

Curriculum Vitae
As of 1/11/2025

Joshua N. Tennant, M.D., M.P.H.

Mailing address: 101 Fox Run
Chapel Hill, NC, 27516

Education

Orthopaedic Foot and Ankle Fellowship August 2012 – July 2013
University of Iowa Hospital and Clinics
Department of Orthopaedics and Rehabilitation
Iowa City, IA

Orthopaedic Residency June 2007 – July 2012
University of North Carolina at Chapel Hill Department of Orthopaedics
Chapel Hill, NC

M.D. May 2007
University of North Carolina School of Medicine
Chapel Hill, NC

M.P.H. August 2006
University of North Carolina School of Public Health
Chapel Hill, NC

B.S. In Chemistry, concentration in Biochemistry; minor in History May 2002
University of North Carolina at Chapel Hill
Chapel Hill, NC

Certifications

American Board of Orthopaedic Surgery, July 23, 2015, currently recertified through December 31, 2035

Licensure Information

North Carolina, Active

Professional Experience

Clinical Associate Professor Oct 2019 - Present
Department of Orthopaedics
University of North Carolina at Chapel Hill School of Medicine

Clinical Assistant Professor
Department of Orthopaedics
University of North Carolina at Chapel Hill School of Medicine

Aug 2013 – Oct 2019

Adjunct Assistant Professor
Public Health Leadership Program
UNC Gillings School of Public Health

November 2013 - Nov 2016

Foot and Ankle Fellow Associate
Department of Orthopaedics
University of Iowa Hospitals and Clinics

Aug 2012 – July 2013

Professional Societies

- American Academy of Orthopaedic Surgeons
- North Carolina Medical Society
- North Carolina Orthopaedic Association
- American Orthopaedic Foot & Ankle Society
- Arthroscopy Association of North America

Honors and Awards

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| 2014 | AAOS Annual Meeting Top Five Foot and Ankle Paper
Title: “Risks to the Blood Supply of the Talus after Four Methods of Total Ankle Arthroplasty: A Cadaveric Injection Study” |
| 2013 | AOFAS Annual Meeting 1 st Place Poster
Title: “Risks to the Blood Supply of the Talus after Four Methods of Total Ankle Arthroplasty: A Cadaveric Injection Study” |
| 2012 | UNC Orthopaedics Chief Resident Research Award |
| 2012 | UNC Orthopaedics William C. Patton Chief Resident Teaching Award |
| 2010 | UNC Injury Prevention Research Center Small Student Grant |
| 2002 – 2007 | Gaul Scholar, Medical Alumni Loyalty Scholarship
4 year tuition scholarship to University of North Carolina at Chapel Hill-School of Medicine. |
| 1998 – 2002 | Carolina Scholar
4 year merit-based scholarship to UNC-CH. |
| 2000 – 2001 | Trans-Atlantic Science Student Exchange Program
Studied at Friedrich-Schiller Universität in Jena, Germany for two semesters, taking chemistry courses in German toward B.S. degree at UNC. |

Publications

Contributions to Text Books

1. Toy K, Tennant JN. 2023. Embryology, Anatomy, and Physiology of the Ankle. In: Herscovici D, Anglen J, Early J editors. Evaluation and Surgical Management of the Ankle. Springer Nature, Switzerland AG p 3-20.
2. Wellborn P, Tennant JN, Lalli TA. 2023. Biomechanics of the Ankle. In: Herscovici D, Anglen J, Early J editors. Evaluation and Surgical Management of the Ankle. Springer Nature, Switzerland AG p 21-34.
3. Paranjape C, Tennant JN. 2021. Common Conditions of the Foot and Ankle. In: Esther RJ editor. Clinical Foundations of Musculoskeletal Medicine. 8 pages.
4. Tennant JN, Amendola A. 2015. Navicular Stress Fractures. In: Alexander Ian J, Bluman Eric M, Greisberg Justin K, editors. Advanced Reconstruction Foot and Ankle 2. Rosemont (IL): American Academy of Orthopaedic Surgery. p 379-386.
5. Kerkhoffs, GMM, De Leeuw PAJ, Tennant JN, Amendola A. 2014. Ankle ligament lesions. In: D'Hooge Pieter P.R.N, Kerkhoffs Gino M.M.J., editors. The Ankle in Football, 1st ed. Springer Paris. p 81-96.
6. Meeker J, Tennant JN, Parekh SG. 2011. Peroneal tendon pathology. In: Hurwitz S, Parekh S, editors. Musculoskeletal Examination of the Foot and Ankle: Making the complex simple. Thorofare (NJ): Slack Inc. p 78-106.

