

GRANT EDWARD GARRIGUES, M.D.

Shoulder and Elbow Surgeon

Current appointment: Midwest Orthopaedics at Rush
Rush University Medical Center
Department of Orthopaedic Surgery
Division of Sports Medicine and Shoulder Surgery

Prior appointments: Duke University Medical Center
Duke Regional Hospital
Duke Raleigh Hospital
Durham Veterans Administration Medical Center
(mid-Atlantic VISN6 complex shoulder and elbow referral center)

Diplomate, American Board of Orthopaedic Surgeons (“Board Certified”) 7/25/2013

EDUCATION

THE BISHOP’S SCHOOL, LA JOLLA, CA	1997	HS
HARVARD COLLEGE	2001	BA, Biochemistry <i>magna cum laude</i>

GRADUATE OR PROFESSIONAL SCHOOL

HARVARD MEDICAL SCHOOL	2005	MD, HST program, <i>cum laude</i>
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	2005	MD, HST program, <i>cum laude</i>

ADDITIONAL TRAINING

DUKE UNIVERSITY MEDICAL CENTER	2005-2010	Residency, Orthopaedic Surgery
DUKE GME AND FUQUA SCHOOL OF BUSINESS	2008	Healthcare Policy Lecture Series
ILIZAROV INSTITUTE FOR TRAUMATOLOGY AND OSTEOSYNTHESIS (KURGAN, SIBERIA)	2008	External Fixation Mini-Fellowship
FRENCH SHOULDER MINI-FELLOWSHIP	2010	Shoulder Surgery Mini-Fellowship

(LYON AND NICE, FRANCE)

THE ROTHMAN INSTITUTE / THOMAS JEFFERSON UNIVERSITY	2010-2011	Fellowship Shoulder and Elbow Surgery
THE CHANCELLOR'S CLINICAL LEADERSHIP IN ACADEMIC MEDICINE PROGRAM (C-CHAMP)	2014	6 month "mini MBA" for leadership in academic medicine
AMERICAN SHOULDER AND ELBOW SURGEONS (ASES) EUROPEAN TRAVELING FELLOWSHIP	2017	One of two fellows representing North America

PROFESSIONAL TRAINING AND ACADEMIC CAREER

Assistant Professor, Orthopaedic Surgery, Duke University Medical Center	2011-2014
Deputy Director, Duke Sports Medicine and Shoulder Surgery Fellowship	2012-2013
Co-Director, Duke Sports Medicine and Shoulder Surgery Fellowship	2013-2014
Diplomate, American Board of Orthopaedic Surgeons ("Board Certified")	7/25/2013
Co-Director, Upper Extremity Trauma Surgery, Duke University Medical Center	2012-2018
Associate Professor, Orthopaedic Surgery, Duke University Medical Center	2014-2018
Fellow, American Academy of Orthopaedic Surgeons	2014-2018
Section Head, Shoulder Reconstruction, Duke University Medical Center	2017-2018
Associate Professor (pending), Orthopaedic Surgery, Rush University Medical Center	2018-present
Director of Upper Extremity Research, Midwest Orthopaedics at Rush	2019-present

TEAM COVERAGE

CHICAGO WHITE SOX, MLB	2018-PRESENT
CHICAGO BULLS, NBA	2018-PRESENT
CHICAGO FIRE, MLS	2018-PRESENT

PUBLICATIONS

Refereed journals: (Refereed journals are scientific publications that have active editorial boards and a system of critical review of all submissions for publication.)

i. Named Author

1. **Garrigues GE**, Rubash HR, Herndon JH, Shanbhag AS. *Unraveling the Macrophage Response to Particulate Biomaterials*, Orthopaedic Journal of Harvard Medical School, 5: 93-95, 2003.
2. **Garrigues GE**, Cho DR, Rubash HE, Goldring SR, Herndon JH, Shanbhag AS. *Gene Expression Clustering Using Self-Organizing Maps: Analysis of The Macrophage Response to Particulate Biomaterials*, Biomaterials, 26(16): 2933-45, 2005. PMID: 15603788

3. von Knoch F, Cho MR, **Garrigues GE**, Alabre C, Rubash HR, Shanbhag AS. *Bisphosphonates Increase Periprosthetic Bone Stock*, Orthopaedic Journal of Harvard Medical School, 7: 68-80, 2005.
4. **Garrigues GE** and Moorman CT. *Football Injuries: Part I – Spine and Upper Extremity*. (Cover article) Journal of Musculoskeletal Medicine, 24:393-9, 2007.
5. Manvar A, Bhalani S, **Garrigues GE**, Major N. *Distinguishing Superior Labral Tears from Normal Meniscoid Insertions with Magnetic Resonance Imaging*. American Journal of Roentgenology, 188:A62-A66, 2007
6. **Garrigues GE**, Aldridge JM III. *Acute Irreducible Distal Radioulnar Joint Dislocation*. Journal of Bone and Joint Surgery, 89-A:1594-1597, 2007. PMID: 19606800
7. **Garrigues GE** and Moorman CT. *Football Injuries: Part II – Lower Extremity and Injury Prevention*. (Cover article) Journal of Musculoskeletal Medicine, 25:290-4, 2008.
8. **Garrigues GE**, Sabesan V, Aldridge JM III. *Acute Distal Radioulnar Joint Instability*. Journal of Surgical Orthopaedic Advances, Winter; 17(4):262-6, 2008. PMID: 19138499
9. **Garrigues GE**, Aldridge JM III, Toth A, Stout J. *Non-tuberculous Mycobacterial Olecranon Bursitis*, Journal of Shoulder and Elbow Surgery, 18(2):1-5, 2008. PMID: 19019704
10. **Garrigues GE**, Patel M, Colletti TP, Weaver J, Mallon W. *Brachial Artery Thrombosis After Closed Elbow Dislocation*, Journal of Bone and Joint Surgery, 91-B(8):1097-9, 2009.
11. **Garrigues GE**, Aldridge JM III, Friend J, Urbaniak J. *Free Vascularized Fibular Grafting for Osteonecrosis of the Femoral Head Following Hip Dislocation*, Microsurgery, 29(5):342-5, 2009. PMID: 19382157
12. **Garrigues GE**, Marchant M Jr, Lewis G, Gupta A, Richard M, Basamania CJ. *The Cortical Ring Sign: A Reliable Radiographic Landmark for Percutaneous Coracoclavicular Fixation*, Journal of Shoulder and Elbow Surgery, 19(1):121-9, 2010. PMID: 19616974
13. Richard MJ, Messmer C, Wray WH III, **Garrigues GE**, Goldner RD, Ruch DS. *Management of Subluxating Ulnar Nerve at the Elbow*, Orthopedics, 33(9):672, 2010. PMID: 20839711
14. **Garrigues GE**, Glisson R, Garrigues NW II, Richard M, Ruch DS. *Can locking screws allow smaller, low-profile plates to achieve comparable stability to larger, standard plates?.*, Journal of Orthopaedic Trauma, 25(6):347-54, 2010.
15. Berkes M, **Garrigues GE**, Solic J, Zeeland NV, Shourbaji N, Brouwer K, Ruch D, Obremskey WT. *Locking and Non-locking Constructs Achieve Similar Radiographic and Clinical Outcomes for Internal Fixation of Intra-articular Distal Humerus Fractures*, HSS Journal, 7(3)244-250, 2011.
16. **Garrigues GE**, Nagda S, Yu J. *Open Luxatio Erecta*, Journal of Orthopaedic Trauma, 25(4):e34-7.2011. PMID: 21399462

17. **Garrigues GE**, Wray WH III, Lindenhovius AL, Ring D, Ruch DS. *Fixation of the Coronoid Process in Elbow Fracture-Dislocations*, Journal of Bone and Joint Surgery, 93(20):1873-81, 2011. PMID: 22012524
18. **Garrigues GE**, Endres N, Singh A, Gupta A, Lewis G, Marchant M, Richard M, Higgins L, Basamania CJ. *Clinical Results of Percutaneous Acromioclavicular Screw Placement*, Shoulder and Elbow, 3:88-94, 2011.
19. Manvar A, Bhalani S, **Garrigues GE**, Major N. *Distinguishing Superior Labral Tears from Normal Meniscoid Insertions with Magnetic Resonance Imaging*. The Duke Orthopaedic Journal, 2(1): 44-49, 2012.
20. **Garrigues GE**, Gorman PP, Plisky PJ, Kiesel KB, Myers H, Black D, Queen RM, Butler RJ. *Differences on the upper Quarter Y Balance Test Between High School and College Baseball Players*. Medicine and Science in Sports and Exercise, 44, May 2012: 408-408
21. **Garrigues GE**, Lazarus MD. *Operative Treatment of Isolated Teres Major Ruptures*, Journal of Shoulder and Elbow Surgery, 21(6):6-11, 2012. PMID: 22217640
22. **Garrigues GE**, Johnston PS, Pepe MD, Tucker BS, Ramsey ML, Austin L. *Hemiarthroplasty versus Reverse Total Shoulder for Proximal Humerus Fractures in the Elderly*, Orthopedics, 35(5):703-708, 2012. PMID: 22588413
23. **Garrigues GE**, Lazarus MD. *Arthroscopic Bone Tunnel Augmentation*, Orthopedics, 35(5):392-397, 2012. PMID: 22588393
24. **Garrigues GE**, Kraeutler MJ, Gillespie RJ, O'Brien DF, Lazarus MD. *Repair of Pectoralis Major Ruptures: Single-surgeon Case Series*, Orthopedics, 35(8):1184-1190, 2012. PMID: 22868603
25. Vinson EN, Wittstein J, **Garrigues GE**, Taylor DC. *MRI of selected abnormalities at the anterior superior aspect of the shoulder: potential pitfalls and subtle diagnoses*, Am J Roentgenol, 199(3):534-545, 2012. PMID: 22915393
26. Ives EP, Nazarian LN, Parker L, **Garrigues GE**, Williams GR. *Subscapularis Tendon Tears: A Common Sonographic Finding in Symptomatic Post-arthroplasty Shoulders*, J Clin Ultrasound, 2012. PMID: 22941952
27. **Garrigues GE**, Wray WH III, Lindenhovius AL, Ring D, Ruch DS. *Fixation of the Coronoid Process in Elbow Fracture-Dislocations*, Journal of Bone and Joint Surgery: Essential Surgical Techniques, 2(3):e17 1-10, 2012. PMID: 22012524
28. Sears BW, **Garrigues GE**, Witmer D, Ramsey ML. *Reefing Procedure for Elbow Lateral Collateral Ligament Attenuation During Repair*, Shoulder and Elbow, 4(4):277-281, 2012.
29. Riboh JC, **Garrigues GE**. *Bone Grafting in Shoulder Arthroplasty*, Orthopedics, 35(11):966-973, 2012. PMID: 23127445

30. **Garrigues GE**, Warnick D, Busch M. *Subscapularis avulsion of the lesser tuberosity in adolescents.* Journal of Pediatric Orthopaedics, 2013 Jan;33(1):8-13. doi: 10.1097/BPO.0b013e318270d0d6. PMID: 23232372
31. Ledford C, **Garrigues GE**, Fitch R. *GA Ilizarov: The Man, the Myth, the Method.* Duke Orthopaedic Journal, 3(1):104-107, 2013.
32. **Garrigues GE**, Williams GR. *Deltopectoral Approach with Lesser Tuberosity Osteotomy and Capsulectomy: Tips for Success in Anatomic Total Shoulder Replacement.* Orthopaedic Knowledge Online Journal, 11(9): http://orthoportal.aaos.org/oko/article.aspx?article=OKO_SHO051. Accessed September 1, 2013.
33. Godin JA, Mayer SW, **Garrigues GE**, Mather RC 3rd. *Pseudoaneurysm After Shoulder Arthroscopy.* J Shoulder Elbow Surg, 22(10):12-17, 2013. PMID: 24054312
34. Watters TS, **Garrigues GE**, Ring D, Ruch DS. *Fixation versus Replacement of the Radial Head in Terrible Triad: Is There a Difference in Elbow Stability and Prognosis?* Clin Orthop Relat Res, 2014 Jul;472(7):2128-35. doi: 10.1007/s11999-013-3331-x. PMID: 24136807
35. Alijanipour P, Karam J, Linas A, Vince KG, Salavras C, Austin M, **Garrigues G**, Heller S, Huddleston J, Klatt B, Krebs V, Lohmann C, McPherson EJ, Molloy R, Oliashirazi A, Schwaber M, Sheehan E, Smith E, Sterling R, Stocks G, Vaidya S. *International Consensus on Periprosthetic Joint Infection: Operative Environment.* J Orthop Res. 32(1 Suppl):S60-80, 2014. doi: 10.1002/jor.22550. PMID: 24464899
36. Alijanipour P, Karam J, Linas A, Vince KG, Salavras C, Austin M, **Garrigues G**, Heller S, Huddleston J, Klatt B, Krebs V, Lohmann C, McPherson EJ, Molloy R, Oliashirazi A, Schwaber M, Sheehan E, Smith E, Sterling R, Stocks G, Vaidya S. *International Consensus on Periprosthetic Joint Infection: Operative Environment.* J Arthroplasty. 29(2 Suppl):49-64, 2014. doi: 10.1016/j.arth.2013.09.031. PMID: 24342274
37. Okike K, O'Toole RV, Pollak AN, Bishop JA, McAndrew CM, Mehta S, Cross WW 3rd, **Garrigues GE**, Harris MB, Lebrun CT. *Survey Finds Few Orthopaedic Surgeons Know the Costs of the Devices They Implant.* Health Affairs, 2014 Jan;33(1):103-9. doi: 10.1377/hlthaff.2013.0453. PMID: 24395941
38. Riboh JC, **Garrigues GE**. *Early Passive Motion versus Immobilization after Arthroscopic Rotator Cuff Repair: A Systematic Review and Meta-Analysis.* Arthroscopy, 2014 Aug;S0749-8063(14)00236-9, 2014.
39. Arnold C, **Garrigues GE**, St Geme JW 3rd, Sexton D. *Necrotizing fasciitis caused by Haemophilus influenzae serotype f.* J Clin Micro, 52(9): 3471-4, 2014 Sep. doi: 10.1128/JCM.01460-14. PMID: 24989609
40. Mook W, **Garrigues GE**. *Current Concepts Review: Diagnosis and Management of Periprosthetic Shoulder Infections.* J Bone Joint Surg (Am), 96(11):956-965, 2014 Jun. PMID: 24897745

41. Laver L, **Garrigues GE**. *Avoiding Superior Tilt in Reverse Total Shoulder Arthroplasty: a review of the literature and technical recommendations*. J Shoulder Elbow Surg, 23(10):1582-1590, 2014. PMID: 25220202
42. Tarity TD, **Garrigues GE**, Cicotti MG, Zooker CC, Cohen CC, Frederick RW, Williams GR Jr., DeLuca PF, Dodson CC. *Pectoralis Major Ruptures in Professional American Football Players*. Phys Sportsmed, 42(3): 131-135, 2014. doi: 10.3810/psm.2014.09.2084 PMID: 25295775
43. Gillespie RJ, **Garrigues GE**, Chang E, Namdari S, Williams GR Jr. *Surgical Exposure for Reverse Total Shoulder Arthroplasty: Differences in Approaches & Outcomes*. Ortho Clin N America. 46(1):49-56, 2014. PMID: 25435034
44. Neumann J, **Garrigues GE**. *Synovial Chondromatosis of the Subacromial Bursa Causing a Bursal-Sided Rotator Cuff Tear*. Case Reports in Orthop, 259483, 2015. doi:10.1155/2015/259483. PMID: 25861500
45. Tao M, **Garrigues GE**. *Arthroscopic-Assisted Fixation of Ideberg Type III Glenoid Fractures*. Arthroscopy Techniques, 4(2):119-125, 2015. doi: 10.1016/j.eats.2014.11.012. PMID: 26052487
46. Vovos T, Blizzard DJ, **Garrigues GE**. *Management of Terrible Triad Injuries of the Elbow*. Duke Orthop. Journal, (1): 28-34, June-July 2015.
47. Morwood M and **Garrigues GE**. *Shoulder Arthroplasty in the Patient with Metal Hypersensitivity*. J Shoulder Elbow Surg, S1058-2746(15)00053-1. doi: 10.1016/j.jse.2015.01.015. 2015. PMID: 25799922
48. Nodzo SR, Bauer T, Pottinger PS, **Garrigues GE**, Bedair H, Deirmengian CA, Segreti J, Blount KJ, Omar IM, Parvizi J. *Conventional Diagnostic Challenges in Periprosthetic Joint Infection*. J Am Acad Orthop Surg. 23 Suppl:S18-25, 2015. doi: 10.5435/JAAOS-D-14-00385. PMID: 25808966
49. Shirwaiker RA, Springer BD, Spangehl MJ, **Garrigues GE**, Lowenberg DW, Garras DN, Yoo JU, Pottinger PS. *A Clinical Perspective on Musculoskeletal Infection Treatment Strategies and Challenges*. J Am Acad Orthop Surg. 23 Suppl:S44-54, 2015. doi: 10.5435/JAAOS-D-14-00379. PMID: 25808969
50. Lazarides AL, Alentorn-Geli E, Choi JHJ, Stuart JJ, Lo I K-Y, **Garrigues GE**, Taylor DC. *Rotator Cuff Tears in Young Patients: A Different Disease Than Rotator Cuff Tears in Elderly Patients*. Journal of Shoulder and Elbow Surg, 24(11):1834-43, 2015. doi: 10.1016/j.jse.2015.05.031. PMID:26209913
51. Mook WR, Klement MR, Green CL, Hazen KC, **Garrigues GE**. *The Incidence of Propionibacterium acnes in Open Shoulder Surgery: A Controlled Diagnostic Study*. J Bone Joint Surg (Am), 97(12):957-963, 2015. doi: 10.2106/JBJS.N.00784. PMID: 26085528
52. Karas V, Riboh JC, **Garrigues GE**. *Arthroscopic Management of the Stiff Shoulder*. JBJS Reviews. 4(4):e2, 2016. PMID: 27487426

