

Mark A. Frankle, M.D.

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Florida Orthopaedic Institute
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Educational Background

University

Grinnell University College
Grinnell, IA
1977-1981

Medical School

Rush Medical College
Chicago, IL
1981-1985

Internship & Residency

University of South Florida
Tampa, FL
1985-1990

Fellowships

Rush Medical College
Chicago, IL
Orthopaedic Pathology & Research
1982-1983

A/O-ASIF

Davos, Switzerland
Laboratory for Experimental Surgery
Research
1990-1991

Mayo Clinic

Rochester, MN
Shoulder & Adult Reconstruction
Elbow & Adult Reconstruction
1991-1992

Academic, Hospital and Business Appointments

- Florida Orthopaedic Institute, Chief of Shoulder and Elbow Surgery 1992-Present
- Tampa General Hospital, 1992-Present
- Florida Hospital, 1992-Present
- Florida Orthopaedic Institute Surgery Center, 2002-Present
- University of South Florida, Affiliate Assistant Professor, 2012-2015
- University of South Florida Chemical and Biomedical Engineering Department, Courtesy Professor, 2008-2009
- Florida Hospital, Chairman of Department of Orthopaedic Surgery, 1998-2003
- Mayo School Of Medicine, Department of Orthopaedic Surgery Instructor, 1991-1992

Committee Appointments

- Cost Effectiveness Committee, American Shoulder and Elbow Surgeons, 2014-present
- Shoulder and Elbow Program Subcommittee, American Academy of Orthopaedic Surgeons, 2010-2014
- 2014 Open Meeting Program Committee, American Shoulder and Elbow Surgeons, 2013
- Ad Hoc Committee (Task Force) on Value-Driven Shoulder Care, American Shoulder and Elbow Surgeons, 2013-present
- Appropriate Use Criteria Committee Writing Panel Member for Rotator Cuff Repairs, American Academy of Orthopaedic Surgeons, 2012-present
- Executive Committee Member for the Florida Medical Association PAC, 2010-present
- Research Committee American Shoulder and Elbow Surgeons, 2007-present
- Sub-Committee Member for Upper Extremity Evaluation, American Academy of Orthopaedic Surgeons, 2007
- Sub-Committee Member for the Closed Meeting of the American Shoulder and Elbow Surgeons 2007
- Sub-Committee Member for Shoulder and Elbow Evaluation American Academy of Orthopaedic Surgeons 2002-2005
- Sub-Committee Member for Electronic Media Education American Shoulder and Elbow Society 2001-2005
- Sub-Committee Member for CPT Coding Committee American Academy of Orthopaedic Surgeons 2004
- Sub-Committee Member for Publication Committee American Shoulder and Elbow Surgeons 2001-2003
- Committee Member for the Closed Meeting of the American Shoulder and Elbow Society 2000-2001
- Committee Member for the Open Meeting of the American Shoulder and Elbow Society 2000-2001

Awards and Certifications

- American Board of Orthopaedic Surgery, 1994
- Recertified, 2005
- Recertified, 2015
- Examiner, American Board of Orthopaedic Surgery, 2011

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Professional Memberships

- Australia Society of Shoulder and Elbow Surgeons, 2002
- American Shoulder and Elbow Surgeons, 1999
- Fellow American College of Surgeons, 1998
- American Academy of Orthopaedic Surgeons, 1997
- American College of Surgeons, 1997
- American Medical Association, 1994
- Hillsborough County Medical Association, 1993
- Florida Orthopaedic Society, 1992
- Mayo Alumni Foundation, 1992

Course Director

- Current Solutions in Shoulder and Elbow Surgery Tampa, FL • *The purpose of this course is to provide orthopaedists with a comprehensive update on the surgical treatment of shoulder and elbow problems including arthroscopy, arthroplasty, and fracture management*, 1994-Present
- Annual Total Joint Replacement and Rehabilitation Seminar • *Total Shoulder Arthroplasty Indications, Diagnosis, and Complex Problems Including Revision, Dislocations, Infections, and relation to Physical Therapy* • *Total Elbow Arthroplasty Indications, Diagnosis, Surgical Approach and Procedure*, 1995-2005
- Spectrum of Orthopaedics Vail, CO • *Co-Chairman of this course to discuss the surgical management of patients who have shoulder, knee or hip reconstruction or fracture repair in terms of surgical technique and device selection*, 2001

Course Faculty

- Nice Shoulder Course Nice, France, 2006-Present
- San Diego Shoulder Course San Diego, CA, 2002-Present
- Congress of the European Society for Surgery of the Shoulder & the Elbow, 2000-present
- International Congress of Shoulder and Elbow Surgeons Nagoya, Japan, 2001, 2013
- Paris International Shoulder Course Paris, France, 2013
- AAOS/ASES Shoulder Arthroplasty Course Rosemont, IL, 2012
- International Congress for Joint Reconstruction Las Vegas, NV, 2012
- Ohio Shoulder & Elbow Society Course, 2012
- Orthopaedic Congress of North Germany Hamburg, Germany, 2010
- Orthopaedic Education Summit Park City, Utah, 2008
- 37th Annual Orthopaedic Trauma and Seminar Minneapolis, MN, 2007
- AAOS "Boomeritis: Musculoskeletal Care of the Mature Athlete" Hilton Head, SC, 2007
- Transforming Orthopaedics Vail, CO, 2006
- The Philadelphia Orthopaedic Society Philadelphia, PA, 2001
- AAOS Summer Institute San Diego, CA, 2001
- Spectrum of Orthopaedics, Trauma, and Spine Hilton Head, SC, 2000
- Shoulder Arthroplasty – Past and Future, Palais de Congrès Paris, France, 2000
- Mayo Clinic Orthopaedic Course on Advanced Surgical Skills of the Elbow for Trauma Related Injuries Rochester, MN, 2000
- AAOS Learning Course of Current Techniques in Open and Arthroscopic Shoulder Surgery, #456/3226 Rosemont, IL, 1998

Consulting Journal Reviewer

- Clinical Orthopaedics and Related Research
- Journal of Bone and Joint Surgery
- Journal of Orthopaedic Research
- Journal of Orthopaedic Trauma
- Journal of Shoulder and Elbow Surgery

Honors Received

- Nominated for Charles S. Neer Award Simon P, PhD, Gupta A, Pappau I, Hussey M, Santoni B, Inoue N, Frankle M. The Relationship Between the Subchondral Bone Density Distribution and Glenoid Depth: An In-Vivo Pilot Study of Male Total Shoulder Arthroplasty Subjects. Proceeding of American Shoulder and Elbow Society 2014 Open Meeting, New Orleans, LA. 2014
- America's Top Orthopaedists Consumers Research Council 2007,2008
- Best Doctors in America Mark A. Frankle, elected by his peers for inclusion in Best Doctors in America® 2001-2013
- Best Doctors Tampa, FL Tampa Bay Metro 2002-2013
- America's Top Surgeons Mark A. Frankle was selected as one of "America's Top Surgeons" in April of 2002. He is currently listed in the "Guide to America's Top Surgeons". 2002-2005

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Honors Received (cont.)

- Tampa Business Journal Tampa, FL Finalist for "Health Care Innovation and Research" Award 2004 Charles S. Neer Award Recipient Frankle, M, Ondrovic, L, Markee, B, Harris, ML, Lee, WE. Tuberosity Reconstruction in Hemiarthroplasty for Four-part Proximal Humerus Fractures: A Biomechanical Study to Assess Interfragmentary Stability. Proceeding of American Shoulder and Elbow Society 17th Open Meeting, San Francisco, CA. 2001
- "Who's Who in the World" Mark A. Frankle was nominated by a colleague for inclusion in Marquis Who's Who in the World. Who's Who in the World is a comprehensive directory of the biographies of outstanding men and women in a wide range of professions and geographic locations. The book is a reference for educators, administrators, researchers and library patrons. June 2000
- Nominated for Charles S. Neer Award, Frankle, M, Sanders, R., DiPasquale, T. A Comparison of Open Reduction and Internal Fixation vs. Primary Total Elbow Arthroplasty for Distal Humerus Fractures in Females Greater Than Sixty-Five Years Old. Proceeding of American Shoulder and Elbow Society 15th Open Meeting, Anaheim, CA. 1999
- Best Scientific Paper, Frankle, M, Markee, B, Greenwald, D. "The Biomechanical Effects of Malposition of Tuberosity Fragments on the Humerus Prosthetic Reconstruction for Four-Part Proximal Humerus Fractures." Proceeding of the Seventh International Conference on Surgery of the Shoulder. October 1998

