

12<sup>TH</sup> Biennial

# ISAKOS CONGRESS 2019

Cancun, Mexico • May 12–16, 2019



## FINAL PROGRAM

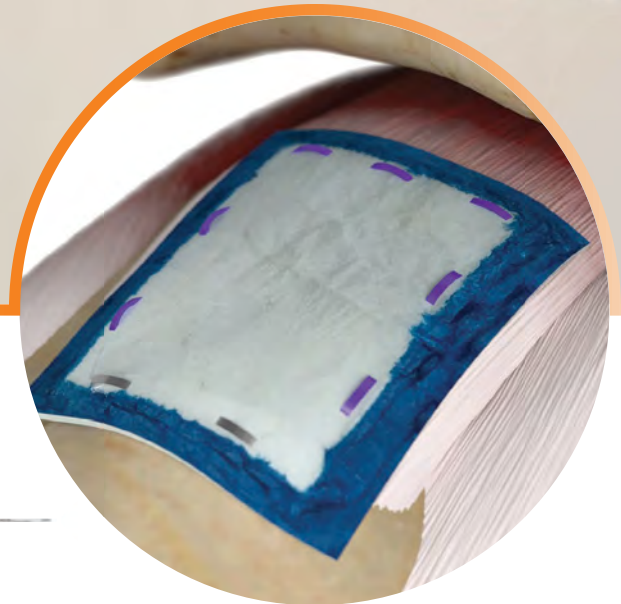


#ISAKOS2019

[isakos.com/2019congress](http://isakos.com/2019congress)

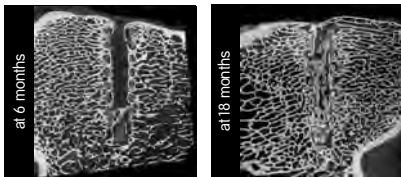


# Life Unlimited



References 1. Data on file at Smith & Nephew, report 15000897, 2012. 2. Costantino PD, Friedman CD. Synthetic bone graft substitutes. *Otolaryngol Clin North Am.* 1994;27:1037-1074

**REGENESORB® Material**  
Replaced by bone within 24 months!\*



Comparisons of absorption, measured via  $\mu$ CT, at 6 and 18 months.\*

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## Rotator Cuff Repair

# Advanced Healing Solutions

Learn more at the 12th Biennial ISAKOS Congress, **booth #303**.



Welcome to the 12<sup>TH</sup> Biennial ISAKOS Congress and the beautiful city of Cancun! The Program Committee, led by Stefano Zaffagnini, MD, Prof. from Italy and Volker Musahl, MD from the United States, have worked diligently for two years to develop a challenging and educationally diverse scientific program reflecting the interests and desires of the society's members. The ISAKOS Congress is the signature event of our society, bringing together world leaders in our specialties of arthroscopy, knee surgery and orthopaedic sports medicine.



Known for its international dialogue, the ISAKOS Congress is a unique opportunity for the exchange of scientific information by reconnecting with old

friends, and networking with colleagues from around the world. The 12<sup>TH</sup> Biennial ISAKOS Congress has brought more than 4,500 orthopaedic surgeons, allied health personnel, residents and fellows to the great city of Cancun.

The ISAKOS Congress Scientific Program emphasizes evidence based medicine, new surgical techniques, and basic science. We hope you enjoy the broad array of instructional courses, surgical demonstrations, debates, lectures, symposia, scientific paper presentations and electronic posters demonstrations. Overall, there are more than 1,800 educational opportunities available to attendees, in addition to the technical exhibits, demonstrating the newest orthopaedic surgical technology. The ISAKOS Congress has a large, diverse and multidisciplinary faculty, who are enthusiastic about instructing on basic research, operative techniques, and technical pearls and pitfalls.

Cancun offers something for everyone, and we hope you will enjoy your stay and take advantage of the tour assistance provided. The ISAKOS Congress will also host a variety of social events such as the Welcome Reception for all Congress attendees and their guests, a spouse and guest program and a special tour program. You and your guests are invited to the Welcome Reception on Sunday, May 12.

You are the most important part of the 12<sup>TH</sup> Biennial ISAKOS Congress! We are glad that you have joined us in Cancun. Thank you for participating in the international experience that is the ISAKOS Congress!

**Marc R. Safran, MD**  
President 2017–2019

**Stefano Zaffagnini, MD, Prof.**  
Program Chair 2017–2019

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# CONGRESS AT A GLANCE

TIME	SATURDAY, MAY 11	SUNDAY, MAY 12	MONDAY, MAY 13	TUESDAY, MAY 14	WEDNESDAY, MAY 15	THURSDAY, MAY 16
	<b>Registration</b> 06:00 – 17:30	06:30 – 17:30	06:30 – 17:30	06:30 – 17:30	06:30 – 17:30	06:30 – 13:00
<b>Exhibits</b>		07:00 – 15:30 17:30 – 20:00	07:00 – 15:30	07:00 – 15:30	07:00 – 15:30	Closed
<b>Sports Rehabilitation Concurrent</b>		08:30 – 17:00	08:30 – 16:45	9:00 – 17:00		
07:30	<b>Morning Pre-Courses</b> Current Concepts in Shoulder Surgeries: New Insights in Instability and Rotator Cuff Repair <b>07:30 – 13:00</b>	<b>Opening Ceremony</b> <b>Honorary Members</b> <b>2021 Congress Cape Town</b> 08:00 – 08:45 <b>Walking Break</b> 08:45 – 09:00	<b>Instructional Course Lectures</b> 07:30 – 09:00	<b>Instructional Course Lectures</b> 07:30 – 09:00	<b>Instructional Course Lectures</b> 07:30 – 09:00	<b>Instructional Course Lectures</b> 07:30 – 09:00
08:00	Updating and Upgrading the Knee Surgical Techniques (presented in Spanish) <b>07:50 – 12:00</b>	<b>Concurrent Sessions</b> 09:00 – 12:00	<b>Break to Visit Exhibits</b> 09:00 – 09:30	<b>Break to Visit Exhibits</b> 09:00 – 09:30	<b>Break to Visit Exhibits</b> 09:00 – 09:30	<b>Concurrent Session</b> 09:00 – 13:00
09:00			<b>ISAKOS Business Meeting I</b> 09:30 – 10:10	<b>ISAKOS Business Meeting II</b> 09:30 – 10:15	<b>ISAKOS Business Meeting II</b> 09:30 – 10:15	
09:30			<b>Walking Break</b> 10:10 – 10:15	<b>Presidential Guest Lecture</b> <b>Medicine Guest Lecture</b> 9:30 – 10:25	<b>Awards Ceremony International Society Presidents</b> <b>Presidential Medallion</b> 10:15 – 11:00	
10:00	Knee Arthroplasty: All You Need to Know <b>08:00 – 12:00</b>	<b>Walking Break</b> 08:45 – 09:00	<b>Presidential Lecture</b> 10:15 – 10:45			
10:30			<b>Walking Break</b> 10:45 – 11:00	<b>Walking Break</b> 10:25 – 10:35	<b>Walking Break</b> 11:00 – 11:15	
11:00			<b>Concurrent Session</b> 11:00 – 12:00	<b>Concurrent Session</b> 10:35 – 12:05	<b>Concurrent Session</b> 11:15 – 12:00	
11:30				<b>Walking Break</b> 12:00 – 12:15	<b>Walking Break</b> 12:00 – 12:15	
12:00	<b>Lunch Break</b> <b>12:00 – 13:30</b> (Depending on Pre-Course)	<b>Walking Break</b> 12:00 – 12:15	<b>Walking Break</b> 12:00 – 12:15	<b>Walking Break</b> 12:05 – 12:15	<b>Walking Break</b> 12:00 – 12:15	
12:30		<b>Lunch Time Sessions*</b> 12:15 – 13:30	<b>Lunch Time Sessions*</b> 12:15 – 13:30	<b>Lunch Time Sessions*</b> 12:15 – 13:30	<b>Lunch Time Sessions*</b> 12:15 – 13:30	<b>End of ISAKOS Congress</b> 13:00
13:00	<b>Afternoon Pre-Courses</b> Updating and Upgrading the Shoulder Surgical Techniques (presented in Spanish) <b>12:50 – 17:00</b>	<b>Concurrent Sessions</b> 13:30 – 15:00	<b>Concurrent Sessions</b> 13:30 – 15:00	<b>Concurrent Sessions</b> 13:30 – 15:00	<b>Concurrent Sessions</b> 13:30 – 15:00	
13:30		<b>Break to Visit Exhibits</b> 15:00 – 15:30	<b>Break to Visit Exhibits</b> 15:00 – 15:30	<b>Break to Visit Exhibits</b> 15:00 – 15:30	<b>Break to Visit Exhibits</b> 15:00 – 15:30	
14:00						
14:30						
15:00	Masterclass in Knee Sports and Preservation Surgery: A Case Based Approach <b>13:30 – 17:05</b>	<b>Concurrent Sessions</b> 15:30 – 17:30	<b>Concurrent Sessions</b> 15:30 – 17:30	<b>Concurrent Sessions</b> 15:30 – 17:30	<b>Concurrent Sessions</b> 15:30 – 17:30	
15:30						
16:00						
16:30						
17:00	The Sports Medicine Physician <b>13:30 – 17:35</b>	<b>Welcome Reception</b> Exhibit Hall 17:30 – 20:00				

\*Not CME Accredited. Ticket Required.



# THE INTERACTIVE AGENDA HAS A NEW LOOK!

Save the ISAKOS Congress **Web App** for Access on the Go!

Now more mobile friendly!

The Interactive web app includes:

- *LIVE* Agendas by Day, Room, or Session Type
- Faculty Profiles and Presentation Schedules
- Access to Abstracts, Outlines & Presentations
- Search and Sort Filters
- Collapsible and Expandable Viewing
- Save Favorites to mySchedule
- 5-Star Rating System
- Electronic Questions and Polling—by 2Shoes
- Interactive Exhibits Floorplan & Directory
- Congress PDF Programs & Downloads
- Convention Center Maps
- Attendee and Guest Directory\*
- *And More!*

[isakos.com/interactiveagenda](http://isakos.com/interactiveagenda)



\* Due to data privacy protection laws, only attendees who have consented to share their information will be listed in online directories. You may change your privacy preferences at any time at [isakos.com/myISAKOS](http://isakos.com/myISAKOS).

# GENERAL MEETING INFORMATION

## CME ACCREDITATION

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through joint sponsorship of the American Academy of Orthopaedic Surgeons (AAOS) and the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS). The AAOS is accredited by the ACCME to provide continuing medical education for physicians.

The American Academy of Orthopaedic Surgeons designates this live activity for a maximum of **33.5 AMA PRA Category 1 Credits™**.

For more information regarding CME, including credit hours for the Pre-Courses and Sports Rehabilitation Concurrent Course, please visit [isakos.com/2019/Program#CME](http://isakos.com/2019/Program#CME).

## CME CERTIFICATES

To receive your CME Certificate for the 2019 ISAKOS Congress, please use your ISAKOS myCongress login at [isakos.com/myCongress](http://isakos.com/myCongress) and complete the online Course Survey after the Congress.

Once you have completed the survey, you will be able to download or print your CME Certificate.

## DISCLAIMER

The material presented at the ISAKOS Biennial Congress has been made available by ISAKOS for educational purposes only. This material is not intended to represent the only, nor necessarily the 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.

## FDA STATEMENT

Some drugs or medical devices demonstrated at the ISAKOS Biennial Congress have not been cleared by the American Food & Drug Administration (FDA), or have been cleared by the FDA for specific purposes only. The FDA has stated that it is the responsibility of the physicians to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.

The AAOS which is accredited to provide CME credits for this meeting provides that "off label" uses of a drug or medical device may be described in accredited activities so long as the "off label" use of the drug or medical device is described specifically (i.e., it must be disclosed that the FDA has not cleared the drug or device for the described purpose). Any drug or medical device is being used "off label" if the described use is not set forth on the products' approach label.

## FINANCIAL DISCLOSURE

Each participant in the ISAKOS Biennial Congress 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 his or her presentation. ISAKOS has identified the option to disclose as follows:

- 1.... Royalties
- 2.... Speaker
- 3a.. Paid Employee
- 3b.. Paid Consultant
- 3c.. Unpaid Consultant
- 4.... Stock
- 5.... Research Support
- 6.... Financial /Material Support
- 7.... Publisher Support
- 8.... Publication Board
- 9.... Organization Board

An indication of the participant's financial disclosure appears after his or her name in the online Presenter Disclosure list in the Congress Interactive Agenda, as well as the commercial company or institution that provided the support, as applicable.

ISAKOS 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 Biennial Congress.

Presenter Disclosures can be found online at [isakos.com/2019Congress/Disclosures](http://isakos.com/2019Congress/Disclosures)

## CONGRESS VENUE

- Venue: **Cancun International Convention Center (Cancun ICC)**
- Location: Boulevard Kukulcán KM.9  
1er Piso, Zona Hotelera  
77500 Cancún, Q. Roo  
MEXICO

## TRANSPORTATION & SHUTTLES

ISAKOS does not provide transportation for Congress attendees. Please find information on buses and taxis on page 72.



## ON-SITE REGISTRATION AND BADGE PICK-UP

### GROUND FLOOR—CANCUN ICC

Badge pick-up is scheduled to open on Friday, May 10, 2019. Attendees will be able to pay for their on-site registrations in US dollars or Mexican pesos, by credit card (American Express, MasterCard and Visa), or by check drawn in US dollars on a US bank. Registration will be open every day at Cancun ICC during the following hours:

Friday, May 10	14:00–17:00
Saturday, May 11	
Pre-Course Registration Only	06:00–11:00
Congress Registration Opens	11:00–17:30
Sunday, May 12	06:30–17:30
Monday, May 13	06:30–17:30
Tuesday, May 14	06:30–17:30
Wednesday, May 15	06:30–17:30
Thursday, May 16	06:30–13:00

### BREAKFASTS, LUNCH AND BREAKS

Continental breakfast and breaks will be available daily for all registered attendees beginning at 07:00 on Sunday, May 12 in the Exhibit Hall (Ground Floor). Lunch and refreshments will be available for purchase.

Sunday–Wednesday: Complimentary lunch will be provided to Lunch Time Session registrants only, on a first-come, first-served basis. Lunch is not guaranteed.

### INSTRUCTIONAL COURSE LECTURES

Instructional Course Lectures are free of charge to all attendees. Instructional Course Lectures will be offered on Monday, May 13 through Thursday, May 16 from 07:30–09:00. For a complete list of Instructional Courses, please refer to page 50.

## TECHNICAL EXHIBITS

Attendees must be registered for the meeting in order to access the Exhibit Hall which is located on the ground floor (by Registration) of the Cancun International Convention Center. A complete listing of all technical exhibits is included in this program on page 63. Exhibits will be open:

Sunday, May 12	07:00–15:30
Welcome Reception	17:30–20:00
Monday, May 13	07:00–15:30
Tuesday, May 14	07:00–15:30
Wednesday, May 15	07:00–15:30
Thursday, May 16	CLOSED

## ePOSTER EXHIBITS

Scientific ePoster presentations can be viewed at computer stations located in the Foyer of Gran Cancun on Floor 3 and in the hallway by Cozumel on Floor 2. ePoster presentations can also be viewed at any time in the Interactive Agenda at [www.isakos.com/interactiveagenda](http://www.isakos.com/interactiveagenda).

## WI-FI SERVICE

### WI-FI PASSWORD: isakos2019

Premium Wi-Fi service is complimentary to Congress attendees in all meeting rooms and public areas, including the Exhibit Hall.

## INTERNET STATIONS

All meeting attendees are welcome to access the internet at no charge at the ISAKOS Internet Stations. The Internet Stations will be open daily during Congress hours and are located in the Bacalar foyer on Floor 1.



**Tweeting About  
The Congress?**

Include hashtag **#ISAKOS2019** in your Tweets to join the global conversation!

Follow **@ISAKOS** for **#ISAKOS2019** updates!

[twitter.com/ISAKOS](https://twitter.com/ISAKOS)



## GENERAL MEETING INFORMATION

# WELCOME RECEPTION

**Room:** Exhibit Hall–Ground Floor  
Cancun International Convention Center

**Date:** Sunday, May 12

**Time:** 17:30–20:00

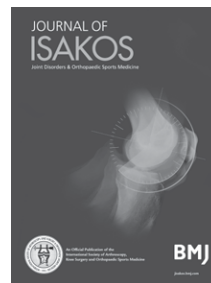
ISAKOS welcomes all attendees and their guests to celebrate the opening of the 12<sup>TH</sup> Biennial ISAKOS Congress. The Welcome Reception is a wonderful opportunity to reunite with old friends and network with colleagues. Hors d'oeuvres and cocktails will be provided for this festive occasion. Attendance is included in the Congress registration fee and guests are welcome to attend at no additional charge.

### SPEAKER READY ROOM

Please bring a copy of your podium presentation to the Speaker Ready Room a minimum of 24 hours in advance of your presentation. The Speaker Ready Room is located in Tulum 2, 3, 4 on Floor 2.

The Speaker Ready Room will be open as follows:

Friday, May 10	14:00–17:00
Saturday, May 11	
Pre-Course Presenters Only	06:00–11:00
All Congress Presenters	11:00–17:30
Sunday, May 12	06:30–17:30
Monday, May 13	06:30–17:30
Tuesday, May 14	06:30–17:30
Wednesday, May 15	06:30–17:30
Thursday, May 16	06:30–12:00



### JOURNAL OF ISAKOS LEADERSHIP SYMPOSIUM: STRATEGIES IN SUCCESSFUL PUBLISHING

Cozumel 1 + 5

Wednesday, May 15

15:30–16:30

The editor of the *Journal of ISAKOS: Joint Disorders & Orthopedic Sports Medicine* will host a session for those who are interested in reviewing or writing articles for journal publication. Information on the reviewing process, and manuscript structure and preparation will be provided, along with reviewer objectives and responsibilities.

- Submitting: How to Write an Excellent Paper
- What It Takes To Be A Good Reviewer
- Post-Publication Marketing: How Authors Can Promote Their Research Using Social Media

**Chair:** C. Niek Van Dijk, MD, PhD NETHERLANDS  
*JISAKOS* Editor in Chief

**Faculty:** Leendert Blankevoort, PhD, NETHERLANDS

Christopher D. Harner, MD UNITED STATES

Jon Karlsson, Prof. SWEDEN

Stephen L. Lyman, PhD UNITED STATES

Gary G. Poehling, MD UNITED STATES

#### ISAKOS VIP Faculty:

Marc R. Safran, MD UNITED STATES

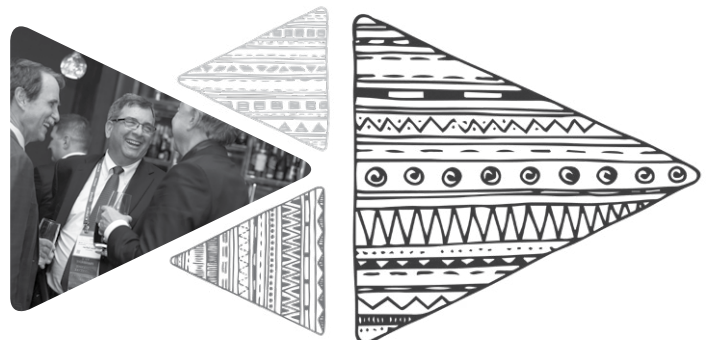
Willem M. Van Der Merwe, MBChB, FCS(SA)Ortho  
SOUTH AFRICA

Guillermo Arce, MD ARGENTINA

Philippe N. Neyret, MD, PhD FRANCE

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## SPOUSE AND GUEST MORNING CAFÉ

The Spouse and Guest Morning Café includes a daily morning coffee and pastry social held at the Fiesta Americana Coral Beach. This is a great opportunity to meet with new and old friends to enhance your experience in Cancun. For additional information or to register, please visit the Spouse and Guest desk in the Registration area located on the Ground Floor of the Cancun International Convention Center.

Location: Fiesta Americana Coral Beach  
Coral Café Restaurant  
Address: Km 9.5, Blvd. Kukulcan,  
Zona Hotelera, 77500  
Cancún, Quintana Roo, MEXICO  
Dates: Sunday, May 12–Thursday, May 16  
Time: 07:30–10:00  
Cost: US \$125

\*To view an online directory of ISAKOS Congress attendees and guests, please visit [isakos.com/2019/attendees](http://isakos.com/2019/attendees). Cancun tour options can be viewed at [isakos.com/2019congress/travel](http://isakos.com/2019congress/travel).



ISAKOS would like to present Members with a complimentary USB Drive, pre-loaded with the latest ISAKOS Publications!

- Basic Methods Handbook for Clinical Orthopaedic Research
- Complex Knee Ligament Injuries
- Hip & Groin Pain in the Athlete
- Motor Skills Training in Orthopedic Sports Medicine
- Rotator Cuff Across the Life Span
- Sports Injuries of the Foot and Ankle
- The Sports Medicine Physician Book

Please redeem the ePubs USB ticket at the Backpack and USB distribution booth #224 inside the Exhibit Hall. The Ticket can be found with the Congress materials you received at Registration. USBs will be available on a first-come, first-served basis.

\*Due to data privacy protection laws, only attendees who have consented to share their information will be listed in online directories. You may change your privacy preferences at any time at [isakos.com/myISAKOS](http://isakos.com/myISAKOS).

## INTERACTIVE AGENDA & myCONGRESS

[isakos.com/InteractiveAgenda](http://isakos.com/InteractiveAgenda)  
[isakos.com/myCongress](http://isakos.com/myCongress)



### THE INTERACTIVE AGENDA HAS A NEW LOOK!

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Now more mobile friendly! The Interactive web app includes:

- LIVE Agendas by Day, Room, or Session Type
- Faculty Profiles and Presentation Schedules
- Access to Abstracts, Outlines & Presentations
- Search and Sort Filters
- Collapsible and Expandable Viewing
- Save Favorites to mySchedule
- 5-Star Rating System
- Electronic Questions and Polling—by 2Shoes
- Interactive Exhibits Floorplan & Directory
- Congress PDF Programs & Downloads
- Convention Center Maps
- Attendee and Guest Directory\*
- And More!

## HAVE A QUESTION FOR A PRESENTER? AUDIENCE RESPONSE & LIVE POLLING Powered by 2Shoes

[isakos.com/InteractiveAgenda](http://isakos.com/InteractiveAgenda)



ISAKOS has partnered with 2Shoes to offer a way for attendees to interact with presenters and moderators. Visit the 2019 ISAKOS Congress Interactive Agenda, locate the “Question?” icon during the appropriate Discussion Session and submit your question directly to the Moderator!

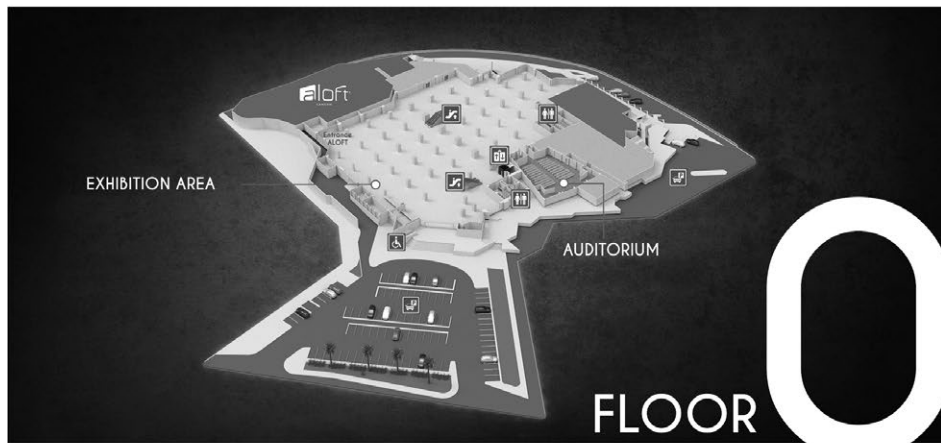
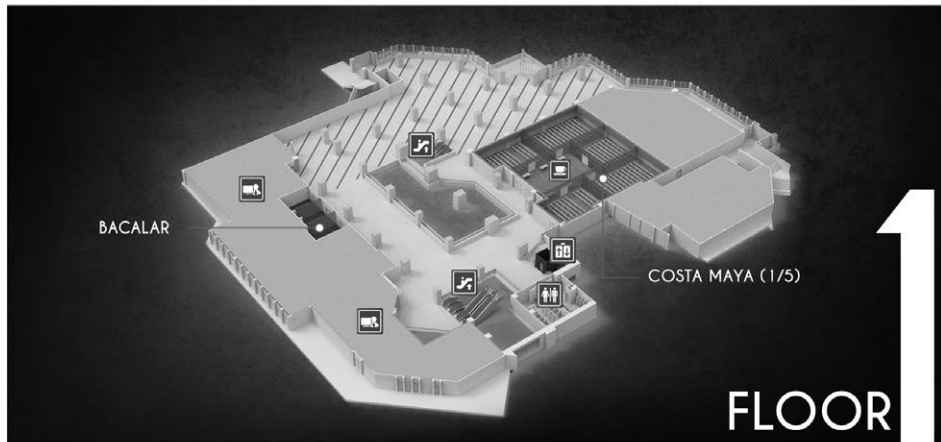
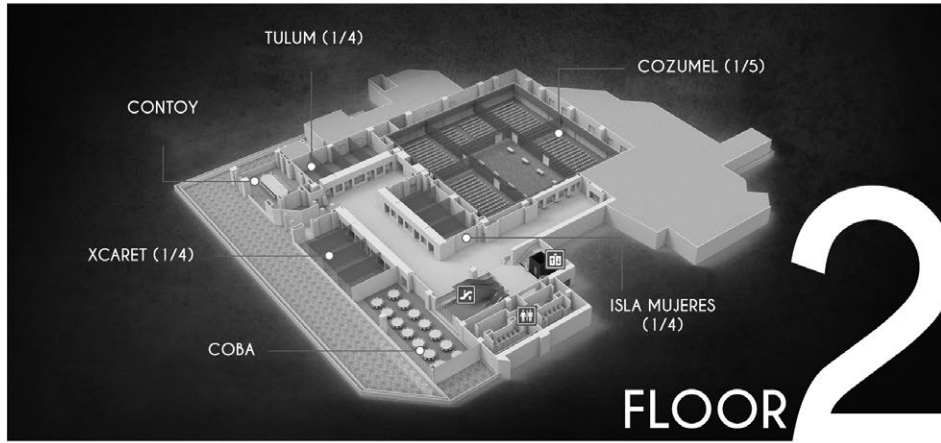
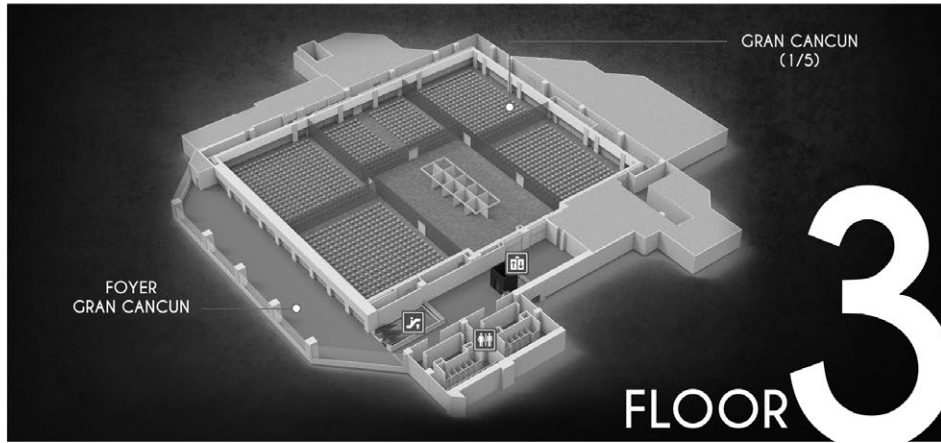
Also use this tool to participate in polls asked by the faculty! There is no app to download or account required to participate in this offering.

# DIRECTORY

<b>Technical Exhibits</b>		Exhibition Area, Ground Floor
<b>General Session</b>		Gran Cancun, Floor 3
<b>Concurrent Sessions</b>		Cozumel, Floor 2
<b>ePoster Stations</b>		Gran Cancun Foyer, Floor 3 Cozumel Hallway, Floor 2
<b>ICLs 1, 8, 16, 24</b>		Gran Cancun, Floor 3
<b>ICLs 2, 9, 17, 25</b>		Cozumel 1 + 5, Floor 2
<b>ICLs 3, 10, 18, 26</b>		Cozumel 3 + 4, Floor 2
<b>ICLs 4, 11, 19, 27</b>		Cozumel 2 + A, Floor 2
<b>ICLs 5, 12, 20, 28</b>		Coba, Floor 2
<b>ICLs 6, 13, 21, 29</b>		Xcaret, Floor 2
<b>ICLs 7, 15, 23, 30</b>		Costa Maya B, Floor 1
<b>ICLs 14, 22, 31</b>		Costa Maya A, Floor 1
<b>Internet Stations</b>		Bacalar Foyer, Floor 1
<b>ISAKOS Booth</b>		<b>Gran Cancun Foyer, Floor 3</b>
<b>ISAKOS Business Meeting I</b>		<b>General Session</b>
Monday, May 13	09:30–10:10	Gran Cancun, Floor 3
<i>Members Only</i>		
<b>ISAKOS Business Meeting II</b>		<b>General Session</b>
Wednesday, May 15	09:30–10:15	Gran Cancun, Floor 3
<i>Members Only</i>		
<b>ISAKOS Committee Meeting Rooms</b>		Fiesta Americana Hotel, Kingdom Coral 2 + 3
<b>Lunch Time Sessions</b>		See page 60–Ticket Required
Sunday, May 12	12:15–13:30	
Monday, May 13	12:15–13:30	
Tuesday, May 14	12:15–13:30	
Wednesday, May 15	12:15–13:30	
<b>Registration &amp; Help Desks</b>		<b>Registration Area, Ground Floor</b>
Saturday, May 11		
Pre-Course Registration	06:00–11:00	
Congress Registration	11:00–17:30	
Sunday, May 12	06:30–17:30	
Monday, May 13	06:30–17:30	
Tuesday, May 14	06:30–17:30	
Wednesday, May 15	06:30–17:30	
Thursday, May 16	06:30–13:00	
<b>Speaker Ready</b>		Tulum 2, 3, 4, Floor 2
Friday, May 10	14:00–17:00	
Saturday, May 11		
Pre-Course Presenters Only	06:00–11:00	
All Congress Presenters	11:00–17:30	
Sunday, May 12	06:30–17:30	
Monday, May 13	06:30–17:30	
Tuesday, May 14	06:30–17:30	
Wednesday, May 15	06:30–17:30	
Thursday, May 16	06:30–12:00	
<b>Spouse and Guest Morning Café</b>		Fiesta Americana Hotel, Coral Café
Sunday, May 12–Thursday, May 16	07:30–10:00	
<b>Hotels &amp; Tours Desk</b>		Registration Area, Ground Floor
Friday, May 10–Wednesday, May 15		
<b>Welcome Reception</b>		Exhibit Hall, Ground Floor
Sunday, May 12	17:30–20:00	



# CANCUN INTERNATIONAL CONVENTION CENTER



# DON'T MISS THESE CONGRESS HIGHLIGHTS



## OPENING CEREMONY

*Presidential Welcome, Program Chair Remarks and Announcement of Honorary Members*

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Sunday, May 12

**Time:** 08:00–08:35

## 13<sup>th</sup> BIENNIAL ISAKOS CONGRESS PRESENTATION—CAPE TOWN!



**Room:** General Session—Gran Cancun, Floor 3

**Date:** Sunday, May 12

**Time:** 08:35–08:45

## WELCOME RECEPTION

**Room:** Cancun International Convention Center Exhibit Hall

**Date:** Sunday, May 12

**Time:** 17:30–20:00

ISAKOS welcomes all attendees and their guests to celebrate the opening of the 12<sup>th</sup> Biennial ISAKOS Congress. The Welcome Reception is a wonderful opportunity to reunite with old friends and network with colleagues. Hors d'œuvres and cocktails will be provided for this festive occasion. Attendance is included in the Congress registration fee and guests are welcome to attend at no additional charge.

## PRESIDENTIAL ADDRESS

**Marc R. Safran, MD UNITED STATES, 2017–2019 ISAKOS President**



**Room:** General Session—Gran Cancun, Floor 3

**Date:** Monday, May 13

**Time:** 10:20–10:45

## ISAKOS CONGRESS AWARDS CEREMONY

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Wednesday, May 15

**Time:** 10:15–10:40

## INTRODUCTION OF INTERNATIONAL SOCIETY PRESIDENTS

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Wednesday, May 15

**Time:** 10:40–10:55

## PASSING OF THE ISAKOS PRESIDENTIAL MEDALLION

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Wednesday, May 15

**Time:** 10:55–11:00



**PRESIDENTIAL GUEST SPEAKER**  
**USING VIRTUAL REALITY TO IMPROVE**  
**SURGERY, SPORTS MEDICINE, AND**  
**ATHLETIC PERFORMANCE**



**Michael Casale, PhD**

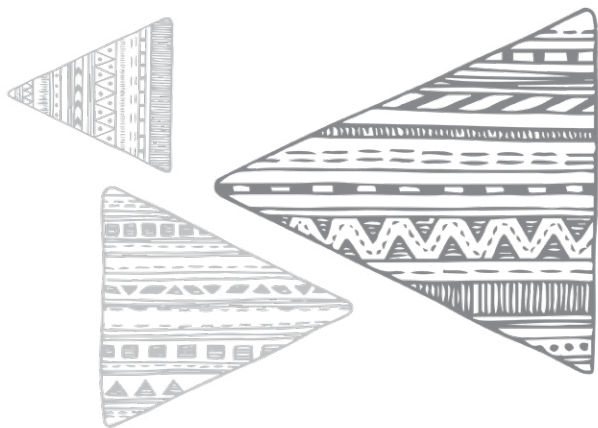
**Room:** General Session  
Gran Cancun

**Date:** Tuesday, May 14

**Time:** 09:33–09:58

Dr. Michael Casale is a cognitive neuroscientist whose research is focused on understanding the biological underpinnings of learning and memory. His research is aimed at understanding how to best optimize training for a variety of learning situations as well as understanding how to optimize training in order to ensure maximum benefit to the learner. He has also led multi-year / multi-million dollar research projects aimed at understanding how virtual technologies can be used to facilitate the effectiveness of behavioral therapy and the brain basis underlying such processes. His work has been published dozens of times in notable peer-reviewed journals such as *Memory & Cognition* and the *Journal of Cognitive Neuroscience*. At STRIVR, Dr. Casale is able to blend his academic and applied research expertise to help develop training methodologies that optimize performance using immersive technologies.

 @michaelbcasale



**PRESIDENTIAL SPORTS MEDICINE**  
**GUEST LECTURE**

**DOPING IN ATHLETES—THE WADA / USADA**  
**PERSPECTIVE & PERSPECTIVE OF A 4-TIME**  
**WORLD RECORD HOLDER**

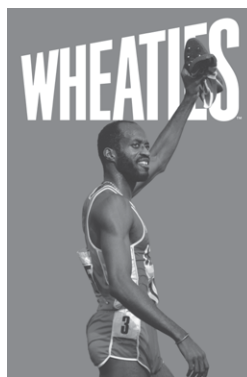


**Edwin C. Moses, Sc.D hc**

**Room:** General Session  
Gran Cancun

**Date:** Tuesday, May 14

**Time:** 10:00–10:25



Track & Field icon, Edwin Moses, won Olympic gold medals in 1976 and 1984, three World Cup titles, two World Championships, and broke the World Record four times as a 400-meter hurdler. He remained undefeated in 122 consecutive races spanning nine years, nine months, and nine days.

Known as The Thinking Man's Athlete™, Moses is a physicist (Morehouse) with an MBA degree (Pepperdine). He has contributed pioneering work against the use of performance enhancing drugs at the USOC, IOC, USADA, and WADA in various capacities. Moses has cemented his place as a global sports icon through his work as Chairman of the Laureus Sport for Good Foundation, an association of sporting legends, which uses the positive influence of sport as a powerful tool for social change around the globe.

Edwin is the proud father to son, Julian (23), with whom he shares his affinity for the sciences and all things sports.

 @edwinmoses



# PROGRAM COMMITTEE + BUSINESS MEETINGS



## SPECIAL THANKS TO THE 12<sup>TH</sup> BIENNIAL ISAKOS CONGRESS PROGRAM COMMITTEE

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## BUSINESS MEETING I

### ISAKOS Members Only

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Monday, May 13

**Time:** 09:30–10:10

Please Note: Only ISAKOS Active and Honorary Members have voting privileges

- Recommendation of Candidates to serve on the Nominating Committee
- Recommendation of Candidates to serve as ISAKOS Board of Directors: Members at Large

Online Voting for Nominating Committee & Board of Directors: Members at Large will be available to ISAKOS Active and Honorary Members from 12:00 on Monday, May 13 until 09:00 on Tuesday, May 14.

Please visit [www.isakos.com/myISAKOS](http://www.isakos.com/myISAKOS)

## BUSINESS MEETING II

### ISAKOS Members Only

**Room:** General Session—Gran Cancun, Floor 3

**Date:** Wednesday, May 15

**Time:** 09:30–10:15

Please Note: Only ISAKOS Active and Honorary Members have voting privileges

- Report of the ISAKOS Executive Committee
- Report of the Treasurer
- Report of the Secretary
- Introduction of 2019–2021 ISAKOS Board of Directors: Executive Committee & Members at Large
- Introduction of the Incoming President
- Incoming President's Remarks

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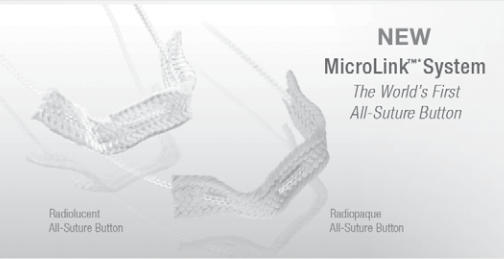
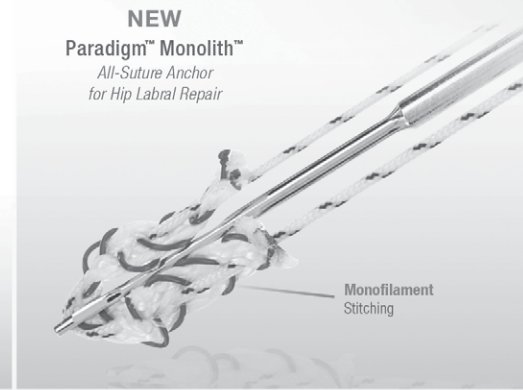
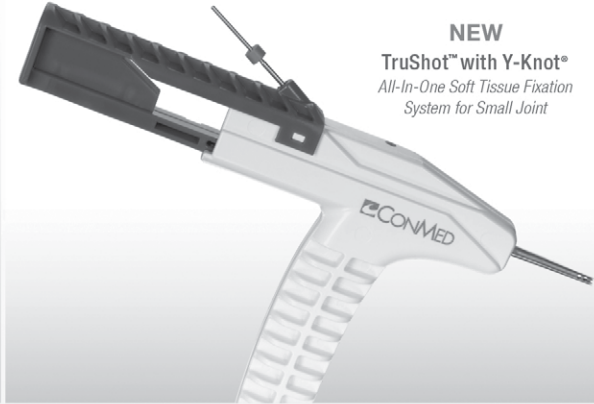
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- SUN, MAY 12** | 15:00 - 15:30 Superior Capsular Reconstruction (en español) | Raul Barco MD, PhD (Spain)
- MON, MAY 13** | 09:00 - 09:30 Continuum of Care in Managing Labral Disease | Olufemi R. Ayeni, MD, PhD, MSc, FRCS (Canada)
- 15:00 - 15:30 Improving Meniscal Transplantation – How and What Can We Do? | Tim Spalding, FRCS (UK); Joan C. Monllau, MD, PhD, Prof (Spain)
- TUES, MAY 14** | 09:00 - 09:30 Complex Ankle Arthroscopy: New Tools for Simplicity and Safety | Markus Walther, MD (Germany)
- 15:00 - 15:30 Multi-ligament Technique Debates (en español) | Pablo E. Gelber, MD, PhD (Spain); Jorge Chahla MD, PhD (US)
- WED, MAY 15** | 15:00 - 15:30 When is the Best Time to Add a Remplissage to Anterior Shoulder Stabilization? | Jeffrey S. Abrams, MD (US)

Schedule subject to change.

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SUNDAY, MAY 12, 2019

07:30–08:00 VISIT THE EXHIBITS

## GRAN CANCUN: GENERAL SESSION

<b>08:00–08:45</b>	<b>ISAKOS OPENING CEREMONY</b>	<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS*</b> – see page 60
08:00–08:08	<b>Presidential Welcome</b> Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019	<b>13:30–15:00</b>	<b>SPORTS MEDICINE</b>
08:08–08:13	<b>Program Chair Remarks</b> Stefano Zaffagnini, MD, Prof. ITALY 12 <sup>TH</sup> Biennial ISAKOS Congress Program Chair	13:30–14:00	<b>Symposium: What Works Best for the Athlete: Meniscal Repair or Resection?</b> <b>Chair: Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM</b> Moises Cohen, MD, PhD, Prof. BRAZIL Darren L. Johnson, MD UNITED STATES
08:13–08:15	<b>Welcome AMECRA &amp; SLARD</b> M. Ivan Encalada-Díaz, MD MEXICO David Figueroa, MD, Prof. CHILE	14:00–15:00	<b>Symposium: Time or Criterion-Based Return-to-Sport After ACL Reconstruction?</b> <b>Chair: Karl Eriksson, MD, PhD, Asst. Prof. SWEDEN</b> Matteo Denti, MD ITALY Parag K. Sancheti, MS(Orth), DNB(Orth), MCh(Orth), FRCS(Ed) INDIA Seth L. Sherman, MD UNITED STATES Simon W. Young, MD, FRACS NEW ZEALAND Moderator: Gabriel Baron, MD CHILE
08:15–08:35	<b>Announcement of Honorary Members</b> Moderator: Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019	<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>
08:35–08:45	<b>13<sup>th</sup> Biennial ISAKOS Congress Presentation: Cape Town!</b> Willem M. van der Merwe, MBChB, FCS(SA) Ortho SOUTH AFRICA ISAKOS President 2019–2021 Volker Musahl, MD UNITED STATES 13th Biennial ISAKOS Congress Program Chair	<b>15:30–17:30</b>	<b>KNEE: DISLOCATION &amp; LAXITY</b>
<b>08:45–09:00</b>	<b>TRANSITION TO SESSION ROOMS</b>	15:30–16:15	<b>Symposium: Knee Dislocation: From the Emergency Department to Final Treatment</b> <b>Chair: Christopher D. Harner, MD UNITED STATES</b> Fabio J. Angelini, MD BRAZIL Michail E. Chantes, Prof. GREECE Robert F. LaPrade, MD, PhD UNITED STATES Moderator: M. Ivan Encalada-Díaz, MD MEXICO
<b>09:00–12:00</b>	<b>KNEE: ACL</b>	16:15–17:15	<b>Symposium: Anterolateral Knee Instability: The ISAKOS Experience</b> <b>Chair: Philippe Landreau, MD FRANCE</b> Andrew A. Amis, PhD, FREng, DSc UNITED KINGDOM Andrea Ferretti, Prof. ITALY Yuichi Hoshino, MD, PhD JAPAN Volker Musahl, MD UNITED STATES Bertrand Sonnery-Cottet, MD FRANCE Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM
09:00–09:45	<b>Surgical Demonstration:</b> Anatomical Variation of ACL as Related to Reconstruction Surgeon: Christian Fink, MD, Prof. AUSTRIA Surgeon: Freddie H. Fu, MD UNITED STATES Moderator: Frank A. Cordasco, MD, MS UNITED STATES	17:15–17:30	<b>Papers #8–9: Knee</b> Moderator: Yuichi Hoshino, MD, PhD JAPAN Moderator: Philippe Landreau, MD FRANCE
09:45–10:30	<b>Symposium: Grafts in ACL Reconstruction: Your Choice?</b> <b>Chair: Jon Karlsson, Prof. SWEDEN</b> Shiyi Chen, MD, PhD, Prof. CHINA Robert G. Marx, MD, MSc, FRCSC UNITED STATES Philippe N. Neyret, MD, PhD, Prof. FRANCE Willem M. Van Der Merwe, MBChB, FCS(SA) Ortho SOUTH AFRICA Moderator: Maximiliano Scheu, MD, MMSc CHILE	<b>17:30–20:00</b>	<b>WELCOME RECEPTION – EXHIBIT HALL</b>
10:30–11:15	<b>Symposium: What Have We Learned from ACL Registries and Large Cohort Data?</b> <b>Chair: Tim Spalding, FRCS(Orth) UNITED KINGDOM</b> Magnus Forssblad, MD, PhD SWEDEN Christopher C. Kaeding, MD UNITED STATES Martin Lind, MD, PhD, Prof. DENMARK Gregory B. Maletis, MD UNITED STATES Nick Mohtadi, MD, MSc, FRCSC CANADA Moderator: Magaly Iñiguez, MD CHILE	<b>COZUMEL 1+5: CONCURRENT 2</b>	
11:15–12:00	<b>Papers #1–7: ACL</b> Moderator: Jon Karlsson, Prof. SWEDEN Moderator: Magaly Iñiguez, MD CHILE	<b>09:00–11:00</b>	<b>SHOULDER INSTABILITY</b>
<b>12:00–12:15</b>	<b>WALKING BREAK</b>	09:00–09:45	<b>Symposium: Complex Issues in Instability Surgery: A Case-Based Approach</b> <b>Chair: Michael T. Freehill, MD UNITED STATES</b> Kevin D. Plancher, MD, MPH UNITED STATES Kevin P. Shea, MD UNITED STATES Andreas Voss, MD GERMANY Stephen C. Weber, MD UNITED STATES Moderator: Pablo A. Narbona, MD ARGENTINA

\*Lunch Time Sessions are not CME Accredited. Ticket Required.

## COZUMEL 1+5: CONCURRENT 2

09:45–10:30	<b>Surgical Demonstration:</b> Management of a First-Time Shoulder Dislocation <i>Surgeon: Philippe Landreau, MD FRANCE</i> <i>Moderator: Vicente Gutierrez, MD CHILE</i>
10:30–10:40	<b>Special Presentation:</b> ISAKOS Upper Extremity Traveling Fellows <i>Moderator: Felix H. Savoie III, MD UNITED STATES</i>
10:40–11:00	<b>Papers #10–11:</b> Shoulder Instability <i>Moderator: Felix H. Savoie III, MD UNITED STATES</i>
<b>11:00–12:00</b>	<b>ACL</b>
11:00–12:00	<b>Symposium:</b> What Is New in ACL Reconstruction? <b>Co-Chair: John A. Bergfeld, MD UNITED STATES</b> <b>Co-Chair: Julian A. Feller, FRACS AUSTRALIA</b> <i>Mark Clatworthy, FRACS NEW ZEALAND</i> <i>Moises Cohen, MD, PhD, Prof. BRAZIL</i> <i>Ryosuke Kuroda, MD, PhD JAPAN</i> <i>David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA</i>
<b>12:00–12:15</b>	<b>WALKING BREAK</b>
<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS*</b> –see page 60
<b>13:30–15:00</b>	<b>SHOULDER</b>
13:30–14:30	<b>Partner Society Symposium: SLARD: Controversial Topics in Shoulder Surgery</b> <b>Chair: Daniel A. Slullitel, MD, Prof. ARGENTINA</b> <i>Guillermo Arce, MD ARGENTINA</i> <i>M. Ivan Encalada-Díaz, MD MEXICO</i> <i>Vicente Gutierrez, MD CHILE</i> <i>Fabio Restrepo Tello, MD, Prof. COLOMBIA</i> <i>Moderator: A. David Torres, MD, MBA PERU</i>
14:30–15:00	<b>Papers #12–16:</b> Shoulder <i>Moderator: M. Ivan Encalada-Díaz, MD MEXICO</i> <i>Moderator: Daniel A. Slullitel, MD, Prof. ARGENTINA</i>
<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>
<b>15:30–17:30</b>	<b>CARTILAGE &amp; BIOLOGICS</b>
15:30–15:45	<b>Lecture:</b> Stem-Cell-Based Therapy in Cartilage Repair: From Bench to Clinic <i>Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES</i> <i>Norimasa Nakamura, MD, PhD JAPAN</i>
15:45–16:30	<b>Papers #17–23:</b> Cartilage <i>Moderator: Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES</i> <i>Moderator: Norimasa Nakamura, MD, PhD JAPAN</i>
16:30–17:30	<b>Symposium:</b> Knee Cartilage Lesions in Athletes <b>Chair: Andreas H. Gomoll, MD UNITED STATES</b> <i>Nobuo Adachi, MD, PhD JAPAN</i> <i>Stefano Della Villa, MD ITALY</i> <i>Giuseppe Filardo, MD, PhD ITALY</i> <i>Alberto Gobbi, MD ITALY</i> <i>Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES</i> <i>Moderator: Pablo A. Narbona, MD ARGENTINA</i>

## COZUMEL 3+4: CONCURRENT 3

<b>09:00–10:00</b>	<b>SPORTS MEDICINE</b>
09:00–09:15	<b>Lecture:</b> Understanding the History of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine <i>Giancarlo Puddu, MD ITALY</i> <i>Moderator: Philippe Landreau, MD FRANCE</i>
09:15–09:45	<b>Jan I. Gillquist Scientific Award</b> <b>Finalist Presentations: Papers #24–27</b> <i>Moderator: Jason L. Koh, MD, MBA UNITED STATES</i> <i>Moderator: Volker Musahl, MD UNITED STATES</i>
09:45–10:00	<b>Papers #28–29:</b> Sports Medicine <i>Moderator: Magaly Iñiguez, MD CHILE</i> <i>Moderator: Jason L. Koh, MD, MBA UNITED STATES</i>
<b>10:00–12:00</b>	<b>KNEE OSTEOTOMY</b>
10:00–11:00	<b>Symposium:</b> Complex Knee Osteotomy Made Simple <b>Chair: Yong In, MD, PhD REPUBLIC OF KOREA</b> <i>Annunziato Amendola, MD UNITED STATES</i> <i>Mark Clatworthy, FRACS NEW ZEALAND</i> <i>Andreas B. Imhoff, MD, Prof. GERMANY</i> <i>Jacques Ménétreay, Prof. SWITZERLAND</i> <i>Moderator: Luis Alfredo Moreno, MD COLOMBIA</i>
11:00–12:00	<b>Gong Show Papers #30–44:</b> Osteotomy and Meniscus <i>Moderator: Annunziato Amendola, MD UNITED STATES</i> <i>Moderator: Jacques Ménétreay, Prof. SWITZERLAND</i>
<b>12:00–12:15</b>	<b>WALKING BREAK</b>
<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS*</b> –see page 60
<b>13:30–15:00</b>	<b>KNEE: MENISCUS</b>
13:30–14:15	<b>Symposium:</b> Indications for Meniscal Transplant in Complex Knees <b>Chair: Stefano Zaffagnini, MD, Prof. ITALY</b> <i>Matias Costa-Paz, MD ARGENTINA</i> <i>Alan Getgood, MD, FRCS(Tr&amp;Orth), DipSEM CANADA</i> <i>Jong-Min Kim, MD, PhD REPUBLIC OF KOREA</i> <i>Nicolas Pujol, MD FRANCE</i>
14:15–14:45	<b>Surgical Demonstration:</b> Meniscal Root Repair <i>Surgeon: Robert F. LaPrade, MD, PhD UNITED STATES</i> <i>Moderator: Sachin R. Tapasvi, MBBS, MS, DNB, FRCS INDIA</i>
14:45–15:00	<b>Papers #45–46:</b> Meniscus <i>Moderator: Nicolas Pujol, MD FRANCE</i>
<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>

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**COZUMEL 3+4: CONCURRENT 3**

<b>15:30–17:30</b>	<b>ANKLE</b>
15:30–16:30	<b>Symposium: Athletic Foot and Ankle Stress Injuries</b> <b>Chair: Jon Karlsson, Prof. SWEDEN</b> Gian Luigi Canata, MD ITALY Nicola Maffulli, MD, PhD, MS, FRCS(Orth) UNITED KINGDOM Hélder M. D. Pereira, MD PORTUGAL Moderator: Alberto Cuellar-Avaroma, MD MEXICO
16:30–16:45	<b>Achilles Orthopaedic Sports Medicine Research Award</b> Moderator: Sérgio R. Piedade, MD, MSc, PhD, Assoc. Prof. BRAZIL A Bioactive Scaffold Enhances Articular Cartilage Regeneration after Microfracture in a Rabbit Model Jonathan D. Packer, MD UNITED STATES
16:45–17:00	<b>Papers #47–48: Ankle</b> Sérgio R. Piedade, MD, MSc, PhD, Assoc. Prof. BRAZIL
17:00–17:30	<b>Debate: The Role of Synthetic Ligaments in Foot and Ankle Surgery: The Future?</b> Nasef M.N. Abdelatif, MD, PhD EGYPT MaCalus V. Hogan, MD UNITED STATES Moderator: Kenneth J. Hunt, MD UNITED STATES

**COZUMEL 2+A: CONCURRENT 4**

<b>09:00–10:00</b>	<b>KNEE: PATELLOFEMORAL</b>
09:00–10:00	<b>Symposium: Failure of Patellofemoral Stabilization</b> <b>Chair: David H. Dejour, MD FRANCE</b> Elizabeth A. Arendt, MD UNITED STATES Florian Dirisamer, MD AUSTRIA Julian A. Feller, FRACS AUSTRALIA Moderator: Mario Ferretti, MD, PhD BRAZIL
<b>10:00–12:00</b>	<b>HIP</b>
10:00–11:00	<b>Symposium: Hip and Groin Injuries in Athletes: Management from an International Hip Preservation Perspective: A Dynamic, Interactive, and Case-Based Discussion</b> <b>Chair: Marc R. Safran, MD, Prof. UNITED STATES</b> Nicolas Bonin, MD FRANCE Yi-Sheng Chan, MD, Prof. TAIWAN Victor M. Ilizaliturri, MD MEXICO Omer Mei-Dan, MD UNITED STATES
11:00–12:00	<b>Surgical Demonstration: Arthroscopic Hip Surgery</b> Surgeon: Olufemi R. Ayeni, MD, PhD, MSc, FRCS CANADA Moderator: Nicolas Bonin, MD FRANCE
<b>12:00–12:15</b>	<b>WALKING BREAK</b>
<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS* – see page 60</b>
<b>13:30–15:00</b>	<b>KNEE: PATELLOFEMORAL</b>

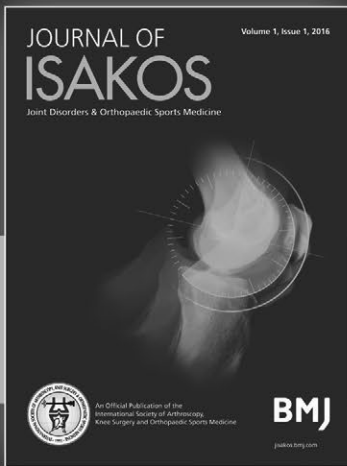
**COZUMEL 2+A: CONCURRENT 4**

13:30–14:15	<b>Symposium: The Role of Torsion in Patellofemoral Disease: Pain and Instability</b> <b>Chair: Elizabeth A. Arendt, MD UNITED STATES</b> Michael C. Liebensteiner, MD, PhD AUSTRIA Gerd Seitlinger, MD AUSTRIA Robert A. Teitge, MD, Prof. UNITED STATES Marc Tompkins, MD UNITED STATES Moderator: Rafael Calvo, MD CHILE
14:15–14:35	<b>Papers #49–51: Patellofemoral</b> Moderator: Mark Clatworthy, FRACS NEW ZEALAND Moderator: Jason L. Koh, MD, MBA UNITED STATES
14:35–14:45	<b>Patellofemoral Traveling Fellowship Winner Presentations</b> Moderator: Mark Clatworthy, FRACS NEW ZEALAND Moderator: Julian A. Feller, FRACS AUSTRALIA Moderator: Jason L. Koh, MD, MBA UNITED STATES Sheanna Maine, FRACS, AUSTRALIA Mauro Núñez, MD, COSTA RICA
14:45–15:00	<b>Patellofemoral Research Excellence Award Winner Presentation</b> Moderator: Mark Clatworthy, FRACS NEW ZEALAND Moderator: Jason L. Koh, MD, MBA UNITED STATES Isolated Medial Patellofemoral Ligament Reconstruction versus Tibial Tuberosity Transfer for Patellar Instability Alessandra Berton, MD ITALY
<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>
<b>15:30–17:30</b>	<b>SHOULDER: ROTATOR CUFF</b>
15:30–16:30	<b>Surgical Demonstration: Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tears</b> Surgeon: Albert Lin, MD UNITED STATES Moderator: Teruhisa Mihata, MD, PhD JAPAN
16:30–17:30	<b>Symposium: Massive Rotator Cuff Tears: When to Repair or Replace</b> <b>Chair: Guillermo Arce, MD ARGENTINA</b> Angel Calvo, MD SPAIN Andreas B. Imhoff, MD, Prof. GERMANY Eiji Itoi, MD, PhD JAPAN Teruhisa Mihata, MD, PhD JAPAN Richard K. Ryu, MD UNITED STATES

**WELCOME RECEPTION**

Exhibit Hall  
Sunday, May 12 | 17:30–20:00  
ISAKOS welcomes all attendees and their guests to celebrate the opening of the 12<sup>TH</sup> Biennial ISAKOS Congress. The Welcome Reception is a wonderful opportunity to reunite with old friends and network with colleagues. Hors d'oeuvres and cocktails will be provided for this festive occasion. Attendance is included in the Congress registration fee and guests are welcome to attend at no additional charge.

