St Luke's Orthopaedic Research Journal

2025 - Volume III

EDITORS
Margaret J. Higgins, MD; Jonathan D. McKeeman, MD, MBA
Assistant Editors: Trevor Luck, MD; Nigel Wang, MD

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ST. LUKE'S UNIVERSITY HEALTH NETWORK

BETHLEHEM

St. Luke's University Hospital – Bethlehem
(Lehigh County)
Home of St. Luke's Children's Hospital

Total Admissions:	20,281
ER Visits:	45,791

ALLENTOWN

St. Luke's Allentown Campus
(Lehigh County)

Total Admissions:	12,537
ER Visits:	52,494

ANDERSON

St. Luke's Anderson Campus
(Northampton County)

Total Admissions:	19,363
ER Visits:	49,193

CARBON

St. Luke's Carbon Campus
(Carbon County)

Total Admissions:	4,120
ER Visits:	20,578

EASTON

St. Luke's Easton Campus
(Northampton County)

Total Admissions:	1,942
ER Visits:	21,342

GEISINGER ST. LUKE'S

Geisinger St. Luke's Hospital
(Schuylkill County)

Total Admissions:	3,974
ER Visits:	25,534

MINERS

St. Luke's Miners Campus
(Schuylkill County)

Total Admissions:	3,172
ER Visits:	20,335

MONROE

St. Luke's Monroe Campus
(Monroe County)

Total Admissions:	9,112
ER Visits:	49,947

SACRED HEART

St. Luke's Sacred Heart Campus
(Lehigh County)

Total Admissions:	4,942
ER Visits:	29,724

UPPER BUCKS

St. Luke's Upper Bucks Campus
(Bucks County)

Total Admissions:	6,375
ER Visits:	24,242

WARREN

St. Luke's Warren Campus
(Warren County, NJ)

Total Admissions:	5,115
ER Visits:	28,199

WEST END

St. Luke's West End Campus
(Lehigh County)
Home of St. Luke's Orthopedic Hospital – West End Campus

PENN FOUNDATION, LEHIGHTON & QUAKERTOWN

Region's largest network of behavioral health services.

St Luke's
UNIVERSITY HEALTH NETWORK

100 TOP HOSPITALS

St. Luke's University Health Network is a regional, integrated Network of hospitals, physicians and other related organizations providing care in Lehigh, Northampton, Monroe, Carbon, Schuylkill, Luzerne, Bucks, Montgomery and Berks counties in Pennsylvania and Warren and Hunterdon counties in New Jersey.

ST. LUKE'S UNIVERSITY HEALTH NETWORK

St. Luke's University Health Network's vision is to achieve top decile performance in clinical quality and safety measures, provide exceptional service and be perceived as EASY to use by everyone accessing our services.

The Network's flagship University Hospital has earned the 100 Top Major Teaching Hospital designation from Fortune/PINC AI 11 times total and nine years in a row, including in 2023 when it was identified as THE #4 TEACHING HOSPITAL IN THE COUNTRY. In 2021, St. Luke's was identified as one of the 15 Top Health Systems nationally.

It is the only Lehigh Valley-based health care system to earn Medicare's five-star ratings (the highest) for quality, efficiency and patient satisfaction. It is both a Leapfrog Group and Healthgrades Top Hospital and a Newsweek World's Best Hospital.

The fully integrated system includes Pennsylvania's largest trauma network and hospital-based EMS unit; 24 Care Now walk-in urgent care locations and many other health care services, such as home health and hospice.

St. Luke's Care Network comprises St. Luke's-owned practices (St. Luke's Physician Group) with nearly 2,200 physicians, nurse practitioners and physician assistants; and independent practices with nearly 400 physicians, nurse practitioners and physician assistants.

Areas of exceptional medical expertise include:

- Largest network of trauma centers in Pennsylvania (7)
- Cardiology/Cardiovascular Surgery
- Oncology
- Orthopedics
- Neuroscience
- Robotic/Minimally Invasive Surgery
- Radiology
- Obstetrics/Perinatal Care
- Bariatric Surgery
- Hernia Surgery
- Pediatrics

92,079 annual admissions & observations

367,379 annual emergency room visits

20,000 employees, region's second largest employer

2,200 doctors and advanced practitioners*

1,906 volunteers contributing 139,595 hours of service

**Representing more than 100 specialties (90% of physicians are board-certified)*

Medical Education

An exceptional commitment to the advancement of medical education has been a core St. Luke's focus since its inception in 1872. St. Luke's is one of only 400 members of the prestigious Council of Teaching Hospitals.

In response to the shortage of physicians facing our nation, St. Luke's and the Lewis Katz School of Medicine partnered to develop the first and only medical school campus in the Lehigh Valley. Students spend all four years at St. Luke's University Hospital – Bethlehem. The inaugural class graduated in 2015. St. Luke's expects to graduate 300 physicians in 10 years and to retain 150 (50 percent) in the Lehigh Valley region.

St. Luke's offers more than 470 intern/resident/fellowship positions in 50 accredited programs. Teaching staff hold faculty appointments at the Lewis Katz School of Medicine, The University of Pennsylvania and Philadelphia College of Osteopathic Medicine.

Additionally, St. Luke's School of Nursing is the nation's longest continuously operating nursing school. The fully accredited program currently enrolls 150+ students. St. Luke's is also a major allied health training site. More than 560 students representing 80+ colleges, universities and technical institutes annually spend 123,300 hours at St. Luke's.

Medical education throughout the Network is supported by St. Luke's Simulation Center, which provides advanced training through specialized educational technology and "real world" learning environments.

TEMPLE UNIVERSITY
Lewis Katz School of Medicine

St Luke's UNIVERSITY HEALTH NETWORK

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EDITORIAL BOARD

Previous St. Luke's Orthopaedic Journal Editions

2023 Editor:
Brendan Smith, MD

2024 Editors:
Michael DeRogatis, MD and Akhil Sharma, MD

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Preface

It is with great pride and excitement that we present the third edition of the St. Luke's Orthopaedic Journal (SLOJ). Over the past year, our residents have dedicated countless hours to pursuing their research interests, and this publication stands as a testament to their hard work, curiosity, and commitment to excellence.

Our residency leadership has continued to foster a culture of inquiry, where research is not only encouraged but also celebrated as an integral part of our training. We are deeply grateful to Drs. Lundy, Matullo, and Greenhill, whose unwavering support and mentorship has been instrumental in fostering this environment. We would also like to extend our sincere gratitude to last year's journal editors, Dr. Akhil Sharma and Dr. Michael DeRogatis, whose efforts helped establish a strong foundation for this journal.

Beyond St. Luke's, our residents have traveled all over the country presenting their research at prestigious conferences, earning numerous awards for their contributions. Their work has not only enhanced our program's national reputation but has allowed them to engage with experts and receive pivotal feedback on their findings.

Lastly, we would like to take a moment to recognize and congratulate our graduating chief resident, Brendan Smith, MD, on his accomplishments. His dedication to clinical expertise and leadership will leave a lasting impact on our program. As he embarks on the next chapter of his training at Florida Orthopaedic Institute, we are confident that he will thrive, and we look forward to seeing all that he will accomplish.

Respectfully,
Margaret Higgins, MD and
Jonathan McKeeman, MD, MBA

Margaret Higgins, MD

Jonathan McKeeman, MD, MBA

Chairman's Corner

It is a great honor and privilege to report the significant achievements of the St. Luke's MSK Department over the past academic year! The reputation and prestige of our service line continues to grow and emulate the shining star of St. Luke's. There is so much to report that I must ask Drs. Matullo and Greenhill further elaborate their areas to give full credit where it is due!

Among the most significant accomplishments of the year is the fantastic success of the new West End Orthopaedic Hospital, and we are making plans to open the fifth operating room! Although the capital investment to open an additional operating suite is substantial, we are quickly approaching the point where the economics to proceed make financial sense.

The biggest news in the network is the signed "definitive agreement to partner" between St. Luke's and Grand View Health in Sellersville, PA. Grand View Hospital is a 250-bed hospital to our south in Bucks County, and this is a very strategic acquisition for the network. Grand View Health has seven orthopaedic surgeons and three other MSK physicians who we warmly welcome to the St. Luke's MSK team. The addition of these physicians will swell the size of the MSK team to ninety-five physicians and close to five-hundred team members!

Quality remains a top priority at St. Luke's. This year we performed in the top quartile on readmission on total hip patients and top quartile on length-of-stay in total knee patients, top decile on length-of-stay for total shoulder patients as well as in patients with hip & femoral fractures. More significantly, we excelled where it really matters – in Patient-Reported Outcomes. According to the AJRR, our Patient-Reported Outcomes for hip and knee arthroplasty (HOOS and KOOS) demonstrates that we start with patients that are worse than the national average, and we finish with our patients doing better than the national average at three months and one year.

We remain proud that we continue to offer the expertise of fellowship-trained orthopaedic surgeons in all nine specialties including pediatric orthopaedic surgery and musculoskeletal oncology.

We continue to excel in offering same-day total joint replacement discharging 50.0% of hip and 42.2% of knee arthroplasty patients without an overnight stay. These same patients then tell the community of their great experience and the expertise of the surgeon who was so good that they could discharge them home right after surgery.

We continue to attract incredible people as our Grand Rounds speakers this year including ABOS Vice President Scott Porter, AAHKS Second Vice-President Antonia Chen, AAOS President Ned Amendola, AAOS past-President Kevin Bozic, Karl Koenig and ABOS President Jim Kang.

One of the main reasons that I came to St. Luke's was to work with our residents and medical students. Our residents are spectacular and make coming to work every day an absolute joy. The very capable leadership of Kris Matullo and Dustin Greenhill ensures that we are one of the premier orthopaedic residencies. Their enthusiasm, curiosity and desire to be the best they can drive us to be even better.

I would be remiss if I didn't address the acquisition of Lehigh Valley Health Network by Jefferson Health. Rumors abound regarding the true motives behind this transaction, and we are concerned about the impact of this transaction on the care of the patients in the region. As you can tell, St. Luke's is very well positioned competitively in the Lehigh Valley, and we will continue to increase in market share. Although we wish our orthopaedic colleagues at LVHN well, we will continue to be the region's premier partner to keep our community in motion for a healthier tomorrow!

Douglas W. Lundy, MD, MBA, FAOA, FACS
Chair, Department of Orthopaedic Surgery and Orthopaedic Trauma Surgeon
St. Luke's University Health Network
Bethlehem, Pennsylvania
President, Orthopaedic Trauma Association 2024-2025

Program Director's Corner

Another year has passed and success continues with the orthopaedic surgery residency program. The residency program at St. Luke's has undergone significant change within the past 4 years. During this time, our residents have worked hard to read, study, learn and progress. Numerous suggestions and initiatives have been suggested, developed and implemented by them to improve not only the culture but the education within the department. They have desired and obtained national committee positions, leadership opportunities, and excellent fellowships in their chosen specialty. The residents developed and launched the St. Luke's Orthopaedic Surgery Research Journal, which is now preparing for its third edition, as well as achieved awards in research, having over 10 publications and 20 national presentations over the last year alone. We are in the process of recruiting our third research fellow and are involved in 6 national, multi-centered trials. Dr. Greenhill, as associate program director, has furthered our department's research efforts, and has been successful in assisting multiple medical students interested in orthopaedics achieve publications this past year. Our education has improved significantly with adoption of the ROCK curriculum, an increase in journal clubs and cadaveric sessions. With the increased involvement of attending physicians, our morning education has been more productive and valuable, the journal clubs and cadaveric labs have improved our residents' knowledge. This is most demonstrated with our residents over the last 2 years having scored at the 97th percentile and above in the ABOS Part 1 exam! Our department was one of 2 pilot programs for the ABOS KSB evaluation system, and through the participation of the residents and attendings, we have been recognized as instrumental in the development process, which will be required of all programs starting July 1, 2025. With the work and support of Dr. Lundy, Jessica Kamensky and Kate Tintorri, we have been able to bring in nationally recognized visiting professors, develop a leadership and business course for the residents, update the Martin Cohen Conference Room and open a chief resident office for our PGY-4s and 5s.