Refereed Journals

1. Jang J, Pietrosimone BG, Blackburn JT, Tennant JN, Franz JR, Wikstrom EA. Conceptual modeling of structural malalignments and ankle joint contact forces during walking. Gait Posture. 2024 Dec 9;117:65-71. doi: 10.1016/j.gaitpost.2024.12.008. Epub ahead of print. PMID: 39674064.
2. Suh YM, Tennant JN. Classification and Radiology. Foot Ankle Clin. 2024 Sep;29(3):389-404. doi: 10.1016/j.fcl.2023.09.009. Epub 2023 Oct 29. PMID: 39068016.
3. Padovano A, Lalli T, Tennant JN, Martin K, Santrock RD. The Triplanar Hallux Abducto Valgus Classification System: Is it Valid? J Foot Ankle Surg. 2023 Dec 15:S1067-2516(23)00318-6. doi: 10.1053/j.jfas.2023.12.003. Epub ahead of print. PMID: 38104889.

4. Paranjape CS, Zhang J, Lalli T, Lin FC, Tennant JN. Radiographic and Patient-Reported Outcomes of a Low-Cost Modified Lapidus Bunion Correction Technique. *Foot Ankle Orthop.* 2023 Sep 28;8(3):24730114231200482. doi: 10.1177/24730114231200482. PMID: 37786608; PMCID: PMC10541767.
5. Wikstrom EA, Song K, Tennant JN, Pietrosimone B. Gait Biomechanics and Balance Associate with Talar and Subtalar T1p Relaxation Times in Those with Chronic Ankle Instability. *Med Sci Sports Exerc.* 2022 Jun 1;54(6):1013-1019. doi: 10.1249/MSS.0000000000002867. Epub 2022 Jan 25. PMID: 35576137.
6. Song K, Pietrosimone B, Blackburn JT, Padua DA, Tennant JN, Wikstrom EA. Mechanical and Sensorimotor Outcomes Associate with Talar Cartilage Deformation Following Static Loading in Those with Chronic Ankle Instability. *J Athl Train.* 2022 Apr 27. doi: 10.4085/1062-6050-0520.21. Epub ahead of print. PMID: 35476021.
7. Song K, Pietrosimone B, Blackburn JT, Padua DA, Tennant JN, Wikstrom EA. Dorsiflexion and Hop Biomechanics Associate with Greater Talar Cartilage Deformation in Those with Chronic Ankle Instability. *Med Sci Sports Exerc.* 2022 Jul 1;54(7):1176-1182. doi: 10.1249/MSS.0000000000002902. Epub 2022 Apr 7. PMID: 35389946.
8. Paranjape CS, Lalli T, Tennant JN. Are Outcomes Following Crossed Lag-Screw Modified Lapidus Technique for Hallux Abductovalgus Comparable to Plate-Screw Fixation Technique? A Study of Costs, Radiographic and Patient Reported Outcomes. *Foot Ankle Orthop.* 2022;7(1):2473011421S00387. Published 2022 Jan 21. doi:10.1177/2473011421S00387
9. Padovano AG, Lalli T, Tennant JN, Martin KD, Santrock RD. The Triplanar Hallux Abducto Valgus Classification System: Is it Valid?. *Foot Ankle Orthop.* 2022;7(1):2473011421S00384. Published 2022 Jan 21. doi:10.1177/2473011421S00384
10. Song K, Pietrosimone B, Blackburn JT, Padua DA, Tennant JN, Wikstrom EA. Acute Talar Cartilage Deformation in Those with and without Chronic Ankle Instability. *Med Sci Sports Exerc.* 2021 Jun 1;53(6):1228-1234. doi: 10.1249/MSS.0000000000002572. PMID: 33986229.
11. Song K, Pietrosimone B, Tennant JN, Nissman DB, Dederer KM, Paranjape C, Wikstrom EA. Talar and Subtalar T1p Relaxation Times in Limbs with and without Chronic Ankle Instability. *Cartilage.* 2021 Feb 15:1947603521994626. doi: 10.1177/1947603521994626. Epub ahead of print. PMID: 33588577.
12. Carpenter, D., Dederer, K., Weinhold, P., & Tennant, J. N. (2020). Clinical Outcomes and Cadaveric Biomechanical Analysis of Endoscopic Percutaneous Achilles Tendon Rupture Repair With Absorbable Suture. *Foot & Ankle Orthopaedics.* <https://doi.org/10.1177/2473011420965967>
13. Song K, Wikstrom EA, Tennant JN, Guskiewicz KM, Marshall SW, Kerr ZY. 2019. Osteoarthritis prevalence in retired national football league players with a history of ankle injuries. *J Athl Train*, 54(11):1165-1170.

