19th ANNUAL POS®

International Pediatric Orthopaedic Symposium

December 5-9, 2023 | Orlando, FL Suken Shah, MD, FAOA, FAAOS Co-Director

Derek Kelly, MD, FAOA, FAAOSCo-Director



IPOS® aspires to be the best pediatric orthopaedic educational event in the world

Final Program





The Pediatric Orthopaedic Society of North America gratefully acknowledges these sponsors for their generous financial support in 2023.

Emerald Level (\$300,000+)



Double Diamond Level (\$150,000 - \$299,999)



Diamond Level (\$100,000 - \$149,999)

*DePuy Synthes Stryker

Platinum Level (\$75,000 - \$99,999)

NuVasive Orthofix

Gold Level (\$50,000 - \$74,999)

Pacira BioSciences, Inc.

Silver Level (\$20,000 - \$49,999)

Arthrex
Biedermann Motech
BioMarin Pharmaceutical, Inc.
Children's Healthcare of Atlanta
Children's Hospital Colorado

Globus Medical
Nemours Children's Health
nView medical
*Shriners Children's™
Stanford Children's Health

Bronze Level (\$1,000 - \$19,999)

Akron Children's Hospital
Campbell Clinic Orthopaedics
Central Texas Pediatric Orthopaedics
Children's Hospital of Los Angeles
Children's National Hospital
Cincinnati Children's Hospital
CurveBeam Al

Gillette Children's
Miach Orthopaedics, Inc.
PediTST
Scottish Rite for Children
Washington University St. Louis
Wishbone Medical

*Provided an educational grant for IPOS®

TABLE OF CONTENTS



Acknowledgements	2
About IPOS®	4
IPOS® Faculty	5
IPOS® by Topic	6-7
Schedule at a Glance	8-11
Meeting Schedule	13-51
ePosters	53-61
Exhibit Map	63
Exhibitors	65-71
Policies	73-74
POSNA Antitrust Policy	76-77
Things to do in Orlando	78-79
POSNA Membership	80

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 world-renowned faculty share their expertise in every subspecialty field of pediatric orthopaedics.

Learning Objectives

- Describe foundational aspects of pediatric orthopaedic principles and techniques
- Analyze and incorporate innovations and advances in pediatric orthopaedic surgery when applicable
- Identify potential for and apply improvements to your practice and treatment/outcomes optimization plans
- Practice hands-on techniques for a wide variety of procedures to improve performance
- Develop a growth mindset, soft skills, and emotional intelligence for practice success

Registration

Sponsored by Stryker

Tuesday, December 5	3:00 PM-7:00 PM
Wednesday, December 6	7:00 AM-5:00 PM
Thursday, December 7	7:00 AM-3:00 PM
Friday, December 8	7:00 AM-3:00 PM
Saturday, December 9	8:00 AM-10:00 AM

Exhibit Hall

Join your colleagues in the Exhibit Hall for networking and discovery of new pediatric orthopaedic products and services. Meals and breaks will be served in the Exhibit Hall.

Wednesday, December 6	7:00 AM-5:00 PM
Wednesday, December 6 Happy Hour in the Hall	2:35 PM-3:35 PM
Thursday, December 7	7:00 AM-4:00 PM
Friday, December 8	7:00 AM-3:00 PM



Residents and Fellows: Programming just for you!

Case Competition: Hear the faculty discuss your cases and put your knowledge to the test during the Arabella Leet session!

Top Gun: The 11th annual surgical skills competition allows you to showcase your maverick skill set (by invitation only).

Career Planning and Professional Development: Get perspectives and advice on handling what you do not find in textbooks.

Lunchtime Career Development: Join IPOS® faculty, Wednesday–Friday, for a 30-minute case review and discussion.

Breakfast with Faculty: This is a unique, direct-access opportunity with leaders in the field to feed your mind, ask questions, and seek professional guidance on Thursday morning over breakfast from 7:00 AM-8:00 AM.

Craft Your Own IPOS® Adventure with Over 30 Breakout Sessions and 11 Different Topic Tracks Featuring:

- Focused lectures and engaging case discussions
- Surgical skills demonstrations
- Industry-sponsored sessions on cutting edge techniques
- Small group discussions
- Essentials Session on how to teach and learn Pediatric Orthopaedic Surgery

IPOS® Lounge

Network, Relax, and Recharge

Located in the back of the Exhibit Hall

Hands-on Sessions You Don't Want to Miss:

- On the Go Sessions: Halo, Pavlik, and Ponseti
- Pelvic Osteotomies I and II
- Pinning an Elbow
- Ponseti Casting and Congenital Vertical Talus

NEW for 2023

- The Future Direction of AI and ML in Peds Ortho
- Mid-Career Programming
 - Leadership Institute
 - CMS Coding Update
 - ABOS Re-Certification Changes
 - Changing Jobs Mid-Career
- General Session 2: Syndromes Managed by Multi-Disciplinary Teams
 - Focuses on topics like AMC, OI, and CTD



Suken Shah, MD, FAOA, FAAOS Co-Director



Derek Kelly, MD, FAOA, FAAOS Co-Director

IPOS® 2023 Faculty

Lindsay Andras, MD Alexandre Arkader, MD **Donald Bae, MD*** Pablo Castañeda, MD **Robert Cho, MD, FAAOS***

Jon Davids, MD

Craig Eberson, MD, FAOA

Eric Edmonds, MD*

Henry Ellis, MD

Nicholas Fletcher, MD

John (Jack) Flynn, MD*

Theodore Ganley, MD

Michael Glotzbecker, MD

Christine Ho, MD

Mininder Kocher, MD, MPH*

Jennifer Laine, MD*

John Lovejoy III, MD, FAAOS

Scott Luhmann, MD

Jeff Martus, MD, MS*

James McCarthy, MD

Philip McClure, MD*

Thomas McPartland, MD

Todd Milbrandt, MD*

L. Reid Boyce Nichols, MD, FAOA, FAAOS*

Kenneth Noonan, MD, MHCDS Matthew Oetgen, MD, MBA

David Podeszwa, MD

Anthony Riccio, MD

Julie Samora, MD, PhD*

Wudbhav (Woody) Sankar, MD*

Jeffrey Sawyer, MD

Jonathan Schoenecker, MD, PhD*

Kevin Shea, MD

Benjamin Shore, MD, MPH, FRCSC

M. Wade Shrader, MD*

Daniel Sucato, MD, MS

Vishwas Talwalkar, MD, FAAOS

V. Salil Upasani, MD

Michael Vitale, MD, MPH*

Burt Yaszay, MD

International Faculty

Alaric Aroojis, MS, D'Ortho, DNB

Maryse Bouchard, MD, MSc*

Ron El-Hawary, MD, MSc, FRCS(C)*

Sandra Jarvis-Selinger, PhD

Simon Kelley, MBChB, PhD, FRCS

Javier Masquijo, MD*

Firoz Miyanji, MD, FRCSC*

Kishore Mulpuri, MBBS, MS, MHSc, FRCSC

Manoj Ramachandran, MD, FRCS (Orth)

Stefan Parent, MD, PhD, FRCS(C)

Daniel Perry, MA(Oxon), PhD, FRCS (Orth)

Christof Radler, MD

Instructors

Jennifer Bauer, MD, MS

Andrea Bauer, MD

Jaysson Brooks, MD

Jaime Rice Denning, MD

Corinna Franklin, MD

Jeanne Franzone, MD

Raymond Liu, MD

Craig Louer Jr., MD

Mihir Thacker, MD

Rachel Thompson, MD

Kali Tileston, MD, FAAOS

Lindley Wall, MD, MSc

Michelle Welborn, MD

Advanced Practice Provider (APP) Faculty

John Ansiaux PA-C

Adriana Glazier, PA-C

Lauren Hewins, PA-C

Ben Johnson, PA-C

Jessica King, PA-C*

Ray Kleposki MSN, CPNP

Valerie Parrish, PA-C

Caitlin Parsons, PA-C

Christopher Tremonti, PA-C

Tracy Warhoover, MSN, APRN, CPNP*

19th Annual IPOS® IPOS® BY TOPIC



Advanced Practice Providers

Wednesday, December 6

3:40 PM-4:40 PM Oceana Grand 2-5
APP CME Breakout 1: What You See on Sports
Center-Top Injuries in the Adolescent Athlete

Thursday, December 7

10:35 AM–11:35 AM Oceana Grand 2-5 APP CME Breakout 2: Put Me in Coach–Injury Prevention and Return to Sports After an Injury

Friday, December 8

8:05 AM–9:35 AM Banda Sea

APP CME Breakout 3: Respect the Past,
Embrace the Future–Recent Advances in
Treatment Options for Common Sports Injuries in
the Adolescent Athlete



Essentials of Pediatric Orthopaedics

Wednesday, December 6

10:35 AM–11:50 AM Pacifica 11-12 CME Breakout 1: Essentials of Pediatric Orthopaedics I

Thursday, December 7

2:45 PM–2:00 PM Pacifica 11-12 CME Breakout 2: Essentials of Pediatric Orthopaedics II

Saturday, December 9

10:05 AM-11:20 AM Pacifica 8-10 CME Breakout 4: Essentials of Pediatric Orthopaedics III



Foot

Wednesday, December 6

1:30 PM-2:15 PM South China Sea Ponseti on the Go (Hands-on)

Thursday, December 7

12:45 PM–2:00 PM Banda Sea
CME Breakout 2: Ponseti Casting (Hands-on)

2:30 PM-4:00 PM Oceana Grand 6-7

Concurrent Session 2: When a Clubfoot That Isn't Just a Clubfoot–Managing Clubfeet in Infants with Syndromes and Multiple Deformities

Friday, December 8

3:00 PM-4:15 PM Banda Sea

CME Breakout 3: Congenital Vertical Talus: Topic Update and Hands-on Casting (Hands-on)



General Pediatric Orthopaedics/Trauma

Wednesday, December 6

8:05 AM-10:05 AM Oceana Grand 6-7 General Session 1: Trauma, Fractures, & Complications

10:35 AM-11:50 AM Pacifica 8-10 CME Breakout 1: Tumors and Infections

Thursday, December 7

8:05 AM–10:05 AM Oceana Grand 6-7 General Session 2: Combination Problems in Syndromic Children–AMC, OI, and CTD

Friday, December 8

12:15 PM–2:15 PM Oceana Grand 6-7 General Session 3: Author's Preferred Techniques

Saturday, December 9

10:05 AM-11:20 AM Pacifica 11-12 CME Breakout 4: Reconstruct, Rotate, or Amputate? Difficult Decisions in Limb Reconstruction



Hand & Upper Extremity

Wednesday, December 6

10:35 AM-11:50 AM Banda Sea CME Breakout 1: Pinning an Elbow (Hands-on)

Thursday, December 7

2:30 PM–4:00 PM Oceana Grand 6-7 Concurrent Session 2: Upper Extremity and Sports Case-Based Learning

Saturday, December 9

CME Breakout 4: Pediatric Upper Limb Surgery: Concepts, Cases, and Controversies





Hip

Wednesday, December 6

10:35 AM-11:50 AM Timor Sea

CME Breakout 1: Pelvic Osteotomies Part 1: Salter, Pemberton, Dega, San Diego

Thursday, December 7

12:45 PM-2:00 PM Pacifica 8-10

CME Breakout 2: Challenging Hips in the

Elementary Years

3:00 PM-3:45 PM South China Sea

Pavlik on the Go (Hands-on)

Friday, December 8

Concurrent Session 3: Femoroacetabular Impingement: Where Are We in 2023?

3:00 PM-4:15 PM Timor Sea

CME Breakout 3: Pelvic Osteotomies Part 2:

Triple. PAO (Hands-on)



Lower Extremity/Deformity

Saturday, December 9

8:05 AM-9:35 AM Coral Sea

Concurrent Session 4: Managing Congenital

Differences Below the Knee



Mid-Career

Friday, December 8

8:05 AM-9:35 AM Pacifica 3-5

Concurrent Session 3: Course for Mid-Career

Surgeons

3:00 PM-4:15 PM Pacifica 3-5

CME Breakout 3: Course for Mid-Career Surgeons

Saturday, December 9

7:30 AM-9:30 AM Pacifica 8-10

Concurrent Session 4: Course for Mid-Career

Surgeons

1

Neuromuscular & Cerebral Palsy

Wednesday, December 6

Concurrent Session 1: Contemporary

Management of the Complex Neuromuscular Child

Thursday, December 7

CME Breakout 2: Gait Analysis and Cerebral Palsy

Interactive Session



Spine

Thursday, December 7

12:45 PM-2:00 PM Pacifica 3-5

CME Breakout 2: Early Onset Scoliosis (Big Curves in Little Kids) and Neuromonitoring Challenges

3:00 PM-3:45 PM South China Sea

Halo on the Go (Hands-on)

Friday, December 8

Concurrent Session 3: Neuromuscular Scoliosis

and Syndromic Spine

3:00 PM-4:15 PM Pacifica 8-10

CME Breakout 3: Growth Modulation of the Spine



Sports

Wednesday, December 6

10:35 AM-11:50 AM Oceana Grand 2-5

CME Breakout 1: Pediatric Sports Medicine

Debates

Concurrent Session 1: Success and Failure in

Pediatric Sports Medicine

WiFi Information

Conference WiFi: IPOS2023

Password: orlando2023

Topics



APP Advanced Practice Providers



Essentials of Pediatric Orthopaedics



Foot



General Pediatric Orthopaedics/Trauma



Hand & Upper Extremity



Hip



Lower Extremity/Deformity



Mid-Career



Neuromuscular & Cerebral Palsy



Spine



Sports

Tuesday, December 5

3:00 PM-7:00 PM	Registration
4:00 PM-5:30 PM Oceana Grand 6-7	Arabella Leet Resident and Fellow Forum* (Sponsored by Shriners Children's™)
5:35 PM-6:35 PM Oceana Grand 6-7	Career Planning and Professional Development for Residents and Fellows* (Sponsored by Medtronic)
6:35 PM-6:50 PM Oceana Grand 6-7	Mingle with Medtronic
7:00 PM-8:15 PM Oceana Grand 2-5	Industry Pre-Course* (Sponsored by OrthoPediatrics)
8:20 PM-9:20 PM	Industry-Sponsored

Reception (Sponsored by OrthoPediatrics)

Wednesday, December 6

7:00 AM-5:00 PM

Registration

7:00 AM-8:00 AM

Breakfast and Exhibits

Pacifica 6-7

8:05 AM-10:05 AM

Oceana Grand 6-7



General Session 1: Trauma, Fractures, &

Complications

10:10 AM-10:30 AM

Pacifica 6-7

Break and Exhibits

10:35 AM-11:50 AM

Pacifica 11-12



CME Breakout 1:

Essentials of Pediatric Orthopaedics I

10:35 AM-11:50 AM

Oceana Grand 2-5

CME Breakout 1: Pediatric Sports Medicine Debates

10:35 AM-11:50 AM

Timor Sea



CME Breakout 1:

Pelvic Osteotomies Part 1: Salter, Pemberton, Dega,

San Diego

10:35 AM-11:50 AM

Banda Sea



CME Breakout 1:

Pinning an Elbow (Hands-on)

10:35 AM-11:50 AM

Pacifica 8-10

Pacifica 6-7



Tumors and Infections

11:55 AM-12:55 PM

12:25 PM-12:55 PM

Lunch and Exhibits

Pacifica 6-7

Lunchtime Career Development*

1:00 PM-2:30 PM

Oceana Grand 6-7

Concurrent Session 1: **Contemporary Management**

of the Complex

Neuromuscular Child

Java Sea

1:00 PM-2:30 PM	Concurrent Session 1:	Thursday	, December 7
Oceana Grand 2-5	Success and Failure in Pediatric Sports Medicine	7:00 AM-3:00 PM	Registration
1:30 PM-2:15 PM South China Sea	Ponseti on the Go (Hands-on)	7:00 AM-8:00 AM Pacifica 6-7	Breakfast and Exhibits
2:35 PM-3:35 PM Pacifica 6-7	Happy Hour in the Hall	7:00 AM-8:00 AM Pacifica 6-7	Breakfast with Faculty*
3:40 PM-4:40 PM Oceana Grand 2-5	APP CME Breakout 1: What You See on Sports Center-Top Injuries in the Adolescent Athlete	8:05 AM-10:05 AM Oceana Grand 6-7	General Session 2: Combination Problems in Syndromic Children-AMC, OI, and CTD
3:40 PM-4:40 PM Pacifica 8-10	Industry Spotlight Sessions 1*: DePuy	10:10 AM-10:30 AM Pacifica 6-7	Break and Exhibits
3:40 PM-4:40 PM Pacifica 3-5 3:40 PM-4:40 PM	Industry Spotlight Sessions 1*: NuVasive Industry Spotlight	10:35 AM-11:35 AM Oceana Grand 2-5	APP CME Breakout 2: Put Me in Coach-Injury Prevention and Return to Sports After an Injury
Banda Sea 3:40 PM-4:40 PM	Sessions 1*: Arthrex Industry Spotlight	10:35 AM–11:35 AM Pacifica 3-5	Industry Spotlight Sessions 3*: Medtronic
Timor Sea 3:40 PM-4:40 PM Coral Sea	Sessions 1*: DePuy Industry Spotlight Sessions 1*: OrthoPediatrics	10:35 AM-11:35 AM Pacifica 8-10 10:35 AM-11:35 AM	Industry Spotlight Sessions 3*: Orthofix Industry Spotlight
4:45 PM–5:45 PM Pacifica 11-12	Industry Spotlight Sessions 2*: NuVasive	Pacifica 11-12	Sessions 3*: Pacira Biosciences
4:45 PM-5:45 PM Timor Sea	Industry Spotlight Sessions 2*: DePuy	10:35 AM-11:35 AM Timor Sea	Industry Spotlight Sessions 3*: Nview
4:45 PM-5:45 PM Java Sea	Industry Spotlight Sessions 2*	10:35 AM-11:35 AM Coral Sea	Industry Spotlight Sessions 3*: OrthoPediatrics
	OrthoPediatrics	10:35 AM-11:35 AM Java Sea	Industry Spotlight Sessions 3*: OrthoPediatrics
		11:40 AM-12:40 PM Pacifica 6-7	Lunch and Exhibits

Thursday continued

12:10 PM-12:40 PM Pacifica 6-7

Lunchtime Career Development*

12:45 PM-2:00 PM

Pacifica 8-10



CME Breakout 2:

Challenging Hips in the Elementary Years

12:45 PM-2:00 PM

Pacifica 3-5

CME Breakout 2: Early Onset Scoliosis (Big Curves in Little Kids) and Neuromonitoring

12:45 PM-2:00 PM

Pacifica 11-12

CME Breakout 2:

Challenges

Essentials of Pediatric Orthopaedics II

12:45 PM-2:00 PM Coral Sea



CME Breakout 2: Gait Analysis and Cerebral Palsy Interactive Session

12:45 PM-2:00 PM Banda Sea



CME Breakout 2: Ponseti Casting (Hands-on)

2:05 PM-2:25 PM Pacifica 6-7

Break and Exhibits

2:30 PM-4:00 PM

Oceana Grand 2-5

Concurrent Session 2:

Upper Extremity and Sports Case-Based Learning

2:30 PM-4:00 PM Oceana Grand 6-7



Concurrent Session 2:

When a Clubfoot That Isn't Just a Clubfoot-Managing Clubfeet in Infants with Syndromes and Multiple Deformities

3:00 PM-3:45 PM South China Sea



Pavlik on the Go (Hands-on)

3:00 PM-3:45 PM South China Sea



Halo on the Go (Hands-on)

5:00 PM-7:30 PM

Top Gun Surgical Skills Competition* (by invitation only)

Friday, December 8

7:00 AM-3:30 PM

Registration

7:00 AM-8:00 AM Pacifica 6-7

Breakfast and Exhibits

8:05 AM-9:35 AM

Pacifica 3-5



Concurrent Session 3:

Course for Mid-Career Surgeons

8:05 AM-9:35 AM Oceana Grand 6-7



Concurrent Session 3:

Femoroacetabular Impingement: Where Are We in 2023?