53. Neumann JA, **Garrigues GE**, Brigman BE, Eward WC. *Synovial Chondromatosis*. JBJS Reviews. 4(5):e2, 2016. PMID: 27490219
54. Choi JHJ, Alentorn-Geli E, Stuart JJ, **Garrigues GE**, Toth AP. *Rotator Cuff Reconstruction and Augmentation Using Polymer, Allograft, and Xenograft Constructs*. Techniques in Orthopaedics. 31(2):102, 2016.
55. Churchill JL, **Garrigues GE**. *Current Controversies in Reverse Total Shoulder Arthroplasty*. JBJS Reviews, Jun;4(6):e4, 2016. PMID: 27486721
56. Bala A, Penrose CT, Visgauss JD, Seyler TM, Randell TR, Bolognesi MP, **Garrigues GE**. *Total Shoulder Arthroplasty in patient with HIV infection: Complications, Comorbidities, and Trends*. Journal of Shoulder and Elbow Surgery, 2016 Dec;25(12):1971-1979. doi: 10.1016/j.jse.2016.02.033. PMID: 27117043
57. Nickel BT, Klement MR, Richard MJ, Zura R, **Garrigues GE**. *Closing the Gap: A Novel Technique for Humeral Shaft Non-unions using Cup and Cone Reamers*. Injury, 2016 Dec;47 Suppl 7:S40-S43, 2016. doi: 10.1016/S0020-1383(16)30853-1. PMID: 28040077
58. Klement MR, Nickel BT, Bala A, Penrose CT, Zura RD, **Garrigues GE**. *Glenohumeral Arthritis as a Risk Factor for Proximal Humerus Nonunion*. Injury, 2016 Dec;47 Suppl 7:S36-S39. doi: 10.1016/S0020-1383(16)30852-X. PMID: 28040076
59. Grier J, Bala A, Penrose CT, Thorsten MS, Bolognesi MP, **Garrigues GE**. *Analysis of complication rates following perioperative transfusion in shoulder arthroplasty*. Journal of Shoulder and Elbow Surgery, 2017 Jul;26(7):1203-1209. doi: 10.1016/j.jse.2016.11.039. PMID: 28153684
60. **Garrigues GE**. The Emperor May Truly Have New Clothes: Commentary on an article by Zahab S. Ahsan, MD, et al.: "Characterizing the Propionibacterium Load in Revision Shoulder Arthroplasty. A Study of 137 Culture-Positive Cases." J Bone Joint Surg Am. 2017 Jan 18;99(2):e7. doi: 10.2106/JBJS.16.01148. PubMed PMID: 28099312.
61. Morwood MP, Johnston PS, **Garrigues GE**. *Proximal ingrowth coating decreases risk of loosening following uncemented shoulder arthroplasty using mini-stem humeral components and lesser tuberosity osteotomy*. Journal of Shoulder and Elbow Surgery, 2017 Jul;26(7):1246-1252. doi: 10.1016/j.jse.2016.11.041. PMID: 28159474
62. Matson AP, **Garrigues GE**. *Reverse total shoulder replacement: approaches and current controversies*. Current Orthopaedic Practice, 28(2):146-152, March/April 2017 doi: 10.1097/BCO.0000000000000486
63. Tao MA, Karas V, Riboh JC, Laver L, **Garrigues GE**. *Management of the Stiff Shoulder with Arthroscopic Circumferential Capsulotomy and Axillary Nerve Release*. Arthrosc Tech, 2017 Mar 13;6(2):e319-e324. Doi: 10/1016/j.eats.2016.10.005 PMID: 28580248
64. Sutter EG, Godin J, **Garrigues GE**. *All-arthroscopic Superior Shoulder Capsule Reconstruction with Partial Rotator Cuff Repair*. Orthopedics, 2017. doi: 10.3928/01477447-20170615-01. PMID: 28632288

65. Sutter EG, Orenduff J, Fox WJ, Myers J, **Garrigues GE**. *Predicting Injury in Professional Baseball Pitchers From Delivery Mechanics: A Statistical Model Using Quantitative Video Analysis*. Orthopedics, 2018 Jan 1;41(1):43-53. doi: 10.3928/01477447-20171127-05. Epub 2017 Dec 1. PMID: 29192934
66. Wall KC, Toth AP, **Garrigues GE**. *How to Use a Graft in Irreparable Rotator Cuff Tears: A Literature Review Update of Interposition and Superior Capsule Reconstruction Techniques*. Curr Rev Musculoskelet Med. 2018 Mar;11(1):122-130. doi: 10.1007/s12178-018-9466-3. Review. PubMed PMID: 29327176.
67. Peters SD, Bullock GS, Goode AP, **Garrigues GE**, Ruch DS, Reiman MP. *The Success of Return to Sports after Ulnar Collateral Ligament Injury in Baseball: a Systematic Review of Meta-analysis*. Journal of Shoulder and Elbow Surgery, 2018;27, 561-571 PMID: 29433647
68. Lampley AJ, Brubacher JW, Dekker TJ, Richard MJ, **Garrigues GE**. *The Radiocapitellar Synovial Fold: A Lateral Anatomic Landmark for Sizing Radial Head Arthroplasty*. J Shoulder Elbow Surgery, 2018; PMID: 29709413
69. Guerrero, EM., Morwood, MP., Kankaria RA., Johnston PS, **Garrigues, GE**. *Shoulder Arthroplasty using Mini-Stem Humeral Components and a Lesser Tuberosity Osteotomy*. Musculoskeletal Surg, 2018 June 1. doi: 10.1007/s12306-018-0545-9. PMID: 29858837
70. Bailey JR, Kim C, Alentorn-Geli E, Kirkendall DT, Ledbetter L, Taylor DC, Toth AP, **Garrigues GE**. *Rotator Cuff Matrix Augmentation and Interposition: A Systematic Review and Meta-analysis*. Am J Sports Med. 2018 Jun 1:363546518774762. doi: 10.1177/0363546518774762. PMID: 29906191.
71. Duchman KR, Mickelson DT, Little BA, Hash TW 2nd, Lemmex DB, Toth AP, **Garrigues GE**. *Graft Use in the Treatment of Large and Massive Rotator Cuff Tears: An Overview of Techniques and Modes of Failure with MRI Correlation*. Skeletal Radiol. 2018 Jul 5. doi: 10.1007/s00256-018-3015-4. PMID: 29978243.
72. Zhang H, Heckelman LN, Spritzer CE, Owusu-Akyaw KA, Martin JT, Taylor DC, Moorman CT 3rd, **Garrigues GE**, DeFrate LE. *In Vivo Assessment of Exercise-Induced Glenohumeral Cartilage Strain*. Orthop J Sports Med. 2018 Jul 13;6(7):2325967118784518. doi: 10.1177/2325967118784518. eCollection 2018 Jul. PubMed PMID: 30023404; PubMed Central PMCID: PMC6047251.
73. Patel SH, Nandurkar T, Toth AP, **Garrigues GE**. *A Novel Failure Mode for Biceps Tenodesis Using Fork-tipped Interference Screws*. J Shoulder Elbow Surg. 2018 Jul 18. pii: S1058-2746(18)30407-5. doi: 10.1016/j.jse.2018.03.033. PubMed PMID: 30030032.
74. Helmkamp JK, Bullock GS, Amilo NR, Guerrero EM, Ledbetter LS, Sell TC, **Garrigues GE**. *The Clinical and Radiographic Impact of Center of Rotation Lateralization in Reverse Shoulder Arthroplasty: A Systematic Review*. J Shoulder Elbow Surg. 2018 Nov doi: 10.1016/j.jse.2018.07.007

75. Laver L, Paiste MR, Lazarus MD, **Garrigues GE**. *Arthritis Mutilans of the Shoulder: A Rare Cause of Rapidly Destructive Arthritis of the Shoulder*, Duke Orthopaedic Journal, 2018 June 8(1): 16-21 10.5005.
76. Coughlin RP, Bullock GS, Shanmugaraj A, Sell TC, **Garrigues GE**, Ledbetter L, Taylor DC. *Outcomes After Arthroscopic Rotator Interval Closure for Shoulder Instability: A Systematic Review*. Arthroscopy. 2018 Nov;34(11):3098-3108.e1. doi: 10.1016/j.arthro.2018.05.042. Epub 2018 Oct 5. Review. PubMed PMID: 30297156.
77. Reiman MP, Walker MD, Peters S, Kilborn E, Thigpen CA, **Garrigues GE**. *Risk factors for ulnar collateral ligament injury in professional and amateur baseball players: a systematic review with meta-analysis*. J Shoulder Elbow Surg. 2018 Nov 1. pii: S1058-2746(18)30613-X. doi: 10.1016/j.jse.2018.08.018. [Epub ahead of print] Review. PubMed PMID: 30392938.
78. Klement MR, Cunningham DJ, Wooster BM, Wellman SS, Bolognesi MP, Green CL, **Garrigues GE**. *Comparing Standard Versus Extended Culture Duration in Acute Hip and Knee Periprosthetic Joint Infection*. J Am Acad Orthop Surg. 2018 Nov 13. doi: 10.5435/JAAOS-D-17-00674. [Epub ahead of print] PubMed PMID: 30431505.
79. Lazarides AL, Duchman KR, Ledbetter L, Riboh JC, **Garrigues GE**. *Arthroscopic Remplissage for Anterior Shoulder Instability: A Systematic Review of Clinical and Biomechanical Studies*. Arthroscopy. 2019 Jan 3. pii: S0749-8063(18)30852-1. doi: 10.1016/j.arthro.2018.09.029. [Epub ahead of print] Review. PubMed PMID: 30612762.
80. Bergen MA, Wall KC, Kim CY, **Garrigues GE**. *Occult Left Common Iliac Vein Compression Increases Postoperative Venous Thromboembolism Risk Following Total Hip Arthroplasty*. J Arthroplasty. 2019 Feb. pii: S0883-5403(18)31081-7. doi: 10.1016/j.arth.2018.10.024. PubMed PMID: 30448323.
81. Federer AE, Mather RC 3rd, Ramsey ML, **Garrigues GE**. *Cost-effectiveness analysis of total elbow arthroplasty versus open reduction-internal fixation for distal humeral fractures*. J Shoulder Elbow Surg. 2019 Jan;28(1):102-111. doi: 10.1016/j.jse.2018.08.041. PubMed PMID: 30551781.
82. Wahl EP, Coughlin RP, Mickelson DT, Green CL, **Garrigues GE**. *How Arthroscope Orientation Affects Performance: Arthroscopy in the Perspective of the Viewer and Arthroscopy Opposite of the Viewer*. J Bone Joint Surg Am. 2019 Feb 20;101(4):e14. doi: 10.2106/JBJS.17.01426. PubMed PMID: 30801382.
83. Dekker TJ, Steele JR, Vinson EV, **Garrigues GE**. *Current peri-operative imaging concepts surrounding shoulder arthroplasty*. Skeletal Radiol. 2019 Feb 23. doi: 10.1007/s00256-019-03183-3. [Epub ahead of print] Review. PubMed PMID: 30798396.
84. Schwarz EM, Parvizi J, Gehrke T, Aiyer A, Battenberg A, Brown SA, Callaghan JJ, Citak M, Egol K, **Garrigues GE**, Ghert M, Goswami K, Green A, Hammound S, Kates SL, McLaren AC, Mont MA, Namdari S, Obrebsky WT, O'Toole R, Raikin S, Restrepo C, Ricciardi B, Saeed K, Sanchez-Sotelo J, Shohat N, Tan T, Thirukumaran CP, Winters B. 2018 International Consensus Meeting on Musculoskeletal Infection: Research Priorities from the General

Assembly Questions. J Orthop Res. 2019 Apr 12. doi: 10.1002/jor.24293. [Epub ahead of print] Review. PubMed PMID: 30977537.

85. Matson AP, Kim C, Bajpai S, Green CL, Hash TW, **Garrigues GE**. The effect of obesity on fatty infiltration of the rotator cuff musculature in patients without rotator cuff tears. Shoulder Elbow. 2019 May;11(1 Suppl):30-38. doi: 10.1177/1758573217736008. Epub 2017 Oct 11. PubMed PMID: 31019560; PubMed Central PMCID: PMC6463385.
86. Bullock GS, **Garrigues GE**, Ledbetter L, Kennedy J. A Systematic Review of Proposed Rehabilitation Guidelines Following Anatomic and Reverse Shoulder Arthroplasty. J Orthop Sports Phys Ther. 2019 Apr 25:1-28. doi: 10.2519/jospt.2019.8616. [Epub ahead of print] PubMed PMID: 31021690.
87. Green AA, **Garrigues GE**. Shoulder periprosthetic joint infection: the current state of the art. J Shoulder Elbow Surg. 2019 Jun;28(6S):S2. doi: 10.1016/j.jse.2019.05.003. PubMed PMID: 31196512.
88. **Garrigues GE**, Zmistowski B, Cooper AM, Green A. Proceedings from the 2018 International Consensus Meeting on Orthopedic Infections: *rationale and methods* of the shoulder subgroup. J Shoulder Elbow Surg. 2019 Jun;28(6S):S4-S7. doi: 10.1016/j.jse.2019.03.041. PubMed PMID: 31196515.
89. **Garrigues GE**, Zmistowski B, Cooper AM, Green A; ICM Shoulder Group. Proceedings from the 2018 International Consensus Meeting on Orthopedic Infections: the *definition* of periprosthetic shoulder infection. J Shoulder Elbow Surg. 2019 Jun;28(6S):S8-S12. doi: 10.1016/j.jse.2019.04.034. PubMed PMID: 31196517.
90. **Garrigues GE**, Zmistowski B, Cooper AM, Green A; ICM Shoulder Group. Proceedings from the 2018 International Consensus Meeting on Orthopedic Infections: *prevention* of periprosthetic shoulder infection. J Shoulder Elbow Surg. 2019 Jun;28(6S):S13-S31. doi: 10.1016/j.jse.2019.04.017. PubMed PMID: 31196506.
91. **Garrigues GE**, Zmistowski B, Cooper AM, Green A; ICM Shoulder Group. Proceedings from the 2018 International Consensus Meeting on Orthopedic Infections: *evaluation* of periprosthetic shoulder infection. J Shoulder Elbow Surg. 2019 Jun;28(6S):S32-S66. doi: 10.1016/j.jse.2019.04.016. PubMed PMID: 31196514.
92. **Garrigues GE**, Zmistowski B, Cooper AM, Green A; ICM Shoulder Group. Proceedings from the 2018 International Consensus Meeting on Orthopedic Infections: *management* of periprosthetic shoulder infection. J Shoulder Elbow Surg. 2019 Jun;28(6S):S67-S99. doi: 10.1016/j.jse.2019.04.015. PubMed PMID: 31196516.
93. Barchick SR, Otte RS, **Garrigues GE**. Voluntary acromioclavicular joint dislocation: a case report and literature review. J Shoulder Elbow Surg. 2019 Jul;28(7):e238-e244. doi: 10.1016/j.jse.2019.03.039. Review. PubMed PMID: 31230787.