14. Dederer KM, Tennant JN. 2019. Anatomical and functional considerations in achilles tendon lesions. *Foot Ankle Clin*, 24(3);371-385.
15. Wikstrom EA, Song K, Tennant JN, Dederer KM, Paranjape C, Pietrosimone B. 2019. T1p MRI of the talar articular cartilage is increased in those with chronic ankle instability. *Osteoarthritis Cartilage*. 27(4):646-649. doi: 10.1016/j.joca.2018.12.019.
16. Casp AJ, Patterson BM, Yarboro SR, Tennant JN. 2018. The effect of time during the academic year or resident training level on complication rates after lower-extremity orthopaedic trauma procedures. *J Bone Joint Surg Am*. 100(22):1919-1925. doi 10.2106/JBJS.18.00279.
17. Haddix KP, Clement RC 3rd, Tennant JN, Ostrum RF. 2018. Complications following operatively treated ankle fractures in insulin- and non-insulin-dependent diabetic patients. *Foot Ankle Spec*. 1:1938640017714867.
18. Jernigan EW, Tennant JN, Esther RJ. 2018. Not all patients undergoing stabilization of impending pathologic fractures for renal cell carcinoma metastases to the femur need preoperative embolization. *Clin Orthop Relat Res*. 476(3):529-534.
19. Rungprai C, Tennant JN, Gentry RD, Phisitkul P. 2017. Management of osteochondral lesions of the talar dome. *Open Orthop J*. 11:743-761.
20. Clement RC, Lang PJ, Pettett BJ, Overman RA, Ostrum RF, Tennant JN. 2017. Sanders II/III calcaneus fractures in laborers: a cost-effectiveness analysis and call for effectiveness research. *J Ortho Trauma*. 31(6):299-304.
21. Patterson BM, Eskildsen SM, Clement RC, Lin FC, Olcott CW, Del Gaizo DJ, Tennant JN. 2016. Patient satisfaction is associated with time with provider but not clinic wait time among orthopedic patients. *Ortho*. 40(1):43-48. doi: 10.3928/01477447-20161013-05.
22. Veljkovic A, Tennant J, Rungprai C, Abbas KZ, Phisitkul P. 2017. An anatomic study of percutaneous endoscopically assisted calcaneal osteotomy technique to correct hindfoot malalignment. *Foot Ankle Int*. 38(2):192-199.
23. Avery M, Tennant J. 2016. Surgeons become cinematographers: options for producing intraoperative, high-definition education videos. *AAOSNow*. 10(11):6-7.
24. Clement RC, Haddix KP, Creighton RA, Spang JT, Tennant JN, Kamath GV. 2016. Risk factors for infection after knee arthroscopy: analysis of 595,083 cases from 3 United States databases. *Arthroscopy*. 32(12):2556-256.
25. Schumer, R. A., Guetschow, B., Ripoli, M. V., Tennant, J. N., Gardner, S., Phisitkul, P., & Femino, J. (2016). Conservative Sharp Wound Debridement by Nurses in the Outpatient Management of Diabetic Foot Ulcers: Safety, Efficacy, and Economic Analysis. *Foot & Ankle Orthopaedics*. <https://doi.org/10.1177/2473011416S00077>

26. Goetz JE, Rungrai C, Tennant JN, Huber E, Uribe B, Femino J, Phisitkul P, Amendola A. 2016. Variable volumes of resected bone resulting from different total ankle arthroplasty systems. *Foot Ankle Int.* 37(8):898-904.
27. Rungprai C, Tennant JN, Phisitkul P. 2015. Disorders of the flexor hallucis longus and os trigonum. *Clin Sports Med.* 34(4): 741-59.
28. Clement RC, Eskildsen SM, Tennant JN. 2015. Technical tip and cost analysis for lesser toe plantar plate Repair with curved suture needle. *Foot Ankle Int.* 36(3): 330-4.
29. Tennant JN, Amendola A, Phisitkul P. 2014. Endoscopic gastrocnemius release. *Foot Ankle Clin.* 19(4): 787-93.
30. Tennant JN, Rungprai C, Phisitkul P. 2014. Bilateral anterior tarsal tunnel syndrome variant secondary to extensor hallucis brevis muscle hypertrophy in a ballet dancer: A case report. *Foot Ankle Surg.* 20(4): e56-e58.
31. Tennant JN, Carmont M, Phisitkul P. 2014. Calcaneus osteotomy. *Curr Rev Musculoskeletal Med.* 7(4): 271-276.
32. Tennant JN, Rungprai C, Pizzimenti MA, Goetz J, Phisitkul P, Femino J, Amendola A. 2014. Risks to the blood supply of the talus after four methods of total ankle arthroplasty: A cadaveric injection study. *J Bone Joint Surg.* 96(5): 359-402.
33. Phisitkul P, Tennant JN, Amendola A. 2013. Is there any value to arthroscopic debridement of ankle osteoarthritis and impingement? *Foot and Ankle Clinics.* 18(3): 449-58.
34. Tennant JN, Veljkovic A, Phisitkul P. 2013. Technique tip. Percutaneous endoscopically-assisted calcaneal slide osteotomy. *Iowa Orthop J.* 33: 191-5. PMID: 24027482
35. Tennant JN, Shankar V, Dirschl DR. 2013. Reliability and validity of a mobile phone for radiographic assessment of ankle injuries: a randomized inter- and intraobserver agreement study. *Foot Ankle Int.* 34(2): 228-33.
36. Bushnell BD, Tennant JN, Rubright JH, Creighton RA. 2008. Repair of patellar tendon rupture using suture anchors. *J Knee Surg.* 21(2): 122-9.