Grants Received

- Individual Research Project Grants, Over \$1,000,000, 2000-present
- Orthopaedic Research & Educational Foundation for prospective cohort study of shoulder function after reverse and anatomical total shoulder replacement. \$99,000, 2008-2010
- Orthopaedic Research & Educational Foundation for the Foundation for Orthopaedic Research & Education/Florida Orthopaedic Institute Shoulder & Elbow Fellowship Program \$75,000/Tornier, Inc. (2009, 2010), \$25,000 (2010,2011), \$27,500 (2011-2012), \$25,000 (2012-2013), \$31,250 (2013-2014)
- OMeGA Medical Grants Association for the Foundation for Orthopaedic Research & Education/Florida Orthopaedic Institute Shoulder & Elbow Fellowship Program, \$50,000 (2009-2010), \$150,000 (2011-2013), \$7,500 (2015-2016)
- DePuy Mitek Fellowship Grant for the Foundation for Orthopaedic Research & Education/Florida Orthopaedic Institute Shoulder & Elbow Fellowship Program, \$25,000 (2012-2013), \$21,500 (2013-2014)
- Cross Award Shoulder and Elbow Fellowship for the Foundation for Orthopaedic Research & Education/Florida Orthopaedic Institute Shoulder & Elbow Fellowship Program, \$50,000 (2012-2014), \$50,000 (2014-2016)

Product Development

- Encore Orthopaedics, Inc. (DJO Surgical) - Designer of Reverse Shoulder Prosthesis
- Encore Orthopaedics, Inc. (DJO Surgical) - Co-designer of Total Shoulder Replacement
- DePuy, Inc. - Co-designer Humeral Head Resection Guide
- Wright Medical Technology, Inc. - Co-designer - Total Shoulder Replacement

Patents

- Frankle, Mark and Gutierrez, Sergio. Method and system for the intramedullary fixation of a fractured bone Patent 8,425,513. 2013.
- Frankle, Mark A. Suture management method and system. Patent 6,860,887. 2005.
- Frankle, Mark A. Reverse shoulder prosthesis system. Patent 6,790,234. 2004.
- Frankle, Mark A. Shoulder prosthesis system. Patent 6,679,916. 2004.

Video Production

- Locked Plating for Proximal Humerus Fractures. Mark Mighell, Derek Pupello, Brian Badman and Mark Frankle. 2007.
- Reverse Shoulder Prosthesis Surgical Technique. Perf. Mark A. Frankle. 2006.
- "The Reverse Shoulder Prosthesis for Glenohumeral Arthritis Associated with Sever Rotator Cuff Deficiency" Dir. Mark A. Frankle. The Video Journal of Orthopaedics. June 2005. <<http://www.vjo.com>>.

Books

- Puskas B, Harreld K, Sahajpal D, Frankle M. Chapter 40: Arthroplasty of the Shoulder Using the Reverse Shoulder Prosthesis. In: Craig E, ed. Master's Techniques in Orthopaedic Surgery: The Shoulder. 3rd edition: Philadelphia: Lippincott Williams & Wilkins, c2013. p. 621-660. ISBN: 978-0-7817-9748-1.
- Otto R, Nigro P, Frankle M. Chapter 35: Reverse Shoulder Arthroplasty for Chronic Shoulder Pathology: Indications, Contraindications, and Outcomes, and Outcomes in 2012. In: Nicholson G, ed. Orthopaedic Knowledge Update: Shoulder and Elbow 4: Rosemont: Academy of Orthopedic Surgeons (AAOS), c2013. ISBN: 978-0-8920-3955-5.
- Willis M, Walker M, Frankle M. Reverse Total Shoulder Arthroplasty. In: Sanchez-Sotelo J, editor. AAOS Monograph on Total Shoulder Arthroplasty. Rosemont: American Academy of Orthopedic Surgeons (AAOS); c2012. p. 49-70. ISBN: 978-0-89203-412-3.
- Frankle M, Chacon A, Cuff D. Reverse Prosthesis for Acute and Chronic Fractures. In: Dines D, Williams G, Laurencin C, editors. Arthritis & Arthroplasty: The Shoulder. Philadelphia: Elsevier, c2009. p. 218-234. ISBN: 978-1-4160-4975-3.

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Books (cont.)

- Frankle, Mark A. Rotator Cuff Deficiency in the Shoulder. New York: Thieme Medical, 2008. p. 200. ISBN: 978-1588905062.
- Frankle, M. Management of Flail Elbow. In: Yamaguchi K, O'Driscoll S, King G, McKee M, editors. Advanced Reconstruction Elbow. Rosemont: American Academy of Orthopedic Surgeons (AAOS), c2007. p. 427-434. ISBN: 978-0-89203-391-1.
- Frankle, Mark. "Revision of Failed Reverse Type Implants." Revision and Complex Shoulder Arthroplasty. Philadelphia: Lippincott Williams and Wilkins, 2005.
- Devinney Scott, Mark Frankle, Mark Mighell, and David Fisher. "Surgery of Shoulder Arthritis." Arthritis and Allied Conditions. Philadelphia: Lippincott Williams & Williams, 2005
- Floyd, III, W, Troum, S, Frankle, M. Infections-Acute and Chronic Sepsis, Surgery of the Hand and Upper Extremity, Edited by Clayton Peimer, Volume II, Chapter 77, pp 1731-1762.

Research Articles

- Pappou I, Virani N, Clark R, Frankle M. Outcomes and Cost of Reverse Shoulder Arthroplasty in Morbidly Obese, a Case Control Study. J Bone Joint Surg Am. [In Press]
- Cabezas AF, Gutiérrez S, Teusink MJ, Schwartz DG, Hartzler RU, Santoni BG, Frankle MA. Kinematic impact of size on the existing glenohumeral joint in patients undergoing reverse shoulder arthroplasty. Clin Biomech. 2014 May 9. [Epub ahead of print]
- Levy JC, Everding NG, Frankle MA, Keppler LJ. Accuracy of patient-specific guided glenoid baseplate positioning for reverse shoulder arthroplasty. J Shoulder Elbow Surg. 2014 Apr 13. [Epub ahead of print]
- Schwartz DG, Cottrell BJ, Teusink MJ, Clark RE, Downes KL, Tannenbaum RS, Frankle MA. Factors that predict postoperative motion in patients treated with reverse shoulder arthroplasty. J Shoulder Elbow Surg. 2014 Apr 8. [Epub ahead of print]
- Teusink M, Otto R, Cottrell B, Frankle M. What is the Effect of Postoperative Scapula Fracture on Outcomes of Reverse Shoulder Arthroplasty? J Shoulder Elbow Surg. 2014 Jun;23(6):782-90.
- Nigro PT, Gutiérrez S, Frankle MA. Improving glenoid-side load sharing in a virtual reverse shoulder arthroplasty model. J Shoulder Elbow Surg. 2013 Jul;22(7):954-62.
- Puskas B, Harreld K, Clark R, Downes K, Virani NA, Frankle M. Isometric strength, range of motion, and impairment before and after total and reverse shoulder arthroplasty. J Shoulder Elbow Surg. 2013 Jul;22(7):869- 76.
- Harreld K, Clark R, Downes K, Virani N, Frankle M. Correlation of subjective and objective measures before and after shoulder arthroplasty. Orthopedics. 2013 Jun;36(6):808-14.
- Otto RJ, Virani NA, Levy JC, Nigro PT, Cuff DJ, Frankle MA. Scapular fractures after reverse shoulder arthroplasty: evaluation of risk factors and the reliability of a proposed classification. J Shoulder Elbow Surg. 2013 May 6. [Epub ahead of print]
- Virani NA, Williams CD, Clark R, Polikandriotis J, Downes KL, Frankle MA. Preparing for the bundled-payment initiative: the cost and clinical outcomes of reverse shoulder arthroplasty for the surgical treatment of advanced rotator cuff deficiency at an average 4-year follow-up. J Shoulder Elbow Surg. 2013 Apr 5. [Epub ahead of print]
- Virani NA, Williams CD, Clark R, Polikandriotis J, Downes KL, Frankle MA. Preparing for the bundled-payment initiative: the cost and clinical outcomes of total shoulder arthroplasty for the surgical treatment of glenohumeral arthritis at an average 4-year follow-up. J Shoulder Elbow Surg. 2013 Mar 16. [Epub ahead of print]
- Pervaiz K, Cabezas A, Downes K, Santoni BG, Frankle MA. Osteoporosis and shoulder osteoarthritis: incidence, risk factors, and surgical implications. J Shoulder Elbow Surg. 2013 Mar;22(3):e1-8. doi: 10.1016/j.jse.2012.05.029.
- Virani NA, Cabezas A, Gutiérrez S, Santoni BG, Otto R, Frankle M. Reverse shoulder arthroplasty components and surgical techniques that restore glenohumeral motion. J Shoulder Elbow Surg. 2013 Feb;22(2):179-87. doi: 10.1016/j.jse.2012.02.004.
- Andersen JR, Williams CD, Cain R, Mighell M, Frankle M. Surgically treated humeral shaft fractures following shoulder arthroplasty. J Bone Joint Surg Am. 2013 Jan 2;95(1):9-18. doi: 10.2106/JBJS.K.00863.
- Cuff D, Clark R, Pupello D, Frankle M. Reverse shoulder arthroplasty for the treatment of rotator cuff deficiency: a concise follow-up, at a minimum of five years, of a previous report. J Bone Joint Surg Am. 2012 Nov 7;94(21):1996-2000. doi: 10.2106/JBJS.K.01206.
- Kwon YW, Pinto VJ, Yoon J, Frankle MA, Dunning PE, Sheikhzadeh A. Kinematic analysis of dynamic shoulder motion in patients with reverse total shoulder arthroplasty. J Shoulder Elbow Surg. 2012 Sep;21(9):1184- 90. doi: 10.1016/j.jse.2011.07.031
- Walker M, Willis MP, Brooks JP, Pupello D, Mulieri PJ, Frankle MA. The use of the reverse shoulder arthroplasty for treatment of failed total shoulder arthroplasty. J Shoulder Elbow Surg. 2012 Apr;21(4):514-22. doi: 10.1016/j.jse.2011.03.006.
- Willis M, Min W, Brooks JP, Mulieri P, Walker M, Pupello D, Frankle M. Proximal humeral malunion treated with reverse shoulder arthroplasty. J Shoulder Elbow Surg. 2012 Apr;21(4):507-13. doi: 016/j.jse.2011.01.042.
- Gutiérrez S, Walker M, Willis M, Pupello DR, Frankle MA. Effects of tilt and glenosphere eccentricity on baseplate/bone interface forces in a Mark A. Frankle, MD Curriculum Vitae 12 Updated: 7/1/2014 computational model, validated by a mechanical model, of reverse shoulder arthroplasty. J Shoulder Elbow Surg. 2011 Jul;20(5):732-9. doi: 10.1016/j.jse.2010.10.035.
- Cuff D, Levy JC, Gutiérrez S, Frankle MA. Torsional stability of modular and non-modular reverse shoulder humeral components in a proximal humeral bone loss model. J Shoulder Elbow Surg. 2011 Jun;20(4):646-51. doi: 10.1016/j.jse.2010.10.026
- Badman B, Frankle M, Keating C, Henderson L, Brooks J, Mighell M. Results of proximal humeral locked plating with supplemental suture fixation of rotator cuff. J Shoulder Elbow Surg. 2011 Jun;20(4):616-24. doi: 10.1016/j.jse.2010.08.030.
- Mulieri P, Dunning P, Klein S, Pupello D, Frankle M. Reverse shoulder arthroplasty for the treatment of irreparable rotator cuff tear without glenohumeral arthritis. J Bone Joint Surg Am. 2010 Nov 3;92(15):2544- 56. doi: 10.2106/JBJS.I.00912.

