

Jack Steele, MD

EDUCATION

Georgetown University School of Medicine – Washington, DC, Graduated May 22, 2016

- Graduated Cum Laude

Dartmouth College - Hanover, NH, Graduated June 12, 2011

- Bachelor of Arts in History, modified with Economics
- Academic Honors 2009-2010 and 2010-2011
- Member of the Division I Men's Lacrosse Team 2007-2011; Most Improved Player 2009 Season

POST-GRADUATE TRAINING

Duke University Orthopaedic Surgery Residency– Durham, NC, July 1, 2016 to June 30, 2021

- Residency Selection Committee 2017-2018, 2018-2019

Hospital for Special Surgery – Fellowship in Adult Reconstruction, August 1, 2021 – July 31, 2022

- Clinical Excellence Award, as voted on by the Adult Reconstruction Faculty

MEDICAL LICENSURES

North Carolina (Training License) (2016 – 2021)

New York – February 2021 – 2022

Maryland – January 2022 - current

PROFESSIONAL SOCIETIES

American Academy of Orthopaedic Surgeons, Member (2016 – Current)

American Association of Hip and Knee Surgeons, Member (2022 – Current)

Eastern Orthopedic Association – Committee Member (2023 – Current)

Hip and Knee IEP – Alumni Board (2024)

HONORS AND AWARDS

2021-2022 HSS ARJR Clinical Excellence Award

Awarded in recognition of outstanding clinical commitment to the Adult Reconstruction and joint Replacement Service at Hospital for Special Surgery

2019-2020 Feagin Scholar

Awarded annually to select individuals who exhibit outstanding leadership potential within medicine and surgery. The Feagin Leadership Program is a year-long program designed to develop effective, ethical leaders to positively influence healthcare

WORK EXPERIENCE

Towson Orthopedic Associates – September 2022 – Present **Attending Orthopedic Surgeon**

Editor in Chief of Duke Orthopaedic Journal – September 2018 – January 2020

Editor in Chief – Acted as the editor in chief of the Duke Orthopaedic Journal from 2018-2019. This entailed reviewing and editing submissions, securing funding for the publishing of the journal and switching publishers with the goal of becoming PubMed Indexed.

Duke University Adjunct Professor, Department of Anthropology – January to March 2019

Course Instructor, Lower Extremity Anatomy – Course instructor for the “Lower Extremity Anatomy” course within the Department of Evolutionary Anthropology given to undergraduates at Duke University. Involved classes two times per week consisting of both lecture and cadaveric dissection components.

Hospital for Special Surgery – June 2011 to June 2012

Research Assistant – Managed the Anterior Cruciate Ligament Reconstruction Registry. Participated in data collection, including consenting patients, administering preoperative and postoperative surveys to patients, and collecting intraoperative data directly in the operating room. The ACL registry aims to test the effects of several intraoperative variables on patient outcomes, namely functional levels over time, with the ultimate goal of determining whether certain surgical techniques and graft types are more effective than others. I was also involved in additional research projects, including review articles, case series and retrospective clinical studies.

RESEARCH

PEER-REVIEWED PUBLICATIONS

Published

1. **Steele J**, Jun Jang S, Brilliant Z, Mayman D, Sculco P, Jerabek S, Vigdorichik J. Deep Learning Phenotype Automation and Cohort Analyses of 2,042 Knees Using the Coronal Plane Alignment of the Knee Classification. *Journal of Arthroplasty*. June 2023.
PMID: 36858128
2. **Steele J**, Shenoy A, Wright T, Padgett D. Evaluation of Mechanically-Assisted Crevice Corrosion of Different Dual Mobility Constructs. *Journal of Arthroplasty*. July 2023.
PMID: 37088224
3. **Steele J**, Cochrane N, Charalambous L, Kim B, Case A, Bolognesi M, Seyler T. Outcomes and Cost Analysis of a Surgical Care Unit for Outpatient Total Joint Arthroplasties Performed at a Tertiary Academic Center. *Arthroplasty Today*. December 2022.
PMID: 36312885
4. Jun Jang S, Kunze K, Casey J, **Steele J**, Mayman D, Jerabek S, Sculco P, Vigdorichik J. Variability of the Femoral Mechanical-Anatomical Axis Angle: A Population-Level Analysis of 2,156 Knees Using a Validated Deep Learning Tool. *Bone and Joint Open*. February 2024.
PMID: 38316146
5. McIntosh E, Sarpong N, **Steele J**, Davis E, Muir J, Canoles H, Vigdorichik J. The Hip-spine Assessment of a Novel Surgical Planning Software Provides Acetabular Component Targets That Are Reliable and in Agreement with Current Clinical Recommendations. *Arthroplasty Today*. January 2024.

