

16th Annual International Pediatric Orthopaedic Symposium



December 3-7, 2019

Donald Bae, MD
Todd Milbrandt, MD
Course Directors



Presented by



POSNA
PEDIATRIC ORTHOPAEDIC SOCIETY
OF NORTH AMERICA

AAOS
AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS

Grow together

Because every millimeter counts in EOS, use a treatment that impacts a lifetime.



Band together

When you are going for the win, you need a versatile game plan.



Strong together

When AIS tests their confidence, choose a system with the strength to bring it back.



Visit the **NuVasive booth** to learn more about our deformity solutions today.



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Thank You!

The Pediatric Orthopaedic Society of North America gratefully acknowledges the following for their generous financial support for 2019. We sincerely appreciate each of these companies for helping POSNA fulfill its goals of providing education and fostering research.

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Zimmer Biomet

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Pega Medical

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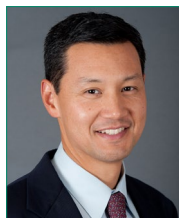
In-kind donations of equipment for workshops being provided by:

DePuy Synthes

Orthofix

OrthoPediatrics

Smith+Nephew



Donald Bae, MD
Course Director



Todd Milbrandt, MD
Course Director

2019 IPOS Faculty

*Lindsay Andras, MD
Alexandre Arkader, MD
*Donald Bae, MD
Laurel Blakemore, MD
*Michelle Caird, MD
*Pablo Castañeda, MD
*Jon Davids, MD
*Craig Ebersson, MD
*John (Jack) Flynn, MD
Steven Frick, MD
Theodore Ganley, MD
Michael Glotzbecker, MD
*Martin Herman, MD
Jose Herrera-Soto, MD
John Herzenberg, MD
Christine Ho, MD
Sandra Jarvis-Selinger, PhD
Lori Karol, MD
Derek Kelly, MD
Mininder Kocher, MD, MPH
Scott Kozin, MD
*A. Noelle Larson, MD
*William Mackenzie, MD
Amy McIntosh, MD
*Todd Milbrandt, MD
Vincent Mosca, MD

Peter Newton, MD
*Kenneth Noonan, MD
Tom Novacheck, MD
Matthew Oetgen, MD
Dror Paley, MD, FRCSC
Jonathan Phillips, MD
*David Podeszwa, MD
Wudbhav (Woody) Sankar, MD
Jeffrey Sawyer, MD
*Jonathan Schoenecker, MD, PhD
*Suken Shah, MD
*Kevin Shea, MD
*Benjamin Shore, MD, MPH, FRCSC
*Ernest Sink, MD
David Skaggs, MD, MMM
*Brian Smith, MD
Paul Sponseller, MD
*Anne Stuedemann, MSN, RN, CPNP
Daniel Sucato, MD, MS
Vishwas Talwalkar, MD
*Bryan Tompkins, MD
*Michael Vitale, MD, MPH
Peter Waters, MD
Jennifer Weiss, MD
*Ira Zaltz, MD
Erica Zepeda, MSN, RN, CPNP

International Faculty

Alaric Aroojis, MD
*Haemish Crawford, MD
Deborah Eastwood, FRCS
David Little, MD, MBBS, FRACS, PhD
*Kishore Mulpuri, MD
Stefan Parent, MD
Christof Radler, MD
Thomas Wirth, MD, PhD
Muharrem Yazici, MD

Instructors

Brian Brighton, MD
Stephanie Boehm, MD
Eric Edmonds, MD
Nicholas Fletcher, MD
Megan Gresh, MD
Javier Masquijo, MD
Thomas McPartland, MD
Wendy Moon, MS, APRN, CNP
L. Reid Nichols, MD
Eduardo Novais, MD
Scott Rosenfeld, MD
Mauricio Silva, MD
Samantha Spencer, MD
Nicole Tweedy, DNP-PNP
Lindley Wall, MD
Maegen Wallace, MD

*2019 IPOS Advisory Board



Download the
My POSNA App.

About POSNA

The Pediatric Orthopaedic Society of North America (POSNA) is a group of professionals comprised mostly of pediatric orthopaedic surgeons. We are board certified in orthopaedic surgery and have participated in additional training to become specialized in the care of children's musculoskeletal health and our practice reflects this dedication.

We, as a group, strive to become the authoritative source on such care through appropriate research that will lead to the best evidence-based patient care.

Learning Objectives

- Effectively assess children with musculoskeletal conditions requiring care
- Compare and contrast surgical and non-operative treatment options for common pediatric orthopaedic conditions
- Apply alternative treatment techniques for selected pediatric orthopaedic conditions
- Identify, manage, and prevent complications of common pediatric orthopaedic conditions and treatments
- Implement evidence-based strategies for infection control, fracture care, and management of sports-related injuries.

IPOS Mission Statement

To provide the highest quality, most comprehensive, and most interactive pediatric orthopaedic education to learners and practitioners of all levels.

IPOS Vision Statement

Through our inspiring international faculty, innovative programming, and vibrant interactions among all attendees, IPOS aspires to be the best pediatric orthopaedic educational event in the world.

Accreditation

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Orthopaedic Surgeons and the Pediatric Orthopaedic Society of North America. The American Academy of Orthopaedic Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Designation

The American Academy of Orthopaedic Surgeons designates this live activity for a maximum of **20.75 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Explore All Areas of Pediatric Orthopaedics

Immerse yourself in this exciting and interactive four-day program, alongside hundreds of pediatric orthopaedic professionals from around the world. Discover new insights and technology, and learn how to integrate best practices and new techniques into your care of children and adolescents. From fundamental fracture care to advanced surgical reconstruction, our renown international faculty share their expertise in every subspecialty field of pediatric orthopaedics.

POSNA is going green!

Here are a few of our green initiatives:

- Paperless: use the website and mobile app as your IPOS guide.
- Signage is digital throughout the meeting space.
- Recycle your conference badge at registration at the end of the meeting.
- Loews is committed to using local, sustainable goods as part of their banquet food and beverage program.
- Water stations with biodegradable cups will be available throughout the meeting space.



Craft your own IPOS adventure with over 40 breakout sessions featuring:

- Focused lectures and engaging case discussions
- Surgical skills demonstrations
- Hands-on technical workshops
- Industry-sponsored satellite sessions on cutting edge techniques



IPOS Lounge

Located in the Exhibit Hall, the IPOS Lounge is a place to recharge, relax, and network with others. Come to the lounge to view ePosters, participate in Lunchtime Career Development, or chat with the IPOS directors during one of the scheduled breaks.

Resident Info

Residents! Special programming just for you, including:

- **Career Planning and Professional Development** – gain perspectives and advice
- **Resident Case Competition** – cases presented and discussed



ePoster Information

ePosters are located in the Exhibit Hall at the IPOS Lounge. The ePosters can be found on pages 41-43.

Lunchtime Career Development

During lunch, meet with IPOS course directors and faculty to review the day's educational events, share interesting clinical cases and discuss professional development. Visit the IPOS Lounge in the Exhibit Hall during lunch.



WiFi Information

IPOS Conference WiFi:
IPOS2019

Password:
orlando2019

Remember to share your IPOS experience posting on social media using #IPOS2019.

Registration

Tuesday, December 3	3:00 PM – 7:00 PM
Wednesday, December 4	7:00 AM – 6:00 PM
Thursday, December 5	7:00 AM – 4:30 PM
Friday, December 6	7:00 AM – 4:30 PM
Saturday, December 7	6:30 AM – 11:30 AM

Exhibit Hall

Join your colleagues in the Exhibit Hall for fellowship and discovery of new pediatric orthopaedic products and services. Meals and breaks will be served in the Exhibit Hall, located in **Pacifica 6-7**.

Wednesday, December 4	7:00 AM – 7:00 PM
Thursday, December 5	7:00 AM – 4:30 PM
Friday, December 6	7:00 AM – 3:30 PM

Speaker Ready Room

All IPOS faculty are required to upload their presentations. Speaker Ready Room will be in **South China Sea**.

Tuesday, December 3	3:00 PM – 7:00 PM
Wednesday, December 4	7:00 AM – 6:00 PM
Thursday, December 5	7:00 AM – 4:30 PM
Friday, December 6	7:00 AM – 4:30 PM
Saturday, December 7	6:30 AM – 11:30 AM

Registration	Onsite Rates
POSNA/AAOS Member	\$1,399
Orthopaedic Resident/Post Residency Fellow/U.S. Military*/ POSNA/AAOS Emeritus	\$1,199
Non-member	\$1,999
Low Income Countries (determined by worldbank)	\$1,049
Nurse/Allied Health/PA	\$899
Fellowship Directors Program- Half Day Saturday (included with full IPOS registration) TICKETED EVENT	\$200

*For POSNA/AAOS members in active U.S. military duty only

POSNA Membership Requirement

Attendance fulfills your POSNA active membership requirements. IPOS attendance does not fulfill the requirement for Candidate Members.

Share your experience by using #IPOS2019.

Stay Connected!


 @POSNA_org


 @POSNA


 @posna_ortho

Download the IPOS app.

- Access the meeting schedule, session details, handouts, posters & ePosters
- Connect with attendees
- View faculty disclosures
- Submit questions to eModerators
- Complete meeting evaluations
- Take notes & bookmark sessions




Access the program by downloading the My POSNA app, available in the Apple App or Google Play store.

All attendees will have app access.

The app will be available for download in late November.

posna.org
ipos.posna.org
Mobile app sponsored by **stryker**

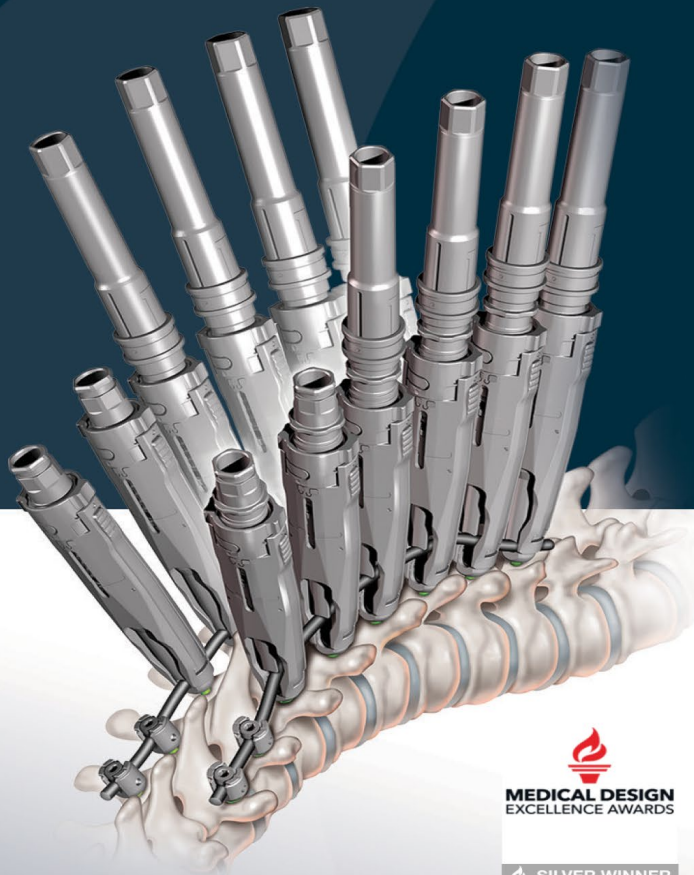
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Help POSNA continue accomplishing the things most important to our members: education, patient care initiatives, and research.

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Craft Your Own Adventure!



General Pediatric Orthopaedics/Trauma

- **General Session 1: Pediatric Trauma: Early Fixes and Late Saves** (Wednesday, 12/4, 8:00 AM-10:00 AM)
- **CME Breakout: Musculoskeletal infections** (Wednesday, 12/4, 10:30 AM-12:00 PM)
- **General Session 2: Teaching and Learning in Pediatric Orthopaedics** (Thursday, 12/5, 9:30 AM-11:30 AM) 
- **General Session 3: Author's Preferred Techniques** (Friday, 12/6, 12:30 PM-2:30 PM)
- **CME Breakout: Wellness in Pediatric Orthopaedics** (Friday, 12/6, 3:00 PM-4:30 PM)
- **CME Breakout: Bone Lesions (Cysts, Masses and Malignancies)** (Saturday, 12/7, 10:00 AM-11:30 AM)




Hip

- **CME Breakout: Hip: SCFE** (Wednesday, 12/4, 10:30 AM-12:00 PM)
- **CME Breakout: Pelvic Osteotomies I** (hands-on workshop) (Thursday, 12/5, 12:30 PM-2:00 PM)
- **Concurrent Session: Hip: The Immature Hip** (Thursday, 12/5, 2:20 PM-4:30 PM)
- **CME Breakout: Pelvic Osteotomies II** (hands-on workshop) (Friday, 12/6, 3:00 PM-4:30 PM)



Hand & Upper Extremity

- **CME Breakout 1: Hand- Injuries for the Front Line Provider** (Wednesday, 12/4, 10:30 AM-12:00 PM)
- **CME Breakout: Hand: Congenital Upper Limb Issues** (Friday, 12/6, 3:00 PM-4:30 PM) 



Spine

- **Concurrent Session: Spine: Adolescent Idiopathic Scoliosis** (Wednesday, 12/4, 1:00 PM-3:00 PM)
- **CME Breakout: Spine: Cervical Spine** (Thursday, 12/5, 12:30 PM-2:00 PM)
- **Concurrent Session: Spine/Hand: Complex Spine and Upper Limb Conditions** (Saturday, 12/7, 7:30 AM-9:40 AM)



Neuromuscular & Cerebral Palsy

- **CME Breakout: CP: Gait Analysis: A Systematic Approach** (Thursday, 12/5, 12:30 PM-2:00 PM)
- **Concurrent Session: CP: Management of Neuromuscular Hip Dysplasia** (Friday, 12/6, 8:00 AM-10:00 AM)
- **CME Breakout: CP: Surgery to Improve Ambulation** (Saturday, 12/7, 10:00 AM-11:30 AM)



Sports

- **CME Breakout: Sports/Foot: More than Athlete's Foot: Coalitions, OCD, and Jones Fractures** (Thursday, 12/5, 12:30 PM-2:00 PM)
- **Concurrent Session: Sports: Knee Conditions of the Immature Athlete** (Friday, 12/6, 8:00 AM-10:00 AM)



Foot

- **Concurrent Session: Foot: Clubfoot Care in 2019** (Wednesday, 12/4, 1:00 PM-3:00 PM)
- **CME Breakout: Ponseti I** (hands-on workshop) (Thursday, 12/5, 12:30 PM-2:00 PM)
- **CME Breakout: Ponseti I** (hands-on workshop) (Friday, 12/6, 3:00 PM-4:30 PM)
- **CME Breakout: Ponseti II: Case Based Discussions** (Saturday, 12/7, 10:00 AM-11:30 AM)



Syndromes, Dysplasias & Genetic Conditions

- **Concurrent Session: Skeletal Dysplasias** (Thursday, 12/5, 2:20 PM-4:30 PM)
- **CME Breakout: Dysplasias: Joint Laxity** (Friday, 12/6, 3:00 PM-4:30 PM)
- **Concurrent Session: Dysplasias: Muscular Dystrophies** (Saturday, 12/7, 7:30 AM-9:40 AM)



POPS

- **CME Breakout: POPS: The Limping Child: Physiologic to Pathologic** (Wednesday, 12/4, 10:30 AM-12:00 PM)
- **CME Breakout: POPS: Lower Back Pain** (Thursday, 12/5, 12:30 PM- 2:00 PM)
- **CME Breakout: POPS: Rapid Fire Review** (Friday, 12/6, 3:00 PM-4:30 PM)




Lower Extremity/Deformity

- **CME Breakout: LE Deformity I: Congenital Deformity** (Wednesday, 12/4, 10:30 AM-12:00 PM)
- **CME Breakout: LE Deformity II: Growth and Limb Length Discrepancy** (Thursday, 12/5, 12:30 PM-2:00 PM)
- **CME Breakout: LE Deformity: External Fixation (Hands-On Workshop)** (Friday, 12/6, 3:00 PM-4:30 PM)



Essentials of Pediatric Orthopaedics










- **CME Breakout 1: Essentials of Pediatric Orthopaedics I** (Wednesday, 12/4, 10:30 AM-12:00 PM) 
- **CME Breakout: Essentials of Pediatric Orthopaedics II** (Thursday, 12/5, 12:30 PM-2:00 PM)
- **CME Breakout: Essentials of Pediatric Orthopaedics III** (Friday, 12/6, 3:00 PM-4:30 PM)
- **CME Breakout: Essentials of Pediatric Orthopaedics IV** (Saturday, 12/7, 10:00 AM-11:30 AM)

