

MedStar Health

MedStar Orthopaedic and Sports Research Network
MUMH Musculoskeletal Research Center
Curtis National Hand Center

Academic Report of Publications, Presentations, and Current Research 2023-2024



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Orthopaedic and Sports Research Network

Publications, Presentations, and Current Research 2023-24

Published Journal Articles and Book Chapters

1. Bodendorfer BM, DeFroda SF, Newhouse AC, Yang DS, Shu HT, Wichman D, Murphy JP, Milner JD, Hartnett DA, Gould H, Chahla J, Nho SJ. Recurrence of hamstring injuries and risk factors for partial and complete tears in the National Football League: an analysis from 2009-2020. *Phys Sportsmed.* 2023;51(2):139-43. PMID 34878369
2. Carroll A, Ashmyan R, Wright MA, Abbasi P, Gillin TR, Murthi AM. Impact of radiocapitellar interposition arthroplasty on ulnohumeral joint biomechanics. *J Shoulder Elbow Surg.* 2023;33(3):480-5. PMID: 36252785
3. Chopra A, Wright MA, Murthi AM. Outcomes after arthroscopically assisted lower trapezius transfer with Achilles tendon allograft. *J Shoulder Elbow Surg.* 2024;33(2):321-7. PMID: 37499785
4. Douoguih WA, Apseloff N, Murray JC, Kelly RL, Svoboda SJ. Suture-augmented ACL repair for proximal avulsion or high-grade partial tears shows similar side-to-side difference and no clinical differences at two years versus conventional ACL reconstruction for mid-substance tears or poor ACL tissue quality. *Arthroscopy.* 2024;40(3):857-67. PMID: 37479153
5. Gould H, Rate WRI, Harrell RA, Abbasi P, Fillar AL. Effect of poly-L-lactic acid mesh augmentation on cyclic gap formation in transosseous patellar tendon repair: a biomechanical study. *J Knee Surg.* 2023;36(12):1224-9. PMID: 36049770
6. Gould HP. CORR Insights: High acromial slope and low acromiohumeral distance increase the risk of retear of the supraspinatus tendon after repair. *Clin Orthop Relat Res.* 2023;481(6):1171-3. PMID 36812065
7. Gould HP, Gosnell GG, Bano JM, Rate WR, Sequeira SB, Marchant MH. Adjustable cortical fixation repair is a safe and effective technique for quadriceps tendon rupture. *Arthrosc Sports Med Rehabil.* 2023;5(5):100796. PMID: 37753187
8. Gould HP, Lostetter SJ, Samuelson ER, Guyton GP. Lower extremity injury rates on artificial turf and natural grass playing surfaces: a systematic review. *Am J Sports Med.* 2023;51(6):1615-21. PMID: 35593739
9. Group ACoRR, Lohre R, Swanson DP, Mahendraraj KA, Elmallah R, Glass EA, Dunn WR, Cannon DJ, Friedman LG, Gaudette JA, Green J, Grobaty L, Gutman M, Kakalecik J, Kloby MA, Konrade EN, Knack MC, Loveland A, Mathew JI, Myhre L, Nyfeler J, Parsell DE, Pazik M, Polisetty TS, Ponnuru P, Smith KM, Sprengel KA, Thakar O, Turnbull L, Vaughan A, Wheelwright JC, Abboud J, Armstrong A, Austin L, Brolin T, Entezari V, Garrigues GE, Grawe B, Gulotta LV, Hobgood R, Horneff JG, Iannotti J, Khazzam M, King JJ, Kirsch JM, Levy JC, Murthi A, Namdari S, Nicholson GP, Otto RJ, Ricchetti ET, Tashjian R, Throckmorton T, Wright T, Jawa A. Risk factors of acromial and scapular spine stress fractures differ by

indication: a study by the ASES Complications of Reverse Shoulder Arthroplasty Multicenter Research Group. *J Shoulder Elbow Surg.* 2023;32(12):2483-92. PMID: 37330167

10. Group ACoRR, Lohre R, Swanson DP, Mahendraraj KA, Elmallah R, Glass EA, Dunn WR, Cannon DJ, Friedman LG, Gaudette JA, Green J, Grobaty L, Gutman M, Kakalecik J, Kloby MA, Konrade EN, Knack MC, Loveland A, Mathew JI, Myhre L, Nyfeler J, Parsell DE, Pazik M, Polisetty TS, Ponnuru P, Smith KM, Sprengel KA, Thakar O, Turnbull L, Vaughan A, Wheelwright JC, Abboud J, Armstrong A, Austin L, Brolin T, Entezari V, Garrigues GE, Grawe B, Gulotta LV, Hobgood R, Horneff JG, Iannotti J, Khazzam M, King JJ, Kirsch JM, Levy JC, Murthi A, Namdari S, Nicholson GP, Otto RJ, Ricchetti ET, Tashjian R, Throckmorton T, Wright T, Jawa A. Predictors of dislocations after reverse shoulder arthroplasty: a study by the ASES complications of RSA multicenter research group. *J Shoulder Elbow Surg.* 2024;33(1):73-81. PMID: 37379964
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12. Guyton GP. CORR Insights: What is the efficacy of intra-articular injections in the treatment of ankle osteoarthritis? a systematic review. *Clin Orthop Relat Res.* 2023;481(9):1825-7. PMID: 37043554
13. Guyton GP. Minimally invasive osteotomies of the calcaneus. In: Ellis S, editor. *Master Techniques in Orthopaedic Surgery: The Foot and Ankle.* New York: Wolters Kluwer; 2024. In press
14. Haislup B, Lindsey S, Tarapore R, Abbasi P, Wright MA, Murthi A. Biomechanics of subscapularis v-shaped tenotomy compared to standard tenotomy. *J Shoulder Elbow Surg.* 2024;33(3):604-9. PMID: 37777043
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17. Hembree WC, Rodriguez-Materon S, Dai A, Alkaramany E, Mansur NS, Guyton GP. What's new in foot and ankle surgery. *J Bone Joint Surg Am.* 2024; In press. PMID: 38502715
18. Hembree WC, Tarka MC, Pasternack JB, Mathew SE, Guyton GP. What's new in foot and ankle surgery. *J Bone Joint Surg Am.* 2023;105(10):737-43. PMID: 36888693
19. Imbergamo C, Sequeira S, Iskandarova A, Giladi A. Distal interphalangeal joint fractures and dislocations. In: Jerome TJ, editor. *An Evidence-Based Approach to Fingertip Disease.* New York: Thieme Medical Publishers; 2023.
20. Imbergamo C, Sequeira S, Patankar A, Means KR, Jr., Stein J. The statistical fragility of studies on rotator cuff repair with graft augmentation. *J Shoulder Elbow Surg.* 2023;32(5):1121-5. PMID: 36681109

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22. Imbergamo C, Wieland M, Sequeira S, Patankar A, Dreese JC, Gould H. Graft augmentation of rotator cuff repair improves load to failure but does not affect stiffness or gap formation: a meta-analysis of biomechanical studies. *Arthroscopy*. 2023;39(10):2202-10. PMID: 37207921
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24. Jeong S, Lee JW, Boucher HR. Symptomatic benign prostatic hyperplasia is not associated with a higher risk of periprosthetic joint infections and periprosthetic joint infection-related revisions after primary THA. *Clin Orthop Relat Res*. 2023;482(1):89-95. PMID: 37458699
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32. McCormick B, Sequeira S, Hasenauer M, Boucher HR. The use of continuous positive airway pressure for patients with obstructive sleep apnea is associated with early medical and surgery-related complications following total knee arthroplasty: a national database study. *Arthroplasty Today*. 2023;19:101085. PMID: 36698756

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34. McCormick B, Sequeira S, Lee J, Boucher HR. Hormone replacement therapy does not increase thrombosis risk following total hip arthroplasty: a national database study. *J Exp Orthop*. 2023;10(1):60. PMID: 37261550
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36. McCormick B, Trent S, Haislup BD, Bolster D, Bubnash K, Miller SD. Dual semitendinosus allograft reconstruction of chronic Achilles tendon ruptures: operative technique and outcomes. *Foot Ankle Int*. 2023;44(1):48-53. PMID: 36461671
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39. Mistretta KL, Abbasi P, Wright M, Murthi AM. Fixation of transverse midshaft clavicle fractures with nitinol staples vs. superior locked plating: a biomechanical study. *Curr Orthop Pract*. 2023;34(4):137-41.
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43. Rodriguez-Materon S, Guyton G. The philosophy of surgical success and outcomes of Cartiva versus fusion. *Foot Ankle Clin*. 2024;In press.
44. Sedgley MD, Hudson K, Hulsopple C. Prepare for the unexpected: a new look at trauma triage and care in mass participation sporting events. *Curr Sports Med Rep*. 2023;22(1):4-9. PMID: 36606629

45. Sequeira S, Ayan S, Kushare IV, Gould HP, Fillar AL, Dreese J. Posterior root tears of the lateral meniscus only affect tibiofemoral contact forces when the meniscofemoral ligament is involved: a cadaveric study. *Arthrosc Sports Med Rehabil.* 2023;5(2):e515-e21. PMID: 37101864
46. Sequeira S, Boucher HR. Payor type is associated with increased rates of reoperation and healthcare utilization following unicompartmental knee arthroplasty: a national database study. *Arthroplasty Today.* 2023;19:101074. PMID: 36605496
47. Sequeira S, Duvall G, Boucher HR. Statistical fragility of venous thromboembolism prophylaxis following total joint arthroplasty. *Arthroplasty Today.* 2023;20:101111. PMID: 36923060
48. Sequeira S, Duvall G, Boucher HR. A biomechanical comparison between robotic and conventional total knee arthroplasty in resection accuracy: a meta-analysis. *J Exp Orthop.* 2023;10(1):34. PMID: 36995538
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51. Sequeira S, McCormick B, Hasenauer MD, McKinstry R, Ebert F, Boucher HR. Previous extensor mechanism repair is associated with increased rates of surgical complications following total knee arthroplasty: a propensity matched analysis. *Arthroplasty Today.* 2024;26:101319.
52. Sequeira S, Sequeira LM, Wieland M, Imbergamo C, Tepper K. No difference in load to failure or stiffness between transosseous tunnels, suture anchors, and cortical buttons for pectoralis major tendon repair: a systematic review and meta-analysis. *J Exp Orthop.* 2023;10(1):56. PMID: 37233834
53. Sequeira S, Wright M, Murthi A. Payor type is associated with increased rates of reoperation and healthcare utilization following rotator cuff repair: a national database study. *J Shoulder Elbow Surg.* 2023;32(3):597-603. PMID: 36206978
54. Sequeira SB, Boucher HR. Heart failure is associated with early medical and surgery-related complications following total hip arthroplasty: a propensity-scored analysis. *J Arthroplasty.* 2023;38(5):868-72 e4. PMID 36470365
55. Sethi P, Fares MY, Murthi A, Tokish JM, Abboud JA. The long head of the biceps tendon: a valuable tool in shoulder surgery. *J Shoulder Elbow Surg.* 2023;32(9):1801-11. PMID 37245621
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57. Tarapore R, Wieland M, Haislup B, Imbergamo C, McCormick B, Castillo W, Boucher HR. The impact of signaling on the 2022 to 2023 orthopaedic residency application cycle: a survey of incoming residents. *JBJS Open Access*. 2024;9(1):e23.00135.
58. Wieland MD, Sequeira SB, Imbergamo C, Murthi AM, Wright MA. Home health care is associated with an increased risk of readmission and cost of care without reducing risk of complication following shoulder arthroplasty: a propensity-score analysis. *J Shoulder Elbow Surg*. 2024;in press. PMID: 38122889
59. Wright MA, Aleem AW, Murthi AM, Zmistowski BM. Gender differences among shoulder arthroplasty surgeons: past, present, and future. *J Shoulder Elbow Surg*. 2024;In press. PMID: 38237720
60. Wright MA, Deal JB, Jr., Schiffman BA, Gould HP, Forthman CL, Murthi AM. No difference in torque load to failure between split anconeus fascia transfer and autograft palmaris longus tendon for reconstruction of the lateral ulnar collateral ligament. *JSES Int*. 2024;8(1):232-5. PMID: 38312284
61. Wright MA, Murthi AM. The B2 glenoid: evaluation and treatment. *Semin Arthroplasty*. 2024;34(1):222-7.
62. Wright MA, Murthi AM, Aleem A, Zmistowski B. Patient disparities and provider diversity in orthopaedic surgery: a complex relationship. *J Am Acad Orthop Surg*. 2023;31(3):132-9. PMID: 36563332
63. Wright MA, Shapiro D, Chopra A, Murthi AM. Limited health literacy in shoulder and elbow patients. *Shoulder Elbow*. 2024; In press.

