AOFAS at Home
SEPT. 10–12

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Welcome to AOFAS at Home!

On behalf of the AOFAS Board of Directors and Program Committee, we welcome you to the AOFAS at Home virtual meeting. While we would have liked to see everyone in person this year, we are pleased to have the opportunity to share our outstanding educational program with colleagues around the world.

This year’s program covers just about every part of the foot and ankle, from minimally invasive techniques to ankle replacement to external fixation to the research and science behind all that we do. Each symposium during the Live Program includes live discussion with the panelists. From the AOFAS at Home virtual platform, you can submit questions for the speakers or vote for the questions you would like them to answer.

We’re also pleased to have exceptional guest speakers joining our meeting:

- **Pamela Wible, MD**, a physician who has studied 1,300 doctor and medical student suicides and is dedicated to the prevention of these deaths, will deliver the Keynote Presentation on Thursday.
- **Kevin Bozic, MD, MBA**, a nationally recognized leader in value-based healthcare, joins the program on Friday as our Research Speaker.
- **Martinus Richter, MD, PhD**, a renowned foot and ankle orthopaedic surgeon, researcher, and leader, headlines the Kenneth A. Johnson Symposium on Controversies in Foot and Ankle Surgery on Friday.

Finally, we’d like to thank our exhibitors and industry partners for their support in this challenging year. Make sure to check out the Virtual Exhibit Hall to explore new products and technology and chat with company representatives. When you visit the Exhibit Hall, you’ll also earn points in the AOFAS at Home Reward Zone for the chance to win prizes.

Thank you for joining us!

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**AOFAS Guest Nation**

AOFAS welcomes Chile as our 2020 Guest Nation! Check out the Guest Nation Symposium, a special OnDemand Session featuring Chilean leaders in foot and ankle surgery (see page 30). AOFAS at Home registrants have access to OnDemand Sessions through March 31, 2021.

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AOFAS at Home

Friday, September 11
4:00 PM - 5:00 PM (CDT)

Samuel Adams Jr, MD
Duke Health, Durham, NC

Douglas Lucas, DO
EmergeOrtho, Arden, NC

Saturday, September 12
8:00 AM - 9:00 AM (CDT)

Michael Swords, DO
Michigan Orthopedic Center, Lansing, MI

Sarang Desai, DO
Total Orthopedics Sports & Spine, Allen, TX
Program Information

Table of Contents

Program Information .................................................. 5
Leadership and Volunteers ....................................... 6-7
Resident Scholars ..................................................... 9
Mission Partners ....................................................... 11
Foundation Donors .................................................. 12-15
Meeting Supporters ................................................ 17
Industry Sessions ..................................................... 18-19
Exhibit Hall .............................................................. 21
Live Program .......................................................... 24-27
Resident Program .................................................... 28
OnDemand Program ................................................. 30-34
Audio Posters .......................................................... 35-45
ePosters ................................................................. 46-57
Disclosures .............................................................. 58-75

Target Audience
This educational program is designed for orthopaedic surgeons, physicians, and allied health professionals in the field of orthopaedic foot and ankle surgery.

Educational Objectives
At the conclusion of the AOFAS at Home virtual meeting, learners should be able to:

- Recognize and assess current data reflecting clinical trends, emerging surgical techniques, pre- and post-operative procedures, and technological innovations in orthopaedic foot and ankle surgery
- Describe and apply current research in foot and ankle disorders to improve patient care
- Identify ways to avoid potential complications in foot and ankle procedures
- Incorporate knowledge of patient safety, outcomes, and evidence-based medicine into foot and ankle patient care

Statement of Need
A need for this educational activity has been determined based on previous course evaluations and the AOFAS educational curriculum. The content of this course was based on current issues and topics provided by AOFAS membership and leadership. For more information on the AOFAS CME mission, visit aofas.org/education.

Accreditation
The American Orthopaedic Foot & Ankle Society (AOFAS) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education (CME) for physicians.

Continuing Education Credit
AOFAS designates the AOFAS at Home live activity for a maximum of 17.5 AMA PRA Category 1 Credits™ and the AOFAS at Home enduring materials for a maximum of 46.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. Participants are required to submit a completed evaluation form at the end of the meeting in order to receive CME credit.

Disclosure
AOFAS requires all instructors, planners, and other individuals in a position to control or influence the content of an educational activity to disclose all relevant financial relationships or affiliations during the past 12 months with any commercial interest (any entity producing, marketing, re-selling, or distributing healthcare goods and services consumed by, or used on patients). All identified conflicts of interest must be resolved and the education content vetted by AOFAS for fair balance, scientific objectivity, and appropriateness. AOFAS also requires faculty to disclose when off-label/unapproved uses of a product are discussed in a CME activity. AOFAS attests that the persons responsible for the development of this educational activity did so independently and were not influenced by commercial supporters. All financial disclosures will be provided to meeting attendees in the final program materials.

Disclaimer
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AOFAS may photograph or record you as you participate in this meeting and related activities. Lectures and questions from the audience will be recorded and made available in future materials. Photographing and recording of the sessions by meeting attendees is prohibited.
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AP View

Lateral View

X-rays courtesy of David Dalstrom, MD (San Diego, CA)

Reference


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RESIDENT SCHOLARSHIP PROGRAM

Congratulations to the 2020 Resident Scholars!

Eighty-two orthopaedic residents in the US and Canada were selected for this year’s AOFAS Resident Scholarship Program. Resident Scholarships cover registration fees for the AOFAS at Home virtual meeting. Each Scholar is paired with an AOFAS-member mentor and attends an exclusive virtual gathering where they can meet mentors and other scholarship recipients.

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Throughout the COVID-19 pandemic, our work continues.

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The Orthopaedic Foot & Ankle Foundation acknowledges the following companies for their generous contributions to the Foundation as an integral part of the AOFAS/Foundation Mission Partner Program (current as of August 15, 2020). Thank you for your investment in the advancement of orthopaedic foot and ankle care!

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Sept. 10-12, 2020
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- Nextremity Solutions

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The AOFAS at Home educational program was made possible in part with support from the following companies:

**Stryker**

Keynote Speaker: Pamela Wible, MD

**Treace Medical Concepts, Inc.**

Symposium: Battle of the Bunions: Why My Way of Fixing Bunions Is Best
Explore new products and techniques in industry-led workshops.
No CME awarded; program subject to change; links to sessions will be provided in the virtual platform.

**THURSDAY, SEPTEMBER 10**

8:00 – 9:30 pm CT

**Bioventus LLC**
Difficult Cases: The Role of Bone Stimulation in Fracture Care

**Faculty:**
Robert B. Anderson, MD

**Paragon 28**
Paragon 28 Precision Ankle Solutions

**Faculty:**
Mark S. Myerson, MD

**Stryker**
Managing Midfoot Reconstruction with Stryker’s NEW T2 ICF Nailing System

**Faculty:**
Michael C. Aynardi, MD
Jason T. Bariteau, MD
Adam P. Schiff, MD

**Treace Medical Concepts, Inc.**
Lapiplasty® System Innovations

**Faculty:**
Mark E. Easley, MD
Robert D. Santrock, MD
W. Bret Smith, DO

**Wright Medical Group N.V.**
LapiFuse™ Live Cadaveric Experience: Why Patients Deserve More Than Triplanar Correction

**Faculty:**
W. Hodges Davis, MD
Jesse F. Doty, MD

**Zimmer Biomet**
Continuum of Care: Hallux Valgus and Lisfranc Repair

**Faculty:**
Ricardo L. Cook, MD
Rob Grunfeld, MD

**FRIDAY, SEPTEMBER 11**

4:00 – 5:30 pm CT

**3M + KCI**
Next Generation Negative Pressure Therapy for Incision and Soft Tissue Management: Improving Outcomes Following Lower Extremity Surgery

**Faculty:**
Ravi A. Karia, MD

**DePuy Synthes**
Flexible Syndesmotic Repair with the FIBULINK System

**Faculty:**
Samuel B. Adams, MD
Douglas E. Lucas, DO

**Paragon 28**
Why the Lapidus and Emergent Minimally Invasive Approaches

**Faculty:**
Gregory P. Guyton, MD
Cesar de Cesar Netto, MD, PhD

**Stryker**
Addressing Ankle Fusions with Stryker’s NEW AxSOS 3 Ankle Fusion Plating System

**Faculty:**
Michael J. Coughlin, MD
Armen S. Kelikian, MD
Keith L. Wapner, MD

**Zimmer Biomet**
Total Ankle Replacement: Complex Cases

**Faculty:**
Steven A. Herbst, MD
Lew C. Schon, MD

Explore new products and techniques in industry-led workshops.
No CME awarded; program subject to change; links to sessions will be provided in the virtual platform.
FRIDAY, SEPTEMBER 11 CONTINUED

8:10 – 9:40 pm CT

Paragon 28  
Changes in Thinking and Approaches to Ankle and TTC Arthrodesis  
Faculty:  
Mark S. Myerson, MD  
Michael E. Brage, MD

Stryker  
Addressing Ankle Fusions with Stryker’s NEW AxSOS 3 Ankle Fusion Plating System  
Faculty:  
Michael J. Coughlin, MD  
Andrew R. Harston, MD  
Armen S. Kelikian, MD  
Keith L. Wapner, MD

SATURDAY, SEPTEMBER 12

8:00 – 9:30 am CT

DePuy Synthes  
Flexible Syndesmotic Repair with the FIBULINK System  
Faculty:  
Michael P. Swords, DO  
Sarang N. Desai, DO

GMReis  
What Is New in Foot and Ankle Sports Injuries Treatment?  
Faculty:  
Cristian A. Ortiz, MD

Paragon 28  
Emerging Concepts and Research in Pilon Fx, Ankle Fx and Syndesmosis Repair  
Faculty:  
John Y. Kwon, MD

Stryker  
Managing Midfoot Reconstruction with Stryker’s NEW T2 ICF Nailing System  
Faculty:  
Michael C. Aynardi, MD  
Jason T. Bariteau, MD  
Adam P. Schiff, MD

Zimmer Biomet  
Fusion and Pain in the Foot and Ankle  
Faculty:  
Robert B. Anderson, MD  
John S. Early, MD

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13 Lapiplasty® Publications
20,000+ Patients Treated

Correct the alignment in all three planes before making cuts
Perform precision cuts to minimize metatarsal shortening¹
Achieve controlled compression while maintaining the 3-plane correction
Biomechanically-tested² multiplanar stability for rapid return to weight-bearing³

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The Leader in Hallux Valgus Surgery™

*Trailing 12 months' revenues based on Company market estimates M810A
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Visit the Virtual Exhibit Hall

- Explore industry products, services, and technology to improve your practice
- View product images and videos
- Virtually chat with company representatives one-on-one

Access the Exhibit Hall through the AOFAS at Home platform. The Exhibit Hall opens on Thursday, September 10, at 2:00 pm Central Time.

Exhibitors

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<td>Innomed, Inc.</td>
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AOFAS at Home Reward Zone

**Engage with the AOFAS at Home platform for your chance to win a prize!**

Earn points when you complete tasks in the Reward Zone — including visiting the Virtual Exhibit Hall. Attendees with the most points will win items from the AOFAS Apparel Store.
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Now Through a 3.5cm Incision

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- Anatomic contour accommodates tibialis anterior tendon insertion
- Center span extends plantarly across tension-side of 1st TMT joint
- 3D anatomic, U-shaped curvature for access to locking screws through a mini dorsal incision

Lapiplasty.com
The Leader in Hallux Valgus Surgery™
Mark your calendar for these upcoming education events!

October 14, 2020
**Foot and Ankle Resident Review Webinar**
Moderator: Amgad Haleem Amin, MD, PhD
aofas.org/webinars

October 17, 2020
**Minimally Invasive Surgery Virtual Course**
Course Chair: A. Holly Johnson, MD
aofas.org/MIS

October 28, 2020
**Practice Management Webinar**
Moderator: John A. DiPreta, MD
aofas.org/webinars

December 2, 2020
**Adding Arthroscopy to Your Foot and Ankle Practice Webinar**
Moderator: Phinit Phisitkul, MD
aofas.org/webinars

December 11, 2020
**AOFAS Allied Health Virtual Course**
aofas.org/allied

April 15-17, 2021
**AOFAS Advanced Foot and Ankle Course**
Chicago, Illinois
Course Chair: Christopher P. Chiodo, MD
Course Co-Chair: Peter G. Mangone, MD
aofas.org/advancedfoot

April 29-May 1, 2021
**International Federation of Foot & Ankle Societies (IFFAS)**
7th Triennial Scientific Meeting
Viña del Mar, Chile
iffaschile2021.com

**AOFAS Members:**
Complimentary webinars and reduced registration rates for AOFAS meetings and courses are benefits of your membership. Make sure to log into your account at aofas.org before registering.

**REGISTER NOW**

**Minimally Invasive Surgery Virtual Course**
October 17, 2020

Join Course Chair A. Holly Johnson, MD, and renowned faculty from around the world for the Minimally Invasive Surgery (MIS) Virtual Course. This one-day course offers a comprehensive look at foot and ankle MIS, from getting started to advanced techniques.

For more information and registration, visit aofas.org/MIS
2:00 – 3:00 pm CT

Symposium: Battle of the Bunions: Why My Way of Fixing Bunions Is Best
Moderator: James R. Holmes, MD

Lapidus
James R. Holmes, MD

Proximal Opening Wedge
Glenn B. Pfeffer, MD

Proximal Rotational Osteotomy
Emilio Wagner, MD

SCARF
Peter Bock, MD

Ludloff
Steven K. Neufeld, MD

Distal Minimally Invasive Osteotomy
A. Holly Johnson, MD

Discussion

3:00 – 4:00 pm CT

Symposium: Tackling the Stage IV Flatfoot
Moderator: Steven L. Haddad, MD

Join Salvage in the Stage IV Flatfoot
Jonathan T. Deland, MD

How to Deal with the Malunited Triple
Jeffrey D. Seybold, MD

Managing Deformity with the Total Ankle
Mark E. Easley, MD

Concomitant Deltoid Reconstruction and Total Ankle
Steven L. Haddad, MD

Deltoid in a Single Stage vs. Two Approach to Ankle Valgus
Timothy R. Daniels, MD

Discussion

4:00 – 5:00 pm CT

Virtual Exhibit Hall/OnDemand Programming
Explore products and services in the Virtual Exhibit Hall, or earn additional credit with OnDemand Education Sessions.

5:00 – 6:00 pm CT

Symposium: Charcot Marie Tooth: The Cutting Edge
Moderator: Glenn B. Pfeffer, MD

A Neurologist’s Overview of CMT Surgery
Richard Lewis, MD

Contracture Release and the Medial Hindfoot:
The Sine Qua Non
Paul T. Fortin, MD

Soft Tissue Balance: The Future Ain’t What It Used to Be
Glenn B. Pfeffer, MD

Calcaneal Osteotomy: 2D or Not 2D? That Is the Question
Max Michalski, MD

Osteotomy Techniques: Is There Anything New Under the Sun?
Jeffrey E. Johnson, MD

The Peroneals: How to Make Something from Nothing
Steven M. Raikin, MD

Discussion

6:00 – 7:00 pm CT

Keynote Presentation:
Preventing Physician Suicide
Pamela L. Wible, MD

In between treating patients and helping doctors launch community clinics, Dr. Wible devotes herself to the prevention of medical student and physician suicide. Her extensive database from investigating nearly 1,300 doctor suicides reveals the highest-risk specialties and ways individuals and institutions can prevent these deaths.

7:00 – 8:00 pm CT

Symposium: Prevention and Management of Physician Burnout
Moderator: Casey J. Humbyrd, MD

Work-Life Balance
Katherine Sage, DO

Pressure to Publish
Sandra E. Klein, MD

Government Regulation
Michael S. Aronow, MD

Pressures on Private Practice Entrepreneurship
Bruce E. Cohen, MD

Burnout Rates Among General Orthopaedic Surgeons and Subspecialists
Robert Nugent, DO

Discussion

8:00 – 9:30 pm CT

Industry Symposia
(See page 18 for more information)
12:30 – 1:00 pm CT

Research Presentation:
Lessons Learned in the Transition to Value Based Health Care
Kevin J. Bozic, MD, MBA

Dr. Bozic is a nationally recognized leader in orthopaedic surgery and value-based healthcare. His research interests include healthcare technology assessment, cost-effectiveness analysis, and the implementation and evaluation of value-based payment and delivery models.

1:00 – 2:30 pm CT

Symposium: Measuring What Matters in Orthopaedic Surgery
Moderators: Harold B. Kitaoka, MD, and Mohit Bhandari, MD, PhD

Assessing Satisfaction in Foot and Ankle Surgery
Alastair S.E. Younger, MBChB, ChM

Using Legacy Scores: Is There Still a Role and What Scores Should We Use?
Vinod K. Panchbhavi, MD

The PROMIS Outcomes Scores: Is This the Gold Standard for the AOFAS?
Judith F. Baumhauer, MD, MPH, MS

Foot and Ankle Registries: What We Have Learned and Where We Go from Here
Kenneth J. Hunt, MD

Getting Started with Clinical Outcome Collection
Daniel Guss, MD, MBA

Can Artificial Intelligence Provide Value in Orthopaedic Surgery?
Nelson F. SooHoo, MD

2:30 – 4:00 pm CT

Kenneth A. Johnson Symposium on Controversies in Foot and Ankle Surgery
Moderator: Bryan D. Den Hartog, MD

Kenneth A. Johnson
International Speaker
Martinus Richter, MD, PhD

Dr. Richter is the head of the Department of Foot and Ankle Surgery at Hospital Rummelsberg in Germany. He is an internationally renowned surgeon and innovator and a driving force in scientific research.

Arthroscopic Brostrom vs. Not
Peter G. Mangone, MD; Mark C. Drakos, MD

Minimally Invasive Bunion vs. Open
Rebecca A. Cerrato, MD; Matthew M. Roberts, MD

Arthroscopic Ankle Fusions vs. Open
Andrea N. Veljkovic, MD, MPH; David S. Levine, MD

Haglund’s Resection vs. Not
Phinit Phisitkul, MD; Rachel J. Shakked, MD

Discussion

4:00 – 5:30 pm CT

Industry Symposia
(See page 18 for more information)

5:30 – 5:55 pm CT

Award-Winning Paper Presentations
Recipients of the Roger A. Mann, J. Leonard Goldner, and IFFAS Awards

SAVE THE DATE

Allied Health Virtual Course
December 11, 2020

Focused education for physical therapists, physician assistants, nurse practitioners, and other members of the orthopaedic team.

