





2024 Annual Symposium

Dates: January 25-27, 2024

Location: The Francis Marion Hotel, Charleston, SC

Elevate your Orthopedic Trauma Expertise at the 2024 Symposium for a dive into cutting-edge techniques and a hands-on learning experience.



About the Conference

Symposium Overview

The Southeastern Fracture Symposium is a CME-accredited event specifically tailored for orthopaedic trauma professionals. Renowned leaders in orthopaedic trauma gather to share their expertise, present challenging cases, and discuss the latest advancements in fracture care and management. Small group settings allow for direct interaction with the speakers. Ample time is provided for exhibitors to meet and socialize with attendees throughout the conference. This year our program also includes a plethora of



hands-on skills labs. The annual symposium is accredited by the ACCME to provide continuing medical education for physicians. This event provides opportunity to earn up to **19 AMA PRA Category 1**Credit(s)TM.

About the Foundation



The Southeastern Fracture Consortium (SEFC) is a dynamic non-profit foundation with a rich history of improving the multidisciplinary treatment of orthopaedic trauma patients in the southeastern United States and beyond. SEFC provides forums for skilled orthopaedic surgeons, researchers, and allied health professionals to come together and unlock endless possibilities in orthopaedic trauma. SEFC is a foundation with multi-disciplinary members from leading hospitals and universities across the United States.

Who Attends

The Southeastern Fracture Symposium is the meeting of choice for orthopaedic surgeons and allied health professionals. We have a collaborative approach to provide research and education opportunities for surgeons, fellows, residents, physician assistants, nurses, and other members of the care team, as well as dedicated research teams. SEFC provides continuing medical education, research collaboration, and opportunities to foster networking to those individuals who are on the forefront of orthopaedic trauma.

























































Date & Location



2024 Learning Objectives

- 1. Discuss strategies for successful fracture treatment by integrating ideas from current medical evidence and from demonstration and discussion with faculty experts. Be able to explain lessons learned to peers at home institutions.
- 2. Compare one's own decision-making and surgical techniques to current standards.
- 3. Distinguish areas for change of practice after analysis of current practice as compared to course content.
- 4. Recognize resources needed to provide up to date care, including complex surgical procedures, to provide high quality, safe and effective care.
- 5. Identify treatment strategies to include implants appropriate for trauma care management. Recognize instruments and implants needed to support best practice orthopaedic management.
- 6. Participate in proctored, hands-on lab sessions, including both product and surgical technique innovation, to further refine surgical skills and gain knowledge to implement in current practice.
- 7. Progress leadership and career development by attending sessions from multi-disciplinary team members such as Anesthesiologists and gaining career insights on running a practice.
- 8. Participants will bridge potential knowledge gaps about orthopaedic trauma research efforts and be able to organize and design quality research projects to address clinical concerns to improve outcomes.

Accreditation

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

The American Academy of Orthopaedic Surgeons designates the 2024 Southeastern Fracture Symposium, January 25th -27th, 2024 in Charleston, SC (live activity) for a maximum of **19 AMA PRA Category 1 CreditsTM**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Membership

The Southeastern Fracture Consortium aims to continue to grow its member base and provide additional benefits for members. If you enjoy the annual conference, please spread the word to your colleagues about the foundation. We look forward to growing our community and are always open to ideas you may have as members to further expand our work!

Membership Benefits

- ♦ Discounts for the next annual conference
- ♦ Participate in high-level multi-center research programs
- ♦ Contribute to research on Orthopaedic Trauma
- ♦ Build relationships and collaborate with OrthoTrauma Leaders
- ♦ Access to exclusive member-only content
- ♦ Exclusive invitations to participate as faculty members
- ♦ Organizational leadership opportunities





2024 Conference Planning Committee

Program Chair



Russell Norris, MD

Assistant Program Chair



Jason Halvorson, MD

Local Host



Langdon Hartsock, MD

President



David Weiss, MD

President Elect; Research Co-Chair



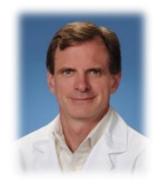
Lisa Cannada, MD

Research Co-Chair



Joseph Hsu, MD

Planning Committee Advisor



Scott Broderick, MD

Co-Executive Director



Lauren Kulp, Esq. LCSW Ashlyn Zebrowski, MS

Co-Executive Director





Thursday, January 25th, 2024

Thursday, January 25, 2024

3:00-9:00 PM: Registration Open Registration Booth

3:00-9:00 PM: Exhibitor Set-up Pre-Function A & Mezzanine Area

3:00-9:00 PM: Poster Display Setup Pre-Function B

4:00-6:00 PM: 2024 Board of Directors & 2025 SEFS Planning Meeting Rutledge Room

(Board of Directors & 2025 Planning Committee Only) (NON-CME)

6:00-6:30 PM: SEFC General Membership Meeting

Carolina Ballroom (Open to active 2023-2024 Members) (NON-CME)

6:30-10:00 PM: Annual SEFC Research Session Carolina Ballroom

RESEARCH SESSION

(Carolina Ballroom)

6:30-10:00 PM: Annual SEFC Research Session

For Members presenting SEFC multi-center updates and new study hypotheses

Outcomes and Analysis of Active SEFC Multi-Center Studies 6:30-7:30 PM

(SEFC members present multi-center study updates)

7:30-8:30 PM New SEFC Multi-Center Proposals and Presentations of Executive Summaries

8:30-10:00 PM **Faculty Interesting Cases**

(Open to all active SEFC Members)



Moderator: Joe Hsu



Friday, January 26th, 2024

7:00 AM-7:15 PM: Registration Open

7:00 AM-7:15 PM: Exhibits Open

7:00 AM-7:15 PM: Complimentary Headshots

7:00-8:00 AM: Poster Display Setup

7:00-8:00 AM: Breakfast in Exhibit Hall

8:00 AM-7:15 PM: General Session

11:00 AM-12:00 PM: Clinical Skill Lab I

12:00 PM-1:00 PM: Concurrent Lunch Sessions

3:00 PM-4:00 PM: Clinical Skill Lab II

■ 5:15-6:00 PM: Podium Presentation Competition

• 6:00-7:15 PM: Research Poster Session Tour and Networking Session

7:30-10:00 PM: Faculty Dinner (By Invitation Only)



GENERAL SESSION

(Carolina Ballroom)

8:00 – 8:15 AM: Welcome and Introduction from Local Host

Langdon Hartsock

Moderator: Scott Broderick

Moderator: David Weiss

8:15 – 9:15 AM: Session 1 – Rapid Fire Case Discussions I

Back by popular demand, a panel of experienced surgeons are led through thought-provoking cases and discussion of surgical tactics.

Panelists: Michael Hadeed, Justin Kauk, Sharon Babcock, Andrew Chen

9:15 – 10:45 AM: Session 2 – Shoulder and Upper Extremities

Practicing surgeons share surgical experiences and strategies for treating shoulder and upper extremities.

9:15-9:45 AM	Debate: Fix vs. Replace for Proximal Humerus Ja	rrod Dumpe, Kristoff Reid
9:45-10:00 AM	Strategies for Unstable Elbow	Nikki Zelenski
10:00-10:15 AM	How to Stay (or Get) Out of Trouble in the Wrist/Carp	us Kevin Phelps
10:15-10:30 AM	Best Practices: Pediatric Elbow and Forearm	Sara Van Nortwick
10:30-10:45 AM	Discussion, O&A	

10:45 - 11:00 AM: Break in Exhibit Hall with Mid-Morning Snacks

Enjoy time with our exhibitors while fueling up for the late morning, hands-on clinical skills session.

11:00 AM - 12:00 PM: Session 3 - Hands-On Clinical Skills Lab and Breakout Session I

Spend time practicing surgical techniques and learning about new innovations in Orthopaedic Trauma.