Published Abstracts

1. Abraham E, Imbergamo C, Sequeira SB, Gould HP, Lawson J, Dreese JC. Complications associated with proximal hamstring tendon repair: a systematic review [abstr]. *Ortho J Sports Med*. 2023;11(7 Suppl 3): 10.1177/2325967123S00208.
2. Gallagher BW, Guyton GP, Bifano S, Abbasi P, Wisbeck J. Lateral column overload in modified double vs triple arthrodesis [abstr]. *Foot Ankle Orthop*. 2023;8(4):10.1177/2473011423S00337.
3. Hembree CW, Brooks DM, Rosenthal B, Winters C, Pasternack JB, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model [abstr]. *Foot Ankle Orthop*. 2023;8(4):10.1177/2473011423S00295.
4. Mathew S, Guyton GP. Safe and effective is not always acceptable: the case for PASS scores in foot and ankle surgery [abstr]. *Foot Ankle Orthop*. 2023;8(4):10.1177/2473011423S00403.
5. Mathew S, Kuripla CS, Coleman MM, Hembree CW, Guyton GP. Clinical outcomes and complications of peroneus brevis allograft reconstruction [abstr]. *Foot Ankle Orthop*. 2023;8(4):10.1177/2473011423S00132.

6. Tarka M, Gould HP, Camire L, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis [abstr]. *Foot Ankle Orthop.* 2023;8(4):10.1177/2473011423S00019.

Presentations at Local, National, and International Meetings

1. Abraham E, Imbergamo C, Sequeira SB, Gould HP, Lawson J, Dreese JC. Complications associated with proximal hamstring tendon repair: a systematic review. American Orthopaedic Society for Sports Medicine (AOSSM), Washington DC, July 2023.
2. Boucher HR, Mistretta KL, Sequeira S, Lee JW. Statistical fragility of venous thromboembolism prophylaxis following total joint arthroplasty. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
3. Gould HP, Civiletti M, Wyand T, Guyton GP. Return to play following lateral ankle ligament repair: a systematic review. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
4. Gould HP, Civiletti M, Wyand T, Guyton GP. Return to play following lateral ankle ligament repair: a systematic review. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
5. Group ACoRMR, Lohre R, Mahendraraj KA, Elmallah R, Swanson D, Kirsch JM, Jawa A, Dunn WR, Abboud JA, Armstrong A, Austin L, Brolin T, Entezari V, Garrigues GE, Grawe B, Gulotta L, Hobgood R, Horneff JG, Iannotti J, Khazzam M, King J, Levy J, Murthi AM, Otto R, Ricchetti E, Tashjian RZ, Throckmorton T, Wright T, Cannon D, Friedman L, Gaudette J, Green J, Grobaty L, Gutman M, Kakalecik J, Kloby MA, Knack M, Konrade E, Loveland A, Mathew J, Myhre L, Nyfeler J, Parsell DE, Pazik M, Polisetty T, Ponnuru P, Smith K, Sprengel K, Thakar OV, Turnbull L, Vaughan V, Wheelwright J. Risk factors of acromial and scapular spine stress fractures differ by indication: a study of the American Shoulder and Elbow Surgeons Complications after Reverse Shoulder Arthroplasty Multicenter Research Group. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
6. Group ACoRMR, Vaughan A, Murthi A, Wright MA, Thakar O, Haislup B, Todd E. Predictors of dislocations after reverse shoulder arthroplasty (RSA): a study by the ASES Complications of RSA Multicenter Research Group. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
7. Haislup B, Ashmyan R, Johnston P, Gillin TR, Abbasi P, Wright MA, Murthi A. Effect of glenosphere lateralization with and without coracoacromial ligament transection on acromial and scapular spine strain in reverse shoulder arthroplasty. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
8. Haislup B, Tarapore R, Hwang T, Lee M, Wright MA, Murthi A. The impact of trainee involvement on outcomes following shoulder arthroplasty. Maryland Orthopaedic Association (MOA), Linthicum Heights, MD, February 2024.
9. Hembree CW, Mathew S, Guyton GP. Nonunion rate of Evans osteotomy without fixation pediatric flatfoot. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.

10. Hoskins J, Douoguih WA. Do patients who complete a patient care guide take shorter courses of opioids than patients who do not? Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
11. Hwang T, Haislup B, Schaefer E, Murthi AM, Wright MA, O'Leary M, Sanghavi K, Gillin TR. Characterizing glenoid morphology in rotator cuff arthropathy using 3D software. Maryland Orthopaedic Association (MOA), Linthicum Heights, MD, February 2024.
12. Imbergamo C, Gould HP, Sequeira S, Lawson J, Guyton GP, Hembree CW. Biomechanical comparison of open versus percutaneous techniques for primary mid-substance Achilles tendon repair: a systematic review and meta-analysis. American Orthopaedic Society for Sports Medicine (AOSSM), Washington DC, July 2023.
13. Jeong S, Lee J, Boucher HR. New onset depression is associated with adverse total joint arthroplasty outcomes. Maryland Orthopaedic Association (MOA), Linthicum Heights, MD, February 2024.
14. Kang L, Jeong S, Lee JW, Geng X, Korostyshevskiy V, Boucher HR. Comparing learning curves and short term outcomes: two robotic TKA systems. Maryland Orthopaedic Association (MOA), Linthicum Heights, MD, February 2024.
15. Leape CP, Donaldson ST, Haislup BD, Wright MA, Murthi A. Predicting successful outpatient total shoulder arthroplasty. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 2023.
16. Levens B, Dreese JC. Systematic review of patient reported outcome measure compliance in orthopaedic surgery. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
17. Levens B, Kim BS, Aksu NE, Dorris CS, Dreese JC. Systematic review of patient reported outcome measure compliance in orthopaedics. MedStar Health-Georgetown University Research Symposium, May 2023.
18. Mansur NS, Mathew S, Guyton GP. Safe and effective is not always acceptable: the case for PASS scores in foot and ankle orthopaedic surgery. Maryland Orthopaedic Association (MOA), Linthicum Heights, MD, February 2024.
19. Mathew S, Gallagher B, Miles MR, Guyton GP. Nonunion rate of Evans osteotomy without fixation pediatric flatfoot. American Orthopaedic Foot and Ankle Society (AOFAS), Louisville, KY, September 2023.
20. Mathew S, Hembree CW, Guyton GP. Clinical outcomes and complications of peroneus brevis allograft reconstruction. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
21. Mathew S, Kuripla C, S., Coleman M, Hembree CW, Guyton GP. Clinical outcomes and complications of peroneus brevis allograft reconstruction. MedStar Health-Georgetown University Research Symposium, Bethesda, MD, May 2023.
22. Mathew S, Kuripla CS, Coleman MM, Hembree CW, Guyton GP. Clinical outcomes and complications of peroneus brevis allograft reconstruction. American Orthopaedic Foot and Ankle Society (AOFAS), Louisville, KY, September 2023.

23. McCormick B, Jaicks C, Sequeira S, Hasenauer MD, McKinstry R, Boucher HR. History of patella fractures increases complications following total knee arthroplasty. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 2023.
24. McCormick B, Sequeira S, Hasenauer M, Boucher HR. Prednisone is associated with early complications following total joint arthroplasty. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 2023.
25. McCormick B, Sequeira S, Hasenauer M, Boucher HR. Oral prednisone administration is associated with early medical and surgery-related complications following total joint arthroplasty: a national database study. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
26. McCormick B, Sequeira S, Hasenauer MD, Boucher HR. Cushing's syndrome is associated with increased complications following total joint arthroplasty. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 2023.
27. McCormick B, Sequeira S, Lee J, Boucher HR. Hormone replacement therapy and thrombosis risk following total hip arthroplasty. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
28. Mistretta KL, Abbasi P, Wright M, Murthi AM. Fixation of transverse midshaft clavicle fractures with nitinol staples vs. superior locked plating: a biomechanical study. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
29. Penny G, Douoguih WA. Patient demographic factors and their effect on patient reported outcome survey compliance. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
30. Penny G, Douoguih WA. Review of OBERD patient reported outcome compliance. MedStar Health-Georgetown University Research Symposium, May 2023.
31. Sequeira S, Ayan S, Kushare IV, Gould HP, Fillar AL, Dreese J. Radial lateral meniscus tears affect contact forces when the menisiofemoral ligament is involved: a cadaveric study. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 2023.
32. Sequeira S, Imbergamo C, Gould H. A biomechanical analysis of interference screws and cortical buttons for coracoid graft fixation during the Latarjet procedure: a meta-analysis. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
33. Sequeira S, McCormick B, Boucher HR. The use of CPAP for patients with OSA is associated with early medical and surgery-related complications following TKA: a national database study. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
34. Sequeira S, McCormick B, Boucher HR. A history of scoliosis without fusion is associated with an increased risk of early medical and surgery-related complications following THA: a propensity-scored analysis. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.

35. Sequeira S, McCormick B, Wieland MD, Hasenauer MD, Boucher HR. Previous extensor mechanism repair is associated with increased rates of lysis of adhesions following total knee arthroplasty (TKA): a propensity matched analysis. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 2023.
36. Sequeira S, McCormick BP, Hasenauer MD, Boucher HR. Home health care is associated with an increased risk of emergency department visit, readmission, and cost of care without reducing risk of complication: a propensity-score analysis. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
37. Sequeira S, McCormick BP, Hasenauer MD, Boucher HR. Home health care is associated with increased healthcare utilization without decreasing risk of complication following THA: a propensity-scored analysis. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 2023.
38. Sequeira S, Wright M, Murthi A. Payor type is associated with increased rates of reoperation and healthcare utilization following rotator cuff repair: a national database study. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.
39. Swansen T, Wright MA, Murthi A. Radiographic measurements in reverse total shoulder arthroplasty: accuracy of preoperative planning. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
40. Swansen T, Wright MA, Murthi A. Radiographic measurements in reverse total shoulder arthroplasty: accuracy of preoperative planning. American Shoulder and Elbow Surgeon (ASES) Fellows' Day Symposium, San Diego, CA, June 2023.
41. Tarka M, Gould H, Camire L, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis. American Orthopaedic Foot and Ankle Society (AOFAS), Louisville, KY, September 2023.
42. Tarka M, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.
43. Wright AJ, Abbasi P, Albaba A, Svoboda S, Dreese J, Hinton R, Douoguih WA. Protective effect of a lateral hinge screw for medial opening wedge high tibial osteotomy in a sawbones model: a matched comparison study. European Society of Sports Traumatology, Knee Surgery & Arthroscopy (ESSKA) Specialty Day, Warsaw, Poland, November 2023.
44. Wright AJ, Abbasi P, Albaba A, Svoboda S, Dreese J, Hinton R, Douoguih WA. Lateral hinge screw effect for medial opening wedge high tibial osteotomy in a sawbones model. Society of Military Orthopaedic Surgeons (SOMOS), Vail, CO, December 2023.
45. Wright AJ, Abbasi P, Svoboda S, Dreese J, Hinton RY, Douoguih WA. Protective effect of lateral hinge screw for medial open wedge high tibial osteotomy. MedStar Health-Georgetown University Research Symposium, May 2023.
46. Wright AJ, Albaba A, Svoboda S, Dreese J, Abbasi P, Douoguih WA. Comparing multidirectional screw vs no screw to prevent hinge fracture in open wedge high tibial

osteotomy. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 2023.