Watch aofas.org/allied for details and registration.
FRIDAY, SEPTEMBER 11  LIVE PROGRAM

5:55 – 6:55 pm CT

Presidential Remarks, Foundation Update, and Award Presentations

Outgoing Presidential Remarks
William C. McGarvey, MD

Introduction of Incoming President
Christopher W. DiGiovanni, MD

Incoming Presidential Remarks
Bruce E. Cohen, MD

Foundation Update
Scott J. Ellis, MD

Presentation of the Diamond Mission Partner Award to Wright Medical Group N.V.
Scott J. Ellis, MD

Women’s Leadership Presentation
Naomi N. Shields, MD, Career Impact Award Recipient

Women’s Leadership Presentation
Laura K. Dawson, DO, Career Development Award Recipient

6:55 – 7:10 pm CT

AOFAS Business Meeting
Voting conducted electronically prior to meeting

7:10 – 8:10 pm CT

Symposium: Bone Loss Deformity Arthritis: Modern Use of External Fixation and Other Contemporary Methods
Moderator: William C. McGarvey, MD

Military and Battlefield Uses of External Fixation
Joseph R. Hsu, MD

Tibial and Ankle Bone Loss Management
Douglas N. Beaman, MD

Ankle and Subtalar Joint Distraction Arthroplasty
Austin T. Fragomen, MD

Deformity Correction and Total Joint Arthroplasty
Paul T. Fortin, MD

Discussion

8:10 – 9:40 pm CT

Industry Symposia
(See page 19 for more information)

Women’s Leadership Awards

The Women’s Leadership Initiative supports and encourages women in foot and ankle orthopaedic surgery. As part of the initiative, female leaders in foot and ankle orthopaedics are honored annually with the Women’s Leadership Awards. Two awards are being presented in 2020:

- **Career Impact Award**, recognizing women who have made exceptional contributions to the field of orthopaedic foot and ankle surgery
- **Career Development Award**, supporting the professional aspirations of early- and mid-career female orthopaedic foot and ankle surgeons

**Career Impact Award**
Naomi N. Shields, MD, is a highly regarded orthopaedic surgeon and humanitarian. After serving in the military, she was the first woman in the orthopaedic surgery residency program at Wilford Hall USAF Medical Center in Texas and went on to complete a foot and ankle fellowship at the Medical College of Wisconsin. Dr. Shields is a role model in the orthopaedic community and continues to give back by participating in the Orthopaedic Foot & Ankle Foundation’s Overseas Outreach Project to Vietnam and other humanitarian missions.

**Career Development Award**
Laura K. Dawson, DO, exemplifies dedication, leadership, and strength. Dr. Dawson completed her orthopaedic surgery residency at Texas Tech University Health Service Center and a foot and ankle orthopaedic fellowship at the University of Rochester Medical Center. Currently, she serves as the United States Corps of Cadets Senior Medical Officer and an orthopaedic surgeon at Keller Army Community Hospital in West Point, New York. Prior to her medical career, Dr. Dawson received five awards for exemplary military service.

2020 funding for the Women’s Leadership Initiative is provided by the Orthopaedic Foot & Ankle Foundation, supported in part by a grant from Treace Medical Concepts, Inc. Additional funding for online CME and the Physician Wellness Webinar Series provided by Wright Medical Group N.V.
8:00 – 9:30 am CT

**Industry Symposia**
(See page 19 for more information)

9:30 – 10:30 am CT

**Symposium: Novel Coronavirus COVID-19**
*Moderators: Harold B. Kitaoka, MD, and William C. McGarvey, MD*

- Current Evidence and Evolving Strategies
  *Mohit Bhandari, MD, PhD*

- Emerging COVID-19 Research
  *Andrew D. Badley, MD*

- Development of an Effective COVID-19 Vaccine
  *Eric M. Bluman, MD, PhD*

**Discussion**

10:30 – 11:30 am CT

**Symposium: Optimizing Technology in Radiology to Treat Foot and Ankle Patients**
*Moderator: Carolyn M. Sofka, MD*

- Ultrasound and Guided Injections to Optimize Foot and Ankle Diagnoses and Treatment
  *Manickam Kumaravel, MD*

- Weightbearing CT Technology
  *Cesar de Cesar Netto, MD, PhD*

- SPECT CT in Foot and Ankle Surgery
  *Charles L. Saltzman, MD*

- MRI: Especially for OCLs, Technique, Critical Review of Papers
  *Carolyn M. Sofka, MD*

**Discussion**

11:30 am – noon CT

**PED Talk: Management of the NBA Player with Foot and Ankle Injuries**
*Martin J. O’Malley, MD*

Dr. O’Malley specializes in reconstructive surgery of the foot and ankle with special emphasis on sports medicine. He has operated on athletes from all professional sports and serves as team physician for the Brooklyn Nets, USA Basketball, and Iona College.

Noon – 1:00 pm CT

**Symposium: Managing Fractures in the Elderly**
*Moderator: Jason T. Bariteau, MD*

- Alternate Fixation Techniques
  *Samuel B. Adams, MD*

- The Fracture Is Fixed: What Next?
  *Kevin L. Kirk, DO*

- Managing Pain Medication After Surgery
  *Kelly K. Hynes, MD*

- Managing Foot Fractures
  *Jacob R. Zide, MD*

- Managing Ankle Fractures with Osteoporosis
  *Kelly C. Stéfani, MD, PhD*

**Discussion**

1:00 – 2:00 pm CT

**Symposium: What Is the Best Total Ankle Replacement and Why?**
*Moderator: Constantine A. Demetracopolus, MD*

- Zimmer Biomet Trabecular Metal™
  *Lew C. Schon, MD*

- Cadence® Total Ankle System
  *David I. Pedowitz, MD, MS*

- INFINITY™ / INBONE™ Total Ankle System
  *Jeremy J. McCormick, MD*

- Vantage® Total Ankle System (Exactech)
  *Mark E. Easley, MD*

- STAR™ Ankle
  *David B. Thordarson, MD*

- Salto Talaris® Ankle
  *Mark P. Slovenkai, MD*

**Discussion**

Program subject to change.
8:00 – 10:00 am CT

Colloquium
Opening Remarks
Pamela C. Luk, MD, AOFAS Young Physicians Committee Chair
Foot and Ankle Fellowships
James R. Holmes, MD
Road to Foot and Ankle Research
Christopher E. Gross, MD
Foot and Ankle Trauma: Talar and Calcaneal Fractures
Amanda J. Fantry, MD
Foot and Ankle Sports: Tendon Injuries and Instability
Kenneth M. Chin, MD
Closing Remarks
Amgad M. Haleem Amin, MD, PhD, AOFAS Young Physicians Committee Vice Chair

10:00 – 10:15 am CT
Break

10:15 am – 12:15 pm CT

Case-Based Discussions
Discuss cases in an informal, virtual roundtable setting. Residents will be separated into virtual meeting rooms based on training year.
Topics:
- Hallux Valgus
- Lateral Ligament Reconstruction with Peroneal Tendon and SPR Reconstruction
- Flatfoot Reconstruction

FREE RESIDENT WEBINAR

Foot and Ankle Resident Review Webinar
October 14, 2020

Free for orthopaedic residents, this webinar features an overview of key foot and ankle concepts to help you prepare for exams. The webinar also includes questions from the Orthopaedic In-Training Examination (copyright by American Academy of Orthopaedic Surgeons, used with permission).

Visit aofas.org/webinars for details and registration.

Want more free foot and ankle education for residents? Check out AOFAS Resident Resources at aofas.org/residentresources
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join us
next year
for Annual
Meeting in
Vancouver

AOFAS Annual Meeting 2021
September 22-25, 2021
Vancouver Convention Centre
Vancouver, British Columbia, Canada
aofas.org/annualmeeting
ONDEMAND PROGRAM

Earn continuing education credit at your convenience! AOFAS at Home registrants can access OnDemand Sessions in the AOFAS at Home virtual platform through March 31, 2021.

SYMPOSIUM: GUEST NATION: CHILE

Moderator: Emilio Wagner, MD

Hallux Valgus
Pablo Wagner, MD

Flexible Flatfoot
Jorge Filippi, MD, MBA

Flexible Cavovarus
Cristian A. Ortiz, MD

Osteochondral Lesions of the Talus
Manuel J. Pellegrini, MD

Calcaneal Fractures
Eduardo Fuentes Morales, MD

SYMPOSIUM: CODING AND PRACTICE MANAGEMENT

Moderator: John A. DiPreta, MD

COVID-19 Economic Impact on a Foot and Ankle Practice
Aaron J. Guyer, MD

E/M 2021 Updates and Rules
R. Dale Blasier, MD

Appropriate Use Criteria (AUC) for Advanced Diagnostic Imaging
Tye Ouzounian, MD

HUMANITARIAN SERVICE SYMPOSIUM: INTERNATIONAL EXPERIENCE ON ANKLE FRACTURE

Moderator: John Y. Kwon, MD

Orthopaedic Surgery in Malawi
Kiran Agarwal-Harding, MD

My Experiences with Ankle Fracture Management as a Malawian Orthopaedic Surgeon
Leonard Banza, MD

Treating Ankle Fractures During a Short-Term Trip to Kenya
Daniel C. Farber, MD

My Experiences Managing Ankle Fractures in India
Rajiv S. Shah, MS(Orth)

Please Fix My Ankle: Perspectives of an Ankle Fracture Patient in Ethiopia
Eric C. Gokcen, MD

Ankle Trauma in Vietnam: Not Always What You Expect
J. Turner Vosseller, MD

PAPER SESSION 1A: FOREFOOT

Moderators: Monica Volesky, MD, and Timothy P. Charlton, MD

Comparison of Outcomes of Cheilectomy With and Without Synthetic Hydrogel Interposition (Cartiva®)
Samuel E. Ford, MD; Daniel J. Scott, MD, MBA; Shannon F. Alejandro, MD; David D. Vier, MD; Jacob R. Zide, MD; James W. Brodsky, MD

ROGER A. MANN AWARD FINALIST

Adverse Events Related to Polyvinyl Alcohol Hydrogel Hemiarthroplasty of 1st Metatarsal: An Analysis of Reports to the United States Food and Drug Administration
Sreenivasulu Metikala, MD; Karim Mahmoud Khamis, MBBC; Kathryn O’Connor, MD; Wen Chao, MD; Keith L. Wapner, MD; Daniel C. Farber, MD

Cartiva: A Retrospective Multicenter Report
Nicholas Casscells, MD; Daniel M. Dean, MD; Paul S. Cooper, MD; Stuart D. Miller, MD; Gregory P. Guyton, MD

Assessing Hallux Valgus Using Automatically Segmented Weight Bearing CT Datasets: A Case-Control Study
Francois Lintz, MD; Alessio Bernasconi, MD; Céline Fernando; Cesar de Cesar Netto, MD, PhD

Evaluation of a Weightbearing CT Artificial Intelligence-Based Automatic Measurement System for the M1-M2 Intermetatarsal Angle in Hallux Valgus: A Case-Control Study
Jonathan Day, MS; Francois Lintz, MD; Martinus Richter, MD, PhD; Céline Fernando; Scott J. Ellis, MD; Jonathan T. Deland, MD; Cesar de Cesar Netto, MD, PhD

Weightbearing AP Radiographs Do Not Accurately Predict Pronation of the First Metatarsal Measured on Weightbearing CT Scans
Matthew S. Conti, MD; Kristin C. Caolo, BA; Mark C. Miller, PhD; Stephen F. Conti, MD; Scott J. Ellis, MD

J. LEONARD GOLDNER AWARD FINALIST

Does Lag Screw Retightening Improve Compression in Hindfoot Arthrodesis?
Amanda Rugg, BS; Melissa Requist; Brooks Johnson; Michelle Son, MD; Alicia Alvarez; L. Daniel Latt, MD, PhD
**PAPER SESSION 1B: PRACTICE MANAGEMENT & MISC.**

**Moderator: Eric M. Bluman, MD, PhD**

Medical Malpractice Trends in Foot and Ankle Surgery  
Rishin J. Kadakia, MD; Keith Orland; Akhil Sharma, BSc(Med); Jie Chen, MD, MPH; Craig C. Akoh, MD; Selene G. Parekh, MD, MBA

Geographic Distribution of Foot and Ankle Orthopaedic Surgeons Throughout the United States  
Hui Zhang, MD; Matthew G. Fanelli, MD; Coleman Cush; Benjamin Wagner, MD; Louis C. Grandizio; Amanda Young; Bhumika Maddineni; Gerard J. Cush, MD

Prescribing Fewer Opioid Pills to Patients Undergoing Foot and Ankle Surgery: A Prospective Comparative Study  
Kristin C. Caolo, BA; Jonathan Day, MS; Celia Marion; Gabrielle S. Ray, BA; A. Holly Johnson, MD

Economic Analysis and Surgical Outcomes of Outpatient versus Inpatient Total Ankle Replacement Surgery  
Craig C. Akoh, MD; Jie Chen, MD, MPH; Rishin J. Kadakia, MD; Amanda N. Fletcher, MD; Mark E. Easley, MD; Samuel B. Adams, MD; James A. Nunley II, MD; James K. DeOrio, MD; Young-uk Park, MD, PhD; Hyong Nyun Kim, MD, PhD; Juntao Wang, MD, PhD

Contamination Profile of the Mini C-Arm Fluoroscopy Unit in Orthopedic Surgery  
Kaveh Momenzadeh, MD; Caroline Williams, MS; Natalia Czerwonka; Mohammad Mehdi Alemi; John Y. Kwon, MD; Ara Nazarian, PhD; Christopher P. Miller, MD, MHS

**ROGER A. MANN AWARD FINALIST**

Comparative Postoperative Outcomes Between Positive and Negative Electromyography (EMG) in Patient with Tunnel Syndrome: A Retrospective Study  
Chamnanni Rungprai, MD; Tanarat Hempongphan; Yantarat Sripanich; Warongporn Pongpinyopap, MD; Ptit Boonma, MD

**J. LEONARD GOLDNER AWARD FINALIST**

Biomechanical Effects of Δ9-Tetrahydrocannabinol (THC) and Cannabidiol (CBD), the Major Constituents of Cannabis, in a Sprague Dawley Rat Achilles Tendon Surgical Repair Model  
Chris M. Stauch; Brittany Ammerman; Diana E. Sepulveda; Michael C. Aynardi, MD; Matthew Garner; Gregory Lewis, PhD; Daniel Morgan; Aman Dhawan, MD

**PAPER SESSION 2A: FLATFOOT**

**Moderators: Sara L. Miniaci-Coxhead, MD, and Irvin Oh, MD**

Correlation Between Three-Dimensional Biometric Weightbearing CT Assessment of Hindfoot Alignment and Conventional Measurements of Adult Acquired Flatfoot  
Nacime S. Mansur, MD; Cesar de Cesar Netto, MD, PhD; Katrina E. Bang; Chris Cychosz, MD; Jonathan H. Garfinkel, MS; Francois Lintz, MD; Alessio Bernasconi, MD; Jonathan T. Deland, MD; Scott J. Ellis, MD

The Effect of Lateral Column Lengthening on Subtalar Motion: Are We Trading Deformity for Stiffness?  
Brittany Hedrick; Anthony Riccio; Danielle M. Thomas, MD; Claire Shivers; Matthew Siebert; William A. Pierce; Mitchell Harris, MD; Jacob R. Zide, MD

The Efficacy of Surgical Treatment in the Correction of Adult Acquired Flatfoot Deformity: A Three-Dimensional Biometric Weightbearing Computed Tomography Evaluation  
Cesar de Cesar Netto, MD, PhD; Jonathan Day, MS; Alexandre L. Godoy-Santos, MD; Jonathan H. Garfinkel, MS; Chris Cychosz, MD; Francois Lintz, MD; Alessio Bernasconi, MD; Danilo Ryuko Nishikawa, MD, Scott J. Ellis, MD; Jonathan T. Deland, MD

Posterior vs. Middle Facet of the Subtalar Joint: The Search for an Early Sign of Peritalar Subluxation and Progressive Flatfoot Deformity  
Cesar de Cesar Netto, MD, PhD; Thiago A. Silva, MD; Shuyuan Li, MD, PhD; Kevin N. Dibbern, PhD; Nacime S. Mansur, MD; Francois Lintz, MD; Chris Cychosz, MD; Alexandre L. Godoy-Santos, MD; John E. Femino, MD; Daniel Baumfeld, MD

Relationship Between Middle Facet Peritalar Subluxation and the Severity of Flatfoot Deformity  
Daniel Baumfeld, MD; Thiago A. Silva, MD; Shuyuan Li, MD, PhD; Nacime S. Mansur, MD; Kevin N. Dibbern, PhD; Chris Cychosz, MD; Francois Lintz, MD; Alexandre L. Godoy-Santos, MD; Jessica E. Goetz, PhD; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD

The Influence of Preoperative Deformity Severity in Postoperative Patient Reported Outcomes in Adult Acquired Flatfoot  
Bopha Chrea, MD; Cesar de Cesar Netto, MD, PhD; Jonathan H. Garfinkel, MS; Jonathan Day, MS; Guilherme H. Saito, MD; Shuyuan Li, MD, PhD; Francois Lintz, MD; Jonathan T. Deland, MD; Scott J. Ellis, MD

Is Lateral Impingement a Good Predictor of Peritalar Subluxation in Patients with Adult Acquired Flatfoot Deformity?  
Daniel Baumfeld, MD; Thiago A. Silva, MD; Shuyuan Li, MD, PhD; Alexandre L. Godoy-Santos, MD; Francois Lintz, MD; Nacime S. Mansur, MD; Kevin N. Dibbern, PhD; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD
ONDEMAND PROGRAM

**PAPER SESSION 2B: OUTCOMES**

**Moderators:** Lan Chen, MD, and Amgad M. Haleem Amin, MD, PhD

Great Expectations: Predicting Postoperative Expectation Fulfillment in Orthopaedic Foot and Ankle Patients  
**Jensen K. Henry, MD; Andrew R. Roney, BA; Amelia Hummel; Elizabeth Cody, MD; Carol A. Mancuso, MD; Scott J. Ellis, MD**

Associations Between Baseline PROMIS Scores, Patient-Provider Communication Factors, and Musculoskeletal Health Literacy on Differences in Patients’ and Surgeons’ Expectations in Foot and Ankle Surgery  
**Aoife MacMahon, BA; Elizabeth Cody, MD; Kristin C. Caolo, BA; Jensen K. Henry, MD; Mark C. Drakos, MD; Constantine A. Demetracopoulos, MD; A. Holly Johnson, MD; Matthew M. Roberts, MD; Jonathan T. Deland, MD; Oleksandr Savenkov, PhD; Scott J. Ellis, MD**

Impact of Patient Diagnosis on Expectation Fulfillment in Orthopaedic Foot and Ankle Surgery  
**Jensen K. Henry, MD; Andrew R. Roney, BA; Amelia Hummel; Carol A. Mancuso, MD; Elizabeth Cody, MD; Scott J. Ellis, MD**

**ROGER A. MANN AWARD FINALIST**

Application of Computerized Adaptive Testing to the Foot and Ankle Ability Measure  
**Joseph T. O’Neil, MD; Otho R. Plummer, PhD; Steven M. Raikin, MD**

Relationship of Press Ganey® Satisfaction and PROMIS Function and Pain in Foot and Ankle Patients  
**Devon C. Nixon, MD; Chong Zhang, MS; Maxwell Weinberg, BSc; Angela Presson, PhD; Florian Nickisch, MD**

Patient-Reported and Radiographic Outcomes in Primary and Revision Stage II, III, and IV Adult Acquired Flatfoot Deformity Surgery  
**Rusheel Nayak, BA; Milap Patel, DO; Anish R. Kadakia, MD**

Predictors of Improvement in Patient Outcomes After Fasciotomy for Chronic Exertional Compartment Syndrome of the Lower Leg  
**John J. Mangan, MD; Ryan G. Rogero, BS; Daniel Corr; Daniel J. Fuchs, MD; Joseph T. O’Neil, MD; Steven M. Raikin, MD**

**PAPER SESSION 3A: SPORTS/OSTEOCHONDRAL DEFECTS**

**Moderators:** Joan R. Williams, MD, and Steve B. Behrens, MD

Arthroscopic Bone Marrow Stimulation for the Treatment of Osteochondral Lesions of the Talus Shows Promising Clinical Outcomes Over 10 Years  
**Jae Han Park, MD; Jin Woo Lee, MD, PhD; Kwang Hwan Park, MD, PhD; Sang B. Kim; Yoo Jung Park, MD; Seung Hwan Han, MD, PhD**