Schedule At a Glance












TUESDAY, DECEMBER 3

Registration	3:00 PM - 7:00 PM
Resident Case Presentations - Pacifica 8-10	4:00 PM - 5:20 PM
Resident Career Planning - Pacifica 8-10	5:20 PM - 6:30 PM
Pre-Course Reception - Oceana Foyer	6:30 PM - 6:45 PM
NuVasive Pre-Course - Oceana 1-2	6:45 PM - 8:00 PM
OrthoPediatrics Pre-Course - Oceana 3-5	6:45 PM - 8:00 PM
Industry Sponsored Cocktail Reception - Pacifica 11-12	8:00 PM - 9:00 PM

WEDNESDAY, DECEMBER 4

Registration	7:00 AM - 6:00 PM
Breakfast & Exhibits	7:00 AM - 8:00 AM
General Session - Oceana 6-7 	8:00 AM - 10:00 AM
Director's Welcome	10:00 AM - 10:10 AM
Break & Exhibits	10:10 AM - 10:30 AM
CME Breakout - Pacifica 11-12 	10:30 AM - 12:00 PM
CME Breakout - Pacifica 8-10 	10:30 AM - 12:00 PM
CME Breakout - Oceana 3-5 	10:30 AM - 12:00 PM
CME Breakout - Coral Sea 	10:30 AM - 12:00 PM
CME Breakout - Pacifica 1-3 	10:30 AM - 12:00 PM
CME Breakout - Java Sea 	10:30 AM - 12:00 PM
Lunch & Exhibits	12:00 PM - 1:00 PM
Lunch with IPOS Directors - IPOS Lounge	12:00 PM - 1:00 PM
Concurrent Session - Oceana 6-7 	1:00 PM - 3:00 PM
Concurrent Session - Pacifica 1-3 	1:00 PM - 3:00 PM
Break & Exhibits	3:00 PM - 3:20 PM
Industry Spotlight Session 1: Arthrex - Timor Sea	3:20 PM - 4:30 PM
Industry Spotlight Session 1: DePuy Synthes - Pacifica 11-12	3:20 PM - 4:30 PM
Industry Spotlight Session 1: Globus Medical - Pacifica 8-10	3:20 PM - 4:30 PM
Industry Spotlight Session 1: Orthopediatrics - Coral Sea	3:20 PM - 4:30 PM
Industry Spotlight Session 1: Orthopediatrics - Java Sea	3:20 PM - 4:30 PM
Industry Spotlight Session 2: Arthrex - Timor Sea	4:40 PM - 5:50 PM
Industry Spotlight Session 2: DePuy Synthes - Pacifica 11-12	4:40 PM - 5:50 PM
Industry Spotlight Session 2: Medtronic - Philippine Sea	4:40 PM - 5:50 PM
Industry Spotlight Session 2: Orthopediatrics - Coral Sea	4:40 PM - 5:50 PM
Industry Spotlight Session 2: Stryker - Banda Sea	4:40 PM - 5:50 PM
Course Directors' Welcome Reception - Pacifica 6-7	6:00 PM - 7:00 PM

THURSDAY, DECEMBER 5












Registration	7:00 AM - 4:30 PM
Faculty and Staff Lounge	7:00 AM - 6:00 PM
Breakfast & Exhibits	7:00 AM - 8:00 AM
POSNA Live	8:00 AM - 4:00 PM
Double Diamond Meeting Room	8:00 AM - 4:00 PM
Industry Spotlight Session 3: DePuy Synthes - Pacifica 11-12	8:00 AM - 9:10 AM
Industry Spotlight Session 3: Misonix - Banda Sea	8:00 AM - 9:10 AM
Industry Spotlight Session 3: Orthopediatrics - Coral Sea	8:00 AM - 9:10 AM
Industry Spotlight Session 3: Wright Medical - Java Sea	8:00 AM - 9:10 AM
Industry Spotlight Session 3: Zimmer Biomet - Timor Sea	8:00 AM - 9:10 AM
Break & Exhibits	9:10 AM - 9:30 AM
General Session - Oceana 6-7 	9:30 AM - 11:30 AM
Lunch & Exhibits	11:30 AM - 12:30 PM
Lunchtime Development - IPOS Lounge	11:45 AM - 12:30 PM
CME Breakout: Hands-On Workshop - Banda Sea 	12:30 PM - 2:00 PM
CME Breakout: Hands-On Workshop - Timor Sea 	12:30 PM - 2:00 PM
CME Breakout - Coral Sea 	12:30 PM - 2:00 PM
CME Breakout - Pacifica 11-12 	12:30 PM - 2:00 PM
CME Breakout - Pacifica 8-10 	12:30 PM - 2:00 PM
CME Breakout - Oceana 3-5 	12:30 PM - 2:00 PM
CME Breakout - Pacifica 1-3 	12:30 PM - 2:00 PM
CME Breakout - Java Sea 	12:30 PM - 2:00 PM
Break & Exhibits	2:00 PM - 2:20 PM
Concurrent Session - Oceana 6-7 	2:20 PM - 4:30 PM
Concurrent Session - Pacifica 1-3 	2:20 PM - 4:30 PM
Top Gun Surgical Skills Competition (by invitation only)	5:00 PM - 7:30 PM

Have lunch with IPOS Directors in the IPOS Lounge on Wednesday.







Schedule Subject to Change












Schedule At a Glance, continued

FRIDAY, DECEMBER 6

Registration		7:00 AM - 4:30 PM
Breakfast & Exhibits		7:00 AM - 8:00 AM
Concurrent Session - Pacifica 1-3		8:00 AM - 10:00 AM
Concurrent Session - Oceana 6-7		8:00 AM - 10:00 AM
Exhibitor Forum (by invitation only)		8:15 AM - 9:00 AM
Break & Exhibits		10:00 AM - 10:20 AM
Industry Spotlight Session 4: BioMarin - Pacifica 8-10		10:20 AM - 11:30 AM
Industry Spotlight Session 4: DePuy Synthes - Pacifica 11-12		10:20 AM - 11:30 AM
Industry Spotlight Session 4: Pega Medical - Java Sea		10:20 AM - 11:30 AM
Industry Spotlight Session 4: Orthopediatrics - Coral Sea		10:20 AM - 11:30 AM
Lunch & Exhibits		11:30 AM - 12:30 AM
Faculty Lunch		11:30 AM - 12:30 AM
Lunchtime Career Development - IPOS Lounge		11:45 AM - 12:30 PM
General Session - Oceana 6-7		12:30 PM - 2:30 PM
Awards and Acknowledgements - Oceana 6-7		2:30 PM - 2:40 PM
Break & Exhibits		2:40 PM - 3:00 PM
Coffee Break with Course Directors		2:40 PM - 3:00 PM
CME Breakout: Hands-On Workshop - Banda Sea		3:00 PM - 4:30 PM
CME Breakout: Hands-On Workshop - Timor Sea		3:00 PM - 4:30 PM
CME Breakout: Hands-On Workshop - Coral Sea		3:00 PM - 4:30 PM
CME Breakout - Oceana 3-5		3:00 PM - 4:30 PM
CME Breakout - Pacifica 11-12		3:00 PM - 4:30 PM
CME Breakout - Pacifica 8-10		3:00 PM - 4:30 PM
CME Breakout - Java Sea		3:00 PM - 4:30 PM
CME Breakout - Oceana 6-7		3:00 PM - 4:30 PM

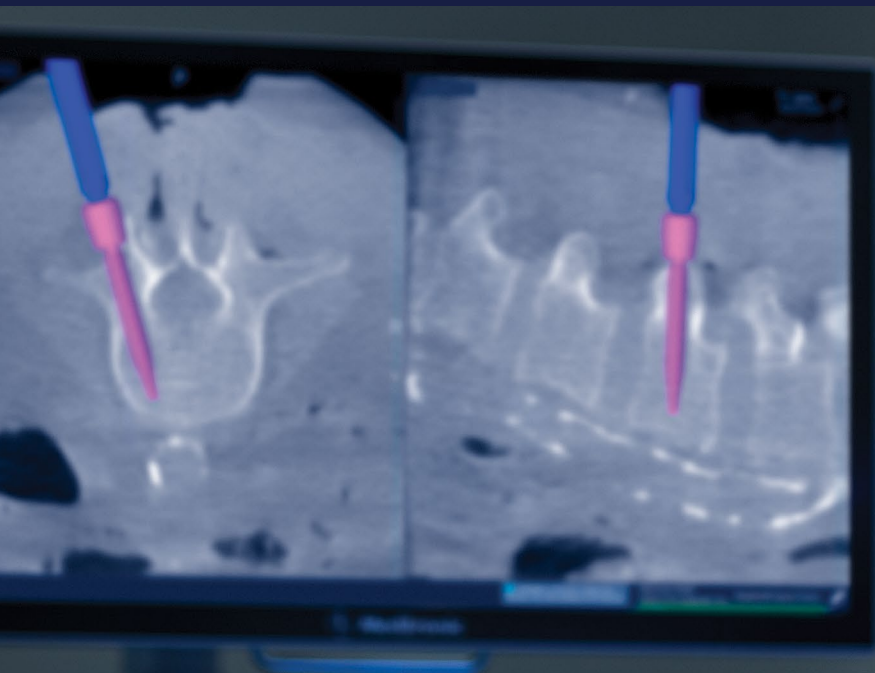
SATURDAY, DECEMBER 7

Registration		6:30 AM - 11:30 AM
Breakfast		6:30 AM - 8:00 AM
Concurrent Session - Oceana 6-7		7:30 AM - 9:40 AM
Concurrent Session - Pacifica 1-3		7:30 AM - 9:40 AM
Fellowship Director's Program (by invitation only) Pacifica 8-10		8:00 AM - 11:00 AM
Break		9:40 AM - 10:00 AM
CME Breakout - Banda Sea		10:00 AM - 11:30 AM
CME Breakout - Pacifica 11-12		10:00 AM - 11:30 AM
CME Breakout - Java Sea		10:00 AM - 11:30 AM
CME Breakout - Oceana 6-7		10:00 AM - 11:30 AM
Lunch		11:30 AM - 12:00 PM

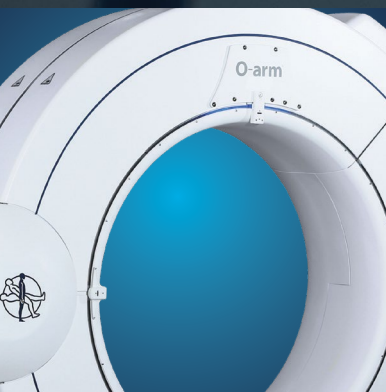
-  General Pediatric Orthopaedics/Trauma
-  Hip
-  Hand & Upper Extremity
-  Spine
-  Sports
-  Neuromuscular & Cerebral Palsy
-  Foot
-  Syndromes, Dysplasias & Genetic Conditions
-  POPS
-  Lower Extremity/Deformity
-  Essentials of Pediatric Orthopaedics



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The CD Horizon Spinal System is intended to treat pediatric patients diagnosed with the following conditions: spondylolisthesis/spondylolysis, fracture caused by tumor and/or trauma, pseudarthrosis, and/or failed previous fusion. These devices are to be used with autograft and/or allograft. Pediatric pedicle screw fixation is limited to a posterior approach.

Risks include:

- Early or late loosening of any or all of the components.
- Disassembly, bending, and/or breakage of any or all of the components.
- Foreign body (allergic) reaction to implants, debris, corrosion products (from crevice, fretting, and/or general corrosion), including metallosis, staining, tumor formation, and/or autoimmune disease.

O-Arm O2 Imaging System

The O-arm O2 Imaging System is a mobile x-ray system designed for 2D fluoroscopic and 3D imaging for adult and pediatric patients weighing 60 lbs or greater and having an abdominal thickness greater than 16cm, and is intended to be used where a physician benefits from 2D and 3D information of anatomic structures and objects with high x-ray attenuation such as bony anatomy and metallic objects. The O-arm O2 Imaging System is compatible with certain image guided surgery systems.

StealthStation System

The StealthStation System, with StealthStation Spine Software, is intended as an aid for precisely locating anatomical structures in either open or percutaneous neurosurgical and orthopedic procedures. Their use is indicated for any medical condition in which the use of stereotactic surgery may be appropriate, and where reference to a rigid anatomical structure, such as the spine or pelvis, can be identified relative to images of the anatomy.

Please refer to product indication manual/package insert for instructions, warnings, precautions, and contraindications.

Results may vary.

Industry Spotlight Sessions (Non-CME)

Wednesday, December 4

3:20 PM–4:30 PM Industry Spotlight Session #1

Arthrex (Timor Sea) (Non-CME)

Managing Pediatric ACL Ruptures
Ted Ganley, MD; Carlos Uquillas, MD; Kevin Shea, MD

DePuy Synthes (Pacifica 11-12)

Pediatric Femur Fracture Management
Martin Herman, MD

Globus Medical (Pacifica 8-10)

When Bracing Does Not Work
Walter Samora, MD

Orthopediatrics (Coral Sea)

Shilla- A Different Way to Think About EOS and Other Growing Spinal Disorders
Rick McCarthy, MD; Scott Luhmann, MD

Orthopediatrics (Java Sea)

Pediatric Foot & Ankle Fractures and Deformity Correction
Vincent Mosca, MD; Jon Davids, MD; Maryse Bouchard, MD

4:40 PM–5:50 PM Industry Spotlight Session #2

Arthrex (Timor Sea) (Non-CME)

Glenohumeral Stabilization in the Young Population
Ted Ganley, MD; Carlos Uquillas, MD; Kevin Shea, MD

DePuy Synthes (Pacifica 11-12)

Pitfalls and Pearls for Proximal Femoral Osteotomies
Ernest Sink, MD

Medtronic (Philippine Sea)

Navigation in the Pediatric Spine: Optimizing Deformity Correction with Enabling Technology
Sumeet Garg, MD; Noelle Larson, MD

Orthopediatrics (Coral Sea)

That Wasn't the Plan, Now What!?:
Pediatric Orthopedic Trauma
Alexandra Arkader, MD; Joshua Murphy, MD; Scott Rosenfeld, MD

Stryker Spine (Banda Sea)

Small But Mighty: Exploring the Power of Low-Profile System in EOS and AIS
William Accousti, MD, Scott Luhmann, MD, Michael Vitale, MD, MPH

Thursday, December 5

8:00 AM–9:10 AM Industry Spotlight Session #3

DePuy Synthes (Pacifica 11-12) (Non-CME)

Neuromuscular Scoliosis: Principles of Management and Complication Prevention
Suken Shah, MD; Michael Glotzbecker, MD; Jeffrey Sawyer, MD

Misonix (Banda Sea)

BoneScalpel Osteotomies in Spine Surgery. Limitless Bone Cutting, Powered by neXus
David Skaggs, MD

Orthopediatrics (Coral Sea)

Deformity Correction Surgical Planning and Software: A Novel Approach to Hexapod Procedures
Dror Paley, MD; Tony Cooper, MD, Craig Robbins, MD; Sean Tabaie

Wright Medical (Java Sea)

Addressing Challenging Benign Bone Tumors and Cysts in the Pediatric Population
Ronald Williams, MD

Zimmer Biomet (Timor Sea)

Anterior Vertebral Body Tethering – Experience to Date
Firoz Miyanji, MD, FRCSC

Friday, December 6

10:20 AM–11:30 AM Industry Spotlight Session #4

BioMarin (Pacifica 8-10) (Non-CME)

Look Beyond the X-Ray for Skeletal Dysplasia
Klane White, MD; Megan Sikes, MS, LGC

DePuy Synthes (Pacifica 11-12)

Treatment of AIS: Beyond The Basics
Suken Shah, MD; Stefan Parent, MD; John (Jack) Flynn, MD