47. Wright MA, Murthi AM, Aleem AW, Zmistowski BM. Gender differences among shoulder arthroplasty surgeons: past, present, and future. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 2023.

Awards

1. Leape CP, Donaldson ST, Haislup BD, Wright MA, Murthi A. Predicting successful outpatient total shoulder arthroplasty. Received the **3rd place Best Poster Award**, Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 2023.
2. Sequeira S, Ayan S, Kushare IV, Gould HP, Fillar AL, Dreese J. Radial lateral meniscus tears affect contact forces when the meniscomfemoral ligament is involved: a cadaveric study. Received the **SOA/OREF Resident Award**, Southern Orthopaedic Association, Miramar Beach, FL, July 2023.
3. Sequeira S, McCormick BP, Hasenauer MD, Boucher HR. Home health care is associated with an increased risk of emergency department visit, readmission, and cost of care without reducing risk of complication: a propensity-score analysis. Received the **Roger H. Michael Resident Project Award for Outstanding Achievement in Orthopedic Research** MedStar Union Memorial Hospital, Department of Orthopedics, Baltimore, MD, June 2023.
4. Sequeira S, McCormick BP, Hasenauer MD, Boucher HR. Home health care is associated with an increased risk of emergency department visit, readmission, and cost of care without reducing risk of complication: a propensity-score analysis. Received the **AAOS Best Poster Award in the Practice Management/Rehabilitation classification**, American Academy of Orthopaedic Surgeons, Las Vegas, NV, March 2023.
5. Tarka M, Gould H, Camire L, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis. Received the **J. Leonard Goldner Award**, American Orthopaedic Foot and Ankle Society Louisville, KY, September 2023.
6. Tarka M, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis. Received the **Roger H. Michael Fellow Project Award for Outstanding Achievement in Orthopedic Research**, MedStar Union Memorial Hospital, Department of Orthopedics, Baltimore, MD, June 2023.

Pending Publication – in Editing, Submitted, Accepted

1. Douguih WA, Svoboda S, Lincoln AE, Apseloff NA, Murray JC. Teriparatide for treatment of stress-fractures in the NBA: A survey of team physicians. Am J Sports Med; Manuscript in preparation.

2. Gallagher BW, Day J, Schon LC, Hembree WC. Complications and radiographic outcomes of the Hintermann lateral column lengthening osteotomy. *Tech Foot Ankle Surg*; Submitted.
3. Gallagher BW, Guyton GP, Bifano S, Abbasi P, Wisbeck J. Lateral column overload in modified double vs triple arthrodesis. *Foot Ankle Int*; Manuscript in preparation.
4. Gosnell G, Imbergamo C, Gould HP, Zimmerman RM, Wright MA. Trauma-induced coagulopathy in the setting of isolated humeral shaft fracture. *JBJS Case Connect*; Submitted.
5. Gould HP, Civilette M, Wyand T, Guyton GP. Return to play following lateral ankle ligament repair: a systematic review. *Foot Ankle Int*; Manuscript in preparation.
6. Guyton GP. Minimally invasive osteotomies of the calcaneus. In: Ellis S, editor. *Master Techniques in Orthopaedic Surgery: The Foot and Ankle*. New York: Wolters Kluwer; Submitted.
7. Haislup B, Gupta S, Fleisher I, Wright MA, Murthi A. Industry funding in shoulder and elbow arthroplasty research. *J Shoulder Elbow Surg*; Submitted.
8. Haislup B, Sequeira S, Schaefer E, Trent S, Wright MA, Murthi AM. The reliability of the Walch classification for characterization of primary glenohumeral arthritis: a systematic review. *J Am Acad Orthop Surg*; Accepted.
9. Hameed D, McCormick BP, Sequeira SB, Dubin JA, Bains SS, Mont MA, Delanois RE, Boucher HR. Short-term outcomes following cemented versus cementless robotic-assisted total knee arthroplasty. *J Arthroplasty*; Accepted.
10. Hembree CW, Brooks DM, Rosenthal B, Winters C, Pasternack JB, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. *Foot Ankle Int*; Manuscript in preparation.
11. Mansur NS, Mathew S, Dai A, Rodriguez-Materon S, Alkaramany E, Guyton GP. Safe and effective is not always acceptable: the case for PASS scores in foot and ankle surgery. *Foot Ankle Int*; Submitted.
12. McCormick B, Murray J, Torrez L, Lemma MA. Drains for posterior lumbar fusion: suction vs off-suction. *J Spine Surg*; Manuscript in preparation.
13. McCormick B, Sequeira S, Hasenauer M, Boucher HR. Oral prednisone administration is associated with early medical and surgery-related complications following total joint arthroplasty: a national database study. *Arthroplasty Today*; Submitted.
14. Rodriguez-Materon S, Gallagher B, Miles MR, Mistretta KL, Hsu NN, Wang H, Guyton GP. The Evans osteotomy without fixation does not increase the nonunion rate. *Foot Ankle Int*; Manuscript in preparation.
15. Sherman TI, Guyton GP. Pes cavus. In: Lee S, Hsu A, editors. *Synopsis of Foot and Ankle Surgery*. New York: Thieme; Submitted.

16. Wright AJ, Chou A, Albaba A, Svoboda S, Dreese J, Abbasi P, Douoguih WA. Comparing multidirectional screw vs no screw to prevent hinge fracture in open wedge high tibial osteotomy; Manuscript in preparation.
17. Wright MA, Boos AM, Kolm P, Murthi AM. Trends in shoulder stabilization surgery: use of open Bankart repair. JAAOS; Manuscript in preparation.
18. Wright MA, O'Leary M, Johnston X, Murthi AM. Advances in anatomic total shoulder arthroplasty glenoid component design. JAAOS; Manuscript in preparation.

Projects in Progress

1. Abousayed M, Coleman M, Thompson J, Bean BA, Mcabee E, Guyton GP. Allograft versus flexor digitorum longus tendon transfer for posterior tibial tendon dysfunction. A randomized controlled trial with short-term functional outcome.
2. Argintar E. Anterior cruciate ligament repair leads to improved patient reported outcomes compared to anterior cruciate ligament reconstruction.
3. Argintar E. Outcomes of the nanoscopic partial meniscectomy versus standard arthroscopic partial meniscectomy.
4. Boucher HR. The MedStar/Baltimore Orioles Pitching Lab Data Repository.
5. Boucher HR, Jeong S, Lee JW. Exploring barriers, facilitators, and preferences for deprescribing during the surgical period
6. Boucher HR, Lee J, Levine RG, Szakiel P, Grieme C, Abraham N. Single antibiotic use for joint replacements at an ambulatory surgery center.
7. Boucher HR, Lee JW. Evaluation of the Hip/Knee Injury and Osteoarthritis Outcome Score for Joint Replacement.
8. Boucher HR, Lee JW, Abraham N, Grieme C, Rigor P, Markel M, Szakiel P, Desale S. Safety and efficacy of using general anesthesia for joint replacements at an ambulatory surgery center.
9. Boucher HR, Lee JW, Jeong S. Determination of the learning curve for the ROSA® knee system.
10. Boucher HR, Lee JW, Strait A, Supra R. Comparison of outcomes between conventional versus robot-assisted partial knee replacement.
11. Boucher HR, Lee JW, Supra R. Comparison of outcomes between robot-assisted patellofemoral knee replacement versus total knee replacements.
12. Brodine J, Ryan K. The cost of jockey injuries: an analysis of health claims.
13. Chopra A, Miller SD. First MTP fusion using staple compression plates.

14. Chopra A, Murthi A. Outcomes evaluation of total shoulder arthroplasty with DePuy Enhance.
15. Chopra A, Murthi A. Patient reported outcomes following total shoulder arthroplasty: a multi-center study.
16. Chopra A, Murthi A. B2 glenoid correction with novel conforming circular glenoid with peripheral ring fixation.
17. Chopra A, Murthi A. Novel 3D printed humeral implant in shoulder arthroplasty, a two-year follow-up study of stemmed and stemless designs.
18. Chopra A, Zhang L, Hoffman R, Murthi A. Insurance-mandated physical therapy prior to shoulder arthroplasty.
19. Chopra A, Zhang L, Johnson P, Murthi A. Short-term outcomes of reverse shoulder arthroplasty using a custom baseplate for severe glenoid deficiency.
20. Chou T, Svoboda S, Douoguih WA. Biomechanical comparison of lateral extra-articular tenodesis versus internal brace after ACL reconstruction.
21. Dai A, Hembree CW, Guyton GP. Percutaneous modified Lapidus procedure with early weightbearing: pain relief and radiographic outcomes with minimum 1-year follow-up.
22. Dobrowolski MG, Gould H, Sequeira S, Svoboda S. The effect of a standardized tutorial on the measurement of TT-TG distance in MRIs of knees with patellar instability.
23. Dreese JC, Svoboda S. A randomized controlled trial of the Subchondroplasty procedure with arthroscopy versus arthroscopy alone for treatment of bone marrow lesions in the knee.
24. Duvall G, Wright M, Murthi AM. Do modern orthopaedic trainees have sufficient exposure and education on open shoulder stabilization?
25. Elkaramany E, Haislup BD, McCormick B, Bubnash K, Bolster D, Trent S, Miller SD. Clinical outcomes of Nitinol staple plates in foot fusion procedures.
26. Gallagher B, Guyton GP, Wisbeck JM, Miller SD, Hassani A, Bubnash K, Mcabee E, Bury A, Hembree WC. The effect of postoperative naproxen on heterotopic ossification following Achilles tendon debridement.
27. Gould H, Cullen MT, Sequeira S, Svoboda S. Poor inter-observer reliability of TT-TG measurement among orthopaedics sports medicine surgeons regardless of measurement technique.
28. Gould HP, Lawson J, Sequeira S, Imbergamo C, Guyton GP, Hembree CW. Biomechanical comparison of open vs. percutaneous techniques for Achilles repair (systematic review).
29. Gould HP, Sequeira S, Bano J, Wyand T, Imbergamo C, Dreese J. Physical therapy versus arthroscopic surgery for treatment of patellar tendinopathy: a systematic review.