Comparison of Microfracture with Extracellular Matrix Augmentation and Osteochondral Autograft Transplantation for the Treatment of Medium-Size Osteochondral Lesions of the Talus  
**Oliver B. Hansen; Stephanie K. Eble; Taylor Cabe, BA; Karan A. Patel; Jonathan T. Deland, MD; Carolyn M. Sofka, MD, FACS; Mark C. Drakos, MD**

The Effect of Supramalleolar Osteotomy Without Marrow Stimulation on Cartilage Regeneration for Medial Compartment Ankle Osteoarthritis: Second-Look Arthroscopic Evaluation of Cartilage Regeneration  
**Jung-Won Lim, MD; Hong-Geun Jung, MD, PhD**

Talar Osteonecrosis After Subchondroplasty for Acute Lateral Ligament Injuries: A Small Case Series  
**Ian Foran, MD; Daniel D. Bohl, MD, MPH; Anand M. Vora, MD; Nasima Mehraban; Kamran S. Hamid, MD, MPH; Simon Lee, MD**

**J. LEONARD GOLDNER AWARD FINALIST**

Inhibition of HMGB1 by Metformin Prevents Mechanical Overloading-Induced Tendinopathy  
**Jianying Zhang, PhD; Feng Li, MD, PhD; Daibang Nie, PhD; Kentaro Onishi, DO; Macalus V. Hogan, MD, MBA; James H. Wang, PhD**

**PAPER SESSION 3B: MISC.**

**Moderators:** Michael C. Greaser, MD, and Taggart T. Gauvain, MD

Comparison of Change in Hindfoot Alignment with Coleman Block Testing Using Clinical Exam, X-Ray, and Weightbearing CT  
**Ian Foran, MD; Nasima Mehraban; Stephen K. Jacobsen, MD, MSc; Daniel D. Bohl, MD, MPH; Kamran S. Hamid, MD, MPH; Johnny L. Lin, MD; Simon Lee, MD**

The Influence of Calcaneal and First Ray Osteotomies in the Contact Pressures of the Ankle Joint  
**Cesar de Cesar Netto, MD, PhD; Pooyan Abbasi, MSc; Niall A. Smyth, MD; Stuart Michnick, MD; Nicholas Casscells, MD; Constantine A. Demetracopoulos, MD; Danilo Ryuuko Nishikawa, MD; Brent Parks, MSc; Stuart D. Miller, MD**
Influence of Topography on 3D-Printed Titanium Foot and Ankle Implants

**Bijan Abar**: Cambre N. Kelly; Nicholas B. Allen; Helena Barber; Alexander P. Kelly; Ken Gall; Samuel B. Adams, MD

A Biomechanical Evaluation of the Tibia After Retrograde Intramedullary Reaming

**David J. Ciullo, MD**: Denise Koueiter; Mariam Alsaleh; Avianna E. Arapovic; Kevin C. Baker, PhD; Erin A. Baker, PhD; Paul T. Fortin, MD; Zachary M. Vaupel, MD

The Effect of Knee Flexion on Active and Passive Popliteal Venous Flow When Using Crutches or Knee Scooter While Immobilized

Christopher W. Reb, DO; **Edward T. Haupt, MD**: Gregory C. Berlet, MD, FRCS, FAAO

**J. LEONARD GOLDNER AWARD FINALIST**

Next-Generation Sequencing for Pathogen Identification in Infected Foot Ulcers

Yoonjung Choi; Irvin Oh, MD

**PAPER SESSION 4A: TOTAL ANKLE I**

Moderators: Pamela C. Luk, MD, and Christopher W. DiGiovanni, MD

**ROGER A. MANN AWARD FINALIST**

The UK INFINITY Study: Early Experience and Complications of a Multicenter Series of 504 Total Ankle Arthroplasties

**David N. Townshend, MBBS, FRCS(Tr&Orth)**: Rajesh Kakwani; Murty N. Aradhyula; John C. McKinley; Hisham Shalaby; Robert Smith; James H. Davenport, FRCS(Tr&Orth); Michael Karsi; Timothy Clough; Chris Blundell, MD, FRCS; Howard Davies, MD; Martin Raglan, MD; Sunil Dhar, MBBS, MS, MCh; Steve Hepple, MBChB; Heath Taylor; James Davis, MD; Ian T. Sharpe, MD; Andrew J. Bing; Andrew J. Goldberg, MD, MBBS, FRCS(Tr&Orth)

Do Total Ankle Replacements Have Worse Outcomes when Compared to Total Knee and Hip Replacements at 10 Years Postoperatively?: A Prospective Clinical Study

**Jayasree Ramas Ramaskandhan, MPT, MSc**: Malik S. Siddique, FRCS (T&O); Karen Smith, MSc, BSc

Evaluation of True Ankle Motion Following Total Ankle Replacement Utilizing XROMM Technology

Emily M. Abbott; Zoe Merchant; Erica Lee; Sadie M. Abernathy; Charles Hammer; Young-Hui Chang; **Jason T. Bariteau, MD**

Prospective Comparison of Ankle Replacement and Ankle Arthrodesis 4 Years After Surgery

**Bruce J. Sangeorzan, MD**: Daniel Norvell, PhD; William R. Ledoux, PhD; J. Chris Coetzee, MD; James S. Davitt, MD; Jane Shofer, MS; John G. Anderson, MD; Donald R. Bohay, MD, FACS; Michael J. Houghton, MD; John D. Maskill, MD; Michael E. Brage, MD

A Propensity Score-Matched Analysis Comparing Outpatient and Short-Stay Hospitalization to Standard Inpatient Hospitalization Following Total Ankle Arthroplasty

**Mark A. Plantz, BS**: Alain E. Sherman, BA; Anish R. Kadakia, MD

**PAPER SESSION 4B: SPORTS ANKLE INSTABILITY**

Moderators: Rachael J.A. Da Cunha, MD, and John T. Campbell, MD

Preliminary Results of a Multicenter Prospective Randomized Trial: Traditional Modified Brostrom versus InternalBrace™ Augmentation

**Robert Kulwin, MD**: Mallory Suhling; Ryan Rigby; Anand M. Vora, MD; Troy S. Watson, MD

Using Dynamic Portable Ultrasonography for the Diagnosis of Lateral Ankle Instability

**Jirawat Saengsin**: Rohan Bhimani, MD, MBA; Go Sato; Noortje Hagemeijer, MD; Bart Lubberts, MD, PhD; Gregory R. Warvasz, MD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

Dynamic Evaluation of the Effect of Syndesmotic Injury on Lateral Ankle Stability Using Fluoroscopy

**Rohan Bhimani, MD, MBA**: Go Sato; Jirawat Saengsin; Noortje Hagemeijer, MD; Bart Lubberts, MD, PhD; Gregory R. Warvasz, MD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

Obesity as a Risk Factor for Failure Following a Modified Brostrom Procedure

Daniel Corr; Ryan G. Rogero, BS; Justin E. Palm; Joseph N. Daniel, DO; Steven M. Raikin, MD; **David I. Pedowitz, MD, MS**
ONDEMAND PROGRAM

Conservative versus Surgical Treatment for the Fifth Metatarsal Diaphyseal Fractures: A Retrospective Comparative Study
Warongporn Pongpinyopap, MD; Chamnanni Rungprai, MD

Return to Play Following High-Grade Turf Toe Injuries in National Football League Athletes
Benjamin B. Lindsey, MD; Neil K. Bakshi, MD; David M. Walton, MD; James R. Holmes, MD; Paul G. Talusan, MD

Mechanical Overload Followed by Consecutive Collagenase Injections: Developing a Multifactorial and Long-Lasting Animal Model of Induced Achilles Tendinopathy
Cesar de Cesar Netto, MD, PhD; Zijun Zhang, MD; Mario Lobao Goncalves, MD; Chris Cychosz, MD; Shuyuan Li, MD, PhD; Kyle R. Duchman, MD; Jessica E. Goetz, PhD; John E. Femino, MD; Ruth Chimenti, DPT, PhD; Lew C. Schon, MD

Using 3D Volume Measurements on Weightbearing Computed Tomography Scan to Diagnose Syndesmotic Instability
Rohan Bhimani, MD, MBA; Soheil Ashkani-Esfahani, MD; Bart Lubberts, MD, PhD; Daniel Guss, MD, MBA; Noortje Hagemeijer, MD; Gregory R. Waryasz, MD; Christopher W. DiGiovanni, MD

Diagnostic Accuracy of Comparative Computed Tomography with Stress Maneuvers for Diagnosing Isolated Syndesmotic Instability in an Acute Ankle Sprain
João C. Rodrigues; Alexandre L. Godoy-Santos, MD; Marcelo P. Prado, MD; José Felipe Marion Alloza, MD; Renato do Amaral Masagao, MD; Laercio Rosemberg; Durval d. Santos; Adham Castro; Marco K. Demange

Portable Dynamic Ultrasonography versus Fluoroscopy for the Evaluation of Syndesmotic Instability: A Cadaveric Study
Noortje Hagemeijer, MD; Bart Lubberts, MD, PhD; Jirawat Saengsin; Rohan Bhimani, MD, MBA; Go Sato; Gregory R. Waryasz, MD; Gino Kerkhoffs, MD; Christopher W. DiGiovanni, MD

PAPER SESSION 5A: FOOT AND ANKLE TRAUMA

Moderators: Amanda J. Fantry, MD, and Macalus V. Hogan, MD, MBA

Measuring the Total Cost of Ankle Fractures: A Prospective Analysis
Peter C. Noback; Tess Dougherty; Christina Freibott, BA; Eric F. Swart, MD; Melvin P. Rosenwasser, MD; J. Turner Vosseller, MD

Vitamin D Deficiency and Outcomes After Ankle Fusion
Deepak Ramanathan, MD; Mark J. Berkowitz, MD; Alan Davis, MD; Stephen J. Pinney, MD; Sara Lyn Miniaci-Coxhead, MD

Biomechanical Comparison of FiberTape Device Repair Techniques of Ligamentous Lisfranc Injury in Cadaveric Model
Zachary Koroneos, BS; Emily Vannatta, BS; Morgan S. Kim; Madelaine W. Fritsche, BSc; Trevor Cowman; Allen Kunselman, MA; Gregory Lewis, PhD; Michael C. Aynardi, MD

Does Hindfoot Valgus Deformity Affect the Distal Tibiofibular Syndesmotic Space?
Shuyuan Li, MD, PhD; Thiago A. Silva, MD; Daniel Baumfeld, MD; Nacime S. Mansur, MD; Tiago S. Baumfeld, MD; Kevin N. Dibbern, PhD; Francois Lintz, MD; Kyle R. Duchman, MD; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD

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PAPER SESSION 5B: TOTAL ANKLE II

Moderators: Todd A. Irwin, MD, and Andrew J. Rosenbaum, MD

Revision Total Ankle Replacement Using the Inbone 2 System, Nottingham Experience
Hatem Salem-Saqaer, FRCS(Orth); Martin Raglan, MD; Sunil Dhar, MBBS, MS, MCh

Total Ankle Arthroplasty: Risk Factors for Subsequent Flap Coverage
Daniel J. Cunningham, MD; Sean Ryan, MD; Samuel B. Adams, MD

Extensile Anteromedial Approach for Total Ankle Arthroplasty
Shahin Kayum, MD, MRCS; Ryan M. Khan, PA; Jong Min Lee, MD; Timothy R. Daniels, MD, FRCSC

Influence of Comprehensive Joint Loads on Tibial Implant Micromotion in Total Ankle Arthroplasty
Brett D. Steineman, PhD; Constantine A. Demetracopoulos, MD; Jonathan T. Deland, MD; Fernando Quevedo Gonzalez, PhD; Daniel R. Starnick, MS; Timothy Wright

Tibial Torsion and Ankle Arthritis: Is External Tibial Rotation Associated with Varus Deformity in Patients with Ankle Arthritis?
Collin C. Barber, MD; Teresa Hall; Tyler Madden; Parin D. Kothari; Monica LaPointe; John G. Anderson, MD; Donald R. Bohay, MD, FACS; John D. Maskill, MD; Michelle A. Padley, MS
AUDI0 POSTERS

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ANKLE

A New Method for Reduction and Stabilization of the Distal Tibiofibular Syndesmosis
Andres E. O’Daly Baquero, MD; Timothy R. Kreulen, MD; Babar Shafiq; Erik A. Hasenboehler, MD; Alfred Pisano, MD

Anatomic Structures at Risk During Posterior to Anterior Percutaneous Screw Fixation of Posterior Malleolar Fractures: A Cadaveric Study
Kaveh Momenzadeh, MD; Natalia Czerwonka; Derek S. Stenquist; Seth W. O’Donnell; John Y. Kwon, MD; Ara Nazarian, PhD; Christopher P. Miller, MD, MHS

Cost Comparison of Suture Anchor Modified Broström Repair and Augmentation of the Modified Broström with FiberTape Device
Emily Vannatta, BS; Chris M. Stauch; Jesse King, BSc; Morgan S. Kim; Laura R. Luick; Shawn M. Bifano, MD; Paul J. Juliano, MD; Umur Aydogan, MD; Michael C. Aynardi, MD

Anatomically Relevant Structures at Risk During Reduction and Stabilization of the Distal Tibiofibular Syndesmosis
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Bilateral Comparison of the Three-Dimensional Configuration in the Normal Ankle Syndesmosis: A Non-Weightbearing and Weightbearing CT Analysis
Arne Burssens, MD; Matthias Peiffer; Alexej Barg, MD; Wouter Huysse; Yantarat Sripanich, MD; Aline C. Van Oevelen; Kristian Buedts, MD; Emmanuel Audenaert, MD, PhD

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Can Patient Effort Influence Sensitivity and Specificity of the Gravity Stress View? Assessing the Potential for False Negative Results
Kimberly K. Broughton, MD; Christopher P. Miller, MD, MHS; Caroline Williams, MS; Kristen L. Stupay, MD; John Y. Kwon, MD

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Can Reducing Implant Costs Increase Revenue for Surgically Treated Ankle Fractures: Time Driven Activity Based Costing for 1 year Episode of Care
Will Freking; Bandele Okelana; Logan J. McMillan; Kendra Kibble; Harsh R. Parikh; Brian P. Cunningham, MD

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Changes in the Plantarflexion Moment Arm of the Achilles Tendon Following Total Ankle Arthroplasty
Francesca E. Wade; Gregory Lewis, PhD; Andrea H. Horne; Lauren Hickox; Michael C. Aynardi, MD; Paul J. Juliano, MD; Umur Aydogan, MD; Stephen J. Piazza, PhD

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Correction of Talar Sagittal Alignment in Total Ankle Replacement Using Cadence Biased Polyethylene Insert
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Diagnosing the Impact of the Syndesmotic Injury on Lateral Ankle Stability Using Dynamic Ultrasound
Rohan Bhimani, MD, MBA; Jirawat Saengsin; Go Sato; Noortje Hagemeijer, MD; Bart Lubberts, MD, PhD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD; Gregory R. Waryasz, MD

Distance Mapping of the Foot and Ankle Joints Using Weightbearing CT: The Cavovarus Configuration
Francois Lintel, MD; Maui Jepsen, BSc; Cesar de Cesar Netto, MD, PhD; Alessio Bernasconi, MD; Maria Ruiz, BSc; Sorin Siegel, PhD

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Does a Fibula-Sparing Approach Improve Outcomes in Tibiotalocalcaneal Arthrodesis?
Mark Wu, MD; Daniel J. Scott, MD, MBA; Adam P. Schiff, MD; Manuel J. Pellegrini, MD; James K. DeOrio, MD; James A. Nunley II, MD; Samuel B. Adams, MD

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Effect of Distal Tibial Varus and Valgus Deformity on Tibiotalar Joint Contact
Zhao Hong-Mou, MD, PhD

Effect of Distal Tibial Varus and Valgus Deformity on Tibiotalar Joint Contact
Zhao Hong-Mou, MD, PhD

Efficacy of the Glidepath Technique for Ankle Syndesmosis Reduction
Alicia M. Unangst, DO; Paul M. Ryan, MD; Mitchell Harris, MD; Daniel Song, MD

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Evaluation of the Anterior Talofibular Ligament by Stress Ultrasound for Assessing Generalized Joint Hypermobility
Jaehwang Song, MD; Chan Kang, MD; Je Hyung Jeon; Chang Uk Ham

Evaluation of the Anterior Talofibular Ligament by Stress Ultrasound for Assessing Generalized Joint Hypermobility
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Factors Affecting Emergency Department Visits, Readmissions, and Reoperations within 30 Days of Ankle Fracture Surgery: An Institutional Retrospective Study
John C. Prather, MD; Bradley Alexander, BS; Jared R. Halstrom, BS; Charles R. Sutherland; Akshar Patel, BS; Gerald McGwin, PhD; Ashish Shah, MD

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<tr>
<th>Title</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td><strong>Syndesmosis Injuries in Ankle Fractures: Correlation of Fracture Type and Syndesmotic Instability</strong></td>
<td>Christina Freibott, BA; Seth C. Shoap, BA, BS; Sebastian F. Baumbach, MD; Kathrin Rellensmann, MD; Rami Alrabaa, MD; Hans Polzer, MD; Justin K. Greisberg, MD; J. Turner Vosseller, MD</td>
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<tr>
<td><strong>The 3D Printed Total Talus Replacement: A Novel Treatment Option for Avascular Necrosis of the Talus</strong></td>
<td>Rishin J. Kadakia, MD; Craig C. Akoh, MD; Jie Chen, MD, MPH; Akhil Sharma; Selene G. Parekh, MD, MBA</td>
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<tr>
<td><strong>The Impact of Preoperative Mental Health and Depression on Outcomes After Total Ankle Arthroplasty</strong></td>
<td>Daniel J. Cunningham, MD; John Steele, MD; Samuel B. Adams, MD</td>
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<tr>
<td><strong>The Trans-Syndesmotic Axis in Relation to the Distal Anterior Medial Tibial Cortex</strong></td>
<td>Daniel R. Schlatterer, DO; James Deal; Kurt M. Krautmann, MD</td>
</tr>
<tr>
<td><strong>The Use of Long Acting Opioids to Prevent Rebound Pain Following Peripheral Nerve Blocks for Outpatient Foot and Ankle Surgery</strong></td>
<td>Leah Herzog, MD; Sylvia H. Wilson; Christopher E. Gross, MD</td>
</tr>
<tr>
<td><strong>Accuracy and Reproducibility of a Patient-Specific Instrumentation in Total Ankle Arthroplasty</strong></td>
<td>Pierre-Marc April, MD, FRCSC; Philippe Hugo Champagne, MD, FRCSC; Magalie Angers, MD, FRCSC; Karl-Andre R. Lalonde, MD; Brad Meulenkamp, MD; Adriana P. Martinez, MD; Angela Seidel, MD</td>
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<tr>
<td><strong>Assessment of Intraoperative of Range of Motion After Total Ankle Replacement: Radiographic Cohort Study</strong></td>
<td>Rogerio C. Bitar; Kristin C. Caolo, BA; Guilherme H. Saito, MD; Jaeyoung Kim, MD; Jonathan T. Deland, MD; Scott J. Ellis, MD; Constantine A. Demetracopoulos, MD</td>
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<tr>
<td><strong>Does Prior Surgery Affect Total Ankle Complication and Failure Rates?</strong></td>
<td>Luigi Manzi, MD; Federico Giuseppe Usuelli, MD; Alexander Caughman; Christopher E. Gross, MD</td>
</tr>
<tr>
<td><strong>Effects of Supramalleolar Osteotomy on Abnormal Internal Rotation of the Talus in Varus Ankle Osteoarthritis</strong></td>
<td>Jaehwang Song, MD; Chan Kang, MD; Je Hyung Jeon; Chang Uk Ham</td>
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<tr>
<td><strong>Establishing Maximal Subjective Outcome Improvement After Total Ankle Arthroplasty</strong></td>
<td>Avinesh Agarwallia; Kaisei Yao; Anirudh Gowd, BS; Elizabeth Cody, MD; James A. Nunley II, MD; Nirav Amin; Joseph Liu</td>
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<td><strong>Long-Term Functional Outcomes After Total Ankle Arthroplasty</strong></td>
<td>James W. Brodsky, MD; Daniel J. Scott, MD, MBA; Samuel E. Ford, MD; Scott Coleman; Yahya Daoud, PhD</td>
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<td>Rogerio C. Bitar; Kristin C. Caolo, BA; Guilherme H. Saito, MD; Jaeyoung Kim, MD; Jonathan T. Deland, MD; Scott J. Ellis, MD; Constantine A. Demetracopoulos, MD</td>
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<td><strong>Restoration of Talar Height, Alignment, and Implant Survival After Revision Total Ankle Arthroplasty with Minimum 2-Year Follow-up</strong></td>
<td>Robert Kulwin, MD; Steven L. Haddad, MD</td>
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<tr>
<td><strong>Return to Sport and Activity After Total Ankle Arthroplasty and Arthrodesis: A Systematic Review</strong></td>
<td>William L. Johns; Christopher Sowers; Kempland C. Walley, BSc; J. Benjamin Jackson, MD; David B. Thordarson, MD; Tyler A. Gonzalez, MD, MBA</td>
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</table>
The Demographics of Total Ankle Replacement in the USA: A Study of 21,222 Cases Undergoing Preoperative CT Scan-Based Planning
Murray J. Penner, MD, FRCS; Gregory C. Berlet, MD, FRCS, FAOA; Ricardo Calvo; Eric Molina; David Reynolds; Paul Stemniski; W. Hodges Davis, MD