8:05 AM-9:35 AM Oceana Grand 2-5



Concurrent Session 3:

Neuromuscular Scoliosis and Syndromic Spine

8:05 AM-9:35 AM Banda Sea



APP CME Breakout 3:

Respect the Past, Embrace the Future-Recent Advances in Treatment Options for Common Sports Injuries in the Adolescent Athlete

9:40 AM-10:00 AM

Pacifica 6-7

Break and Exhibits

10:05 AM-11:05 AM Pacifica 8-10

Industry Spotlight Sessions 4*: DePuy

3:40 PM-4:40 PM Pacifica 11-12

Industry Spotlight Sessions 4*: Globus Medical

3:40 PM-4:40 PM Coral Sea

Industry Spotlight Sessions 4*: BioMarin

3:40 PM-4:40 PM Java Sea

Industry Spotlight Sessions 4*: **OrthoPediatrics**

11:10 AM-12:10 PM Pacifica 6-7

Lunch and Exhibits

11:40 AM–12:10 PM Lunchtime Career Development*

12:15 PM–2:15 PM General Session 3:

Oceana Grand 6-7 Author's Preferred Techniques

2:15 PM–2:30 PM Awards Presentation

Oceana Grand 6-7

2:35 PM–2:55 PM Break and Exhibits

Pacifica 6-7

3:00 PM-4:15 PM Banda Sea



CME Breakout 3:

Congenital Vertical Talus: Topic Update and Handson Casting (Hands-on)

3:00 PM-4:15 PM Pacifica 3-5



CME Breakout 3: Course for Mid-Career Surgeons

3:00 PM-4:15 PM Pacifica 8-10



CME Breakout 3: Growth Modulation of the Spine

3:00 PM-4:15 PM **Timor Sea**



CME Breakout 3: Pelvic Osteotomies Part 2: Triple, PAO (Hands-on)

Saturday, December 9

7:00 AM-8:00 AM **Pacifica 6-7**

Breakfast

8:00 AM-10:00 AM

Registration

8:05 AM-9:35 AM Coral Sea



Concurrent Session 4:

Managing Congenital

Differences Below the Knee

7:30 AM-9:30 AM **Pacifica 8-10**



Concurrent Session 4:

Course for Mid-Career Surgeons

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

Break

10:05 AM-11:20 AM

Pacifica 8-10



CME Breakout 4: Essentials of Pediatric Orthopaedics III

10:05 AM-11:20 AM

Java Sea



CME Breakout 4: Pediatric Upper Limb Surgery: Concepts, Cases and Controversies

10:05 AM-11:20 AM

Pacifica 11-12



CME Breakout 4: Reconstruct, Rotate,

or Amputate? Difficult
Decisions in Limb
Reconstruction

11:25 AM-12:25 PM Pacifica 6-7

Lunch

*Indicates non-CME session (Schedule Subject to Change)







Well Beyond Medicine



DAILY SCHEDULE TUESDAY

Tuesday, December 5

3:00 PM-7:00 PM Registration

4:00 PM-5:30 PM Oceana Grand 6-7

Arabella Leet Resident and Fellows Forum

Sponsored by Shriners Children's™

Chair: Julie Samora, MD, PhD Co-Chair: Jennifer Laine, MD Panelists: Jaysson Brooks, MD; Jaime Rice Denning, MD;

Jeanne Franzone, MD; Raymond Liu, MD



In honor and memory of Dr. Arabella Leet's career and contributions she made improving the lives of children through her work and commitment to both personally and systemically providing quality and safe musculoskeletal care for children.

the Arabella Leet Resident Forum, sponsored by Shriners Children's™, is an opportunity for all to attend an exciting case competition. The top ten cases are provided by this year's scholarship winners with stimulating discussion from IPOS® faculty. Attend to demonstrate your trivia knowledge for prizes and fun!

4:00 PM-4:05PM	Introduction
4:06 PM-4:11 PM	Case 1: Andrew Kirk
4:12 PM-4:17 PM	Case 2: Jeffrey Henstenburg
4:18 PM-4:23 PM	Case 3: Guillermo Marquez
4:24 PM-4:29 PM	Trivia
4:30 PM-4:35 PM	Case 4: Michael O'Brien
4:36 PM-4:41 PM	Case 5: Stefano Cardin
4:42 PM-4:47 PM	Case 6: Christina Herrero
4:48 PM-4:53 PM	Trivia
4:54 PM-4:59 PM	Case 7: Brendon Mitchell
5:00 PM-5:05 PM	Case 8: Florencia Turazza
5:06 PM-5:11 PM	Trivia
5:12 PM-5:17 PM	Case 9: William Scott Fravel
5:18 PM-5:23PM	Case 10: Lee Haruno
5:24 PM-5:30 PM	Trivia



"There are so many reasons to attend IPOS®. I think the most important thing is that it's the most high-yield pediatric conference out there. There is so much jam-packed into four days. With all the different subspecialty tracks, you could attend multiple years in a row and get a totally different experience learning new things at each one."

Amelia Lindgren, MD

DAILY SCHEDULE TUESDAY



Sponsored by Medtronic

5:35 PM-6:35 PM

Oceana Grand 6-7

Career Planning and Professional Development

This interactive hour-long session from POSNA

leaders is designed for orthopaedic trainees to

The faculty will discuss how to build a robust

learn pearls on how to have a successful career.

practice early, provide pearls on teaching the next

generation and options for research and service

endeavors, and address work-life integration.



6:10 PM-6:23 PM

Finance and Wealth Management for Orthopaedic Surgeons lan Rose, LACP, CRES

6:24 PM-6:35 PM **Questions and Answers**

Julie Samora, MD, PhD Jennifer Laine, MD Jaime Rice Denning, MD Donald Bae, MD Raymond Liu, MD Wudbhav (Woody) Sankar, MD Jeffrey Sawyer, MD lan Rose, LACP, CRES Medtronic Representative

6:35 PM-6:50 PM

Mingle with Medtronic

5:35 PM-5:39 PM Introduction and Welcome

> Julie Samora, MD, PhD Jennifer Laine, MD

5:40 PM-5:45 PM How Do I Build a Busy Practice? Is it Better to

Stay Broad or Sub-specialize? Jaime Rice Denning, MD

5:46 PM-5:51 PM How to Incorporate Meaningful Teaching While Staying Patient-Focused (and On Time)

Donald Bae, MD

5:52 PM-5:57 PM How Can I Contribute to

Discovery in Pediatric Orthopaedics? Finding Ideas, Support, and Time

Raymond Liu, MD

5:58 PM-6:03 PM How to Become Involved in Service in

Orthopaedics Wudbhav (Woody)

6:04 PM-6:09 PM The Importance of Life and Family, Outside of

Work

Sankar, MD

Jeffrey Sawyer, MD

7:00 PM-8:15 PM Pre-Course

Oceana Grand 2-5

(Sponsored by OrthoPediatrics) Ego in the OR, Empathy in the Clinic

We train for years to become outstanding technical surgeons, but we know that our job entails far more than that. Our patients come with parents, and an equally important part of our job is to educate and reassure them, providing the confidence that they can trust us with their child. It can be a challenge to have the confidence and leadership that is required in the operating room, while at the same time having empathy and listening skills necessary in the clinic. To be successful, you will need both. We will hear from some technically outstanding surgeons who have mastered the ability to have both ego and empathy and participate in some role-play scenarios.

Alexandre Arkader, MD Maryse Bouchard, MD, MSc Scott Luhmann, MD

8:20 PM-9:20 PM Java Sea

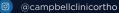
Industry-Sponsored Cocktail Reception (Sponsored by OrthoPediatrics)



Leading the world in pediatric orthopaedic care.

Campbell Clinic is committed to attracting and nurturing the world's top talent in pediatric orthopaedics. We're proud to support surgeons whose research, insight, and expertise built our reputation as an international leader in musculoskeletal care and continue to shape the future of pediatric care.







Introduction to Session

8:05 AM-8:07 AM

Wednesday, December 6

7:00 AM-5:00 PM **Registration**

7:00 AM-8:00 AM Breakfast and Exhibits

Pacifica 6-7

GENERAL SESSION 1

Mastering Call in Pediatric Orthopaedics

You won't want to miss the Mastering Call in Pediatric Orthopaedics session. This year's course provides a comprehensive overview of what it takes to care for pediatric orthopedic injuries, including critical concepts such as the role of the periosteum in pediatric fractures and the pathophysiology behind complications such as pulmonary embolus and necrotizing fasciitis.

Our course will be structured into three sessions that will cover the basics of the periosteum and how to use it in diagnosing and treating fractures, managing injuries to vital structures around fractures, and understanding the acute phase response in both severely injured and infected patients. We will be using interactive technology that allows learners to participate throughout the session by answering questions on their mobile devices, making this an engaging and immersive learning experience.

As experienced educators in pediatric orthopaedics, we are passionate about delivering a high-quality educational experience that will be valuable to your clinical practice. We have received great feedback from previous learners, who have found our content to be relevant, engaging, and useful in their every day work.

7:45 AM-8:00 AM	Onboarding
8:00 AM-8:04 AM	Introduction to IPOS® and Teams Co-Director: Suken Shah, MD, FAOA, FAAOS

8:05 AM-8:07 AM	Introduction to Session and App Moderators: Jonathan Schoenecker, MD, PhD Nicholas Fletcher, MD
8:08 AM-8:39 AM	Trauma Periosteum
8:08 AM-8:14 AM	Periosteum Introduction Jonathan Schoenecker, MD, PhD
8:15 AM-8:21 AM	Periosteum Intact Fracture Principles Thomas McPartland, MD
8:22 AM-8:28 AM	Periosteum Not Intact Fracture Principles Jennifer Laine, MD
8:29 AM-8:33 AM	Quiz/Survey 1 Moderator: Nicholas Fletcher, MD
8:34 AM-8:39 AM	Discussion Periosteum Moderator: Nicholas Fletcher, MD
8:40 AM-9:11 AM	Trauma Colateral Damage
8:40 AM-8:46 AM	Open Fracture Management Alexandre Arkader, MD
8:47 AM-8:53 AM	Nerve and Vascular Inury Management Lindley Wall, MD, MSc
8:54 AM-9:00 AM	Physeal Injury Management Nicholas Fletcher, MD
9:01 AM-9:05 AM	Quiz/Survey 2 Collateral Damage Moderator: Lindsay Andras, MD
9:06 AM-9:11 AM	Discussion Collateral Damage Moderator: Lindsay Andras, MD



9:11 AM-9:38 AM	Trauma Severe Injury	10:10 AM-10:30 AM Break and Exhibits Pacifica 6-7
9:12 AM-9:18 AM	Acute Phase Response in Severe Injury Jonathan Schoenecker, MD, PhD	CME BREAKOUT 1 10:35 AM-11:50 AM Pacifica 11-12
9:19 AM-9:25 AM	Multi Trauma Patient Management Lindsay Andras, MD	Essentials of Pediatric Orthopaedics This session covers the basics of pediatric orthopaedics with a focus on recognition,
9:26 AM-9:32 AM	Septic Patient Thomas McPartland, MD	evaluation, and treatment of common conditions. The information is geared toward residents, fellows, and newer advanced practice providers
9:33 AM-9:35 AM	Quiz/Survey 3 Severe Injury Moderator: Alexandre	who desire a strong foundational knowledge and strategy to synthesize clinical data into appropriate treatment plans.
	Arkader, MD	Moderator: Jeff Martus, MD
9:36 AM-9:38 AM	Discussion Severe Injury Moderator: Alexandre Arkader, MD	10:35 AM–10:40 AM Normal Growth and Alignment L. Reid Boyce Nichols, MD,
9:39 AM-10:05 AM	Trauma Wrap Up	FAOA, FAAOS
9:39 AM–9:41 AM	Score Recap Moderators:	10:41 AM-10:46 AM Normal Gait and Gait Deviations M. Wade Shrader, MD
	Nicholas Fletcher, MD Jonathan Schoenecker, MD, PhD	10:47 AM-10:54 AM MSK Imaging Essentials Jeff Martus, MD
9:42 AM-9:45 AM	Quiz 5/Survey Potpourri Moderators: Nicholas Fletcher, MD Jonathan Schoenecker, MD, PhD	10:55 AM-11:01 AM Discussion L. Reid Boyce Nichols, MD, FAOA, FAAOS M. Wade Shrader, MD Jeff Martus, MD
9:46 AM-9:55 AM	Discussion All-Review Audience Response Moderators: Nicholas Fletcher, MD	11:02 AM-11:07 AM Approach to the Child with Developmental Delay James McCarthy, MD
9:56 AM-10:05 AM	Jonathan Schoenecker, MD, PhD Final Results and Discussion Moderators: Nicholas Fletcher, MD	11:08 AM-11:13 AM CP: Lower Extremity (Hip Dysplasia, Crouch Gait, and Foot Deformity) Benjamin Shore, MD, MPH, FRCSC
	Jonathan Schoenecker, MD, PhD	11:14 AM-11:19 AM CP: Upper Extremity Lindley Wall, MD, MSc

- BA
THE CONTRACTOR

	_		
11:20 AM-11:28 AM	Discussion Jeff Martus, MD James McCarthy, MD Benjamin Shore, MD, MPH, FRCSC	10:56 AM-11:01 AM	First-Time Patella Dislocation Conservative Management Corinna Franklin, MD
	Lindley Wall, MD, MSc	11:02 AM-11:07 AM	First-Time Patella Dislocation Operative
11:29 AM-11:34 AM	Limb Length Discrepancy and Limb Deficiency		Management Henry Ellis, MD
	Raymond Liu, MD	11:07 AM-11:13 AM	Discussion Corinna Franklin, MD
11:35 AM-11:40 AM	Hip: DDH, Perthes, SCFE Rachel Thompson, MD		Henry Ellis, MD
11:41 AM-11:50 AM		11:14 AM-11:19 AM	Ankle Instability Conservative Management Javier Masquijo, MD
CME BREAKO	UT 1	11:20 AM-11:25 AM	Ankle Instability Operative Management Maryse Bouchard, MD, MSc
10:35 AM-11:50 AM	Oceana Grand 2-5	44 00 004 44 04 004	
Pediatric Sports N First-Time Joint Dislocand Vote Often for Sur	cations Debated: Vote Early	11:26 AM-11:31 AM	Discussion Javier Masquijo, MD Maryse Bouchard, MD, MSc
Moderator: Theodore		11:32 AM-11:37 AM	First-Time Elbow Dislocation Conservative
10:35 AM-10:37 AM	Opening Remarks and Pre-Debate Voting		Management Kevin Shea, MD
	Moderator: Theodore Ganley, MD	11:38 AM-11:43 AM	First-Time Elbow Dislocation Operative
10:38 AM-10:43 AM	Dislocation Conservative		Management Christine Ho, MD
	Management Eric Edmonds, MD	11:43 AM-11:50 AM	Discussion Kevin Shea, MD
10:44 AM-10:49 AM	First-Time Shoulder Dislocation Operative Management Mininder Kocher, MD, MPH		Christine Ho, MD
10:50 AM-10:55 AM	Discussion Eric Edmonds, MD Mininder Kocher, MD, MPH		



CME BREAKOUT 1



10:35 AM-11:50 AM

Timor Sea

Pelvic Osteotomies Part 1: Salter, Pemberton, Dega, San Diego (Hands-on)

Part 1: Salter, Dega, Pemberton, San Diego Osteotomies

Moderator: Pablo Castañeda, MD

10:35 AM-10:40 AM Salter Osteotomy

Simon Kelley, MBChB, PhD,

FRCS

10:41 PM-10:46 PM Dega/Pemberton

Osteotomy

Nicholas Fletcher, MD

10:47 AM-10:52 AM San Diego

Acetabuloplasty

V. Salil Upasani, MD

10:53 PM-11:09 AM Short Case Review

Pablo Castañeda, MD

11:10 AM-11:50 AM Table Instruction

Hands-on Faculty:

Kishore Mulpuri, MBBS, MS,

MHSc. FRCSC

Alaric Aroojis, MS, D'Ortho,

DNB

V. Salil Upasani, MD

Pablo Castañeda, MD

Nicholas Fletcher, MD

Simon Kelley, MBChB, PhD,

FRCS

WiFi Information

Conference WiFi: IPOS2023

Password: orlando2023

CME BREAKOUT 1



10:35 AM-11:50 AM

Banda Sea

Pinning an Elbow (Hands-on)

A Hands-on and interactive session on pinning of supracondylar humerus fractures, guided by our esteemed IPOS® faculty. Space is limited, so register early!

Moderator: Donald Bae, MD

10:35 AM-10:40 AM Why Skiing Is Such a

Great Family Activity

Donald Bae, MD

10:41 AM–10:46 AM Beginning with BOGERD

Julie Samora, MD, PhD

10:47 AM-10:50 AM **Table Assignments**

Donald Bae, MD

10:50 AM-11:35 AM Hands-on Exercise

Hands-on Faculty:
Donald Bae, MD
Julie Samora, MD, PhD
Kali Tileston, MD, FAAOS
John (Jack) Flynn, MD
Jeffrey Sawyer, MD
Jennifer Laine, MD

Jaysson Brooks, MD Andrea Bauer, MD Matthew Oetgen, MD,

MBA

Derek Kelly, MD, FAAOS,

FAOA

Jennifer Bauer, MD, MS Vishwas Talwalkar, MD,

FAAOS

Thomas McPartland, MD

11:35 AM-11:40 AM **Debrief**

Kali Tileston, MD, FAAOS

10:41 AM-10:47 AM String of Pearls

Moderator: Donald Bae, MD

- BA
100

10:42 AM-10:43 AM My Favorite Room 10:49 AM-10:55 AM Understanding (Maybe) Setup Tip and Managing Non-Kali Tileston, MD, FAAOS **Bacterial Osteomyelitis** Craig Louer Jr., MD 10:43 AM-10:44 AM **My Go-to Closed** Reduction Maneuver 10:56 AM-11:02 AM Pediatric Septic Hip-The **UK** Approach Vishwas Talwalkar, MD, **FAAOS** Daniel Perry, MA (Oxon), PhD. FRCS (Orth) 10:44 AM-10:45 AM The Key to an Open 11:03 AM-11:08 AM Discussion Reduction Andrea Bauer, MD 11:09 AM-11:15 AM Benign Tumors of the 10:45 AM-10:46 AM Pinning Pearl: Lateral Spine: When to Cut, Pins When to Instrument. Jeffrey Sawyer, MD When to Burn Craig Eberson, MD, FAOA 10:46 AM-10:47 AM Pinning Pearl: The 11:16 AM-11:22 AM Bone Tumors Meet Medial Pin John (Jack) Flynn, MD Limb Deformities (MHE, Ollier's, FD...) 10:48 AM-10:50 AM Making Your CAST Mihir Thacker, MD Julie Samora, MD, PhD 11:23 AM-11:29 AM "The Quick Guide" to Managing Benign CME BREAKOUT 1 **Cystic Lesions** Ron El-Hawary, MD, MSc, 10:35 AM-11:50 AM Pacifica 8-10 FRCS(C) Tumors and Infections 11:30 AM-11:36 AM Generalist Approach to This session will discuss the overlap between Malignant Bone Tumors: infectious and neoplastic conditions, including Pearls, Pitfalls, and modern treatment of the most common Staging pathologies and update on related differential Mihir Thacker, MD diagnosis. The goal is to walk through several cases and allow for audience participation and 11:37 AM-11:50 AM **Discussion** interaction. Alexandre Arkader, MD Jonathan Schoenecker,

Moderator: Craig Eberson, MD, FAOA

10:35 AM-10:41 AM Is it a Tumor or

Infection?

Alexandre Arkader, MD

10:42 AM-10:48 AM The Metastatic

Infection and Predicting Complications in MSKI Jonathan Schoenecker, MD, PhD

11:55 AM-12:55 PM Lunch and Exhibits Pacifica 6-7

12:25 PM-12:55 PM Lunchtime Career Pacifica 6-7

MD. PhD

FRCS(C)

Craig Louer Jr., MD

PhD, FRCS (Orth)

Mihir Thacker, MD

Daniel Perry, MA (Oxon),

Ron El-Hawary, MD, MSc,

Craig Eberson, MD, FAOA

Development (non-CME)

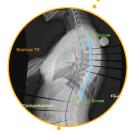
Medtronic

Leading the way in pediatric patient-specific spine solutions

Josephine™
the giraffe is our
ambassador for
education to
children with early
onset scoliosis and
their families.



CD Horizon[™] **ModuLeX**[™] **spinal system**, building on 40 years of patient history using **CD Horizon**[™] **system** technology.



UNID[™] ASI is a longitudinal data collection platform that leverages artificial intelligence and patient specific implants to support planning, execution, and analysis of alignment goals. UNID[™] ASI is FDA cleared for use with CD Horizon[™] Solera[™] and CD Horizon[™] ModuLeX[™] 5.5/6.0 spinal systems.



LigaPASS™ 2.0 system is designed to help achieve a well-balanced spine in both coronal and sagittal planes when screws, hooks, or wires cannot be placed and axial derotation and reduction are both desired.



Mazor™ robotic guidance platform is a powerful surgical solution featuring planning tools that enable 3-D construct design and robotic surgical execution for a seamless OR experience.

See the device manual for detailed information regarding the instructions for use, indications, contraindications, warnings, precautions, and potential adverse events. For further information, contact your local Medtronic representative and/or consult the Medtronic website at medtronic.eu. An electronic version of the package insert may be found at www.medtronic.com/manuals and www.medtronic.com/UNID.

The commercial name of Mazor™ is Mazor X Stealth™ Edition.



CONCURRENT SESSION 1 &

1:00 PM-2:30 PM Oceana Grand 6-7

Contemporary Management of the Complex Neuromuscular Child

Broad discussion of the care of children with cerebral palsy, spinal muscle atrophy, and similar pediatric disabilities, including new techniques of growth modulation, complex care coordination, gene therapy in SMA, and how new therapy is changing the prognosis of SMA.

Moderator: M. Wade Shrader, MD eModerator:

Benjamin Shore, MD, MPH, FRCSC

1:00 PM-1:02 PM Introduction

M. Wade Shrader, MD

1:03 PM-1:10 PM Minimizing Postoperative

> Complications in the Neuromuscular Child M. Wade Shrader, MD

1:11 PM-1:17 PM Who Should We Not

> Operate On? Ethics. Palliative Care, and Shared Decision-Making

Rachel Thompson, MD

1:18 PM-1:23 PM Hip Guided Growth in

> Cerebral Palsy: Technical **Details and Early Results**

Jon Davids, MD

1:24 PM-1:29 PM Knee Guided Growth in

> Cerebral Palsy: Implants, Technique, and Results

Kenneth Noonan, MD,

MHCDS

1:30 PM-1:45 PM Q&A/Case Discussion

> M. Wade Shrader, MD Rachel Thompson, MD Jon Davids, MD Kenneth Noonan, MD.