94. Dekker TJ, Chen A, Kwon NJ, Steele J, Eward WC, **Garrigues G**, Adams SB, Toth AP. The histopathology of the degenerative proximal biceps tendon. Orthopaedic Journal of Sports Medicine. July 29, 2019. doi.org/10.1177/2325967119S00343
95. Duchman KR, Lemmex DB, Patel SH, Ledbetter L, **Garrigues GE**, Riboh JC. The Effect of Non-Steroidal Anti-Inflammatory Drugs on Tendon-to-Bone Healing: A Systematic Review with Subgroup Meta-Analysis. Iowa Orthop J. 2019;39(1):107-119. PubMed PMID: 31413684; PubMed Central PMCID: PMC6604538.
96. Jamgochian G, Abboud J, Churchill R, **Garrigues G**, Brockmeier S, Bauer T, Nagda S. The value of shoulder replacement and rotator cuff surgery: the patients' perspective. J Shoulder Elbow Surg. 2019 Jun 28. pii: S1058-2746(19)30230-7. doi:10.1016/j.jse.2019.03.018. PubMed PMID: 31262639.
97. Friedman LGM and **Garrigues GE**. "Anatomic Augmented Glenoid Implants for the Management of the B2Glenoid" Journal of Shoulder and Elbow Arthroplasty. September 3, 2019. doi: 10.1177/2471549219870350
98. Belay ES, Wittstein JR, **Garrigues GE**, Lassiter TE, Scribani M, Goldner RD, Bean CA. *Biceps tenotomy has earlier pain relief compared to biceps tenodesis: A randomized prospective study*. Knee Surg Sports Traumatol Arthrosc. 2019 Dec;27(12):4032-4037. doi: 10.1007/s00167-019-05682-1. Epub 2019 Sep 5. PubMed PMID: 31486915.
99. Rao AJ, MacLean IS, Naylor AJ, **Garrigues GE**, Verma NN, Nicholson GP. *Next-generation sequencing for diagnosis of infection: is more sensitive really better?* J Shoulder Elbow Surg. 2020 Jan;29(1):20-26. doi: 10.1016/j.jse.2019.07.039. Epub 2019 Oct 13. PubMed PMID: 31619355.
100. Diaz MA, **Garrigues GE**, Ricchetti ET, Gutierrez S, Frankle MA. *Relationship Between Insertion Torque and Compression Strength in the Reverse Total Shoulder Arthroplasty Baseplate*. J Orthop Res. 2019 Nov 6. doi: 10.1002/jor.24506. PubMed PMID: 31692052.
101. Wahl EP, **Garrigues GE**. *Diagnosis of Shoulder Arthroplasty Infection: New Tests on the Horizon*. Orthopedics. 2019 Dec 16:1-7. doi: 10.3928/01477447-20191212-01. PubMed PMID: 31841608.

ii. Study Group Publications

1. Guitton TG, Ring D, et al*. *Interobserver Reliability of Radial Head Fracture Classification: Two-Dimensional Compared with Three-Dimensional CT*. J. Bone Joint Surgery (Am), 2011 Nov 2;93(21):2015-21. doi: 10.2106/JBJS.J.00711 PMID: 22048097
* = As part of the Science of Variation Group (SOVG)
2. Buijze GA, Wijffels MM, Guitton TG, Grewal R, van Dijk CN, Ring D., et al*. *Interobserver Reliability of Computed Tomography to Diagnose Scaphoid Wrist Fracture Union*. J. Hand Surg (Am), 2012 Feb;37(2):250-4. doi: 10.1016/j.jhsa.2011.10.051. PMID: 22281168

* = As part of the Science of Variation Group (SOVG)

3. Buijze GA, Guitton TG, van Dijk CN, Ring D, et al*. *Training Improved Interobserver Reliability for the Diagnosis of Scaphoid Fracture Displacement.* Clin Orthop Relat Res, 2012 July;470(7):2029-34. doi: 10.1007/s11999-012-2260-4 PMID: 22290132
* = As part of the Science of Variation Group (SOVG)
4. Ovan Kollenbur JA, Vrahas MS, Smith RM, Guitton TG, Ring D, et al*. *Diagnosis of Union of Distal Tibia Fractures: Accuracy and Interobserver Reliability.* Injury, 2013 Aug;44(8):1073-5. doi: 10.1016/j.injury.2012.10.034. Epub 2012 Nov 28 PMID: 23200031
* = As part of the Science of Variation Group (SOVG)
5. Hageman MG, Guitton TG, Ring DA, et al*. *How Surgeons Make Decisions when the Evidence is Inconclusive.* J Hand Surg (Am), 38(6):1202-8, 2013. PMID: 23647639
* = As part of the Science of Variation Group (SOVG)
6. Gradl G, Neuhaus V, Fuchsberger T, Guitton TG, Prommersberger KJ, Ring D, et al*. *Radiographic Diagnosis of Scaphoulnate Dissociation Among Intra-Articular Fractures of the Distal Radius: Interobserver Reliability.* J Hand Surg (Am), 013 Sep;38(9):1685-90. doi: 10.1016/j.jhsa.2013.05.039. Epub 2013 Jul 30. PMID: 23910379
* = As part of the Science of Variation Group (SOVG)
7. Wijffels MM, Guitton TG, Ring D, et al*. *Inter-Observer Variation in the Diagnosis of Coronal Articular Fracture Lines in the Lunate Facet of the Distal Radius.* Hand (N Y), 2012 Sep;7(3):271-5. doi: 10.1007/s11552-012-9421-5. PMID: 23997731
* = As part of the Science of Variation Group (SOVG)
8. Bruinsma WE, Guitton TG, Warner JJ, Ring D, et al*. *Interobserver Reliability of Proximal Humerus Fracture Classification: Two-Dimensional vs. Three-Dimensional Computed Tomography.* J Bone Joint Surg (Am), 95(17):1600-4, 2013. PMID: 24005201
* = As part of the Science of Variation Group (SOVG)
9. Doornberg JN, Guitton TG, Ring D, et al*. *Diagnosis of Elbow Fracture patterns on Radiographs: Interobserver Reliability and Diagnostic Accuracy.* Clin Orthop Relat Res, 2013 Apr;471(4):1373-8. doi: 10.1007/s11999-012-2742-4. Epub 2012 Dec 18. PMID: 23247817
* = As part of the Science of Variation Group (SOVG)
10. Hageman MG, Becker SJ, Bot AG, Guitton T, Ring D, et al*. *Variation in Recommendation for Surgical Treatment for Compressive Neuropathy.* J Hand Surg (Am), 2013 May;38(5):856-62. doi: 10.1016/j.jhsa.2013.02.008. Epub 2013 Apr 3. PMID: 23561726
* = As part of the Science of Variation Group (SOVG)
11. Neuhaus V, Bot AG, Guitton TG, Ring DC, et al*. *Scapula Fractures: Interobserver Reliability of Classification and Treatment.* J Orthop Trauma, 2014 Mar;28(3):124-9. doi: 10.1097/BOT.0b013e31829673e2. PMID: 23629469
* = As part of the Science of Variation Group (SOVG)

12. Bruinsma WE, Guitton T, Ring D, et al*. *Radiographic loss of contact between radial head fracture fragments is moderately reliable.* Clin Orthop Relat Res, 2014 July; 472(7):2113-9, 2014. doi: 10.1007/s11999-014-3592-z. PMID: 24711128
* = As part of the Science of Variation Group (SOVG)
13. Tosti R, Ilyas AM, Mellema JJ, Guitton TG, Ring D, et al*. *Interobserver variability in the treatment of little finger metacarpal neck fractures.* J Hand Surg (Am), 2014 Sep; 39(9):1722-7, 2014. doi: 10.1016/j.jhsa.2014.05.023. PMID: 25034789
* = As part of the Science of Variation Group (SOVG)
14. Hageman MG, Kinaci A, Ju K, Guitton TG, Mudgal CS, Ring D, et al*. *Carpal Tunnel Syndrom: Assessment of Surgeon and Patient Preferences and Priorityies for Decision-Making.* J Hand Surg (Am), 2014 Sep;39(9):1799-1804.e1. doi: 10.1016/j.jhsa.2014.05.035. Epub 2014 Aug 1. PMID: 25087865
* = As part of the Science of Variation Group (SOVG)
15. Mellema JJ, Doornberg JN, Guitton TG, Ring D, * et al. *Biomechanical studies: Science (f)or common sense?* Injury, 45(12)2035-9, 2014. doi: 10.1016/j.injury.2014.09.014. PMID: 25306381
* = As part of the Science of Variation Group (SOVG)
16. Döring AC, Hageman MG, Mulder FJ, Guitton TG, Ring D, et al*. *Trigger Finger: Assessment of Surgeon and Patient Preferences and Priorities for Decision Making.* J Hand Surg (Am), 2014 Nov;39(11):2208-13.e2. doi: 10.1016/j.jhsa.2014.08.010. Epub 2014 Oct 3. PMID: 25283491
* = As part of the Science of Variation Group (SOVG)
17. Claessen FM, van den Ende KI, Doornberg JN, Guitton TG, Eygendaal D, van den Bekerom MP, et al *. *Osteochondritis dessicans of the humeral capitellum; Reliability of four classification systems using radiographs and computed tomography.* J Shoulder Elbow Surg, 24(10):1613-1618, 2015. doi: 10.1016/j.jse.2015.03.029. PMID: 25953486
* = As part of the Science of Variation Group (SOVG)
18. Hageman MG, Jayakumar P, King JD, Guitton TG, Doornberg JN, Ring D; et al* *The factors influencing the decision making of operative treatment for proximal humeral fractures.* J Shoulder Elbow Surg, 24(1):21-6, 2015. doi: 10.1016/j.jse.2014.05.013. PMID: 25168346
* = As part of the Science of Variation Group (SOVG)
19. Neuhaus V, Bot AG, Guitton TG, Ring DC, et al*. *Influence of Surgeon, Patient, and Radiographic Factors on Distal Radius Fracture Treatment.* J Hand Surg EurVol, 40(8):796-804, 2015. doi: 10.1177/1753193414555284. PMID: 25342650
* = As part of the Science of Variation Group (SOVG)
20. Janssen SJ, Teunis T, Guitton TG, Ring D, et al*. *Do Surgeons Treat Their Patients Like They Would Treat Themselves?* Clin Orthop Relat Res, 473(11):3564-3573, 2015. doi: 10.1007/s11999-015-4304-z. PMID: 25957212
* = As part of the Science of Variation Group (SOVG)
21. Janssen SJ, Molleman J, Guitton TG, Ring D, et al*. *What Middle Phalanx Base Fracture Characteristics are Most Reliable and Useful for Surgical Decision-Making?* Clin Orthop Relat Res, 2015

Dec;473(12):3943-50. doi: 10.1007/s11999-015-4394-7. Epub 2015 Jun 18. Erratum in: [Clin Orthop Relat Res](#), 2016 Apr;474(4):1080-1. PMID: 26084850

* = As part of the Science of Variation Group (SOVG)

22. FLOW Investigators, *A Trial of Wound Irrigation in the Initial Management of Open Fracture Wounds*. [N Engl J Med](#), Oct 8, 2015. PMID: 26448371

* = As part of the Fluid Lavage in patients with Open fracture Wounds (FLOW Investigators) group

23. Becker SJ, Bruinsma WE, Guitton TG, van der Horst CM, Strackee SD, Ring D, et al*. *Interobserver Agreement of the Eaton-Glickel Classification for Trapeziometacarpal and Scaphotrapezial Arthrosis*. [J Hand Surg \(Am\)](#), 2016 Apr;41(4):532-540.e1. doi: 10.1016/j.jhsa.2015.12.028. Epub 2016 Jan 27. PMID: 26826947

* = As part of the Science of Variation Group (SOVG)

24. Mallee WH, Mellema JJ, Guitton TG, Goslings JC, Ring D, Doornberg JN, et al*. *Erratum to: 6-week radiographs unsuitable for diagnosis of suspected scaphoid fractures*. [Arch Orthop Trauma Surg](#), 2017 May;137(5):733. doi: 10.1007/s00402-017-2663-5. PMID: 28283742

* = As part of the Science of Variation Group (SOVG)

25. Claessen FMAP, Stoop N, Doornberg JN, Guitton TG, van den Bekerom MPJ, Ring D, et al*. *Interpretation of Post-operative Distal Humerus Radiographs After Internal Fixation: Prediction of Later Loss of Fixation*. [J Hand Surg \(Am\)](#), 2016 Oct;41(10):e337-e341. doi: 10.1016/j.jhsa.2016.07.094. Epub 2016 Aug 10. PMID: 27522299

* = As part of the Science of Variation Group (SOVG)

26. Hageman MG, Bossen JK, Neuhaus V, Mudgal CS, Ring D, et al*. *Assessment of Decisional Conflict about the Treatment of carpal tunnel syndrome, Comparing Patients and Physicians*. [Arch Bone Jt Surg](#), 2016 Apr;4(2):150-5. PMID: 27200394

* = As part of the Science of Variation Group (SOVG)

27. van Wulfften Palthe OD, Neuhaus V, Janssen SJ, Guitton TG, Ring D, et al*. *Among Musculoskeletal Surgeons, Job Dissatisfaction Is Associated With Burnout*. [Clin Orthop Relat Res](#), 2016 Aug;474(8):1857-63. doi: 10.1007/s11999-016-4848-6. Epub 2016 Apr 25. PMID: 27113597

* = As part of the Science of Variation Group (SOVG)

28. Mallee WH, Mellema JJ, Guitton TG, Goslings JC, Ring D, Doornberg JN, et al*. *6-week radiographs unsuitable for diagnosis of suspected scaphoid fractures*. [Arch Orthop Trauma Surg](#), 2016 Jun;136(6):771-8. doi: 10.1007/s00402-016-2438-4. Epub 2016 Mar 30. Erratum in: [Arch Orthop Trauma Surg](#), 2017 Mar 10;: [Arch Orthop Trauma Surg](#). 2017 May;137(5):733. PMID: 27026536

* = As part of the Science of Variation Group (SOVG)

29. Janssen SJ, Molleman J, Guitton TG, Ring D, et al*. *Erratum to: What Middle Phalanx Base Fracture Characteristics are Most Reliable and Useful for Surgical Decision-making?* [Clin Orthop Relat Res](#), 2016 Apr;474(4):1080-1. doi: 10.1007/s11999-016-4728-0. PMID: 26842233

* = As part of the Science of Variation Group (SOVG)

30. Giattino CM, Gardner JE, Sbahi FM, Roberts KC, Cooter M, Moretti E, Browndyke JN, Mathew JP, Woldorff MG, Berger M; MADCO-PC Investigators. *Intraoperative Frontal Alpha Band Power Correlates with Preoperative Neurocognitive Function in Older Adults*. *Front Syst Neurosci*. 11:24, 2017.
* = As part of the Markers of Alzheimers Disease and neuroCognitive Outcomes after Perioperative Care (MADCO-PC group)
31. Wasterlain AS, Melamed E, Bello R, Karia R, Capo JT, et al*. *The Effect of Price on Surgeons' Choice of Implants: A Randomized Controlled Survey*. *J Hand Surg (Am)*, 2017 Aug;42(8):593-601.e6. doi: 10.1016/j.jhsa.2017.05.005. Epub 2017 Jun 10. PMID: 28606437
* = As part of the Science of Variation Group (SOVG)
32. Sprague S, Petrisor B, Jeray K, McKay P, Heels-Ansdell D, Schemitsch E, Liew S, Guyatt G, Walter SD, Bhandari M; FLOW Investigators. *Wound Irrigation Does Not Affect Health-Related Quality of Life After Open Fractures: Results of a Randomized Controlled Trial*. *Bone Joint J*. 2018 Jan; 100-B(1):88-94. doi: 10.1302/0301-620X.100B1.BJJ-2017-0955.R1. PMID:29305456
33. Sprague S, Tornetta P 3rd, Slobogean GP, O'Hara NN, McKay P, Petrisor B, Jeray KJ, Schemitsch EH, Sanders D, Bhandari M; FLOW Investigators. *Are Large Clinical Trials in Orthopaedic Trauma Justified*. *BMC Musculoskelet Disord*. 2018 Apr 20;19(1):124. Doi: 10.1186/s12891-018-2029-3. PMID 29678204
* = As part of the Fluid Lavage in patients with Open fracture Wounds (FLOW Investigators) group
34. Berger M, Oyeyemi D, Olurinde MO, Whitson HE, Weinhold KJ, Woldorff MG, Lipsitz LA, Moretti E, Giattino CM, Roberts KC, Zhou J, Bunning T, Ferrandino M, Scheri RP, Cooter M, Chan C, Cabeza R, Browndyke JN, Murdoch DM, Deviney MJ, Shaw LM, Cohen HJ, Mathew JP; INTUIT Investigators. *The INTUIT Study: Investigating Neuroinflammation Underlying Postoperative Cognitive Dysfunction*. *J Am Geriatr Soc*. 2019 Apr;67(4):794-798. doi: 10.1111/jgs.15770. Epub 2019 Jan 23. PubMed PMID: 30674067.
* = As part of the INTUIT group
35. Berger M, Murdoch DM, Staats JS, Chan C, Thomas JP, Garrigues GE, Browndyke JN, Cooter M, Quinones QJ, Mathew JP, Weinhold KJ; MADCO-PC Study Team. *Flow Cytometry Characterization of Cerebrospinal Fluid Monocytes in Patients With Postoperative Cognitive Dysfunction: A Pilot Study*. *Anesth Analg*. 2019 May 3. doi: 10.1213/ANE.0000000000004179. PubMed PMID: 31085945.
* = As part of the MADCO-PC study team

ACCEPTED / IN PRESS

1. **Garrigues GE**. *Management of Glenoid Bone Loss in Total Shoulder Arthroplasty*, *Journal of Surgical Orthopaedic Advances*, (accepted), 2019.

2. **Garrigues, GE.** "*Perspectives: SCR: Here to Stay.*" Commentary on Mihata et al. *Journal of Bone and Joint Surgery*. [In Press]
3. Mehta N, **Garrigues GE.** Materials of Reverse Total Shoulder Arthroplasty: Their Makeup, Function and Effect on Outcomes. In: Abboud JA, ed. Reverse Shoulder Arthroplasty: A Comprehensive Case-Based Approach. Slack Publishers Inc, Thorafore, NJ, 2020. [In Press]
4. Friedman LGM and **Garrigues GE.** "Anatomic Augmented Glenoid Implants for the Management of the B2Glenoid" *Journal of Shoulder and Elbow Arthroplasty*. [In Press]
5. Friedman LGM and **Garrigues GE.** "Rehabilitation for Rotator Cuff." *The Shoulder*. 6th Edition. Philadelphia: Elsevier. [In Press]
6. Otte RS, Friedman LGM and **Garrigues GE.** "Orthopaedic Knowledge Update: Shoulder and Elbow". [In Press]
7. Stone MA, Getz CL, **Garrigues G.** Open Rotator Cuff Repair. *Operative Techniques in Orthopaedic Surgery* 3rd ed [In Press]
8. Stoll KE and **Garrigues GE.** The Basketball Sports Medicine and Science Book. Elbow Injuries in Basketball. 1st ed. Switzerland: Springer. [In Press]
9. Friedman LGM, Pepe MD, Bradford TS, Basamania C, **Garrigues GE.** *Pectoralis Major Repair*. In: Wiesel B, ed. Operative Techniques in Orthopaedic Surgery. 3rd edition. Philadelphia: Wolters Kluwer [In Press]
10. Otte RS, Srikumaran U, Lin A, Freehill M, **Garrigues GE.** *Arthroscopic Rotator Cuff Repair* In. Lieberman JR and Davis CM (Eds.) Instructional Course Lectures (vol 69) Philadelphia AAOS/Wolters Kluwer Health [In Press]

BOOKS AND BOOK CHAPTERS

11. Shanbhag A, **Garrigues GE,** Kaufman AM, Rubash HE. *Genome Sciences in Clinical Orthopaedics* In. Shanbhag A, Rubash HE, Jacobs JJ (Eds.) Joint Replacement and Bone Resorption, Taylor & Francis Group, New York, 2006. https://www.amazon.com/Joint-Replacement-Bone-Resorption-Biomaterials-ebook/dp/B00UV9IPLQ/ref=sr_1_1
12. **Garrigues GE** (delegate) *Proceedings of the International Consensus Meeting on Periprosthetic Joint Infection*. Chairs: Parvizi J, Gehrke T. Data Trace, Maryland, 2013.
13. **Garrigues GE,** Williams GR Jr. *Instability after Anatomic Shoulder Arthroplasty: Revision of Components is Necessary*, Ch. 29 In Dodson CC, Dines DM, Dines JS, Walch G, Williams G (Eds.) Controversies in Shoulder Instability, Lippincott Williams & Wilkins, Philadelphia 2014.