Research Articles (cont.)

- Holcomb JO, Hebert DJ, Mighell MA, Dunning PE, Pupello DR, Pliner MD, Frankle MA. Reverse shoulder arthroplasty in patients with rheumatoid arthritis. *J Shoulder Elbow Surg.* 2010 Oct;19(7):1076-84. doi: 10.1016/j.jse.2009.11.049.
- Klein SM, Badman BL, Keating CJ, Devinney DS, Frankle MA, Mighell MA. Results of surgical treatment for unstable distal clavicular fractures. *J Shoulder Elbow Surg.* 2010 Oct;19(7):1049-55. doi: 10.1016/j.jse.2009.11.056.
- Mulieri PJ, Holcomb JO, Dunning P, Pliner M, Bogle RK, Pupello D, Frankle MA. Is a formal physical therapy program necessary after total shoulder arthroplasty for osteoarthritis? *J Shoulder Elbow Surg.* 2010 Jun;19(4):570-9. doi: 10.1016/j.jse.2009.07.012.
- Klein SM, Dunning P, Mulieri P, Pupello D, Downes K, Frankle MA. Effects of acquired glenoid bone defects on surgical technique and clinical outcomes in reverse shoulder arthroplasty. *J Bone Joint Surg Am.* 2010 May;92(5):1144-54. doi: 10.2106/JBJS.I.00778.
- Holcomb JO, Cuff D, Petersen SA, Pupello DR, Frankle MA. Revision reverse shoulder arthroplasty for glenoid baseplate failure after primary reverse shoulder arthroplasty. *J Shoulder Elbow Surg.* 2009 Sep-Oct;18(5):717-23. doi: 10.1016/j.jse.2008.11.017.
- Gutiérrez S, Luo ZP, Levy J, Frankle MA. Arc of motion and socket depth in reverse shoulder implants. *Clin Biomech (Bristol, Avon).* 2009 Jul;24(6):473-9. doi: 10.1016/j.clinbiomech.2009.02.008.
- Chacon A, Virani N, Shannon R, Levy JC, Pupello D, Frankle M. Revision arthroplasty with use of a reverse shoulder prosthesis-allograft composite. *J Bone Joint Surg Am.* 2009 Jan;91(1):119-27. doi: 10.2106/JBJS.H.00094.
- Gutiérrez S, Comiskey CA 4th, Luo ZP, Pupello DR, Frankle MA. Range of impingement-free abduction and adduction deficit after reverse shoulder arthroplasty. Hierarchy of surgical and implant-design-related factors. *J Bone Joint Surg Am.* 2008 Dec;90(12):2606-15. doi: 10.2106/JBJS.H.00012.
- Levy JC, Frankle M. Bilateral shoulder chondrolysis following arthroscopy. A report of two cases. *J Bone Joint Surg Am.* 2008 Nov;90(11):2546-7; author reply 2547-8.
- Gutiérrez S, Levy JC, Frankle MA, Cuff D, Keller TS, Pupello DR, Lee WE 3rd. Evaluation of abduction range of motion and avoidance of inferior scapular impingement in a reverse shoulder model. *J Shoulder Elbow Surg.* 2008 Jul-Aug;17(4):608-15. doi: 10.1016/j.jse.2007.11.010.
- Cuff D, Pupello D, Virani N, Levy J, Frankle M. Reverse shoulder arthroplasty for the treatment of rotator cuff deficiency. *J Bone Joint Surg Am.* 2008 Jun;90(6):1244-51. doi: 10.2106/JBJS.G.00775.
- Levy JC, Virani NA, Frankle MA, Cuff D, Pupello DR, Hamelin JA. Young patients with shoulder chondrolysis following arthroscopic shoulder surgery treated with total shoulder arthroplasty. *J Shoulder Elbow Surg.* 2008 May-Jun;17(3):380-8. doi: 10.1016/j.jse.2007.11.004.
- Virani NA, Harman M, Li K, Levy J, Pupello DR, Frankle MA. In vitro and finite element analysis of glenoid bone/baseplate interaction in the reverse shoulder design. *J Shoulder Elbow Surg.* 2008 May-Jun;17(3):509-21. doi: 10.1016/j.jse.2007.11.003.
- Cuff DJ, Virani NA, Levy J, Frankle MA, Derasari A, Hines B, Pupello DR, Cancio M, Mighell M. The treatment of deep shoulder infection and glenohumeral instability with debridement, reverse shoulder arthroplasty and postoperative antibiotics. *J Bone Joint Surg Br.* 2008 Mar;90(3):336-42. doi: 10.1302/0301-620X.90B3.19408.
- Gutiérrez S, Greiwe RM, Frankle MA, Siegal S, Lee WE 3rd. Biomechanical comparison of component position and hardware failure in the reverse shoulder prosthesis. *J Shoulder Elbow Surg.* 2007 May-Jun;16(3 Suppl):S9-S12.
- Levy J, Frankle M, Mighell M, Pupello D. The use of the reverse shoulder prosthesis for the treatment of failed hemiarthroplasty for proximal humeral fracture. *J Bone Joint Surg Am.* 2007 Feb;89(2):292-300.
- Levy JC, Virani N, Pupello D, Frankle M. Use of the reverse shoulder prosthesis for the treatment of failed hemiarthroplasty in patients with glenohumeral arthritis and rotator cuff deficiency. *J Bone Joint Surg Br.* 2007 Feb;89(2):189-95. Review.
- Frankle M, Levy JC, Pupello D, Siegal S, Saleem A, Mighell M, Vasey M. The reverse shoulder prosthesis for glenohumeral arthritis associated with severe rotator cuff deficiency. A minimum two-year follow-up study of sixty patients surgical technique. *J Bone Joint Surg Am.* 2006 Sep;88 Suppl 1 Pt 2:178-90.
- Frankle M, Siegal S, Pupello D, Saleem A, Mighell M, Vasey M. The Reverse Shoulder Prosthesis for glenohumeral arthritis associated with severe rotator cuff deficiency. A minimum two-year follow-up study of sixty patients. *J Bone Joint Surg Am.* 2005 Aug;87(8):1697-705.
- Mighell MA, Dunham RC, Rommel EA, Frankle MA. Primary semi-constrained arthroplasty for chronic fracture-dislocations of the elbow. *J Bone Joint Surg Br.* 2005 Feb;87(2):191-5.
- Harman M, Frankle M, Vasey M, Banks S. Initial glenoid component fixation in "reverse" total shoulder arthroplasty: a biomechanical evaluation. *J Shoulder Elbow Surg.* 2005 Jan-Feb;14(1 Suppl S):162S-167S.
- Frankle MA, Mighell MA. Techniques and principles of tuberosity fixation for proximal humeral fractures treated with hemiarthroplasty. *J Shoulder Elbow Surg.* 2004 Mar-Apr;13(2):239-47. Review.
- Swieszkowski W, Frankle M, Bersee H, Kurzydowski K. In vivo wear of polyethylene glenoid components in total shoulder arthroplasty. *European Materials Research Society Fall Meeting.* Mar 2004(25).
- Mighell MA, Kolm GP, Collinge CA, Frankle MA. Outcomes of hemiarthroplasty for fractures of the proximal humerus. *J Shoulder Elbow Surg.* 2003 Nov-Dec;12(6):569-77.
- Mansat P, Frankle MA, Cofield RH. Tears in the subscapularis tendon: descriptive analysis and results of surgical repair. *Joint Bone Spine.* 2003 Sep;70(5):342-7.
- Frankle MA, Herscovici D Jr, DiPasquale TG, Vasey MB, Sanders RW. A comparison of open reduction and internal fixation and primary total elbow arthroplasty in the treatment of intraarticular distal humerus fractures in women older than age 65. *J Orthop Trauma.* 2003 Aug;17(7):473-80.