MHCDS

1:46 PM-1:53 PM

SMA: New Genetic **Diagnosis and Treatment** Changes Everything

Jaysson Brooks, MD

1:54 PM-2:00 PM

SMA Hips, PRO: We Should Operate with the **Changing Prognosis** Benjamin Shore, MD, MPH,

FRCSC

2:01 PM-2:07 PM

SMA Hips, CON: Still Approach with Caution Kishore Mulpuri, MBBS, MS,

MHSc, FRCSC

2:08 PM-2:14 PM

SMA Spine: From EOS to PSF to Intrathecal

Access

Michael Vitale, MD, MPH

2:15 PM-2:30 PM

Q&A/Case Discussion

Jaysson Brooks, MD Benjamin Shore, MD, MPH,

FRCSC

Kishore Mulpuri, MBBS, MS,

MHSc. FRCSC

Michael Vitale, MD, MPH



CONCURREN 1:00 PM-2:30 PM	T SESSION 1 COCCEANA Grand 2-5	1:45 PM-1:50 PM	How to Manage Ankle Instability Jennifer Laine, MD
	Approach Sports Medicine	1:51 PM-1:56 PM	How to Manage Failed Ankle Surgery Maryse Bouchard, MD, MSc
and What to Do When Things Go Wrong in a 101 (Beginner) to 401 (Expert) Course.		1:57 PM-2:03 PM	Discussion John Lovejoy III, MD, FAAOS
Moderator: Eric Edn eModerator: Javier I			Henry Ellis, MD Jennifer Laine, MD Maryse Bouchard, MD, MSc
1:00 PM-1:01 PM	Opening Remarks and Introduction of 101 to 401 Eric Edmonds, MD	2:04 PM-2:10 PM	Motion Analysis in Sports Medicine Corinna Franklin, MD
1:02 PM-1:07 PM	How to Manage Osteochondral Lesions of the Talus	2:11 PM-2:17 PM	Discoid Mensicus Technique Eric Edmonds, MD
1:08 PM-1:13 PM	Javier Masquijo, MD How to Manage the Failures of OLT Surgery Kevin Shea, MD	2:18 PM-2:24 PM 2:25 PM-2:30 PM	Elbow Arthroscopy Techniques Theodore Ganley, MD Discussion
1:14 PM-1:19 PM	How to Manage Knee Cartilage Injuries Corinna Franklin, MD	2.23 FIVI-2.30 FIVI	Corinna Franklin, MD Eric Edmonds, MD Theodore Ganley, MD
1:20 PM-1:25 PM	How to Manage the Failures of Knee Cartilage Surgery Mininder Kocher, MD, MPH	1:30 PM-2:15 PM South China Sea Ponseti on the Go (Hands-on) This session will provide a brief introduction of Ponseti tips and tricks followed by a Hands-ocasting lab with ample opportunity to learn a practice. Hands-on Faculty: L. Reid Boyce Nichols, MD, FAOA, FAAOS Derek Kelly, MD, FAAOS, FAOA Alaric Aroojis, MS, D'Ortho, DNB	de a brief introduction with
1:26 PM-1:32 PM	Discussion Eric Edmonds, MD Javier Masquijo, MD Kevin Shea, MD Corinna Franklin, MD Mininder Kocher, MD, MPH		e opportunity to learn and s, MD, FAOA, FAAOS OS, FAOA
1:33 PM-1:38 PM	How to Manage Meniscus Tears John Lovejoy III, MD, FAAOS	Vishwas Talwalkar, MI	
1:39 PM-1:44 PM	How to Manage Failed Meniscus Surgery Henry Ellis, MD		

2:35 PM-3:35 PM Pacifica 6-7

Happy Hour in the Hall

3:58 PM-4:03 PM

Making the Catch-Common Sports-Related Wrist and Hand Injuries

John Ansiaux, PA-C

3:40 PM-4:40 PM

Industry Spotlight Sessions 1 (non-CME) See page 26 for details

4:04 PM-4:12 PM

Discussion

Caitlin Parsons, PA-C Ben Johnson, PA-C Ray Kleposki, MSN, CPNP John Ansiaux, PA-C

One Too Many Hurdles

APP CME BREAKOUT 1

3:40 PM-4:40 PM Oceana Grand 2-5

What You See on Sports Center-Top Injuries in the Adolescent Athlete

Making the Diagnosis: The Participant Will Understand the Importance of Detailed History, Recognize Key Exam and X-Ray Findings, Identify Common Pitfalls, and Determine Best Next Steps When Diagnosing Common Sports Injuries in the Adolescent Athlete.

Moderator: Tracy Warhoover, MSN, RN, CPNP

3:40 PM-3:45 PM

Taking the Hit-

Concussions, Neck, and

Back Injuries

Caitlin Parsons, PA-C

3:46 PM-3:51 PM

Take Me Out to the Ball Game-Common Shoulder Injuries in the **Adolescent Athlete** Ben Johnson, PA-C

3:52 PM-3:57 PM

What's Your Pitch Count? Elbow Injuries Seen in Young Throwing **Athletes** Ray Kleposki, MSN, CPNP

4:13 PM-4:18 PM

to Overcome-Sports **Related Hip Injuries** Valerie Parrish, PA-C

4:19 PM-4:24PM

Not a Slam Dunk-Common Knee Injuries in Adolescent Athletes Adriana Glazier, PA-C

4:25 PM-4:30 PM

Don't Get Tripped Up-Ankle and Foot Injuries Christopher Tremonti, PA-C

4:31 PM-4:40 PM

Discussion

Valerie Parrish, PA-C Adriana Glazier, PA-C Christopher Tremonti, PA-C

4:45 PM-5:45 PM

Industry Spotlight Sessions 2 (non-CME) See page 26 for details

POSNA DIRECT

Your tax-deductible donation supports POSNA's vision for a world with optimal musculoskeletál health for all children.





INDUSTRY SPOTLIGHT WEDNESDAY

Industry Spotlight Session 1

3:40 PM-4:40 PM

Arthrex, Inc. (Non-CME) Banda Sea

Eric Edmonds, MD

Managing ACL Tears in Adolescent Patients
Immerse yourself in an engaging discussion focused
on managing ACL injuries in adolescent patients
guided by expert faculty. Gain valuable insights and
hands-on experience through a dry lab session, where
you'll have the exclusive opportunity to use the first
and only FDA cleared device designed specifically for
pediatric ACL surgery."

OrthoPediatrics (Non-CME) Coral Sea

Nicholas Fletcher, MD; Jeanne Franzone, MD

Small Canal Solutions for Pediatrics

This case-based session will focus on unique treatments for patients with small canals for both deformity correction and trauma indications.

DePuy (Non-CME) Timor Sea

Walter Samora, MD; Khristinn Kellie Leitch, MD Lower Extremity Pediatric Fracture Management Explore myriad lower extremity pediatric fracture treatment options in this hands-on session with Dr. Walter Samora of Nationwide Children's Hospital and the Hon. Dr. Khristinn Kellie Leitch of the University of Mississippi Medical Center Children's Hospital. A case-based discussion on when and where to utilize harness, casting, nailing, plating, and framing treatment plans will be followed by rotating labs of the DePuy Synthes adolescent nail, submuscular plating, and framing product portfolios.

DePuy (Non-CME) Pacifica 8-10

Keith Bachmann, MD; Firoz Miyanji, MD, FRCSC; V. Salil Upasani, MD; Jennifer Bauer, MD, MS Complex Spine: Transition from Early Onset to

Young Adult

Please join our expert surgeon panel for an interactive, case-based discussion following the surgical progression from EOS to skeletally mature patients. The cases presented will touch upon the unique challenges that present for each pathology and the important considerations that drive the panel's treatment plan.

NuVasive (Non-CME) Pacifica 11-12

Christopf Radler, MD; Philip McClure, MD; Shawn Standard, MD

Precice Case Mash Up: Unveiling Fundamental Pearls and Principles for Success

Drs. Radler, McClure, and Standard will lead an interactive walk-through of multiple case scenarios using Precice, covering patient selection, pre-op planning, intra-op execution, and post-op case management. Special focus will be directed towards the core Precice principles and fundamentals that are applicable to all case examples shown. Open Q&A exchange is encouraged throughout.

Industry Spotlight Session 2

4:45 PM-5:45 PM

OrthoPediatrics (Non-CME) Java Sea

Andrea Kramer, MD; Jonas Owen, MD; David Speers, CPO

Femur Fracture/Bracing Workshop (DF2 Debut)

Recent studies suggest that functional bracing may be equivalent to spica casting for patients with femur fractures. This session will highlight a commercially available brace, the research supporting its use, and how to integrate into a busy pediatric orthopaedic practice.

DePuy (Non-CME) Timor Sea

Walter Samora, MD; Khristinn Kellie Leitch, MD Lower Extremity Pediatric Fracture Management Explore myriad lower extremity pediatric fracture treatment options in this hands-on session with Dr. Walter Samora of Nationwide Children's Hospital and the Hon. Dr. Khristinn Kellie Leitch of the University of Mississippi Medical Center Children's Hospital. A case-based discussion on when and where to utilize harness, casting, nailing, plating, and framing treatment plans will be followed by rotating labs of the DePuy Synthes adolescent nail, submuscular plating, and framing product portfolios.

NuVasive (Non-CME) Pacifica 11-12

Lindsay Andras, MD; Michelle Welborn, MD; Megan Johnson, MD

Addressing Pediatric Spinal Deformity from Occiput to Pelvis: Holistic Strategies to Optimize Patient OutcomesN33

Please join our esteemed faculty as they share their insights, tips, and tricks around treating the full pediatric spine across ages and indications. This will be an interactive case-based discussion around best practices in the cervical, thoracolumbar, and pelvic pediatric spine followed by a hands-on session to demonstrate the latest techniques in treating pediatric spinal deformity. Learn techniques in treating pediatric spinal deformity.









Stanford Excellence By the Numbers

- 2 IPOS® 2023 faculty: Kevin Shea, MD and Kali Tileston, MD
- 70 retrospective and prospective active trials
- 42 peer-reviewed publications (and counting) in 2023
- 25 national and regional presentations
- 38,000 outpatient visits a year
- 2,000 surgeries a year
- 15 pediatric orthopedic surgeons and sports medicine specialists



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

DAILY SCHEDULE THURSDAY

Thursda	y, December 7	8:29 AM-8:34 AM	The Arthrogrypotic Hip: What Can We Do
7:00 AM-3:00 PM	Registration		with It?
7:00 AM-8:00 AM Pacifica 6-7	Breakfast and Exhibits	8:35 AM-8:40 AM	Pablo Castañeda, MD Talk about Miserable
7:00 AM-8:00 AM Pacifica 6-7	Breakfast with Faculty (non-CME)		Malalignment The Lower Extremity in AMC L. Reid Boyce Nichols, MD, FAOA, FAAOS
	Oceana Grand 6-7	8:41 AM-8:46 AM	Foot and Ankle Challenges in Arthrogryposis
Combination Problems in Syndromic Children–AMC, OI, and CTD Providing good care for complex patients with musculoskeletal conditions often requires comprehensive knowledge and a multidisciplinary approach. In this session, we will discuss three conditions in a case-based format to reveal and discuss central and peripheral issues critical to manage.		8:47 AM-8:52 AM	Anthony Riccio, MD Discussion Alaric Aroojis, MS, D'Ortho, DNB Michael Vitale, MD, MPH Lindley Wall, MD, MSc Pablo Castañeda, MD L. Reid Boyce Nichols, MD, FAOA, FAAOS Anthony Riccio, MD
Moderator: John (Ja	ack) Flynn, MD		Antinony Miccio, Mid
Moderator: John (Ja eModerator: Lindsa		8:53 AM-9:28 AM	Osteogenesis Imperfecta
		8:53 AM-9:28 AM 8:53 AM-8:58 AM	
eModerator: Lindsa	y Andras, MD Opening Remarks Co-Director: Suken Shah, MD, FAOA,		Osteogenesis Imperfecta Spine Problems in OI from Occiput to Sacrum Suken Shah, MD, FAOA, FAAOS Humeral Shaft Deformity
eModerator: Lindsa 8:05 AM-8:05 AM	y Andras, MD Opening Remarks Co-Director: Suken Shah, MD, FAOA, FAAOS Arthrogryposis Multiplex	8:53 AM-8:58 AM	Spine Problems in OI from Occiput to Sacrum Suken Shah, MD, FAOA, FAAOS Humeral Shaft Deformity in OI and Reconstruction with Function in Mind Jeanne Franzone, MD Consequences of Acetabular Protrusio in OI Can Anything Be
eModerator: Lindsa 8:05 AM-8:05 AM 8:05 AM-8:52 AM	y Andras, MD Opening Remarks Co-Director: Suken Shah, MD, FAOA, FAAOS Arthrogryposis Multiplex Congenita Current Knowledge About the Etiology and Spectrum of AMC Alaric Aroojis, MS, D'Ortho,	8:53 AM-8:58 AM 8:59 AM-9:04 AM	Spine Problems in OI from Occiput to Sacrum Suken Shah, MD, FAOA, FAAOS Humeral Shaft Deformity in OI and Reconstruction with Function in Mind Jeanne Franzone, MD Consequences of Acetabular Protrusio in

DAILY SCHEDULE THURSDAY

	C. B. C.
San Marie	100

9:17 AM-9:22 AM	Bisphosphonate Therapy in OI and Future Modalities of Treatment Vishwas Talwalkar, MD, FAAOS		Oceana Grand 2-5 -Injury Prevention ports After on Injury
9:23 AM-9:28 AM	Discussion Suken Shah, MD, FAOA, FAAOS Jeanne Franzone, MD Kishore Mulpuri, MBBS, MS, MHSc, FRCSC Derek Kelly, MD, FAAOS, FAOA Vishwas Talwalkar, MD, FAAOS	The participant will be prevent season ending rest, time off from spe They will also be able after an injury has occ rehab, or surgery) and	able to identify key ways to g injuries (improving form, cific sports, warm ups). to determine next steps curred (rest, immobilization, d appreciate the importance approach to getting these
9:29 AM-10:05 AM	Connective Tissue Disorders		arhoover, MSN, RN, CPNP
9:29 AM-9:34 AM	Cervical Spine in CTD: Instability, Kyphosis, and Cerebrovascular Issues Jennifer Bauer, MD, MS	10:35 AM-10:40 AM	Thinking Clearly– Protocol for Return to Sports After a Concussion Caitlin Parsons, PA-C
9:35 AM-9:40 AM	Thoracolumbar Spine in CTD Jaysson Brooks, MD	10:41 AM-10:46 AM	Coming Full Circle– Return to Sport Considerations Following Shoulder
9:41 AM-9:46 AM	Late Onset Hip Dysplasia in CTD: Successes and Failures	10:47 AM-10:52 AM	Injury/Surgery Ben Johnson, PA-C Orthopaedic
9:47 AM-9:52 AM	Mihir Thacker, MD Managing the Unstable Patella in CTD Mininder Kocher, MD, MPH	10.47 AIVI-10.32 AIVI	Manifestations of Eating Disorders Ray Kleposki, MSN, CPNP
9:52 AM-9:57 AM	Ankle Instability in CTD: Bone and Soft Tissue Concerns Maryse Bouchard, MD, MSc	10:53 AM-10:58 AM	Catching Up with the Team-Returning to Play After a Wrist or Hand Injury John Ansiaux, PA-C
9:58 AM-10:05 AM	Discussion Jennifer Bauer, MD, MS Jaysson Brooks, MD Mihir Thacker, MD Mininder Kocher, MD, MPH Maryse Bouchard, MD, MSc	10:59 AM-11:07 AM	Discussion Caitlin Parsons, PA-C Ben Johnson, PA-C Ray Kleposki, MSN, CPNP John Ansiaux, PA-C
10:10 AM-10:30 AM Pacifica 6-7	Break and Exhibits	11:08 AM-11:13 AM	Hip Hip Hooray, When Can I Go Back to Play– Hip Injuries Valerie Parrish, PA-C

DAILY SCHEDULE THURSDAY

	73.
San Marie	And the second

11:14 AM-11:19 AM Making the Cut-Protocol for Returning to Full Sports After a Knee Iniurv

Adriana Glazier, PA-C

11:20 AM-11:25 AM Bouncing Back From

the Bench-Return to Sports After an Ankle or Foot Injury

Christopher Tremonti, PA-C

11:26 AM-11:35 AM **Discussion**

Valerie Parrish, PA-C Adriana Glazier, PA-C Christopher Tremonti, PA-C

10:35 AM-11:35 AM Industry Spotlight

Sessions 3 (non-CME) See page 36 for details

11:40 AM-12:40 PM Lunch and Exhibits Pacifica 6-7

12:10 PM-12:40 PM Lunchtime Career Pacifica 6-7 Development (non-CME)

CME BREAKOUT 2

12:45 PM-2:00 PM Pacifica 8-10

Challenging Hips in the **Elementary Years**

This session will cover the diagnosis and management of atypical hips in the 6-11 year age group.

Moderator: Wudbhav (Woody) Sankar, MD

12:45 PM-12:50 PM DDH: Decision-Making in

Mild-Moderate Dysplasia Daniel Perry, MA(Oxon), PhD, FRCS (Orth)

12:51 PM-12:56 PM DDH: Managing Growth Arrest

> Kishore Mulpuri, MBBS, MS, MHSc, FRCSC

12:57 PM-1:02 PM **DDH: Late Neglected**

Dislocations

Simon Kelley, MBChB, PhD,

FRCS

1:03 PM-1:08 PM Questions

> Wudbhav (Woodv) Sankar, MD

Daniel Perry, MA(Oxon),

PhD. FRCS (Orth) Kishore Mulpuri, MBBS, MS,

MHSc, FRCSC

Simon Kellev, MBChB, PhD.

FRCS

1:09 PM-1:14 PM MHE Hip Deformity: **Elements and Solutions**

Mihir Thacker, MD

1:15 PM-1:20 PM Charcot Marie Tooth: It

May See You More Than You See It!

Wudbhav (Woody) Sankar, MD

1:21 PM-1:26 PM Sickle Cell Anemia and Osteonecrosis

of the Hip

Jonathan Schoenecker,

MD, PhD

1:27 PM-1:32 PM Questions

> Mihir Thacker, MD Wudbhav (Woody) Sankar, MD

Jonathan Schoenecker,

MD. PhD

1:33 PM-2:00 PM Cases

Wudbhav (Woody)

Sankar, MD

Daniel Perry, MA(Oxon), PhD, FRCS (Orth)

Kishore Mulpuri, MBBS, MS, MHSc, FRCSC

Simon Kelley, MBChB, PhD. FRCS

Mihir Thacker, MD Jonathan Schoenecker,

MD. PhD

DAILY SCHEDULE THURSDAY



CME BREAKOUT 2



12:45 PM-2:00 PM

Pacifica 3-5

Early Onset Scoliosis (Big Curves in Little Kids) and Neuromonitoring Challenges

Spine geeks rejoice! This two-part interactive breakout will feature all stops on the EOS journey and faculty-led small groups dealing with simulated neuromonitoring changes.

Moderator: Firoz Miyanji, MD, FRCSC

12:45 PM-12:50 PM Casting and NonOp

Strategies in EOS: Treatment Plan or Delaying Tactic? Michelle Welborn, MD

12:51 PM-12:56 PM Abandon Ship: When

to Start the Surgical Journey in EOS Michael Glotzbecker, MD

12:57 PM-1:02 PM Conversion of Growing

Rods to Final Fusion: Why, When, and How Lindsay Andras, MD

1:03 PM-1:08 PM Challenges in Congenital

Cervicothoracic
Deformity Management

Firoz Miyanji, MD, FRCSC

1:08 PM-1:12 PM **Discussion**

Michelle Welborn, MD Michael Glotzbecker, MD Lindsay Andras, MD Firoz Miyanji, MD, FRCSC 1:13 PM-1:29 PM

Case Presentations and Discussion

Moderator: Firoz Miyanji,

MD, FRCSC

John (Jack) Flynn, MD Jennifer Bauer, MD, MS Michael Vitale, MD, MPH

Jeff Martus, MD

1:30 PM-2:00 PM

Adolescent Idiopathic Scoliosis (Small Group-Based Discussion): Neuromonitoring Challenges

Moderator:

Firoz Miyanji, MD, FRCSC

Facilitator:

Michael Vitale, MD, MPH

1:30 PM-1:54 PM

Small Group Breakout: "Responding to Real-Time Neuromonitoring

Changes"

Small Group Faculty: Robert Cho, MD, FAAOS Michael Glotzbecker, MD Lindsay Andras, MD Jennifer Bauer, MD, MS John (Jack) Flynn, MD Todd Milbrandt, MD Burt Yaszay, MD

Ron El-Hawary, MD, MSc,

FRCS(C)

1:55 PM-2:00 PM

Summary: How I Repond to Intraop Monitoring

Changes

Michael Vitale, MD, MPH



"Having attended one of the first IPOS® meetings nearly 20 years ago, I have watched it progress. It allows you to be around the greatest minds in pediatric orthopaedics and learn about nearly any topic that you're interested in."

Jeffrey Shilt, MD

DAILY SCHEDULE THURSDAY



CME BREAKOUT 2

12:45 PM-2:00 PM Pacifica 11-12

Essentials of Pediatric Orthopaedics II

This session covers the basics of pediatric orthopaedics with a focus on recognition, evaluation, and treatment of common conditions. The information is geared toward residents, fellows, and newer advanced practice providers who desire a strong foundational knowledge and strategy to synthesize clinical data into appropriate treatment plans.

Moderator: Matthew Oetgen, MD, MBA

12:45 PM-12:50 PM Approach to the Limping

Child

Craig Eberson, MD, FAOA

12:51 PM-12:56 PM Acute and Chronic MSK

Infections

Raymond Liu, MD

12:57 PM-1:02 PM MSK Tumors: Staying

Out of Trouble

Alexandre Arkader, MD

1:03 PM-1:11 PM **Discussion**

Craig Eberson, MD, FAOA Raymond Liu, MD Alexandre Arkader, MD

1:12 PM-1:17 PM Neonatal Foot (Clubfoot,

CVT, Calcaneovalgus, Met Add, Polydactyly)

Jaime Rice Denning, MD

1:18 PM-1:23 PM Child/Adolescent Foot

(Accessory Navicular, Curly Toes, Hallux Valgus, Pes Planus, Tarsal Coalition)

Christof Radler, MD

1:24 PM -1:32 PM Discussion

Jaime Rice Denning, MD Christof Radler, MD 1:33 PM-1:38 PM

Sports: Knee/Ankle (ACL, Meniscus Tear, Discoid Meniscus, OCD, Patellar Instability, Ankle

Instability)

Corinna Franklin, MD

1:39 PM-1:44 PM Sports: Shoulder/Elbow

(Shoulder Instability, Elbow OCD)

Eric Edmonds, MD

1:45 PM-1:50 PM

Approach to the Patient with Multifocal Musculoskeletal

Symptoms

John Lovejoy III, MD, FAAOS

1:51 PM-2:00 PM

Discussion

Corinna Franklin, MD Eric Edmonds, MD

John Lovejoy III, MD, FAAOS

CME BREAKOUT 2



12:45 PM-2:00 PM

Coral Sea

Gait Analysis and Cerebral Palsy Interactive Session

Practical learning of gait impairments and treatment in cerebral palsy, including small group discussion, flipped classroom, and basics of observational and instrumented gait analysis.