30. Group ACoRMR, Loveland A, Murthi A, Austin L, Thakar O. Low success rate of closed reductions when treating dislocations after reverse shoulder arthroplasty (RSA): a study by the ASES Complications of RSA Multicenter Research Group.
31. Gupta S, Haislup B, Vaughan A, Hoffman R, Murthi A. Accessing information provided via artificial intelligence regarding distal biceps tendon repair surgery.
32. Gupta S, Haislup B, Vaughan A, Hoffman R, Murthi A. Accessing information provided via artificial intelligence regarding reverse and anatomic total shoulder arthroplasty.
33. Guyton GP, Miller SD, A. H, Bury A, Wisbeck J, Mcabee E, Bubnash K, Hembree WC. Effect of ketorolac administration on postoperative narcotic utilization and union rates in great toe arthrodesis.
34. Haislup B, Tarapore R, Hwang T, Lee M, Wright MA, Murthi A. The impact of resident and fellow involvement on patient outcomes in shoulder arthroplasty.
35. Haislup B, Vaughan A, Zhang L, Murthi A. Pyrocarbon shoulder hemiarthroplasty for avascular necrosis following proximal humerus fracture nonunion.
36. Haislup B, Wright MA, Sanghavi KK, Giladi A, Thomas A. The intersection of racial and spatial inequalities on utilization and outcomes for common orthopedic procedures.
37. Hembree CW, Miller SD. TITAN 3-D wedge system post-market clinical follow-up study.
38. Hembree WC, Guyton G, Miller SD, Hassani A, McAbee E, Bubnash K. Prospective comparison of wound complications after anterior total ankle arthroplasty with and without PICO negative pressure incisional dressing.
39. Hoffman R, Murthi A. Subscapularis repair in reverse shoulder arthroplasty: a multi-center randomized single blinded superiority study.
40. Hoskins J, Wright AJ, Penny G, Levens B, Almajed H, Sequeira S, Dreese J, Svoboda S, Hinton R, Douoguih WA. Comparing preoperative MRI findings with arthroscopy to assess location of ACL tears.
41. Imbergamo C, Gould H, Rate W, Civilette M, Bano J, Brumback RJ, Giladi A. Clinical outcomes in hip fracture surgery: direct presentation to geriatric orthopedic specialty center vs transfer from outside hospital.
42. Imbergamo C, Gould H, Richardson M. Start on the lateral: a technique guide for trochanteric start intramedullary nailing.
43. Imbergamo C, Sequeira S, McCormick B, Hasenauer MD, Boucher HR. The use of telemedicine in the global period for postoperative orthopaedic care following total joint arthroplasty is associated with increased medical complications and healthcare utilization: a national database study.
44. Jacobs M, Gerding A. Outcomes evaluation of using Donjoy flat knee inserts after surgery inserts.

45. Jeong S, Lee J, Boucher HR. Low income is associated with a higher risk of new-onset postsurgical depression after total joint arthroplasty, which may be associated with adverse TJA outcomes.
46. Jeong S, Lee J, Boucher HR. Antidepressant use in total joint arthroplasty recipients with new-onset postsurgical depression is not associated with improved outcomes.
47. Khan AZ, Jawa A, Wiater JM, Cuff DJ, Murthi AM, Smith MJ, Miller D, Vasconcellos D, Nicholson T, Austin LS. Biomechanical comparison of a novel circular glenoid with peripheral ring fixation to a standard anchor pegged glenoid in total shoulder arthroplasty.
48. Kowalis AW, Lee J, Boucher HR. Impact of physician assistants in orthopaedic night float coverage.
49. Lee JW, Baek G, Boucher HR. Investigating the comparison of short-term outcomes between MAKO total and bicompartamental knee arthroplasty.
50. Lee JW, Baek G, Boucher HR. Investigating the comparison of short-term outcomes between ROSA, MAKO, and conventional total knee arthroplasties.
51. Lee JW, Baek G, Boucher HR. Investigating the outcomes of hip resurfacing implants.
52. Levens B, Douoguih WA. Comparing one and two hinge screw vs no screw to prevent hinge fracture in medial closing wedge distal femoral osteotomy.
53. Lindsey S, Feijoo E, Wright MA, Murthi A, Giladi A. Impact of sociodemographic factors on bone health referrals following fragility fracture.
54. Mansur NS, Alkaramany E, Dai A, Rodriguez-Materon S, Guyton G. Correlation between intraoperative joint distraction after cheilectomy and postoperative patient reported outcomes in hallux rigidus: a prospective study.
55. Mansur NS, Alkaramany E, Dai A, Rodriguez-Materon S, Guyton G. Correlation between intraoperative joint distraction and postoperative patient reported outcomes in distal metatarsal osteotomies.
56. Martelli D. NSF TANDEM project: Convergence Accelerator, Track M: TANDEM: Tensegrity-based Assistive and rehabilitation Exosuits to complement human biomechanics.
57. Martelli D. Personalized RF sensing: learning optimal representations of human activities and ethogram on the fly.
58. Martelli D. Analysis of the effects of a perturbation-based balance training in adults with medial knee osteoarthritis.
59. Martelli D, Volkell G, Hennawi G. Validation of a virtual reality floor maze test to measure spatial navigation to detect early signs of cognitive impairment.
60. Mathew S, Gallagher BP, Guyton GP. Nonunion rate of Evans osteotomy without fixation pediatric flatfoot.

61. Mathew S, Kuripla CS, Coleman MM, Hembree CW, Guyton GP. Clinical outcomes and complications of peroneus brevis allograft reconstruction.
62. McCormick B, Jaicks C, Sequeira S, Hasenauer MD, McKinstry R, Boucher HR. A history of patella fractures is associated with early surgery-related complications following total knee arthroplasty: a national database study.
63. McCormick B, McKinstry R. Patient care coordination, healthcare resource utilization, and perioperative complication rates following total joint arthroplasty.
64. McCormick B, Sequeira S, Hasenauer M, McKinstry R, Boucher HR. Peripheral nerve blocks are associated with decreased early medical complications, dislocations, and opioid consumption following total hip arthroplasty.
65. Miller SD, Bubnash K. Outcome of new cannulated screws in foot fusion and osteotomy procedures.
66. Mistretta KL, McCormick B, Markel M, Lee JW, Boucher HR. Manipulation of preoperative plan during robotic total knee replacement.
67. Mueller S. Perhaps the nose knows the best intervention to decrease SSIs in patients undergoing hip and knee joint replacement.
68. Murthi A, Wright M, Khan M, O'Leary MT. Shoulder instability trial comparing arthroscopic stabilization benefits compared with latarjet procedure evaluation.
69. Murthi A, Wright M, Thakar O, Haislup B, Rajan L, Todd E. A Retrospective study of identifying predictors of acromial stress fracture after reverse total shoulder arthroplasty (rTSA) with the Zimmer TM prosthesis.
70. Murthi A, Wright MA, Thakar O, Haislup B. Baseplate fractures: a follow-up to the Multicenter ASES Research Group's study on RSA Complications.
71. Pasternack JB, Guyton GP. Inter-rater and intra-rater reliability of a novel fifth metatarsal base fracture classification system.
72. Perraut G, Kuenze C, Cherelstein R, Chang E. Comparison of biomechanical strength of suture anchor versus staple fixation of lateral extra-articular tenodesis graft.
73. Rajan L, Mizher R, Wright M, Murphy J. The impact of social deprivation on patient reported outcomes after anatomic and reverse shoulder arthroplasty.
74. Rodriguez-Materon S, Guyton GP. The tradeoff of motion versus pain in hallux rigidus treatment: matching surgical philosophy and patient expectations.
75. Sedgley MD, Hudson K, Avgeropoulos D. Systemwide evaluation of emergency Action Plans (EAP) in sports medicine.
76. Sequeira S, Ebert F. Is there value in a preoperative arthrogram to characterize loosening and instability of painful TKAs? a retrospective cohort study.

77. Sequeira S, Lee J, Boucher HR. Does the postoperative hip radiograph following total hip arthroplasty have clinical and actionable value to orthopaedic surgeons?
78. Sequeira S, McCormick B, Boucher HR. A history of scoliosis without fusion is associated with an increased risk of early medical and surgery-related complications following THA: a propensity-scored analysis.
79. Sequeira S, McCormick B, Hasenauer M, McKinstry R, Boucher HR. Does the presence of an iliofemoral stent prior to direct anterior total hip arthroplasty place the femoral nerve at risk for a postoperative palsy during retractor placement? a cadaveric-based investigation.
80. Sequeira S, McCormick B, Hasenauer M, McKinstry R, Boucher HR. Does the presence of an iliofemoral stent prior to direct anterior total hip arthroplasty place the femoral nerve at risk for a postoperative palsy during retractor placement? a cadaveric-based investigation.
81. Sequeira S, Tarka M, Gould H, Miller SD, Guyton GP, Hembree CW. Reoperation rates of isolated lateral ankle ligament stabilization versus combined medial and lateral ankle ligament stabilization: a propensity-scored analysis.
82. Sequeira S, Tarka M, Gould H, Miller SD, Guyton GP, Hembree CW. Primary lateral ankle ligament repair is associated with increased rates of revision ligamentous procedures and ankle arthroscopy compared to secondary lateral ankle ligament reconstruction: a propensity-matched analysis.
83. Sequeira S, Tarka M, Gould H, Miller SD, Guyton GP, Hembree CW. Peroneal tendon repair with retrofibular groove deepening is associated with decreased rates of revision peroneal tendon repair procedures compared to repair without groove deepening: a propensity-matched analysis.
84. Sequeira S, Tarka M, Gould H, Miller SD, Guyton GP, Hembree CW. Isolated syndesmotic fixation is associated with increased risk of arthrodesis and arthroplasty operations compared to nonoperatively managed syndesmotic injury: A propensity-scored analysis.
85. Shah A, Ryan K, leStrange A. Evaluation of jockey heart rate and rhythm trends during training, racing and recovery.
86. Sherif B, Peacock T, Baek G, Boucher HR. Follow up to investigating the comparison of short-term outcomes between ROSA, MAKO, and conventional total knee arthroplasties.
87. Skinner DW, O'Leary MT, Murthi A, Wright M. Uncemented reverse shoulder arthroplasty for proximal humerus fracture.
88. Stein JA, Wright MA, Duvall GT, Ozturk I. Outcomes following rotator cuff repair with a surgeon directed home rehabilitation program.
89. Tarapore R, Wieland M, Abbasi P, Gould HP, Fillar AL. Does repair of the extensor retinaculum significantly impact the biomechanical strength of patellar tendon repair? a cadaveric study.
90. Tarka M, Gould HP, Camire L, Guyton GP. Data censoring likely biased the largest randomized trial of Achilles tendon rupture treatment against surgery: a Monte Carlo analysis.

91. Tarka M, Yang P, Hembree CW. Ultrasound guided injection of the tarsal tunnel – a cadaveric study to confirm inject dispersion and safety.
92. Thakar O, Abbasi P, Wright MA, Murthi A. Biomechanical comparison of superior capsular reconstruction (SCR) and anterior cable reconstruction (ACR) with long head of biceps tendon for irreparable rotator cuff tears.
93. Thakar O, Haislup B, Wright M, Murthi A. Identifying predictors of acromial stress fracture after reverse total shoulder arthroplasty.
94. Thakar O, Swansen T, Abbasi P, Wright MA, Murthi A. Biomechanical comparison of anterior cable reconstruction (ACR) for irreparable rotator cuff tears with various long head of the biceps tendon fixation techniques.
95. Wright MA, Lee SY, Murthi A. Patient satisfaction and clinical outcomes following shoulder arthroplasty with a patient care coordination team.
96. Wright MA, Thakar O, Murthi A. Implant-related risk factors for acromial and scapular stress fracture after reverse shoulder arthroplasty: a multicenter study from the ASES Acromial Stress Fracture Research Group.
97. Yerrapragada A, Noori N, Gatenby W, Delijani K, Kennedy PM, Wisbeck J, Guyton G, Miller SD, Hembree WC. Patient satisfaction with telehealth visits in a busy foot and ankle practice.
98. Zhang L, Abbasi P, Khan A, Abboud J, Johnson P, Wright MA, Murthi A. Biomechanical comparison of distal tibia allograft versus distal radius allograft for anterior glenoid reconstruction.