Session	Topic	Topic Location		
1	Pangea FORCE Course ¹	Pinckney Room	Joseph Hsu, Jason Halvorson	
1	IlluminOss Minimally Invasive Fracture Repair Skills Lab ¹	ninOss Minimally Invasive		
2	Femur Pro-X1 Trochanteric Nailing System Sawbone Lab ²	Laurens Room	NA	
2	Virtual Reality Surgical Technique Simulator ²	Laurens Room	14/1	
3	Standard Antegrade Tibial Nailing System Sawbone Lab ³	Rutledge Room	Seth Yarboro,	
3	Virtual Reality Surgical Technique Simulator ³	Rudeuge Room	David Weiss	
4	Dr. James Kellam presents on Fragility Fractures of the Pelvis; Case Studies with Dr. Langdon Hartsock ⁴	Poinsette Room	James Kellam, Langdon Hartsock	
5	Cannulated Screws for Pelvic Fixation Sawbone Lab Utilizing a Cannulated Fastener System ⁵	Drayton Room	Brent Norris, Malcolm DeBaun	

12:00 – 1:00 PM: Session 4 – Working Lunch with Concurrent Sessions

Carolina Ballroom

Discuss best practices and learning from peers based on your role in the care team.

Topic	Facilitator	
Community Practice with Faculty	Matt Stillwagon, Colin Crickard	
APP and PA Focus	Kathryn Battle, Jennifer Dye, Michelle Tidd, Freda Yin	
Residents and First Job Seekers	Christopher Parks	
Research Staff	Gabriella Rivas, Stephanie Tanner	

1:00 – 2:45 PM: Session 5 – Lower Extremities

Practicing surgeons share surgical experiences and strategies for treating lower extremities.

1:00-1:30 PM	Debate: Fix vs. Arthroplasty for Acetabulum	Sharon Babcock, Suman Medda
1:30-2:00 PM	Debate: Fix vs. Arthroplasty for Plateau Fracture	Erin Hofer, Jeff Garrett
2:00-2:15 PM	Fixation of Distal Fibular/Ankle Fractures	Michael LeCroy
2:15-2:30 PM	Standard of Care for Talus Fractures	Seth Yarboro
2:30-2:45 PM	Discussion, Q&A	

Moderator: Michael Tucker

2:45 - 3:00 PM: Break in Exhibit Hall with Mid-Afternoon Snacks

Enjoy time with our exhibitors while fueling up for the afternoon hands-on clinical skills session.

3:00PM - 4:00PM: Session 6 - Hands-On Clinical Skills Lab and Breakout Session II

Spend time practicing surgical techniques and learning about new innovations in Orthopaedic Trauma.

Session	Topic	Location	Faculty Facilitator	
1	Pangea FORCE Course ¹	Pinckney Room	Joseph Hsu, Jason Halvorson	
I	Minimally Invasive Fracture Repair Skills Lab ¹	Filekiley Room	Kyle Mobley, Jason Halvorson	
2	Femur Pro-X1 Trochanteric Nailing System Sawbone Lab ²	Laurens Room	NA	
<i>L</i>	Virtual Reality Surgical Technique Simulator ²		1471	
3	Standard Antegrade Tibial Nailing System Sawbone Lab ³	Rutledge Room	Seth Yarboro, David Weiss	
	Virtual Reality Surgical Technique Simulator ³	Rutledge Room	David Weiss	
4	Dr. James Kellam presents on Fragility Fractures of the Pelvis; Case Studies with Dr. Langdon Hartsock ⁴	Poinsette Room	James Kellam, Langdon Hartsock	
5	Cannulated Screws for Pelvic Fixation Sawbone Lab Utilizing a Cannulated Fastener System ⁵	Drayton Room	Brent Norris, Malcolm DeBaun	

4:00 – 5:15 PM: Session 7 – Ortho Innovations and Updates Session Moderator: Michael LeCroy

Deep dive into contemporary strategies and innovations in the Orthopaedic Trauma field.

4:00-4:15 PM	Lower Extremity Regional Anesthetic Update	Joseph Hsu
4:15-4:30 PM	What's New in Coding and Billing?	Matthew Stillwagon
4:30-4:45 PM	Orthobiologics	John Floyd
4:45-5:00 PM	The Elderly Pelvic Fracture—A Dilemma	James Kellam
5:00-5:15 PM	Discussion, Q&A	

5:15 – 6:00 PM: Session 8 – Podium Research Presentation Competition *Moderator: Lisa Cannada*

Presenters highlight innovative research in a friendly competition.



1. **Christopher Robinson** from Medical University of South Carolina "Postoperative Infection Rate in Lower Extremity Orthopaedic Trauma Unchanged by Vancomycin Powder"

2. **Robert Rutz** from University of Alabama at Birmingham "Nail-Plate Construct for Periprosthetic Distal Femoral Fractures: A Case Series"

3. **Alyssa Althoff** from University of Virginia "Evaluation of Weekend Operating Room Delays at a Level 1 Trauma Center: A One-Year Retrospective Analysis"

4. **Nainisha Chintalapudi** from Atrium Health Carolinas Medical Center "Are There Modifiable Factors for Decreasing Complications in Low Velocity Civilian Femur Fracture?"

5. **Anthony Paterno** from UNC Orthopedics
"A Comparison of Piperacillin-Tazobactam to Conventional Antibiotics for Prophylaxis in Type III Open Fractures"

6. **Derek Lance** from Medical College of Georgia at Augusta University "Intramedullary Nailing of Tibial Plateau Fractures Can Be Safe and Effective"

6:00 – 7:15 PM: Session 9 – Research Poster Session Tour

6:00 – 7:15 PM: Happy Hour Drinks and Appetizers in Poster and Exhibit Space

7:30 – 10:00 PM: Faculty Dinner (*by invitation only*)

Moderator: Joseph Hsu



Saturday, January 27th, 2024

Saturday, January 27, 2024

7:00 AM-12:15 PM: Registration Open

7:00 AM-12:15 PM: Exhibits Open

7:00-8:00 AM: Breakfast in Exhibit Hall

8:00 AM-12:15 PM: General Session

12:15-12:30 PM: Exhibits and Poster Breakdown



Moderator: Scott Broderick

Moderator: Robert Hymes

GENERAL SESSION

(Carolina Ballroom)

8:00 – 9:00 AM: Session 10 – Rapid Fire Case Discussions II

Back by popular demand, a panel of experienced surgeons are led through thought-provoking cases and discussion of surgical tactics.

Panelists: Malcolm DeBaun, Kevin Murr, Kyle Mobley, Russell Norris

9:00 – 10:15 AM: Session 11 – Complications

Interactive discussion of how to handle common trauma complications and challenges

9:00-9:15 AM	Infection: Diagnosis and Management	Paul Matuszewski
9:15-9:30 AM	Periprosthetic Fractures	Lisa Cannada
9:30-9:45 AM	Wound Healing	Madhav Karunakar
9:45-10:00 AM	Non-Unions – Distal Femur Focus	Colin Crickard
10:00-10:15 AM	Discussion, Q&A	

10:15 – 10:30 AM: Break in Exhibit Hall with Mid-Morning Snacks

Enjoy time with our exhibitors and mid-morning snacks before the conclusion of the conference.

10:30 AM – 12:00 PM: Session 12 – Wish We Had Known

Moderator: Christopher Bray

Faculty share their wisdom for your career growth, curiosity, and wellness.

10:30-10:45 AM	About Running a Practice	LA Koman
10:45-11:00 AM	About Worker's Comp	Jennifer Bruggers
11:00-11:15 AM	About Being a PA	Kathryn Battle
11:15-11:30 AM	About Malpractice and Legal Work	LA Koman
11:30-11:45 AM	About Enjoying Your Career	Langdon Hartsock
11:45 AM-12:00 PM	Discussion, Q&A	

12:00 – 12:15 PM: Closing Remarks from Dr.'s Hartsock, Weiss, Norris, and Halvorson



Skills Labs and Breakouts: In-Kind Donations

- 1. Crosslink Orthopedics representing IlluminOss and Stryker
- 2. X-Bolt Trauma Orthopaedics
- 3. DePuy Synthes
- 4. Curvafix
- 5. Osteocentric Technologies



2024 Sponsorships

The gratefully acknowledges these contributors for their generous financial support for our 2024 Southeastern Fracture Symposium. The continued success and increased impact of the Southeastern Fracture Consortium's research and education effort is dependent upon foundation and industry support.