PMID: 38292149

6. Ong C, Grubel J, **Steele J**, Della-Valle AG. Re-initiation of elective total knee arthroplasty with an adapted pathway during the 2020 COVID-19 pandemic was safe and effective. *Archives of Orthopaedic and Trauma Surgery*. August 2023.
PMID: 36550383
7. **Steele JR**, Ryan SP, Jiranek WA, Wellman SS, Bolognesi MP, Seyler TM. Cost of Aseptic Revision Total Knee Arthroplasty at a Tertiary Medical Center. *Journal of Arthroplasty*. May 2021.
PMID: 33390337
8. Ryan SP, **Steele JR**, Plate JF, Seyler TM, Attarian DE, Bolognesi MP, Wellman SS. All-polyethylene Tibia: An Opportunity for Value Based Care in Bundled Reimbursement Initiatives. *Orthopedics*. November 2020.
PMID: 33141229
9. Peterson JR, **Steele JR**, Wellman SW, Lachiewicz PL. High-dose Bupivacaine Periarticular Injection with Intra-articular Saphenous Nerve Block is Safe and Effective in Total Knee Arthroplasty. *Journal of Arthroplasty*. May 2020.
PMID: 32057598
10. Hernandez N, **Steele J**, Wu C, Cunningham D, Aggrey G, Wellman S. A Specific Capsular Repair Technique Lowered Early Dislocations in Primary Total Hip Arthroplasty through a Posterior Approach. *Arthroplasty Today*. September 2020.
PMID: 32995415
11. Cunningham D, **Steele J**, Allen N, Nunley J, Adams S. The impact of pre-operative mental health and depression on outcomes after total ankle arthroplasty. *Journal of Bone and Joint Surgery*. January 2021.
PMID: 33298797
12. Lazarides AL, Kerr DL, Dial B, **Steele JR**, Lane WO, Blazer DG, Brigman BE, Mendoza-Lattes S, Erickson ME, Eward WC. Does facility volume influence survival in patients with primary malignant bone tumors of the vertebral column? A comparative cohort study. *Spine*. July 2020.
PMID: 32145357
13. **Steele JR**, Cunningham DJ, Green CL, Risoli TJ, DeOrio JK, Nunley JA, Easley ME, Adams SB. Patient Characteristics of Possible Responders and Non-Responders to Total Ankle Arthroplasty. *Foot and Ankle International*. August 2020.
PMID: 32517549
14. Dial BL, Catanzano AA, Eposito V, **Steele J**, Fletcher A, Ryan SP, Kirkpatrick JP, Goodwin CR, Torok J, Hopkins T, Mendoza-Lattes S. Treatment Outcomes in Spinal Metastatic Disease with Indeterminate Stability. *Global Spine Journal*. September 2020.
PMID: 32975442
15. Lachiewicz P, **Steele J**, Wellman S. Unexpected High Rate of Revision of a Modern Cemented Fixed Bearing Modular Posterior-Stabilized Knee Arthroplasty. *Bone and Joint Journal*. June 2021.
PMID: 34053294
16. **Steele JR**, Lazarides AL, DeOrio JK. Tibiotalocalcaneal Arthrodesis Using a Novel Retrograde Intramedullary Nail. *Foot and Ankle Specialist*. October 2019
PMID: 31640417