<https://www.amazon.com/Controversies-Shoulder-Instability-Christopher-Dodson-ebook/dp/B00GCHZIQG/r>

14. **Garrigues GE**, Lazarus MD. *Impingement Syndrome: Does it Really Exist?* In Getz C (Ed.), World Clinics in Orthopaedics, Jaypee Publishers, 2015. https://www.amazon.com/World-Clinics-Orthopaedics-Shoulder-Surgery/dp/9351526003/ref=sr_1_6?
15. **Garrigues GE**, Pepe M, Basamania C. *Pectoralis Major Ruptures*, in Williams GR Jr and Wiesel B (Eds.) Operative Techniques in Orthopaedic Surgery: Volume III, 2016. https://www.amazon.com/Operative-Techniques-Orthopaedic-Surgery-Four/dp/1451193149/ref=sr_1_fkmr0
16. **Garrigues GE**, Williams GR Jr., *The Superior Approach to the Shoulder*, In Abrams JS, Bell RH, Tokish JM (Eds.) AAOS Advanced Reconstruction: Shoulder 2, 2016. https://www.amazon.com/Advanced-Reconstruction-Jeffrey-Abrams-M-D/dp/1975123476/ref=sr_1_1?
17. Kim, C and **Garrigues GE**. *Proximal Humerus Fracture: Hemiarthroplasty/Reverse Shoulder Arthroplasty*, in Stern SH, Bono CB, Saltzman MD (Eds.) Key Techniques in Orthopaedic Surgery. 2nd edition. New York: Thieme; 2018. https://www.amazon.com/Techniques-Orthopaedic-Surgery-Steven-Stern-ebook/dp/B07C4ZXZXQ/ref=sr_1_1?
18. **Garrigues GE**, Torrens, C., Willems, J., Wall, K.C., Ledbetter, L. *What is the relevance of unexpected positive cultures (UPC) in revision shoulder arthroplasty without clinical or radiographic signs of infection?* In: Proceedings of the Second International Consensus Meeting on Musculoskeletal Infection. Brooklandville, MD: Data Trace Publishing Company; 2018. p. 540 – 544.
19. **Garrigues GE**, Torrens, C., Willems, J., Wall, K.C., Ledbetter, L. *What is the treatment (if any) of unexpected positive cultures (UPC) in revision shoulder arthroplasty without clinical or radiographic signs of infection?* In: Proceedings of the Second International Consensus Meeting on Musculoskeletal Infection. Brooklandville, MD: Data Trace Publishing Company; 2018. p. 544 – 546.
20. **Garrigues GE**, Green, A., Zmistowski, B., Hsu, J., Ricchetti, E., Namdari, S., Frankle, M., Gerber, C., Tashjian, R., Matsen, F. *What are the diagnostic criteria of shoulder periprosthetic joint infection (PJI)?* In: Proceedings of the Second International Consensus Meeting on Musculoskeletal Infection. Brooklandville, MD: Data Trace Publishing Company; 2018. p. 558 – 565.
21. **Garrigues GE**, Torrens, C., Willems, J., Belay, E.S., Ledbetter, L. *What are the indications for one-versus two-stage exchange arthroplasty in the management of acute shoulder periprosthetic joint infection (PJI)?* In: Proceedings of the Second International Consensus Meeting on Musculoskeletal Infection. Brooklandville, MD: Data Trace Publishing Company; 2018. p. 620 – 622.
22. **Garrigues GE**, Torrens, C., Willems, J., Belay, E.S., Ledbetter, L. *What are the indications for one-versus two-stage revision in subacute or chronic shoulder periprosthetic joint infection (PJI)?* In: Proceedings of the Second International Consensus Meeting on Musculoskeletal Infection. Brooklandville, MD: Data Trace Publishing Company; 2018. p. 622 – 624.

23. Churchill J, **Garrigues GE**: Biomechanics of the Reverse Shoulder Arthroplasty: Controversies in Prosthesis Design and Placement, in Parsons BO, Hasan SS, eds: *Surgical Insights: Reverse Shoulder Arthroplasty* [online course]. Rosemont, IL American Academy of Orthopaedic Surgeons, 2019. <https://www.aaos.org/store/product/?productId=13562002&ssopc=1>

NON-PEER-REVIEWED PUBLICATIONS AND MEDIA

1. **Garrigues GE**, *Advice on Rotator Cuff Tears*. Bodies in Motion, online <http://www.dukehealth.org/health_library/advice_from_doctors/bodies-in-motion/rotator-cuff-tears>
2. **Garrigues GE**, *A Strong Shoulder to Lean On*. Duke Medicine Connect, Spring:16-17, 2012.
3. Featured in, Leggett P, *Staying in the Swing*. Midtown Magazine, Mar/Apr, 2013.
4. Featured in, Leggett P, *Stretching's 'Link' to Better Golf*. Healthy Focus, Summer 2013.
5. Refereed study above reported in numerous publications (selected list below) (Okike K, O'Toole RV, Pollak AN, Bishop JA, McAndrew CM, Mehta S, Cross WW 3rd, **Garrigues GE**, Harris MB, Lebrun CT. *Survey Finds Few Orthopaedic Surgeons Know the Costs of the Devices They Implant*. Health Affairs, 33(1):103-109, 2014.)
 - i. Albuquerque Business Journal, 1/7/14, Dennis Domrzalski: Doctors Have Few Clues On Costs
 - ii. Becker's ASC Review, 1/9/14, Carrie Pallardy: 7 Things For ASC Leaders To Know For Thursday
 - iii. Becker's Spine Review, 1/9/14, Heather Linder: 8 Things For Spine Surgeons To Know For Thursday
 - iv. Becker's Spine Review, 1/7/14, Molly Gamble: Few Physicians Can Correctly Estimate Device Costs, Study Finds [also appeared in: Becker's Hospital Review]
 - v. Bloomberg Business Week, 1/23/14, John Tozzi: How Much Do Medical Devices Cost? Doctors Have No Idea
 - vi. BMJ, 1/10/14, Michael McCarthy: Few Surgeons Know Cost Of Devices They Implant, Survey Finds
 - vii. Crain's Cleveland Business, 1/10/14, Scott Suttell: Do You Think Your Doc Knows The Cost Of That Artificial Hip? Guess Again
 - viii. Elsevier Business Intelligence, 1/20/14, Sue Darcey: What Surgeons Don't Know About Orthopedic Implant Prices
 - ix. FierceHealthIT, 1/7/14, Ashley Gold: Most Surgeons Blind To Implanted Device Costs
 - x. Health News Review, 1/6/14, Gay Schwitzer: Survey Finds Few Orthopedic Surgeons Know The Costs Of The Devices They Implant
 - xi. Kaiser Health News, 1/6/14, How Much Does a New Hip Cost—Even the Surgeon Doesn't Know
 - xii. MedPage Today, 1/7/14: Morning Break: Medicare Cops Target Pill Mills

- xiii. Modern Healthcare, 1/10/14, Sabriya Rice: Few Docs Aware Of Implant Devices' Price Tags, Survey Finds
 - xiv. National Public Radio, 1/6/14, How Much Does a New Hip Cost—Even the Surgeon Doesn't Know
 - xv. NyMedicin, 1/19/14: Survey Finds Few Orthopedic Surgeons Know The Costs Of The Devices They Implant [Medical Device Cost]
 - xvi. Orthopedic Design & Technology, 1/13/14: Surgeons Ignorant Of Orthopedic Implant Costs, Study Says
 - xvii. Outpatient Surgery, 1/13/14, Daniel Cook: Study: Most Orthopods Don't Know How Much Implants Cost
 - xviii. PrawfsBlawg (Blog), 1/7/14: The Price is Right: Health Care Pricing Transparency Wars
 - xix. Ring Of Fire, 1/9/14, Krysta Loera: Survey: Doctors Have No Clue What Hip Replacements Cost
 - xx. Terra, 1/10/14: Pocos Cirujanos Conocen El Precio De Los Dispositivos Implantables (Few surgeons know the price of implantable devices)
 - xxi. Washington Post, 1/6/14, Jenny Gold: How Much Does A New Hip Cost? Even The Surgeon Doesn't Know
 - xxii. WTOP, 1/9/14: Dr. Andrew Pollak, Chair Of The Department Orthopedics At University Of Maryland School Of Medicine: Do Doctors Know How Much Your Medical Implants Cost -- And Should They?
6. Featured in, Mitchell M, *Pressure to Play: Youth Baseball Injuries*. WRAL News, televised and online, accessed July 24, 2014
 - i. <<http://www.wralsportsfan.com/overuse-injuries-in-youth-sports-on-the-rise/13832438/>>
 - ii. <<https://www.youtube.com/watch?v=rFFWFF-aK9w>>
 - iii. <<http://www.dukemedicine.org/blog/#!/prevent-overuse-injuries-baseball-pitchers>>
 7. Featured in, Leahy M, *Musculoskeletal Infection Symposium*. AAOS Now, 2014.
 - i. online, accessed August 30, 2014
<<http://www.aaos.org/news/aaosnow/aug14/clinical5.asp>>
 8. Featured on, Sirius XM Satellite Radio, Cardone D, Gidumal R, hosts. *Prosthetic Shoulder Infections and Injuries to the Young, Throwing Athlete*. Doctor Radio, August 11, 2014.
 9. Featured in, *Prevent Overuse Injuries in Baseball Pitchers*. Duke Medicine Blog, July 28, 2014.
 10. Featured in, Mary Jane Gore, *New Material to Repair a Common Joint Injury*. Clinical Practice Today, 2015.
 - i. Online, access April 12, 2016,
<<http://duke.clinicaltalkpoints.com/ClinicalPracticeToday/new-material-to-repair-a-common-joint-injury/>>
 11. Featured in, Tim Pittman, *Duke Performs Novel Rotator Cuff Procedure*. Clinical Practice Today, April 12, 2016.
 - i. Duke Orthopaedics Blog online, accessed April 12, 2016. *Grant Garrigues, MD, Offering Novel Rotator Cuff Procedure*. <<http://sites.duke.edu/orthopaedics/2016/04/12/grant-garrigues-md-offering-novel-rotator-cuff-procedure/>>

- ii. Clinical Practice Today online, accessed April 12, 2016. *Duke Performs Novel Rotator Cuff Procedure*. < [http://duke.clinicaltalkpoints.com/ClinicalPracticeToday/duke-performs-novel-rotator-cuff-procedure/?eblast=orthopaedics&utm_source=WhatCounts%2c+Publicaster+Edition&utm_medium=email&utm_campaign=DK025+-+eBrief+ISSUE+41+4%2f12+-+ORTHOPAEDICS+\(Duke+Health+and+Med-IQ\)&utm_content=New+and+noteworthy](http://duke.clinicaltalkpoints.com/ClinicalPracticeToday/duke-performs-novel-rotator-cuff-procedure/?eblast=orthopaedics&utm_source=WhatCounts%2c+Publicaster+Edition&utm_medium=email&utm_campaign=DK025+-+eBrief+ISSUE+41+4%2f12+-+ORTHOPAEDICS+(Duke+Health+and+Med-IQ)&utm_content=New+and+noteworthy)>
12. Featured in, Joe Lemire, *DVS Statistical Model Can Evaluate Pitching Mechanics and Injury Risk From Video*. *Sport Techie*, April 2, 2019.
 - i. <https://www.sporttechie.com/dvs-statistical-model-can-evaluate-pitching-mechanics-and-injury-risk-from-video/>
13. Commentary on Falstie-Jensen T, Arveschoug AK, Ovesen J, Lange J, Gormsen LC; ROSA study group, Olsen BS, Sørensen AK, Zerahn B, Johanssen HVS, Elmengaard B, Thillemann TM, Bolvig L, Søballe K, Daugaard H. Response to Wouthuyzen-Bakker et al "Labeled white blood cell/bone marrow single-photon emission computed tomography with computed tomography fails in diagnosing chronic periprosthetic shoulder joint infection". *J Shoulder Elbow Surg*. 2019 Jul;28(7):e252-e254. doi: 10.1016/j.jse.2019.03.026. PubMed PMID: 31230789. https://www.healio.com/orthopedics/shoulder-elbow/news/online/%7B3abe14f8-4b81-4378-8f74-04c497ef7a41%7D/white-blood-cellbone-marrow-imaging-yielded-poor-diagnosis-of-chronic-shoulder-pji?utm_source=selligent&utm_medium=email&utm_campaign=orthopedics%20news&utm_bt=11579300324 Accessed July 24, 2019.
14. Featured in, *On the Cuff*, <https://www.rush.edu/health-wellness/discover-health/cuff>
15. Featured in, *Bad Bones*, <https://www.rush.edu/health-wellness/discover-health/bad-bones>, accessed November 11, 2019

ACKNOWLEDGEMENTS AND LETTERS TO THE EDITOR

1. Acknowledged in: Siparsky PN, Talyor DC, *Acute Traumatic Anterior Shoulder Instability: Surgical Management for the First-Time Dislocator*. in Brockmeier S, Miller MD, Arce G, eds. Surgery of Shoulder Instability, Springer, New York, 2013.
2. Riboh JC, **Garrigues GE**. Authors Reply. *Arthroscopy*, (30):10, 2014.
3. Acknowledged in: Teunis T, Janssen SJ, Guitton TH, Vranceanu AM, Goos B, Ring D. *Surgeon Personality is Associated with Recommendation for Operative Treatment*. *Hand (NY)*, 10(4):779-784, 2015. doi: 10.1007/s11552-015-9755-x.
4. Acknowledged in: Janssen SJ, Teunis T, Guitton TH, Ring D, Herndon JH. *Orthopaedic Surgeon's View on Strategies for Improving Patient Safety* *J Bone Joint Surg (Am)*, 97(14):1173-1186, 2015.
5. Acknowledged in: Bruinsma WE, Becker SJ, Guitton TH, Kadzielski, Ring D. *How Prevalent Are Hazardous Attitudes Among Orthopaedic Surgeons?* *Clin Orthop Relat Res*, 473(5):1582-1589, 2015. doi: 10.1007/s11999-014-3966-2.
6. **Garrigues GE**, *Preface*. *Techniques in Orthopaedics* 31(2):69, June 2016.

7. **Garrigues GE.** *The Superior Capsule Reconstruction: Here to Stay: Commentary on an article by Teruhisa Mibata, MD, PhD, et al.: "Five-Year Follow-up of Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tears".* J Bone Joint Surg Am. 2019 Nov 6;101(21):e116. doi: 10.2106/JBJS.19.00883. PubMed PMID: 31693524.

RESEARCH THESIS

1. **Garrigues GE,** Rubash HR, Shanbhag AS. *Osteolysis and Aseptic Loosening of Joint Arthroplasty: Gene Expression in Cell-Biomaterial Interactions,* Harvard Medical School/MIT Thesis, (188 pages), 2005.

PATENTS/INTELLECTUAL PROPERTY

1. Vitamin E UHMWPE, **Garrigues GE**
 - U.S. Provisional Patent: Expired
2. Unified Plate Construct System, **Garrigues GE,** Garrigues NW II.
 - U.S. Provisional Patent No. 61/163,307
3. Member of 5 surgeon, international design team for novel augmented glenoid component (FDA approved and CE mark obtained, first implanted July 20, 2015).
 - Perform + Augmented Anatomic Glenoid Implant (Tornier/Wright Medical) Design team. FDA approved, CE Mark
 - U.S. Patent No. 9,474,619; EP 1996125
4. Member of 8 surgeon design team for novel total shoulder system (FDA approved and CE mark obtained, first implanted January 2017)
 - Altivate Anatomic Total Shoulder Arthroplasty Prosthesis (DJO) Design Team. FDA approved.
 - Shoulder Implant Components, U.S. Patent No. 62/448,205 (filing 1/19/17)
 - Shoulder Implant Components, U.S. Patent No. 15/847,091 (filing 1/18/18)
 - Shoulder Implant Components, PCT/US2018/01428 (filing 1/18/18)
5. Bottle Opening Apparatus; Inventors: **Grant Garrigues,** Brian Hodorek, Matt Purdy; Assigned To: Ignite Orthopedics; Design Patent Application Number: 29/641,074; Status: Application Pending.