- Stryker (Gold)
- Zimmer Biomet (Silver)
- X-Bolt Orthopaedics (Silver)
- Smith & Nephew (Silver)



2024 Exhibitors

- Stryker
- Crosslink
- IlluminOss
- BoneBridge
- Zimmer Biomet
- Smith & Nephew
- DePuy Synthes
- Osteocentric
- Curvafix
- Irrisept
- X-Bolt Orthopaedics
- Endeavor Orthopaedics
- Biocomposites
- Arthrex (Peerless Surgical)
- Globus NuVasive
- MY01
- Siemens
- Skeletal Dynamics
- Clemson University



2024 Faculty



Sharon Babcock, MD, FAAOS

Dr. Sharon Babcock, MD is an Assistant Professor in the Department of Orthopaedic Surgery and Rehabilitation at Wake Forest University School of Medicine. She moved from Massachusetts to attend Wake Forest University for both undergraduate and medical school. She was fortunate to continue her tenure at Wake Forest Baptist Medical Center for orthopaedic surgery residency. She then completed her orthopaedic trauma fellowship at The University of Texas Health Science Center at Houston. She returned to Wake Forest to join the orthopaedic faculty within the Trauma Division in 2018. She is currently Chief of Surgery for Atrium Health Wake Forest Baptist - High Point Medical Center and serves on the Medical Executive Committee. She also is a Patient Safety Advocate and Instructor for WakeWings – a patient safety program for procedural areas. When Dr. Babcock is not treating fracture patients both young and old, she can be found teaching residents around the country through Resident Education Courses, as a faculty member for both the Orthopaedic Trauma Association (OTA) and the AO. Dr. Babcock has a particular interest in acute extremity fracture and nonunion care, as well as geriatric fracture prevention, focusing on osteoporosis treatment. She is married to Dr. Michael Reynolds, MD, plastic and hand surgeon whom she met in residency and also works for Wake Forest University School of Medicine. They share three beautiful and entertaining children, ages 4, 2, and 7 months. There is never a dull moment at their household!



Kathryn Battle, PA-C

Kat is a physician associate who specializes in orthopedic trauma. She earned her master's degree from Philadelphia College of Osteopathic Medicine after attending Virginia Tech. The majority of her training in ortho trauma came from Inova Fairfax Level I Trauma Center in Fairfax, VA, from 2008 until 2021. She was involved in several research studies while at Inova including "Prevent Clot" randomized control trial, which was published in the New England Journal of Medicine. She and her family now reside in North Carolina, and she is employed by Novant Health Orthopedics & Sports Medicine in Winston-Salem. Kat is involved in all aspects of care from initial injury presentation in the emergency department to assisting in the operating room and all post-operative care.



Christopher Bray, MD, FAAOS

Christopher Bray, MD is a fellowship-trained orthopaedic surgeon specializing in pediatrics at Greenville Health System, Steadman Hawkins Clinic of the Carolinas. After completing his bachelor's degree from the Citadel, he received his medical degree from the Medical University of South Carolina and then completed his residency in orthopaedic surgery at Carolinas Medical Center. Following his residency, Dr. Bray completed a fellowship in Pediatric Orthopaedic Surgery at Rady Children's Hospital. He also completed fellowships in sports medicine and pediatric orthopaedics at Starship Childrens Hospital in addition to a sports medicine fellowship at Unisports Sports Medicine Clinic in Auckland, NZ.



Scott Broderick, MD, FAAOS

Dr. Scott Broderick is an orthopaedic traumatologist who specializes in the care of patients with severe musculoskeletal injuries and fractures, as well as fractures with complications such as malunions and nonunions. He is currently practicing with Spartanburg Regional Health System in Spartanburg, SC. Dr. Broderick received his medical degree at Vanderbilt University School of Medicine. After completing a residency in orthopaedic surgery at Greenville Health System, he completed a fellowship in orthopaedic traumatology at Methodist Hospital in Indianapolis, Indiana.



Jennifer Bruggers, MD, FAAOS

Dr. Jennifer Bruggers is a board-certified orthopaedic surgeon joining us from WellStar in Marietta, Georgia. Dr. Bruggers received her medical degree from Louisiana State University School of Medicine. She completed a residency at Ochsner Clinic Foundation.



Lisa Cannada, MD, FAAOS

Dr. Lisa Cannada is an orthopaedic trauma surgeon, mentor, and advocate for women pursuing careers in orthopedics or trauma surgery. She received the RJOS "She for She" award and the OTA DEI Award in 2022. She is also the co-founder of Speak Up Ortho, an initiative to increase awareness of bias, inequities, and harassment within orthopaedic surgery. Dr. Cannada received her medical degree from the University of Maryland and has over 20 years of experience. She served as the first female chair of the AAOS Board of Specialty Societies from 2017-2018. She is also the former president of the Ruth Jackson Orthopedic Society and was on the BOD of the OTA.



Andrew Chen, MD, MPH

Andrew Tang Chen MD, MPH is a board-certified, fellowship-trained orthopedic surgeon specializing in orthopedic trauma. Dr. Chen obtained a Master of Public Health in Clinical Research from Johns Hopkins University and attended medical school at the University of North Carolina at Chapel Hill. He completed a residency in orthopedic surgery at Case Western University in Cleveland, OH and a fellowship in orthopedic trauma surgery at Carolinas Medical Center in Charlotte, NC. Dr. Chen currently practices at UNC Health in Chapel Hill, NC.



Colin Crickard, MD

Dr. Crickard was born and raised in Western New York. He still roots for the Buffalo Bills during football season. Dr. Crickard boasts a distinguished military medical career, having served as a surgeon in both Iraq and Afghanistan following his education at the United States Naval Academy and the F. Edward Hebert School of Medicine. He completed his surgical internship at Naval Medical Center in San Diego, CA. Upon completion, he was attached to 1st Marine Division, Camp Pendleton, CA and deployed to Ar Ramadi, Iraq with the 2nd Battalion, 4th Marine Regiment. At the completion of his operational tour, then LT Crickard was selected for Orthopedic Surgery Residency, again at the Naval Medical Center in San Diego. After residency, Dr. Crickard and his family were stationed at the James Lovell Federal Health Care Center in North Chicago, IL in support of Naval Station Great Lakes. After a surgical company tour in Helmand Province, Afghanistan, then LCDR Crickard was selected for the Orthopedic Trauma Fellowship at Carolinas Medical Center in Charlotte, NC. After completing fellowship in 2014, CDR Crickard moved to the Naval Medical Center in Portsmouth, VA, closing out 20 years of service to the Navy. In 2022, he retired from the Navy, moving across the Elizabeth River to Sentara Norfolk General Hospital to continue to provide Orthopedic Trauma care at the region's only Level One trauma center. He currently resides in Virginia Beach, VA with his lovely wife and two energetic sons. When not at work he can be found at the beach, sailing, or on long walks with the family dog, Jasmine.



Malcolm DeBaun, MD

Dr. DeBaun was born and raised in St. Louis, Missouri. He attended Stanford Medical School where he obtained his medical degree with a scholarly concentration in Bioengineering. He then completed his orthopaedic residency at Stanford University before matriculating to Harborview Medical Center for his Orthopaedic Traumatology Fellowship. After fellowship, he joined the faculty at Duke University where he is currently practicing as an academic surgeon and the Director of Orthopaedic Trauma.



Jarrod Dumpe, MD, FAAOS

Jarrod Dumpe, MD is a board-certified orthopedic traumatologist. He currently serves as Associate Professor of surgery, assistant orthopedic trauma fellowship director, and director of orthopedic research at Atrium Health Navicent in Macon, Georgia. He did his medical school training at The Medical College of Georgia. He completed his orthopedic residency at the Cleveland Clinic Foundation. His orthopedic trauma fellowship was done at Carolinas Medical Center. He served on active duty in the United States Air Force at Joint Base San Antonio, the military's only level 1 trauma center. His clinical and research interests include the mangled extremity with massive soft tissue and bone loss requiring soft tissue and bony reconstruction. He also has an interest in musculoskeletal infection.