17. **Steele J**, Kildow B, Cunningham D, Dekker T, DeOrio J, Easley M, Nunley J, Parekh S, Adams S. Comparison of Tibiotalocalcaneal Arthrodeses Using a Sustained Dynamic Compression Nail versus Non-dynamized Nails. *Foot and Ankle Specialist*. April 2019.
PMID: 31018671
18. Dekker TJ, Vinson EV, **Steele JR**, Garrigues GE. Current Peri-operative Imaging Concepts Surrounding Shoulder Arthroplasty. *Skeletal Radiology*. February 2019.
PMID: 30798396
19. Pereira G, **Steele JR**, Fletcher A, Clement R, Arasa M, Adams S. Fresh Osteochondral Allograft Transplantation for Osteochondral Lesions of the Talus: A Systematic Review. *Journal of Foot and Ankle Surgery*. May 2021.
PMID: 33642164
20. Adams SB, **Steele JR**, Demetracopoulos CA, Nunley JA, Easley ME, DeOrio JK. Results of Tibia and Fibula Osteotomies Performed Concomitant to Total Ankle Replacement. *Foot and Ankle International*. March 2020.
PMID: 32134716
21. Dekker TJ, Hamid KS, Federer AE, **Steele JR**, Easley ME, Nunley JA, Adams SB. The Value of Motion: Patient-Reported Outcome Measures are Correlated with Range of Motion in Total Ankle Replacement. *Foot Ankle Spec*. October 2018.
PMID: 29277111
22. Scott DJ, **Steele JR**, Fletcher AN, Parekh SG. Early Outcomes of 3D Printed Total Talus Arthroplasty. *Foot and Ankle Specialist*. October 2020.
PMID: 32924584
23. **Steele JR**, Kadakia RJ, Cunningham DJ, Dekker TJ, Kildow BJ, Adams SB. Comparison of 3D Printed Spherical Implants versus Femoral Head Allografts for Tibiotalocalcaneal Arthrodesis. *Journal of Foot and Ankle Surgery*. November 2020.
PMID: 32830015
24. Dekker TJ, **Steele JR**, Federer AE, Easley ME, Hamid KS, Adams SB. Efficacy of Particulate Juvenile Cartilage Allograft Transplantation for Osteochondral Lesions of the Talus. *Foot Ankle Int*. March 2018.
PMID: 29262723
25. Dekker TJ, **Steele JR**, Federer AE, Hamid KS, Adams SB. The Use of Patient-Specific 3D Printed Titanium Implants for Complex Foot and Ankle Limb Salvage, Deformity Correction, and Arthrodesis Procedures. *Foot and Ankle International*. August 2018.
PMID: 29648876
26. Federer AE, **Steele JR**, Dekker TJ, Liles JL, Adams SB. Tendonitis and Tendinopathy: What Are They and How Do They Evolve? *Foot and Ankle Clinics*. December 2017.
PMID: 29078821
27. Li X, Zhou H, Williams P, **Steele J**, Nguyen J, Jager M, Coleman S. The epidemiology of single season musculoskeletal injuries in professional baseball. *Orthopaedics Review*. February 2013.
PMID: 23705061
28. Lopez V, Ma R, Li X, **Steele J**, Allen A. Costal cartilage fractures and disruptions in a rugby

