



International Skeletal Society

44TH ANNUAL MEETING AND MUSCULOSKELETAL IMAGING COURSE: FUNDAMENTALS TO ADVANCED CONCEPTS

AUGUST 30 - SEPTEMBER 1, 2017

BE A PART OF IT
NEW YORK, NEW YORK



**AUGUST 30 to
SEPTEMBER 1, 2017**

**NEW YORK HILTON
MIDTOWN**



OPTIONAL ONE-DAY COURSES:

ORTHOPEDIC PATHOLOGY COURSE

August 27, 2017

MUSCULOSKELETAL ULTRASOUND COURSE

August 29, 2017

Register quickly and easily online at internationalskeletalsociety.com

START SPREADING THE NEWS – NEW YORK, NEW YORK!

The International Skeletal Society invites you to its 44th Annual Meeting and Imaging Update Course (Refresher Course) to be held at the New York Hilton Midtown located in the heart of New York City. A fabulous setting for this popular international meeting. The program brings together world renowned thought leaders to share their expertise in a variety of formats including didactic lectures, rapid-fire presentations and panel discussions. Based on needs-assessments and comments from attendees at prior ISS courses, the Refresher Course committee has put together a comprehensive, multimodality program consisting of two parallel programs; "Sports Injuries" and "Musculoskeletal Diseases". Delegates are encouraged to move freely between the two programs to maximize their areas of interest. Highlights include:

- Case-based Interactive Audience Response Sessions (ARS)
- 4 Self-Assessment Module Offerings
- "At The Paces" Format That Allows Participants To Have A Combination Of Case Review And Didactic Experience
- "Know The Lingo" To Review Complex Anatomy In Specific Structural Lesions
- Big Picture Thinking Delivered by the Legendary Msk Radiology Masters
- Pediatric MSK Focus Session
- Radiologist and Surgeon Collaborative Session

The refresher course closes on Friday with Dr. Don Resnick's highly acclaimed, must see, film quiz session.

This year's optional **ultrasound course**, chaired by Dr. Andrew Grainger will focus on ultrasound and guided intervention in the shoulder. The course will combine lectures and demonstrations with small group tutorials where delegates will have the opportunity to scan normal models under the supervision of experienced tutors. **Space is limited for the ultrasound course – be sure to register early! Registrants for the ultrasound course need to be registered for the refresher course.**

New this year, we have added a special optional One-Day Pathology Orthopedic Course "**Musculoskeletal Pathology, Radiology and Surgery - A Correlative Approach**". This course chaired by Dr. Julie Fanburg-Smith provides a full day of education broken into four parts: Benign Bone and Joints; Benign versus Malignant Bone Forming Tumors; Conventional Chondrosarcoma and Chordoma; Giant Cell Rich and Epithelioid Vascular Tumors of the Bone. **As a special promotion this year, non-members of the ISS who register for this pathology orthopedic course are invited to observe the ISS members meeting on Monday and Tuesday (August 28-29) at a reduced fee of \$50.**

Be A Part Of It!

William E. Palmer, MD
ISS President

Christine B. Chung, MD
Chair, Scientific Program Committee 2017

ONE DAY PATHOLOGICAL ORTHOPEDIC COURSE DIRECTORS

Dr. Julie C. Fanburg-Smith Orthopedic and Soft Tissue Pathology
Dr. Mark D. Murphey Musculoskeletal Radiology **Dr. Franklin H. Sim** Orthopedic Oncologic Surgery

FOR COMPLETE PROGRAM DETAILS:

internationalskeletalsociety.com

NEW! ONE-DAY PATHOLOGY ORTHOPEDIC COURSE

Musculoskeletal Pathology, Radiology and Surgery - A Correlative Approach Orthopedic Pathology
• Musculoskeletal Radiologic • Oncologic Orthopedic Surgery Correlation

Sunday, August 27th 2017

MUSCULOSKELETAL IMAGING COURSE EDUCATIONAL NEEDS

OVERALL MEETING DESIGN

During this six-day meeting, all attendees are welcome to register for the three-day refresher course, our main educational activity. All attendees can also register for our one-day Pathology Orthopedic Course and Hands-On Ultrasound Course. The Members Meeting, our two-day scientific program, is open to ISS members. The multiple sessions are designed to meet the needs of the multi-disciplinary physicians attending the course. The course focus is targeted towards, pathologists, radiologists, researchers, sonographers, allied health providers and other professionals interested in musculoskeletal imaging.

EDUCATIONAL NEEDS

Musculoskeletal imaging involves a broad spectrum of pathology including sports related injuries, trauma, arthritis, infection, osseous and soft tissue tumors, and metabolic bone disease. The diagnosis and management of musculoskeletal disorders increasingly relies upon advanced imaging. Further, image guided biopsy and therapeutic interventions play an important role in the management of musculoskeletal disorders. Given these demands, musculoskeletal imagers require ongoing education to maintain an extensive knowledge base, be skilled in state-of-the-art imaging techniques, and understand the latest advances in clinical management.

The refresher course is structured to fully address the educational needs of musculoskeletal imagers. Two parallel tracks in sports medicine imaging and musculoskeletal imaging provide attendees a wide selection of activities to fulfill their individual educational needs. Educational sessions within each track concentrate on specific pathology and anatomic regions. Conventional didactic lectures are supplemented by highly focused "rapid fire" sessions to maximize the educational yield for participants. To facilitate integration of educational material into clinical practice, attendees are encouraged to participate in case interpretation sessions. Interactive events include a film interpretation panel and an innovative "at the PACS" session combining real-time interpretation with didactic materials.