Jennifer Dye, PA

Jennifer K. Dye, PA, is a board-certified physician assistant focusing in orthopedic trauma. Dye attended Duke University's Physician Assistant Program. She currently practices at Duke Orthopaedic Trauma Clinic in Durham, NC.



John Floyd, MD, FAAOS, FACS

Dr. Floyd is a board-certified orthopaedic surgeon specializing in orthopaedic traumatology and fracture care. He earned his medical degree at Mercer University School of Medicine. He completed an orthopaedic residency at SUNY Stony Brook University Hospital, as well as a fellowship in orthopaedic traumatology at the University of Maryland Medical Center. Dr. Floyd is associated with various medical organizations and holds memberships in national and international specialty societies. He has published in major orthopaedic and trauma medical journals.



Jeff Garrett, MD, FAAOS

Jeffrey Garrett, MD is a board-certified orthopedic surgeon and Director of Arthroplasty at ECU Health Orthopedics. Dr. Garrett attended Brody School of Medicine at East Carolina University. He then completed residency at Wake Forest University School of Medicine and a fellowship at Tampa General Hospital.



Michael Hadeed, MD

Michael Hadeed is a board-certified orthopaedic trauma surgeon at the University of Virginia. He completed medical school and residency at the University of Virginia and his trauma fellowship at Denver Health.



Jason Halvorson, MD, FAAOS

Dr. Jason Halvorson is the assistant program chair for the 2024 Southeastern Fracture Symposium. He is an orthopaedic trauma surgeon at Atrium Health - Wake Forest Baptist. Dr. Halvorson treats fractures, trauma, non-unions, pelvic and acetabular surgery, and fracture management.



Langdon Hartsock, MD, FAAOS

Dr. Langdon Hartsock received his undergraduate degree from Davidson College and his medical degree from Duke University. He completed his residency in orthopaedic surgery at Duke University with two years training in the Department of Surgery's Division of General and Thoracic Surgery and four years training in the Division of Orthopaedic Surgery. He also completed a fellowship at the R. Adams Cowley Shock Trauma Center in Baltimore, Maryland and has trained directly with Drs. Joel Matta, Peter Matter, Harold Tscherne, and Emile Letournel, all renowned orthopaedic trauma surgeons. Dr. Hartsock is a board-certified orthopaedic surgeon. He has been at MUSC for over 20 years and currently directs the orthopaedic trauma service for the Department. Dr. Hartsock is internationally known for his expertise in trauma and frequently teaches surgical techniques at national conferences and at other universities. Dr. Hartsock served in the United States Naval Reserve, and he holds an Honorable Discharge at the rank of Lieutenant Commander, Medical Corps. Prior to joining the faculty in the Department of Orthopaedic Surgery at the Medical University of South Carolina, he was on faculty at the University of South Alabama. He became an associate professor in 2000. He was the chairman of orthopaedic surgery at the Medical University of South Carolina from 2000 to 2013. Dr. Hartsock was promoted to professor in 2005 and was the inaugural holder of the John A. Siegling, M.D. chair in orthopaedic surgery from 2006 to 2013. He has received the Order of the Silver Crescent from former South Carolina Governor, Nikki Haley.



Erin Hofer, MD

Erin L. Hofer, MD, is a fellowship-trained orthopaedic traumatologist. She completed her orthopaedic surgery residency at Prisma Health in Greenville, SC, followed by a fellowship in orthopaedic trauma at Washington University in St. Louis, MO. Dr. Hofer is a member of both the American Academy of Orthopaedic Surgeons and the Orthopaedic Trauma Association.

Having published numerous peer-reviewed articles in major orthopaedic journals, she is currently working on several additional projects concerning traumatic fractures. Her research interests include complex fractures, anesthesia in orthopaedics, and postoperative activity protocols.



Joseph Hsu, MD, FAAOS

Joseph R. Hsu, MD is an orthopaedic surgeon who specializes in limb lengthening, deformity correction, osseointegration, and trauma. He is the Vice Chair of Quality of Atrium Health's Musculoskeletal Institute, Professor of orthopaedic trauma and Director of the limb lengthening and deformity program.

Dr. Hsu served in the U.S. Army and deployed in 2006 to Baghdad, Iraq. He spent the majority of his military career trying to optimize outcomes for limb reconstruction patients. Much of Dr. Hsu's research now involves guiding safe opioid prescribing and true multimodal pain management for clinicians.



Robert Hymes, MD

Dr. Robert A. Hymes is a board-certified and fellowship-trained orthopedic surgeon with more than 20 years of experience, specializing in the management of fractures, nounions/malunions, pelvis and acetabular fractures/injuries and bone infections.

He completed his undergraduate education at Morehouse College and then attended the University of California, San Francisco for medical school and an orthopedic surgery residency. Following residency, Dr. Hymes completed an orthopedic trauma fellowship at Harborview Medical Center in Seattle.

Dr. Hymes serves as the Chairman of the Department of Orthopedic Surgery at Inova Fairfax Medical Campus and as Inova's Musculoskeletal Service Line Section Chief, Trauma and Fracture Care. He has authored numerous publications and given national presentations in the field of orthopedic trauma. He is a member of several organizations focused on orthopedic trauma and has served as faculty for various educational courses. Dr. Hymes served as the SEFC president from 2021-2023.



Madhav Karunakar, MD, FAAOS

Dr. Karunakar completed his undergraduate education at Pomona College and received his medical degree from Baylor College of Medicine. He completed his residency in Orthopaedic surgery at the University of Cincinnati, and a fellowship in Orthopaedic Trauma at Carolinas Medical Center in Charlotte, NC. He is currently a board-certified Orthopaedic Trauma surgeon and Professor of Orthopaedic surgery at Atrium Health Carolinas Medical Center. He holds several leadership roles including Chief of Orthopaedic Trauma, Trauma Fellowship Director and Vice Chair of Diversity, Equity, and Inclusion. He serves on the Executive Committee of the Major Extremity Trauma Research Consortium and has served as the Chair of the Orthopaedic Trauma Association Fellowship Committee. He has been an active contributor to the academic community with over 100 peer reviewed publications.



Justin Kauk, MD, FAAOS

Justin is an orthopaedic traumatologist with Wake Orthopaedics in Cary, North Carolina, treating patients at WakeMed Cary. He attained his undergraduate degree at the University of Nebraska - Lincoln. He attended the University of Missouri - Columbia for medical school. After finishing his residency at the University of North Carolina - Chapel Hill, he completed his fellowship at the Reno Orthopedic Trauma Fellowship.



James Kellam, MD, FAAOS, FRCSC

James Kellam, M.D. is a Professor at The University of Texas Health Science Center – Houston's Department of Orthopaedic Surgery as well as the associate residency program director. He supervises the Department of Orthopaedic Surgery's Fragility Fracture and Bone Health program and is the interim director of research for the department. He received his medical degree as well as his orthopaedic surgical training at the University of Toronto, Toronto Canada. Dr. Kellam completed an orthopaedic trauma training at Sunnybrook Medical Center, University of Toronto, the AO Foundation, Davos Switzerland and Harborview Medical Center, University of Washington, Seattle, Washington. He is certified by the American Board of Orthopaedic Surgery and the Royal College of Surgeon of Canada as well as a fellow of the American College of Surgeons and an honorary fellow of the Royal College of Surgeons of Ireland. Prior to his appointment in Houston, he was the Director of the Orthopaedic Trauma Program and Vice Chair of the Department of Orthopaedic Surgery, Carolinas Medical Center in Charlotte, N.C. and an adjunct professor of Biomechanical Engineering at Clemson University. He has been involved in the practice of orthopaedic traumatology for 40 years. During this time, he has been the president of the AO Foundation and the Orthopaedic Trauma Association and recently been appointed as an Emeritus Professor of Orthopaedic Surgery by Atrium Health Charlotte, N.C. Dr. Kellam's areas of specialty care include acute management of complex orthopaedic injuries, limb reconstruction, and pelvis and lower extremity fractures and dislocations and their complications. Dr. Kellam is also interested in the basic science of fracture healing, resident education and clinical outcomes research.