football player. *Clinical Journal of Sports Medicine*. May 2013.
PMID: 22627657

29. Liles JL, **Steele JR**, Chen F, Nettles DF, Adams SB. Basic science behind the development of post traumatic osteoarthritis of the ankle. *Techniques in Foot & Ankle Surgery*. July 2018.
30. **Steele JR**, Boggess BR. Mid-term Clinical Outcomes of Intraarticular Injection of Platelet Rich Plasma and Adipose-Derived Mesenchymal Stem Cells for the Treatment of Intraarticular Pathology of the Knee, Hip and Shoulder. *Embryology and Stem Cell Research*. Oct 2019.
31. **Steele J**, Dekker T, Federer A, Liles J, Adams S, Easley M. Osteochondral Lesions of the Talus: Current Concepts in Diagnosis and Treatment. *Foot and Ankle Orthopaedics*. July 2018.
32. **Steele JR**, Park C, Adams SB. Bone Marrow Stimulation plus Bone Marrow Aspirate Concentrate versus Bone Marrow Stimulation Alone in the Treatment of Osteochondral Lesions of the Talus: A Prospective Study. *Duke Orthopaedic Journal*. February 2020.
33. Fletcher AN, Liles JL, Pereira GF, **Steele JR**, Adams SB, Easley ME. Systematic Review of Subtalar Distraction Arthrodesis for the Treatment of Subtalar Arthritis. *Foot and Ankle International*. November 2020.
PMID: 31958992
34. Rothberg M, **Steele J**, Wheeler J, Arora A, Priya A, Lindenauer P. The Relationship Between Time Spent Communicating and Communication Outcomes on a Hospital Medicine Service. *Journal of General Internal Medicine*. February 2012.
PMID: 21922161
35. Botwinick I, Shonkwiler R, **Steele J**, Yu G, Chabot J. Atrial fibrillation and delayed gastric emptying. *PLoS One*. October 2011.
PMID: 22028778
36. Sterns J, Smith C, **Steele J**, Stevenson K, Gallicano G. Epigenetics and type II diabetes mellitus; underlying mechanisms of prenatal predisposition. *Frontiers in Cell and Developmental Biology*. May 2014.
PMID: 25364722

BOOK CHAPTERS

1. John R. Steele and Michael P. Ast. *How do I Structure an ASC or Hospital OP Department to Perform Outpatient Total Joint Arthroplasty Successfully?* Total Joint Arthroplasty in Ambulatory Surgery Centers. Springer.
2. John R. Steele and Michael P. Bolognesi. *Skilled Nursing Facilities: It's a Shared Partnership*. Contemporary Strategies for Rapid Recovery in Total Joint Arthroplasty. Springer.
3. John R. Steele and Michael P. Bolognesi. *Outpatient Hip and Knee Arthroplasty: Implications for Hospitals, ASC's and Payers*. Outpatient Joint Replacement: Indications, Implementation and Surgical Management. Springer.

ABSTRACTS AND/OR PROCEEDINGS

Podium Presentations

1. **Event:** 2020 Southern Orthopaedic Association Annual Meeting, White Sulphur Springs, WV
Topic: Surgeon-Performed Periarticular Injection with Intra-Articular Saphenous Nerve Block is Not Inferior to Adductor Canal Block in Total Knee Arthroplasty
(Presenter: **John Steele, MD**)
2. **Event:** 2020 Southern Orthopaedic Association Annual Meeting, White Sulphur Springs, WV
Topic: All-polyethylene Tibia: An Opportunity for Value Based Care in Bundled Reimbursement Initiatives
(Presenter: **John Steele, MD**)
3. **Event:** 2020 Southern Orthopaedic Association Annual Meeting, White Sulphur Springs, WV
Topic: A Specific Capsular Repair Technique Lowered Dislocations in Primary Total Hip Arthroplasty through a Posterior Approach
(Presenter: **John Steele, MD**)
4. **Event:** 2019 American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV
Topic: Results of Tibia and Fibula Osteotomies in the Setting of Total Ankle Replacement
(Presenter: **John Steele, MD**)
5. **Event:** 2019 Southern Orthopaedic Association Annual Meeting, Amelia Island, FL
Topic: Defining Responders vs Non-Responders After Total Ankle Arthroplasty
Resident Travel Grant Award Winner
(Presenter: **John Steele, MD**)
6. **Event:** 2019 Southern Orthopaedic Association Annual Meeting, Amelia Island, FL
Topic: Early Outcomes of 3D Printed Total Talus Arthroplasty
(Presenter: **John Steele, MD**)
7. **Event:** 2019 Southern Orthopaedic Association Annual Meeting, Amelia Island, FL
Topic: Tibiotalocalcaneal Arthrodesis Using a Novel Retrograde Intramedullary Nail
(Presenter: **John Steele, MD**)
8. **Event:** 2019 Southern Orthopaedic Association Annual Meeting, Amelia Island, FL
Topic: Comparison of Custom 3D Printed Spherical Implants vs Femoral Head Allografts for Tibiotalocalcaneal Arthrodeses
(Presenter: **John Steele, MD**)
9. **Event:** 2019 Eurospine Annual Meeting, Helsinki, Finland
Topic: Does the Management of Spinal Metastatic Disease Impact outcomes for “Indeterminate” Spinal Instability (SINS 7-12)? (Presenter: Brian Dial, MD)
10. **Event:** 2018 American Orthopaedic Foot and Ankle Society Annual Meeting, Boston, MA
Topic: Tibiotalocalcaneal Fusion Rate with Pseudoelastic Intramedullary Nail vs Non-Dynamized Nails. (Presenter: **John Steele, MD**)
11. **Event:** 2018 OREF/ORS Southeast Region Resident Research Symposium, Durham, NC
Topic: Outcomes following 3D Printed Total Talus Arthroplasty (Presenter: Daniel Scott, MD)
12. **Event:** 2017 Southern Orthopaedic Association Annual Meeting, Hilton Head, SC