Research Articles (cont.)

- Parvizi J, Frankle MA, Tiegs RD, Sim FH. Corrective osteotomy for deformity in Paget disease. *J Bone Joint Surg Am*. 2003 Apr;85-A(4):697-702.
- Frankle MA, Ondrovic LE, Markee BA, Harris ML, Lee WE 3rd. Stability of tuberosity reattachment in proximal humeral hemiarthroplasty. *J Shoulder Elbow Surg*. 2002 Sep-Oct;11(5):413-20.
- Frankle MA, Greenwald DP, Markee BA, Ondrovic LE, Lee WE 3rd. Biomechanical effects of malposition of tuberosity fragments on the humeral prosthetic reconstruction for four-part proximal humerus fractures. *J Shoulder Elbow Surg*. 2001 Jul-Aug;10(4):321-6.
- Frankle MA, Koval KJ, Sanders RW, Zuckerman JD. Radial head fractures associated with elbow dislocations treated by immediate stabilization and early motion. *J Shoulder Elbow Surg*. 1999 Jul-Aug;8(4):355-60.
- Frankle M, Cordey J, Sanders RW, Koval K, Perren SM. A biomechanical comparison of the antegrade inserted universal femoral nail with the retrograde inserted universal tibial nail for use in femoral shaft fractures. *Injury*. 1999;30 Suppl 1:A40-3.
- Cordey J, Borgeaud M, Frankle M, Harder Y, Martinet O. Loading model for the human femur taking the tension band effect of the ilio-tibial tract into account. *Injury*. 1999;30 Suppl 1:A26-30.
- Frankle M, Mighell M. Non-implant arthroplasty for elbow arthritis. *Seminars in Arthroplasty* 1998:12-24.
- Frankle M, Lord M. Glenoid deficiency in hemiarthroplasty for shoulder dislocation. *Medscape Orthopedics & Sports Medicine* 1997.
- Cofield RH, Frankle MA, Zuckerman JD. Humeral head replacement for glenohumeral arthritis. *Semin Arthroplasty*. 1995 Oct;6(4):214-21.
- Frankle M, Tiegs RD, Sim FH. A review of corrective osteotomies for deformity in Paget's disease. *Semin Arthritis Rheum*. 1994 Feb;23(4):253.
- Frankle MA, Cordey J, Frankle MD, Baumgart F, Perren S. A retrospective analysis of plate contouring in the tibia using the conventional 4.5 (narrow) dynamic compression plate. *J Orthop Trauma*. 1994;8(1):59-63.
- Frankle MA, Cordey J, Frankle MD, Baumgart F, Perren S. A retrospective analysis of plate contouring in the tibia using the conventional 4.5 (narrow) dynamic compression plate. *J Orthop Trauma*. 1994;8(1):59-63.
- Sanders R, Koval KJ, DiPasquale T, Helfet DL, Frankle M. Retrograde reamed femoral nailing. *J Orthop Trauma*. 1993;7(4):293-302.
- Frankle MA. Association of anabolic steroids and avascular necrosis of femoral heads. *Am J Sports Med*. 1992 Jul-Aug;20(4):488.
- Frankle M, Leffers D. A review of the efficacy of a clinic treating athletes who use anabolic androgenic steroids. *The Physician and Sports Medicine* 1992;20:75-87.
- Sinnott JT 4th, Cancio MR, Frankle MA, Gustke K, Spiegel PG. Tuberculous osteomyelitis masked by concomitant staphylococcal infection. *Arch Intern Med*. 1990 Sep;150(9):1865-7.
- Frankle M, Borrelli J. The effects of testosterone propionate and methenolone enanthate on the healing of humeral osteotomies in the Wistar rat. *J Invest Surg*. 1990;3(2):93-113.
- Frankle M, Leffers D. Anabolic androgenic steroids: A guide for the orthopaedic surgeon. *Orthopaedic Perspectives* 1990;1:119-40.
- Frankle MA, Eichberg R, Zachariah SB. Anabolic androgenic steroids and a stroke in an athlete: case report. *Arch Phys Med Rehabil*. 1988 Aug;69(8):632-3.
- Frankle M. Weightlifting, weight training and injuries. *Orthopedics*. 1986 Jan;9(1):29.
- Frankle MA, Cicero GJ, Payne J. Use of androgenic anabolic steroids by athletes. *JAMA*. 1984 Jul 27;252(4):482.

Technique Articles

- Mighell MA, Frankle MA, Mulieri PJ. Elbow arthroplasty for distal humeral fractures – technique, pearls, and pitfalls. *Oper Tech Orthop*. 2010;20:38- 47.
- Frankle M, Levy JC, Pupello D, Siegal S, Saleem A, Mighell M, Vasey M. The reverse shoulder prosthesis for glenohumeral arthritis associated with severe rotator cuff deficiency. A minimum two-year follow-up study of sixty patients surgical technique. *J Bone Joint Surg Am*. 2006 Sep;88 Suppl 1 Pt 2:178-90.
- Frankle M. Immediate Total Elbow Arthroplasty For Distal Humerus. *Techniques in Orthopaedics*. 2006;21(4):363-73. doi: 10.1097/01.bto.0000252140.07199.21.
- Mighell MA, Harkins D, Klein D, Schneider S, Frankle M. Technique for internal fixation of capitellum and lateral trochlea fractures. *J Orthop Trauma*. 2006 Nov-Dec;20(10):699-704
- Frankle M, Kumar A. Reverse total shoulder replacement for arthritis with an irreparable rotator cuff tear. *Techniques in Shoulder & Elbow Surgery* 2003;4:77-83.
- Frankle M, Lord M. Triceps Split Technique for Total Elbow Arthroplasty. *Techniques in Shoulder & Elbow Surgery* 2002;3:23-7.
- Hamelin JA, Frankle M.A. Arthroscopic stabilization technique for SLAP and MDI. *Florida Orthopaedic Society Journal* 1999:24-7.

Review and Invited Articles

- Teusink MJ, Virani NA, Polikandriotis JA, Frankle MA. Cost analysis in shoulder arthroplasty surgery. *Adv Orthop*. 2012;2012:692869. Epub 2012 Dec 2.
- Walker M, Brooks J, Willis M, Frankle M. How reverse shoulder arthroplasty works. *Clin Orthop Relat Res*. 2011 Sep;469(9):2440-51. Review.
- Cheung E, Willis M, Walker M, Clark R, Frankle MA. Complications in reverse total shoulder arthroplasty. *J Am Acad Orthop Surg*. 2011 Jul;19(7):439- 49. Review.
- Harreld KL, Puskas BL, Frankle M. Massive rotator cuff tears without arthropathy: when to consider reverse shoulder arthroplasty. *J Bone Joint Surg Am*. 2011 May 18;93(10):973-84.
- Frankle M. Androgenic steroids: A guide for the physician. *J Musculoskel Med* 1989;6:69-87.