LA Koman, MD, FAAOS

L. Andrew Koman, MD is a tenured Professor and Chair Emeritus of the Department of Orthopaedic Surgery and Rehabilitation at Wake Forest University School of Medicine. In addition, he has appointments as a professor in the Department of Pediatrics, the Department of Vascular and Endovascular Surgery; the Childress Institute for Pediatric Trauma; and the Translational Science institute. He is an associate in the Wake Forest Institute of Regenerative Medicine and a member of the graduate faculty at Wake Forest University School of Medicine.

He was an assistant professor on the Duke faculty until 1981 when he joined the orthopaedic faculty at the Bowman Gray School of Medicine (now Wake Forest University School of Medicine). Dr. Koman is board certified in Orthopaedic Surgery with subspecialty certification in Hand Surgery. After Frank Stelling, he was the second elected member of both the American Society of Surgery of the Hand (ASSH) and the Pediatric Orthopaedic Society of North America (POSNA); he has made significant contributions to trauma care in both subspecialties. His contributions and advances to trauma care involve replantation, vascular repair, nerve repair and reconstruction, the pediatric elbow trauma, chronic pain and compartment syndromes. He has been involved with and supported the SEFC since its inception.

Dr. Koman has served on numerous committees for national orthopaedic organizations, has presented over a 1,500 didactic and Socratic lectures, has chaired or participated in over a hundred scientific panels, has lectured at orthopaedic meetings and medical centers in 30 states and 10 countries, has been awarded 3 patents, has been the principal investigator on

multiple grants (>5 million) and has authored more than 250 scientific articles and book chapters. Dr. Koman is a member of 20 professional societies. He has served as President of the American Society for Surgery of the Hand, the Eastern Orthopaedic Association, the North Carolina Orthopaedic Society, and the North Carolina Society for Surgery of the Hand (which he founded), the Southern Orthopaedic Association, the Clinical Orthopaedic Society, and the Southeastern Hand Association. Dr. Koman is Editor-in-Chief of the Journal of Surgical Orthopaedic Advances. He reviews manuscripts for more than 10 national and international journals.

Dr. Koman and his research team received the Kappa Delta / Clinical Research Award, Orthopaedic Research and Education Foundation twice --in 1999 for their work involving basic science and translational research in microvascular physiology and in 2019 for their 30 years of seminal work in basic and clinical applications Botulinum toxins.

In 2004, Dr. Koman was presented the Huene Award by the Pediatric Orthopaedic Society of North America, Dr. Koman has also been acknowledged by WFUSM with the Established Investigator in Clinical Sciences Award (2006); an Honorary Doctorate from the University of Athens in 2009; the Distinguished Southern Orthopaedist from the SOA (2011); the American Academy of Orthopaedic Surgeons Achievement Award (2012); the Honored Surgeon in the State of North Carolina from the NCOA (2013); the Nix Award in Medical Ethics from the Clinical Orthopaedic Society (2019); the Honored Professor award from Orthopaedic Summit (2019) and the A Lee Osterman Award from the ASSH (2022). He has been recognized on the best doctor and top doctor lists, since their inception. Dr Koman was born and lived in Winchester Virginia until he moved to NC in 1970. He lives currently in Winston-Salem, NC. He has been married for 52 years, has 2 children and 3 grandchildren.



Michael LeCroy, MD, FAAOS

Michael LeCroy, MD is a fellowship-trained orthopaedic surgeon specializing in orthopaedic trauma surgery at Mission Health System in Asheville, NC. After completing his undergraduate work at Duke University, he received his medical degree from Duke University School of Medicine and then completed his residency in orthopaedic surgery at Duke University Medical Center. Following his residency, Dr. LeCroy completed a fellowship in Orthopaedic Trauma Surgery at the University of Maryland R.A. Cowley Shock Trauma Center in Baltimore. He has been the Director of Orthopaedic Trauma Services at Mission since 2003.



Paul Matuszewski, MD, FAAOS

Dr. Paul Matuszewski is an orthopaedic surgeon joining us from the University of Kentucky Healthcare System. Dr. Matuszewski received his medical degree from SUNY Downstate, Health Science Center in Brooklyn, N.Y. He completed a residency at the University of Maryland Medical Center in Baltimore. He then completed fellowships in orthopaedic trauma at University of Pennsylvania, School of Medicine in Philadelphia and Carolinas Medical Center in Charlotte, N.C.



Suman Medda, MD

Dr. Suman Medda specializes in orthopedic trauma surgery. He has clinical interests in fractures of the upper and lower extremities, post-traumatic reconstruction and hip arthroplasty. He is involved in research projects which attempt to improve outcomes of fracture treatments and surgeries. Dr. Medda received his bachelor's degree in biomedical engineering at North Carolina State University and his medical degree at the University of North Carolina at Chapel Hill. He completed residency at Atrium Health Wake Forest Baptist and a fellowship at Atrium Health's Carolinas Medical Center.



Kyle Mobley, MD, FAAOS

Kyle S. Mobley, M.D. is a board certified orthopedic surgeon specializing in orthopedic trauma. Dr. Mobley completed his undergraduate education at Vanderbilt University. He then attended medical school at East Carolina University Brody School of Medicine. Dr. Mobley completed a residency in orthopedic surgery at Palmetto Health/University of South Carolina and a fellowship in orthopedic trauma at Wright State University Boonshoft School of Medicine in Dayton, OH. Dr. Mobley currently practices at Tallahassee Orthopedic Clinic in Tallahassee, FL.



Kevin Murr, MD, FAAOS

Dr. Kevin Murr is an orthopaedic trauma surgeon currently at Prisma Health. He also currently serves as a clinical associate professor of orthopaedic surgery at the University of South Carolina School of Medicine.



Brent Norris, MD, FAAOS

Brent Norris, M.D. is a fellowship trained orthopedic trauma surgeon with Orthopedic and Trauma Service of Oklahoma in Tulsa. He completed his orthopedic surgery residency at the University of North Carolina Chapel Hill and his traumatology fellowship at Carolinas Medical Center in Charlotte, NC.



Russell Norris, MD, FAAOS

Dr. Russell Norris is the program chair for the 2024 Southeastern Fracture Symposium. He is a board-certified orthopaedic surgeon practicing in North Carolina for ECU Health.



Christopher Parks, MD, FAAOS

Dr. Christopher Parks completed his undergraduate education at the University of Maine at Orono and finished both his medical school and residency at SUNY Upstate Medical University, Syracuse, NY. He received his fellowship in orthopedic trauma from Washington University School of Medicine, St. Louis, Missouri. Dr. Parks is a fellow of the American Academy of Orthopaedic Surgery and a clinical member of the Orthopaedic Trauma Association. He is a specialty-trained orthopedic trauma surgeon and fracture care specialist, concentrating in fractures and dislocations of the upper extremities (shoulder, upper arm, elbow, forearm, and wrist), lower extremities (hip, upper leg, lower leg and ankle) and the pelvis in addition to the care of non-unions, mal-unions and complex fracture conditions. He is affiliated with New Hanover Regional Medical Center, the NHRMC Orthopaedic Specialty Hospital, Wilmington SurgCare, and Brunswick Surgery Center.



Kevin Phelps, MD

Dr. Kevin Phelps is an orthopaedic surgeon joining us from Atrium Health.



Kristoff Reid, MD, FAAOS

Dr. Kristoff Reid earned his bachelor's degree from the United States Military Academy, West Point, and his medical doctorate from Washington University in St. Louis School of Medicine. He spent five years in orthopaedic surgery residency at the Johns Hopkins Hospital and one year in an orthopaedic trauma fellowship at Duke University Medical Center. Dr. Reid promotes advancement of his field through active membership in the American Academy of Orthopaedic Surgeons, the Orthopaedic Trauma Association, AO Trauma North America, and the Piedmont Orthopaedic Society. His research on fractures and non- unions has been published in scholarly journals and at orthopaedic conferences. Following graduation from West Point, Dr. Reid served in the United States Army for five years. He currently serves as a member of a Forward Surgical Team in the U.S. Army Reserves, holding the rank of Lieutenant Colonel.