PROFESSIONAL AWARDS AND SPECIAL RECOGNITIONS

Harvard-MIT Health Sciences and Technology Research Scholarship
Massachusetts Medical Society, Technology in Medicine Award: Finalist

Eastern Orthopaedic Association, Resident Research Award 2009
 Recognized at 2013 Duke Leadership Luncheon
 5-Star service awards: 17
 5-Star service champion: February 2013
 James Kelly MD Award, Piedmont Orthopaedic Society, 2013
 Invited Delegate, International Consensus Meeting on Periprosthetic Joint Infections, 2013
 The Chancellor's Clinical Leadership in Academic Medicine Program (C-CHAMP), 2014
 Diplomate, American Board of Orthopaedic Surgeons ("Board Certified")
 Fellow, American Academy of Orthopaedic Surgeons
 Deputy Director, Duke Sports Medicine and Shoulder Surgery Fellowship, 2012-2013
 Co-Director, Duke Sports Medicine and Shoulder Surgery Fellowship, 2013-2014
 Co-Director, Upper Extremity Trauma, Duke University Medical Center, 2011-2018
 American Shoulder and Elbow Surgeons European Traveling Fellowship, Alternate, 2015
 Piedmont Pitcher, Piedmont Orthopaedic Society, 2015
 "Best Doctors"—Business North Carolina, 2016, 2017
 ENhanced Academics in a Basic Laboratory Environment (ENABLE) career development grant, 2016
 Guest Editor, *The Rotator Cuff: Current Concepts and a Glimpse at the Future Techniques in Orthopaedics*, 2016
 Invited Participant, American Orthopaedic Association (AOA) Emerging Leaders Forum, 2017
 ENhanced Academics in a Basic Laboratory Environment (ENABLE) career development grant, 2017
 Elected Scientific Program Director, Phoenix Society, 2017
 American Shoulder and Elbow Surgeons European Traveling Fellowship, 2017
 Fellow, American Orthopaedic Association (AOA), 2018-2019
 Selected for OREF/Bone and Joint Initiative Early-Funded Investigator Program, Aug 2-4, 2019

Visting Professorships and Invited Grand Rounds

1. Georgetown University Department of Orthopaedics, *Surgical Management of the B2 Glenoid*, 2018.
2. 10th Annual IC Middelman Memorial Lecture, St Louis University, *Surgical Management of Shoulder Arthritis with Glenoid Erosion*, 2019.

OTHER AWARDS

National Eagle Scout of the Year
 California Eagle Scout of the Year
 Hornaday Conservation Award
 Bishop's Head of School Award
 Bausch & Lomb Science Award
 Stanford Book Award
 La Jolla Rotary Scholarship
 George Washington Honor Medal
 Navy League Scholarship
 Marines Memorial Scholarship
 James Copley Citizenship Award
 John Harvard Scholarship, Rank List Group I (GPA 3.8, top 10% of class),

Varsity Water Polo: Academic All-American (3 times), 4 Varsity letters, Coach’s Award

ORGANIZATIONS AND PARTICIPATION

American Shoulder and Elbow Surgeons (ASES), Member, elected 2015
 European Society for Surgery of the Shoulder and Elbow (SECCEC-ESSSE), Corresponding Member, 2017-present
 Co-Founder, The Complicated Shoulder—Surgical and Rehabilitative Strategies for Successful Patient Outcomes, NCBPTE course
 Journal of Shoulder and Elbow Surgery, Assistant Editor
 Journal of Bone and Joint Surgery, Reviewer
 Techniques in Orthopaedics, Editorial Board
 Arthroscopy Self-Assessment Program (ASAP) Version III – Shoulder and Elbow Question Writer
 ASES-AANA Maintenance of Certification Question Writer: Shoulder Arthritis Section
 Science of Variation Upper Extremity Surgery Study Group
 American Academy of Orthopaedic Surgeons (AAOS)
 Arthroscopy Association of North America (AANA)
 Orthopaedic Trauma Association (OTA)
 Piedmont Orthopaedic Society
 North Carolina Orthopaedic Association (NCOA)
 Southern Orthopaedic Association
 Eastern Orthopaedic Association
 EOA 2016 Self-Assessment Exam Question Writer
 Mid-Atlantic Shoulder and Elbow Society
 Phoenix Society (Penn, Rothman, Jefferson, Cleveland Clinic Shoulder Fellowship alumni group)
 American Orthopaedic Society for Sports Medicine (AOSSM) 2018 to present

EXTERNAL SUPPORT - GIFTS, GRANTS, AND CONTRACTS

	PI	Purpose	Approximate Amount	Notes
2008	Carl Basamania	“The Coracoid Cortical Ring”	\$2,000.00	Lead Researcher, Piedmont Orthopaedic Society Research Grant
2009	David Ruch	“The Biomechanics of Low-profile Radius Plating”		Lead Researcher, Zimmer Research Grant
2011-2014	Grant Garrigues	“Current Solutions in Shoulder and Elbow Surgery”	\$20,700	Principial Contact, DJO Global Education Grant, 1/2011-\$6900, 1/2012 - \$6900, 2/ 2914-\$6900
2012	Grant Garrigues	“P. Acnes in shoulder Surgery”	\$7,000	Piedmont Orthopaedic Society Research Grant
2013	Grant Garrigues	Duke Core Lab Voucher Grant	\$7,000	

2013	Grant Garrigues	“Clavicle Fixation Lab”	\$3,695	Sonoma Orthopaedics
2014	Grant Garrigues	“The Role of Anterior Shoulder Capsule in the Pathogenesis of Osteoarthritis”	\$7,500	Piedmont Orthopaedic Society Research Grant
2014	Grant Garrigues	“Quantitative Cultures of P. Acnes in Shoulder Surgery”	\$70,000	CareFusion Co. Research Grant
2014	Marc Richard	“Radial Head Implant Sizing with a Novel Landmark”	\$19,875	Acumed Inc. Research Grant
2011-2017	Grant Garrigues	“Duke Upper Extremity Cadaver Experience”	\$20,540	Education Grant, 2/2012 \$3,500 (Zimmer); 8/2012 \$5,520 (Zimmer); 9/2013 \$5,520 (Zimmer); 3/2015 \$6000 (Stryker)
2014-2018	Grant Garrigues	“Tornier Clinical Shoulder Outcomes Study”	\$189,166	Principial Investigator / Organizer Tornier Inc. Research Grant, \$12,000 (start-up) + \$150 per patient, per year (150-200 patients per year)
2016-2018	Grant Garrigues	FDA Trial for Tornier Pyrolytic Carbon Humeral Head	\$142,191	Principal Investigator / Organizer; Dependent on Subjects
2016-2018	Grant Garrigues	Duke ENABLE Grant	25% Protected Time	
2017-2018	Grant Garrigues	“Clinical Correlations of Humeral Head Articular Cartilage wear patterns in Glenohumeral Osteoarthritis”	\$6,000	Piedmont Orthopaedic Society
2018-Present	Grant Garrigues	“Multicenter Randomized Trial of Home vs PT Rehabilitation for Reverse TSA”	\$40,000	OREF/AirCast Foundation
03/15/2019 – 01/31/2024	Dianne Little	"Driver Genes for Engineered Rotator Cuff Development"	(Direct Cost) \$1,598,828 (Total Cost) \$2,455,911	NIH R01 1R01AR073882-01A1

RESEARCH EXPERIENCE

Midwest Orthopaedics / Rush University Medical Center (2018-present): Chicago, IL
 Basic science and clinical projects focused on understanding the pathogenesis and possible prevention of shoulder disease (primarily osteoarthritis and rotator cuff) as well as outcomes studies evaluating the ideal treatments. Research collaborations with fundamental scientist Dr. Little.

Duke University Medical Center, Orthopaedic Surgery (2005-2018): Durham, NC
Multiple active research projects related to a variety of shoulder and elbow surgery topics. Published papers related to shoulder and upper extremity surgery, trauma, sports medicine, and musculoskeletal radiology (see next page). Research collaborations with clinicians Drs. Aldridge, Basamania, Higgins, Mallon, Moorman, Ring, Ruch, Toth, and Urbaniak. Research collaborations with fundamental scientists Drs. DeFrate, Little, and Sell.

The Rothman Institute / Thomas Jefferson University (2010-2011): Philadelphia, PA
Ongoing research related to a variety of traumatic and degenerative conditions of the shoulder and elbow. Research with Drs. Williams, Fenlin, Lazarus, Dodson, and others.

Mass. General Hospital Orthopaedic Biomaterials Laboratory (2002-2005): Boston, MA
Analyzed the mechanisms of osteolysis and aseptic loosening after total hip arthroplasty in the laboratory of Dr. Rubash. Used microarrays, designed and implemented custom software programs for array analysis, molecular classification, and clustering. HST honors thesis *Cum Laude*.

Harvard BioControls Engineering Laboratory (1999-2001): Cambridge, MA
Designed and built multiple recording site electrodes for neural network studies and neuronal recording.

Aurora Biosciences Corporation (2000): San Diego, CA
Investigated a novel ion-channel stimulation technology using FRET voltage sensitive dyes.

University of Kansas Microsurgical Laboratory (1999): Kansas City, KS
Performed rat femoral artery and vein anastomoses. Studied antioxidants to prevent reperfusion injury.

MENTORSHIP

i. Faculty

Host: AOA ASG traveling fellow, Samy Bouaicha, 2017,
Organizing Host: European shoulder and elbow society (SECEC) traveling fellows, Tjarco Alta and Alexander van Tongle 2016
Sponsor and mentor, University of Nottingham, UK, visiting orthopaedic surgeon, Solange Serna, 2014
Approximately weekly case emails/phone calls from former fellows and residents now in practice regarding management of complex shoulder conditions 2012-present

ii. Fellows, doctoral, post docs

Doctoral Thesis Advisor, Doctor of Nursing Practice (DNP), (Chris Bean, NP), ECU School of Nursing, Greenville, NC, 2016
Active participant in the Duke Sports Medicine fellowship

iii. Resident

Basil M. Boyd, MD Memorial Resident Outstanding Paper Award (William Mook, MD), Oscar Miller Day, 2013
Harley and Betty Baxter Resident Award, (Mitchell Klement, MD), Southern Orthopaedic Association, Asheville, NC, 2015

Resident Presentation Award, (Brian Nickel, MD), NC Society for Surgery of the Hand Annual Meeting Kiawah Island, SC, 2015
Best Paper award, Shoulder and Elbow Session, North Carolina Orthopaedic Association (Jordan Grier, MD)
Best Resident Paper, North Carolina Orthopaedic Association (Elshaday Belay)

iv. Medical Students

Sponsor and mentor, University of Pretoria, South Africa, visiting Medical Student, Yolandi Naude, 2014

Co-Founder, C-STORM: Clinician-Scientist Training Opportunity and Research Mentorship 2014-present

"C-STORM is an in-depth bench to bedside orthopaedic experience for outstanding undergraduates or medical students from groups traditionally under-represented in orthopaedic surgery. The program goals are to provide a rich mentorship experience, exposure to cutting-edge scientific research and clinical care, and to prepare students from under-represented groups for a career as orthopedic clinician-scientists." (Abby Chaiani, Mohammed Omer)

Anthony V. Seaber Student Fellowship Award, (Abiram Bala, BS), Eastern Orthopaedic Association, Maui, HI, 2015

Sponsor and mentor, St. George Hospital Kogarah, Sydney NSW Australia, William McNamara, 2017

Anthony V. Seaber Student Fellowship Award, (Hans Zhang, BS), The American Orthopaedic Society for Sports Medicine (AOSSM), Toronto, Canada, 2017

TEACHING RESPONSIBILITIES INCLUDING CONTINUING EDUCATION

(See "Selected presentation" listing above)

I. Teaching and Supporting Learners

- i. Research Triangle Park Orthopaedic Society quarterly meetings, 2010-2012
- ii. Invited Lecturer, Panelist, Moderator, SOA annual meeting, White Sulphur Springs, WV, 2012
- iii. American Academy of Orthopaedic Surgeons national meeting, San Diego, CA, 2012
- iv. American Shoulder and Elbow Surgeons specialty day, San Diego, CA, 2012
- v. Lecture Duke University School of Medicine, surgery rotation "Extremity Anatomy"
- vi. Lecture Thomas Jefferson University School of Medicine, surgery rotation "Orthopaedic Emergency Evaluation"
- vii. Panelist, Lab Instructor, Duke Hand Course, Durham, NC 2012
- viii. Southeastern Fracture Symposium, Durham, NC 2012
- ix. Current Solutions in Shoulder and Elbow Surgery, Tampa, FL, 2012
- x. Presenter American Shoulder and Elbow Surgeons open meeting, Boca Raton, FL, 2012
- xi. Invited lecturer, Panelist AOA Postgraduate Course, White Sulphur Springs, WV, 2012
- xii. Mid-Atlantic Shoulder and Elbow Society annual meeting, Washington, DC, 2012
- xiii. Lab Instructor, American Academy of Orthopaedic Surgeons national meeting, Chicago, IL, 2013
- xiv. American Shoulder and Elbow Surgeons specialty day, Chicago, IL, 2013
- xv. Faculty, AO/Synthes Principles of Fracture Management, Charlotte, NC 2013
- xvi. Invited Lecturer, Panelist, Moderator, EOA annual meeting, Miami, FL 2013

- xvii. Invited Lecturer, AORN Tarheel Chapter Meeting, Durham, NC 2013
- xviii. Invited Moderator, J. Leonard Golder Research Symposium, Durham, NC 2014
- xix. Invited Lecturer, AORN Tarheel Chapter Meeting, Durham, NC 2014
- xx. American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2014
- xxi. American Shoulder and Elbow Surgeons specialty day, New Orleans, LA 2014
- xxii. Invited Lecturer, Orthopaedic Symposium, Wake AHEC, Raleigh, NC, 2014.
- xxiii. Invited Lecturer, Southern Orthopaedic Association annual meeting, Avon, CO, 2014
- xxiv. AAOS / ORS, Musculoskeletal Infection Symposium, Rosemont, IL, 2014
- xxv. Invited Moderator, J. Leonard Golder Research Symposium, Durham, NC 2015
- xxvi. Invited Lecturer, Piedmont Orthopaedic Society Meeting, Sea Island, GA, 2015
- xxvii. Invited Lecturer, Duke Orthopaedic Surgery Interest Group, Durham, NC 2015
- xxviii. Invited Faculty, Cooperstown Shoulder and Elbow Symposium, Cooperstown, NY, 2015
- xxix. Invited Lecturer, Duke Nursing Grand Rounds, Durham, NC, 2015
- xxx. Invited Lecturer, Eastern Orthopaedic Association, Shoulder Symposium, New Orleans, LA 2016
- xxxi. American Shoulder and Elbow Surgeons (Open Symposium and Closed Meeting), Boston, MA 2016
- xxxii. American Academy of Orthopaedic Surgeons national meeting, San Diego, CA, 2017
- xxxiii. American Shoulder and Elbow Surgeons specialty day, San Diego, CA 2017
- xxxiv. Invited Faculty, Current Solutions in Shoulder and Elbow Surgery “Tampa Shoulder Course”, Tampa, FL 2017
- xxxv. Lecturer, Vanderbilt Sports Medicine and Shoulder Surgery Conference, Nashville, TN, 2017
- xxxvi. Invited Faculty, Duke Winter Baseball Meeting, Durham, NC 2018
- xxxvii. American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2018
- xxxviii. American Shoulder and Elbow Surgeons specialty day, New Orleans, LA, 2018
- xxxix. Emily Berend Adult Reconstructive Symposium (EBARS), Durham, NC 2018
 - xl. Sub-specialty conferences in Sports Medicine, Trauma, Hand and upper extremity surgery
 - xli. Faculty Lecturer, Duke Sports Medicine Conference, Durham, NC 2011-2018
 - xl. Invited Faculty, Chicago Sports Medicine Summit, World Series of Surgery, Chicago, IL 2018, 2019
 - xliii. Invited Faculty, American Shoulder and Elbow Surgeons (ASES) Open Symposium, Chicago, IL 2018
 - xliv. American Shoulder and Elbow Surgeons (ASES) Closed Meeting, Chicago, IL 2018
 - xl. Invited Faculty, Pennsylvania Orthopaedic Society, Hershey, PA 2018
 - xlvi. Invited Faculty, AAOS/ASES Anatomic and Reverse Total Shoulder Arthroplasty: State-of-the-Art, Chicago, IL 2018
 - xl. Invited Faculty, Current Solutions in Shoulder and Elbow Surgery “Tampa Shoulder Course”, Tampa, FL 2019
 - xl. Invited Moderator, American Shoulder and Elbow Surgeons (ASES) Specialty Day, Las Vegas, NV 2019
 - xl. Invited Faculty, AANA/SOMOS course, Rosemont, IL 2019
 - l. Invited Faculty, International Congress for Joint Reconstruction (ICJR) Shoulder Course, Las Vegas, NV 2019

II. Development of courses/educational programs

- i. Developed “Harvard Medical School Trauma Workshop” 2002
- ii. Teaching Assistant for Musculoskeletal Pathophysiology, Harvard Medical School 2003

- iii. Teaching Assistant for Biomaterials and Tissue Engineering, Massachusetts Institute of Technology 2003
- iv. Originator of Duke quarterly shoulder and elbow cadaver workshop (est. 2011)
- v. Faculty, Tornier Course for Arthroplasty and Rotator Cuff Repair, Bethlehem, PA, 2012
- vi. Faculty, Duke Musculoskeletal Ultrasound Course, Durham, NC, 2013
- vii. Faculty, Tornier Master's Course, Chicago, IL, 2014
- viii. Founder, Shoulder Reconstruction and Radiology Conference, Durham, NC, monthly since 2014
- ix. Co-Organizer, "The Complicated Shoulder—Surgical and Rehabilitative Strategies for Successful Patient Outcomes," NCBPTE course, Durham, NC, 2014.
- x. Faculty, Tornier Master's Course, Chicago, IL, 2015
- xi. Faculty, AAOS/MSIS, Musculoskeletal CME Course, Webinar, 2015
- xii. Co-Instructor Duke undergraduate course "Anatomy of the Lower Extremity"
- xiii. Co-Founder, C-STORM: Clinician-Scientist Training Opportunity and Research Mentorship 2014-2016
- xiv. Moderator, Faculty, and Organizer, AAOS Instructional Course Lecture 166, "I've got a culture positive for *P. acnes*---What do I do now?! The Diagnosis and Management of Periprosthetic Shoulder Infections, AAOS, San Diego, CA 2017; New Orleans, LA 2018; Las Vegas, NV 2019
- xv. Faculty, American Society of Shoulder and Elbow Therapists (ASSET) "Evidence-based rehabilitation and surgical options for: The disabled throwing shoulder, the unstable shoulder, massive rotator cuff tears," NCBPTE course, Durham, NC, 2017.
- xvi. Scientific Program Director, Phoenix Society, Biennial meeting, Avalon, NJ 2017
- xvii. Faculty, Tornier/Wright Fellows Course for Shoulder Arthroplasty, Las Vegas/Henderson, NV, 2013, 2014, 2016, 2017
- xviii. Faculty, DJO Fellows Course for shoulder Arthroplasty, Indianapolis, IN, 2018; Chicago, IL 2019
- xix. Faculty/Moderator, Chicago Sports Medicine Symposium World Series of Surgery, Chicago, IL, 2018, 2019
- xx. Faculty/Instructor, AAOS Fundamentals of Knee and Shoulder Arthroscopy for Orthopaedic Residents, Chicago, IL, 2019

III. Education Management/Leadership

- i. Dixon-Hughes-Goodman Annual Healthcare Symposium, Charleston, SC 2013
- ii. A Practical Approach to Competency-Based Education in Your Residency Training Program: From Concept to Implementation, Toronto, ON, 2013
- iii. Summit on Transformative Innovation in Health Care, Durham, NC 2013
- iv. Invited Panelist, Leaving the Duke Nest Forum, Durham, NC, 2015

SELECTED PRESENTATIONS (COMPLETE LIST AVAILABLE ON REQUEST)

iii. International Meetings

- 1. Gillespie R, **Garrigues GE**, Williams GR. *Reverse Total Shoulder Arthroplasty through a Deltopectoral versus a Superior Approach: A Comparison of Outcomes*, 2011.
 - i. Podium presentation and Abstract, ESSSE Lyon, France 2011
- 2. Nickel BT, Klement MR, Bala A, Penrose C, Zura R, **Garrigues GE**. Annual Meeting of Küntscher Society – Osteosynthese International 2015. Brussels, Belgium. 2015.