The sports medicine imaging track includes topics reviewing anatomy and pathology of the shoulder, elbow, wrist, hip, knee, ankle and foot. Rapid fire sessions focus on sites of complex anatomy and specific injuries. Special sessions addressing tendon, cartilage, bone and muscle emphasize the evaluation of musculoskeletal structural substrates, affording an in depth exploration of biomechanics, pathophysiology, and advanced imaging. Attendees are assured of an expansive educational experience with offerings that include tendon histopathology, advanced cartilage imaging, pediatric sports injuries, postoperative imaging, and numerous specific sports related injuries.

The musculoskeletal disease track covers a broader array of pathology, acting as both a comprehensive review and update on recent advances. Common musculoskeletal findings are discussed in an introductory "differential and diagnosis" session, with subsequent sessions on trauma, bone and soft tissue tumors, metabolic bone disease and arthritis. Additional sessions address disorders of the spine and peripheral nerves, imaging of orthopedic hardware, and musculoskeletal therapeutic interventions. Advanced imaging techniques are discussed using the popular rapid fire format, including whole body MRI, dual energy CT and metal artifact reduction methods.

The primary goal of the refresher course is to provide a rich educational experience for attendees. The wide variety of educational sessions allows participants to remedy educational gaps, regardless of experience or scope of practice. Attendees of the course can expect to gain in depth knowledge of common clinical entities and exposure to uncommon disorders, while also learning of the latest innovations in advanced imaging and therapeutic interventions.

EDUCATIONAL OBJECTIVES

At the conclusion of the ISS 44th Annual Meeting and Musculoskeletal Imaging Course, attendees should be able to:

1. Explain the pathophysiology and imaging findings of commonly encountered musculoskeletal disorders and sports related injuries.
2. Identify appropriate utilization of radiographs, CT, MRI and ultrasound for evaluating musculoskeletal disorders.

ULTRASOUND AND GUIDED INTERVENTION: SHOULDER

The need for the hands-on ultrasound workshop and lectures has been established from discussions with the ISS program committee, the feedback from past ISS program committee, the feedback from past ISS program committee and past ISS hands-on workshops, as well as, participant participation in other similar hands-on ultrasound workshops across the world. The topic chosen for this year's course is ultrasound and guided intervention in the shoulder. In addition to didactic lectures, the group will take advantage of the ability to use models for training. This will allow delegates to work in small groups with experts to refine their skills identifying safe and accurate approaches to MSK interventional procedures.

ACCREDITATION

Please visit the website for CME and Sonographer accreditation updates: www.internationalskeletalsociety.com

NEW YORK, THE LARGEST CITY IN THE U.S.

An architectural marvel with plenty of historic monuments magnificent buildings and countless dazzling skyscrapers. Besides the architectural delights, New York is an urban jungle that has everything to offer to visitors. The city is home to numerous museums, parks, trendy neighborhoods and shopping streets.



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7:00 am - 8:00 am BREAKFAST

7:00 am - 5:00 pm REGISTRATION/INFORMATION DESK HOURS

7:00 am - 4:00 pm

EXHIBIT HALL HOURS

DAY 1

WEDNESDAY, AUGUST 30, 2017

COMBINED SESSION

8:00 am - 8:10 am INTRODUCTION, *Christine B. Chung, MD*

8:10 am - 10:00 am Fat: The Good, The Bad, The Ugly

Moderators: William Palmer, MD, Lawrence White, MD

8:10 am - 8:35 am Fat: Close Friend or Common Foe?

Donald Resnick, MD

8:35 am - 8:55 am Histopathologic Considerations of Fat

Julie C. Fanburg-Smith, MD

8:55 am - 9:15 am

Fat Depots and Their Implications: Not Just the Liver Anymore *Miriam Bredella, MD*

9:15 am - 9:35 am

Muscle Fat: Assessment and Implications *Christian Pfirrmann, MD, MBA*

9:35 am - 10:00 am

Fat Lesions in Bone and Soft Tissue Tumors - Spectrum of Disease and Prognosis *Mark Murphey, MD*

SPORTS MEDICINE IMAGING

10:00 am - 10:30 am BREAK

10:30 am - 12:00 pm Elbow

Moderators: Corrie Yablon, MD, and David Fessell, MD

10:30 am - 10:45 am Elbow Imaging: What Technique to Use When *Julia Crim, MD*

10:45 am - 11:00 am Elbow Ligaments and Instability *Luis Beltran MD*

11:00 am - 11:15 am Biceps and Triceps: Anatomic Review and Characterization of Lesions *David Fessell, MD*

11:15 am - 11:30 am Epicondylitis: Common Flexor and Extensor Tendon Lesions *Kathryn Stevens, MD, BS (hons)*

11:30 am - 11:45 am Valgus Extension Overload in the Overhead Thrower *Bruce Forster, MD, MSC, FRCPC*

11:45 am - 12:00 pm Pediatric Elbow Injuries in the Athlete *Nancy Chauvin, MD*

12:00 pm - 1:30 pm LUNCH

1:30 pm - 3:00 pm Cartilage and Bone: Present and Future

Moderators: Garry Gold, MD and Mark Schweitzer, MD

1:30 pm - 1:40 pm Normal Cartilage Structure and Basic MR Grading for Acute Injury *Rick Kijowski, MD*

1:40 pm - 1:50 pm T2 Mapping: What Is It, How Do I Do It, When Do I Do It? *Garry Gold, MD*