Gabriella Rivas, MD

Gabriella A. Rivas, M.D. serves as the Research Program Assistant for the Medical University of South Carolina's Orthopaedics Trauma and Spine teams. Dr. Rivas completed her bachelor's degree in Exercise Science at Berry College, with minors in Art and Dance. She then attended medical school at St. George's University School of Medicine, where she is also currently completing an MPH. Dr. Rivas originates from Washington D.C., but grew up in Dominican Republic where her family is from. She is married to Dr. Ricardo Domingo Cabreja, M.D., a neurosurgery resident also at MUSC. When not working on manuscripts, Dr. Rivas uses her Art degree to create medical illustrations that support her research projects and education.



Matthew Stillwagon, MD

Matthew Stillwagon, MD is a board certified orthopedic surgeon practicing at Mission Orthopedic Trauma Services in Asheville, NC. Dr. Stillwagon completed a residency at University of North Carolina School of Medicine, and a fellowship at Hennepin County Medical Center in Minneapolis, Minnesota.



Stephanie Tanner, MS

Stephanie Tanner, MS is the Director of the Clinical Research Unit- Upstate for Prisma Health in Greenville, SC. Ms. Tanner received her Master's Degree in Bioengineering from Clemson University in 2002. She worked in clinical orthopaedic research for the 20 years at Prisma Health. Her experience ranges from conducting small case studies to coordinating prospective multicenter research projects. She has co-authored more than 50 publications. Ms. Tanner's research interests include human subjects' research education, care delivery and outcomes of the multiply injured trauma patient, injured geriatric patients, and multidisciplinary approaches post-injury care. Currently, Mrs. Tanner is the Director of a multispeciality research unit covering Orthopedic Surgery, Anesthesia, Rehabilitation, General Surgery, Pediatrics, Obstetrics and Gynecology, and Emergency Medicine.



Michelle Tidd, PA

Michelle Tidd, PA-C, is a board-certified physician assistant specializing in orthopedic trauma. Michelle graduated from Lincoln Memorial University-DeBusk College of Osteopathic Medicine's PA class of 2014. She has over 9 years of experience as an orthopedic trauma PA, previously practicing at Level I trauma centers in Macon, GA and Spartanburg, SC. Michelle currently practices as an orthopedic trauma physician assistant at Novant Health in Charlotte, NC.



Michael Tucker, MD, FAAOS

Michael C. Tucker, MD, is an orthopedic trauma surgeon. He is a graduate of Clemson University and the Medical University of South Carolina. He completed his orthopedic surgery residency at the Medical College of Georgia and an orthopedic trauma fellowship at Carraway Methodist Medical Center in Birmingham, Alabama. He currently serves as the Medical Director of Orthopedic Trauma at Prisma Health Richland Hospital. He is also a Clinical Associate Professor of Orthopedic Surgery at the University of South Carolina School of Medicine.



Sara Van Nortwick, MD

Sara Van Nortwick is an associate professor of Orthopaedic Surgery at the Medical University of South Carolina (MUSC) in Charleston, SC. Dr Van Nortwick covers trauma at Shawn Jenkins Children's Hospital, the only pediatric level 1 trauma center in South Carolina. She enjoys trauma as well as treating scoliosis and hip dysplasia. Her research interests include reducing intraoperative radiation exposure, reducing pediatric gunshot injuries and decision making in not quite skeletally mature patients.



David Weiss, MD, FAAOS

Dr. David Weiss is a board-certified orthopaedic surgeon. After completing an Orthopaedic Trauma fellowship at Harborview Medical Center in Seattle, Dr. Weiss served as the Medical Director for Orthopaedic Trauma at St. Joseph Mercy Hospital, a level 2 trauma center in Ann Arbor, MI. He now directs the Orthopaedic Trauma Division at UVA. Dr. Weiss' research interests include fractures of the proximal and distal tibia. Dr. Weiss is the SEFC 2023-2025 Board President.



Seth Yarboro, MD, FAAOS

Seth R. Yarboro, MD, is an orthopaedic surgeon specializing in treating patients with bone, joint and soft tissue injuries, using traditional, minimally invasive, and computer-assisted surgical techniques. Yarboro attended medical school at University of North Carolina at Chapel Hill, where he also completed his orthopaedic residency training. Yarboro completed a fellowship in orthopaedic trauma surgery at UNC Hospital, an AO Trauma Fellowship in Hannover, Germany, and a final fellowship in orthopaedic trauma and computer-assisted surgery in Ulm, Germany. Dr. Yarboro is an active researcher at UVA and has contributed to multiple peer- reviewed publications and book chapters.



Freda Yin, PA-C

Freda Yin, PA-C, is a board-certified physician assistant specializing in orthopedic trauma. Yin completed her undergraduate education at Clemson University, and then attended Wake Forest University School of Medicine. Yin currently practices as an orthopedic trauma physician assistant at Prisma Health in Columbia, SC.



Nicole Zelenski, MD

Dr. Zelenski obtained her medical degree at Duke University in North Carolina. She completed his orthopedic surgery residency at University of Pennsylvania in Philadelphia and her hand/microvascular surgery fellowship at the Mayo Clinic in Rochester, Minnesota. She completed a second fellowship in microsurgery at Chang Gung Memorial Hospital in Taiwan. She is an assistant professor of orthopedic surgery at Emory University and chief of the combined hand service at Grady Memorial Hospital.

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Podium Presentation Abstracts

 "Postoperative Infection Rate in Lower Extremity Orthopaedic Trauma Unchanged by Vancomycin Powder" presented by Dr. Christopher Robinson, Medical University of South Carolina. Authors and contributors include Juliette Gammel, Frank Nichols, Christopher Robinson, Gabriella Rivas, Josh Morningstar, Christopher Gross, Langdon Hartsock, Daniel Scott, Kristoff Reid.

Objectives: Limited data in the field of orthopedic trauma support the use of intrawound topical vancomycin powder or demonstrates efficacy in reducing the risk of postoperative surgical site infections (SSI). This study aims to evaluate the efficacy of topical vancomycin powder in reducing SSI in patients with lower extremity trauma.

Methods: We conducted a retrospective review of 2155 patients at a single Level 1 Trauma Center following open reduction and internal fixation of peri-articular lower extremity fractures between 2014 and 2022. Patients were excluded if under 18 years of age or were lost to follow-up. Demographic factors, medical comorbidities, postoperative infections, and use of vancomycin powder were reviewed. SSIs were defined as 'superficial' if they were treated only with oral antibiotics and 'deep' if they required further surgical intervention. Infections were analyzed using Fischer's exact test and Student t-test.

Results: 1650 patients were included, of which 109 (6.6%) were lost to follow up, resulting in a final cohort of 1541 patients. 351 (22.8%) of patients received intraoperative vancomycin powder. There were 108 total postoperative surgical site infections (SSI; 7%). Of those, 35 infections were superficial, 68 were deep. The vancomycin cohort saw an 9.12% (32/351) rate of infection, with 78.1% (25/32) being deep infections. There was no significant difference in the rate of post-operative infections with the use of vancomycin (p=0.078), which remains insignificant when excluding patients with less than 90-day follow-up (p=0.275). The average time to infection was 117.17 days, with no significant difference between superficial and deep infections (p=0.312).

Conclusion: This study found no difference in the rate of surgical site infections following peri-articular lower extremity fracture fixation with or without the use of vancomycin power. Further focused studies with larger cohorts should be pursued to further investigate the effect of vancomycin powder application on postoperative infection rates.