The INFINITY Total Ankle Prosthesis: Outcomes at Short Term Follow-up
Calvin J. Rushing; Gregory C. Berlet, MD, FRCS, FAOA; Christopher F. Hyer, DPM

The Radiographic Support for Distal Tibia Medial Opening-Wedge Osteotomy with Fibular Valgization Osteotomy for Medial Ankle Osteoarthritis
Hong-Geun Jung, MD, PhD; Jung-Won Lim, MD

Tibial Torsion May Predict Morphology of the Talus
David J. Ciufio, MD; Erin A. Baker, PhD; Paul T. Fortin, MD

Total Ankle Arthroplasty as a Day Case Surgery: How Safe and Effective Is It?
Shahin Kayum, MD, MRCS; Timothy R. Daniels, MD, FRCS; Ryan M. Khan, PA

Total Ankle Arthroplasty (TAR) vs. Ankle Arthrodesis (AA) for Primary Ankle Osteoarthritis: A Nationwide Analysis
Bailey J. Ross, BA; Ian Savage-Elliott, MD; Victor Wu; Ramon F. Rodriguez, MD

All-Inside Arthroscopic Cancellous Allograft for the Large Cystic Osteochondral Defect of the Talus
Shi-Ming Feng, MD

Appropriate Distraction Strength of Metatarsophalangeal Joint Arthroscopy
Kwang-Bok Lee, MD, PhD; Jongkil Kim, MD

Arthroscopic Findings in Symptomatic Fourth and Fifth Tarsometatarsal Joints With and Without Arthritis
George T. Liu, DPM; Michael D. VanPelt, DPM; Matthew J. Johnson; Katherine M. Raspovic, DPM; Dane K. Wukich, MD; Trapper Lalli, MD

Arthroscopic Mobilization of the Ankle-Subtalar Joint Complex Using a Novel “Infra-fibula-tip” Portal
Yuki Tochigi, MD, PhD; Satoru Ozeki, MD, PhD; Masato Ogawa, MD

Functional and Radiographic Outcomes Following Repair of Osteochondral Lesions After Ankle Fracture with Arthrex BioCartilage and Bone Marrow Aspirate Concentrate Compared to Microfracture
Drew N. Stal, MD; Stephanie K. Eble; Oliver B. Hansen; Bopha Chrea, MD; Mark C. Drakos, MD

Outcomes of Posterior Arthroscopic Reduction and Internal Fixation (PARIF) for the Posterior Malleolar Fragment in Trimalleolar Ankle Fractures
Kevin D. Martin, DO; Jeannie Huh, MD

Results of an Accelerated Rehabilitation Program After Arthroscopic Broström Ankle Ligament Repair Augmented with an Arthroscopically Applied Suture Tape
James R. McWilliam, MD; Andres A. Cedeno; Jorge I. Acevedo, MD

Ankle Joint Pressure in Supination-External Rotation Injuries: A Dynamic Biomechanic Cadaveric Study
Fabian Krause, MD; Ivan Zderic; Angela Seidel, MD; Boyko Gueorguiev; Marc C. Attinger; Andreas Foesel, MD

Bio-Integration and Bone Fixation Performance of Continuous Mineral Fiber-Reinforced Implants
Gregory C. Berlet, MD, FRCS, FAOA; Ronit Merchav-Feuermann; Nicolette Jackson

Influence of Cannabinoid on Interleukin-1β Treated Cartilage: An In Vitro Study
Jiangyinzi Shang; Yuning Hu; Peter Alexander; MaCalus V. Hogan, MD; Hang Lin; Alan Y. Yan, MD
Abstracts available for viewing in the AOFAS mobile app.

**Novel Pathology Classification System (FEMASK-Score) for Charcot Neuropathic Arthropathy Reveals Intraneurale Vasculopathy and Predicts Outcome**

**Jesse King, BSc;** Ben Murie; Julie C. Fanburg-Smith; Chris M. Stauch; Donald Flemming, MD; Michael J. Klein; Elizabeth E. Frauenthoffer; Madelaine W. Fritsche, BSc; Jessica Smith; John Ellar; Michael C. Aynardi, MD

**Semi-Automatic Software-Based 3D-Angular Measurement for Weightbearing CT (WBCT) Is 97% Faster Than Measurement by Hand and Provides Similar Angles**

**Martinus Richter, MD, PhD;** Stefan Zech, MD; Stefan A. Meissner; Issam Naef

**Species-Specific Immunoassay for Diagnosis and Tracking Treatment Response in Foot and Ankle Infection**

**Irvin Oh, MD;** Stephanie Hao; Olivia Waldman; Amanda H. Holleran; John L. Daiss, PhD

**The Effects of Fibular Malrotation on Tibiotalar Contact Area and Peak Pressure Distributions in Weber B Ankle Fractures**

**Ansab M. Khwaja, MD;** Alfonso E. Ayala, BS; Brianna Goodison; Jared Irwin, BS; L. Daniel Latt, MD, PhD

**BUNION**

**Anatomical Risk Factors Associated with Rapid Progression of Hallux Valgus Deformity**

**Shinohara Masashi;** Yamaguchi Satoshi; Ono Yoshimasa

**Comparison of Topical Skin Adhesive and Simple Interrupted Nylon Sutures for Wound Closure in Forefoot Surgery: A Prospective Randomised Trial**

**Robbie Ray; Thomas A. Goff;** Paul M. Dearden; Peter W. Robinson; Peter Lam, MBBS, FAOrthA, FRACS(Orth); Andrew P. Wines, MBBS, FRACS(Orth); **Thomas L. Lewis**

**Correcting the Hallux Valgus Deformity: A Comparison Between Modified Lapidus Procedure and Scarf Osteotomy**

**Megan Reilly, MD;** Jonathan Day, MS; Aoife MacMahon, BA; Kristin C. Caolo, BA; Bopha Chrea, MD; Nicholas Williams; Mark C. Drakos, MD; Scott J. Ellis, MD

**Distal Chevron Osteotomy Increases Anatom Intermetatarsal Angle in Hallux Valgus**

**Jeremy Y. Chan, MD;** Naudereh B. Noori, MD; Stephanie Chen, NP; Glenn B. Pfeffer, MD; Timothy P. Charlton, MD; David B. Thordarson, MD

**Do PROMIS® Biopsychosocial Measures Inform Clinical Decisions in Patients with Hallux Valgus?**

**Marcey Keefer Hutchison, DPT;** Jeff Houck, PhD

**Efficacy of Bilateral Simultaneous Hallux Valgus Correction in The Elderly Aged 70 to 79 Compared to Middle Age**

**Chul-Young Jang;** Ho-Jin Lee, MD; Eui Hyun Park, MD; In Tak Chu, MD

**Impact of Preoperative Metatarsus Adductus on Surgical Correction After Triplanar Tarsometatarsal Arthrodesis**

**Joshua M. Reside;** Justin J. Ray, MD; Taylor L. Shackleford; Jennifer Koay; Paul Dayton, MS, DPM; Daniel J. Hatch, FACFAS; W. Bret Smith, DO, MS; Robert D. Santrock, MD

**Influence of First Metatarsophalangeal Joint Degenerative Changes on Functional Outcomes Following Hallux Valgus Correction**

**Daniel Corr;** Ryan G. Rogero, BS; Andrew Fisher, BS; Joseph T. O’Neil, MD; Daniel J. Fuchs, MD; Steven M. Raikin, MD

**Metatarsal Pronation: Does It Matter?**

**Monique C. Chambers, MD;** Dion Birhiray; Mina A. Botros; William M. Granberry, MD

**One Year Follow-Up of Patient Reported Outcomes Following Third Generation Minimally Invasive Chevron Akin Osteotomies (MICA) in Hallux Valgus Surgery**

**Thomas L. Lewis;** Robbie Ray; David Gordon

**Outcome of Concomitant First Metatarsophalangeal and Tarsometatarsal Arthrodesis for Severe Hallux Valgus**

**Thomas B. Bemenderfer, MD, MBA;** Jacob B. Boersma; Michael J. Pryor; John D. Maskill, MD; John G. Anderson, MD; Donald R. Bohay, MD, FACS

**Patient Reported Outcomes and Recurrence Following 127 Primary Lapidus Surgeries for Hallux Valgus**

**Sara H. Galli, MD;** Nick Johnson; W. Hodges Davis, MD; Robert B. Anderson, MD; Carroll P. Jones III, MD; Bruce E. Cohen, MD

**Percutaneous Chevron Akin (PECA) Correction of Hallux Valgus Deformity: Analysis of the Learning Curve.**

**Peter W. Robinson; Robbie Ray; Paul M. Dearden; Thomas A. Goff; Michael R. Whitehouse; Peter Lam, MBBS, FAOrthA, FRACS(Orth); George Dracopoulos, MD**
AUDIPO STERS

Radiological Outcomes of Third Generation Minimally Invasive Chevron Akin Osteotomies (MICA) For Hallux Valgus
Thomas L. Lewis; Robbie Ray; David Gordon

Results of Hallux Metatarsophalangeal Joint Arthrodesis With and Without Calcaneus Autograft
Fred T. Finney, MD; Philip Kaiser, MD; D. Anthony Barcel, MD; W. Hodges Davis, MD; Bruce E. Cohen, MD; J. Kent Ellington, MD, MS; Todd A. Irwin; Carroll P. Jones III, MD

Six Month Follow-Up of Patient Reported Outcomes Following Third Generation Minimally Invasive Chevron Akin Osteotomies (MICA) in Hallux Valgus Surgery
Thomas L. Lewis; Robbie Ray; David Gordon

Three-Dimensional Weightbearing CT Assessment of Metatarsal Osteotomies for Hallux Valgus Correction
Jarrett D. Cain, MSc, DPM; Jordan T. Stolle; Sorin Siegler, PhD

Understanding the Rotational Positioning of the Bones in the Medial Column of the Foot: A Weightbearing CT Analysis
Thiago A. Silva; Daniel Baumfield, MD; Shuyuan Li, MD, PhD; Nacime S. Mansur, MD; Francois Lintz, MD; Caio A. Nery, MD; Alexandre L. Godoy-Santos, MD; Pablo Wagner, MD; Emilio Wagner, MD; Kevin N. Dibbern, PhD; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD

Validity of the Paper Pull Test for Strength in Patients with Hallux Valgus
Marcey Keefer Hutchinson, DPT; Jeff Houck, PhD; Jaymee Kau; Kristen E. Omohundro; Alex Hughes; Kara Oshiro; Taylor Eckel, BS

HINDFOOT

3D Imaging for Hindfoot Alignment: A Comparative Study between MRI and Weightbearing CT
Anil Haldar; Alessio Bernasconi, MD; Syed E. Junaid; Matthew J. Welck, MD, FRCS(Orth); Asif Saifuddin

Clinical Significance of Measurements in Adult Acquired Flatfoot Deformity Using Weightbearing CT: A Matched Case-Control Study
Francois Lintz, MD; Alessio Bernasconi, MD; Matthieu Lalévé; Céline Fernando; Alexej Barg, MD; Cesar de Cesar Netto, MD, PhD

Establishing a New Bony Landmark for Safe Screw Insertion in Medial Displacement Calcaneal Osteotomy: A Simulation-Based Approach
Jaeyong Kim, MD; Jonathan Day, MS

Evaluating Prospective Patient-Reported Pain and Function Outcomes After Ankle and Hindfoot Arthrodesis
Mitesh P. Mehta, BA; Alain E. Sherman, BA; Manish Mehta; Anish R. Kadakia, MD

Exposure of the Calcaneus via the Sinus Tarsi Approach versus the Lateral Extensile Approach: A Cadaveric Study
John C. Prather, MD; John Wilson, BS; Eldar Abyar, MD; Sean Young; Gerald McGwin, PhD; Michael D. Johnson, MD

Factors Affecting the Outcomes of Tibiotalocalcaneal Fusion
Charles C. Pitts, MD; Bradley Alexander, BS; Joshua L. Washington; Hannah M. Barranco; Romil K. Patel; Benjamin B. Cage; Elise M. Greco; Ashish Shah, MD

Is There a Difference in Outcomes Between Patients Who Received a Double or Triple Arthrodesis for Hindfoot Arthritis?
Amanda H. Holleran, MD; Judith F. Baumhauer, MD, MS, MPH; Jeff Houck, PhD; Daniel Homeier; Adolph S. Flemister, MD; John P. Ketz, MD; Benedict F. DiGiovanni, MD; Irvin Oh, MD

Long-Term Outcomes of Coalition Resection in Adult Tarsal Coalition
Thomas B. Bemenderfer, MD, MBA; Jacob B. Boersma; Donald R. Bohay, MD, FACS; John G. Anderson, MD; John D. Maskill, MD

Medial Displacement Calcaneal Osteotomy: Loss of Correction with Varying Drilling Techniques
Benjamin D. Umbel, DO; B. Dale Sharpe, DO; Adam L. Halverson, DO; Mark A. Prissel, DPM

DIABETES

Complication Rates in Ankle and Hindfoot Charcot Arthropathy Treated with Arthrodesis
David M. Macknet, MD; Andrew Wohler, MD; Bruce E. Cohen, MD; J. Kent Ellington, MD, MS; Carroll P. Jones III, MD; Todd A. Irwin; W. Hodges Davis, MD

Group B Streptococcus Infected Tenosynovitis in Diabetic Foot Ulcers
Olivia Waldman; Thomas Sajda; Irvin Oh, MD; Aron Sulovari

Calcaneus Autograft
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**LESSER TOES**

A Comparison of Microvasculature of Normal versus Torn Lesser Toe Metatarsophalangeal Joint Plantar Plates Using Nano-CT Imaging

*Natalie Singer, MD*; David M. Walton, MD; James R. Holmes, MD; Paul G. Talusan, MD

Comparison Between Osteochondral Autologous Transplantation and Dorsiflexion Closing Wedge Metatarsal Osteotomy for Operative Treatment of Late-Stage Freiberg Disease in Adult Patients

*Sung-Jae Kim, MD, PhD*; Gablae Kim

Direct Plantar Approach to Plantar Plate Repair and Associated Wound Complications

*B. Dale Sharpe Jr., DO*; M.P. Ebaugh, DO; Mark A. Prissel, DPM; Christopher F. Hyer, DPM; Terrence M. Philipin, DO; Gregory C. Berlet, MD, FRSCC, FAOA; David A. Goss Jr., DO


*V. James Sammarco, MD*; Josika A. Sammarco; Allegra L. Delman

Patient Outcomes Following Polyvinyl Alcohol Hydrogel Implant of the Lesser Metatarsals

*Bopha Chrea, MD; Jonathan Day, MS*; Stephanie K. Eble; Andrew J. Elliott; Martin J. O’Malley, MD; Jonathan T. Deland, MD; Mark C. Drakos, MD

**MIDFOOT/FOREFOOT**

Allograft Interposition Bone Graft for First Metatarsal Phalangeal Arthrodesis: Salvage After Bone Loss and Shortening of the First Ray

*John Burke, MD*; Glenn G. Shi, MD; Benjamin Wilke, MD; Joseph L. Whalen, MD, PhD

Complications Rates and Outcomes Following First Metatarsophalangeal Arthrodesis for Hallux Rigidus: Does Age Matter?