1:50 pm - 2:00 pm Proteoglycans: What Are They, How Do I Assess Them, When Do I Assess Them? *Carl Winalski, MD*

2:00 pm - 2:10 pm Cartilage Repair: What is Microfracture - What Do I Look For on MRI? *Thomas Link, MD, PHD*

2:10 pm - 2:20 pm Cartilage Repair: What is Autologous Chondrocyte Implantation - What Do I Look For On MRI? *Siegfried Trattnig, MD*

2:20 pm - 2:30 pm What are Bone Biomarkers? *Gregory Chang, MD*

2:30 pm - 2:40 pm Cartilage and Bone Interface: Why is Subchondral Bone Important? *Carol Andrews, MD*

2:40 pm - 2:50 pm Osteochondral Injury in the Athlete *Nogah Shabshin, MD, MBA, BSc*

2:50 pm - 3:00 pm Lower Extremity Stress Fracture: Diagnosis and Characterization *Tommy Pope, MD, FACR*

3:00 pm - 3:30 pm BREAK

3:30 pm - 5:00 pm Radiologist and Surgeon Collaboration: Insight to Value Added

3:30 pm - 4:00 pm Shoulder Surgery *Joseph Zuckerman, MD, and Leon Rybak, MD*

4:00 pm - 4:30 pm Cartilage Repair *Eric Strauss, MD, Michael Recht, MD*

4:30 pm - 5:00 pm Hip Preservation *Danyal Nawabi, MD, Theodore Miller, MD, FACR*

MUSCULOSKELETAL DISEASE

10:00 am - 10:30 am BREAK

10:30 am - 12:00 pm Big Picture Thinking by the Masters: How to Organize Your Thoughts

Moderators: Christine Chung, MD and Michael Recht, MD

10:30 am - 10:45 am Arthritis *Donald Resnick, MD*

10:45 am - 11:00 am Metabolic Bone *Daniel Rosenthal, MD*

11:00 am - 11:15 am Muscle *David Rubin, MD*

11:15 am - 11:30 am Tumors *Mark Murphey, MD*

11:30 am - 11:45 am Nerve *Avneesh Chhabra, MD*

11:45 am - 12:00 pm The Child's Skeleton: How is it Different? *Diego Jaramillo, MD, MPH*

12:00 PM - 1:30 PM LUNCH

1:30 pm - 3:00 pm MSK Intervention

Moderators: Jack Jennings, MD, PhD and Philip O'Connor, MD

1:30 pm - 1:45 pm PRP Injection: Distilling the Literature and Finesse Points on Best Practice *James F. Griffith, MD, MRCP, FRCR*

1:45 pm - 2:00 pm Percutaneous Tenotomy (Dry Needling) and Autologous Blood Injection *Luca Sconfienza, MD, PhD*

2:00 pm - 2:15 pm Vertebroplasty *Jack Jennings, MD, PhD*

2:15 pm - 2:30 pm RF Ablation of Osteoid Osteoma *Thomas Le Corroler, MD*

2:30 pm - 2:45 pm How Do Steroid Injections Work and How Should Radiologists Use Them *Nathalie Bureau, MD, MSc*

2:45 pm - 3:00 pm Image-Guided Trigger Finger Therapy *Gajan Rajeswaran, MBBS, FRCR*

3:00 pm - 3:30 pm BREAK

3:30 PM - 5:00 PM Metabolic and Systemic Processes

Moderators: Thomas Link, MD, PhD and Giuseppe Guglielmi, MD

3:30 pm - 3:45 pm Whole Body MRI for Systemic MSK Processes *Frederic Lecouvet, MD*

3:45 pm - 4:00 pm Sarcopenia - Approach to Clinical Measurements *Leon Lenchik, MD*

4:00 pm - 4:15 pm Osteoporosis - Pitfalls of Clinical Measurements *Catherine Petchprapa, MD*

4:15 pm - 4:30 pm Complications of Osteoporosis Therapy *Zehava Sadka Rosenberg, MD*

4:30 pm - 4:45 pm Renal Disease of Bone

4:45 pm - 5:00 pm MSK Manifestations of HIV *Johnny Monu, MD, BS, MS*

WELCOME RECEPTION
6:30 PM - 8:30 PM

DAY 2

THURSDAY, AUGUST 31, 2017

SPORTS MEDICINE IMAGING

8:00 am - 10:00 am Knee

Moderators: Robert Wissman, MD and William Conway, MD

- 8:00 am - 8:15 am Cruciate Ligament Evaluation
Klaus Bohndorf, MD
- 8:15 am - 8:30 am How to Assess the Post-Operative ACL
Philip Robinson, FRCR
- 8:30 am - 8:45 am Meniscal Tears: Diagnosis and Determination of Clinical Significance
Hilary Umans, MD
- 8:45 am - 9:00 am Post-Operative Meniscal Evaluation: How to Do It-What to Look For
Dan Walz, MD
- 9:00 am - 9:15 am Posteromedial Corner: Why is Injury Important
Andrew Grainger, BM, BS, MRCP, FRCR
- 9:15 am - 9:30 am Posterolateral Corner: What Structures Do I Need to Know and Why?
Michael Tuite, MD
- 9:30 am - 9:45 am Patellofemoral Pain Syndrome: What Causes the Pain?
Elisabeth Dion, MD
- 9:45 am - 10:00 am Cysts and Bursae Around the Knee
Lynne Steinbach, MD

10:00 am - 10:30 am BREAK

10:30 am - 12:00 pm Wrist and Hand -Case Based (ARS)