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Published Instructional Course Lectures

- Affonso J, Nicholson GP, Frankle MA, Walch G, Gerber C, Garzon-Muvdi J, McFarland EG. Complications of the reverse prosthesis: prevention and treatment. Instr Course Lect. 2012;61:157-68.
- Harreld KL, Puskas BL, Frankle MA. Massive rotator cuff tears without arthropathy: When to consider reverse shoulder arthroplasty. Instr Course Lect. 2012;61:143-56.

Research Presented at Meetings

- The Relationship Between The SBD Distribution And Glenoid Depth: An In-Vivo Pilot Study Of Male TSA Subjects, American Shoulder and Elbow Surgeons Open Meeting, New Orleans, Louisiana, Nominee, March 2014
- Results of Closed Management of Acute Dislocation Following Reverse Shoulder Arthroplasty, Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, Louisiana, March 2014
- Scapular Neck Length Measurement and Distribution in the Reverse Shoulder Arthroplasty (RSA) Patient Population Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, Louisiana, March 2014
- Factors that Predict Postoperative Motion in Patients Treated with Reverse Shoulder Arthroplasty Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, Louisiana, March 2014
- Effects of Morbid Obesity on RSA: A Case Control Study on Outcomes, Complications, Disposition and Cost Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, Louisiana, March 2014
- Quantification of the Existing Glenohumeral Relationships in Patients Undergoing Reverse Shoulder Arthroplasty International Society for Technology in Arthroplasty Palm Beach, Florida, October 2013
- What Is the Effect of Postoperative Scapula Fractures on Outcomes Following Reverse Shoulder Arthroplasty? International Society for Technology in Arthroplasty Palm Beach, Florida, October 2013
- Effects of Morbid Obesity on RSA: a Case Control Study on Outcomes, Complications, Disposition and Cost International Society for Technology in Arthroplasty Palm Beach, Florida, October 2013
- Factors That Predict Postoperative Motion in Patients Treated With Reverse Shoulder Arthroplasty International Society for Technology in Arthroplasty Palm Beach, Florida, October 2013
- Scapular Neck Length Measurement and Distribution in the Reverse Shoulder Arthroplasty (RSA) Patient Population International Society for Technology in Arthroplasty, Palm Beach, Florida, October 2013
- Factors That Predict Postoperative Motion in Patients Treated with Reverse Shoulder Arthroplasty American Shoulder and Elbow Surgeons Closed Meeting, Pinehurst, North Carolina, October 2013
- Acromial Fractures After Reverse Shoulder Arthroplasty: A Multicenter Evaluation Of Clinical And Radiographic Risk Factors International Congress of Shoulder and Elbow Surgeons, Nagoya, Japan, April 2013
- The 4-Year Cost And Clinical Outcomes Of Reverse Shoulder Arthroplasty For The Surgical Treatment Of The Rotator Cuff Deficient Shoulder, Annual Meeting of the American Academy of Orthopaedic Surgeons Specialty Day, Chicago, March 2013
- Acromial Fractures After Reverse Shoulder Arthroplasty: Multicenter Evaluation Of Risk Factors, Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, March 2013
- The 4-year Cost and Clinical Outcomes of Shoulder Arthroplasty, American Shoulder and Elbow Surgeons Closed Meeting, Sea Island, October 2012
- Mid-term Results of Reverse Shoulder Arthroplasty at a Minimum of Five Years of Follow Up Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, February 2012
- Surgically Treated Humeral Shaft Fractures Following Shoulder Arthroplasty 23rd Congress of the European Society for Surgery of the Shoulder and the Elbow, Lyon, September 2011
- Failed Total Shoulder Arthroplasty Treated with Reverse Shoulder Arthroplasty Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, February 2011
- Proximal Humeral Bone Loss in Reverse Shoulder Arthroplasty American Shoulder and Elbow Surgeons Closed Meeting, Scottsdale, October 2010
- Effects of Tilt and glenosphere eccentricity in a reverse shoulder model 22nd Congress of the European Society for Surgery of the Shoulder and the Elbow, Edinsburg, September 2010
- Factors Affecting Humeral Translation and Joint Volume in Reverse Shoulder Arthroplasty 22nd Congress of the European Society for Surgery of the Shoulder and the Elbow, Edinsburg, September 2010
- Stability of Reverse Shoulder Humeral Implants in a Proximal Humerus Bone Loss Model 22nd Congress of the European Society for Surgery of the Shoulder and the Elbow, Edinsburg, September 2010
- Massive Cuff Tears Role of Reverse Prosthesis 22nd Congress of the European Society for Surgery of the Shoulder and the Elbow, Edinsburg, September 2010
- Effects of Acquired Glenoid Bone Defects on Surgical Technique and Clinical Outcomes in Reverse Shoulder Arthroplasty Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, March 2010
- Effects of Tilt and glenosphere eccentricity in a reverse shoulder model American Shoulder and Elbow Society Closed Meeting, New York, October 2009
- Effects of Glenoid Morphology on Surgical Technique and Clinical Outcomes in Reverse Shoulder Arthroplasty 21st Congress of the European Society for Surgery of the Shoulder and the Elbow, Madrid, September 2009

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Research Presented at Meetings (cont.)

- The Use of Reverse Shoulder Arthroplasty for Treatment of Failed Total Shoulder Arthroplasty 21st Congress of the European Society for Surgery of the Shoulder and the Elbow, Madrid, September 2009
- Proximal Humerus Malunion in the Setting of Rotator Cuff Deficiency Treated with Reverse Shoulder Arthroplasty 21st Congress of the European Society for Surgery of the Shoulder and the Elbow, Madrid, September 2009
- Pilot Study: Is a Formal Therapy Program Necessary after Total Shoulder Arthroplasty for Osteoarthritis Annual Meeting of the American Academy of Orthopaedic Surgery, Las Vegas, February 2009
- Glenoid Morphology in Reverse Shoulder Arthroplasty – Classification and Surgical Implications American Shoulder and Elbow Society Closed Meeting, Santa Barbara, September 2008
- Reverse Arthroplasty in Rheumatoid Patients 20th Congress of the European Society for Surgery of the Shoulder and the Elbow, Belgium, September 2008
- Mobility versus Stability: The Relationship between the Abduction Range of Motion and Articular Constraint in Reverse Shoulder Arthroplasty 20th Congress of the European Society for Surgery of the Shoulder and the Elbow, Belgium, September 2008
- Classification of glenoid morphology in reverse shoulder arthroplasty and its surgical implications 20th Congress of the European Society for Surgery of the Shoulder and the Elbow, Belgium, September 2008
- An Evaluation of Mechanical Failure of the Primary Glenoid Baseplate Treated with Revision Reverse Shoulder Arthroplasty 20th Congress of the European Society for Surgery of the Shoulder and the Elbow, Belgium, September 2008
- Outcomes of Reverse Shoulder Prostheses Using a Lateral Center of Rotation and Inferiorly Tilted Glenoid Component: A Minimum 2-Year Follow-up Study American Shoulder and Elbow Society Closed Meeting, Chicago, September 2007
- Reverse Shoulder Prosthesis for Failed Hemiarthroplasty for Fracture American Shoulder and Elbow Society Biennial, Orlando, April 2006
- RSP for the Treatment of Failed Arthroplasty American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, March 2006
- Component Tilt and the Risk of Failure American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, March 2006
- A comparison of a reverse ball and socket prosthesis (RSP) as a salvage procedure for failed shoulder reconstruction to a primary reverse prosthesis for rotator cuff arthropathy or primary rotator cuff deficiency with idiopathic superior arch instability Closed Meeting of the American Shoulder and Elbow Society, Pebble Beach, CA, November 2002
- Osteoarthritis of the Shoulder Treated by Total Shoulder Arthroplasty: A Prospective Outcomes Study Proceedings of the 69th American Academy of Orthopaedic Surgeons (AAOS), Dallas, March 2002
- A Custom Reverse Ball and Socket Prosthesis As A Salvage Procedure in the Rotator Cuff Deficient Shoulder: A Prospective Outcome Study Proceedings of the 69th American Academy of Orthopaedic Surgeons (AAOS), Dallas, March 2002
- Tuberosity Reconstruction in Hemiarthroplasty for Four- Part Proximal Humerus Fractures: A Biomechanical Study to Assess Interfragmentary Stability Proceeding of the 8th International Congress on Surgery of the Shoulder (ICSS), Cape Town, South Africa, February 2002
- Outcomes of Hemiarthroplasty for Fractures of the Proximal Humerus Proceeding of the 8th International Congress on Surgery of the Shoulder (ICSS), Cape Town, South Africa, April 2001
- Tuberosity Reconstruction in Hemiarthroplasty for Four-Part Proximal Humerus Fractures: A Biomechanical Study to Assess Interfragmentary Stability Proceeding of the 17th Annual American Shoulder & Elbow Surgeons Open Meeting (ASES), San Francisco Neer Award Recipient in the Basic Science Category, March 2001
- Outcomes of Hemiarthroplasty for Fractures of the Proximal Humerus Proceeding of the 68th Annual American Academy of Orthopaedic Surgeons (AAOS), San Francisco, Feb-Mar 2001
- Driving for Patients After Total Shoulder Surgery Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon, Portugal, September 2000
- Outcomes of Hemiarthroplasty for Fractures of the Proximal Humerus Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon, Portugal, September 2000
- Tuberosity Reconstruction in Hemiarthroplasty for Four-Part Proximal Humerus Fractures: A Biomechanical Study to Assess Interfragmentary Stability Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon, Portugal, September 2000