- i. Podium Presentation and Abstract, *Coexisting Glenohumeral Arthritis as a Risk Factor for Proximal Humerus Nonunion*
3. Nickel BT, Klement MR, Richard M, **Garrigues GE**. Annual Meeting of Küntscher Society – Osteosynthese International 2015. Brussels, Belgium. 2015.
 - i. Podium Presentation and Abstract, *Closing the Gap: A Novel Technique for Humeral Shaft Nonunions Using Cup-in-cone Reamers*
4. **Garrigues GE**. European shoulder and elbow society (SECEC) annual meeting. Berlin, Germany, 2017.
 - i. Podium Presentation, *The Altivate Anatomic Total Shoulder Arthroplasty: Design Rationale*.
5. **Garrigues GE**. Balgrist-Schulthess Combined Shoulder Symposium. Zurich, Switzerland, 2017.
 - i. Podium Presentation, *Management of the B2 Glenoid: Early Results with All-Polyethylene Augmented Components*
6. **Garrigues GE**. The Wrightington Upper Limb Conference. Wigan, UK, 2017.
 - i. Podium Presentation, *Management of Posterior Glenoid Erosion*
7. **Garrigues GE**. The Reading Shoulder Unit Conference. Reading, UK, 2017.
 - i. Podium Presentation, *Management of the B2 Glenoid*
8. **Garrigues GE**. Hospital Universitario Fundación Jiménez Díaz Shoulder and Elbow Conference. Madrid, Spain, 2017.
 - i. Podium Presentation, *Management of Posterior Glenoid Erosion*
 - ii. Podium Presentation, *The Effect of Obesity on Fatty Infiltration of the Rotator Cuff Musculature*
9. **Garrigues GE**. Humanitas Shoulder Conference. Milan, Italy, 2017.
 - i. Podium Presentation, *Management of the B2 Glenoid: Early Results with All-Polyethylene Augmented Components*
10. **Garrigues GE**. Säntis Shoulder Summit. St. Gallen, Switzerland, 2017.
 - i. Podium Presentation, *Management of the B2 Glenoid: Early Results with All-Polyethylene Augmented Components*
 - ii. Podium Presentation, *The Influence of Pitching Technique on Shoulder and Elbow Injury: A Risk Model*
11. Hall D, **Garrigues GE**, Blanchard K, Shewman E, Nicholson G, Pourzal R. Annual Meeting of the International Society for Technology in Arthroplasty (ISTA), Toronto, Canada, 2019.
 - a. Podium Presentation and Abstract, *Mixed Implant Debris Causes a Strong Macrophage Response in Anatomic and Reverse Total Shoulder Arthroplasties*

iv. National Scientific Meetings

1. **Garrigues GE**, Rubash HR, Shanbhag AS. *Gene-expression Clustering Using Self-Organizing Maps: Analysis of the Macrophage Response to Particulate Biomaterials*,
 - i. Podium Presentation, AAOS/ORS combined meeting, New Orleans, LA, 2003

- ii. Transactions of the ORS, Paper #280, 2003.
2. von Knoch F, Cho MR, **Garrigues GE**, Kowalsky M, Rubash HR, Shanbhag AS. *The Effects of Bisphosphonates (Alendronate and Zoledronate) on Bone Ingrowth In a Rabbit Model: A Radiographic and Morphometric Analysis*,
 - i. Transactions of the ORS, 28:1375, 2003.
3. Kuwahara M, **Garrigues GE**, Velyvis JH, Rubash HE, Shanbhag AS. *Gene Expression Profiling of Osteolytic Lesions Around Total Hip Replacements*
 - i. Orthopaedic Research Society National Meeting, San Diego, 2007.
4. Pedrotty D, Sabesan VJ, **Garrigues GE**, Aldridge JM III, Urbaniak JR. *Free Vascularized Fibular Grafting for Osteonecrosis of the Femoral Head following SCFE*
 - i. American Academy of Orthopaedic Surgeons National Meeting, Abstract (3911), San Diego, 2007.
5. Sabesan V, **Garrigues GE**, Urbaniak JR. *An Evidence Based Review of a Single Surgeon's Experience Over 15 Years with Endoscopic Carpal Tunnel*,
 - i. Podium presentation & Abstract (6054), American Society for Surgery of the Hand National Meeting, 2007.
6. **Garrigues GE**, Aldridge JM III, Lindenhovius A, Ruch DS, Ring D. *Coronoid Fixation in "Terrible Triad" Elbow Fracture-Dislocations*.
 - i. American Society for Surgery of the Hand National Meeting, Chicago, 2008.
7. **Garrigues GE**, Johnston PS, Pepe MD, Tucker BS, Ramsey ML, Austin L. *Hemiarthroplasty versus Reverse Total Shoulder for Proximal Humerus Fractures in the Elderly*, 2011.
 - i. Podium presentation, ASES closed meeting, Greenbrier, WV, 2011.
8. Gillespie R, **Garrigues GE**, Williams GR. *Reverse Total Shoulder Arthroplasty through a Deltopectoral versus a Superior Approach: A Comparison of Outcomes*, 2011.
 - i. Podium presentation and Abstract, ASES closed meeting, Greenbrier, West Virginia, 2011.
9. **Garrigues GE**, Zooker C, Cohen SB, Ciccotti MG, Frederick R, Williams GR, DeLuca P, Dodson CC. *Pectoralis Major Ruptures in Professional American Football Players*, 2011.
 - i. Abstract #32, ASES closed meeting, Greenbrier, West Virginia, 2011.
10. **Garrigues GE**, Gillespie RJ, Krautler MJ, Lazarus MD. *Repair of Pectoralis Major Ruptures*, 2011.
 - i. Abstract #31, ASES closed meeting, Greenbrier, West Virginia, 2011.
11. Gillespie R, **Garrigues GE**, Williams GR. *Reverse Total Shoulder Arthroplasty through a Deltopectoral versus a Superior Approach: A Comparison of Outcomes*, 2011.
 - i. Podium presentation and Abstract #425, AAOS meeting, San Francisco, 2012.
12. **Garrigues GE**, Johnston PS, Pepe MD, Tucker BS, Ramsey ML, Austin L. *Hemiarthroplasty versus Reverse Total Shoulder for Proximal Humerus Fractures in the Elderly*, 2011.
 - i. Podium presentation, ASES/AAOS biennial meeting, Boca Raton, FL, 2012.

13. **Garrigues GE.** American Academy of Orthopaedic Surgeons / Orthopaedic Research Society, Musculoskeletal Infection Symposium, Rosemont, IL, 2014.
 - i. Invited speaker, *Infections after Shoulder Surgery: Focus on P acnes*
14. Okike K, **Garrigues GE,** et al. American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2014.
 - i. Podium Presentation 472, *Do Surgeons Know the Cost of Orthopaedic Implants? A Multicenter Study of 503 Orthopaedic Surgeons*
15. Mook W, **Garrigues GE.** American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2014.
 - i. Presentation 620, *Propionibacterium Acnes in Shoulder Surgery: False Positive, Commensal Organism, or Pathogen?*
16. **Garrigues GE.** Phoenix Society Biennial Meeting, Park City, UT, 2015
 - i. Invited Lecture, *Arthroscopic Reduction and Internal Fixation of Glenoid Fractures*
17. Bala A, Penrose CT, Seyler TM, Mather RC III, Bolognesi MP, **Garrigues GE.** American Academy of Orthopaedic Surgeons national meeting, Orlando, FL, 2016.
 - i. Podium Presentation and Abstract #545, *Utilization and Cost of Reverse Shoulder Arthroplasty versus Hemiarthroplasty for Proximal Humerus Fractures*
18. Klement MR, Byrd WA, Bala A, Wellman SS, Bolognesi MP, **Garrigues GE.** Musculoskeletal Infection Society national meeting, Charlotte, NC, 2016.
 - i. Podium Presentation and Abstract, *Culture Duration in Periprosthetic Hip and Knee Infection: No Difference in Microbiology Profile.*
19. Sutter EG, Godin J, **Garrigues GE.** American Academy of Orthopaedic Surgeons national meeting, San Diego, CA, 2017.
 - i. Orthopaedic Video Theatre, *All-arthroscopic Superior Shoulder Capsule Reconstruction with Partial Rotator Cuff Repair.* (2934)
20. Zhang H, Heckelman LN, Spritzer CE, Owusu-Akyaw K, Martin J, Taylor D, Moorman CT III, **Garrigues GE,** DeFrate LE. Orthopaedic Research Society national meeting, San Diego, CA, 2017.
 - i. Podium Presentation and Abstract, *In Vivo Exercise-Induced Glenohumeral Cartilage Strains.* (0277)
21. Lampley AJ, Brubacher JW, Richard MJ, **Garrigues GE.** American Shoulder and Elbow Surgeons closed meeting, New Orleans, LA, 2017.
 - i. Podium Presentation and Abstract, *The Radiocapitellar Synovial Fold: A Lateral Landmark For Sizing Radial Head Arthroplasty.* (15)
22. Federer AE, Bajpai S, Mather RC, **Garrigues GE.** American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2018.
 - i. Podium Presentation and Abstract, *Cost-Effectiveness of Open Reduction and Internal Fixation versus Total Elbow Arthroplasty for Distal Humerus Fractures.* (262)

23. Sutter EG, Orenduff, Fox W, Meyers J, **Garrigues GE**. American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2018.
 - i. Podium Presentation and Abstract, *Predicting Injury through Quantitative Analysis of Professional Baseball Pitcher Mechanics*. (529)
24. Federer AE, Bajpai S, Mather RC, **Garrigues GE**. American Academy of Orthopaedic Surgeons national meeting, New Orleans, LA, 2018.
 - i. Podium Presentation and Abstract, *Cost-Effectiveness of Open Reduction and Internal Fixation versus Total Elbow Arthroplasty for Distal Humerus Fractures*. (262)
25. **Garrigues GE**. American Shoulder and Elbow Surgeons specialty day, New Orleans, LA, 2018.
 - i. Podium Presentation, *New Tests on the Horizon for Periprosthetic Shoulder Infection*.
26. **Garrigues GE**. Emily Berend Adult Reconstructive Symposium (EBARS), Durham, NC 2018.
 - i. Podium Presentation, *Management of Glenoid Bone Loss in TSA*
 - ii. Moderator, *Shoulder Panel Discussion*
27. Bullock G, Ledbetter L, **Garrigues GE**, Kennedy J. American Society of Shoulder and Elbow Therapists (ASSET), Chicago, IL 2018.
 - i. Podium Presentation, *A Systematic Review of Proposed Rehabilitation Strategies following Anatomic and Reverse Shoulder Arthroplasty*
28. **Garrigues GE**. American Shoulder and Elbow Surgeons (ASES) Open Symposium, Chicago, IL 2018.
 - i. Podium Presentation, *Propionibacterium acnes: How to Treat?*
29. Reiman PM, Walker MD, Peters S, Kilborn E, Thigpen CA, **Garrigues GE**. American Shoulder and Elbow Surgeons (ASES) Closed Meeting, Chicago, IL 2018.
 - i. Podium Presentation, *Risk Factors for Ulnar Collateral Ligament Injury in Professional and Amateur Baseball Players: A Systematic Review with Meta-Analysis*
30. Matson AP, Kunkel Z, Crespo VB, Chainani AL, Chainani ML, Finley S, Little D, **Garrigues GE**. Orthopaedic Research Society (ORS) Annual Meeting, Austin, TX 2019
 - i. Podium Presentation #0037, *The Histopathology of the Humeral Head in Glenohumeral Osteoarthritis and its Clinical Correlations*
31. Dekker TJ, Chen A, Kwon N, Adams SB, **Garrigues GE**, Toth AP. Orthopaedic Research Society (ORS) Annual Meeting, Austin, TX, 2019
 - i. Podium Presentation #0353, *The Histopathology of the Degenerative Proximal Biceps Tendon*
32. Helmkamp JK, Bullock GS, Rao AJ, Shanley E, Thigpen C, Nicholson GP, **Garrigues GE**., American Shoulder and Elbow Surgeons (ASES) Closed Meeting, Chicago, IL 2018.
 - i. Podium Presentation and Abstract, *The Relationship Between Humeral Torsion and Arm Injury in Baseball Players: A Systematic Review and Meta-Analysis*
33. Guerrero EM, Helmkamp BA, Bullock GS, Ledbetter L, Richard MJ, Nicholson GP, **Garrigues GE**. American Shoulder and Elbow Surgeons (ASES) Closed Meeting, New York, NY 2019.

- a. Podium Presentation (#46) and Abstract, *The Clinical Impact of Different Approaches to Osteocapsular Debridement for Primary Osteoarthritis of the Elbow: A Systematic Review*.

v. Instructional Courses, workshops, symposiums

1. Levin LS, **Garrigues GE**, LaRose C. Duke Undergraduate Course: *Anatomy of the Lower Extremity*, Durham, NC, 2008.
 - i. Faculty, Lab Instructor
2. **Garrigues GE**. AOA Postgraduate Course, White Sulphur Springs, WV, 2012.
 - i. Invited lecturer, *Total Elbow Arthroplasty*
 - ii. Panelist, *Shoulder and Elbow Panel*
3. **Garrigues GE**. AO/Synthes Principles of Fracture Management, Charlotte, NC, June 2013.
 - i. Presentation, *Preoperative Planning—A Team Approach*
 - ii. Moderator, *Internal Fixation of Forearm and Hand Fractures*
 - iii. Lab-Instructor
4. **Garrigues GE**. Tornier Shoulder Master's Course, Chicago, IL, September 2013.
 - i. Invited faculty, *Avoiding Superior Tilt in Reverse Total Shoulder Arthroplasty*
 - ii. Panelist, *Management of Glenoid Bone Loss*
5. McCann P, Burkhart S, Lazarus M, Krishnan S, Cain EL, **Garrigues GE**. American Academy of Orthopaedic Surgeons national meeting, Chicago, IL, 2013.
 - i. Instructor for *Instructional Course Lecture: Rotator Cuff Tears*
6. **Garrigues GE**. Duke Musculoskeletal Ultrasound Course, Durham, NC, 2013.
 - i. Faculty, Lab instructor
 - ii. Presentation, *Cadaveric Dissection of the Upper and Lower Limb*
7. **Garrigues GE**. Tornier Fellows Course for Shoulder Arthroplasty, Las Vegas, NV, April 2013.
 - i. Invited faculty and cadaver lab instructor
 - ii. Presentation, *Total Shoulder Arthroplasty versus Hemiarthroplasty: Results*
 - iii. Presentation, *Complications of Anatomic Shoulder Arthroplasty*
 - iv. Presentation, *Complications of Reverse Total Shoulder Arthroplasty*
 - v. Presentation, *Choosing a Career in Academic Medicine*
8. **Garrigues GE**. Tornier Arthroplasty Fellowship Course, Las Vegas, NV, November 2013.
 - i. Invited faculty and cadaver lab instructor
 - ii. Presentation, *Total Shoulder Arthroplasty versus Hemiarthroplasty: Results*
 - iii. Presentation, *Complications of Anatomic Shoulder Arthroplasty*
 - iv. Presentation, *Choosing a Career in Academic Medicine*
9. **Garrigues GE**. The Complicated Shoulder—Surgical and Rehabilitative Strategies for Successful Patient Outcomes, NCBPTE course, Durham, NC, 2014.
 - i. Founder and Organizer