Moderator: M. Wade Shrader, MD

12:45 PM-12:47 PM Introduction

M. Wade Shrader, MD

12:48 PM-12:53 PM Identifying Pathological

Gait in CP

Benjamin Shore, MD, MPH,

FRCSC

12:54 PM-12:59 PM How I Approach Gait

Analysis: The Diagnostic

Matrix

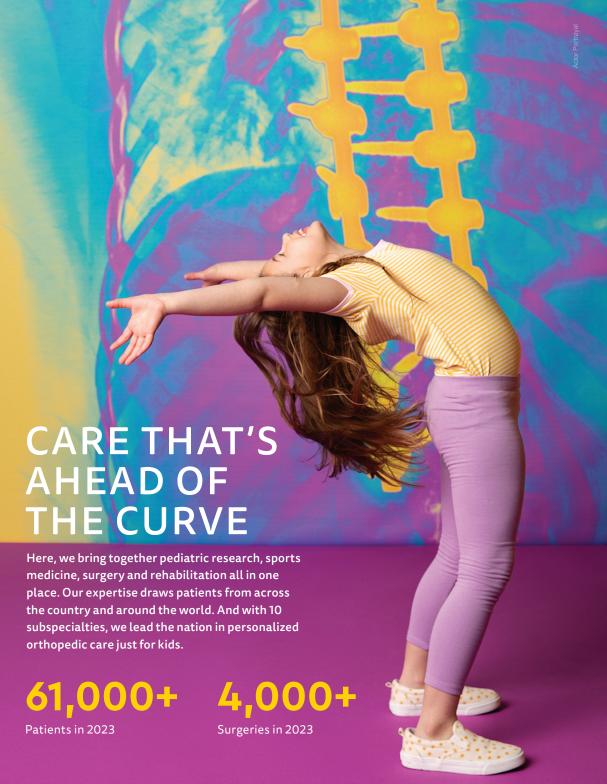
Jon Davids, MD

DAILY SCHEDULE THURSDAY



1:00 PM-1:15 PM Flipped Classroom: Jump Gait M. Wade Shrader, MD Benjamin Shore, MD, MPH, FRCSC Jon Davids, MD James McCarthy, MD Jennifer Laine, MD Rachel Thompson, MD	CME BREAKC 12:45 PM-2:00 PM	OUT 2 Banda Sea	
	Ponseti Casting (Hands-on) This session will provide a brief introduction with Ponseti casting and bracing tips and tricks followed by a Hands-on casting lab with ample opportunity to learn and practice. Braces will also be available to practice application.		
1:15 PM-1:30 PM	Flipped Classroom: Miserable Malalignment M. Wade Shrader, MD	Moderator: Maryse	Bouchard, MD, MSc
	Benjamin Shore, MD, MPH, FRCSC Jon Davids, MD James McCarthy, MD	12:45 PM-12:50 PM	Clubfoot Ponseti Video Derek Kelly, MD, FAAOS, FAOA
	Jennifer Laine, MD Rachel Thompson, MD	12:51 PM-12:56 PM	5 Things to Do for the Complex Clubfoot Javier Masquijo, MD
1:30 PM-1:45 PM	Flipped Classroom: Adolescent Crouch Gait M. Wade Shrader, MD Benjamin Shore, MD, MPH, FRCSC	12:57 PM-1:03 PM	5 Things Never to Do When Casting Clubfeet Todd Milbrandt, MD
	Jon Davids, MD James McCarthy, MD Jennifer Laine, MD Rachel Thompson, MD	1:04PM-1:09 PM	5 Things to Do for Running the Optimal Clubfoot Clinic Kenneth Noonan, MD, MHCDS
1:46 PM-1:50 PM	Master Review Case 1 (Jump Gait): Take Home Points James McCarthy, MD	1:10 PM-1:15 PM	Clubfoot Bracing Compliance Tricks Alaric Aroojis, MS, D'Ortho, DNB
1:51 PM-1:55 PM	Master Review Case 2 (Miserable Malalignment): Take Home Points Jennifer Laine, MD	1:16 PM-2:00 PM	Hands-on Instruction Hands-on Faculty: L. Reid Boyce Nichols, MD, FAOA, FAAOS Derek Kelly, MD, FAAOS,
1:56 PM-2:00 PM	Master Review Case 3 (Adolescent Crouch Gait): Take Home Points Rachel Thompson, MD		FAOA Javier Masquijo, MD Maryse Bouchard, MD, MSc Kenneth Noonan, MD, MHCDS Alaric Aroojis, MS, D'Ortho, DNB

2:05 PM-2:25 PM Break and Exhibits Pacifica 6-7





Learn more about how we're advancing pediatric orthopedic care.



DAILY SCHEDULE THURSDAY

CONCURREN 2:30 PM-4:00 PM	IT SESSION 2 Oceana Grand 2-5	3:33 PM-3:38 PM	Elbow Dislocations and Sequelae Christine Ho, MD
Upper Extremity and Sports Case-Based Learning Shoulder, elbow, and wrist instability are common and often challenging problems in the pediatric athlete. Join our esteemed experts for this		3:39 PM-3:46 PM	Elbow Dislocation with Medial Epicondyle Fracture Julie Samora, MD, PhD
case-based session of upper limb!	on sports injuries of the	3:47 PM-3:54 PM	My Elbow Is Stiff: Now What? Andrea Bauer, MD
Moderator: Donald eModerator: Christi		3:55 PM-4:00 PM	Discussion Christine Ho, MD
2:30 PM-2:32 PM	Introduction Moderator: Donald Bae, MD		Julie Samora, MD, PhD Andrea Bauer, MD
2:33 PM-2:38 PM	Ulnar Sided Wrist Pain: A Black Box? Lindley Wall, MD, MSc	CONCURREN	IT SESSION 2 Oceana Grand 6-7
2:39 PM-2:46 PM	ECU Instability: Case Andrea Bauer, MD	When a Clubfoot That Isn't Just a Clubfoot-Managing Clubfeet in	
2:47 PM-2:54 PM	Ulnar Impaction Secondary to Gymnast Wrist: Case Julie Samora, MD, PhD	Infants with Syndromes and Multiple Deformities This session will discuss complexities and controversies in clubfoot management of children with concurrent medical and orthopaedic issues.	
2:55 PM-3:02 PM Discussion Lindley Wall, MD, MSc	Moderator: Maryse Bouchard, MD, MSc		
	Andrea Bauer, MD Julie Samora, MD, PhD	2:30 PM-2:32 PM	Welcome Remarks Moderator: Maryse Bouchard, MD, MSc
3:03 PM-3:08 PM	Scapula Alata: Diagnosis and Management Theodore Ganley, MD	2:33 PM-2:58 PM	Clubfoot in the Infant with Concurrent
3:09 PM-3:16 PM	SC Traumatic Fracture/ Dislocation: Case Mininder Kocher, MD, MPH		Orthopaedic and Medical Diagnoses Moderator: Maryse Bouchard, MD, MSc
3:17 PM-3:24 PM	AC Joint: A Case of Separation Anxiety Eric Edmonds, MD	2:33 PM-2:38 PM	The Infant with Clubfoot and DDH Mihir Thacker, MD
3:25 PM-3:32 PM	Discussion Theodore Ganley, MD Mininder Kocher, MD, MPH Eric Edmonds, MD	2:39 PM-2:44 PM	The Infant with Ipsilateral Clubfoot and Congenital Knee Dislocation Alaric Aroojis, MS,
34			D'Ortho, DNB

DAILY SCHEDULE THURSDAY

2:45 PM-2:50 PM	The Infant with Clubfoot Requiring a Prolonged NICU Admission Derek Kelly, MD, FAAOS, FAOA
2:51 PM-2:58 PM	Discussion Maryse Bouchard, MD, MSc Mihir Thacker, MD Alaric Aroojis, MS, D'Ortho, DNB Derek Kelly, MD, FAAOS, FAOA
2:59 PM-3:28 PM	The Stiff Non-Idiopathic Clubfoot Moderator: Alaric Aroojis, MS, D'Ortho, DNB
2:59 PM-3:05 PM	The Infant with a Stiff Arthrogryposis Clubfoot L. Reid Boyce Nichols, MD, FAOA, FAAOS
3:06 PM-3:12 PM	The Infant with an Equinovarus Foot with Fibular Hemimelia Anthony Riccio, MD
3:13 PM-3:19 PM	The Infant with a Clubfoot and Amniotic Bands Javier Masquijo, MD
3:20 PM-3:28 PM	Discussion Alaric Aroojis, MS, D'Ortho, DNB L. Reid Boyce Nichols, MD, FAOA, FAAOS Anthony Riccio, MD Javier Masquijo, MD
3:29 PM-4:00 PM	The Neuromuscular and Syndromic Clubfoot Moderator: Anthony Riccio, MD
3:29 PM-3:35 PM	Clubfoot in Children with Trisomy 21 Kenneth Noonan, MD, MHCDS

3:36 PM-3:42 PM

Clubfoot in Children with Spina Bifida
Vishwas Talwalkar, MD, FAAOS

3:42 PM-3:48 PM The Undiagnosed
Paralytic Clubfoot
Jaime Rice Denning, MD

3:49 PM-4:00 PM Discussion

Anthony Riccio, MD Kenneth Noonan, MD, MHCDS

Vishwas Talwalkar, MD, FAAOS

Jaime Rice Denning, MD

3:00 PM-3:45 PM South China Sea Paylik on the Go (Hands-on)



Join the faculty for a Hands-on experience to learn bracing tips and tricks, including the Pavlik method and other commonly used braces used to treat hip dysplasia.

Hands-on Faculty:

Wudbhav (Woody) Sankar, MD Simon Kelley, MBChB, PhD, FRCS Pablo Castañeda, MD Kishore Mulpuri, MBBS, MS, MHSc, FRCSC Valerie Parrish, PA-C

3:00 PM-3:45 PM South China Sea Halo on the Go (Hands-on)



Brief introduction with Halo tips and tricks with the opportunity to learn and practice on a simulator with real equipment.

Hands-on Faculty:

Firoz Miyanji, MD, FRCSC Ron El-Hawary, MD, MSc, FRCS(C) Jennifer Bauer, MD, MS Michael Glotzbecker, MD Burt Yaszay, MD John Lovejoy III, MD, FAAOS Suken Shah, MD, FAOA, FAAOS

5:00 PM-7:30 PM **Top Gun Surgical Skills Competition (non-CME)**

(by invitation only)

INDUSTRY SPOTLIGHT THURSDAY



Industry Spotlight Session 3

10:35 AM-11:35 AM

OrthoPediatrics (Non-CME) Coral Sea

Ron El-Hawary, MD, MSc, FRCS(C); Scott Luhmann, MD

Motion Preservation Options in the EOS and AIS Patient Population—Advancements in Guided Growth and Posterior Distraction

The technologies highlighted in this session allow maintenance of growth and motion in two distinct patient populations. Appropriate patient selection and surgical technique review will be discussed.

OrthoPediatrics (Non-CME) Java Sea

Marie Gdalevitch, MD; Mark Seeley, MD

Treatment Choices for SCFE – What to Choose and When?

Unique implants allow for continued growth of patient after SCFE while a more traditional approach is to fuse the patient post-SCFE. This session will explore what to use and when, how to handle post SCFE deformities, and impact of contralateral pinning.

nView Medical (Non-CME) Timor Sea

Kali Tileston, MD, FAAOS; Matthew Oetgen, MD, MBA; Allen Kadado, MD; V. Salil Upasani, MD Next Generation Pediatric 3D Imaging and Navigation—Simplifying Your Current Surgical Workflow

Hands-on experience with the nView S1 imaging system. Demonstrating one system can localize, navigate, verify screw placement, and stitch a final image together with a dramatic reduction in radiation

Medtro Fenic (Non-CME) Pacifica 3-5

Nicholas Fletcher, MD; Mark Erikson, MD

The Evolving Role of AI, Navigation, and Robotics in Pediatric Deformity

The next disruptive advances in pediatric spine surgery are happening now. Medtronic is leading this revolution by integrating powerful complementary technologies: artificial intelligence driven surgical planning, personalized spinal implants, navigation, and robotic-assisted surgical delivery, which together advance standardization and reduce variability. This workshop will provide a unique opportunity to discover how spine surgeons are incorporating these integrated solutions into their practice and how Medtronic is accelerating the transition to a new era of personalized medicine to deliver optimal patient care.

Orthofix (Non-CME)

Pacifica 8-10

David Podeszwa, MD; David Frumberg, MD Radiolucent Circular Fixation: An enLIGHTening New Vision for Pediatrics

Join us for case-based discussion and hands-on demonstration where the experienced faculty take you through a myriad of applications, benefits, and best practices utilizing a light-weight, stable, radiolucent frame for pediatric complex limb reconstruction and deformity correction procedures.

Pacira Biosciences (Non-CME) Pacifica 11-12

Suken Shah, MD, FAOA, FAAOS; Robert Cho, MD, FAAOS

Post-Surgical Pain Management in Children—Achieving Opioid Minimization

Join us for an interactive presentation where we will discuss key insights that led pediatric scoliosis spine surgeons to change their pain management protocols. We will also review the data that led to FDA approval of the first and only long-acting local-anesthetic in pediatrics. Our featured speakers will share their experience utilizing EXPAREL® (bupivacaine liposome injectable suspension) in adolescent idiopathic spine surgery and demonstrate how their administration technique evolved from surgical site infiltration to fascial plane infiltration for an Erector Spinae Plane (ESP) block. Multimodal protocols, recovery milestones, and implementation best practices will also be reviewed.

ORTHOFIX® Pediatric Solutions

Eight-Plate Guided Growth System+**

The **FIRST** plating system designed for guided growth



Fitbone[®]

Intramedullary Lengthening System

The **FIRST** intramedullary lengthening nail system indicated for pediatric use



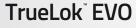
Pioneers in Pediatric Limb Reconstruction

Continuously Providing Innovative Solutions



OrthoNext[®]

The FIRST and ONLY pediatric dedicated pre-planning software platform



Ring Fixation System

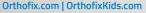
The FIRST and ONLY radiolucent, lightweight pre-assembled frame

Learn more at OrthofixKids.com

Visit us at Booth #19

Orthofix products or services referenced herein are trademarks or registered trademarks of Orthofix SRL and its group of companies. Any rights not expressly granted herein are reserved.

TrueLok is a trademark or registered trademark exclusively licensed to Orthofix Medical Inc. and its affiliate companies. All rights reserved.











100

Friday, 7:00 AM-3:00 PM 7:00 AM-8:00 AM Pacifica 6-7	December 8 Registration Breakfast and Exhibits	8:25 AM-8:30 AM	Discussion Moderator: James McCarthy, MD Panelists: Daniel Sucato, MD, MS Jeffrey Sawyer, MD
8:05 AM-9:35 PM	IT SESSION 3 Pacifica 3-5	8:31 AM-8:54 AM	Teach the Teacher 2.0 Craig Eberson, MD, FAOA Thomas McPartland, MD Sandra Jarvis-Selinger, PhD
to the next level? Wa speaker, mentor, and	r a while and trying to get nt to be a better teacher, leader? Who doesn't? Join Leadership Institute, Teach	8:55 AM-9:00 AM	Discussion Craig Eberson, MD, FAOA Thomas McPartland, MD Sandra Jarvis-Selinger, PhD
leaders. Moderator: James I	a panel discussion for new McCarthy, MD Shah, MD, FAOA, FAAOS	9:00 AM-9:06 AM	Answering Challenging Questions and Messaging with Intention (Media Training) Sandra Jarvis-Selinger, PhD
8:05 AM-8:30 AM	IPOS® XC Leadership Institute Moderator: James McCarthy, MD	9:07 AM-9:12 AM	Soliciting Feedback to Improve Leadership Skills James McCarthy, MD
8:05 AM-8:09 AM	Managing Your Team Peter Waters, MD, MMSc	9:13 AM-9:29 AM	I Just Became Division Chief Now What?
8:10 AM-8:14 AM	Managing Up Daniel Sucato, MD, MS		Moderator: James McCarthy, MD Panelists:
8:15 AM-8:19 AM	Managing Your Micro- Environment: What's Your Currency? Michael Vitale, MD, MPH		Michael Glotzbecker, MD Corinna Franklin, MD Lindley Wall, MD, MSc Burt Yaszay, MD
8·20 AM_8·24 AM	Managing Your	9:30 AM-9:35 AM	Changing Jobs Mid



Managing Your

Jeffrey Sawyer, MD

(EQ 101)

Emotional Intelligence

8:20 AM-8:24 AM

"It's a really big deal to be able to collaborate with APPs, residents, and physicians at IPOS® and then translate that back to what we are doing at our home institutions."

Career-Opportunities

and Challenges

Todd Milbrandt, MD



CONCURRENT SESSION 3



8:05 AM-9:35 PM Oceana Grand 6-7

Femoroacetabular Impingement: Where Are We in 2023?

This session will highlight the state of the art in treatment of FAI, etiology, and diagnosis.

Moderator: Jonathan Schoenecker.

MD, PhD

FAI Is More Than Just 8:05 AM-8:10 AM

Cam

Jonathan Schoenecker,

MD. PhD

8:11 AM-8:16 AM Is It FAI or Is It Normal?

Mininder Kocher, MD, MPH

8:17 AM-8:22 AM Where's This Stuff

> Coming From? Theories on the Etiology of FAI

Jennifer Laine, MD

8:23 AM-8:28 AM Natural History of FAI

> Wudbhav (Woody) Sankar, MD

8:29 AM-8:34 AM Questions

Jonathan Schoenecker,

MD. PhD

Mininder Kocher, MD, MPH Jennifer Laine, MD Wudbhav (Woody)

Sankar, MD

8:35 AM-8:40 AM Arthroscopy for FAI:

Pelvic Side: Technique

and Results Henry Ellis, MD

8:41 AM-8:46 AM Acetabular Retroversion:

When to Work on the

Pelvis

V. Salil Upasani, MD

8:47 AM-8:52 AM Arthroscopy for FAI:

Femoral Side; Technique,

and Results

Manoj Ramachandran, MD,

FRCS (Orth)

8:53 AM-8:58 AM SHD: When is Open the

Better Way to Go for

FAI?

Daniel Sucato, MD, MS

8:59 AM-9:04 AM Questions

> Henry Ellis, MD V. Salil Upasani, MD

Manoj Ramachandran, MD,

FRCS (Orth)

Daniel Sucato, MD, MS

9:05 AM-9:35 AM Challenging FAI Cases

> Moderator: Jonathan Schoenecker, MD, PhD

Panelists:

Manoj Ramachandran, MD,

FRCS (Orth) Henry Ellis, MD V. Salil Upasani, MD Daniel Sucato, MD, MS Mininder Kocher, MD, MPH

CONCURRENT SESSION 3



8:05 AM-9:35 PM

Oceana Grand 2-5

Neuromuscular Scoliosis and Syndromic Spine

Complex spine topics for neuromuscular and syndromic patients who require optimization before life-changing surgery. Faculty review preoperative, intraoperative, and postoperative care pathways to get the job done well.