Invited Presentations

- MIO-RSA: Complications and Revisions Nice Shoulder Course, Nice, June 2014
- Results of Closed Management of Acute Dislocation Following Reverse Shoulder Arthroplasty Nice Shoulder Course, Nice, June 2014
- Periscapular Fractures after Reverse Shoulder Arthroplasty, Nice Shoulder Course, Nice, June 2014
- Subchondral Bone density distribution in degenerative shoulder disease; implications for clinical practice and etiology Grand Rounds, MGH Boston, Massachusetts, May 2014
- Defining Value in Shoulder Arthroplasty MGH Sports Medicine Conference Boston, Massachusetts, May 2014
- Subchondral Bone density distribution in degenerative shoulder disease; implications for clinical practice and etiology RH Cofield Visiting Professor, Mayo Clinic, Rochester Minnesota, May 2014
- Defining Value in Shoulder Arthroplasty RH Cofield Visiting Professor Mayo Clinic, Rochester Minnesota, May 2014
- The 4-year Cost and Clinical Outcomes of Shoulder Arthroplasty Current Solutions in Shoulder and Elbow Surgery, Tampa, FL, January 2014

Invited Presentations (cont.)

- Size Matters Current Solutions in Shoulder and Elbow Surgery, Tampa, FL, January 2014
- An Update on RSA for the Treatment of Massive Cuff Tears Without Arthritis Salzburger Schulterforum, Salzburg, December 2013
- Poor Glenoid Bone Stock and Reverse Shoulder Arthroplasty Salzburger Schulterforum, Salzburg, December 2013
- New Options For Clavicle Fractures ICJR - Current State of the Art and Science Shoulder Reconstruction 2013, Las Vegas, November 2013
- Medial vs. Lateral COR in Reverse TSA ICJR - Current State of the Art and Science Shoulder Reconstruction 2013, Las Vegas, November 2013
- Choosing Medial vs. Lateral Offset in Reverse TSA ICJR - Current State of the Art and Science Shoulder Reconstruction 2013, Las Vegas, November 2013
- Biomechanics of the RSA: Influence of Prosthetic Design International Society for Technology in Arthroplasty, Palm Beach, Florida, October 2013
- Biomechanics Of The RSA: Influence Of Prosthetic Design Instructional Course Lecture. International Congress of Shoulder and Elbow Surgeons, Nagoya, Japan, June 2013
- Component Loosening In Anatomic And Reverse Arthroplasty, Can It Be Avoided? Symposium: Eight Common Pitfalls In Shoulder Arthroplasty Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, April 2013
- Reverse Shoulder Arthroplasty: Beyond The Basics, Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, March 2013
- What are the Limits of Reverse Shoulder Arthroplasty?, Paris International Shoulder Course, Paris, March 2013
- RSA for the Treatment of Massive Cuff Tears Without Arthritis, Paris International Shoulder Course, Paris, March 2013
- Size Matters, Current Solutions in Shoulder & Elbow Surgery, Tampa, February 2013
- The 4-year Cost and Clinical Outcomes of Shoulder Arthroplasty, Current Solutions in Shoulder & Elbow Surgery, Tampa, February 2013
- Reverse Shoulder Arthroplasty for Cuff Tear Arthropathy: Technical Considerations and Outcomes, AAOS/ASES Shoulder Arthroplasty Course, Rosemont, January 2013
- New Options For Clavicle Fractures, International Congress for Joint Reconstruction Conference, Las Vegas, November 2012
- Choosing Medial vs. Lateral Offset in Reverse Shoulder Arthroplasty, International Congress for Joint Reconstruction Conference, Las Vegas, October 2012
- Resurfacing vs. Reverse Shoulder Arthroplasty: Is there really a question? International Congress for Joint Reconstruction Conference, Las Vegas, September 2012
- Point / Counterpoint: Lateralization in RSA: Humeral or Glenoid Lateralization? Nice Shoulder Course, Nice, September 2012
- Our Patients: Who Does and Who Does Not Do Well With a Reverse San Diego Shoulder Course, San Diego, September 2012
- Baseplate Complications and Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, June 2012
- RSA for the Treatment of Massive Cuff Tears Without Arthritis Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, February 2012
- Current Controversies in Biomechanics of Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, February 2012
- Effects of Bone Defects on Surgical Technique & Clinical Outcomes in Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, February 2012
- Does Lateral Center of Rotation Lead to Baseplate Failure? Ohio Shoulder & Elbow Society Course, Cleveland, OH, February 2012
- Baseplate Complications and Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, January 2012
- RSA for the Treatment of Massive Cuff Tears Without Arthritis Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, September 2011
- Effects of Bone Defects on Surgical Technique & Clinical Outcomes in Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, February 2011
- Current Controversies in Biomechanics of Reverse Shoulder Arthroplasty Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, San Diego, February 2011
- Technique for Tunnel Bridge Hybrid Transosseous Rotator Cuff Repair Current Solutions in Shoulder and Elbow Surgery, Tampa, February 2011
- Effects of Glenoid Bone Defects on Surgical Technique & Clinical Outcomes in Reverse Shoulder Arthroplasty Current Solutions in Shoulder and Elbow Surgery, Tampa, February 2011
- Current Controversies in Biomechanics of Reverse Shoulder Arthroplasty Current Solutions in Shoulder and Elbow Surgery, Tampa, January 2011
- Chondrolysis following Shoulder Arthroscopy San Diego Shoulder, San Diego, September 2010
- Baseplate Complications and The Reverse Prosthesis Instructional Course Lecture Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, March 2010
- How Does the Reverse Total Shoulder Work? Current Solutions in Shoulder and Elbow Surgery, Tampa, March 2010
- Reverse Shoulder Arthroplasty: Understanding The Debate Over Center of Rotation Vumedi Webinar, September 2009

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Invited Presentations (cont.)