\*Lunch Time Sessions are not CME Accredited. Ticket Required.



## JOURNAL OF ISAKOS: JOINT DISORDERS & ORTHOPAEDIC SPORTS MEDICINE

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REHABILITATION | SPORTS INJURY PREVENTION | ORTHOPAEDIC SPORTS MEDICINE AND TRAUMATOLOGY  
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**BMJ**

- 07:00–07:30 VISIT THE EXHIBITS  
 07:30–09:00 INSTRUCTIONAL COURSE LECTURES (FOR FULL LIST, PLEASE SEE PAGE 50)  
 09:00–09:30 BREAK TO VISIT THE EXHIBITS

GRAN CANCUN: GENERAL SESSION	
10:15–10:45	<b>ISAKOS OPENING SESSION</b>
10:15–10:20	<b>ISAKOS Presidential Introduction</b> Philippe N. Neyret, MD, PhD, Prof. FRANCE ISAKOS Past President 2015–2017
10:20–10:45	<b>ISAKOS Presidential Lecture</b> Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019 
10:45–11:00	<b>WALKING BREAK</b>
11:00–12:00	<b>KNEE: OSTEOTOMY</b>
11:00–12:00	<b>Partner Society Symposium: ESSKA: Technical Tips and Tricks for Knee Osteotomy</b> Chair: David H. Dejour, MD FRANCE Roland Becker, MD, PhD, Prof. GERMANY Sandro Fucentese, MD SWITZERLAND Jacques Ménétreay, Prof. SWITZERLAND Romain Seil, MD, Prof. LUXEMBOURG Ronald J. Van Heerwaarden, MD, PhD NETHERLANDS Moderator: Alfonso R. Barnechea-Rey, MD PERU
12:00–12:15	<b>WALKING BREAK</b>
12:15–13:30	<b>LUNCH TIME SESSIONS* –see page 60</b>
13:30–15:00	<b>SHOULDER: LATARJET</b>
13:30–14:15	<b>Surgical Demonstration: Open Latarjet</b> Surgeon: Andreas B. Imhoff, MD, Prof. GERMANY Moderator: Giovanni Di Giacomo, MD ITALY
14:15–15:00	<b>Surgical Demonstration: Arthroscopic Latarjet</b> Surgeon: Ivan Wong, MD, FRCS, MACM, Dip. Sports Med CANADA Moderator: Emilio Calvo, MD, PhD, MBA SPAIN
15:00–15:30	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>
15:30–17:30	<b>SHOULDER: BONE LOSS</b>
15:30–16:30	<b>Symposium: How to Handle Major and Minor Bone Loss in the Shoulder</b> Chair: Giovanni Di Giacomo, MD ITALY Jiwu Chen, MD, PhD CHINA Eiji Itoi, MD, PhD JAPAN Denny T. T. Lie, MBBS, FRCS, FAMS SINGAPORE Nahum Rosenberg, Prof. MD, FRCS ISRAEL Moderator: Vicente Gutierrez, MD CHILE
16:30–17:30	<b>Gong Show Papers #52–66: Upper Limb</b> Moderator: Jiwu Chen, MD, PhD CHINA Moderator: Denny T. T. Lie, MBBS, FRCS, FAMS SINGAPORE

COZUMEL 1+5: CONCURRENT 2	
11:00–12:00	<b>ANKLE: INSERTIONAL ACHILLES TENDINOPATHY</b>
11:00–12:00	<b>Symposium: Open vs. Arthroscopic Techniques in Insertional Achilles Tendinopathy: When and Why?</b> Chair: Umile Giuseppe Longo, MD, MSc, PhD ITALY Gian Luigi Canata, MD ITALY Nicola Maffulli, MD, PhD, MS, FRCS(Orth) UNITED KINGDOM Hélder M. D. Pereira, MD PORTUGAL Mohammad Razi, MD ISLAMIC REPUBLIC OF IRAN Moderator: Alberto Cuellar-Avaroma, MD MEXICO
12:00–12:15	<b>WALKING BREAK</b>
12:15–13:30	<b>LUNCH TIME SESSIONS* –see page 60</b>
13:30–15:00	<b>KNEE: MENISCUS</b>
13:30–14:15	<b>Symposium: Beyond Meniscus Repair: A Case-Based Approach</b> Chair: Christopher C. Kaeding, MD UNITED STATES Roland Becker, MD, PhD, Prof. GERMANY Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA Bryson P. Lesniak, MD UNITED STATES Peter Verdonk, MD, PhD BELGIUM
14:15–15:00	<b>Papers #67–73: Meniscus</b> Moderator: Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA Moderator: Peter Verdonk, MD, PhD BELGIUM
15:00–15:30	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>
15:30–16:30	<b>KNEE: RETURN TO SPORTS</b>
15:30–16:30	<b>Symposium: Return to Sports After Knee Surgery: How to Test for Readiness</b> Chair: Robert A. Magnussen, MD, MPH UNITED STATES Julian A. Feller, FRACS AUSTRALIA Christian Fink, MD, Prof. AUSTRIA Alli Gokeler, PhD, PT GERMANY Lynn Snyder-Mackler, PT, ScD, FAPTA UNITED STATES Mihai Vioreanu, MD, MCh, FFSEM, FRCSI(Tr&Orth) IRELAND Moderator: Guillermo J. Allende, MD Prof. ARGENTINA

\*Lunch Time Sessions are not CME Accredited. Ticket Required.



**COZUMEL 1+5: CONCURRENT 2**

16:30–17:30 **Symposium: ISAKOS Research Symposium**  
**Chair: Volker Musahl, MD UNITED STATES**  
 Alfonso R. Barnechea Rey, MD PERU  
 Michael T. Hirschmann, Prof. SWITZERLAND  
 Yuichi Hoshino, MD, PhD JAPAN  
 Stephen L. Lyman, PhD UNITED STATES  
 Robert G. Marx, MD, MSc, FRCS  
 UNITED STATES  
 Moderator: Sebastian Irrazaval, MD,  
 Prof. CHILE

**COZUMEL 3+4: CONCURRENT 3**

**11:00–12:00 KNEE: MULTILIGAMENT**

11:00–12:00 **Surgical Demonstration: How to Perform a Safe and Reproducible PCL Reconstruction**  
**Surgeon: Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA**  
 Moderator: Fabrizio Margheritini, MD ITALY

**12:00–12:15 WALKING BREAK**

**12:15–13:30 LUNCH TIME SESSIONS\* – see page 60**

**13:30–15:00 KNEE OSTEOARTHRITIS**

13:30–14:30 **Symposium: Managing the Complications of Knee Osteotomy**  
**Chair: Christopher J. Vertullo, MBBS, PhD, FRACS(Orth) AUSTRALIA**  
 Annunziato Amendola, MD UNITED STATES  
 Marco K. Demange, MD, PhD BRAZIL  
 Yong In, MD, PhD REPUBLIC OF KOREA  
 Eiichi Nakamura, MD, PhD JAPAN  
 Moderator: Alex Vaisman, MD, Prof. CHILE

14:30–15:00 **Debate: Medial Osteoarthritis in the Young and Active Adult: UKA vs. HTO**  
 Moderator: Myles R. J. Coolican, FRACS AUSTRALIA  
 Sebastien Lustig, MD, PhD, Prof. FRANCE  
 Andrew J. Price, DPhil, FRCS(Orth) UNITED KINGDOM

**15:00–15:30 AFTERNOON WALKING BREAK – VISIT THE EXHIBITS**

**15:30–17:30 KNEE**

15:30–16:30 **Surgical Demonstration: High Tibial Osteotomy**  
**Surgeon: Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA**  
 Moderator: Philippe N. Neyret, MD, PhD, Prof. FRANCE

16:30–17:30 **Symposium: New Technologies in Knee Arthroplasty**  
**Chair: Sebastien Lustig, MD, PhD, Prof. FRANCE**  
 David Figueroa, MD, Prof. CHILE  
 Fares S. Haddad, MCh(Orth), BSc, FRCS(Orth) UNITED KINGDOM  
 Myung-Chul Lee, MD, PhD, Prof. REPUBLIC OF KOREA  
 Maurilio Marcacci, MD ITALY  
 Moderator: M. Ivan Encalada-Díaz, MD MEXICO

**COZUMEL 2+A: CONCURRENT 4**

**11:00–12:00 SHOULDER: ROTATOR CUFF REPAIR**

11:00–11:45 **Symposium: Rotator Cuff Repair: A Case-Based Approach**  
**Chair: Angel Calvo, MD SPAIN**  
 Michail E. Chantes, Prof. GREECE  
 Mark Ferguson, MD SINGAPORE  
 Mauricio Gutierrez, MD COLOMBIA  
 Daniel A. Slullitel, MD, Prof. ARGENTINA  
 Moderator: Mauricio Gutierrez, MD COLOMBIA

11:45–12:00 **Papers #74–75: Rotator Cuff**  
 Moderator: Angel Calvo, MD SPAIN

**12:00–12:15 WALKING BREAK**

**12:15–13:30 LUNCH TIME SESSIONS\* – see page 60**

**13:30–15:00 ACLR**

13:30–14:30 **Symposium: ACLR with Remnant Preservation: So What?**  
**Chair: Freddie H. Fu, MD UNITED STATES**  
 Anastasios D. Georgoulis, MD, Prof. GREECE  
 Eiji Kondo, MD, PhD JAPAN  
 Rainer Siebold, MD, Prof. GERMANY  
 Joon Ho Wang, MD, PhD REPUBLIC OF KOREA  
 Kyoung-Ho Yoon, MD, PhD, Prof. REPUBLIC OF KOREA  
 Moderator: Alex Vaisman, MD, Prof. CHILE

14:30–15:00 **Papers #76–80: ACL Reconstruction**  
 Moderator: Anastasios D. Georgoulis, MD, Prof. GREECE  
 Moderator: Rainer Siebold, MD, Prof. GERMANY

**15:00–15:30 AFTERNOON WALKING BREAK – VISIT THE EXHIBITS**

**15:30–17:45 HIP**

15:30–16:15 **Symposium: Camera or Eyeball?: Arthroscopic vs. Open Hip Indications**  
**Chair: Omer Mei-Dan, MD UNITED STATES**  
 Matthew J. Brick, MBChB, FRACS NEW ZEALAND  
 Dean K. Matsuda, MD UNITED STATES  
 Thierry Pauyo, MD, FRCS CANADA  
 Moderator: Leandro Ejnisman, MD, PhD BRAZIL

16:15–17:00 **Surgical Demonstration: Arthroscopic Hip Labral Reconstruction**  
**Surgeon: Marc J. Philippon, MD UNITED STATES**  
 Moderator: Allston Stubbs, MD, MBA UNITED STATES

17:00–17:45 **Surgical Demonstration: Gluteus Medius**  
**Surgeon: J.W. Thomas Byrd, MD UNITED STATES**  
 Moderator: Rodrigo Mardones, MD CHILE

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07:00–07:30 VISIT THE EXHIBITS  
 07:30–09:00 INSTRUCTIONAL COURSE LECTURES (FOR FULL LIST, PLEASE SEE PAGE 50)  
 09:00–09:30 BREAK TO VISIT THE EXHIBITS

**GRAN CANCUN: GENERAL SESSION**

**09:30–10:25 ISAKOS OPENING SESSION**  
 09:30–09:33 **Presidential Guest Lecture: Michael Casale, PhD**  
*Marc R. Safran, MD, Prof. UNITED STATES*  
*ISAKOS President 2017–2019*

09:33–09:58 **Using Virtual Reality to Improve Surgery, Sports Medicine, and Athletic Performance**  
*Michael Casale, PhD*  
*UNITED STATES*

09:58–10:00 **Presidential Sports Medicine Guest Lecture: Edwin C. Moses, Sc.D hc**  
*Marc R. Safran, MD, Prof. UNITED STATES*  
*ISAKOS President 2017–2019*

10:00–10:25 **Doping in Athletes: The WADA /USADA Perspective and the Perspective of a Four-Time World Record Holder**  
*Edwin C. Moses, Sc.D hc*  
*UNITED STATES*

**10:25–10:35 TRANSITION TO SESSION ROOMS**

**10:35–11:35 ALL RECONSTRUCTION**  
 10:35–11:35 **Symposium: Facts About ALL Reconstruction**  
**Chair: Masahiro Kurosaka, MD JAPAN**  
*Steven Claes, MD, PhD BELGIUM*  
*Andrea Ferretti, Prof. ITALY*  
*Camilo P. Helito, MD, PhD BRAZIL*  
*Elmar Herbst, MD GERMANY*  
*Ryosuke Kuroda, MD, PhD JAPAN*  
*Bertrand Sonnery-Cottet, MD FRANCE*  
*Andy Williams, MBBS, FRCS(Orth), FFSEM(UK)*  
*UNITED KINGDOM*  
*Stefano Zaffagnini, MD, Prof. ITALY*  
*Moderator: J. Ignacio Cardona-Munoz, MD, MSc*  
*MEXICO*

**11:35–12:05 DOPING & SUPPLEMENTS**  
 11:35–12:05 **Symposium: Dealing with Doping (exogenous) & Androgyny (endogenous) Advantages in International Sports**  
**Chair: Walter C. Taylor III, MD UNITED STATES**  
*Joao A. Grangeiro-Neto, MD, MS BRAZIL*  
*Jacques Ménétreay, Prof. SWITZERLAND*  
*Edwin C. Moses, Sc.D hc UNITED STATES*

**12:05–12:15 WALKING BREAK**  
**12:15–13:30 LUNCH TIME SESSIONS\* –see page 60**



**13:30–15:00 KNEE**  
 13:30–14:00 **Surgical Demonstration: How to Perform Extra Articular Tenodesis**  
*Surgeon: Eivind Inderhaug, MD, PhD, MPH*  
*NORWAY*  
*Moderator: Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM*

14:00–14:30 **Surgical Demonstration: How to Perform an ALL Reconstruction**  
*Surgeon: Steven Claes, MD, PhD BELGIUM*  
*Moderator: Bertrand Sonnery-Cottet, MD*  
*FRANCE*

14:30–15:00 **Papers #81–85: Knee**  
*Moderator: Elizabeth A. Arendt, MD*  
*UNITED STATES*  
*Moderator: Volker Musahl, MD UNITED STATES*

**15:00–15:30 AFTERNOON WALKING BREAK – VISIT THE EXHIBITS**

**15:30–17:30 CARTILAGE**  
 15:30–16:15 **Surgical Demonstration: How to Surgically Manage the Medial Structures Around the Knee**  
*Surgeon: Martin Lind, MD, PhD, Prof. DENMARK*  
*Moderator: Daniel B. Whelan, MD, MSc, FRCSC*  
*CANADA*

16:15–16:45 **Surgical Demonstration: Posterior Lateral Corner Reconstruction**  
*Surgeon: Scott C. Faucett, MD, MS*  
*UNITED STATES*  
*Moderator: Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM*

16:45–17:30 **Symposium: Genetics in Knee Injuries**  
**Chair: Willem M. Van Der Merwe, MBChB, FCS(SA)Ortho SOUTH AFRICA**  
*Diego C. Astur, MD, PhD BRAZIL*  
*Mario Ferretti, MD, PhD BRAZIL*  
*Johnny Huard, PhD UNITED STATES*  
*Moderator: Maximiliano Scheu, MD, MMSc CHILE*

**COZUMEL 1+5: CONCURRENT 2**

**10:35–12:05 KNEE: ACL**  
 10:35–11:35 **Symposium: Anatomy of the ACL: From Bundles to Ribbons and Beyond**  
**Chair: Rainer Siebold, MD, Prof. GERMANY**  
*Freddie H. Fu, MD UNITED STATES*  
*Mirco Herbort, MD, Prof. GERMANY*  
*Andrew D. Pearle, MD UNITED STATES*  
*Robert J. Smigielski, MD POLAND*  
*Timothy S. Whitehead, MBBS, FRACS AUSTRALIA*  
*Moderator: Horacio F. Rivarola-Etcheto, MD*  
*ARGENTINA*

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## COZUMEL 1+5: CONCURRENT 2

11:35–12:05	<b>Papers #86–90: ACL</b> Moderator: Robert J. Smigielski, MD POLAND Moderator: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA
12:05–12:15	<b>WALKING BREAK</b>
12:15–13:30	<b>LUNCH TIME SESSIONS*</b> —see page 60
13:30–15:00	<b>KNEE</b>
13:30–14:30	<b>Partner Society Symposium: AOSSM:</b> Current Treatment Strategies of the Multiligament-injured Knee <b>Chair: Annunziato Amendola, MD UNITED STATES</b> Steven B. Cohen, MD UNITED STATES Christopher D. Harner, MD UNITED STATES Robert G. Marx, MD, MSc, FRCS UNITED STATES Moderator: Nils E. Calderon, MD BOLIVIA
14:30–15:00	<b>Papers #91–95: Knee</b> Moderator: Christopher D. Harner, MD UNITED STATES Moderator: Robert G. Marx, MD, MSc, FRCS UNITED STATES
15:00–15:30	<b>AFTERNOON WALKING BREAK—VISIT THE EXHIBITS</b>
15:30–17:30	<b>BIOLOGICS</b>
15:30–15:45	<b>Lecture: Biologics for Meniscal Healing</b> Christopher D. Harner, MD UNITED STATES Takeshi Muneta, MD, PhD JAPAN
15:45–16:00	<b>Albert Trillat Young Investigator's Award</b> Moderator: James D. Calder, MBBS, MD, PhD, FRCS, FFSEM(UK) UNITED KINGDOM Moderator: Mark Clatworthy, FRACS NEW ZEALAND Moderator: Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM Anterolateral Procedures in Combination with an Anterior Cruciate Ligament Reconstruction: A Biomechanical Analysis of Commonly Used Procedures in a Cadaveric Model Thomas Neri, MD, PhD FRANCE
16:00–16:15	<b>Lecture: Middle-Aged Active Athlete's Knee Osteoarthritis</b> Tahsin Beyzadeoglu, MD, Prof. TURKEY Egemen Turhan, MD, Prof. TURKEY
16:15–16:30	<b>Paolo Aglietti Award</b> Moderator: Myles R. J. Coolican, FRACS AUSTRALIA Moderator: Sebastien Lustig, MD, PhD, Prof. FRANCE Outlier Alignment Does Not Adversely Affect Implant Survival and Function Ten Years After Kinematically Aligned Total Knee Arthroplasty Performed without Restrictions on Preoperative Deformity Trevor Shelton, MD, MS UNITED STATES
16:30–17:30	<b>Symposium: Cartilage Repair Options 2019</b> <b>Co-Chair: Constance R. Chu, MD UNITED STATES</b> <b>Co-Chair: Norimasa Nakamura, MD, PhD JAPAN</b> Alberto Gobbi, MD ITALY Christian Lattermann, MD UNITED STATES Daniel Saris, MD, Prof. UNITED STATES

## COZUMEL 3+4: CONCURRENT 3

10:35–12:05	<b>SHOULDER: ROTATOR CUFF</b>
10:35–11:35	<b>Surgical Demonstration: Standard Rotator Cuff Repair</b> Surgeon: Enrique A. Salas, MD VENEZUELA Moderator: Dan Guttman, MD UNITED STATES
11:35–12:05	<b>Richard B. Caspari Award</b> <b>Finalist Presentations: Papers #96–99</b> Moderator: Andreas B. Imhoff, MD, Prof. GERMANY Moderator: Felix H. Savoie III, MD UNITED STATES
12:05–12:15	<b>WALKING BREAK</b>
12:15–13:30	<b>LUNCH TIME SESSIONS*</b> —see page 60
13:30–15:00	<b>SHOULDER: ROTATOR CUFF</b>
13:30–14:30	<b>Symposium: The Failed Rotator Cuff Repair</b> <b>Chair: Giuseppe Milano, MD ITALY</b> Francesco Franceschi, MD, PhD ITALY Dan Guttman, MD UNITED STATES Anthony A. Romeo, MD UNITED STATES
14:30–15:00	<b>Papers #100–104: Rotator Cuff</b> Moderator: Giuseppe Milano, MD ITALY Moderator: Anthony A. Romeo, MD UNITED STATES
15:00–15:30	<b>AFTERNOON WALKING BREAK—VISIT THE EXHIBITS</b>
15:30–16:30	<b>KNEE: ACL</b>
15:30–16:30	<b>Symposium: Why Do ACL Grafts Fail?</b> <b>Chair: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA</b> Robert G. Marx, MD, MSc, FRCS UNITED STATES James R. Robinson, MBBS, MS, MRCS, FRCS(Orth) UNITED KINGDOM Seth L. Sherman, MD UNITED STATES Willem M. Van Der Merwe, MBChB, FCS(SA) Ortho SOUTH AFRICA
16:30–17:30	<b>HIP</b>
16:30–17:30	<b>Gong Show Papers #105–119: Lower Limb</b> Moderator: James R. Robinson, MBBS, MS, MRCS, FRCS(Orth) UNITED KINGDOM Moderator: Seth L. Sherman, MD UNITED STATES

## COZUMEL 2+A: CONCURRENT 4

10:35–12:05	<b>ISAKOS GLOBAL TRAVELING FELLOWSHIP</b>
10:35–11:35	<b>Symposium: ISAKOS Global Traveling Fellowship</b> <b>Chair: Julian A. Feller, FRACS AUSTRALIA</b> Brian M. Devitt, MD, FRCS, FRACS AUSTRALIA David Figueroa, MD, Prof. CHILE Dean C. Taylor, MD UNITED STATES ISAKOS Traveling Fellows Presentation Taofeek Olanrewaju Adeyemi, MD, MBA, Dip Orth, FMC(Orth) NIGERIA Paulo H. M. Araujo, MD, PhD BRAZIL Weili Fu, MD, PhD CHINA Gilbert Moatshe, MD, PhD NORWAY Brian J. Rebolledo, MD UNITED STATES

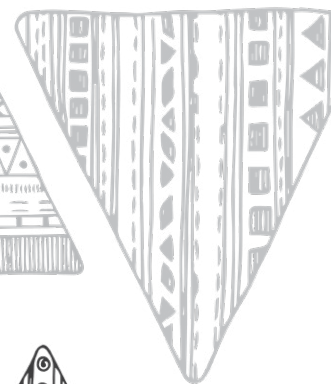
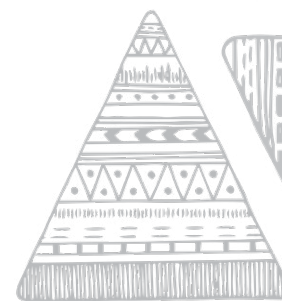
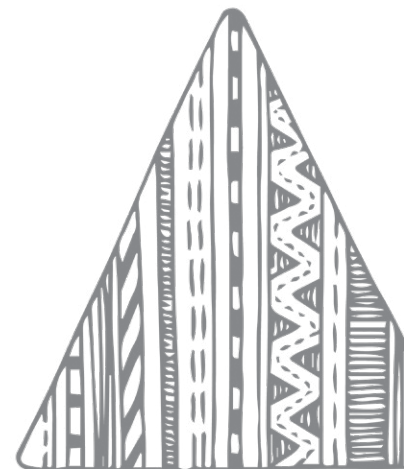
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**COZUMEL 2+A: CONCURRENT 4**

11:35–12:05	<p><b>Papers #120–124: Other</b>  <i>Moderator: Julian A. Feller, FRACS AUSTRALIA</i>  <i>Moderator: David Figueroa, MD, Prof. CHILE</i></p>
12:05–12:15	<b>WALKING BREAK</b>
12:15–13:30	<b>LUNCH TIME SESSIONS*—see page 60</b>
13:30–15:00	<b>ACL</b>
13:30–14:15	<p><b>Symposium: The Biological Approach to ACL Injury and Management</b>  <i>Chair: Karl Eriksson, MD, PhD, Asst. Prof. SWEDEN</i>  <i>Peter T. Annear, FRACS(Orth) AUSTRALIA</i>  <i>Johannes Barth, MD FRANCE</i>  <i>Ryosuke Kuroda, MD, PhD JAPAN</i>  <i>Timothy S. Whitehead, MBBS, FRACS AUSTRALIA</i>  <i>Moderator: Roberto F. Leal, MD MEXICO</i></p>
14:15–15:00	<p><b>Partner Society Symposium: APKASS: Optimizing Management of ACL Injuries: From Individualized Reconstruction to Safe Return to Play, an Asia-Pacific Perspective</b>  <i>Co-Chair: Chih-Hwa Chen, MD, Prof. TAIWAN</i>  <i>Co-Chair: Parag K. Sancheti, MS(Orth), DNB(Orth), MCh(Orth), FRCS(Ed) INDIA</i>  <i>Nobuo Adachi, MD, PhD JAPAN</i>  <i>Shiyi Chen, MD, PhD, Prof. CHINA</i>  <i>Myung-Chul Lee, MD, PhD, Prof. REPUBLIC OF KOREA</i>  <i>David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA</i>  <i>Patrick S. Yung, FRCS(Orth), FHKCOS, FHKAM, FRCS, MBChB HONG KONG</i>  <i>Moderator: M. Ivan Encalada-Díaz, MD MEXICO</i></p>
15:00–15:30	<b>AFTERNOON WALKING BREAK—VISIT THE EXHIBITS</b>
15:30–17:30	<b>ANKLE ARTHROSCOPY</b>
15:30–16:15	<p><b>Symposium: Advanced Indications for Posterior Ankle Arthroscopy</b>  <i>Chair: Pieter D’Hooghe, MD QATAR</i>  <i>Annunziato Amendola, MD UNITED STATES</i>  <i>Umile Giuseppe Longo, MD, MSc, PhD ITALY</i>  <i>Yasuhito Tanaka, Prof. JAPAN</i>  <i>C. Niek Van Dijk, MD, PhD NETHERLANDS</i>  <i>Moderator: Alberto Cuellar-Avaroma, MD MEXICO</i></p>
16:15–16:45	<p><b>John J. Joyce Award</b>  <b>Finalist Presentations: Papers #125–128</b>  <i>Mark Clatworthy, FRACS NEW ZEALAND</i>  <i>Moderator: Jason L. Koh, MD, MBA UNITED STATES</i>  <i>Moderator: Stefano Zaffagnini, MD, Prof. ITALY</i></p>
16:45–17:30	<p><b>Surgical Demonstration: Insertional Achilles Tendinopathy Repair with Excision of Haglund’s Deformity</b>  <i>Surgeon: Markus Walther, MD GERMANY</i>  <i>Moderator: Mark Glazebrook, MD, PhD, MSc, FRCS(C) CANADA</i></p>



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12<sup>TH</sup> Biennial

# ISAKOS CONGRESS 2019

Cancun, Mexico • May 12–16, 2019



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# WEDNESDAY, MAY 15, 2019

- 07:00–07:30 VISIT THE EXHIBITS  
 07:30–09:00 INSTRUCTIONAL COURSE LECTURES (FOR FULL LIST, PLEASE SEE PAGE 50)  
 09:00–09:30 BREAK TO VISIT THE EXHIBITS

## WEDNESDAY, MAY 15 GRAN CANCUN: GENERAL SESSION

<b>10:15–11:00</b>	<b>ISAKOS OPENING SESSION</b>
10:15–10:40	<b>Awards Ceremony</b> Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019
10:40–10:55	<b>Introduction of International Society Presidents</b> Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019 Willem M. Van Der Merwe, MBChB, FCS(SA) Ortho SOUTH AFRICA ISAKOS President 2019–2021 Guillermo Arce, MD ARGENTINA ISAKOS President 2021–2023
10:55–11:00	<b>Passing of the ISAKOS Presidential Medallion</b> Marc R. Safran, MD, Prof. UNITED STATES ISAKOS President 2017–2019 Willem M. Van Der Merwe, MBChB, FCS(SA) Ortho SOUTH AFRICA ISAKOS President 2019–2021
<b>11:00–11:15</b>	<b>TRANSITION TO SESSION ROOMS</b>
<b>11:15–12:00</b>	<b>KNEE: PEDIATRIC ACL</b>
11:15–12:00	<b>Symposium: Management of the Pediatric ACL: Do We Need to Protect Physis?</b> <b>Chair: Timo J. Järvelä, MD, PhD FINLAND</b> Arturo Almazan, MD MEXICO Mark Clatworthy, FRACS NEW ZEALAND Justin P. Roe, FRACS, A/Prof. AUSTRALIA Jeremy Stanley, BHB, MBChB, FRACS NEW ZEALAND Frederick Weitz, MD FINLAND Moderator: Maria Tuca, MD CHILE
<b>12:00–12:15</b>	<b>WALKING BREAK</b>
<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS* –see page 60</b>
<b>13:30–15:00</b>	<b>KNEE: ACL</b>
13:30–14:15	<b>Surgical Demonstration: Robotic-Assisted Bi-Cruciate Retaining Total Knee Replacement</b> Surgeon: Paul Schwartz, MD UNITED STATES Moderator: Sebastien Lustig, MD, PhD, Prof. FRANCE
14:15–15:00	<b>Papers #129–135: ACL</b> Moderator: David H. Dejour, MD FRANCE Moderator: Mark Clatworthy, FRACS NEW ZEALAND
<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>

<b>15:30–17:30</b>	<b>ACL</b>
15:30–16:15	<b>Symposium: The Female ACL: Should It Be Managed Differently?</b> <b>Chair: Elvire Servien, MD, PhD, Prof. FRANCE</b> Constance R. Chu, MD UNITED STATES Mario Ferretti, MD, PhD BRAZIL Justin P. Roe, FRACS, A/Prof. AUSTRALIA Carola F. Van Eck, MD, PhD UNITED STATES
16:15–17:00	<b>Symposium: Case-Based Posterolateral Corner Reconstruction</b> <b>Chair: Bryson P. Lesniak, MD UNITED STATES</b> Marco Acuna Tovar, MD MEXICO Brett A. Fritsch, MBBS, BMedSc AUSTRALIA Timothy Lording, MBBS, FRACS AUSTRALIA Vincenzo Madonna, MD ITALY
17:00–17:30	<b>Papers #136–140: ACL</b> Moderator: Bryson P. Lesniak, MD UNITED STATES Moderator: Timothy Lording, MBBS, FRACS AUSTRALIA

## COZUMEL 1+5: CONCURRENT 2

<b>11:15–12:00</b>	<b>SHOULDER: ARTHROPLASTY</b>
11:15–12:00	<b>Surgical Demonstration: Reverse Shoulder Arthroplasty</b> Surgeon: Anthony A. Romeo, MD UNITED STATES Moderator: Matthew T. Provencher, MD UNITED STATES
<b>12:00–12:15</b>	<b>WALKING BREAK</b>
<b>12:15–13:30</b>	<b>LUNCH TIME SESSIONS* –see page 60</b>
<b>13:30–15:00</b>	<b>SHOULDER</b>
13:30–14:15	<b>Symposium: The Latarjet Procedure: Five Continents' Approach</b> <b>Chair: Philippe Landreau, MD FRANCE</b> Guillermo Arce, MD ARGENTINA Emilio Calvo, MD, PhD, MBA SPAIN Eiji Itoi, MD, PhD JAPAN Matthew T. Provencher, MD UNITED STATES
14:15–15:00	<b>Surgical Demonstration: Improving Healing for Massive Rotator Cuff Repair</b> Surgeon: Felix H. Savoie III, MD UNITED STATES Moderator: Kevin D. Plancher, MD, MPH UNITED STATES
<b>15:00–15:30</b>	<b>AFTERNOON WALKING BREAK – VISIT THE EXHIBITS</b>

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## COZUMEL 1+5: CONCURRENT 2

15:30–16:30



Symposium: *JISAKOS* Leadership  
Symposium: Strategies in  
Successful Publishing  
**Chair: C. Niek Van Dijk, MD, PhD**  
**NETHERLANDS** *JISAKOS* Editor in Chief

**Faculty:** Leendert Blankevoort, PhD,  
NETHERLANDS  
Christopher D. Harner, MD UNITED STATES  
Jon Karlsson, Prof. SWEDEN  
Stephen L. Lyman, PhD UNITED STATES  
Gary G. Poehling, MD UNITED STATES  
**ISAKOS VIP Faculty:**  
Marc R. Safran, MD UNITED STATES  
Willem M. Van Der Merwe, MBChB, FCS(SA)  
Ortho SOUTH AFRICA  
Guillermo Arce, MD ARGENTINA  
Philippe N. Neyret, MD, PhD FRANCE

16:30–17:30

**Gong Show Papers #141–155: Shoulder**  
Moderator: Guillermo Arce, MD ARGENTINA  
Moderator: Kevin D. Plancher, MD, MPH  
UNITED STATES

## COZUMEL 3+4: CONCURRENT 3

11:15–12:00

### KNEE ARTHROPLASTY

11:15–12:00

**Papers #156–162: Knee Arthroplasty**  
Moderator: Roland Becker, MD, PhD, Prof.  
GERMANY  
Moderator: Sébastien Parratte, MD, PhD, Prof.  
UNITED ARAB EMIRATES

12:00–12:15

### WALKING BREAK

12:15–13:30

### LUNCH TIME SESSIONS\*—see page 60

13:30–15:00

### KNEE ARTHROPLASTY

13:30–14:30

**Symposium: How to Manage Revision Knee  
Arthroplasty**  
**Chair: Daniel C. Wascher, MD UNITED STATES**  
Roland Becker, MD, PhD, Prof. GERMANY  
Myung-Chul Lee, MD, PhD, Prof.  
REPUBLIC OF KOREA  
David A. Parker, MBBS, BMedSc, FRACS  
AUSTRALIA  
Sébastien Parratte, MD, PhD, Prof.  
UNITED ARAB EMIRATES

14:30–15:00

**Papers # 163–167: Knee Arthroplasty**  
Moderator: Roland Becker, MD, PhD, Prof.  
GERMANY  
Moderator: Daniel C. Wascher, MD  
UNITED STATES

15:00–15:30

### AFTERNOON WALKING BREAK— VISIT THE EXHIBITS

## COZUMEL 3+4: CONCURRENT 3

15:30–17:30

### KNEE ARTHROPLASTY

15:30–16:30

**Surgical Demonstration: Calipered Kinematic  
Alignment in Total Knee Arthroplasty**  
Surgeon: Stephen M. Howell, MD  
UNITED STATES  
Moderator: Myles R. J. Coolican, FRACS  
AUSTRALIA

16:30–17:30

**Symposium: Alignment in Total Knee Arthroplasty:  
Is a Neutral Mechanical Axis the Target?**  
Chair: Stephen M. Howell, MD UNITED STATES  
Myles R. J. Coolican, FRACS AUSTRALIA  
Shuichi Matsuda, MD, PhD JAPAN  
Philippe N. Neyret, MD, PhD, Prof. FRANCE  
Moderator: O. Rolando Suarez, MD PERU

## COZUMEL 2+A: CONCURRENT 4

11:15–12:00

### KNEE

11:15–12:00

**Papers #168–174: Knee**  
Moderator: Roland Becker, MD, PhD, Prof.  
GERMANY  
Moderator: Daniel C. Wascher, MD  
UNITED STATES

12:00–12:15

### WALKING BREAK

12:15–13:30

### LUNCH TIME SESSIONS\*—see page 60

13:30–15:00

### ELBOW

13:30–14:15

**Symposium: Treatment of the Stiff Elbow**  
**Chair: Luigi A. Pederzini, MD ITALY**  
Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA  
Christian Lozano, MD, MBA PERU  
Alessandro Marinelli, MD ITALY  
Felix H. Savoie III, MD UNITED STATES

14:15–14:39

**Gary G. Poehling Award**  
**Finalist Presentations: Papers #175–178**  
Moderator: Gregory I. Bain, MBBS, FRACS, PhD  
AUSTRALIA  
Moderator: Mark I. Loeberberg, MD ISRAEL

14:39–14:54

**Papers #179–180: Sports Medicine**  
Moderator: Stefano Zaffagnini, MD, Prof. ITALY  
Moderator: Luigi A. Pederzini, MD ITALY

14:54–15:00

**Gary G. Poehling Award Announcement**  
Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA

15:00–15:30

### AFTERNOON WALKING BREAK— VISIT THE EXHIBITS

15:30–17:30

### PATELLOFEMORAL

15:30–16:30

**Symposium: Patellofemoral Arthroplasty (PFA):  
Indications, Technical Aspects, Complications,  
and Results**  
**Chair: Pieter J. Erasmus, MBChB, MMed**  
**SOUTH AFRICA**  
Elizabeth A. Arendt, MD UNITED STATES  
Diane L. Dahm, MD UNITED STATES  
David H. Dejour, MD FRANCE  
Shuichi Matsuda, MD, PhD JAPAN

16:30–17:30

**Surgical Demonstration: Combined MPTL and  
MPFL Reconstruction**  
Surgeon: Betina B. Hinckel, MD, PhD  
UNITED STATES  
Moderator: Elizabeth A. Arendt, MD  
UNITED STATES

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07:00–07:30 VISIT THE EXHIBITS

07:30–09:00 INSTRUCTIONAL COURSE LECTURES (FOR FULL LIST, PLEASE SEE PAGE 50)

GRAN CANCUN: GENERAL SESSION	
09:00–10:00	<b>TEAM PHYSICIAN: AN INTERNATIONAL PERSPECTIVE</b>
09:00–10:00	<b>Symposium: Team Physician: An International Perspective</b> <b>Chair: Peter Anthony Indelicato, MD UNITED STATES</b> <i>Ryuichiro Akagi, MD, PhD JAPAN</i> <i>José F. Huylebroek, MD BELGIUM</i> <i>Antonio Maestro, MD, PhD SPAIN</i> <i>Fernando Radice, MD CHILE</i> <i>Marc R. Safran, MD, Prof. UNITED STATES</i> <i>Moderator: Moises Cohen, MD, PhD, Prof. BRAZIL</i>
10:00–13:05	<b>KNEE</b>
10:00–11:00	<b>Symposium: Infection Management in Knee Replacement</b> <b>Chair: Sebastien Lustig, MD, PhD, Prof. FRANCE</b> <i>Thomas Bauer, MD, PhD FRANCE</i> <i>Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof. INDONESIA</i> <i>Umile Giuseppe Longo, MD, MSc, PhD ITALY</i> <i>Maurilio Marcacci, MD ITALY</i>
11:00–12:00	<b>Symposium: Current Controversies in TKA</b> <b>Chair: Sébastien Parraite, MD, PhD, Prof. UNITED ARAB EMIRATES</b> <i>Paolo Adravanti, MD ITALY</i> <i>Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof. INDONESIA</i> <i>Yong In, MD, PhD REPUBLIC OF KOREA</i> <i>Mojieb M. Manzary, MD, FRCSC SAUDI ARABIA</i> <i>Christopher J. Vertullo, MBBS, PhD, FRACS(Orth) AUSTRALIA</i>
12:00–13:00	<b>Symposium: Controversies in ACL Reconstruction</b> <b>Chair: Jon Karlsson, Prof. SWEDEN</b> <i>David Figueroa, MD, Prof. CHILE</i> <i>Christian Fink, MD, Prof. AUSTRIA</i> <i>Robert G. Marx, MD, MSc, FRCSC UNITED STATES</i> <i>Volker Musahl, MD UNITED STATES</i> <i>Kristian Samuelsson, MD, PhD, MSc, Prof. SWEDEN</i> <i>Romain Seil, MD, Prof. LUXEMBOURG</i>
13:00–13:05	<b>Special Presentation: Closing Remarks of the 12<sup>TH</sup> Biennial ISAKOS Congress</b> <i>Volker Musahl, MD UNITED STATES</i>

COZUMEL 1+5: CONCURRENT 2	
09:00–11:00	<b>GONG SHOW</b>
09:00–10:00	<b>Gong Show Papers #181–195: Knee</b> <i>Moderator: Julian A. Feller, FRACS AUSTRALIA</i> <i>Moderator: Elizabeth A. Arendt, MD UNITED STATES</i>
10:00–11:00	<b>Gong Show Papers #196–210: Knee</b> <i>Moderator: Bruce C. Twaddle, MD, FRACS, Prof. NEW ZEALAND</i> <i>Moderator: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA</i>
11:00–11:45	<b>ARTHROSCOPIC MENISCAL REPAIR</b>
11:00–11:45	<b>Partner Society Symposium: AANA: State-of-the- Art Arthroscopic Meniscal Repair</b> <b>Chair: Louis F. McIntyre, MD UNITED STATES</b> <i>Kevin F. Bonner, MD UNITED STATES</i> <i>Christopher P. Dougherty, DO UNITED STATES</i> <i>Nicholas Sgaglione, MD UNITED STATES</i>
11:45–13:05	<b>ANKLE</b>
11:45–12:15	<b>Debate: Ankle Arthrodesis vs. Ankle Prosthesis: The Updated Battle</b> <i>Moderator: Pieter D'Hooghe, MD QATAR</i> <i>Kenneth J. Hunt, MD UNITED STATES</i> <i>Matteo Romagnoli, MD ITALY</i>
12:15–13:00	<b>Papers #211–217: Ankle</b> <i>Moderator: Matteo Romagnoli, MD ITALY</i> <i>Moderator: Thomas Bauer, MD, PhD FRANCE</i>
13:00–13:05	<b>Special Presentation: Closing Remarks of the 12<sup>TH</sup> Biennial ISAKOS Congress</b> <i>Stefano Zaffagnini, MD, Prof. ITALY</i>

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## SUNDAY, MAY 12, 2019

09:00–09:45

Concurrent 2–Cozumel 1+5

**COMPLEX ISSUES IN INSTABILITY SURGERY:  
A CASE-BASED APPROACH****Chair: Michael T. Freehill, MD UNITED STATES***Kevin D. Plancher, MD, MPH UNITED STATES**Kevin P. Shea, MD UNITED STATES**Andreas Voss, MD GERMANY**Stephen C. Weber, MD UNITED STATES**Moderator: Pablo A. Narbona, MD ARGENTINA*

This session includes the discussion of different instability surgical methods, including Bony Bankart & double-row, Bankart, bone transfer, and relevant case presentations.

- Open Bankart Case Presentation
- Treatment Decision and Why You Chose
- Arthroscopic Bankart Capsulorrhaphy and Remplissage for Instability with Hill-Sachs and Subcritical Bone Loss Case Presentation
- Treatment Decision and Why You Chose
- Latarjet Case Presentation
- Treatment Decision and Why You Chose
- Huge Hill-Sachs Lesion, Metal Implant (Designed for the Knee) to Resurface the Defect Case Presentation
- Treatment Decision and Why You Chose

09:00–10:00

Concurrent 4–Cozumel 2+A

**FAILURE OF PATELLOFEMORAL  
STABILIZATION****Chair: David H. Dejour, MD FRANCE***Elizabeth A. Arendt, MD UNITED STATES**Florian Dirisamer, MD AUSTRIA**Julian A. Feller, FRACS AUSTRALIA**Moderator: Mario Ferretti, MD, PhD BRAZIL*

A case-based ICL discussing potential surgical failures of patella stabilization and their solutions.

- Failure by Missed Trochlear Dysplasia
- Failure by Wrong MPFL Positioning and Missed MPTL Rupture
- Failure by Missed Torsional Abnormalities
- Failure by Missed Patella Alta

09:45–10:30

General Session–Gran Cancun

**GRAFTS IN ACL RECONSTRUCTION:  
YOUR CHOICE?****Chair: Jon Karlsson, Prof. SWEDEN***Shiyi Chen, MD, PhD, Prof. CHINA**Robert G. Marx, MD, MSc, FRCSC UNITED STATES**Philippe N. Neyret, MD, PhD, Prof. FRANCE**Willem M. Van Der Merwe, MBChB, FCS(SA)Ortho  
SOUTH AFRICA**Moderator: Maximiliano Scheu, MD, MMSc CHILE*

During this discussion, speakers will present the pros and cons of each graft choice, focusing on allograft tissue and various autograft options, including hamstrings, patella tendon, and quadriceps.

- Why I Use Quad Tendon for the High Demand Athlete
- Are There Specificities About Graft Choice in Revision ACL Reconstruction
- BTB is the Best Option for ACL Reconstruction in High Risk Patients
- Why I Choose SYNTHETIC Ligament for Athletes for an Early Return to Competition

10:00–11:00

Concurrent 3–Cozumel 3+4

**COMPLEX KNEE OSTEOTOMY MADE SIMPLE****Chair: Yong In, MD, PhD, REPUBLIC OF KOREA***Annunziato Amendola, MD UNITED STATES**Mark Clatworthy, FRACS NEW ZEALAND**Andreas B. Imhoff, MD, Prof. GERMANY**Jacques Ménétrety, Prof. SWITZERLAND*

High tibial osteotomies often require additional procedures: cartilage repair, meniscal root repair, ACL reconstruction, or meniscal allograft transplantation. This course will provide participants with a comprehensive introduction to the various procedures that often accompany an HTO.

- Osteotomy Combined With Cartilage Resurfacing
- Osteotomy Combined With Meniscal Allograft Transplantation
- Osteotomy In Cruciate Ligament Decient Patient
- Tibial Osteotomies for the Valgus Knee
- Double Level Osteotomy: When and How

# SUNDAY, MAY 12, 2019

10:00–11:00

Concurrent 4–Cozumel 2+A

## HIP AND GROIN INJURIES IN ATHLETES: MANAGEMENT FROM AN INTERNATIONAL HIP PRESERVATION PERSPECTIVE: A DYNAMIC, INTERACTIVE, AND CASE-BASED DISCUSSION

**Chair:** *Marc R. Safran, MD, Prof. UNITED STATES*

*Nicolas Bonin, MD FRANCE*

*Yi-Sheng Chan, MD, Prof. TAIWAN*

*Victor M. Ilizaliturri, MD MEXICO*

*Omer Mei-Dan, MD UNITED STATES*

Participants will gain an in-depth understanding of Hip and Groin Injuries in Athletes including management from an international hip preservation perspective with a dynamic, interactive, and case-based discussion.

- Case 1–Hamstring Avulsion
- Case 2–FAI
- Case 3–Hip Instability
- Case 4–Adductor Injury
- Case 5–Iliopsoas Snapping

10:30–11:15 General Session–Gran Cancun

## WHAT HAVE WE LEARNED FROM ACL REGISTRIES AND LARGE COHORT DATA?

**Chair:** *Tim Spalding, FRCS(Orth) UNITED KINGDOM*

*Magnus Forssblad, MD, PhD SWEDEN*

*Christopher C. Kaeding, MD UNITED STATES*

*Martin Lind, MD, PhD, Prof. DENMARK*

*Gregory B. Maletis, MD UNITED STATES*

*Nick Mohtadi, MD, MSc, FRCSC CANADA*

*Moderator: Magaly Iñiguez, MD CHILE*

In this symposium, registries and large multi-centered cohort studies that provide important information regarding the management and outcomes of ACL injury and surgery will be presented and discussed. Participants will have the opportunity to critically examine this data and develop a greater understanding of the challenges, pitfalls, and benefits of these outcome tools.

- Scandinavia Pioneered ACL Registries, Where Are We Now
- Registries and Prospective Cohorts: What's the Difference and Why Do We Do Them. The MOON Perspective
- How to Set Up a Modern Registry. Expanding from the ACL
- Effecting Change by Data
- High-Fidelity Data Through Large Randomized Clinical Trials

11:00–12:00

Concurrent 2–Cozumel 1+5

## WHAT IS NEW IN ACL RECONSTRUCTION?

**Co-Chair:** *John A. Bergfeld, MD*

**UNITED STATES**

**Co-Chair:** *Julian A. Feller, FRACS AUSTRALIA*

*Mark Clatworthy, FRACS NEW ZEALAND*

*Moises Cohen, MD, PhD, Prof. BRAZIL*

*Ryosuke Kuroda, MD, PhD JAPAN*

*David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA*

This symposium will address recent studies that show return to sport (RTS) following anterior cruciate ligament (ACL) reconstruction reduces reruptures.

- Have Things Really Changed?
- What Is New in Surgical Technique
- The Power (and Limitations) of ACL Registries
- Biologic Considerations for Return To Play–Can We Assess Graft Maturation?
- Where Are We with ACL Repair?

13:30–14:00

General Session–Gran Cancun

## WHAT WORKS BEST FOR THE ATHLETE: MENISCAL REPAIR OR RESECTION?

**Chair:** *Andy Williams, MBBS, FRCS(Orth), FFSEM(UK)*

**UNITED KINGDOM**

*Moises Cohen, MD, PhD, Prof. BRAZIL*

*Darren L. Johnson, MD UNITED STATES*

This discussion will address the controversies between meniscal repair and meniscal resection of the athletic knee.

Case Based Discussion:

- Degenerate MM Tear
- Isolated Bucket Handle MM Tear
- BH Lateral Meniscal Tear
- Isolated Complex Tear LM
- Anterior Horn Tear LM
- LM Tear with Cyst
- Subtotal Radial Tear Mid Region of Lateral Meniscus
- Isolated MM Posterior Root Tear



SUNDAY, MAY 12, 2019

**PARTNER SOCIETY SYMPOSIUM  
SLARD**

13:30–14:30 Concurrent 2–Cozumel 1+5

**SLARD: CONTROVERSIAL TOPICS IN SHOULDER SURGERY**

**Chair: Daniel A. Slullitel, MD, Prof. ARGENTINA**

*Guillermo Arce, MD ARGENTINA*

*M. Ivan Encalada-Díaz, MD MEXICO*

*Vicente Gutierrez, MD CHILE*

*Fabio Restrepo Tello, MD, Prof. COLOMBIA*

Presented by members of the Latin American Society of Arthroscopy, Knee Surgery, and Sports Medicine, this symposium will focus on controversial topics in shoulder surgery.

- Knot vs. Knotless Repair in Shoulder Surgery
- Glenoid Reconstruction: Bone Block vs. Latarjet
- Shoulder Laxity: Is Latarjet the Right Way to Go?
- Five Lessons I've learned in Shoulder Instability

13:30–14:15 Concurrent 3–Cozumel 3+4

**INDICATIONS FOR MENISCAL TRANSPLANT IN COMPLEX KNEES**

**Chair: Stefano Zaffagnini, MD, Prof. ITALY**

*Matias Costa-Paz, MD ARGENTINA*

*Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA*

*Jong-Min Kim, MD, PhD REPUBLIC OF KOREA*

*Nicolas Pujol, MD FRANCE*

This course presents cases for the use of meniscal allograft transplantation (MAT) in the context of osteotomy, cartilage repair, revision ACL surgery, and more.

- General Indications and Technical Considerations of Meniscal Transplant
- ACL Reconstruction & TAM
- Meniscal Transplant and Osteotomy
- Meniscus Transplant and Osteochondral Autograft
- Meniscal Transplant as a Biologic Alternative to Metal Resurfacing

13:30–14:15

Concurrent 4–Cozumel 2+A

**THE ROLE OF TORSION IN PATELLOFEMORAL DISEASE: PAIN AND INSTABILITY**

**Chair: Elizabeth A. Arendt, MD UNITED STATES**

*Michael C. Liebensteiner, MD, PhD AUSTRIA*

*Gerd Seitlinger, MD AUSTRIA*

*Robert A. Teitge, MD, Prof. UNITED STATES*

*Marc Tompkins, MD UNITED STATES*

*Moderator: Rafael Calvo, MD CHILE*

This symposium will review both femoral and tibial torsion, with an emphasis on methods of measurement, including Gait Studies and the emerging use of EOS imaging, and surgical intervention.

- Introduction: History of Presentation and Limited Physical and Radiographic Exam
- Why Does Torsion Create Problems at the Knee? Biomechanics of Limb Torsion in PF Dysfunction
- Measurement of Torsion for Femur and Tibia. What Do We Know About the Level of Torsion and Is It Important.
- Case Study: Femoral Torsion and Patellar Instability. Work Up and Surgical Technique.
- Case Study: Tibial Torsion and PF Pain. Work Up and Surgical Technique.

14:00–15:00

General Session–Gran Cancun

**TIME OR CRITERION-BASED RETURN TO SPORT AFTER ACL RECONSTRUCTION?**

**Chair: Karl Eriksson, MD, PhD, Asst. Prof. SWEDEN**

*Matteo Denti, MD ITALY*

*Parag K. Sancheti, MS(Orth), DNB(Orth), MCh(Orth), FRCS(Ed) INDIA*

*Seth L. Sherman, MD UNITED STATES*

*Simon W. Young, MD, FRACS NEW ZEALAND*

*Moderator: Gabriel Baron, MD CHILE*

In this symposium, participants will learn how to examine evidence for early anterior cruciate ligament (ACL) surgery and, from that evidence, determine which patients are suitable for it.

- Biology and Graft Maturation, What Do We Know?
- Functional Testing Before Return to Sports
- MRI and Radiographic Assessment Before Return to Sports
- Graft Choice and Return to Sports, Time or Criterion Based
- Time or Criterion Pros and Cons



# SUNDAY, MAY 12, 2019

15:30–16:15 General Session–Gran Cancun

## KNEE DISLOCATION: FROM THE EMERGENCY DEPARTMENT TO FINAL TREATMENT

**Chair: Christopher D. Harner, MD UNITED STATES**

*Fabio J. Angelini, MD BRAZIL*

*Michail E. Chantes, Prof. GREECE*

*Robert F. LaPrade, MD, PhD UNITED STATES*

*Moderator: M. Ivan Encalada-Díaz, MD MEXICO*

In this symposium, participants will learn how to identify the algorithm for this dramatic casuistry, taking into consideration possible severe preoperative, intraoperative, and postoperative complications.

- Classification and Initial Management of the Multiple Ligament Injured Knee
- Surgical Management of ACL/PCL/MCL
- Surgical Management of ACL/PCL/Lateral Corner
- Post-Op Rehab and Outcomes

15:30–16:30 Concurrent 3–Cozumel 3+4

## ATHLETIC FOOT AND ANKLE STRESS INJURIES

**Chair: Jon Karlsson, Prof. SWEDEN**

*Gian Luigi Canata, MD ITALY*

*Nicola Maffulli, MD, PhD, MS, FRCS(Orth)*

*UNITED KINGDOM*

*Hélder M. D. Pereira, MD PORTUGAL*

*Moderator: Alberto Cuellar-Avaroma, MD MEXICO*

- Pain of the Achilles Tendon: Not Always Achilles Tendinopathy
- 5<sup>TH</sup> Metatarsal Jones Fractures and Refracture
- Stress Fractures in Runners

16:15–17:15 General Session–Gran Cancun

## ANTEROLATERAL KNEE INSTABILITY: THE ISAKOS EXPERIENCE

**Chair: Philippe Landreau, MD FRANCE**

*Andrew A. Amis, PhD, FEng, DSc UNITED KINGDOM*

*Andrea Ferretti, Prof. ITALY*

*Yuichi Hoshino, MD, PhD JAPAN*

*Volker Musahl, MD UNITED STATES*

*Bertrand Sonnery-Cottet, MD FRANCE*

*Andy Williams, MBBS, FRCS(Orth), FFSEM(UK)*

*UNITED KINGDOM*

Participants will obtain an understanding of what the current anatomical, biomechanical, and surgical concepts and strategies of the anterolateral laxity of the knee are across five continents.

- Definition and Historical Perspective
- Anatomy of the Anterolateral Complex of the Knee
- Biomechanics of the Anterolateral Structures
- Diagnosis / Objective Measurement of the Rotational Laxity
- Imaging Assessment of the Anterolateral Structures
- Surgical Concepts
- Indications and Outcomes

16:30–17:30 Concurrent 2–Cozumel 1+5

## KNEE CARTILAGE LESIONS IN ATHLETES

**Chair: Andreas H. Gomoll, MD UNITED STATES**

*Nobuo Adachi, MD, PhD JAPAN*

*Stefano Della Villa, MD ITALY*

*Giuseppe Filardo, MD, PhD ITALY*

*Alberto Gobbi, MD ITALY*

*Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES*

*Moderator: Pablo A. Narbona, MD ARGENTINA*

Upon completion of this session, participants will be able to recognize and distinguish the different approaches to knee cartilage injuries in athletes and how to manage them.

- Return to Sports After Cartilage Repair– What's the Evidence?
- The Role of Biomechanics on Return to Sports After Cartilage Repair
- Knee Cartilage Lesions in Athletes Case Presentations

16:30–17:30 Concurrent 4–Cozumel 2+A

## MASSIVE ROTATOR CUFF TEARS: WHEN TO REPAIR OR REPLACE

**Chair: Guillermo Arce, MD ARGENTINA**

*Angel Calvo, MD SPAIN*

*Andreas B. Imhoff, MD, Prof. GERMANY*

*Eiji Itoi, MD, PhD JAPAN*

*Teruhisa Mihata, MD, PhD JAPAN*

*Richard K. Ryu, MD UNITED STATES*

- Biology and Biomechanics Behind the Tears
- The Workhorse: Releases and Repairs
- The Emerging Role of the Subacromial Balloon
- Assuring a Stable Fulcrum: Augments and Patches
- Superior Capsule Reconstruction: New Improvements and Results
- Tendon Transfers 2019
- Reverse Shoulder Arthroplasty
- Problem Cases

MONDAY, MAY 13, 2019

PARTNER SOCIETY SYMPOSIUM  
ESSKA

11:00–12:00 General Session–Gran Cancun

**ESSKA: TECHNICAL TIPS AND TRICKS FOR KNEE OSTEOTOMY****Chair: David H. Dejour, MD FRANCE***Roland Becker, MD, PhD, Prof. GERMANY**Sandro Fucentese, MD SWITZERLAND**Jacques Ménétreay, Prof. SWITZERLAND**Romain Seil, MD, Prof. LUXEMBOURG**Ronald J. Van Heerwaarden, MD, PhD NETHERLANDS**Moderator: Alfonso R. Barnechea-Rey, MD PERU*

This course, with help from members of the European Society of Sports Traumatology, Knee Surgery & Arthroscopy, will review knee malalignment with special focus on coronal plane and sagittal plane alignment. Indications for proximal tibia osteotomies and distal femur osteotomies will be discussed. The advantages and disadvantages of closing wedge and opening wedge osteotomies, will be examined in a case-based discussion with special attention to the tibial slope. Surgical technique for osteotomies will be presented in a case-based format.