Moderator: Ron El-Hawary, MD, MSc,

FRCS(C)

eModerator: Lindsay Andras, MD

8:05 AM-8:10 AM Neuromuscular

> Scoliosis: The Biomechanics of **Deformity Correction:** Tips and Tricks on How to Correct an NM Curve

Burt Yaszay, MD

8:11 AM-8:16 AM

The Role and Value of Traction in NM Deformity

Scott Luhmann, MD

DAILY SCHEDULE FRIDAY	

8:17 AM-8:22 AM	Stopping Short of the Pelvis: When You Can and When You Shouldn't Lindsay Andras, MD	9:05 AM-9:10 AM	My 5 Pearls for Managing Myelomeningocele Spinal Deformity Jeffrey Sawyer, MD
8:23 AM-8:28 AM	Discussion Burt Yaszay, MD Scott Luhmann, MD Lindsay Andras, MD	9:11 AM-9:16 AM	Neuromuscular Scoliosis Tweeners: The Rationale for Early Fusion Craig Louer Jr., MD
8:29 AM-8:34 AM	Setting the Stage: What Is Quality, Safety, Value, in Spine and Healthcare and How Is the Landscape Is Changing? Michael Vitale, MD, MPH	9:17 AM-9:35 AM	Rapid Fire Case Panel: Neuromuscular Spine Deformity Moderator: Ron El-Hawary, MD, MSc, FRCS(C) Panelists:
8:35 AM-8:40 AM	Optimizing the Patient's Surgical Journey I: How to Optimize and Prepare the NM Patient Preoperatively Robert Cho, MD, FAAOS		Jeffrey Sawyer, MD Nicholas Fletcher, MD Scott Luhmann, MD Jeff Martus, MD, MS Michelle Welborn, MD
0.44.414.0.40.414	0 " ' ' " " " " " "	A DD 0145 DD	
8:41 AM-8:46 AM	Optimizing the Patient's Surgical Journey II: Operating Room Team	APP CME BRE 8:05 AM-9:35 AM	EAKOUT 3 APP Banda Sea
	Culture—How to Build It and Why It Helps Firoz Miyanji, MD, FRCSC	Recent Advances for Common Spor	
8:47 AM-8:52 AM	Optimizing the Patient's Surgical Journey III: Care Pathways and ERAS in NM patients. Is This Feasible and the Future Model of Care Delivery? Nicholas Fletcher, MD	changes and advance and surgeries for com- participants will have	e introduced to the top ements in treatment options amon sports injuries. The an opportunity to learn ant injections and aspirations
8:53 AM-8:58 AM	Discussion	Moderator: Ray Klep	ooski, MSN, CPNP
	Michael Vitale, MD, MPH Robert Cho, MD, FAAOS Firoz Miyanji, MD, FRCSC Nicholas Fletcher, MD	8:05 AM-8:11 AM	Don't Play Through the Pain-Treatment Options for Shoulder Injuries Ben Johnson, PA-C
8:59 AM-9:04 AM	My Approach to DMD and SMA in 2023—How Medical Management Has Changed My	8:12 AM-8:18 AM	It's Up for Debate– Treatment of Common Elbow Injuries in the

Elbow Injuries in the Adolescent Athlete

Henry Ellis, MD

Practice

Michelle Welborn, MD

DAILY S FRIDAY	CHEDULE		
8:19 AM-8:2	27 AM Discussi o	on	GENERAL SESSION 3
	Ben Johns Henry Ellis	*	12:15 PM-2:15 PM Oceana Grand 6-7
8:28 AM-8:0	34AM Liahts. C	amera, Action-	Author's Preferred Techniques
	Hip Arthr	,	An IPOS® signature session! Join our international faculty as they share master surgical techniques and soft skills in short, video-based
8:35 AM-8:4		rgery Is the	presentations.
	in Surgic ACL Inju	ion-Advances al Treatment of ries ewins, PA-C	Moderator: Suken Shah, MD, FAOA, FAAOS eModerator: Christine Ho, MD
8:42 AM-8:4	48 AM Tips and	Tricks for	12:15 PM–12:16 PM Introduction Co-Director:

8:49 AM-8:57 AM Discussion

Valerie Parrish, PA-C Lauren Hewins, PA-C Christopher Tremonti, PA-C

Management of Foot

and Ankle Injuries Christopher Tremonti, PA-C

8:58 AM-9:35 AM Hands-on-Ultrasound Guided Joint Injections/

Aspirations
Hands-on Faculty:
Pablo Casteñeda, MD
Valerie Parrish, PA-C

9:40 AM-10:00 AM Break and Exhibits Pacifica 6-7

10:05 AM-11:05 AM Industry Spotlight Sessions 4 (non-CME)

See page XXX for details

11:10 AM-12:10 PM Lunch and Exhibits Pacifica 6-7

11:40 AM-12:10 PM Lunchtime Career Development (non-CME)

Suken Shah, MD, FAOA,

FAAOS

12:17 PM-12:22 PM Tibial Tubercle

Periosteum Transfer (TTPT) for Patella Instability

Javier Masquijo, MD

12:23 PM–12:28 PM Modified Brostrom

Repair for Ankle Instability

Eric Edmonds, MD

12:29 PM-12:34 PM Patellar Sleeve Fracture:

Recognition and Management Corinna Franklin, MD

Goninia Frankini, MD

12:35 PM–12:40 PM **Discussion**

Moderator:

Suken Shah, MD, FAOA,

FAAOS eModerator: Christine Ho, MD

12:41 PM-12:46 PM First MTP Arthrodesis

M. Wade Shrader, MD

12:47 PM-12:52 PM **Cavus Foot**

Reconstruction
Anthony Riccio, MD

12:53 PM-12:58 PM Intraoperative

Distraction for Severe Spinal Deformity

Robert Cho, MD, FAAOS

12:59 PM-1:04 PM	Discussion Moderator: Suken Shah, MD, FAOA, FAAOS eModerator: Christine Ho, MD	1:53 PM-1:58 PM	Combo PAO/SHD and Osteochondral Allograft for Symptomatic Femoral Head OCD Daniel Sucato, MD, MS
1:05 PM-1:10 PM	Hybrid Spine Surgery: Selective Thoracic Fusion and Lumbar Vertebral Body Tethering Firoz Miyanji, MD, FRCSC	1:59 PM-2:04 PM	Reconsidering How You Should Code for Fractures Matthew Oetgen, MD, MBA
1:11 PM-1:16 PM	Machine Vision Image Guided Navigation in Spine Surgery	2:05 PM-2:10 PM	Why and How to Be a Better Listener Lindsay Andras, MD
	Derek Kelly, MD, FAAOS, FAOA	2:11 PM-2:15 PM	Discussion and Audience Voting Moderator: Suken Shah,
1:17 PM-1:22 PM	Modified Bohlman Procedure for High- Grade Spondylolisthesis Reconstruction		MD, FAOA, FAAOS eModerator: Christine Ho, MD
	Suken Shah, MD, FAOA, FAAOS	2:15 PM-2:30 PM	Awards: Presentation of Resident Cases, Top Gun, and Author's
1:23 PM-1:28 PM	Discussion Moderator: Suken Shah, MD, FAOA, FAAOS eModerator:		Preferred Techniques Co-Director: Derek Kelly, MD, FAAOS, FAOA
1:29 PM-1:34 PM	Christine Ho, MD Pollicization: How to Do	2:35 PM-2:55 PM Pacifica 6-7	Break and Exhibits
1.29 PIVI-1.34 PIVI	It and What Not to Do		
	Julie Samora, MD, PhD	CME BREAKO	OUT 3
1:35 PM-1:40 PM	ORIF of Thumb Salter-	3:00 PM-4:15 PM	Banda Sea
	Harris 3 Fracture (Pediatric Gamekeeper) Donald Bae, MD	Congenital Vert	nds-on Casting
1:41 PM-1:46 PM	Distal Femoral Physeal Fractures: Pearls and Pitfalls	controversies in CVT	uss current practices and management and will casting session for practice.
	Simon Kelley, MBChB, PhD, FRCS	3:00 PM-3:05 PM	Welcome Remarks Moderator: Maryse Bouchard, MD, MSc
1:47 PM-1:52 PM	Discussion Moderator: Suken Shah, MD, FAOA, FAAOS eModerator: Christine Ho, MD	3:05 PM-3:12 PM	CVT—Making the Diagnosis and Initial Assessment Todd Milbrandt, MD
			,



CME BREAKO	OUT 3 Pacifica 8-10	3:40 PM-3:45 PM	Best Treatment: Fusion Suken Shah, MD, FAOA, FAAOS
assessment, modulat	debate the latest in growth tion, and VBT. Faculty will sessment, selection, and	3:46 PM-3:51 PM	Best Treatment: Single or Bilateral VBT Stefan Parent, MD, PhD, FRCS(C)
	Parent, MD, PhD, FRCS(C)	3:52 PM-3:57 PM	Best Treatment: Hybrid Burt Yaszay, MD
3:00 PM-3:01 PM	Introduction Moderator: Stefan Parent, MD, PhD, FRCS(C)	3:58 PM-4:15 PM	Debate Summary and Discussion with Case Examples
3:01 PM-3:06 PM	Spinal Growth: Current Concepts and Best Methods to Predict Michelle Welborn, MD		Firoz Miyanji, MD, FRCSC Ron El-Hawary, MD, MSc, FRCS(C) Stefan Parent, MD, PhD, FRCS(C) Burt Yaszay, MD
3:07 PM-3:12 PM	Brace Treatment for Scoliosis: Best Practices Kali Tileston, MD, FAAOS		Suken Shah, MD, FAOA, FAAOS
		CME BREAK	OUT 3
3:13 PM-3:18 PM	VBT: Ideal Patient Selection and the Preop	3:00 PM-4:15 PM	Timor Sea
	Discussion Stefan Parent, MD, PhD, FRCS(C)		ies Part 2: Triple, PAO
3:19 PM-3:25 PM	VBT: Tips/Tricks and	Part 2: Triple and Per	riacetabular Osteotomies
3.19 FIVI-3.23 FIVI	Complication Avoidance Firoz Miyanji, MD, FRCSC	Moderator: Daniel S	Sucato, MD, MS
3:26 PM-3:35 PM	Discussion Michelle Welborn, MD	3:00 PM-3:09 PM	PAO Daniel Sucato, MD, MS
	Kali Tileston, MD, FAAOS Stefan Parent, MD, PhD, FRCS(C)	3:10 PM-3:19 PM	Triple Osteotomy V. Salil Upasani, MD
	Firoz Miyanji, MD, FRCSC	3:20 PM-4:15 PM	Table Instruction
3:36 PM-3:39 PM	Debate: Lenke 1C, 3C, and 6C Curves in Skeletally Immature, Active Patient Ron El-Hawary, MD, MSc, FRCS(C)		Hands-on Faculty: Daniel Sucato, MD, MS Jonathan Schoenecker, MD, PhD Wudbhav (Woody) Sankar, MD V. Salil Upasani, MD Thomas McPartland, MD Pablo Castañeda, MD

INDUSTRY SPOTLIGHT **FRIDAY**



Industry Spotlight Session 4

10:05 AM-11:05 AM

BioMarin Pharmaceuticals (Non-CME)

Coral Sea

Klane White, MD

Skeleta I Dysplasia Diagnosis for the Pediatric Orthopaedic Surgeon: Changing the Paradiam

Clinicians around the globe are changing the paradigm toward an etiology-driven approach for diagnosis of skeletal dysplasia. In this session, Dr. Klane White will discuss the following topics:

- Diagnostic challenges in patients with skeletal dvsplasia
- How accurate diagnosis of these patients may be facilitated by genetic testing
- Practical considerations for implementing genetic testing in the diagnostic work-up

OrthoPediatrics (Non-CME) Java Sea

Roger Widmann, MD; Christine Hardesty, MD; Stefan Parent, MD, PhD, FRCS

Navigating the Spine-Choose Your Own Adventure

Choose your own adventure! Come learn about the various navigation technologies out there for spinal surgery, including robotics, patient-specific pedicle screw guides, and image-guided navigation systems. You will hear from the experts about what unmet needs are being addressed and what the future looks like for each, how the technologies fit in clinical practice, and the challenges associated with each—all helping you form a perspective on which might fit best in your practice. The session will feature talks from experts in each area, a moderated faculty discussion, and Q&A with the participants.

DePuy Spine (Non-CME) Pacifica 8-10

Suken Shah, MD, FAOA, FAAOS;

Craig Louer Jr., MD; Michelle Welborne, MD; Ryan Fitzgerald, MD

Complex Spine: Optimizing AIS Correction

Join our faculty to learn how to optimize AIS correction through level selection, derotation techniques, and rod materials. Round out the workshop with a hands-on rod bending session on differential rod contouring featuring DePuy Synthes's innovative treatment option for complex pediatric spine patients: the ALTALYNE Ultra Alianment System.

Globus Medical (Non-CME) Pacifica 11-12

Juan Carlos Rodriguez-Olaverri, MD, PhD Latest Trends in Vertebral Body Tethering Faculty will discuss deformity correction for skeletally immature AIS patients through the application of the innovative REFLECT™ Scoliosis Correction System, which is a U.S. Humanitarian device, Attendees will have the opportunity to delve into various aspects of non-fusion deformity correction surgery, such as patient selection, preoperative planning, and surgical techniques, through the utilization of REFLECT™. The workshop will conclude with clinical case examples and a live Q&A.

ALTALYNETM

Ultra Alignment System

Elevate Your Expectations

- » Designed to address intraoperative rod flattening
- » Greater bending yield strength in a smaller profile compared to a 6.0mm CoCr Rod¹

References:

 DePuy Synthes. Altalyne Calculation of Rod Bending Yield Strength and Stiffness Memorandum, June 7, 2022. Adaptiv #103782175 Rev. B

Please refer to the instructions for use for a complete list of indications, contraindications, warnings and precautions.
© DePuy Synthes 2022. All rights reserved.
221173-220718 DSUS





DAILY SCHEDULE SATURDAY



Saturday, December 10

7:00 AM-8:00 AM

Breakfast

Pacifica 6-7

8:00 AM-10:00 AM Registration

CONCURRENT SESSION 4



8:05 AM-9:35 AM

Coral Sea

Managing Congenital Differences Below the Knee

Small Group Interactive Case-Based Learning on Lower Extremity Deficiencies Below the Knee

Moderator:

L. Reid Boyce Nichols, MD, FAOA, FAAOS

8:05 AM-8:07 AM

Introduction

Moderator: L. Reid Boyce Nichols, MD, FAOA, FAAOS

8:08 AM-8:15 AM

Case 1: Congenital
Differences: Working the

Problem: Life Plans and Other Decision-Making Philip McClure, MD

8:16 AM-8:23 AM

Case 2: Congenital

Differences: The Femur Bone Is Connected to the Shin Bones (Or Not)

Christof Radler, MD

8:24 AM-8:32 AM

Discussion

L. Reid Boyce Nichols, MD,

FAOA, FAAOS
Philip McClure, MD
Christof Radler, MD
David Podeszwa, MD
Jeanne Franzone, MD
Mihir Thacker, MD
Anthony Riccio, MD

8:33 AM-8:39 AM

Case 3: Congenital
Differences: SUPER
SUPER: When to Address
Both the Knee and Ankle
in Fibular Hemimelia
Philip McClure, MD

8:40 AM-8:48 AM Discussion

L. Reid Boyce Nichols, MD, FAOA, FAAOS Philip McClure, MD Christof Radler, MD David Podeszwa, MD Jeanne Franzone, MD Mihir Thacker, MD Anthony Riccio, MD

8:49 AM-8:55 AM

Case 4: Congenital
Differences: This Ankle

Is Dynamic!

David Podeszwa, MD

8:56 AM-9:04 AM

Discussion

L. Reid Boyce Nichols, MD, FAOA, FAAOS Philip McClure, MD Christof Radler, MD David Podeszwa, MD Jeanne Franzone, MD Mihir Thacker, MD

9:05 AM-9:11 AM

Case 5: Congenital
Differences: Something
Is Not Quite Right!

Jeanne Franzone, MD

Anthony Riccio, MD

9:12 AM-9:18 AM

Discussion

L. Reid Boyce Nichols, MD, FAOA, FAAOS Philip McClure, MD Christof Radler, MD David Podeszwa, MD Jeanne Franzone, MD Mihir Thacker, MD Anthony Riccio, MD

9:19 AM-9:24 AM

Case 6: Congenital Differences: Can You Kick Me? Tibial

Hemimelia

L. Reid Boyce Nichols, MD, FAOA, FAAOS

DAILY SCHEDULE SATURDAY

9:25 AM-9:32 AM 9:33 AM-9:35 AM	Discussion L. Reid Boyce Nichols, MD, FAOA, FAAOS Philip McClure, MD Christof Radler, MD David Podeszwa, MD Jeanne Franzone, MD Mihir Thacker, MD Anthony Riccio, MD Wrap Up L. Reid Boyce Nichols, MD,	7:55 AM-8:07 AM	Recruitment for Peds Ortho, Pipeline Options, and What Can We Do Everyday? Moderator: James McCarthy, MD Panelists: Corinna Franklin, MD Jaysson Brooks, MD Jennifer Bauer, MD, MS Michelle Welborn, MD
	FAOA, FAAOS	8:08 AM-8:18 AM	Innovations in Surgical Coaching
CONCURREN			Benjamin Shore, MD, MPH, FRCSC
7:30 AM-9:30 AM	Pacifica 8-10	8:19 AM-8:25 AM	Simulation in Pediatric
	areer Surgeons t for fellowship program ing leaders in pediatric		Orthopaedic Education Todd Milbrandt, MD
orthopaedics. We will news on pediatric ort POSNA Workforce In chiefs, chairs, and pro-	I dig into up-to-the-minute hopaedic fellowships, the itiative, skills for division actice leads and don't	8:26 AM-8:31 AM	QI 101: How to Do a Hospital-Based Quality Project Michael Glotzbecker, MD
miss the updates on re-certification.	coding and ABOS	8:32 AM-8:42 AM	Pediatric Orthopedic Coding: How the
Moderator: James Moderator: Suken S	McCarthy, MD Shah, MD, FAOA, FAAOS		Sausage Gets Made Kevin Neal, MD
7:30 AM-7:40 AM	Fellowship Update Meghan Imrie, MD	8:43 AM-8:48 AM	How a Very Busy Surgeon Can Make PLENTY of Time
7:41 AM-7:47 AM	POSNA Workforce Initiative Update Wudbhav (Woody) Sankar, MD		for Family, Fun, and Volunteer Leadership John (Jack) Flynn, MD
7:48 AM-7:54 AM	PSSP: Where Are We Now, What Your Center	8:49 AM-8:56 AM	Mentorship: Paying It Forward Suken Shah, MD, FAOA, FAAOS
	Needs to Know, Where Are We Going? Kevin Shea, MD Kali Tileston, MD, FAAOS	8:57 AM-9:02 AM	Clinical Research: Intention to Action John Lovejoy III, MD, FAAOS
		9:03 AM-9:09 AM	ABOS Re-Certification: What's New and the WLA Pathway Explained John (Jack) Flynn, MD

DAILY SCHEDULE SATURDAY

9:10 AM-9:20 AM **Compensation Models** in Peds Ortho Drive

> Desired Behaviors and Institutional Strategy James McCarthy, MD

9:21 AM-9:30 AM Discussion

Moderator:

James McCarthy, MD

9:40 AM-10:00 AM **Break**

Pacifica 6-7

10:38 AM-10:43 AM Practice Management: Practical Integration of Research into a Busy Clinical Practice Wudbhav (Woody) Sankar, MD

10:44 AM-10:52 AM **Discussion**

Matthew Oetgen, MD, MBA Robert Cho, MD, FAAOS Wudbhav (Woody) Sankar, MD

10:53 AM-10:58 AM Child Abuse

John (Jack) Flynn, MD

10:59 AM-11:04 AM Lower Extremity Trauma in the Outpatient Setting

John Lovejoy III, MD, FAAOS

11:05 AM-11:10 AM Upper Extremity Trauma in the Outpatient Setting

Christine Ho, MD

11:11 AM-11:20 AM **Discussion**

Matthew Oetgen, MD, MBA John (Jack) Flynn, MD John Lovejoy III, MD, FAAOS Christine Ho, MD

CMF BRFAKOUT 4



10:05 AM-11:20 AM Pacifica 8-10

Essentials of Pediatric Orthopaedics III

This session covers the basics of pediatric orthopaedics with a focus on recognition, evaluation, and treatment of common conditions. The information is geared toward residents, fellows, and newer advanced practice providers who desire a strong foundational knowledge and strategy to synthesize clinical data into appropriate treatment plans.

Moderator: Matthew Oetgen, MD, MBA

10:05 AM -10:10 AM **AIS, EOS, NM Scoli**:

Bracing, Casting,

Therapy

Lindsay Andras, MD

10:11 AM-10:16 AM Spine Trauma

Jennifer Bauer, MD, MS

10:17 AM-10:22 AM Back Pain, Kyphosis,

Spondy, Disc Disease

Matthew Oetgen, MD, MBA

10:23 AM-10:31 AM Discussion

Matthew Oetgen, MD, MBA

Lindsay Andras, MD Jennifer Bauer, MD, MS

10:32 AM-10:37 AM Skeletal Dysplasias and

Orthopaedic-Related

Syndromes

Robert Cho, MD, FAAOS





CME BREAKOUT 4



10:05 AM-11:20 AM

Java Sea

Pediatric Upper Limb Surgery: Concepts, Cases, and Controversies

Join our internationally renowned faculty for this case-based discussion of challenging pediatric upper extremity conditions. From the fundamental concepts to late complications of treatment, we will explore the totality of care. There will be principles and pearls for providers of every level!

Moderator: Donald Bae, MD

10:05 AM-10:10 AM Surgeons Are Not Replaceable!

Donald Bae, MD

10:11 AM-10:15 AM Madelung Deformity:

Concepts

Donald Bae, MD

10:16 AM-10:25 AM Madelung Deformity:

Case

Julie Samora, MD, PhD Donald Bae, MD Andrea Bauer, MD Christine Ho, MD

10:26 AM-10:31 AM Madelung Deformity:

WTF

Christine Ho, MD

10:32 AM-10:36 AM Arthrogrypotic Elbow:

Concepts

Julie Samora, MD, PhD

10:37 AM-10:47 AM Arthrogryposis Elbow:

Case Presentation

Andrea Bauer, MD Donald Bae, MD Julie Samora, MD, PhD Lindley Wall, MD, MSc

10:48 AM–10:53 AM **Arthrogryposis Elbow:**

WIF

Lindley Wall, MD, MSc

10:54 AM-10:58 AM Shoulder in Brachial

Plexus Birth Injury:

Concepts
Donald Bae, MD

10:59 AM-11:07 AM Shoulder in Brachial

Plexus Birth Injury: Case

Julie Samora, MD, PhD Donald Bae, MD Andrea Bauer, MD Lindley Wall, MD, MSc

11:08 AM-11:13 AM Shoulder in Brachial

Plexus Birth Injury: WTF

Andrea Bauer, MD

11:14 AM-11:20 AM **Summary**

Julie Samora, MD, PhD



DAILY SCHEDULE SATURDAY



CME BREAKOUT 4

10:05 AM-11:20 AM

Pacifica 11-12

Reconstruct, Rotate, or Amputate? Difficult Decisions in Limb Reconstruction

This session will describe the key principles of pediatric lower limb amputation and prosthetic reconstructive options. This will be followed by debate-style discussions of treatment options for Congenital Pseudarthrosis of the Tibia, Proximal Focal Femoral Deficiency, and Fibular Hemimelia.