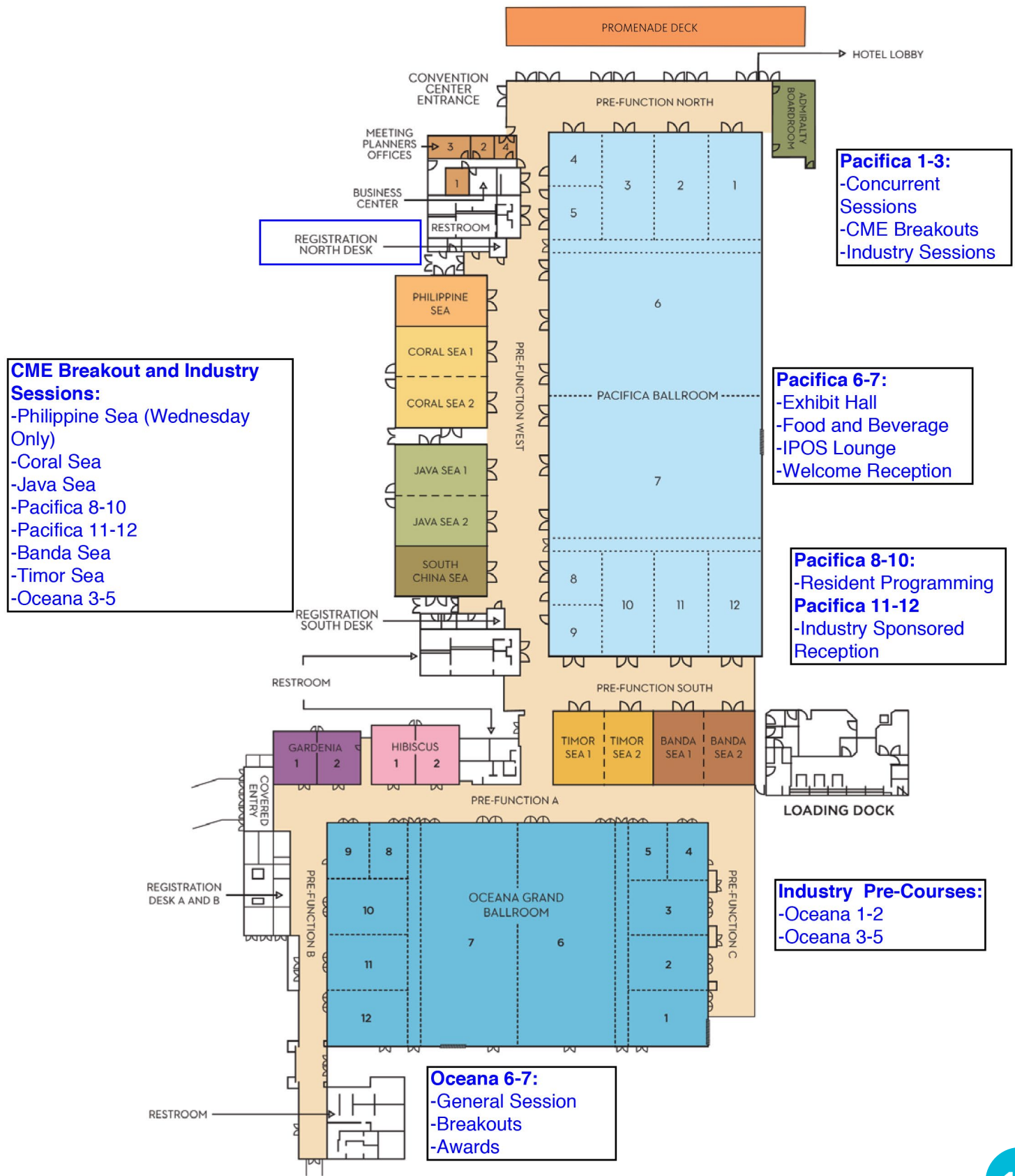
Orthopediatrics (Coral Sea)

The Challenges, Decision Making, and Solutions in Treating Pediatric Neuromuscular Scoliosis
Chris Hardesty, MD; Jonathan Phillips, MD

Pega Medical (Java Sea)

Advancements in Non-Fusion Treatment of SCFE
David Little, MD; Karl Logan, MD

Floor Plan



Tuesday, December 3

3:00 PM–7:00 PM	Registration	
4:00 PM–5:20 PM	Resident Scholarship Recipient Case Presentations	<i>Pacifica 8-10</i>
5:20 PM–6:30 PM	Career Planning and Professional Development for Residents and Fellows	<i>Pacifica 8-10</i>
6:30 PM–6:45 PM	Pre-Course Reception	<i>Oceana 1-5 Foyer</i>

6:45 PM–8:00 PM CONCURRENT EVENTS (Non-CME) Industry Pre-Courses:

NuVasive: Best Practices for Pediatric Intramedullary Nailing and Limb Lengthening Using the Precice® Nail *Oceana 1-2*

Faculty: Christopher Iobst, MD; Christof Radler, MD
This 75-minute interactive course will focus on the best practices of intramedullary nailing and limb lengthening using the Precice nail. Our faculty surgeons will share their knowledge and expertise on proper patient selection and preoperative planning. The basics of intramedullary nailing which includes nail selection, entry point, osteotomy location and method, and reaming technique will also be discussed. This course will include case examples and surgical tips. Attendees will also participate in a hands on sawbones workshop to demonstrate and reinforce the essentials of intramedullary nailing. Time will be set aside for questions at the end of the course.

OrthoPediatrics: SUPER SMASH BROTHERS: PEDIATRIC ELBOW VS. MONKEY BARS *Oceana 3-5*
The Ultimate Boss Battle – You vs. the Posterolateral SCH An Interactive Extravaganza!

Faculty: Jonathan Schoenecker, MD, PhD; Christopher Stutz, MD; Bryan Tompkins, MD
Supracondylar humerus fractures are easy - until they aren't. Undoubtedly, one of the first cases that will give you pause in the OR as a young attending will be an elbow fracture - either because you have a difficult time reducing it, are concerned that it isn't safe to leave the operating room because of diminished vascularity or many other reasons. In this course we will take a deep dive into everything you need to know to take this villain head on. We will cover basics such as why they occur when they do, common pathomechanisms, which fractures cause neurovascular injuries, how to set the OR up to win, tricks to reduction, pin configurations how to open and when to call for help and more. This will be a highly engaging interactive media filled course with prizes.

8:00 PM–9:00 PM	Industry Sponsored Cocktail Reception	<i>Pacifica 11-12</i>
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Wednesday, December 4

7:00 AM–6:00 PM	Registration	
7:00 AM–8:00 AM	Breakfast and Exhibits	<i>Pacifica 6-7</i>

8:00 AM–10:00 AM **GENERAL SESSION 1: Pediatric Trauma: Early Fixes and Late Saves** *Oceana 6-7*
In this action packed and quick hitting



	opening session, join our IPOS experts for tips and tricks on the management of acute fractures and care for late sequelae.
8:00 AM-8:51 AM	Moderator: <i>Donald Bae, MD</i> eModerator: <i>Brian Brighton, MD</i>
8:00 AM-8:03 AM	Introduction – <i>Todd Milbrandt, MD</i>
8:04 AM-8:09 AM	Lateral Condyle: Percutaneous Screw Fixation <i>Paul Sponseller, MD</i>
8:10 AM-8:15 AM	Treatment of Lateral Condyle Nonunions <i>Scott Kozin, MD</i>
8:16 AM-8:21 AM	Expert Tips: How to Get the Joint Right <i>John (Jack) Flynn, MD</i>
8:22 AM-8:27 AM	Discussion Panelists: <i>Todd Milbrandt, MD</i> <i>Paul Sponseller, MD</i> <i>Scott Kozin, MD</i> <i>John (Jack) Flynn, MD</i>
8:28 AM-8:33 AM	Acute Monteggia: Standard of Care in 2019 <i>Mauricio Silva, MD</i>
8:34 AM-8:39 AM	Chronic Reconstruction: What and When to Do? <i>Donald Bae, MD</i>
8:40 AM-8:45 AM	Expert Tips: Getting (and Keeping) the Head In <i>Peter Waters, MD</i>
8:46 AM-8:51 AM	Discussion Panelists: <i>Mauricio Silva, MD</i> <i>Donald Bae, MD</i> <i>Peter Waters, MD</i>
8:52 AM-10:00 AM	Moderator: <i>Todd Milbrandt, MD</i> eModerator: <i>Samantha Spencer, MD</i>
8:52 AM-8:57 AM	Femoral Neck Fractures: Acute Reduction and Fixation <i>Martin Herman, MD</i>
8:58 AM-9:03 AM	Lost Fixation, Nonunion, and AVN <i>Ira Zaltz, MD</i>
9:04 AM-9:09 AM	Expert Tips: Safe Approaches for the Non-dislocator <i>Deborah Eastwood, FRCS</i>
9:10 AM-9:15 AM	Discussion Panelists: <i>Martin Herman, MD</i> <i>Ira Zaltz, MD</i> <i>Deborah Eastwood, FRCS</i>
9:16 AM-9:21 AM	Tibia Spine Fractures: What Is Good Enough? <i>Jennifer Weiss, MD</i>
9:22 AM-9:27 AM	Tibial Spine Fractures: Arthroscopic Fixation <i>Theodore Ganley, MD</i>

Wednesday, December 4, continued

8:00 AM–10:00 AM	GENERAL SESSION 1, cont'd
9:28 AM–9:33 AM	Expert Tips: My Approach to the Stiff Knee <i>Mininder Kocher, MD, MPH</i>
9:34 AM–9:39 AM	Discussion Panelists: <i>Jennifer Weiss, MD</i> <i>Theodore Ganley, MD</i> <i>Mininder Kocher, MD, MPH</i>
9:40 AM–9:45 AM	Tibia Fractures: Multiplanar Ex for Everything <i>David Podeszwa, MD</i>
9:46 AM–9:51 AM	Late Physeal Arrest After Physeal Fracture: Bar Excision and Other Strategies <i>Haemish Crawford, MD</i>
9:52 AM–9:57 AM	Expert Tips: Triplane Fractures - Where I Cut and Why <i>Craig Ebersson, MD</i>
9:57 AM–10:00 AM	Discussion Panelists: <i>David Podeszwa, MD</i> <i>Haemish Crawford, MD</i> <i>Craig Ebersson, MD</i>

10:00 AM–10:10 AM	Director's Welcome	<i>Oceana 6-7</i>
10:10 AM–10:30 AM	Break and Exhibits	<i>Pacifica 6-7</i>

10:30 AM–12:00 PM	CME BREAKOUT SESSIONS <i>(Advance Sign-up Encouraged for Hands-on Workshops)</i>	
	Essentials of Pediatric Orthopaedics I For learners and practitioners of all levels, join our esteemed faculty for a review of the essentials of pediatric orthopaedics. 	<i>Pacifica 11-12</i>
	Moderator: <i>Martin Herman, MD</i>	
10:30 AM–10:40 AM	LE Alignment and Normal Development <i>Maegen Wallace, MD</i>	
10:41 AM–10:55 AM	LE Deformity and Length Discrepancy <i>Alexandre Arkader, MD</i>	
10:56 AM–11:10 AM	Spine: AIS, EOS, Scheurman's, Lysis/Listhesis, Include Primer on Bracing <i>Nicholas Fletcher, MD</i>	
11:11 AM–11:20 AM	Spine: Trauma, Including Cervical <i>Lindsay Andras, MD</i>	
11:21 AM–11:25 AM	Discussion Panelists: <i>Alexandre Arkader, MD</i> <i>Nicholas Fletcher, MD</i> <i>Lindsay Andras, MD</i>	

11:26 AM–11:35 AM	Physeal Biology: Implications on Growth, Trauma, and Deformity <i>Michelle Caird, MD</i>	
11:36 AM–11:50 AM	Hip: DDH, Perthes, SCFE, Coxa Vara <i>Scott Rosenfeld, MD</i>	
11:51 AM–12:00 PM	PM: EMR/Templates/Scribes <i>John (Jack) Flynn, MD</i>	
	Hand- Injuries for the Front Line Provider For all frontline providers, this session will cover common pediatric hand injuries seen by all.	<i>Pacifica 8-10</i>
10:30 AM–10:56 AM	Moderator: <i>Donald Bae, MD</i>	
10:30 AM–10:33 AM	Introduction <i>Donald Bae, MD</i>	
10:34 AM–10:39 AM	Flexor Tendon Injuries in Children <i>Peter Waters, MD</i>	
10:40 AM–10:45 AM	Extensor Tendon Injuries <i>Lindley Wall, MD</i>	
10:46 AM–10:56 AM	Discussion Panelists: <i>Scott Kozin, MD</i> <i>Peter Waters, MD</i> <i>Lindley Wall, MD</i> <i>Christine Ho, MD</i>	
10:57 AM–12:00 PM	Moderator: <i>Lindley Wall, MD</i>	
10:57 AM–11:25 AM	Hand Fracture Cases Panelists: <i>Scott Kozin, MD</i> <i>Peter Waters, MD</i> <i>Lindley Wall, MD</i> <i>Christine Ho, MD</i>	
11:26 AM–11:31 AM	Fingertip Amputations: Is a Dressing Enough? <i>Scott Kozin, MD</i>	
11:32 AM–11:37 AM	A Primer on Burns, Frostbite, and Infiltrates <i>Christine Ho, MD</i>	
11:38 AM–11:43 AM	Blast Injuries and Amputations <i>Peter Waters, MD</i>	
11:44 AM–11:49 AM	Infections <i>Lindley Wall, MD</i>	
11:49 AM–12:00 PM	Discussion Panelists: <i>Scott Kozin, MD</i> <i>Christine Ho, MD</i> <i>Peter Waters, MD</i> <i>Lindley Wall, MD</i>	

Wednesday, December 4, continued

10:30 AM–12:00 PM CME BREAKOUT SESSIONS, cont'd



Hip: SCFE

Oceana 3-5

Join our IPOS faculty for a comprehensive session on slipped capital femoral epiphysis.

Moderator: *Ernest Sink, MD*

10:30 AM-10:36 AM Advanced Imaging in Scfe and Its Role in Diagnosis and Treatment
Jonathan Schoenecker, MD, PhD

10:37 AM-10:43 AM Stable SCFE: Management Strategies to Prevent Complications
Steven Frick, MD

10:44 AM-11:02 AM The Unstable SCFE: Risks and Rewards of the Different Treatments
Daniel Sucato, MD, MS

11:03 AM-11:10 AM The Painful Healed SCFE
Wudbhav (Woody) Sankar, MD

11:11 AM-11:20 AM Cases
Ernest Sink, MD

11:21 AM-11:29 AM Complications following In-Situ fixation
Eduardo Novais, MD

11:30 AM-11:36 AM The Imhauser in 2019
Jose Herrera-Soto, MD

11:37 AM-11:43 AM SCFE and Hip Arthroscopy
Mininder Kocher, MD, MPH

11:44 AM-12:00 PM Cases
Ira Zaltz, MD



LE Deformity I: Congenital Deformity

Coral Sea

First of four IPOS sessions devoted to lower extremity deformity. Part 1 will focus on challenging congenital conditions.

Moderator: *David Podeszwa, MD*

10:30 AM-10:45 AM Understanding the Deformities of the Hip, Knee and Ankle in Congenital Deficiencies
Christof Radler, MD

10:46 AM-10:56 AM Creating a Treatment Plan
David Podeszwa, MD

10:57 AM-11:12 AM Hip and Knee Reconstruction in Femoral Deficiency
Dror Paley, MD, FRCSC

11:13 AM-11:28 AM Ankle Reconstruction in Tibial and Fibular Hemimelia
John Herzenberg, MD

11:29 AM-11:44 AM Role of Amputation in Congenital Deficiency
L. Reid Nichols, MD

11:45 AM - 12:00 PM Case Based Discussion - Congenital Deficiencies
Panelists: *John Herzenberg, MD*
L. Reid Nichols, MD
Dror Paley, MD, FRCSC
Christof Radler, MD



Musculoskeletal Infections

Pacifica 1-3

Despite advances in diagnostic technology and medical therapies, musculoskeletal infections remain a clinical challenge for providers at every level in every venue. Join our esteemed international faculty for a discussion on the evaluation and treatment of orthopaedic infections.

Moderator: *Michelle Caird, MD*

10:30 AM-10:32 AM Introduction
Michelle Caird, MD

10:33 AM-10:38 AM My Standard Work Up for a Suspected Septic Hip
Thomas McPartland, MD

10:39 AM-10:44 AM How I Decide Who Needs Treatment for Septic Hip
Scott Rosenfeld, MD

10:45 AM-10:50 AM European Perspective on Surgical Drainage for Septic Hip-Is It Needed?
Thomas Wirth, MD, PhD

10:51 AM-10:56 AM Managing Hip AVN Following Septic Hip
Eduardo Novais, MD

10:57 AM-11:12 AM Cases and Discussion
Michelle Caird, MD

11:13 AM-12:00 PM Moderator: *Craig Ebersson, MD*

11:13 AM-11:18 AM Is It Osteo or CRMO? How to Differentiate?
Brian Smith, MD

11:19 AM-11:24 AM MRSA Osteo vs All the Rest
Mauricio Silva, MD

11:25 AM-11:30 AM Chronic Osteomyelitis in Children
Alaric Aroojis, MD

11:31 AM-11:36 AM Discitis and Vertebral Osteomyelitis
Jonathan Phillips, MD

11:37 AM-11:42 AM Cases and Discussion
Craig Ebersson, MD

Wednesday, December 4, continued

11:43 AM-11:48 AM Culture Every Tumor,
Biopsy Every Infection-
Still True in 2019?
Kenneth Noonan, MD

11:49 AM-11:54 AM Benefits of a Multi-disciplinary
Service for Infection
Samantha Spencer, MD

11:55 AM-12:00 PM Discussion
Moderator: *Craig Eberson, MD*

POPS

POPS: The Limping Child: Physiologic to Pathologic

Java Sea

Featuring our POPS faculty and interactive case studies, this session will cover gait analysis as well as the evaluation and treatment of the limping child.