- High Tibial Deflexion Osteotomy
- Medial Open Wedge HTO with Internal Fixator for Varus OA
- Tri-plane Osteotomy in Ligament Deficient Knee (PCL-PLC)
- OW THO Combined to ACL Reconstruction
- Femur, Tibia: Rotational Osteotomy
- Patient Specific Osteotomies (PSI) for Distal Femoral OT

11:00–12:00

Concurrent 2–Cozumel 1+5

**OPEN VS. ARTHROSCOPIC TECHNIQUES IN INSERTIONAL ACHILLES TENDINOPATHY: WHEN AND WHY?****Chair: Umile Giuseppe Longo, MD, MSc, PhD ITALY***Gian Luigi Canata, MD ITALY**Nicola Maffulli, MD, PhD, MS, FRCS(Orth)**UNITED KINGDOM**Hélder M. D. Pereira, MD PORTUGAL**Mohammad Razi, MD ISLAMIC REPUBLIC OF IRAN**Moderator: Alberto Cuellar-Avaroma, MD MEXICO*

- Calcaneal Osteotomy: When We Do Not Need to Touch the Tendon
- Pro and Cons of Arthroscopic Techniques for Insertional Achilles Tendinopathy
- Minimally Invasive Management of Insertional Tendinopathy of the Achilles Tendon
- Insertional Calcific Tendinopathy of The Achilles Tendon

11:00–11:45

Concurrent 4–Cozumel 2+A

**ROTATOR CUFF REPAIR: A CASE-BASED APPROACH****Chair: Angel Calvo, MD SPAIN***Michail E. Chantes, Prof. GREECE**Mark Ferguson, MD SINGAPORE**Mauricio Gutierrez, MD COLOMBIA**Daniel A. Slullitel, MD, Prof. ARGENTINA**Moderator: Mauricio Gutierrez, MD COLOMBIA*

In this symposium, participants will learn how to discern if a single-row, double-row, or other type of repair is important for optimal rotator cuff repair results.

- The Perfect Case for Cuff Repair. How to Choose the Best Technique?
- The Perfect Case for Tendon Transfers. Tendon Transfer Selection, Technique and Results.
- The Perfect Case for Superior Capsular Reconstruction. Is it Really Effective? Cost/Benefits and Graft Selection.
- We Lost The Battle. From the Balloon to the Reverse. When and Why?

# MONDAY, MAY 13, 2019

13:30–14:15

Concurrent 2–Cozumel 1+5

## BEYOND MENISCUS REPAIR: A CASE-BASED APPROACH

**Chair: Christopher C. Kaeding, MD UNITED STATES**

*Roland Becker, MD, PhD, Prof. GERMANY*

*Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA*

*Bryson P. Lesniak, MD UNITED STATES*

*Peter Verdonk, MD, PhD BELGIUM*

Many changes occur following meniscectomy, eventually leading to knee osteoarthritis, including, among many, changed contact mechanics, altered knee kinematics, and biochemical milieu. But meniscus repair is not always possible. Meniscus substitutes include allografts, collagen meniscus implants, and tissue-engineered materials. This course will provide an overview of the latest technology and provide a case-based instruction on contemporary surgical techniques.

- Ramp Lesions in ACL Injured Knees
- Meniscus Root and Radial Tears
- European Consensus about the Management of Traumatic Meniscus Tears
- Clinical Results of a Polyurethane Meniscal Scaffold
- Early Results of a Polycarbonate-urethane Medial Meniscal Implant

13:30–14:30

Concurrent 3–Cozumel 3+4

## MANAGING THE COMPLICATIONS OF KNEE OSTEOTOMY

**Chair: Christopher J. Vertullo, MBBS, PhD, FRACS(Orth) AUSTRALIA**

*Annunziato Amendola, MD UNITED STATES*

*Marco K. Demange, MD, PhD BRAZIL*

*Yong In, MD, PhD REPUBLIC OF KOREA*

*Eiichi Nakamura, MD, PhD JAPAN*

*Moderator: Alex Vaisman, MD CHILE*

This session aims to provide participants with management strategies of dealing with the common complications that may occur in knee osteotomy, and the methods to avoid them.

- Case-Based Discussion with Panelists Annunziato Amendola, Marco K. Demange, Yong In and Eiichi Nakamura

13:30–14:30

Concurrent 4–Cozumel 2+A

## ACLR WITH REMNANT PRESERVATION: SO WHAT?

**Chair: Freddie H. Fu, MD UNITED STATES**

*Anastasios D. Georgoulis, MD, Prof. GREECE*

*Eiji Kondo, MD, PhD JAPAN*

*Rainer Siebold, MD, Prof. GERMANY*

*Joon Ho Wang, MD, PhD REPUBLIC OF KOREA*

*Kyoung-Ho Yoon, MD, PhD, Prof. REPUBLIC OF KOREA*

*Moderator: Manuel F. Mosquera, MD COLOMBIA*

This course will help participants understand the background, advantages, specific surgical technique, and expected adverse effects of the remnant preservation technique in ACL reconstruction.

- Biological and Biomechanical Effects of Remnant-Preserving ACLR
- Clinical Outcomes of Remnant-Preserving ACLR
- Advantages and Disadvantages of Remnant-Preservation Technique
- Deciding Between Single-Bundle vs. Double-Bundle vs. Remnant-Preservation

15:30–16:30

General Session–Gran Cancun

## HOW TO HANDLE MAJOR AND MINOR BONE LOSS IN THE SHOULDER

**Chair: Giovanni Di Giacomo, MD ITALY**

*Jiwu Chen, MD, PhD CHINA*

*Eiji Itoi, MD, PhD JAPAN*

*Denny T. T. Lie, MBBS, FRCS, FAMS SINGAPORE*

*Nahum Rosenberg, Prof. MD, FRCS ISRAEL*

*Moderator: Vicente Gutierrez, MD CHILE*

This lecture addresses methods of repairing the shoulder with bone loss and the complications that may arise. Discussion topics include the J-span technique, Hill-Sachs lesions, and glenoid fractures.

- Surgical Application of Glenoid Track
- Major Bone Loss in Shoulder Instability
- Minor Bone Loss in Shoulder Instability
- How to Manage Surgical Instability Failure

## MONDAY, MAY 13, 2019

15:30–16:30

Concurrent 2–Cozumel 1+5

**RETURN TO SPORTS AFTER KNEE SURGERY:  
HOW TO TEST FOR READINESS****Chair: Robert A. Magnussen, MD, MPH UNITED STATES***Julian A. Feller, FRACS AUSTRALIA**Christian Fink, MD, Prof. AUSTRIA**Alli Gokeler, PhD, PT GERMANY**Lynn Snyder-Mackler, PT, ScD, FAPTA UNITED STATES**Mihai Vioreanu, MD, MCh, FFSEM, FRCSI(Tr&Orth) IRELAND**Moderator: Guillermo J. Allende, MD, Prof. ARGENTINA*

This symposium will review the best practices for evaluating readiness of athletes to return to sport after knee ligament surgery.

- The Historical Battle in Return to Play Decisions: Criteria vs. Time
- 3D Biomechanics Testing in Clinic
- A Simple Mobile Test Battery for RTS After ACLR
- Is Return to Sport Testing Even Useful?
- Early Data on Some New RTS Tests

15:30–16:15

Concurrent 4–Cozumel 2+A

**CAMERA OR EYEBALL?: ARTHROSCOPIC VS.  
OPEN HIP INDICATIONS****Chair: Omer Mei-Dan, MD UNITED STATES***Matthew J. Brick, MBChB, FRACS NEW ZEALAND**Dean K. Matsuda, MD UNITED STATES**Thierry Pauyo, MD, FRCSC CANADA**Moderator: Leandro Ejnisman, MD, PhD BRAZIL*

Upon completion of this session, participants will have gained a better understanding of open and arthroscopic hip surgery indications, along with the advantages and disadvantages of both options.

- Sciatic Neurolysis
- FAI–Global Pincer and Large Camera, Arthroscopic or Open?
- Labral Reconstruction–Indications, Techniques and Should We Just Open the Joint Up?
- The Instability Patient, Scope or Open? Bony vs. Soft Tissue

16:30–17:30

Concurrent 2–Cozumel 1+5

**ISAKOS RESEARCH SYMPOSIUM****Chair: Volker Musahl, MD UNITED STATES***Alfonso R. Barnechea Rey, MD PERU**Michael T. Hirschmann, Prof. SWITZERLAND**Yuichi Hoshino, MD, PhD JAPAN**Stephen L. Lyman, PhD UNITED STATES**Robert G. Marx, MD, MSc, FRCSC UNITED STATES**Moderator: Sebastian Irarrazaval, MD CHILE*

This symposium will provide attendees with an introduction to the ISAKOS Young Investigator's Scholarship and Research Mentoring program. The session will provide instructions on how to write a grant, how to assess outcome, basic statistics, how to perform a multi-center research project, how to write a manuscript, followed by a panel discussion. The session will end with a recognition of the 20 Young Investigator award winners and presentation of the ISAKOS/ESSKA Research Handbook to the winners.

- Introduction of ISAKOS Young Investigator Program
- How to Write a Grant
- How to Assess Outcome
- Basic Statistics
- How to Organize A Multicenter Clinical Trial
- How to Write a Manuscript
- Recognition of Young Investigator Winners

16:30–17:30

Concurrent 3–Cozumel 3+4

**NEW TECHNOLOGIES IN  
KNEE ARTHROPLASTY****Chair: Sebastien Lustig, MD, PhD, Prof. FRANCE***David Figueroa, MD, Prof. CHILE**Fares S. Haddad, MCh(Orth), BSc, FRCS(Orth)  
UNITED KINGDOM**Myung-Chul Lee, MD, PhD, Prof. REPUBLIC OF KOREA**Maurilio Marcacci, MD ITALY**Moderator: M. Ivan Encalada-Díaz, MD MEXICO*

This course will outline the advantages and disadvantages of some of the new technologies used in knee arthroplasty, including: robotic total knee replacement (TKR); robotic unicompartmental knee replacement (UKR), both CT-based and CT-free; patient-specific instrumentation (PSI); navigation and accelerometers; and sensor technology.

- Robotic Unicompartmental Knee Replacement
- Total Knee Replacement with Robotics in South America: Breaking the Paradigms
- Early Experience of Reduced Soft Tissue Damage and Better Early Functional Outcomes with Robotic UKA and TKA
- TKA with PSI and Sensor Technology
- Individual Knee Arthroplasty Implant



# ISAKOS



## GLOBAL TRAVELING FELLOWSHIP

The ISAKOS Global Traveling Fellowship is a new initiative from ISAKOS and the ISAKOS Traveling Fellowship Committee to foster the international exchange of knowledge and skills in the field of sports orthopaedic surgery. Fellows have the opportunity to observe sports orthopaedic surgeries performed by highly respected surgeons, to discuss surgical procedures and all aspects of patient management, and to share research experience.

The Fellowship provides the opportunity for five orthopaedic surgeons, under the age of 45, to travel with an ISAKOS Godfather to the Godfather's geographic region. They visit up to six medical centers over two weeks, prior to attending the ISAKOS Congress.

For the 2019 fellowship, one applicant was selected from each of the following five regions: North America, Europe, Asia-Pacific, Africa/Middle East, and the region of the 12<sup>th</sup> Biennial ISAKOS Congress.

### 2019 Global Traveling Fellowship Godfather



David Figueroa, MD, Prof.  
CHILE



### Congratulations to the 2019 Fellowship Winners



Taofeek Olanrewaju Adeyemi  
MD, MBA, Diploma Ortho,  
FMC Ortho  
NIGERIA



Brian J. Rebolledo MD  
UNITED STATES



Weili Fu MD, PhD  
CHINA



Paulo H. M. Araujo MD, PhD  
BRAZIL



Gilbert Moatshe MD, PhD  
NORWAY

## TUESDAY, MAY 14, 2019

10:35–11:35 General Session–Gran Cancun

**FACTS ABOUT ALL RECONSTRUCTION****Chair: Masahiro Kurosaka, MD JAPAN***Steven Claes, MD, PhD BELGIUM**Andrea Ferretti, Prof. ITALY**Camilo P. Helito, MD, PhD BRAZIL**Elmar Herbst, MD GERMANY**Ryosuke Kuroda, MD, PhD JAPAN**Bertrand Sonneroy-Cottet, MD FRANCE**Andy Williams, MBBS, FRCS(Orth), FFSEM(UK)  
UNITED KINGDOM**Stefano Zaffagnini, MD, Prof. ITALY***Moderator: J. Ignacio Cardona-Munoz, MD, MSc MEXICO**

From this course, participants will gain the ability to recognize the necessity, indication, and surgical technique of anterolateral ligament (ALL) reconstruction.

- Multiple Case Discussions: ALL & Large Pivot Shift Patients

10:35–11:35 Concurrent 2–Cozumel 1+5

**ANATOMY OF THE ACL: FROM BUNDLES TO RIBBONS AND BEYOND****Chair: Rainer Siebold, MD, Prof. GERMANY***Freddie H. Fu, MD UNITED STATES**Mirco Herbort, MD, Prof. GERMANY**Andrew D. Pearle, MD UNITED STATES**Robert J. Smigielski, MD POLAND**Timothy S. Whitehead, MBBS, FRACS AUSTRALIA***Moderator: Horacio F. Rivarola-Etcheto, MD ARGENTINA**

From this symposium, participants will gain insight into the complex anatomy of the anterior cruciate ligament (ACL) and will learn how to practically utilize that knowledge in the operating room.

- Individualized ACL Reconstruction: Which Technique for Which Patient?
- Development of Flat ACL Reconstruction: Does It Work?
- Flat or Round ACL Reconstruction: Does It Make a Difference?
- Understanding ACL Anatomy: Where Should We Place Our Bone Tunnels?
- Single Bundle ACL Reconstruction with Semi-T or BTB: Is It a Good Approximation of the Anatomy?

10:35–11:35 Concurrent 4–Cozumel 2+A

**ISAKOS GLOBAL TRAVELING FELLOWSHIP****Chair: Julian A. Feller, FRACS AUSTRALIA***Brian M. Devitt, MD, FRCS, FRACS AUSTRALIA**David Figueroa, MD, Prof. CHILE**Dean C. Taylor, MD UNITED STATES*

The ISAKOS Global Traveling Fellowship is a new initiative intended to foster the international exchange of knowledge and skills in the field of sports orthopaedic surgery. The Fellowship is coordinated by the Traveling Fellowship Committee and the ISAKOS Office. It will provide the opportunity for five orthopaedic surgeons under the age of 45 to travel with an ISAKOS Godfather to the Godfather's geographic region. They will visit up to six medical centers over 14 to 16 days, before attending the ISAKOS Biennial Congress. At each center, the fellows will have the opportunity to observe sports orthopaedic surgeries performed by highly respected surgeons, to discuss not only the surgical procedures, but all aspects of patient management, and to discuss and share research experience. At each center, each fellow and the Godfather will be expected to present a short scientific paper from a list of three such papers provided by each fellow.

- Introduction to ISAKOS Global Traveling Fellowship
- Why Traveling Fellowships are Worthwhile
- What I Have Learned From International Fellowships
- ISAKOS Global Traveling Fellowship: A New Fellowship
- ISAKOS Traveling Fellows Presentation
- Godfather Presentation

11:35–12:05 General Session Gran Cancun

**DEALING WITH DOPING (EXOGENOUS) & ANDROGENY (ENDOGENOUS) ADVANTAGES IN INTERNATIONAL SPORTS****Chair: Walter C. Taylor III, MD UNITED STATES***Joao A. Grangeiro-Neto, MD, MS BRAZIL**Jacques Ménétrety, Prof. SWITZERLAND**Edwin C. Moses, Sc.D hc UNITED STATES*

- Modern Anti-doping Approaches in Cycling
- Hyperandrogenism and Intersex—An Issue of Science, Sports and Political Correctness
- Anti-doping Control: An Olympic Perspective

# TUESDAY, MAY 14, 2019

## PARTNER SOCIETY SYMPOSIUM AOSSM

13:30–14:30

Concurrent 2–Cozumel 1+5

### AOSSM: CURRENT TREATMENT STRATEGIES OF THE MULTILIGAMENT-INJURED KNEE

**Chair: Annunziato Amendola, MD UNITED STATES**

*Steven B. Cohen, MD UNITED STATES*

*Christopher D. Harner, MD UNITED STATES*

*Robert G. Marx, MD, MSc, FRCSC UNITED STATES*

From this session, presented with help from members of the American Orthopaedic Society of Sports Medicine, participants will gain an understanding of the diagnosis and management of knee dislocations.

- Initial Evaluation and Management (Vascular Management, Associated Injury, Indications for Ex Fix, Etc.)
- Preoperative Planning (Early Vs. Late, Repair vs. Reconstruction, Dealing With PN Injury)
- Surgical Approach / Techniques
- Outcomes and Complications

13:30–14:30

Concurrent 3–Cozumel 3+4

### THE FAILED ROTATOR CUFF REPAIR

**Chair: Giuseppe Milano, MD ITALY**

*Francesco Franceschi, MD, PhD ITALY*

*Dan Guttman, MD UNITED STATES*

*Anthony A. Romeo, MD UNITED STATES*

*Moderator: Fabio Restrepo Tello, MD, Prof. COLOMBIA*

This lecture will address potential solutions to a failed rotator cuff repair, including margin convergence, biologic solutions, partial replacement, and reverse shoulder arthroplasty.

- Defining Successful Rotator Cuff Repair: What Does Really Matter?
- Predictors of Failure of Rotator Cuff Repair
- Surgical Treatment of Failed Rotator Cuff Repair: Non-Arthroplasty Options
- Biologic Augmentation in Revision Rotator Cuff Surgery
- Failed Rotator Cuff Repair: Is Replacement the Best Choice?

13:30–14:15

Concurrent 4–Cozumel 2+A

### THE BIOLOGICAL APPROACH TO ACL INJURY AND MANAGEMENT

**Chair: Karl Eriksson, MD, PhD, Asst. Prof. SWEDEN**

*Peter T. Annear, FRACS(Orth) AUSTRALIA*

*Johannes Barth, MD FRANCE*

*Ryosuke Kuroda, MD, PhD JAPAN*

*Timothy S. Whitehead, MBBS, FRACS AUSTRALIA*

*Moderator: Roberto F. Leal, MD MEXICO*

Upon completion of this course, participants will gain an understanding of the biology of the anterior cruciate ligament (ACL), the graft remodeling process, methods of improving graft healing, and techniques to repair the native ACL.

- Graft Choice, Timing and Biology
- Fixation Options, How Does it Affect Biology?
- Biological Stimulation of Healing and Graft Maturation, Where are We?
- Combining Biology and Technology, Stump Preservation, Artificial Material, Any Benefit?
- Biological Rehab? Brace Therapy? Adjusted Rehab According to Biological Response?

TUESDAY, MAY 14, 2019

PARTNER SOCIETY SYMPOSIUM  
APKASS

14:15–15:00

Concurrent 4–Cozumel 2+A

**APKASS: OPTIMIZING MANAGEMENT OF ACL INJURIES: FROM INDIVIDUALIZED RECONSTRUCTION TO SAFE RETURN TO PLAY, AN ASIA-PACIFIC PERSPECTIVE****Co-Chair: Chih-Hwa Chen, MD, Prof. TAIWAN****Co-Chair: Parag K. Sancheti, MS(Orth), DNB(Orth), MCh(Orth), FRCS(Ed) INDIA***Nobuo Adachi, MD, PhD JAPAN**Shiyi Chen, MD, PhD, Prof. CHINA**Myung-Chul Lee, MD, PhD, Prof. REPUBLIC OF KOREA**David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA**Patrick S. Yung, FRCS(Orth), FHKCOS, FHKAM, FRCS, MBChB HONG KONG*

With help from the Asia-Pacific Knee, Arthroscopy, and Sports Medicine Society, participants will gain an understanding of the concept, indication, and surgical techniques of individualized ACL surgery.

- Graft selection and Surgical Technique for Anatomic Single Bundle ACL Reconstruction
- Clinical Outcomes of ACL Reconstruction with Remnant Preservation
- The Key Technique of ACL Reconstruction for Early Return to Sports
- Which Lateral Procedure: ITB Tenodesis Or ALL Reconstruction?
- Assessment of Readiness for Safe Return to Sports After ACL Reconstruction

15:30–16:30

Concurrent 3–Cozumel 3+4

**WHY DO ACL GRAFTS FAIL?****Chair: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA***Robert G. Marx, MD, MSc, FRCSC UNITED STATES**James R. Robinson, MBBS, MS, MRCS, FRCS(Orth) UNITED KINGDOM**Seth L. Sherman, MD UNITED STATES**Willem M. Van Der Merwe, MBChB, FCS(SA)Ortho SOUTH AFRICA***Moderator: Alex Vaisman, MD Prof. CHILE**

Participants will gain a comprehensive understanding of the risk factors for graft failure, failure rates, and methods of assessment.

- Surgical Technique for Primary ACLR as a Cause of Failure
- The Role of Lower Limb Alignment and Collateral Ligament Injuries in ACL Graft Failure
- Is the Patient the Issue? Which Patient Groups are at Higher Risk of Graft Failure?
- The Balance Between Graft Maturity and Return to Activity

15:30–16:15

Concurrent 4–Cozumel 2+A

**ADVANCED INDICATIONS FOR POSTERIOR ANKLE ARTHROSCOPY****Chair: Pieter D'Hooghe, MD QATAR***Annunziato Amendola, MD UNITED STATES**Umile Giuseppe Longo, MD, MSc, PhD ITALY**Yasuhito Tanaka, Prof. JAPAN**C. Niek Van Dijk, MD, PhD NETHERLANDS***Moderator: Alex Vaisman, MD Prof. CHILE****Moderator: Alberto Cuellar-Avaroma, MD MEXICO**

- Posterior Ankle Impingement
- Endoscopic Calcaneoplasty
- Subtalar Arthrodesis
- Current and Future Indications



## TUESDAY, MAY 14, 2019

16:30–17:30

Concurrent 2–Cozumel 1+5

### CARTILAGE REPAIR OPTIONS 2019

*Co-Chair: Constance R. Chu, MD UNITED STATES*

*Co-Chair: Norimasa Nakamura, MD, PhD JAPAN*

*Alberto Gobbi, MD ITALY*

*Christian Lattermann, MD UNITED STATES*

*Daniel Saris, MD, Prof. UNITED STATES*

This session will allow participants to catch up on the latest information about cutting-edge technologies used to restore articular surface and prevent osteoarthritis, which are coming into clinical practice.

- Introduction: Cartilage Repair Options 2019
- Biologic Enhancement of Cartilage Repair
- One Step Cartilage Repair Procedures. What are the Long-Term Results as Conventional Two-Step Procedures?
- The Early Osteoarthritic Knee: Implications for Cartilage Repair
- Creating a One Stage Cell Based Cartilage Solution

16:45–17:30

General Session–Gran Cancun

### GENETICS IN KNEE INJURIES

*Chair: Willem M. Van Der Merwe, MBChB, FCS(SA)Ortho SOUTH AFRICA*

*Diego C. Astur, MD, PhD BRAZIL*

*Mario Ferretti, MD, PhD BRAZIL*

*Johnny Huard, PhD UNITED STATES*

*Moderator: Maximiliano Scheu, MD, MMSc CHILE*

In this course, participants will be exposed to the latest in genetic analysis of patients with ACL injuries.

- Overview of Genetic Risk Factors in ACL Injury
- Gene Expression of Healing Factors as a Predictor to Treat Anterior Cruciate Ligament Injuries
- Knee Osteoarthritis: Cell Therapy and Exercises Alter Gene Expression of Inflammatory Molecules and Extracellular Matrix

## WEDNESDAY, MAY 15, 2019

11:15–12:00

General Session–Gran Cancun

### MANAGEMENT OF THE PEDIATRIC ACL: DO WE NEED TO PROTECT PHYISIS?

*Chair: Timo J. Järvelä, MD, PhD FINLAND*

*Arturo Almazan, MD MEXICO*

*Mark Clatworthy, FRACS NEW ZEALAND*

*Justin P. Roe, FRACS, A/Prof. AUSTRALIA*

*Jeremy Stanley, BHB, MBChB, FRACS NEW ZEALAND*

*Frederick Weitz, MD FINLAND*

*Moderator: Maria Tuca, MD CHILE*

Skeletally immature ACL patients pose distinct and significant differences in presentation and management. Participants will learn about the best current research on and top surgical techniques in pediatric ACL surgery.

- ACL Tear with Open Physis: Conservative or Operative Treatment?
- Rationale for the Surgical Treatment of ACL Injuries in Open Physes
- Transphyseal ACL Reconstruction in the Skeletally Immature
- Does Thicker Graft Reduce the Failure Rate in the Pediatric Knee?
- Transphyseal or Physeal Sparing ACL Reconstruction for Skeletally Immature Patients

13:30–14:15

Concurrent 2–Cozumel 1+5

### THE LATARJET PROCEDURE: FIVE CONTINENTS' APPROACH

*Chair: Philippe Landreau, MD FRANCE*

*Guillermo Arce, MD ARGENTINA*

*Emilio Calvo, MD, PhD, MBA SPAIN*

*Eiji Itoi, MD, PhD JAPAN*

*Matthew T. Provencher, MD UNITED STATES*

This symposium will provide participants with a thorough understanding of how surgeons from five different continents approach techniques of the Latarjet procedure.

- Introduction /History and Concept of the Latarjet Procedure
- Management of the Bone Block: Harvesting, Position and Fixation
- The Sling and the Capsular Effects: How to Optimize Them?
- Arthroscopic Approach: Is it Better for the Patient and for the Surgeon?
- Open Approach: The Best Choice From the Menu?
- Take Home Message /Guidelines



WEDNESDAY, MAY 15, 2019

13:30–14:30

Concurrent 3–Cozumel 3+4

**HOW TO MANAGE REVISION KNEE ARTHROPLASTY**

**Chair: Daniel C. Wascher, MD UNITED STATES**

*Roland Becker, MD, PhD, Prof. GERMANY*

*Myung-Chul Lee, MD, PhD, Prof. REPUBLIC OF KOREA*

*David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA*

*Sébastien Parratte, MD, PhD, Prof. UNITED ARAB EMIRATES*

After this session, participants will be able to manage the patient who needs revision surgery after an HTO, UKA, or TKA. Topics and methods to be discussed include: exposure and implant removal, management of bone deficiency, prosthesis selection (PS, VVC, hinge/fixed vs. mobile), and the use of stem and fixation.

- Planning for Revision Surgery
- Tips for Exposure and Implant Removal
- Managing Soft Tissue Defects–  
Choosing the Right Constraint
- Managing Bone Defects and Fixation Options

13:30–14:15

Concurrent 4–Cozumel 2+A

**TREATMENT OF THE STIFF ELBOW**

**Chair: Luigi A. Pederzini, MD ITALY**

*Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA*

*Christian Lozano, MD, MBA PERU*

*Alessandro Marinelli, MD ITALY*

*Felix H. Savoie III, MD UNITED STATES*

From this symposium, participants will learn about the most current ways to classify a stiff elbow and arthroscopic techniques in releasing the elbow joint.

- Stiff Elbow Classifications
- Arthroscopic Treatment in Degenerative Stiff Elbow
- Arthroscopic and Endoscopic Approach to Stiff Elbow
- Indication and Limits to Arthroscopic Treatment of Stiff Elbow
- Arthroscopic Treatment of Elbow Ossifications

15:30–16:15

General Session–Gran Cancun

**THE FEMALE ACL: SHOULD IT BE MANAGED DIFFERENTLY?**

**Chair: Elvire Servien, MD, PhD, Prof. FRANCE**

*Constance R. Chu, MD UNITED STATES*

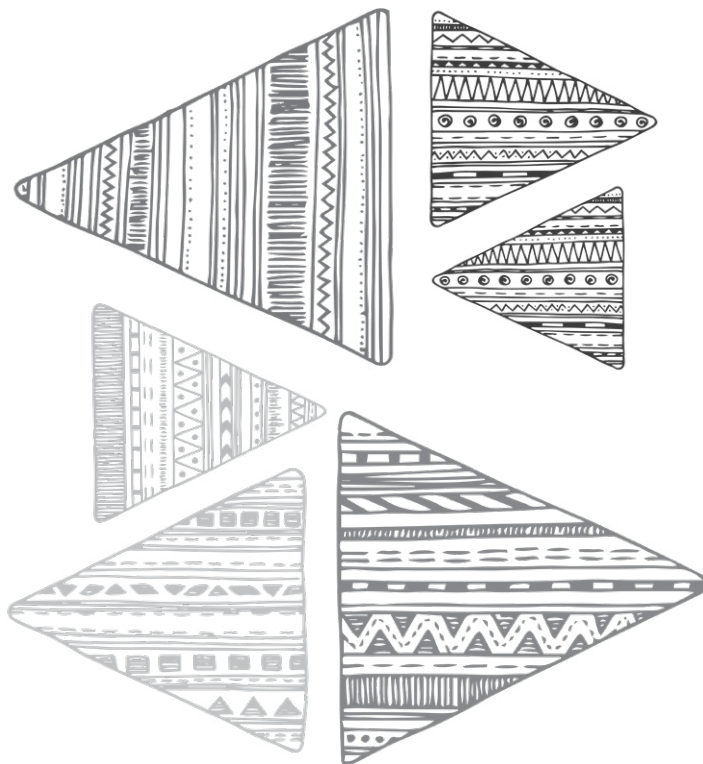
*Mario Ferretti, MD, PhD BRAZIL*

*Justin P. Roe, FRACS, A/Prof. AUSTRALIA*

*Carola F. Van Eck, MD, PhD UNITED STATES*

In this session, participants will be able to critically examine risk factors for anterior cruciate ligament (ACL) injury specific to female athletes and will gain an understanding of the management of ACL injury in the female population.

- ACL: Genetics and Biology, What’s Different for Females?
- Prevention of ACL Injury: Extrinsic Factors
- Anatomy and Other Intrinsic Factors for ACL Reconstruction
- Graft Choice in Female
- Return to Sport



# WEDNESDAY, MAY 15, 2019

15:30–16:30

Concurrent 2–Cozumel 1+5



## **JOURNAL OF ISAKOS LEADERSHIP SYMPOSIUM STRATEGIES IN SUCCESSFUL PUBLISHING**

**Chair: C. Niek Van Dijk, MD, PhD  
NETHERLANDS JISAKOS Editor in Chief**

**Faculty:** Christopher D. Harner, MD UNITED STATES  
Leendert Blankevoort, PhD, NETHERLANDS  
Jon Karlsson, Prof. SWEDEN  
Stephen L. Lyman, PhD UNITED STATES  
Gary G. Poehling, MD UNITED STATES

**ISAKOS VIP Faculty:** Marc R. Safran, MD, Prof.  
UNITED STATES

Willem M. Van Der Merwe MBChB, FCS(SA)Ortho  
SOUTH AFRICA

Guillermo Arce, MD ARGENTINA

Philippe N. Neyret, MD, PhD FRANCE

The editor of the *Journal of ISAKOS: Joint Disorders & Orthopedic Sports Medicine* will host a session for those who are interested in reviewing or writing articles for journal publication. Information on the reviewing process, and manuscript structure and preparation will be provided, along with reviewer objectives and responsibilities.

- Submitting: How to Write an Excellent Paper
- What it Takes to Be a Good Reviewer
- Post-Publication Marketing: How Authors Can Promote Their Research Using Social Media

15:30–16:30

Concurrent 4–Cozumel 2+A

## **PATELLOFEMORAL ARTHROPLASTY (PFA): INDICATIONS, TECHNICAL ASPECTS, COMPLICATIONS, AND RESULTS**

**Chair: Pieter J. Erasmus, MBChB, MMed SOUTH AFRICA**

Elizabeth A. Arendt, MD UNITED STATES

Diane L. Dahm, MD UNITED STATES

David H. Dejour, MD FRANCE

Shuichi Matsuda, MD, PhD JAPAN

Moderator: Gabriel Baron, MD CHILE

This session provides highlights of the indications, surgical technique, complications, and results pertaining to patellofemoral arthroplasty.

- Biomechanics of the Patellofemoral Joint
- Philosophy of Different Designs
- Indications
- Technical Aspects–Important Points
- Complications and Results

16:15–17:00

General Session–Gran Cancun

## **CASE-BASED POSTEROLATERAL CORNER RECONSTRUCTION**

**Chair: Bryson P. Lesniak, MD UNITED STATES**

Marco Acuna Tovar, MD MEXICO

Brett A. Fritsch, MBBS, BMedSc AUSTRALIA

Timothy Lording, MBBS, FRACS AUSTRALIA

Vincenzo Madonna, MD ITALY

Moderator: Matias Costa-Paz, MD ARGENTINA

This symposium will cover history, anatomy, repair, reconstruction, and outcomes as they pertain to the posterolateral corner (PLC) of the knee.

- PLC Anatomy, Biomechanics and Reconstruction Techniques
- Timing of PLC Surgery–Acute or Delayed Management
- Treatment of Complex PLC Injuries: Not Just a Soft Tissue Problem with Soft Tissue Solutions
- Post-Operative Care and Return to Sport / Activity

WEDNESDAY, MAY 15, 2019

16:30–17:30

Concurrent 3–Cozumel 3+4

**ALIGNMENT IN TOTAL KNEE ARTHROPLASTY: IS A NEUTRAL MECHANICAL AXIS THE TARGET?**

**Chair: Stephen M. Howell, MD UNITED STATES**

*Myles R. J. Coolican, FRACS AUSTRALIA*

*Shuichi Matsuda, MD, PhD JAPAN*

*Philippe N. Neyret, MD, PhD, Prof. FRANCE*

*Moderator: O. Rolando Suarez, MD PERU*

One long-held tenet of mechanically aligned (MA) total knee arthroplasty (TKA) is that implant durability is promoted by setting the alignments of the femoral and tibial components referenced to the mechanical axes of the femur and tibia in the coronal plane. Kinematic alignment (KA) is an alternative alignment paradigm that co-aligns the axes and joint lines of the components with the three ‘kinematic’ axes and joint lines of the pre-arthritis or native knee without placing limits on the pre-operative deformity and post-operative correction and without ligament release. In 2018, the technique of kinematic alignment received FDA approval and CE marking, enabling use throughout the world. KA is of interest because three meta-analyses, three randomized trials, and a national multicenter study showed that patients treated with KA reported significantly better pain relief, function, flexion, and a more normal-feeling knee than patients treated with mechanical alignment (MA). This symposium will feature speakers’ opposing views, which will provide insight on the benefits, risks, and shortcomings of both the mechanical and kinematic targets.

- Residual Tibial Varus Deformity Does Not Negatively Influence Results of Calipered Kinetically Aligned TKA
- Residual Femoral Varus Deformity Does Not Negatively Influence Results of TKA
- A Neutral Mechanical Axis Most of the Time
- Residual Lateral Laxity Does Not Negatively Influence Results of Neutrally Aligned TKA

THURSDAY, MAY 16, 2019

09:00–10:00

General Session–Gran Cancun

**TEAM PHYSICIAN: AN INTERNATIONAL PERSPECTIVE**

**Chair: Peter Anthony Indelicato, MD UNITED STATES**

*Ryuichiro Akagi, MD, PhD JAPAN*

*José F. Huylebroek, MD BELGIUM*

*Antonio Maestro, MD, PhD SPAIN*

*Fernando Radice, MD CHILE*

*Marc R. Safran, MD, Prof. UNITED STATES*

*Moderator: Moises Cohen, MD PhD, Prof. BRAZIL*

Upon completion of this symposium, participants will gain a comprehensive understanding of the role of the Team Physician from an International Perspective including topics on The Best Way to Manage on the Field Decisions, How to Deal with Contracts Between Physicians and Team Management, Agents, the Media and Ownership, Keys to Being a Successful Team Physician for an Academic or Professional Soccer Club, and How To Arrange a Team of Medical Consultants.

- The Best Way to Manage on the Field Decisions
- How to Deal with Contracts Between Physicians and Team Management
- Agents, the Media and Ownership
- Keys to Being a Successful Team Physician for an Academic or Professional Soccer Club
- How to Arrange a Team of Medical Consultants

10:00–11:00

General Session–Gran Cancun

**INFECTION MANAGEMENT IN KNEE REPLACEMENT**

**Chair: Sebastien Lustig, MD, PhD, Prof. FRANCE**

*Thomas Bauer, MD, PhD FRANCE*

*Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof. INDONESIA*

*INDONESIA*

*Umile Giuseppe Longo, MD, MSc, PhD ITALY*

*Maurilio Marcacci, MD ITALY*

*Moderator: Felipe E. Cámara, MD MEXICO*

Upon completion of this symposium, participants will have refreshed and updated their knowledge on the management of infection in the knee replacement patient.

- Prevention and Patient Optimization
- Diagnosis
- DAIR
- One Stage Revision
- Two Stage Revision



# THURSDAY, MAY 16, 2019

11:00–12:00 General Session–Gran Cancun

## CURRENT CONTROVERSIES IN TKA

**Chair: Sébastien Parratte, MD, PhD, Prof.**

**UNITED ARAB EMIRATES**

*Paolo Adravanti, MD ITALY*

*Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof. INDONESIA*

*Yong In, MD, PhD REPUBLIC OF KOREA*

*Mojieb M. Manzary, MD, FRCSC SAUDI ARABIA*

*Christopher J. Vertullo, MBBS, PhD, FRACS(Orth) AUSTRALIA*

See internationally renowned surgeons discuss and debate the current controversies surrounding total knee arthroplasty (TKA).

- Introduction: Current Controversies in TKA
- Manage Patient Expectations and Return to Activities After TKA: Is There Any Effect of Prosthesis Selection on Outcomes?
- Alignment: Which Target for Which Patient?
- What is the Role of New Technologies?
- TKA in Complex Cases: What are the Important Points?
- Fast Track: When Is It Too Fast?
- Discussion on Current Controversies in TKA
- Key Points Messages on Current Controversies in TKA

12:00–13:00 General Session–Gran Cancun

## CONTROVERSIES IN ACL RECONSTRUCTION

**Chair: Jon Karlsson, Prof. SWEDEN**

*David Figueroa, MD, Prof. CHILE*

*Christian Fink, MD, Prof. AUSTRIA*

*Robert G. Marx, MD, MSc, FRCSC UNITED STATES*

*Volker Musahl, MD UNITED STATES*

*Kristian Samuelsson, MD, PhD, MSc, Prof. SWEDEN*

*Romain Seil, MD, Prof. LUXEMBOURG*

This symposium will touch upon the most pertinent and most controversial topics in anterior cruciate ligament (ACL) reconstruction, and will educate attendees on ACL reconstruction and management.

- The New Meniscus Lesions (Medial Ramp, Lateral Root) in ACL Injured Knees and Their Role on Knee Stability
- When Is Acute ACL Reconstruction Indicated?
- Quadriceps Tendon Autograft–The New Gold Standard for ACL Reconstruction
- The New Paradigm: Why Do We Move to Individualized Anatomic ACL Reconstruction
- Does Graft Fixation and Graft Size Matter?
- ACL+LET: What Is the Science Behind Combined Surgery?

## PARTNER SOCIETY SYMPOSIUM AANA

11:00–11:45 Concurrent 2–Cozumel 1+5

## AANA: STATE-OF-THE-ART ARTHROSCOPIC MENISCAL REPAIR

**Chair: Louis F. McIntyre, MD UNITED STATES**

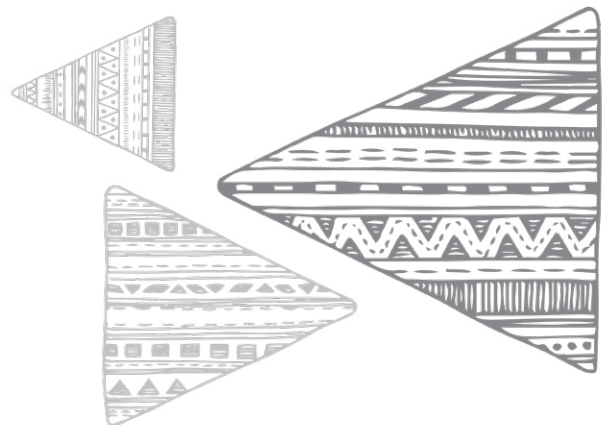
*Kevin F. Bonner, MD UNITED STATES*

*Christopher P. Dougherty, DO UNITED STATES*

*Nicholas Sgaglione, MD UNITED STATES*

State-of-the-Art Arthroscopic Meniscal Repair will be presented by members of the Arthroscopy Association of North America.

- Horizontal Meniscal Repair
- Inside-Out, Outside-In & All-Inside Meniscus Repair: Keep Everything in Your Toolbox
- Root Repair: Making It Easy
- Flaps, Radial and Complex Tear Repair: Should We Be Doing These?





**SUNDAY, MAY 12, 2019**

**Anatomical Variation of ACL as Related to Reconstruction**

09:00–09:45 General Session–Gran Cancun

**Surgeon: Christian Fink, MD, Prof. AUSTRIA**

**Surgeon: Freddie H. Fu, MD UNITED STATES**

**Moderator: Frank A. Cordasco, MD, MS UNITED STATES**

**Management of a First-Time Shoulder Dislocation**

09:45–10:30 Concurrent 2–Cozumel 1+5

**Surgeon: Philippe Landreau, MD FRANCE**

**Moderator: Vicente Gutierrez, MD CHILE**

**Arthroscopic Hip Surgery**

11:00–12:00 Concurrent 4–Cozumel 2+A

**Surgeon: Olufemi R. Ayeni, MD, PhD, MSc, FRCSC CANADA**

**Moderator: Nicolas Bonin, MD FRANCE**

**Meniscal Root Repair**

14:15–14:45 Concurrent 3–Cozumel 3+4

**Surgeon: Robert F. LaPrade, MD, PhD UNITED STATES**

**Moderator: Sachin R. Tapasvi, MBBS, MS, DNB, FRCS INDIA**

**Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tears**

15:30–16:30 Concurrent 4–Cozumel 2+A

**Surgeon: Albert Lin, MD UNITED STATES**

**Moderator: Teruhisa Mihata, MD, PhD JAPAN**

**MONDAY, MAY 13, 2019**

**How to Perform a Safe and Reproducible PCL Reconstruction**

11:00–12:00 Concurrent 3–Cozumel 3+4

**Surgeon: Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA**

**Moderator: Fabrizio Margheritini, MD ITALY**

**Open Latarjet**

13:30–14:15 General Session–Gran Cancun

**Surgeon: Andreas B. Imhoff, MD, Prof. GERMANY**

**Moderator: Giovanni Di Giacomo, MD ITALY**

**Arthroscopic Latarjet**

14:15–15:00 General Session–Gran Cancun

**Surgeon: Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med CANADA**

**Moderator: Emilio Calvo, MD, PhD, MBA SPAIN**

**High Tibial Osteotomy**

15:30–16:30 Concurrent 3–Cozumel 3+4

**Surgeon: Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA**

**Moderator: Philippe N. Neyret, MD, PhD, Prof. FRANCE**

**Arthroscopic Hip Labral Reconstruction**

16:15–17:00 Concurrent 4–Cozumel 2+A

**Surgeon: Marc J. Philippon, MD UNITED STATES**

**Moderator: Allston Stubbs, MD, MBA UNITED STATES**

**Gluteus Medius**

17:00–17:45 Concurrent 4–Cozumel 2+A

**Surgeon: J.W. Thomas Byrd, MD UNITED STATES**

**Moderator: Rodrigo Mardones, MD CHILE**



## Surgical Demonstrations are supported by the following companies:

Arthrex | ConMed | DePuy Synthes Mitek Sports Medicine | Medacta | Smith & Nephew | Stryker Instruments

# TUESDAY, MAY 14, 2019

## Standard Rotator Cuff Repair

10:35–11:35 Concurrent 3–Cozumel 3+4

**Surgeon:** Enrique A. Salas, MD VENEZUELA

**Moderator:** Dan Guttmann, MD UNITED STATES

## How to Perform Extra Articular Tenodesis

13:30–14:00 General Session–Gran Cancun

**Surgeon:** Eivind Inderhaug, MD, PhD, MPH NORWAY

**Moderator:** Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM

## How to Perform an ALL Reconstruction

14:00–14:30 General Session–Gran Cancun

**Surgeon:** Steven Claes, MD, PhD BELGIUM

**Moderator:** Bertrand Sonnery-Cottet, MD FRANCE

## How to Surgically Manage the Medial Structures Around the Knee

15:30–16:15 General Session–Gran Cancun

**Surgeon:** Martin Lind, MD, PhD, Prof. DENMARK

**Moderator:** Daniel B. Whelan, MD, MSc, FRCSC CANADA

## Posterior Lateral Corner Reconstruction

16:15–16:45 General Session–Gran Cancun

**Surgeon:** Scott C. Faucett, MD, MS UNITED STATES

**Moderator:** Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM

## Insertional Achilles Tendinopathy Repair with Excision of Haglund's Deformity

16:45–17:30 Concurrent 4–Cozumel 2+A

**Surgeon:** Markus Walther, MD GERMANY

**Moderator:** Mark Glazebrook, MD, PhD, MSc, FRCS(C) CANADA

# WEDNESDAY, MAY 15, 2019

## Reverse Shoulder Arthroplasty

11:15–12:00 Concurrent 2–Cozumel 1+5

**Surgeon:** Anthony A. Romeo, MD UNITED STATES

**Moderator:** Matthew T. Provencher, MD UNITED STATES

## Robotic-Assisted Bi-Cruciate Retaining Total Knee Replacement

13:30–14:15 General Session–Gran Cancun

**Surgeon:** Paul Schwartz, MD UNITED STATES

**Moderator:** Sebastien Lustig, MD, PhD, Prof. FRANCE

## Improving Healing for Massive Rotator Cuff Repair

14:15–15:00 Concurrent 2–Cozumel 1+5

**Surgeon:** Felix H. Savoie III, MD UNITED STATES

**Moderator:** Kevin D. Plancher, MD, MPH UNITED STATES

## Calipered Kinematic Alignment in Total Knee Arthroplasty

15:30–16:30 Concurrent 3–Cozumel 3+4

**Surgeon:** Stephen M. Howell, MD UNITED STATES

**Moderator:** Myles R. J. Coolican, FRACS AUSTRALIA

## Combined MPTL and MPFL Reconstruction

16:30–17:30 Concurrent 4–Cozumel 2+A

**Surgeon:** Betina B. Hinckel, MD, PhD UNITED STATES

**Moderator:** Elizabeth A. Arendt, MD UNITED STATES

# ICLS AT A GLANCE

	Gran Cancun: General Session	Cozumel 1+5: Concurrent 2	Cozumel 3+4: Concurrent 3	Cozumel 2+A: Concurrent 4
	ICL #1	ICL #2	ICL #3	ICL #4
<b>MONDAY, MAY 13, 2019</b>	<b>Target for Appropriate Alignment</b> <b>Chair: Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof. INDONESIA</b> Stephen M. Howell, MD UNITED STATES Shuichi Matsuda, MD, PhD JAPAN Sébastien Parratte, MD, PhD, Prof. UNITED ARAB EMIRATES Simon Talbot, MBChB, FRACS AUSTRALIA Emmanuel Thienpont, MD, PhD, MBA BELGIUM	<b>Prevention and Management of Infection in ACL Reconstruction</b> <b>Chair: Christopher J. Vertullo, MBBS, PhD, FRACS(Orth) AUSTRALIA</b> Lucio S. R. Ernlund, MD, MSc BRAZIL Martin Lind, MD, PhD, Prof. DENMARK Joan C. Monllau, MD, PhD, Prof. SPAIN Rick W. Wright, MD UNITED STATES Moderator: Alex Vaisman, MD Prof. CHILE	<b>Measurement of Knee Stability: Is It Important in Football?</b> <b>Chair: Moises Cohen, MD, PhD, Prof. BRAZIL</b> João Espregueira-Mendes, MD, PhD PORTUGAL Christophe H. Hulet, MD, Prof. FRANCE Ryosuke Kuroda, MD, PhD JAPAN Volker Musahl, MD UNITED STATES Stefano Zaffagnini, MD, Prof. ITALY Moderator: J. Ignacio Cardona-Munoz, MD MSc MEXICO	<b>Elbow Arthroscopy: From Basic to Advanced</b> <b>Chair: Luigi A. Pederzini, MD ITALY</b> Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA Deepak N. Bhatia, MS(Orth), DNB(Orth) INDIA Andrea Celli, MD ITALY Gregory A. Hoy, FRACS, FAOrthA, FACSP, FASMF AUSTRALIA Gary G. Poehling, MD UNITED STATES Moderator: Osvandré L. Lech, Prof. BRAZIL
<b>TUESDAY, MAY 14, 2019</b>	<b>ICL #8</b> <b>Partial Knee Replacement: Indication, Technique, and Results</b> <b>Chair: David Figueroa, MD, Prof. CHILE</b> Gabriel Baron, MD CHILE David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA Sébastien Parratte, MD, PhD, Prof. UNITED ARAB EMIRATES Andrew J. Price, DPhil, FRCS(Orth) UNITED KINGDOM Anders Troelsen, MD, PhD, DMSc, Prof. DENMARK	<b>ICL #9</b> <b>Management of Revision ACL</b> <b>Chair: Nobuo Adachi, MD, PhD JAPAN</b> David H. Dejour, MD FRANCE Rodrigo Maestu, MD ARGENTINA Jacques Ménétrey, Prof. SWITZERLAND John Xerogeanes, MD UNITED STATES Moderator: Fabio Restrepo Tello, MD, Prof. COLOMBIA	<b>ICL #10</b> <b>Everything Rotator Cuff</b> <b>Chair: Kevin D. Plancher, MD, MPH UNITED STATES</b> Emilio Calvo, MD, PhD, MBA SPAIN Francesco Franceschi, MD, PhD ITALY Dan Guttman, MD UNITED STATES Albert Lin, MD UNITED STATES Nahum Rosenberg, Prof. MD, FRCS ISRAEL	<b>ICL #11</b> <b>Practical Applications of Growth Factors, Cells, and Novel Therapies in Sport Medicine</b> <b>Chair: Ramon Cugat, MD, PhD SPAIN</b> Chih-Hwa Chen, MD, Prof. TAIWAN Giuseppe Filardo, MD, PhD ITALY Alberto Gobbi, MD ITALY Johnny Huard, PhD UNITED STATES Rodrigo Mardones, MD CHILE
<b>WEDNESDAY, MAY 15, 2019</b>	<b>ICL #16</b> <b>Managing Difficult Cases: Innovations and Evidence in Hip Arthroscopy</b> <b>Chair: Marc R. Safran, MD, Prof. UNITED STATES</b> Nicolas Bonin, MD FRANCE Leandro Ejnisman, MD, PhD BRAZIL Anil S. Ranawat, MD UNITED STATES Soshi Uchida, MD, PhD JAPAN Ivan Wong, MD, FRCS, MACM, Dip. Sports Med CANADA Moderator: Victor M. Ilizaliturri, MD MEXICO	<b>ICL #17</b> <b>Complex Issues in RCR Surgery and Advanced Techniques to Solve Them</b> <b>Chair: Guillermo Arce, MD ARGENTINA</b> Jeffrey S. Abrams, MD UNITED STATES Giuseppe Milano, MD ITALY Kevin D. Plancher, MD, MPH UNITED STATES Daniel A. Slullitel, MD, Prof. ARGENTINA Moderator: Vicente Gutierrez, MD CHILE	<b>ICL #18</b> <b>Management of the Multi-Ligament-Injured Knee</b> <b>Chair: Bruce C. Twaddle, MD, FRACS, Prof. NEW ZEALAND</b> David Figueroa, MD, Prof. CHILE Brett A. Fritsch, MBBS, BMedSc AUSTRALIA Fabrizio Margheritini, MD ITALY Claudio Zorzi, MD ITALY	<b>ICL #19</b> <b>Reverse Shoulder Replacement: Indications, Results, Complications, and Failures</b> <b>Chair: Anthony A. Romeo, MD UNITED STATES</b> Mike H. Baums, MD, PhD GERMANY
<b>THURSDAY, MAY 16, 2019</b>	<b>ICL #24</b> <b>The AC Joint and Scapula</b> <b>Chair: Jeffrey A. Macalena, MD UNITED STATES</b> Guillermo Arce, MD ARGENTINA Klaus Bak, MD DENMARK Felix Dyrna, MD GERMANY Moderator: Christian Lozano, MD, MBA PERU	<b>ICL #25</b> <b>PCL Reconstruction: Tips and Tricks</b> <b>Chair: Francesco Giron, MD, PhD ITALY</b> <b>Chair: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA</b> Fabrizio Margheritini, MD ITALY Matthew J. Matava, MD UNITED STATES Manuel F. Mosquera, MD COLOMBIA Bruce C. Twaddle, MD, FRACS, Prof. NEW ZEALAND Moderator: O. Rolando Suarez, MD PERU	<b>ICL #26</b> <b>Tendon and Ligament Injuries in the Elbow</b> <b>Chair: Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA</b> Deepak N. Bhatia, MS(Orth), DNB(Orth) INDIA Michael T. Freehill, MD UNITED STATES Mark I. Loebenberg, MD ISRAEL Alessandro Marinelli, MD ITALY Luke S. Oh, MD UNITED STATES Kilian Wegmann, MD, PhD GERMANY	<b>ICL #27</b> <b>Patellar Dislocation in the Skeletally Immature Patient</b> <b>Chair: Petri J. Sillanpää, MD, PhD FINLAND</b> Jack T. Andrich, MD UNITED STATES Franck P. D. A. Chotel, MD, PhD, Prof. FRANCE Masataka Deie, MD, PhD, Prof. JAPAN Daniel W. Green, MD, MS UNITED STATES Moderator: Maria Tuca, MD CHILE



Coba	Xcaret	Costa Maya A	Costa Maya B
<b>ICL #5</b>	<b>ICL #6</b>	<b>ICL #31</b>	<b>ICL #7</b>
<b>How to Diagnose and Treat Isolated Athletic Syndesmotic Ankle Injuries</b> <b>Chair: Pieter D’Hooghe, MD QATAR</b> Carlo Angelo V. Borbon, MD, FPOA PHILIPPINES MaCalus V. Hogan, MD UNITED STATES Kenneth J Hunt, MD UNITED STATES Helder M. D. Pereira, MD PORTUGAL Moderator: Alberto Cuellar Avaroma, MD MEXICO	<b>Case-Based MDI / Posterior Instability of the Shoulder</b> <b>Chair: Felix H. Savoie III, MD UNITED STATES</b> Jeffrey S. Abrams, MD UNITED STATES Knut Beitzel, MD, MA GERMANY Bancha Chernchujit, Prof. THAILAND Eiji Itoi, MD, PhD JAPAN	<b>Pain Management in the Elite Athlete</b> <b>Chair: Walter C. Taylor III, MD UNITED STATES</b> José F. Huylebroek, MD BELGIUM Julian Feller, FRACS AUSTRALIA Carlos Yacuzzi, MD ARGENTINA	<b>Instability of the Shoulder: A Case-Based Approach</b> <b>Chair: Andreas B. Imhoff, MD, Prof. GERMANY</b> Knut Beitzel, MD, MA GERMANY Emilio Calvo, MD, PhD, MBA SPAIN Augustus D. Mazzocca, MD, MS UNITED STATES Manuel F. Mosquera, MD COLOMBIA Andreas Voss, MD GERMANY Moderator: Benno Ejnisman, MD BRAZIL
<b>ICL #12</b>	<b>ICL #13</b>	<b>ICL #14</b>	<b>ICL #15</b>
<b>Ankle Cartilage Repair: How to Indicate the Appropriate Treatment</b> <b>Chair: MaCalus V. Hogan, MD UNITED STATES</b> <b>Chair: Yasuhito Tanaka, Prof. JAPAN</b> Pieter D’Hooghe, MD QATAR Umile Giuseppe Longo, MD, MSc, PhD ITALY Yoshiharu Shimozono, MD UNITED STATES Masato Takao, MD, PhD JAPAN	<b>How Do I Perform a Standard, Safe ACL Reconstruction?</b> <b>Chair: Julian A. Feller, FRACS AUSTRALIA</b> Arturo Almazan, MD MEXICO Darren L. Johnson, MD UNITED STATES Takeshi Muneta, MD, PhD JAPAN Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA Kristian Samuelsson, MD, PhD, MSc, Prof. SWEDEN Moderator: Fernando Radice, MD CHILE	<b>How to Repair the Meniscus in a Difficult Situation</b> <b>Chair: René E. Verdonk, MD, PhD BELGIUM</b> Felipe E. Cámara, MD MEXICO Jorge Chahla, MD, PhD UNITED STATES Nicolas Pujol, MD FRANCE Romain Seil, MD, Prof. LUXEMBOURG Joon Ho Wang, MD, PhD REPUBLIC OF KOREA Moderator: Horacio F. Rivarola-Etcheto, MD ARGENTINA	<b>Getting Started in Hip Arthroscopy</b> <b>Chair: Olufemi R. Ayeni, MD, PhD, MSc, FRCS CANADA</b> Nicolas Bonin, MD FRANCE Matthew J. Brick, MBChB, FRACS NEW ZEALAND Nick Mohdadi, MD, MSc, FRCS CANADA Marc R. Safran, MD, Prof. UNITED STATES
<b>ICL #20</b>	<b>ICL #21</b>	<b>ICL #22</b>	<b>ICL #23</b>
<b>Challenges of Difficult Primary Total Knee Arthroplasty</b> <b>Chair: Daniel C. Wascher, MD UNITED STATES</b> Felipe Ambra, MD, PhD BRAZIL Myles R. J. Coolican, FRACS AUSTRALIA Francois M. Kelberine, MD FRANCE Mihai Vioreanu, MD, MCh, FFSEM, FRCS(Tr&Orth) IRELAND Moderator: Rafael Calvo, MD CHILE	<b>Hand and Wrist Injuries in Sports</b> <b>Chair: Margaret W. M. Fok, FRCS(Ortho), MBChB HONG KONG</b> Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA Shanlin Chen, MD, PhD CHINA Bo Liu, MD, FRCS CHINA Toshiyasu Nakamura, MD, PhD JAPAN	<b>Soft Tissue and Bony Procedures for Patellofemoral Instability: Indications and Techniques</b> <b>Chair: David Sadigursky, MD, MSc BRAZIL</b> Jorge Chahla, MD, PhD UNITED STATES David H. Dejour, MD FRANCE Betina B. Hinckel, MD, PhD UNITED STATES Martin Lind, MD, PhD, Prof. DENMARK Moderator: Mario V. Larrain, MD ARGENTINA	<b>Meniscal Allografts</b> <b>Chair: Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA</b> Jin-Goo Kim, MD, PhD REPUBLIC OF KOREA Tim Spalding, FRCS(Orth) UNITED KINGDOM Kevin R. Stone, MD UNITED STATES Peter Verdonk, MD, PhD BELGIUM
<b>ICL #28</b>	<b>ICL #29</b>		<b>ICL #30</b>
<b>Minimally Invasive Surgery: Does It Play a Role in Orthopaedic Foot and Ankle Surgery?</b> <b>Chair: Thomas Bauer, MD, PhD FRANCE</b> Mohammad Razi, MD ISLAMIC REPUBLIC OF IRAN Masato Takao, MD, PhD JAPAN Jordi Vega, MD SPAIN Moderator: Alberto Cuellar-Avaroma, MD MEXICO	<b>Return-to-Sport Testing After ACL Reconstruction: Should We Be Doing It?</b> <b>Chair: James J. Irrgang, PT, PhD, FAPTA UNITED STATES</b> Eduard Alentorn-Geli, MD, PhD, MSc, FEBOT, FACGME SPAIN Ricardo P. Bastos-Filho, MD, PhD, Prof. BRAZIL Timothy E. Hewett, PhD UNITED STATES Philippe Landreau, MD FRANCE Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES Kate E. Webster, PhD AUSTRALIA Moderator: Sebastián Irrarrázaval, MD CHILE		<b>Patellofemoral Cartilage Defects: The ISAKOS Perspective</b> <b>Chair: Seth L. Sherman, MD UNITED STATES</b> David Figueroa, MD, Prof. CHILE Yasuyuki Ishibashi, MD JAPAN Mario Ronga, MD, Prof. ITALY Moderator: Carlos H. Yacuzzi, MD ARGENTINA



## MONDAY, MAY 13, 2019

### ICL #1

General Session—Gran Cancun

#### Target for Appropriate Alignment

**Chair: Nicolaas C. Budhiparama, MD, FICS,**  
**Assoc. Prof. INDONESIA**

*Stephen M. Howell, MD UNITED STATES*

*Shuichi Matsuda, MD, PhD JAPAN*

*Sébastien Parratte, MD, PhD, Prof. UNITED ARAB EMIRATES*

*Simon Talbot, MBChB, FRACS AUSTRALIA*

*Emmanuel Thienpont, MD, PhD, MBA BELGIUM*

Upon completion of this symposium, participants will have updated their knowledge on various techniques of alignment and patient-reported outcome measures (PROMs) in knee replacement.