With these significant improvements, we desired to expand our residency program to 4 residency positions per year. This expansion will allow us to train additional orthopaedic surgeons for the future and allow the involvement of additional interested attending physicians. We applied this application cycle and have been approved by the ACGME RRC for 4 residents per year, for a total of 20 in our program. This expansion marks a doubling of positions within the last 5 years! Given this news, we entered the March 2025 match with 4 applicant positions.

I would like to thank the hard work, dedication, support and perseverance of Nicole Toland, Heather Brown, Dustin Greenhill, Doug Lundy, Jessica Kamensky, Kate Tintorri, and especially our residents and teaching attendings in helping St. Luke's Orthopaedic Surgery Residency continue to grow and improve.

Kristofer S. Matullo, MD, FAOA
Vice Chair of Orthopaedic Surgery
Orthopaedic Surgery Residency Director and Division
Division Chief of Hand Surgery
St. Luke's University Health Network, Bethlehem, PA

Associate Program Director's Corner

Over the past year our faculty has continued its resident-centric optimization of academic curriculum and clinical experience while simultaneously supporting the scientific community. We are conducting or initiating agreements with national and international research groups traversing orthopaedic subspecialties. Some of these include contributions to Major Extremity Trauma Research Consortium (METRC) trials and American Academy of Orthopaedic Surgeons (AAOS) registries.

Research highlighted in this journal is current. During the previous calendar year our residents and/or faculty contributed to over 30 peer-reviewed publications (including manuscripts in the Journal of Bone & Joint Surgery and Journal of American Academy of Orthopaedic Surgeons). We presented or moderated (at times receiving awards) at annual meetings for the AAOS, American Orthopaedic Association, regional orthopaedic organizations, and several orthopaedic subspecialty societies including the Orthopaedic Trauma Association (OTA), Pediatric Orthopaedic Society of North America, International Pediatric Orthopaedic Symposium, American Society for Surgery of the Hand, and more.

Our residents excel at serving the national orthopaedic community. Michael DeRogatis (PGY4) has shown extreme dedication on the AAOS Now editorial board by instigating (and often coauthoring) over 15 articles that covered a wide array of topics. He also serves on the resident advisory board for The Clinical Orthopaedic Society. Akhil Sharma (PGY4) and Margaret Higgins (PGY3) serve as resident members on the AAOS Resident Assembly. Samantha Weiss (PGY3) and Jonathan McKeeman (PGY3) serve as resident members on the OTA Humanitarian Committee and the AOSSM Membership Committee, respectively.

This year's research fellow, Neil Jain, has done an excellent job learning, mentoring, proactively moving projects into the next phase, improving the protocol with which we initiate data use agreements, and serving as a centerpiece for all research-related activities. Our eagerness to provide opportunities for the Temple / St. Luke's School of Medicine (and other regional medical schools) persists. The hard work of all our medical students was demonstrated in several podium or poster presentations and publications.

We hope this journal compliments the selfless efforts of everyone involved in our department's continued accomplishments. On to the next year!

Dustin A. Greenhill, M.D., FAOA, FAAOS
Pediatric Orthopaedic Surgery & Scoliosis
Associate Program Director, Orthopaedic Surgery Residency
St. Luke's University Health Network
Assistant Clinical Professor (Adjunct), Temple University School of Medicine

Year in Review

New Orthopaedic Faculty 2024 - 2025

Nicholas Genovese
Hand Surgery
Fellowship:
Beth Israel Deaconess Medical Center

Michael Doran
Sports Medicine
Fellowship:
University of Michigan

Roland Howard
Sports Medicine
Fellowship:
Thomas Jefferson University

David Kirby
Hand Surgery
Fellowship:
Thomas Jefferson University

Ajay Kanakamedala
Sports Medicine
Fellowship:
Steadman Philippon Sports Medicine Fellowship

Visiting Professors

Scott Porter

Scott E. Porter, MD, MBA, Senior Director of the American Board of Orthopaedic Surgery (ABOS) and Vice Chair of Operations in the Department of Orthopaedic Surgery at Prisma Health-Upstate, delivered a thought-provoking lecture that challenged traditional approaches to diversity in medicine, encouraging a broader and more inclusive perspective on the topic. Reflecting on his journey as the first Black resident in one of the nation's top orthopaedic surgery programs, Dr. Porter shared insights into systemic inequities in medicine, urging a shift toward addressing both racial disparities and the critical role of socioeconomic barriers in shaping access to opportunities in healthcare and medical education.

Dr. Porter emphasized the importance of recognizing privilege and bias while advocating for a reevaluation of traditional diversity efforts to focus on economic disparities as a driving force for inequity. Through candid anecdotes and provocative questions, he challenged the audience to confront uncomfortable truths and consider a more inclusive framework for addressing disparities. His lecture served as a compelling call to action to build a more equitable medical community by tackling the socioeconomic divide in healthcare education.

Visiting Professors *(continued)*

Antonia Chen

Dr. Antonia Chen, MD, MBA, is a renowned orthopedic surgeon and Chair of the Department of Orthopaedic Surgery at the University of Texas Southwestern. She delivered an insightful presentation on the importance of preoperative patient optimization to improve outcomes in total joint arthroplasty (TJA). She explained how addressing modifiable risk factors like obesity, malnutrition, diabetes, smoking, and alcohol use can significantly reduce complications, including periprosthetic joint infections (PJIs), which are a leading cause of TJA failure. Drawing on evidence from clinical studies, Dr. Chen highlighted successful interventions such as MSSA/MRSA screening and decolonization, nutritional supplementation, anemia management, and smoking cessation. She emphasized the need for a multidisciplinary approach, involving specialists like nutritionists and endocrinologists, to prepare patients for surgery effectively.

Dr. Chen also shared practical recommendations for healthcare providers, including preoperative use of essential amino acids, iron supplementation, and vitamin D therapy to enhance recovery and reduce risks. She underscored the importance of maintaining strict glucose control in diabetic patients and reducing preoperative opioid use to improve postoperative outcomes. Her presentation concluded with a strong call to action for continued focus on infection prevention techniques throughout the surgical process and a collaborative effort to optimize patient conditions preoperatively.

James Kang

James Kang, MD, Chairman of Orthopedic Surgery at Brigham and Women's Hospital and the Thomas S. Thornhill Professor of Orthopedic Surgery at Harvard Medical School, delivered an impactful lecture on conflicts of interest in medicine. Dr. Kang explored how financial incentives in healthcare can sometimes overshadow patient welfare, sharing real-world examples from his career to illustrate the ethical dilemmas these conflicts create. While acknowledging the potential for industry collaboration to drive medical innovation, he emphasized the need for transparency and ethical standards to ensure decisions align with patients' best interests.

Dr. Kang also highlighted the financial pressures faced by physicians, particularly in high-demand specialties such as orthopedics and spine surgery, where incentives like consulting fees and research funding can influence clinical choices. He advocated for clearer and more accurate disclosure of these relationships, stressing that underreporting undermines public trust. His lecture served as a compelling call to action for healthcare professionals to prioritize integrity and uphold ethical practices while navigating the complexities of industry relationships.

Visiting Professors *(continued)*

Asif Ilyas

Dr. Asif Ilyas is a distinguished orthopedic surgeon specializing in hand and upper extremity surgery, who serves both as a professor at Thomas Jefferson University and Program Director of the Hand Surgery Fellowship at Rothman Orthopaedics, and as a friend and former co-resident to our Program Director Dr. Matullo. Dr. Ilyas has become a key voice in tackling the opioid crisis in healthcare. He's published extensively on pain management and serves on boards like the Rothman Opioid Foundation, making him a leader in both clinical practice and education. In his talk he focused on addressing the opioid crisis through evidence-based pain management strategies.

In his grand rounds talk he shined a light on the significant role orthopedic surgeons play in addressing the opioid epidemic. He breaks down three practical strategies: avoiding over-prescription, using multi-modal regimens that include alternatives like NSAIDs and local anesthetics, and educating patients to reduce voluntary opioid use. His approach is simple yet impactful, grounded in research and proven to maintain effective pain control while cutting down on opioid dependency. Dr. Ilyas's insights offer actionable solutions to one of the most pressing challenges in modern healthcare.

Kevin Bozic

Kevin J. Bozic, MD, MBA, Chair of Surgery and Perioperative Care at Dell Medical School at The University of Texas at Austin and President of the American Academy of Orthopaedic Surgeons (2023-2024), delivered an engaging Grand Rounds lecture on value-based healthcare. Drawing on decades of experience in healthcare policy, payment reform, and surgical innovation, Dr. Bozic emphasized the need to shift the focus from care to health—ensuring that healthcare systems prioritize patient outcomes rather than procedure volume or cost efficiency alone. He provided a historical overview of value-based care, highlighting its origins in the work of Michael Porter and Elizabeth Teisberg, and explained how competition based on patient-centered value can drive better healthcare outcomes.

Dr. Bozic illustrated how his team at Dell Medical School has implemented multidisciplinary care models that align incentives with health improvements rather than service utilization. He stressed the importance of measuring outcomes that truly matter to patients—such as pain relief, function, and quality of life—rather than traditional process metrics. By integrating patient-reported outcomes into clinical workflows and shared decision-making tools, his team has improved both patient satisfaction and surgical efficacy. Concluding with a discussion on payment models, he advocated for systems that reward improvements in health per dollar spent rather than perpetuating inefficiencies in care delivery. His thought-provoking lecture underscored the urgent need for leadership in healthcare transformation and encouraged clinicians to take an active role in shaping the future of value-based care.

St. Luke's Orthopedic Surgery

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Douglas Lundy, MD
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Chairman, Dept of Orthopedics


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Hand & Elbow
Vice Chairman


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Joint Replacement


Patrick Brogle, MD
Trauma &
Joint Replacement


Gregory Carolan, MD
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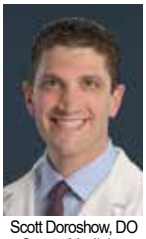
Donald Diverio, DO
General


Michael Doran, MD
Sports Medicine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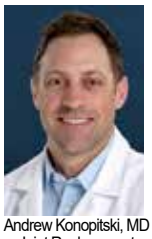
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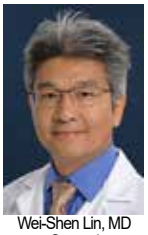
James Lachman, MD
Foot & Ankle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General


Justin Miller, DO
Orthopedic Oncology
& General


Anastassia Newbury, MD
Hand & Elbow


Chinenye Nwachuku, MD
Trauma &
Joint Replacement


Ryan O'Donnell, MD
Sports Medicine


Scott Polansky, DO
Trauma


Eric Pridgen, MD
Sports Medicine


Jeremy Raducha, MD
Hand & Elbow


Hithem Rahmi, DO
Shoulder & Elbow


David Ramski, MD
Trauma


James Sacco, DO
General


Adam Sadler, DO
Joint Replacement


Tyler Smith, DO
Sports Medicine


Gonzalo Sumarriva, MD
Hand & Elbow


William Tenpenny, DO
Sports Medicine


Colin Whitaker, MD
Spine Surgery


Kimberly Zambito, MD
Hand & Elbow

St Luke's
Orthopedic Care

10/2024

Chief Resident

Brendan Smith

Brendan Smith, MD was born and raised in Westfield, NJ. He graduated from the University of Maryland and obtained his medical degree from Rutgers New Jersey Medical School. He pursued a career as an orthopaedic surgeon because he valued the remarkable impact orthopaedics can have on a patient's quality of life. He was honored to have matched at St. Lukes University Health Network and has been grateful for the opportunities and experiences he has had here. His favorite aspect of training has been the connections he has made with his co-residents and attending mentors. Brendan will be completing a fellowship in Adult Reconstruction at the Florida Orthopedic Institute in Tampa, Florida.