Active Clinical Trials

1. Boucher HR. A post-market clinical follow-up study to provide safety, performance and clinical benefits data using the Persona Ti-Nidium total knee system and instrumentation.
2. Cooper J. Golf-related outcomes following total joint arthroplasty: a prospective case series.
3. Dreese J. A prospective, multicenter, concurrently controlled clinical study of Chondro-Gide® articular cartilage cover for the treatment of large chondral lesions in the knee.
4. Hembree WC. A prospective, controlled, multi-center, post-approval trial to evaluate the long-term safety and effectiveness of AUGMENT® injectable bone graft compared to autologous bone graft as a bone regeneration device in foot and ankle fusions.
5. Levine RG. A prospective cohort clinical trial evaluating age as a risk factor for poor outcomes of Bridge-Enhanced ACL Repair.
6. Mesfin A. A prospective, multicenter study evaluating the safety and performance of posterior fixation in trauma, reconstructive, and tumor surgery of the occipito-cervico-thoracic spine.

7. Miller SD. First MTP fusion using staple compression plates.
8. Miller SD. Juggerknot with broadband post marketing clinical follow-up.
9. Murthi A. Limited health literacy in patients with rotator cuff tears: risk factors and outcome effects.

Grants Awarded

Dr. Evan Argintar – Sports Medicine

Two Arthrex Investigator Initiated Grants

Dr. Stuart Miller – Foot and Ankle

Depuy Synthes Investigator-Initiated study Grant

Dr. Dario Martelli – Gait and Motion Analysis

MedStar Health New Investigator Associate Giving Grant

NIH R21 Grant

NSF Collaborative Research Grant

NSF Convergence Accelerator Grant

Musculoskeletal Research Center MUMH Publications, Presentations, and Current Research 2023-2024

Published Journal Articles and Book Chapters

1. Brooks DM, Cunningham B, McAfee PC. In vivo analysis of wear debris produced from titanium plasma-sprayed implants: a micro-computed tomographic investigation. *Spine J.* 2024; In press.
2. Cunningham BW, Brooks DM, Rolle NP, Weiner DA, Wang W. An investigational time course study of titanium plasma spray on osseointegration of PEEK and titanium implants: an in vivo animal model. *Spine J.* 2024;24(4):721-9. PMID: 37875243
3. Hembree CW, Brooks DM, Rosenthal B, Winters C, Pasternack JB, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model [abstr]. *Foot Ankle Orthop.* 2023;8(4):10.1177/2473011423S00295.
4. Homeier D, Kang D, Molinari R, Mesfin A. The top-cited military relevant spine articles. *J Orthop.* 2024;54:38-45. PMID: 38524362
5. Lucas SL, Gallagher B, Mullinax KP, Brumback RJ, Cunningham BW. 3D-printed model in preoperative planning of sciatic nerve decompression because of heterotopic ossification: A case report. *JBJS Case Connect.* 2024;14(1):e23.00483. PMID: 38394316
6. McCormick B, Asdourian P, Johnson D, Moatz B, Duvall G, Soda M, Beaufort AR, Chotikul L, McAfee PC. 100 complex posterior spinal fusion cases performed with robotic instrumentation. *J Robot Surg.* 2023;17(6):2749-56. PMID: 37707742
7. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Cervicothoracic reconstruction with quad rods, dual rods, and tapered rods: an in vitro human cadaveric model. *World Neurosurg.* 2023;180:243-4. PMID: 37839569
8. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervicothoracic junction in a human cadaveric model. *Neurosurgery.* 2024;94(1):217-25. PMID: 37706689
9. Tortolani PJ, Lucas SL, Pivazyan G, Wang W, Cunningham BW. Validation of impaction grafting for single-level transforaminal lumbar interbody fusion: technical pearls and microCT analysis. *Spine (Phila Pa 1976).* 2023;48(6):E70-E7. PMID 36728792

Presentations at Local, National, and International Meetings

1. Brooks DM, Cunningham B, McAfee PC. In vivo analysis of wear debris produced from titanium plasma-sprayed implants: a micro-computed tomographic investigation. North American Spine Society (NASS), Los Angeles, CA, October, 2023.

2. Brooks DM, Cunningham B, McAfee PC. In vivo analysis of wear debris produced from titanium plasma-sprayed implants: a micro-computed tomographic investigation. International Society for the Advancement of Spine Surgery (ISASS), San Francisco, CA, June, 2023.
3. Cowley RAI, Johnson D, Cunningham BW, Brooks DM, McAfee PC. An investigational study of the neurohistopathologic response following epidural application of a novel hemostatic agent: an in-vivo ovine laminectomy model. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 28, 2023.
4. Cunningham BW, Brooks DM, Cowley RAI, Rolle NP, Spotnitz WD, McAfee PC. An investigational study of the neurohistopathologic response following epidural application of a novel hemostatic agent: an in-vivo ovine laminectomy model. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11, 2023.
5. Cunningham BW, Brooks DM, Johnson D, Pivazyan G, McAfee PC. Gender specific biomechanical evaluation of fifty human cadaveric lumbopelvic spines: emphasis on the kinematic differences in sacroiliac joint range of motion. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11, 2023.
6. Cunningham BW, Brooks DM, Johnson D, Pivazyan G, McAfee PC. Gender specific biomechanical evaluation of fifty human cadaveric lumbopelvic spines: emphasis on the kinematic differences in sacroiliac joint range of motion. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 28, 2023.
7. Cunningham BW, Brooks DM, Johnson D, Pivazyan G, McAfee PC. Gender specific biomechanical evaluation of fifty human cadaveric lumbopelvic spines: emphasis on the kinematic differences in sacroiliac joint range of motion. American Association of Neurological Surgeon (AANS), Los Angeles, CA, April 21-23, 2023.
8. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Use of dexamethasone in the immediate post-operative period is associated with increased risk of instrumentation and surgical site complications in diabetic patients undergoing lumbar spinal fusion. North American Spine Society (NASS), Los Angeles, CA, October, 2023.
9. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Use of dexamethasone in the immediate post-operative period is associated with increased risk of instrumentation and surgical site complications in diabetic patients undergoing lumbar spinal fusion. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 28, 2023.
10. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Use of dexamethasone in the immediate post-operative period is associated with increased risk of instrumentation and surgical site complications in diabetic patients undergoing lumbar spinal fusion. International Society for the Advancement of Spine Surgery (ISASS), San Francisco, CA, June, 2023.
11. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Post-operative dexamethasone increases complications in diabetic patients undergoing lumbar fusion. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 26, 2023.

12. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Post-operative dexamethasone increases complications in diabetic patients undergoing lumbar fusion. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11, 2023.
13. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Post-operative dexamethasone increases complications in diabetic patients undergoing lumbar fusion. Orthopaedic Summit Evolving Techniques (OSET), Boston, MA, September, 2023.
14. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Post-operative dexamethasone increases complications in diabetic patients undergoing lumbar fusion. Eastern Orthopaedic Association (EOA), Charleston, SC, October, 2023.
15. McCormick B, Asdourian P, Johnson D, Moatz B, Duvall G, Soda M, Beaufort AR, Chotikul L, Cunningham B, Brooks DM, McAfee PC. 100 complex posterior spinal fusion cases performed with robotic instrumentation. Southern Orthopaedic Association (SOA), Miramar Beach, FL, July 26, 2023.
16. McCormick B, Asdourian P, Johnson D, Moatz B, Duvall G, Soda M, Beaufort AR, Chotikul L, Cunningham B, Brooks DM, McAfee PC. 100 complex posterior spinal fusion cases performed with robotic instrumentation. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11, 2023.
17. Moatz B, McCormick BP, Cunningham BW, Brooks DM, Duvall G, Soda MT, Asdourian P, McAfee PC. Anterior cervical discectomy and fusion survivorship using a combined 3d printed interbody spacer, plate, and integral screws: 338 consecutive patients. Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 7-11, 2023.
18. Pasternack JB, Cunningham B, Brooks DM, Winters C, Rosenthal B, Hembree CW. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11, 2023.
19. Pasternack JB, Hembree CW, Brooks DM, Rosenthal B, Winters C, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. Visiting Professor Lectureship, MedStar Union Memorial Hospital, Baltimore, MD, June 29. 2023.
20. Pasternack JB, Hembree CW, Brooks DM, Rosenthal B, Winters C, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. American Orthopaedic Foot and Ankle Society (AOFAS), Louisville, KY, September 20. 2023.
21. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervico-thoracic junction: an in vitro human cadaveric model. Neurosurgical Society of the Virginias (NSV), Virginia, January, 2023.
22. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervico-thoracic junction: an in vitro human cadaveric model. Student Neurosurgery/Neurology Research Conference (SNRC), January, 2023.
23. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervico-thoracic junction: an in vitro human cadaveric model.

American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS) Spine Summit, Miami Beach, FL, March, 2023.

24. Pivazyan G, Winters C, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervico-thoracic junction: an in vitro human cadaveric model. Medical Student Orthopedic Society (MSOS), March, 2023.
25. Soda M, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 100 consecutive patients. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11
26. Soda M, Johnson D, McCormick B, Moatz B, Asdourian P, Chotikul L, Brooks DM, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 300 consecutive medical implants. MedStar Health-Georgetown University Research Symposium, May 8, 2023.
27. Soda M, Johnson D, McCormick B, Moatz B, Asdourian P, Chotikul L, Brooks DM, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 300 consecutive medical implants. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 7-11, 2023.
28. Soda M, Johnson D, McCormick B, Moatz B, Asdourian P, Chotikul L, Brooks DM, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 300 consecutive medical implants. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 28, 2023.
29. Stewart J, Soda M, Cunningham B, McAfee PC. Globus Medical E3D: based on the first 100 spinal deformity cases over 7 operative levels. Maryland Orthopaedic Association (MOA), Annapolis, MD, February 11. 2023.
30. Stewart J, Soda M, Cunningham B, McAfee PC. Globus Medical E3D: based on the first 100 spinal deformity cases over 7 operative levels. American Academy of Orthopaedic Surgeons (AAOS), Las Vegas, NV, March 7-11. 2023.
31. Stewart J, Soda M, Cunningham B, McAfee PC. Globus Medical E3D: based on the first 100 spinal deformity cases over 7 operative levels. Virginia Orthopaedic Society (VOS), Hot Springs, VA, April 28. 2023.
32. Stewart J, Soda M, Cunningham B, McAfee PC. Globus Medical E3D: based on the first 100 spinal deformity cases over 7 operative levels. North American Spine Society (NASS), Los Angeles, CA, October. 2023.
33. Tortolani PJ, Lucas SL, Pivazyan G, Wang W, Cunningham BW. Validation of impaction grafting for single-level transforaminal lumbar interbody fusion: technical pearls and microCT analysis. American Association of Neurological Surgeon (AANS), Los Angeles, CA, April 21-23. 2023.
34. Winters C, Pivazyan G, Brooks DM, Sandhu FA, Cunningham BW. Biomechanical analysis of 2 versus 4 rods across the cervico-thoracic junction: an in vitro human cadaveric model. MedStar Health-Georgetown University Research Symposium, May 8, 2023.