- Advantages of Neutral Alignment
- Alignment in TKA: Why Should We Think Beyond the Neutral Mechanical Axis for Everybody?
- Anatomical Variation of Joint Line Orientation in the Osteoarthritic Knee
- Unrestricted Calipered Kinematic Alignment: Restores Native Compartment Forces without Ligament Release with a Negligible Risk of Varus Component Failure at 10-Years
- Coronal Alignment is Not as Important as Flexion Stability and Rotational Alignment

### ICL #2

Concurrent 2—Cozumel 1+5

#### Prevention and Management of Infection in ACL Reconstruction

**Chair: Christopher J. Vertullo, MBBS, PhD, FRACS(Orth)**  
**AUSTRALIA**

*Lucio S. R. Ernlund, MD, MSc BRAZIL*

*Martin Lind, MD, PhD, Prof. DENMARK*

*Joan C. Monllau, MD, PhD, Prof. SPAIN*

*Rick W. Wright, MD UNITED STATES*

**Moderator: Alex Vaisman, MD Prof. CHILE**

Participants will be exposed to the latest research in, be able to recognize the clinical presentation of, and learn strategies to prevent and manage infection in ACL surgery.

- Factors Associated with Infection Following ACLR
- Precautions to Reduce the Risk of Septic Infections Following ACLR
- The Vancomycin Wrap Technique and a Diagnostic Algorithm for Infection Diagnosis
- Surgical and Antibiotic Treatment for Septic Arthritis Following ACLR
- Postoperative Septic Arthritis After ACLR: Does It Affect the Outcome?

### ICL #3

Concurrent 3—Cozumel 3+4

#### Measurement of Knee Stability: Is It Important in Football?

**Chair: Moises Cohen, MD, PhD, Prof. BRAZIL**

*João Espregueira-Mendes, MD, PhD PORTUGAL*

*Christophe H. Hulet, MD, Prof. FRANCE*

*Ryosuke Kuroda, MD, PhD JAPAN*

*Volker Musahl, MD UNITED STATES*

*Stefano Zaffagnini, MD, Prof. ITALY*

**Moderator: J. Ignacio Cardona-Munoz, MD, MSc MEXICO**

Upon completion of this session, participants will be able to understand the different methods for measuring knee stability and how to manage unstable knees, all in the context of football players.

- Why and When the Medial Knee Stability Is Important in Football
- Knee Laxity Measurements in Stress MRI. Global Instability and Football.
- Link Between Instability Evaluation and Surgical Practices
- Clinical Relevance of High-Grade Pivot-Shift
- Can Quantitative Pivot Shift Predict Clinical Outcome?
- The Utility of Measuring Pivot Shift Pre-Intra and Post-Operative

### ICL #4

Concurrent 4—Cozumel 2+A

#### Elbow Arthroscopy: From Basic to Advanced

**Chair: Luigi A. Pederzini, MD ITALY**

*Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA*

*Deepak N. Bhatia, MS(Orth), DNB(Orth) INDIA*

*Andrea Celli, MD ITALY*

*Jeffrey Raymond Dugas, MD UNITED STATES*

*Gregory A. Hoy, FRACS, FAOrthA, FACSP, FASMF AUSTRALIA*

*Gary G. Poehling, MD UNITED STATES*

**Moderator: Osvandré L. Lech, Prof. BRAZIL**

This ICL presents important concepts of elbow arthroscopy with discussion, including set up and portals, epicondylitis, instability, stiffness and osteochondritis dissecans (OCD), biceps tendon pathology, and endoscopy and repair.

- Introduction to Elbow Arthroscopy
- Set Up and Portals
- Arthroscopic and Arthrotomic View of the Nerves Around the Elbow
- Arthroscopic Treatment of Epicondylitis
- Arthroscopic Treatment of Stiff Elbow
- Arthroscopic Treatment of OCD of Capitulum Humeri
- Arthroscopic Treatment of Elbow Ossifications
- Arthroscopic Treatment of Elbow Instability

## MONDAY, MAY 13, 2019

### ICL #5

Coba

#### How to Diagnose and Treat Isolated Athletic Syndesmotic Ankle Injuries

**Chair: Pieter D’Hooghe, MD QATAR**

*Carlo Angelo V. Borbon, MD, FPOA PHILIPPINES*

*MaCalus V. Hogan, MD UNITED STATES*

*Kenneth J Hunt, MD UNITED STATES*

*Hélder M. D. Pereira, MD PORTUGAL*

**Moderator: Alberto Cuellar-Avaroma, MD MEXICO**

- How to Scope the Problem?
- How to Diagnose?
- How to Treat?
- How to Improve?

### ICL #6

Xcaret

#### Case-Based MDI / Posterior Instability of the Shoulder

**Chair: Felix H. Savoie III, MD UNITED STATES**

*Jeffrey S. Abrams, MD UNITED STATES*

*Knut Beitzel, MD, MA GERMANY*

*Bancha Chernchujit, Prof. THAILAND*

*Eiji Itoi, MD, PhD JAPAN*

This course covers some of the approaches to posterior and multi-directional shoulder instability. The discussion will address concepts such as nonoperative vs. operative treatment, classification, and allografts.

- Exam for Posterior and for MDI
- Initial Treatment in the Athlete with Posterior and MDI
- Surgery for Posterior Shoulder Instability
- Surgery for MDI
- Case Presentations to the Panel

### ICL #7

Costa Maya B

#### Instability of the Shoulder: A Case-Based Approach

**Chair: Andreas B. Imhoff, MD, Prof. GERMANY**

*Knut Beitzel, MD, MA GERMANY*

*Emilio Calvo, MD, PhD, MBA SPAIN*

*Augustus D. Mazzocca, MD, MS UNITED STATES*

*Manuel F. Mosquera, MD COLOMBIA*

*Andreas Voss, MD GERMANY*

**Moderator: Benno Ejnisman, MD BRAZIL**

This instructional course lecture reviews strategies and concepts of shoulder instability surgery, including ASC reconstruction, the Latarjet procedure, and Hill-Sachs lesions, with case presentations.

- Basics of Shoulder Instability (State of the Art, Bipolar Lesions, On-Off track)
- Young (18–35y) (Regular Bankart Repair with Small HS Lesion)
- Bone Defect (Iliac Crest Graft or Arthroscopic / Open Latarjet)
- Middle Age (35–50Y) (Rotator Cuff #)
- MDI / Hyperlaxity (Scapula Thoracic Motion, 360° Repair)

### ICL #31

Costa Maya A

#### Pain Management in the Elite Athlete

**Chair: Walter C. Taylor III, MD UNITED STATES**

*Julian Feller, FRACS AUSTRALIA*

*José F. Huylebroek, MD BELGIUM*

*Carlos Yacuzzi, MD ARGENTINA*

Participants in this session will gain an in-depth understanding of addressing pain in the athlete, the acute in-game injury, in-season injury, chronic injury, and managing post-operative pain.

- Acute Injury–Pain Management To Get Through The Game
- Acute Injury–Pain Management To Get Through Season
- Chronic Injury–Pain Management To Get Through Season(s)
- Post Operative Pain Management in the Athlete



**TUESDAY, MAY 14, 2019**

## ICL #8

General Session—Gran Cancun

### Partial Knee Replacement: Indication, Technique, and Results

**Chair: David Figueroa, MD, Prof. CHILE**

*Gabriel Baron, MD CHILE*

*David A. Parker, MBBS, BMedSc, FRACS AUSTRALIA*

*Sébastien Parratte, MD, PhD, Prof. UNITED ARAB EMIRATES*

*Andrew J. Price, DPhil, FRCS(Orth) UNITED KINGDOM*

*Anders Troelsen, MD, PhD, DMSc, Prof. DENMARK*

Partial knee arthroplasty offers an attractive solution for treatment of unicompartmental degenerative disease. Indications, perioperative protocols, and surgical technique have evolved considerably in recent years. This ICL reviews current evidence through didactic presentations, debates, and cases.

- Why Would I Do PKR?
- Tibial Design Considerations: Mobile Vs. Fixed Bearing UKA
- Medial vs. Lateral PKA and Association with PF Arthroplasty
- Outcomes of PKR
- Is It Robotic and Navigation the Future in PKA?

## ICL #9

Concurrent 2—Cozumel 1+5

### Management of Revision ACL

**Chair: Nobuo Adachi, MD, PhD JAPAN**

*David H. Dejour, MD FRANCE*

*Rodrigo Maestu, MD ARGENTINA*

*Jacques Ménétrey, Prof. SWITZERLAND*

*John Xerogeanes, MD UNITED STATES*

**Moderator: Fabio Restrepo Tello, MD, Prof. COLOMBIA**

This course outlines a systematic approach to managing a patient with failed anterior cruciate ligament (ACL) reconstruction. Highlights include preoperative workup, with quantitative assessment of knee laxity. Complex knee ligament reconstructive cases will be presented, including revision ACL reconstruction with quadriceps tendon, management of extra-articular surgery, meniscus reconstruction, and osteotomy.

- Overview of ACL Revision Surgery
- Diagnosis and Treatment Options for Revision ACL Surgery
- Technical Aspects Of Revision ACL Reconstruction
- Revision ACL Reconstruction with Hamstring or Quad Tendons
- Deflexion Osteotomies in ACL Revision

## ICL #10

Concurrent 3—Cozumel 3+4

### Everything Rotator Cuff

**Chair: Kevin D. Plancher, MD, MPH UNITED STATES**

*Emilio Calvo, MD, PhD, MBA SPAIN*

*Francesco Franceschi, MD, PhD ITALY*

*Dan Guttman, MD UNITED STATES*

*Albert Lin, MD UNITED STATES*

*Nahum Rosenberg, Prof. MD, FRCS ISRAEL*

This instructional course lecture outlines and breaks down concepts related to rotator cuff surgery including the lateral shoulder angle, healing and basic science, and single- vs. double-row rotator cuff repair.

- The Healing & Basic Science of Rotator Cuff Tears
- The Lateral Shoulder Angle, Its Utilization & How It Relates to Rotator Cuff
- The Utilization of Single Vs. Double Row Rotator Cuff Repairs
- Partial Rotator Cuff Tears & Patch Augmentation
- Massive Rotator Cuff Repairs: Should We Bother Fixing? Are Partial Repairs Worth Our Time?
- The Truth About Tendon Transfers: Do They Work, Do We Bother in Massive Rotator Cuff Repairs, or Do We Give Up?

## ICL #11

Concurrent 4—Cozumel 2+A

### Practical Applications of Growth Factors, Cells, and Novel Therapies in Sport Medicine

**Chair: Ramon Cugat, MD, PhD SPAIN**

*Chih-Hwa Chen, MD, Prof. TAIWAN*

*Giuseppe Filardo, MD, PhD ITALY*

*Alberto Gobbi, MD ITALY*

*Johnny Huard, PhD UNITED STATES*

*Rodrigo Mardones, MD CHILE*

Upon completion of this session, participants will be able to understand and confidently discuss the practical applications of growth factors, cells, and novel therapies in sports medicine

- Practical Applications of Growth Factors, Cells, and Novel Therapies in Sports Medicine
- Basic Science and New Therapies in Sport Medicine
- Growth Factors: How to Prepare and Use
- BMAC and Hyaluronan Scaffold
- Novel Therapies—Adipose Tissue, Cells, Umbilical Cord and Amniotic ET



## TUESDAY, MAY 14, 2019

### ICL #12

Coba

#### Ankle Cartilage Repair: How to Indicate the Appropriate Treatment

**Chair: MaCalus V. Hogan, MD UNITED STATES**

**Chair: Yasuhito Tanaka, Prof. JAPAN**

*Pieter D'Hooghe, MD QATAR*

*Umile Giuseppe Longo, MD, MSc, PhD ITALY*

*Yoshiharu Shimozono, MD UNITED STATES*

*Masato Takao, MD, PhD JAPAN*

- Diagnosis and Decision Making for Treatment
- Operative Treatment 1 (Bone Marrow Stimulation, Biologics, etc.)
- Operative Treatment 2 (Autograft, Cancellous Graft, Fixation, etc.)
- Rehabilitation and How to Return to Play

### ICL #13

Xcaret

#### How Do I Perform a Standard, Safe ACL Reconstruction?

**Chair: Julian A. Feller, FRACS AUSTRALIA**

*Arturo Almazan, MD MEXICO*

*Darren L. Johnson, MD UNITED STATES*

*Takeshi Muneta, MD, PhD JAPAN*

*Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA*

*Kristian Samuelsson, MD, PhD, MSc, Prof. SWEDEN*

**Moderator: Fernando Radice, MD CHILE**

During this course, participants will be exposed to the tips and tricks of world expert ACL surgeons.

- What Do the Registries Tell Us?
- Pearls for Planning and Operative Set-Up
- Pearls for Graft Harvest
- Tunnels
- Graft Fixation
- Putting It All Together

### ICL #14

Costa Maya A

#### How to Repair the Meniscus in a Difficult Situation

**Chair: René E. Verdonk, MD, PhD BELGIUM**

*Felipe E. Cámara, MD MEXICO*

*Jorge Chahla, MD, PhD UNITED STATES*

*Nicolas Pujol, MD FRANCE*

*Romain Seil, MD, Prof. LUXEMBOURG*

*Joon Ho Wang, MD, PhD REPUBLIC OF KOREA*

**Moderator: Horacio F. Rivarola-Etcheto, MD ARGENTINA**

In this instructional course lecture, participants will learn and recognize how to repair the meniscus under difficult and unpredictable circumstances.

- What Is a Difficult Situation?
- How to Improve Your Portal: See Better to Do Better
- Ramp Lesions
- Root Tears
- Complex and Horizontal Tears. Combined Repair with Partial Meniscectomy.
- Discoid Meniscus

### ICL #15

Costa Maya B

#### Getting Started in Hip Arthroscopy

**Chair: Olufemi R. Ayeni, MD, PhD, MSc, FRCSC CANADA**

*Nicolas Bonin, MD FRANCE*

*Matthew J. Brick, MBChB, FRACS NEW ZEALAND*

*Nick Mohtadi, MD, MSc, FRCSC CANADA*

*Marc R. Safran, MD, Prof. UNITED STATES*

This instructional course will provide participants with an overview of hip arthroscopy from the viewpoints of five different surgeons.

- How I Got Started in Hip Arthroscopy



## WEDNESDAY, MAY 15, 2019

### ICL #16

General Session—Gran Cancun

#### Managing Difficult Cases: Innovations and Evidence in Hip Arthroscopy

**Chair: Marc R. Safran, MD, Prof. UNITED STATES**

*Nicolas Bonin, MD FRANCE*

*Leandro Ejnisman, MD, PhD BRAZIL*

*Anil S. Ranawat, MD UNITED STATES*

*Soshi Uchida, MD, PhD JAPAN*

*Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med CANADA*

**Moderator: Victor M. Ilizaliturri, MD MEXICO**

Participants will gain an understanding of topics related to the spine & hip relationship, management of DDH, chondral lesions of the hip, femoral version and the young patient with OA.

- Spine—Hip Relationship
- Management of DDH—To Scope or Not
- Chondral Lesions of the Hip—Microfracture, Cartigel, Scaffolds and other Options
- The Real Role of Femoral Version
- The Young Patient with Hip OA

### ICL #17

Concurrent 2—Cozumel 1+5

#### Complex Issues in RCR Surgery and Advanced Techniques to Solve Them

**Chair: Guillermo Arce, MD ARGENTINA**

*Jeffrey S. Abrams, MD UNITED STATES*

*Giuseppe Milano, MD ITALY*

*Kevin D. Plancher, MD, MPH UNITED STATES*

*Daniel A. Slullitel, MD, Prof. ARGENTINA*

**Moderator: Vicente Gutierrez, MD CHILE**

This instructional course lecture presents some of the more complex complications that can arise during rotator cuff repair (RCR) surgery, such as tendon transfer or suprascapular nerve release, and provides participants with viable techniques to remedy them.

- Be All You Can Be. Subscapularis and Infraspinatus Are Enough.
- Address the Pain: Biceps, Suprascapular Nerve, and Counting
- My Technique (The Best) for Superior Capsule Reconstruction
- After the Fulcrum, the Best Sum of All Things. Rehabilitation!
- Throw the Towel in and Make Everyone Happy: Reverse Shoulder Arthroplasty

### ICL #18

Concurrent 3—Cozumel 3+4

#### Management of the Multi-Ligament-Injured Knee

**Chair: Bruce C. Twaddle, MD, FRACS, Prof. NEW ZEALAND**

*David Figueroa, MD, Prof. CHILE*

*Brett A. Fritsch, MBBS, BMedSc AUSTRALIA*

*Fabrizio Margheritini, MD ITALY*

*Claudio Zorzi, MD ITALY*

This sessions provides participants with an overview of the management algorithm for multi-ligament knee injuries presented in a case based format. Each of the topics covered will include a case discussion by the panel followed by an overview of the management principles and time set aside for discussion.

- MultiLigamentous Knee Injury: What, When and How. A Case Based Discussion of Timing and Treatment Options.
- Treatment of Medial Instability in the MultiLigamentous Knee Injury: A Case Based Discussion of Treatment Options
- Treatment of Posterolateral and Lateral Instability in the MultiLigamentous Knee Injury: A Case Based Discussion of Treatment Options
- The Role of Osteotomy in the Management in the MultiLigamentous Knee Injury: A Case Based Discussion of Treatment Options

### ICL #19

Concurrent 4—Cozumel 2+A

#### Reverse Shoulder Replacement: Indications, Results, Complications, and Failures

**Chair: Anthony A. Romeo, MD UNITED STATES**

*Mike H. Baums, MD, PhD GERMANY*

This course presents reverse shoulder replacement scenarios along every stage of the process, addressing concepts such as 135° vs. 155° humeral implants, fracture-related infection (FRI), and how to approach patients with a history of reverse shoulder arthroplasty (RSA).

## WEDNESDAY, MAY 15, 2019

### ICL #20

Coba

#### Challenges of Difficult Primary Total Knee Arthroplasty

**Chair: Daniel C. Wascher, MD UNITED STATES**

*Felipe Ambra, MD, PhD BRAZIL*

*Myles R. J. Coolican, FRACS AUSTRALIA*

*Francois M. Kelberine, MD FRANCE*

*Mihai Vioreanu, MD, MCh, FFSEM, FRCSI(Tr&Orth) IRELAND*

**Moderator: Rafael Calvo, MD CHILE**

This ICL will provide participants with ways to preoperatively assess the difficult total knee arthroplasty (TKA) cases encountered in everyday practice and the solutions to them. Complications addressed in this session include severe malalignment, bone deformity, stiff knee, compromised soft tissue coverage, extensor mechanism disruption, previous infection, and more.

- Managing Severe Varus Deformity
- Managing Severe Valgus Deformity
- Total Knee Arthroplasty in the Morbidly Obese
- Management of Severe Contractors and Extensor Mechanism Problems
- Managing Post-Traumatic Deformity

### ICL #21

Xcaret

#### Hand and Wrist Injuries in Sports

**Chair: Margaret W. M. Fok, FRCSEd(Ortho), MBChB HONG KONG**

*Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA*

*Shanlin Chen, MD, PhD CHINA*

*Bo Liu, MD, FRCS CHINA*

*Toshiyasu Nakamura, MD, PhD JAPAN*

Participants of this ICL will be treated to a case-by-case discussion of various hand and wrist injuries commonly seen in athletes, including scaphoid fractures, distal radioulnar joint (DRUJ) instability, scapholunate (SL) reconstruction, hand and wrist tendinopathies, sports-related proximal interphalangeal (PIP) joint injuries, and sports-related thumb injuries.

- DRUJ Instability/TFCC Tears in Athletes
- Scaphoid Fractures in Athletes
- SL Reconstruction in Athletes
- Tendinopathies in Hands and Wrist
- Sports-Related PIP Joint Injuries

### ICL #22

Costa Maya A

#### Soft Tissue and Bony Procedures for Patellofemoral Instability: Indications and Techniques

**Chair: David Sadigursky, MD, MSc BRAZIL**

*Jorge Chahla, MD, PhD UNITED STATES*

*David H. Dejour, MD FRANCE*

*Betina B. Hinckel, MD, PhD UNITED STATES*

*Martin Lind, MD, PhD, Prof. DENMARK*

**Moderator: Mario V. Larrain, MD ARGENTINA**

This ICL will review the different techniques for changing the shape of the groove, including thin flap, deepening, lengthening, Peterson grooveplasty, and arthroscopic thin flap, and will discuss the indications for each, ending with a case example. The participant will have a better understanding of how to interpret imaging and of its role in one's surgical algorithm.

- Distal Medial Patellofemoral Stabilizers: Anatomy, Biomechanics and Clinical Applications
- MPFL Reconstruction: Pearls for Successful Results
- Trochleoplasty: Indications and Clinical Results
- Tibial Tuberosity Osteotomy and Lateral Retinaculum Surgery: Indications and Clinical Results
- Algorithm for the Treatment of Patellofemoral Instability—Isolated or Combined

### ICL #23

Costa Maya B

#### Meniscal Allografts

**Chair: Peter T. Myers, MBBS, FRACS, FAOrthA AUSTRALIA**

*Jin-Goo Kim, MD, PhD REPUBLIC OF KOREA*

*Tim Spalding, FRCS(Orth) UNITED KINGDOM*

*Kevin R. Stone, MD UNITED STATES*

*Peter Verdonk, MD, PhD BELGIUM*

This instructional course lecture is an informative update on indications, surgical technique, and outcome of meniscal allograft transplantation.

- Patient selection—Indications, Contra-Indications and Associated Surgery
- Graft Selection, Sizing And Preparation
- Medial Meniscus Transplant Techniques
- Lateral Meniscus Transplant Techniques
- Outcomes, Clinical Benefit and Cost Effectiveness



**THURSDAY, MAY 16, 2019**

## ICL #24 General Session—Gran Cancun

### The AC Joint and Scapula

**Chair: Jeffrey A. Macalena, MD UNITED STATES**

*Guillermo Arce, MD ARGENTINA*

*Klaus Bak, MD DENMARK*

**Moderator: Christian Lozano, MD, MBA PERU**

This course focuses on treatments of shoulder injuries related to the acromioclavicular (AC) joint and the scapula, including the coracoclavicular (CC) ligament, CC and AC reconstruction, non-operative management, and related injuries of the athlete's shoulder.

- Anatomy of the AC Joint and Scapula
- Nonoperative Management of AC Injuries
- Operative Management of AC Injuries
- Considerations in Athletes
- Case-Based Discussion

## ICL #25 Concurrent 2—Cozumel 1+5

### PCL Reconstruction: Tips and Tricks

**Chair: Francesco Giron, MD, PhD ITALY**

**Chair: Timothy S. Whitehead, MBBS, FRACS AUSTRALIA**

*Fabrizio Margheritini, MD ITALY*

*Matthew J. Matava, MD UNITED STATES*

*Manuel F. Mosquera, MD COLOMBIA*

*Bruce C. Twaddle, MD, FRACS, Prof. NEW ZEALAND*

**Moderator: O. Rolando Suarez, MD PERU**

Posterior cruciate ligament (PCL) reconstruction is one of the most demanding surgical procedures. This session will focus on tips and tricks to make PCL reconstruction surgery safer and easier, and to ensure better outcomes.

- Acute Repair of PCL Injuries: Imaging Assessment and Techniques
- PCL Augmentation and Remnant Tensioning. Indication and Technique. Tricks and Tips.
- Posteromedial Arthro-medial Approach
- How to Get the Best from an Arthroscopic Single Bundle Transtibial Approach
- Double-Bundle Reconstruction with Both Arthroscopic and Open Inlay Techniques
- PCL Reconstruction: Knowing the Anatomy to Avoid Complications

## ICL #26 Concurrent 3—Cozumel 3+4

### Tendon and Ligament Injuries in the Elbow

**Chair: Gregory I. Bain, MBBS, FRACS, PhD AUSTRALIA**

*Deepak N. Bhatia, MS(Orth), DNB(Orth) INDIA*

*Mark I. Loeberberg, MD ISRAEL*

*Alessandro Marinelli, MD ITALY*

*Kilian Wegmann, MD, PhD GERMANY*

This course offers a discussion of common elbow injuries and related concepts, including the classification of elbow instability, lateral and medial collateral ligament instability, and distal biceps injuries.

- Classification of Elbow Instability
- Lateral Collateral Ligament Instability
- Medial Collateral Ligament Instability
- The Ulnar Nerve
- Endoscopic Biceps Tendon Surgery
- Partial Distal Biceps Tendon Tears

## ICL #27 Concurrent 4—Cozumel 2+A

### Patellar Dislocation in the Skeletally Immature Patient

**Chair: Petri J. Sillanpää, MD, PhD FINLAND**

*Jack T. Andrish, MD UNITED STATES*

*Franck P. D. A. Chotel, MD, PhD, Prof. FRANCE*

*Masataka Deie, MD, PhD, Prof. JAPAN*

*Daniel W. Green, MD, MS UNITED STATES*

**Moderator: Maria Tuca, MD CHILE**

In this instructional course lecture, participants will review the clinical algorithm for acute and chronic patellofemoral (PF) dislocations in children and adolescents, when to operate, and when to rehabilitate.

- Diagnostics and Management of Pediatric First-Time Patellar Dislocation
- MPFL Reconstruction in Skeletally Immature
- Panel Discussion MPFL Reconstruction Techniques
- Management of Recurrent Dislocation and Habitual Dislocation
- Patella Alta, Generalized Ligament Laxity—How to Manage
- Bony Abnormalities in Skeletally Immature—Surgical Options



## THURSDAY, MAY 16, 2019

### ICL #28

Coba

#### **Minimally Invasive Surgery: Does It Play a Role in Orthopaedic Foot and Ankle Surgery?**

**Chair: Thomas Bauer, MD, PhD FRANCE**

*Mohammad Razi, MD ISLAMIC REPUBLIC OF IRAN*

*Masato Takao, MD, PhD JAPAN*

*Jordi Vega, MD SPAIN*

**Moderator: Alberto Cuellar-Avaroma, MD MEXICO**

- Definitions of Minimally Invasive Foot and Ankle Surgery
- MIS Surgery for Chronic Ankle Instability: ATFL Repair
- MIS Surgery for Chronic Ankle Instability: Ligament Reconstruction
- MIS Surgery for Achilles Tendon Problems: Haglund and Tendinopathy
- MIS Surgery for Osteotomies Around the Ankle and Foot

### ICL #29

Xcaret

#### **Return-to-Sport Testing After ACL Reconstruction: Should We Be Doing It?**

**Chair: James J. Irrgang, PT, PhD, FAPTA UNITED STATES**

*Eduard Alentorn-Geli, MD, PhD, MSc, FEBOT, FACGME SPAIN*

*Ricardo P. Bastos-Filho, MD, PhD, Prof. BRAZIL*

*Timothy E. Hewett, PhD UNITED STATES*

*Philippe Landreau, MD FRANCE*

*Bert R. Mandelbaum, MD, DHL(Hon) UNITED STATES*

*Kate E. Webster, PhD AUSTRALIA*

**Moderator: Sebastián Irrarázaval, MD CHILE**

This course will address recent studies that show return to sport (RTS) following anterior cruciate ligament (ACL) reconstruction reduces re-ruptures.

- Current Status of Return to Sports After ACL Reconstruction & Psychosocial Considerations for Return to Sport Decisions
- Biomechanical and Neuromuscular Control Factors that Should Be Considered in Return to Sports Decisions After ACL Reconstruction
- Considerations for Return to Sports—Portuguese Experience
- Considerations for Return to Sports—Qatar Experience
- Considerations for Return to Sports—Spanish Experience
- Considerations for Return to Sports—USA Experience

### ICL #30

Costa Maya B

#### **Patellofemoral Cartilage Defects: The ISAKOS Perspective**

**Chair: Seth L. Sherman, MD UNITED STATES**

*David Figueroa, MD, Prof. CHILE*

*Yasuyuki Ishibashi, MD JAPAN*

*Mario Ronga, MD, Prof. ITALY*

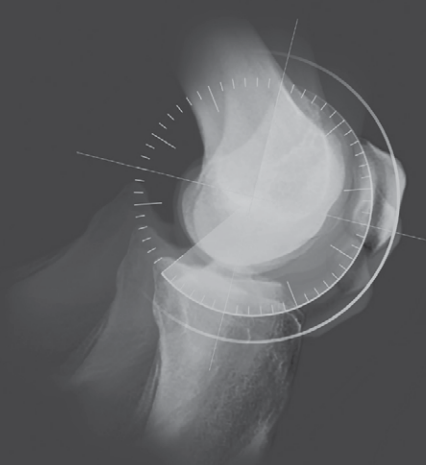
**Moderator: Carlos H. Yacuzzi, MD ARGENTINA**

This course outlines for participants a clinical algorithm on how to approach and manage the spectrum of patellofemoral (PF) cartilage disease and injury.

- Patellofemoral Cartilage Defects Case Presentations

# JOURNAL OF ISAKOS

Joint Disorders & Orthopaedic Sports Medicine



An Official Publication of the  
International Society of Arthroscopy,  
Knee Surgery and Orthopaedic Sports Medicine

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jisakos.bmj.com

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## SUNDAY, MAY 12, 2019

**Massive to Irreparable Cuff Tears: Is it Worth the Effort?****Supported by ConMed**

Room: Cozumel 2+A

*Jeffrey S. Abrams, MD UNITED STATES**Clara Azevedo, MD PORTUGAL**Raul Barco, MD, PhD, FEBOT SPAIN**Nick Jansen, Orthopaedic Surgeon BELGIUM**Felix H. Savoie III, MD UNITED STATES*

A panel-based discussion around treatment of massive to irreparable cuff tears, how to treat and when to fix. Several different methodologies will be presented and evaluated with an opportunity for debate / discussion.

**Advancements and Innovations to Considerations when Treating Rotator Cuff Tear****Supported by DePuy Synthes**

Room: Cozumel 1+5

*Richard K. Ryu, MD UNITED STATES**Denny T. T. Lie, MBBS, FRCS, FAMS SINGAPORE**Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med CANADA*

Current thoughts on managing massive tears and the importance of proper planing and new technologies to evolve and advance rotator cuff repair.

**Preserve the Meniscus – Different Tears Require Different Repairs****Supported by Smith & Nephew**

Room: Gran Cancun

*Moderator: Charles H. Brown Jr., MD  
UNITED ARAB EMIRATES**Moderator: Alan Getgood, MD, FRCS(Tr&Orth), DipSEM  
CANADA**Robert F. LaPrade, MD, PhD UNITED STATES**Timothy Lording, MBBS, FRACS AUSTRALIA**Rodrigo Maestu, MD ARGENTINA**Nicolas Pujol, MD FRANCE**Seth L. Sherman, MD UNITED STATES**Tim Spalding, FRCS(Orth) UNITED KINGDOM**Sachin R. Tapasvi, MBBS, MS, DNB, FRCS INDIA**Peter Verdonk, MD, PhD BELGIUM*

Experts from across the globe share rationale and demonstrate surgical techniques for preserving the meniscus, including complex tear patterns and addressing “hidden lesions” such as meniscal root tears.

## MONDAY, MAY 13, 2019

**HYALOFAST: One-Step Cartilage Regeneration, and CINGAL: Combination Therapy for OA Pain****Supported by Anika Therapeutics, Inc.**

Room: Cozumel 3+4

*Stephen J. French, MD, FRCS(C), Dip. Sports Med CANADA  
& Alberto Gobbi, MD ITALY*

Clinical results: Hyalofast, the only hyaluronic acid-based scaffold for one-step cartilage regeneration, and Cingal, a fast-acting, long-lasting single-injection HA plus corticosteroid treatment for OA pain.

**From Complex Knee to Trouble Free****Supported by ConMed**

Room: Cozumel 2+A

*Björn Barenius MD, PhD SWEDEN**Pablo E. Gelber, MD, PhD SPAIN**Laurie A. Hiemstra MD, PhD, FRCSC CANADA**Seth L. Sherman, MD UNITED STATES**Tim Spalding, FRCS UNITED KINGDOM**Peter Verdonk, MD, PhD BELGIUM**Daniel B. Whelan, MD, MSc, FRCSC CANADA*

Panel-based discussion around treatment of complex knee ligament injuries. Multiple aspects of ligament injury will be addressed, including multiligament injuries, lateral instability, patellar instability and addressing bone loss in revisions.

**Patient Specific Alignment CAS Balanced TKA Philosophy, Surgical Technique and Patient Outcome****Supported by DePuy Synthes**

Room: Cozumel 1+5

*Mark Clatworthy, FRACS NEW ZEALAND***The Role of Electrical Muscle Stimulation in Active Rehab – Is It Functional Enough? – Panel Discussion & Demo****Supported by DJO Global**

Room: Costa Maya A

*PT/Rehab Expert Panel*



## MONDAY, MAY 13, 2019

### Advanced Healing Solutions for Shoulder Pathologies

#### Supported by Smith & Nephew

Room: Gran Cancun

*Moderator: Kevin D. Plancher, MD, MPH UNITED STATES*

*Jonathan T. Bravman, MD UNITED STATES*

*Michael T. Freehill, MD UNITED STATES*

*Philippe Landreau, MD UNITED ARAB EMIRATES*

*Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med CANADA*

Please join us as our distinguished panel of surgeons present Advanced Healing Solutions for instability and rotator cuff repairs, maximizing healing potential with the latest technology and biologics.

## TUESDAY, MAY 14, 2019

### Dueling Techniques for Addressing Lateral Ankle Instability-Repair vs. Reconstruction

#### Supported by ConMed

Room: Isla Mujeres

*Mark Glazebrook, MD, PhD, MSc, FRCS(C) CANADA & Markus Walther, MD GERMANY*

This session will present two alternative techniques to address lateral ankle instability. Listen to the experts debate the clinical benefits and indications for traditional Brostrum Repair and Ankle Anti-ROLL Reconstruction.

### Managing Complex Instability

#### Supported by DePuy Synthes

Room: Cozumel 1+5

*Emilio Calvo, MD, PhD, MBA SPAIN*

*Gregory A. Hoy, FRACS, FAOrthA, FACSP, FASMF AUSTRALIA*

Clinical decision making and planning when treating instability with or without bone loss in the non-athlete vs the collision athlete or "high demand" patient.

### Understanding Clinical Subgroups and Targeting Instability in People with Patellofemoral Pain

#### Supported by DJO Global

Room: Costa Maya A

*Jim D. Richards PhD, MSc, BEng*

## TUESDAY, MAY 14, 2019

### Experience the Handheld Robotic Technology in Knee Replacement

#### Supported by Smith & Nephew

Room: Cozumel 2+A

*Sebastien Lustig, MD, PhD, Prof. FRANCE*

*Paul Schwartz, MD UNITED STATES*

Join us to experience the latest in robotic-assisted knee replacement and learn how NAVIO hand held robotics provides patient specific planning and soft tissue balancing for UKA, TKA and Bi-Cruciate Retaining knees.

## WEDNESDAY, MAY 15, 2019

### Innovations in ACL Reconstruction and Meniscus Repair and Cartilage Management

#### Supported by DePuy Synthes

Room: Cozumel 1+5

*Jacques Ménétreay, Prof. SWITZERLAND*

*Alessandro Lelli, MD ITALY*

*Stefano Zaffagnini, MD, Prof. ITALY*

Protocols that enable achieving procedural efficiency and reliable outcomes in ACL, Meniscus and Cartilage procedures.

### Reconstruct with Confidence

#### Supported by Smith & Nephew

Room: Gran Cancun

*Moderator: Charles H. Brown Jr., MD UNITED ARAB EMIRATES*

*Moderator: Alan Getgood, MD, FRCS(Tr&Orth), DipSEM CANADA*

*Jorge Chahla, MD, PhD UNITED STATES*

*Scott C. Faucett, MD, MS UNITED STATES*

*Julian A. Feller, FRACS AUSTRALIA*

*Darren L. Johnson, MD UNITED STATES*

*Martin Lind, MD, PhD, Prof. DENMARK*

*Volker Musahl, MD UNITED STATES*

*Luigi A. Pederzini, MD ITALY*

*Romain Seil, MD, Prof. LUXEMBOURG*

*Andy Williams, MBBS, FRCS(Orth), FFSEM(UK) UNITED KINGDOM*

*Patrick S. Yung, FRCS(Orth), FHKCOS, FHKAM, FRCS, MBChB HONG KONG*

A World-Class Faculty panel will discuss the latest information on ACL grafts, perform live surgical demonstrations that demonstrate practical tips for performing anatomic ACL reconstructions and discuss the role of the peripheral structures in controlling rotation stability of the knee.

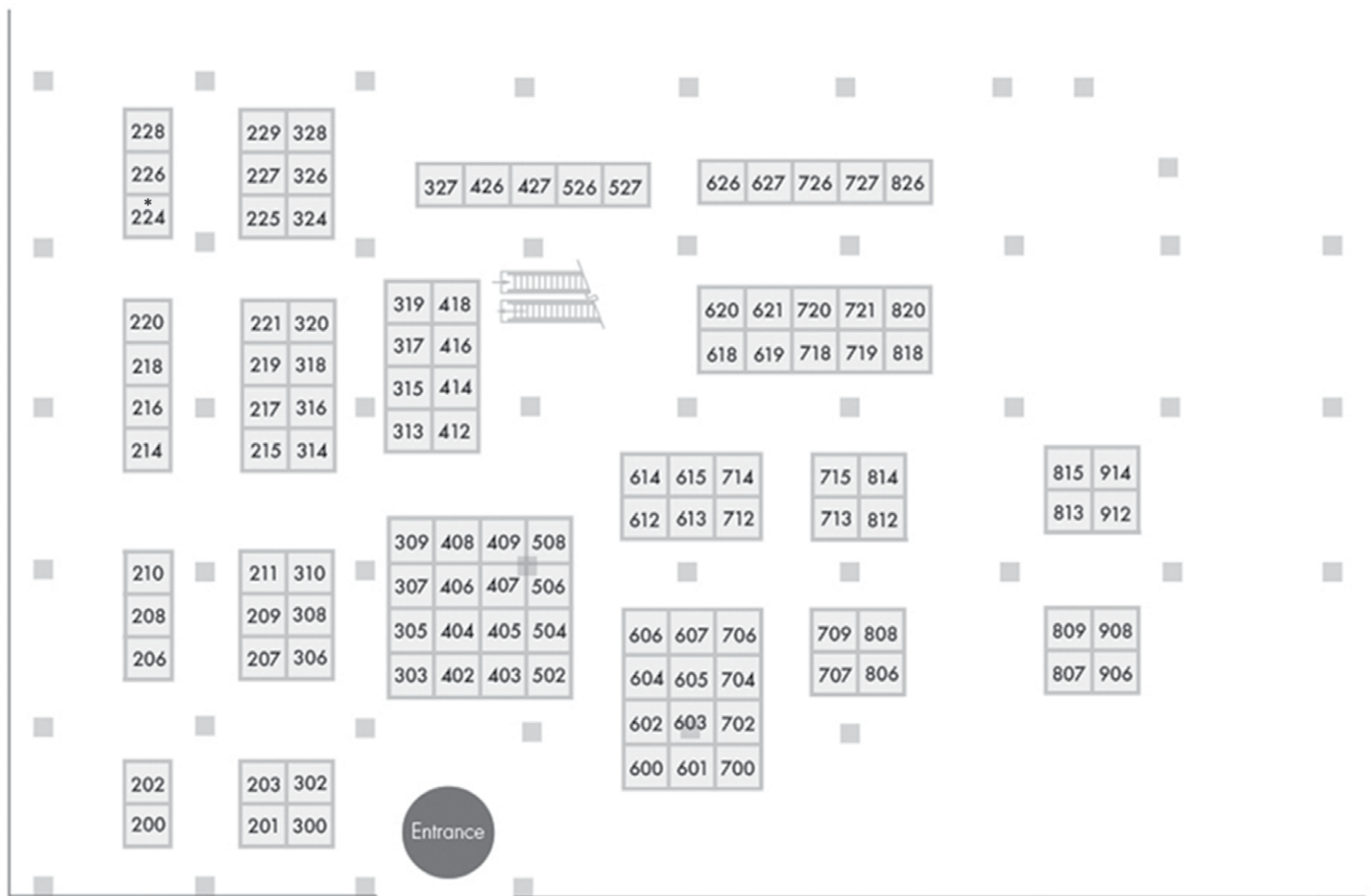


12<sup>TH</sup> Biennial

# ISAKOS CONGRESS 2019

Cancun, Mexico • May 12–16, 2019

## Cancun International Convention Center–Cancun ICC Ground Floor



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210	3D Systems Symbionix
214	Aesculap Biologics
215	SAGE Publishing & American Orthopaedic Society for Sports Medicine (AOSSM)
216	AA Medical Store
217	Trice Medical
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316	VirtaMed
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826	Arthroscopy Association of North America (AANA)

# JOURNAL OF ISAKOS LEADERSHIP SYMPOSIUM: STRATEGIES IN SUCCESSFUL PUBLISHING

Cozumel 1 + 5

Wednesday, May 15

15:30–16:30

The editor of the *Journal of ISAKOS: Joint Disorders & Orthopedic Sports Medicine* will host a session for those who are interested in reviewing or writing articles for journal publication. Information on the reviewing process, and manuscript structure and preparation will be provided, along with reviewer objectives and responsibilities.

- Submitting: How to Write an Excellent Paper
- What It Takes To Be A Good Reviewer
- Post-Publication Marketing: How Authors Can Promote Their Research Using Social Media

## Chair:

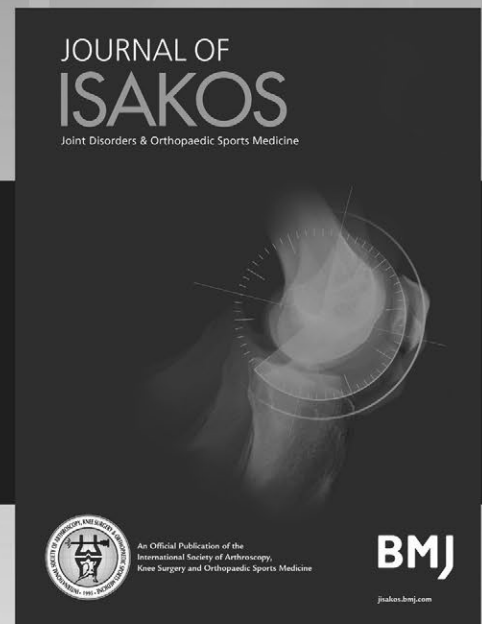
C. Niek Van Dijk, MD, PhD NETHERLANDS  
*JISAKOS* Editor in Chief

## Faculty:

Leendert Blankevoort, PhD, NETHERLANDS  
Christopher D. Harner, MD UNITED STATES  
Jon Karlsson, Prof. SWEDEN  
Stephen L. Lyman, PhD UNITED STATES  
Gary G. Poehling, MD UNITED STATES

## ISAKOS VIP Faculty:

Marc R. Safran, MD UNITED STATES  
M. Van Der Merwe, MBChB, FCS(SA)Ortho SOUTH AFRICA  
Guillermo Arce, MD ARGENTINA  
Philippe N. Neyret, MD, PhD FRANCE



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Center Valley, PA 18034

UNITED STATES

[www.aesculapusa.com](http://www.aesculapusa.com)

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### Aike (Shanghai) Medical Instrument Co., Ltd.

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Jiading District

Shanghai 201821

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UNITED STATES

[contact@anikatherapeutics.com](mailto:contact@anikatherapeutics.com)

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Beijing, 100022

CHINA

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### BIOTEK (Chetan Meditech Pvt. Ltd.)

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Ellisbridge

Ahmedabad City, Gujarat State 380006

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treatment to pre- and post-surgery.

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### ConMed

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Raynham, MA 2767

UNITED STATES

[www.depuysynthes.com](http://www.depuysynthes.com)

[dpsy-congresses-emea@its.jnj.com](mailto:dpsy-congresses-emea@its.jnj.com)

DePuy Synthes, part of the Johnson & Johnson Family of

companies, offers products and services across eight

businesses that focus on joint reconstruction, trauma, spinal

surgery, sports medicine, neurological, cranio-maxillofacial,

biomaterials and power tools.

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### DJO Global

BOOTH #612

1430 Decision St.

Vista, CA 92081

UNITED STATES

[www.djoglobal.com](http://www.djoglobal.com)

DJO believes in "Powering Motion" and our products

address the continuum of patient care from injury prevention

to rehabilitation, enabling people to regain and maintain

natural motion.

---

### GeNouRoB

BOOTH #202

Rue du Chef de Bataillon H. Géret

Laval, 53000

FRANCE

[www.genourob.com](http://www.genourob.com)

[contact@genourob.com](mailto:contact@genourob.com)

Genourob is specialized in designing and manufacturing

innovative medical devices. Knee ligamentous structures

assessment is our specialty as we provide the only

motorized / computerized arthrometers.

---

## Globe Medica Internacional

BOOTH #427

Moras 318

Colonia de Valle, Mexico City 3100

MEXICO

[www.globemedica.com.mx](http://www.globemedica.com.mx)

[ventas@globemedica.com.mx](mailto:ventas@globemedica.com.mx)

Globe Medica is a national leader in the distribution of allograft tissue, spine implants and orthopedic goods in Mexico. It represents brands such as MTF Biologics, Medacta, Game Ready and Hyperice. Quality and service are our core and motor that drives us everyday.

---

## Incrediwear

BOOTH #225

3120 Thorntree Dr.

Chico, California 95973

UNITED STATES

[www.Incrediwear.com](http://www.Incrediwear.com)

[info@incrediwear.com](mailto:info@incrediwear.com)

Incrediwear' is wearable, anti-inflammatory technology for pain relief, enhanced recovery and optimum performance. Incrediwear is redefining postoperative recovery with wearables that reduce swelling, inflammation, and pain.

---

## Integrated Endoscopy

BOOTH #526

16 Technology, Suite 165

Irvine, CA 92618

UNITED STATES

[www.iescope.com](http://www.iescope.com)

[rob@iescope.com](mailto:rob@iescope.com)

Integrated Endoscopy has developed the world's first single use, sterile packaged, battery operated, HD arthroscope with it's own built-in LED light source.

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## International Cartilage Regeneration & Joint Preservation Society (ICRS)

BOOTH #627

c/o Cartilage Executive Office GmbH

Spitalstrasse 190

House 3

Wetzikon-ZH CH 8623

SWITZERLAND

[www.cartilage.org](http://www.cartilage.org)

[office@cartilage.org](mailto:office@cartilage.org)

The ICRS is the main forum for international collaboration in cartilaginous tissue research and joint preservation. Recognizing that there is a continuum from cartilage injury to degenerative joint disease we bring together basic scientists, clinical researchers, physicians, other healthcare providers and members of industry, engaged or interested in the field of articular biology, its genetic basis and regenerative medicine. We seek to improve our patients' quality of life, decrease their disability and reduce the impact of degenerative joint disease on healthcare systems worldwide by preserving joints and maintaining function.



# ISAKOS

## International Society of Arthroscopy, Knee Surgery & Orthopaedic Sports Medicine (ISAKOS)

FLOOR 3

[www.isakos.com](http://www.isakos.com)

[isakos@isakos.com](mailto:isakos@isakos.com)

ISAKOS Mission Statement: Advance the worldwide exchange and dissemination of education, research and patient care in arthroscopy, knee surgery and orthopaedic sports medicine. ISAKOS was formed by the merger of the International Arthroscopy Association (IAA) and the International Society of the Knee (ISK). ISAKOS boasts more than 3,000 members from 90+ countries and regions around the world. For a list of member benefits, see page 14.

## ISAKOS Backpacks & Member ePubs USBs

BOOTH #224

Backpack and ePubs USB tickets can be found with the Congress materials you received at Registration. USBs will be available to ISAKOS Members only, on a first-come, first-served basis.

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## TECHNICAL EXHIBITS

### Jiangsu Bonss Medical Technology Co. Ltd

BOOTH #324

Floor #6, Building G21, North of Xinyang Rd., East of Koutai Rd., China Medical City Zone  
Taizhou, Jiangsu 225316  
CHINA

[en.bonss.com.cn/](http://en.bonss.com.cn/)

We're the manufacturer of Innovative Radio Frequency Plasma Surgical System and Surgical Electrodes, for minimally-invasive ENT, Arthroscopic and Spine Surgeries.

### Karl Storz SE & Co. KG

BOOTH #621

Dr.-Karl-Storz-Straße 34  
Tuttingen, D-78532  
GERMANY

[www.karlstorz.com](http://www.karlstorz.com)  
[info@karlstorz.de](mailto:info@karlstorz.de)

Karl Storz is a renowned manufacturer that is well established in all fields of endoscopy and is well-known for its innovative and high-quality products.

### Neoligaments

BOOTH #619

Springfield House  
Whitehouse Lane  
Leeds West Yorkshire LS19 7UE  
UNITED KINGDOM

[www.neoligaments.com](http://www.neoligaments.com)  
[enquiries@neoligaments.com](mailto:enquiries@neoligaments.com)

Neoligaments is a UK company manufacturing implantable scaffolds for sports-medicine and orthopaedics. Our portfolio incorporates tapes, ligaments and patches for shoulder, knee and ankle injuries.

### Newclip Technics

BOOTH #327

Pa De La Lande Saint Martin  
45 Rue des Garottiers  
Haute Goulaine 44115  
FRANCE

[www.newcliptechnics.com](http://www.newcliptechnics.com)  
[lfosse@newcliptechnics.com](mailto:lfosse@newcliptechnics.com)

Each patient needs personalized care: NEWCLIP TECHNICS PSI Solutions combined with our new HTO/DFO generation system, ensure accurate osteotomy positioning and achieves optimized corrections.

### Organogenesis

BOOTH #718

2641 Rocky Ridge Ln.  
Birmingham, AL 35216  
UNITED STATES

[www.organogenesis.com](http://www.organogenesis.com)  
[surgicalmarketing@organo.com](mailto:surgicalmarketing@organo.com)

Organogenesis offers a portfolio of bioactive and acellular biomaterials products in advanced wound care and surgical biologics, including orthopedics and spine. Organogenesis's versatile portfolio is designed to treat a variety of patients with repair and regenerative needs.

### OrthoSpace

BOOTH #300

7 Halamish St.  
Caesarea 3088900  
ISRAEL

[www.orthospace.co.il](http://www.orthospace.co.il)  
[info@orthospace.co.il](mailto:info@orthospace.co.il)

OrthoSpace develops and commercializes biodegradable balloon systems for the Orthopedic market. InSpace™ is a minimally invasive method, addressing unmet clinical needs in rotator cuff injury.

### Össur Americas

BOOTH #707

27051 Towne Centre Dr. Suite 100  
Foothill Ranch, CA 92610  
UNITED STATES

[www.ossur.com](http://www.ossur.com)  
[sales@ossur.com](mailto:sales@ossur.com)

Össur, a global leader in Bracing & Supports, provides innovative brands such as Rebound®, Unloader® One, FormFit® and CTi.

### OSTEONIC CO.,LTD

BOOTH #814

1206Ho, 38, Digital-ro 29-gil, Guro-gu  
Seoul 8381  
REPUBLIC OF KOREA  
[younghkim@osteonic.com](mailto:younghkim@osteonic.com)

### Parcus Medical, LLC

BOOTH #713

6423 Parkland Dr.  
Sarasota, FL 34243  
UNITED STATES

[www.parcusmedical.com](http://www.parcusmedical.com)  
[customerservice@parcusmedical.com](mailto:customerservice@parcusmedical.com)

Parcus Medical™ manufactures and distributes implants and instrumentation for soft tissue repair and ligament/tendon fixation. At Parcus™, surgical innovation is customer-driven.



## REGEN LAB

BOOTH #618

En Budron B2

Le Mont-sur-Lausanne 1052

SWITZERLAND

[www.regenlab.com](http://www.regenlab.com)

[contact@regenlab.com](mailto:contact@regenlab.com)

Global leader in autologous regenerative medicine with freshly prepared platelet concentrate, alone or in combination with hyaluronic acid or fresh autologous cells from fat or bone marrow.

## REJOIN

BOOTH #806

No. 22, Xinyan Rd., Yuhang Economic Development Zone

Hangzhou Zhejiang 311100

CHINA

[alex.jin@rejoin.com](mailto:alex.jin@rejoin.com)

REJOIN focus on sports medicine implants and instrument for shoulder, ACL, meniscus and small joint.

## SAGE Publishing & American Orthopaedic Society for Sports Medicine (AOSSM)

BOOTH #215

2455 Teller Rd.

Thousand Oaks, CA 91320

UNITED STATES

[www.sagepublishing.com](http://www.sagepublishing.com)

[www.sportsmed.org](http://www.sportsmed.org)

[info@sagepub.com](mailto:info@sagepub.com)

Founded in 1965, SAGE Publishing is an independent company that disseminates journals, books, and library products for the educational, scholarly, and professional markets

## Sawbones / Pacific Research Laboratories

BOOTH #709

10221 SW 188th St.

PO BOX 409

Vashon, WA 98070

UNITED STATES

[www.sawbones.com](http://www.sawbones.com)

[info@sawbones.com](mailto:info@sawbones.com)

SAWBONES inspires confidence through practice by creating the world's best medical procedure simulation models. From Orthopaedics to Veterinary, from Biomechanical testing devices to Digital Anatomy models, SAWBONES has lead the industry since its inception over 40 years ago.

## SBM SAS

BOOTH #812

ZI du Monge

Lourdes 65100

FRANCE

[www.sbm-france.com](http://www.sbm-france.com)

[contact@sbm-fr.com](mailto:contact@sbm-fr.com)

Founded in 1991 and located in Lourdes (France), SBM is specialized in the design, manufacture and distribution of orthopedic implants for bone reconstruction and healing. Present in more than 45 countries around the world, SBM offers a range of innovative products for osteotomies around the knee, ligament reconstruction and bone void filling. Over the years, SBM has focused on innovation to increase the quality of life for patients while improving ergonomics for surgeons.

## Shanghai Ligatech Bioscience Co., Ltd.

BOOTH #318

Room 301, Building 1

508 Tianchen Rd.

Qingpu Shanghai Shanghai 201712

CHINA

[finance@ligatech.com.cn](mailto:finance@ligatech.com.cn)

Working closely with a range of experienced surgeons, Shanghai Ligatech is devoted to the innovation of arthroscopic devices.

## Smith & Nephew, Inc.

BOOTH #303

150 Minuteman Rd.

Andover, MA 1810

UNITED STATES

[www.smith-nephew.com](http://www.smith-nephew.com)

[info@smith-nephew.com](mailto:info@smith-nephew.com)



Smith & Nephew is a portfolio medical technology business with leadership positions in:

- Orthopaedic—joint replacement systems for knees, hips and shoulders
- Advanced Wound Management—wound care treatment and prevention products used to treat hard-to-heal wounds
- Sports Medicine—minimally invasive surgery of the joint
- Ear, Nose & Throat (ENT)—surgical products for nasal, sinus, airway management and tonsils/adenoids
- Trauma & Extremities—products that help repair broken bones
- Smith & Nephew has more than 16,000 employees and a presence in more than 100 countries. Annual sales in 2018 were \$4.9 billion.