Moderator: *Wendy Moon, MS, APRN, CNP*

10:30 AM-10:35 AM Introduction: A Method to the Morbidity
Anne Stuedemann, MSN, RN, CPNP

10:36 AM-10:55 AM Gait Analysis: A Walk to Remember
Erica Zepeda, MSN, RN, CPNP
Colleen Story, ARNP

10:56 AM-11:10 AM Focused Physical Exam & Common
Laboratory Tests/Radiographic Studies
Nicole Tweedy, DNP-PNP

11:11 AM-11:19 AM Discussion

11:20 AM-12:00 PM Interactive Case Study Review:
Clinical Application
Erica Zepeda
Nicole Tweedy

12:00 PM-1:00 PM Lunch and Exhibits *Pacifica 6-7*
12:00 PM-1:00 PM Lunch with IPOS Directors *IPOS Lounge*

1:00 PM-3:00 PM CONCURRENT SESSIONS



Foot: Clubfoot Care in 2019

Oceana 6-7

From Ponseti casting to complex surgical reconstructions, join in the discussion of clubfoot care!

Clubfoot Care in 2019

1:00 PM-1:50 PM Moderator: *Derek Kelly, MD*
eModerator: *Kenneth Noonan, MD*

1:00 PM-1:06 PM Epidemiology and Genetic Influences
for Clubfoot-What We Know in 2019
Stephanie Boehm, MD

1:07 PM-1:13 PM Managing the Pre-Natal Clubfoot Visit
Vishwas Talwalkar, MD

1:14 PM-1:20 PM Best Tips for Clubfoot Cast Application
Stephanie Boehm, MD

1:21 PM-1:26 PM Strategies for Stalled Clubfoot
Casting in a Resistant Clubfoot
Kenneth Noonan, MD

1:27 PM-1:40 PM Sticking to the Ponseti Method-
Do We Have To?
Derek Kelly, MD

1:41 PM-1:50 PM Audience Questions
Panelists: *Stephanie Boehm, MD*
Vishwas Talwalkar, MD
Stephanie Boehm, MD
Kenneth Noonan, MD
Derek Kelly, MD

Surgical Management of Clubfoot

1:51 PM-2:30 PM Moderator: *Kenneth Noonan, MD*
eModerator: *Derek Kelly, MD*

1:51 PM-1:57 PM Achilles Tenotomy for Clubfoot in 2019
Kenneth Noonan, MD

1:58 PM-2:04 PM Anterior Tibialis Tendon Transfer-
Indications/Technique
Stephanie Boehm, MD

2:05 PM-2:11 PM Surgical Strategies for Resistant
Clubfeet <5 yo
Vincent Mosca, MD

2:12 PM-2:18 PM Clubfoot (or residual) Treatment in >5 yo
Alaric Aroojis, MD

2:19 PM-2:30 PM Audience Questions
Panelists: *Kenneth Noonan, MD*
Stephanie Boehm, MD
Vincent Mosca, MD
Alaric Aroojis, MD



Wednesday, December 4, continued

1:00 PM–3:00 PM **CONCURRENT SESSIONS, cont'd**

Bunions

- 2:31 PM-3:00 PM Moderator: *Kenneth Noonan, MD*
eModerator: *Derek Kelly, MD*
- 2:31 PM-2:37 PM Juvenile Bunions-
Why Are They So Difficult
Megan Gresh, MD
- 2:38 PM-2:44 PM Double Osteotomy for Juvenile Bunion
Correction
Vincent Mosca, MD
- 2:45 PM-2:51 PM Treatment of Neuromuscular Bunions-
How Is It Different?
Derek Kelly, MD
- 2:45 PM-2:51 PM Audience Questions
Panelists: *Megan Gresh, MD*
Vincent Mosca, MD
Derek Kelly, MD



Spine: Adolescent Idiopathic Scoliosis *Pacifica 1-3*

Join our international faculty for a comprehensive and in-depth discussion of idiopathic scoliosis. Debates, surgical tips, case studies, and much more!

Debate #1

- 1:00 PM-1:30 PM Moderator: *A. Noelle Larson, MD*
eModerator: *Peter Newton, MD*
- 1:00 PM-1:03 PM 45 Degree Curve in a 11 yo
Growing Child
A. Noelle Larson, MD
- 1:04 PM-1:09 PM Brace
Michael Glotzbecker, MD
- 1:10 PM-1:15 PM Tether
Stephan Parent, MD
- 1:16 PM-1:21 PM Fuse
Amy McIntosh, MD
- 1:22 PM-1:27 PM Growing Rods
Muharrem Yazici, MD
- 1:28 PM-1:30 PM Resolution
A. Noelle Larson, MD

Debate #2

- 1:31 PM-2:00 PM Moderator: *Peter Newton, MD*
eModerator: *A. Noelle Larson, MD*
- 1:31 PM-1:33 PM What is the Best Brace?
Peter Newton, MD
- 1:34 PM-1:39 PM Start with Night-time Bracing
Stephan Parent, MD
- 1:40 PM-1:45 PM Rigo Cheneau Brace and Scoliosis
Specific Exercises, Worth the \$\$\$
A. Noelle Larson, MD

- 1:46 PM-1:50 PM Gold Standard is a TLSO and
Doesn't Affect HRQLY
Lori Karol, MD
- 1:51 PM-1:55 PM No Bracing . . . Bracing is Cruel
Haemish Crawford, MD
- 1:56 PM-2:00 PM Discussion, Resolution
Panelists: *Peter Newton, MD*
Stephan Parent, MD
A. Noelle Larson, MD
Lori Karol, MD
Haemish Crawford, MD
- AIS Talks**
- 2:01 PM-2:30 PM Moderator: *Michael Vitale, MD, MPH*
eModerator: *Matthew Oetgen, MD*
- 2:01 PM-2:10 PM AIS that Wasn't AIS
Lindsay Andras, MD
- 2:11 PM-2:20 PM Pain Control Pre- and Post-op/Chronic Pain
Nicholas Fletcher, MD
- 2:21 PM-2:30 PM Discussion
Panelists: *Michael Vitale, MD, MPH*
Matthew Oetgen, MD
Lindsay Andras, MD
Nicholas Fletcher, MD

Rapid Fire Scoliosis Pearls

- 2:31 PM-3:00 PM Moderator: *Michael Vitale, MD, MPH*
eModerator: *Matthew Oetgen, MD*
- 2:31 PM-2:35 PM Correction Maneuvers 101
Matthew Oetgen, MD
- 2:36 PM-2:40 PM How to Manage Leg Length Discrepancy
and Fusion into Lumbar Spine
Michael Glotzbecker, MD
- 2:41 PM-2:45 PM How to Manage the Sagittal Plane in AIS
Stephan Parent, MD
- 2:46 PM-2:50 PM Selective Fusion: Rules to Live by in 2019
David Skaggs, MD, MMM
- 2:51 PM-2:55 PM Lessons Learned from Your First 10 Spine
Fusions and How to Avoid the Learning Curve
John (Jack) Flynn, MD
- 2:56 PM-3:00 PM Discussion
Panelists: *Matthew Oetgen, MD*
Michael Glotzbecker, MD
Stephan Parent, MD
David Skaggs, MD, MMM
John (Jack) Flynn, MD

- 3:00 PM–3:20 PM Break and Exhibits *Pacifica 6-7*
- 3:20 PM–4:30 PM Industry Spotlight Sessions
- 4:40 PM–5:50 PM Industry Spotlight Sessions
(See page 14 for session details.)
- 6:00 PM–7:00 PM Course Directors' Welcome Reception

WHEN TIME MATTERS

Rod Link Reducer 3-Plane Deformity Correction Technique is designed to improve the technique for deformity correction and reduce operative time compared to traditional scoliosis correction techniques.¹

**75 MINUTES
SAVED IN THE
OPERATING ROOM**
vs traditional correction techniques¹



Discover more about the Rod Link Reducer technique at:
Rod-Link.com

Life moves us 

1. Zhang, H. and D. Sucato, A novel posterior Rod-Link-Reducer system provides safer, easier, and better correction of severe scoliosis. *Spine Deformity*, (2019); 7: 445-453.


GLOBUS
MEDICAL

Thursday, December 5

- 7:00 AM–4:30 PM Registration
- 7:00 AM–8:00 AM Breakfast and Exhibits *Pacifica 6-7*
- 8:00 AM–9:10 AM Industry Spotlight Sessions
(See page 14 for session details.)
- 9:10 AM–9:30 AM Break and Exhibits *Pacifica 6-7*

9:30 AM–11:30 AM **GENERAL SESSION 2:** *Oceana 6-7*



Teaching and Learning in Pediatric Orthopaedics
How to become a better teacher, how to become a better learner-for our trainees, our colleagues, our patients, and ourselves.



9:30 AM-11:30 AM Moderator: *Craig Ebersson, MD*
eModerator: *Donald Bae, MD*

9:30 AM-9:35 AM More to Learn, Less Time to Do So: Force Multipliers for Pediatric Orthopaedic Education
Craig Ebersson, MD

9:36 AM-9:41 AM "Intention to Teach"
Thomas McPartland, MD

9:42 AM-10:05 AM **I. Teaching in the Office**

9:42 AM-9:47 AM Teaching Clinical Reasoning
Presenter: *Thomas McPartland, MD*

9:48 AM-9:53 AM The One Minute Clinical Preceptor
Presenter: *Scott Rosenfeld, MD*

9:54 AM-10:05 AM Panel Discussion-
Panelists: *Thomas McPartland, MD*
Scott Rosenfeld, MD
Christine Ho, MD
Kirsten Ross, MD

10:06 AM-10:15 AM Fostering Active Learning in Modern Medicine
Sandra Jarvis-Selinger, PhD

10:16 AM-10:40 AM **II. Teaching in the OR**

10:16 AM-10:21 AM The Scrub Sink Bargain
Craig Ebersson, MD

10:22 AM-10:27 AM Ensuring Patient Safety While Teaching Surgical Skills
Martin Herman, MD

10:28 AM-10:40 AM Panel Discussion
Panelists: *Craig Ebersson, MD*
Donald Bae, MD
Martin Herman, MD
Kristen Alves, MD

10:41 AM-11:10 AM **III. Educating Yourself**

10:41 AM-10:46 AM How Do I Find Time to Learn Myself?
Ira Zaltz, MD

10:47 AM-10:52 AM Role of Mentoring and Coaching in Your Career Development
Brian Smith, MD

10:53 AM-11:10 AM Panel Discussion-
Panelists: *Lori Karol, MD*
Brian Smith, MD

11:11 AM-11:30 AM **IV. Summary and Final Discussion**
Where to Go from Here?
Panelists: *Sandra Jarvis-Selinger, PhD*
Craig Ebersson, MD
Thomas McPartland, MD

11:30 AM–12:30 PM Lunch and Exhibits *Pacifica 6-7*

11:45 AM–12:30 PM Lunchtime Development *Pacifica 6-7*

12:30 PM–2:00 PM **CME BREAKOUT SESSIONS** (Advance Sign-up Encouraged for Hands-on Workshops)

Ponseti I (Hands-On Workshop) *Banda Sea*



Hands-on workshop! From the fundamental principles to technical pearls, learn the technique of Ponseti casting for clubfoot from our international experts.

12:30 PM-2:00 PM Hands-On Faculty:
Kenneth Noonan, MD
Stephanie Boehm, MD
Vincent Mosca, MD
Vishwas Talwalkar, MD
Bryan Tompkins, MD

Pelvic Osteotomies I (Hands-On Workshop) *Timor Sea*



Join our international experts for a unique hands-on workshop in the techniques of pelvic osteotomies.

12:30 PM-2:00 PM Hands-On Faculty:
Ernest Sink, MD
Pablo Castañeda, MD
Jose Herrera-Soto, MD
Megan Gresh, MD
David Little, MBBS, FRACS, PhD
Ira Zaltz, MD



Thursday, December 5, continued

12:30 PM–2:00 PM CME BREAKOUT SESSIONS, cont'd



LE Deformity II: Growth and Limb Length Discrepancy Coral Sea

Part 2 of our IPOS series of limb deformity, join our international experts for discussion of growth and limb length differences.

Moderator: *L. Reid Nichols, MD*

12:30 PM–12:35 PM Introduction
L. Reid Nichols, MD

12:36 PM–12:46 PM Bone Age: Hand or Elbow?
David Podeszwa, MD

12:47 PM–12:57 PM Predicting LLD and Growth Remaining with the Multiplier Method
Dror Paley, MD, FRCSC

12:58 PM–1:03 PM Alternative Methods Predicting LLD
L. Reid Nichols, MD

1:04 PM–1:09 PM Epiphysiodesis – Indications, Techniques and Outcomes
David Podeszwa, MD

1:10 PM–1:15 PM Indications and Options for IM Lengthening
Christof Radler, MD

1:16 PM–1:21 PM Master's Technique: Femoral IM Rodding
John Herzenberg, MD

1:22 PM–1:32 PM Managing the Complications of IM Lengthening
Christof Radler, MD

1:33 PM–2:00 PM Case Based Discussion - Managing LLD
Panelists: *David Podeszwa, MD*
Dror Paley, MD, FRCSC
John Herzenberg, MD
Christof Radler, MD



Essentials of Pediatric Orthopaedics II Pacifica 11-12

For learners and practitioners of all levels, join our esteemed faculty for a review of the essentials of pediatric orthopaedics. NEW!

Moderator: *Samantha Spencer, MD*

12:30 PM–12:50 PM Common Genetic Syndromes and Dysplasias
Maegen Wallace, MD

12:51 PM–1:05 PM Foot: Clubfoot, CVT, MA, Tarsal Coalitions
Samantha Spencer, MD

1:06 PM–1:15 PM Spina Bifida
Laurel Blakemore, MD

1:16 PM–1:20 PM Discussion
Panelists: *Maegen Wallace, MD*
Samantha Spencer, MD
Laurel Blakemore, MD

1:21 PM–1:30 PM Musculoskeletal infections
Thomas McPartland, MD

1:31 PM–1:40 PM Child Abuse
Brian Brighton, MD

1:41 PM–1:50 PM Limping Child
Presenter: *Brian Brighton, MD*

1:51 PM–2:00 PM PM: Managing a Busy Nonop Clubfoot Practice
Derek Kelly, MD



CP: Gait Analysis: A Systematic Approach Pacifica 8-10

Our esteemed IPOS faculty break down gait analysis and discuss the evaluation and treatment of characteristic patterns in patients with spasticity.

Moderator: *Kishore Mulpuri, MD*

12:30 PM–12:50 PM Qualitative Assessment of Normal Gait
Alaric Aroojis, MD

12:51 PM–1:01 PM I Don't Have a Gait Lab: Technique of Observational Gait Analysis
Jon Davids, MD

1:02 PM–1:17 PM Introduction to Quantitative Gait Analysis
Benjamin Shore, MD, MPH, FRCSC

1:18 PM–1:28 PM Gait Disruption in Children with Cerebral Palsy
Kishore Mulpuri, MD

1:29 PM–1:54 PM Case Series: Common Gait Patterns/Deviations in Children with Cerebral Palsy: Identification, Causes, and Management Principles
Tom Novacheck, MD

1:55 PM–2:00 PM Questions/Discussion
Panelists: *Alaric Aroojis, MD*
Jon Davids, MD
Tom Novacheck, MD
Benjamin Shore, MD, MPH, FRCSC
Kishore Mulpuri, MD

Thursday, December 5, continued

12:30 PM–2:00 PM CME BREAKOUT SESSIONS, cont'd



Sports/Foot: More than Athlete's Foot: Coalitions, OCD, and Jones Fractures Oceana 3-5

A multi-specialty session focused on trauma, acquired, and sports-related conditions of the child's foot and ankle. Don't miss out on this fast-paced and interactive session!

Moderator: *Kevin Shea, MD*

- | | |
|-------------------|---|
| 12:30 PM-12:32 PM | Introduction
<i>Kevin Shea, MD</i> |
| 12:33 PM-12:38 PM | How to Differentiate Ankle Pain in Athletes
<i>Kevin Shea, MD</i> |
| 12:39 PM-12:49 PM | Treatment of Foot Coalitions
<i>Steven Frick, MD</i> |
| 12:50 PM-12:59 PM | Coalition Cases
<i>Steven Frick, MD</i> |
| 1:00 PM-1:04 PM | OCD of the Talus:
Do All Athletes Get Them?
<i>Kevin Shea, MD</i> |
| 1:05 PM-1:10 PM | Best Evidence for Treatment of
OCD of the Talus
<i>Eric Edmonds, MD</i> |
| 1:10 PM-1:20 PM | Case Presentations-OCD
<i>Eric Edmonds, MD</i> |
| 1:21 PM-1:26 PM | Discussion
Panelists: <i>Kevin Shea, MD</i>
<i>Eric Edmonds, MD</i>
<i>Todd Milbrandt, MD</i>
<i>Steven Frick, MD</i> |
| 1:27 PM-1:33 PM | Metatarsal Fractures-Stress or
Acute in Athletes
<i>Martin Herman, MD</i> |
| 1:34 PM-1:39 PM | Which Jones Is It? 5th MT Fx in Athletes
<i>Jeffrey Sawyer, MD</i> |
| 1:40 PM-1:49 PM | Case Presentations-Jones
<i>Jeffrey Sawyer, MD</i> |
| 1:50 PM-2:00 PM | Discussion
Panelists: <i>Jeffrey Sawyer, MD</i>
<i>Martin Herman, MD</i>
<i>Kevin Shea, MD</i> |



Spine: Cervical Spine

Pacifica 1-3

From the ER to the operating room, our esteemed IPOS faculty will cover the evaluation and management of cervical spine conditions.