St. Luke's Orthopedic Surgery Residents 2024-25


Brendan Smith, MD
PGY-5


Ryan De Leon, MD
PGY-4


Michael DeRogatis, MD
PGY-4


Akhil Sharma, MD
PGY-4

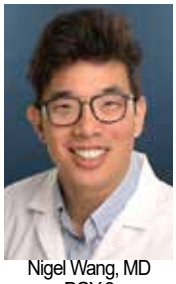

Margaret Higgins, MD
PGY-3


Jonathan McKeeman, MD
PGY-3


Samantha Weiss, MD
PGY-3


Trevor Luck, MD
PGY-2


Dhairya Shukla, MD
PGY-2


Nigel Wang, MD
PGY-2


Robert Gomez, MD
PGY-1


Nareena Imam, MD
PGY-1


Santiago Rengifo, MD
PGY-1

St Luke's
Orthopedic Care

10/2024

Research Division

Scholarly Activity 2024-2025 - Publications

1. DeRogatis MJ, Pellegrino AN, Wang N, Higgins M, Dubin J, Issack P, Sokunbi G, Brogle P, Konopitski A. Enhancing recovery and reducing readmissions: The impact of remote monitoring on acute postoperative care in outpatient total joint arthroplasty. J Orthop. 2024 Jun 26;58:111-116.

2. DeRogatis MJ, Malige A, Wang N, Dubin J, Issack P, Sadler A, Brogle P, Konopitski A. Comparative analysis of acute blood loss anemia in robotic assisted vs. manual instrumented total knee arthroplasty. J Orthop. 2024 Apr 16;55:105-108.

3. Dubin JA, Bains SS, DeRogatis MJ, Moore MC, Hameed D, Mont MA, Nace J, Delanois RE. Appropriateness of Frequently Asked Patient Questions Following Total Hip Arthroplasty From ChatGPT Compared to Arthroplasty-Trained Nurses. J Arthroplasty. 2024 Sep;39(9S1):S306-S311.

4. Malige A, DeRogatis M, Michaud A, Usewick M, Ng-Pellegrino A. The Evolution of Anesthetic Management for Total Knee Arthroplasty (TKA) patients: A hospital network experience. J Orthop. 2024 Jun 24;58:10-15.

5. Dubin JA, Hameed D, Bains SS, Monárrez R, Swartz GN, DeRogatis M, Mont MA, Nace J, Delanois RE. A Comparison Between Polyethylene Exchange and Full Revision for Arthrofibrosis Following Total Knee Arthroplasty. J Arthroplasty. 2024 Sep;39(9):2363-2367.

6. Higgins MJ, Gomez RW, Storino M, Jessen D, Lamb ZJ, Jain N, Greenhill DA. Pediatric Orthopaedic Surgeons Manage Pediatric Diaphyseal Clavicle Fractures Differently Than Nonpediatric Orthopaedic Specialists. J Pediatr Orthop. 2024 Nov 12.

7. McKeeman J, Lee R, Smith T. Knee dislocation with concomitant patellofemoral dislocation: A systematic review. J Orthop. 2024 Oct 19;62:84-89.

8. McKeeman JD, Greenhill DA, Sharma A, Harrast JJ, Martin DF, Lundy DW. Do Half of Orthopaedic Surgeons Change Jobs within Their First 2 Years?: An Analysis Using the American Board of Orthopaedic Surgery Database. J Bone Joint Surg Am. 2024 Sep 26.

9. Luck T, Zaki PG, Slotkin EM, Michels R, Ong A, Butts CA. Age-Adjusted Modified Frailty Index: Association With Hip Fracture Discharge Functional Dependence. J Surg Res. 2024 Mar;295:214-221.

10. Konopitski AP, Jones H, Mathis KB, Noble PC, Rodriguez-Quintana D. Wearing a Surgical Vest With a Sterile Surgical Helmet System Decreases Contamination of the Surgical Field. J Arthroplasty. 2024 Sep;39(9):2377-2382.

11. Gomez RW, McHugh RC, Shukla D, Greenhill DA. Flexible Intramedullary Nail Placement in Pediatric Humerus Fractures. JBJS Essent Surg Tech. 2024 Nov 8;14(4):e23.00071.

12. Gomez RW, Jessen D, Storino M, Lamb ZJ, Wang NK, Jain N, Greenhill DA. When to Radiate and When to Stop? Timing Radiographic Surveillance During Nonoperative Treatment of Pediatric Diaphyseal Clavicle Fractures. J Pediatr Orthop. 2025 Jan 1;45(1):e18-e22.

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Scholarly Activity 2024-2025 - Publications *(continued)*

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Research Division

Scholarly Activity 2024-2025 - Presentations

1. Malige A, DeRogatis MJ, Michaud A, Usewick M, Ng-Pellegrino A. The Evolution of Anesthetic Management for Total Knee Arthroplasty (TKA) patients: A hospital network experience. Clinical Orthopaedic Society Annual Meeting. Tampa, FL, September 2024. (Poster)

2. Sharma A, De Leon R, Malige A, Lachman JR. Does a Patient's Ability to Localize their Pain Improve Patient Outcomes and Decrease the Cost of Care? A Prospective Cohort Review." American Association of Orthopaedic Surgeons Annual Meeting. San Francisco, CA, February 2025. (Podium)

3. McKeeman JD, Lee R, Cush C, Lachman J. The Effect on Ankle and Great Toe Range of Motion Depends on Surgical Approach Utilized: A Retrospective Cohort Study with Patient Reported Outcomes. American Association of Orthopaedic Surgeons Annual Meeting. San Diego, CA, March 2025. (Poster)

4. McKeeman JD, Renzi T, Lee R, Matullo K: An analysis of factors contributing to delays in surgery at a Level 1 Trauma Center prior to implementation of a Dedicated Orthopaedic Trauma Room. American Association of Orthopaedic Surgeons Annual Meeting. San Diego, CA, March 2025. (e-Poster)

5. McKeeman JD, Renzi T, Lee R, Matullo K: An analysis of factors contributing to delays in surgery at a Level 1 Trauma Center prior to implementation of a Dedicated Orthopaedic Trauma Room. Philadelphia Orthopaedic Trauma Symposium. Philadelphia, PA, June 2024. (Poster)

6. Higgins MJ, McKeeman JD, Greenhill DA, Harrast JJ, Martin DF, Lundy DW. Is 50% a Myth of Reality? Early Career Practice Change Rates According to the American Board of Orthopaedic Surgery Database. Twentieth Century Orthopaedic Association Annual Meeting. Lake Geneva, WI, August 2024. (Podium)

7. McKeeman JD, Weiss SN, Gomez R, Hast M, Friday C, Higgins MJ, Lundy DW: Biomechanical Comparison of Cephalomedullary and Reconstruction Nails Used in the Treatment of Subtrochanteric Femur Fractures. Orthopaedic Trauma Association Annual Meeting. Montreal, ON, October 2024. (Podium)

8. McKeeman JD, Weiss SN, Gomez R, Hast M, Friday C, Higgins MJ, Lundy DW. Biomechanical Comparison of Cephalomedullary and Reconstruction Nails Used in the Treatment of Subtrochanteric Femur Fractures. Eastern Orthopaedic Association Annual Meeting. Palm Beach, FL, October 2024. (Podium)

9. Gomez RW, Higgins MJ, Storino M, Strouse A, Wang NK, Zachary Zook Z, Greenhill DA. On-Site 3D-Printed Casts Improve Function and Satisfaction in Stable Pediatric Distal Third Forearm Fractures. American Society for Surgery of the Hand Annual Meeting. Minneapolis, MN, September 2024. (Poster)

10. Gomez RW, Walsh A, Matullo KM. Enhancing Healing with Non-Contact Low-Frequency Ultrasound in Fingertip Amputation Treatment: A Comparative Pilot Study. American Society for Surgery of the Hand Annual Meeting. Minneapolis, MN, September 2024. (Podium)

11. Gomez RW, Higgins MJ, Jessen D, Storino M, Lamb Z, Wang NK, Greenhill DA. Timing Radiographs During Nonoperative Treatment of Pediatric Diaphyseal Clavicle Fractures. Eastern Orthopaedic Association Annual Meeting. Palm Beach, FL, October 2024. (Poster)

12. Higgins MJ, Gomez RW, Jessen D, Storino M, Lamb Z, Jain N, Greenhill DA. Pediatric Orthopaedic Surgeons Manage Pediatric Diaphyseal Clavicle Fractures Differently Than Non-Pediatric Orthopaedic Specialists. Eastern Orthopaedic Association Annual Meeting. Palm Beach, FL, October 2024. (Poster)

13. DeRogatis MJ, Gomez R, Higgins MJ, Issack PS, Lundy D. Periprosthetic Fracture Rate in Elderly Patients Undergoing Hip Hemiarthroplasty: A Comparison of Fit-and-Fill, Tapered-Wedge, and Cemented Stems. Eastern Orthopaedic Association Annual Meeting. Palm Beach, FL, October 2024. (Podium)

Scholarly Activity 2024-2025 - Presentations *(continued)*

14. DeRogatis MJ, Gomez R, Higgins MJ, Issack PS, Lundy D. Periprosthetic Fracture Rate in Elderly Patients Undergoing Hip Hemiarthroplasty: A Comparison of Fit-and-Fill, Tapered-Wedge, and Cemented Stems. Clinical Orthopaedic Society Annual Meeting. Tampa, FL, September 2024. (Poster)

15. DeRogatis MJ, Gomez R, Higgins MJ, Issack PS, Lundy D. Periprosthetic Fracture Rate in Elderly Patients Undergoing Hip Hemiarthroplasty: A Comparison of Fit-and-Fill, Tapered-Wedge, and Cemented Stems. Pennsylvania Orthopaedic Society Annual Meeting. Lafayette Hills, PA, October 2024. (Podium)

16. DeRogatis MJ, Gomez R, Higgins MJ, Issack PS, Lundy D. Periprosthetic Fracture Rate in Elderly Patients Undergoing Hip Hemiarthroplasty: A Comparison of Fit-and-Fill, Tapered-Wedge, and Cemented Stems. 16th Annual Philadelphia Orthopaedic Trauma Symposium. Philadelphia, PA, June 2024. (Poster)

17. DeRogatis MJ, Pellegrino AN, Wang N, Higgins M, Dubin J, Issack P, Sokunbi G, Brogle P, Konopitski A. Enhancing recovery and reducing readmissions: The impact of remote monitoring on acute postoperative care in outpatient total joint arthroplasty. Clinical Orthopaedic Society Annual Meeting. Tampa, FL, September 2024. (Poster)