For more information about Smith & Nephew, please visit our corporate website [www.smith-nephew.com](http://www.smith-nephew.com) and follow us on Twitter, LinkedIn or Facebook.

## TECHNICAL EXHIBITS



### South America Implants S.A.

BOOTH #818

Perito Moreno 845

Ezeiza Buenos Aires 1804

ARGENTINA

[www.southamericaimplants.com](http://www.southamericaimplants.com)

[consultas@southamericaimplants.com](mailto:consultas@southamericaimplants.com)

South America Implants is the largest manufacturer of sports medicine products in South America. We work every day for the best quality life of the patients.

### Tianjin Walkman Biomaterial Co.,Ltd.

BOOTH #715

NO.19 Technology Road, Jinghai Economic Development

Zone, Tianjin, 301600

CHINA

### Trice Medical

BOOTH #217

40 General Warren Blvd. Suite 100

Malvern, PA 19355

UNITED STATES

[www.tricemedical.com](http://www.tricemedical.com)

[abones@tricemedical.com](mailto:abones@tricemedical.com)

Trice has pioneered fully integrated camera-enabled technologies that provide a clinical solution that is optimized for the physician's office. Our mission is to provide more immediate and definitive patient care, eliminating the false reads associated with current indirect modalities and significantly reduce the overall cost to the healthcare system.

### Vericel

BOOTH #206

64 Sidney St.

Cambridge, MA 2139

UNITED STATES

[www.vcel.com](http://www.vcel.com)

[mail@vcel.com](mailto:mail@vcel.com)

Vericel develops, manufactures, and markets autologous cell-based therapies. MACI® (autologous cultured chondrocytes on porcine collagen membrane) is indicated for the repair of symptomatic, full-thickness cartilage defects of the knee in adult patients.

### VirtaMed

BOOTH #316

Rütistrasse 12

Schlieren Zürich 8952

SWITZERLAND

[www.virtamed.com](http://www.virtamed.com)

[sales@virtamed.com](mailto:sales@virtamed.com)

VirtaMed is the world leader in high-fidelity virtual reality simulation for training of minimally invasive diagnostic and therapeutic interventions in arthroscopy and other medical disciplines.

### Zimmer Biomet — USA

BOOTH #807

56 E Bell Dr.

PO Box 587

Warsaw, IN 46582

UNITED STATES

[www.zimmerbiomet.com](http://www.zimmerbiomet.com)

Zimmer Biomet designs, manufactures and markets effective, innovative solutions that support orthopaedic surgeons and clinicians in restoring mobility, alleviating pain and improving the quality of life for patients around the world.



## PARTNER SOCIETY EXHIBITS

### Arthroscopy Association of North America (AANA)

BOOTH #826

9400 West Higgins Rd. Suite 200

Rosemont, IL 60018

UNITED STATES

[www.aana.org](http://www.aana.org)

[info@aana.org](mailto:info@aana.org)

The Arthroscopy Association of North America has a global reach of more than 4,500 orthopaedic surgeons committed to advancing the field of arthroscopy and related surgery to improve patient outcomes. We drive this mission forward through innovative meetings, continuing medical education and the development and dissemination of cutting-edge research.

### American Orthopaedic Society for Sports Medicine (AOSSM) & SAGE Publishing

BOOTH #215

9400 West Higgins Rd. Suite 300

Rosemont, IL 60018

UNITED STATES

[www.sportsmed.org](http://www.sportsmed.org)

The American Orthopaedic Society for Sports Medicine (AOSSM) is the premier global, sports medicine organization representing the interests of orthopaedic surgeons and other professionals who provide comprehensive health services for the care of athletes and active people of all ages and levels.

### Asia-Pacific Knee, Arthroscopy and Sports Medicine Society (APKASS)

BOOTH #727

Rm. 74029, 5/F, Clinical Sciences Bldg.

Prince of Wales Hospital

Shatin, N.T. Hong Kong

HONG KONG

[www.apkass.org](http://www.apkass.org)

[info@apkass.org](mailto:info@apkass.org)

APKASS, established in 2013, is an evolution of APOSSM in response to the growing trend both regionally and globally of combining arthroscopy, knee surgery and orthopaedic sport medicine into a coherent group.

### European Society of Sports Traumatology Knee Surgery and Arthroscopy (ESSKA)

BOOTH #726

Centre Médical–Fondation Norbert Metz

76, rue d'Eich Luxembourg 1460

LUXEMBOURG

[www.esska.org](http://www.esska.org)

[info@esska.org](mailto:info@esska.org)

The European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA) is a professional society that represents Europe in the fields of degenerative joint disease and sports medicine.



## ISAKOS

### International Society of Arthroscopy, Knee Surgery & Orthopaedic Sports Medicine (ISAKOS)

FLOOR 3

[www.isakos.com](http://www.isakos.com)

[isakos@isakos.com](mailto:isakos@isakos.com)

ISAKOS Mission Statement: Advance the worldwide exchange and dissemination of education, research and patient care in arthroscopy, knee surgery and orthopaedic sports medicine. ISAKOS was formed by the merger of the International Arthroscopy Association (IAA) and the International Society of the Knee (ISK). ISAKOS boasts more than 3,000 members from 90+ countries and regions around the world. For a list of member benefits, see page 14.

### La Sociedad Latinoamericana de Artroscopía, Rodilla y Deporte (SLARD)

BOOTH #626

La Sociedad Latinoamericana de Artroscopía,  
Rodilla y Deporte

Pacheco de Melo 2067–P.B. 'A'

Buenos Aires 1126

ARGENTINA

[www.slard.org](http://www.slard.org)

SLARD's (Sociedad Latinoamericana de Artroscopía Rodilla y Deporte) Vision and Objectives: "To promote education and science development, seeking continued progress of our specialty in the Latin American region".

## CANCUN TOURISM & TRAVEL TIPS

### WELCOME TO CANCUN!

[isakos.com/2019/Travel](http://isakos.com/2019/Travel)

Cancun is located in southeastern Mexico, on the northeast coast of the Yucatán Peninsula, in the Mexican state of Quintana Roo. Cancun is surrounded by the breathtaking Caribbean Sea, soft coral sands, and the striking shade of turquoise that reflects from its crystal-clear waters. The mystical ruins take you on an incredible journey back to the Mayan civilization. The archaeological zone of El Rey or El Templo del Alacrán (the Temple of the Scorpion) will amaze you. If you are into nature, you'll love Xel-Ha, a local natural aquarium. Visiting the Secret River will take you closer to the Xibalbá, the Mayan underworld, while Xcaret, the most important eco-archaeological park in the country, will offer its lush jungle charm. It is easy to see why Cancun is such an attractive and popular destination. From Cancun's trendy nightlife, to its underwater museum, Cancun has something for tourists of all ages.

### CANCUN TRAVEL TIPS

#### GROUND TRANSPORTATION—BUSES & TAXIS

##### Buses

Buses are the least expensive way to get around Cancun. Buses have routes from the Hotel Zone to almost anywhere in the surrounding areas (Mexican coins only).

- R1–R2–R15–R27 all travel within the Hotel Zone. These routes will take you to the Congress venue.
- There is also the Bus One (white bus), which is the only bus with air conditioning, traveling in the Hotel Zone.
- R2–R15 goes to Walmart and the Market 28 in Downtown Cancun.
- R1 takes you to Puerto Juarez where you can catch the ferry to Isla Mujeres.
- R27 takes you to Plaza Las Americas.

##### Taxis

You can take a taxi to almost anywhere in Cancun. The only restriction is that taxis are not allowed to collect from the airport. The airport has its own taxi system.

Taxi fares are set by how many zones you travel through. It is best to agree to the rate before you start your journey.



# ISAKOS GLOBAL CONNECTION

*Education, Research and Collaboration*

## DONATE TO ISAKOS

Donations to ISAKOS directly support initiatives that ensure the growth of our society. Your generosity will enable ISAKOS to implement educational programs for the professional development of our young members and researchers, and aid in the enhancement of global patient care. ISAKOS thanks you in advance for your support!



### Tips to Ensure Safety

- Avoid hailing cabs on the street. Instead, ask your hotel to arrange a taxi.
- Exercise caution when venturing outside popular tourist and hotel zones.
- Avoid displaying signs of wealth, such as wearing expensive watches or jewelry.
- Be extra vigilant when visiting banks or ATMs.
- Stay up-to-date with the latest travel warnings issued by your local Travel Advisory Department.

### GUEST ASSIST–TOURIST ASSISTANCE PROGRAM

[guestassist.mx/portal/en/Index.php](http://guestassist.mx/portal/en/Index.php)

Guest Assist is a tourist assistance program that provides visitors to Quintana Roo with information and guidance—for those who find themselves in emergency situations where their wellbeing or belongings are affected. This service is available through the Guest Assist mobile app, website, and phone lines.

### CANCUN TOUR OPPORTUNITIES

Explore all that Cancun has to offer! ISAKOS arranged for Congress attendees and their guests to have the opportunity to register for day tours in Cancun and the surrounding areas. Please note, tour logistics and specifics are subject to change.

Important Note: Unsold tours will be shared with other attendees, not associated with the Congress. Tour prices are quoted in \$ USD, per person (additional taxes and fees may apply).

[isakos.com/2019/Travel#Tours](http://isakos.com/2019/Travel#Tours)

### TRAVEL & ACCOMMODATIONS OFFICIAL ISAKOS HOUSING & TOUR BUREAU INTERMEETING

[intermeetingonline.com.mx/isakos/](http://intermeetingonline.com.mx/isakos/)

[smartbooking.mx/en/booking/tours/12th-biennial-isakos-congress-2019](http://smartbooking.mx/en/booking/tours/12th-biennial-isakos-congress-2019)

[mvertiz@intermeeting.com.mx](mailto:mvertiz@intermeeting.com.mx)

Please contact InterMeeting for questions regarding housing and tours. A Hotels & Tours desk is located in the Registration area on the Ground Floor of the Cancun International Convention Center.

## Ways to Give:

- ISAKOS Annual Fund
- ISAKOS Godfather Initiative
- Corporate Giving

Donate Today at [isakos.com/GlobalConnection](http://isakos.com/GlobalConnection)

## AWARDS & FELLOWSHIPS

### 2019 ISAKOS AWARD FINALISTS & FELLOWSHIPS

ISAKOS is pleased to offer award and fellowship opportunities to acknowledge outstanding contributions to the fields of arthroscopy, knee surgery and orthopaedic sports medicine. Please join us in recognizing these accomplishments during the Award Ceremony at the ISAKOS Congress.

**Date:** Wednesday, May 15  
**Time:** 10:15–10:40  
**Location:** General Session –  
Gran Cancun, Floor 3

### JOHN J. JOYCE AWARD

In 1981, Dr. John J. Joyce III offered a monetary prize for the best arthroscopy paper read by an orthopaedic surgery resident or fellow during the Scientific Program of the 4<sup>TH</sup> Congress of the International Arthroscopy Association in Rio de Janeiro. With characteristic generosity, he endowed a prize to be awarded at every IAA Congress thereafter. John Joyce created the award with the intention to stimulate and reward younger members who contribute high-quality data and presentations. Thus, orthopaedic residents and fellows, with a study related to arthroscopic treatment are encouraged to apply for this award.

#### Join us for the John J. Joyce Award finalists' paper presentations:

Tuesday, May 14 16:15–16:45 Cozumel  
2 & A

### RICHARD B. CASPARI AWARD

Richard B. Caspari was an innovator, teacher and leader in the field of Arthroscopy. Beginning at the 2003 ISAKOS Congress in Auckland, New Zealand, a monetary prize in honor of Richard B. Caspari was awarded to the best upper extremity paper read at the scientific program of the congress. The Richard B. Caspari award was established with the intention of stimulating and rewarding abstracts and presentations in the subject of the upper extremity.

#### Join us for the Richard B. Caspari Award finalists' paper presentations:

Tuesday, May 14 11:35–12:05 Cozumel  
3 & 4

### JAN I. GILLQUIST SCIENTIFIC RESEARCH AWARD

The Scientific Research Award began at the 2007 ISAKOS Congress in Florence, Italy. There, a monetary prize was awarded to the best scientific paper read at the scientific program of the congress. The Scientific Research Award was created with the intention of stimulating and rewarding abstracts and presentations in the subject of Scientific Research.

#### Join us for the Scientific Award finalists' paper presentations:

Sunday, May 12 09:15–09:45 Cozumel  
3 & 4

### GARY G. POEHLING AWARD

Former ISAKOS President, Gary G. Poehling, is an innovator, teacher and leader in the field of Arthroscopy—specializing in the elbow, wrist and hand. Beginning at the 2017 ISAKOS Congress in Shanghai, China, a monetary prize in honor of Dr. Poehling is to be awarded to the best Elbow, Wrist and Hand paper read during the scientific program of the ISAKOS Congress.

#### Join us for the Scientific Award finalists' paper presentations:

Wednesday, May 15 14:15–14:39 Cozumel  
2 & A

### ALBERT TRILLAT YOUNG INVESTIGATOR'S AWARD

*Sponsored by Innovate Orthopaedics Ltd.*

In 1989, The International Society of the Knee established a Young Investigator's Research Award in memory of Professor Albert Trillat. Past president and founder of the International Society of the Knee, Professor Albert Trillat was one of the pioneers in knee surgery and sports traumatology. This award provides recognition for a young researcher who has done outstanding clinical laboratory research contributing to the understanding, care or prevention of injuries to the knee.

Join us for the presentation of the winning manuscript for this award:

Tuesday, May 14 15:45–16:00 Cozumel  
1 & 5

*Anterolateral Procedures in Combination with an Anterior Cruciate Ligament Reconstruction: A Biomechanical Analysis of Commonly Used Procedures in a Cadaveric Model*

*Thomas Neri, MD, PhD FRANCE*

## ACHILLES ORTHOPAEDIC SPORTS MEDICINE RESEARCH AWARD

*Sponsored by DJO Global*

The Achilles Orthopaedic Sports Medicine Research Award was created in 1995 to recognize the researcher(s) who have performed the most outstanding clinical or laboratory research in the field of sports medicine, such as the care and prevention of injuries.

**Join us for the presentation of the winning manuscript for this award:**

Sunday, May 12      16:30–16:45      Cozumel  
3 & 4

*A Bioactive Scaffold Enhances Articular Cartilage Regeneration After Microfracture in a Rabbit Model*

*Jonathan D. Packer, MD UNITED STATES*

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## PAOLO AGLIETTI AWARD

*Sponsored by Nicolaas C. Budhiparama Jr. & Inge Widjaja*

*Nicolaas Institute of Constructive Orthopedic Research & Education Foundation for Arthroplasty & Sports Medicine*

ISAKOS is pleased to announce the Paolo Aglietti Award for Knee Arthroplasty. This award is in recognition of Professor Aglietti's numerous contributions to knee surgery as a prolific researcher, teacher and surgeon. Professor Aglietti served as Chairman of the ISAKOS Knee Committee and was ISAKOS President from 2007–2009.

**Join us for the presentation of the winning manuscript for this award:**

Tuesday, May 14      16:15–16:30      Cozumel  
1 & 5

*Outlier Alignment Does Not Adversely Affect Implant Survival And Function Ten-Years After Kinematically Aligned Total Knee Arthroplasty Performed Without Restrictions On Preoperative Deformity*

*Trevor Shelton, MD, MS UNITED STATES*

## PATELLOFEMORAL RESEARCH EXCELLENCE AWARD

*Sponsored by The Patellofemoral Foundation, Inc.*

The Patellofemoral Research Excellence award was conceived in 2005 by the Patellofemoral Foundation and ISAKOS to encourage outstanding research leading to improved understanding, prevention and treatment of patellofemoral pain or instability.

**Join us for the presentation of the winning manuscript for this award:**

Sunday, May 12      14:45–15:00      Cozumel  
2 & A

*Isolated Medial Patellofemoral Ligament Reconstruction vs. Tibial Tuberosity Transfer for Patellar Instability*

*Alessandra Berton, MD ITALY*

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## ISAKOS GLOBAL TRAVELING FELLOWSHIP

*ISAKOS Traveling Fellowship Committee*

The ISAKOS Global Traveling Fellowship is a new initiative from ISAKOS to foster the international exchange of knowledge and skills in the field of sports orthopaedic surgery. The Fellowship provides the opportunity for five orthopaedic surgeons, under the age of 45, to travel with an ISAKOS Godfather to the Godfather's geographic region. They will visit up to six medical centers over 14 to 16 days, before the ISAKOS Congress. Fellows will have the opportunity to observe sports orthopaedic surgeries performed by highly respected surgeons, to discuss not only the surgical procedures but all aspects of patient management, and to discuss and share research experience.

**Join us for presentations by the winners and Godfather of this Fellowship:**

Tuesday, May 14      10:30–11:30      Cozumel  
2 & A

**Godfather:**

*David Figueroa, MD, Prof. CHILE*

**Winners:**

*Taofeek Olanrewaju Adeyemi, MD, MBA, Diploma Ortho, FMC Ortho NIGERIA*

*Paulo H. M. Araujo, MD, PhD BRAZIL*

*Weili Fu, MD, PhD CHINA*

*Buru Gilbert Moatshe, MD, PhD NORWAY*

*Brian J. Rebolledo, MD UNITED STATES*

## AWARDS & FELLOWSHIPS

### NEW! ISAKOS KNEE ARTHROPLASTY FELLOWSHIP

*Sponsored by Nicolaas C. Budhiparama & Inge Widjaja*

*Nicolaas Institute of Constructive Orthopaedic Research & Education Foundation for Arthroplasty & Sports Medicine*

Knee Arthroplasty Fellowships are available every other year to young orthopaedic surgeons interested in the study and advancement of understanding of the Knee Arthroplasty. The dual purpose of the fellowship is to improve knee arthroplasty in developing nations and to promote better understanding and communication amongst knee surgeons around the world.

Learn more at [isakos.com/fellowships](http://isakos.com/fellowships)

### THE PATELLOFEMORAL TRAVELING FELLOWSHIP

*Sponsored by the Patellofemoral Foundation, Inc.*

The Patellofemoral Traveling Fellowship was established in 2005 by the Patellofemoral Foundation and ISAKOS to promote better understanding and communication around the world regarding Patellofemoral pain. The Patellofemoral Traveling Fellowship is available on a competitive basis to an orthopaedic surgeon interested in the study and advancement of understanding of the Patellofemoral joint.

**Join us for presentations by the winners this Fellowship:**

Sunday, May 12      14:35–14:45      Cozumel  
2 & A

**2017 Winners:**

*Sheanna Maine, FRACS, AUSTRALIA*

*Mauro Núñez, MD COSTA RICA*

**2019 Winners:**

*Robert A. Magnussen MD, MPH UNITED STATES*

*Marc Tompkins, MD UNITED STATES*

### ISAKOS YOUNG INVESTIGATOR'S SCHOLARSHIP & RESEARCH MENTORING PROGRAM

*ISAKOS Scientific Committee*

The ISAKOS Young Investigator's Scholarship and Research Mentoring Program was developed by the ISAKOS Scientific Committee as a mentor-mentee program for young investigators with specific focus on developing countries. The Young Investigator Program seeks to stimulate research and education in developing countries, foster international collaboration, and promote academic excellence in arthroscopy, knee surgery and orthopaedic sports medicine.

**Join us for an introduction of the winners during the ISAKOS Research Symposium:**

Monday, May 13      16:30–17:30      Cozumel  
1 & 5

**Winners:**

*Purevdorj Avirmed, MD MONGOLIA*

*Nitin Bansal, Prof. INDIA*

*Artit Boonrod, MD THAILAND*

*Umesha Chowdaiah, MBBS, DOrtho, DNB(Orth) INDIA*

*Ujjval Harehbhaid Deliwala, MS (Orth) INDIA*

*Francisco Figueroa, MD CHILE*

*Siddalingeshwara G.I., MS(Orth) INDIA*

*Syed Faraz Ul Hassan Shah Gillani, MBBS PAKISTAN*

*Varun Gupta, MS(Orth) INDIA*

*Theodorakys Marín, MD VENEZUELA*

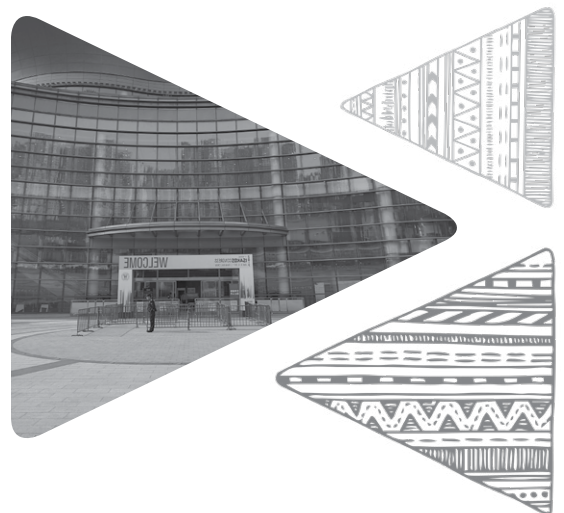
*Mikhail Ryazantsev, MD, PhD RUSSIAN FEDERATION*

*Sukesh Rao Sankineani, MS(Orth) INDIA*

*Kiran K. Shah, MD CHINA*

*Prasad Soraganvi, MBBS, MS, DNB, MRCS INDIA*

*Onur Nazim Tan, MD TURKEY*





12<sup>TH</sup> Biennial

# ISAKOS CONGRESS 2019

Cancun, Mexico • May 12–16, 2019

## THANK YOU FOR ATTENDING THE 12<sup>TH</sup> BIENNIAL ISAKOS CONGRESS!

### CME CERTIFICATES

At the conclusion of the ISAKOS Congress (Thursday, May 16), please follow the below steps to claim your CME Certificate:

- 1 Log in to ISAKOS myCongress  
[isakos.com/myCongress](http://isakos.com/myCongress)
- 2 In the Meeting Dashboard,  
click the Survey button next to myCME
- 3 Complete the online Course Survey
- 4 Download / Print CME Certificate(s)



[www.isakos.com/myCongress](http://www.isakos.com/myCongress)



**SUNDAY, MAY 12, 2019**

**General Session – Gran Cancun  
10:30 – 11:15  
ACL**

PAPER #1

**Remnant Sparing ACL Reconstruction Patients Have Later Time to Graft Failure but Higher Rates of Re-Operations When Compared to Remnant Debridement Patients: A 10-Year Follow-Up of a Randomized Controlled Study**

**Peter T. Annear, FRACS(Orth), Swanbourne, WA, AUSTRALIA**  
David Hille, MBBS, Perth, WA, AUSTRALIA  
Jay R. Ebert, PhD, Perth, WA, AUSTRALIA

Perth Orthopaedics and Sports Medicine Center  
Perth, WA, AUSTRALIA

PAPER #2

**Quadriceps Tendon Graft Has Higher Revision Rates Than Hamstring and Patellar Tendon Grafts for ACL Reconstruction: Results from the Danish Knee Ligament Reconstruction Registry**

**Martin Lind, MD, PhD, Prof., Aarhus N, DENMARK**  
Marc J. Strauss, MD, Avon, CO, UNITED STATES  
Torsten G. Nielsen, BSc, Aarhus N, DENMARK

Aarhus University Hospital  
Aarhus, DENMARK

PAPER #3

**Higher Risk of Rupture for the Contralateral Anterior Cruciate Ligament in Comparison with the Affected Knee in a Series of 244 Patients with a Long-Term Follow-Up Following Anterior Cruciate Ligament Reconstruction**

Alberto Grassi, MD, Bologna, ITALY  
Luca Macchiarola, MD, Bologna, ITALY  
Tommaso Roberti Di Sarsina, MD, Bologna, ITALY  
Federico Raggi, MD, Bologna, ITALY  
Ilaria Cucurnia, MD, Bologna, ITALY  
Gian Andrea Lucidi, Casalecchio Di Reno, BO, ITALY  
**Stefano Zaffagnini, MD, Prof., Bologna, ITALY**

Istituto Ortopedico Rizzoli – University of Bologna  
Bologna, ITALY

PAPER #4

**A Prospective Study of Bone-Tendon-Bone ACL Reconstruction with and without Lateral Extra-Articular Tenodesis: 19-Year Clinical and Radiological Follow-Up**

Marie Castoldi, Resident, Nice, FRANCE  
Cécile Batailler, MD, Lyon, Rhône Alpes, FRANCE  
Philippe N. Neyret, MD, PhD, Prof., La Tour De Salvagny, FRANCE  
Sebastien Lustig, MD, PhD, Prof., Lyon, Rhône Alpes, FRANCE  
**Elvire Servien, MD, PhD, Prof., Lyon, Rhône Alpes, FRANCE**

Department of Orthopedic Surgery, FIFA Medical Center of Excellence, Lyon University Hospital  
Lyon, FRANCE

PAPER #5

**Increased Risk of ACL Revision with Non-Surgical Treatment of a Concomitant Medial Collateral Ligament Injury: A Cohort Study from the Swedish National Knee Ligament Registry**

**Eleonor Svantesson, MD, Gothenburg, SWEDEN**  
Eric H. Senorski, PT, PhD, MSc, Västra Frölunda, SWEDEN  
Eduard Alentorn-Geli, MD, PhD, MSc, FEBOT, FACGME, Barcelona, SPAIN  
Olof Westin, MD, Gothenburg, SWEDEN  
David S. Sundemo, MD, Stenungsund, Västra Götaland, SWEDEN  
Alberto Grassi, MD, Bologna, ITALY  
Svemir Custovic, MD, PhD, Tuzla, BOSNIA AND HERZEGOVINA  
Kristian Samuelsson, MD, PhD, MSc, Prof., Mölndal, SWEDEN

Department of Orthopedics, Institute of Clinical Sciences, The Sahlgrenska Academy, University of Gothenburg  
Gothenburg, SWEDEN

PAPER #6

**Transibial vs. Anteromedial Portal Techniques in Anterior Cruciate Ligament Reconstruction: Prospective and Randomized Series**

**Luiz Gabriel B. Guglielmetti, MD, PhD, São Paulo, SP, BRAZIL**

*Ricardo P. Cury, MD, São Paulo, SP, BRAZIL*

*Nilson R. Severino, MD, São Paulo, SP, BRAZIL*

*Osmar P. A. Camargo, MD, PhD, São Paulo, SP, BRAZIL*

*Victor M. Oliveira, MD, PhD, São Paulo, SP, BRAZIL*

*Fabrcio R. Severino, MD, São Paulo, SP, BRAZIL*

*Marcos Mestriner, MD, São Paulo, SP, BRAZIL*

*Alfredo D. Netto, MD, São Paulo, SP, BRAZIL*

*Leandro J. Aihara, MD, São Paulo, SP, BRAZIL*

Santa Casa de São Paulo

São Paulo, SP, BRAZIL

PAPER #7

**Revision Anterior Cruciate Ligament Reconstruction: Clinical Outcomes of Isolated vs. Combined with Anatomic Antero-lateral Ligament Reconstruction**

**Ji-Nam Kim, MD, Seoul, REPUBLIC OF KOREA**

*Dhong-Won Lee, MD, Seoul, REPUBLIC OF KOREA*

*Sang-Jin Yang, PhD, Seoul, REPUBLIC OF KOREA*

*Jin-Goo Kim, MD, PhD, Seoul, REPUBLIC OF KOREA*

KonKuk University Medical Center

Seoul, REPUBLIC OF KOREA

**General Session – Gran Cancun**

**17:15 – 17:30**

**Knee**

PAPER #8

**Decreased Posterior Tibial Slope Does Not Impact Postoperative Posterior Knee Laxity After Double-Bundle Posterior Cruciate Ligament Reconstruction**

**Nicholas N. DePhillipo, MS, ATC, OPE-C, Vail, CO, UNITED STATES**

*Andrew S. Bernhardtson, MD, San Diego, CA, UNITED STATES*

*Zachary S. Aman, BA, Vail, CO, UNITED STATES*

*Mitchell I. Kennedy, Vail, CO, UNITED STATES*

*Grant J. Dornan, MSc, Vail, CO, UNITED STATES*

*Robert F. LaPrade, MD, PhD, Chanhassen, MN, UNITED STATES*

The Steadman Clinic

Vail, CO, UNITED STATES

PAPER #9

**Functional and Radiological Outcome of Arthroscopic Single Bundle vs. Double Bundle PCL Reconstruction Using Hamstring Autograft in Isolated Grade 3 PCL Tear: A Prospective Randomized Control Trial**

**Blessin S. Cherian, MS(Orth), DNB(Orth), Pathanamthitta, Kerala, INDIA**

*Silvampatti R. Sundararajan, MS(Orth), Coimbatore, Tamil Nadu, INDIA*

Ganga Medical Center and Hospitals Pvt. Ltd.

Coimbatore, Tamil Nadu, INDIA

**Concurrent 2 – Cozumel 1+5**

**10:45 – 11:00**

**Shoulder Instability**

PAPER #10

**Failure Rates in Contact vs. Non-Contact Athletes following Arthroscopic Bankart Repair**

**Kevin D. Plancher, MD, MPH, New York, NY, UNITED STATES**

*Merja Perhonen, MD, PhD, Stamford, CT, UNITED STATES*

*Stephanie C. Petterson, MPT, PhD, Old Greenwich, CT, UNITED STATES*

Orthopaedic Foundation

Stamford, CT, UNITED STATES

PAPER #11

**Arthroscopic Bankart Repair with and without Arthroscopic Infrapinatus Remplissage in Anterior Shoulder Instability with Hill-Sachs Defect: A Randomized Controlled Trial**

*Peter B. Macdonald, MD, FRCS, Dip Sport Med, Winnipeg, MB, CANADA*

*Jeff Leiter, PhD, Winnipeg, MB, CANADA*

*Peter Lapner, MD, FRCSC, Ottawa, ON, CANADA*

*Jason A. Old, MD, FRCSC, Winnipeg, MB, CANADA*

**Randy Mascarenhas, MD, FRCSC, Houston, TX, UNITED STATES**

*Sharad Prabhakar, MS(Orth), Chandigarh, INDIA*

*Sheila Mcrae, PhD, MSc, Winnipeg, MB, CANADA*

*Jonathon Marsh, MD, Winnipeg, MB, CANADA*

*Jamie Dubberley, MD, Winnipeg, MB, CANADA*

*Gregory Adam Stranges, MD, Winnipeg, MB, CANADA*

*James Koenig, MD, Winnipeg, MB, CANADA*

Pan Am Clinic / University of Manitoba

Winnipeg, MB, CANADA



**SUNDAY, MAY 12, 2019**

**Concurrent 2–Cozumel 1+5  
14:30–15:00  
Shoulder**

PAPER #12

**Cadaveric Analysis of Progressive Anterior Bone Loss-Induced Alteration in Glenoid Articular Surface Geometry and Restoration with Coracoid Transfer Procedures**

**Deepak N. Bhatia, MS(Orth), DNB(Orth), Mumbai, INDIA**

Seth GS Medical College and King Edward VII Memorial Hospital  
Mumbai, INDIA

PAPER #13

**Cartilage Loss Due to Overlying Suture in Surgical Treatment of Acute Bony Bankart Lesions**

**Raymond J. Kenney, MD, Rochester, NY, UNITED STATES**

Alexander Greenstein, MD, Rochester, NY, UNITED STATES  
Alexander Brown, MD, Rochester, NY, UNITED STATES  
Aaron Roberts, MD, Rochester, NY, UNITED STATES  
Raymond Chen, MD, Rochester, NY, UNITED STATES  
Emma Knapp, BS, Rochester, NY, UNITED STATES  
Pranay Rao, MD, Rochester, NY, UNITED STATES  
Ilya Voloshin, MD, Rochester, NY, UNITED STATES

University of Rochester  
Rochester, NY, UNITED STATES

PAPER #14

**Suprapectoral vs. Intra-Articular Biceps Tenodesis: A Comparison of Clinical Outcomes**

**Brian Godshaw, MD, Metairie, LA, UNITED STATES**

Nicholas Kolodychuk, MBBS, New Orleans, LA, UNITED STATES  
Gerard Williams, MD, New Orleans, LA, UNITED STATES  
Deryk G. Jones, MD, Jefferson, LA, UNITED STATES

Ochsner Sports Medicine Institute  
New Orleans, LA, UNITED STATES

PAPER #15

**Structural Outcome of Fascia Lata Autograft After Arthroscopic Superior Capsule Reconstruction**

**Akihiko Hasegawa, MD, PhD, Takatsuki, Osaka, JAPAN**

Teruhisa Mihata, MD, PhD, Takatsuki, Osaka, JAPAN  
Takeshi Kawakami, MD, PhD, Takatsuki, Osaka, JAPAN  
Masashi Neo, MD, PhD, Prof., Takatsuki, Osaka, JAPAN

Department of Orthopedic Surgery, Osaka Medical College  
Takatsuki, Osaka, JAPAN

PAPER #16

**Arthroscopic Treatment for Shoulder Instability with Glenoid Bone Loss Using Distal Tibia Allograft Augmentation: Two-Year Outcomes**

Rakesh John, MBBS, MS, DNB, MRCS(Eng), Dip SICOT, MNAMS, Halifax, NS, CANADA  
**Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med, Halifax, NS, CANADA**

Dalhousie University and Nova Scotia Health Authority  
Halifax, NS, CANADA

**Concurrent 2–Cozumel 1+5  
15:45–16:30  
Cartilage**

PAPER #17

**In Vitro Safety and Efficacy of a Commonly Used Post-Operative “Orthococktail”**

**Seth L. Sherman, MD, Columbia, MO, UNITED STATES**

John R. Baumann, Columbia, MO, UNITED STATES  
Lasun O. Oladeji, MD, MS, Columbia, MO, UNITED STATES  
Aaron Stoker, PhD, Columbia, MO, UNITED STATES  
James L. Cook, DVM, PhD, Columbia, MO, UNITED STATES

University of Missouri  
Columbia, MO, UNITED STATES

PAPER #18

**Is Patient Satisfaction Associated with Clinical Outcomes After Osteochondral Allograft Transplantation in the Knee?**

**Luís Eduardo P. Tírico, MD, São Paulo, SP, BRAZIL**

Julie McCauley, MPHc, La Jolla, CA, UNITED STATES  
Pamela Pulido, MD, La Jolla, CA, UNITED STATES  
Marco K. Demange, MD, PhD, São Paulo, SP, BRAZIL  
William Bugbee, MD, La Jolla, CA, UNITED STATES

Scripps Clinic; Shiley Center for Orthopaedic Research and Education  
La Jolla, CA, UNITED STATES



PAPER #19

**History of Prior Surgery Negatively Affects Cell Culture Identity in Patients Undergoing Autologous Chondrocyte Implantation**

**Jakob Ackermann, MD, Boston, MA, UNITED STATES**

Alexandre B. Mestriner, MD, São Paulo, SP, BRAZIL

Courtney VanArsdale, PA-C, Boston, MA, UNITED STATES

Andreas H. Gomoll, MD, New York, NY, UNITED STATES

Cartilage Repair Center, Brigham and Women's Hospital,  
Harvard University  
Boston, MA, UNITED STATES

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PAPER #20

**Osteochondral Lesions of the Femoral Condyles: Are the Results of the One-Step Repair Technique Still Satisfactory at Long-term?**

Simone Natali, MD, Bologna, ITALY

Enrico Franceschini, MD, Bologna, ITALY

Matteo Baldassarri, MD, Bologna, ITALY

Marco Ricciarelli, MD, Bologna, ITALY

Luca Perazzo, MD, Bologna, ITALY

Francesca Vannini, MD, Bologna, ITALY

**Roberto Buda, Prof., Bologna, ITALY**

IRCCS-Istituto Ortopedico Rizzoli  
Bologna, Bologna, ITALY

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PAPER #22

**Intra-Articular Leukocyte-Poor Platelet-Rich Plasma Injections for the Japanese Patients with Osteoarthritis of the Knee: Results with Three-Years Mean Follow-Up**

**Tomokazu Yoshioka, MD, PhD, Tsukuba, Ibaraki, JAPAN**

Yu Taniguchi, MD, PhD, Tsukuba, Ibaraki, JAPAN

Hisashi Sugaya, MD, PhD, Tsukuba, Ibaraki, JAPAN

Norihito Arai, MD, Tsukuba, Ibaraki, JAPAN

Kojiro Hyodo, Tsukuba, Ibaraki, JAPAN

Naoya Kikuchi, MD, Tsukuba, Ibaraki, JAPAN

Katsuya Aoto, MD, PhD, Tsukuba, Ibaraki, JAPAN

Akihiro Kanamori, MD, PhD, Tsukuba, Ibaraki, JAPAN

Masashi Yamazaki, MD, PhD, Tsukuba, Ibaraki, JAPAN

University of Tsukuba  
Tsukuba, Ibaraki, JAPAN

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PAPER #23

**Mid-Term Results of Lipo-Amic Technique for Treatment of Focal Symptomatic Cartilage Defects in the Knee**

**Fabio V. Sciarretta, MD, Rome, ITALY**

Claudio Ascani, MD, Rome, ITALY

Carolina Fossati, MD, Rome, ITALY

Silvana Campisi, Prof., Rome, ITALY

Clinica Nostra Signora della Mercede  
Rome, ITALY

Concurrent 3–Cozumel 3+4  
09:15–09:45

Jan I. Gillquist Scientific Award Finalist Presentations

PAPER #24

**In Vivo ACL Bundle Elongation Shows Complex Change During Walking and Running: Analysis Using Biplane Radiography System**

**Kanto Nagai, MD, PhD, Kobe, Hyogo, JAPAN**

Tom Gale, MS, Pittsburgh, PA, UNITED STATES

Daisuke Chiba, MD, PhD, Hirosaki, Aomori, JAPAN

Favian Su, BS, Pittsburgh, PA, UNITED STATES

William Anderst, PhD, Pittsburgh, PA, UNITED STATES

Freddie H. Fu, MD, Pittsburgh, PA, UNITED STATES

Department of Orthopaedic Surgery,  
University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

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PAPER #25

**Platelet-Rich Plasma in Combination with Adipose Stem Cells Encapsulated in Three-Dimensional Hydrogel in a Rabbit Model of Cartilage Repair**

**Tomoya Iseki, MD, Pittsburgh, PA, UNITED STATES**

Benjamin B. Rothrauff, MD, PhD, Pittsburgh, PA,  
UNITED STATES

Shinsuke Kihara, MD, PhD, Pittsburgh, PA, UNITED STATES

Freddie H. Fu, MD, Pittsburgh, PA, UNITED STATES

Peter G. Alexander, PhD, Pittsburgh, PA, UNITED STATES

Rocky S. Tuan, PhD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

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**SUNDAY, MAY 12, 2019**

**Concurrent 3 – Cozumel 3+4  
09:15 – 09:45  
Jan I. Gillquist Scientific Award Finalist Presentations  
(Cont.)**

**PAPER #26**

**Anterior Cruciate Ligament Reconstruction with or without a Lateral Extra-Articular Tenodesis: Analysis of Complications from the ISAKOS-Sponsored Stability Study**

**Mark A. Heard, MD, FRCS, Canmore, AB, CANADA**

*Davide Bardana, MD, Kingston, ON, CANADA  
 Alex Rezansoff, MD, FRCSC, Calgary, AB, CANADA  
 Stability Study Group, MD, London, ON, CANADA  
 Dianne M. Bryant, PhD, London, ON, CANADA  
 Alan Getgood, MD, FRCS(Tr&Orth), DipSEM, London, ON, CANADA  
 Robert Litchfield, MD, FRCSC, London, ON, CANADA  
 Robert G. McCormack, MD, New Westminster, BC, CANADA  
 Peter B. Macdonald, MD, FRCS, Dip Sport Med, Winnipeg, MB, CANADA  
 Tim Spalding, FRCS(Orth), Coventry, West Midlands, UNITED KINGDOM  
 Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM  
 Devin Peterson, London, ON, CANADA  
 Fowler Kennedy Sport Medicine Clinic,  
 Western University  
 London, ON, CANADA*

**PAPER #27**

**The Effect of Anterolateral Procedures on Contact Pressures in the Lateral Compartment of the Knee**

**Thomas Neri, MD, PhD, Asst. Prof., Saint-Etienne, FRANCE**

*Brian M. Devitt, MD, FRCS, FRACS, Melbourne, VIC, AUSTRALIA  
 Richard Appleyard, PhD, Sydney, NSW, AUSTRALIA  
 David A. Parker, MBBS, BMedSc, FRACS, Sydney, NSW, AUSTRALIA  
 Joseph Cadman, PhD, Sydney, NSW, AUSTRALIA  
 Sven Putnis, MBChB, FRCS(Orth), Sydney, NSW, AUSTRALIA  
 Samuel Grasso, PhD, BME, Chatswood, NSW, AUSTRALIA  
 Aaron Beach, PhD, Sydney, NSW, AUSTRALIA  
 Danè Dabirrahmani, PhD, Sydney, NSW, AUSTRALIA  
 Takeshi Oshima, MD, PhD, Sydney, NSW, AUSTRALIA  
 Brett A. Fritsch, MBBS, BMedSc, Hunters Hill, NSW, AUSTRALIA  
 Myles R. J. Coolican, FRACS, Sydney, NSW, AUSTRALIA  
 Sydney Orthopaedic Research Institute  
 Sydney, NSW, AUSTRALIA*

**Concurrent 3 – Cozumel 3+4  
09:45 – 10:00  
Sports Medicine**

**PAPER #28**

**Comparison of Clinical Outcome and Graft Maturation in Double-Bundle Anterior Cruciate Ligament Reconstruction between Young and Elder Patients.**

**Mashaiko Saito, MD, PhD, Chiba, JAPAN**

*Junichi Iwasaki, Chiba, JAPAN  
 Hiroaki Hosokawa, MD, Chiba, JAPAN  
 Tsuguo Morikawa, Chiba, JAPAN  
 Chiba Medical Center  
 Chiba, JAPAN*

**PAPER #29**

**The Impact of Oral Contraceptive Hormones on Anterior Cruciate Ligament Strength**

**Jason L. Drago, MD, Redwood City, CA, UNITED STATES**

*Jaclyn Konopka, BS, Palo Alto, CA, UNITED STATES  
 Lauren Hsue, BS, Palo Alto, CA, UNITED STATES  
 Stanford University  
 Palo Alto, CA, UNITED STATES*

**Concurrent 3 – Cozumel 3+4  
11:00 – 12:00  
Osteotomy and Meniscus**

**PAPER #30**

**Effects of Autologous Osteophyte Grafting for Open-Wedge High Tibial Osteotomy with Beta-Tricalcium Phosphate Spacers**

**Taiki Tokuhiko, Sapporo, Hokkaido, JAPAN**

*Eiji Kondo, MD, PhD, Sapporo, Hokkaido, JAPAN  
 Koji Yabuuchi, MD, Muroran, Hokkaido, JAPAN  
 Tomohiro Onodera, MD, PhD, Sapporo, Hokkaido, JAPAN  
 Tomonori Yagi, MD, PhD, Sapporo, Hokkaido, JAPAN  
 Norimasa Iwasaki, MD, PhD, Sapporo, Hokkaido, JAPAN  
 Kazunori Yasuda, MD, PhD, Prof., Sapporo, Hokkaido, JAPAN  
 Hokkaido University  
 Sapporo, Hokkaido, JAPAN*

PAPER #32

**High Tibial Derotational Osteotomy for Distal Extensor Mechanism Alignment in Patients with Inwardly Pointing Knee Due to Increased External Tibial Torsion: Technique and Functional Results**

**Ricardo D. Manilov, MD, Capital, San Juan, ARGENTINA**

Jorge Chahla, MD, PhD, Chicago, IL, UNITED STATES

Sebastian Maldonado, MD, San Juan, San Juan, ARGENTINA

Manuel O. Manilov, MD, Capital, San Juan, ARGENTINA

Biagio Zampogna, MD, Rome, Italy, ITALY

Burak Altintas, MD, Vail, CO, UNITED STATES

Clínica Mercedario

San Juan, San Juan, ARGENTINA

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PAPER #33

**Comparison of Patient-Specific Instrumentation (PSI) vs. a Conventional Technique in Medial Opening-Wedge High Tibial Osteotomy (HTO)**

Wouter Van Genechten, MD, Antwerp, BELGIUM

Wouter Van Tilborg, MD, Antwerp, BELGIUM

Maxim Van den Bempt, MD, Antwerp, BELGIUM

Annemieke Van Haver, PhD, MSc, Antwerp, BELGIUM

**Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM**

Antwerp Orthopaedic Center–

Monica Research Foundation

Antwerp, Antwerp, BELGIUM

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PAPER #34

**Biplanar Ascending Opening-Wedge High Tibial Osteotomy Lateralizes Knee Extensor Mechanism Alignment and Decreases Patellar Height**

**Alexandre B. Mestriner, MD, São Paulo, SP, BRAZIL**

Jakob Ackermann, MD, Boston, MA, UNITED STATES

Gergo Merkely, MD, Boston, MA, UNITED STATES

Takahiro Ogura, MD, Funabashi, Chiba, JAPAN

Juan P. Zicaro, MD, Villa Adelina, San Isidro, BA,

ARGENTINA

Andreas H. Gomoll, MD, New York, NY, UNITED STATES

Harvard Medical School–Brigham and Women’s Hospital

Boston, MA, UNITED STATES

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PAPER #36

**The Occurrence of Spontaneous Osteonecrosis After Medial Meniscal Posterior Root Tear Associates with Meniscal Extrusion**

**Shigehiro Asai, MD, Tokyo, JAPAN**

Hideaki Fukuda, MD, Funabashi, Chiba, JAPAN

Takahiro Ogura, MD, Funabashi, Chiba, JAPAN

Tatsuya Takahashi, MD, Funabashi, Chiba, JAPAN

Akihiro Tsuchiya, MD, Funabashi, Chiba, JAPAN

Kenji Takahashi, MD, PhD, Funabashi, Chiba, JAPAN

Funabashi Orthopaedic Hospital

Funabashi, Chiba, JAPAN

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PAPER #37

**Characteristic Location and Rapid Progression of Medial Femoral Condylar Chondral Lesions Accompanying Medial Meniscus Posterior Root Tear**

**Jae-Young Park, MD, Seoul, REPUBLIC OF KOREA**

Seung-Bin Im, MD, Seoul, REPUBLIC OF KOREA

Tae-Hoon Kang, MD, Seoul, REPUBLIC OF KOREA

Du-Hyun Ro, MD, MS, Seoul, REPUBLIC OF KOREA

Hyuk-Soo Han, MD, PhD, Seoul, REPUBLIC OF KOREA

Myung-Chul Lee, MD, PhD, Prof., Seoul, REPUBLIC OF KOREA

Seoul National University Hospital

Seoul, REPUBLIC OF KOREA

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PAPER #38

**Alternative Method to Detect Dynamic Medial Meniscus Extrusion: Weight-Bearing Magnetic Resonance Imaging, Comparison to Ultrasonography Measurement**

**Makoto Kobayashi, MD, PhD, Nagoya, Aichi, JAPAN**

Masahiro Nozaki, MD, PhD, Nagoya, Aichi, JAPAN

Sanshiro Yasuma, MD, Nagoya, Aichi, JAPAN

Yusuke Kawanishi, Nagoya, Aichi, JAPAN

Masahito Yoshida, MD, PhD, Nagoya, Aichi, JAPAN

Hiroto Mitsui, MD, PhD, Nagoya, Aichi, JAPAN

Takanobu Otsuka, MD, PhD, Prof., Nagoya, Aichi, JAPAN

Nagoya City University

Nagoya, Aichi, JAPAN

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**SUNDAY, MAY 12, 2019**

**Concurrent 3 – Cozumel 3+4  
11:00 – 12:00  
Osteotomy and Meniscus (Cont.)**

PAPER #39

**The “Sleeper’s Sign” is Suggestive of a Medial Submeniscal Flap Tear: Validity and Diagnostic Performance Compared to Arthroscopy and Agreement with MR Imaging**

**Nicolas Lefevre, MD, Paris, FRANCE**

*Shahnaz Klouche, MD, Paris, FRANCE  
Antoine Gerometta, MD, Paris, FRANCE  
Serge Herman, MD, Paris, FRANCE  
Yoann Bohu, MD, Paris, FRANCE  
Edouard Lefevre, MD, Paris, FRANCE*

Clinique du Sport Paris  
Paris, FRANCE

PAPER #40

**The Risk of Extrusion: Insights on Meniscus Tear Patterns from the Osteoarthritis Initiative**

*David C. Flanigan, MD, Columbus, OH, UNITED STATES  
Joshua Everhart, MD, MPH, Columbus, OH, UNITED STATES  
Alex C. Dibartola, MD, MPH, Columbus, OH,  
UNITED STATES*

**Robert A. Magnussen, MD, MPH, Columbus, OH,  
UNITED STATES**

*Christopher C. Kaeding, MD, Columbus, OH,  
UNITED STATES*

Ohio State University  
Columbus, OH, UNITED STATES

PAPER #41

**Outcomes of Arthroscopic Repair vs. Observation in Older Patients with Meniscal Root Tears**

**Jason L. Drago, MD, Redwood City, CA, UNITED STATES**

*Jaclyn Konopka, BS, Palo Alto, CA, UNITED STATES*

Stanford University  
Palo Alto, CA, UNITED STATES

PAPER #42

**The Effect of Meniscocapsular and Meniscotibial Based Lesions in ACL Deficient and ACL Reconstructed Knees: A Biomechanical Study**

**Nicholas N. DePhillipo, MS, ATC, OPE-C, Vail, CO,  
UNITED STATES**

*Gilbert Moatshe, MD, PhD, Oslo, NORWAY  
Alex Brady, MSc, Vail, CO, UNITED STATES  
Jorge Chahla, MD, PhD, Chicago, IL, UNITED STATES  
Zachary S. Aman, BA, Vail, CO, UNITED STATES  
Gilberto Y. Nakama, MD, São Paulo, SP, BRAZIL  
Grant J. Dornan, MSc, Vail, CO, UNITED STATES  
Lars Engebretsen, MD, PhD, Oslo/Lausanne, NORWAY  
Robert F. LaPrade, MD, PhD, Chanhasen, MN,  
UNITED STATES*

The Steadman Philippon Research Institute  
Vail, CO, UNITED STATES

PAPER #43

**Survivorship Analysis and Clinical Outcomes of Transtibial Pullout Repair for Medial Meniscus Posterior Root Tears: A 5- to 10-Year Follow-Up Study**

**Kyu Sung Chung, MD, PhD, Prof., Seoul, REPUBLIC OF KOREA**

*Jeong-Ku Ha, MD, Seoul, REPUBLIC OF KOREA  
Ho-Jong Ra, MD, PhD, Gangneung, Gangwon,  
REPUBLIC OF KOREA  
June-Mo Noh, MD, Seoul, REPUBLIC OF KOREA  
Dhong-Won Lee, MD, Seoul, REPUBLIC OF KOREA  
Jin-Goo Kim, MD, PhD, Seoul, REPUBLIC OF KOREA*

Department of Orthopaedic Surgery, Seoul Paik Hospital, Inje University  
Seoul, REPUBLIC OF KOREA



PAPER #44

**Combined Anterior Cruciate Ligament Reconstruction with Knee Alignment Osteotomy: Results up to Five Years**

*Raj R. Thakrar, MBBS, BSc(Hons), FRCS(Tr&Orth),  
Basingstoke, UNITED KINGDOM*

**John Dabis, MBBS, MSc SEM, MRCS, FRCS(Tr&Orth), London,  
UNITED KINGDOM**

*Sam K. Yasen, MBBS, MScEng, BSc, MRCS, FRCS(Tr&Orth), PGCE,  
Basingstoke, Hampshire, UNITED KINGDOM*

*Michael J. Risebury, MBBS(Hons), MA(Hons), FRCS(Tr&Orth),  
Basingstoke, Hampshire, UNITED KINGDOM*

*Adrian J. Wilson, FRCS, Basingstoke, Hants,  
UNITED KINGDOM*

North Hampshire Hospital  
Basingstoke, UNITED KINGDOM

**Concurrent 3–Cozumel 3+4  
14:45–15:00  
Meniscus**

PAPER #45

**ISAKOS Classification of Meniscus Tears: Arthroscopic Correlations with MRI**

**Jay P. Shah, MD, Dallas, TX, UNITED STATES**

*Christopher L. McCrum, MD, Dallas, TX, UNITED STATES*

*Anthony Cai, MD, Nashville, TN, UNITED STATES*

*Kyle Planchard, MD, New Orleans, LA, UNITED STATES*

*Rocco Hlis, BS, Dallas, TX, UNITED STATES*

*Yin Xi, PhD, Dallas, TX, UNITED STATES*

*Avneesh Chhabra, MD, Dallas, TX, UNITED STATES*

UT Southwestern Medical Center  
Dallas, TX, UNITED STATES

PAPER #46

**Transosseous Meniscal Root Repair Can Be Improved Using a Knotless Anchor for Fixation**

**Alejandro Espejo-Reina, MD, MSc, Málaga, Málaga, SPAIN**

*María Josea Espejo-Reina, MD, Málaga, Málaga, SPAIN*

*Ana Pérez de la Blanca-Cobos, MEng, Málaga, Málaga, SPAIN*

*María Prado-Novoa, MEng, PhD, Málaga, Málaga, SPAIN*

*Alejandro Espejo-Baena, MD, Málaga, Málaga, SPAIN*

*Jaime Dalla Rosa Nogales, MSC, Málaga, Málaga, SPAIN*

Clínica Espejo  
Málaga, Málaga, SPAIN

**Concurrent 3–Cozumel 3+4  
16:30–16:45**

**Achilles Orthopaedic Sports Medicine  
Research Award**

PAPER #21

**A Bioactive Scaffold Enhances Articular Cartilage Regeneration After Microfracture in a Rabbit Model**

*Ting Guo, PhD, College Park, MD, UNITED STATES*

*Hannah B Baker, PhD, College Park, MD, UNITED STATES*

*Maesha Noshin, , College Park, MD, UNITED STATES*

*Sean J. Meredith, MD, Pittsburgh, PA, UNITED STATES*

*Evin Taskoy, MSAT, Baltimore, MD, UNITED STATES*

*Qinggong Tang, PhD, College Park, MD, UNITED STATES*

*R. Frank Henn, MD, Baltimore, MD, UNITED STATES*

*John Fisher, PhD, College Park, MD, UNITED STATES*

**Jonathan D. Packer, MD, Baltimore, MD, UNITED STATES**

University of Maryland  
College Park, MD, UNITED STATES

**Concurrent 3–Cozumel 3+4  
16:45–17:00  
Ankle**

PAPER #47

**Chronic Lateral Ankle Instability Increases the Likelihood for Surgery in Athletes with OS Trigonum Syndrome**

**Pieter D'Hooghe, MD, Doha, QATAR**

*Khalid Alkhelaifi, MD, Doha, QATAR*

Aspetar Orthopaedic and Sports Medicine Hospital  
Doha, QATAR

PAPER #48

**Deep Vein Thrombosis After Acute Achilles Tendon Rupture: A Randomized Controlled Trial Comparing Early Controlled Motion of the Ankle with No Motion**

**Kristoffer W. Barfod, MD, PhD, Copenhagen, DENMARK**

*Beth H. Olsen, MD, Copenhagen, DENMARK*

*Pablo G. Vinicoff, MD, Copenhagen, DENMARK*

*Anders Troelsen, MD, PhD, DMSc, Prof., Copenhagen,  
DENMARK*

*Per Hölmich, DMSc, Prof., Copenhagen, DENMARK*

Sports Orthopedic Research Center–Copenhagen (SORC-C),  
Arthroscopic Center, Department of Orthopedic Surgery,  
Copenhagen University Hospital, Amager-Hvidovre  
Copenhagen, DENMARK



SUNDAY, MAY 12, 2019

Concurrent 4 – Cozumel 2+A  
14:15 – 14:35  
Patellofemoral

PAPER #49

**Divergent Patellar Bony Tunnels vs. Patellar Anchor Fixation for Reconstruction in Isolated Medial Patellofemoral Ligament (MPFL) Rupture**

**Amr S. Rashwan, Assoc. Prof., Cairo, EGYPT**  
*Hisham Misbah, MD, Cairo, EGYPT*

Kasr AlAiny Hospital, Faculty of Medicine,  
Cairo University  
Cairo, EGYPT

PAPER #50

**Distalization of Tibial Tubercle for Patella Stabilization: Does Length of Distalization or Residual Patella Alta Effect Outcome?**

*Andrew Schmiesing, MD, Minneapolis, MN, UNITED STATES*  
*Marta Engelking, MD, Minneapolis, MN, UNITED STATES*  
*Julie Agel, MA, Minneapolis, MN, UNITED STATES*  
**Elizabeth A. Arendt, MD, Minneapolis, MN, UNITED STATES**

University of Minnesota  
Minneapolis, MN, UNITED STATES

PAPER #51

**Anatomic Reconstruction of the Medial Patellofemoral Ligament in Children and Adolescents with Open Growth Plates: Ideal Tunnel Positioning following a Digital Three-Dimensional Model**

**Sebastián Irarrázaval, MD, Prof., Santiago, CHILE**

*Pablo Besa, MD, Santiago, CHILE*  
*Francisco Fernández, MD, Santiago, CHILE*  
*Tomás Fernández, MD, Santiago, CHILE*  
*Luis A. Irribarra, MD, Santiago, CHILE*  
*Rafael Vega, MD, Santiago, CHILE*  
*Mario Orrego, MD, Prof., Santiago, CHILE*

Pontificia Universidad Católica de Chile  
Santiago, CHILE

Concurrent 4 – Cozumel 2+A  
14:45 – 15:00  
Patellofemoral Research Excellence Award Winner  
Presentation

PAPER #218

**Isolated Medial Patellofemoral Ligament Reconstruction vs. Tibial Tuberosity Transfer for Patellar Instability**

**Alessandra Berton, MD, Rome, IT, ITALY**

*Umile Giuseppe Longo, MD, MSc, PhD, Rome, ITALY*  
*Ara Nazarian, PhD, Boston, MA, UNITED STATES*  
*Giuseppe Salvatore, MD, Rome, ITALY*  
*Alexander Orsi, PhD, Sydney, AUSTRALIA*  
*Jonathan Egan, BS, MEng, Boston, MA, UNITED STATES*  
*Joseph P. DeAngelis, MD, West Hartford, CT, UNITED STATES*  
*Vincenzo Denaro, MD, PhD, Prof., Rome, ITALY*

Center for Advanced Orthopedic Studies, Beth Israel  
Deaconess Medical Center, Harvard Medical School  
Boston, MA, UNITED STATES

General Session—Gran Cancun  
16:30–17:30  
Upper Limb

PAPER #52

**Preoperative Patient Expectations of Elective Reverse Total Shoulder Arthroplasty**

**Ryan Rauck, MD, New York, NY, UNITED STATES**

Ishaan Swarup, MD, New York, NY, UNITED STATES  
Brenda Chang, MPH, New York, NY, UNITED STATES  
Joseph J. Ruzbarsky, MD, New York, NY, UNITED STATES  
Edward V. Craig, New York, NY, UNITED STATES  
David M. Dines, MD, Uniondale, NY, UNITED STATES  
Russell F. Warren, MD, New York, NY, UNITED STATES  
R Frank Henn, MD, Baltimore, MD, UNITED STATES  
Lawrence V. Gulotta, MD, Chappaqua, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

PAPER #53

**The Impact of Pain Sensitivity on Patient Outcomes After Rotator Cuff Surgery**

**Lee S. Yaari, MD, Herzlia, ISRAEL**

Stephen J. Nicholas, MD, New York, NY, UNITED STATES  
Ben Bedford, MD, New York, NY, UNITED STATES  
Matthew S. Mendez-Zfass, MD, Miami Beach, FL,  
UNITED STATES  
Kendall Harousseau, PA-C, New York, NY, UNITED STATES  
Daniel E. Hogan, MS, New York, NY, UNITED STATES  
Malachy P. McHugh, PhD, New York, NY, UNITED STATES

Nicholas Institute of Sports Medicine and Athletic Trauma,  
Lenox Hill Hospital  
New York City, NY, UNITED STATES

PAPER #54

**Arthroscopic Subacromial Decompression is Not Necessarily Essential in Arthroscopic Rotator Cuff Repair**

**Hironori Kakoi, MD, Kagoshima, Kagoshima, JAPAN**

Toshihiko Izumi, MD, Kagoshima, JAPAN  
Yasunari Fujii, MD, Kanoya, JAPAN  
Noboru Taniguchi, MD, Kagoshima, JAPAN

Department of Orthopaedic Surgery Graduate School of  
Medical and Dental Sciences, Kagoshima University  
Kagohsima, JAPAN

PAPER #55

**The Economic Burden of Comorbidities in Patients Undergoing Total Shoulder Arthroplasty**

**Kevin X. Farley, BS, Atlanta, GA, UNITED STATES**

Albert T. Anastasio, BA, Atlanta, GA, UNITED STATES  
Andrew M. Schwartz, MD, Atlanta, GA, UNITED STATES  
Charles A. Daly, MD, Atlanta, GA, UNITED STATES  
Eric R. Wagner, MD, MS, Atlanta, GA, UNITED STATES  
Michael B. Gottschalk, MD, Dunwoody, GA,  
UNITED STATES

Emory University School of Medicine  
Atlanta, GA, UNITED STATES

PAPER #56

**A Single PRP Injection Post Rotator Cuff Repair Improves Goutallier Grade Compared to Saline in a Double Blinded Randomized Controlled Trial**

**Martyn Snow, FRCS, Birmingham, UNITED KINGDOM**

Faisal Hussain, MBBS, FRCS(Tr&Orth), Solihull,  
UNITED KINGDOM  
Tomasz Kowalski, MD, PhD, Birmingham, UNITED KINGDOM  
Samir Massoud, FRCS, Birmingham, UNITED KINGDOM  
Steve James, MBChB, FRCR, Birmingham,  
UNITED KINGDOM

The Royal Orthopaedic Hospital  
Birmingham, UNITED KINGDOM

PAPER #57

**Into-Tunnel Repair vs. Onto-Surface Repair for Rotator Cuff Tears in a Rabbit Model**

**Xiaoxi Li, MD, Shanghai, CHINA**

Peng Shen, MD, Shanghai, CHINA  
Song Zhao, MD, Shanghai, CHINA  
Jinzhong Zhao, MD, Shanghai, CHINA

Shanghai Sixth People's Hospital  
Shanghai, CHINA



MONDAY, MAY 13, 2019

General Session – Gran Cancun  
16:30 – 17:30  
Upper Limb (Cont.)