- ii. Podium Presentation, *Glenohumeral arthritis: Conservative medical intervention and surgical management with total shoulder arthroplasty*
 - iii. Podium Presentation, *Massive Rotator Cuff Tear - surgical repair and reverse shoulder arthroplasty*
 - iv. Podium Presentation, *Proximal humeral fracture: non-operative management or open reduction internal fixation?*
 - v. Podium Presentation, *Adhesive Capsulitis: Non-operative management; arthroscopic lysis of adhesions with manipulation under anesthesia and post-operative management*
10. **Garrigues GE.** Cooperstown Shoulder and Elbow Symposium, Cooperstown, NY, 2015
- i. Invited Lecture, *Traumatic Elbow Instability*
 - ii. Invited Lecture, *Proximal Humerus Fractures: ORIF, Hemiarthroplasty or Reverse TSA*
 - iii. Invited Lecture, *Treatment of Distal Biceps Tendonopathy and Tears*
11. **Garrigues GE.** American Shoulder and Elbow Surgeons national meeting, Boston, MA 2016.
- i. Industry Luncheon Symposium Presentation, *What's new with the B2?*
12. **Garrigues GE.** AAOS Instructional Course Lecture 166, "I've got a culture positive for *P. acnes*--What do I do now?! The Diagnosis and Management of Periprosthetic Shoulder Infections, AAOS, San Diego, CA 2017
- i. Moderator and Organizer of ICL with John Sperling, Rick Matsen III, and Eric Ricchetti
 - ii. Podium Presentation "Management Strategies for Periprosthetic Shoulder Infections."
 - iii. Podium Presentation and Moderator "Case studies of Periprosthetic Shoulder Infections."
 - iv. Moderator of Panel "What to do with positive culture results?"
13. **Garrigues GE.** American Society of Shoulder and Elbow Therapists (ASSET) "Evidence-based rehabilitation and surgical options for: The disabled throwing shoulder, the unstable shoulder, massive rotator cuff tears," NCBPTE course, Durham, NC, 2017.
- i. Faculty and assistance with organizing national course for shoulder and elbow therapists
 - ii. Podium Presentation, *Remplissage for the Management of Engaging Hill Sachs Lesions*
 - iii. Podium Presentation, *Surgical Options for the Massive Rotator Cuff tear: Repair, Superior Capsular Reconstruction, or Reverse Total Shoulder Replacement.*
14. **Garrigues GE.** Phoenix Society, Biennial meeting, Avalon, NJ 2017
- i. Scientific Program Director for 2 day national meeting
 - ii. Podium Presentation, *Superior Capsular Reconstruction: Pearls and Pitfalls*
15. **Garrigues GE.** Duke Winter Baseball Meeting, Durham, NC 2018
- i. Faculty, *Predicting Injury through Quantitative Analysis of Professional Baseball Pitching Mechanics*
16. **Garrigues GE.** Current Solutions in Shoulder and Elbow Surgery, Tampa, FL 2018
- i. Faculty, Live Cadaveric Surgical Demonstration, *Stemless Shoulder Arthroplasty*
 - ii. Faculty, Live Cadaveric Surgical Demonstration, *Platform Reverse Total Shoulder Arthroplasty*

- iii. Faculty, Debate, *Subscapularis Management: LTO with Capsulectomy*
 - iv. Faculty, *Management of Posterior Glenoid Bone Loss*
 - v. Faculty, Moderator, *Complex Reverse Case Presentations*
 - vi. Faculty, Debate, *Arthroscopic Bankart is the Standard of Care for Anterior Shoulder Instability*
 - vii. Faculty, Podium, *Is There Value in Reverse Total Shoulder Arthroplasty for Fracture*
17. **Garrigues GE**, Edwards S. “Shoulder and Elbow VII—Acute Rotator Cuff and Biceps Tendon.”
- i. Moderator, AAOS 2018
18. **Garrigues GE**. AAOS Instructional Course Lecture 410, “I’ve got a culture positive for *P. acnes*—What do I do now?! The Diagnosis and Management of Periprosthetic Shoulder Infections, AAOS, New Orleans, LA 2018
- i. Moderator and Organizer of ICL with John Sperling, Jason Hsu, and Eric Ricchetti
 - ii. Podium Presentation “Management Strategies for Periprosthetic Shoulder Infections.”
 - iii. Podium Presentation and Moderator “Case studies of Periprosthetic Shoulder Infections.”
 - iv. Moderator of Panel “Periprosthetic Shoulder Infection Cases.”
19. **Garrigues GE**. DJO Arthroplasty Fellowship Course, Indianapolis, IN. April 2018
- v. Invited faculty and cadaver lab instructor
 - vi. Presentation, *Shoulder Periprosthetic Infection: Prevention, Diagnosis, and Management*
 - vii. Presentation, *Management of the Subscapularis in Anatomic Total Shoulder Arthroplasty*
 - viii. Presentation, *Complications of Reverse Total Shoulder Arthroplasty*
 - ix. Presentation, *Choosing a Career in Academic Medicine*
20. **Garrigues GE**. American Society of Shoulder and Elbow Therapists (ASSET) “Shoulder Challenges: Evaluation, Rehabilitation, and Surgical Solutions for Scapular Movement Disorders and Glenohumeral Osteoarthritis.” NCBPTE course, Durham, NC, 2017.
- i. Presentation, *Glenohumeral Osteoarthritis: The Problem and the Solutions*
21. **Garrigues GE**. Chicago Sports Medicine Symposium World Series of Surgery, Chicago, IL 2018
- i. Faculty, *Revision Instability Repair: What Went Wrong?*
 - ii. Moderator, *Shoulder Session II*
 - iii. Faculty, *Massive Cuff: Anatomy and Mobilization*
 - iv. Moderator, *Shoulder Surgical Technique Spotlight*
22. **Garrigues GE**. AAOS/ASES Anatomic and Reverse Total Shoulder Arthroplasty: State-of-the-Art, Chicago, IL 2018.
- i. Invited Podium Presentation, *Symposium: Managing the B2 Glenoid, Augmented Glenoid.*
 - ii. Invited Podium Presentation, *Reverse TSA for Failed Anatomic TSA*
 - iii. Moderator, *Surgical Demonstration—Primary Reverse TSA*
 - iv. Laboratory Instructor AAOS Orthopaedic Learning Center
23. **Garrigues GE**. Current Solutions in Shoulder and Elbow Surgery, Tampa, FL 2019
- i. Faculty, Live Cadaveric Surgical Demonstration, *Platform Reverse Total Shoulder Arthroplasty*
 - ii. Faculty, Podium, *Posterior Shoulder Instability: Tricks of the Trade*

- iii. Faculty, Panel, *Rapid Fire Cases: Instability*
 - iv. Faculty, Podium, *Clavicle Fractures: Not "One Size Fits All"*
 - v. Faculty, Panel/Moderator, *Rapid Fire Cases: Rotator Cuff*
24. **Garrigues GE.** AAOS Instructional Course Lecture 251, "I've got a culture positive for *P. acnes*--What do I do now?! The Diagnosis and Management of Periprosthetic Shoulder Infections," AAOS, Las Vegas, NV 2019
- i. Moderator and Organizer of ICL with John Sperling, Jason Hsu, and Eric Ricchetti
 - ii. Podium Presentation "Management Strategies for Periprosthetic Shoulder Infections."
 - iii. Podium Presentation and Moderator "Case studies of Periprosthetic Shoulder Infections."
 - iv. Moderator of Panel "Periprosthetic Shoulder Infection Cases."
25. **Garrigues GE.** AAOS Instructional Course Lecture 209, "Arthroscopic Rotator Cuff Repair," AAOS, Las Vegas, NV 2019
- i. ICL with Michael Freehill, Uma Srikumaran, and Albert Lin
 - ii. Podium Presentation "Know when to hold 'em, know when to fold 'em: Predictors of Success in Arthroscopic Rotator Cuff Repair."
26. **Garrigues GE.** ASES Specialty Day, Las Vegas, NV 2019
- i. Moderator, "Shoulder Paper Session."
27. **Garrigues GE.** AANA/Society of Military Orthopaedic Surgeons (SOMOS) Advanced Arthroscopy Course, Rosemont, IL 2019
- i. Faculty/Podium Presentation, *The Remplissage Procedure for Anterior Shoulder Instability*
28. **Garrigues GE.** Chicago Sports Medicine Symposium World Series of Surgery, Chicago, IL 2019
- i. Moderator, *Shoulder Instability*
 - ii. Podium, *Arthroscopic Latarjet: My Experience*
 - iii. Panel, *Shoulder Instability Case Panel*
 - iv. Podium, *SCR: Fact and Fiction*
 - v. Moderator, *Live Surgery Broadcast*
29. **Garrigues GE.** AAOS Fundamentals of Knee and Shoulder Arthroscopy for Orthopaedic Residents, Chicago, IL 2019
- a. Presenter, *Labral Repair: Indications and Anatomy*
 - b. Presenter, *Labral Repair Surgical Demonstration*
 - c. Instructor, *Cadaveric Laboratory Sessions*
30. **Garrigues GE.** International Congress for Joint Reconstruction (ICJR) Shoulder Course, Las Vegas, NV 2019
- a. Presenter, *Technical Corner: Arthroscopic Latarjet*
 - b. Panelist, *Case Presentations: Instability*
 - c. Panelist, *Challenging Arthroplasty Cases*
 - d. Presenter, *Repair the Subscapularis in Reverse!*
 - e. Presenter, *Challenging Shoulder Cases*

1. Butler R, **Garrigues GE**, Queen R. *Differences on the Upper Quarter Y Balance Test Between High School and College Baseball Players*
 - i. Poster presentation and Abstract (3905), American College of Sports Medicine, San Francisco, 2012.
2. Hubbard E, **Garrigues GE**. *The Unhappy Triad of Subscapularis Insufficiency*, 2012.
 - i. Poster presentation, SOA, White Sulphur Springs, West Virginia, 2012.
3. Bala A, Penrose CT, Seyler TM, Randell TR, Mather RC, Bolognesi MP, **Garrigues GE**. Southern Orthopaedic Association, Asheville, NC, 2015.
 - i. Poster presentation and Abstract, *Risk Factors For Perioperative Blood Transfusion In Total Elbow Arthroplasty*.
4. Abiram Bala, B.A.; Colin T. Penrose, B.A. B.S.; Thorsten M. Seyler M.D. Ph.D; Richard C. Mather, M.D.; Samuel S. Wellman, M.D.; Michael P. Bolognesi, M.D.; **Garrigues GE**. Eastern Orthopaedic Association, Maui, HI, 2015.
 - i. Poster presentation and Abstract, *Perioperative Transfusion Associated with Periprosthetic Infection in Total Elbow Arthroplasty*
5. Chainani A, **Garrigues GE**, Little D. Medical College of Georgia, Medical Scholars Research Day, Augusta, GA, 2015
 - i. Poster Presentation and Abstract, *The Role of the Anterior Shoulder Capsule in Primary Glenohumeral Osteoarthritis*
6. Bala A, Penrose CT, Seyler TM, Randell TR, Mather RC, Bolognesi MP, **Garrigues GE**. Southern Orthopaedic Association, Asheville, NC, 2015.
 - i. Poster presentation and Abstract, *Risk Factors For Perioperative Blood Transfusion In Total Shoulder Arthroplasty*.
7. Bean C, Roberson D, Duke C, **Garrigues GE**. 25th Annual East Carolina Collaborative Nursing Research Day, Greenville, NC, 2016.
 - i. Poster Presentation and Abstract, *Interprofessional collaborative project for the diagnosis, assessment, and treatment of contracted (frozen) shoulder: A synthesis of the literature*.
8. Brubacher J, Lampley A, Blizzard D, **Garrigues GE**, Richard MJ. *The Radiohumeral Synovial Fold: A Lateral Anatomic Landmark for Sizing Radial Head Arthroplasty*.
 - i. Poster presentation and Abstract (23337), American Association for Hand Surgery National Meeting, Waikoloa, HI, 2017.
9. Morwood MP, Kankaria RA, Johnston PS, **Garrigues GE**. *The Effect of Proximal Ingrowth Coating on Clinical and Radiographic Results of a Cementless Short-Stem Shoulder Prosthesis at Minimum Two-Year Follow Up*.
 - i. Poster Presentation and Abstract, American Academy of Orthopaedic Surgeons National Meeting, San Diego, 2017.

10. Matson AP, Kim C, Bajpai S, Green CL, Hash TW, **Garrigues GE**. *Infiltration of the Rotator Cuff in Patients without Rotator Cuff Tear*.
 - i. Poster Presentation (23), American Shoulder and Elbow Surgeons Closed Meeting, New Orleans, LA, 2017.
11. Zhang H, Heckelman L, Spritzer CE, Owusu-Akayaw K, Martin JT, Taylor DC, Moorman CT III, **Garrigues GE**, DeFrate LE. The American Orthopaedic Society for Sports Medicine (AOSSM), Toronto, Canada, 2017
 - i. Poster and Abstract 909, *Cartilage Strains in the Glenohumeral Articulation Immediately After Pushups*.
12. Matson AP, Kim C, Bajpai S, Green CL, Hash TW, **Garrigues GE**. *Obesity Predicts Fatty Infiltration of the Rotator Cuff Musculature in Patients without Rotator Cuff Tears*.
 - i. Poster Presentation (0818), American Academy of Orthopaedic Surgeons National Meeting, New Orleans, 2018.
13. Churchill R, Nagda SH, Abboud JA, **Garrigues GE**, Jamgochian GC, Savoia DM, Bauer TM. *Value of Shoulder Replacement and Rotator Cuff Surgery: The Patients' Perspective*.
 - i. Poster Presentation and Abstract (P0273), American Academy of Orthopaedic Surgeons National Meeting, New Orleans, 2018.
14. Politzer CS, Bala A, Wall KC, Seyler TM, Bolognesi MP, **Garrigues GE**. *Utilization and Cost of Reverse Shoulder Arthroplasty versus Hemiarthroplasty*.
 - i. Poster Presentation and Abstract (0804), American Academy of Orthopaedic Surgeons National Meeting, New Orleans, LA 2018.
15. Guerrero EM, Grier AJ, Morwood MP, Kankaria RA, Johnston PS, **Garrigues GE**. *Total Shoulder Arthroplasty with Mini-stem Humeral Components and Lesser Tuberosity Osteotomy*.
 - i. Poster Presentation and Abstract, Southern Orthopaedic Association Annual Meeting, Palm Beach, FL 2018.
16. Guerrero EM, Grier AJ, Morwood MP, Kankaria RA, Johnston PS, **Garrigues GE**. *Using Mini-stem Humeral Components and a Lesser Tuberosity Osteotomy*.
 - i. Poster Presentation and Abstract, North Carolina Orthopaedic Association Annual Meeting, Kiawah Island, SC 2018.
17. Wall KC, Politzer CS, **Garrigues GE**. *Obesity is Associated with Increased Prevalence of Glenohumeral Osteoarthritis and Arthroplasty*
 - i. Poster Presentation and Abstract, Duke University School of Medicine AOA Day, Durham, NC 2018.
 - ii. Poster Presentation and Abstract, American Shoulder and Elbow Surgeons National Meeting, Chicago, IL, 2018.
 - iii. Poster Presentation and Abstract (P0788), American Academy of Orthopaedic Surgeons National Meeting, Las Vegas, NV, 2019.
18. Chainani A, Matson A, Chainani ML, Colon AJM, Toth AP, **Garrigues GE**, Little D. *Synovitis, Fibrosis, and Transient Receptor Potential Channel Upregulation in the Anterior Shoulder Joint Capsule of Total Shoulder Arthroplasty Patients*

- i. Poster Presentation and Abstract #1102, Orthopaedic Research Society, Austin, TX, 2019.
19. Wahl E, Coughlin R, Mickelson D, **Garrigues GE**. *The Feng Shui of Surgeon, Arthroscopic, and Instrument: A Simulator Based Study*
 - i. eposter and Abstract #94, American Orthopaedic Association (AOA) National Meeting, San Diego, CA, 2019.
20. Dekker T, Chen F, Kwon N, Eward W, Adams S, **Garrigues GE**, Toth A. *The Histopathology of the Degenerative Proximal Biceps Tendon*
 - i. Poster Presentation and Abstract (P0392), American Academy of Orthopaedic Surgeons National Meeting, Las Vegas, NV, 2019.
21. Cvetanovich GL, Blanchard KN, Naylor AJ, **Garrigues GE**, Nicholson GP. *Functional Outcomes for Surgeon-Directed Home Therapy: A Retrospective Cohort Analysis*.
 - i. Poster Presentation and Abstract, International Congress of Shoulder and Elbow Surgery (ICSES). Buenos Aires, Argentina, 2019.
22. Shanmugaraj A, Sarraj M, Coughlin RP, Guerrero EM, Nicholson GP, Ekhtiari S, Ayeni OR, **Garrigues GE**. *Surgical Management of Glenohumeral Osteoarthritis with Glenoid Erosion and Static Posterior Subluxation (Walch B2): A Systematic Review of Surgical Techniques, Outcomes, and Survivorship Rates*.
 - i. Poster Presentation and Abstract (#795), International Congress of Shoulder and Elbow Surgery (ICSES). Buenos Aires, Argentina, 2019.
23. Guerrero EM, Bullock GS, Joshua KH, Madrid, Ledbetter LS, Richard MJ, Nicholson G, **Garrigues, GE**. *The Clinical Impact of Different Approaches to Osteocapsular Debridement for Primary Osteoarthritis of the Elbow: A Systematic Review*.
 - i. Poster Presentation and Abstract (#807), International Congress of Shoulder and Elbow Surgery (ICSES). Buenos Aires, Argentina, 2019.
24. Matson AP, Kunkel Z, Bernal Crespo VA, Chainani A, Chainani M, Finley S, Nicholson GP, Little, D, **Garrigues GE**. *The Histopathology of the Humeral Head in Glenohumeral Osteoarthritis and its Clinical Correlations*.
 - i. Poster Presentation and Abstract, ASES Meeting, New York, NY, October, 2019.
25. **Garrigues GE**, Hall DJ, Blanchard KN, Naylor AJ, Shewman E, Pourzal R, Nicholson GP. *Periprosthetic Tissue Response to Implant Debris in Anatomic and Reverse Total Shoulder Arthroplasties*.
 - i. Poster Presentation and Abstract, ASES Meeting, New York, NY, October, 2019.