Moderator: *Daniel Sucato, MD, MS*

- | | |
|-------------------|---|
| 12:30 PM-12:55 PM | ER Management |
| 12:30 PM-12:36 PM | Imaging of the Traumatized C-spine
<i>Matthew Oetgen, MD</i> |
| 12:37 PM-12:43 PM | Clearance of the C-spine: A Primer
<i>Craig Ebersson, MD</i> |
| 12:44 PM-12:50 PM | Application of a Halo for Pediatric Trauma
<i>Laurel Blakemore, MD</i> |
| 12:51 PM-12:55 PM | Discussion
Panelists: <i>Matthew Oetgen, MD</i>
<i>Craig Ebersson, MD</i>
<i>Laurel Blakemore, MD</i> |
| 12:56 PM-1:20 PM | Clinic Management |
| 12:56 PM-1:01 PM | C-spine in Skeletal Dysplasias
<i>William Mackenzie, MD</i> |
| 1:02 PM-1:08 PM | C-spine Instability
<i>Paul Sponseller, MD</i> |
| 1:09 PM-1:15 PM | Myelopathy
<i>Jonathan Phillips, MD</i> |
| 1:09 PM-1:15 PM | Discussion
Panelists: <i>William Mackenzie, MD</i>
<i>Paul Sponseller, MD</i>
<i>Jonathan Phillips, MD</i> |
| 1:21 PM-2:00 PM | OR Treatment |
| 1:21 PM-1:26 PM | Preoperative Imaging
<i>Lindsay Andras, MD</i> |
| 1:27 PM-1:33 PM | Placement of Fixation C0-C2, C3-C7
<i>Suken Shah, MD</i> |
| 1:34 PM-1:39 PM | How to Avoid the Vertebral Artery and
What to Do If You Hit It
<i>Michael Glotzbecker, MD</i> |
| 1:40 PM-2:00 PM | Cases
<i>Daniel Sucato, MD, MS</i> |
| 1:40 PM-2:00 PM | Discussion
Panelists: <i>Lindsay Andras, MD</i>
<i>Suken Shah, MD</i>
<i>Michael Glotzbecker, MD</i> |



Thursday, December 5, continued

12:30 PM–2:00 PM CME BREAKOUT SESSIONS, cont'd



POPS: Lower Back Pain

Java Sea

Join our POPS and IPOS faculty for a robust discussion of this common but challenging clinical condition.

Moderator: *Nicole Tweedy, DNP-PNP*

- 12:30 PM-12:34 PM Introduction: Look, Listen and See
Anne Stuedemann, MSN, RN, CPNP
-
- 12:35 PM-12:40 PM Past Medical History Pitfalls & Exam Peals
Colleen Story, ARNP
-
- 12:39 PM-12:45 PM A Picture is Worth a Thousand Words: Imaging Indications
Peter Newton, MD
-
- 12:46 PM-12:54 PM Discussion
Nicole Tweedy, DNP-PNP
-
- 12:55 PM-1:00 PM What Bugs You about Lower Back Pain?
A. Noelle Larson, MD
-
- 1:01 PM-1:05 PM Things that Wake You at Night
John (Jack) Flynn, MD
-
- 1:06 PM-1:14 PM Discussion
Nicole Tweedy, DNP-PNP
-
- 1:15 PM-1:20 PM Staying out of Trouble with Spinal Trauma
David Skaggs, MD, MMM
-
- 1:21 PM-1:25 PM The "S" word: Spondy
Amy McIntosh, MD
-
- 1:26 PM-1:30 PM Good News! We Didn't Find Anything Bad
Murrehem Yacizi
-
- 1:31 PM-1:39 PM Discussion
Nicole Tweedy, DNP-PNP
-
- 1:40 PM-1:50 PM Interactive Case Study Review: Clinical Application
Panelists: *Anne Stuedemann, MSN, RN, CPNP*
Wendy Moon, MS, APRN, CNP
Colleen Story, ARNP
-
- 1:51 PM-2:00 PM Discussion
Nicole Tweedy, DNP-PNP

2:00 PM–2:20 PM Break and Exhibits *Pacifica 6-7*

2:20 PM–4:30 PM CONCURRENT SESSIONS



Hip: The Immature Hip

Oceana 6-7

Join our international faculty experts to discuss the art and science of treatment of the growing hip. From Pavlik harness to periacetabular osteotomy, there is something for every provider!

Moderator: *Ernest Sink, MD*

eModerator: *Ira Zaltz, MD*

- 2:20 PM-2:26 PM Etiology and Prevalence of Hip Dysplasia: Contemporary Data in the Ultrasound Era
Kishore Mulpuri, MD
-
- 2:27 PM-2:34 PM Contemporary Indications for Pavlik Use
Pablo Castañeda, MD
-
- 2:35 PM-2:41 PM The Art and Practice of Reduction Harnesses (Practical Everyday Use)
Thomas Wirth, MD, PhD
-
- 2:42 PM-2:48 PM The Failed Pavlik: Defining the End-point and Next Steps
Daniel Sucato, MD, MS
-
- 2:49 PM-3:00 PM Case Based Discussion
Presenter: *Ernest Sink, MD*
Panelists: *Kishore Mulpuri, MD*
Pablo Castañeda, MD
Thomas Wirth, MD, PhD
Daniel Sucato, MD, MS
-
- 3:01 PM-3:06 PM Early Open Reduction is the Best Treatment
Lori Karol, MD
-
- 3:07 PM-3:13 PM Delaying the Open Reduction: Better to Be Able to Include a Pelvic Osteotomy
Pablo Castañeda, MD
-
- 3:14 PM-3:20 PM How I Do a Closed Reduction: MASTERS Technique
Wudbhav (Woody) Sankar, MD
-
- 3:21 PM-3:26 PM How I Do an Open Reduction: MASTERS Technique
Jonathan Schoenecker, MD, PhD
-
- 3:27 PM-3:32 PM What to Do with a Failed Open Reduction
Deborah Eastwood, FRCS
-
- 3:33 PM-3:45 PM Case Based Discussion
Presenter: *Steven Frick, MD*
Panelists: *Lori Karol, MD*
Pablo Castañeda, MD
Wudbhav (Woody) Sankar, MD
Jonathan Schoenecker, MD, PhD
Deborah Eastwood, FRCS

Thursday, December 5, continued

2:20 PM–4:30 PM **CONCURRENT SESSIONS, cont'd**
Moderator: *Ira Zaltz, MD*
eModerator: *Ernest Sink, MD*

3:46 PM–3:51 PM Current Surgical Indications for Residual Dysplasia
Eduardo Novais, MD

3:52 PM–3:58 PM Choosing the Pelvic Osteotomy: Is There Reliable Data?
David Little, MBBS, FRACS, PhD

3:59 PM–4:04 PM The Triple Innominate Osteotomy: Modern Applications and Technique
Wudbhav (Woody) Sankar, MD

4:05 PM–4:11 PM Failed DDH Cases: Salvaging Difficult Problems
Presenter: *Ira Zaltz, MD*

4:12 PM–4:18 PM PAO in 2019: Current Standards and Expectations
Presenter: *Ernest Sink, MD*

4:18 PM–4:30 PM Case Presentations
Presenter: *Ira Zaltz, MD*
Panelists: *Eduardo Novais, MD*
David Little, MBBS, FRACS, PhD
Wudbhav (Woody) Sankar, MD
Ernest Sink, MD

3:09 PM–3:19 PM Cases: Cervical Spine
Presenter: *Suken Shah, MD*
Panelists: *A. Noelle Larson, MD*
Michael Glotzbecker, MD
Laurel Blakemore, MD

3:20 PM–3:25 PM Discussion
Moderator: *William Mackenzie, MD*

3:26 PM–3:36 PM Thoracolumbar Spine-Sagittal/Coronal/Stenosis
Laurel Blakemore, MD

3:37 PM–3:57 PM Cases: Spinal Deformity, Stenosis
Presenter: *Laurel Blakemore, MD*
Panelists: *Suken Shah, MD*
David Skaggs, MD, MMM
Michael Vitale, MD, MPH

3:58 PM–4:08 PM Lower Extremity Deformity
Presenter: *Dror Paley, MD, FRCSC*

4:09 PM–4:29 PM Lower Extremity Cases
Presenter: *William Mackenzie, MD*
Panelists: *Dror Paley, MD, FRCSC*
Michelle Caird, MD
David Podeszwa, MD

5:00 PM–7:30 PM Top Gun Surgical Simulation Competition (By Invitation Only) *Various Locations*



Skeletal Dysplasias

Pacifica 1-3

From new genetic advances to cutting edge treatment, join our IPOS experts for discussion on how to treat children with skeletal dysplasias.

Moderator: *William Mackenzie, MD*
eModerator: *Samantha Spencer, MD*

2:20 PM–2:24 PM Introduction
William Mackenzie, MD

2:25 PM–2:35 PM New Genetics and Advances in Diagnosis
Michelle Caird, MD

2:36 PM–2:46 PM Application of Genetics and New Technology to Treatment
Samantha Spencer, MD

2:47 PM–2:57 PM Cases: Diagnosis
Presenter: *William Mackenzie, MD*
Panelists: *Michelle Caird, MD*
Samantha Spencer, MD
Dror Paley, MD, FRCSC

2:58 PM–3:08 PM Cervical Spine – Instability, Sagittal Deformity
Suken Shah, MD





 **Stanford**
Children's Health
Children's Orthopedic
and Sports Medicine Center



Fearless leadership

Our faculty is leading innovation in pediatric orthopedics:

- **New scoliosis treatments.** A Stanford preliminary study found that 3-D printed scoliosis braces were as effective as traditional braces and patients said they were more comfortable and easier to take on and off. We are one of the few hospitals in the country testing this approach. Our surgeons also use innovative MAGEC spine-lengthening rods.
- **More research.** Our faculty are engaged in more than 80 ongoing research projects on topics including VR use in the clinic, shoulder pain in swimmers, and activity levels and bracing compliance in clubfoot patients, and have published almost 50 papers in 2019.
- **Better imaging.** Our EOS low-dose imaging system helps reduce radiation exposure. And we use custom technology to obtain high-resolution 4D MRI of knees and ankles, which takes only 10 minutes but yields detailed thinner slices that enable viewing anatomic structures in any orientation.
- **Smarter return-to-sport decisions.** Our Motion Analysis Laboratory captures the body's motion and force and translates it into actionable data and custom recovery plans.

Learn more at ortho.stanfordchildrens.org
or by calling **(844) 41-ORTHO**.

Friday, December 6

7:00 AM–4:30 PM Registration
7:00 AM–8:00 AM Breakfast and Exhibits *Pacifica 6-7*

8:00 AM–10:00 AM CONCURRENT SESSIONS



CP: Management of Neuromuscular Hip Dysplasia

Pacifica 1-3

Join us for this comprehensive session on neuromuscular hip dysplasia.

Moderator: *Jon Davids, MD*

eModerator: *Kishore Mulpuri, MD*

- | | |
|------------------|---|
| 8:00 AM-8:07 AM | Pathophysiology / Pathoanatomy / Natural History
<i>Jon Davids, MD</i> |
| 8:08 AM-8:15 AM | Hip Surveillance: Why / When / How
<i>Thomas Wirth, MD, PhD</i> |
| 8:16 AM-8:23 AM | Soft Tissue Surgery
<i>Alaric Aroojis, MD</i> |
| 8:24 AM-8:31 AM | Proximal Femoral Guided Growth
<i>Jon Davids, MD</i> |
| 8:32 AM-8:39 AM | Skeletal Surgery:
Proximal Femoral Osteotomy
<i>Benjamin Shore, MD, MPH, FRCSC</i> |
| 8:40 AM-8:47 AM | Skeletal Surgery: Pelvic Osteotomy
<i>Tom Novacheck, MD</i> |
| 8:48 AM-8:55 AM | Skeletal Surgery:
Pelvic Osteotomy in Skeletally Mature
<i>Ira Zaltz, MD</i> |
| 8:56 AM-9:03 AM | Arthroplasty in Skeletally Mature
<i>Ernest Sink, MD</i> |
| 9:04 AM-9:11 AM | Palliative Surgery
<i>Benjamin Shore, MD, MPH, FRCSC</i> |
| 9:12 AM-9:26 AM | Discussion: How the GMFCS Guides
Clinical Decision Making for the
Management of Neuromuscular
Hip Dysplasia
<i>Tom Novacheck, MD</i> |
| 9:27 AM-10:00 AM | Case Discussions
Presenter: <i>Kishore Mulpuri, MD</i>
Panelists: <i>Jon Davids, MD</i>
<i>Alaric Aroojis, MD</i>
<i>Benjamin Shore, MD, MPH, FRCSC</i>
<i>Tom Novacheck, MD</i>
<i>Ernest Sink, MD</i>
<i>Ira Zaltz, MD</i> |



Sports: Knee Conditions of the Immature Athlete

Oceana 6-7

Join our IPOS team for this action-packed and interactive session on knee injuries. Whether it's the playground or the pros, learn principles and techniques to help our young patients get back in the game!

Moderator: *Kevin Shea, MD*

eModerator: *Eric Edmonds, MD*

- | | |
|---------------------------------------|--|
| 8:00 AM-8:02 AM | Introduction
<i>Kevin Shea, MD</i> |
| 8:03 AM-8:15 AM | Patellar Instability
<i>Kevin Shea, MD</i> |
| 8:16 AM-8:21 AM | MPFL reconstruction
<i>Kevin Shea, MD</i> |
| 8:22 AM-8:27 AM | Medial Retinacular Repair, MPQTL
<i>Mininder Kocher, MD, MPH</i> |
| 8:28 AM-8:33 AM | Lateral Release vs Lengthening
<i>Javier Masquijo, MD</i> |
| 8:34 AM-8:36 AM | Audience Questions
<i>Kevin Shea, MD</i> |
| 8:37 AM-8:42 AM | Going Distal: When and How to
Move the Patella Tendon
<i>Eric Edmonds, MD</i> |
| 8:43 AM-8:45 AM | Audience Questions
<i>Kevin Shea, MD</i> |
| Moderator: <i>Theodore Ganley, MD</i> | |
| 8:46 AM-8:51 AM | Point/Counterpoint for
Tibial Spine Fractures
<i>Theodore Ganley, MD</i> |
| 8:52 AM-9:01 AM | When is the Right Timing for Surgery
for Tibial Spine Fractures?
<i>Kevin Shea, MD</i> |
| 8:52 AM-9:01 AM | When is the Right Timing for Surgery
for Tibial Spine Fractures?
<i>Jennifer Weiss, MD</i> |
| 9:02 AM-9:06 AM | Screws for Fixation in Tibial
Spine Fracture
<i>Jennifer Weiss, MD</i> |
| 9:07 AM-9:11 AM | Suture Fixation for Tibial
Spine Fractures
<i>Theodore Ganley, MD</i> |
| 9:12 AM-9:16 AM | Tips for Open Reduction and
Internal Fixation
<i>Eric Edmonds, MD</i> |
| 9:17 AM-9:22 AM | Audience Questions
<i>Theodore Ganley, MD</i> |

Friday, December 6, continued

8:00 AM–10:00 AM **CONCURRENT SESSIONS, cont'd**

Moderator: *Kevin Shea, MD*

- 9:23 AM–9:28 AM **Meniscus Pathology**
Kevin Shea, MD

- 9:29 AM–9:33 AM **Bucket Handle Meniscus Tears in Children**
Jennifer Weiss, MD

- 9:35 AM–9:40 AM **Radial Tears and Root Tears**
Theodore Ganley, MD

- 9:41 AM–9:46 AM **Discoid Meniscus Is It Better to Resect?**
Mininder Kocher, MD, MPH

- 9:47 AM–9:52 AM **Discoid Meniscus Repair is Key**
Amy McIntosh, MD

- 9:53 AM–10:00 AM **Audience Questions**
Kevin Shea, MD

- 10:00 AM–10:20 AM **Break and Exhibits** *Pacifica 6-7*
- 10:20 AM–11:30 AM **Industry Spotlight Sessions**
(See page 14 for session details.)
- 11:30 AM–12:30 PM **Lunch and Exhibits** *Pacifica 6-7*
- 11:45 AM–12:30 PM **Lunchtime Development** *Pacifica 6-7*

12:30 PM–2:30 PM **GENERAL SESSION 3:** *Oceana 6-7*



Authors' Preferred Techniques
An IPOS signature session! Join our international faculty as they share master surgical techniques in short, video-based presentations. Cast your vote at the end of the session through the mobile app for the Best Authors' Preferred Technique Presentation.