PAPER #58

**Do Elderly Patients Gain As Much Benefit from Arthroscopic Rotator Cuff Repair As Their Younger Counterparts?**

*Caroline Witney-Lagen, MD, Reading, Berkshire, UNITED KINGDOM*

*George Mazis, Reading, Berkshire, UNITED KINGDOM*

*Andreas Leonidou, MD, Reading, Berkshire, UNITED KINGDOM*

*Georgios Panagopoulos, MD, London, UNITED KINGDOM*

*Juan Bruguera, MD, Pamplona, SPAIN*

*Ehud Atoun, MD, Karakur, ISRAEL*

*Giuseppe Sforza, Pratica Di Mare, Rome, ITALY*

**Ofer Levy, MD, MCh(Orth), FRCS, Reading, Berkshire, UNITED KINGDOM**

Reading Shoulder Unit

Reading, Berkshire, UNITED KINGDOM

PAPER #59

**Clinical Outcome of Arthroscopic Treatment for Posteromedial Elbow Impingement in Adolescent Baseball Players**

**Toshiyuki Iwame, MD, Tokushima, JAPAN**

*Tetsuya Matsuura, MD, PhD, Tokushima, JAPAN*

*Naoto Suzue, MD, PhD, Komatsushima, Tokushima, JAPAN*

*Jyoji Iwase, MD, Tokushima, JAPAN*

*Shunsuke Tamaki, MD, Kannonji, JAPAN*

*Kenji Yokoyama, MD, Komatsushima, JAPAN*

*Koichi Sairyō, MD, PhD, Kawasaki, Kanagawa, JAPAN*

Tokushima University

Tokushima, JAPAN

PAPER #60

**Micro-Coil MRI Scan Findings in Ulnar Collateral Ligament Condition in Professional Baseball Players**

**Takeshi Morioka, MD, Funabashi, Chiba, JAPAN**

*Hiroyuki Sugaya, MD, Funabashi, Chiba, JAPAN*

*Norimasa Takahashi, MD, Funabashi, Chiba, JAPAN*

*Keisuke Matsuki, MD, PhD, Funabashi, Chiba, JAPAN*

*Morihito Tokai, MD, Funabashi, Chiba, JAPAN*

*Yusuke Ueda, MD, Funabashi, Chiba, JAPAN*

*Shota Hoshika, MD, Funabashi, Chiba, JAPAN*

*Hiroshige Hamada, MD, Funabashi, Chiba, JAPAN*

*Yasutaka Takeuchi, MD, Funabashi, Chiba, JAPAN*

Funabashi, Chiba, JAPAN

PAPER #61

**Unicortical vs. Bicortical Button Fixation for Distal Biceps Brachii Tendon Rupture: A Cadaveric Biomechanical Study**

**Aditi Majumdar, MD, Albuquerque, NM, UNITED STATES**

*William Chavez, Albuquerque, NM, UNITED STATES*

*Jacob Valdez, BS, Albuquerque, NM, UNITED STATES*

*Tony J. Sapradit, BS, Albuquerque, NM, UNITED STATES*

*Christina Salas, PhD, Albuquerque, NM, UNITED STATES*

*Christopher Bankhead, MD, Albuquerque, NM, UNITED STATES*

*Deana Mercer, MD, Albuquerque, NM, UNITED STATES*

*Dustin Richter, MD, Albuquerque, NM, UNITED STATES*

University of New Mexico

Albuquerque, NM, UNITED STATES



PAPER #62

**Outcomes by MRI Grade and Tear Location for Non-Operatively Treated Elbow UCL Injuries in Professional Baseball Players**

Aakash Chauhan, MD, MBA, Naperville, IL, UNITED STATES  
Stephen Fealy, MD, New York, NY, UNITED STATES  
**Jan Fronek, MD, San Diego, CA, UNITED STATES**  
Peter Chalmers, MD, Chicago, IL, UNITED STATES  
Peter McQueen, Menlo Park, CA, UNITED STATES  
Christopher L. Camp, MD, Rochester, MN, UNITED STATES  
Hollis G. Potter, MD, New York, NY, UNITED STATES  
Michael G. Ciccotti, MD, Philadelphia, PA, UNITED STATES  
John D'Angelo, BA, New York, NY, UNITED STATES  
Heinz Hoenecke Jr., La Jolla, CA, UNITED STATES  
Brandon Erickson, MD, Chicago, IL, UNITED STATES

Scripps Clinic  
La Jolla, CA, UNITED STATES

PAPER #63

**Do Relaxation Exercises Decrease Postoperative Pain After Rotator Cuff Repair?: A Randomized Controlled Trial**

**Steven B. Cohen, MD, Media, PA, UNITED STATES**  
Danielle Weekes, MD, Egg Harbor Township, NJ, UNITED STATES  
Richard E. Campbell, MD, Egg Harbor Township, NJ, UNITED STATES  
Christopher J. Hadley, BS, Barnegat, NJ, UNITED STATES  
Zaira S. Chaudhry, MPH, Philadelphia, PA, UNITED STATES  
Matthew D. Pepe, MD, Philadelphia, PA, UNITED STATES  
Bradford Tucker, MD, Philadelphia, PA, UNITED STATES  
Kevin Freedman, MD, Bryn Mawr, PA, UNITED STATES  
Fotios P. Tjoumakaris, MD, Egg Harbor Township, NJ, UNITED STATES

Rothman Orthopaedic Institute  
Philadelphia, PA, UNITED STATES

PAPER #64

**Capsular Release Following Total Shoulder Arthroplasty: An Analysis of Early Outcomes**

**Eric R. Wagner, MD, MS, Atlanta, GA, UNITED STATES**  
Michelle Chang, BS, Boston, MA, UNITED STATES  
Muriel Solberg, BS, Boston, MA, UNITED STATES  
Kathryn Welp, MS, Boston, MA, UNITED STATES  
Tyler Hunt, BS, New York, NY, UNITED STATES  
Jarret M. Woodmass, MD, FRCSC, Winnipeg, MB, CANADA  
Laurence Higgins, MD, Brookline, MA, UNITED STATES  
Jon J. P. Warner, MD, Boston, MA, UNITED STATES

Boston Shoulder Institute, Harvard University  
Boston, MA, UNITED STATES

PAPER #65

**The Accuracy of Preoperative HAGL Lesion Diagnosis**

**Toshinobu Omiya, MD, Nagasaki, JAPAN**  
Yasutaka Takeuchi, MD, Funabashi, Chiba, JAPAN  
Hiroyuki Sugaya, MD, Funabashi, Chiba, JAPAN  
Norimasa Takahashi, MD, Funabashi, Chiba, JAPAN  
Keisuke Matsuki, MD, PhD, Funabashi, Chiba, JAPAN  
Morihito Tokai, MD, Funabashi, Chiba, JAPAN  
Yusuke Ueda, MD, Funabashi, Chiba, JAPAN  
Shota Hoshika, MD, Funabashi, Chiba, JAPAN  
Hiroshige Hamada, MD, Funabashi, Chiba, JAPAN  
Takeshi Morioka, MD, Funabashi, Chiba, JAPAN

Funabashi Orthopaedic Sports Medicine Center  
Funabashi, Chiba, JAPAN

PAPER #66

**Long Head Biceps Tendon Excursion throughout Shoulder Range of Motion: Implications for Establishing "Anatomic" Length-Tension Relationship During Biceps Tenodesis**

**Brian E. Ward, MD, New York, NY, UNITED STATES**  
Joshua S. Dines, MD, Uniondale, NY, UNITED STATES  
David M. Dines, MD, Uniondale, NY, UNITED STATES  
Russell F. Warren, MD, New York, NY, UNITED STATES  
Lawrence V. Gulotta, MD, Chappaqua, NY, UNITED STATES  
Stephen James O'Brien, MD, MBA, New York, NY, UNITED STATES  
Samuel A. Taylor, MD, New York, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

Concurrent 2 – Cozumel 1+5  
14:15 – 15:00  
Meniscus

PAPER #67

**Long-Term Survival of Meniscus Allograft Transplantation in an Arthritic Population: Time to Abandon Restricted Indications for Transplantation**

**Kevin R. Stone, MD, San Francisco, CA, UNITED STATES**  
Susan E. Hennessy, PhD, San Francisco, CA, UNITED STATES  
Thomas J. Turek, PhD, San Francisco, CA, UNITED STATES  
Ann W. Walgenbach, RN, NP, MSN, San Francisco, CA, UNITED STATES  
Eric Huttler, BA, San Francisco, CA, UNITED STATES  
Whitney Li, BA, San Francisco, CA, UNITED STATES  
Le Do, MD, San Francisco, CA, UNITED STATES  
David R. Greene, BEng, San Francisco, CA, UNITED STATES

Stone Research Foundation  
San Francisco, CA, UNITED STATES

Concurrent 2 – Cozumel 1+5  
14:15 – 15:00  
Meniscus (Cont.)

PAPER #68

**Extreme Loads, Generated by Ultramarathon Running Result in Temporary Pathological Meniscus Extrusion**

**Andrea E. Ahtnich, MD, Munich, GERMANY**

*Knut Beitzel, MD, MA, Cologne, GERMANY*  
*Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY*  
*Wolf Petersen, MD, Prof., Berlin, GERMANY*  
*Klaus Wörtler, MD, Prof., Munich, Bavaria, GERMANY*  
*Laura Bachmann, MD, Munich, Bavaria, GERMANY*  
*Theresa Diermeier, MD, Munich, Bavaria, GERMANY*

Klinikum rechts der Isar, Technical University Munich,  
Department of Orthopaedic Sports Medicine  
Munich, Bavaria, GERMANY

PAPER #69

**Open Meniscal Allograft Transplantation with Transosseous Suture Fixation of the Meniscal Body Significantly Decreases Meniscal Extrusion Rate Compared to Arthroscopic Technique**

**Gergo Merkely, MD, Boston, MA, UNITED STATES**

*Takahiro Ogura, MD, Funabashi, Chiba, JAPAN*  
*Jakob Ackermann, MD, Boston, MA, UNITED STATES*  
*Alexandre B. Mestriner, MD, São Paulo, SP, BRAZIL*  
*Tom Minas, MD, Chestnut Hill, MA, UNITED STATES*  
*Andreas H. Gomoll, MD, New York, NY, UNITED STATES*

Cartilage Repair Center, Brigham and Women's Hospital,  
Harvard Medical Center  
Boston, MA, UNITED STATES

PAPER #70

**Is Tranexamic Acid Useful in Reducing Knee Swelling and Improving Early Function Following Arthroscopic Meniscectomy?**

**Gary J. Hooper, MD, FRACS, Christchurch, NEW ZEALAND**

*Jedediah May, MD, Christchurch, NEW ZEALAND*  
*Mary Nugent, FRCS, Christchurch, NEW ZEALAND*  
*Michael Douglas, MBChB, Christchurch, NEW ZEALAND*  
*Jack Parker, MSc, Christchurch, NEW ZEALAND*  
*Khoon Lim, PhD, Christchurch, NEW ZEALAND*

University of Otago  
Christchurch, NEW ZEALAND

PAPER #71

**Landing Strategies of Patients Treated for Cartilage Lesions Along with ACL Reconstruction: An In Vivo Biomechanical Study**

**Michail I. Iosifidis, MD, PhD, Thessaloniki, GREECE**

*Anastasios Mpeletsiotis, MD, PhD, Thessaloniki, GREECE*  
*Giannis Giakas, PhD, Trikala, GREECE*  
*Efthymios Iliopoulos, MD, PhD, MBA, Thessaloniki, GREECE*  
*Themis Tsatalas, MS, Trikala, GREECE*  
*Stefanos Kalolythos, MS, Trikala, GREECE*  
*Vasileios Sideris, MSc, Trikala, GREECE*  
*Ioannes Melas, Thessaloniki, GREECE*  
*Kosmas Petras, MD, Thessaloniki, GREECE*  
*George Gkikas, MD, Thessaloniki, GREECE*  
*Dimitrios Metaxiotis, MD, PhD, Thessaloniki, GREECE*

OrthoBiology Surgery Center, Papageorgiou G.H., Institute  
for Research and Technology Thessaly (IRETETH)  
Thessaloniki, Trikala, GREECE

PAPER #72

**Change in Cartilage Volume After Meniscal Allograft Transplantation: A One-Year MRI Study Based on Semi-Automated Graph-Cut Algorithm Method**

**Tae-Hyuk Kim, MD, Seoul, REPUBLIC OF KOREA**

*Seong-Il Bin, MD, PhD, Seoul, REPUBLIC OF KOREA*  
*Jong-Min Kim, MD, PhD, Seoul, REPUBLIC OF KOREA*  
*Bum-Sik Lee, MD, Seoul, REPUBLIC OF KOREA*  
*Jun-Gu Park, MD, Seoul, REPUBLIC OF KOREA*  
*Sung-Mok Oh, MD, Seoul, REPUBLIC OF KOREA*

Department of Orthopedic Surgery, College of Medicine,  
University of Ulsan, Asan Medical Center  
Seoul, REPUBLIC OF KOREA

PAPER #73

**Age, Gender, Symmetrical Isokinetic Quadriceps Strength and Single Leg Hop Test Performance are the Most Important Factors Affecting the Achievement of a Patient-Acceptable Symptom State After Primary Anterior Cruciate Ligament Reconstruction**

**Riccardo Cristiani, MD, Stockholm, SWEDEN**

*Bjorn Engstrom, MD, PhD, Assoc. Prof., Spanga, SWEDEN*  
*Magnus Forssblad, MD, PhD, Stockholm, SWEDEN*  
*Gunnar Edman, MD, PhD, Prof., Stockholm, SWEDEN*  
*Anders Stalman, MD, PhD, Saltsjöbaden, SWEDEN*

Capio Artro Clinic, Stockholm Sports Trauma Research  
Center, Karolinska Institute, FIFA Medical Centre  
of Excellence  
Stockholm, SWEDEN

Concurrent 4–Cozumel 2+A  
11:45–12:00  
Rotator Cuff

PAPER #74

**Biomechanical Effect of Superior Capsule Reconstruction Using a 3-mm and 6-mm Thick Acellular Dermal Patch Graft in a Dynamic Shoulder Model**

**Bastian Scheiderer, MD, Munich, Bavaria, GERMANY**

*Elifho Obopilwe, ME, BSc, Farmington, CT, UNITED STATES*

*Mark P. Cote, PT, DPT, MSCTR, Farmington, CT,*

*UNITED STATES*

*Florian B. Imhoff, MD, Munich, Bavaria, GERMANY*

*Felix Dyrna, MD, Münster, GERMANY*

*Knut Beitzel, MD, MA, Cologne, GERMANY*

*Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY*

*Augustus D. Mazzocca, MD, MS, Farmington, CT,*

*UNITED STATES*

*Daichi Morikawa, MD, PhD, Tokyo, JAPAN*

Department of Orthopaedic Surgery, University of Connecticut  
Farmington, CT, UNITED STATES

PAPER #75

**Preoperative Lymphocyte Monocyte Ratio Affects Outcome After Rotator Cuff Repair**

**Yaying Sun, MD, Shanghai, CHINA**

*Shaohua Liu, MD, Shanghai, CHINA*

*Shuang Cong, MD, Shanghai, CHINA*

*Zheci Ding, MD, Shanghai, CHINA*

*Jinrong Lin, MD, Shanghai, CHINA*

*Jiwu Chen, MD, PhD, Shanghai, CHINA*

Department of Huashan Hospital, Fudan University  
Shanghai, CHINA

Concurrent 4–Cozumel 2+A  
14:30–15:00  
ACL Reconstruction

PAPER #76

**Association between Tibial Plateau Slopes and Early Graft Failure After Anterior Cruciate Ligament Reconstruction**

**Ahmet Kulduk, MD, Istanbul, TURKEY**

*Kerem Sencan, MD, Istanbul, TURKEY*

*Rasit Özcafer, MD, Istanbul, TURKEY*

*Mehmet O. Buyukkusu, MD, Istanbul, TURKEY*

*Engin Çetinkaya, MD, Assoc. Prof., Istanbul, TURKEY*

*Sükrü Sarper Gürsu, MD, Assoc. Prof., Istanbul, TURKEY*

*Vedat Sahin, MD, Istanbul, TURKEY*

MS Baltalimani Bone Research & Educational Hospital  
Istanbul, TURKEY

PAPER #77

**Knee Joint Should Be Reduced in ACL Reconstruction Surgery: Assessment of a New Maneuver**

**Amirmohammad Navali, MD, Toronto, ON, CANADA**

Tabriz University of Medical Sciences

Tabriz, East Azerbaijan, ISLAMIC REPUBLIC OF IRAN

PAPER #78

**ACL-SPORTS Randomized Control Trial 1- and 2-Year Clinical and Functional Outcomes in Women: 100% Return-to-Sport Rates and High Outcome Scores, but No Between Group Differences**

**Jacob J. Capin, PT, DPT, MS, Newark, DE, UNITED STATES**

*Celeste Dix, PT, DPT, MS, Newark, DE, UNITED STATES*

*Angela H. Smith, DPT, Newark, DE, UNITED STATES*

*Jessica L. Johnson, DPT, Newark, DE, UNITED STATES*

*Amelia J. H. Arundale, PT, DPT, SCS, Newark, DE,*

*UNITED STATES*

*Ryan Zarzycki, PT, DPT, Newark, DE, UNITED STATES*

*Lynn Snyder-Mackler, PT, ScD, FAPTA, Newark, DE,*

*UNITED STATES*

University of Delaware

Newark, DE, UNITED STATES

PAPER #79

**Transphyseal ACL Reconstruction in Skeletally Immature Patients: Medium Term Follow-Up with Focus on Gender and Return to Competitive Sports**

**Rodica Marinescu, MD, PhD, Voluntari, Ilfov, ROMANIA**

*lozefina Botezatu, MD, Bucharest, ROMANIA*

*Dan Laptoiu, MD, PhD, Bucharest, ROMANIA*

*Andrei C. Bunea, MD, Bucharest, ROMANIA*

Colentina Clinical Hospital

Bucharest, ROMANIA

PAPER #80

**Ultrastructural Morphology of Anterior Cruciate Ligament Stump in ACL Injured Patients and Semitendinosus Graft Used for ACL Reconstruction with the Help of Electron Microscopy and Light Microscopy: A Comparative Study**

**Hira L. Nag, MS(Orth), New Delhi, New Delhi, INDIA**

AIIMS

New Delhi, New Delhi, INDIA



**TUESDAY, MAY 14, 2019**

**General Session – Gran Cancun  
14:30 – 15:00  
Knee**

PAPER #81

**Posterior Tibial Slope and Risk of Posterior Cruciate Ligament Injury**

**Andrew S. Bernhardson, MD, San Diego, CA, UNITED STATES**

Nicholas N. DePhillipo, MS, ATC, OPE-C, Vail, CO, UNITED STATES

Blake Daney, MD, Akron, OH, UNITED STATES

Mitchell I. Kennedy, Vail, CO, UNITED STATES

Zachary S. Aman, BA, Vail, CO, UNITED STATES

Robert F. LaPrade, MD, PhD, Chanhassen, MN, UNITED STATES

The Steadman Clinic Steadman Philippon Research Institute  
Vail, CO, UNITED STATES

PAPER #82

**Long-Term Clinical and Radiological Outcomes After Knee Multi-Ligament Knee Using a Delayed Ligament Reconstruction Approach**

**Michail E. Chantes, Prof., Larissa, GREECE**

Apostolos Fyllos, MD, Larissa, GREECE

Fotios Papageorgiou, MD, Larissa, GREECE

Ilias Tseronis, MD, Larissa, GREECE

Panagiotis Karakitsios, MD, Larissa, GREECE

Dimitrios Morfis, MD, Volos, GREECE

University Hospital of Larissa, University of Thessalia  
Larissa, GREECE

PAPER #83

**Early vs. Delayed Surgery Results in Similar Outcomes following Multiligament Knee Injury: A Prospective Cohort**

**Daniel B. Whelan, MD, MSc, FRCSC, Toronto, ON, CANADA**

Matthew Rubacha, MD, Toronto, ON, CANADA

Ryan Khan, MSc, BA, Toronto, ON, CANADA

Graeme Hoit, MD, Toronto, ON, CANADA

St. Michael's Hospital  
Toronto, ON, CANADA

PAPER #84

**Outcomes Evaluation of Treatment of Fibular Collateral Ligament Rupture with Cruciate Ligament Injuries**

**Diego C. Astur, MD, PhD, São Paulo, SP, BRAZIL**

Edilson F. De Andrade Jr., MD, São Paulo, SP, BRAZIL

Leonardo A. Ramos, MD, PhD, São Paulo, SP, BRAZIL

Tiago Matiello Zogbi, MD, São Paulo, SP, BRAZIL

Gabriel C. Taniguti, MD, São Paulo, SP, BRAZIL

Jorge L. Yamashita, MD, São Paulo, SP, BRAZIL

Renan M. Chaim, São Paulo, SP, BRAZIL

Moises Cohen, MD, PhD, Prof., São Paulo, SP, BRAZIL

Universidade Federal de São Paulo  
São Paulo, SP, BRAZIL

PAPER #85

**Non-Irradiated Fresh Frozen Allografts for Anterior Cruciate Ligament Reconstruction in Young Active Patients**

**Justin P. Roe, FRACS, A / Prof., Sydney, NSW, AUSTRALIA**

Sarah Shumborski, MD, Sydney, NSW, AUSTRALIA

Emma Heath, MPhy, Sydney, NSW, AUSTRALIA

Lucy J. Salmon, PhD, Sydney, NSW, AUSTRALIA

Leo A. Pinczewski, MBBS, FRACS, FAOA, Sydney, NSW, AUSTRALIA

North Sydney Orthopaedic and Sports Medicine Centre  
Sydney, NSW, AUSTRALIA

**Concurrent 2 – Cozumel 1+5  
11:35 – 12:05  
ACL**

PAPER #86

**Does a Thicker Hamstring or Patella Tendon Graft Reduce the Failure Rate in Anterior Cruciate Ligament Reconstruction in Young Patients?**

**Mark Clatworthy, FRACS, Auckland, NEW ZEALAND**

Andrew Powell, FRCS, Auckland, NEW ZEALAND

Middlemore Hospital, Auckland, NEW ZEALAND



PAPER #87

**Risk Factors for Opioid Use following Anterior Cruciate Ligament Reconstruction**

**Anita G. Rao, MD, Vancouver, WA, UNITED STATES**

Priscilla Chan, MS, San Diego, CA, UNITED STATES  
Heather Prentice, PhD, San Diego, CA, UNITED STATES  
Liz W. Paxton, MA, El Cajon, CA, UNITED STATES  
T. Ted Funahashi, MD, Newport Beach, CA, UNITED STATES  
Gregory B. Maletis, MD, Baldwin Park, CA, UNITED STATES

Kaiser Permanente  
San Diego, CA, UNITED STATES

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PAPER #88

**Age Appropriateness of ACL Injury Prevention Exercises**

Joseph Janosky, DPHc, MS, PT, ATC, New York, NY,  
UNITED STATES

Naomi Roselaar, BA, New York, NY, UNITED STATES  
Brenda Chang, MPH, New York, NY, UNITED STATES  
James Kinderknecht, New York, NY, UNITED STATES

**Robert G. Marx, MD, MSc, FRCSC, New York, NY,  
UNITED STATES**

Hospital for Special Surgery  
New York, NY, UNITED STATES

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PAPER #89

**Patients Frequently Change Surgeon When Undergoing Revision Anterior Cruciate Ligament Reconstruction**

**Simon W. Young, MD, FRACS, Auckland, NEW ZEALAND**

Hamish Love, FRACS, Christchurch, NEW ZEALAND  
Kirsty Sutherland, MBChB(Cand.), Auckland, NEW ZEALAND  
Mark Clatworthy, FRACS, Auckland, NEW ZEALAND

North Shore Hospital  
Auckland, NEW ZEALAND

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PAPER #90

**The Effect of Physcal Closure on Quadriceps Strength and Symmetry After Anterior Cruciate Ligament Reconstruction in Adolescent Patients**

Sean W. Noona, BS, Charlottesville, VA, UNITED STATES  
Stephan G. Bodkin, MEd, ATC, Charlottesville, VA,  
UNITED STATES

**David R. Diduch, MD, MS, Charlottesville, VA, UNITED STATES**

Aaron J. Casp, MD, Charlottesville, VA, UNITED STATES  
Michelle Kew, Charlottesville, VA, UNITED STATES  
Joe Hart, PhD, Charlottesville, VA, UNITED STATES

University of Virginia  
Charlottesville, VA, UNITED STATES

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Concurrent 2–Cozumel 1+5  
14:30–15:00  
Knee

PAPER #91

**Return to Sports and Clinical Outcomes After Arthroscopic Anatomic Posterior Cruciate Ligament Reconstruction with Remnant Preservation Using a Posterior Transseptal Portal in High-Demand Patients**

**Dhong-Won Lee, MD, Seoul, REPUBLIC OF KOREA**

Ji-Nam Kim, MD, Seoul, REPUBLIC OF KOREA  
Sang-Jin Yang, PhD, Seoul, REPUBLIC OF KOREA  
Jin-Goo Kim, MD, PhD, Seoul, REPUBLIC OF KOREA

KonKuk University Medical Center  
Seoul, REPUBLIC OF KOREA

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PAPER #92

**Quadriceps Tendon Vs. Patellar Tendon Autografts in ACL Reconstruction: Outcomes of Muscular, Physical, and Patient-Reported Function**

Jennifer L. Hunnicutt, PhD, ATC, Atlanta, GA, UNITED STATES  
Michelle M. McLeod, PhD, ATC, Charleston, SC,  
UNITED STATES

Chris M. Gregory, PhD, PT, Charleston, SC, UNITED STATES  
**Harris S. Slone, MD, Charleston, SC, UNITED STATES**

Medical University of South Carolina  
Charleston, SC, UNITED STATES

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PAPER #93

**Mechanics of the Knee and Hip Joints During the Pivot Shift Test**

**Niv Marom, MD, New York, NY, UNITED STATES**

Herve Ouanazar, MD, Dubai, UNITED ARAB EMIRATES  
Matthew Tao, MD, Omaha, NE, UNITED STATES  
Mark Amirtharaj, MD, Omaha, NE, UNITED STATES  
Hamid Jahandar, BS, New York, NY, UNITED STATES  
Carl W. Imhauser, PhD, New York, NY, UNITED STATES  
Thomas L. Wickiewicz, MD, New York, NY, UNITED STATES  
Danyal H. Nawabi, MD, FRCS(Orth), New York, NY,  
UNITED STATES  
Andrew D. Pearle, MD, New York, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

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**TUESDAY, MAY 14, 2019**

**Concurrent 2 – Cozumel 1+5  
14:30 – 15:00  
Knee (Cont.)**

**PAPER #94**

**Comparing the Efficacy of Kneeling Stress Radiographs and Weighted Gravity Stress Radiographs to Assess Posterior Cruciate Ligament Insufficiency**

*Charles Lee Holliday, BS, Ann Arbor, MI, UNITED STATES*  
*Ryan Martin, FRCSC, Calgary, AB, CANADA*  
**John A. Grant, MD, PhD, FRCSC, Ann Arbor, MI, UNITED STATES**

University of Michigan and the University of Calgary  
Ann Arbor, MI, UNITED STATES

**PAPER #95**

**Are Increased Serum Ions Following Less Complex Revision Knee Arthroplasty with a Metal-on-Metal Hinge a Concern at Mid-Term Follow-Up?**

**Antonio Klasan, MD, Chatswood, NSW, AUSTRALIA**  
*Turgay Efe, MD, Prof., Marburg, Hesse, GERMANY*  
*Susanne Fuchs-Winkelmann, MD, Assoc. Prof., Marburg, Hesse, GERMANY*  
*Thomas J. Heyse, MD, PhD, Marburg, Hesse, GERMANY*

University of Marburg, Department of Orthopedics and Trauma Surgery  
Marburg, Hesse, GERMANY

**Concurrent 2 – Cozumel 1+5  
15:45 – 16:00  
Albert Trillat Young Investigator's Award**

**PAPER #220**

**Anterolateral Procedures in Combination with an Anterior Cruciate Ligament Reconstruction: A Biomechanical Analysis of Commonly Used Procedures in a Cadaveric Model**

**Thomas Neri, MD, PhD, Asst. Prof., Saint-Etienne, FRANCE**  
*Brian M. Devitt, MD, FRCS, FRACS, Melbourne, VIC, AUSTRALIA*

*Richard Appleyard, PhD, Sydney, NSW, AUSTRALIA*  
*David A. Parker, MBBS, BMedSc, FRACS, Sydney, NSW, AUSTRALIA*  
*Danè Dabirrahmani, PhD, Sydney, NSW, AUSTRALIA*  
*Aaron Beach, PhD, Sydney, NSW, AUSTRALIA*  
*Sven Putnis, MBChB, FRCS(Orth), Sydney, NSW, AUSTRALIA*  
*Samuel Grasso, PhD, BME, Chatswood, NSW, AUSTRALIA*  
*Joseph Cadman, PhD, Sydney, NSW, AUSTRALIA*  
*Takeshi Oshima, MD, PhD, Sydney, NSW, AUSTRALIA*  
*Brett A. Fritsch, MBBS, BMedSc, Hunters Hill, NSW, AUSTRALIA*  
*Myles R. J. Coolican, FRACS, Sydney, NSW, AUSTRALIA*  
Sydney Orthopaedic Research Institute  
Sydney, NSW, AUSTRALIA

**Concurrent 2 – Cozumel 1+5  
16:15 – 16:30  
Paolo Aglietti Award**

**PAPER #219**

**Outlier Alignment Does Not Adversely Affect Implant Survival and Function Ten Years After Kinematically Aligned Total Knee Arthroplasty Performed without Restrictions on Preoperative Deformity**

**Trevor Shelton, MD, MS, Sacramento, CA, UNITED STATES**  
*Stephen M. Howell, MD, Sacramento, CA, UNITED STATES*  
*Maury L. Hull, PhD, Davis, CA, UNITED STATES*

University of California, Davis  
Sacramento, CA, UNITED STATES

Concurrent 3–Cozumel 3+4  
11:35–12:05

Richard B. Caspari Award Finalist Presentations

PAPER #96

**Intraarticular Biomechanical Environment After Bristow and Latarjet Procedures in Shoulders with Large Glenoid Defects: Relationship to Postoperative Complications**

**Hirota Sano, MD, PhD, Sendai, Miyagi, JAPAN**

*Tatsuro Komatsuda, MD, PhD, Sendai, Miyagi, JAPAN*

*Hiroo Abe, MD, PhD, Sendai, JAPAN*

*Hiroshi Ozawa, MD, PhD, Sendai, Miyagi, JAPAN*

*Jun Kumagai, MD, PhD, Yamagata, Miyagi, JAPAN*

*Toshimitsu A. Yokobori, PhD, Tokyo, JAPAN*

Division of Orthopedics, Sendai City Hospital  
Sendai, Miyagi, JAPAN

PAPER #97

**Glenoid Retroversion is an Important Factor for Humeral Head Centration and the Biomechanics of Posterior Shoulder Stability**

**Felix Dyrna, MD, Münster, GERMANY**

*Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY*

*Julian Mehl, MD, Munich, Bavaria, GERMANY*

*Elifho Obopilwe, ME, BSc, Farmington, CT, UNITED STATES*

*Augustus D. Mazzocca, MD, MS, Farmington, CT, UNITED STATES*

*Robert A. Arciero, MD, Farmington, CT, UNITED STATES*

*Florian B. Imhoff, MD, Munich, Bavaria, GERMANY*

University of Connecticut Health Center  
Farmington, CT, UNITED STATES

PAPER #98

**Prospective Evaluation of Glenoid Bone Loss After First-Time and Recurrent Anterior Glenohumeral Instability Events**

**Sean E. Slaven, MD, Washington, DC, UNITED STATES**

*Jonathan F. Dickens, MD, Bethesda, MD, UNITED STATES*

*Kenneth L. Cameron, PhD, MPH, ATC, West Point, NY, UNITED STATES*

*Adam M. Pickett, MD, West Point, NY, UNITED STATES*

*Matthew Posner, MD, West Point, NY, UNITED STATES*

*Scot Campbell, MD, San Antonio, TX, UNITED STATES*

*Brett D. Owens, MD*

Walter Reed National Military Medical Center  
Bethesda, MD, UNITED STATES

PAPER #99

**Failed Dermal Allograft Procedures for Irreparable Rotator Cuff Tears Can Still Improve Pain and Function: The “Biologic Tuberooplasty Effect”**

**Raffy Mirzayan, MD, Baldwin Park, CA, UNITED STATES**

*Michael A. Stone, MD, Pasadena, CA, UNITED STATES*

*Michael Batech, DrPH, Pasadena, CA, UNITED STATES*

*Daniel Acevedo, MD, Calabasas, CA, UNITED STATES*

*Anshuman Singh, MD, San Diego, CA, UNITED STATES*

Kaiser Permanente Southern California  
Baldwin Park, CA, UNITED STATES

Concurrent 3–Cozumel 3+4  
14:30–15:00  
Rotator Cuff

PAPER #100

**Relationship Between Deltoid and Rotator Cuff Muscles During Dynamic Shoulder Abduction: A Biomechanical Study of Rotator Cuff Tear Progression**

**Felix Dyrna, MD, Münster, GERMANY**

*Neil S. Kumar, MD, Brandon, FL, UNITED STATES*

*Bastian Scheiderer, MD, Munich, Bavaria, GERMANY*

*Knut Beitzel, MD, MA, Cologne, GERMANY*

*Robert A. Arciero, MD, Farmington, CT, UNITED STATES*

*Anthony A. Romeo, MD, Scarsdale, NY, UNITED STATES*

*Augustus D. Mazzocca, MD, MS, Farmington, CT, UNITED STATES*

University of Connecticut Health Center  
Farmington, CT, UNITED STATES

PAPER #101

**Beta-3 Adrenergic Receptor Agonist Improves Rotator Cuff Muscle Rehabilitation and Shoulder Function After Delayed Tendon Repair in Mice**

**Zili Wang, PhD, San Francisco, CA, UNITED STATES**

*Xuhui Liu, MD, San Francisco, CA, UNITED STATES*

*Mengyao Liu, BA, San Francisco, CA, UNITED STATES*

*Carlin Lee, MD, San Francisco, CA, UNITED STATES*

*Hubert Kim, MD, San Francisco, CA, UNITED STATES*

*Brian Feeley, MD, San Francisco, CA, UNITED STATES*

University of California San Francisco  
San Francisco, CA, UNITED STATES



**TUESDAY, MAY 14, 2019**

**Concurrent 3–Cozumel 3+4  
14:30–15:00  
Rotator Cuff (Cont.)**

**PAPER #102**

**Treatment of Supraspinatus Degeneration in Mice Rotator Cuff Tear Model with Myostatin Antibody**

**Jinrong Lin, MD, Shanghai, CHINA**

*Yaying Sun, MD, Shanghai, CHINA*

*Jiwu Chen, MD, PhD, Shanghai, CHINA*

Huashan Hospital affiliated with Fudan University  
Shanghai, CHINA

**PAPER #103**

**Effects of Polydeoxyribonucleotide and Polynucleotide on Healing and Fatty Degeneration of Rotator Cuff in Diabetic Rat Model**

**Jung-Taek Hwang, MD, PhD, Chuncheon, Gangwon, REPUBLIC OF KOREA**

Chuncheon Sacred Heart Hospital, Hallym University Medical College  
Chuncheon-si, Gangwon, REPUBLIC OF KOREA

**PAPER #104**

**Minimum Five-Year Outcomes and Clinical Survivorship for Arthroscopic Transosseous Equivalent Double Row Rotator Cuff Repair: A Comparison of Techniques**

**Jonas Pogorzelski, MD, PhD, MHBA, Munich, Bavaria, GERMANY**

*Erik M. Fritz, MD, Minneapolis, MN, UNITED STATES*

*Marilee P. Horan, MPH, Vail, CO, UNITED STATES*

*J. Christoph Katthagen, MD, Münster, NRW, GERMANY*

*Zaamin B. Hussain, MD, Oxford, UNITED KINGDOM*

*Jonathan Godin, MD, MBA, Roanoke, VA, UNITED STATES*

*Peter J. Millett, MD, MSc, Vail, CO, UNITED STATES*

Steadman Philippon Research Institute and  
The Steadman Clinic  
Vail, CO, UNITED STATES

**Concurrent 3–Cozumel 3+4  
16:30–17:30  
Lower Limb**

**PAPER #105**

**Pre-Operative Performance of PROMIS in Patients with Femoroacetabular Impingement**

**Benedict U. Nwachukwu, MD, MBA, Chicago, IL, UNITED STATES**

*Elizabeth B. Gausden, MD, New York, NY, UNITED STATES*

*Kyle Kunze, BA, Chicago, IL, UNITED STATES*

*Bhavik H. Patel, BS, BA, Chicago, IL, UNITED STATES*

*Jorge Chahla, MD, PhD, Chicago, IL, UNITED STATES*

*Kelechi R. Okoroha, MD, Chicago, IL, UNITED STATES*

*Shane Nho, MD, Chicago, IL, UNITED STATES*

Rush University  
Chicago, IL, UNITED STATES

**PAPER #106**

**Impingement Simulation Based on Virtually Reconstructed Acetabular Labrum by Patient-Specific 3-Dimensional Data**

**Shota Higashihira, MD, Yokohama, JAPAN**

*Naomi Kobayashi, MD, PhD, Yokohama, JAPAN*

*Hyonmin Choe, MD, PhD, Yokohama, JAPAN*

*Hiroyuki Ike, MD, PhD, Yokohama, JAPAN*

*Taro Tezuka, MD, PhD, Yokohama, JAPAN*

*Yutaka Inaba, MD, PhD, Yokohama, JAPAN*

Yokohama City University  
Yokohama, JAPAN

**PAPER #107**

**Arthroscopic Management of Femoral Acetabular Impingement with Concomitant Os Acetabuli Lesion**

**Elan J. Golan, MD, Pittsburgh, PA, UNITED STATES**

*Srino Bharam, MD, New York, NY, UNITED STATES*

Lenox Hill Hospital  
New York, NY, UNITED STATES

**PAPER #108**

**Hip Arthroscopy within 3 Months of an Intraarticular Injection: Is it Safe?**

**J.W. Thomas Byrd, MD, Nashville, TN, UNITED STATES**

*Elizabeth A. Bardowski, MSN, APN, ACNP-BC, Nashville, TN, UNITED STATES*

*Ashley N. Civils, LPN, Nashville, TN, UNITED STATES*

*Sharon E. Parker, BA, Nashville, TN, UNITED STATES*

Nashville Hip Institute  
Nashville, TN, UNITED STATES



PAPER #109

**Acetabular Subchondral and Cortical Breach during Labral Repair with Suture Anchors: Influence of Portal Location, Curved vs. Straight Drill Guides, and Drill Starting Point**

**Guillaume D. Dumont, MD, Columbia, SC, UNITED STATES**

*Adam Money, MD, Columbia, SC, UNITED STATES*

*Zachary Thier, BS, Columbia, SC, UNITED STATES*

University of South Carolina  
Columbia, SC, UNITED STATES

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PAPER #110

**Impact of Femoroacetabular Impingement Bony Abnormalities on Severity of Labral Injury**

**Guillaume D. Dumont, MD, Columbia, SC, UNITED STATES**

*Thomas Ergen, MD, Columbia, SC, UNITED STATES*

*Matthew Pacana, MD, Columbia, SC, UNITED STATES*

*Adam Money, MD, Columbia, SC, UNITED STATES*

*Allen Barnes, BS, Columbia, SC, UNITED STATES*

University of South Carolina School of Medicine  
Columbia, SC, UNITED STATES

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PAPER #111

**Technique and Early Results of a Two-Incision, Minimally Invasive Interlocking Periacetabular Osteotomy**

*K. L. Welton, MD, Boulder, CO, UNITED STATES*

*Matthew J. Kraeutler, MD, Cedar Grove, NJ, UNITED STATES*

*Jesse A. Goodrich, BA, Boulder, CO, UNITED STATES*

*Sivashanmugam Raju, MBBS, MS, Creve Coeur, MO, UNITED STATES*

*Tigran Garabekyan, MD, Huntington, WV, UNITED STATES*

**Omer Mei-Dan, MD, Boulder, CO, UNITED STATES**

University of Colorado School of Medicine  
Aurora, CO, UNITED STATES

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PAPER #112

**Do Femoral Head Osteochondral Lesions Predict a Poor Outcome in Hip Arthroscopy Patients?: A Matched Control Study with Minimum Five-Year Follow Up**

*Lyall J. Ashberg, MD, Atlantis, FL, UNITED STATES*

*Mary J. Close, BS, Chicago, IL, UNITED STATES*

*Itay Perets, MD, Jerusalem, ISRAEL*

*Edwin O. Chaharbakshi, BS, Chicago, IL, UNITED STATES*

*John P. Walsh, MA, Des Moines, IA, UNITED STATES*

*Benjamin G. Domb, MD, Chicago, IL, UNITED STATES*

American Hip Institute  
Chicago, IL, UNITED STATES

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PAPER #113

**Utility of 3D Printed Models in the Treatment of Femoroacetabular Impingement**

*Anjaneyulu Purnachandra Tejaswi Ravipati, MS, DNB, Halifax, NS, CANADA*

**Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med, Halifax, NS, CANADA**

Dalhousie University and Nova Scotia Health Authority  
Halifax, NS, CANADA

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PAPER #114

**A Model Using Patient-Specific Data to Predict Severe Cartilage Damage of the Hip**

*Hajime Utsunomiya, MD, PhD, Vail, CO, UNITED STATES*

*Karen K. Briggs, MPH, MBS, Vail, CO, UNITED STATES*

**Grant J. Dornan, MSc, Vail, CO, UNITED STATES**

*Renato Locks, PR, BRAZIL*

*Ioanna Bolia, MD, MSc, Vail, CO, UNITED STATES*

*Marc J. Philippon, MD, Vail, CO, UNITED STATES*

Steadman Philippon Research Institute  
Vail, CO, UNITED STATES

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PAPER #115

**The Proximal and Distal Effects of Blood Flow Restriction Therapy on the Upper and Lower Extremity Strengthening: A Randomized Controlled Trial**

*Eric N. Bowman, MD, MPH, Nashville, TN, UNITED STATES*

*Rami Elshaar, Rochester, NY, UNITED STATES*

*Heather Milligan, PT, Los Angeles, CA, UNITED STATES*

*Greg N. Jue, PT, Los Angeles, CA, UNITED STATES*

**Karen Mohr, PT, Los Angeles, CA, UNITED STATES**

*Patty N. Brown, PT, Manhattan Beach, CA, UNITED STATES*

*Drew M. Watanabe, BS, Los Angeles, CA, UNITED STATES*

*Orr Limpisvasti, Seal Beach, CA, UNITED STATES*

Kerlan-Jobe Orthopaedic Clinic  
Los Angeles, CA, UNITED STATES

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PAPER #116

**Clinical Outcomes After Conservative Treatment of Hip Microinstability**

**Leandro Ejnisman, MD, PhD, São Paulo, SP, BRAZIL**

*Marc R. Safran, MD, Prof., Redwood City, CA, UNITED STATES*

Stanford University  
Redwood City, CA, UNITED STATES

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**TUESDAY, MAY 14, 2019**

**Concurrent 3–Cozumel 3+4  
16:30–17:30  
Lower Limb (Cont.)**

PAPER #117

**Femoroacetabular Impingement Randomized Controlled Trial (First): A Multi-Centre Randomized Controlled Trial Comparing Arthroscopic Lavage and Arthroscopic Osteochondroplasty on Patient Important Outcomes in the Treatment of Young Adult FAI**

**Olufemi R. Ayeni, MD, PhD, MSc, FRCSC, Hamilton, ON, CANADA**

FIRST Investigators, MD, Hamilton, ON, CANADA

McMaster University  
Hamilton, ON, CANADA

PAPER #118

**Perineal Pressure During Hip Arthroscopy is Reduced by Routine Introduction of Trendelenburg: A Prospective Study of 50 Consecutive Patients with Randomized Order of Positioning**

Ajay C. Lall, MD, MS, Westmont, IL, UNITED STATES  
Ardavan Saadat, MD, Chicago, IL, UNITED STATES  
Muriel Battaglia, BA, Chicago, IL, UNITED STATES  
David R. Maldonado, MD, Elmhurst, IL, UNITED STATES  
Itay Perets, MD, Jerusalem, ISRAEL  
Benjamin G. Domb, MD, Chicago, IL, UNITED STATES

American Hip Institute  
Chicago, IL, UNITED STATES

PAPER #119

**Utility of MRI to Predict Severity and Location of Pathology at Arthroscopy in Patients with Femoroacetabular Impingement**

**Stephen L. Lyman, PhD, New York, NY, UNITED STATES**

Danyal H. Nawabi, MD, FRCS(Orth), New York, NY, UNITED STATES

Alissa J. Burge, MD, New York, NY, UNITED STATES  
Kara Fields, MPH, New York, NY, UNITED STATES  
Bryan T. Kelly, MD, New York, NY, UNITED STATES  
Matthew Koff, PhD, New York, NY, UNITED STATES  
Hollis G. Potter, MD, New York, NY, UNITED STATES  
Robert G. Marx, MD, MSc, FRCSC, New York, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

PAPER

**Arthroscopic Outcomes as a Function of Acetabular Coverage from a Large Hip Arthroscopy Study Group**

**Dean K. Matsuda, MD, Marina Del Rey, CA UNITED STATES**

Shane Nho, MD, Chicago, IL UNITED STATES  
Andrew B. Wolff, MD, McLean, VA UNITED STATES  
Benjamin Kivlan, PhD, DPT, Philadelphia, PA UNITED STATES  
John P. Salvo Jr., MD, Marlton, NJ UNITED STATES  
John Christoforetti, MD, Pittsburgh, PA UNITED STATES  
Thomas J. Ellis, MD, Columbus, OH UNITED STATES  
Dominic S. Carreira, MD, Atlanta, GA UNITED STATES

Multiple Centers Across USA, Los Angeles, CA, UNITED STATES

**Concurrent 4–Cozumel 2+A  
11:35–12:05  
Other**

PAPER #120

**First-Time Lateral Patella Dislocation: Which Imaging Method Should We Use CT or MRI?**

**Ran Thein, MD, Ramat-Gan, ISRAEL**

Shahar Dekel, Ramat-Gan, ISRAEL  
Sagie Haziza, Ramat-Gan, ISRAEL  
Gideon Burstein, MD, Ramat Efal, ISRAEL  
Iris Eshed, MD, Ramat Gan, ISRAEL  
Shay Tenenbaum, MD, Tel-Hashomer, ISRAEL

Sheba Medical Center  
Tel-Hashomer, ISRAEL

PAPER #121

**Efficacy of Early Controlled Motion of the Ankle Compared with No Motion in Non-Operative Treatment of Patients with an Acute Achilles Tendon Rupture: An Assessor Blinded Randomized Controlled Trial**

**Kristoffer W. Barfod, MD, PhD, Copenhagen, DENMARK**

Maria S. Hansen, PT, MSc, Copenhagen, DENMARK  
Per Hölmich, DMSc, Prof., Copenhagen, DENMARK  
Morten T. Kristensen, PT, PhD, Copenhagen, DENMARK  
Anders Troelsen, MD, PhD, DMSc, Prof., Copenhagen, DENMARK

Sports Orthopedic Research Center–Copenhagen (SORC-C), Arthroscopic Center, Department of Orthopedic Surgery, Copenhagen University Hospital Hvidovre  
Copenhagen, DENMARK

PAPER #122

**Optimizing Opiate Use in Hip Arthroscopy**

Ryan S. Selley, MD, Chicago, IL, UNITED STATES  
Matthew J. Hartwell, MD, Chicago, IL, UNITED STATES  
Bennet Butler, MD, Chicago, IL, UNITED STATES  
**Vehniah K. Tjong, MD, FRCSC, Chicago, IL, UNITED STATES**  
Michael Terry, MD, Chicago, IL, UNITED STATES

Northwestern Memorial Hospital  
Chicago, IL, UNITED STATES

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PAPER #123

**3-Tesla Resonance Efficiency in the Study of  
Coxofemoral Chondral Lesions in Patients with  
Femoroacetabular Impingement**

Luis Moya, MD, Santiago, CHILE  
Jorge Cabroler, MD, Santiago, CHILE  
Alan Garín, MD, Santiago, CHILE  
**Macarena Santorcuato, MD, Santiago, CHILE**  
Jaime A. Lopez, MD, Santiago, CHILE

Clinica Alemana Santiago  
Santiago, CHILE

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PAPER #124

**Referent Weight Bearing Parameters on an Elliptical Trainer**

**Yonatan Kaplan, PhD, MSc(Med), BSc(Physio), Mount Scopus,  
ISRAEL**

Jerusalem Sports Medicine Institute, Lerner Sports Center,  
Hebrew University  
Jerusalem, ISRAEL

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Concurrent 4–Cozumel 2+A  
16:15–16:45

John J. Joyce Award Finalist Presentations

PAPER #125

**Primary Stability of an Acromioclavicular Joint Repair Is  
Affected by the Type of Additional Reconstruction of the  
Acromioclavicular Capsule**

**Felix Dyrna, MD, Münster, GERMANY**  
Sepp Braun, MD, PhD, Munich, Bavaria, GERMANY  
Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY  
Elifho Obopilwe, ME, BSc, Farmington, CT, UNITED STATES  
Augustus D. Mazzocca, MD, MS, Farmington, CT,  
UNITED STATES  
Knut Beitzel, MD, MA, Cologne, GERMANY

University of Connecticut Health Center  
Farmington, CT, UNITED STATES

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PAPER #126

**Postoperative Recovery Comparisons of Latissimus Dorsi  
Transfer to Lower Trapezius Transfer for the Treatment of  
Massive Rotator Cuff Tears**

**Jarret M. Woodmass, MD, FRCSC, Winnipeg, MB, CANADA**  
Eric R. Wagner, MD, MS, Atlanta, GA, UNITED STATES  
Michelle Chang, BS, Boston, MA, UNITED STATES  
Kathryn Welp, MS, Boston, MA, UNITED STATES  
Laurence Higgins, MD, Brookline, MA, UNITED STATES  
Jon J. P. Warner, MD, Boston, MA, UNITED STATES

Boston Shoulder Institute, Harvard University  
Boston, MA, UNITED STATES

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PAPER #127

**Absence of Ligament Progenitor Cells in the Pediatric Knee  
Anterolateral Complex**

**Tomoya Iseki, MD, Pittsburgh, PA, UNITED STATES**

Benjamin B. Rothrauff, MD, PhD, Pittsburgh, PA,  
UNITED STATES  
Shinsuke Kihara, MD, PhD, Pittsburgh, PA, UNITED STATES  
Kevin G. Shea, MD, Stanford, CA, UNITED STATES  
Freddie H. Fu, MD, Pittsburgh, PA, UNITED STATES  
Peter G. Alexander, PhD, Pittsburgh, PA, UNITED STATES  
Volker Musahl, MD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

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PAPER #128

**Preoperative Fascia Iliaca Compartment Blockade for Hip  
Arthroscopy: A Multicenter, Prospective, Randomized,  
Controlled, and Triple-Blinded Study**

**Blake M. Bodendorfer, MD, Washington, DC, UNITED STATES**

Madeline Lyons, MD, Chicago, IL, UNITED STATES  
Melissa Soderquist, BS, Washington, DC, UNITED STATES  
Neil Sarna, BS, Washington, DC, UNITED STATES  
Luc Fortier, BS, Washington, DC, UNITED STATES  
William Ferris, BS, Washington, DC, UNITED STATES  
Vishal A. Mehta, DO, Baltimore, MD, UNITED STATES  
Brent Gilmore, MD, Washington, DC, UNITED STATES  
William F. Postma, MD, Bethesda, MD, UNITED STATES

Georgetown University Medical Center  
Washington, DC, UNITED STATES

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**WEDNESDAY, MAY 15, 2019**

**General Session – Gran Cancun  
14:15 – 15:00  
ACL**

PAPER #129

**Knee Laxities Correlates with In Vivo Tibio-Femoral Kinematics during Single-Leg Squat in ACL Deficient Patients: An Evaluation with Surgical Navigation and Dynamic RSA**

**Stefano Zaffagnini, MD, Prof., Bologna, ITALY**

*Alberto Grassi, MD, Bologna, ITALY  
Umberto Cardinale, MD, Bologna, ITALY  
Luca Macchiarola, MD, Bologna, ITALY  
Laura Bragonzoni, PhD, Bologna, ITALY  
Marco Bontempi, Bologna, ITALY*

Istituto Ortopedico Rizzoli  
Bologna, ITALY

PAPER #130

**Predictors of Poor Outcome Following ACL Reconstruction with or without Lateral Extra-Articular Tenodesis: The Stability Experience**

**Dianne M. Bryant, PhD, London, ON, CANADA**

*Davide Bardana, MD, Kingston, ON, CANADA  
Alex Rezanoff, MD, FRCSC, Calgary, AB, CANADA  
Stability Study Group, MD, London, ON, CANADA  
Alan Getgood, MD, FRCS(Tr&Orth), DipSEM, London, ON, CANADA  
Robert Litchfield, MD, FRCSC, London, ON, CANADA  
Robert G. McCormack, MD, New Westminster, BC, CANADA  
Mark A. Heard, MD, FRCS, Canmore, AB, CANADA  
Peter B. Macdonald, MD, FRCS, Dip Sport Med, Winnipeg, MB, CANADA*