18. DeRogatis MJ, Malige A, Wang N, Dubin J, Issack P, Sadler A, Brogle P, Konopitski A. Comparative analysis of acute blood loss anemia in robotic assisted vs. manual instrumented total knee arthroplasty. Clinical Orthopaedic Society Annual Meeting. Tampa, FL, September 2024. (Poster)

19. DeRogatis MJ, Gomez R, Miner N, McHugh R, Pellegrino AN, Gould W, Bubba D, Carmona A, Lundy D. Reducing AKI Rates: Individualized Fluid Protocol with Plethysmography and Hemoglobin. Clinical Orthopaedic Society Annual Meeting. Tampa, FL, September 2024. (Podium)

20. Weiss SN, Higgins MJ, McKeeman JD, Lachman JR. "I can't exercise because my foot hurts me too much." Does BMI change after common foot and ankle surgeries? A retrospective review. American Orthopaedic Foot and Ankle Society. Tampa, FL. January 2024. (Poster)

21. Weiss SN, Jain N, Gomez R, Fedoryszak K, Pellegrino AN, Matullo KS. The Efficacy of Ultrasound Guided Supraclavicular Nerve Blocks with Liposomal Bupivacaine in Managing Postoperative Pain for Finger, Hand, Wrist and Elbow Surgery A Prospective, Randomized, Controlled Study. Philadelphia Trauma Symposium. Philadelphia, PA. June 2024. (Poster)

22. Weiss SN, Jain N, Gomez R, Fedoryszak K, Pellegrino AN, Matullo KS. The Efficacy of Ultrasound Guided Supraclavicular Nerve Blocks with Liposomal Bupivacaine in Managing Postoperative Pain for Finger, Hand, Wrist and Elbow Surgery A Prospective, Randomized, Controlled Study. American Society for Surgery of the Hand. Minneapolis, MD. September 2024. (Podium)

23. Weiss SN, Jain N, Gomez R, Fedoryszak K, Pellegrino AN, Matullo KS. The Efficacy of Ultrasound Guided Supraclavicular Nerve Blocks with Liposomal Bupivacaine in Managing Postoperative Pain for Finger, Hand, Wrist and Elbow Surgery A Prospective, Randomized, Controlled Study. Eastern Orthopedic Association. Palm Beach, FL. October 2024. (Podium)

24. Weiss SN, Jain N, Gomez R, Fedoryszak K, Pellegrino AN, Matullo KS. The Efficacy of Ultrasound Guided Supraclavicular Nerve Blocks with Liposomal Bupivacaine in Managing Postoperative Pain for Finger, Hand, Wrist and Elbow Surgery A Prospective, Randomized, Controlled Study. American Academy of Orthopaedic Surgery. San Diego, CA. March 2025. (Podium)

25. Grega K, Higgins M, Jain N, Greenhill D. Hanging On or Falling Off? Monitoring Post-Reduction Alignment of Metaphyseal and Diaphyseal Forearm Fractures. International Pediatric Orthopaedic Society. Orlando, FL, December 2024. (Poster)

Research Division

Scholarly Activity 2024-2025 - Presentations *(continued)*

26. Jain N, Wang N, Quintana L, Hoy O, Pellegrino AN, Greenhill D. Intraoperative Methadone Reduces Early Postoperative Opioid Intake After Idiopathic Scoliosis Surgery. International Pediatric Orthopaedic Symposium. Orlando, FL, December 2024. (Poster)

27. Smith B, Dehkes E, Kyser J, Jain N, Greenhill D. Does a Knee Effusion in a Pediatric Patient Predict Relevant Pathology? International Pediatric Orthopaedic Symposium. Orlando, FL, December 2024. (Poster).

28. Luck T, Greenhill D. Less Time, Same Results: A New Focused Protocol for Magnetic Resonance Imaging in Presumed Idiopathic Scoliosis. International Pediatric Orthopaedic Symposium. Orlando, FL, December 2024. (Poster)..

Scholarly Activity 2024-2025 - Editorials

1. DeRogatis MJ, Issack PS. OVT Video Details Superior Pubic Ramus Screw Fixation in Revision Hip. AAOS Now. February 2025.
2. Jain N, DeRogatis MJ. OVT Video Details Technique for Applying an Anteromedial Ankle Hematoma Block. AAOS Now. February 2025.
3. Jain N, DeRogatis MJ. OVT Video Demonstrates Technique for Managing Posterior Wall Acetabular Fracture Using Greater Trochanter Allograft. AAOS Now. January 2025.
4. Jain N, DeRogatis MJ. How to Use a 3D-Printed Cutting Guide for Open Allograft Reconstruction of the Proximal Humerus. AAOS Now. January 2025.
5. DeRogatis MJ, Issack PS. Getting Geriatric Hip Fractures to the OR within 24 Hours is Critical to Reduce the Risk of Complications, Mortality. AAOS Now. December 2024.
6. DeRogatis MJ, Jain N. OVT Video Demonstrates Modified Method for Coaptation Splinting of Humeral Diaphysis Fracture. AAOS Now. December 2024.
7. Zambito K, Bush A, DeRogatis MJ. Radiofrequency Echographic Multi-Spectometry Delivers a New Form of Ultrasound to Assess Bone Density and Quality. AAOS Now. December 2024.
8. DeRogatis MJ, Issack PS. Management of Pathological Proximal Femur Fractures: Challenges and Surgical Considerations. AAOS Now. November 2024.
9. DeRogatis MJ, Jain N, Issack PS. OVT Video Details Internal Hemipelvectomy for Chondrosarcoma with Custom Pelvic Reconstruction. AAOS Now. November 2024.
10. DeRogatis MJ, Issack PS. OVT Video Details Technique for Distal Femur Replacement from High-Grade Chemoresistant Osteosarcoma. AAOS Now. November 2024.
11. DeRogatis MJ, Higgins MJ, Issack PS. The Collaboration between the Medical Device Industry and Surgeons Continues to Drive Advancements in Patient Care. AAOS Now. October 2024.
12. DeRogatis MJ, Issack PS. Report Details Use of Marlex Hernia Mesh for Reconstruction of Failed Extensor Mechanism in TKA. AAOS Now. July 2024.
13. Higgins MJ, DeRogatis MJ, LaPorte D. Infertility: The Hidden Cost of Orthopaedic Training. AAOS Now. July 2024
14. DeRogatis MJ, Spiegel D. Navigating the Spectrum and Intricacies of Osteomyelitis: Organisms, Hosts, Antibiotics, and Surgery. AAOS Now. June 2024.
15. DeRogatis MJ, Issack PS. Indications and Technique: Contemporary Hip Arthroscopy for Femoroacetabular Impingement. AAOS Now. May 2024.
16. Sharma, A. Orthopaedic Leaders Discuss Recent Surgical Innovations and Where the Specialty is Heading. AAOS Now. November 2024.

Research Division - Research Fellow

NEIL JAIN, MD

Serving as the 2024-2025 Research Fellow for the Department of Orthopaedic Surgery has been a rewarding experience. The position has provided opportunities to pursue projects in multiple subspecialties and connect with professionals across the health network. In addition, many of the residents and attendings have served as mentors in teaching me how to conduct high-quality research.

Studies we worked on this year examined the role of artificial intelligence in orthopaedics, dynamic anterior stabilization techniques for shoulder instability, and femoral fixation for revision total hip arthroplasty. These investigations have allowed me to collaborate with multidisciplinary teams, including other specialty care members, the local IRB office, and the Clinical Trials Office. I strongly believe these interactions have facilitated my professional and personal growth as a physician.

Over the past year, we were able to expand our participation in prospective studies and this resulted in multiple abstracts getting presented at national meetings. Being able to assist with these projects has allowed me to lead teams of investigators, understand study design, and improve my scientific reading and writing skills. I have no doubt that the impressive work done this year will foster future relationships and additional academic opportunities.

I am grateful to the St. Luke's Orthopaedic Department for allowing me to be participate in experiences tailored towards preparing me to excel as a resident physician. This has included attending didactics, journals clubs, and cadaveric labs. Being able to learn from senior residents and attendings has given me a clear picture of the type of leader and future resident I aim to be. I wholeheartedly recommend this fellowship for those interested in expanding their orthopaedic knowledge and engaging in high quality research.

Resident Abstract

A Knee Effusion in a Child Predicts Intra-Articular Pathology

Erik Dehkes[1], Cole Cushman[1], Jackson Kyser[1], Neil Jain[2], Brendan Smith[2], Dustin Greenhill[2]
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Abstract

Introduction: A knee effusion in a pediatric patient with typically healthy anatomy is diagnostically concerning. The decision to pursue advanced imaging is multifactorial, often balancing cost with pre-test probability of discovering pathology that changes management. This study aimed to determine the incidence of, and predictive values associated with, intra-articular pathology in pediatric patients with a knee effusion.

Methods: Patients ≤16 years old over an 8-year period (2016-2024) within a large health network were retrospectively reviewed. A knee effusion was considered present if at least one of three qualifying criteria were satisfied: visualized effusion during physical exam, effusion on plain radiograph, or effusion on magnetic resonance imaging (MRI). Exclusion criteria were insufficient medical records, prior surgery on the imaged knee, and presentation >6 weeks after injury. Surgical rates were recorded.

Results: Among 1474 patients with a knee MRI, 1148 (77.9%) had diagnostic findings. 840 (57.0%) patients reported history of recent trauma. The most common findings on MRI were ligamentous pathology (n = 394, 26.7%), patellar instability (n = 252, 17.1%), and meniscal tear (n = 234, 15.9%). The positive and negative predictive values of a knee effusion being associated with diagnostic findings on MRI were 88.8% and 63.0%, respectively. Presentation with a knee effusion was significantly associated with intra-articular pathology on MRI ($p < 0.001$). Among all 1163 patients with a knee effusion, 345 (29.7%) ultimately underwent surgery. Among 360 surgical patients, 345 (95.8%) had a knee effusion.

Conclusion: The presence of a knee effusion in pediatric patients is highly predictive of underlying pathology but not surgery. Patients with surgical indications had a high prevalence of knee effusion. A knee effusion in a child should be considered a qualifying indication for advanced imaging.

Level of Evidence: IV, retrospective case series

Table 1: Frequency of Diagnoses and Surgical Intervention in Pediatric Patients With and Without Knee Effusion

	Effusion	No Effusion	Total	p-value
Number of patients, *n*	**1163**	**311**	**1474**	
Time to orthopedic evaluation after injury (days)	6.2 ± 7.3	10.5 ± 9.8	7.1 ± 8.1	<0.001
Time from injury to MRI order (days)	13.1 ± 18.1	31.4 ± 48.2	17.0 ± 28.3	<0.001
Surgical Intervention required, *n (%)*	345 (29.7)	15 (4.8)	360 (24.4)	<0.001
Any pathology on MRI	1149	325	1474	<0.001
MRI Results, *n*				
Ligamentous Pathology	372	22	394	
Meniscal Pathology	234	8	242	
Fractures	162	12	174	
Patellar Instability	252	21	273	
Osteochondral Pathology	66	8	74	
Infectious Pathology	12	0	12	
Malignant Bone Lesion	0	1	1	
Isolated soft tissue or bony contusion	165	39	204	
Tendinitis	7	5	12	
Bursitis	16	2	18	
Total	1568	313		

Table 1 Legend: Study data including the number of patients requiring surgery based on the presence of knee effusion as well as the incidence of various knee pathologies seen on MRI in patients with or without knee effusion. P-values reported where applicable using Chi-Squared test. $P < 0.05$ was considered significant. The number of MRI findings is higher than the number of total patients accounting for occasional multiple findings within a single patients MRI study.