Moderator: Jeanne Franzone, MD

10:05 AM-10:06 AM Introduction

Jeanne Franzone, MD Jennifer Laine, MD

10:07 AM-10:12 AM Amputation Principles:

Early Keys to Long-Term

Success

Jennifer Laine, MD

10:13 AM-10:18 AM Multidisciplinary

Prosthesis Care: Approach to Helping Families Make Tough Decisions, Ongoing

Follow-up

Jeanne Franzone, MD

10:19 AM-10:24 AM Maximizing Gait for

Pediatric Prosthetic

Patients

Sheila Mason, PNP

10:25 AM-10:29 AM Considerations in

Maximizing Long-Term Outcomes for Patients with Prostheses

Mihir Thacker, MD

10:30 AM-10:33 AM Debate 1: CPT-Reconstruction

Philip McClure, MD

10:38 AM-10:47 AM **Discussion**

Philip McClure, MD Mihir Thacker, MD

L. Reid Boyce Nichols, MD,

FAOA, FAAOS

David Podeszwa, MD

10:48 AM–10:51 AM Debate 2: PFFD–
Rotationplasty

David Podeszwa, MD

Amputation

Jeanne Franzone, MD

10:56 AM-10:59 AM **Debate 2: PFFD-**

Reconstruction

Christof Radler, MD

11:00 AM-11:03 AM **Debate 3: Fibular**

Hemimelia-Amputation

Jennifer Laine, MD

11:04 AM-11:07 AM **Debate 3: Fibular**

Hemimelia-Reconstruction

L. Reid Boyce Nichols, MD,

FAOA, FAAOS

11:08 AM-11:18 AM **Discussion**

David Podeszwa, MD Jeanne Franzone, MD Christof Radler, MD Jennifer Laine, MD

L. Reid Boyce Nichols, MD,

FAOA, FAAOS

11:19 AM-11:20 AM **Conclusion**

Jeanne Franzone, MD

Jennifer Laine, MD

11:25 AM–12:25 PM **Lunch**

Pacifica 6-7

Your partner in **EXCELLENCE**

In our relentless pursuit of improvement, we have partnered with many of you and we are **changing the outcome together.**

- Cincinnati Children's created Solutions for Patient Safety, now in over 140 children's hospitals, that has dramatically decreased patient harm
- POSNA's QSVI program, setting the standard for quality in Pediatric Orthopedics
- Cincinnati Children's is involved with 12 research and study groups.



THANK YOU!





FOOT

ePoster 1

Ability of the Area Deprivation Index to Predict Idiopathic Clubfoot Recurrence1

Smitha E. Mathew, MBBS; William Schaberg; Matthew E. Oetgen, MD, MBA Children's National Hospital, Washington, DC

ePoster 2

Is Computed Tomography Scan Necessary in the Preoperative Evaluation of Calcaneonavicular Tarsal Coalition?

Lauren M. Harte, MD; Charles M. Gordon, MD; Corey T. Clyde, MD; Sonja Pavlesen, MD, MS; Jeremy P. Doak, MD University at Buffalo, Buffalo, NY

ePoster 3

Putting a Better Foot Forward: Prospective Cohort Study of Flatfoot Reconstruction for Painful Pediatric Idiopathic Flexible Flatfoot

Christopher J. DeFrancesco, MD; Matthew S. Conti, MD; Howard J. Hillstrom, PhD; John Blanco, MD; Silvia Zanini, MS; Emily Dodwell, MD, MPH; David M. Scher, MD Children's Hospital of Philadelphia, Philadelphia, PA

ePoster 4

Understanding Clubfoot Recurrence: Insights from a Social Determinants Perspective

Tasha Garayo, MS; Nadim Kheir, MD; Maralexa Martínez-Valcárce; Robert Schmidt Cianchini; **Karim Masrouha. MD**

NYU Langone Health, New York, NY

HAND & UPPER EXTREMITY

ePoster 5

Cubital Tunnel Syndrome in Children and Adolescents: Clinical Presentation and Surgical Outcomes

Nathan Chaclas; Scott Mahon; Joseph Yellin, MD; Christine Goodbody, MD, MBE; Apurva S. Shah, MD, MBA

The Children's Hospital of Philadelphia, Philadelphia, PA

ePoster 6

Does Fixation Type Affect Symptomatic Implant Removal Rates in Operatively Treated Pediatric Medial Epicondyle Fractures?

Matthew J. Siebert, MD; Emily Zhang; Jayden Nicole Brennan; Aaron Wey, MD; Stephanie Holmes, MD; Christopher A. Makarewich, MD University of Utah Health, Salt Lake City, UT



Does Time to Surgery Impact Nerve Recovery in Supracondylar Humerus Fractures with Nerve Injury?

Mikaela H. Sullivan, MD; Brian D. Wahlig, MD; Samuel E. Broida, MD; A. Noelle Larson, MD; William J. Shaughnessy, MD; Anthony A. Stans, MD; Emmanouil Grigoriou, MD; Brandon J. Yuan, MD; Todd A. Milbrandt, MD Mayo Clinic, Rochester, MN

ePoster 8

Intraoperative Cardiothoracic Intervention Rates During Open Surgery Following Traumatic Posterior Sternoclavicular Joint Injury: A Case Series and Systematic Review

Jesse M. Galina; Sawyer Miller; Sonja Pavlesen, MD, MS; Michael R. Ferrick, MD University at Buffalo, Buffalo, NY

ePoster 9

The Relationship between Obesity and Lateral Condyle Fracture Healing

Jacob Smithey, MD; Hunter Gillon, MD; Kellie Leitch, MD University of Mississippi Medical Center, Jackson, MS

ePoster 10

Who Should See My Kids? Clavicle Fracture Management across Orthopaedic Subspecialties Robert W. Gomez, MD; Dustin A. Greenhill, MD; Zachary J. Lamb; David Jessen; Morgan Storino St. Luke's University Health Network, Bethlehem, PA

HIP

ePoster 11

An Investigation into the Public's Most Frequently Asked Questions About Developmental Dysplasia of the Hip and Evaluating Online Information About Management and Treatment Elizabeth Garrett; Christena Abraham; Madison Blackwell, DO; Samuel Shepard, DO; Nicholas Sajjadi, DO; Brylie Schafer, DO; Mark Schwarz, DO; Steven Brown, DO Oklahoma State University, Tulsa, Oklahoma

ePoster 12

Colder Weather and Likelihood of Surgical Intervention for Developmental Dysplasia of the Hip within the First 5-Years of Life: A National Database Analysis

Samantha L. Ferraro; Anthony K. Chiu; Tanner Seibold; Alex Gu, MD; Amil R. Agarwal; Savyasachi Thakkar, MD; **Ahmed Elabd, MD;** Sean A. Tabaie, MS, MD, FAAOS Children's National Hospital, Washington, DC

ePoster 13

Effects of Hip Muscle Fatiguability as Assessed by Surface Electromyography

Olivia Dyer; Benjamin Wheatley, PhD; **Mark Seeley, MD** Geisinger Medical Center, Danville, PA



Labral Support Shelf Acetabuloplasty for Late Presenting Perthes Disease: Outcomes in Indian Patients

Chaitrali Gundawar; Udit Vinayak, MS Orth, DNB Orth; Parag Sancheti, MS Orthopaedics, DNB

Orth; Sandeep V. Vaidya, MS Orthopaedics, DNB Orth; Mandar V. Agashe, MS Orth;

Sandeep Patwardhan, MS Orth

SRCC Childrens Hospital, Mumbai, India

ePoster 15

Preliminary Study on the Stabilization of Varus Proximal Femoral Osteotomies using Pediatric LCP Plates in Adults undergoing Combined Correction of Proximal Femoral and Acetabular Dysplasia

Ian Hollyer; Taylor R. Johnson; Harsh Wadhwa; Michael J. Chen; Stephanie Y. Pun, MD;

Michael J. Bellino

Stanford University, Palo Alto, CA

ePoster 16

Radiological Measure of Femoral Neck Height, Epiphyseal Extrusion, and Greater Trochanter Overgrowth Can Predict Reported Outcomes of Legg-Calve-Perthes Disease in Adulthood

Alberto Losa-Sanchez, MD; Luis Moraleda-Novo, MD, PhD; Ricardo Fernandez-Fernandez, MD,

PhD; Gaspar Gonzalez-Moran, MD

Hospital Universitario La Paz, Madrid, Spain

ePoster 17

Skeletal Maturity May Not be a Factor in Optimizing Outcome in Total Hip Arthroplasty

Correggio L. Peagler Jr.; Philip M. Parel; Anthony K. Chiu; Savyasachi Thakkar, MD;

Sean Tabaie, MD, FAAOS

George Washington University, Washington, DC

LOWER EXTREMITY/DEFORMITY

ePoster 18

A Biomechanical Evaluation of Casting Technique and Cast Core Size Effect

Trenton P. Sprenkle; Alexander CM Chong; Jordan Shearer; Brandon Fisher; Brian R. Sauer, MD University of North Dakota, Fargo, ND

ePoster 19

A Midterm Follow-Up of Trident Fixation Technique for Pediatric Knee Arthrodesis with Recycled Bone Graft

Yu-Min Lin, MD, PhD; Yuan-Ya Liao, MD, PhD

Taichung Veterans General Hospital, Taichung, Taiwan

ePoster 20

Can We Determinate the Degree of External Tibial Torsion on a Simple X-Ray? ... Saving Radiation.

Natalia Penelas Abelleira; Pedro González Herranz; Llanos Rodríguez Rodríguez;

Clara Domenech Bendaña; Miguel Castro Torre

Hospital Materno Infantil Teresa Herrera, A Coruña, Spain



Comparing Pediatric Femoral Shaft Fracture Repair Patient Outcomes Between Pediatric and Non-Pediatric Orthopedic Surgeons

B. Tanner Seibold; Theodore Quan, MD; Jordan Pizzarro; Benjamin Farley, MD; **Ahmed Elabd, MD**; Sean A. Tabaie, MS, MD, FAAOS

Children's National Hospital, Washington, DC

ePoster 22

Computer Prediction of Pediatric Occult Ankle Fracture Using Assessment of Non-Weight Bearing and X-Ray Measures of Acute Swelling

Denise Kerut, MD; Srikanth Mudiganty, MD; Joseph A. Gonzalez, MD

Childrens Hospital New Orleans, New Orleans, LA

ePoster 23

Evaluation of Compensatory Rotational Gait Kinematics in Children with Pathological Genu Valgum

Chaitrali Gundawar, D. Orthopaedic; Atul Bhaskar, MS Ortho; Mayuri Lad;

Chasanal Rathod, MS Ortho

SRCC Children's Hospital, Mumbai, India

ePoster 24

Frida Kahlo: The Artist who Turned Pain into Art

Carla M. Bridges, MD; Laura I. Marrero; Melissa Esparza, MD

Phoenix Children's Hospital, Phoenix, AZ

ePoster 25

Idiopathic Toe Walking: Retrospective Cohort Study Demonstrates Surgery Results in Greatest Resolution Rate and Improvement in Range of Motion (ROM)

Kiranpreet Nagra; Erikson Nichols; Peter Cirrincione; Akshitha Adhiyaman; John Blanco, MD;

David Scher, MD; Shevaun M. Doyle, MD; Emily Dodwell, MD, MPH

Hospital for Special Surgery, New York, NY

ePoster 26

Nailed it! Can Rigid Femoral Nailing be Safely Used for Pediatric Femoral Shaft Fractures in Patients 8-10 Years of Age?

Kwangwon Park, MD, PhD; Stefano Cardin, MD; Bensen Fan, MD; James Toledano, MD;

Mark Birnbaum, MD; José A. Herrera-Soto, MD

Orlando Health, Arnold Palmer Hospital for Children, Orlando, FL

ePoster 27

Optimizing Tibial Torsion Measurements in Pediatric Patients

Kiranpreet Nagra; Peter Cirrincione; Erikson Nichols, MS, MMS; Olivia C. Tracey; Julia Retzky, MD; Kathryn Barth. MD; Noah Cha, MD; Jessica Heyer, MD; Shevaun M. Doyle, MD;

Emily Dodwell, MD, MPH

Hospital for Special Surgery, New York, NY



Orthopedic Fixation of Skeletally Immature Ankle Fractures in Children and Adolescents Using Bio-Integrative Implants

Mark Solomon, DPM, FACFAS; David Lin, MD, FAAOS; **Evan McNall;** Joslin Seidel, DPM, AACFAS; Hannah Schneiders. DPM

The Pediatric Orthopedic Center, Cedar Knolls, NJ

ePoster 29

Systematic Review and Reference for Pediatric Physeal Fractures and Premature Physeal Arrests; How Often and When Do They Occur?

Bianca Parker, MS; Frass Ahmed; Erickson Andrews, MD; Walter H. Truong, MD, FAOA, FAAOS Gillette Children's, Saint Paul, MN

NEUROMUSCULAR & CEREBRAL PALSY

ePoster 30

Differences in School Services Offered and Accessibility for Children with Cerebral Palsy Based on Race, Income, and GMFCS Level

Tara A. Saxena, MD; Joseph Andary, MPH; Philip E. Gates, MD Louisiana State University Shreveport Health Sciences, Shreveport, LA

ePoster 31

Improving the Quality of Interpretation of Pelvic Radiographs for Hip Surveillance in Cerebral Palsy – a Quality Improvement Project

Alexandra Rocha; Ian Ross; Scott McKillop; Jacob Davidson; Debra Bartley, MD; Sarah Pilon; Kevin Morash; Ryan Katchky, MD; **Patrick Thornley, MD**

London Health Sciences Centre, London, ON

ePoster 32

Radiographic Angles after Posterior Medial Lateral Release are Associated with Increased Rates of Reoperation in Neuromuscular Clubfoot

Jared M. May; Emily L. DeMaio, MD; Jill E. Larson, MD

Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

ePoster 33

Trends in Timing of Hip Surgery in Children with Cerebral Palsy: Is Surgery Being Performed Earlier? A National Observational Study from 2010-2020

Anthony K. Chiu; Sarah Dance; Samantha L. Ferraro; Alana O'Mara, MD; **Ahmed Elabd, MD**; Savyasachi C. Thakkar, MD; Sean Tabaie, MD Children's National Hospital, Washington, DC



QUALITY, SAFETY, AND VALUE INDICATORS

ePoster 34

Can We Screen for Limb Length Discrepancy on Spinal Radiographs of Patients with Scoliosis?

Neeraj Mishra, MRCSEd; Nicole Kim Luan Lee, PhD; Liang Hui Loo, BSc(Hons); Kai Yet Lam, FRCSEd(Orth); Kevin Boon Leong Lim, FRCS(Eng.), FRCSEd(Orth), MBA KK Women's & Children's Hospital, Singapore

ePoster 35

Evaluation of Patient-Reported Outcome Measures (PROMs) in the Pediatric Musculoskeletal Oncology Literature: A Systematic Review Using the EMPRO Tool

David VanEenenaam; Soroush Baghdadi, MD; Divya Talwar, PhD, MPH; Alexandre Arkader, MD The Children's Hospital of Philadelphia, Philadelphia, PA

ePoster 36

Nonoperative vs. Operative Management of Pediatric Grade 1 Open Fractures

Kevin Schauer, MD; Dylan Lis; Ellen Lutnick, MD; **Lauren M. Harte, MD**; Mohammad Nadir Haider, MD, PhD; Jeremy Doak, MD University at Buffalo, Buffalo, NY

ePoster 37

Parent Perspectives on Firearm Safety Discussions in a Pediatric Orthopaedic Surgery Clinic William Allen MD; Emily Wilson; Gabrielle Rauls; Thomas Geiger; Ryan McFadden; William Barfield, PhD; Matthew A. Dow, MD; Robert F. Murphy, MD; Sara Van Nortwick, MD The Medical University of South Carolina, Charleston, SC

ePoster 38

Preferences for Return to Sport for Patients Undergoing Cast Treatment for Distal Radial Metaphyseal Fractures: A Cross Sectional Survey of Primary Care Orthopedic Physicians and Orthopedic Surgeons

Erikson Nichols, MS MMS; Olivia C. Tracey; Jessica Heyer, MD; **Emily Dodwell, MD, MPH** Hospital for Special Surgery, New York, NY

SPINE

ePoster 39

Are 3D-Printed Anatomic Haptic Adolescent Idiopathic Scoliosis Spine Models Better Resident Training Tools when Compared to Conventional Training Modalities

Selina Poon, MD, MPH; Haleh Badkoobehi, MD, MPH; Cynthia Nguyen, MD; Robert H. Cho, MD, FAAOS, FAOA; Ryan A. Finkel, MD; Reginald Fayssoux, MD

Shriners Children's Southern California, Pasedena, CA

ePoster 40

Characterizing the Spectrum of Scoliosis in Autism

Ravi Rajendra, MD; Matthew Bratton; Claudia Leonardi, PhD; R. Carter Clement, III, MD, MBA Louisiana State University, New Orleans, LA



Coronal and Sagittal Spinal Alignment Two Years after Posterior Dynamic Distraction Device (PDDD) Instrumentation for Adolescent Idiopathic Scoliosis

Kevin Boon Leong Lim, FRCS(Eng), FRCSEd(Orth), MBA; Grace Hui Min Chew, BComms (Hons); Stacy Wei Ling Ng, MBBS, MRCS(Ed), FRCSEd (Orth); Woei Jack Pan, MB ChB BAO, FRCSEd (Orth); Nicole Kim Luan Lee, PhD KK Women's & Children's Hospital, Singapore

ePoster 42

Early Results from a Prospective Study on a Posterior Dynamic Distraction Device for Adolescent Idiopathic Scoliosis (NCT04296903)

Michael C. Albert, MD; Gilbert Chan, MD; Geoffrey Haft, MD; Timothy Oswald, MD; Kevin M. Neal, MD; Noelle Larson, MD; Ryan E. Fitzgerald, MD; Alvin Jones, MD; Nigel Price, MD, FAAP, FRCSC, FAAOS; Baron Lonner, MD; Todd Milbrandt, MD; Christina K. Hardesty, MD; John T. Anderson, MD Dayton Children's Hospital, Dayton, OH

ePoster 43

High BMI Limits Initial Correction but Not Growth Modulation After Vertebral Body Tethering William ElNemer; Daniel Badin, MD; Stefan Parent, MD; Firoz Miyanji, MD; Daniel Hoernschemeyer, MD; Ahmet Alanay, MD; John Avenado; Harms Study Group; Paul Sponseller, MD, MBA Johns Hopkins University, Baltimore, MD

ePoster 44

How Effective is the 'Scolibrace' in the Management of Adolescent Idiopathic scoliosis (AIS)

Kevin Boon Leong Lim, FRCS(Eng), FRCSEd (Orth), MBA; Heidi Ka Wing Mak; Siti Hauzah Binte Abdul Rahaman, RN; Ling Ling, Ong, RN; Jess Shi Yang Ooi, RN; Nicole Kim Luan Lee, PhD KK Women's & Children's Hospital, Singapore, Singapore

ePoster 45

Is Rib-on-Pelvis Deformity associated with Reported Pain in Neuromuscular Early-Onset Scoliosis?

Vineet Desai; Margaret A. Bowen; Jason B. Anari, MD; John M. Flynn, MD; Jaysson Brooks, MD; Brian Snyder, MD; Brandon A. Ramo, MD; Jason Howard, MD; O. Hank Mayer, MD; Hiroko Matsumoto, PhD; Lawrence Karlin, MD; Robert K. Lark, MD, MS; G. Ying Li, MD; Lindsay Andras, MD; Walter Truong, MD; Ryan Fitzgerald, MD; Kenny Kwan, MD; Nan Wu, MD; Amy McIntosh, MD; Susan Nelson, MD; Pediatric Spine Study Group; Patrick J. Cahill, MD Children's Hospital of Philadelphia, Philadelphia, PA

ePoster 46

Safety and Efficacy of a Novel Technique for Posterior Column Osteotomy in Patients with Adolescent Idiopathic Scoliosis Undergoing Posterior Spinal Fusion

Alec Stall, MD; Ryan Ilgenfritz, MD; **Michael Read, MD;** Naveed Nabizadeh, MD; Tyler Anderson, MD

Nemours Children's Hospital, Orlando, FL



Surgical Site Infection Risk in Neuromuscular Scoliosis Undergoing Long Posterior Spinal Fusion

Ryan Sefcik MD; Michael Kreft, MD; Richard Steiner, PhD; Lorena Floccari, MD; Todd Ritzman, MD, FAAOS, FAOA Summa Health System. Akron. OH

ePoster 48

The Effect of Preoperative Mental Health Diagnosis on Pain Management in Patients with Adolescent Idiopathic Scoliosis Undergoing Surgery

James Bennett, MD; **Vivek M. Abraham, MD**; Hoon Chung; Nicholas Artz; Albert Andrews; Douglas Wells Jr.; Marc Cardelia, MD; Carl St. Remy, MD Children's Hospital of The King's Daughters, Norfolk, VA

ePoster 49

The Link Between a Growth Mindset and Health-related Quality of Life in AIS Patients on Brace Treatment.