Moderator: *John (Jack) Flynn, MD*
eModerator: *A. Noelle Larson, MD*

- 12:30 PM–12:32 PM **Introduction**
John (Jack) Flynn, MD

- 12:33 PM–12:38 PM **Revision ACL Reconstruction**
Theodore Ganley, MD

- 12:39 PM–12:44 PM **Stabilization of Peroneal Tendon Instability**
Mininder Kocher, MD, MPH

- 12:45 PM–12:50 PM **Post-traumatic Elbow Contracture Release**
Scott Kozin, MD

- 12:51 PM–12:55 PM **Discussion**

- 12:56 PM–1:01 PM **Flexible IM Rods for Tibial Shaft Fracture**
Jeffrey Sawyer, MD

- 1:02 PM–1:07 PM **Troch Entry Nail for Adolescent Femur Fracture**
Kenneth Noonan, MD

- 1:08 PM–1:13 PM **Posterior Calcaneus Displacement Osteotomy**
Vincent Mosca, MD

- 1:14 PM–1:18 PM **Discussion**

- 1:19 PM–1:24 PM **Carpal Wedge Osteotomy for Arthrogyrosis**
Lindley Wall, MD

- 1:25 PM–1:30 PM **Woodward Procedure for Sprengel Deformity**
Peter Waters, MD

- 1:31 PM–1:36 PM **Femoral Neck and Pelvic Osteochondroma Excision**
Alexandre Arkader, MD

- 1:37 PM–1:41 PM **Discussion**

- 1:42 PM–1:47 PM **Anterior Open Reduction of Infant Hip Dislocation**
Deborah Eastwood, FRCS

- 1:48 PM–1:53 PM **"Bumpectomy" vs Osteotomy for Late SCFE with FAI**
Ernest Sink, MD

- 1:54 PM–1:59 PM **Tibialis Anterior Tendon Transfer**
Derek Kelly, MD

- 2:00 PM–2:04 PM **Discussion**

- 2:05 PM–2:10 PM **Using Power to Make Spine Surgery for Surgeons and Patients**
Michael Vitale, MD, MPH

- 2:11 PM–2:16 PM **Hemivertebral Excision**
Presenter: *Muharrem Yazici, MD*

- 2:17 PM–2:22 PM **Measuring Femoral Head Perfusion of the Acute SCFE**
Jonathan Schoenecker, MD, PhD

- 2:23 PM–2:28 PM **Discussion**

- 2:28 PM–2:30 PM **Voting for the Best Authors' Preferred Technique Presentation**
John (Jack) Flynn, MD



- 2:30 PM–2:40 PM **AWARDS** *Oceana 6-7*
Presentation of Resident Case, Top Gun, and Best Authors' Preferred Techniques Awards
- 2:40 PM–3:00 PM **Break and Exhibits** *Pacifica 6-7*

Friday, December 6, continued

3:00 PM–4:30 PM

CME BREAKOUT SESSIONS

(Advance Sign-up Encouraged for
Hands-on Workshops)



Ponseti I (Hands-On Workshop)

Banda Sea

Hands-on workshop! From the fundamental principles to technical pearls, learn from our international experts the technique of Ponseti casting for clubfoot.

3:00 PM–4:30 PM

Hands-On Faculty:
Kenneth Noonan, MD
Stephanie Boehm, MD
Vincent Mosca, MD
Amy McIntosh, MD
Bryan Tompkins, MD



Pelvic Osteotomies II (Hands-On Workshop)

Timor Sea

Join our international experts for a unique hands-on workshop in the techniques of pelvic osteotomies.

3:00 PM–4:30 PM

Hands-On Faculty:
Ernest Sink, MD
Pablo Castañeda, MD
Jose Herrera-Soto, MD
Megan Gresh, MD
David Little, MBBS, FRACS, PhD
Ira Zaltz, MD



LE Deformity: External Fixation (Hands-On Workshop)

Coral Sea

Join our international experts for a unique hands-on workshop in the techniques of pelvic osteotomies.

Moderator: *David Podeszwa, MD*

3:00 PM–3:22 PM

Half Pins vs. Wires:
Where, When and How
Christof Radler, MD

3:23 PM–3:35 PM

Hinges vs. Hexapod: When and Why
John Herzenberg, MD

3:36 PM–4:30 PM

Hands-on Workshop:
Proper Wire (Station 1) and
Half Pin Placement (Station II)
Techniques for Tibia and Femur

Hands-On Faculty:
John Herzenberg, MD
L. Reid Nichols, MD
Dror Paley, MD, FRCSC
David Podeszwa, MD
Christof Radler, MD



Wellness in Pediatric Orthopaedics *Oceana 6-7*

Improving and sustaining the health of our care delivery teams is critically important. Join us for this breakout session focusing on wellness. Learn about burnout, team dynamics, strategies to improve provider health, as well as the new POSNA wellness initiative. This session will be a live webcast. Visit IPOS website for more information.

Moderator: *Jennifer Weiss, MD*

eModerator: *Lindsay Andras, MD*

3:00 PM–3:08 PM

Welcome and History of the WTF
Vishwas Talwalkar, MD

3:09 PM–3:17 PM

Is it Wellness or is it Moral Injury?
Jennifer Weiss, MD

3:18 PM–3:26 PM

Bringing the Message to Your C-Suite
David Skaggs, MD, MMM

3:27 PM–3:44 PM

Discussion
Jennifer Weiss, MD

3:45 PM–3:53 PM

Wellness for the Whole Clinical Team
Wendy Moon, MS, APRN, CNP

3:54 PM–4:02 PM

Physician and Clinician Wellness
and Quality
Daniel Sucato, MD, MS

4:03 PM–4:11 PM

Energy (and Time) Management
John (Jack) Flynn, MD

4:12 PM–4:30 PM

Discussion
Jennifer Weiss, MD



Dysplasias: Joint Laxity

Oceana 3-5

Management of pathologic laxity and joint instability continues to challenge pediatric orthopaedic surgeons. Join us for this review of syndromes associated with joint laxity.

Moderator: *Paul Sponseller, MD*

3:00 PM–3:10 PM

Syndromes with Joint Laxity:
An Overview
Paul Sponseller, MD

3:11 PM–3:21 PM

Marfan Spine and Extremities
Jonathan Phillips, MD

3:22 PM–3:32 PM

Larsen Syndrome
Samantha Spencer, MD

3:33 PM–3:50 PM

Cases: Marfan and Larsen
Presenter: *Paul Sponseller, MD*
Panelists: *Jonathan Phillips, MD*
Samantha Spencer, MD

Friday, December 6, continued

3:00 PM–4:30 PM CME BREAKOUT SESSIONS, cont'd

- 3:51 PM–4:02 PM Ehlers-Danlos Syndrome
Brian Brighton, MD
-
- 4:03 PM–4:13 PM Down Syndrome
Nicholas Fletcher, MD
-
- 4:14 PM–4:30 PM Cases: EDS and Down
Presenter: *Samantha Spencer, MD*
Panelists: *Brian Brighton, MD*
Paul Sponseller, MD



Essentials of Pediatric Orthopaedics III

For learners and practitioners of all levels, join our esteemed faculty for a review of the essentials of pediatric orthopaedics.

Pacifica 11-12



Moderator: *Kevin Shea, MD*

- 3:00 PM–3:20 PM Congenital LE Overview
Brian Smith, MD
-
- 3:21 PM–3:40 PM Trauma UE
Mauricio Silva, MD
-
- 3:41 PM–3:45 PM Discussion
Kevin Shea, MD
-
- 3:46 PM–4:05 PM Sports: Knee Ankle
Javier Masquijo, MD
-
- 4:06 PM–4:20 PM Sports: Shoulder Elbow
Eric Edmonds, MD
-
- 4:21 PM–4:30 PM Tumor: The Good, the Bad, and the Ugly
Alexandre Arkader, MD



Hand: Congenital Upper Limb Issues Pacifica 8-10

Enter our flipped classroom and discuss the evaluation and treatment of common congenital upper limb conditions treated by pediatric orthopaedic surgeons. Materials will be provided in advance to review and prepare for this session.



Moderator: *Donald Bae, MD*

- 3:00 PM–3:04 PM Introduction
Donald Bae, MD
-
- 3:05 PM–3:08 PM Case #1: Madelung's
Donald Bae, MD
-
- 3:09 PM–3:24 PM Case #1: Small Group Discussion
-
- 3:25 PM–3:34 PM Case #1: Debrief
Scott Kozin, MD

- 3:35 PM–3:38 PM Case #2: Distal Ulna Osteochondroma
Scott Kozin, MD
-
- 3:39 PM–3:54 PM Case #2: Small Group Discussion
-
- 3:55 PM–4:04 PM Case #2: Debrief
Donald Bae, MD
-
- 4:05 PM–4:08 PM Case #3: Radioulnar Synostosis
Peter Waters, MD
-
- 4:09 PM–4:24 PM Case #3: Small Group Discussion
-
- 4:25 PM–4:30 PM Case #3: Debrief
Peter Waters, MD



POPS: Rapid Fire Review

Java Sea

Our POPS faculty will guide you through a fast-paced, high-yield review of imaging pediatric patients. From frontline provider to tertiary decision-making, there will be pearls for everyone!

Moderator: *Colleen Story*

- 3:00 PM–3:10 PM Introduction: Walking the Line
Wendy Moon, MS, APRN, CNP
-
- 3:11 PM–3:25 PM Understanding Hip Sonography: Alpha Angle Style
Erica Zepeda, MSN, RN, CPNP
-
- 3:26 PM–3:35 PM Sixty-Five Thousand Shades of Grey: Understanding and Applying MRI Imaging
Mark Sinclair, MD
-
- 3:36 PM–3:45 PM CT: Making Hounsfield Units Work for Your Practice
Mark Sinclair, MD
-
- 3:46 PM–3:50 PM Discussion
Colleen Story
-
- 3:51 PM–4:00 PM CXR and KUB: How to Identify Common Post-operative Complications
Anne Stuedemann, MSN, RN, CPNP
-
- 4:01 PM–4:10 PM Benign vs. Malignant Bone Tumors
Nicole Tweedy, DNP-PNP
-
- 4:11 PM–4:30 PM Interactive Case Study Review: Clinical Application
Panelists: *Anne Stuedemann, MSN, RN, CPNP*
Nicole Tweedy, DNP-PNP
Wendy Moon, MS, APRN, CNP
Erica Zepeda MSN, RN, CPNP

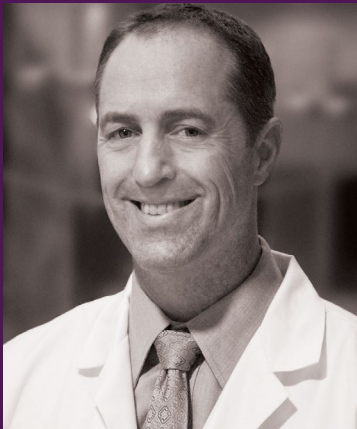
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Genetic Test for Skeletal Dysplasias

Join us at IPOS 2019 for a symposium:
“Look Behind the X-Ray for Skeletal Dysplasia”



Klane K. White, MD



Megan Sikes, MS, LGC

Did you know that all skeletal dysplasias have a genetic component? Join us to learn how genetic testing complements the tools you are already using, and how a no-charge test may help put your patients on the path to disease-specific management sooner.

Date: Friday, December 6, 2019

Time: 10:20 am - 11:30 am

Room: Pacifica 8-10

Presented by **Klane K. White, MD**, Director of the Skeletal Health and Dysplasia Program at Seattle Children’s Hospital and Professor of Orthopaedic Surgery and Sports Medicine at the University of Washington, and **Megan Sikes, MS, LGC**, Genetic Counselor at Seattle Children’s Hospital.

Speak with a BioMarin representative at **Booth 108** to learn more.

Saturday, December 7

6:30 AM–11:30 AM Registration
6:30 AM–8:00 AM Breakfast *Pacifica 6-7*

7:30 AM–9:40 AM CONCURRENT SESSIONS



Dysplasias: Muscular Dystrophies *Oceana 6-7*
Join our esteemed IPOS faculty for this case-based discussion of muscular dystrophies and other neuromuscular disorders.

Moderator: *William Mackenzie, MD*
eModerator: *L. Reid Nichols, MD*

- 7:30 AM–7:40 AM **Genetics and Advances in Diagnosis**
David Little, MBBS, FRACS, PhD

- 7:41 AM–7:51 AM **Breakthroughs in Biologic Treatments**
Michelle Caird, MD

- 7:52 AM–8:02 AM **Cases: Make the Diagnosis**
Presenter: *L. Reid Nichols, MD*
Panelists: *David Little, MBBS, FRACS, PhD*
William Mackenzie, MD

- 8:03 AM–8:13 AM **Sagittal and Coronal Deformity in Muscular Dystrophies**
Suken Shah, MD

- 8:14 AM–8:24 AM **Treatment of Spinal Deformities**
Jonathan Phillips, MD

- 8:25 AM–8:45 AM **Cases: Spinal**
Presenter: *Suken Shah, MD*
Panelists: *Paul Sponseller, MD*
William Mackenzie, MD
L. Reid Nichols, MD

- 8:45 AM–8:50 AM **Discussion**
William Mackenzie, MD

- 8:50 AM–9:00 AM **Upper Limb in Muscular Dystrophy**
L. Reid Nichols, MD

- 9:01 AM–9:06 AM **Case: Upper Extremity**
William Mackenzie, MD

- 9:07 AM–9:17 AM **Lower Extremities in Muscular Dystrophy**
Matthew Oetgen, MD

- 9:18 AM–9:40 AM **Cases: Lower Extremity**
Presenter: *William Mackenzie, MD*
Panelists: *Matthew Oetgen, MD*
L. Reid Nichols, MD

7:30 AM–9:40 AM CONCURRENT SESSIONS



Spine/Hand: Complex Spine and Upper Limb Conditions *Pacifica 1-3*
Join our esteemed IPOS faculty for a discussion of treatment of complex spine and upper limb conditions.

Moderator: *Donald Bae, MD*
eModerator: *Lindley Wall, MD*

- 7:30 AM–7:34 AM **Introduction**
Donald Bae, MD

- 7:35 AM–7:42 AM **Tried Tested and True: My Go To Procedures for Arthrogryposis**
Lindley Wall, MD

- 7:43 AM–7:48 AM **Master Technique: Elbow release in AMC**
Scott Kozin, MD

- 7:49 AM–7:57 AM **Discussion**
Donald Bae, MD

- 7:58 AM–8:05 AM **Tried Tested and True: My Go To Procedures for CP**
Scott Kozin, MD

- 8:06 AM–8:11 AM **Master Technique: Tendon Transfer for Wrist Extension**
Christine Ho, MD

- 8:12 AM–8:20 AM **Minimizing Complications in the NM Spine**
Michael Vitale, MD, MPH

- 8:21 AM–8:30 AM **Discussion**
Donald Bae, MD

- 8:31 AM–8:38 AM **Sprengel's Deformity: The Scapula**
Peter Waters, MD

- 8:39 AM–8:46 AM **Klippel Feil: Approach and Treatment of Congenital Cervical Anomalies**
Muharrem Yazici, MD

- 8:47 AM–8:55 AM **Discussion**
Donald Bae, MD

- 8:56 AM–9:03 AM **MHE Spinal Exostoses: Incidence, Screening, Treatment**
Stephan Parent, MD

- 9:04 AM–9:11 AM **Approach to Severe Scoliosis in SMA**
Laurel Blakemore, MD

- 9:12 AM–9:19 AM **Severe Scoliosis in NF**
Presenter: *Paul Sponseller, MD*

- 9:20 AM–9:30 AM **Discussion**
Donald Bae, MD

8:00 AM–11:00 AM **Fellowship Directors Program (By Invitation Only)** *Oceana 3-5*
9:20 AM–9:40 AM **Fellowship Directors Break**
Foyer/ Pacifica 8-10



Saturday, December 7, continued

9:40 AM-10:00 AM Break *Pacifica 6-7*

10:00 AM-11:30 AM **CME BREAKOUT SESSIONS**
(Advance Sign-up Encouraged for Hands-on Workshops)



Ponseti II: Case Based Discussions *Banda Sea*

From the fundamental principles to technical pearls, learn from our international experts the technique of Ponseti casting for clubfoot.

10:00 AM-11:30 AM Presenter: *Derek Kelly, MD*
Panelists: *John Herzenberg, MD*
Vincent Mosca, MD
Vishwas Talwalkar, MD
Stephanie Boehm, MD



Bone Lesions (Cysts, Masses and Malignancies) *Oceana 6-7*

Be a part of this international simulcast webinar! Join our IPOS faculty for a comprehensive tour of bone lesions, ranging from benign bumps and cysts to malignant conditions. This session will be a live web-cast. Visit IPOS website for more information.