*Tim Spalding, FRCS(Orth), Coventry, West Midlands, UNITED KINGDOM*

*Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM  
Devin Peterson, London, ON, CANADA*

Fowler Kennedy Sport Medicine Clinic,  
Western University  
London, ON, CANADA

PAPER #131

**Return to Sport Following Anterior Cruciate Ligament Reconstruction with or without a Lateral Extra-Articular Tenodesis: Results from the ISAKOS-Sponsored Stability Study**

**Alex Rezanoff, MD, FRCSC, Calgary, AB, CANADA**

*Devin Peterson, London, ON, CANADA  
Davide Bardana, MD, Kingston, ON, CANADA  
Stability Study Group, MD, London, ON, CANADA  
Alan Getgood, MD, FRCS(Tr&Orth), DipSEM, London, ON, CANADA  
Dianne M. Bryant, PhD, London, ON, CANADA  
Robert Litchfield, MD, FRCSC, London, ON, CANADA  
Robert G. McCormack, MD, New Westminster, BC, CANADA  
Mark A. Heard, MD, FRCS, Canmore, AB, CANADA  
Peter B. Macdonald, MD, FRCS, Dip Sport Med, Winnipeg, MB, CANADA  
Tim Spalding, FRCS(Orth), Coventry, West Midlands, UNITED KINGDOM  
Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM*

Fowler Kennedy Sport Medicine Clinic,  
Western University  
London, ON, CANADA

PAPER #132

**Can We Stop Asking So Many Questions?: Evaluating Responsiveness in Selected Patient Reports Outcome Measures, A Delaware-Oslo Cohort Study**

**Jessica L. Johnson, DPT, Newark, DE, UNITED STATES**

*James J. Irrgang, PT, PhD, FAPTA, Pittsburgh, PA, UNITED STATES  
May Arna Risberg, PT, PhD, Oslo, NORWAY  
Lynn Snyder-Mackler, PT, ScD, FAPTA, Newark, DE, UNITED STATES*

University of Delaware  
Newark, DE, UNITED STATES

PAPER #133

**Failure and Reoperation Rates Following Arthroscopic Primary Repair vs. Reconstruction of the Anterior Cruciate Ligament**

**Jelle P. van der List, MD, Amsterdam, NETHERLANDS  
Daan Vermeijden, BA, Amsterdam, NETHERLANDS**

*Anne Jonkergouw, MD, New York, NY, UNITED STATES  
Gregory S. Difelice, MD, New York, NY, UNITED STATES*

Hospital for Special Surgery  
New York, NY, UNITED STATES



PAPER #134

**The Effect of Vancomycin Pre-Soaking of the Graft on Postoperative Infection-Rate, Graft Failure and Arthrofibrosis in ACL Reconstruction**

**Christoph Offerhaus, MD, Konstanz, GERMANY**

Maurice Balke, MD, Köln, GERMANY

Juergen Hoehner, MD, PhD, Cologne, GERMANY

Sportsclinic Cologne, University of Witten-Herdecke  
Köln, GERMANY

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PAPER #135

**Transphyseal Anterior Cruciate Ligament Reconstruction In The Skeletally Immature: Outcome in 148 Tanner 1–3 Children**

Justin P. Roe, FRACS, A/Prof., Sydney, NSW, AUSTRALIA

**Koushik Ghosh, MD, Sydney, NSW, AUSTRALIA**

Lucy J. Salmon, PhD, Sydney, NSW, AUSTRALIA

Leo A. Pinczewski, MBBS, FRACS, FAOA, Sydney, NSW, AUSTRALIA

North Sydney Orthopaedic and Sports Medicine Centre  
Sydney, NSW, AUSTRALIA

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General Session – Gran Cancun  
17:00 – 17:30  
ACL

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PAPER #136

**Tunnel Location and Two-Year Clinical Outcomes After the Anatomical Rectangular Tunnel Anterior Cruciate Ligament Reconstruction with a Bone Patellar-Tendon Bone Graft**

**Yuta Tachibana, MD, PhD, Sakai, Asia, JAPAN**

Konsei Shino, MD, PhD, Osaka, Osaka, JAPAN

Tatsuo Mae, MD, PhD, Suita, Osaka, JAPAN

Ryo Iuchi, MD, Osaka, Osaka, JAPAN

Take Yasuhiro, MD, PhD, Osaka, Osaka, JAPAN

Shigeto Nakagawa, MD, Osaka, Osaka, JAPAN

Yukioka Hospital  
Osaka, JAPAN

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PAPER #137

**Athletes Under the Age of 20 following Primary Anterior Cruciate Ligament Reconstruction: Risk Profile Comparing Three Patient Groups Predicated upon Skeletal Age**

**Frank A. Cordasco, MD, MS, New York, NY, UNITED STATES**

Sheena R. Black, MD, Dallas, TX, UNITED STATES

Meghan Price, BS, New York, NY, UNITED STATES

Colleen Wixted, BS, Durham, NC, UNITED STATES

Michael Heller, ATC, PES, CES, New York, NY,  
UNITED STATES

Lori Ann Asaro, PA-C, MS, New York, NY, UNITED STATES

Joseph T. Nguyen, MPH, New York, NY, UNITED STATES

Daniel W. Green, MD, MS, New York, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

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PAPER #138

**Is a Stenotic Intercondylar Notch a Risk Factor for Failure in Skeletally Immature Athletes Who Undergo ACL Reconstructions?**

**Maria Tuca, MD, Santiago, CHILE**

Elizabeth B. Gausden, MD, New York, NY, UNITED STATES

Frank A. Cordasco, MD, MS, New York, NY, UNITED STATES

Daniel W. Green, MD, MS, New York, NY, UNITED STATES

Hospital for Special Surgery  
New York, NY, UNITED STATES

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PAPER #139

**Psychological Readiness to Return to Sport is Associated with Second Anterior Cruciate Ligament Injuries**

Kate E. Webster, PhD, Melbourne, VIC, AUSTRALIA

**April McPherson, Rochester, MN, UNITED STATES**

Julian A. Feller, FRACS, Melbourne, VIC, AUSTRALIA

Timothy E. Hewett, PhD, Rochester, MN, UNITED STATES

La Trobe University and OrthoSport Victoria  
Melbourne, VIC, AUSTRALIA

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PAPER #140

**Prospective Clinical Feasibility Study of a PLLA Scaffold for Primary ACL Reconstruction with Three-Year Follow-Up**

**Kees van Egmond, MD, Nieuwleusen, Overijssel, NETHERLANDS**

Robert A. Arciero, MD, Farmington, CT, UNITED STATES

Pieter Van Dyck, MD, PhD, Edegem, BELGIUM

Robert A. Stanton, MD, Fairfield, CT, UNITED STATES

Reinoud W. Brouwer, MD PhD, Groningen, NETHERLANDS

Isala Klinieken  
Zwolle, NETHERLANDS

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WEDNESDAY, MAY 15, 2019

Concurrent 2 – Cozumel 1+5  
16:30 – 17:30  
Shoulder

PAPER #141

**Lower Combined Cortical Thickness is Associated with Poorer Functional Outcomes After Arthroscopic Rotator Cuff Repair**

**Merrill Lee, MBBS, MRCS(Edin), Singapore, SINGAPORE**

*Jerry Chen, MBBS, MRCS(Edin), MMed(Orth), Singapore, SINGAPORE*

*Denny T. T. Lie, MBBS, FRCS, FAMS, Singapore, SINGAPORE*

Singapore General Hospital  
Singapore, SINGAPORE

PAPER #142

**Effect of Dexmedetomidine Combined with Suprascapular Nerve Block and Axillary Nerve Block in Arthroscopic Rotator Cuff Repair: A Randomized Controlled Trial**

**Jung-Taek Hwang, MD, PhD, Chuncheon, Gangwon, REPUBLIC OF KOREA**

Chuncheon Sacred Heart Hospital, Hallym University Medical College  
Chuncheon-si, Gangwon, REPUBLIC OF KOREA

PAPER #143

**Revision Rotator Cuff Reconstruction Results in Good Clinical Outcome Despite High Failure Rate in MRI in Mid-Term Follow-Up**

**Lukas Willinger, MD, London, UNITED KINGDOM**

*Lucca Lacheta, MD, Vail, CO, UNITED STATES*

*Knut Beitzel, MD, MA, Cologne, GERMANY*

*Stefan Buchmann, MD, Munich, Bavaria, GERMANY*

*Klaus Wörtler, MD, Prof., Munich, Bavaria, GERMANY*

*Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY*

*Bastian Scheiderer, MD, Munich, Bavaria, GERMANY*

Department for Orthopaedic Sports Medicine, Klinikum rechts der Isar, TU Munich  
Munich, GERMANY

PAPER #144

**Rotator Cuff Arthroscopic Repair in Patients Aged 80 Years or Over**

**Ignacio Tanoira, MD, Buenos Aires, ARGENTINA**

*Maximiliano Ranalletta, MD, Buenos Aires, ARGENTINA*

*Luciano A. Rossi, MD, Buenos Aires, ARGENTINA*

*Bernardo A. Bertona-Altieri, MD, Buenos Aires, ARGENTINA*

*Guillermina Bruchmann, MD, Buenos Aires, ARGENTINA*

*Javier E. Sanchez-Saba, MD, Buenos Aires, ARGENTINA*

Hospital Italiano de Buenos Aires  
Buenos Aires, ARGENTINA

PAPER #145

**Effect of Preoperative Subacromial Injection on Postoperative Clinical Outcome in Patients with Arthroscopic Rotator Cuff Repair**

**Yosuke Nakamura, MD, Kurume, Fukuoka, JAPAN**

*Masafumi Gotoh, MD, PhD, Kurume, Fukuoka, JAPAN*

*Yasuhiro Mitsui, MD, PhD, Saga, Saga, JAPAN*

*Hirokazu Honda, MD, PhD, Kurume, Fukuoka, JAPAN*

*Hiroki Ohzono, MD, Kurume, Fukuoka, JAPAN*

*Hisao Shimokobe, MD, Kurume, Fukuoka, JAPAN*

*Naoto Shiba, MD, PhD, Kurume, Fukuoka, JAPAN*

Kurume University  
Kurume, Fukuoka, JAPAN

PAPER #146

**Higher Critical Shoulder Angle is Not Associated with Post-Operative Functional Outcomes following Arthroscopic Rotator Cuff Repair**

**Jóni Nunes, MD, Braga, PORTUGAL**

*Ana Correia, MD, Braga, PORTUGAL*

*Renato Andrade, BSc, Porto, PORTUGAL*

*Pedro Moreira, PhD, Braga, PORTUGAL*

*João Espregueira-Mendes, MD, PhD, Porto, PORTUGAL*

**Nuno Sevivas, MD, PhD, Póvoa De Varzim, PORTUGAL**

University of Minho, School of Medicine Life and Health Sciences Research Institute (ICVS)  
Braga, PORTUGAL

PAPER #147

**Severity of Synovitis in Rotator Cuff Tears Is Correlated with Clinical Features Independent with Tear Size and Age**

**Kee-Yong Hong, MD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA**

Doo-Hyung Lee, MD, Seoul, REPUBLIC OF KOREA  
Seung-Hyun Yoon, MD, PhD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA

Bong-Gun Lee, MD, Seoul, REPUBLIC OF KOREA  
Jang-Ho Park, MD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA

Hyo-Sung Lee, MD, Seoul, REPUBLIC OF KOREA  
Hong-Ri Lee, MD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA

Ajou University School of Medicine  
Suwon, Gyeonggi-do, REPUBLIC OF KOREA

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PAPER #148

**Biomechanics of Biodegradable Subacromial Balloon Spacer on Glenohumeral Joint in the Setting of Irreparable Superior Rotator Cuff Tears**

Mario H. Lobao, MD, Baltimore, MD, UNITED STATES  
Robert Canham, MD, Bismarck, ND, UNITED STATES  
Roshan T. Melvani, MD, Baltimore, MD, UNITED STATES

**Joseph A. Abboud, MD, Philadelphia, PA, UNITED STATES**

Brent Parks, MSc, Baltimore, MD, UNITED STATES  
Anand M. Murthi, MD, Baltimore, MD, UNITED STATES

MedStar Health  
Baltimore, MD, UNITED STATES

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PAPER #149

**Determining the Minimal Clinically Important Difference of Oxford, Constant, and UCLA Shoulder Score for Arthroscopic Rotator Cuff Repair**

**Sheng Xu, MBBS, MRCS, Singapore, SINGAPORE**

Jerry Chen, MBBS, MRCS(Edin), MMed(Orth), Singapore, SINGAPORE

Hannah Mei En Lie, MBBS, Singapore, SINGAPORE  
Ying Hao, PhD, Singapore, SINGAPORE

Denny T. T. Lie, MBBS, FRCS, FAMS, Singapore, SINGAPORE

Singapore General Hospital  
Singapore, SINGAPORE

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PAPER #150

**Changes in the Neurovascular Anatomy of the Shoulder Following an Open Latarjet Procedure: Defining a Surgical Safe Zone**

Christopher M. LaPrade, BA, Milwaukee, WI, UNITED STATES  
Andrew S. Bernhardtson, MD, San Diego, CA, UNITED STATES

Zachary S. Aman, BA, Vail, CO, UNITED STATES  
Gilbert Moatshe, MD, PhD, Oslo, NORWAY  
Jorge Chahla, MD, PhD, Chicago, IL, UNITED STATES

Grant J. Dornan, MSc, Vail, CO, UNITED STATES  
Robert F. LaPrade, MD, PhD, Chanhassen, MN, UNITED STATES

**Matthew T. Provencher, MD, Vail, CO, UNITED STATES**

The Steadman Philippon Research Institute  
Vail, CO, UNITED STATES

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PAPER #151

**A Biomechanical Comparison of a Novel Technique for Distal Clavicle Fracture Repair Using Cortical Button Fixation and Coracoclavicular Ligament Reconstruction**

David A. Porter, MD, Coral Gables, FL, UNITED STATES  
Gautam Yagnik, MD, Miami, FL, UNITED STATES  
Paul C. Brady, MD, Knoxville, TN, UNITED STATES

Joseph P. Zimmerman, MD, Coral Gables, FL, UNITED STATES  
Charles J. Jordan, MD, Coral Gables, FL, UNITED STATES

**Luis A. Vargas, MD, PhD, Coral Gables, FL, UNITED STATES**

UHZ Institute  
Coral Gables, FL, UNITED STATES

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PAPER #152

**Postoperative Recovery Comparisons of Total, Reverse, and Revision Reverse Shoulder Arthroplasty**

**Eric R. Wagner, MD, MS, Atlanta, GA, UNITED STATES**

Jarret M. Woodmass, MD, FRCSC, Winnipeg, MB, CANADA  
Michelle Chang, BS, Boston, MA, UNITED STATES

Muriel Solberg, BS, Boston, MA, UNITED STATES  
Kathryn Welp, MS, Boston, MA, UNITED STATES

Laurence Higgins, MD, Brookline, MA, UNITED STATES  
Jon J. P. Warner, MD, Boston, MA, UNITED STATES

Boston Shoulder Institute, Harvard University  
Boston, MA, UNITED STATES

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WEDNESDAY, MAY 15, 2019

Concurrent 2 – Cozumel 1+5  
16:30 – 17:30  
Shoulder (Cont.)

PAPER #153

**Tensioning of the Superior Capsule Reconstruction Graft Improves Shoulder Function Biomechanically**

**Felix Dyrna, MD, Münster, GERMANY**

*Knut Beitzel, MD, MA, Cologne, GERMANY*  
*Florian B. Imhoff, MD, Munich, Bavaria, GERMANY*  
*Bastian Scheiderer, MD, Munich, Bavaria, GERMANY*  
*Andreas B. Imhoff, MD, Prof., Munich, Bavaria, GERMANY*  
*Augustus D. Mazzocca, MD, MS, Farmington, CT, UNITED STATES*

University of Connecticut Health Center  
Farmington, CT, UNITED STATES

PAPER #154

**Biomechanical Comparison of Two Arthroscopic Suprascapular Biceps Tenodesis: Interference Screw and Suture Anchor**

**Marko Nabergoj, MD, Ankaran, SLOVENIA**

*Benjamin Marjanovic, MD, Ankaran, SLOVENIA*  
*Samo Novak, Ankaran, SLOVENIA*  
*Jakob Merkač, MD, Ankaran, SLOVENIA*

Valdoltra Orthopaedic Hospital  
Ankaran, SLOVENIA

PAPER #155

**Arthroscopic Biodegradable Spacer as a Treatment Alternative for Massive Rotator Cuff Tears: A Summary of Three Prospective Cohort Studies**

**Eran Maman, MD, Kiriyat Ono, ISRAEL**

*Vladimir Senekovic, MD, PhD, Ljubljana, SLOVENIA*  
*Boris Poberaj, MD, Doha, QATAR*  
*Ofir Chechik, MD, Tel Aviv, ISRAEL*  
*Enrico Cautero, MD, Latisana, Udine, ITALY*  
*Enrico Gervasi, MD, Udine, ITALY*

Multicenter  
Tel Aviv, Lubliana, Udine, ISRAEL

Concurrent 3 – Cozumel 3+4  
11:15 – 12:00  
Knee Arthroplasty

PAPER #156

**Survivorship and Functional Outcomes of Robotic-Assisted Medial Unicompartmental Knee Arthroplasty: A Minimum of 5-Year Follow-Up**

**Keerati Chareancholvanich, MD, Bangkok, THAILAND**

*Chaturong Pornrattanamaneewong, MD, Bangkok, THAILAND*  
*Suphawatt Tantithawornwat, MD, Bangkok, THAILAND*  
*Areesak Chotivichit, MD, Bangkok, THAILAND*  
*Rapeepat Narkbunnam, MD, Bangkok, THAILAND*  
*Aasis Unnanuntana, MD, MSc, Bangkok, THAILAND*  
*Vatanachai Rojvanit, MD, Bangkok, THAILAND*  
*Pakpoom Ruangsomboon, MD, Bangkok, THAILAND*  
*Pacharapol Udomkiat, MD, Bangkok, THAILAND*

Siriraj Hospital, Mahidol University  
Bangkok, THAILAND

PAPER #157

**Periprosthetic Bone Mineral Density Change After Total Knee Arthroplasty: Titanium Alloy vs. Cobalt-Chromium**

**Seung-Bin Im, MD, Seoul, REPUBLIC OF KOREA**

*Woo-Cheol Shin, MD, Seoul, REPUBLIC OF KOREA*  
*Du-Hyun Ro, MD, MS, Seoul, REPUBLIC OF KOREA*  
*Jae-Young Park, MD, Seoul, REPUBLIC OF KOREA*  
*Oh-Hyo Kwon, MD, Seoul, REPUBLIC OF KOREA*  
*Jangyun Lee, MD, Seoul, REPUBLIC OF KOREA*  
*Myung-Chul Lee, MD, PhD, Prof., Seoul, REPUBLIC OF KOREA*  
*Min-Ku Song, MD, Seoul, REPUBLIC OF KOREA*

Department of Orthopaedic Surgery, Seoul National University Hospital  
Seoul, REPUBLIC OF KOREA



PAPER #158

**Hyperextension Developed After Posterior Substituting Total Knee Arthroplasty**

**Seung-Bin Im, MD, Seoul, REPUBLIC OF KOREA**

Tae-Hoon Kang, MD, Seoul, REPUBLIC OF KOREA  
Jangyun Lee, MD, Seoul, REPUBLIC OF KOREA  
Min-Ku Song, MD, Seoul, REPUBLIC OF KOREA  
Woo-Cheol Shin, MD, Seoul, REPUBLIC OF KOREA  
Joon-Hee Lee, MD, Seoul, REPUBLIC OF KOREA  
Myung-Chul Lee, MD, PhD, Prof., Seoul, REPUBLIC OF KOREA  
Hyuk-Soo Han, MD, PhD, Seoul, REPUBLIC OF KOREA

Seoul National University Hospital  
Seoul, REPUBLIC OF KOREA

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PAPER #159

**Navigation Improves the Ten to Fifteen Year Survival Rate After Mobile Bearing Total Knee Arthroplasty: A French Multicentric Nationwide Study**

**Jean-Yves Jenny, Prof., Illkirch, FRANCE**

Dominique Saragaglia, Prof., Grenoble, FRANCE

University Hospital  
Strasbourg, FRANCE

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PAPER #160

**Extensor Mechanism Reconstruction with Achilles Tendon Allograft After Infected Total Knee Arthroplasty**

**Theofylaktos Kyriakidis, MD, MSc, PhD, Brussels, BELGIUM**

Jacques Hernigou, MD, Brussels, BELGIUM  
Aad A. Dhollander, MD, PT, PhD, Brasschaat, BELGIUM  
Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM  
René E. Verdonk, MD, PhD, Gent, BELGIUM

Erasmus University Hospital  
Brussels, BELGIUM

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PAPER #161

**Posterior Cruciate Ligament Resection in Total Knee Arthroplasty: Effect on Flexion-Extension Gaps, Mediolateral Laxity, and Fixed Flexion Deformity**

**Babar Kayani, MBBS, BSc(Hons), MRCS, London, UNITED KINGDOM**

Sujith Konan, MD(Res), MBBS, MRCS, FRCS(Tr&Orth), London, UNITED KINGDOM  
Saman Horriat, MD, MSc, FRCS Orth, London, UNITED KINGDOM  
Fares S. Haddad, MCh(Orth), BSc, FRCS(Orth), London, UNITED KINGDOM

University College London Hospital  
London, UNITED KINGDOM

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PAPER #162

**No Difference in Five-Year Clinical and Radiographic Outcomes between Kinematic and Mechanical Alignment in TKA: A Randomized Controlled Clinical Trial**

**Simon W. Young, MD, FRACS, Auckland, NEW ZEALAND**

Matthew Walker, MBChB, FRACS, Auckland, NEW ZEALAND  
Ali Bayan, MBChB, FRACS, Auckland, NEW ZEALAND  
Sherina Holland, BSc(Hons), Auckland, NEW ZEALAND  
Niall Sullivan, FRCS, Auckland, NEW ZEALAND  
Bill Farrington, FRCS, Auckland, NEW ZEALAND

North Shore Hospital  
Auckland, NEW ZEALAND

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**Concurrent 3–Cozumel 3+4  
14:30–15:00  
Knee Arthroplasty**

PAPER #163

**“Bone Balancing” in TKR: A Marriage between Gap Balancing and Measured Resection**

**Pieter J. Erasmus, MBChB, MMed, Stellenbosch, Western Cape, SOUTH AFRICA**

Kneeclinic Stellenbosch  
Stellenbosch, Western Cape, SOUTH AFRICA

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PAPER #164

**Reoperation, Revision, and Repeat Revision Rates and the Potential Cost-Utility of Knee Preservation in Young Total Knee Arthroplasty Patients**

**Mario Hevesi, MD, Rochester, MN, UNITED STATES**

Cody C. Wyles, MD, Rochester, MN, UNITED STATES  
R. Kyle Martin, MD, FRCSC, Rochester, MN, UNITED STATES  
Rafael J. Sierra, MD, Rochester, MN, UNITED STATES  
Robert T. Trousdale, MD, Rochester, MN, UNITED STATES  
Elizabeth Habermann, PhD, Rochester, MN, UNITED STATES  
Hilal Maradit-Kremers, MD, Rochester, MN, UNITED STATES  
Aaron J. Krych, MD, Rochester, MN, UNITED STATES  
Daniel Saris, MD, Prof., Rochester, MN, UNITED STATES

Mayo Clinic  
Rochester, MN, UNITED STATES

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WEDNESDAY, MAY 15, 2019

Concurrent 3 – Cozumel 3+4  
14:30 – 15:00  
Knee Arthroplasty (Cont.)

PAPER #165

**Posterior Stabilized TKR with Non-Cross-Linked Polyethylene Have Double the Risk of Revision of Infection Compared to Minimally Stabilized TKR with Cross-Linked Polyethylene: An Analysis of 336,997 Prostheses from the AOANJRR**

**Christopher J. Vertullo, MBBS, PhD, FRACS(Orth), Gold Coast, QLD, AUSTRALIA**

*Richard N. De Steiger, FRACS(Orth), Richmond, VIC, AUSTRALIA*

*Peter L. Lewis, MBBS, FRACS(Orth), FAOrthA, Adelaide, SA, AUSTRALIA*

*Michelle Lorimer, BSc(Hons), Adelaide, SA, AUSTRALIA*

*Yi Peng, MMed(Epi&Stats), Adelaide, SA, AUSTRALIA*

*Stephen E. Graves, MBBS, DPhil, FRACS, FAOrthA, Adelaide, SA, AUSTRALIA*

Australian Orthopaedic Association National Joint Replacement Registry  
Adelaide, SA, AUSTRALIA

PAPER #166

**Conversion Rates and Timing to Total Knee Arthroplasty following ACL Reconstruction: A United States Population-Based Study of Over 100,000 ACL Reconstructions**

*Jacob Bobman, MD, Los Angeles, CA, UNITED STATES*

**Alexander E. Weber, MD, Los Angeles, CA, UNITED STATES**

*Cory Mayfield, BS, Los Angeles, CA, UNITED STATES*

*Nathanael Heckmann, MD, Los Angeles, CA, UNITED STATES*

*Aaron Gipsman, MD, Los Angeles, CA, UNITED STATES*

*Hyunwoo "Paco" Kang, MD, Los Angeles, CA, UNITED STATES*

*Omid Jalali, BS, Los Angeles, CA, UNITED STATES*

*Erik Mayer, BS, Los Angeles, CA, UNITED STATES*

*George F. R. Hatch III, MD, Los Angeles, CA, UNITED STATES*

*Seth C. Gamradt, MD, Los Angeles, CA, UNITED STATES*

University of Southern California  
Los Angeles, CA, UNITED STATES

PAPER #167

**Anteroposterior Translation of the Native Knee, but Not Rotational Kinematics, Is Preserved After Bicruciate-Retaining Total Knee Arthroplasty: A Biomechanical Cadaveric Study**

**Daisuke Hamada, MD, PhD, Tokushima, Tokushima, JAPAN**

*Keizo Wada, MD, Tokushima, Tokushima, JAPAN*

*Tomoya Takasago, MD, Tokushima, Tokushima, JAPAN*

*Akihiro Nitta, MD, Tokushima, Tokushima, JAPAN*

*Tomohiro Goto, MD, PhD, Komatsushima, Tokushima, JAPAN*

*Yoshihiro Tsuruo, MD, PhD, Tokushima, Tokushima, JAPAN*

*Koichi Sairyō, MD, PhD, Kawasaki, Kanagawa, JAPAN*

Tokushima University

Tokushima, Tokushima, JAPAN

Concurrent 4 – Cozumel 2+A  
11:15 – 12:00  
Knee

PAPER #168

**Anterior Cruciate Ligament Reconstruction with or without a Lateral Extra-Articular Tenodesis: Assessment of Failure at Two Years from the ISAKOS Sponsored Stability Study**

**Alan Getgood, MD, FRCS(Tr&Orth), DipSEM, London, ON, CANADA**

*Davide Bardana, MD, Kingston, ON, CANADA*

*Alex Rezansoff, MD, FRCSC, Calgary, AB, CANADA*

*Stability Study Group, MD, London, ON, CANADA*

*Dianne M. Bryant, PhD, London, ON, CANADA*

*Robert Litchfield, MD, FRCSC, London, ON, CANADA*

*Robert G. McCormack, MD, New Westminster, BC, CANADA*

*Mark A. Heard, MD, FRCS, Canmore, AB, CANADA*

*Peter B. Macdonald, MD, FRCS, Dip Sport Med, Winnipeg, MB, CANADA*

*Tim Spalding, FRCS(Orth), Coventry, West Midlands, UNITED KINGDOM*

*Peter Verdonk, MD, PhD, Zwiijnaarde, BELGIUM*

*Devin Peterson, London, ON, CANADA*

Fowler Kennedy Sport Medicine Clinic,

University of Western Ontario

London, ON, CANADA

PAPER #169

**ACL Reconstruction with Monoloop Lateral Extra-Articular Tenodesis Results in a Reduced Revision Rate: A Large Comparative Cohort Study**

Koen Lagae, MD, Antwerp, BELGIUM  
Annemieke Van Haver, PhD, MSc, Antwerp, BELGIUM  
**Peter Verdonk, MD, PhD, Zwijnaarde, BELGIUM**  
Antwerp Orthopaedic Center–Monica Research Foundation  
Antwerp, BELGIUM

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PAPER #170

**Extra-Articular Augmentation of ACL Reconstruction**

**Begad H. M. Z. Abdelrazek, MD, London, UNITED KINGDOM**

Ahmed Abdelaziz, PhD(Orth), MSc(Orth), Mohandeseen, Giza, EGYPT

Ahmed M. Gad, MD, Giza, EGYPT

Mahmoud A. Abdelaziz, BSc, MSc, MD, Giza, EGYPT

A. Samir El-Kalyoby, MD, Giza, EGYPT

Mahmoud Y. A. Tolba, MD, Giza, EGYPT

Faculty of Medicine Cairo University  
Giza, EGYPT

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PAPER #171

**Injury to the Distal Kaplan Fibres of the Iliotibial Band is Not Associated with Increased Anterolateral Rotational Laxity in Anterior Cruciate Ligament-Injured Patients: A Radiological and Clinical Study**

**Brian M. Devitt, MD, FRCS, FRACS, Melbourne, VIC, AUSTRALIA**

Jérôme Murgier, MD, Toulouse, FRANCE

Lachlan Batty, FRACS, Melbourne, VIC, AUSTRALIA

Kate E. Webster, PhD, Melbourne, VIC, AUSTRALIA

Julian A. Feller, FRACS, Melbourne, VIC, AUSTRALIA

OrthoSport Victoria  
Melbourne, VIC, AUSTRALIA

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PAPER #173

**Minimum 10 Year Follow-Up of a Randomized Trial Evaluating Accelerated vs. Conservative Weight Bearing Rehabilitation After Matrix-Induced Autologous Chondrocyte Implantation**

**Jay R. Ebert, PhD, Perth, WA, AUSTRALIA**

Michael Fallon, MBBS, FRANZCR, Perth, WA, AUSTRALIA

Timothy Ackland, PhD, FASMF, Perth, WA, AUSTRALIA

Greg Janes, MBBS, FRACS, West Perth, WA, AUSTRALIA

David J. Wood, MBBS, FRACS, Perth, WA, AUSTRALIA

University of Western Australia  
Perth, WA, AUSTRALIA

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PAPER #174

**Clinical Results and Rotational Stability of the Knee Two Years After the ACL Reconstruction Using a Quadriceps Tendon Graft**

**Radek Hart, MD, PhD, FRCS, Prof., Znojmo, CZECH REPUBLIC**

Martin Komzak, MD, PhD, Znojmo, CZECH REPUBLIC

General Hospital  
Znojmo, CZECH REPUBLIC

Concurrent 4–Cozumel 2+A

14:15–14:39

Gary G. Poehling Award Finalist Presentations

PAPER #175

**Variations in Blood Supply from Proximal to Distal in the Ulnar Collateral Ligament of the Elbow: A Qualitative Descriptive Cadaveric Study**

**Patrick S. Buckley, MD, Wall Township, NJ, UNITED STATES**

Elizabeth Morris, BA, Vail, CO, UNITED STATES

Colin Robbins, BA, Vail, CO, UNITED STATES

Bryson R. Kemler, MS, Norfolk, VA, UNITED STATES

Salvatore J. Frangiamore, MD, Akron, OH, UNITED STATES

Michael G. Ciccotti, MD, Philadelphia, PA, UNITED STATES

Johnny Huard, PhD, Houston, TX, UNITED STATES

Robert F. LaPrade, MD, PhD, Chanhassen, MN,  
UNITED STATES

Thomas R. Hackett, MD, Vail, CO, UNITED STATES

Steadman Philippon Research Institute  
Vail, CO, UNITED STATES

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PAPER #176

**Cumulative Incidence of Osteochondritis Dissecans of the Capitellum in Pre-Adolescent Baseball Players**

**Tetsuya Matsuura, MD, PhD, Tokushima, JAPAN**

Toshiyuki Iwame, MD, Tokushima, JAPAN

Naoto Suzue, MD, PhD, Komatsushima, Tokushima, JAPAN

Jyoji Iwase, MD, Tokushima, JAPAN

Shunsuke Tamaki, MD, Kannonji, JAPAN

Kenji Yokoyama, MD, Komatsushima, JAPAN

Koichi Sairyō, MD, PhD, Kawasaki, Kanagawa, JAPAN

Tokushima University  
Tokushima, JAPAN

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WEDNESDAY, MAY 15, 2019

Concurrent 4–Cozumel 2+A

14:15–14:39

Gary G. Poehling Award Finalist Presentations (Cont.)

PAPER #177

**Cadaveric Analysis of Dynamic Rotational Relationship of Distal Biceps Tendon with Neurovascular Structures and Proximal Radioulnar Space**

**Deepak N. Bhatia, MS(Orth), DNB(Orth), Mumbai, INDIA**

Seth GS Medical College and King Edward VII Memorial Hospital  
Mumbai, INDIA

PAPER #178

**3D CT Modeling for Kinematic Analysis of Lateral Ulnar Collateral Ligament Reconstruction**

**Erica Kholinne, MD, Seoul, REPUBLIC OF KOREA**

*In-Ho Jeon, MD, PhD, Prof., Seoul, REPUBLIC OF KOREA*

Asan Medical Center  
Seoul, REPUBLIC OF KOREA

Concurrent 4–Cozumel 2+A

14:39–14:54

Sports Medicine

PAPER #179

**The Effect of Single Sport Specialization in Youth Sports: Does It Increase the Risk of Injury?: A Prospective Study**

**Steven B. Cohen, MD, Media, PA, UNITED STATES**

*Danielle Weekes, MD, Egg Harbor Township, NJ, UNITED STATES*

*Richard E. Campbell, MD, Egg Harbor Township, NJ, UNITED STATES*

*Fotios P. Tjoumakaris, MD, Egg Harbor Township, NJ, UNITED STATES*

*Meghan E. Mattson, BS, Egg Harbor Township, NJ, UNITED STATES*

*Matthew D. Pepe, MD, Philadelphia, PA, UNITED STATES*

*Bradford Tucker, MD, Philadelphia, PA, UNITED STATES*

Rothman Orthopaedic Institute  
Philadelphia, PA, UNITED STATES

PAPER #180

**High Incidence Rate of Lumbar Spinal Disease Among Child and Adolescent Weightlifting Athletes: A Prospective 4-Year Cohort Study**

**Kazu Toyooka, MD, Kanazawa, Ishikawa, JAPAN**

*Junsuke Nakase, MD, PhD, Kanazawa, Ishikawa, JAPAN*

*Kengo Shimozaki, MD, Kanazawa, Ishikawa, JAPAN*

*Kazuki Asai, Kanazawa, Ishikawa, JAPAN*

*Katsuhiko Kitaoka, MD, Kanazawa, Ishikawa, JAPAN*

*Hiroyuki Tsuchiya, Kanazawa, Ishikawa, JAPAN*

Kanazawa University Hospital  
Kanazawa, Ishikawa, JAPAN



Concurrent 2 – Cozumel 1+5  
09:00 – 10:00  
Knee

PAPER #181

**Partial Lateral Meniscectomy Affects Knee Stability Even in Anterior Cruciate Ligament-Intact Knees**

**João V. Novaretti, MD, São Paulo, SP, BRAZIL**

Jayson Lian, BA, New York, NY, UNITED STATES  
Neel K. Patel, MD, Pittsburgh, PA, UNITED STATES  
Calvin K. Chan, MS, Pittsburgh, PA, UNITED STATES  
Moises Cohen, MD, PhD, Prof., São Paulo, SP, BRAZIL  
Volker Musahl, MD, Pittsburgh, PA, UNITED STATES  
Richard Debski, PhD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

PAPER #182

**Remaining Pivot-Shift Was Observed in the ACL Reconstructed Knee with Unrepaired Lateral Meniscus Tear**

**Yuichi Hoshino, MD, PhD, Kobe, Hyogo, JAPAN**

Nobuaki Miyaji, MD, Kobe, Hyogo, JAPAN  
Yuji Hiroshima, MD, Kobe, Hyogo, JAPAN  
Takahiro Yamashita, MD, Kobe, Hyogo, JAPAN  
Kazuyuki Ibaraki, MD, Kobe, Hyogo, JAPAN  
Daisuke Araki, MD, PhD, Kobe, Hyogo, JAPAN  
Noriyuki Kanzaki, MD, PhD, Kobe, Hyogo, JAPAN  
Takehiko Matsushita, MD, Kobe, Hyogo, JAPAN  
Ryosuke Kuroda, MD, PhD, Kobe, Hyogo, JAPAN

Department of Orthopaedic Surgery, Kobe University,  
Graduate School of Medicine  
Kobe, Hyogo, JAPAN

PAPER #183

**Evaluation of Healing After Medial Meniscal Root Repair by Using Second-Look Arthroscopy, Clinical And Radiological Criteria**

**Sung-Sahn Lee, MD, Seoul, REPUBLIC OF KOREA**

Kyeuback Kwon, MD, REPUBLIC OF KOREA  
Joon Ho Wang, MD, PhD, Seoul, REPUBLIC OF KOREA  
Jun-Ho Kim, MD, Seoul, REPUBLIC OF KOREA  
Bong-Soo Kyung, MD, Seongnam-si, Gyeonggi-do,  
REPUBLIC OF KOREA  
Jin-Hwan Ahn, MD, Seoul, REPUBLIC OF KOREA

Samsung Medical Center  
Seoul, REPUBLIC OF KOREA

PAPER #184

**Composition of the Developing Human Meniscus**

William Fedje-Johnston, MD, Minneapolis, MN,  
UNITED STATES  
Melissa White, BA, Minneapolis, MN, UNITED STATES  
Cathy S. Carlson, DVM, PhD, Minneapolis, MN,  
UNITED STATES  
Kevin G. Shea, MD, Stanford, CA, UNITED STATES  
Aaron Rendahl, PhD, St. Paul, MN, UNITED STATES  
Ferenc Tóth, DVM, PhD, St. Paul, MN, UNITED STATES  
Lindsey Harper, DVM, St. Paul, MN, UNITED STATES  
**Marc Tompkins, MD, Minneapolis, MN, UNITED STATES**

University of Minnesota  
Minneapolis, MN, UNITED STATES

PAPER #185

**Positional Relationship between the Lateral Meniscus and the Popliteal Artery from the Lateral Infrapatellar Portal in All-Inside Lateral Meniscal Repair**

**Junpei Inoue, MD, Komaki, Aichi, JAPAN**

Kaneaki Tawada, MD, PhD, Nagoya, Aichi, JAPAN  
Kunio Yamada, MD, Komaki, Aichi, JAPAN  
Masahiro Nozaki, MD, PhD, Nagoya, Aichi, JAPAN  
Makoto Kobayashi, MD, PhD, Nagoya, Aichi, JAPAN  
Atsunori Murase, MD, PhD, Kasugai, Aichi, JAPAN  
Sanshiro Yasuma, MD, Nagoya, Aichi, JAPAN  
Yusuke Kawanishi, Nagoya, Aichi, JAPAN

Komaki City Hospital  
Komaki, Aichi, JAPAN

PAPER #186

**A Multicenter Randomized Controlled Trial Comparing Collagen-Augmented Chondrogenesis Technique with Microfracture in the Knee**

**Man-Soo Kim, MD, Seoul, REPUBLIC OF KOREA**

Chulkyu Kim, MD, Seoul, REPUBLIC OF KOREA  
Keun-Young Choi, MD, Seoul, REPUBLIC OF KOREA  
Yong In, MD, PhD, Seoul, REPUBLIC OF KOREA

Seoul St. Mary's Hospital  
Seoul, REPUBLIC OF KOREA



**THURSDAY, MAY 16, 2019**

**Concurrent 2 – Cozumel 1+5  
09:00 – 10:00  
Knee (Cont.)**

PAPER #187

**Delay in Surgical Management of Multiligament Knee Injuries Is Associated with Cartilage and Meniscus Injury**

**Alan Shamrock, MD, Iowa City, IA, UNITED STATES**

James Hall, BS, Iowa City, IA, UNITED STATES  
Christina Hajewski, MD, Iowa City, IA, UNITED STATES  
Qiang An, MPH, Iowa City, IA, UNITED STATES  
Kyle R. Duchman, MD, Iowa City, IA, UNITED STATES

University of Iowa  
Iowa City, IA, UNITED STATES

PAPER #188

**The Pathological Anatomy of the Posteromedial Corner Complex in Severe Varus Osteoarthritic Knee**

**Samih Tarabichi, MD, Dubai, UNITED ARAB EMIRATES**

Amr Osman, MD, Dubai, UNITED ARAB EMIRATES  
Feras Haidar, MD, Dubai, UNITED ARAB EMIRATES  
Mohamed Elkabbani, MD, EGYPT

Burjeel Hospital for Advanced Surgery  
Dubai, UNITED ARAB EMIRATES

PAPER #189

**Anterolateral Ligament Reconstruction Protects the Repaired Medial Meniscus: A Comparative Study of 383 ACL Reconstructions with a Minimum Follow-Up of Two Years**

**Jean-Romain Delaloye, MD, Winterthur, Zurich, SWITZERLAND**

Adnan Saithna, MBChB, MSc, BMedSc, DipSEM, FRCS, Ormskirk, UNITED KINGDOM  
William G. Blakeney, MBBS, MSc, MS, FRACS, South Perth, WA, AUSTRALIA  
Herve Ouanezar, MD, Dubai, UNITED ARAB EMIRATES  
Amrut U. Borade, MBBS, MS(Orth), New Delhi, Delhi, INDIA  
Matthew Daggett, DO, MDA, Kansas City, MO, UNITED STATES  
Jean-Marie Fayard, MD, Lyon, Rhône, FRANCE  
Mathieu Thaunat, MD, Lyon, Rhône, FRANCE  
Bertrand Sonnery-Cottet, MD, Lyon, Rhône, FRANCE

Centre Orthopédique Santy  
Lyon, Rhône, FRANCE

PAPER #190

**Operative vs. Nonoperative Treatment for Acute Anterior Cruciate Ligament Tears: A Multicenter Randomized Trial**

**Vincent Eggerding, MD, Rotterdam, NETHERLANDS**

Duncan E. Meuffels, MD, PhD, Rotterdam, NETHERLANDS  
Eline van Es, MSc, Rotterdam, NETHERLANDS  
Ewoud R. Van Arkel, MD, PhD, Den Haag, NETHERLANDS  
Igor van de Brand, MD, Tilburg, NETHERLANDS  
Joost van Linge, MD, Delft, NETHERLANDS  
Jacco A. C. Zijl, MD, Bilthoven, NETHERLANDS  
Sita Bierma-Zeinstra, MD, Rotterdam, NETHERLANDS  
Max Reijman, MD, Rotterdam, NETHERLANDS

Erasmus MC  
Rotterdam, NETHERLANDS

PAPER #191

**Only One Patient Out of Five Achieves Symmetrical Knee Function Six Months After Primary Anterior Cruciate Ligament Reconstruction**

**Riccardo Cristiani, MD, Stockholm, SWEDEN**

Christina Mikkelsen, PT, Stockholm, SWEDEN  
Magnus Forssblad, MD, PhD, Stockholm, SWEDEN  
Bjorn Engstrom, MD, PhD, Assoc. Prof., Spanga, SWEDEN  
Anders Stalman, MD, PhD, Saltsjöbaden, SWEDEN

Capio Arthro Clinic, Stockholm Sports Trauma Research Center, Karolinska Institute, FIFA Medical Centre of Excellence  
Stockholm, SWEDEN

PAPER #192

**Small Lateral Meniscus Tears Propagate and Affect Knee Kinematics and Forces**

**João V. Novaretti, MD, São Paulo, SP, BRAZIL**

Elmar Herbst, MD, Münster, GERMANY  
Calvin K. Chan, MS, Pittsburgh, PA, UNITED STATES  
Richard Debski, PhD, Pittsburgh, PA, UNITED STATES  
Volker Musahl, MD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

PAPER #193

**Lateral Meniscal Allograft Transplantation with Bone-Block and Suture-Only Techniques Partially Restores Knee Kinematics and Forces**

**João V. Novaretti, MD, São Paulo, SP, BRAZIL**

Jayson Lian, BA, New York, NY, UNITED STATES  
Andrew Sheean, MD, San Antonio, TX, UNITED STATES  
Calvin K. Chan, MS, Pittsburgh, PA, UNITED STATES  
Joon Ho Wang, MD, PhD, Seoul, REPUBLIC OF KOREA  
Moises Cohen, MD, PhD, Prof., São Paulo, SP, BRAZIL  
Richard Debski, PhD, Pittsburgh, PA, UNITED STATES  
Volker Musahl, MD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
Pittsburgh, PA, UNITED STATES

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PAPER #194

**Anthropometric Measurement of Caucasian and Asian Knees, Mismatch with Knee Systems?**

**Imelda Lumban Gaol, MD, Bogor, West Java, INDONESIA**

Nicolaas C. Budhiparama, MD, FICS, Assoc. Prof., Jakarta, DKI Jakarta, INDONESIA  
Nadia Ifran, MD, Jakarta, DKI Jakarta, INDONESIA  
Rob Nelissen, Leiden, NETHERLANDS

Nicolaas Institute of Constructive Orthopaedic Research & Education Foundation for Arthroplasty & Sport Medicine  
Jakarta, DKI Jakarta, INDONESIA

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PAPER #195

**Clinical Outcomes and Predictive Factors for Failure with Isolated MPFL Reconstruction for Recurrent Patellar Instability: A Series of 213 Reconstructions with a Minimum Follow-Up of Three Years**

**Mathieu Thaumat, MD, Lyon, Rhône, FRANCE**

Bertrand Sonnery-Cottet, MD, Lyon, Rhône, FRANCE  
Herve Ouanezar, MD, Dubai, UNITED ARAB EMIRATES  
Padhraig O'loughlin, MD, Dublin, IRELAND  
Elliot Sappey-Marinié, MD, Lyon, Rhône, FRANCE

Centre Orthopédique Santy  
Lyon, FRANCE

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Concurrent 2–Cozumel 1+5  
10:00–11:00  
Knee

PAPER #196

**The Avon Patellofemoral Joint Arthroplasty: 2- to 18-Year Results of a Large Single-Centre Cohort**

Andrew Metcalfe, PhD, Coventry, UNITED KINGDOM  
Nathanael Ahearn, FRCS, Bristol, UNITED KINGDOM  
Mo Hassaballa, MD, Bristol, UNITED KINGDOM  
Nicholas Parsons, PhD, MSc, BSc, Warwick, UNITED KINGDOM

Christopher Ackroyd, FRCS, Bristol, UNITED KINGDOM  
**James R. Robinson, MBBS, MS, MRCS, FRCS(Orth), Bristol, UNITED KINGDOM**

Jonathan Eldridge, FRCS, Bristol, UNITED KINGDOM  
Andrew Porteous, MBChB, MSc, FRCS(Ed), FRCS(Tr&Orth), Bristol, UNITED KINGDOM

Avon Orthopaedic Centre  
Bristol, UNITED KINGDOM

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PAPER #197

**Do Not Forget About Sagittal Trochlea Length when Assessing Patellofemoral Instability**

**Piyush Mahapatra, MA(Cantab), MBBS, MRCS, London, UNITED KINGDOM**

Josh Ajay, London, UNITED KINGDOM  
Foad Mohamed, MBBS, BA(Oxon), London, UNITED KINGDOM  
Bobby Anand, FRCS(Tr&Orth), London, UNITED KINGDOM

Croydon University Hospital  
London, UNITED KINGDOM

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PAPER #198

**The Influence of Patellofemoral Degenerative Changes on the Outcome of Unicompartmental Knee Replacement**

**Turlough O'Donnell, MB, MCh, FRCSI, FRCS(Orth), FFSEM, Clonskeagh, Dublin, IRELAND**

University College Dublin School of Medicine  
Dublin, IRELAND

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THURSDAY, MAY 16, 2019

Concurrent 2 – Cozumel 1+5  
10:00 – 11:00  
Knee (Cont.)

PAPER #199

**Unilateral Anterior Knee Pain is Associated with Medial Patellar Soft-Tissue Insufficiency: Measurement Utilizing Instrumented Patella Stress and Slice Imaging**

Ana Leal, MSc, Guimarães, PORTUGAL  
Renato Andrade, BSc, Porto, PORTUGAL  
**Ricardo P. Bastos-Filho, MD, PhD, Prof., Rio De Janeiro, RJ, BRAZIL**  
Paulo Flores, PhD, Guimarães, PORTUGAL  
Filipe Samuel, PhD, Guimarães, PORTUGAL  
John P. Fulkerson, MD, Farmington, CT, UNITED STATES  
Philippe N. Neyret, MD, PhD, Prof., La Tour De Salvagny, FRANCE  
Elizabeth A. Arendt, MD, Minneapolis, MN, UNITED STATES  
João Espregueira-Mendes, MD, PhD, Porto, PORTUGAL

Clínica do Dragão, Espregueira-Mendes Sports Centre –  
FIFA Medical Centre of Excellence  
Porto, PORTUGAL

PAPER #200

**“Routinely Resurfacing” The Patella During Primary Total Knee Arthroplasty Is Associated with Better Patient Reported Outcomes than “Selectively” or “Rarely” Resurfacing Strategies**

**Simon W. Young, MD, FRACS, Auckland, NEW ZEALAND**  
Alistair Maney, MBChB, Auckland, NEW ZEALAND  
Mark Zhu, MBChB, Auckland, NEW ZEALAND  
North Shore Hospital  
Auckland, NEW ZEALAND

PAPER #201

**Failed Debridement and Implant Retention Does Not Compromise the Success of Subsequent Staged Revision in Infected Total Knee Arthroplasty**

**Simon W. Young, MD, FRACS, Auckland, NEW ZEALAND**  
Katy Kim, MBChB, Auckland, NEW ZEALAND  
Mark Zhu, MBChB, Auckland, NEW ZEALAND  
Jacob T. Munro, PhD, FRACS, Auckland, NEW ZEALAND  
University of Auckland  
Auckland, NEW ZEALAND

PAPER #202

**Feedback from Activity Trackers Improve Daily Step Count After Knee and Hip Arthroplasty: A Randomized Controlled Trial**

Justin P. Roe, FRACS, A/Prof., Sydney, NSW, AUSTRALIA  
Neill Van Der Walt, MD, Sydney, NSW, AUSTRALIA  
Lucy J. Salmon, PhD, Sydney, NSW, AUSTRALIA  
Benjamin Gooden, MBBS, FRACS, PhD, Sydney, NSW, AUSTRALIA  
**Matt Lyons, FRACS, Mosman, NSW, AUSTRALIA**  
Michael O’Sullivan, MBBS FRACS, Wollstonecraft, NSW, AUSTRALIA  
Kaka Martina, RN, Sydney, NSW, AUSTRALIA  
Leo A. Pinczewski, MBBS, FRACS, FAOA, Sydney, NSW, AUSTRALIA  
North Sydney Orthopaedic and Sports Medicine Centre  
Sydney, NSW, AUSTRALIA

PAPER #203

**Robotic vs. Conventional Primary Total Knee Arthroplasty: Clinical and Radiological Long-Term Results with Minimum 10-Year Follow-Up**

**Jong-Keun Seon, MD, PhD, Hwasun, Jeonnam, REPUBLIC OF KOREA**  
Eun-Kyoo Song, MD, PhD, Prof., Gwangju, REPUBLIC OF KOREA  
Kyu-Jin Cho, MD, PhD, Gwangju, REPUBLIC OF KOREA  
Seung-Min Na, MD, Gwangju, REPUBLIC OF KOREA  
Chonnam National University Bitgoeul Hospital  
Gwangju, REPUBLIC OF KOREA

PAPER #204

**Effect of Proximal Tibial Morphology on a Tibial Cut Line in Bicruciate-Retaining Total Knee Arthroplasty: An Analysis Using a Computed Tomography-Based 3-Dimensional Preoperative Planning System**

**Ryota Yamagami, MD, Tokyo, JAPAN**  
Hiroshi Inui, MD, Tokyo, JAPAN  
Shuji Taketomi, MD, PhD, Tokyo, JAPAN  
Kentaro Takagi, MD, Tokyo, JAPAN  
Tomofumi Kage, MD, Kawasaki, JAPAN  
Kohei Kawaguchi, MD, Tokyo, JAPAN  
Keiu Nakazato, MD, Tokyo, JAPAN  
Kenichi Kono, MD, Tokyo, JAPAN  
Sakae Tanaka, MD, PhD, Tokyo, JAPAN  
University of Tokyo  
Tokyo, JAPAN

PAPER #205

**Total Knee Arthroplasty Using Tibial and Femoral Cementless Components: A Minimum 8-Year Follow-Up**

**Samih Tarabichi, MD, Dubai, UNITED ARAB EMIRATES**

*Amr Osman, MD, Dubai, UNITED ARAB EMIRATES*

*Feras Haidar, MD, Dubai, UNITED ARAB EMIRATES*

*Mohamed Elkabbani, MD, EGYPT*

Burjeel Hospital for Advanced Surgery  
Dubai, UNITED ARAB EMIRATES

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PAPER #206

**Knee Proprioception Does Not Affect Outcomes in Total Knee Replacement: Unicompartmental vs. Total Knee Replacement, a Comparative Study**

**Edoardo Franceschetti, MD, Rome, ITALY**

*Alessio Palumbo, MD, Rome, ITALY*

*Gian Mauro De Angelis d'Ossat, MG, Rome, ITALY*

*Riccardo Ranieri, MD, Rome, ITALY*

*Michele Paciotti, MD, Rome, ITALY*

*Antongiulio Lisanti, MD, Rome, ITALY*

*Nicola Maffulli, MD, PhD, MS, FRCS(Orth), London, UNITED KINGDOM*

*Francesco Franceschi, MD, PhD, Rome, ITALY*

Campus Bio-Medico University of Rome  
Rome, ITALY

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**Trends in Total Knee Arthroplasty in a Developing Region: A Survey on Latin American Surgeons**

*David Figueroa, MD, Prof., Santiago, RM, CHILE*

**Francisco Figueroa, MD, Santiago, RM, CHILE**

*Rafael Calvo, MD, Santiago, CHILE*

*Alex Vaisman, MD, Santiago, RM, CHILE*

Clínica Alemana-Universidad del Desarrollo  
Santiago, CHILE

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PAPER #208

**Correction of Coronal Tibiofemoral Subluxation After Unicompartmental Knee Arthroplasty Results in Long-Term Postoperative Functional Improvement**

**Byoung-Hyun Min, MD, PhD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA**

*Jun-Young Chung, MD, Suwon, Gyeonggi-do, REPUBLIC OF KOREA*

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**High Range of Motion in the First Ten Postoperative Days After TKA Does Not Predict Superior Outcome in the Long Run**

**Michael C. Liebensteiner, MD, PhD, Innsbruck, Tyrol, AUSTRIA**

*Tobias Roth, MD, Innsbruck, Tyrol, AUSTRIA*

*Paul Köglberger, MD, Innsbruck, Tyrol, AUSTRIA*

*Alexander Wurm, MD, Innsbruck, Tyrol, AUSTRIA*

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Medical University Innsbruck  
Innsbruck, Tyrol, AUSTRIA

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**Paul Monk, DPhil, FRCS, Auckland, NEW ZEALAND**

*Stephen Mellon, PhD, Oxford, Oxfordshire, UNITED KINGDOM*

*David J. Beard, MA, MSc, DPhil, FRCS(Hon), Prof., Oxford, Oxfordshire, UNITED KINGDOM*

*Richie Gill, Oxford, Oxon, UNITED KINGDOM*

*David Murray, FRCS(Orth), Headington, Oxford, UNITED KINGDOM*

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University of Oxford  
Oxford, UNITED KINGDOM

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12:15 – 13:00  
Ankle**

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**Positive Leukocyte Scintigraphy Might Be the Only Chance to Diagnose an Infection: Evaluation of 42 Consecutive Patients**

**Patryk Ulicki, MD, Warsaw, POLAND**

Urszula E. Zdanowicz, MD, Warsaw, POLAND  
Jaroslaw B. Cwikla, MD, PhD, Warsaw, POLAND

Carolina Medical Center  
Warsaw, POLAND

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Kenji Takahashi, MD, PhD, Funabashi, Chiba, JAPAN  
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Takahiro Ogura, MD, Funabashi, Chiba, JAPAN  
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Izumi Kanisawa, MD, Chiba, Chiba, JAPAN  
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**PAPER #213**

**Diagnosis – History, Physical Examination, Imaging and Arthroscopy: An International Consensus Statement on Cartilage Repair of the Ankle**

**Christopher D. Murawski, MD, Pittsburgh, PA, UNITED STATES**

University of Pittsburgh Medical Center  
Pittsburgh, PA, UNITED STATES

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Maria S. Hansen, PT, MSc, Copenhagen, DENMARK  
Håkon Sandholdt, Copenhagen, DENMARK  
Anders Boesen, MD, Copenhagen, DENMARK  
Per Hölmich, DMSc, Prof., Copenhagen, DENMARK  
Anders Troelsen, MD, PhD, DMSc, Prof., Copenhagen, DENMARK  
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Sports Orthopedic Research Center – Copenhagen (SORC-C),  
Arthroscopic Center, Department of Orthopedic Surgery,  
Copenhagen University Hospital Hvidovre  
Copenhagen, DENMARK

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Conor I. Murphy, MD, Pittsburgh, PA, UNITED STATES  
Richard Debski, PhD, Pittsburgh, PA, UNITED STATES  
Volker Musahl, MD, Pittsburgh, PA, UNITED STATES  
MaCalus V. Hogan, MD, Pittsburgh, PA, UNITED STATES