*Matthew Lunati*; Wesley J. Manz; Samuel D. Maidman, BA; Danielle Mignemi, ATC; Jason T. Bariteau, MD

Early Failures of Polyvinyl Alcohol Hydrogel Implant for the Treatment of Hallux Rigidus

*Yoshiharu Shimozono, MD*; Eoghan T. Hurley, MBBCh, BAO; John G. Kennedy, MD, FRCS(Orth)

Early Weightbearing After Operative Fixation of Jones Fractures Does Not Delay Union

*Austin Looney; Daniel M. Dean, MD*; John Renehan; Thomas H. Sanders, MD; Daniel J. Cuttica, DO; Steven K. Neufeld, MD
Extensor Tendon Transfers for Treatment of Foot Drop in Charcot-Marie-Tooth Disease: A Biomechanical Evaluation
Max Michalski, MD; Tonya W. An, MD; Melodie F. Metzger, PhD; Trevor Nelson, BS; Glenn B. Pfeffer, MD

Functional Outcomes of Open Reduction and Internal Fixation Treatment of Lisfranc Injuries
Daniel Corr; Trevor McBride; Ryan G. Rogero, BS; Steven M. Raikin, MD; Rachel J. Shakked, MD

Independent Radiographic Review of Joint Space Following First Metatarsophalangeal Synthetic Cartilage Implantation: Is There an Association Between Joint Space and Outcomes?
Timothy R. Daniels, MD, FRCSC; Mark A. Glazebrook, MD, MSc, PhD; Judith F. Baumhauer, MD, MPH; Christopher W. DiGiovanni, MD; Keith L. Wapner, MD; David Fitch; Alastair S. Younger, MBChB, ChM, FRCSC

Lateral Column Lengthening versus Medial Displacement Calcaneal Osteotomy in Stage II Tibialis Posterior Tendon Dysfunction: Randomized Controlled Trial
Amr A. Mohammed; Hossam Abubeih; Ahmed Osman; Wael Eladly; Ahmed Khalifa; Kamal Gafary

Medial Displacement Calcaneal Osteotomy as a Novel Treatment for Recurrent Pain After Kidner Procedure for Accessory Navicular Syndrome
Jaeyoung Kim, MD; Jonathan Day, MS

Outcomes After Minimally Invasive Chevron/Akin Procedure and Strategies to Optimize Outcomes
Syed H. Hussaini, MD; Steven K. Neufeld, MD; Stephen D. Lockey; Daniel M. Dean, MD

Postoperative Outcomes and Complications in Hallux Rigidus: A Comparison Between Polyvinyl Alcohol Implant and Cheilectomy with Moberg Osteotomy
Bopha Chrea, MD; Jonathan Day, MS; Stephanie K. Eble; Megan Reilly, MD; Jonathan T. Deland, MD; Scott J. Ellis, MD; Martin J. O’Malley, MD; Mark C. Drakos, MD

Preoperative Radiographic Parameters of Arch Collapse Do Not Predict Future Treatment Failure in Patients with Stage IIb Pes Planus
Kempeland C. Walley, BSc; Chris M. Stauch; Jeremy Silver; Patrick Wise, BSc; Thomas Harper; Christopher Ehret; Jesse King, BSc; Mark Dunleavy; Paul J. Juliano, MD; Michael C. Aynardi, MD

Radiographic Analysis and Patient Reported Outcomes (PROMIS) in Zone 2 and 3 Fifth Metatarsal Fracture Surgery
Rusheel Nayak, BA; Joshua E. Barrett, BA; Mauricio P. Barbosa, MD; Milap Patel, DO; Anish R. Kadakia, MD

The Role of Weightbearing Computed Tomography Scan in Hallux Valgus
Sreenivasulu Metikala, MD; Karim Mahmoud Khamis, MBBCh; George W. Fryhofer; Samir Mehta; Daniel C. Farber, MD

Using Area and Volume Measurements on Weightbearing CT to Detect Isolated Lisfranc Instability
Rohan Bhimani, MD, MBA; Pongpanot Sornsakrin; Soheil Ashkani-Esfahani; Bart Lubberts, MD, PhD; Gregory R. Waryasz, MD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

Other

Changes in Radiographic Angles of the Foot and Ankle as a Function of Weightbearing Load: A Cadaver Study
Tadashi Kimura, MD, PhD; Eric Thorhauer; Matthew W. Kindig, MSc; Bruce J. Sangeorzan, MD; William R. Ledoux, PhD

Comparative Outcomes and Complications of Open versus Endoscopic Gastrocnemius Recession: A Prospective Randomized Control Trial
Chammanni Rungprai, MD; Yantarat Sripanich, MD; Warongpoom Pongpinoyap, MD

Comparison of Patient-Reported Outcomes (PROs) for Major Pathologies of the Forefoot, Midfoot, Hindfoot, and Achilles Using PROMIS
Daniel A. Hu; Rusheel Nayak, BA; Elijah O. Ogunkoya; Milap Patel, DO; Anish R. Kadakia, MD

Do Geographic Region, Pathologic Chronicity, and Hospital Affiliation Affect Access to Care Among Medicaid- and Privately-Insured Foot and Ankle Surgery Patients?
Charles C. Pitts, MD; Haley M. McKissack; Jun Kit He; Bradley Alexander, BS; Charles R. Sutherland; Benjamin B. Cage; Ashish Shah, MD
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Do Preoperative Transcutaneous Oxygen Perfusion Measurements Predict Atraumatic Major Lower Extremity Amputation Wound Healing?
*Naudereh B. Noori, MD; Lee Haruno; Ian Schroeder; Mark Vrahas; Milton T. Little; Carol Lin*

Hypoalbuminemia is an Independent Predictor of 30-Day Postoperative Complications Following Surgical Fixation of Ankle Fractures
*Nathan Kukowski; Jacob M. Wilson, MD; Jason T. Bariteau, MD; Christopher A. Staley, BS*

Impact of Postoperative Complications on Fulfillment of Expectations After Orthopaedic Foot and Ankle Surgery
*Bopha Chrea, MD; Jensen K. Henry, MD; Jonathan Day, MS; Andrew R. Roney, BA; Elizabeth Cody, MD; Scott J. Ellis, MD*

Incidence and Risk Factors of Preoperative and Postoperative Falls for Patients with Chronic Foot Pathologies: An Institutional Prospective Study
*Bradley Alexander, BS; Nicholas Andrews, BS; Benjamin B. Cage; Elise M. Greco; Charles R. Sutherland; Jared R. Halstrom, BS; Spaulding F. Solar; Tanvee Sinha; Ashish Shah, MD*

Leg-Length-Evening Device Improves Balance in Patients Wearing a Controlled Ankle Motion Boot: A Multicenter Randomized Controlled Trial
*Daniel D. Bohl, MD, MPH; Nasima Mehraban; Alexander J. Idarraga; Kevin J. Wu, BS; Milap Patel, DO; Anand M. Vora, MD; Anish R. Kadakia, MD; Simon Lee, MD; Kamran S. Hamid, MD, MPH*

Patient Perceptions of Patient Reported Outcome Measures in Orthopedic Surgery (PROMOS): A Snapshot of Data for Foot and Ankle Patients
*Kempland C. Walley, BSc; Emily Vannatta, BS; Chris M. Stauch; Madelaine W. Fritsche, BSc; Mark Dunleavy; Paul J. Juliano, MD; Michael C. Aynardi, MD*

Postoperative Length of Stay May Predict Foot and Ankle Patients at Risk for Readmission
*Erin A. Baker, PhD; Corinn Gehrke, MS; David J. Ciufio, MD; Zachary M. Vaupel, MD; Paul T. Fortin, MD*

Postoperative Opioid Dependence Following Orthopaedic Foot and Ankle Surgery: A Cohort Study of 448 Patients
*Daniel D. Bohl, MD, MPH; Emily Hejna; Nasima Mehraban; Johnny L. Lin, MD; George B. Holmes, MD; Simon Lee, MD; Kamran S. Hamid, MD, MPH*

Preoperative and Postoperative PROMIS and FFI Scores Based on Region of Foot Pathology and Surgery
*Charles C. Pitts, MD; Bradley Alexander, BS; Elise M. Greco; Benjamin B. Cage; Spaulding F. Solar; Tanvee Sinha; Ashish Shah, MD*

Prospective Evaluation of Opioid Consumption in Multimodal Analgesia Following Isolated Hallux Valgus Correction or First MTP Joint Arthrodesis
*Wonyong Lee, MD; Dan Prat, MD; Daniel C. Farber, MD; Keith L. Wapner, MD; Wen Chao, MD*

Randomized Trial of Dilute Betadine Soak and Scrub for Orthopaedic Foot and Ankle Surgery
*Daniel D. Bohl, MD, MPH; Nasima Mehraban; David Rossi; Connor Wakefield, BS; Johnny L. Lin, MD; Simon Lee, MD; Kamran S. Hamid, MD, MPH*

Regional Nerve Block Complication Analysis Following Peripheral Nerve Block During Foot and Ankle Surgical Procedures
*Jason A. Lauf; Pearson N. Huggins; Mohammed Al-Issa; Brian M. Byrne, DO; Bryan Large, DO; Joseph M. Long, BS; Brent Whitehead; Nicholas A. Cheney, DO; Timothy Law, DO, MBA*

Surgical Management of Insertional Achilles Tendinopathy in the Young and Elderly Result in Similar Clinical Outcomes
*Huai M. Phen; Wesley J. Manz; Joel T. Greenshields; Daniielle Mignemi, ATC; Jason T. Bariteau, MD*

The Rise of Predatory Journals in Foot and Ankle Surgery: Propitious or Detrimental?
*Adeshina Adeyemo; Umur Aydogan, MD*

The Role of Cavovarus Deformity in the Pathogenesis of Peroneal Tendon Tears
*Shannon F. Alejandro, MD; Akira Taniguchi, MD; Justin M. Kane, MD; Samuel E. Ford, MD; Daniel J. Scott, MD, MBA; Yasuhiito Tanaka, MD; James W. Brodsky, MD*

Trends in Industry Payments to Orthopedic Foot and Ankle Surgeons from 2014 to 2018
*Kush S. Mody; Lathan Liou; Taj Joshi; Christopher Mikhail; Joseph Barbera; Stephen Selverian; Ettore Vulcano, MD*
Vitamin D Management and Nonunion in Elective Foot and Ankle Arthrodesis

Benjamin J. Ebben, MD; Andrew E. Brooks, MD; Natalie M. Gaio; Kathryn L. Williams, MD

What Is the Responsiveness and Quality of Life “Utility” for PROMIS Outcomes in Foot and Ankle Patients Following Physical Therapy?

Christopher G. Neville, PhD, PT; Judith F. Baumhauer, MD, MS, MPH; Jeff Houck, PhD

SPORTS

A Comparison of Clinical Outcomes and Complication Rates in Open Versus Minimally Invasive Achilles Tendon Repair Using PROMIS Scores

Kristin C. Caolo, BA; Stephanie K. Eble; Andrew J. Elliott; Constantine A. Demetracopoulos, MD; Jonathan T. Deland, MD; Mark C. Drakos, MD; Scott J. Ellis, MD

Automatic 3D Volumetric Analysis of the Distal Tibiofibular Syndesmotic Incisura: A Case-Control Study of Subtle Chronic Syndesmotic Instability

Cesar de Cesar Netto, MD, PhD; Francois Lintz, MD; Jessica E. Goetz, PhD; Kevin N. Dibbern, PhD; Ivan C. Girola; Alexandre L. Godoy-Santos, MD; Daniel Guss, MD, MBA; John E. Femino, MD; Donald D. Anderson, PhD; Christopher W. DiGiovanni, MD

Biomechanical Evaluation of Suture Button Spread With and Without Deltoid Repair in Combined Syndesmosis and Deltoid Injury

Brian Lau, MD; Hunter Storaci; Kaysie Tam; Cara Lai; Brett P. Salazar; Roberto Guzman; David E. Oji, MD; Loretta B. Chou, MD

Comparison of Clinical Outcomes After Arthroscopic Anterior Talofibular Ligament Repair With or Without Inferior Extensor Retinaculum Augmentation

Sung Hyun Lee, MD

Dynamic Imaging Evaluation in Turf Toe Injuries: A Prospective Analysis in 18 Patients

Jorge Filippi, MD, MBA; Gonzalo F. Bastias, MBBS, FRCS; Freddy Escobar, MD; Claudia Astudillo; Sara R. Munoz; Edith Miranda; Ignacio A. Valderrama; Manuel J. Pellegrini, MD; Natalio R. Cuchacovich Mikenberg, MD

Influence of Foot Orthotics and Intrinsic Factors on Strain Measurements in the Fifth Metatarsal

Jeffrey W. Hoffman; Rogerio C. Bitar; Daniel R. Sturnick, MS; Glenn Garrison; Constantine A. Demetracopoulos, MD; Mark C. Drakos, MD; Martin J. O’Malley, MD

Pain Scores and Return to Activities/Sport Following Dehydrated Micronized Allogenic Cartilage and Isolated Microfracture for Treatment of Talar Osteochondral Lesions

Brian Lau, MD; Brianna Johnson; David E. Oji, MD; Loretta B. Chou, MD

Return to Play and Performance After Achilles Tendon Rupture in Women’s National Basketball Association Players

Vincent Federico; Samy Gabriel; Christopher W. Reb, DO

Using Portable Ultrasound to Measure the Effect of Lateral Ankle Ligament Injury on Syndesmotic Stability: A Cadaveric Study

Jirawat Saengsin; Noortje Hagemeijer, MD; Rohan Bhimani, MD, MBA; Go Sato; Bart Lubberts, MD, PhD; Gregory R. Waryasz, MD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

TRAUMA

An In Vivo Biomechanical Analysis of Syndesmotic Surgical Repair in Elite Athletes: Screw versus Suture Button Fixation

Stephen P. Canton; Tom Gale, PhD; Dukens LaBaze, BS; William Anderst, PhD; MaCalus V. Hogan, MD

Asymmetric Lambda Sign on Axial Weightbearing CT Scans of the Foot: An Indicator to Aid in the Diagnosis of Subtle Lisfranc Instability?

Yantarat Sripanich, MD; Jesse Steadman, BS; Nicola Krahenbuhl, MD; Chamnanni Rungprai, MD; Charles L. Saltzman, MD; Alexej Barg, MD

Complications Associated with Lisfranc Injury

Open Reduction Internal Fixation versus Primary Arthrodesis: A Matched Cohort Study

William V. Probasco, MD, MS; Benjamin E. Stein, MD; Cyrus Fassih, MD; Nazia Hossain

Fractures of the Talar Head: A Series of 16 Patients

Ishaq Ibrahim; John Y. Kwon, MD; Christopher P. Miller, MD, MHS; Jeremy T. Smith, MD
Fractures of the Tibial Plafond: Does the Presence or Absence of a Fibular Fracture Predict Future Morbidity?
Henry Boateng, MD, MSc; Kempecial C. Walley, BSc; Chinenye Nwachuku, MD; Vince Lands; Justin W. Walker; Muhammad Z. Mirza; Rhett MacNeille, MD; Paul Tornetta, MD; Spence Reid, MD

Impact of Early Weight Bearing on Outcomes after Open Reduction and Internal Fixation of Trimalleolar Ankle Fractures
Devon Myers; Benjamin D. Umbel, DO; Shane Forsting; Benjamin C. Taylor, MD; Sergio H. Pulido

Improving the Management of Adult Patients with Acute Ankle Fractures in Malawi: An Examination of Providers’ Knowledge and Treatment Strategies
Kiran J. Agarwal-Harding, MD; Ami Kapadia; Leonard Banza, MD; Mabvuto Chawinga; Nyengo Mkandawire; John Y. Kwon, MD

Is Immediate Weight Bearing Safe for Lateral Malleolus Fracture After Surgery?
Young Rak Choi; Sang-June Lee; Jaehyung Lee; Seung-Hwan Park

Graham J. DeKeyser, MD; Yantarat Sripanich, MD; Jesse Steadman, BS; Chamnanni Rungprai, MD; Justin Haller; Charles L. Saltzman, MD; Alexej Barg, MD

Predicting Syndesmotic Injury in Weber B Ankle Fractures
Patrick Kellam; Graham J. DeKeyser, MD; David Rothberg; Thomas F. Higgins; Justin Haller; Lucas S. Marchand

Predictors of Functional Outcomes Following Operative Treatment of Acute Achilles Tendon Ruptures
Ryan G. Rogero, BS; Andrew Fisher, BS; Daniel Corr; Joseph T. O’Neil, MD; Daniel J. Fuchs, MD; Steven M. Raikin, MD

The Lateral Drawer Test: A Novel Clinical Test to Assess Mortise Instability in Weber B Fibula Fractures
John Z. Zhao, MD; Caroline Williams, MS; Kimberly K. Broughton, MD; Christopher P. Miller, MD, MHS; John Y. Kwon, MD
2.4mm Non-Cannulated Screws Are Non-Inferior to 4.0mm Cannulated Screws for Medial Malleolar Fixation in Unstable Ankle Fractures
Brianna R. Fram, MD; Joseph L. Schmitz; Ryan G. Rogero, BS; Gerard Chang; James Krieg, MD

A Multicenter Retrospective Study Examining Complication Rates Following Syndesmotic Screw Removal
Seth C. Shoap, BA, BS; Christina Freibott, BA; Sebastian F. Baumbach, MD; Viktoria Herterich, MD; Hans Polzer, MD; J. Turner Vosseller, MD

A Retrospective Study Examining Complication Rates Following Syndesmotic Screw Removal
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A Retrospective Analysis of Results and Outcomes After Cadence Total Ankle Arthroplasty Implanted Through the End of 2017
Brianna R. Fram, MD; Ryan G. Rogero, BS; Daniel Corr; David I. Pedowitz, MD, MS; Justin Tsai, MD

A Retrospective Chart Review to Determine Lateral Ankle Instability Treatment Based Off of the Degree of Varus Tilt
Greggory Brandle; Kaitlyn Rizzo; Nicholas A. Cheney, DO; Brian C. Clark

A Retrospective Chart Review to Examine Failed Modified Brostrom Procedures for Chronic Lateral Ankle Instability
Kaitlyn Rizzo; Greggory Brandle; Nicholas A. Cheney, DO; Brian C. Clark

A Systematic Review of Fresh Osteochondral Allograft Transplantation for Osteochondral Lesions of the Talus
Gregory F. Pereira, MD; John Steele, MD; Amanda N. Fletcher, MD; Samuel B. Adams, MD; Ryan B. Clement, PA-C

Analysis of 28 Broken Syndesmosis Screws
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Are Locked Plates Necessary to Maintain Reduction in the Treatment of Geriatric Ankle Fractures?
Aseel G. Dib, BS; Caitlin Curtis Crocker, BS; John C. Prather, MD; Michael D. Johnson, MD

Autologous Osteochondral Transplantation for Osteochondral Lesions of the Talus: Does Gender Impact Outcomes?
Arianna L. Gianakos, DO; Olasunmbbo Okedele; Sean Flynn; John G. Kennedy, MD, FRCS(Orth); Christopher W. DiGiovanni, MD

Biologic Augmentation of Tibiotalocalcaneal Arthrodesis with Autologous Bone Block Is Associated with High Rates of Fusion
Alain E. Sherman, BA; Mitesh P. Mehta, BA; Rusheel Nayak, BA; Anish R. Kadakia, MD

BMI and Comorbidities in Patients with Syndesmosis Screw Breakage
Josh W. Vander Maten; Jiayong Liu, MD; Logan Roebke

Clinical Outcomes of 3D Printed Titanium Cage Implantation for Foot and Ankle Surgery
Bijan Abar; Nicholas B. Allen; Ken Gall; Samuel B. Adams, MD

Clinical Outcomes of Anatomical Reconstruction of the Lateral Ankle Ligament Complex: A Systematic Review
Conor Mulvin; James P. Toale; Yoshiharu Shimozono, MD; Eoghan T. Hurley, MBBCh, BAO; John G. Kennedy, MD, FRCS(Orth)

Comparison Matrix-Associated Stem Cell Transplantation (MAST) with Autologous Matrix Induced Chondrogenesis Plus Peripheral Blood Concentrate (AMIC+PBC) in Chondral Lesions at the Ankle - Matched-Patient Analysis
Martinus Richter, MD, PhD; Stefan Zech, MD; Stefan A. Meissner; Issam Naef

Comparison of Syndesmotic Malreduction Rate Following Trans-Syndesmotic Screw Fixation in SER versus PER Type Ankle Fracture: A Prospective Analytic Study
Chamnanni Rungprai, MD; Yantarat Sripanchich, MD

Cross-Cultural Adaptation and Validation of an Arabic Version of the American Orthopedics Foot and Ankle Score (AOFAS)
Meshal A. Alhadhoud, MBChB; Najla F. Alsiri; Maryam M. Alsaffar; Mark A. Glazebrook, MD, MSc, PhD

Development of an Anatomic Landmark-Based Measurement of the Achilles Tendon
Daniel Urness, BS; Austin R. Thompson, BS; Erik Ensrud; James E. Meeker, MD

Diagnosing Syndesmosis Instability: Dynamic Ultrasound versus Arthroscopy: A Cadaveric Study
Noortje Hagemeijer, MD; Go Sato; Rohan Bhimani, MD, MBA; Bart Lubberts, MD, PhD; Mohamed Abdelaziz Elghazy, MD, MSc; Gino Kerkhoffs, MD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

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Irfan Khan; Kevin D. Martin, DO; Carmen E. Quatman; Adam T. Groth, MD; Rudy Rodriguez

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Jimmy Chan, MD; Kevin K. Chen, MD; Peter Choi; Edward Rojas; Oliver N. Schipper, MD; Amiethab A. Aiyer, MD; Cesar de Cesar Netto, MD, PhD; Amgad M. Haleem Amin, MD, PhD; Anish R. Kadakia, MD; Ettore Vulcano, MD

Incidence of Chondral and Osteochondral Lesions in Ankle Fracture Patients Identified with Ankle Arthroscopy Following Rotational Ankle Fracture
Emilie Williamson; Yoshiharu Shimozono, MD; John Dankert; James P. Toale; Eoghan T. Hurley, MBBC, BAO; Kenneth Egol; John G. Kennedy, MD, FRCS(Orth)