- Reverse Shoulder Arthroplasty for 'Cuff Tear Arthropathy' Vumedi Webinar, September 2009
- How Does the Reverse Total Shoulder Work? San Diego Shoulder Course, San Diego, August 24, 2009
- The Total Shoulder Revision Glenoid San Diego Shoulder Course, San Diego, August 24, 2009
- Using Reverse Shoulder Arthroplasty for Difficult Problems San Diego Shoulder Course, San Diego, June 2009
- Proximal Humeral bone loss in revision of hemi to reverse prosthesis Nice, France, June 2009
- Massive Cuff Tears - Role of Reverse Prosthesis Annual Meeting of the American Academy of Orthopaedic Surgery, Las Vegas, June 2009
- Financial Conflicts of Interest in Patient Care & Clinical Research 9th USF Symposium on Bioethics, Tampa, February 2009
- How Does the Reverse Total Shoulder Work? Current Solutions in Shoulder and Elbow Surgery, Tampa, February 2009
- Clinical Outcomes of Reverse Shoulder Arthroplasty Current Solutions in Shoulder and Elbow Surgery, Tampa, March 26, 2009
- How Does the Reverse Total Shoulder Work? Orthopaedic Education Summit, Salt Lake City, January 2009
- How Does the Reverse Total Shoulder Work? San Diego Shoulder, San Diego, September 2008
- Fracture Sequelae: Open Reduction Internal Fixation San Diego Shoulder, San Diego, September 2008
- Proximal Humeral bone loss in revision of hemi to reverse prosthesis Nice Shoulder Course, France, June 2008
- Reverse Shoulder Arthroplasty for Treatment of Acute and Chronic Fractures of the Shoulder Florida Orthopaedic Society, Key Largo, May 2008
- Theory, Biomechanics and Design Rationale of Reverse Shoulder Arthroplasty Instructional Course Lecture American Academy of Orthopaedic Surgeons Annual Meeting Instructional Course Lecture, San Francisco, May 2008
- Biomechanics of the Reverse Shoulder Prosthesis Orthopaedic Education Summit, Park City, Utah, May 2008
- Reverse Shoulder Arthroplasty: The Case for a Lateral Offset and Clinical Results American Shoulder and Elbow Society 25th Anniversary Symposium on Total Shoulder and Elbow Arthroplasty, Dallas, March 2008
- Biomechanics and Design Rationale of Reverse Shoulder Arthroplasty Instructional Course Lecture American Academy of Orthopaedic Surgeons Annual Meeting, San Diego, October 2007
- Design Rationale and Clinical Outcomes for the Reverse Shoulder Prosthesis San Diego Shoulder Meeting, San Diego, September 2007
- Complications and Revisions, My Experience with the Reverse Shoulder Prosthesis Shoulder Arthropathy and Arthroplasty, France, March 2006
- The Design Rationale of the Reverse Shoulder Prosthesis Orthopaedic Education Summit, March 2006
- Clinical Outcomes of the RSP Orthopaedic Education Summit, Tampa, 2006
- In Vivo Wear of Glenoid Components American Shoulder and Elbow Society Focused Meeting, Las Vegas, 2006
- Semi-constrained Total Elbow Arthroplasty Closed Meeting of the Shoulder and Elbow Society of Australia, Queensland, Australia, November 2003
- Seven Steps to Glenoid Exposure Closed Meeting of the Shoulder and Elbow Society of Australia, Queensland, Australia, November 2002
- The Reverse Shoulder Arthroplasty: Evolution, Rationale, Technique and Outcomes Closed Meeting of the Shoulder and Elbow Society of Australia, Queensland, Australia, September 2002
- Revision Shoulder Arthroplasty for Failed Glenoid Components Closed Meeting of the Shoulder and Elbow Society of Australia, Queensland, Australia, September 2002
- Outcomes of Arthroscopic Versus Open Repair in the Management of Rotator Cuff Tears Advances in Minimally Invasive Hand/Upper Extremity Surgery, Brussels, Belgium, April 2002
- Semiconstrained Arthroplasty for Irreparable Rotator Cuff Tears State of the Art in Orthopaedics, Whistler, BC, Canada, March 2002
- Triceps Splitting Approach for Total Elbow State of the Art in Orthopaedics, Whistler, BC, Canada, March 2002
- Arthroplasty for Proximal Humerus Fractures The Philadelphia Orthopaedic Society, Philadelphia, March 2001
- Glenoid Reconstruction in Revision Shoulder Surgery Part of the Bone and Joint Decade 2000-2010 Current Concepts in Shoulder Arthroplasty at the Schulthess Klinik, Zurich, Switzerland, August 2000
- The Techniques and Results of Four-Part Fracture Fixation Spectrum of Orthopaedics, Trauma, and Spine, Hilton Head, April 2000
- Acute Complex Proximal Humerus Fractures – A Round Table Discussion Shoulder Arthroplasty – Past and Future, Palais de Congrès, Paris, France, January 2000
- Glenoid Component Failure Treated with a Bulk Allograft for Revision Total Shoulder Surgery Shoulder Arthroplasty – Past and Future, Palais de Congrès, Paris, France, January 2000

Poster Presentations

- Teusink M, Otto R, Cottrell B, Frankle M. "What is the Effect of Postoperative Scapula Fractures of Outcomes Following Reverse Shoulder Arthroplasty?" American Academy of Orthopaedic Surgeons Annual Meeting, March 2014
- Cabezas A, Santoni B, Diaz M, Teusink M, Schwartz D, Gutierrez S, Frankle M. "Quantification Of The Existing Glenohumeral Relationships In Patients Undergoing Reverse Shoulder Arthroplasty" American Academy of Orthopaedic Surgeons Annual Meeting, March 2014
- Gutierrez S, Harreld K, Nigro P, Santoni B, Frankle M. "The Effect of Glenosphere Edge Offset on Glenoid-Glenosphere Surface Contact Area" American Academy of Orthopaedic Surgeons Annual Meeting, February 2012

Poster Presentations (cont.)

- Harreld K, Clark R, Virani N, Downes K, Frankle M. "Correlation of Subjective and Objective Outcome Measures Before and After Shoulder Arthroplasty" American Academy of Orthopaedic Surgeons Annual Meeting, February 2012
- Pupello D, Clark R, Frankle M. "Hospital Cost and Outcome Analysis of Shoulder Arthroplasty for Osteoarthritis with and without an Intact Rotator Cuff" American Orthopaedic Association, June 2011
- Virani N, Pupello D, Frankle M. "Range Specific Strength After Total and Reverse Shoulder Arthroplasty" American Academy of Orthopaedic Surgeons Annual Meeting, February 2011
- Willis, M, Min, W, Brooks, J, Mulieri, P, Walker, M, Pupello, D, Frankle, M. "Proximal humeral malunion treated with reverse shoulder Arthroplasty" International Congress on Surgery of the Shoulder (ICSS), 2010
- Walker, M, Brooks, J, Willis, M, Frankle, M. "Failed Total Shoulder Arthroplasty Treated with Reverse Shoulder Arthroplasty" International Congress on Surgery of the Shoulder (ICSS). 2010
- Pupello, D, Holcomb, J, Chacon, A, Frankle, M. "Mechanical Failure of the Primary Glenoid Baseplate Treated with Revision Reverse Shoulder Arthroplasty." British Elbow and Shoulder Society, 2008
- Pupello, D, Levy, J, Chacon, A, Virani, N, Frankle, M. "Prospective Evaluation of Reverse Shoulder Prosthesis- Allograft Composite for the Revision of Failed Arthroplasty Associated with Proximal Humeral Bone Deficiency" British Elbow and Shoulder Society, 2008
- Frankle, M, Pupello, D, Levy, J, Virani, N. "Revision of Failed Hemiarthroplasty for Proximal Humerus Fractures Treated with a Reverse Shoulder Prosthesis" International Congress on Surgery of the Shoulder (ICSS). 2007
- Frankle, M, Pupello, D, Levy, J, Virani, N. "Use of the Reverse Shoulder Prosthesis for the Treatment of Failed Hemiarthroplasty in Patients with Glenohumeral Arthritis and Rotator Cuff Deficiency", International Congress on Surgery of the Shoulder (ICSS). 2007
- Frankle, M, Pupello, D, Levy, J, Gutierrez, S. "Component Positioning and Hardware Failure in the Reverse Shoulder Prosthesis" 73rd Annual American Academy of Orthopaedic Surgeon (AAOS), February 2006
- Frankle, M, Mighell, M, Pupello, D. "Chondrolysis in the Shoulder: Clinical Course and Results of Treatment with Total Shoulder Arthroplasty" 19th European Society for Surgery of the Shoulder & the Elbow (ESSSE). September 2005
- Frankle, M, Mighell, M, Pupello, D. "Reverse Shoulder Prosthesis in the Treatment of Fixed Anterior Superior Humeral Escap", 19th European Society for Surgery of the Shoulder & the Elbow (ESSSE). September 2005
- Frankle, M, Harman, M, Vasey, M, Lee III, W, Ondrovic, L, Ganey, T, Gutierrez, S. "A Comparison of Micromotion for Two Different Semi-Constrained Shoulder Replacements used in Rotator Cuff Deficient Patients." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, Las Vegas, November 2003
- Frankle, M, Harman, M, Vasey, M, Lee III, W, Ondrovic, L, Ganey, T, Gutierrez, S. "Achieving Adequate Glenoid Fixation During Semi-Constrained Total Shoulder Arthroplasty Used in Rotator Cuff-Deficient Patients." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, Las Vegas, NV. November 2003
- Frankle, M, Vasey, M, Shields, J, Moore, J. "The Effects of Osteopenia/Osteoporosis on Surgical Outcomes of Arthroscopic Rotator Cuff Repair." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, #15, Las Vegas, NV. November 2003
- Frankle, M, Kumar, A, Lee III, W, Ondrovic, L, Ganey, T, Gutierrez, S, Vasey, M. "The Effects of Proximal Prosthetic Humeral Geometry on the Stability of Tuberosity Reconstruction for Four-Part Proximal Humerus Fractures." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, #16, Las Vegas, NV. November 2003
- Frankle, M, Lee III, W, Ondrovic, L, Ganey, T, Gutierrez, S, Vasey, M. "Influence of Prosthesis Design on Moment Arms of the Deltoid in Rotator Cuff Deficient Shoulders." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, # 17, Las Vegas, NV. November 2003
- Frankle, M, Mighell, M, Devinney, S, Vasey, M, Pupello, D. "Revision of Failed Hemiarthroplasty for Proximal Humerus Fractures Treated With a Reverse Shoulder Prosthesis (RSP)." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, #18, Las Vegas, NV. November 2003
- Frankle, M, Mighell, M, Devinney, S, Vasey, M, Pupello, D. "Revision of Total Shoulder Arthroplasty with Recurrent Instability Treated with a Reverse Shoulder Prosthesis." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, # 19, Las Vegas, NV. November 2003
- Frankle, M, Mighell, M, Devinney, S, Vasey, M, Pupello, D. "Comparison of Hemiarthroplasty versus Reverse Shoulder Prosthesis Performed by One Surgeon For Rotator Cuff Arthropathy." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, # 20, Las Vegas, NV. November 2003
- Frankle, M, Mighell, M, Fisher, D, Vasey, M, Pupello, D. "Deep Infection Treated with Revision to Reverse Shoulder Prosthesis." 2003 American Shoulder and Elbow Society (ASES) Focused Meeting, #21, Las Vegas, NV, November 2003
- Frankle, M. "Outcomes for Revision of Failed Hemiarthroplasties with a Chronic Irreparable Rotator Cuff Treated with a Custom Reverse Ball and Socket Prosthetics." Proceeding of the 8th International Congress on Surgery of the Shoulder (ICSS), #246, Cape Town, South Africa. April 2001
- Frankle, M, Mighell, M, Bernasek, T, Sanders, R. "Outcomes Following Surgical Reconstructions for Periprosthetic Humerus Fractures." Proceeding of the 8th International Congress on Surgery of the Shoulder (ICSS), #244, Cape Town, South Africa. April 2001
- Frankle, M. "Outcomes for Revision of Failed Hemiarthroplasties with a Chronic Irreparable Rotator Cuff Treated with a Custom Reverse Ball and Socket Prosthetics." Proceeding of the 68th Annual American Academy of Orthopaedic Surgeon (AAOS), Poster #PE227, San Francisco, CA. February – March 2001