Topic: The Use of 3D Printed Titanium Implants for Complex Foot and Ankle Limb Salvage, Deformity Correction and Arthrodesis Procedures (Presenter: Travis Dekker, MD)

- 13. Event:** 2017 North Carolina Orthopaedic Association Annual Meeting, Williamsburg, VA
Topic: Radiographic Recurrence of Hallux Valgus by Surgical Technique (Presenter: Andrew Federer, MD)

Poster Presentations

- 14. Event:** 2022 Current Concepts in Joint Replacement Annual Meeting, Orlando, FL
Topic: Variability in the Femoral Mechanical-Anatomical Axis Angle: A Population-Level Analysis of 2,156 Knees using a Deep Learning Tool
- 15. Event:** 2022 American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, IL
Topic: Outcomes and Cost Analysis of an Accelerated Discharge Unit after Total Joint Arthroplasty at a Tertiary Academic Center
- 16. Event:** 2019 Park City Hip and Knee Symposium
Topic: All-polyethylene Tibia Decreases Cost of Care While Maintaining 90-Day Quality Outcome Metrics
Poster Award Winner
- 17. Event:** 2020 American Orthopaedic Foot and Ankle Society Annual Meeting, San Antonio, TX
Topic: The Impact of Pre-operative Mental Health and Depression on Outcomes after Total Ankle Arthroplasty
- 18. Event:** 2020 American Orthopaedic Foot and Ankle Society Annual Meeting, San Antonio, TX
Topic: Subtalar Distraction Arthrodesis for the Treatment of Subtalar Arthritis and Severe Hindfoot Deformity: A Systematic Review
- 19. Event:** 2020 American Orthopaedic Foot and Ankle Society Annual Meeting, San Antonio, TX
Topic: A Systematic Review of Fresh Osteochondral Allograft Transplantation for Osteochondral Lesions of the Talus
- 20. Event:** 2019 American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV
Topic: Higher Fusion Rates Using Pseudoelastic Intramedullary Nails for Tibiotalocalcaneal Arthrodesis in High Risk Patients
- 21. Event:** 2019 American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV
Topic: The Histopathology of the Degenerative Proximal Biceps Tendon
- 22. Event:** 2018 American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, LA
Topic: The Use of Patient-Specific 3D-Printed Titanium Implants for Complex Foot and Ankle Limb Salvage, Deformity Correction and Arthrodesis Procedures
- 23. Event:** 2019 American Orthopaedic Foot and Ankle Society Annual Meeting, Chicago, IL
Topic: Comparison of Custom 3D Printed Spherical Implants vs Femoral Head Allografts for Tibiotalocalcaneal Arthrodeses
- 24. Event:** 2019 American Orthopaedic Foot and Ankle Society Annual Meeting, Chicago, IL
Topic: Defining Responders versus Non-Responders After Total Ankle Arthroplasty
- 25. Event:** 2019 American Orthopaedic Foot and Ankle Society Annual Meeting, Chicago, IL