Projects in Progress and Pending Publication

1. Beaufort AR, Brooks DM, Cunningham BW, Kukreja MM, Mullinex K, N.P. R, Tortolani PJ. Does attachment of the dorsolumbar fascia to a spinous process prosthetic device affect the operative and kinematic properties of the lumbosacral spine. *J Neurosurg Spine*; Manuscript in preparation.
2. Brooks DM, Cunningham BW, Beaufort A, Berven SH. Eccentric kinematic patterns of the sacroiliac junction following lumbopelvic reconstruction: , an in-vitro human cadaveric model. *Spinal Deformity*; Manuscript in preparation.
3. Brooks DM, Cunningham BW, Johnson DC, Berven SH. Experimental correlation of radiographic metrics and lumbosacral rod strain following lumbopelvic instrumentation for deformity correction and computational finite element analysis of rod material. *Spinal Deformity*; Manuscript in preparation.
4. Cunningham B, Smith K, Soda M, Brooks DM, McAfee PC. 3D printed lumbar expandable cages: aged-matched control analysis of 130 cases: a retrospective cohort study. Project in process.
5. Cunningham BW, Brooks DM, Cappuccino A. Does replacement of the anterior longitudinal ligament with a polyester mesh affect the biomechanical properties following lumbar total disc arthroplasty? an in-vitro human cadaveric model. *Spine*; Manuscript in preparation.
6. Cunningham BW, Brooks DM, Cowley RAI, McAfee PC. A correlation analysis of the Denis fracture classification versus regional variations in lumbar vertebral bone mineral density: an in vitro cadaveric model. Project in process.
7. Cunningham BW, Brooks DM, Cowley RAI, Rolle NP, Spotnitz WD, McAfee PC. An investigational study of the neurohistopathologic response following epidural application of a novel hemostatic agent: an in-vivo ovine laminectomy model. *Spine J*; Manuscript in preparation.
8. Cunningham BW, Brooks DM, Johnson D, Pivazyan G, McAfee PC. Gender specific biomechanical evaluation of fifty human cadaveric lumbopelvic spines: emphasis on the kinematic differences in sacroiliac joint range of motion. *J Bone Joint Surg*; Manuscript in preparation.
9. Cunningham BW, Brooks DM, Johnson DC, Pivazyan G, Berven SH. Comprehensive biomechanical analysis of lumbosacral rod strain following unilateral versus bilateral iliac screw instrumentation – an in vitro cadaveric model. *Spine J*; Manuscript in preparation.
10. Cunningham BW, Brooks DM, McAfee PC, Yuan H. An investigational study of nucleoplasty using an in situ-curable polyurethane: an in vivo non-human primate model. *J Neurosurg – Spine*; Manuscript in preparation.
11. Cunningham BW, Cowley RAI, Brooks DM. A comparative biomechanical investigation of anterior versus posterior stabilization to augment lumbar interbody arthrodesis: an in-vitro ovine model. *J Anim Sci Biotechnol*; Manuscript in preparation.

12. Cunningham BW, Johnson L, McAfee PC. Maturation process of beta-tricalcium phosphate granules versus autograft for posterolateral spinal arthrodesis: a time course investigation using an in-vivo ovine model. *Spine J*; Manuscript in preparation.
13. Cunningham BW, McAfee PC. Dynamic fatigue properties of an articulating interbody fusion device with supplemental posterior instrumentation: an in vitro human cadaveric model. *Spine*; Manuscript in preparation.
14. Cunningham BW, Mueller K, Klunk J, Mullinix KP, McAfee PC. An investigational study of a parathyroid hormone-based bone graft substitute for interbody spinal arthrodesis: an in-vivo ovine model. *Spine J*; Manuscript in preparation.
15. Cunningham BW, Mueller K, Layton SL, Beaufort AR, McAfee PC. Comprehensive neurohistopathologic analysis following epidural application of bone graft substitutes used for spinal arthrodesis: an in vivo ovine model. *Spine J*; Manuscript in preparation.
16. Cunningham BW, Sun X, McAfee PC. Biomechanical and radiographic evaluation of an articulating interbody fusion device for TLIF: an in-vitro human cadaveric model. *Spine J*; Manuscript in preparation.
17. Cunningham BW, Umekoji H, McAfee PC. An investigational study of beta-tricalcium phosphate granules and polymeric binder for posterolateral spinal arthrodesis: an in-vivo ovine model. *Spine*; Manuscript in preparation.
18. Cunningham BW, Zittel K, McAfee PC. An investigational study of beta-tricalcium phosphate granules and hydroxyapatite for posterolateral spinal arthrodesis: an in-vivo ovine model. *Spine J*; Manuscript in preparation.
19. Hein RE, Cunningham BW, Milone M, Forthman CL, Richard MJ. Comparative biomechanical analysis of scaphoid fracture: an in vitro human cadaveric model. *J Hand Surg*; Manuscript in preparation.
20. Hembree CW, Brooks DM, Rosenthal B, Winters C, Cunningham B. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. *Foot Ankle Int*; Manuscript in preparation.
21. Johnson D, McCormick B, Ferguson J, Cunningham BW, McAfee PC. Use of dexamethasone in the immediate post-operative period is associated with increased risk of instrumentation and surgical site complications in diabetic patients undergoing lumbar spinal fusion. Manuscript in preparation.
22. Johnson DC, Cunningham BW, Udan J, Tortolani PJ. 3D printed model in pre-operative planning and intra-operative evaluation for Klippel-Feil syndrome: a case report. *Spine J*; Manuscript in preparation.
23. Lee F, Brooks DM, Lucas SL, Means JA, Lemma MA, Cunningham BW. A comprehensive biomechanical investigation of cross-link fixation method on kinematic properties of the lumbosacral spine. *Spine J*; Manuscript in preparation.
24. McCann J, Burroughs P, Brooks DM, Zittel K, Cooper PS, Cunningham BW. Analysis of tissue retraction pressures in total ankle arthroplasty: an in vitro cadaveric model. Project in progress.

25. Means JA, Brooks DM, Cunningham BW, Kukreja MM, Tortolani PJ. A novel testing methodology to quantify multidirectional flexibility properties of the lumbar spine. *Eur Spine J*; Manuscript in preparation.
26. Mesfin A. Incidence, surgical rates, and outcomes of ossification of the posterior longitudinal ligament. Project in progress.
27. Mesfin A. Incidence, surgical rates, and outcomes of cauda equina syndrome. Project in progress.
28. Mesfin A. Orthopedic disparities in the management of cauda equina syndrome. Project in progress.
29. Mesfin A. Orthopedic Methodology to Track Surgical Cases. Project in progress.
30. Moatz B, McCormick BP, Cunningham BW, Brooks DM, Duvall G, Soda MT, Asdourian P, McAfee PC. Anterior cervical discectomy and fusion survivorship using a combined 3d printed interbody spacer, plate, and integral screws: 338 consecutive patients. *World Neurosurg*; Manuscript in preparation.
31. Perraut G, Burroughs P, Lyden M, Cunningham BW, Argintar E. Analysis of patellofemoral contact pressure with varying trochlear dysplasia: an in-vitro cadaveric model. Project in progress.
32. Rolle NP, Cunningham BW, McAfee PC. Effect of gestational orthoses on pain, center of gravity, and contact forces in simulated pregnancy. *Am J Obstet Gynecol*; Manuscript in preparation.
33. Rolle NP, Cunningham BW, McAfee PC. Multidirectional flexibility properties of the lumbar spine following implantation of anular repair mesh: an in vitro cadaveric model. Manuscript in preparation.
34. Soda M, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 100 consecutive patients. *World Neurosurg*; Manuscript in preparation.
35. Soda M, Johnson D, McCormick B, Moatz B, Asdourian P, Chotikul L, Brooks DM, Hashemi S, Cunningham B, McAfee PC. 3D printed anterior cervical stand-alone combined cage-plate: 300 consecutive medical implants. *Global Spine J*; Manuscript submitted.
36. Stewart J, Soda M, Cunningham B, McAfee PC. The contribution of intraoperative computed tomography integrated directly with robotic navigation: analysis of the first 100 consecutive posterior thoracolumbar instrumented fusions. Project in process.
37. Stewart J, Tortolani PJ, Lucas SL, Beaufort AR, Brooks DM, Mueller KB, Cunningham BW. Quantitative histomorphological characterization of human cervical nerve roots to determine the relationship with postoperative C5 palsy. Manuscript in preparation.
38. Tannous O, Moatz BW, Patalive Z, Tran V. A multi-center, patient outcome registry for a hydroxyapatite infused PEEK interbody fusion device. Project in process.

Musculoskeletal Research Center

39. Umekoji H, Cunningham BW, Rolle NP, Shirado O, McAfee PC, Oda H. Spinal kinematics of dynamic posterior stabilization at the superior operative and adjacent levels in lumbar spinal reconstruction: an in vitro human cadaveric model. Spine J; Manuscript in preparation.
40. Zittel K, Asku N, Petrillo K, Murray R, Cunningham BW. Pull out force of press-fit osteochondral allografts in uncontained femoral condyle lesions: an in-vitro cadaveric model. Manuscript in preparation.

Awards

1. Pasternack JB, Cunningham B, Brooks DM, Winters C, Rosenthal B, Hembree CW. Effect of distal tibiofibular syndesmosis overcompression on the range of motion of ankle bones: a cadaveric model. Presented at the Annual Meeting of the Maryland Orthopaedic Association (MOA), **Awarded second place in non-clinical abstracts**, Annapolis, MD, February 11, 2023.

Grants Awarded

Dr. Addisu Mesfin - Spine

OREF/JRGOS Diversity, Equity, Inclusion and Disparities in Orthopaedic Health Care Research Grant

Curtis National Hand Center Publications, Presentations, and Current Research 2023-2024

Published Journal Articles and Book Chapters

1. Azad CL, Beres LK, Wu AW, Giladi AM. Patient interpretations vary for questions in the patient-reported outcomes measurement information system upper extremity. *J Hand Surg Eur Vol.* 2023 Jul;48(7):654-660.
2. Belyea CM, Abbasi P, Sanghavi KK, Giladi AM, Means KR Jr. All-suture anchor repair of the flexor digitorum profundus insertion: a biomechanical comparison of 2 suturing techniques. *J Hand Surg Am.* 2023 Dec;48(12):1276.e1-1276.e7.
3. Bauder AR, Graham EM, Shubinets V, Mendenhall SD, Carrigan RB, Lin IC, Shah A, Chang B. Does irreducibility always mean a complex dislocation? an analysis of 33 pediatric metacarpophalangeal joint dislocations. *Plast Reconstr Surg.* 2023 Oct 1;152(4):662e-669e.
4. Billig JI, Kotsis SV, Kong L, Wang L, Chung KC; Michigan Collaborative Hand Initiative for Quality in Surgery (M-CHIQS) Group*. Predictors and variation in steroid injection use for carpal tunnel syndrome from a multicenter quality collaborative. *Plast Reconstr Surg.* 2023 Jun 27; Online ahead of print.
5. Bovill J, Huffman S, Cach G, Haffner Z, Deldar R, Abu El Hawa AA, Sgromolo N, Giladi AM. Propeller perforator flaps used for hand and digit reconstruction: a systematic review. *J Hand Microsurg.* 2023 Jun; Online ahead of print
6. Daniels CM, Abbasi P, Sanghavi KK, Giladi AM, Katz RD, Means KR Jr. Comparison of 3 dynamic external fixation devices for proximal interphalangeal joint dorsal fracture-dislocations in a cadaver model. *J Hand Surg Am.* 2023 Jul;48(7):736.e1-736.e7.
7. Daruwalla JH, Skrok J, Pet MA, Giladi AM, Higgins JP. Magnetic resonance imaging to investigate the clinical applicability of the medial femoral trochlea osteochondral flap within the wrist. *Hand (N Y).* 2023 Mar;18(2_suppl):119S-123S.
8. Gary CS, Horowitz ME, Giladi AM. Diagnostic biomarkers for upper extremity chronic pain conditions. *J Hand Surg Glob Online.* 2023 Jan;5(1):116-120.
9. Gary CS, Iskandarova A, Abadeer AI, Yohe GJ, Giladi AM. Performance of near-infrared spectroscopy in detecting acute tourniquet-induced upper-extremity ischemia across different skin phenotypes. *J Hand Surg Am.* 2023 Jul 26; Online ahead of print.
10. Gary CS, Wang JS, Shubinets V, Sanghavi KK, Katz RD, Giladi AM, Means KR Jr. Passive manipulation for proximal interphalangeal joint extension contractures. *J Hand Surg Am.* 2023 Jul;48(7):737.e1-737.e10.
11. Giladi AM. Nerve pain surgery. *J Hand Surg Glob Online.* 2023 Jan;5(1):80.