Moderators: Robert Lopez, MD, and Thomas Magee, MD

- 10:30 am - 10:45 am Wrist Ligament Injuries
Robert Campbell, MD
- 10:45 am - 11:00 am TFCC Lesions
Leon Lenchik, MD
- 11:00 am - 11:15 am Wrist Tendon Injuries
Karen Finlay, MD
- 11:15 am - 11:30 am Finger Tendon and Ligament Injuries
Laura Bancroft, MD, FACR
- 11:30 am - 11:45 am Thumb Tendon and Ligament Injuries
Michael Richardson, MD
- 11:45 am - 12:00 pm Overuse Injuries
Andrew Haims, MD

12:00 pm - 1:30 pm LUNCH

1:30 pm - 3:00 pm Ankle "At the PACS": Case and Didactic

Moderators: Georgina Allen, FRCR, MScSEM and Christine Chung, MD

- 1:30 pm - 1:55 pm Ankle Instability: Case and Characterization
William Palmer, MD
- 1:55 pm - 2:15 pm Ankle MRI: Approach to the Patients with Heel Pain
David Rubin, MD
- 2:15 pm - 2:35 pm Hindfoot Valgus: Case and Characterization
Zehava Sadka Rosenberg, MD
- 2:35 pm - 3:00 pm Cavovarus Foot: Case and Characterization
Carolyn Sofka, MD

3:00 pm - 3:30 pm BREAK

3:30 pm - 5:00 pm Hip - Self-Assessment Module

Moderators: Bruce Kneeland, MD and Adam Zoga, MD

- 3:30 pm - 3:40 pm Self-Assessment Module: Test Your Skill - Cases!
Adam Zoga, MD
- 3:40 pm - 3:55 pm Labrum/ FAI/ DDH
Donna Blankenbaker, MD
- 3:55 pm - 4:10 pm Extra-Articular Impingement
Reto Sutter, MD
- 4:10 pm - 4:25 pm Greater Trochanteric Pain Syndrome
Naveen Subhas, MD
- 4:25 pm - 4:40 pm Athletic Pubalgia/ Groin Injury
Tobias Dietrich, MD
- 4:40 pm - 4:55 pm Fixing Hip Pain- Steroid Injections and Beyond
Connie Chang, MD
- 4:55 pm - 5:00 pm Self-Assessment Module: Test Your Skill - Answers!
Adam Zoga, MD

MUSCULOSKELETAL DISEASE

8:00 am - 10:00 am Arthritis - Self-Assessment Module

Moderators: Charles Resnik, MD and Andrea Klauser, MD

- 8:00 am - 8:20 am Synovitis: Overlooked and Underemphasized
Eric Chang, MD
- 8:20 am - 8:40 am Plain Film Diagnosis of Peripheral Arthritis of the Hands and Feet
Ali Guermazi, MD, PhD
- 8:40 am - 9:00 am What Can Mr Add in the Diagnosis of Appendicular Arthritis
Monique Reijnierse, MD, PhD
- 9:00 am - 9:20 am Inflammatory Versus Degenerative Arthritis of The Sacroiliac Joint
Jean-Denis Laredo, MD
- 9:20 am - 9:40 am Imaging Crystal Disease
John Crues, MD, MS
- 9:40 am - 10:00 am What Is New In Osteoarthritis Imaging
Frank Roemer, MD

10:30 am - 12:00 pm Pediatric Musculoskeletal Imaging Update:

Moderators: Tal Laor, MD and Paul Kleinman, MD

- 10:30 am - 10:45 am I See This on MRI: Should I Worry?
Tal Laor, MD
- 10:45 am - 11:00 am Acute Injuries in the Skeletally Immature Patient
Kathleen Emery, MD
- 11:00 am - 11:15 am Overuse Injuries in the Skeletally Immature Patient
Kelley Marshall, MD
- 11:15 am - 11:30 am MSK Vascular Anomalies in Children - Made Simple!
Sarah Bixby, MD
- 11:30 am - 11:45 am Pediatric Bone Marrow Imaging: Pearls and Pitfalls
Paul Guillermin, MD
- 11:45 am - 12:00 pm Unique Manifestations of Tumors and Infection in Children
Diego Jaramillo, MD, MPH

12:00 pm - 1:30 pm LUNCH

1:30 pm - 3:00 pm Bone Tumor "Rapid Fire"

Moderators: Murali Sundaram, MD, MBBS, FRCR and Francesca Beaman, MD

- 1:30 pm - 1:45 pm Bone Marrow Imaging: Hematologic Disorders
Emine Remide Arkun, MD
- 1:45 pm - 2:00 pm Primary Musculoskeletal Lymphoma
Mark Kransdorf, MD
- 2:00 pm - 2:15 pm Cartilage Forming Tumours
Paul O'Donnell, MBBS, MRCP, FRCR
- 2:15 pm - 2:30 pm Diffusion-Weighted MR Imaging in Bone Tumors
Fatma Bilge Ergen, MD
- 2:30 pm - 2:45 pm Imaging of Pelvic Osseous Sarcoma
Hakan Ilaslan, MD
- 2:45 pm - 3:00 pm An Approach to Spinal Bone Tumors
Charles Bush, MD

3:00 pm - 3:30 pm BREAK

3:30 pm- 5:00 pm Spine and Peripheral Nerve - Case Based (ARS)