Resident Abstract

Notch width index differences when measured on axial and coronal MRI

Jonathan McKeeman[1], Ryan DeLeon[1], Neil Jain[1], Daniel Heckman[1]
[1]St. Luke's University Health Network, Department of Orthopedic Surgery

Abstract

Introduction: There are several known risk factors for ACL injury. Among them, the notch width index (NWI) can be measured using either coronal or axial MRI images. However, measurement variability between the coronal versus axial plane is unknown. This study compared coronal versus axial NWI measurements in ACL injured patients.

Methods: Patients ≥14 years of age with a confirmed ACL injury on MRI were included for review. Two orthopedic resident physicians measured the NWI using both axial and coronal cuts using previously described measurement criteria as well as a modification utilizing the MRI cuts with the widest bicondylar width. The NWI was computed, and a t-test was performed to compare the axial and coronal measurements. Inter-observer reliability was assessed using two-way mixed intraclass correlation (ICC).

Results: 64 patients with ACL injuries were included. Modified axial and coronal NWIs for the cohort were 0.27 (SD = 0.02) and 0.23 (SD = 0.02), respectively. Modified axial NWIs were greater than coronal NWIs ($p < 0.001$). Standard axial and coronal NWIs for the cohort were 0.29 (SD ± 0.03) and 0.25 (SD = 0.03), respectively. Standard axial NWIs were greater than coronal NWIs ($p < 0.001$). Modified axial and coronal NWIs for males and females were not different ($p=0.61$, $p=0.14$, respectively). Axial notch width measurements were greater than coronal notch widths for both modified and standard measurements ($p < 0.001$). Axial intercondylar distances were not different from coronal intercondylar distances for both standard and modified measurements ($p=.59$ and $p= 0.82$ respectively). The ICC for modified coronal and axial NWIs were 0.88 and 0.97, respectively. The ICC for standard coronal and axial NWIs were 0.99 and 0.99, respectively.

Conclusions: The notch-width index measures greater on an axial (versus coronal) MRI plane. This was likely due to notch widths being measured as wider on axial imaging. This finding may help surgeons identify risk factors for ACL injury with greater detail.

Level of Evidence: Level IV case series

Table 1: Patient Demographic Information

Patient Demographics	
Age	26.54 yrs (SD ± 12.14)
Male: Female Ratio	36 (56.25%): 28 (43.75%)
Contact: Noncontact Injury Ratio	15 (23.44%): 49 (76.56%)
Race	80% white, 14% black, 2% mixed, 2% Asian, 3% other
Ethnicity	84% non-Hispanic, 14% Hispanic, 2% other

Table 2: Details on Notch Width Index Measurements

Notch Width Index Measurements				
	Standard	**p-value**	**Modified**	**p-value**
Axial Bicondylar Width	7.13 (SD ± 0.60)	(p = 0.59)	7.70 (SD ± 0.66)	(p = 0.82)
Coronal Bicondylar Width	7.18 (SD ± 0.60)		7.72 (SD ± 0.66)	
Axial Notch Width	2.03 (SD ± 0.28)	**p < 0.001**	2.09 (SD ± 0.26)	**p < 0.001**
Coronal Notch Width	1.83 (SD ± 0.25)		1.78 (SD ± 0.23)	
Axial NWI	0.29 (SD ± 0.03)	**p < 0.001**	0.27 (SD ± 0.02)	**p < 0.001**
Coronal NWI	0.25 (SD ± 0.03)		0.23 (SD ± 0.02)	

Resident Abstract

Periprosthetic Femur Fractures in Hemiarthroplasty are Correlated with Stem Type: An Analysis from the American Joint Replacement Registry

Michael J. DeRogatis[1], Margaret J. Higgins[1], Isabella Zaniletti[2], Paul S. Issack[3], Antonia F. Chen[4], Douglas W. Lundy[1]

[1]St. Luke's University Health Network, Bethlehem, PA; [2]American Academy of Orthopaedic Surgeons, Combined Analytics Team, [3]New York Presbyterian Hospital, New York, NY, [4]UT Southwestern Medical Center, Dallas, TX

Abstract

Introduction: Periprosthetic femur fractures are a known complication following hip hemiarthroplasty (HA) in geriatric patients. The association between femoral stem design (cemented taper slip, cemented composite beam, uncemented fit-and-fill, and uncemented tapered wedge) and periprosthetic femur fracture risk remains unclear. This study aimed to assess (1) the link between stem geometry and periprosthetic femur fracture risk and (2) the impact of collar on fracture rates.

Methods: Data from the American Joint Replacement Registry (AJRR) included 47,989 HA cases in patients aged 70 and older from 2012 to 2021. Outcomes were followed through December 2023, capturing periprosthetic fracture rates and reoperations. Cemented composite beam stems comprised 38% of implants with cemented taper slip at 1%, while fit-and-fill and tapered wedge stems accounted for 32% and 29%, respectively. Collared stems were present in 47% of cemented composite beam, 22% of fit-and-fill, and 27% of tapered wedge implants. Statistical analyses included the Hochberg method, Chi-Square tests, Cox models, and hazard ratios (HR).

Results: After adjusting for age, sex, Charlson Comorbidity Index, region, year, and comorbidities, collared cemented composite beam stems showed a significantly lower fracture risk compared to tapered wedge stems without a collar (HR 4.2, 95% CI 2.7–6.6; $p < 0.001$) and fit-and-fill stems without a collar (HR 3.6, 95% CI 2.3–5.7; $p < 0.001$). Fit-and-fill stems with a collar exhibited a threefold higher fracture risk compared to collared cemented composite beam stems ($p < 0.002$). The presence of a collar reduced fracture risk across all designs, with the most pronounced reduction seen in tapered wedge stems (0.95% vs. 0.44%). Fracture risk significantly declined over time (HR 0.9; $p = 0.005$).

Conclusion: For HA in patients over 70, cemented composite beam stems with a collar are associated with the lowest risk of periprosthetic femur fractures. Surgeons should consider these implants when selecting fixation strategies.

Level of Evidence: Therapeutic Level III

Table 1: Periprosthetic Fracture Outcome Rates **ORIF, open reduction and internal fixation.*

Group	Referent	Revision or ORIF for Periprosthetic Fracture	
		HR + 95% CI	**Adjusted p-value**
NonCollared Taper Wedge	Collared Cemented Composite Beam	4.22(2.69,6.62)	<.0001
NonCollared Fit-and-Fill	Collared Cemented Composite Beam	3.64(2.33,5.71)	<.0001
Collared Fit-and-Fill	Collared Cemented Composite Beam	3.03(1.73,5.3)	0.0017
NonCollared Cemented Composite Beam	Collared Fit-and-Fill	0.36(0.21,0.62)	0.003
NonCollared Taper Wedge	Collared Taper Wedge	2.6(1.54,4.39)	0.0056
NonCollared Fit-and-Fill	Collared Taper Wedge	2.24(1.33,3.78)	0.0337
NonCollared Taper Wedge	NonCollared Cemented Composite Beam	3.83(2.53,5.8)	<.0001
NonCollared Fit-and-Fill	NonCollared Cemented Composite Beam	3.31(2.19,5.01)	<.0001

**Based on separate one-way analysis of variance (ANOVA), Kruskal Wallis tests, or chi square tests, as appropriate; $p < .05$ denotes statistical significance, with no adjustment for the multiple comparisons.*

Resident Abstract

Hanging On or Falling Off? Monitoring Post-Reduction Alignment of Metaphyseal and Diaphyseal Forearm Fractures

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Abstract

Introduction: Loss of alignment (LOA) is the most common complication after closed reduction of pediatric forearm fractures. It is believed that LOA can occur up to three weeks post-reduction. Therefore, weekly radiographic surveillance is conventionally performed throughout this entire timeframe. With hopes of optimizing rote radiation protocols, we aimed to clarify the weekly incidence of LOA in pediatric forearm fractures.

Material and Methods: Patients ≤14 years old with an acute metaphyseal or distal/middle-third diaphyseal forearm fracture who underwent immediate closed reduction and cast application between July 2019-July 2024 were retrospectively reviewed. Patients were excluded if they were not amenable to closed management (i.e. open fractures, acutely surgical), underwent cast wedging or repeat reduction, had proximal third fractures, or had insufficient radiographs or follow-up. Post-reduction LOA was defined as >10° of interval angulation or new/recurrent bayonet apposition. We defined "minimal change" as <5° post-reduction angulation without new/recurrent bayonet apposition. Radiographs until union were recorded. Radiographic (±LOA) and clinical (±surgery) cohorts were analyzed.

Results: Among 119 patients who underwent closed reduction, 100 patients averaging 8.2±3.2 years old met inclusion criteria. Age, gender, and cast indices were similar between all cohorts. Patients who met minimal change criteria one week following initial closed reduction had an 84.6% positive predictive value (PPV) that acceptable alignment was maintained (no LOA) prior to radiographic union. Patients who met minimal change criteria two weeks following initial closed reduction had a 97.6% PPV that acceptable alignment was maintained (no LOA) prior to radiographic union.

Conclusion: In pediatric patients with a reduced forearm fracture, minimal change in radiographic alignment two weeks after reduction strongly predicts maintenance of alignment thus weekly surveillance can be discontinued. Conversely, patients trending toward loss of alignment at two weeks may be monitored the full three weeks per surgeon discretion.

Table 1: Patient Characteristics

Sex, *n*	***n=100***
Female	30
Male	70
Age, years (SD)	**8.2 (3.2)**
Fracture Characteristics, *n*	***n=100***
Laterality	
Left	57
Right	43
Fracture Region	
Metaphyseal	46
Diaphyseal	54
Distal 1/3rd	27
Middle 1/3rd	27
Indices, mean (SD)	***n=98***
Cast Index	0.77 (0.06)
Padding Index	0.17 (0.09)
Canterbury Index	0.94 (0.12)

Resident Abstract

Is 50% a Myth? Practice Change Rates According to the American Board of Orthopaedic Surgery Database

Margaret J. Higgins[1], Jonathan D. McKeeman[1], Dustin Greenhill[1], John J. Harrast[2], David F. Martin[3], Douglas W. Lundy[1]

[1]St. Luke's University Health Network, Bethlehem, PA, [2]Data Harbor Solutions, Chicago, IL, [3]Wake Forest University, Winston-Salem, NC

Abstract

Introduction: Although sources propagate a claim that half of orthopaedic surgeons leave their first practice within two to five years, the actual early-career practice change rate is unknown. A recent study demonstrated that only 5.7% of board-eligible orthopaedic surgeons left their first practice before taking the American Board of Orthopaedic Surgeons (ABOS) Part II Examination (which occurred, on average, two years into practice).1 This study aims to more accurately estimate early- to mid-career practice change rates by using ABOS recertification data.

Methods: The ABOS recertification application database identified orthopaedic surgeons who passed Part II between 2007 and 2009. Corresponding data using our previous study was matched to acquire practice location information throughout each surgeon's career. Surgeons who practiced outside of the United States and active-duty military surgeons were excluded. The incidence with which ABOS recertification applicants left their first practice by two years, five years, and after five years was determined. Annual practice change rates were then statistically compared between three distinct time periods of interest (Group 1: ≤ 2 years, Group 2: 2-5 years, and Group 3: >5 years until recertification).

