carolyn Sofka, MD</i>
14:15 - 14:30	Making a Break For It: Tendon Subluxation/Dislocation <i>Ramy Mansour, MD</i>
14:30 - 14:50	Turf Toe - Not Just for American Football Players <i>Hilary Umans, MD</i>
14:50 - 15:00	Ultrasound of Acute Foot and Ankle Sports Injuries <i>Mihra Taljanovic, MD, PhD</i>

MUSCULOSKELETAL DISEASE

8:00 - 10:00	Imaging Orthopedic Hardware Moderators: <i>Thomas LeCorroller, MD, PhD</i> <i>Theodore Miller, MD</i>
8:00 - 8:15	MR Imaging of Metal: How To Do It <i>Christian Pfirrmann, MD, MBA</i>
8:15 - 8:30	CT Scanning of Metal: How To Do It <i>Kenneth Buckwalter, MD, MS, MBA</i>
8:30 - 9:00	Multimodality Imaging of Hip and Knee Replacements <i>Theodore Miller, MD, FACR</i>
9:00 - 9:20	Imaging of Shoulder Replacements <i>Alice Ha, MD, MS</i>
9:20 - 9:40	Imaging of Ankle Replacements <i>Laura Bancroft, MD, FACR</i>
9:40 - 10:00	Plates and Screws - What Do They Do? <i>Marcelo Bordalo-Rodrigues MD, PhD</i>
10:00 - 10:30	BREAK
10:30 - 12:00	Imaging Peripheral Nerves with Detailed Anatomy and Lesion Characterization Moderators: <i>Mario Maas, MD, PhD</i> <i>Avneesh Chhabra, MD</i>
10:30 - 10:55	Ultrasound of the Brachial Plexus, Pathology and Technique Made Easy <i>Carlo Martinoli, MD</i>
10:55 - 11:05	MR Neurography: Current Perspectives and Literature Review <i>Gustav Andreisek, MD, MBA</i>
11:05 - 11:20	Peripheral Nerve Anatomy and Lesions in the Ankle and Foot <i>Jean Luc Drape, MD</i>
11:20 - 11:30	MR Neurography of Extra-Spinal Sciatica <i>John Carrino, MD, MPH</i>
11:30 - 11:45	Imaging Nerve Entrapment Syndromes of the Elbow and Forearm <i>Catherine Petchprapa MD</i>
11:45 - 12:00	Peripheral Nerve Lesions Around the Shoulder, How to Make the Imaging Diagnosis? <i>Ronald Adler, MD, PhD</i>
12:00 - 13:30	LUNCH
13:30 - 15:00	Cartilage/Bone (SAM) Moderators: <i>Garry Gold, MD, Jung-Ah Choi, MD</i>
13:30 - 13:45	Normal Cartilage Structure <i>Richard Kijowski, MD</i>
13:45 - 13:55	Fast Imaging - 5 Minute Knee MRI <i>Soterios Gyftopoulos, MD</i>
13:55 - 14:05	Isotropic 3D T2 Mapping <i>Patrick Omoumi, MD, PhD</i>
14:05 - 14:15	Identifying Hidden Zones of the Far Posterior Cartilage of the Femoral Condyles <i>John Crues, MD, MS</i>
14:15 - 14:30	Cartilage Repair - Microfracture <i>Thomas Link, MD, PhD</i>
14:30 - 14:45	Cartilage Repair - ACI <i>Carl Winalski, MD</i>
14:45 - 15:00	Lesions at the Osteochondral Junction <i>Christine Chung, MD</i>

COMBINED SESSION

FILM QUIZ PANEL 15:30 - 17:00