2. "Nail-Plate Construct for Periprosthetic Distal Femoral Fractures: A Case Series" presented by Dr. Robert Rutz, University of Alabama Birmingham. Authors and contributors include Robert W Rutz MD, Ethan Sheppard BS, Jacob K Hawkins MD, David A Patch MD, Charles O Owen BS, Jonathan H Quade MD.

Objectives: The nail plate construct (NPC) has gained popularity in the elderly patient population due to the high rate of nonunion and malunion in osteoporotic and periprosthetic femoral fractures. This method of dual fixation provides additional support that is needed in patients with poor bone quality. The NPC also allows for early weight bearing and mobility which leads to improved outcomes in the older population. The objective of this study is to assess the outcomes and complications in patients with prior total knee arthroplasty (TKA) or total hip arthroplasty (THA) who subsequently underwent fixation of an ipsilateral distal femoral fracture using the NPC.

Methods: A retrospective case study was performed at a single level 1 trauma center. Patients who had a distal femur fracture and an existing knee or hip arthroplasty were included. These patients received an intramedullary femoral nail and a lateral locking femoral plate. Outcomes measured were time to surgery, length of stay, reoperation rates, nonunion rates, implant failure rates, infection rates, and mortality.

Results: Thirty-four distal femoral fractures with ipsilateral TKAs or THAs underwent NPC fixation. The average age of these patients was 69 years old and included 6 males (18%) and 28 females (82%). Twenty-six patients (69%) sustained a low energy mechanism of injury while 8 (31%) sustained a high energy mechanism of injury. Average length of inpatient stay was 11 days. Five patients (15%) experienced nonunion and four (12%) patients developed a prosthetic joint infection. Eighteen patients (53%) were allowed to weight bear as tolerated immediately postoperatively. Patients who were allowed to bear weight immediately after the procedure did not have significantly different rates of surgical site infection, reoperation, nonunion, or prosthetic joint infection.

Conclusions: The present study shows that nail-plate construct can be safely used in periprosthetic distal femur fractures and allows for immediate weight-bearing with few subsequent implant related and in-hospital complications.

3. "Are There Modifiable Factors for Decreasing Complications in Low Velocity Civilian Femur Fracture?" presented by Dr. Nainisha Chintalapudi, Atrium Health Carolinas Medical Center. Authors and contributors include Brianna R. Fram, Nainisha Chintalapudi, Mario Cuadra, Meghan Sweeney, Kate Hickson, Catherine Young, Jana M. Davis, Ziqing Yu, Rachel B. Seymour, Madhav A. Karunakar, EMIT.

Purpose: Despite their frequency, there are unresolved questions in the treatment of ballistic femur fractures. We report here on outcomes and risk factors for complications following low-velocity ballistic fractures of the femur.

Methods: This was a retrospective single center case series of 238 patients aged 18 years or older presenting with low-velocity civilian ballistic femur fractures from 2011-2020. AO/OTA types 31-33 were included. We collected information on demographics, injury characteristics, treatment, and outcomes. Primary outcome was all cause complications. Treating surgeons decided whether to operatively debride bullet tracts. Patients with and without complications were compared to identify risk factors. Univariate logistic regression was performed to identify risks for nonunion/hardware failure, infection, or reoperation/readmission.

Results: Median age was 28 years, 90% were male, and 63% were current smokers. By AO/OTA classification, 51 (21%) were type 31, 121 (51%) type 32, and 66 (28%) type 33. Two-hundred and six (87%) were treated operatively. Forty-eight patients (20%)%) experienced complications, with 23 (9.7%) undergoing reoperation at mean 251 days post-injury. Median follow-up was 136 days, and median time to union was 148 days.

All-cause complications were associated with older age (31 vs. 27, P=0.011). While not statistically significant, patients with arterial injury had a higher complication rate (8/22, 36.3% vs. 40/216, 18.5%, P=0.055). Time to initial antibiotics did not differ significantly for those without or with complications (1.5 hours vs. 1.6 hours to initial antibiotics, P=0.76), nor did duration of prophylactic antibiotics (P=0.21). On univariate logistic regressions, increasing age (OR 1.05, CI 1.01-1.08, P=0.0045) was associated with nonunion/hardware failure. Only depression (OR 10.7, CI 2.6-43.8) was associated with infection. Increasing age (OR 1.05, CI 1.01-1.08, P=0.0047), depression (OR 0.028, CI 1.1-10.7), and surgical debridement of ballistic wounds (OR 3.2, CI 1.3-7.9, P=0.014) were associated with reoperation/readmission. Analysis by Gustilo-Anderson type showed severity bias in operative debridement, with 17% of type I vs. 69% of type II/III injuries being debrided (P=0.0001). Analysis by Gustilo-Anderson type did not show severity bias in time to first antibiotic administration. Time to initial antibiotics and duration of prophylactic antibiotics again had no significant associations on univariate analyses.

Conclusion: We found a 20% complication rate in ballistic femur fractures. We were unable to identify modifiable factors associated with decreased complications, including antibiotic timing, duration, or performance of operative debridement. While debridement was associated with increased risk of reoperation/readmission, we identified injury severity bias, making interpretation of this result difficult.

4. "Evaluation of Weekend Operating Room Delays at a Level 1 Trauma Center: A One-Year Retrospective Analysis" presented by Dr. Alyssa Althoff, University of Virginia. Authors and contributors include Alyssa Althoff, MD; W. Harrison Cook, MS; Seth Yarboro, MD.

Introduction: The current study aimed to: (1) characterize trends in demographics of individuals undergoing operative intervention institutionally at a level 1 trauma center, (2) evaluate the prevalence of delays in first-start case times over the course of one year for trauma-related orthopedic surgery on weekends, and (3) identify the cited cause for delay. We hypothesize that more weekend days that had a first-start orthopedic trauma case will have a delay than days without delay.

Methods: An institutional database was used to query weekend first start OR cases from 2022-2023. Patients undergoing operative intervention for orthopedic trauma related hospital presentations were identified by retrospective chart review. Incidence and documented reasons for weekend first start cases were recorded. On-time first start case was defined as in-room time of 7:30AM.

Results: Eighty-eight first start orthopedic trauma related cases were recorded over 106 weekend days assessed (100% delayed, 0% on time). The mean time (AM, morning of surgery) for assigned room, pre-op, surgeon ready, in room, OR ready, anesthesia ready, anesthesia start, and case start were, 07:15 (+/- 0.02), 07:23 (+/- 0.02), 08:07 (+/- 0.02), 07:44 (+/- 0.01), 08:21 (+/- 0.02), 08:03 (+/- 0.02), and 8:43 (+/- 0.01), respectively. Of the possible causes, a reason was not recorded in 27% of cases. This was followed by patient factors, insufficient anesthesia coverage, transport, OR delays, surgeon factors, "weekend" as the stated reason, and pre-op delays. There was no notable difference in on-time first start cases based on weekend day or time of year.

Discussion/Conclusions: Our institution had 0% of weekend cases start on time. The common occurrence of delays in weekend cases highlights the need for either improving the process to have patients move through the preop process earlier or adjusting the schedule for surgeons to avoid excessive wait time and frustration.

5. "A comparison of Piperacillin-Tazobactam to Conventional Antibiotics for Prophylaxis in Type III Fractures" presented by Dr. Anthony Paterno, UNC Orthopedics. Authors and contributors include Anthony V. Paterno, MD, Alysa B. Nash, MD, Anne M. Lachiewicz, MD, Jingru Zhang, MS, Feng-Chang Lin, PhD, Robert F. Ostrum, MD.

Introduction: Prophylactic antibiotics for Gustilo-Anderson type III open fractures are cefazolin plus gentamicin (CG) at many institutions. Adverse effects such as nephrotoxicity make gentamicin a less appealing drug, particularly in trauma patients. The purpose of our study was to compare piperacillin-tazobactam (PT) with conventional antibiotics in preventing surgical site infections (SSIs) in type III open fractures. This was a single center, retrospective analysis at a level 1 trauma center.