Topic: Clinical and Radiographic Outcomes of 3D Printed Total Talus Arthroplasty

- 26. Event:** 2018 American Orthopaedic Foot and Ankle Society Annual Meeting, Boston, MA
Topic: Radiographic Recurrence of Hallux Valgus Based on Osteotomy Location
- 27. Event:** 2018 Society of Military Orthopaedic Surgeons Annual Meeting, Keystone, CO
Topic: Tibiotalocalcaneal Fusion Rate with a Novel Pseudoelastic Intramedullary Nail with NiTiNOL
- 28. Event:** 2018 Southern Orthopaedic Association Annual Meeting, Kiawah Island, SC
Topic: Outcomes following 3D Printed Total Talus Arthroplasty
- 29. Event:** 2017 American Orthopaedic Foot and Ankle Society Annual Meeting, Seattle, WA
Topic: The Use of Patient-Specific 3D Printed Titanium Implants for Complex Foot and Ankle Limb Salvage, Deformity Correction, and Arthrodesis Procedures
- 30. Event:** 2020 American Physical Therapy Association Annual Meeting, Denver, CO
Topic: Effects of a Season of American Football on Eccentric Hamstring Strength
- 31. Event:** 2015 International Forum on Quality and Safety in Healthcare Annual Meeting, London, England
Topic: Educating Future Interdisciplinary Healthcare Leaders Through Creation of Innovation, Quality, and Leadership Track for Undergraduate Medical Students at Georgetown University
- 32. Event:** 2015 National Patient Safety Foundation Annual Congress Annual Meeting, Austin, TX
Topic: Creating an Organic Culture of Patient Safety and Quality Improvement Through Early Intervention in Undergraduate Medical Education
- 33. Event:** 2015 American Transplant Congress Annual Meeting, Philadelphia, PA
Topic: Surgical Site Infections after Intestinal and Multivisceral Transplantation
- 34. Event:** 2014 Institute for Healthcare Improvement National Forum on Quality Improvement in Healthcare Annual Meeting, Orlando, FL
Topic: Healthcare Innovation, Quality and Leadership: Creating a Medical School Track
- 35. Event:** 2013 Mid-America Orthopaedic Association Annual Meeting, Amelia Island, FL
Topic: Evaluation of hip internal and external rotation range of motion as an injury risk factor for hip, abdominal and groin injuries in professional baseball
- 36. Event:** 2010 Society for Surgery of the Alimentary Tract Annual Meeting, New Orleans, LA
Topic: Advanced disease not a risk factor for delayed gastric emptying after pancreaticoduodenectomy (Whipple procedure)
- 37. Event:** 2010 Society for Surgery of the Alimentary Tract Annual Meeting, New Orleans, LA
Topic: Atrial fibrillation and delayed gastric emptying after pancreaticoduodenectomy - coincidence or shared mechanism?

INSTITUTIONAL AND COMMUNITY SERVICE

Duke Orthopaedic Surgery Resident Selection Committee – September 2017 – March 2019

Member– Acted as a member of the committee tasked with selecting incoming Duke Orthopaedic Surgery Residents for 2018 and 2019. This involved reading numerous applications, interviewing applicants and partaking in committee meetings to discuss applicants’ candidacy to become Duke Orthopaedic Surgery residents.

North Carolina Central University Football Team Sports Coverage – August 2016 – December 2018

Physician Sports Coverage – Provided medical care to NCCU Football players throughout their 2016, 2017 and 2018 season under the guidance of head team physician Dr. Toth. This involved being on the sidelines for NCCU home games to provide medical attention to players as needed as well as twice weekly walk-in clinics for players with injuries.

North Carolina Central University Basketball Team Sports Coverage – November 2018 – March 2019

Physician Sports Coverage – Provided medical care to NCCU Basketball players throughout their 2018-2019 season under the guidance of head team physician Dr. Toth. This involved being on the sidelines for NCCU home games to provide medical attention to players as needed as well as twice weekly walk-in clinics for players with injuries.

Business and Leadership in Medical Practice (BLIMP) – August 2013 – May 2016

Co-Founder and Board Member– Established this group to serve as a platform for medical students to enhance their knowledge of “business literacy” and to develop physician leadership skills to prosper in an ever-changing medical landscape. Collaborated with MedStar executives in creating the longitudinal track, “Innovation, Quality and Leadership,” within the medical school curriculum.

ADDITIONAL INFORMATION

Personal Interests: Spending time with family, hiking with my dog, traveling, golf