Results: 1,608 orthopaedic surgeons applied for ABOS recertification approximately 8.9±1.0 years (range 8-16 years) after starting practice. Time period analyses determined that 7.7% changed practice within two years, 24.6% within 5 years, and 38.6% before recertification. There was a significant increase in the annual practice change rate after surgeons' first two years in practice (3.8% versus 5.7%, $p<0.001$) and then a significant decrease in the annual practice change rate after five years (5.7% versus 2.6%, $p=0.002$). Practice change rates between Group 1 and Group 3 were similar ($p= 0.166$).

Conclusions: Prior to recertification, 38.6% of ABOS certified orthopaedic surgeons leave their first job. Approximately one in four change practices within five years. Move rates peak after ABOS Part II. The unfounded presumption that 50% of orthopaedic surgeons change jobs within two to five years into practice is likely false.

Level of Evidence: IV

Figure 1: Percentage of orthopaedic surgeons who changed practice locations by year prior to recertification

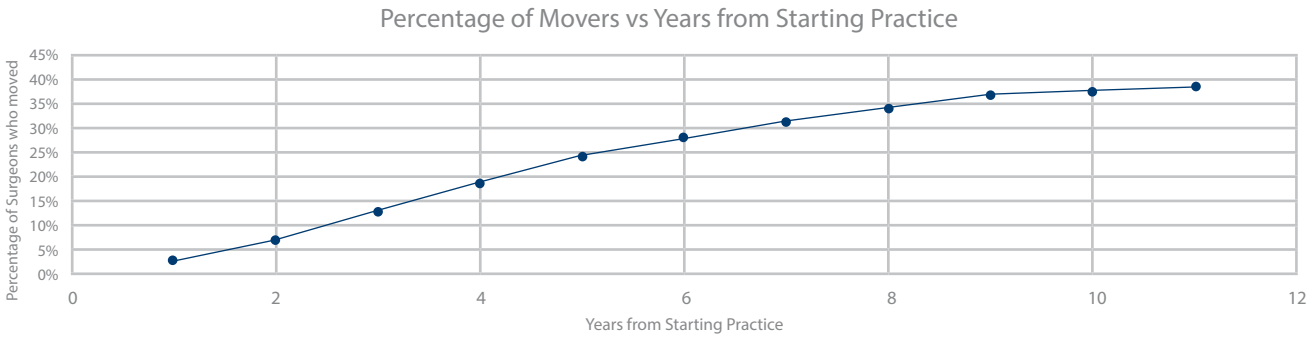
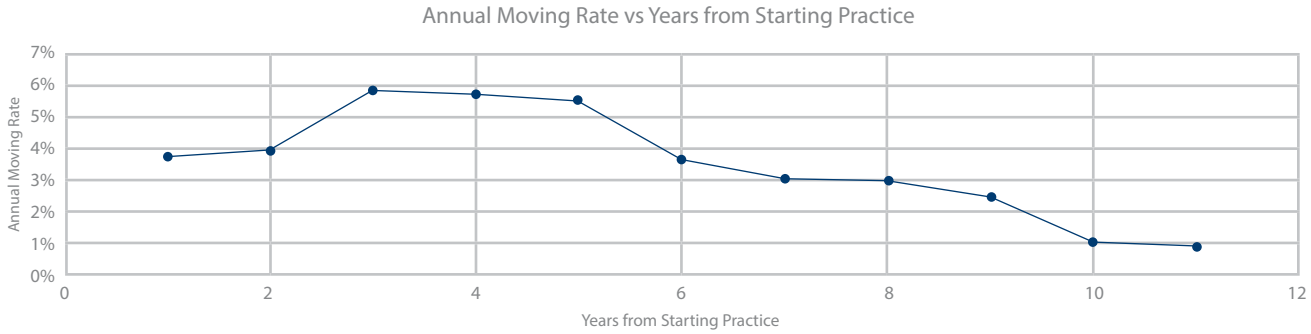


Figure 2: Annual moving rate of orthopaedic surgeons who changed practice locations by year prior to recertification



References:

1. McKeeman JD, Greenhill DA, Sharma A, Harrast JJ, Martin DF, Lundy DW. Do Half of Orthopaedic Surgeons Change Jobs within Their First 2 Years?: An Analysis Using the American Board of Orthopaedic Surgery Database. J Bone Joint Surg Am. Published online September 26, 2024.

Resident Abstract

Computed Tomography Overestimates Posterior Tilt in Geriatric Garden I/II Femoral Neck Fractures

Samantha Weiss[1], Neil Jain[1], Douglas Lundy[1], Dustin Greenhill[1]
[1]St. Luke's University Health Network, Bethlehem, PA

Abstract

Introduction: In 2019, data from the Fixation using Alternative Implants for the Treatment of Hip fractures (FAITH) trial concluded that surgeons should consider primary arthroplasty for elderly patients with a Garden I or II femoral neck fracture (FNF) when posterior tilt is ≥20°. After widespread adoption of this treatment recommendation, clinicians are now measuring posterior tilt on computed tomography (CT) when available. However, the FAITH trial only measured plain film hip radiographs. The correspondence of posterior tilt measured on X-ray versus CT is unknown.

Methods: Five trauma centers retrospectively reviewed surgically managed patients ≥65 years-old with Garden I/II FNFs in whom both acceptable preoperative hip X-rays and CT of the affected hip were available (between January 2018 to August 2024). Patients with an unacceptable lateral radiograph were excluded. Posterior tilt was measured on plain X-ray (PT-XR) and CT (PT-CT).

Results: After review of 1208 records, a total of 100 patients averaging 82±8 years old met inclusion criteria: 29 hemiarthroplasty, 71 internal fixation (IF). Mean measurements of PT-XR and PT-CT were 9° and 14°, respectively. X-ray identified 2 patients (2%) with a posterior tilt ≥20° while CT identified 17 (17%). For the additional 15 patients in whom arthroplasty may be indicated only by CT, the mean difference between PT-XR and PT-CT was 25±15°. Among patients receiving a hemiarthroplasty, PT-XR and PT-CT accurately predicted treatment in 6.9% and 41.4% of cases, respectively.

Conclusions: Plain X-ray underestimates posterior tilt for nondisplaced FNFs. With CT, an additional 15% of patients are identified with a posterior tilt ≥20°. Advanced imaging of Garden I/II FNFs increases accuracy, but its use as an indication for primary arthroplasty is not yet evidence based.

Level of Evidence: III

Table 1: X-ray and CT Measurement Results

	Hemiarthroplasty (n = 29)	IF (n = 71)	Overall (n = 100)
Garden Classification			
I	4	16	20
II	25	55	80
Posterior tilt X-ray (PT-X), n			
>20°	2	0	2
<20°	27	71	98
Posterior tilt CT (PT-CT), n			
>20°	12	5	17
<20°	17	66	83
Impaction Angle CT (IA-CT), n			
<135°	23	58	81
>135°	6	13	19
Retroversion Angle CT(RA-CT), n			
Bilateral Axial CT scan available	20	29	49
>13°	7	2	9
<13°	13	27	40

IF, Internal Fixation; PT-X, Posterior tilt X-ray; PT-CT, Posterior tilt CT; IA-CT, Impaction Angle CT; RA-CT, Retroversion Angle CT.

Resident Abstract

Optimizing Tip-Apex Distance and Calcar-associated Tip-Apex Distance for Femoral Lag Screw Placement on Intraoperative Fluoroscopy

Trevor Luck[1], Coleman Cush[1], Keith Grega[1], Neil Jain[1], Douglas W. Lundy[1], Dustin A. Greenhill[1]
[1]St. Luke's University Health Network, Bethlehem PA

Abstract

Introduction: Tip-apex distance (TAD) and calcar-associated tip-apex distance (CalTAD) predict lag screw cut-out during surgical management of intertrochanteric hip fractures. Although surgeons aim to keep both <25mm, quantifying this measurement on intraoperative fluoroscopy is impossible. This study categorizes whether lag screw positioning is optimal per its visualized location within the femoral head.

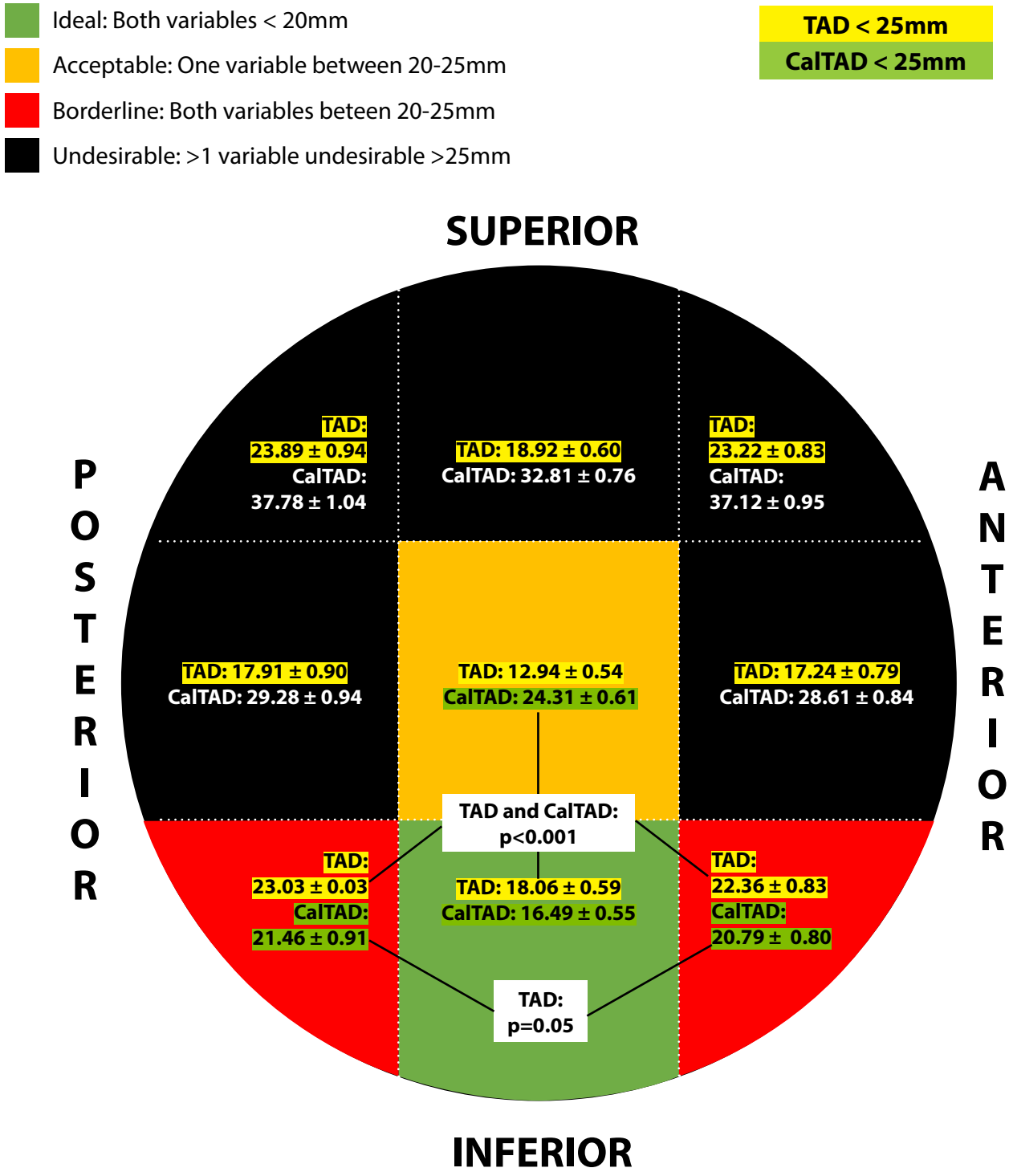
Methods: A Synthes 130° short cephalomedullary nail was templated on 100 low-anteroposterior (AP) radiographs. Lag screws were positioned in the superior, central, and inferior third of the femoral neck, 5mm from the articular surface. To account for femoral head sphericity, 398 lateral postoperative radiographs were reviewed to identify 20 screws each in anterior, central, and posterior thirds of the femoral head. Average TAD and CalTAD values were calculated for nine sectioned femoral head locations. Radiographs with abnormal morphology were excluded. Placement was categorized as ideal, acceptable, borderline, or undesirable. *(Figure 1)*

Results: TAD and CalTAD were optimized (ideal placement) when the lag screw was placed in the inferior-central nonant. Central-central placement was acceptable and inferior-anterior or inferior-posterior were borderline. All other positions are undesirable. Interclass correlation coefficients for TAD and CalTAD were excellent (0.994 and 0.993, respectively).