Materials and Methods: One hundred and sixty patients with Type III open fractures treated with three different antibiotic regimens comprised the cohort. Patients were separated into three groups, those receiving PT, CG, or cefazolin plus gentamicin plus injected tobramycin (CGT) depending on current protocols or surgeon discretion. Primary outcomes were deep (requiring return to OR) and superficial (requiring antibiotics only) SSIs, as well as nonunions, during a postoperative period of twelve months.

Results: Our retrospective analysis from 2008-2019 revealed 160 Type III open fractures. Seventy-two fractures were treated with PT, 41 with CG, and 47 with CGT. There was not a statistically significant difference in deep or superficial infections among the three groups (p = 0.46, p = 0.61 respectively). Nonunion rates were also not significantly different.

Discussion: Results of this study demonstrate no significant difference in SSIs or nonunion rate between PT, CG, and CGT when used for infection prophylaxis in type III open fractures. We believe prophylaxis with PT may be equivalent to traditional regimens, potentially with less adverse effects, particularly in polytraumatized patients."

6. "Intramedullary Nailing of the Tibial Plateau Fractures can be Safe and Effective" presented by Dr. Derek Lance, Medical College of Georgia at Augusta University. Authors and contributors include Derek A. Lance, MD; Daniel E. Herrera, BS; Joshua Nougaisse, BS; Elizabeth P. Barker, BS; Jana M. Davis, MD; James A. Blair, MD, FACS.

Purpose: To investigate clinical and radiographic outcomes associated with treating tibial plateau fractures with intramedullary nailing as a primary implant. We hypothesize that intramedullary nailing alone or intramedullary nailing plus adjunctive plating (IMN) will achieve equivalent radiographic outcomes and faster time to definitive fixation when compared to traditional plating (PLATE) alone.

Methods: A single-center retrospective review of all patients with AO/OTA 41C fractures of the proximal tibia from July 2020 to December 2022 with a minimum of three-month follow-up were reviewed. Demographic information, time to definitive fixation, time to full weight-bearing, initial and final medial proximal tibia angle (MPTA) and posterior proximal tibia angle (PPTA), degrees of loss of reduction for MPTA and PPTA, and complications were collected. Student t-tests were used to compare mean time to definitive fixation and mean loss of MPTA/PPTA between IMN and PLATE groups.

Results: 37 patients met inclusion criteria with 17 patients in the IMN group and 20 patients in the PLATE group. The mean age for the IMN group was 50.8 years versus 48.8 years for the PLATE group. The mean follow-up time for the IMN group was 7.3 months \pm 3.7 versus 8 months \pm 4.3 for the PLATE group. One fracture in the PLATE group went on to nonunion. All other fractures united. The mean loss of reduction of the MPTA was not significantly different between the two groups at final follow up $(2.1^{\circ} \pm 1.9 \text{ IMN})$ group versus $2.6^{\circ} \pm 2.2 \text{ PLATE}$ group, p=0.37). The mean loss of reduction of the PPTA was not significantly different between the two groups $(1.3^{\circ} \pm 2.1 \text{ IMN})$ group versus $1.70^{\circ} \pm 1.1 \text{ PLATE}$ group, p=0.64). Patients treated with intramedullary nailing or intramedullary nailing plus plating had significantly faster time to definitive fixation compared to patients treated with traditional plating alone (2.3 days) versus 5.4 days respectively, p=0.005).

Conclusion: Intramedullary nailing of AO/OTA 41C tibial plateau fractures as a primary implant can be safely performed in select patients with similar radiographic outcomes and faster time to definitive fixation as compared to traditional plating.





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Scan the QR code or type the web address into your browser to open the poll. Winners will be selected based on the top total scores across all categories. Ratings for each presentation will be from 1-5. Ratings are based on the following criteria:

- 1. **Methodology:** The methodology (hypothesis, methods, and procedures) are described clearly and appropriately used.
- 2. **Significance and Impact:** The results and conclusions of the study are (or are not) significant and have implications to advance the field.
- 3. **Presentation Execution:** The presentation was well executed, clear, and the presenter was on time.



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2024 Posters

1	"Ankle Fracture ORIF Cost Efficiency: Ambulatory Surgical Center versus Hospital"	Daniel Scott	Medical University of South Carolina
2	"Outcomes Following Plating of Periprosthetic Femoral Shaft Fractures with a Stable Hip Arthroplasty Stem"	Anthony Paterno	University of North Carolina at Chapel Hill
3	"Locking Plate vs. RFNA-Advanced System in management of Distal Femur"	Andres Fidel Moreno-Diaz	Vanderbilt University Medical Center
4	"Pediatric talar neck fracture: outcomes and complications"	Shrey Nihalani	University of Alabama at Birmingham
5	"Clinical Results of Cannulated Screws and the Femoral Neck System in Stable Geriatric Femoral Neck Fractures"	Nicholas Andring	Wake Forest University School of Medicine
6	"How Long for Radial Nerve Recovery in Low Velocity Ballistic Humerus Fractures?"	Nainisha Chintalapudi	Atrium Health Carolinas Medical Center
7	"Dysphagia is Associated with increased Mortality risk after Hip Fracture Surgery"	Rohan Boyapati	UVA
8	"Utilizing Short-Segment Temporary Reduction Assisting K-wires (TRAK-wires) for Intramedullary Nailing of Peri-Articular Distal Femur and Proximal Tibia Fractures: A Technical Trick and Case Series"	Ryan Serbin	Atrium Health Carolinas Medical Center
9	"Impact of Resilience on Patient Reported Outcomes After Orthopaedic Trauma"	Matthew Yeager	University of Alabama at Birmingham
10	"Risk Factors for Fracture Related Infection With Gram-Negative Organisms"	Robert Rutz	University of Alabama at Birmingham
11	"Social Dynamics Study: A Network Analysis of an Orthopaedic Residency Program"	Juliette Gammel	Medical University of South Carolina
12	"Can patients have a regional block if the limb is or was infected?"	Alicia Williams	Atrium Health Carolinas Medical Center
13	"Comparing Outcomes of Subtrochanteric Femur Fractures Performed by Trauma-Trained and Non- Trauma Trained Surgeons: Is There a Difference?"	Nathaniel Koutlas	University of North Carolina at Chapel Hill
14	"Allocating Operating Room Time in Orthopaedic Trauma – A Survey in Medical Ethics"	Mary-Katherine Lynch	Medical University of South Carolina
15	"Low Replicability of Highly-Cited Studies in Orthopaedic Journals"	Cody Ashy	Medical University of South Carolina
16	"Racialized/Ethnicized Health Inequities in Hip Fracture Outcomes: A Clavien-Dindo Trend1 Analysis 2016-2021"	Mikhail Bethell	Duke University School of Medicine
17	"Factors Affecting Lateral Overgrowth in Operatively Treated Lateral Condyle Fractures in Children"	Adele Bloodworth	University of Alabama at Birmingham
18	"Outpatient Limb Deformity & Reconstruction Surgery"	Ainsley Bloomer	Atrium Health Carolinas Medical Center
19	"Illicit Drug Use: Is There an Effect on Union in Operatively Treated Femoral Shaft Fractures?"	Nagaraj Swaminathan	Medical College of Georgia at Augusta
20	"Non-Surgical Management of Shoulder Girdle Injuries in Patients with Rib Fractures – A Pilot Study"	Benjamin Usry	Medical University of South Carolina



Financial Disclosures

2024 Symposium Planning Committee and Staff Disclosures

All relevant financial disclosures have been mitigated.

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Submitted on: 08/31/2023

AONA: Paid presenter or speaker

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Submitted on: 07/24/2023

Association of Women's Surgeons: Board or committee member

Journal of Bone and Joint Surgery - British: Editorial or governing board

Journal of Orthopaedic EXperience & Innovation: Editorial or governing board

Orthopaedic Trauma Association: Board or committee member

Orthopedics: Editorial or governing board

Ruth Jackson Orthopaedic Society: Board or committee member Southeast Fracture consortium: Board or committee member

Speak Up Ortho: Board or committee member

Wolters Kluwer Health - Lippincott Williams & Wilkins: Editorial or governing board

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AO North America: Other financial or material support

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Stryker: Paid consultant

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