Kinematics After Syndesmotic Injury: Assessing the Magnitude of Talus and Fibula Rotation and Displacement
Jonathan Bartolomei; Mark W. Bowers, MD; Kenneth J. Hunt, MD

Management of Ankle Fractures with Syndesmotic Disruption: A Survey of Orthopaedic Surgeons
Ryan G. Rogero, BS; Emmanuel M. Illicic, MD; Daniel Corr; Steven M. Raikin, MD; James Krieg, MD; Justin Tsai, MD

Morphologic Characteristics of the Medial Malleolar Fragment Based on CT Scan in Ankle Fractures
Jun-Beom Kim, MD; Chung-Han An

Morphological Data from 70 Consecutively Treated OCLTs by a Single Surgeon: Lesion Location Predicts OCLT Morphology, and Morphology Predicts the Surgery
Kenneth Heida, MD; John C. Dunn; Justin D. Orr, MD

No Progression of Radiological Adjacent Joint Arthritis Noted in Patients with Type II DM Undergoing Total Ankle Replacement: A 5 Year Follow Up Study
Zuhair Shahid; Nicholas Hutt; Jack Alport, MBChB; Jayasree Ramas Ramaskandhan, MPT, MSc; Ramsay Refiae; Malik S. Siddique, FRCS (T&O)

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Hatem Salem-Saqer; Martin Raglan, MD; Sunil Dhar, MBBS, MS, MCh

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Arianna L. Gianakos, DO; Filippo Romanelli, DO; Malaka Badri; Naina Rao; Bart Lubberts, MD, PhD; Daniel Guss, MD, MBA; Christopher W. DiGiovanni, MD

Outcomes and Complications Following Treatment of Chronic Subtle Syndemotic Injury with Arthroscopic Debridement and Fixation with Suture Button
Chamnann Rungprai, MD; Yantarat Sripanich, MD

Outcomes Following Arthroscopy for Anterior Impingement in the Ankle Joint: Need for Gender as a Variable in Analysis
Arianna L. Gianakos, DO; Axel Ivander; Christopher W. DiGiovanni, MD; John G. Kennedy, MD, FRCS(Orth)

Outcomes Following Microfracture for Osteochondral Lesions of the Talus in Female Patients
Emilie Williamson; Arianna L. Gianakos, DO; Eoghan T. Hurley, MBBC, BAO; John G. Kennedy, MD, FRCS(Orth)

Patient Characteristics and Comorbidities in Patients Attending Specialist Foot and Ankle Outpatient Clinics in the UK: A Report of 2000 Patients
Linzy Houchen-Wolloff; Clare Tomlinson; Alice E. White; Sara Venturini; Alistair J. Best; Patricia Allen, MBChB; Jitendra Mangwani, MBBS, MS(Orth), FRCS(Tr&Orth)
Patients with Opioid Use Disorder Have Increased Readmission Rates, Emergency Room Visits, and Costs Following Hallux Valgus Procedures
James M. Parrish; Dillon Benson; Aaron K. Hoyt, BS; Jonathan R. Kaplan, MD; Amiethab A. Aiyer, MD

Percutaneous and Minimally Invasive Surgical Technique for Achilles Tendon Repair
Tyler Hoskins; David Goyette; Jay Patel, DO; Christopher Mazzei; Arianna L. Gianakos, DO; Justin Koss; James Wittig; David M. Epstein, MD

Posterolateral Plate Fixation with Pantalarlock® Is More Stable Than Nail Fixation in Tibiotalocalcaneal Arthrodesis in a Biomechanical Cadaver Study
Natalia Gutteck, MD

Quality and Readability of Online Information on Ankle Instability
Madeleine Willegger, MD; Gilbert M. Schwarz; Marcus Lisy

Quantitative Analysis of Talar Dome Morphology
Justine Borchard; Wilshaw Stevens; Matthew Siebert; Claire Shivers; Anthony Riccio; Kirsten Tulchin-Francis, PhD; Jacob R. Zide, MD

Quantitative Analysis of the Deltoid Ligament Degradation in Chronic Ankle Instability Patients Using the CT Value
Yasunari Ikuta; Tomoyuki Nakasa, MD; Junichi Sumii; Akinori Nekomoto; Nobuo Adachi, MD

Review of Variability in Rehabilitation Protocols After Lateral Ankle Ligament Surgery
Christina Hermanns; Reed Coda; Sana Cheema; Matthew Vopat, MD; Megan Bechtold; Armin Tarakemeh, BA; Scott Mullen, MD; Paul Schroeppe1, MD; Bryan G. Vopat, MD

Routine Fixation of Weber B Fibula Fractures with a Lateral Locking Plate and No Lag Screw
Daniel D. Bohl, MD, MPH; Nasima Mehraban; Ian Foran, MD; Kamran S. Hamid, MD, MPH

Safety and Outcomes of Early Fixation in Patients Who Suffered an Ankle Fracture
Ashish Shah, MD; Jacob Hawkins; Bradley Alexander, BS; Abhinav Agarwal, MBBS; Benjamin B. Cage; Elise M. Greco; Hannah M. Barranco; Akshar Patel, BS

Salvage Arthrodesis with Femoral Head Allograft for Failed Total Ankle Arthroplasty
Hong S. Lee, MD; Kiwon Young, MD; Tae-Hoon Park; Hong Seop Lee

Screw Fixation of the Posterior Malleolus Fragment in Ankle Fracture
Gi-Soo Lee, MD; Jaehwang Song, MD

Syndesmosis Screw Breakage: An Analysis of Current Literature
Josh W. Vander Maten; Logan Roebke; Jiayong Liu, MD

Talar-Tarsal Stabilization: Rationale and Preliminary Outcomes
Ansab M. Khwaja, MD; Peter Stevens, MD; Alex Lancaster

The ACL of the Ankle Joint: A Cadaveric Evaluation of the Subtalar Intrinsic Ligaments and Optimal Surgical Approach
Naven Duggal, MD; Patrick M. Williamson, BS; Ara Nazarian, PhD

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Brian T. Sleasman, MD; Alexander Caughman; Christopher E. Gross, MD

Union of Foot/Ankle Arthrodesis: A Registry Study of Low-Intensity Pulsed Ultrasound (LIPUS)
Neil J. White; Johnny T. Lau, MD, MSc; Kevin Ong; Steven M. Kurtz; Sheldon S. Lin, MD

Union Rates and Deformity Correction Using the Hintermann Osteotomy in Type IIb Flatfoot Deformity
Brian P. Gallagher, MD; Walter C. Hembree, MD; Lew C. Schon, MD

ANKLE ARTHRITIS

Analysis of 408 Total Ankle Arthroplasty Adverse Events Reported to the US Food and Drug Administration from 2015-2018
Jie Chen, MD, MPH; Craig C. Akoh, MD; Rishin J. Kadakia, MD; Jeremy S. Somerson; Mark E. Easley, MD; Samuel B. Adams, MD; James K. DeOrio, MD; James A. Nunley II, MD

Arthroscopic Tibiotalar Arthrodesis versus Open Arthrodesis with Anterior Locking Plate: A Retrospective Case Series
Benjamin Y. Jong, MD; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD; Phinit Phisitkul, MD
Brazilian Experience with Zennith – Corin System Total Ankle Replacement
André V. Lemos, MD; Tiago S. Baumfeld, MD; Alexandre L. Godoy-Santos, MD; Daniel Baumfeld, MD; Caio A. Nery, MD

Brazilian Total Ankle Replacement Experience
André V. Lemos, MD; César E. Martins, MD; Caio A. Nery, MD; Daniel Baumfeld, MD

Clinical Analysis on the Treatment of Kaschin-Beck Disease of the End-Stage Ankle by Tibiototalocalcaneal Arthrodesis Using Lateral Approach with Platelet-Rich Plasma
Li Yi, MD; Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

Early Outcomes with the CADENCE Total Ankle Prosthesis
Calvin J. Rushing; Christopher F. Hyer, DPM

Early Weight Bearing and CT-Demonstrated Fusion Following Primary Tibiotalar Arthrodesis Using an Anatomically Contoured Anterior Ankle Fusion Plating System
Nicholas Kusnezov, MD; Kenneth Heida, MD; John C. Dunn; Justin D. Orr, MD

Effect of Travel Time and Distance on Outcomes in Total Ankle Arthroplasty
Kristin C. Caolo, BA; Scott J. Ellis, MD; Jonathan T. Deland, MD; Constantine A. Demetracopoulos, MD

Functional Analysis of Distraction Arthroplasty in the Treatment of Ankle Osteoarthritis
Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

Long-Term Follow Up of Correction of Moderate to Severe Deformity with the STAR Ankle Prosthesis
Sudheer C. Reddy, MD; Roger A. Mann, MD; Kyle Zemeir, BS

Long-Term Survivorship of the INBONE II Total Ankle Arthroplasty
Jonathan Day, MS; Jaeyoung Kim, MD; Scott J. Ellis, MD; Jonathan T. Deland, MD; Martin J. O’Malley, MD; Elizabeth Cody, MD; Constantine A. Demetracopoulos, MD

Management of Periprosthetic Osteolysis After Total Ankle Arthroplasty
Yoo Jung Park, MD; Kwang Hwan Park, MD, PhD; Jae Han Park, MD; Seung Hwan Han, MD, PhD; Sang B. Kim; Jin Woo Lee, MD, PhD

Measurement of Physical Activity Level in Patients with Ankle Osteoarthritis
Seiji Kimura, MD; Satoshi Yamaguchi, MD, PhD; Yoshimasa Ono

Risk Factors for Early Failure of 4th Generation Total Ankle Arthroplasty Prostheses
Calvin J. Rushing; Christopher F. Hyer, DPM; Gregory C. Berlet, MD, FRCS, FAOA

Severe Ankle Varus Malalignment Management with a Fix-Bearing Total Ankle Replacement Implant
Claudia A. Di Silvestri, MD; Riccardo D’Ambrosi, MD; Camilla Maccario, MD; Cristian Indino, MD; Federico Giuseppe Usuelli, MD

Short-Term Effect of the INBONE II Total Ankle Arthroplasty in the Treatment of End-Stage Ankle Arthritis
Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

SMOT with Medial Distraction Arthroplasty for Ankle Arthritis with Increased Talar Tilt: A Comparative Study
Zhao Hong-Mou, MD, PhD

The Epidemiology and Trends of Primary Total Ankle Arthroplasty and Revision Procedure in South Korea Between 2007 and 2017
Sung-Jae Kim, MD, PhD

The Use of Single-Photon-Emission Computed Tomography (SPECT) for the Evaluation of Painful Ankle Arthroplasties
Ramsay Refaie, FRCS (T&O), PhD; Zuhaib Shahid; Jayasree Ramas Ramaskandhan, MPT, MSc; Malik S. Siddique, FRCS (T&O)

Total Ankle Arthroplasty in Valgus Deformity
Camilo Piga; Federico Giuseppe Usuelli, MD; Camilla Maccario, MD; Claudia A. Di Silvestri, MD

ARTHROSCOPY

Accessibility of the Metatarsal Head Comparing Distraction and Plantarflexion in a 2-Portal Technique for First Metatarsophalangeal (MTP 1) Joint Arthroscopy
Madeleine Willeger, MD; Katharina Czerny; Lena Hirtler

Anterior Talofibular Ligament Reconstruction Could Produce Comparable Functional Outcomes With or Without Calcaneofibular Ligament Reconstruction for Chronic Lateral Ankle Instability
Shi-Ming Feng, MD

Arthroscopic Microfracture for Osteochondral Lesions of the Talus in Old Age Patient
Hong S. Lee, MD; Kiwon Young, MD; Tae-Hoon Park; Hong Seop Lee

Chronic Lateral Ankle Instability with Subtalar Instability: Does Lateral Ligaments Reconstruction Reliable?
Shi-Ming Feng, MD
**BASIC SCIENCES/BIOLOGICS**

**A Comparison of Arch Index, Foot Posture Index, and Surgeon Observation for Foot Type Classification**
Dukens LaBaze, BS; Alexandra Gabrielli, MD, MS; William Anderst, PhD; MaCalus V. Hogan, MD

**Biomechanical Comparison of Zone 1 5th Metatarsal Base Fracture Fixation**
Bryan Bean, MD; Niall A. Smyth, MD; Pooyan Abbasi, MSc; Brent Parks, MSc; Walter C. Hembree, MD

**Comparison of Clinically used Bilayer Collagen Membrane and Trilayer Collagen Prototype Fixation Stability in Chondral Defects at the Talus: An Experimental Human Specimen Study**
Martinus Richter, MD, PhD; Alexander Milstrey; Stefan Zech, MD; Angelika Grueter; Julia Evers; Michael J. Raschke; Sabine Ochman

**Foot Loading Symmetry Is Improved After Unicompartmental Knee Arthroplasty**
Dukens LaBaze, BS; Milad Zarei, MS; Ken Urish, MD, PhD; William Anderst, PhD; MaCalus V. Hogan, MD

**Influence of Platelet Rich Plasma on the Skeletal Muscle Fibrosis After Limb Lengthening in Mice**
Ichiro Tonogai, MD, PhD

**Pathological Characters and Molecular Pathogenesis of Diabetic Neuropathic Osteoarthropathy cartilages Damage**
Zhao Hong-Mou, MD, PhD

**Safety Profile of Artelon Use for Soft Tissue Reconstruction in Foot and Ankle Surgery**
Syed H. Hussaini, MD; Daniel M. Dean, MD; Michael Kelly; Daniel J. Cuttica, DO

**AbobotulinumtoxinA in the Management of Hallux Valgus in Adult Patients: Results of a Randomised and Placebo-Controlled Phase 2 Trial**
Robert Silva, PhD; Selene G. Parekh, MD, MBA; Lawrence A. DiDomenico, DPM; David G. Armstrong; Babak Baravarian; Magali Volteau

**Accuracy of Percutaneous Lateral Release for Hallux Valgus: An Anatomic Study**
Lara C. Atwater, MD; Matthew R. McDonald, MD; Patrick J. Maloney, MD; Rebecca A. Cerrato, MD

**Crista Volume Measured from 3D Reconstructions of Weightbearing CT Scans Shows a Relationship to Sesamoid Station**
Stephen F. Conti, MD; Audrey Clarke; Matthew S. Conti, MD; Scott J. Ellis, MD; Mark C. Miller, PhD; Amr A. Fadle, MD

**Early Outcomes of Minimally Invasive Surgery Using Percutaneous Technique for Hallux Valgus**
Jae Han Park, MD; Kwang Hwan Park, MD, PhD; Yoo Jung Park, MD; Seung Hwan Han, MD, PhD; Sang B. Kim; Jin Woo Lee, MD, PhD

**Minimal Invasive Hallux Valgus Surgery**
Shay A. Tenenbaum, MD; Ran Thein; Erel Ben Ari, MD; Niv Dreijangel; Jason T. Bariteau, MD; Nathan Bruck, MD; Oded R. Coifman, MD

**Novel Hallux Valgus Cadaveric Model: Role of Ligament Damage and Tendon Pull in Recreating the Deformity**
Emilio Wagner, MD; Pablo Wagner, MD; Florencia J. Pacheco; Carlos Villarroel; Felipe H. Palma, PT; Rodrigo Guzman-Venegas, MSc

**Outcome of Bunion Correction with First Tarsometatarsal Arthrodesis in Adult Acquired Flatfoot Deformity Correction**
Thomas B. Bemenderfer, MD, MBA; Jacob B. Boersma; Michael J. Pryor; John D. Maskill, MD; Donald R. Bohay, MD, FACS; John G. Anderson, MD

**Outcomes of Modified Scarf Osteotomy for Male Hallux Valgus**
Daniel J. Scott, MD, MBA; Samuel E. Ford, MD; Shannon F. Alejandro, MD; David K. Myer, MD; Akira Taniguchi, MD; James W. Brodsky, MD

**Peak Contact Stress of TMT-1 Joint After Sequential Correction of Hallux Valgus Using a Proximal Opening Wedge Metatarsal Osteotomy (PMO) and Distal Soft Tissue Procedure**
Jonathan C. Kraus, MD; Michael Ziegele; Mei Wang; Brian C. Law, MD; Glenn G. Shi, MD

**BUNION**

**2-Week Post-Operative Opioid Use After Primary Hallux Valgus Correction**
Zachary T. Thier; Kenna C. Altobello; Tyler A. Gonzalez, MD, MBA; J. Benjamin Jackson, MD

**A Comparison of First Ray Length and Dorsiflexion After Arthrodesis, Osteotomy and Suture Button Procedures for Hallux Valgus Deformity**
Ian Foran, MD; Nasima Mehraban; Stephen K. Jacobsen, MD, MSc; Daniel D. Bohl, MD, MPH; Johnny L. Lin, MD; Simon Lee, MD; George B. Holmes, MD; Kamran S. Hamid, MD, MPH

**Outcomes of Modified Scarf Osteotomy for Male Hallux Valgus**
Daniel J. Scott, MD, MBA; Samuel E. Ford, MD; Shannon F. Alejandro, MD; David K. Myer, MD; Akira Taniguchi, MD; James W. Brodsky, MD

**Peak Contact Stress of TMT-1 Joint After Sequential Correction of Hallux Valgus Using a Proximal Opening Wedge Metatarsal Osteotomy (PMO) and Distal Soft Tissue Procedure**
Jonathan C. Kraus, MD; Michael Ziegele; Mei Wang; Brian C. Law, MD; Glenn G. Shi, MD
Radiographic Correction After Hallux Valgus Surgery: A Meta-Analysis
Christopher E. Gross, MD; Alexej Barg, MD

Reduction of Foot Width with Triplanar Tarsometatarsal Arthrodesis for Hallux Valgus Deformity: A Multicenter Study
Justin Vaida; Justin J. Ray, MD; Taylor L. Shackleford; William T. DeCarbo, DPM; Daniel J. Hatch, FACPAS; Paul Dayton, MS, DPM; Brett L. Smith, MD; Robert D. Santrock, MD; Jody McAleer, DPM

Relationship Between Demographic and Radiographic Characteristics and 2nd Ray Pathology in Hallux Valgus Patients
Samantha Cronin; Matthew S. Conti, MD; Nicholas Williams; Scott J. Ellis, MD

Results of an Interim Analysis of a Prospective Multicenter Study Assessing Radiographic and Patient Outcomes Following Triplanar Tarsometatarsal Arthrodesis with Early Weightbearing
Dane K. Wukich, MD; Robert D. Santrock, MD; Daniel C. Farber, MD; Abdi Raissi, MD; Avneesh Chhabra, MD; Jennifer Koay; Lauren Hill

Shortening of the First Ray After First Tarsometatarsal Joint Fusion: A Cadaveric Comparison Between Curettage Versus Planal Resection
Calvin J. Rushing; Bryon J. McKenna; Travis M. Langan; Patrick E. Bull, DO; Christopher F. Hyer, DPM; Gregory C. Berlet, MD, FRCSC, FAOA

The Shape of the First Metatarsal Head and Its Association with Its Pronation Angle and the Presence of Sesamoid-Metatarsal Joint Osteoarthritis
Yoshimasa Ono; Satoshi Yamaguchi, MD, PhD; Seiji Kimura, MD

Two Weeks of Kirschner Wire Fixation Following Chevron Osteotomy for Hallux Valgus
Ryan G. Rogero, BS; Daniel Corr; Joseph T. O’Neil, MD; Steven M. Raikin, MD

A Staged Treatment Algorithm for the Management of Severe Charcot Hindfoot Arthropathy, Using Tibiotalocalcaneal Arthrodesis with Femoral Head Allograft
Aditya Manoharan; Ansab M. Khwaja, MD; Jacob Sorenson; Cyrus V. Etebari; L. Daniel Latt, MD, PhD