Conclusions: Optimized TAD and CalTAD values occur with inferior-central lag screw placement. Superior or anterior/posterior central placement are undesirable.

Level of Evidence: III

Figure 1. Lag screw positioning in the femoral head by nonant.



Resident Abstract

Aragonite-Based Scaffold Osteochondral Substitute Graft for Osteochondral Defects of the Knee: A Systematic Review

Jonathan D. McKeeman, MD[1], Neil Jain, MD[1], Nigel Wang, MD[1], Ajay C. Kanakamedala, MD[1]
[1]St. Luke's University Health Network, Bethlehem, PA

Abstract

Introduction: Chondral and osteochondral defects are a common cause of knee pain. There are several options for treatment that each carry advantages and disadvantages. New cartilage substitutes have been developed to mitigate disadvantages such as donor site morbidity, two stage procedures, and risk of disease transmission, and multiple recent studies have investigated the use of synthetic, aragonite-based osteochondral implants (Agili-CTM, Smith & Nephew, Memphis, TN). This systematic review aims to analyze the clinical outcomes of aragonite-based scaffolds for treating osteochondral defects of the knee.

Methods: Using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines, a comprehensive search of the Pubmed, Embase (Elsevier), and Medline (Ovid) databases was completed in January 2025 to obtain studies reporting on outcomes after implantation of an aragonite-based scaffold in patients with an osteochondral defect of the knee. Clinical studies were assessed for patient-reported outcome measures, failure rates, and MRI findings. Risk-of-bias assessment and the Methodological Index for Non-Randomized Studies (MINORS) criteria were used for appraisal of study quality.

Results: Five studies were included for data analysis. In total, 526 patients with a mean age of 39.1 years old (range, 31.6-42.0) were followed for an average of 30.5 months (range, 12-78). Four studies evaluating Knee Injury and Osteoarthritis Outcome Scores reported mean improvements of 13.8 to 41.0 from pre-operatively to final follow-up. Three studies reported improvements of 23.1 to 43 in International Knee Documentation Committee. Failures, defined as any secondary intervention in the index knee, occurred in 0-13.6% of cases and were significantly lower compared to microfracture/arthroscopic debridement. Tapered scaffolds had lower failure rates than cylindrical designs (0% versus 8-10.5%).

Conclusion: Aragonite-based scaffolds may improve patient reported outcomes with low failure rates at short to mid-term follow-up. These implants appear to be a comparable alternative option for treating osteochondral lesions in the knee and consideration should be given for the use of grafts with tapered designs.

Level of Evidence: IV

Table 1. Study Demographics, Methodology, and Scoring

Author	Year	Journal	Patients receiving aragonite-based scaffold implant (n)	Mean Follow-Up (months)	Mean Age (years)	Methodology/Design	Level of Evidence	Risk of Bias Assessment	MINORS score
Altschuler et al.	2023	AJSM	167	24	42.0	• Randomized controlled trial • Arthroscopic debridement/ microfractures as control group • Power analysis completed	I	Some concerns	-
Conte et al.	2024	International Orthopaedics	164	48	41.8	• Randomized controlled trial • Arthroscopic debridement/ microfractures as control group • Power analysis completed	I	Some concerns	-
de Caro et al.	2024	Cartilage	12	78	34.4	• Prospective case series • No control group • Presents outcomes of longer follow-up for population previously studied by Van Genechten et al.	IV	-	11/16
Kon et al.	2016	Injury	97	12	31.6	• Prospective comparative cohort study with historical control group • Compared tapered vs. cylindrical scaffolds • No power analysis completed	IV	-	17/24
Kon et al.	2021	AJSM	86	24	37.4	• Prospective case series • No control group	IV	-	12/16

Resident Abstract

Buckle Up! Non-Pediatric Orthopaedic Surgeons Treat Kids Differently

Robert W. Gomez[1], David Jessen[2], Riley McHugh[2], Caroline E. Quindlen[3], Zachary Zook[3], Ryan A. De Leon[1], Dustin A. Greenhill[1]

[1]St. Luke's University Health Network, Bethlehem, PA,
[2] Lewis Katz School of Medicine at Temple University/St. Luke's University Health Network, Bethlehem, PA,
[3]Drexel University College of Medicine, Philadelphia, PA

Abstract

Introduction: A distal radius buckle fracture is one of the most common pediatric injuries. Treatment of this inherently stable fracture in a removable splint is an evidence-based option. Although non-pediatric orthopaedic surgeons may treat a large proportion of these patients, it is largely undocumented whether their management strategies deviate from pediatric principles. This study assessed practice variability between pediatric versus non-pediatric orthopedic subspecialists during treatment of pediatric distal radius buckle fractures.

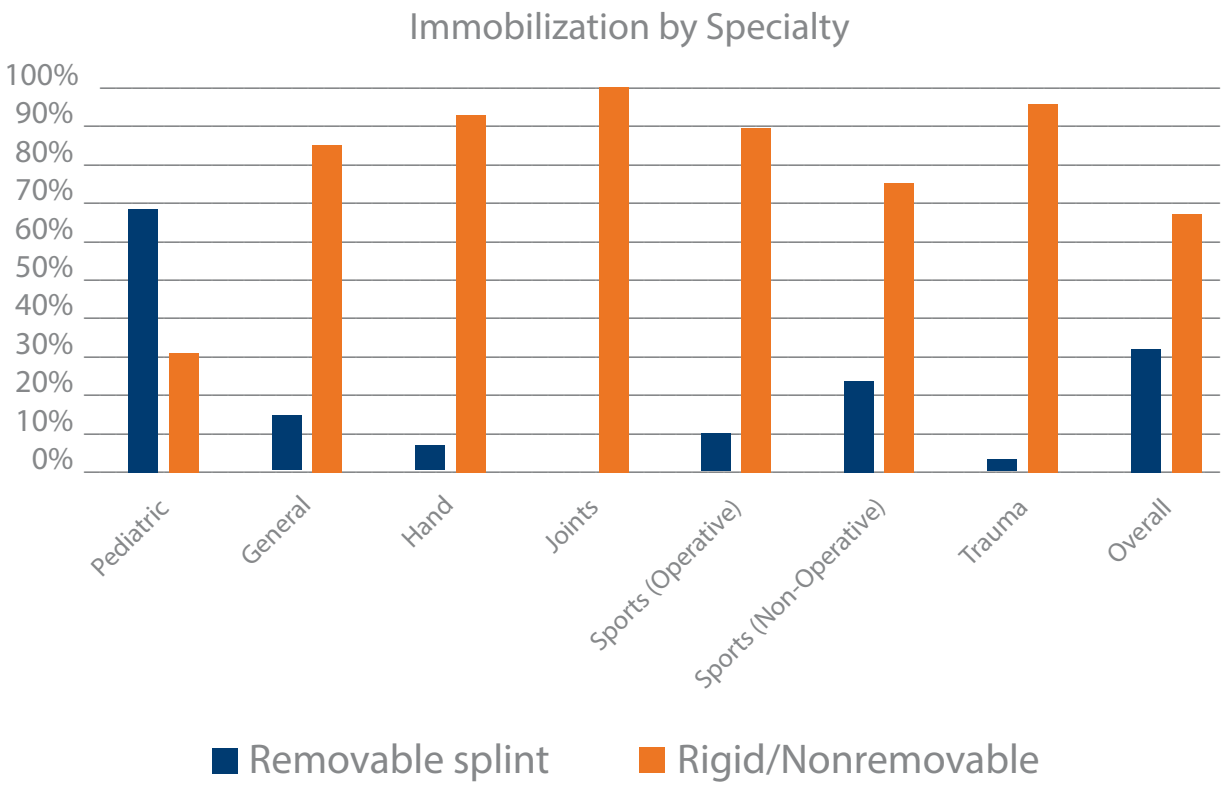
Methods: Pediatric patients with a stable distal radius buckle fracture (DRBF) treated during a 5-year period (6/2018-6/2023) in a 14-hospital health network that employs all orthopaedic subspecialties were retrospectively reviewed. Patients were excluded for: age >18 years, closed physes, a prior distal radius fracture, anterior/posterior extension involving the opposite cortex, concurrent fractures (except for an ipsilateral ulnar buckle fracture), or insufficient records. Immobilization was categorized as rigid/nonremovable (fiberglass cast) or removable (Velcro splint). Treatment duration was defined between the initial and final pertinent outpatient visits. The sum of total X-rays included initial emergency department or urgent care diagnostic radiographs.

Results: Among 1,121 included patients averaging 8.8±3.7 years old, 734 (65%) had their DRBF treated by a non-pediatric orthopaedic physician. Non-pediatric orthopaedic physicians utilized longer treatment durations (31 versus 19 days, $p<0.001$), more outpatient visits (2.7 versus 1.8 $p<0.001$), and obtained more total X-rays (3.0 versus 1.9, $p<0.001$) than pediatric orthopaedic surgeons. Non-pediatric orthopaedic physicians also had much higher frequencies of rigid cast utilization (69% vs 14%, $p<0.001$; OR 13.9, 95% CI 10.3-18.8) and billing fracture care (64% vs 28%, $p<0.001$, OR 4.5, 95% CI 3.4-5.9). No differences were identified between non-pediatric orthopaedic subspecialty comparisons in immobilization type (Figure 1) nor other variables.

Conclusions: Management strategies employed by pediatric versus non-pediatric orthopaedic physicians are clinically and financially discordant. Pediatric orthopaedic surgeons should seize opportunities to educate non-pediatric orthopaedic colleagues regarding evidence-based treatment of common pediatric fractures.

Level of Evidence: Case control or retrospective comparative study-Level III

Figure 1- Immobilization by specialty



Resident Abstract

Okay to Play! Activity Restrictions Do Not Optimize Outcomes During Management of Pediatric Distal Radius Buckle Fractures

Neil Jain[1], Robert Gomez[1], Kylie Coffield[1], Nicholas Grimm[1], Dustin Greenhill[1]
[1]St. Luke's University Health Network, Bethlehem, PA

Abstract

Introduction: Pediatric distal radius buckle fractures are inherently stable. All studies supporting soft splint immobilization incorporated strict activity restrictions into their methodology. The clinical necessity of these restrictions has never been scientifically questioned. This study examined the role of activity restrictions on clinical, radiographic, and patient reported outcomes in pediatric patients with an isolated distal radius buckle fracture.