12. Giladi AM, Daugherty T. Dupuytren disease. In: Chung KC, ed. *Grabb and Smith's Plastic Surgery*. 9th ed. Wolters Kluwer. 2023; In press.
13. Giladi AM, Shipp MM, Sanghavi KK, Zhang G, Gupta S, Miller KE, Belouali A, Madhavan S. Patient-reported data augment prediction models of persistent opioid use after elective upper extremity surgery. *Plast Reconstr Surg*. 2023 Aug 1;152(2):358e-366e.
14. Gong JH, Azad CL, Zhang G, Aliu O, Giladi AM. Bone health screening prior to medicare eligibility-osteoporosis screening and fracture prevention after distal radius fractures in patients aged 50-59. *J Hand Surg Am*. 2023 Dec 7; Online ahead of print.
15. Gong JH, Azad CL, Zhang G, Means KR Jr, Aliu O, Giladi AM. Site of ambulance origination and billing for out-of-network services. *JAMA Netw Open*. 2024 Feb 5;7(2):e240118.
16. Gong JH, Long C, Eltorai AEM, Sanghavi KK, Giladi AM. Billing and utilization trends for hand surgery indicate worsening barriers to accessing care. *Hand (N Y)*. 2023 Oct;18(7):1190-1199.
17. Guarino G, Sgromolo N, Giladi AM. Considerations for perioperative thromboembolic risk mitigation in actively and recently COVID-19-positive patients undergoing hand surgery. *J Hand Surg Glob Online*. 2024 Jan;6(1):103-106.
18. Higgins JP. Vascularized medial femoral condyle flap reconstruction for osseous defects of the hand and wrist. *Hand Clin*. 2024 Feb;40(1):151-159.
19. Higgins JP, Guarino GM, Belyea CM, Tintle SM. Lateral femoral trochlea flap reconstruction of the proximal capitate: an assessment of congruity and description of technique. *J Hand Surg Am*. 2023 Feb;48(2):149-157.
20. Imbergamo CM, Durant NF, Giladi AM, Means KR Jr. Patient perspectives on cognitive behavioral therapy for thumb, hand, or wrist pain and function: a survey of 98 patients. *J Hand Surg Am*. 2024 Jan;49(1):28-34.
21. Imbergamo C, Sequeira SB, Patankar A, Means KR Jr, Stein JA. The statistical fragility of studies on rotator cuff repair with graft augmentation. *J Shoulder Elbow Surg*. 2023 May;32(5):1121-1125.
22. Imbergamo C, Van Handel AC, Giladi AM. Finger phalanx fractures. *American Society for Surgery of the Hand Surgical Anatomy: Hand Fractures and Dislocations*. American Society for Surgery of the Hand. 2023; In press.
23. Isaacs J, Nydick JA, Means KR, Merrell GA, Ilyas A, Levin LS. A multicenter prospective randomized comparison of conduits versus decellularized nerve allograft for digital nerve repairs. *J Hand Surg Am*. 2023 Sep;48(9):904-913.
24. Kraenzlin F, Schaefer EJ, Hawken JB, Sanghavi KK, Chee BW, Giladi AM. Evaluating language characteristics and related gender bias in letters of recommendation for hand surgery fellowship. *J Hand Surg Am*. 2023 Feb 12; Online ahead of print.

25. Lee D, Paulson A, Sanghavi K, Giladi AM. Responsiveness of the Brief Michigan Hand Outcomes Questionnaire and Patient-Reported Outcomes Measurement Information System Pain Interference in the Context of Patient Mental Health. *J Hand Surg Am.* 2024 Feb;49(2):185.e1-185.e7.
26. Means KR, Graham TJ. Sports Medicine and Arthroscopy Review 30.4-Athletic injuries to the hand and wrist Chapter 2: preparing your practice (and family) for your role in the care of professional sports teams. *Sports Med Arthrosc Rev.* 2023 Mar 1;31(1):24-26
27. Miles MR, Jacobson L, Hill JB, Higgins JP, Giladi AM, Pet MA. Patient-reported lower extremity outcomes following fibula or medial femoral condyle free flaps for upper extremity defects. *Hand (N Y).* 2023 Sep;18(6):1005-1011.
28. Narula JP, Wink JD, Catapano J, Forthman CL, Shubinets V. Exploration of the vascular angiosome of the extended lateral arm free flap: a cohort study in cadavers. *Orthop Surg.* 2023 Dec;14: 29-34.
29. Ngaage LM, Casey PM, Giladi AM. Utility of ultrasound for identifying median nerve changes indicative of acute carpal tunnel syndrome after distal radius fracture. *J Hand Surg Glob Online.* 2023 Jul;5(4):430-434.
30. Rahman S, Iskandarova A, Horowitz ME, Sanghavi KK, Aziz KT, Durr N, Giladi AM. Assessing hand perfusion with Eulerian video magnification and waveform extraction. *J Hand Surg Am.* 2024 Feb;49(2):186.e1-186.e9.
31. Schaefer E, Lawson J, Ibrahim T, Yohe G, Zhang G, Giladi AM. Antibiotic prophylaxis in the management of distal fingertip amputation and crush injury. *J Hand Surg Glob Online.* 2023 Nov;5(6):763-767.
32. Schaefer EJ, Thayer MK, Colon AF, Sanghavi KK, Sears ED, Giladi AM, Katz RD. Video-based assessment of microsurgical trainees: an evaluation of gender bias. *J Reconstr Microsurg.* 2023 Nov 3; Online ahead of print.
33. Sharif-Askary B, Abdou SA, Charipova K, Sears ED, Giladi AM. Evaluating the role of mentorship in career advancement: a survey of women in academic hand surgery. *J Hand Surg Am.* 2023 Feb 23; Online ahead of print.
34. Shetty PN, Sanghavi KK, Mete M, Giladi AM. Prescription opioids and patient-reported outcomes and satisfaction after carpal tunnel release surgery. *Hand (N Y).* 2023 Jul;18(5):772-779.
35. Suresh V, Schaefer EJ, Calotta NA, Giladi AM, Tuffaha SH. Use of vascularized, denervated muscle targets for prevention and treatment of upper-extremity neuromas. *J Hand Surg Glob Online.* 2023 Jan;5(1):92-96.
36. Titanji BN, Shubinets V, Giladi AM, Melamed E. Targeted muscle reinnervation for treatment of postresection interdigital neuroma: a cadaveric feasibility study. *Plast Reconstr Surg.* 2023 Jan 1;151(1):99e-104e.

37. Wright MA, Deal JB Jr, Schiffman BA, Gould HP, Forthman CL, Murthi AM. No difference in torque load to failure between split anconeus fascia transfer and autograft palmaris longus tendon for reconstruction of the lateral ulnar collateral ligament. *JSES Int.* 2024 Jan;8(1):232-235.
38. Xu W, Graham EM, Shubinets V, Mendenhall SD, Chang B, Lin IC. An evolution of the surgical management of synpolydactyly: a case series of 21 hands. *Ann Plast Surg.* 2023 Jun 1;90(6S Suppl 5):S583-S592.
39. Yousaf IS, Sanghavi KK, Higgins JP, Giladi AM, Means KR Jr. Use of treatments after recovery from thumb carpometacarpal arthritis surgery. *Plast Reconstr Surg.* 2023 Aug 1;152(2):293e-299e.

Published Podcasts

1. Gong JH, Azad CL, Zhang G, Aliu O, Giladi AM. Bone health screening prior to medicare eligibility-osteoporosis screening and fracture prevention after distal radius fractures in patients aged 50-59. *Journal of Hand Surgery Editor's Choice Audio*, 2023.
2. Gong JH, Azad CL, Zhang G, Aliu O, Giladi AM. Bone health screening prior to medicare eligibility-osteoporosis screening and fracture prevention after distal radius fractures in patients aged 50-59. *Journal of Hand Surgery Top Article of the Month Podcast with Editor-in-Chief Dr. Brent Graham*, 2024.
3. Higgins JP. Dr. James Higgins: Leveling up innovation in hand surgery. *Plastic and Reconstructive Surgery Global Open Deep Cuts*, 2024.
4. Imbergamo CM, Durant NF, Giladi AM, Means KR Jr. Patient perspectives on cognitive behavioral therapy for thumb, hand, or wrist pain and function: a survey of 98 patients. *Journal of Hand Surgery Editor's Choice Audio*, 2023.

Published Webinars

Giladi AM, Imbergamo CM, Lindsey S, Van Handel AC. Metaphyseal ulnar shortening osteotomy. *American Society for Surgery of the Hand Hand.e Surgical Vide*, 2024.

Presentations at Local, National, and International Meetings

1. Abadeer A, Gary CS, Brooks D, Higgins JP, Giladi AM, Shubinets V. The proof is in the periosteum: redefining metacarpal perfusion by micro-computed tomography angiography. *American Association for Hand Surgery*, Miami, FL, January 2023.
2. Abadeer A, Hembd A, Brooks D, Cunningham BW, Higgins JP, Giladi AM, Shubinets V.

Arterial perfusion of the medial femoral trochlea flap: elucidation of perfusion by micro-computed tomographic angiography. American Society for Reconstructive Microsurgery, Nassau, Bahamas, January 2024,

3. Azad CL, Beres LK, Wu AW, Fong A, Giladi AM. Developing a multimedia patient-reported outcomes measure for low literacy patients. International Musculoskeletal Mental and Social Health Consortium Virtual Symposium, March 2023.
4. Bickley RJ, Harris MC, Means KR, Jr., Tintle SM, Giladi AM. Biomechanical comparison of unicortical versus bicortical proximal locking screw in an osteoporotic distal radius volar plating model. American Academy of Orthopaedic Surgeons, Las Vegas, NV, March 2023.
5. Daugherty T, Gillin T, Abbasi P, Means KR Jr., Higgins JP. Quantifying the effects of forearm shortening on finger flexor tendon function. American Association for Hand Surgery, Miami, FL, January 2023.
6. Gong JH, Azad CL, Zhang G, Aliu O, Giladi AM. Bone health before medicare eligibility – osteoporosis screening and fracture prevention after distal radius fractures in patients aged 50-59. American Society for Surgery of the Hand, Toronto, ON, October 2023.
7. Imbergamo CM, Durant NF, Giladi AM, Means KR Jr. Patient perspectives on cognitive behavioral therapy for thumb, hand, or wrist pain and function: a survey of 98 patients. MedStar Health-Georgetown University Research and Education Symposium, Bethesda, MD, May 2023.
8. Imbergamo C, Giladi AM, Means KR Jr. Patient perspectives on cognitive behavioral therapy for thumb, hand, or wrist pain and function: a survey of nearly 100 patients. Podium and poster presentation, Adrian E. Flatt Residents and Fellows Conference, American Society for Surgery of the Hand, Toronto, ON, October 2023.
9. Iskandarova A, Beres LK, Wu AW Fong A, Giladi AM, Azad CL. Refining a multimedia patient-reported outcomes measure for low literacy patients. Podium and poster presentation, Adrian E. Flatt Residents and Fellows Conference, American Society for Surgery of the Hand, Toronto, ON, October 2023.
10. Iskandarova A, Wu CM, Beres LK, Wu A, Fong A, Giladi AM, Azad CL. Refining a multimedia patient-reported outcomes measure for low literacy patients. International Society for Quality of Life Research Conference, Calgary, AB, October 2023,
11. Ngaage LM, Casey P, Giladi AM. Ultrasound evaluation for findings of acute carpal tunnel syndrome after distal radius fracture. Plastic Surgery Research Council, Cleveland, OH, April 2023.
12. Lawson J, Wollstein A, Sgromolo N, Yohe GJ, Means KR Jr., Giladi AM. Post-acute care utilization following hip surgery during the Covid-19 pandemic. American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV, March, 2023.
13. Maughan G, Giladi AM, Garcia BN, Roca H, Wang AA, Kazmers NH. Evaluating the factuality of GPT-3 Artificial Intelligence output regarding hand surgical topics with clinical practice guidelines. American Society for Surgery of the Hand, Toronto, ON, October 2023.