Antibiotic Loaded Calcium Sulphate/Hydroxy Apatite Bio Composite in Diabetic Foot Surgery
Nijil L. Vasukutty, MRCS; Simon Mordecai; Murali Subramaniam; ATank Bala Srinivasan

Combined Internal and External Fixation for Charcot Neuroarthropathy: A Learning Curve
Muhammed Iqbal; Sultan N. Qasim, FRCS(Tr&Orth); Simon Chambers, FRCS

Intra-surgical Site Vancomycin Powder Application in Infected Diabetic Heel Ulcers with Calcaneal Osteomyelitis
James D. Brodell; Irvin Oh, MD

Socioeconomic Distressed Communities Index Associated with Higher Burden of Amputation in Diabetic Peripheral Arterial Disease
Katherine J. Jensen, MS, MPH

HINDFOOT

A Comparative Study Between Lateral Approach Alone and Combination of Medial and Lateral Approaches for Intra-articular Calcaneal Fractures with Displaced Sustentaculum Fragment
Naohiro Hio, MD, PhD; Masanori Taki, MD, PhD

Achilles Injury and Access to Care in South Florida
Allison Boden; Joseph S. Geller; Caroline Granger, BS; Spencer H. Summers, MD; Jonathan R. Kaplan, MD; Amiethab A. Aiyer, MD

Analysis of Short-Term Outcome of Osteotomy Combining with Soft Tissue Surgery in the Treatment of Symptomatic Children with Flexible Flatfoot
Li Yi, MD; Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

Augmentation of Internal Fixation with Multiplanar External Fixator in High Risk Hindfoot Fusion Patients
Meghan Kelly, MD, PhD; Scott R. Whitlow, MD; Spencer J. Cassinelli, MD; Gregory A. Lundeen, MD, MPH

Biomechanical Results of Percutaneous Calcaneal Osteotomy Using Two Different Osteotomy Designs
Natalia Gutteck, MD

Comparative Results of Percutaneous Calcaneal Osteotomy in Correction of Hindfoot Deformities
Natalia Gutteck, MD

Abstracts available for viewing in the AOFAS mobile app.
Comparative Study of Flexor Hallicus Longus Tendon Length Through Single Incision or Accessory Plantar Medial Incision: A Cadaver Study
Caitlin Curtis Crocker, BS; Eildar Abyar, MD; Sean Young; Fatemah Razaghi, MD; Gerald McGwin, PhD; Michael D. Johnson, MD

Complications Associated with Triple Arthrodesis Versus Non-Fusion Flatfoot Reconstruction: A Matched Cohort Study
William V. Probasco, MD, MS; Benjamin E. Stein, MD; Cyrus Fassihi, MD; Lea McDaniel

Evaluation of Ankle Mobility Loss in Patients Undergoing Subtalar Arthrodesis
Tiago S. Baumfeld, MD; Roberto Zambelli de A. Pinto, MD; Fernando Araujo S. Lopes, MD; Daniel Baumfeld, MD; Camilo Tavares

Functional Implications of the Flat-Topped Talus Following Treatment of Idiopathic Clubfoot Deformity
Claire Shivers; Matthew Siebert; Kirsten Tulchin-Francis, PhD; Wilshaw Stevens; Justine Borchard; Anthony Riccio; Jacob R. Zide, MD

Headless vs. Headed Screws Fixation for Calcaneal Osteotomy and Subtalar Arthrodesis: What’s the Cost?
Morgan Boren, DO; Brian D. Steginsky, DO; Anand M. Vora, MD; Mallory Suhling

Hindfoot Arthrodesis Using the Medial Approach to Correct Adult Acquired Valgus Flat Feet: A Series of Cases
Gabriel F. Ferraz, MD; Miguel V. Pereira Filho, MD; Daniel Okman

Identification of the Medial Column Line Collapse Location Is Crucial in Flat Foot Management
Andrew P. Molloy, MBChB, FRCS(Tr&Orth); Joseph Alsousou, MD; Lizzy Weigelt, MD; Lyndon W. Mason, MD

Influence of Interventions on the Sural Complex Like the Gastrocnemius Recession on the Calf Strength
Tonio Gottlieb; Kaj Klaue, MD

Integrated Reconstruction for Chronic Foot Dislocations
Douglas N. Beaman, MD; Cassandra B. Tomczak; Paul T. Fortin, MD

Long Term Autograft Harvest Site Pain After Ankle and Hindfoot Arthrodesis
Judith F. Baumhauer, MD, MS, MPH; Mark A. Glazebrook, MD, MSc, PhD; Alastair S. Younger, MBChB, ChM, FRCS; David Fitch; Jovelyn Quiton; Timothy R. Daniels, MD, FRCSC; Christopher W. DiGiovanni, MD

Outcomes of Immediate Weightbearing with Anchorless Achilles Debridement and Secondary Reconstruction for Insertional Achilles Tendonopathy
Thomas B. Bemenderer, MD, MBA; Jacob B. Boersma; John D. Maskill, MD; John G. Anderson, MD; Donald R. Bohay, MD, FACS

Outcomes of Gastrocnemius Recession in Patients with Plantar Fasciitis and Achilles Tendinosis: A Retrospective Study of 160 Patients
Wesley Stroud; Bradley Alexander, BS; Jared R. Halstrom, BS; Hannah M. Barranco; Benjamin B. Cage; Elise M. Greco; Tanvee Sinha; Ashish Shah, MD

Outcomes of Tibiocalcaneal Arthrodesis in High Risk Patients: An Institutional Cohort of 18 Patients
Bridgette Love; Bradley Alexander, BS; Jared R. Halstrom, BS; Hannah M. Barranco; Spaulding F. Solar; Benjamin B. Cage; Elise M. Greco; Jessyca Ray; Ashish Shah, MD

Outcomes of Tibiotibialcalcaneal Arthrodesis Using a Custom Three-Dimensional Printed Titanium Truss Implant
Daniel Corr; Jared Raikin, BS; Joseph T. O’Neil, MD; Steven M. Raikin, MD

Patient Outcomes After Surgical Release of the Tarsal Tunnel and Baxter’s Nerve in Addition to Partial Plantar Fasciectomy for Chronic Heel Pain
Blake Baer; Kathleen C. Ringenbach; Christopher E. Honstad; Paul J. Juliano, MD; Umut Aydogan, MD

Subtalar Distraction Arthrodesis for the Treatment of Subtalar Arthritis and Severe Hindfoot Deformity: A Systematic Review
Amanda N. Fletcher, MD; Jordan L. Liles, MD; Gregory F. Pereira, MD; John Steele, MD; Samuel B. Adams, MD

Three-Spike Insole Can Substitute the Total Contact Insole (TCI) in Refractory Plantar Fasciitis: Randomized Control Trial
Dong Woo Shim, MD

LESSER TOES

Cartiva Hemiarthroplasty for the Treatment of Hallux Rigidus
Tyler Hoskins; Jay Patel, DO; David Goyette; Christopher Mazzei; Arianna L. Gianakos, DO; Justin Koss; James Wittig; David M. Epstein, MD

Correction of Valgus Lesser Toes by Percutaneous Closing Wedge Osteotomy of the Proximal Phalanx
Robbie Ray; Peter W. Robinson; Paul M. Dearden; Thomas A. Goff; Peter Lam, MBBS, FAOrthA, FRACS(Orth); Thomas L. Lewis
Minimally Invasive Correction for Symptomatic, Fixed Curly Toe Deformity
Jun Young Choi, MD; Jin Soo Suh, MD, PhD

The Percutaneous Technique for the Treatment of Metatarsalgia with Metatarsophalangeal Dislocation of the Lesser Toes: Preliminary Results
Gabriel F. Ferraz, MD; Tatiana F. Santos; Daniel Oksman; Miguel V. Pereira Filho, MD

The Positive Association Between Metatarsal Length and Meary's Angle and Hammertoe Deformity
Jesse King, BSc; Chris M. Stauch; Ryan M. Ridenour, MD; Umur Aydogan, MD

A Prospective Assessment of Great Toe Fusion Outcomes: The Effect of Concomitant Procedures
Mark J. Berkowitz, MD; Sara-Lyn Miniaci, MD; Alan Davis, MD; Deepak Ramanathan, MD; Khalid Hasan, MD, MBBS, MPH; Greg Strnad, MS; Jeffrey Coombs; Yuxuan Jin; Kurt P. Spindler; Stephen J. Pinney, MD

Ability to Show the Knuckles in Forefoot Helps to Assess Intrinsic Muscle Function
Vinod K. Panchbhavi, MD; Michael Poliner; Patrick Finegan; Daniel Jupiter, PhD

Adverse Events Involving Hallux Metatarsophalangeal Joint Implants: Comprehensive Analysis of US Food and Drug Administration Data from 2010 to 2018
Craig C. Akoh, MD; Rishin J. Kadakia, MD; Jie Chen, MD, MPH; Young-uk Park, MD, PhD; Hyong Nyun Kim, MD, PhD; Juntao Wang, MD, PhD; Samuel B. Adams, MD

An Analysis of Change in Patient-Reported Outcome Measures Following First Metatarsophalangeal Joint Arthrodesis: Do Baseline Scores or Comorbidities Make a Difference?
Linzy Houchen-Wolloff; Maitravaarun Burgula; Nikhil Nanavati; Alistair J. Best; Patricia Allen, MBChB; Jitendra Mangwani, MBBS, MS(Orth), FRCS(Tr&Orth)

Anatomical Study of Lapidus Arthrodesis Using Two Different Plantarplate Systems
Sebastian Schilde; Natalia Gutteck, MD; Karl-Stefan Delank, PhD

Arthrodesis Tarsometatarsal in Lisfranc Fracture: Comparison of Different Fixing Methods
Mario Muñoz; Gregorio I. Verschae, MD; Sebastian Drago, MD; Joaquin A. De la Paz Valenzuela; Jose M. Rojas Fuentes

Cerclage Fixation of Navicular Fractures
Robert E. Gallivan, BSE; Paul C. Kupcha, MD

Comparative Assessment of Midfoot Osteoarthritis Diagnostic Sensitivity Using Weightbearing Computed Tomography vs Weightbearing Radiography
Jesse Steadman, BS; Yantarath Sripanich, MD; Chammanni Rungprai, MD; Charles L. Saltzman, MD; Alexej Barg, MD

Contribution of First Tarsometatarsal Joint Fusion to Deformity Correction in the Treatment of Adult Acquired Flatfoot Deformity
Jonathan Day, MS; Matthew S. Conti, MD; Nicholas Williams; Scott J. Ellis, MD; Jonathan T. Deland, MD; Elizabeth Cody, MD

Do We Really Need to Worry About Calcaneocuboid Subluxation During Lateral Column Lengthening for Planovalgus Foot Deformity?
Brittany Hedrick; Anthony Riccio; Matthew Siebert; Claire Shivers; Mitchell Harris, MD; William A. Pierce; Danielle M. Thomas, MD; Jacob R. Zide, MD

Early Outcomes of a Synthetic Cartilage Implant for Treatment of Hallux Rigidus: A Series of 87 Patients
Michael A. Campbell, MD

Impact of Hardware Choice on Talonavicular Arthrodesis Non-Union Rate
Daniel Corr; Parth Kothari, MD; David I. Pedowitz, MD, MS

Minimally Invasive Surgery for Correction of Adult Acquired Flat Foot Deformity: An Anatomic Study
Ademola I. Shofoluwe, MD; Erroll J. Bailey, MD; Gary W. Stewart, MD

Minimally Invasive versus Open Akin Osteotomy: A Comparative Study
Sebastian Schilde; Natalia Gutteck, MD; Karl-Stefan Delank, PhD

Outcomes Following Subchondroplasty in the First Metatarsal Head
Akhil Sharma; Craig C. Akoh, MD; Selene G. Parekh, MD, MBA
Postoperative Rehabilitation in Ankle and Hindfoot/Midfoot Fusion and Reconstruction Surgery: A Scoping Survey of UK Foot and Ankle Surgeons and Allied Health Professionals
Linzy Houchen-Wolloff; Rachel S. Calver; Chloe Dudson; Amiraah Essop-Adam; Jitendra Mangwani, MBBS, MS(Orth), FRCS(Tr&Orth)

Predictors of Malreduction in Zone II and III 5th Metatarsal Fractures Fixed with an Intramedullary Screw: A Retrospective Analysis
Ankit Khurana, MBBS; Charles C. Pitts, MD; Bradley Alexander, BS; Akshar Patel, BS; Charles R. Sutherland; Elise M. Greco; Benjamin B. Cage; Ashish Shah, MD

Primary Arthrodesis versus Open Reduction and Internal Fixation Outcomes for Lisfranc Injuries: An Analysis of Conflicting Meta-Analysis Results
Wesley D. Peters, BS; Vinod K. Panchbhavi, MD

Radiographic Outcomes, Union Rates, and Complications Associated with Implants Positioned on the Plantar Bone Surface for Midfoot Arthrodesis
Tyler W. Fraser, MD; Daniel Miles; Franklin B. Davis; Jesse F. Doty, MD

Radiographic Characterization of Midfoot and Transverse Tarsal Joint Osteoarthritis
Alexander Caughman; Alexander Caughman; Christopher E. Gross, MD

Radiographic Outcomes in the Treatment of Type II Adult Acquired Flatfoot Deformity Following Lateral Column Lengthening with a Titanium Wedge versus Autograft or Allograft
Casey M. O’Connor; Afshin Anoushiravani, MD; Kyle Richardson, MD; Matthew Anderson, MD; Andrew J. Rosenbaum, MD

Subtalar Arthroereisis as an Adjunct Procedure Improves Forefoot Abduction in Stage IIb Adult-Acquired Flatfoot Deformity
Alessio Bernasconi, MD; Miltiadis Argyropoulos; Shelain Patel, FRCS; Yaser Ghani; Nicholas Cullen, FRCS(Orth); Dishan B. Singh, MBChB, FRCS(Orth); Matthew J. Welck, MD, FRCS(Orth)

Success or Failure? Reanalysis of the Cartiva MOTION Study Using an Alternative Pain Paradigm and Statistical Assumptions
Gregory P. Guyton, MD

Surgical Outcomes After Simple Coalition Bar Excision in Naviculo-Medial Cuneiform Coalition in Adults
Jaeyoung Kim, MD; Jonathan Day, MS; Woo-Chun Lee, MD

Surgical Outcomes in Chronic Lisfranc Injuries Without Secondary Degenerative Arthritis: A Systematic Literature Review
Yantarat Sripanich, MD; Jesse Steadman, BS; Nicola Krahenbuhl, MD; Channanee Rungprai, MD; Justin Haller; Charles L. Saltzman, MD; Alexej Barg, MD

Tibialis Anterior Tendon Partial Release and Plantar Implant Placement for Midfoot Arthrodesis: Technique Tip
Daniel Miles; Tyler W. Fraser, MD; Neal Huang; Franklin B. Davis; Jesse F. Doty, MD

Triple Osteotomy for Correction of Hallux Valgus with an Increased Distal Metatarsal Articular Angle
Li Yi, MD; Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

A Decade of Social Media Influence on Foot and Ankle Literature
James M. Parrish; Jonathan R. Kaplan, MD; Amiethab A. Aiyer, MD

A Retrospective Analysis of Outcomes from Foot and Ankle Arthrodesis and Open Reduction and Internal Fixation Using Cellular Bone Allograft Augmentation
Thomas E. Moran; Sean Sequeira; M. Truitt Cooper, MD; Joseph S. Park, MD

A Retrospective Chart Review Examining Gabapentin’s Potential Neuroprotective Effects in Peripheral Nerve Blocks
David M. Shuster; Jacob Brower; Nicholas A. Cheney, DO; Brian C. Clark

A Retrospective Chart Review to Examine Intracompartment Pressures and Postoperative Outcomes of Chronic Exertional Compartment Syndrome
Jacob Brower; David M. Shuster; Nicholas A. Cheney, DO; Brian C. Clark

An Analysis of Orthopaedic Job Availability in the United States Based on Subspecialty
Jeremy Y. Chan, MD; Timothy P. Charlton, MD; David B. Thordarson, MD

An Update of Foot and Ankle Fellowship Website Content and Accessibility
Ansab M. Khwaja, MD; Peter Z. Du; Nathan Sherman; Lisa Truchan
Applying the Periprosthetic Joint Infection Consensus Definition to a Case Series of Revision Foot and Ankle Implant-Associated and Infection-Suspected Procedures to Assess Diagnosis
Erin A. Baker, PhD; Jackson Harley, BS; Corinn Gehrke, MS; David J. Ciufo, MD; Paul T. Fortin, MD; Zachary M. Vaupel, MD

Combined Suspensory and Aperture Fixation of Posterior Tibialis Tendon Anterior Transfer for Dropfoot
Robbie Ray; Richard Navratil; Andrew Ogilvie; Thomas L. Lewis

Comparative Evaluation of the Presence of Insertion Enthesophyte in the Achilles Tendon by X-Ray and Magnetic Resonance Imaging: Intra and Inter Observer Reliability
Tiago S. Baumfeld, MD; Thiago A. Silva; Wilel A. Benevides, MD; Dário M. Silveira; Daniel Baumfeld, MD

Foot and Ankle Fellowship Faculty Research Productivity
Ansab M. Khwaja, MD; Nathaniel Bridge; Nathan Sherman; Peter Z. Du

Level of Evidence and Authorship Trends in Foot and Ankle Related Trauma Publications
Bradley Alexander, BS; James R. Jones; Spaulding F. Solar; Abhinav Agarwal, MBBS; Benjamin B. Cage; Elise M. Greco; Ashish Shah, MD

Major Mistakes in Current Scientific Presentations
Arthur Manoli II, MD; Arthur Manoli III, MD

Predictive Variables for Patient Compliance with Physician Prescribed Orthotics
Trenton T. Stevens, MD; Clayton C. Bettin, MD; G. Andrew Murphy, MD; David R. Richardson; Benjamin J. Grear, MD; Jacob T. Hartline

Preoperative Planning for the Foot and Ankle: A Technique Tip
Caroline Williams, MS; John Y. Kwon, MD; Max Michalski, MD; Christopher P. Miller, MD, MHS

Prevalence and Related Factors of Flexible Flatfoot in School-Aged Children: A Cross-Sectional Study
Liang Xiaojun, MD; Zhao Hong-Mou, MD, PhD

Readability and Suitability of Patient-Reported Outcome Measures in Foot and Ankle Surgery: A Health Literacy Assessment
Christina Freibott, BA; Seth C. Shoap, BA, BS; J. Turner Vosseller, MD

Resuming Humanitarian Medical Trips After COVID-19: Perspectives from Volunteers
Eric C. Gokcen, MD; J. Turner Vosseller, MD

Robotic Arm Assistances in the Foot and Ankle Surgery: A Prospective Study
Chayanin Anghthong, MD, PhD

The Jones Dressing Cast for Safe Aftercare of Foot and Ankle Surgery: A Modification of the Jones Dressing Bandage
Tonio Gottlieb; Kaj Klaue, MD

The Perceived Effectiveness of a Short-Term Orthopaedic Foot and Ankle Mission Trip to Kenya
Eric C. Gokcen, MD; Joshua C. Luginbuhl, MD; Joshua C. Luginbuhl, MD

The Utilization of Physician Cell Phone Numbers by Patients in an Orthopaedic Surgery Practice
Ryan G. Rogero, BS; Daniel Corr; Meghan Bishop; Brandon Erickson; Daniel Seigerman; Daniel C. Smith; Samir Sodha; Howard Yeo; Justin Tsai, MD