Moderators: Jung-Ah Choi, MD, PhD and Klaus Friedrich, MD

- 3:30 pm - 3:45 pm Nerve Root Avulsion and Traumatic Brachial Plexus Injury
Marcelo Bordalo-Rodrigues, MD
- 3:45 pm - 4:00 pm Nerve Entrapment Upper Extremity
Jenny Bencardino, MD
- 4:00 pm - 4:15 pm Diagnostic Ultrasound of Peripheral Nerve
Jon Jacobson, MD
- 4:15 pm - 4:30 pm Intraneural Ganglion
Kimberly Amrami, MD
- 4:30 pm - 4:45 pm Spinal Pathology: Fractures to Infection
Suzanne Anderson, MD, PhD
- 4:45 pm - 5:00 pm Evaluation of the Lumbar Plexus
Anne Cotten, MD

DAY 3

FRIDAY, SEPTEMBER 1, 2017

SPORTS MEDICINE IMAGING

8:00 am - 10:00 am Glenohumeral Joint - Self-Assessment Module
Moderators: Mario Maas, MD, PhD and Josef Kramer, MD

8:00 am - 8:15 am Rotator Cuff: Supraspinatus Variations in Anatomy/ Leading Edge Pathology
Brady Huang, MD, BS

8:15 am - 8:30 am Rotator Cuff: Subscapularis Lesions
Michael Zlatkin, MD

8:30 am - 8:45 am Infrapinatus: Novel Lesion
Patrick Omoumi, MD, PhD

8:45 am - 9:00 am Rotator Cuff Interval: Adhesive Capsulitis and the DDx
Javier Beltran, MD

9:00 am - 9:20 am Anterior Instability: Glenoid Track and More
Soterios Gyftopoulos, MD

9:20 am - 9:40 am SLAP Lesions
Jeffrey Peterson, MD

9:40 am - 10:00 am Understanding the Overhead Throwing Athlete
Michael Recht, MD

10:30 pm - 12:00 pm Make the Diagnosis: Know the Lingo for Complex Anatomy/ Specific Lesions: Rapid Fire

Moderator: Hiroshi Yoshioka, MD, PhD

10:30 am - 10:40 am ECU Subsheath and Evaluation of Lesions
Corrie Yablon, MD

10:40 am - 10:50 am Glenohumeral Ligaments
Maryam Shahabpour, MD

10:50 am - 11:00 am Plantar Plate Anatomy and Injury
Mark Schweitzer, MD

11:00 am - 11:10 am Peroneal Tendon
Mihra Taljanovic, MD, PhD

11:10 am - 11:20 am Chopart Joint and Injuries
Zehava Sadka Rosenberg, MD

11:20 am - 11:30 am Sinus Tarsi Anatomy and Pathology
Marcelo de Abreu, MD

11:30 am - 11:40 am Lis Franc Ligament Anatomy and Injury Patterns
Nancy Major, MD

11:40 am - 11:50 am Rectus Femoris Anatomy and Injury Patterns
Lawrence Yao, MD

11:50 am - 12:00 pm Adductor Avulsive Syndrome
Kambiz Motamedi, MD

12:00 pm - 1:30 pm LUNCH

1:30 pm - 3:00 pm Muscle Injury - Case Based (ARS)

Moderators: William Morrison, MD, and George Koulouris, MD, MBBS, MMed, FRANZCR

1:30 pm - 1:40 pm Self Assessment Module - Test Your Skills - Cases!
William Morrison, MD

1:40 pm - 1:55 pm Pathophysiology/ Classification of Muscle Injury
George Koulouris, MD, MBBS, MMed, FRANZCR

1:55 pm - 2:10 pm Muscle Strain - Calf and Hamstring
David Connell, MD

2:10 pm - 2:25 pm Non-Muscle Strain - DOMS, Contusion and Muscle Herniation
Lawrence White, MD

2:25 pm - 2:40 pm Determining Return to Play
James Linklater, MBBS

2:40 pm - 2:55 pm Pectoralis Injuries: Anatomy and Pathology
Martin Torriani, MD, MMsc

2:55 pm - 3:00 pm Self Assessment Module - Test Your Skills - Answers!
William Morrison, MD

3:00 pm - 3:30 pm BREAK

MUSCULOSKELETAL DISEASE

8:00 am - 10:00 am Imaging Orthopedic Hardware - Case Based (ARS)
Moderator: Theodore Miller, MD, FACR

8:00 am - 8:20 am What You Need to Know About MR Imaging Around Metal
Philip O'Connor, MD

8:20 am - 8:40 am How to Reduce Metal Artifacts in CT: Dual Energy & More
Kenneth Buckwalter, MD, MS, MBA

8:40 am - 9:00 am Hip Replacements: Bearing Surfaces and Stem Design
Theodore Miller, MD, FACR

9:00 am - 9:20 am THR - Particle Disease and Adverse Reaction to Metal Debris
Hollis Potter, MD

9:20 am - 9:40 am Total Shoulder Replacement: Need to Know Facts for Pre- and Post-Op
Alice Ha, MD, MS

9:40 am - 10:00 am Complications of Spinal Instrumentation
Victor Cassar-Pullicino, MD

10:00 am - 10:30 am BREAK

10:30am - 12:00pm Soft Tissue Tumor

Moderators: Radhesh Lalam, MBBS, MRSC, FRCR and Leon Rybak, MD

10:30 am - 10:40 am Molecular Diagnosis of Soft Tissue Tumors
Adrienne Flanagan MD, FRCPath, PhD

10:40 am - 10:50 am ESSR-Approved Guidelines for Diagnostic Imaging of Soft Tissue Tumors
Filip Vanhoenacker, MD, PhD