University of Pittsburgh  
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University of Pittsburgh Medical Center  
Pittsburgh, PA, UNITED STATES

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Christopher D. Murawski, MD, Pittsburgh, PA, UNITED STATES  
C. Niek Van Dijk, MD, PhD, Abcoude, NETHERLANDS

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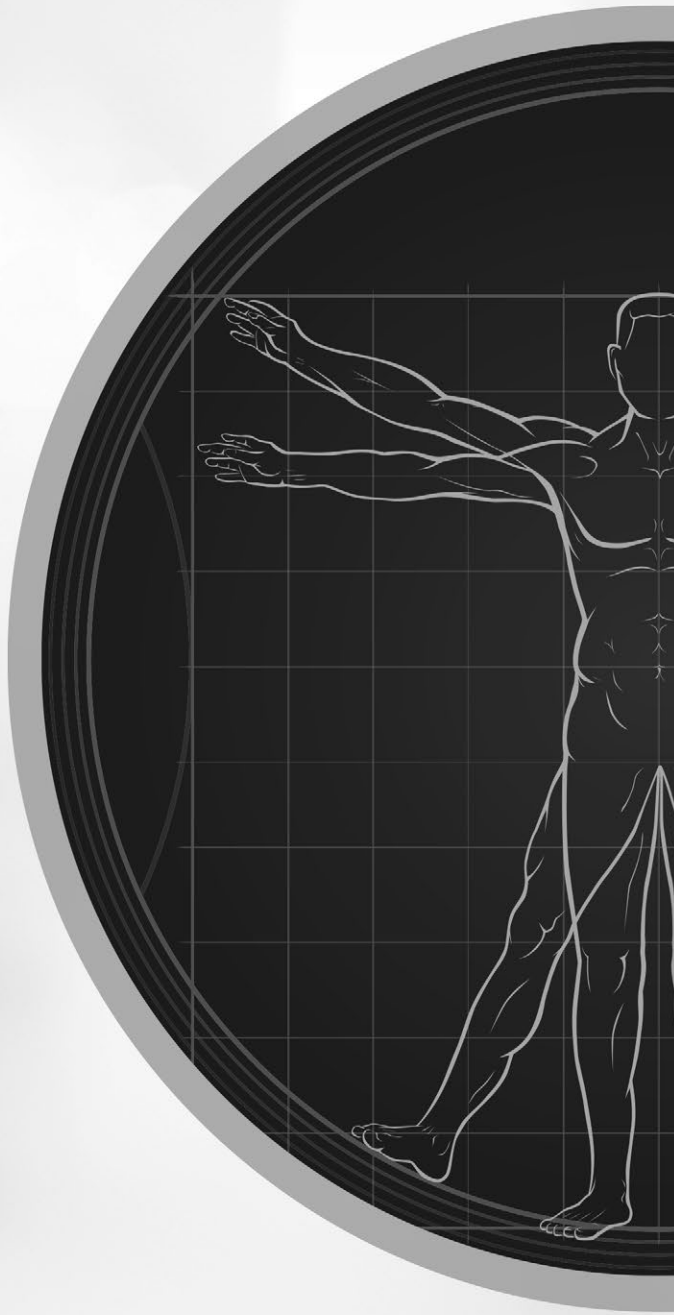
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David R. Diduch, MD, MS  
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Theresa Diermeier, MD  
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Beijing, CHINA

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Yue Li, MD  
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Manabu Akagawa, MD  
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Valdoltra Orthopaedic Hospital  
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Timothy A. Burkhart, PhD  
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Jae-Hoon Chung, MD, PhD  
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Florian B. Imhoff, MD  
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Kanonji, Kagawa, JAPAN

1210 **Clinical Outcome After Osteochondral Autologous Transplantation with and without High Tibial Osteotomy for Spontaneous Osteonecrosis of the Knee**  
Hotaka Ishizu, MD  
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1211 **Complications Associated with Medial Opening-Wedge High Tibial Osteotomy Using a Locking Plate: A Multi-Center Study**  
Ki-Mo Jang, MD, PhD, Prof.  
Anam Hospital, Korea University College of Medicine  
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1212 **Patient-Reported Outcomes Correlate with Functional Scores After Opening-Wedge High Tibial Osteotomy**  
Ki-Mo Jang, MD, PhD, Prof.  
Anam Hospital, Korea University College of Medicine  
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- 1213 **Outcomes After Dome High Tibial Osteotomy**  
Raymond J. Kenney, MD  
University of Rochester Medical Center  
Rochester, NY, UNITED STATES
- 1214 **Degree of Preoperative Subchondral Bone Marrow Lesion is Associated with Postoperative Outcome After Medial Opening Wedge High Tibial Osteotomy**  
Man-Soo Kim, MD  
Seoul St. Mary's Hospital  
Seoul, REPUBLIC OF KOREA
- 1215 **A Retrospective Comparison of Union Rates After Open Wedge High Tibial Osteotomies with and without Synthetic Bone Grafts at Two Years**  
Jae-Gyoon Kim, MD, PhD, Prof.  
Inje University, Ilsan Paik Hospital  
Goyang, Gyeonggi, REPUBLIC OF KOREA
- 1216 **Risk of Deep Peroneal Nerve Injury in Medial Opening-Wedge High Tibial Osteotomy: A Cadaveric Study Using Locking Plate**  
Makoto Kobayashi, MD, PhD  
Nagoya City University  
Nagoya, Aichi, JAPAN
- 1217 **Inverted V-Shaped High Tibial Osteotomy for Medial Osteoarthritic Knees with Severe Varus Deformity**  
Eiji Kondo, MD, PhD  
Hokkaido University  
Sapporo, Hokkaido, JAPAN
- 1218 **Three-Dimensional Comparison of Tibial Torsion Changes Following Lateral Closed Wedge or Medial Open Wedge High Tibial Osteotomy**  
Umito Kuwashima, MD, PhD  
Department of Orthopaedic Surgery, Tokyo Women's Medical University  
Sinjuku-ku, Tokyo, JAPAN
- 1219 **Predictive Factors for Patellofemoral Degenerative Progression After Opening-Wedge High Tibial Osteotomy**  
Sung-Sahn Lee, MD  
Samsung Medical Center  
Seoul, REPUBLIC OF KOREA
- 1220 **Inter-Observer Reliability for Imaging Parameters Describing the Femoral Trochlea Anatomy**  
Michael C. Liebensteiner, MD, PhD  
Medical University Innsbruck  
Innsbruck, Tyrol, AUSTRIA
- 1221 **Anteromedialization Tibial Tubercle Osteotomy Decreases Patellar Height**  
Alexandre B. Mestriner, MD  
Harvard Medical School—Brigham and Women's Hospital  
Boston, MA, UNITED STATES
- 1222 **Survival Analysis of Medial Open Wedge High Tibial Osteotomy for Medial Unicompartement Knee Osteoarthritis**  
Seung-Min Na, MD  
Chonnam National University Hospital  
Gwangju, REPUBLIC OF KOREA
- 1223 **Effect of Posterior Tibial Slope Increase in Opening Wedge High Tibial Osteotomy on Functional Outcomes**  
Seung-Min Na, MD  
Chonnam National University Hospital  
Gwangju, REPUBLIC OF KOREA
- 1224 **High Variability of Tibial Slope Measurement Methods in Daily Clinical Practice: Comparisons between Measurements on Lateral Radiograph, MRI and CT-Scan**  
Jan-Hendrik Naendrup, BS  
Dept. of Trauma Surgery, Witten/Herdecke University,  
Cologne-Merheim Medical Center  
Cologne, NRW, GERMANY
- 1225 **Articular Cartilage Changes of the Proximal Tibiofibular Joint in MRI T1-Rho Mapping Following an Open-Wedge Osteotomy of the Proximal Tibia with Hemicallotasis for Medial Knee Osteoarthritis**  
Eiichi Nakamura, MD, PhD  
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Kumamoto University  
Kumamoto, JAPAN
- 1226 **Investigation of the Change in the Leg Length After High Tibial Osteotomy: A Computer Simulation Study Using the Three-Dimensional Software of Preoperative Planning**  
Kazuki Nomoto, MD  
Hamamatsu University School of Medicine  
Hamamatsu, Shizuoka, JAPAN
- 1227 **Midterm Results of Arthroscopic Anterior Cruciate Ligament Reconstruction with Simultaneous Medial Opening Wedge High Tibial Osteotomy in Patients with Genu Varum Deformity**  
Amr S. Rashwan, Assoc. Prof.  
Kasr AlAiny Hospital, Faculty of Medicine, Cairo University  
Cairo, EGYPT
- 1228 **Mid-Term Influence of Opening Wedge High Tibial Osteotomy on Progression of Patellofemoral Osteoarthritis**  
Shizuka Sasaki  
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Hirosaki, Aomori, JAPAN
- 1229 **Outcomes of Simultaneous Open Wedge High Tibial Osteotomy and Anterior Cruciate Ligament Reconstruction in Anterior Cruciate Ligament Deficiency with Medial Unicompartement Osteoarthritis**  
Jong-Keun Seon, MD, PhD  
Chonnam National University Hwasun Hospital  
Hwasun, Jeonnam, REPUBLIC OF KOREA
- 1230 **One- to Six-Years Clinical and Radiological Outcome of Tibial Rotational Osteotomy and Tuberosity Transfer for Symptomatic Excessive External Tibial Torsion**  
Martyn Snow, FRCS  
The Royal Orthopaedic Hospital  
Birmingham, UNITED KINGDOM

- 1231 **Factors Affecting Cartilage Regeneration After Microfracture with High Tibial Osteotomy**  
Eun-Kyoo Song, MD, PhD, Prof.  
Chonnam National University Bitgoeul Hospital  
Gwangju, REPUBLIC OF KOREA
- 1232 **Medial Open Wedge High Tibial Osteotomy in Patients Aged Over 65 Years: Clinical and Radiological Comparisons between Different Age Groups**  
Hiroki Takeuchi, MD  
Hokkaido University  
Sapporo, Hokkaido, JAPAN
- 1233 **Proximal Tibiofibular Dislocation vs. Fibular Head Osteotomy in a Closing-Wedge High Tibial Osteotomy: Radiological and Clinical Repercussion on the Stability of the Lateral Compartment of the Knee, a Prospective Randomized Study**  
Raúl Torres-Claramunt, PhD  
Parc de Salut Mar  
Barcelona, SPAIN
- 1234 **Difference in Joint Line Convergence Angle between Supine and Standing Positions Can Predict Coronal Correction Error After Medial Opening Wedge High Tibial Osteotomy**  
Joon-Ho Wang, MD, PhD  
Samsung Medical Center  
Seoul, REPUBLIC OF KOREA
- 1235 **Clinical and Radiological Evaluations of a Novel Fixation System for Medial Open-Wedge High Tibial Osteotomy: Comparison with Anatomical Locking Plate**  
Koji Yabuuchi, MD  
Steel Memorial Muroran Hospital  
Muroran, Hokkaido, JAPAN
- 1236 **Correlation between the Amount of Bony Correction Angle in Medial Open Wedge High Tibial Osteotomy and the State of Patellofemoral Cartilage**  
Tae-Hwan Yoon, MD  
Arthroscopy and Joint Research Institute, Dept. of Orthopaedic Surgery, Severance Hospital, Yonsei University College of Medicine  
Seoul, REPUBLIC OF KOREA

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- 1301 **Long-Term Results of the One-Step Technique in the Treatment of the Osteochondritis Dissecans of the Knee**  
Roberto Buda, Prof.  
IRCCS–Istituto Ortopedico Rizzoli  
Bologna, ITALY
- 1302 **Comparison of Post-Traumatic Osteoarthritis Injury Initiation Methods in an Ovine Model**  
Timothy A. Burkhart, PhD  
Western University  
London, ON, CANADA
- 1303 **Quantitative Morphological Analysis of the Capsulo-Osseous Layer of the Distal Iliotibial Band**  
Timothy A. Burkhart, PhD  
Western University  
London, ON, CANADA
- 1304 **Iatrogenic Cartilage Injury During Arthroscopic Procedures: A Common Occurrence That Results in Superficial Cartilage Cell Death**  
Robert W. Westermann, MD  
University of Iowa Hospitals and Clinics  
Iowa City, IA, UNITED STATES
- 1305 **Effect of Focal Metallic Implants to the Contralateral Cartilage: An In Vitro Study with a Novel Designed Abrasion Test Machine**  
Theresa Diermeier, MD  
Dept. of Sportorthopedic, Klinikum rechts der Isar, Technical University Munich  
Munich, Bavaria, GERMANY
- 1306 **Improvement and Low Recurrence Rate After Combined Staged Synovectomy and External Radiotherapy for Diffuse Pigmented Villonodular Synovitis of the Knee: A Minimum Two-Year Follow-Up Case Series**  
Mohamed El Attar, MD  
Zagazig University  
Zagazig, EGYPT
- 1307 **Safety and Effectiveness of Coblation (Radio Frequency Plasma) for Knee Chondroplasty**  
David C. Flanigan, MD  
The Ohio State University Wexner Medical Center  
Columbus, OH, UNITED STATES
- 1308 **Quantifying Compartmental & Sub-Compartmental Cartilage Variation in Osteoarthritic Knees**  
Brett A. Fritsch, MBBS, BMedSc  
360 Knee Systems  
Sydney, NSW, AUSTRALIA
- 1309 **Increased Activity and Sports Specialization Is Associated with Knee Pain: An Epidemiological Cross-Sectional Study of 4,002 Children and Adolescents**  
Daniel W. Green, MD, MS  
Hospital for Special Surgery  
New York, NY, UNITED STATES
- 1310 **Non-Operative Treatments for Knee Osteoarthritis: Are They Equally Effective?**  
Moin Khan, MD, MSc, FRCSC  
McMaster University–Division of Orthopaedic Surgery  
Hamilton, ON, CANADA
- 1311 **Magnetic Resonance Imaging is Helpful in Surgical Decision Making Process of Medial Compartment Osteoarthritis of the Knee**  
Chulkyu Kim, MD  
Seoul St. Mary's Hospital, The Catholic University of Korea  
Seoul, REPUBLIC OF KOREA
- 1312 **Knee Pain in Patients Who Have Radiographic Knee Osteoarthritis Is Associated with Spinal Sagittal Malalignment**  
Hiroshi Koyama, MD, PhD  
Hamamatsu University School of Medicine  
Hamamatsu, Shizuoka, JAPAN

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- 1313 **Significant Proportion of Severe Lateral Osteoarthritis in the Asian Population have Nonvalgus Knee Alignment with Milder Clinical Manifestation**  
Cheong-Su Lim, MD  
Asan Medical Center  
Seoul, REPUBLIC OF KOREA
- 1314 **Use of Posterior Tibial Support Braces for Posterior Cruciate Ligament Injury Treatment: Patients' Perspective**  
Martin Lind, MD, PhD, Prof.  
Aarhus University Hospital  
Aarhus, DENMARK
- 1315 **Conservative Approaches to Kinematic Alignment and Their Impact on Patient Reported Outcomes**  
David A. Parker, MBBS, BMedSc, FRACS  
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Sydney, NSW, AUSTRALIA
- 1316 **How Much Knee Motion Do I Need?: Assessment of Knee Range of Motion During Daily Activities as Assessed by a Novel Gait Tracking Wearable Device**  
Alexander P. Sah, MD  
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Fremont, CA, UNITED STATES
- 1317 **Assessment of Valgus Instability After Release of the Medial Structure in Medial Open-Wedge High Tibial Osteotomy: In Vivo Biomechanical Study Using Quantitative Valgus Stress Radiography**  
Dai Sato, MD  
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Graduate School of Medicine  
Sapporo, Hokkaidou, JAPAN
- 1318 **Medial Plica Syndrome of the Knee – Arthroscopic Plica Resection vs. Structured Physiotherapy: Preliminary Results from a Randomized Controlled Trial**  
Steffen Sauer, MD  
Aarhus University Hospital  
Aarhus, DENMARK
- 1319 **Comparison of Microfracture Alone and Microfracture with Augmentation for Medial Unicompartmental Osteoarthritis**  
Eun-Kyoo Song, MD, PhD, Prof.  
Chonnam National Univ. Bitgoeul Hospital  
Gwangju, REPUBLIC OF KOREA
- 1320 **Arthroscopy vs. Arthrotoomy for the Treatment of Septic Knee Arthritis**  
Vehniah K. Tjong, MD, FRCSC  
Northwestern  
Chicago, IL, UNITED STATES
- 1321 **Retroarticular Drilling with Supplemental Bone Marrow Aspirate for the Treatment of Osteochondritis Dissecans of the Knee**  
Samuel C. Willimon, MD  
Children's Healthcare of Atlanta  
Atlanta, GA, UNITED STATES
- 1322 **Motor Learning in Knee Osteoarthritis Therapy: A New Rehabilitation Approach**  
Barbara Wondrasch, PT, PhD  
St. Poelten University of Applied Sciences  
St. Poelten, Lower Austria, AUSTRIA

## KNEE – PATELLOFEMORAL

- 1401 **Patella Tendon Imbrication as a Surgical Management of Patella Alta**  
Jack T. Andrish, MD  
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Cleveland, OH, UNITED STATES
- 1402 **Clinical Results Following Distalization of the Tibial Tubercle for Patellar Stabilization**  
Elizabeth A. Arendt, MD  
University of Minnesota  
Minneapolis, MN, UNITED STATES
- 1403 **Cartilage Restoration of the Patellofemoral Joint: A Systematic Review**  
Olufemi R. Ayeni, MD, PhD, MSc, FRCSC  
McMaster University  
Hamilton, ON, CANADA
- 1404 **Return to Sport Following Medial Patellofemoral Ligament Reconstruction**  
Jonathan T. Bravman, MD  
University of Colorado School of Medicine, Dept. of Orthopaedics, Division of Sports Medicine and Shoulder Surgery  
Aurora, CO, UNITED STATES
- 1405 **Better Knee Function After Surgical Repair of Acute Quadriceps Tendon Rupture in Comparison to Acute Patellar Tendon Rupture**  
Michail E. Chantes, Prof.  
University Hospital of Larissa, University of Thessalia  
Larissa, GREECE
- 1406 **Outcomes in Patients with Severe Trochlear Dysplasia Undergoing Sulcus-Deepening Trochleoplasty: A Minimum One-Year Follow-Up Prospective Study**  
David R. Diduch, MD, MS  
University of Virginia  
Charlottesville, VA, UNITED STATES

- 1407 **Isolated Patellofemoral Ligament Reconstruction: Implant-Free Technique with Elastic Femoral Fixation Leads to Excellent Clinical Results in Term of Stability without Patellofemoral Pain**  
Maximiliano Ibañez, MD  
ICATME–Dexeus University Hospital  
Barcelona, SPAIN
- 1408 **Magnetic Resonance Study of Vastus Medialis: Comparison between Patellar Instability and Controls**  
Riccardo G. Gobbi, MD, PhD  
Instituto de Ortopedia, Hospital das Clínicas HCFMUSP, Faculdade de Medicina, Universidade de São Paulo  
São Paulo, SP, BRAZIL
- 1409 **Posterior Approach to Hamstring Harvest and Subsequent Graft Length in MPFL Reconstruction**  
Daniel W. Green, MD, MS  
Hospital for Special Surgery  
New York, NY, UNITED STATES
- 1410 **Patellofemoral Cartilage Restoration: A Systematic Review and Meta-Analysis of Clinical Outcomes**  
Betina B. Hinckel, MD, PhD  
University of Missouri School of Medicine  
Columbia, MO, UNITED STATES
- 1411 **Impact of Graft Tension and Posterior Tibia Loading Strategies on the Patellofemoral Joint Contact Pressure during Anterior Cruciate Ligament Reconstruction**  
Wenhan Huang, MD, PhD  
The Chinese University of Hong Kong  
Hong Kong, HONG KONG
- 1412 **Timing for Safe Return to Sport After Medial Patellofemoral Ligament (MPFL) Reconstruction: The Role of a Functional Test Battery**  
Matteo Innocenti, MD  
Azienda Ospedaliero Universitaria Careggi–Orthopaedic and Traumatologic Center  
Florence, ITALY
- 1413 **Comparison of Drop Landing Strategies between Patients with Deficient MPFL and Patients After MPFL Reconstruction**  
Michail I. Iosifidis, MD, PhD  
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Thessaloniki, Trikala, GREECE
- 1414 **A Comparative Study between Patellofemoral Joint and Femoral Condyles Cartilage Lesions After Mesenchymal Stem Cells Implantation**  
Michail I. Iosifidis, MD, PhD  
OrthoBiology Surgery Center, Hellenic Cord Blood Bank of BBRFA  
Thessaloniki, Athens, GREECE
- 1415 **Biomechanics of Patellar Tendon Repair Using a High-Resistance Flexible Suture Frame: A Cadaveric Study**  
Sebastián Irrázaval, MD  
Pontificia Universidad Católica de Chile  
Santiago, CHILE
- 1417 **In-Vivo Length Changes and Isometry of the Medial Patellofemoral Ligament during Weightbearing Motion**  
Willem A. Kernkamp, MD  
Shanghai Jiao Tong University  
Shanghai, CHINA
- 1418 **Evaluation of the Patellofemoral Patient: Consensus Recommendations by an Expert Panel and Survey**  
Jason L. Koh, MD, MBA  
NorthShore University HealthSystem  
Evanston, IL, UNITED STATES
- 1419 **The Effect of Tibial Tuberosity Distalization on Patellofemoral Contact Pressure and Tracking: A Dynamic Computational Simulation Study**  
Jason L. Koh, MD, MBA  
Cleveland Clinic Akron General Hospital  
Akron, OH, UNITED STATES
- 1420 **Biomechanical Analysis of Patellar Resurfacing with Onlay and Inset Patellar Implant Fixation in TKR: A Comparison of Conventional and Highly Cross-Linked Polyethylene**  
Yung-Chang Lu, Assoc. Prof.  
MacKay Memorial Hospital  
New Taipei City, TAIWAN
- 1421 **Inter-Rater Reliability of Measurement of TT-TG and Trochlear Morphology on MRI: The Effect of Axial Slice Selection**  
Robert A. Magnussen, MD, MPH  
The Ohio State University  
Columbus, OH, UNITED STATES
- 1422 **Medial Patellofemoral Ligament Reconstruction Using Fascia Lata Allograft: Minimum Two-Year Follow-Up Results**  
Giulio Maria Marcheggiani-Muccioli, MD, PhD  
IRCCS Istituto Ortopedico Rizzoli–University of Bologna  
Bologna, ITALY
- 1423 **The Recurrent Instability of the Patella (RIP) Score: A Statistically-Based Model for Prediction of Long-Term Recurrence Risk After First-Time Dislocation**  
R. Kyle Martin, MD, FRCSC  
Mayo Clinic  
Rochester, MN, UNITED STATES
- 1425 **Patellofemoral Autologous Chondrocyte Implantation in Patients with Trochlear Dysplasia: A Comparative Matched Group Analysis**  
Alexandre B. Mestriner, MD  
Harvard Medical School–Brigham and Women’s Hospital  
Boston, MA, UNITED STATES
- 1426 **Anchor vs. Trans-Osseous Repair of Acute Patellar Tendon Ruptures**  
Raffy Mirzayan, MD  
Kaiser Permanente Southern California  
Baldwin Park, CA, UNITED STATES
- 1427 **Trochlear Length Is an Important Factor in Trochlear Dysplasia and Patellar Instability**  
Peters T. Otlans, MD, MPH  
Oregon Health & Science University  
Portland, OR, UNITED STATES
- 1428 **Epidemiology of Patellofemoral Injuries in Collegiate Athletes in the United States from 2009 to 2014**  
Mary K. Mulcahey, MD  
Tulane University Hospital  
New Orleans, LA, UNITED STATES
- 1429 **Surgical Treatment of Patellofemoral Cartilage Lesions: A Systematic Review**  
Jóni Nunes, MD  
Clínica do Dragão, Espregueira-Mendes Sports Centre–FIFA Medical Centre of Excellence  
Porto, PORTUGAL



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- 1430 **Trans-Osseous vs. Anchor Repair of Acute Patellar Tendon Ruptures**  
James A. O'Dowd, MD  
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Baldwin Park, CA, UNITED STATES
- 1431 **Clinical and Radiological Outcomes of Trans-Osseous Tunnel vs. Suture Anchor Fixation for Medial Patellofemoral Ligament Reconstruction: Case Control Study with Two-Year Follow-Up**  
Jae-Young Park, MD  
Kyung Hee University Hospital  
Seoul, REPUBLIC OF KOREA
- 1432 **Arthroscopic Medial Patellar Reefing with Suture Loop for Recurrent Patellar Dislocation in Paediatric Population**  
Saroj Rai, MD, PhD  
Department of Orthopaedics, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology  
Wuhan 430022, CHINA
- 1433 **Evaluation of Patellar Contact Pressure Changes After Static vs. Dynamic Medial Patellofemoral Ligament Reconstructions Using a Finite Element Model**  
Vicente Sanchis-Alfonso, MD, PhD  
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University of Zaragoza  
Zaragoza, SPAIN
- 1434 **Risk of Patellar Fracture in MPFL Reconstruction Depends on Bone Tunnel Placement: A Finite Element Analysis**  
Gerd Seitlinger, MD  
Salzburg University of Applied Sciences  
Salzburg, AUSTRIA
- 1435 **Medial Patellofemoral Ligament Repair vs. Reconstruction for Chronic Patella Instability**  
Seth L. Sherman, MD  
University of Missouri Department of Orthopaedic Surgery  
Columbia, MO, UNITED STATES
- 1436 **Accelerated Rehabilitation Program Following Tibial Tubercle Distalization for Patellar Dislocation Does Not Increase Risk of Surgical Complications**  
Petri J. Sillanpää, MD, PhD  
Pihlajalinna Koskisairaala Hospital  
Tampere, FINLAND
- 1437 **Trochlear Morphology and Cartilage Viability After Mini-Open Lateral Approach Trochleoplasty for Recurrent Patellar Dislocation: MRI Analysis and Clinical Results**  
Petri J. Sillanpää, MD, PhD  
Pihlajalinna Koskisairaala Hospital  
Tampere, FINLAND
- 1438 **Hemiepiphysiodesis Is a Potentially Effective Surgical Management for Skeletally Immature Patients with Patellofemoral Instability Associated with Isolated Genu Valgum**  
Si-Heng S. Tan, MBBS, MRCS  
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Singapore, SINGAPORE
- 1439 **The Ribbon-Shaped Femoral Footprint of the MPFL: Implications for Reconstruction**  
Miho J. Tanaka, MD  
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Baltimore, MD, UNITED STATES
- 1440 **Relationship between Graft Force and Tuberosity Position Following MPFL Reconstruction**  
Miho J. Tanaka, MD  
Johns Hopkins University  
Baltimore, MD, UNITED STATES
- 1441 **Functional Testing Identifies Functional Deficits Following Medial Patellofemoral Ligament Reconstruction**  
Marc Tompkins, MD  
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Minneapolis, MN, UNITED STATES
- 1442 **Clinical Outcome of Isolated Patello-Femoral Osteoarthritis Treated with a Single Autologous Protein Solution (APS) Injection: A One-Year Prospective Follow-Up Study**  
Peter Verdonk, MD, PhD  
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Antwerp, BELGIUM
- 1443 **Orientation Changes of Different Medial Patellofemoral Fibers at the Patellar Attachment During Lunge**  
Cong Wang, BEng  
Shanghai Jiao Tong University  
Shanghai, CHINA
- 1444 **Performance of PROMIS in Patients with Patellofemoral Malalignment and Chondral Disease**  
Robert W. Westermann, MD  
University of Iowa Department of Orthopedics  
and Rehabilitation  
Iowa City, IA, UNITED STATES
- 1445 **Classification of Dysplastic Femoral Trochlea Depends on Evaluation Plane in Patients with Patellar Instability**  
Yuzo Yamada, MD, PhD  
Yao Municipal Hospital  
Yao, Osaka, JAPAN
- 1446 **Patellofemoral Realignment: The "Dynamic Quadriceps" as a New Technique**  
Cesar Guillermo Zvietcovich-Cornejo, MD  
Clinica Vallesur-AUNA  
Arequipa, PERU

# KNEE – PCL / COLLATERAL LIGAMENTS / MULTILIGAMENT INJURIES

- 1501 **A Novel Concept: Graft Reinforcement in Knee Ligament Reconstruction**  
John Dabis, MBBS, MSc SEM, MRCS, FRCS(Tr&Orth)  
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- 1502 **Outcomes of an Anatomic Posterolateral Knee Reconstruction with Autografts**  
Carlos E. D. Franciozi, MD, PhD, Prof.  
Federal University of São Paulo  
São Paulo, SP, BRAZIL
- 1503 **Experimental Analysis of Medial Structures on Kinematics of PCL-Deficient Knees**  
Alan Getgood, MD, FRCS(Tr&Orth), DipSEM  
Western University  
London, ON, CANADA
- 1504 **The Effects of Nicotine Use on Clinical Outcomes of Multiligament Knee Injuries**  
Jacob T. Hall, BS  
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Grand Rapids, MI, UNITED STATES
- 1505 **Clinical Outcomes of Surgical Treatment for the Multiple Knee Ligament Injuries with Both Anterior Cruciate Ligament and Posterior Cruciate Ligament Ruptures**  
Zenta Jotoku, MD, PhD  
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Sapporo, Hokkaido, JAPAN
- 1506 **Clinical Comparisons of Double-Bundle vs. Single-Bundle Posterior Cruciate Ligament Reconstruction Procedures Using Hamstring Tendon Hybrid Autografts**  
Yoshio Nishida, MD  
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Sapporo, Hokkaido, JAPAN
- 1507 **Clinical and Radiological Results After Internal Bracing of the Posterior Cruciate Ligament in Acute Lesions**  
Alexander Otto, MD  
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Munich, Bavaria, GERMANY
- 1508 **Minimum Ten-Year Results of Single-Bundle vs. Double-Bundle Posterior Cruciate Ligament Reconstruction: Clinical, Radiologic, and Survivorship Outcomes**  
Jae-Young Park, MD  
Kyung Hee University Hospital  
Seoul, REPUBLIC OF KOREA
- 1509 **Assessing the Incidence of “PCL Plus Popliteus” Injuries**  
Matthew Pate, BS  
Orthopaedic Associates of Michigan  
Grand Rapids, MI, UNITED STATES
- 1510 **Varus Mechanism Is Associated with High Incidence of Popliteal Artery Lesions in Multiligament Knee Injuries**  
Maximiliano Scheu, MD, MMSc  
Mutual de Seguridad CChC  
Santiago, CHILE
- 1511 **Graft Bending Angle of Posterior Cruciate Ligament: Analysis Using an In Vivo 3D Model**  
Young-Jin Seo, MD, PhD  
Hallym University Dongtan Sacred Heart Hospital  
Hwaseong, Gyeonggi, REPUBLIC OF KOREA
- 1512 **Clinical Feature of the “Windswept Knee Injury”**  
Jae-Ang Sim, MD, PhD  
Gachon University Gil Medical Center  
Incheon, REPUBLIC OF KOREA
- 1513 **Virtual Reconstruction of the Posterior Cruciate Ligament for Mechanical Testing of the Knee**  
Sonia Donde, MS  
Stryker  
Mahwah, NJ, UNITED STATES
- 1514 **Double Bundle Anatomic Medial Reconstruction Restores Stability and Function: Clinico-Radiological Outcome**  
Sachin R. Tapasvi, MBBS, MS, DNB, FRCS  
The Orthopaedic Speciality Clinic  
Pune, Maharashtra, INDIA
- 1515 **Multiligament Knee Injuries: Clinical Outcomes of Surgical Treatment**  
Maria Tuca, MD  
Hospital Clínico Mutual de Seguridad  
Santiago, CHILE
- 1516 **Validation of PROMIS Computer Adaptive Testing for Multiligament Knee Reconstruction**  
Alexander E. Weber, MD  
University of Southern California  
Los Angeles, CA, UNITED STATES

## OTHER

- 1601 **International Comparative Analysis to Understand the Capacity for Arthroscopy Training in Developing Countries**  
Nicole H. Goldhaber, MA, BA  
Harvard Medical School  
Boston, MA, UNITED STATES
- 1602 **A Comparison of Novice, Resident, and Attending Orthopaedic Surgeon Outcomes on Six Fundamentals of Arthroscopic Surgery Training Workstation Tasks**  
Peters T. Orlans, MD, MPH  
Oregon Health & Science University  
Portland, OR, UNITED STATES

## SHOULDER – ARTHROPLASTY

- 1701 **Patient-Reported Outcomes Following Anatomic Total Shoulder Arthroplasty for Primary Glenohumeral Osteoarthritis: Mid-Term Results at a Minimum Of Five Years**  
Burak Altintas, MD  
Steadman Philippon Research Institute  
Vail, CO, UNITED STATES
- 1702 **Clinical Outcomes and Complications of Primary Reverse Total Shoulder Arthroplasty After 2010: A Systematic Review**  
Darren L. de Sa, MD, FRCSC  
University of Pittsburgh  
Pittsburgh, PA, UNITED STATES
- 1703 **Peri-Operative Outcomes of Patients with Chronic Kidney Disease Undergoing Shoulder Arthroplasty**  
Kevin X. Farley, BS  
Emory University School of Medicine  
Atlanta, GA, UNITED STATES
- 1704 **Humeral Lateralization Gives Better Outcomes in Reverse Shoulder Arthroplasty: A Comparative Study**  
Edoardo Franceschetti, MD  
Campus Bio-Medico University of Rome  
Rome, ITALY
- 1705 **Clinical Results of Bony Increased Offset Reverse Shoulder Arthroplasty (BIO-RSA) Associated with an Onlay 145° Curved-Stem in Patients with Cuff Tear Arthropathy: A Comparative Study**  
Edoardo Franceschetti, MD  
Campus Bio-Medico University of Rome  
Roma, ITALY
- 1706 **Charlson Comorbidity Index Significantly Predicts 90-Day Readmission After Shoulder Arthroplasty**  
Benjamin R. Graves, MD  
Wake Forest Baptist Medical Center  
Winston Salem, NC, UNITED STATES
- 1707 **Preoperative PROMIS Scores Predict Postoperative Outcome in Total Shoulder Arthroplasty Patients**  
Raymond J. Kenney, MD  
University of Rochester  
Rochester, NY, UNITED STATES
- 1708 **Cemented Humeral Stem vs. Press-Fit Humeral Stem in Total Shoulder Arthroplasty: A Systematic Review**  
Moin Khan, MD, MSc, FRCSC  
McMaster University, Division of Orthopaedic Surgery  
Hamilton, ON, CANADA
- 1709 **Outcomes and Return to Sport After Pectoralis Major Tendon Repair: A Systematic Review**  
Moin Khan, MD, MSc, FRCSC  
McMaster University—Division of Orthopaedic Surgery  
Hamilton, ON, CANADA
- 1710 **The Dimensionless Squared Jolt (DSJ): A Novel Objective Parameter That Improves Assessment of Hand Motion Analysis During Simulated Shoulder Arthroscopy**  
Erica Kholinne, MD  
Asan Medical Center  
Seoul, REPUBLIC OF KOREA
- 1711 **Glenoid Wear Pattern Does Not Influence Patient-Reported Satisfaction Following Humeral Head Resurfacing**  
Albert Lin, MD  
UPMC  
Pittsburgh, PA, UNITED STATES
- 1712 **Does the Teres Minor Muscle Status Affect the Active Rotation Movement in Reverse Total Shoulder Arthroplasty?**  
Ofer Levy, MD, MCh(Orth), FRCS  
Reading Shoulder Unit  
Reading, Berkshire, UNITED KINGDOM
- 1713 **Metaphyseal Reverse Total Shoulder Arthroplasty without a Stem: Long-Term Results with 5- to 11-Years Follow-Up**  
Ofer Levy, MD, MCh(Orth), FRCS  
Reading Shoulder Unit  
Reading, Berkshire, UNITED KINGDOM
- 1714 **Accelerated Rehabilitation Protocol Following Reverse Total Shoulder Arthroplasty: A New Concept**  
Ofer Levy, MD, MCh(Orth), FRCS  
Reading Shoulder Unit  
Reading, Berkshire, UNITED KINGDOM
- 1715 **Incidence of Distal Peripheral Neuropathy After Shoulder Arthroplasty**  
Gregory P. Nicholson, MD  
Rush University Medical Center  
Chicago, IL, UNITED STATES
- 1716 **Outcomes and Complications in Reverse Total Shoulder Arthroplasty by Head-Shaft Angle with a Modular Prosthesis**  
Alexander Otto, MD  
UConn Health Musculoskeletal Institute, Department of Orthopaedic Surgery  
Farmington, CT, UNITED STATES
- 1717 **The Role of the Subscapularis Tendon in a Lateralized Reverse Total Shoulder Arthroplasty: Repair vs. Non-Repair**  
Alessio Palumbo, MD  
Campus Bio-Medico University of Rome  
Rome, ITALY
- 1718 **Acromial Spine Fracture After Reverse Total Shoulder Arthroplasty: A Systematic Review**  
Diana C. Patterson, MD  
Mount Sinai Health System  
New York, NY, UNITED STATES
- 1719 **The Effect of Glenoid Morphology on Outcomes of Total Shoulder Inlay Arthroplasty: Prospective Comparison of Walsh Type A And B Glenoids**  
Luis A. Vargas, MD, PhD  
Miami Orthopedic and Sports Medicine Institute  
Coral Gables, FL, UNITED STATES
- 1720 **Five-Year Outcomes of Powerlifters and Bodybuilders Undergoing Stemless Aspherical Humeral Head Resurfacing along with an Inlay Glenoid**  
Luis A. Vargas, MD, PhD  
Miami Orthopedic Sports Medicine Institute  
Coral Gables, FL, UNITED STATES

# SHOULDER – INSTABILITY

- 1801 **Can the ISIS Predict the Failure of an Arthroscopic Bankart Repair?: A Case Series with 160 Cases with Minimum of Three-Years Follow-Up**  
Francisco S. Arcuri, MD  
IADT  
Buenos Aires, ARGENTINA
- 1802 **Suprascapular Nerve Blockade for Postoperative Pain Control Following Arthroscopic Shoulder Surgery: A Systematic Review and Meta-Analysis**  
Olufemi R. Ayeni, MD, PhD, MSc, FRCS  
McMaster University  
Hamilton, ON, CANADA
- 1803 **Dynamic Anterior Shoulder Stabilization Using the Long Head of the Biceps Tendon: A Biomechanical Study**  
Knut Beitzel, MD, MA  
UConn Health, Department of Orthopaedic Surgery  
Farmington, CT, UNITED STATES
- 1804 **Collision vs. Contact Athletes: Arthroscopic Stabilization After a First-Time Dislocation**  
Bernardo A. Bertona-Altieri, MD  
Hospital Italiano de Buenos Aires  
Buenos Aires, ARGENTINA
- 1805 **Preliminary Results of the Use of Osteochondral Transplantation in the Proximal Humeral Surgical Procedures**  
Rodrigo S. Borges Petros, MD  
Hospital de Traumatologia e Ortopedia (HTO) Dona Lindu  
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- 1806 **All-Arthroscopic Mclaughlin Procedure in Patients with Reverse Hill-Sachs Lesion Caused by Locked Posterior Shoulder Dislocation: A Clinical Series with at Least Five-Years Follow-Up**  
Emmanouil V. Brilakis, MD, MSc  
Hygeia General Hospital  
Athens, GREECE
- 1807 **Arthroscopic Remplissage Supplementing the Classic Bankart Repair: Long-Term Outcomes with Eight Years Average Follow-Up**  
Emmanouil V. Brilakis, MD, MSc  
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- 1808 **Is Return to Play at Six Months After Latarjet Safe?: A Multi-Center Orthopaedic Outcomes Network (MOON) Shoulder Group Cohort Study**  
Grant L. Jones, MD  
The Ohio State University Wexner Medical Center  
Columbus, OH, UNITED STATES
- 1809 **What Are the Effects of Remplissage on Six-Month Outcomes Following Arthroscopic Bankart Repair?: A Multi-Center Orthopaedic Outcomes Network (MOON) Shoulder Group Cohort Study**  
Grant L. Jones, MD  
The Ohio State University Wexner Medical Center  
Columbus, OH, UNITED STATES
- 1810 **The West Point View: An Arthroscopic Load Shift Utilizing an Intra-Articular 50-Yard Line View**  
Donald R. Fredericks Jr., MD  
Walter Reed National Military Medical Center  
Bethesda, MD, UNITED STATES
- 1811 **Relationship between Posterior Instability of the Shoulder and Scapula Dyskinesia: Does the Scapular Manual Fixation Have a Great Effect on the Result of the Jerk Test?**  
Yasunari Fujii, MD  
Orthopaedic Surgery, Kagoshima University  
Kagoshima, JAPAN
- 1812 **The Financial Burden Associated with Multiple Shoulder Dislocations and the Potential Cost-Savings of Surgical Stabilization**  
Benjamin R. Graves, MD  
Wake Forest Baptist Health  
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- 1813 **Arthroscopic Soft Tissue Shoulder Stabilization with Augmentation in Elite Judo Athletes**  
Hiroshige Hamada, MD  
Funabashi Orthopaedic Hospital  
Funabashi, Chiba, JAPAN
- 1814 **Surgical Reconstruction of Unreparable Pectoralis Major Rupture Using Tendo-Achilles Allograft**  
Mohamed A. Imam, MD, MSc, DSportMed, PhD, FRCS(Tr&Orth)  
Wrightington Hospital  
Wrightington, UNITED KINGDOM
- 1815 **The Incidence of Traumatic Posterior and Combined Labral Tears in Patients Undergoing Arthroscopic Shoulder Stabilization**  
Mohamed A. Imam, MD, MSc, DSportMed, PhD, FRCS(Tr&Orth)  
Wrightington Hospital  
Wrightington, UNITED KINGDOM
- 1816 **Cyclic Biomechanical Evaluation of Single-Tunnel Coracoclavicular Reconstruction: Is Augmentation Necessary?**  
Tyler R. Johnston, MD  
Stanford University  
Redwood City, CA, UNITED STATES
- 1817 **Preoperative PROMIS Scores Predict Postoperative Outcomes After Arthroscopic Bankart Repair**  
Raymond J. Kenney, MD  
University of Rochester  
Rochester, NY, UNITED STATES
- 1818 **Biomechanical Comparison of Single- and Double-Row Repair Techniques for Acute Bony Bankart Lesions**  
Raymond J. Kenney, MD  
University of Rochester  
Rochester, NY, UNITED STATES
- 1819 **Arthroscopic Bankart Repair for Recurrent Shoulder Dislocation of Middle-Aged and Elderly Athletes**  
Kazuhiko Kikugawa, MD, PhD  
Mazda Hospital  
Hiroshima, JAPAN
- 1820 **When Is a Hill-Sachs Lesion Too Large for Remplissage?: The Relationship between Humeral Head Size and Infraspinatus Tendon Length**  
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- 1821 **Influence of the Latarjet Procedure on Biceps Brachii Alterations: Results of a Prospective Multi-Center Study**  
Lucca Lacheta, MD  
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Munich, GERMANY
- 1822 **Clinical Outcome in Two- to Nine-Years Follow-Up After Implementation of a Novel Arthroscopic Extracapsular Stabilization Technique for Anterior Shoulder Instability**  
Hubert J. Laprus, MD  
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- 1823 **Decreased Glenoid Retroversion is Associated with Failure of Anterior Shoulder Stabilization in Individuals with Subcritical Bone Loss**  
Ryan T. Li, MD  
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- 1824 **Clavicular Tunnel Widening Following Acromioclavicular Joint Stabilization: A Radiographic Analysis**  
Frank Matrtetschläger, MD  
German Center for Shoulder Surgery, ATOS Clinic  
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- 1825 **Clinical Outcomes Following Open Anterior Shoulder Stabilization for Glenohumeral Instability in the Young Collision Athlete**  
Paul Monk, DPhil, FRCS  
Unisports Center for Sports Medicine  
Auckland, NEW ZEALAND
- 1826 **Postoperative Glenohumeral Stability After Bony Bankart Repair Using Sugaya Technique**  
Macarena Morales, MD  
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- 1827 **Epidemiology of Shoulder Instability Injuries in Collegiate Contact Sports in the United States from 2009 to 2014**  
Mary K. Mulcahey, MD  
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- 1828 **Horizontal Instability of the Acromioclavicular Joint: A Systematic Review**  
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- 1829 **Determining On / Off Track Lesions in Glenohumeral Dislocation Using MPR CT Is Easier and More Reproducible Than Using 3D-CT**  
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- 1833 **Patient Satisfaction After Shoulder Stabilization Surgery: A Comparison of Bankart and Latarjet Procedures**  
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- 1834 **Are Soft Anchors Able to Meet Expectations in the Arthroscopic Treatment of Traumatic Anterior Shoulder Instability?**  
Durmus A. Ocguder, Prof.  
Ankara Atatürk Training and Research Hospital  
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Leonardo Osti, MD  
Hesperia Hospital  
Modena, ITALY
- 1836 **Posterior Open Wedge Glenoid Osteotomy for Young Patients with Increased Retroversion and Posterior Shoulder Instability: Surgical Technique and Preliminary Results**  
Jonas Pogorzelski, MD, PhD, MHBA  
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- 1837 **The Instability Severity Index Score Revisited: Evaluation of 217 Consecutive Cases of Recurrent Anterior Shoulder Instability**  
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- 1838 **Management of the Failed Latarjet Procedure: Outcomes of Revision Surgery with Fresh Distal Tibial Allograft**  
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Andrew Sheean, MD  
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- 1842 **Does Creating a Trough on the Anterior Glenoid Rim Make a Difference in Arthroscopic Bankart Repair Using Suture Anchors?: A Mid-Term Follow-Up Study**  
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Chul Kim, MD  
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Yun-Jae Lee, MD  
Dept. of Orthopaedic Surgery, Arthroscopy and Joint Research Institute, Severance Hospital, Yonsei University  
College of Medicine  
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Michael-Alexander Malahias, MD, PhD  
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Evan A. O'Donnell, MD  
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Carlos I. Palomo-Pizarro, MD  
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Medical University of South Carolina  
Charleston, SC, UNITED STATES
- 2035 **The One- to Five-Year Results of Superior Capsule Reconstruction Using Doubled Dermal Allograft for Irreparable Rotator Cuff Tear**  
Martyn Snow, FRCS  
The Royal Orthopaedic Hospital  
Birmingham, UNITED KINGDOM
- 2036 **The Influence of Intraoperative Repair Tension on the Rotator Cuff Integrity After Arthroscopic Repair**  
Yoshitsugu Takeda, MD, PhD  
Tokushima Red Cross Hospital  
Komatsushima, Tokushima, JAPAN
- 2037 **Preoperative Predictive Factors for Rotator Cuff Repair Tension during Arthroscopic Rotator Cuff Repair**  
Yoshitsugu Takeda, MD, PhD  
Tokushima Red Cross Hospital  
Komatsushima, Tokushima, JAPAN
- 2038 **Clinical and Structural Outcomes in Patients with Irreparable Cuff Tears Treated by Arthroscopic Partial Repair**  
Koji Tanaka, MD, PhD  
Department of Orthopedic Surgery, Kurume University  
Kurume, Fukuoka, JAPAN
- 2039 **How Safe and Effective Are Arthroscopic Procedures of Shoulder Joint under Isolated Regional Anesthesia?**  
Aarthi Thiagarajan, DOrtho, DNB  
Hosmat Hospital  
Bangalore, Karnataka, INDIA
- 2040 **Use of the Western Ontario Rotator Cuff (WORC) Index in a Normal United States Population**  
Marc Tompkins, MD  
Tria  
Bloomington, MN, UNITED STATES
- 2042 **The Efficacy of Platelet-Rich Plasma (Endorep®) in Rotator Cuff Tendinopathy: A Randomized Controlled Trial**  
Victor Vaquerizo García, MD, PhD  
Principe de Asturias University Hospital  
Alcalá de Henares, Madrid, SPAIN
- 2043 **Outcome of Arthroscopically Assisted Lower Trapezius Transfer to Reconstruct Massive Irreparable Posterior-Superior Rotator Cuff Tears**  
Eric R. Wagner, MD, MS  
Mayo Clinic and Emory University  
Rochester, MN, and Atlanta, GA, UNITED STATES
- 2044 **Latissimus Dorsi Transfer for Irreparable Subscapularis Tear**  
Eric R. Wagner, MD, MS  
Mayo Clinic; Emory University; Clinique de L'Union  
Rochester, MN; Atlanta, GA; Toulouse, France,  
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- 2045 **Healing Rates of Massive Rotator Cuff Tears between Allograft Reconstruction vs. Maximal Repair: A Prospective Randomized Controlled Trial**  
Ivan Wong, MD, FRCSC, MACM, Dip. Sports Med  
Dalhousie University and Nova Scotia Health Authority  
Halifax, NS, CANADA
- 2046 **Superior Capsular Reconstruction Using Dermal Allograft: Early Outcomes and Survival**  
Jarret M. Woodmass, MD, FRCSC  
Boston Shoulder Institute, Harvard University  
Boston, MA, UNITED STATES
- 2047 **Complications of Arthroscopic vs. Open Biceps Tenodesis in the Setting of Arthroscopic Rotator Cuff Repairs: An Analysis of the ABOS Database**  
Marco Yeung, MD  
UPMC  
Pittsburgh, PA, UNITED STATES
- 2048 **Can Scapular Function Preserve After Rotator Cuff Repair with Cuff Muscle Advancement for Massive Rotator Cuff Tears?**  
Shin Yokoya, MD, PhD  
Hiroshima University  
Hiroshima, JAPAN

- 2101 **Early Surgical Intervention for Musculo-Tendinous Injuries of the Proximal Biceps Femoris**  
Atif Ayuob, MBBS, MRCS, ChM  
Princess Grace Hospital  
London, UNITED KINGDOM
- 2102 **Assessment of Head Collision Events During the 2018 FIFA World Cup Tournament**  
Kevin X. Farley, BS  
Emory University School of Medicine  
Atlanta, GA, UNITED STATES
- 2103 **The Effect of Triangulation Simulator Training on Arthroscopy Skills: A Prospective Randomized Controlled Trial**  
Rachel M. Frank, MD  
Rush University Medical Center  
Chicago, IL, UNITED STATES
- 2104 **Non-Game Injuries in Major League Baseball**  
Michael T. Freehill, MD  
University of Michigan  
Ann Arbor, MI, UNITED STATES
- 2105 **Acellular Stem Cell Derivatives for the Treatment of Muscle Injuries: A New Paradigm?**  
Rodrigo Guiloff, MD  
Facultad de Medicina Clínica Alemana Universidad del Desarrollo  
Santiago, RM, CHILE
- 2106 **Postoperative Opioid Usage Following Outpatient Arthroscopic Sports Medicine Procedures**  
Sommer Hammoud, MD  
Rothman Orthopaedic Institute  
Philadelphia, PA, UNITED STATES
- 2107 **Return to School Following Orthopaedic Sports Medicine Procedures: A Prospective Study of Adolescents and Young Adults**  
Sommer Hammoud, MD  
Rothman Orthopaedic Institute  
Philadelphia, PA, UNITED STATES
- 2108 **Early Return to Play After Acromioclavicular Joint Stabilization in Collision Athletes Using Twin Tailed Dog Bone Implants**  
Gregory A. Hoy, FRACS, FAOrthA, FACSP, FASMF  
Melbourne Orthopaedic Group, Monash University  
Melbourne, VIC, AUSTRALIA
- 2109 **Clavicle Fixation Allows Very Early Return to Collision Sport, but at What Price?**  
Gregory A. Hoy, FRACS, FAOrthA, FACSP, FASMF  
Melbourne Orthopaedic Group, Monash University  
Melbourne, VIC, AUSTRALIA
- 2110 **Prevention of the Shoulder Injuries Among Young Baseball Players: An Eight-Year Longitudinal Study**  
Yoshihiro Kotoura, MD, PhD  
Kyoto Chubu Medical Center  
Nantan, Kyoto, JAPAN
- 2111 **Fractures and Stress Reactions in Division I NCAA Track and Field Athletes: Do Low Vitamin D Levels Have a Predicative Effect?**  
Adam D. Lindsay, MD, MS  
University of Southern California  
Los Angeles, CA, UNITED STATES
- 2112 **Profiling the Shoulder of the Professional Tennis Players**  
Rosa Lopez-Vidriero, MD  
ISMEC  
Sevilla, Andalusia, SPAIN
- 2113 **A Comparison of the Marx Activity Rating Scale (MARS) and the Hospital for Special Surgery Pediatric Functional Activity Brief Scale (HSS Pedi-FABS)**  
Niv Marom, MD  
Hospital for Special Surgery  
New York, NY, UNITED STATES
- 2114 **Injuries in Elite Female Ski Jump Athletes**  
R. Kyle Martin, MD, FRCSC  
Norwegian School of Sport Science and Oslo Sports Trauma Research Center  
Oslo, NORWAY
- 2115 **Functional Soccer-Specific Exercises on Uneven Ground: Influence on Dynamic Stability of Lower Limbs and Knee in Correlation with Shot on Target Precision in Case of Young Soccer Players**  
Natalia Mrozinska, PhD  
Carolina Medical Center  
Warsaw, POLAND
- 2116 **Outcomes After Dermal Allograft Reconstruction of Chronic Pectoralis Major Tendon Ruptures**  
Julie A. Neumann, MD  
Kerlan-Jobe Orthopaedic Clinic  
Los Angeles, CA, UNITED STATES
- 2117 **Biomechanical Evaluation of a Single-Tunnel Coracoclavicular Ligament Reconstruction with Acromioclavicular Stabilization for Acromioclavicular Joint Injuries**  
Julie A. Neumann, MD  
Kerlan-Jobe Orthopaedic Institute  
Los Angeles, CA, UNITED STATES
- 2118 **Incidents and Injuries in Beach Soccer: The First Prospective Video-Based Analysis of the Actions Before Beach Soccer Injuries**  
Mason Porramatikul, MD  
Dept. of Orthopaedics, Faculty of Medicine, Vajira Hospital, Navamindradhiraj University  
Bangkok, THAILAND
- 2119 **Evaluation of Muscle Activity Just After Straight Leg Raising Exercise by Using 18FDG-PET**  
Hiroyuki Shiozawa, MD, PhD,  
Graduate School of Medicine and Faculty of Medicine,  
University of Gunma  
Maebashi, Gunma, JAPAN
- 2120 **Insulin Dependence Is Associated with Increased Risk of Complications Following Shoulder and Knee Arthroscopy**  
Harris S. Slone, MD  
Medical University of South Carolina  
Charleston, SC, UNITED STATES
- 2122 **Who Should You Be Following?: The Top 100 Social Media Influencers in Orthopaedic Surgery**  
Nathan Varady, SB  
Department of Orthopaedic Surgery, Johns Hopkins University  
Baltimore, MD, UNITED STATES





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*Eric R. Wagner, MD, MS*  
*Boston Shoulder Institute, Harvard University*  
*Boston, MA, UNITED STATES*

2124 **Does Marathon Hurt Our Knee?: A Quantitative MR Analysis**

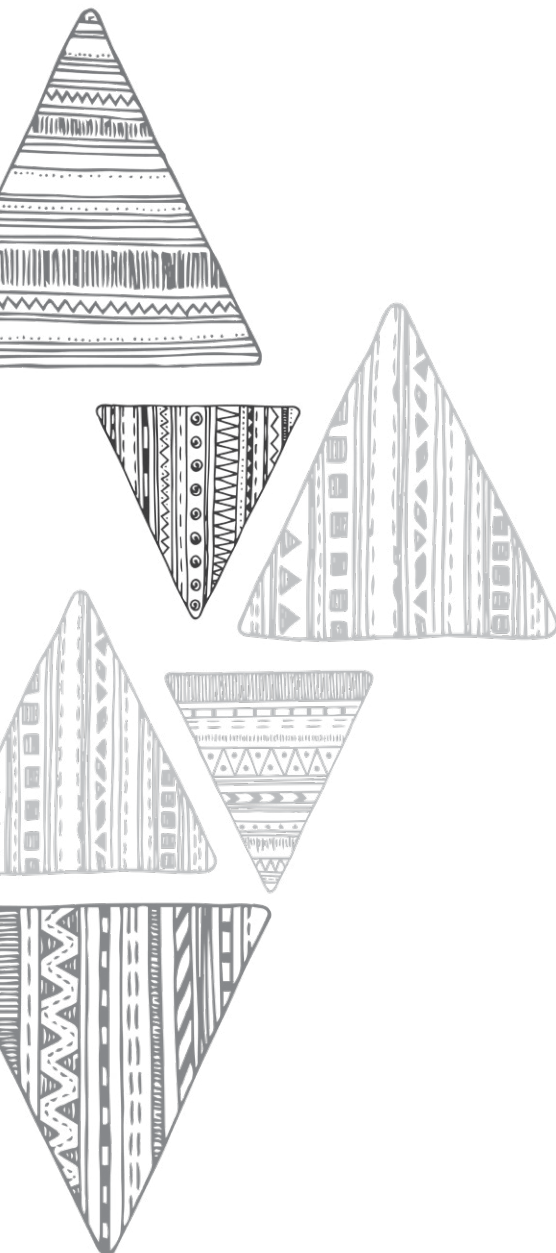
*Zhongzheng Wang, BEng*  
*Med-X Institute*  
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2125 **Comparison of Injury Rate and Pattern of Collegiate Beach and Indoor Volleyball**

*Alexander E. Weber, MD*  
*University of Southern California*  
*Los Angeles, CA, UNITED STATES*

2126 **The Impact of a Standardized Multimodal Analgesia Protocol on Opioid Prescriptions After Common Arthroscopic Procedures**

*Robert W. Westermann, MD*  
*University of Iowa Department of Orthopedics and Rehabilitation*  
*Iowa City, IA, UNITED STATES*





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