14. Rahman S, Iskandarova A, Horowitz ME, Sanghavi KK, Aziz KT, Durr N, Giladi AM. Assessing hand perfusion with eulerian video magnification and waveform extraction. MedStar Health-Georgetown University Research and Education Symposium, Bethesda, MD, May 2023.
15. Sharif-Askary B, Abdou SA, Charipova K, Sears ED, Giladi AM. Evaluating the role of mentorship in career advancement: a survey of women in academic hand surgery. MedStar Health-Georgetown University Research and Education Symposium, Bethesda, MD, May 2023.
16. Sgromolo N, Imbergamo C, Sequeira S, Yohe GJ, Abbasi P, Giladi AM. Intramedullary threaded nail versus headless compression screws for metacarpal fractures: a biomechanical comparison. American Association for Hand Surgery, Miami, FL, January 2023.
17. Shoji MM, Bartee A, Zhang G, Yohe G, Giladi AM, Higgins JP. Patient reported outcomes of the medial femoral trochlea osteochondral free flap for proximal scaphoid and lunate reconstruction: a prospective study. American Society for Surgery of the Hand, Toronto, ON, October 2023.
18. Shoji MM, Lankipalle N, Kingston CQ, Giladi AM, Higgins JP. Long-term patient reported outcomes of the medial femoral trochlea osteochondral free flap for proximal scaphoid reconstruction. American Society for Surgery of the Hand, Toronto, ON, October 2023.
19. Zamore Z, Azad CL, Zhu L, Lowe C, Giladi AM. We Can't Read the PROM: Readability of Patient-Reported Outcome Measures (PROMs) Used in Plastic Surgery. Plastic Surgery Meeting, Austin, TX, October 2023.

Awards

1. Abadeer A, Gary CS, Brooks D, Higgins JP, Giladi AM, Shubinets V. The proof is in the periosteum: redefining metacarpal perfusion by micro-computed tomography angiography. **Awarded Best Presentation of Section.** American Association for Hand Surgery, Miami, FL, January 2023.
2. Saunders, R. Recipient of the **Vargas International Hand Therapy Teaching Award**, American Association for Hand Surgery, Miami, FL, January 2024.

Projects in Progress and Pending Publication

1. Azad CL, Beres LK, Wu AW, Fong A, Giladi AM. Developing a multimedia patient-reported outcomes measure for low literacy patients. PLoS One; In progress.
2. Daugherty T, Sawyer J, Gillin T, Abbasi P, Yohe G, Higgins JP, Means KR, Jr. The effect of forearm shortening on finger flexion: a biomechanical study. J Hand Surg Am; Submitted.

3. Higgins JP. Medial femoral trochlear flap reconstruction of scaphoid proximal pole nonunions. In: Moran S, Rizzo M, eds. *Master Techniques in Orthopaedic Surgery: The Wrist*. 8th ed. Wolters Kluwer; Submitted.
4. Higgins JP. When to use vascularized bone? An algorithm for scaphoid nonunion surgery. *J Wrist Surg*; Submitted.
5. Imbergamo CM, Dahl A, Macaraeg C, Giladi AM, Higgins JP. Fixation of Kienbock-associated lunate coronal fractures during medial femoral trochlea osteochondral reconstruction. *J Hand Surg Am*; In progress.
6. Iskandarova A, Dahl AJ, Yohe G, Abbasi P, Carey P, Zimmerman RM. Perilunate dislocations: cadaveric model K-wire versus compression staple fixation. *J Hand Surg Glob Online*; Accepted for publication.
7. Iskandarova A, Rao SJ, Yohe G, Shah AB, Giladi AM. Distal upper extremity arterial calcification as a predictor for subclinical coronary artery disease by coronary artery calcium scoring. *Plast Reconstr Surg Glob Open*; Accepted for publication.
8. Lawson J, Ngaage LM, El Masry S, Giladi AM. Efficacy of postoperative opioid-sparing regimens for hand surgery: a systematic review of randomized controlled trials. *J Hand Surg Am*; Accepted for publication.
9. Lawson J, Wollstein A, Sgromolo N, Yohe GJ, Aliu O, Giladi AM. Post-acute care utilization following hip surgery in the COVID-19 era. *J Am Acad Orthop Surg Glob Res Rev*; Submitted.
10. Qiu CS, Yohe G, Schaefer E, Zhang G, Aliu O, Giladi AM. Prophylactic antibiotics are associated with higher rates of infection after uncomplicated upper extremity laceration injuries. *J Hand Surg Am*; Submitted.
11. Zamore Z, Azad CL, Zhu L, Lowe C, Giladi AM. Readability of Patient-Reported Outcome Measures (PROMs) used in plastic surgery. *Plast Reconstr Surg*; Submitted.

Active Research Protocols

1. Forthman CM. Fragment specific dorsal plating in AO C2 distal radius fractures: a biomechanical comparison of parallel versus 90-90 plating.
2. Forthman CM. Intramedullary fixation of distal metacarpal fracture: a biomechanical study.
3. Giladi AM. A multimedia patient-reported outcomes instrument for low literacy populations: Baltimore
4. Giladi AM. A randomized trial comparing surgical treatments for neuroma pain in amputees.
5. Giladi AM. A retrospective review of surgical management for neuroma.

6. Giladi AM. Assessing the impact of the Firearm Safety Act of 2013 on firearm injuries to the upper extremity.
7. Giladi AM. Barriers and promoters of women in academic hand surgery: a survey of female fellowship trained hand surgeons.
8. Giladi AM. Biomechanical analysis of minimally invasive intramedullary screw fixation.
9. Giladi AM. Biomechanical comparison of one versus two intramedullary nails for proximal phalanx fractures.
10. Giladi AM. Clinical trial for surgery of the ulnar nerve (SUN) at the elbow.
11. Giladi AM. Determining responsiveness of PROMIS versus MHQ for common hand pathologies.
12. Giladi AM. Does Swiss Cheesing matter? a biomechanical study of the effect of multiple K-wire passes in the 5th metacarpal.
13. Giladi AM. Drug-induced regeneration and re-innervation in a rodent nerve transection model
14. Giladi AM. Evaluation of opioid prescribing patterns by hand surgeons.
15. Giladi AM. Evaluation of osteoporosis screening trends by race/ethnicity in clinical practice.
16. Giladi AM. Identification of risk factors in likelihood of emergency department visit within 90 days postoperatively.
17. Giladi AM. Identifying predictors of opioid overuse in hand surgery patients.
18. Giladi AM. Impact of sociodemographic factors on bone health referrals following fragility fracture.
19. Giladi AM. Medicare billing and utilization trends in surgery.
20. Giladi AM. Osteoporosis screening with computer learning and bone density.
21. Giladi AM. Outcomes evaluation of surgical management of non-amputation or post-replantation neuroma
22. Giladi AM. Outcomes evaluation of wrist reconstruction procedures for treatment of Kienbock disease.
23. Giladi AM. Outcomes evaluation of wrist reconstruction procedures for treatment of scaphoid fracture non-unions
24. Giladi AM. Proficiency and difficulty scoring tools for finger replantation.
25. Giladi AM. Regenerative peripheral nerve interfaces to treat painful digit and hand neuromas after amputation: a prospective observational study.

26. Giladi AM. Risk factors for loss to rehabilitation follow-up after flexor tendon injury.
27. Giladi AM. The impact of economic deprivation on hand surgery outcomes.
28. Giladi AM. The prevalence of cardiac amyloidosis in patients undergoing carpal tunnel release.
29. Giladi AM. Understanding early post-operative opioid prescribing patterns and patient needs.
30. Giladi AM. Understanding patient outcomes for contractures of the hand.
31. Giladi AM. Understanding incidence and impact of depression in hand surgery patients.
32. Giladi AM Higgins JP. Comparing lower extremity patient reported outcomes following fibula and medial femoral condyle free flaps for upper extremity osseous defects.
33. Giladi AM. Verbal administration of patient reported outcomes metrics across varying levels of literacy.
34. Giladi AM. Means KR Closed manipulation under local anesthesia to treat proximal interphalangeal joint extension contracture.
35. Giladi AM, Means KR. Prospective study evaluating the effect of skin pigmentation on clinical exam for determination of limb ischemia in patients with digital injuries.
36. Higgins, JP. Outcomes evaluation of the medial femoral trochlea flap for reconstruction of the scaphoid and lunate
37. Higgins JP. Post-operative prospective outcomes evaluation of the medial femoral condyle flap for reconstruction of the scaphoid and lunate.
38. Higgins JP. Retrospective outcomes evaluation of the medial femoral condyle flap and medial femoral trochlea for reconstruction of the scaphoid and lunate in subjects who are at least 8 years post operative.
39. Higgins JP. Prospective outcomes evaluation of the medial femoral condyle flap and medial femoral trochlea for reconstruction of the scaphoid and lunate in subjects who are at least 8 years post operative.
40. Higgins JP. Scaphoid healing after screw fixation
41. Higgins, JP. The Curtis National Hand Center Comprehensive Data Repository
42. Higgins JP. Use of Indocyanine Green intraoperatively to examine vascularity of scaphoid with histological comparison.
43. Katz RD. Prevalence of thumb CMC arthritis and operative management in hand surgeons.

44. Means KR. Evaluating a hand therapy digital web-based application for thumb carpometacarpal arthritis.
45. Means KR. The association of lower tourniquet pressure on opioid administration during and after an outpatient upper extremity procedure, a retrospective chart review.
46. Means KR, Giladi AM. A Phase 2a, multicenter, randomized, patient and evaluator blinded, controlled study evaluating the safety and efficacy of NTX-001 compared to standard of care in the treatment of acute single transected peripheral nerve injury occurring below the distal border of the brachial plexus requiring surgical repair.
47. Means KR, Giladi AM. Biomechanical comparison of unicortical versus bicortical proximal locking screws in osteoporotic volar plating model.
48. Means KR Giladi AM. Development and evaluation of a 3-D printed fracture model for orthopaedic education.
49. Means, KR. Prospective study evaluating the effect of skin pigmentation on clinical exam for determination of limb ischemia in healthy controls.
50. Means, KR. Prospective longitudinal study of non-operative and operative thumb CMC arthritis interventions.
51. Means KR. Tesamorel in therapy to enhance axonal regeneration, minimize muscle atrophy, and improve functional outcomes following peripheral nerve injury.
52. Shubinets V. Micro-computed tomography angiography of osseous and osteocartilaginous flaps from the distal femur.
53. Shubinets V. Understanding the angiosome of the lateral arm and posterior interosseus artery flaps.
54. Zimmerman R. Intramedullary threaded nail versus headless compression screws: a biomechanical comparison
55. Zimmerman R. Repair and reconstruction of scapholunate ligament injuries (RESULTS)

Grants Awarded

Dr. Aviram Giladi

Department of Defense
Plastic Surgery Foundation

Dr. Kenneth Means

Orthopaedic Research and Education Foundation