10:50 am - 11:00 am Soft Tissue Sarcoma: Diffusion Weighted Imaging
Hye Won Chung, MD

11:00 am - 11:10 am Sarcoma Imaging- Multiparametric Assessment
Avneesh Chhabra, MD

11:10 am - 11:20 am Whole-Body MRI of Neurofibromatosis
Laura Fayad, MD

11:20 am - 11:30 am Perineural Spread of Tumors
Benjamin Howe, MD

11:30 am - 11:40 am Compartmental Anatomy for MSK Biopsy: Proven Fact or Dogma?
Leanne Seeger, MD, FACR

11:40 am - 11:50 am MRI-Based Assessment of Safe Margins in Tumor Surgery
David Panicek, MD

11:50 am - 12:00 pm Imaging After Sarcoma Treatment
Hilary Garner, MD

12 pm - 1:30 pm LUNCH

1:30pm - 3:00pm Trauma - What We Miss - Self-Assessment Module

Moderators: Michael Mulligan, MD and Mini Pathria, MD

1:30 pm - 1:45 pm Sports Injuries Missed in the ER
Robert Campbell, MD

1:45 pm - 2:00 pm Challenges in the Polytrauma Patient
Joseph Yu, MD

2:00 pm - 2:15 pm Tip of the Iceberg Fractures
Mark Anderson, MD

2:15 pm - 2:30 pm Double Fractures: Bone Rings and Beyond
Charles Resnick, MD

2:30 pm - 2:45 pm Fatigue and Insufficiency Fractures
Mini Pathria, MD

2:45 pm - 3:00 pm Soft Tissue Interposition
Robert Boutin, MD

3:00 pm - 3:30 pm BREAK

COMBINED SESSION

FILM QUIZ PANEL 3:30 PM - 5:00 PM

TUESDAY, AUGUST 29, 2017

7:00 am - 8:00 am **BREAKFAST** 7:00 am - 5:00 pm Registration/Information Desk Hours

COMBINED

9:00 am - 9:05 am	Introduction: <i>Andrew Grainger, BM, BS, MRCP, FRCR</i>
9:05 am - 9:35 am	Basic Shoulder Ultrasound: How I Do It: <i>Martin Torriani, MD</i> Anatomy and Demonstration: Cuff and Biceps: <i>Philippe Peetrons, MD</i>
9:35 am - 10:05 am	Advanced Shoulder Ultrasound: <i>Corrie Yablon, MD</i> Anatomy and Demonstration: ACJ, Rotator Interval, Dynamic Assessment, Axillary Recess and Muscles: <i>Jon Jacobson, MD</i>
10:05 am - 10:30 am	Rotator Cuff Tears: How I Diagnose Them and Pitfalls to Avoid: <i>Viviane Khoury, MD</i>
10:30 am - 11:00 am	BREAK

BREAK INTO GROUPS

GROUP A - MORNING

HOW I DIAGNOSE AND TREAT IT:

11:00 am - 11:15 am	Rotator Cuff Tears: How Good Should We Be? Review of Literature <i>Ian Beggs, MD, FRCPE, FRCR</i>
11:15 am - 11:30 am	Tendinopathy, Bursitis and Impingement: What Can US Tell Us <i>David Fessell, MD</i>
11:30 am - 11:45 am	The Postoperative Shoulder On Us <i>Robert Campbell, MD</i>
11:45 am - 12:00 pm	Shoulder US Beyond the Cuff and Bursa <i>Theodore Miller, MD, FACR</i>
12:00 pm - 12:15 pm	Nerve Entrapments About the Shoulder <i>Andrea Klauser, MD</i>
12:15 pm - 12:30 pm	Ultrasound Guided Interventions at the Shoulder <i>Nathalie Bureau, MD, MSC</i>
12:30 pm - 12:45 pm	Shoulder US Cases I've Learned From: Video Presentations <i>Antonio Barile, MD</i>
12:45 pm - 1:00 pm	Shoulder US Cases I've learned From: Video Presentations <i>Philip O'Connor, MD</i>

GROUP B - MORNING

HANDS-ON/TUTORIALS

Jung-Ah Choi, MD, PhD
Joseph Craig, MBChB
James F. Griffith, MD, MRCP, FRCR
Brady Huang, MD, BS
Franz Kainberger, MD
Radhesh Lalam, MBBS, MRSC, FRCR
Ramy Mansour, MBChB, MSc, FRCR
Philippe Peetrons, MD
Luca Sconfienza, MD, PhD

1:00 PM - 2:00 PM - LUNCH

GROUP A - AFTERNOON

HANDS-ON/TUTORIALS

Joseph Craig, MBChB
Robert Lopez, MD
Joel Newman, MD
Violeta Nikodinovska, MD, PhD, MSc
Patrick Omoumi, MD, PhD
Simon Ostlere, MBBS, FRCR
Gajan Rajeswaran, MBBS, FRCR
Mihra Taljanovic, MD, PhD

GROUP B - AFTERNOON

HOW I DIAGNOSE AND TREAT IT:

2:00 pm - 2:15 pm	Rotator Cuff Tears: How good should we be? Review Of Literature <i>Marnix Van Holsbeek, MD</i>
2:15 pm - 2:30 pm	Tendinopathy, Bursitis and Impingement: What Can US Tell Us <i>James F. Griffith, MD, MRCP, FRCR</i>
2:30 pm - 2:45 pm	The Postoperative Shoulder on US <i>Luca Sconfienza, MD, PhD</i>
2:45 pm - 3:00 pm	Shoulder US Beyond the Cuff and Bursa <i>Ron Adler, MD, PhD</i>
3:00 pm - 3:15 pm	Nerve Entrapments About the Shoulder <i>Meg Chiavaris, MD, PhD, FACR</i>
3:15 pm - 3:30 pm	Ultrasound Guided Interventions at the Shoulder <i>Ken Lee, MD</i>
3:30 pm - 3:45 pm	Shoulder US Cases I've Learned From: Video Presentations <i>David Wilson, MD</i>
3:45 pm - 4:00 pm	Shoulder Us Cases I've Learned From: Video Presentations <i>Georgina Allen, FRCR, MScSEM</i>

The deadline for discounted early registration is 07/7/2017. After 07/7/2017, regular registration fees will apply to online and onsite registration. Registration Fees are subject to change. Rates are all USD. To lock in these rates, **REGISTER NOW!**

PLEASE SELECT THE CATEGORY THAT BEST DESCRIBES YOUR STATUS:

- ☐ Industry Employee ☐ Other Medical Professional ☐ Researcher ☐ Other
☐ Fellow ☐ Pathologist ☐ Resident
☐ Full Time Administrator ☐ Physician ☐ Rheumatologist
☐ Non Physician Provider ☐ Radiologist ☐ Student/Trainee

INDUSTRY REGISTRATION – Industry Employee whose company is already supporting ISS OR Industry Medical Science Liaison . . ☐ \$820
 (Proof of MSL Title may be required before confirmation of registration)

Industry Employee whose company is NOT already supporting ISS. ☐ \$1,250

Your submission will need to be approved prior to confirmation of your registration. Approval may be based on current Industry support. To find out if your company is currently supporting ISS, please contact Donna in the Registration Department at + 1 847-752-6245 or by email at donna@veritasmeetings.com

HOW DID YOU LEARN ABOUT THIS CONFERENCE? (CHECK ALL THAT APPLY)

- ☐ Advertisement in Professional Journal ☐ Email ☐ Registration Brochure Mailer
☐ From a Colleague: _____ ☐ Website
☐ Calendar/Monthly Listing ☐ Flyer at another meeting

PLEASE PRINT CLEARLY

Title: ☐ Dr. ☐ Prof. ☐ Mr. ☐ Mrs. ☐ Ms. ☐ Other: _____

First Name (Forename/Given Name): _____

Last Name (Surname/Family Name): _____

Academic Degree(s): _____

Badge First Name: _____

Address: _____ ☐ Home ☐ Office

City: _____ State/Province: _____ Postal Zip Code: _____

Country: _____

Phone: _____ Fax: _____

Email: _____

MEETING REGISTRATION*

REGISTRATION CATEGORIES

EARLY DISCOUNTED
(through 7/7/2017)

REGULAR FEES
(after 7/7/2017)

TOTAL COST

☐ ISS Member (in good standing for 2017)

MEMBERS PLEASE REGISTER ONLINE

☐ Non-Member Practicing Physician \$820 \$920 =\$ _____

☐ Non-Physician Provider (Nurse, PA, Technologist) \$620 \$720 =\$ _____

☐ Resident Expected Graduation Year _____ \$620 \$720 =\$ _____

☐ Fellow Expected Graduation Year _____ \$620 \$720 =\$ _____

☐ Student Expected Graduation Year _____ \$620 \$720 =\$ _____

ULTRASOUND COURSE REGISTRATION

☐ Ultrasound Course – August 29, 2017 (Early Discount BEFORE 7/7/17) \$250 \$325 =\$ _____

(Pre-registration is required for this course. There is a 100 person maximum, so we encourage you to register early.)

PATHOLOGY/ORTHOPEDIC

☐ **New!!** One-Day Pathology Orthopedic Course \$100 =\$ _____

☐ Optional opportunity to observe the ISS Members Meeting if registering for the Pathology/Orthopedic Course (optional opportunity for non members) \$50

SELF-ASSESSMENT MODULES REGISTRATION \$25 =\$ _____

(PLEASE NOTE: *Self-Assessment Module fees are NOT included with registration)

ADDITIONAL WELCOME RECEPTION TICKETS FOR NON-REGISTERED GUESTS:

***Two tickets** to the Welcome Reception are included with your registration.

Please only purchase additional tickets if you are planning to bring additional guests to this event.

Welcome Reception # of tickets = _____ at \$50 per ticket =\$ _____

Total Registration Fee =\$ _____

Total Special Events Tickets =\$ _____

GRAND TOTAL =\$ _____

PAYMENT INFORMATION

The ISS requires full payment for registration fees and optional activities by check or credit card.

☐ Check* (payable to the ISS) ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover

*All fees must be paid in US dollars. Checks must be drawn in US dollars, on a US bank, and made payable to the International Skeletal Society (ISS) (Tax ID #23-7366930). Be sure to print your name on the check.

Credit Card #: _____ Expiration Date: _____ CVV#: _____

Name on Credit Card _____

Billing Address: _____

Signature: _____

The issuer of the card identified on this item is authorized to pay the amount shown as TOTAL upon proper presentation. I promise to pay such TOTAL (together with any other charges due thereon) subject to and in accordance with the agreement governing the use of such card.

PHONE REGISTRATIONS CANNOT BE ACCEPTED.