Joelle Liwen Wang, M.Psych.(Clinical); Nicole Kim Luan Lee, PhD; **Kevin Boon Leong Lim, FRCS(Eng), FRCSEd (Orth), MBA**

KK Women's & Children's Hospital, Singapore

ePoster 50

Vitamin D Deficiency in Scheuermann's Disease is Associated with Increased Adverse Outcomes

Shivan N. Chokshi, BBA; **Srikanth Mudiganty, MD**; R. Carter Clement III, MD, MBA; William Accousti, MD

Childrens Hospital - New Orleans, New Orleans, LA

SPORTS

ePoster 51

Comparison of KT-1000 Results in Hamstring and Quadriceps Tendon Graft Types after Adolescent ACL Reconstruction

Julianna Kennedy; Jennifer Prue, MEd, ATC; Adam Weaver, DPT; **Matthew J. Brown, MD** Connecticut Children's Medical Center, Farmington, CT

ePoster 52

Postoperative Outcomes of Ischial Tuberosity Avulsion Fracture in Adolescents

Brendan A. Williams, MD; Matthew Titus; **Nathan Chaclas**; Kathleen J. Maguire, MD; J. Todd Lawrence, MD, PhD

Children's Hospital of Philadelphia, Philadelphia, PA



Relationship between Early Objective Measures and Patient Reported Outcomes after Adolescent Shoulder Stabilization Surgery

Haya Qutob, DO; Adam P. Weaver, PT, DPT; Michael Brimacombe, PhD; Lisa Cruz; Nicholas Giampetruzzi, PT, MSPT; Allison E. Crepeau, MD; Michael Saper, DO, ATC, CSCS; Donna Pacicca, MD; Dylan P. Roman, PT, DPT; **Matthew Brown, MD**Connecticut Children's Medical Center, Farmington, CT

SYNDROMES, DYSPLASIAS & GENETIC CONDITIONS

ePoster 54

Fidrisertib (IPN60130) for the Treatment of Fibrodysplasia Ossificans Progressiva: Methodology of the Randomized, Double-Blind, Placebo-Controlled Phase II FALKON Trial Negar Karimian, MD, PhD; Caroline Brard, PhD; Jeanna Cooper, PharmD; Fei Shih, MD, PhD Ipsen Biopharmaceuticals Canada, Mississauga, ON

ePoster 55

Functional Independence of Children with Arthrogryposis

Lauren C. Hyer, MD; Emily R. Shull, PhD; Lisa Wagner, DHS, OTR/L; David E. Westberry, MD Shriners Children's Greenville, Greenville, SC

ePoster 56

Investigation into the Development and Progression of Coxa Vara after Intramedullary Rodding in Children with Osteogenesis Imperfecta

Currey Zalman, MS3; Maegen Wallace, MD; Matthew VanOrmer, PhD University of Nebraska Medical Center, Omaha, NE

ePoster 57

Radiographic Outcomes and Recurrence Rates of Pediatric Patients Treated with PRO-DENSE for Benign Bone Tumors

Maralexa Martínez-Valcárcel; Robert Schmidt Cianchini; **Karim Masrouha, MD** NYU Langone Health, New York, NY

ePoster 58

Understanding the Impact of Fibrodysplasia Ossificans Progressiva on the Quality of Life of Patients and Their Family Members Using an International Burden of Illness Survey: Results From the United States and Canada

Mona Al Mukaddam, MD; Katherine S. Toder, MRA; Michelle Davis; Kim Croskery, PhD; Anne-Sophie Grandoulier, MSc; Elaine A. Böing, MPH; Nisreen Shamseddine, PharmD; Frederick S. Kaplan, MD; **Jeanna Cooper, PharmD**University of Pennsylvania, Philadelphia, PA





Most skeletal dysplasias have a genetic cause¹

 The panel for Discover Dysplasias[™] tests over 300 genes and is available at no charge for patients aged 2 years and older suspected of having a skeletal dysplasia

Genetic testing may help **facilitate a diagnosis** sooner, and in some cases, may help put patients on the path to disease-specific management sooner

Visit DiscoverDysplasias.com to learn more

*This is a sponsored testing program. While third parties and commercial organizations may provide financial support for this program, tests and services are performed by Invitae. Healthcare professionals must confirm that patients meet certain criteria to use the program. Third parties and commercial organizations may receive de-identified patient data from this program, but at no time would they receive patient-identifiable information. Third parties and commercial organizations may receive contact information for healthcare professionals who use this program. Genetic testing and counseling is available in the US and Canada. Healthcare professionals and patients who participate in this program have no obligation to recommend, purchase, order, prescribe, promote, administer, use, or support any other products or services from Invitae or from third parties or commercial organizations.

References: 1. Jelin AC, O'Hare E, Blakemore K, et al. Skeletal dysplasias: growing therapy for growing bones. Front Pharmacol. 2017;8(79):1-6.

CNAADINE

BROUGHT TO YOU BY:







Exhibit Hall Pacifica 6-7

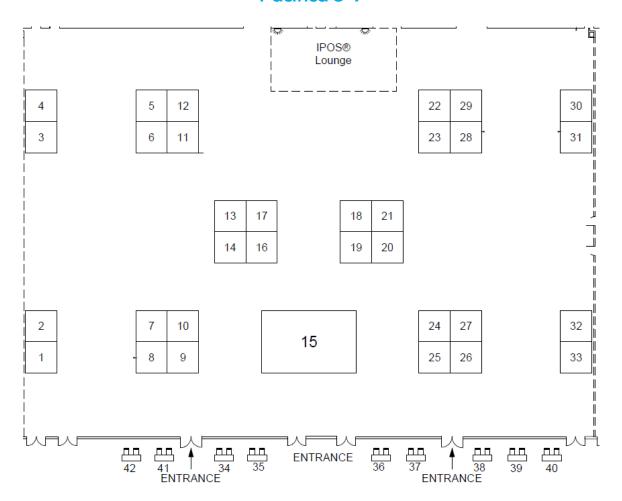


Exhibit Hall Hours

Wednesday, December 6	7:00 AM-5:00 PM
Wednesday, December 6 Happy Hour in the Hall	2:35 PM-3:35 PM
Thursday, December 7	7:00 AM-4:00 PM
Friday, December 8	7:00 AM-3:00 PM





ASSOCIATION OF CHILDREN'S PROSTHETIC-ORTHOTIC CLINICS

Booth 41

The Association of Children's Prosthetic-Orthotic Clinics (ACPOC) provides a comprehensive resource of treatment options provided by professionals who serve children, adolescents, and young adults with various musculoskeletal

differences. ACPOC is recognized as the worldwide leader in multidisciplinary rehabilitative care of children, adolescents, and young adults with musculoskeletal differences.



AQUACAST LINER, BSN MEDICAL, AN ESSITY COMPANY

Booth 17

Essity aspires to be the global leader in health and hygiene. Key brands driving this vision include Delta-Cast®, AquaCast®,

and Leukoplast®. Delta-Cast® is a global market leader in Fracture Management, drawing on a strong brand heritage while offering a comprehensive portfolio to rely on. Our newly added brand, AquaCast®, offers waterproof, breathable cast padding. Leukoplast® provides effective and efficient solutions for acute wound care.



BIEDERMANN MOTECH

Booth 18

Since 1916, Biedermann has been working in synergy with world-class surgeons to solve clinical challenges through the development of next-generation technology. Specializing in spine since the 1980s has allowed us to become a leader in spinal innovation, bringing life-changing technology to the world through specialist surgeons.

Biedermann is a mid-sized, international, family-owned and operated group of companies with headquarters in the Black Forest, Germany (Villingen-Schwenningen) and the USA (Miami). Our focus is on the development, production, and distribution of innovative implants and instruments for spinal and extremity surgery. We research, develop, manufacture, and distribute high-quality implant systems in collaboration with healthcare professionals, technology partners, scientific institutions, and specialist companies with the goal of achieving improved clinical outcomes.



BIOCOMPOSITES

Booth 2

At Biocomposites, we are distinct in that our team of specialists is singularly focused on the development of innovative calcium compounds for surgical use. Our

innovative products are at the forefront of calcium technology and range from bone grafts to matrices that can be used in the presence of infection. We are proud to be driving improved outcomes across a wide range of clinical applications, in musculoskeletal infection, trauma, spine and sports injuries, for surgeons and patients alike.





BIOMARIN PHARMACEUTICALS Booth 10 and 27

BioMarin is a world leader in developing and commercializing innovative therapies for rare diseases driven by genetic causes. With a 20-year history, BioMarin remains steadfast

to its original mission—to bring new treatments to market that will make a big impact on small patient populations. These conditions are often inherited, difficult to diagnose, progressively debilitating, have few, if any, treatment options, and are usually ignored. Visit www.biomarin.com to learn more.



BLUEWAVE TECHNOLOGIES, INC. Boo

Booth 33

The Bluewave Disinfection and Deodorization System is specifically designed to treat pediatric orthopedic devices, such as cranial helmets, TLSOs, AFOs, etc. It uses our patented activated oxygen infusion technology and works in as little as 6 minutes. It is completely dry and leaves no

harmful residues, allowing the patient device to be put back on immediately after treatment. With over a 95% satisfaction rate from over 2,000 patients treated, Bluewave is the new standard for refreshing pediatric orthopedic devices and improving compliance and patient outcomes.



CERAPEDICS

Booth 26

Cerapedics is a global, commercial-stage orthopedics company that aspires to redefine the standard of care for bone repair by healing bones faster and at higher rates,

without compromising safety, so that patients can live their healthiest lives. Bone grafts, including Cerapedics' products, are used in over four million annual spine, orthopedics, trauma, and interventional procedures worldwide. i-FACTOR is a Class III FDA-approved product indicated for single-level ACDF. Cerapedics' next-generation product is currently being evaluated for use in lumbar interbody fusion through ASPIRE, a pivotal clinical study, and has been granted a Breakthrough Device Designation by the FDA.



CHILDREN'S NATIONAL HOSPITAL

Booth 42

Children's National Hospital is home to the only pediatricfocused orthopaedic program in the region. Consistently ranked among the top 10 pediatric orthopaedic surgery programs in the nation by U.S. News & World Report, our

specialists treat more than 25,000 patients annually. Our expertise and innovative care allow us to provide the most efficient treatment while obtaining the best patient outcomes. Our orthopaedic surgeons are leaders in a wide range of subspecialties, including spinal deformities, limb lengthening and reconstruction, pediatric and adolescent sports medicine, bone health and hip preservation. We have attained Level 1 Surgery Verification from the American College of Surgeons, a distinction that recognizes surgery centers that have improved surgical quality, prevented complications, reduced costs and saved lives. Our Spinal Fusion Surgical Home is the first pediatric program of its kind in the nation that delivers safe, effective and family-centered care to children undergoing posterior spinal fusion. To learn more about the programs and services offered at Children's National, please visit: www.childrensnational.org/ortho.





CURVEBEAM AI

Booth 7

CurveBeam Al's HiRise weight bearing CT imaging system provides true 3D alignment data of the entire lower extremities, as well as the distal upper extremities, at the

fraction of the dose of conventional CT imaging. Pediatric programs using HiRise include The Paley Orthopedic & Spine Institute in Florida and The Luskin Orthopaedic Institute for Children in Alliance with UCLA Health. Scans are reimbursed via CPT codes 73700 and 73200. Systems plug into a standard appliance outlet and can be operated by an RT®. Learn more at www.curvebeamai.com.



DEPUY SYNTHES

Booth 14

DePuy Synthes, the Orthopaedics Company of Johnson & Johnson, provides one of the most comprehensive orthopaedics portfolios in the world that helps heal and restore movement for the millions of patients we serve.



GILLETTE CHILDREN'S

Booth 35

Gillette Children's is a global beacon of care for patients who have brain, bone, and movement conditions that start in childhood. Gillette Children's hospital and clinics have earned national and world renown for excellence in the treatment of cerebral palsy, gait and motion

analysis, pediatric orthopedics, pediatric neurology and neurosurgery, and pediatric rehabilitation medicine.

Through innovative research, treatments, and supportive technologies, Gillette Children's focuses on what is possible. If a solution does not exist, we build it. If a question is unanswered, we research it. If a child has a dream, it becomes our dream, too.



GLOBUS MEDICAL

Booth 13

Globus Medical, a leading musculoskeletal solutions company, is driving significant technological advancements across a complete suite of products ranging from spinal, trauma, and joint reconstruction therapies to imaging, navigation, and robotics. 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 high-level engineering and technology to achieve pain-free, active lives for all patients with musculoskeletal disorders.



GREEN SUN MEDICAL

Booth 4

Green Sun Medical has launched the dynamic adjustable Whisper Brace for Adolescent Idiopathic Scoliosis. The Whisper improves the quality of life for adolescents struggling with rigid clamshell braces by allowing them to move freely while

maintaining continuous corrective pressure. The Whisper is enhanced with an advanced pressure sensor system that allows physicians to ensure that their patients are receiving the proper treatment in real time.





IMED INNOVATIVE MEDICAL DEVICES Booth 1

Helping Children EveryWhere. We're iMed, dedicated to children's orthopedic care.

Our adjustable implantable and non-implantable devices are transforming pediatric orthopedics, bringing hope to children worldwide.



IPSEN

Booth 32

Ipsen is a global biopharmaceutical company focused on innovation and specialty care. At Ipsen, we develop and commercialize medicines in three key therapeutic areas—

Oncology, Neuroscience and Rare Disease. We work to provide hope for patients whose lives are challenged by difficult-to-treat diseases, including rare diseases such as acromegaly and certain growth disorders. The patients we serve live with rare and debilitating diseases, and we pride ourselves on putting these patients first. We are always ready to listen to—and learn from—patients. Every day, our more than 5,700 employees worldwide, including over 600 in North America, work diligently to improve the lives of patients around the world. For more information please visit www.ipsenus.com.



KYOWA KIRIN

Booth 12

Kyowa Kirin strives to create and deliver novel medicines with life-changing value. As a Japan-based Global Specialty Pharmaceutical Company, we apply cutting-edge science and expertise in antibody research and engineering to address

the needs of patients and society across multiple therapeutic areas, including Nephrology, Oncology, Immunology/Allergy and Neurology. Across four global regions – Japan, Asia Pacific, North America and EMEA/International – we are united by our shared values of commitment to life, teamwork/Wa, innovation, and integrity, and a drive to advance innovations that have a profound impact on patients. You can learn more about Kyowa Kirin North America at: https://kkna.kyowakirin.com.



LIMB LENGTHENING AND RECONSTRUCTION SOCIETY (LLRS)

Booth 40

The Limb Lengthening and Reconstruction Society (LLRS) is a professional organization of diverse orthopaedic surgeons, physicians, and allied health professionals devoted to advancing the science of limb reconstruction for patients of all ages. This includes fostering research, stimulating scientific

exchange, and collaboration to provide excellent clinical care in the arena of limb lengthening, limb reconstruction, extremity deformity correction, as well as complex fracture treatment.





MEDTRONIC

Booth 24

Bold thinking. Bolder actions. We are Medtronic. We lead global healthcare technology and boldly attack the most challenging health problems facing humanity by searching

out and finding solutions. Our Mission — to alleviate pain, restore health, and extend life — unites a global team of 95,000+ passionate people. Powered by our diverse knowledge, insatiable curiosity, and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day. Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. Learn more at www.medtronic.com.



MHE RESEARCH FOUNDATION

Booth 34

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. The MHE Research Foundation Five-point mission is to REACH, advance and support the following.

RESEARCH: to assist and support researchers in order to one day discover a treatment / cure for MHE. Our foundation works hand in hand with researchers and physicians from around the world in this mission. **EDUCATION:** to provide vital clinical informational guides & accompanying video benefiting both families and physicians.

ADVOCACY: to bring awareness about this disease throughout the world.

CLINICAL: to provide resources directly to families enabling them to locate the medical care they require. **HOPE:** the research being conducted on MHE/MO/HME & the informational resources will bring a better quality of life to the families affected by this disease around the world.



NEMOURS CHILDREN'S HEALTH

Booth 36

Nemours Children's Health is an international destination in orthopedic care for complex disorders including skeletal dysplasia, cerebral palsy, osteogenesis imperfecta and spine conditions such as scoliosis. It also provides a full range of comprehensive orthopedic care through other highly specialized programs including sports medicine, clubfoot, complex hip disorders, fractures, and limb lengthening and reconstruction. Nemours has developed treatment protocols

and innovations used worldwide for the care of complex pediatric orthopedic conditions and has trained among the nation's largest number of residents and fellows in pediatric orthopedic surgery. Nemours orthopedic specialists are also actively involved in life-changing research and clinical trials focused on helping children with musculoskeletal diseases experience the world more independently.





NUVASIVE

Booth 6

Globus Medical is committed to providing innovative technologies and industry-leading clinical support

to help surgeons and healthcare providers deliver better care around the globe. The Company provides one of the most comprehensive offerings of musculoskeletal solutions and enabling technologies to impact the care continuum, now including the procedurally integrated portfolio of NuVasive. The Company's employees are relentlessly focused on advancing patient care. For more information, please visit www.globusmedical.com/uniting.





NVIEW MEDICAL

Booth 23

nView medical is a young company focused on "what's best for patients." nView's imaging and guidance system, the nView s1 + true-map navigation™, is a breakthrough 3D imaging system that provides instant 3D imaging in

the operating room with very low levels of radiation. Improved workflow, imaging versatility, and being instrument/implant agnostic are only a few highlights. The nView platform has also added imaging versatility to many pediatric orthopedic procedures. It is a fully integrated AI-enabled imaging and navigation solution. The nView s1 + true-map is FDA cleared, has been used in more than 300 surgeries, and is commercially available.

Come check us out!



NYRC BRACE

Booth 3

The NYRC Brace™ with Smart Brace Technology™ is a tension-based, custom-made, three-dimensional back brace with wearable technology for scoliosis treatment. Each brace is highly customized to the patient's anatomy and its native sagittal profile to maximize coronal and sagittal balance

improvements. The strapping mechanism with wearable technology is a system that allows the continuous monitoring of the scoliosis brace use, strap tension, and patient balance. The NYRC Brace™ strapping mechanism is set up in the custom rigid shell according to the patient scoliosis curve pattern. The wearable device is able to communicate with a companion proprietary mobile application that stores and processes the collected data and is responsible for data synchronization. All the data related to the system, including data collected by the wearable device, is stored in a cloud infrastructure, which can be accessed through a proprietary web-based application.

Our company headquarters is located in New York and has a multidisciplinary team of experts who have extensive experience dealing with patients with scoliosis. www.nyrcbrace.com



ORTHOFIX

Booth 19

The newly merged Orthofix-SeaSpine organization is a leading global orthopedics and spine company with a comprehensive portfolio of specialized orthopedic solutions, biologics, innovative spinal hardware, bone growth therapies, and a

leading surgical navigation system. Its products are distributed in approximately 68 countries worldwide. The company's pediatric portfolio specifically addresses the most challenging pediatric orthopedic conditions worldwide including bone deformity, trauma, and limb lengthening procedures. The company is headquartered in Lewisville, Texas, and has primary offices in Carlsbad, CA, with a focus on spine and biologics product innovation and surgeon education, and Verona, Italy, with an emphasis on product innovation, production, and medical education for orthopedics. The combined company's global R&D, commercial, and manufacturing footprint also includes facilities and offices in Irvine, CA; Toronto, Canada; Sunnyvale, CA; Wayne, PA; Olive Branch, MS; Maidenhead, UK; Munich, Germany; Paris, France; and São Paulo, Brazil. To learn more, visit Orthofix.com.





ORTHOPEDIATRICS

Booth 15

Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such, it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children

with orthopedic conditions. OrthoPediatrics currently markets 50 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This product offering spans trauma and deformity, scoliosis, and sports medicine/other procedures. OrthoPediatrics' global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and over 70 countries outside the United States. For more information, please visit www.orthopediatrics.com.



OSF HEALTHCARE/CHILDREN'S HOSPITAL Boo

Booth 22

OSF HealthCare is an integrated health system owned and operated by The Sisters of the Third Order of St. Francis, headquartered in Peoria, Illinois. OSF HealthCare has 16 hospitals – 10 acute care, five critical

access, one transitional care - with 2,131 licensed beds throughout Illinois and Michigan. OSF employs nearly 24,000 Mission Partners across 150+ locations; has two colleges of nursing; operates OSF Home Care Services, an extensive network of home health and hospice services; owns Pointcore, Inc., comprised of health care-related businesses; OSF HealthCare Foundation, the philanthropic arm for the organization; and OSF Ventures, which provides investment capital for promising health care innovation startups. In 2020, OSF OnCall was established, a digital health operating unit, including a hospital-at-home. OSF OnCall delivers care and services when, where, and how patients prefer to receive them. OSF HealthCare has been recognized by Fortune as one of the most innovative companies in the country. More at osfhealthcare.org.



PACIRA BIOSCIENCES, INC.

Booth 8

Pacira BioSciences, Inc. (Nasdaq: PCRX) is committed to providing non-opioid options to as many patients as possible to redefine the role of opioids as rescue therapy only. The company is also developing innovative interventions to address debilitating conditions

involving the sympathetic nervous system, such as cardiac electrical storm, chronic pain, and spasticity. Pacira has three commercial-stage non-opioid options for treating pain: EXPAREL® (bupivacaine liposome injectable suspension), a long-acting, local analgesic currently approved for postsurgical pain management; ZILRETTA® (triamcinolone acetonide extended-release injectable suspension), an extended-release, intra-articular, injection indicated for the management of osteoarthritis knee pain; and iovera^{o®}, a novel, handheld device for delivering immediate, long-acting, drug-free pain control using precise, controlled doses of cold temperature to a targeted nerve. To learn more about Pacira, including the corporate mission to reduce overreliance on opioids, visit www.pacira.com.



PEDIATRIC ORTHOPAEDIC PRACTITIONERS SOCIETY

Booth 38

The Pediatric Orthopaedic Practitioners Society (POPS) is a non-profit, volunteer-run organization, established in 2005 that exists to advance and enhance the care provided by the Advanced Practice Nurse and Physician Assistant specializing in Pediatric Orthopaedics. By bringing members together, we aim to support continuing education, specialized training, research collaboration, mentoring, networking and promotion of our role.





Rubin Institute for Advanced Orthopedics

CARE BRAVELY

RUBINS INSTITUTE FOR ADVANCED ORTHOPEDICS Booth 39

The 34th Annual Baltimore Limb Deformity Course will take place August 21-25, 2024. This course is intended for orthopedic surgeons, podiatrists, and allied health professionals who treat lower extremity deformities. No prior experience required. The course features lectures, deformity planning sessions, innovative apps, case presentations from experts, and an internationally renowned faculty.

The course will introduce basic and advanced limb reconstruction concepts, including limb alignment, limb lengthening, corrective osteotomies, and internal and external fixation. The 2023 course was attended by clinicians from 37 countries and 30 U.S. states.

Smith-Nephew

SMITH+NEPHEW

Booth 42

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. Visit www.smith-nephew.com for more information.