Accepted

26. Duchman KR, Lemmex DB, Patel SH, Ledbetter L, Nicholson GP, **Garrigues GE**, Riboh JC. *The Effect of Non-Steroidal Anti-Inflammatory Drugs on Tendon-to-Bone Healing: A Systematic Review with Subgroup Meta-Analysis*.
 - i. Poster Presentation and Abstract (808), AAOS National Meeting, Orlando, FL 2020.

27. Chainani A, Matson A, Chainani M, Toth AP, Nicholson GP, Little D, **Garrigues GE**. *Synovitis, Fibrosis, and Transient Receptor Potential Channel Upregulation in the Anterior Shoulder Joint Capsule of Total Shoulder Arthroplasty Patients*.
 - i. Poster Presentation and Abstract (285), AAOS National Meeting, Orlando, FL 2020.
28. Matson AP, Kunkel Z, Bernal Crespo VA, Chainani A, Chainani M, Finley S, Nicholson GP, Little D, **Garrigues GE**. *The Histopathology of the Humeral Head in Glenohumeral Osteoarthritis and its Clinical Correlations*.
 - i. Poster Presentation and Abstract (285), AAOS National Meeting, Orlando, FL 2020.
29. Hall DJ, **Garrigues GE**, Blanchard KN, Naylor A?J, Shewman E, Nicholson GP, Pourzal R. *Local Tissue Reactions to Mixed Implant Debris from Anatomic and Reverse Total Shoulder Arthroplasty*
 - i. Poster Presentation and Abstract (2112), Orthopaedic Research Society (ORS) Annual Meeting, Phoenix, 2020.

vii. Regional presentations

31. Pedrotty D, Sabesan VJ, **Garrigues GE**, Aldridge JM III, Urbaniak JR. *Free Vascularized Fibular Grafting for Osteonecrosis of the Femoral Head following SCFE*
 - vi. North Carolina Orthopaedic Association Meeting, Podium presentation, 2008.
32. **Garrigues GE**, Aldridge JM III, Friend J, Urbaniak J. *Free Vascularized Fibular Grafting for Osteonecrosis of the Femoral Head Following Hip Dislocation*,
 - vii. Podium Presentation and Abstract, Eastern Orthopaedic Association International Meeting, Bahamas, 2009.
33. **Garrigues GE**, Marchant M Jr, Lewis G, Gupta A, Richard M, Basamania J. *The Cortical Rign Sign: A Reliable Radiographic Landmark for Percutaneous Coracoclavicular Fixation*,
 - viii. Award Winner, Podium presentation and Abstract, Eastern Orthopaedic Association International Meeting, Bahamas, 2009.
34. **Garrigues GE**, Getz C. Thomas Jefferson School of Medicine, Philadelphia, PA, 2010.
 - i. Presentation, *Orthopaedic Emergency Evaluation*
35. **Garrigues GE**. Duke Medical School Surgery Rotation, Durham, NC, 2010.
 - v. Presentation, *Extremity Anatomy*
36. **Garrigues GE**. Duke/Zimmer Shoulder and Elbow Cadaver Workshop
 - i. Founding/Sole Faculty
 - ii. Recurring, 2011-2016
37. **Garrigues GE**. Tornier Course for Arthroplasty and Rotator Cuff Repair, Bethlehem, PA, 2012.
 - i. Faculty, Lab instructor
 - ii. Presentation, *Difficult Shoulder Dilemmas*
38. **Garrigues GE**. Duke Hand Course, Durham, NC, 2012.

- i. Faculty, Lab instructor
 - ii. Panelist, *Elbow Trauma*
39. **Garrigues GE.** Southern Orthopaedic Association annual meeting, White Sulphur Springs, WV, 2012.
- i. Moderator, *Controversies in Sports Medicine*
 - ii. Invited lecturer, Panelist, *Disasters in Upper Extremity Symposium*
40. **Garrigues GE.** Eastern Orthopaedic Association, Miami, FL, November 2013.
- i. Presentation, *Hot Topics in Shoulder and Elbow Surgery*
 - ii. Panelist, Moderator, *Upper Extremity Symposium*
41. **Garrigues GE.** Duke Orthopaedic Faculty Conference, Durham, NC, 2012, 2013.
- i. Presentation, *Rotator Cuff Tears and Cuff Tear Arthropathy*
 - ii. Presentation, *Clavicle Fractures*
42. **Garrigues GE.** Piedmont Orthopaedic Society, Sea Island, GA, May 2013.
- i. Presentation, *Proximal Humerus Fractures: Know Your Options*
 - i. Kelly Award Winner
 - ii. Panelist, *Seminar II: Trauma*
 - iii. Presentation, *The Coracoid Cortical Ring Sign*
 - i. Piedmont Grant Winner
43. **Garrigues GE.** Urgent Care Monthly Meeting, Durham, NC, August 2013.
- i. Presentation, *Clavicle Fractures—Fact and Fiction*
44. **Garrigues GE.** AORN Tarheel Chapter Meeting, Durham, NC, September 2013.
- i. Presentation, *Clavicle Fractures*
45. **Garrigues GE.** Duke Orthopaedic Surgery Core Curriculum, September 2013.
- i. Lab Instructor, *Shoulder and Elbow Anatomy*
46. Mook W, **Garrigues GE.** Oscar Miller Day, Charlotte, NC, October 2013.
- i. Award Winner, Podium Presentation. *Propionibacterium acnes in Shoulder Surgery: False Positive, Commensal Organism, or Pathogen?*
 - ii. Basil M. Boyd, MD Memorial Resident Outstanding Paper Award.
47. **Garrigues GE.** Southern Orthopaedic Association annual meeting, Avon, CO, 2014.
- ii. Invited speaker, *Proximal Humerus Fractures: Know Your Options*
48. **Garrigues GE.** Orthopaedic Symposium, Wake AHEC, Raleigh, NC, 2014.
- iii. Invited speaker, *Staying Active with Shoulder Pain*
49. **Garrigues GE.** AORN Tarheel Chapter Meeting, Durham, NC, April 2014.
- iv. Presentation, *Rotator Cuff Tears*
50. **Garrigues GE.** Wake County Urgent Care Providers Meeting, Raleigh, NC, February 2014.
- v. Presentation, *Clavicle Fractures—Fact and Fiction*

51. **Garrigues GE.** Duke Sports Medicine Journal Club, Durham, NC, January 2014.
 - vi. Moderator, *Shoulder Arthroplasty*
52. **Garrigues GE.** Shoulder Reconstruction and Imaging Conference, Durham, NC, 2014.
 - i. Founder and Organizer
 - ii. May 2014 (Basic imaging), Jun 2014 (Proximal humerus fractures), Aug 2014 (What's new in shoulder and elbow surgery), Sept 2014 (Selected cases)
53. Tao M, **Garrigues GE**, Toth AP. *Post-traumatic Osteonecrosis of the Humeral Head*
 - vii. Podium presentation, Piedmont Association, Crete, Greece, 2014.
54. Tao M, **Garrigues GE**, Toth AP. Eastern Orthopaedic Association, Amelia Island, FL, 2014.
 - i. Podium presentation and Abstract, *Pediatric Shoulder Dislocation Resulting in Rotator Cuff Tear and Osteonecrosis*
55. Abiram Bala, B.A., Colin T. Penrose, B.A. B.S., Thorsten M. Seyler, M.D. Ph.D, Richard C. Mather, M.D. M.B.A., Samuel S. Wellman, M.D., Michael P. Bolognesi, M.D., **Garrigues GE.** Southern Orthopaedic Association, Asheville, NC, 2015.
 - i. Podium presentation and Abstract, *Perioperative Transfusion Predicts Early Prosthetic-related Complications In Total Shoulder Arthroplasty.*
56. Bala A, Penrose CT, Visgauss JD, Seyler TM, Randell TR, Bolognesi MP, **Garrigues GE.** Eastern Orthopaedic Association, Maui, HI, 2015.
 - i. Podium presentation and Abstract, *Total Shoulder Arthroplasty in HIV Patients: Complications, Comorbidities, and Trends.*
57. Abiram Bala, B.A.; Colin T. Penrose, B.A. B.S.; Thorsten M. Seyler M.D. Ph.D; Richard C. Mather, M.D.; Samuel S. Wellman, M.D.; Michael P. Bolognesi, M.D.; **Garrigues GE.** Southern Orthopaedic Association, Asheville, NC, 2015.
 - i. Podium presentation and Abstract, *Allogeneic Blood Transfusion Predicts Infectious Complications In Total Shoulder Arthroplasty.*
58. Abiram Bala, B.A.; Colin T. Penrose, B.A. B.S.; Thorsten M. Seyler M.D. Ph.D; Richard C. Mather, M.D.; Samuel S. Wellman, M.D.; Michael P. Bolognesi, M.D.; **Garrigues GE.** Southern Orthopaedic Association, Asheville, NC, 2015.
 - i. Podium presentation and Abstract, *Perioperative Transfusion Predicts Early Periprosthetic Infection In Total Elbow Arthroplasty.*
59. **Garrigues GE.** Piedmont Orthopaedic Society, Sea Island, GA, 2015
 - i. Podium presentation, *Management of Glenoid Bone Loss in Anatomic Arthroplasty.*
60. Nickel BT, Klement MR, Richard M, **Garrigues GE.** North Carolina Society for Surgery of the Hand. Kiawah Island, SC. 2015
 - i. Podium Presentation and Abstract, *Closing the gap: a novel technique for humeral shaft nonunions using cup in cone reamers.*
 - ii. Resident Award for Outstanding Paper

61. Bala A, Penrose CT, Seyler T, Bolognesi M, Richard M, **Garrigues GE**. North Carolina Orthopaedic Society Annual Meeting. Kiawah Island, SC. 2015.
 - i. Podium Presentation and Abstract, *Prosthetic-Related Complications after Perioperative Transfusion in Total Shoulder Arthroplasty*
62. Nickel BT, Klement MR, Richard M, **Garrigues GE**. North Carolina Orthopaedic Society Annual Meeting. Kiawah Island, SC. 2015.
 - i. Podium Presentation and Abstract, *Humeral Shaft Nonunion: A New Surgical Technique Using Cup and Cone Reamers*.
63. **Garrigues GE**. Duke Nursing Grand Rounds, Durham, NC, 2015
 - i. Invited Lecture, *Proximal Humerus Fractures*
64. **Garrigues GE**. Duke Orthopaedic Surgery Interest Group, Durham, NC, 2015.
 - viii. Invited Lecture, *A Career in Orthopaedic Surgery*
65. Byrd WA, Bala A, Klement MR, Richardson A, Wellman SS, Bolognesi MP, **Garrigues GE**. Southern Orthopaedic Association Annual Meeting, Naples, FL, 2016.
 - i. Podium Presentation and Abstract, *Culture Duration in Periprosthetic Hip and Knee Infection: No Difference in Microbiology Profile*.
66. Sutter EG, Orenduff J, Fox W, Meyers J, **Garrigues GE**. Eastern Orthopaedic Association national meeting, New Orleans, LA, 2016.
 - i. Podium Presentation, *Predicting Injury Through Quantitative Analysis of Professional Baseball Pitcher Mechanics*.
67. **Garrigues GE**. Eastern Orthopaedic Association national meeting, New Orleans, LA, 2016.
 - i. Invited Podium Symposium Presentation, *Management of Posterior Glenoid Erosion in Anatomic Total Shoulder Arthroplasty*.
68. **Garrigues GE**. Vanderbilt Sports Medicine and Shoulder Surgery Conference, August 2017
 - ix. Presentation, *Management of the B2 Glenoid in Shoulder Arthroplasty*
69. **Garrigues GE**. Duke Sports Medicine Conference, Durham, NC.
 - i. Presentation, *Clavicle Fractures*, 2011-present
 - ii. Presentation, *Shoulder Arthroplasty: Cuff-tear Arthropathy*, 2011-present
 - iii. Presentation, *Shoulder Arthroplasty: Osteoarthritis*, 2011-present
 - iv. Presentation, *AC/SC Injuries*, 2011-present
70. **Garrigues GE**. Duke CORE orthopedic curriculum lectures and labs
 - vi. CORE skills lab, "The Deltopectoral Approach," December 2016
 - vii. Specialty CORE Lecture, "Proximal Humerus Fractures," November 2016
 - viii. CORE Case Rounds, "Proximal Humerus Fracture Cases," November 2016
 - ix. CORE Skills Lab, "Elbow dissection, PLRI, and MCL reconstruction," May 2017
 - x. Specialty CORE Lecture, "Glenohumeral Arthritis," May 2017
 - xi. CORE Skills Lab, "Shoulder approaches: Deltopectoral, Judet, and Deltoid Split,"

May 2017

- xii. Intern skills session, “Principles of Arthroscopic Knot Tying,” July 2017
- 71. Belay E, Wittstein J, **Garrigues GE**, Lassiter T, Scribani M, Goldner R, Bean C. North Carolina Orthopaedic Association Annual Meeting, Kiawah Island, SC, 2018.
 - xiii. Podium Presentation and Abstract, *Biceps Tenotomy versus Tenodesis: A Prospective, Randomized Surgical Trial in a Veteran Population*
 - xiv. Resident Paper award—Best Resident Paper, NCOA
- 72. Grier AJ, Guerrero EM, Morwood MP, Kankaria RA, Johnston PS, **Garrigues GE**. North Carolina Orthopaedic Association Annual Meeting, Kiawah Island, SC, 2018.
 - xv. Podium Presentation and Abstract, *Total Shoulder Arthroplasty with Mini-stem Humeral Components and Lesser Tuberosity Osteotomy.*
 - xvi. Resident Paper award—Shoulder and Elbow Section
- 73. **Garrigues GE**. Pennsylvania Orthopaedic Society Annual Meeting, Hershey, PA, 2018.
 - xvii. Guest Speaker, *Proximal Humerus Fractures: Are we fixing too many?*
 - xviii. Guest Speaker, *Evaluation and Management of Periprosthetic Shoulder Infection*

NATIONAL COMMITTEES AND LEADERSHIP ROLES

International Consensus Meeting on Periprosthetic Joint Infection/Musculoskeletal Infection Society (MSIS)/American Shoulder and Elbow Surgeons (ASES) Periprosthetic Shoulder Infection Task-force, Co-chair

2017-present. Coordinated an international group of over 100 members from 10 countries to complete 77 separate systematic reviews. This process culminated with a Delphi meeting in Philadelphia where a landmark diagnostic criteria for shoulder PJI was developed and reached consensus.

<https://icmphilly.com/document/icm-2018-shoulder-document/>

<https://icmphilly.com/document/icm-2018-elbow-document/>

ASES Technology Task Force

Co-chair/member 2018-present

Chair 2019-present

American Academy of Orthopaedic Surgeons (AAOS) Shoulder and Elbow Registry Steering Committee, 2018-present

ASES Multicenter Research Task-force Leader, 2017-present

ASES Education Committee, 2017-19, reappointed 2019-2022

AAOS Shoulder & Elbow Program Committee, 2017-2020

AOSSM Program Directors Meeting, New Orleans, LA 2014

AANA Learning Center Committee, 2018-present

AAOS Shoulder and Elbow Registry Steering Committee 2018-present

AAOS/ASES Liaison Committee, 2019-present

PARTICIPATION IN ACADEMIC AND ADMINISTRATIVE ACTIVITIES OF THE UNIVERSITY AND MEDICAL CENTER

i. Administrative and Leadership positions

- i. Deputy Director, Duke Sports Medicine and Shoulder Surgery Fellowship, 2012-2013
- ii. Co-Chair, Clinical Competency Com, Duke Sports Medicine and Shoulder Surgery Fellowship, 2013-2014
- iii. Co-Director, Duke Sports Medicine and Shoulder Surgery Fellowship, 2013-2014
- iv. Co-Chair, Program Evaluation Com, Duke Sports Medicine and Shoulder Surgery Fellowship, 2014-2014
- v. Co-Director, Upper Extremity Trauma, Duke University Medical Center, 2011-2018
- vi. Section Head, Shoulder Reconstruction, Duke University Medical Center, 2017-2018

ii. Committees

- i. Member, Duke Strategic Planning Steering Committee, 2013
- ii. Interim Chair, Education Strategy Committee, Duke Orthopaedic Surgery, 2013
- iii. Member, Duke Education Vice-chair Search Committee, 2014
- iv. Member, Duke Total Joint Arthroplasty Search Committee, 2016
- v. Member, Operating Room Efficiency Committee, 2011-2012, 2014
- vi. Member, Department of Orthopaedics Residency Education Committee, 2012-2018
- vii. Member, Duke Sports Medicine Fellowship Clinical Competency Committee, 2013-2018
- viii. Member, Department of Orthopaedics Residency Clinical Competency Committee, 2015-2018
- ix. Member, Orthopaedic Co-management Operations Committee, 2015-2018
- x. Member, Orthopaedic Co-management Quality Committee, 2015-2018
- xi. Invited Participant, Duke Department of Orthopaedics Diversity and Inclusion Committee, 2016-2018
- xii. Member, K-lab Faculty Search Committee, 2016-2018
- xiii. Champion, Ergonomics, Duke Department of Orthopaedic Surgery, 2016-2018
- xiv. Member, Duke Sports Medicine Research Committee, 2016-2018