Acceptable registration methods include

- By Fax: +1 847-960-3861
- By Mail: International Skeletal Society;
2575 Northwest Parkway; Elgin, Illinois 60124
- Online: www.internationalskeletalsociety.com

If paying by check, please forward payment to:

International Skeletal Society
Attn: Registration
2575 Northwest Parkway
Elgin, Illinois 60124

***Wire Transfers**

Please email info@internationalskeletalsociety.com for detailed wire transfer information

REGISTRATION CANCELLATION & REFUND POLICY

Registration refund requests must be submitted in writing to the ISS Executive Office by 7/7/2017. All refund requests will be subject to a \$100 processing fee. No refunds will be made after 7/7/2017.

REGISTRATION/INFORMATION DESK HOURS

LOCATION: 3RD FLOOR WEST PROMENADE

Tuesday, August 29, 2017	7:00am – 5:00pm
Wednesday, August 30, 2017	7:00am – 5:00pm
Thursday, August 31, 2017	7:00am – 5:00pm
Friday, September 1, 2017	7:00am – 5:00pm

EXHIBIT HALL HOURS

LOCATION: GRAND BALLROOM FOYER

Wednesday, August 30, 2017	7:00am – 4:00pm
Thursday, August 31, 2017	7:00am – 4:00pm
Friday, September 1, 2017	7:00am – 4:00pm

EVENING EVENTS

WEDNESDAY, AUGUST 30TH 2017

WELCOME RECEPTION

TIME: 6:30pm – 8:30pm

LOCATION: Trianon Complex

ATTIRE: Business Casual

COST: Two tickets included in registration fee. Additional guest tickets are \$50 each.

This year's Welcome Reception will be held in the Trianon Complex inside of the New York Hilton Midtown. Visit with exhibitors and colleagues while sampling an array of delicious foods in the heart of New York City

**Times and locations are subject to change*

HOTEL, TRAVEL & TRANSPORTATION & REGISTRATION INFORMATION

HOTEL INFORMATION

New York Hilton Midtown
1335 Avenue of the Americas
New York, NY 10019
Main: +1 212-586-7000 | Fax: +1 212-315-1374
<http://www3.hilton.com/en/hotels/new-york/new-york-hilton-midtown-NYCNHHH/index.html>

RESERVATIONS: +1 212-586-7000 or
<https://aws.passkey.com/event/16143864/owner/6708/landing>

ROOM RATE

ISS has negotiated a discounted rate of \$279 at the New York Hilton Midtown.

HOTEL DEADLINE

The deadline to receive the ISS group rate is August 4, 2017. ISS encourages you to make your reservation early, as the hotel and discount block may sellout before this date. After this date, reservations will be accepted based on availability and higher rates may apply

RESERVATIONS

Attendees are responsible for making their reservations by calling the hotel at +1-212-586-7000. **Please reference the ISS 2017 Annual Meeting to receive the discounted rate.** Reservations can also be made online at <https://aws.passkey.com/event/16143864/owner/6708/landing>

HOTEL DEPOSIT AND CANCELLATION POLICY

All sleeping rooms must be secured with a valid credit card provided at the time of reservations along with the first night's deposit which is refundable up to 3 days in advance of arrival. Hotel reservations at the group discounted rate may be made for up to 3 nights prior and 3 nights after the conference dates based only hotel availability.

TRAVEL AND TRANSPORTATION

Airport Information

La Guardia Airport is approximately 8 miles away from the New York Hilton Midtown or 30 minutes by car. John F. Kennedy International Airport is approximately 17 miles from the hotel or 45 minutes by car. Newark International Airport is approximately 15 miles from the hotel or 45 minutes by car.

TAXI CAB SERVICES

Several taxi companies operate at the airports and are located outside of the baggage claim area. Taxi rates for a one-way transfer to the hotel from La Guardia Airport cost approximately \$35, from the John F. Kennedy International Airport \$65, and from the Newark International Airport \$85.

PARKING

The New York Hilton Midtown offers valet parking for \$60 (Per 24 hr, \$75 SUV), self-parking is not available.

Other Parking Info: Entrances on 53rd & 54th street between 6 & 7th Avenue

REGISTRATION INFORMATION

Registration Fee Includes:

- Entrance to Refresher Course
- Breakfasts
- Two tickets to the Welcome Reception
- Program Materials

ULTRASOUND COURSE

Registration for the Ultrasound Course on Tuesday, August 29, 2017, is limited and will be allocated on a first-come, first-served basis to the first 100 participants upon payment of the registration fee. Please be sure to register on the meeting registration form if you wish to attend.

EARLY REGISTRATION DEADLINE

Meeting registration forms must be received by the ISS Executive Office by 07/07/2017 to receive the discounted early registration rate. All forms received after this deadline will be assessed the regular registration fee.

REGISTRATION CANCELLATION AND REFUND POLICY

Registration refund requests must be submitted in writing to the ISS Executive Office no later than **07/07/2017**. All refund requests will be subject to a \$100 processing fee. No refunds will be made after **07/07/2017**

SPECIAL NEEDS

For accommodations on the basis of disability or special dietary needs, please call +1 847-752-6245.

CONTACT THE ISS EXECUTIVE OFFICE BY:

Phone: +1 847-752-6245 | Fax: +1 847-960-3861
Email: info@internationalskeletalsociety.com
Website: www.internationalskeletalsociety.com



International Skeletal Society

2575 Northwest Parkway | Elgin, Illinois 60124

7102

REGISTRATION MATERIALS ENCLOSED

**44TH ANNUAL MEETING
AND MUSCULOSKELETAL IMAGING COURSE:
FUNDAMENTALS TO ADVANCED CONCEPTS**

AUGUST 30 - SEPTEMBER 1, 2017

BE A PART OF IT
NEW YORK, NEW YORK