Moderator: *Alexandre Arkader, MD*
eModerator: *Michelle Caird, MD*

- 10:00 AM-10:04 AM Introduction
Alexandre Arkader, MD
- 10:05 AM-10:11 AM Evaluation: The Red Flags
Vishwas Talwalkar, MD
- 10:12 AM-10:20 AM Radiographic Diagnosis: Horses and Zebras
Michelle Caird, MD
- 10:21 AM-10:27 AM Biopsy's Gone Bad: Lessons from St Elsewhere
Brian Smith, MD
- 10:28 AM-10:35 AM Cases & Discussion
Alexandre Arkader, MD
- 10:35 AM-10:42 AM Bone Cysts: Principles of Care
Brian Brighton, MD
- 10:43 AM-10:50 AM Spinal Tumors
David Skaggs, MD, MMM
- 10:51 AM-11:01 AM Malignant Bone Lesions: Amputation, Limb Salvage, and Other Options
Alexandre Arkader, MD
- 11:02 AM-11:12 AM Osteochondroma: Natural History and When to Intervene
Matthew Oetgen, MD
- 11:13 AM-11:30 AM Cases & Discussion
Alexandre Arkader, MD



Essentials of Pediatric Orthopaedics IV

Pacifica 11-12

For learners and practitioners of all levels, join our esteemed faculty for a review of the essentials of pediatric orthopaedics.



Moderator: *Bryan Tompkins, MD*

- 10:00 AM-10:20 AM Congenital UE Overview
Christine Ho, MD
- 10:21 AM-10:30 AM CP: Gait
Tom Novacheck, MD
- 10:31 AM-10:45 AM CP: LE
Kishore Mulpuri, MD
- 10:46 AM-10:50 AM Discussion
Bryan Tompkins, MD
- 10:51 AM-11:10 AM Trauma LE
Megan Gresh, MD
- 11:11 AM-11:20 AM PM: Making the Most of Physician Extenders
Anne Stuedemann, MSN, RN, CPNP
- 11:21 AM-11:30 AM PM: Building and Growing an Online Presence
Bryan Tompkins, MD



Saturday, December 7, continued

10:00 AM–11:30 AM CME BREAKOUT SESSIONS, cont'd



CP: Surgery to Improve Ambulation *Java Sea*
What can we do to improve ambulation and mobility in patients with neuromuscular spasticity? Our IPOS team will provide preoperative pearls, surgical tips, and illustrative cases to help answer this common question.

Moderator: *Benjamin Shore, MD, MPH, FRCSC*

- | | |
|-------------------|--|
| 10:00 AM-10:07 AM | Single Event Multilevel Surgery: Principles and Best Practices
<i>Tom Novacheck, MD</i> |
| 10:08 AM-10:15 AM | Surgery for Transverse Plane Deviations: Where's the Intoeing Coming From?
<i>Kishore Mulpuri, MD</i> |
| 10:16 AM-10:26 AM | Surgery For Sagittal Plane Deviations: Where's the Knee Flexion Coming From?
<i>Benjamin Shore, MD, MPH, FRCSC</i> |
| 10:27 AM-10:37 AM | Surgery for Sagittal Plane Deviations: Where is the Equinus Coming From?
<i>Bryan Tompkins, MD</i> |
| 10:28 AM-10:43 AM | Surgery for Foot Deviations: The Foot is Flat and Turns Out, What Should I Do About It?
<i>Jon Davids, MD</i> |
| 10:44 AM-10:51 AM | Surgery For Foot Deviations: The Foot is Turning Down and In, What Should I Do About It?
<i>Kishore Mulpuri, MD</i> |
| 10:52 AM-10:59 AM | Use of Orthoses to Improve Gait
<i>Jon Davids, MD</i> |
| 11:00 AM-11:30 AM | Discussion and Cases
Presenter: <i>Tom Novacheck, MD</i>
Panelists: <i>Jon Davids, MD</i>
<i>Kishore Mulpuri, MD</i>
<i>Benjamin Shore, MD, MPH, FRCSC</i> |

11:30 AM–12:00 PM Lunch

Pacifica 6-7

For those attending only the Fellowship Directors Program
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Orthopaedic Surgeons and Pediatric Orthopaedic Society of North America. The American Academy of Orthopaedic Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

The American Academy of Orthopaedic Surgeons designates this live activity for a maximum of **3.25 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

8:00 AM–11:30 AM

Saturday, One-Day Fellowship Directors Program



Pacifica 8-10

(CME Applied)

Current and Future Challenges in Pediatric Orthopaedic Fellowship Training (TICKETED EVENT). Designed for training program directors but open to all POSNA educators, join this interactive discussion among education leaders on how to improve pediatric orthopaedic training. (Advance registration required. Included with IPOS registration or \$150 fee for those not registered for IPOS.)

Moderator: *Wudbhav (Woody) Sankar, MD*

- | | |
|-------------------|---|
| 8:00 AM-8:04 AM | Introduction
<i>Wudbhav (Woody) Sankar, MD</i> |
| 8:05 AM-8:14 AM | Generational Differences In Teaching/Learning: How Can We Best Educate our Millennials?
<i>Steven Frick, MD</i> |
| 8:15 AM-8:24 AM | 10,000 Hours in 1 year. How Can We Get There? Role of Simulation in Fellowship
<i>Benjamin Shore, MD, MPH, FRCSC</i> |
| 8:25 AM-8:34 AM | Quantifying Experience- Role of Case Logs and Coding Surgeries
<i>Martin Herman, MD</i> |
| 8:35 AM-8:49 AM | Competency Based Metrics- How Do They Work in Fellowships?
<i>Christof Radler, MD</i> |
| 8:50 AM-8:59 AM | Pediatric Orthopaedic Fellowship Accreditation
<i>Wudbhav (Woody) Sankar, MD</i> |
| 9:00 AM-9:20 AM | Open Discussion
<i>Wudbhav (Woody) Sankar, MD</i> |
| 9:20 AM-9:39 AM | Coffee Break |
| 9:40 AM- 11:30 AM | Best Practices in Fellowship Training
Moderator: <i>John (Jack) Flynn, MD</i> |
| 9:40 AM-9:46 AM | Balancing Resident vs. Fellow Experience: from Death Match to BFFs
<i>Lori Karol, MD</i> |
| 9:47 AM-9:53 AM | Fellow Evaluations- Effective Ways to Give Feedback
<i>David Skaggs, MD, MMM</i> |
| 9:54 AM-10:00 AM | Curriculum Development for Fellows
<i>Lindsay Andras, MD</i> |
| 10:01 AM-10:07 AM | Research Training
<i>Wudbhav (Woody) Sankar, MD</i> |
| 10:08 AM-10:14 AM | Financial Education
<i>Nicholas Fletcher, MD</i> |
| 10:15 AM-10:34 AM | Panel Discussion |
| 10:35 AM-10:49 AM | Fellowship Education from an Educators Point of View
<i>Sandra Jarvis-Selinger, PhD</i> |
| 10:50 AM-10:54 AM | Questions
<i>John (Jack) Flynn, MD</i> |
| 10:50 AM-10:54 AM | Questions
<i>Wudbhav (Woody) Sankar, MD</i> |
| 10:55 AM-11:30 AM | Wrap Up
<i>Wudbhav (Woody) Sankar, MD</i> |

Language

English is the official language of IPOS.

No Smoking Policy

Smoking is not permitted during any meeting or event.

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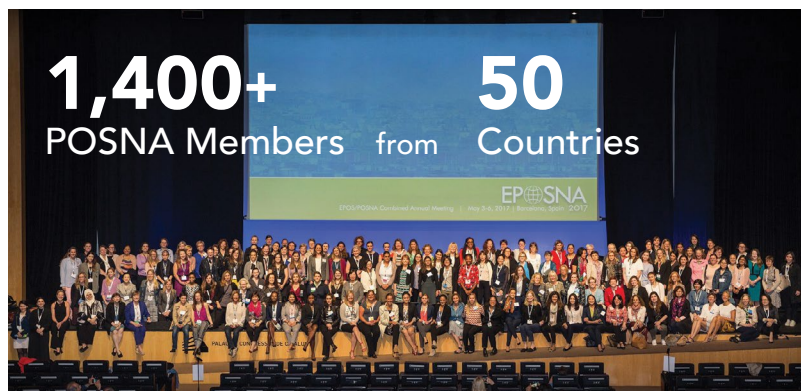
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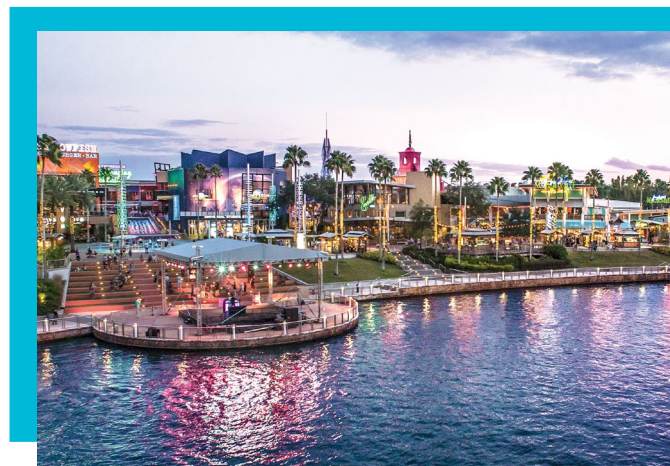
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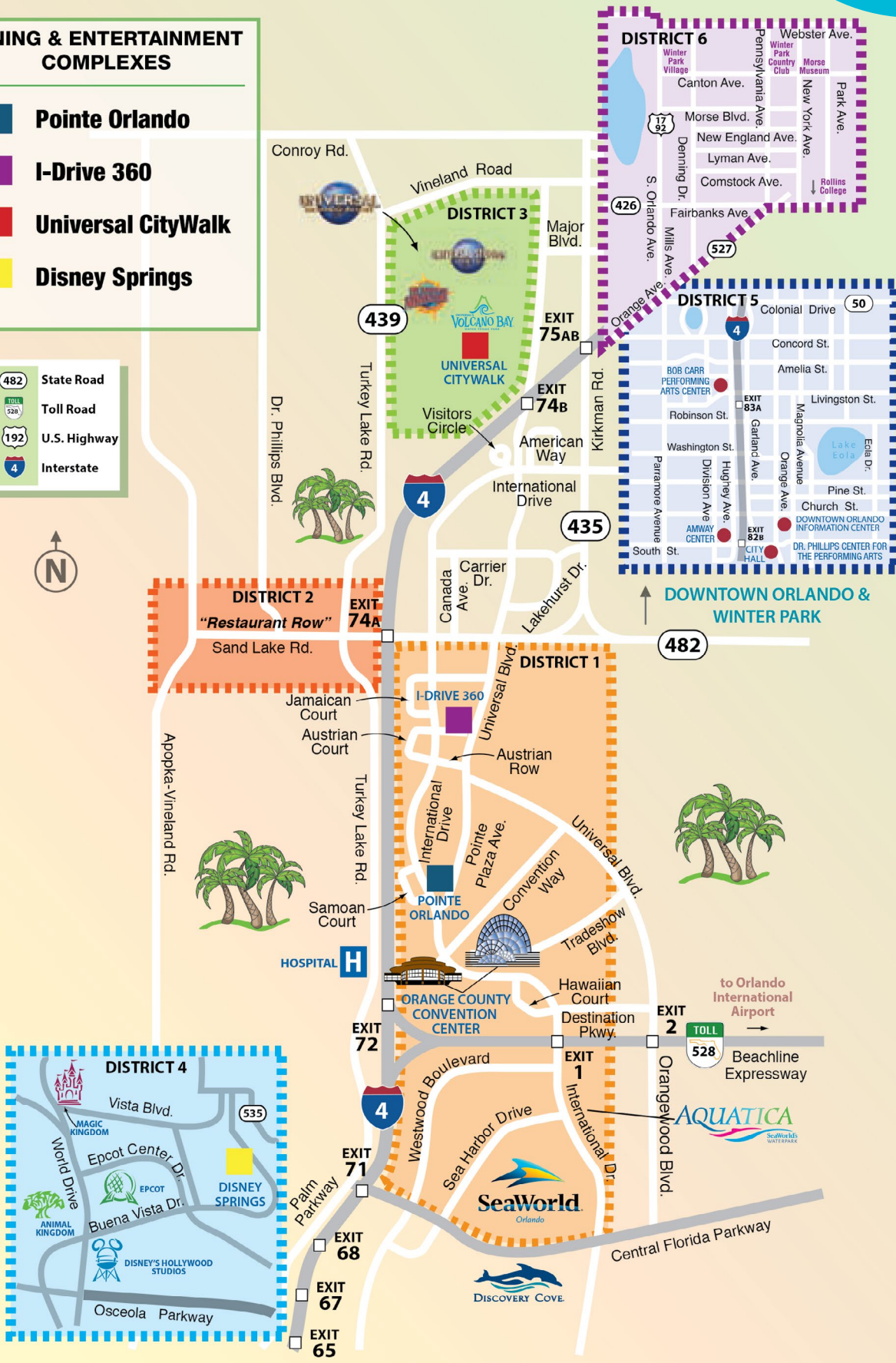
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ePoster Listing

ePoster #1

A Prospective Study to Assess the Clinical Impact of Intraobserver Reliability of Ultrasound Enhanced Physical Examination of the Hip

Neha Jejurikar, MD; Pablo Castaneda, MD; Leon Moscona-Mishy, MD; Monica Rubio, MD; Romina Cavallaro, MD

ePoster #2

Reliability and Validity of an MRI-Based Knee Sagittal Alignment Measure in a Pediatric Cohort

Brendan Williams, MD¹; Samuel Oduwole, BS^{1,2}; Nishank Mehta, BS^{1,3}; Jie C. Nguyen, MD, MS⁴; Lawrence Wells, MD¹

¹Department of Orthopaedics, The Children's Hospital of Philadelphia, Philadelphia, PA, USA; ²Frank H. Netter MD School of Medicine, North Haven, CT, USA; ³Rutgers New Jersey Medical School, Newark, NJ, USA; ⁴Department of Radiology, The Children's Hospital of Philadelphia, Philadelphia, PA, USA

ePoster #3

Nationwide Trends in Surgical Treatment for Juvenile Osteochondritis Dissecans: Agre Predicts Invasiveness of Treatment

Thaddeus Woodard BS²; Divya Talwar, PhD, MPH¹; Nishank Mehta BS¹; Daniel Weltsch MD³;

John Todd Rutter Lawrence, MD, PhD^{1,2}

¹Children's Hospital of Philadelphia, PA, USA; ²Perelman School of Medicine, University of Pennsylvania, PA, USA;

³The Chaim Sheba Medical Center at Tel Hashomer, Affiliated to the Sackler Faculty of Medicine, Tel Aviv University, Israel

ePoster #4

Clinical Presentation and Epidemiology of Hand and Wrist Ganglion Cysts in Children

Joshua T. Bram, BS¹; David Falk²; Benjamin Chang³; Jennifer M. Ty⁴; Ines C. Lin¹; Apurva S. Shah¹

¹The Children's Hospital of Philadelphia; ²Department of Orthopaedics, University of Pennsylvania; ³The Children's Hospital of Philadelphia; ⁴Nemours/Alfred I. duPont Hospital for Children

ePoster #5

Characteristics and Hospital Costs of Spica Cast Treatment of Non Accidental-Related Diaphyseal Femoral Fractures in Children Before Walking Age

Lacey Magee, BA; Jigar S. Gandhi, PharmD¹; Keith Baldwin, MD, MSPT, MPH¹;

Alexandre Arkader, MD¹

¹The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

ePoster #6

Pediatric Ramp Lesions: Incidence and Associated Risk Factors

Joshua T. Bram, BS¹; Jie C. Nguyen¹; Margaret L. Wright¹; Julien Aoyama¹; Theodore J. Ganley¹

¹The Children's Hospital of Philadelphia

ePoster #7

Identification of Complications in Pediatric Cerebral Palsy Treated with Intrathecal Baclofen Pump:

A Descriptive Analysis of 15 Years at One Institution

Ahmet Imerci, MD; Kenneth Rogers, PhD, ATC; Freeman Miller, MD; Julieanne P. Sees, DO

ePoster #8

A Timely Difference - How Accurate Are Prediction Methods in Determining the Timing of Epiphysiodesis?