Methods: After a power analysis confirmed target sample sizes, patients ≤16 years old with an acute dorsal distal radius buckle fracture were prospectively enrolled into three cohorts: 1) soft splint and prescribed restrictions (control), 2) soft splint and no restrictions (Spl-noR), or 3) 3D-printed rigid orthosis and no restrictions (3D-noR). The restricted versus unrestricted designation was random, but unrestricted patients self-selected a soft versus rigid 3D-printed orthosis. Patients with insufficient follow-up, bilateral buckle fractures, abnormality of the volar cortex, or additional injuries were excluded. Four-week radiographs and patient reported outcomes were obtained.

Results: Among 126 included patients (47 control, 53 Spl-noR, 26 3D-noR) averaging 7.9±3.5 years old, there were no demographic differences between cohorts. When compared to unrestricted patients, individuals in the control group avoided more activities ($p<0.001$) and had more functional deficits ($p=0.005$) (Table 1). However, all patients demonstrated uncomplicated radiographic and clinical union by four weeks. Satisfaction with the assigned immobilization device was equivalent across treatment cohorts ($p=0.306$).

Conclusion: Pediatric patients with dorsal radius buckle fractures can be allowed to self-limit activities for 3-4 weeks in a removal splint while healing. Rigid 3D-printed immobilization did not confer any benefit during unrestricted activity.

Level of Evidence: II, prospective comparative cohort study

Table 1. Patient Reported Outcomes Among Treatment Cohorts

	Soft Splint Restrictions (Control)	Soft Splint No Restrictions (Spl-noR)	Rigid 3D-cast No Restrictions (3D-noR)	p-value
Cohort size (n)	47	53	26	
Age (years)	8.2 ± 4.0	7.3 ± 3.3	8.7 ± 2.9	0.181
Laterality	27 L, 20 R	30 L, 23 R	19 L, 7 R	0.327
Mean Patient/Parent Survey Scores (1-5)*				
Perceived impact on overall activity	2.1	1.9	2.0	0.503
Frequency of activity avoidance	2.6	1.6	1.8	<0.001
Satisfaction with splint or cast	4.4	4.4	4.7	0.306
Child's activity level pre-injury	4.6	4.3	4.6	0.357
Child's activity level since the injury	3.4	4.2	4.3	<0.001
Difference in activity levels during treatment	1.2	0.1	0.3	<0.001
QuickDASH**	20.2	8.8	11.4	0.002
QuickDASH Sports**	39.0	13.6	20.7	0.005

**1 = lowest, 5 = highest*
***1 = no difficulty, 5 = severe difficulty.*

Core Clinical Faculty Remarks

Attending Thank You's

Dr. Gilson

Congratulations to graduating chief Brendan Smith, MD!

Dr. Grimm

Congratulations to all of the residents on your hard work putting together this journal! Keep up the good work.

Dr. Brogle

Pass on what you have learned.

Dr. Lundy

Doug and Peggy Lundy are proud of Brendan as he undertakes the next stage in his career and congratulate him as he attains the title of orthopaedic surgeon! We also recognize the tremendous work of the residents in developing our program to the incredible stature it has attained!

Dr. Matullo

I'd like to wish congratulations to Dr. Brendan Smith as he prepares to enter the next phase of his career of adult reconstruction and orthopaedic surgery. Brendan has become an excellent clinician and surgeon, transitioned into an effective leader, and has helped continue to improve the residency culture. All the best to him and his family in their futures!

Dr. Greenhill

Congratulations to the residents on another year of training. Thank you to everyone who makes this institution special - residents, medical students, faculty, staff, administrators, and more. We could not have the learning and practice environment we do without all of you.

Dr. Sadler

To the Residents, Thank you for all of your hard work and dedication this year. I greatly appreciate the detail oriented, empathetic, patient centered care you provide to our patients. I wish all of you nothing but success in your ongoing quest for academic and surgical excellence.

St. Luke's Orthopaedic Alumni

CLASS OF 2024

Nathan White

Hometown: Poway, CA
Undergraduate: Rice University
Med School: Baylor College of Medicine
Fellowship: Southern California Orthopedic Institute Sports Medicine Fellowship

Juan Tio Pagan

Hometown: Cabo Rojo, PR
Undergraduate: University of Puerto Rico Mayaguëz Campus
Med School: University of Puerto Rico Medical Sciences Campus
Fellowship: Allegheny General Hospital Orthopedic Trauma Fellowship

CLASS OF 2023

Andrew Kantzos

Hometown: Phoenix, AZ
Undergraduate: Northwestern University
Med School: University of Arizona College of Medicine Phoenix
Fellowship: Orthopaedic Oncology at Memorial Sloan Kettering
Current Practice: Loma Linda University

Chad Anthony Amato

Hometown: St. Clair, MI
Undergraduate: Michigan State University
Med School: Wayne State University School of Medicine
Fellowship: Hand and Upper Extremity Surgery at Loma Linda University
Current Practice: Orthopedic Associates of Port Huron in Port Huron, MI

CLASS OF 2022

Ajith Malige, MD

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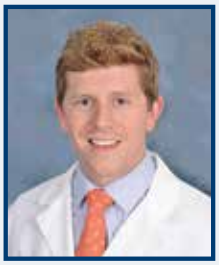
Fellowship: Orthopaedic Sports Medicine, Cedars Sinai-Kerlan Jobe Institute for Sports Medicine
Current Practice: Advanced Orthopaedics & Sports Medicine in San Francisco, CA

Andrew P. Konopitski, MD

Hometown: Asheville, NC
Undergraduate: Wake Forest University
Med School: Drexel University College of Medicine
Fellowship: Adult Reconstruction at UT Houston (McGovern)
Current Practice: St. Luke's University Health Network in Bethlehem, PA

St. Luke's Orthopaedic Alumni

CLASS OF 2021



Jake T. Schroeder, MD

Hometown: York, PA
Undergraduate: Bucknell University
Med School: Sidney Kimmel Medical College at Thomas Jefferson University
Fellowship: Orthopaedic Sports Medicine at San Diego Arthroscopy and Sports Medicine
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Anshul Agarwala, MD

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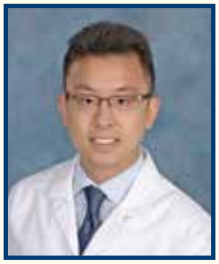
Undergraduate: Johns Hopkins University
Med School: Temple University School of Medicine
Fellowship: Orthopaedic Hand Surgery at Thomas Jefferson Hand to Shoulder Center
Current practice: Medical Associates at Dubuque, IA

CLASS OF 2020



Roger T. Yuh, MD

Hometown: Portland, OR
Undergraduate: Johns Hopkins University in Baltimore
Med School: Case Western Reserve University School of Medicine in Cleveland
Fellowship: Spine Fellowship at University of California Irvine
Current Practice: Sierra Pacific Orthopaedics in Fresno, CA

Shawn T. Yeazell, MD

Hometown: Nashville, TN
Undergraduate: University of North Carolina at Greensboro
Med School: University of North Carolina at Chapel Hill
Fellowship: Orthopaedic Sports Medicine and Shoulder Reconstruction at Steadman Hawkins Clinic of the Carolinas
Current Practice: Vidant Orthopaedics at Greenville, NC

CLASS OF 2019

David C. Roy, MD

Hometown: Grand Junction, CO
Undergraduate: Tufts University
Med School: University of Colorado, Denver
Fellowship: Hand Surgery Fellowship at the University of California San Francisco
Current Practice: Salinas Valley Memorial Healthcare System in Salinas, CA

David E. Ramski, MD

Hometown: Jacksonville, FL
Undergraduate: University of Florida, Gainesville
Med School: Georgetown University School of Medicine
Fellowship: Orthopaedic Trauma Fellowship at MetroHealth/ Case Western Reserve University
Current practice: St. Luke's University Health Network in Bethlehem, PA

CLASS OF 2018

Shane M. McGowan, MD

Hometown: Huntington, NY
Undergraduate: Quinnipiac University; Post University
Med School: The School of Medicine at Stony Brook University Medical Center
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Current practice: OrthoVirginia at Richmond, VA

Vince W. Lands, MD

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Med School: Meharry Medical College
Fellowship: Orthopaedic Trauma Fellowship at Cooper University Hospital
Current Practice: North Oaks Health System in Hammond, LA

CLASS OF 2017

Paul N. Morton, MD

Hometown: Kea 'au, HI
Undergraduate: Antioch College
Med School: University of Hawaii, John A. Burns School of Medicine
Fellowship: Joint Reconstruction at University of Chicago Bone and Joint Replacement Center
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Anup K. Gangavalli, MD

Hometown: Oneonta, NY
Undergraduate: Stony Brook University
Med School: The School of Medicine at Stony Brook University Medical Center
Fellowship: Spine Surgery at Cleveland Clinic Center for Spine Health
Current Practice: Ortho Virginia at Richmond, VA

CLASS OF 2016

Vamsi K. Kancherla, MD

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Undergraduate: Lehigh University
Med School: University of Pennsylvania School of Medicine
Fellowship: Spine Surgery at Cleveland Clinic Center for Spine Health
Current practice: Northeast Georgia Medical Center at Gainesville, GA

Nicholas M. Caggiano, MD

Hometown: West Chester, PA
Graduate: University of California, San Diego
Undergraduate: Emory University
Medical School: Drexel University College of Medicine
BIDMC Harvard Orthopaedic Hand Fellowship
Current Practice: Central Coast Orthopaedic Medical Group in San Luis Obispo, CA

St. Luke's Orthopaedic Alumni

CLASS OF 2015

Daniel M. Avery, III, MD

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Undergraduate: Auburn University
Med School: University of Alabama at Birmingham
Fellowship: Orthopaedic Sports Medicine, UCONN Health and Hand and Upper Extremity
Fellowship at the Hospital for Special Surgery
Current Practice: OrthoSports Associates in Birmingham, AL

Crystal M. Dickson, MPH, MD

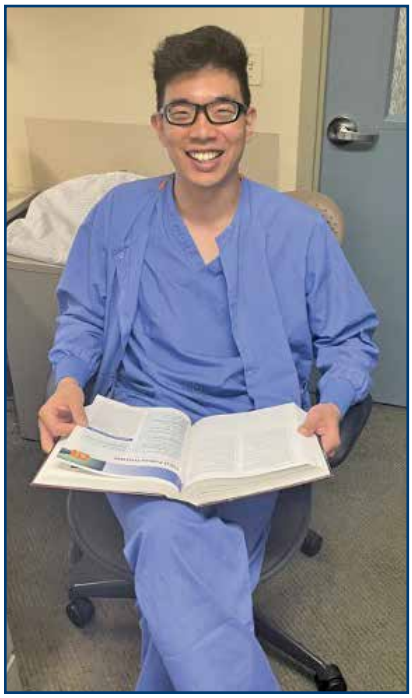
Hometown: Washington, DC
Graduate: Columbia University Mailman School of Public Health
Undergraduate: Cornell University
Medical School: Medical College of Virginia, Virginia Commonwealth University
Fellowship: Foot & Ankle at University of Pennsylvania
Current practice: Orthopaedics East and Sports Medicine Center in Greenville, NC

CLASS OF 2014

John-David Black, MD

Hometown: Hillsboro, TX
Undergraduate: University of Utah
Med School: Ohio State University College of Medicine
Fellowship: Orthopaedic Trauma at Wellspan York Hospital
Current practice: Kadlec Clinic Northwest Orthopaedic & Sports Medicine in Richland, WA

St. Luke's Resident Moments from the Year



St. Luke's Resident Moments from the Year

St. Luke's Resident Moments from the Year

Notes

Notes

Notes

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