STRYKER

Booth 9

At Stryker, we deliver the total spine experience, empowering our customers to keep the world moving. Together, we do more to challenge the standard, respond to clinical needs

and pioneer new possibilities. Our core technologies include biologic solutions, spinal implants and surgical instruments for use in spine procedures. Our enabling technologies include digital health, guidance and imaging for both cranial and spine procedures.



ULTRAGENYX

Booth 31

Ultragenyx is a biopharmaceutical company committed to bringing novel products to patients for the treatment of serious rare and ultrarare genetic diseases. The company has built

a diverse portfolio of approved therapies and product candidates aimed at addressing diseases with high unmet medical need and clear biology for treatment, for which there are typically no approved therapies treating the underlying disease. For more information visit: www.ultragenyx.com or medinfo@ultragenyx.com.



WOLTERS KLUWER

Booth 37

Wolters Kluwer provides trusted clinical technology and evidence-based solutions that engage clinicians, patients,

researchers, and the next generation of healthcare providers. With a focus on clinical effectiveness, research and learning, safety and surveillance, and interoperability and data intelligence, our proven solutions drive effective decision-making and consistent outcomes across the continuum of care.



ZIMVIE SPINE

Booth 21

ZimVie Spine is dedicated to restoring daily life for patients through comprehensive spinal solutions with a focus on education, training, and clinical support for surgeons. Along

with cervical disc replacement, vertebral body tethering, comprehensive spinal fixation, and fusion implants, ZimVie Spine offers minimally invasive procedural solutions and a complete suite of biologic solutions.



Expert orthopedic care that's just for kids.



When a child needs orthopedic services for an acute, chronic or congenital condition, parents and physicians choose WashU Orthopedics. Together with **St. Louis Children's Hospital**, we're proud to be national leaders in pediatric orthopedic care (*U.S. News and World Report*).

- Benign and malignant tumors, including neurfibromatosis
- Congenital hand deformities, including birth brachial plexus
- General fractures and sports injuries
- Hip care from birth through young adulthood
- Lower extremity deformities and limb length discrepancies
- Neuromuscular disorders, including cerebral palsy
- Pediatric foot deformities, including clubfoot
- Spine injuries and deformities, including spina bifida and skeletal dysplasia



ortho.wustl.edu/kids (314) 514-3500





POLICIES



IPOS® registration lists, including the registrant's name and postal mailing address, are used to process your meeting registration and to provide you with information and materials related to POSNA's meeting. POSNA shares your personal data with its sponsors, exhibitors, and other vendors related to the meeting in order to notify you of products and services which may be of interest to you. No financial or other personal identifying information is disclosed. POSNA takes reasonable steps to ensure that our sponsors protect your information on POSNA's behalf. Please click here for additional information on POSNA's Privacy Policy.

Disclosure of Personal Information

When registering for IPOS®, your personal identifying information is retained by POSNA. You understand and agree that POSNA may disclose your name, address, and contact information to the hotel and other service providers.

Language

English is the official language of IPOS®.

No Smoking Policy

Smoking is not permitted during any meeting or event.

Event Cancellation

Due to circumstances beyond our control, the Pediatric Orthopaedic Society of North America may elect to cancel IPOS®. These circumstances may include, but are not limited to, disaster, severe weather, civil commotion, pandemics, or government laws or regulations. In the event of such cancellation, all IPOS® registrants will be notified by the email address noted in the POSNA database, and registration fees will be refunded in full. Other costs incurred by the registrant, such as airline or hotel penalties, are the responsibility of the registrant.

Insurance/Liabilities

POSNA will not be held liable for personal injuries or for loss or damage to property incurred by participants or guests at IPOS®, including those participating in social events. Participants and guests are encouraged to take out insurance to cover losses incurred in the event of cancellation, medical expenses, or damage to or loss of personal effects when traveling outside their own country. POSNA cannot be held liable for any hindrance or disruption of IPOS® arising from natural, political, social, or economic events, or other unforeseen incidents beyond its control. Registration of a participant implies acceptance of this condition.

Disclaimer

The material presented at IPOS® has been made available by the Pediatric Orthopaedic Society of North America for educational purposes only. The material is not intended to represent the only, nor necessarily best, method or procedure appropriate for the medical situations discussed but rather is intended to present an approach, view, statement, or opinion of the faculty which may be helpful to others who face similar situations. POSNA disclaims all liability for injury or other damages resulting to any individual attending IPOS® and for all claims which may arise out of the use of the techniques demonstrated therein by such individuals, whether these claims shall be asserted by the physician or any other person.

Accreditation

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and the Pediatric



Orthopaedic Society of North America. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

ACCME Credit Designation

Amedco LLC designates this live activity for a maximum of 18.50 AMA PRA Category 1 CreditsTM for physicians. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosure

Each meeting presenter has been asked to disclose if he or she has received something of value from a commercial company or institution, which relates directly or indirectly to the subject of their presentation. In the online posted disclosure report, an indication of the participant's disclosure appears after his or her name as well as the commercial company or institution that provided the support. POSNA does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author's participation in the meeting.

FDA Statement (United States)

Some drugs or medical devices demonstrated at the IPOS® Meeting may not have been cleared by the FDA or have been cleared by the FDA for specific purposes only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice. Any drug or medical device is being used "off label" if the described use is not set forth on the product's approval label.

Photography

Registration and attendance at, or participation in, POSNA activities constitutes an agreement by the registrant to allow POSNA to capture, retain, and utilize (both now and in the future) the attendees' image, likeness, voice, and actions, whether captured live or recorded and in any format, during IPOS®, for display, exhibition, publication, or reproduction in any medium or context for any purpose, including but not limited to, POSNA member communications, commercial, or promotional purposes.

No Cameras Or Video Cameras

No cameras or video recorders are allowed in any of the sessions or meeting rooms.

Reproduction Policy

POSNA reserves any and all rights to materials presented at IPOS®, including ePosters.
Reproductions of any kind, by any person or entity without prior written permission from POSNA, are strictly prohibited. Prohibited reproductions include, but are not limited to, audiotapes, videotape, and/or still photography. Persons violating this policy may have their badge confiscated and be escorted from the meeting. No unapproved surveys, handouts, or literature may be distributed at the meeting.





gillette

Helping kids live a life defined by dreams, not diagnosis.

Rare is our every day.

Gillette Children's is internationally recognized for treating pediatric orthopedic and spine conditions. From innovative treatments and procedures to never-been-done-before research, Gillette has the orthopedic expertise to care for the unique needs of children, teens, and adults who have highly complex bone and movement conditions.

POSNA ANTITRUST POLICY



It shall be the policy of the Pediatric Orthopaedic Society of North America (POSNA) to be in strict compliance with all Federal and State Antitrust laws, rules, and regulations. Therefore, these policies and procedures apply to all membership, board, committee, and all meetings attended by representatives of POSNA.

Discussions at POSNA meetings often cover a broad range of topics pertinent to the interests or concerns of orthopaedic surgeons. As a general rule, except as noted below, discussions at POSNA meetings can address topics without raising antitrust concerns if the discussions are kept scrupulously free of even the suggestion of private regulation of the profession. However, a number of topics that might be (and have been) discussed at POSNA meetings may raise significant complex antitrust concerns. These include:

- Membership admissions, rejections, restrictions, and terminations;
- Method of provision and sale of POSNA products and services to non-members;
- Restrictions in the selection and requirements for exhibitors at the POSNA Annual Meeting or in CME activities;
- Collecting and distributing certain orthopaedic practice information, particularly involving practice charges and costs;
- Obtaining and distributing orthopaedic industry price and cost information;
- Professional certification programs;
- Group buying and selling; and
- Inclusions or exclusion of other medical societies in organizational activities or offerings.

When these and related topics are discussed, the convener or members of the POSNA group should seek counsel from its General Counsel.

POSNA urges its Board, committees, and other groups not to participate in discussions that may give the appearance of or constitute an agreement that would violate the antitrust laws. Notwithstanding this reliance, it is the responsibility of each POSNA Board or committee member to avoid raising improper subjects for discussion. This policy has been prepared to ensure that POSNA members and other participants in POSNA meetings are aware of this obligation.

The "Do Not's" and "Do's" presented below highlight only the most basic antitrust principles. POSNA members and others participating in POSNA meetings should consult with the General Counsel in all cases involving specific questions, interpretations, or advice regarding antitrust matters.

Do Not's

- 1. Do not, in fact or appearance, discuss or exchange information regarding:
 - a. Individual company prices, price changes, price differentials, mark-ups, discounts, allowances, credit terms, etc. or any other data that may bear on price, such as costs, production, capacity, inventories, sales, etc.
 - b. Raising, lowering, or "stabilizing" orthopaedic prices or fees;
 - c. What constitutes a fair profit or margin level;
 - d. The availability of products or services; or
 - e. The allocation of markets, territories or patients.
- 2. Do not suggest or imply that POSNA members should or should not deal with certain other persons or companies.
- 3. Do not foster unfair practices regarding advertising, standardization, certification or accreditation.
- 4. Do not discuss or exchange information regarding the above matters during social gatherings, incidental to POSNA-sponsored meetings.
- 5. Do not make oral or written statements on important issues on behalf of POSNA without appropriate authority to do so.

POSNA ANTITRUST POLICY



The Do's

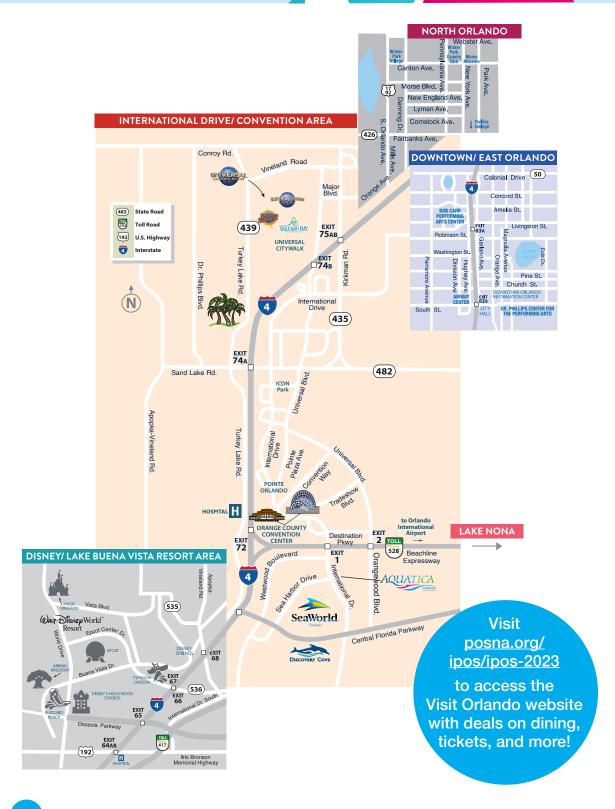
- Do adhere to a prepared agenda for all POSNA meetings. It is generally permissible for agendas
 to include discussions of such varied topics as professional economic trends, advances,
 and problems in relevant technology or research, various aspects of the science and art of
 management, and relationships with local, state, or federal governments.
- 2. Do object whenever meeting summaries do not accurately reflect the matters that occurred.
- 3. Do consult with General Counsel on all antitrust questions relating to discussions at POSNA meetings.
- 4. Do object to and do not participate in any discussions or meeting activities that you believe violate the antitrust laws; dissociate yourself from any such discussions or activities and leave any meeting in which they continue.

Special Guidelines for Collecting and Distributing Information

The collection and distribution of information regarding business practices is a traditional function of associations and is well-recognized under the law as appropriate, legal, and consistent with the antitrust laws. However, if conducted improperly, such information gathering and distributing activities might be viewed as facilitating an express or implied agreement among association members to adhere to the same business practices. For this reason, special general guidelines have developed over time regarding association's reporting on information collected from and disseminated to members. Any exceptions to these general guidelines should be made only after discussion with General Counsel. These general guidelines include:

- 1. Member participation in a statistical reporting program is voluntary. A statistical reporting program should be conducted without coercion or penalty. Non-members should be allowed to participate in a statistical reporting program if eligible; however, if a fee is involved, non-members may be charged a reasonably higher fee than members.
- 2. Information should be collected via a written instrument that clearly sets forth what is being requested.
- 3. The data that is collected should be about past transactions or activities, particularly if the survey deals with prices and price terms (including charges, costs, wages, benefits, discounts, etc,), it should be historic, i.e., more than three months old.
- 4. The data should be collected by either POSNA or an independent third party not connected with any one member.
- 5. Data on individual orthopaedic surgeons should be kept confidential.
- 6. There should be a sufficient number of participants to prevent specific responses or data from being attributable to any one respondent. As a general rule, there should be at least five respondents reporting data upon which any statistic or item is based, and no individual's data should represent more than 25% on a weighted average of that statistic or item.
- 7. Composite/aggregate data should be available to all participants—both members and non-members. The data may be categorized, e.g., geographically, and ranges and averages may be used. No member should be given access to the raw data. Disclosure of individual data could serve to promote uniformity and reduce competition.
- 8. As a general rule, there should be no discussion or agreement as to how members and non-members should adjust, plan, or carry out their practices based on the results of the survey. Each member should analyze the data and make business decisions independently.

THINGS TO DO IN ORLANDO



THINGS TO DO IN ORLANDO



EXPERIENCE ORLANDO'S DISTINCTIVE DINING & NIGHTLIFE

Explore Orlando's expansive dining and entertainment areas, where you can choose from dishes prepared by nationally recognized chefs and local legends, or enjoy live music, sleek lounges, and other options that are all part of our brilliant nightlife. No matter where you choose to go in Orlando, you'll find a vibrant, walkable entertainment area close by, including those featured here. For a complete list, please visit ORLANDOMEETING.COM.

CONVENTION AREA

DINING

A Land Remembered (Rosen Shingle Creek)

Bahama Breeze Island Grille

BJ's Restaurants & Brewhouse

Cafe Tu Tu Tango*

Cala Bella (Rosen Shingle Creek)

The Capital Grille

Ciao Italia Italian Ristorante

Cooper's Hawk Winery & Restaurant

Cuba Libre Restaurant & Rum Bar

David's Club Bar & Grill (Hilton Orlando)

Del Frisco's Double Eagle Steak House

Everglades Restaurant (Rosen Centre Hotel)

Fiorenzo (Hyatt Regency Orlando)

Fogo de Chao Brazilian Steakhouse

The Grill (Marriott's Grande Vista)

Hanamizuki Japanese Restaurant

Harry's Poolside Bar & Grill (Rosen Centre Hotel) Jack's Place (Rosen Plaza Hotel)

Joe's Crab Shack

Knife & Spoon (The Ritz-Carlton Orlando,

Grande Lakes)

Mia's Italian Kitchen

The Oceanaire Seafood Room Orlando

Primo by Melissa Kelly (JW Marriott

Orlando, Grande Lakes)

The Pub Orlando Rodizio Grill

Sakura Sushi (Rosen Inn Closest to Universal)

Saltgrass Steakhouse

Shogun Japanese Restaurant (Rosen Inn closest to Universal)

Spencer's for Steaks and Chops

(Hilton Orlando)

Tapa Toro Tapas Bar & Paella Pit

Taverna Opa

Vincenzo Cucina Italiana

Walk-On's Bistreaux

Yard House

ENTERTAINMENT

3NINE (Rosen Plaza Hotel)

Andretti Indoor Karting & Games*

Axecelsion

Dave & Buster's Inc.*

Dezerland Park*

The Hampton Social*

Howl at the Moon

ICEBAR Orlando

ICON Park*

Kings Dining & Entertainment*

Main Event Entertainment Orlando*

Mango's Tropical Cafe Orlando*

Ole Red*

Pointe Orlando*

Rocks (Hyatt Regency Orlando)

Tin Roof*

Topgolf*

DISNEY/ LAKE BUENA VISTA RESORT AREA

DINING

A Richard Blais Florida Kitchen (Hyatt Regency Grand Cypress)

Boma – Flavors of Africa (Animal Kingdom Lodge)

Bull & Bear (Waldorf Astoria)

California Grill (Contemporary Resort)

Capa Steakhouse & Bar

(Four Seasons Resort Orlando)

Chef Art Smith's Homecomin' Florida Kitchen

Citricos (Grand Floridian)

City Works Eatery & Pour House

Deep Blu Seafood Grill (Wyndham Grand Orlando Resort Bonnet Creek)

The Edison*

Four Flamingos, A Richard Blais Florida Kitchen (Hyatt Regency Grand Cypress)

Flying Fish Café

Frontera Cucina

Il Mulino New York Trattoria (Swan Resort)

Jaleo by José Andrés

Jiko – The Cooking Place (Animal Kingdom Lodge)

La Luce (Hilton Orlando Bonnet Creek)

Lakeside Bar and Grill Landry's Seafood House

Maya Grill (Coronado Springs)

Morimoto Asia

Narcoossee's (Grand Floridian)

'Ohana (Polynesian)

Paddlefish

Planet Hollywood

Rainforest Café

Ravello

Sanaa (Animal Kingdom Lodge)

Sear & Sea (JW Marriott Orlando Bonnet

Creek Resort & Spa)

Shula's Steak House (Dolphin Resort)

Siro Italian Kitchen (Orlando World Center Marriott)

STK Orlando

Terralina Crafted Italian

Todd English's bluezoo (Dolphin Resort)

Toledo (Coronado Springs)

T-REX

Trattoria al Forno

The Venetian Chop House (Caribe Royale)

Victoria & Albert's

Whispering Canyon Café (Wilderness Lodge)

Wolfgang Puck Bar & Grill

Yachtsman Steakhouse (Yacht Club)

Zeta Asia (Signia by Hilton Orlando

Bonnet Creek)

FNTFRTAINMENT

Cirque Du Soleil - Drawn to Life

Disney's Boardwalk*

Disney Springs*

ESPN Club*

Jock Lindsey's Hangar Bar* Kimono's (Swan Resort)*

Rix Sports Bar & Grill (Coronado Springs)*

Splitsville Luxury Lanes*

^{*}Location has both dining and entertainment available

MEMBERSHIP INFORMATION

POSNA Membership

The Pediatric Orthopaedic Society of North America (POSNA) is a not-for-profit professional organization of over 1,500 surgeons, physicians, and allied health members passionately dedicated to advancing musculoskeletal care for children and adolescents through education, research, and quality care.

Mission: To advance pediatric orthopaedics

by promoting education, research,

and quality care

Vision: A world with optimal musculoskeletal

health for all children

Diversity Statement: The Pediatric Orthopaedic Society of North America (POSNA) values diversity, and we are committed to creating an equitable and inclusive environment for all of our current and future members. We strive to eliminate healthcare disparities and deliver the highest quality orthopaedic care to all the children and families we serve. Please visit posna.org/our-society to view the full statement.

POSNA members benefit from a robust and diverse array of resources that advance and fulfill the society's commitment to education, research, and quality care. There are excellent opportunities to forge enduring professional relationships and mentorship. Many members utilize the POSNA platform and its collegial network of colleagues to develop innovative, multi-institution, and multi-national programs.

Benefits:

- Reduced registration fees for Annual Meeting and International Pediatric Orthopaedic Symposium (IPOS®)
- \$400,000+ in research awarded annually
- Committee Appointment Program (CAP) make your voice heard in 30+ committees
- Participate in the POSNA-Sponsored Traveling Fellowship Program
- Reduced subscription rate to the Journal of Pediatric Orthopaedics
- Become a mentor or mentee through the Mentorship Program
- Be a part of the POSNA Safe Surgery
 Program (PSSP)

Become a
POSNA Member and
Advance Your Pediatric
Orthopaedic Career!

Applications for 2024 are closed. Stay tuned for more information on membership for 2025.

Additional Education

- POSNA.org Study Guide over 100 topics available!
- JPOSNA® The official Journal of POSNA.
- POSNAcademy POSNA's video education platform featuring webinars, tutorials, past meeting content, podcasts, and more!
- The Resident Review blog

Follow us!

POSNA.org
OrthoKids.org
JPOSNA.org
POSNAcademy.org



POSNA



posna_org



POSNA



posna_ortho

Medtronic

UNiD™ Adaptive Spine Intelligence

Plan. Execute. Analyze.

UNID™ ASI uses artificial intelligence—backed by data science—to produce implants industrially manufactured to achieve patient-specific spinal alignment goals. Powered by data aggregation and a concierge planning service, the plan, execute, analyze process creates an iterative virtuous cycle that improves with each procedure. Choose the confidence of data and the convenience of patient-specific alignment to your OR with UNID™ ASI.



FDA cleared for use with UNiD™ patient-specific rods.



Infinity[™] OCT System



CD Horizon™ Solera™ Voyager™ System



To learn more, contact your Medtronic representative.

Implantable devices are intended for spinal fusion, fixation, and/or stabilization in certain patient populations, quantities, regions of/approaches to the spine; have certain bone graft option limitations and supplemental device requirements; and are indicated to treat one or more pathologies only as listed in their labeling.

For instruments and implant-specific indications, contraindications, warnings, precautions, and other important medical information, please see the package inserts for the respective product(s). An electronic version of the package insert may be found at https://bit.ly/3uPauYK.

© 2023 Medtronic. Medtronic logo and Engineering the Extraordinary are trademarks of Medtronic. All other brands are trademarks of a Medtronic company. UC202308063EN

Save the Date

Future POSNA Annual Meetings

EPOSNA (Combined POSNA and EPOS Meeting) May 8-11, 2024

National Harbor, MD

Future IPOS® Meetings

December 3-7, 2024 Orlando, FL

December 2-6, 2025

Orlando, FL

December 1-5, 2026

Orlando, FL



1 Tower Lane, Suite 2410 Oakbrook Terrace, IL 60181 Phone: (630) 478-0480 E-mail: ipos@posna.org

The Pediatric Orthopaedic Society of North America (POSNA) is a not-for-profit professional organization of over 1,500 surgeons, physicians, and allied health members passionately dedicated to advancing musculoskeletal care for children and adolescents through education, research, and quality care.

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.