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Poster Presentations (cont.)

- Frankle, M, Mighell, M, Kioschos, JM. A Review of Chronic Unreduced Elbow Dislocations Treated with Total Elbow Arthroplasty. Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon, Portugal. September 2000
- Mighell, M, Hamelin, J, Frankle, M. Failed Impingement and Instability Surgeries in Patients with Primary Scapular Winging. Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon, Portugal. September 2000
- Frankle, M, Kioschos, JM, McClain, R. A Comparison of Primary Total Elbow Arthroplasty versus Total Elbow Arthroplasty for Failed Osteosynthesis in the Treatment of Complex Elbow Fractures in Elderly Patients. Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon Portugal. September 2000
- Frankle, M, Ondrovic, L, Markee, B, Lee, WE, Greenwald, D, Harris, ML. A Biomechanical Evaluation of Varying Humeral Head Size in Total Shoulder Arthroplasty. Proceeding of the 14th European Society for Surgery of the Shoulder & the Elbow (ESSSE), Lisbon Portugal. September 2000
- Mighell, M, Collinge, C, Frankle, M. Outcomes of Hemiarthroplasty for Fractures of the Proximal Humerus. Proceeding of the 2nd Biennial Shoulder and Elbow Meeting. Miami, FL, Paper #15, p.119, May 2000
- Kioschos, JM, Frankle, M. Glenoid Component Failure Treated with a Bulk Allograft for Revision Total Shoulder Surgery. Proceeding of the 2nd Biennial Shoulder and Elbow Meeting, Miami, FL, Paper #16, p.120. May 2000
- Mighell, M, Goodman, A, Hamelin, J, Frankle, M. Paralysis of the Trapezius: Etiology and Treatment Outcomes. Proceeding of the American Academy of Orthopaedic Surgeons 67th Annual Meeting, Orlando, FL, PE330, p.430. March 2000
- Mighell, M, Hamelin, J, Frankle, M. Failed Impingement and Instability Surgeries in Patients with Primary Scapular Winging. Proceeding of the American Academy of Orthopaedic Surgeons 67th Annual Meeting, Orlando, FL, PE325, p.428. March 2000
- Freels, D, Bernasek, T, Gustke, K, Frankle, M. Ceramic Head Endoprosthetic Replacement for Avascular Necrosis of the Hip. Proceeding of the American Academy of Orthopaedic Surgeons 67th Annual Meeting, Orlando, FL, PE029, p. 319. March 2000]

Current Research Activities

- Outcome of reverse shoulder arthroplasty in patients with Parkinson's disease: A matched cohort study - Purpose: Previous studies have shown that patient's with Parkinson's Disease tend to have limited functional outcomes with high complication rates when compared to non-Parkinson patients when treated with anatomical total shoulder arthroplasty. We are seeking to determine if RSA provides similar functional outcomes when compared to a matched cohort of non-Parkinson's patients.
- Glenosphere Dissociation after Reverse Shoulder Arthroplasty - Purpose: Glenosphere dissociation is a rare but serious complication after reverse shoulder arthroplasty. We believe potential etiologies of these glenosphere dissociations may be trauma, technical error, or related to implant design. The purpose of this paper is to present our series and investigate additional etiologies.
- Measurement of Hounsfield Units to Assess Supraspinatus Muscle Quality in Arthritic Shoulders - Purpose: To devise a reliable method to quantitatively evaluate rotator cuff volumetric muscle density using CT Hounsfield Units (HU).
- Reverse Shoulder Arthroplasty for Massive Rotator Cuff Tear: Risk Factors for Poor Functional Improvement - Purpose: To identify risk factors for poor functional improvement after reverse arthroplasty in order to guide patient selection and to assess the overall value of reverse shoulder arthroplasty in cases with poor functional improvement versus controls.
- The Effects of Glenoid Wear Patterns on Patients with Osteoarthritis in TSA: An Assessment of Outcomes and Value - Purpose: To determine whether preoperative glenoid wear patterns affect clinical outcomes and value in patients undergoing TSA.
- A Novel Patient Derived Outcome Assessment to Estimate the Financial Impact of Shoulder Disease Prior to Surgery - Purpose: To develop a new questionnaire adapted specifically to shoulder related conditions, named the Economic Assessment Form (EAF) to quantify the financial burden of shoulder disease.
- Functional Outcomes Of Reverse Shoulder Arthroplasty In Patients With Intact Rotator Cuffs - Purpose: To determine if the presence of an intact rotator cuff improves functional outcomes following primary reverse shoulder arthroplasty when compared to matched controls of patients who underwent Total Shoulder Arthroplasty.
- Comparison of the Existing Glenohumeral Relationships Between Patients from the United State and South Korea Undergoing Reverse Shoulder Arthroplasty - Purpose: To quantify and compare shoulder morphologies between patients undergoing RSA in the US and Korea

Book Reviews

- Bernasek, T, Frankle, M. Complications in Total Hip Arthroplasty By Richard H. Rothman, M.D., Ph.D., Journal Of Orthopaedic Trauma. In Print.
- Frankle, M. The Musculoskeletal System Physiological Basis by James Gibson Gamble, M.D., Journal of Orthopaedic Trauma, Vol. 2, No. 3, Page 264, 1988.

Miscellaneous Publications

- American Academy of Orthopaedic Surgeons: Appropriate Use Criteria on Optimizing the Management of Full-Thickness Rotator Cuff Tears. Rosemont, IL, American Academy of Orthopaedic Surgeons, September 2013.
http://www.aaos.org/research/Appropriate_Use/rotatorcufffull.pdf
- Pupello D, Frankle M. Regarding "Observations on retrieved humeral polyethylene components from reverse total shoulder arthroplasty". J Shoulder Elbow Surg. 2011 Dec;20(8):e22-3. doi: 10.1016/j.jse.2011.01.026. Epub 2011 Apr 9. PMID: 21482152 [PubMed - indexed for MEDLINE]
- Holcomb JO, Frankle M. Counterpoint: should rotator cuff tears be repaired early? Orthopedics. 2010 Apr;33(4):230-1. doi: 10.3928/01477447-20100225-01. PMID: 20415346 [PubMed - indexed for MEDLINE]
- Holcomb J, Pupello D, Levy J, Cuff D, Frankle M. Challenging the conclusion, "Clinical outcome was essentially not affected by the notch". J Shoulder Elbow Surg. 2009 May-Jun;18(3):e51-2; author reply e52-3. doi: 10.1016/j.jse.2009.01.026. PMID: 19393922 [PubMed - indexed for MEDLINE]
- Frankle M, Mighell M. Re: Shoulder prostheses treating cuff tear arthropathy: a comparative biomechanical study. J Orthop Res. 2006 Jan;24(1):112; author reply 112-3. PMID: 16419976 [PubMed - indexed for MEDLINE]
- Frankle M. Weight Lifting, Weight Training Injuries, Letter to Editor, Orthopaedics, Vol. 1, No. 1, January 1986.
- Frankle M. Leffers, D. Hooked On Hormones, Letter to the Editor, JAMA, Vol. 263:15, April 1990.
- Frankle M, Maas, R. Does Anabolic Steroid Use Lead to Avascular Necrosis Letter to Editor, The American Journal of Sports Medicine. In Print.