Trends of Foot and Ankle Publishing in JBJS[A] Over a 15 Year Period from 2004-2018
Bradley Alexander, BS; James Hicks; Abhinav Agarwal, MBBS; Aaradhana J. Jha, MBBS, MS; Spaulding F. Solar; Benjamin B. Cage; Ashish Shah, MD

SPORTS

Achilles Tendon Repair: Can Patients Read, Understand, and Act on Online Educational Resources?
Burke Gao, MD; Alan G. Shamrock, MD; Trevor Gulbrandsen; John E. Femino, MD; Cesar de Cesar Netto, MD, PhD; Kyle R. Duchman, MD

Calcaneal Stress Reaction with Distal Anchor Fixation for Mid-Substance Achilles Ruptures
Seth C. Shoap, BA, BS; Christina Freibott, BA; Hans Polzer, MD; J. Turner Vosseller, MD

Clinical Safety and Outcomes of a Novel Ultrasound Assisted Bioabsorbable Suture Anchor in Foot and Ankle Surgeries
Jie Chen, MD, MPH; Akhil Sharma; Craig C. Akoh, MD; Rishin J. Kadakia, MD; Selene G. Parekh, MD, MBA

Jonathan Bartolomei; Shanthan C. Challa; Kenneth J. Hunt, MD; Daniel K. Moon, MD, MS, MBA

Excisional Debridement for Chronic Achilles Insertional Tendinosis: Technique and Case Series
Tara E. Gaston, DO; Hope Skibicki, DO; Megan C. Chapter, DO; Quincy Cheesman; Joseph N. Daniel, DO
Retrospective Comparison of Complications with Open versus Minimally Invasive Achilles Tendon Repair
Seth C. Shoap, BA, BS; Christina Freibott, BA; Hans Polzer, MD; J. Turner Vosseller, MD

Return to Play After Open Repair for Achilles Rupture in Recreational Athletes
Hong S. Lee, MD; Kiwon Young, MD; Tae-Hoon Park; Hong Seop Lee

The Clinical Outcomes After a Novel Mini-Open Achilles Tendon Repair
Craig C. Akoh, MD; Amanda N. Fletcher, MD; Selene G. Parekh, MD, MBA; Akhil Sharma

The Efficacy of Unfocused Extracorporeal Shock Waves for the Treatment of Achilles Tendinopathy
Ashraf M. Fansa, MBChB; Martin J. O’Malley, MD; Eoghan T. Hurley, MBBS, BAO; John G. Kennedy, MD, FRCS(Orth)

Treatment of Zone II and III Fifth Metatarsal Fractures Using a Novel Fixation Technique
Stephanie K. Eble; Oliver B. Hansen; Martin J. O’Malley, MD; Mark C. Drakos, MD

Trends in Pediatric Skateboard Related Foot and Ankle Injuries Presented to US Emergency Departments from 2009-2018: A Descriptive Epidemiology Study
Devon Scott; Stephen P. Canton; MaCalus V. Hogan, MD; Dukens LaBaze, BS

Trends in Sport Related Foot and Ankle Injuries in Adults 65 and Over Presenting to US Emergency Rooms from 2009-2018: A Descriptive Epidemiology Study
Devon Scott; Stephen P. Canton; MaCalus V. Hogan, MD; Dukens LaBaze, BS

TRAUMA

A Detailed Analysis of Workplace Foot and Ankle Injuries
Alexander Caughman; Christopher E. Gross, MD

Achilles Tendon Rupture Repairs: A Case Series Reporting Clinical Outcomes of a Novel Technique
Caroline Williams, MS; Christopher P. Miller, MD, MHS; John Y. Kwon, MD

Anatomic Relationship of the Sural Nerve When Performing Achilles Tendon Repair Using the Percutaneous Achilles Repair System: A Cadaveric Study
Roddy McGee, DO; Troy S. Watson, MD; Adam Eudy, DO; Candice L. Brady, DO; Cheryl Vanier; Daniel LeCavalier; Victor C. Hoang, DO, BS

Arthroscopic Findings During Routine Ankle ORIF: What Is Being Missed?
Shain Howard; Victor C. Hoang, DO, BS; Troy S. Watson, MD; Candice L. Brady, DO; Adam Eudy, DO

Clinical Outcome of Bimalleolar Ankle Fracture in Patients with Diabetes Mellitus
Hong S. Lee, MD; Kiwon Young, MD; Tae-Hoon Park; Hong Seop Lee

Comparison of Open Syndesmotic Repair and Trans-syndesmotic Screw Fixation: A Biomechanical Study
Hong S. Lee, MD; Kiwon Young, MD; Tae-Hoon Park; Hong Seop Lee

Compression Wrapping for Calcaneal Fractures After Extensile Lateral Approach: Results of a Retrospective Study
Robert Kulwin, MD; Sapan Shah, MD; Steven L. Haddad, MD; Brian M. Weatherford, MD

Efficacy of Ultrasonography for MIPO in Distal Tibia Fractures
Gi-Soo Lee, MD; Jaehwang Song, MD; Chan Kang, MD

Fracture Type, Postoperative Articular Congruency and Obesity of Patients Influenced on Long to Midterm Outcome of Posterior Malleolar Fractures in Ankle Injury
Sung Hyun Lee, MD

How Obesity Affects Need for Syndesmotic Fixation in Malleolar Ankle Fractures and Ankle Fracture Severity
Jonathan B. Goodloe; Alexander Caughman; Sophia A. Traven; Harris Slone; Christopher E. Gross, MD

Impact of Socioeconomic Status on Return to Work After Acute Ankle Fracture
Alessandra L. Falk, MD; Regina Hanstein; Chaiyaporn Kulskadinun, MD

Incidence and Trends in Lower Extremity Amputations in the United States
Leah Herzog, MD; Charles Johnson; Christopher E. Gross, MD

Independent Inter- and Intra-Rater Reliability of the New AO and Leonetti/Tigani Systems for Pilon Fractures Based on CT-Scan.
Benjamin Guiloff; Andres Villa, MD; Joaquin Ananias; Pablo Mery, MD; Gerardo Ledermann; Joaquin Palma, MD; Ignacio Correa

Instagram and Pilon Fractures: An Analysis of Social Media and its Relationship to Patient Injury Perception
James M. Rizkalla, MD; Tanner Lines; Yahya Daoud, PhD; Jacob R. Zide, MD
Intramedullary Fixation of Calcaneal Fractures: Early US Experience
Kevin C. Anderson, MD

Long-Term Patient Reported Outcomes After Correction of Traumatic Foot Drop
Jessica M. Kohring, MD; Steven Karnyski, MD; Peter Joo, BS; Andrew Y. Liu, MD; Judith F. Baumhauer, MD, MS, MPH; Adolph S. Flemister, MD; John P. Ketz, MD

Low Risk of Displacement with Early Weight Bearing of the Isolated Weber B Fracture: Results of a New Treatment Protocol
N. Jane Madeley, MRCS, MBChB, FRCS(Tr&Orth); Nnamdi Obi; Chinnasamy Senthil Kumar, MBBS, FRCS(Tr&Orth); Lech Rymaszewski

Low Risk of Wound Complications with Sinus Tarsi Approach for Treatment of Calcaneus Fractures
S. Blake Wallace, MD; David O’Neill; Anish Narayanan; George T. Liu, DPM; Avneesh Chhabra, MD; Dane K. Wukich, MD; Trapper Lalli, MD

Mismanaged Ankle Fractures: Is It Too Late to Save the Joint?
Mohamed M. Abd-Ella, MD

Ortho-Plastic Approach in Management of Open Pilon Fractures
Jiang An Lim; Azeem Thahir; Matija Krkovic

Outcomes of Plantaris Tendon Augmentation in Acute Achilles Tendon Rupture Repair
Ryan G. Rogero, BS; Daniel Corr; Andrew Fisher, BS; Joseph T. O’Neil, MD; Daniel J. Fuchs, MD; Steven M. Raikin, MD

Pediatric Calcaneus Fractures and Associated Injuries
Norman H. Ward, III, MD; Brennan P. Roper; John W. Munz; William C. McGarvey, MD; Alfred Mansour

Postoperative Noncompliance Following Repair of Acute Achilles Tendon Ruptures
Ryan G. Rogero, BS; Daniel Corr; Andrew Fisher, BS; Joseph T. O’Neil, MD; Daniel J. Fuchs, MD; Steven M. Raikin, MD

Profile vs Tubular Plate in Unimalleolar or Bimalleolar Fractures: Is There a Real Difference in Wound Complications?
Paolo Ceccarini, MD; Rosario Petruccelli; Michele Bisaccia; Giuseppe Rinonapoli, MD; Auro Caraffa

Radiographic Outcomes of Intramedullary Fixation of the Distal Fibula in Unstable Ankle Fractures
Connor Delman, MD; Augustine Saiz, MD; Max Haffner, MD; Aman Arora, MPH, MPH; Satinderdeep Bhatti, MPH; Eric Giza, MD; Christopher D. Kreulen, MD, MS

Reliability of Evaluating Methods Using Weightbearing Radiograph of the Foot in Lisfranc injuries
Yuki Sugino; Ichiro Yoshimura, MD; Tomonobu Hagio, MD, PhD; Masaya Nagatomo; Takuaki Yamamoto, MD

Repair of a Comminuted Talar Neck Fracture Using a Cellular Bone Allograft Combined with a Textured Allograft Wedge
Alaa Mansour; Timothy D. Howard; Elena Gianulis; Danielle Scheunemann

Repair of Complex Bone and Soft Tissue Defect of Feet with Free Double Folded Fibular Composite Tissue Flap
Peiji Wang, MD

Results of Staged Treatment with External Fixation for High Energy Calcaneus Fractures
Jessica M. Kohring, MD; Mackenzie A. Neumaier; John P. Ketz, MD

Return to Weightbearing and High Impact Activities Following Jones Fracture Intramedullary Screw Fixation in 32 Consecutive Patients Treated by a Single Surgeon
John P. Scanaliato; Nicholas Kusnezov, MD; Kenneth Heida, MD; John C. Dunn; Justin D. Orr, MD

Safe Level for the Syndesmotic Stabilization: A Simulated MRI Study
Chayanin Anthong, MD, PhD

The Lateral Trans-Malleolar Approach for Posterior Malleolar Fracture of the Ankle: A Clinical and Computed Tomography Evaluation
Masanori Taki, MD, PhD; Naohiro Hio, MD, PhD

Treatment of Recurrent Peroneal Tendon Dislocation by Peroneal Retinaculum Reattachment Without Fibular Groove Deepening
Seung-Hwan Park; Jaehyung Lee; Young Rak Choi; Jaehyeon Seo; Ho-seong Lee, MD

What Is the Effect of Lateral Ankle Ligament Injury on Syndesmotic Stability?: Arthroscopic Evaluation
Go Sato; Jirawat Saengsin; Rohan Bhimani, MD, MBA; Noortje Hagemeijer, MD; Bart Lubberts, MD, PhD; Daniel Guss, MD, MBA; Gregory R. Waryasz, MD; Christopher W. DiGiovanni, MD
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- South Carolina Orthopaedic Association: Board member-committee appointments for a society

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- Carbon22: Stock or Stock Options
- Altier Trauma: Stock or Stock Options
- American Orthopaedic Foot and Ankle Society: Board member-committee appointments for a society
- AOFAMIS: Board member-committee appointments for a society

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- CrossRoads Medical: Stock or Stock Options
- Extremity Development Company: Stock or Stock Options
- Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board
- American Orthopaedic Foot and Ankle Society: Board member-committee appointments for a society

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- Alabama Orthopaedic Society: Board member-committee appointments for a society

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**DISCLOSURES**

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- Jeil Medical: Paid Consultant
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- Springer: Royalties, Financial or Material Support from Publishers
- Korean Foot and Ankle Society: Board member/committee appointments for a society
- Korean Orthopedic Association: Board member/committee appointments for a society
- Korean Society of Sports Medicine: Board member/committee appointments for a society
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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- Acumed LLC: Royalties
- DePuy A Johnson & Johnson Company: Royalties
- Arthrex Inc: Speaker’s Bureau/Presenter, Paid Consultant
- Wolters Kluwer Health – Lippincott Williams & Wilkins: Royalties, Financial or Material Support from Publishers
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society
- American Orthopaedic Association: Board member/committee appointments for a society

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- Eastern Orthopedic Association: Medical/Orthopaedic publications editorial/governing board
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- Extremity Medical: Other Financial or Material Support
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- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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- Arthroscopy Association of North America: Board member/committee appointments for a society

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- Argenx: Paid Consultant
- UCB: Paid Consultant
- Pfizer: Paid Consultant
- Momenta: Paid Consultant
- Up to Date: Royalties, Financial or Material Support from Publishers
- Journal of Neurological Sciences: Medical/Orthopaedic publications editorial/governing board
- Journal of Neuromuscular Diseases: Medical/Orthopaedic publications editorial/governing board
- Peripheral Nerve Society- President Elect: Board member/committee appointments for a society

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- Curvebeam: Royalties, Speaker's Bureau/Presenter, Stock or Stock Options, Research Support, Other Financial or Material Support
- European Federation of National Assoc of Ortho and Trauma: Board member/committee appointments for a society
- AFCP (French F&A Society): Board member/committee appointments for a society
- International Weight Bearing CT Society: Board member/committee appointments for a society
DISCLOSURES

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• Ziptek, LLC: Speaker’s Bureau/Presenter, Stock or Stock Options, Paid Consultant
• Trice Medical: Paid Consultant
• Osteocentric: Stock or Stock Options, Paid Consultant
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• Journal of the American Academy of Orthopaedic surgeons: Medical/Orthopaedic publications editorial/governing board
• Orthopaedic Knowledge Online Journal: Medical/Orthopaedic publications editorial/governing board
• Techniques in Foot and Ankle Surgery: Medical/Orthopaedic publications editorial/governing board
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• Abbvie: Stock or Stock Options
• Procter & Gamble: Stock or Stock Options
• Teva: Stock or Stock Options

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- Arthrex Inc: Speaker’s Bureau/Presenter

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- Allostem: Research Support
- Arthrex Inc.: Research Support
- Biomimetic: Research Support
- Ferring Pharmaceuticals: Research Support
- Smith & Nephew: Research Support
- Saunders/Mosby-Elsevier: Royalties, Financial or Material Support from Publishers
- Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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- Ossio: Speaker’s Bureau/Presenter, Paid Consultant
- Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society
- International Weight Bearing CT Society: Board member/committee appointments for a society

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- Academy of Orthopaedic Physical Therapy: Board member/committee appointments for a society

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- Brazilian Association of Surgery of the Foot and Ankle: Board member/committee appointments for a society

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• Journal of Arthroplasty: Medical/Orthopaedic publications editorial/governing board

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• International Federation of Foot and Ankle Societies: Board member/committee appointments for a society
• DePuy A Johnson & Johnson Company: Speaker’s Bureau/Presenter
• Smith & Nephew: Speaker’s Bureau/Presenter

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• American Medical Association: Board member/committee appointments for a society
• California Orthopaedic Association: Board member/committee appointments for a society

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• American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society
• AAOS: Board member/committee appointments for a society

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• Acumed LLC: Paid Consultant
• Integra: Paid Consultant, Research Support
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• MiRus: Paid Consultant
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- Curvebeam: Stock or Stock Options
- Foot and Ankle Surgery: Medical/Orthopaedic publications editorial/governing board
- Fuss und Sprunggelenk: Medical/Orthopaedic publications editorial/governing board
- International Federation of Foot and Ankle Societies (IFFAS): Board member/committee appointments for a society
- European Foot and Ankle Society (EFAS): Board member/committee appointments for a society
- International WBCT Society: Board member/committee appointments for a society
- German Orthopaedic Foot and Ankle Society (DAF): Board member/committee appointments for a society

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- Elsevier: Royalties, Financial or Material Support from Publishers

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DISCLOSURES

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- CurveBEAM: Research Support
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- American Board of Orthopaedic Surgery Inc.: Board member/committee appointments for a society

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- Johnson & Johnson: Speaker’s Bureau/Presenter, Paid Consultant
- Synthes: Speaker’s Bureau/Presenter, Paid Consultant
- Integra: Speaker’s Bureau/Presenter, Paid Consultant
- AAOS Now: Medical/Orthopaedic publications editorial/governing board
- Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board
- Journal of the American Academy of Orthopaedic surgeons: Medical/Orthopaedic publications editorial/governing board

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- Acumed LLC: Speaker’s Bureau/Presenter, Paid Consultant
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- SLACK Incorporated: Medical/Orthopaedic publications editorial/governing board  
- Wolters Kluwer Health - Lippincott Williams & Wilkins: Medical/Orthopaedic publications editorial/governing board  
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society  
- AAOS: Board member/committee appointments for a society

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No Relevant Financial Relationships

Jesse Steadman, BS (ePoster Presenter)  
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- Johnson & Johnson: Speaker’s Bureau/Presenter, Paid Consultant  
- Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board  
- American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society  
- Brazilian Foot and Ankle Society: Board member/committee appointments for a society  
- Foot and Ankle Orthopaedics: Medical/Orthopaedic publications editorial/governing board  
- Scientific Journal of the Foot and Ankle: Medical/Orthopaedic publications editorial/governing board  
- Revista Brasileira de Ortopedia: Medical/Orthopaedic publications editorial/governing board  
- Revista Técnicas em Ortopedia: Medical/Orthopaedic publications editorial/governing board

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No Relevant Financial Relationships

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No Relevant Financial Relationships

David Thordarson, MD (Planner, Presenter)
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• Stryker: Speaker’s Bureau/Presenter
• Orthosolutions: Paid Consultant
• Paragon28: Stock or Stock Options, Research Support
• Foot and Ankle International: Royalties, Financial or Material Support from Publishers, Medical/Orthopaedic publications editorial/governing board
• Foot and Ankle Orthopaedics: Medical/Orthopaedic publications editorial/governing board

Yuki Tochigi, MD, PhD (Presenter)
• Zimmer: Royalties, Speaker’s Bureau/Presenter, Paid Consultant
• Daiichi Sankyo Pharmaceutical Co.: Speaker’s Bureau/Presenter
• Japanese Society for Surgery of the Foot: Board member/committee appointments for a society
• Japanese Orthopaedic Society of Knee, Arthroscopy and Sports: Board member/committee appointments for a society
• Japanese Society for Clinical Biomechanics: Board member/committee appointments for a society

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• British Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society
• Arthrex Inc: Speaker’s Bureau/Presenter

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• Arthrex Inc: Speaker’s Bureau/Presenter
• Acumed LLC: Research Support
• Saunders/Mosby-Elsevier: Royalties, Financial or Material Support from Publishers
• Foot and Ankle Orthopaedics: Medical/Orthopaedic publications editorial/governing board
• AAOS: Board member/committee appointments for a society
• American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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• Evidence Based Medicine Committee: Board member/committee appointments for a society

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• Orthofix Inc: Paid Consultant
• Wright Medical Group N.V.: Paid Consultant
• Treace: Research Support
• Association of Diabetic Foot Surgeons: Board member/committee appointments for a society

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• Zimmer: Paid Consultant, Research Support
• Arthrex Inc: Research Support
• Amniox: Research Support
• Biocomposites: Research Support
• Axolotyl: Paid Consultant
• Saunders/Mosby-Elsevier: Royalties, Financial or Material Support from Publishers
• Foot and Ankle International: Medical/Orthopaedic publications editorial/governing board
• Canadian Orthopaedic Association: Medical/Orthopaedic publications editorial/governing board
• American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society
• Canadian Orthopaedic Association: Board member/committee appointments for a society
• Specialist Society of British Columbia: Board member/committee appointments for a society

Hui Zhang, MD (Presenter)
• American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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• American Orthopaedic Foot and Ankle Society: Board member/committee appointments for a society

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