Janus Wong, MBBS, MRCSEd

ePoster #9

In-Vivo Study of the Optimal Femoral Fixation Site for Medial Patello-Femoral Ligament (MPFL) Reconstruction in the Immature Skeleton

Alpesh Kothari, Nr; Javier Masquijo

Department on Pediatric Orthopaedics, Sanatorio Allende, Córdoba, Argentina

ePoster Listing, continued

ePoster #10

Clinical Outcomes of a Composite Bone Graft Substitute to Treat Benign Bone Lesions

Aditya Manoharan, MD¹; Melissa Esparza, MD²; Christina Alvara, BS³; Matthew Seidel, MD²

²University of Arizona; ³Texas Tech University

ePoster #11

Test of Strength: Figure-of-Eight Versus Conventional Wrapping Technique for Fiberglass Casts

Blake K. Montgomery, MD; Hunter Storaci, BS; Jeffrey Young, MD

ePoster #12

The Emergence of the Orthopedic "Year-Out" Program

Joshua T. Bram, Medical Student¹; Kevin Pirruccio, Medical Student²; Julien Aoyama, Medical Student³;

Jaimo Ahn, MD, Associate Professor of Orthopaedic Surgery⁴; Theodore J. Ganley, MD, Professor of Orthopaedic Surgery¹;

John M. Flynn, MD, Chief of the Division of Orthopaedics¹

¹The Children's Hospital of Philadelphia; ²Perelman School of Medicine at the University of Pennsylvania;

³The Children's Hospital of Philadelphia; ⁴Hospital of the University of Pennsylvania

ePoster #13

Clinical Feasibility Study of Zero Echo Time Imaging for Scoliosis

Chi-Kuang Feng; Chien-Yuan Eddy Lin³; Wei-Yin Liu⁴; Wan-Yu Guo⁵; Jaw-Lin Wang¹

¹Department of Biomedical Engineering, National Taiwan University; ²Department of Orthopedics and Traumatology, Taipei

Veterans General Hospital; ³GE Healthcare, Taipei, Taiwan; ⁴GE Healthcare, Guangzhou, China; ⁵Department of Radiology,

Taipei Veterans General Hospital

ePoster #14

Pediatric Tibial Eminence Fractures: A Novel Treatment Using a Bioabsorbable Screw

Anna Johnson, MD; M. Wesley Honeycutt, MD; Anna Johnson, MD; Daniel Zieman, BS; Prasit Nimityongskul, MD

ePoster #15

Multiple Hereditary Exostosis: Should We Perform a Screening Spinal MRI?

Blake K. Montgomery, MD; Eli M. Cahan, BBA; Steven L. Frick, MD

ePoster #16

Using Fracture Asymmetry as a Predictor in the Treatment of Pediatric Lateral Condyle Fractures

Mark Seeley; Matthew Fanelli, MD; Daniela Sanchez, MD; Brittney Ehrlich, MD; Jove Graham, PhD; Mark Seeley, MD

ePoster #17

Geographic Distribution of Pediatric Orthopaedic Surgeons Throughout the United States

Brittney Ehrlich, BS; Mark Seeley, MD

ePoster #18

Advanced Imaging of Pediatric Elbow Neurovasculature

Evan Porter, BS; Max Cornell, BS; Daniel Sylvestre, BS; Mark Seeley, MD

ePoster #19

Patellofemoral Contact Mechanics in Nail-Patella Syndrome and High Femoral Anteversion Morphology-Finite Element Modeling

Benjamin B. Wheatley PhD¹; Margo E. Yancey BS¹; Mark Seeley MD²

Bucknell University¹; ²Geisinger Medical Center

ePoster Listing, continued

ePoster #20

Is Increased Residential Distance from Treatment Facility Associated with Increased Likelihood of Clubfoot Reoccurrence Following Correction via the Ponseti Method?

Charlie Powell, MD¹; Clayton Wing, MD²; David Cearley, MD³

¹UT Chattanooga; ²UT Campbell Clinic; ³Medical College of Georgia

ePoster #21

Novel Technique for Elongation, Derotation, Flexion Casting Using a Jackson Table

Blake K. Montgomery, MD; Kali Tileston, MD; Japsimran Kaur, BS; James Policy, MD;

Lawrence Rinsky, MD; John Vorhies, MD

ePoster #22

The Effects of Splitting An Above Elbow Cast: A Biomechanical Study

Jordan Vokes, MD¹; Sarah Obudzinski, BS MS⁴; Emma Knapp, BS¹; Sandra O'Malley, BM BS²; Natasha O'Malley, MD¹

¹University of Rochester; ²Waterford University Hospital, Ireland

ePoster #23

Does The Location of Short-Arm Cast Univalve Effect Pressure of The Three-Point Mold?

Blake K. Montgomery, MD; Kenneth H. Perrone, MD; Su Yang, BS; Nicole A. Segovia, BS; Lawrence Rinsky, MD;

Carla M. Pugh, MD, PhD; Steven L. Frick, MD

ePoster #24

A Two-Stage Surgery with Internal Traction for Patients with Severe Spinal Deformities

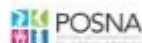
Pawel Grabala, MD

University Children's Hospital, Medical University of Bialystok, The Faculty of Medicine, Dept. of Pediatric Orthopedic

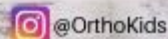
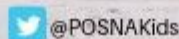
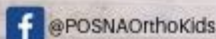


OrthoKids is the website for kids and parents to learn about pediatric orthopaedic conditions, injury prevention, and treatment. Everything on OrthoKids is provided by POSNA members, so parents and kids know that it's information they can trust.

orthokids.org



Check out the OrthoKids Clinician Resources: handouts freely available for your use to download and print for your practice!



Exhibitors



Alexion

Since its founding, Alexion has given hope to people who had none and shined a light on those who felt isolated and alone. But we know that fighting rare diseases takes so much more than hope. It requires persistence, dedication, and a relentless pursuit of the highest levels of medical innovation.



AquaCast Liner

AquaCast Liner was founded in 2011 to replace Gore's Procel® and PANTALOON® protective liners. Our "version 5.0" rolls are greatly improved to make application easier and reduce overall cast changes. A cost-effective marketing tool that increases patient satisfaction – and referrals – AquaCast has become *the* choice for hospitals and practices looking to cost effectively improve skin health in fracture care. The patented new design of the Hipster® protective liner (used in hip spica, shoulder spica, femur fractures and other body casts) makes application faster and easier.



BioMarin Pharmaceuticals

BioMarin develops and commercializes innovative biopharmaceuticals for serious diseases and medical conditions. Approved products include the first and only therapies for PKU, LEMS, MPS I, MPS VI, MPS IVA, and CLN2 disease. Clinical development programs include investigational therapies for Hemophilia A, Achondroplasia, MPS IIIB, Friedreich's Ataxia and other rare diseases.



CURE International

CURE brings healing to locations where healing is needed most. It's why we have hospitals and programs in 14 developing countries around the world, places where access to quality health care and compassionate, knowledgeable medical professionals are often limited at best. Our 8 hospitals offer a wide variety of care through specializing in areas such as orthopedics, neurosurgery, reconstructive surgery, and maternity



DePuy Synthes

DePuy Synthes, part of the Johnson & Johnson Medical Devices Companies, provides one of the most comprehensive orthopaedics portfolios in the world. DePuy Synthes solutions, in specialties including joint reconstruction, trauma, craniomaxillofacial, spinal surgery and sports medicine, are designed to advance patient care while delivering clinical and economic value to health care systems worldwide.

Exhibitors, continued



East Coast O&P Corp.

East Coast Orthotic & Prosthetic Corp. (ECOP) is the largest privately-owned O & P company in New York State, employing 240 professionals. ECOP also created and produces the NYRC Brace™, helping bring innovative treatment to people with adolescent idiopathic scoliosis (AIS). The NYRC Brace™ is a custom-made Rigo-Cheneau style brace, manufactured with the most advanced CAD/CAM technologies. It has been developed to provide, for each case, the most reliable and effective results for the conservative treatment of AIS.



ELSEVIER

Elsevier

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, deliver better care, and sometimes make groundbreaking discoveries that advance the boundaries of knowledge and human progress. Elsevier provides web-based, digital solutions — among them ScienceDirect, Scopus, Elsevier Research Intelligence and ClinicalKey — and publishes over 2,500 journals, including The Lancet and Cell, and more than 33,000 book titles, including a number of iconic reference works. Elsevier is part of RELX Group plc, a world-leading provider of information solutions for professional customers across industries.



GLOBUS
MEDICAL

Globus Medical

Globus Medical, a leading musculoskeletal solutions company is driving significant technological advancements across a complete suite of products ranging from spinal, trauma and orthopedics therapies to robotics, navigation and imaging. Founded in 2003, Globus' single-minded focus on advancing spinal surgery has made it the fastest growing company in the history of orthopedics. Globus is driven to utilize superior engineering and technology to achieve pain free, active lives for all patients with musculoskeletal disorders.



Rubin Institute for
Advanced Orthopedics

Life Bridge/Rubin Institute for Advanced Orthopedics

The International Center for Limb Lengthening (ICLL) is located at the Rubin Institute for Advanced Orthopedics, Sinai Hospital of Baltimore (Maryland, USA). The ICLL is world-renowned for its Pediatric Orthopedics practice. We treat children who are struggling with the most severe and rare orthopedic conditions. The Center is recognized for its innovative treatments for clubfoot, congenital femoral deficiency, fibular hemimelia, Perthes disease and deformities associated with achondroplasia. The ICLL offers clinical and research fellowship opportunities. Our physicians host the annual, CME-accredited Baltimore Limb Deformity Course. The Multiplier and Bone Ninja apps were developed here.

Exhibitors, continued



NEXT STEPS ² NEW FEET™



MD Orthopaedics

MD Orthopaedics, based in Wayland, Iowa, is an orthopedic device company focused on design, manufacture, assembly and distribution of Ponseti Method clubfoot products. Founded in 2004 by John Mitchell, MD Orthopaedics is advancing footwear devices for non-surgical clubfoot treatment and is an industry leader in the production of ankle and foot orthotics in North America. MD Orthopaedics works closely with the orthopedic and prosthetic community and aspires to be continually innovative to offer the best possible products for the teaching, training, and implementation of the Ponseti Method of Club-foot Treatment.

Medtronic

Further, Together

Medtronic

Making healthcare better is our priority and we believe technology can play an even greater role in improving people's lives. In addition to alleviating pain, restoring health, extending lives, we work in partnership with others to create seamless, more efficient care. Learn how we're taking healthcare Further, Together.



MHE Research Foundation

The MHE Research Foundation is a nonprofit 501(c) (3) organization dedicated to the support of Researchers, Physicians & Families dealing with Multiple Hereditary Exostoses Syndrome (MHE) Multiple Osteochondroma Syndrome (MO) a rare genetic bone disease.



Misonix

Misonix is a world leader in developing ultrasonic surgical devices for hard and soft tissue removal. The Misonix BoneScalpel is a unique ultrasonic osteotomy for tissue-selective bone dissection that encourages en-bloc bone removal and refined osteotomies while sparing elastic soft tissue structures. Many leading surgeons have praised the BoneScalpel to be one of the most important advancements to enter spine surgery this decade.



NuVasive, Inc.

NuVasive, Inc. (NASDAQ: NUVA) is the leader in spine technology innovation, focused on transforming surgery with minimally disruptive, procedurally integrated solutions designed to deliver reproducible and clinically proven surgical outcomes. The Company's pediatric and adult treatment portfolio includes access instrumentation, implantable hardware, biologics, software systems for surgical planning, navigation and imaging solutions, magnetically adjustable implant systems for spine and orthopedics, and intraoperative monitoring services. With more than \$1 billion in revenues, NuVasive has approximately 2,600 employees and operates in more than 50 countries serving surgeons, hospitals and patients.

Exhibitors, continued



nView Medical

nView medical is an imaging start-up with the mission to make surgery safer, faster and consistently accurate. nView is showcasing the nView s1, a breakthrough surgical imaging system specifically designed for pediatrics. The nView s1 provides instant 3D images based on low dose x-rays.



Oped Medical

EVENUUp is a shoe lift designed to compensate for temporary or permanent leg length discrepancy. It comes in 6 sizes (4 Adult & 2 Pediatric) and fits the left or right foot. The EVENUUp offers 3 different height adjustments by removing the layers. A great alternative to permanently altering shoes.



Orthofix- JuniOrtho™

JuniOrtho™ is a range of products and resources created by Orthofix, dedicated to children and young adults with bone fractures and deformities. With a long history of developing innovative and leading-edge solutions, Orthofix has now brought all of its pediatric expertise and products together under the JuniOrtho banner. Orthofix is a diversified medical device company focused on improving patients' lives by providing superior reconstructive and regenerative musculoskeletal solutions to physicians worldwide. We are devoted to helping children with trauma and deformity be the very best that they can be.



OrthoPediatrics

Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on providing a comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 31 surgical systems that serve three of the largest categories within the pediatric orthopedic market. These systems span trauma and deformity correction, scoliosis, and sports medicine/other procedures. OrthoPediatrics' global sales organization is focused exclusively on pediatric orthopedics and the Company distributes its products in the United States and 43 international countries.



Osso VR

Osso VR is the leading, validated, surgical training and assessment platform that allows surgeons, sales teams, and hospital staff to train and assess using advanced virtual reality. Our mission is to improve patient outcomes, increase the adoption of higher value medical technologies, and democratize access to the latest surgical techniques globally.

Exhibitors, continued



Paragon28

Paragon28 has built a company around principles that drive innovation. Working relentlessly to advance the science behind F&A surgery, P28 is passionate about blending surgical philosophies from global thought leaders to develop biomechanically and clinically relevant solutions. We are committed to surgeon-centric systems, specialty instruments, and next generation implants at today's prices.



Pega Medical

For more than two decades, Pega Medical has been offering innovative deformity correction solutions in Pediatric Orthopedics. Pega's family of IM Nails (Fassier-Duval Telescopic Rod, SLIM, GAP Endo-Exo Medullary Systems) are specifically designed for small bones, often seen with metabolic and genetic diseases. Hinge Plate and the Free-Gliding SCFE Screw complete our portfolio of growth modulating orthopedic devices. For limb deformity and length discrepancy, the Paley's Osteotomy System offers unique instrumentation for complex procedures. The Lollipop modular hip plating system is our latest innovation, as part of forward thinking technologies developed in collaboration with orthopedic surgeons from around the world.



Precision OS Technology

Precision OS Technology is a software company dedicated to improving and enhancing surgical training and preparedness. Together, orthopedic surgeons and high-end game developers create the most innovative, realistic, and educational medical-grade orthopedic simulated experience towards competency. With this technology, they hope to ensure surgical education keeps up with technological advances and, more importantly, mitigates patient harm as a priority while improving care globally.



Shanghai Bojin Electric Instrument & Device Co., Ltd.

Shanghai Bojin Electric Instrument & Device Co., Ltd. is a scientific research enterprise that has strong product development and production capacities. The company was established in 1993 by Mr. Wang Xijing and mainly develops, manufactures, and sells medical device and equipment. We specialize in orthopaedic surgical products and have predominantly designed and produced medical electric drills, portable x-ray fluoroscopy device and fracture therapeutic equipment.



**Shriners Hospitals
for Children®**

Shriners Hospitals

Shriners Hospitals for Children® is changing lives every day through innovative pediatric specialty care, world-class research and outstanding medical education. Our 22 facilities, located in the United States, Canada and Mexico, provide advanced care for children with orthopedic conditions, burns, spinal cord injuries, and cleft lip and palate.

Exhibitors, continued

Smith+Nephew

Smith+Nephew

Smith+Nephew is a global medical technology business with global leadership positions in Orthopaedic Reconstruction, Sports Medicine, Trauma Fixation, Extremities & Limb Restoration, and Advanced Wound Management.

stryker

Stryker

Stryker is one of the world's leading medical technology companies and, together with our customers, is driven to make healthcare better. We offer innovative products and services in Orthopaedics, Medical and Surgical, and Neurotechnology and Spine that help improve patient and hospital outcomes.



WISHBONE™
MEDICAL

WishBone Medical

To this day, 95% of children receive inappropriate, adult orthopedic products that are not designed for them, nor cleared by the FDA for pediatric use. Headquartered in Warsaw, IN, WishBone Medical is focused on the unmet needs of children suffering from orthopedic issues around the world. As the first and only pediatric orthopedic company to offer anatomically appropriate, single-use implants and instruments in complete, sterile packed procedure kits, WishBone works to raise industry standards by equipping surgeons with proper solutions to safely treat their patients who are still growing -- Because KIDS are not just little adults.



Wolters Kluwer Health

Wolters Kluwer Health is a leading global provider of information and point of care solutions for the healthcare industry. Our solutions are designed to help professionals build clinical competency and improve practice so that healthcare organizations can succeed in value-based care delivery models. Product solutions include Lippincott, Ovid®, and UpToDate®.



Wright Medical

Wright Medical Group N.V. is a global medical device company focused on Extremities and Biologics. We deliver innovative, value-added solutions improving quality of life for patients worldwide, such as PRO-DENSE™ Injectable Regenerative Graft that is the first and only bone graft to have an indication for benign bone cysts and tumors in the pediatric population (ages 6 and up).



Zimmer Biomet

Zimmer Biomet Spine is a leader in restoring mobility, alleviating pain, and improving the quality of life for patients around the world by delivering surgeons a comprehensive portfolio of quality spine technologies and procedural innovation, best-in-class training, and unparalleled service via a network of responsive team members and sales professionals.

SAVE THE DATE

Future POSNA Annual Meetings

May 13-16, 2020
San Diego, CA

May 12-15, 2021
Dallas, TX

May 11-14, 2022
Vancouver, British Columbia, Canada

Future IPOS Meetings

December 1-5, 2020
Orlando, FL

December 7-11, 2021
Orlando, FL

December 6-10, 2022
Orlando, FL



POSNA
PEDIATRIC ORTHOPAEDIC SOCIETY
OF NORTH AMERICA

AAOS

AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS

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