Digital Forms

1. Tennant JN, Watson. Posted 2014. Improving Your Coding: Advice and Resources. American Foot and Ankle Society InStride Article. http://www.aofas.org/publications/InStride%20Documents/2014_Fall_InStride.pdf.
2. Tennant JN, Femino JE. Posted 2013. In shoe Orthotics. American Orthopaedic Foot and Ankle Society Foot Care MD Patient Education website. (Web page no longer available).

Posters and Presentations

International Presentations

Tennant, JN. Managing Complications in Total Ankle Arthroplasty. 24 Hour Global Foot and Ankle Course. Virtual course. 4/12/2024.

Tennant JN. Surgical Considerations for Treatment of Lateral Ankle Instability. Keynote speaker. International Ankle Symposium. Chapel Hill, NC. 9/16/17.

Schumer RA, Guetschow B, Ripoli MV, Tennant JN, Gardner S, Phisitkul P, Femino J. Conservative Sharp Wound Debridement by Nurses in the Outpatient Management of Diabetic Foot Ulcers: Safety, Efficacy, and Economic Analysis. Presentation, American Orthopaedic Foot & Ankle Society. Toronto, Canada. 7/23/2016

Vosseller JT, Tennant JN. Scientific Paper Session 4 – Ankle Arthritis. Moderator. American Orthopaedic Foot & Ankle Society. Toronto, Canada. 7/21/2016.

National Presentations

Padovano, A. G., Lalli, T., Tennant, J. N., Martin, K. D., & Santrock, R. D. (2022). The Triplanar Hallux Abducto Valgus Classification System: Is it Valid? E-poster. Annual Meeting of American Orthopaedic Foot and Ankle Society, Charlotte, NC, 9/2020.

Paranjape CS, Lalli T, Tennant JN. Are Outcomes Following Crossed Lag-Screw Modified Lapidus Technique for Hallux Abductovalgus Comparable to Plate-Screw Fixation Technique? A Study of Costs, Radiographic and Patient Reported Outcomes. E-poster. Annual Meeting of American Orthopaedic Foot and Ankle Society, Charlotte, NC, 9/2020.

Dederer K, Carpenter D, Tennant JN. Endoscopically Assisted Percutaneous Achilles Tendon Repair with Absorbable Suture: A Biomechanical and Clinical Pilot. E-poster. Annual Meeting of American Orthopaedic Foot and Ankle Society, Chicago, IL. 9/11-14/2019.

Lee A, Tennant JN. Implementing Custom Web Interfaces and Integrations into REDCap. Poster. AMIA Annual Symposium. San Francisco, CA. November 3-7, 2018.

Tennant JN. Controversies in Foot Ankle Arthroscopy and Sports Medicine: Solutions and Outcomes. Arthroscopy Association of North America. Chicago, IL. 9/8/17-9/10/17.

Clement RC, Lang p, Overman R, Ostrum R, Tennant JN. Is Calcaneal Fracture Treatment Worth the Cost? A Cost Effectiveness Model of Four Treatment Methods. Presentation, Annual Meeting of American Orthopaedic Surgeons. Orlando, FL. 3/4/16.

Rungprai C, Phisitkul P, Femino JE, Tennant JN, Amendola A. Fixed Bearing versus Mobile Bearing Total Ankle Replacement: A Comparative Study. Presentation, Annual Meeting of American Orthopaedic Foot and Ankle Society and International Federation of Foot and Ankle Surgeons, Chicago, IL. 9/19-23/2014.

Tennant JN, Viswanathan S, Dirschl DR. Reliability and Validity of a Mobile Phone for Radiographic Assessment of Ankle Injuries: A Randomized Inter- and Intraobserver Agreement Study. Poster. American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, IL. 3/19-23/2013.

Tennant JN, Rungprai C, Pizzimenti M, Goetz J, Phisitkul P, Femino JE, Amendola A. Risks to the Blood Supply of the Talus after Four Methods of Total Ankle Arthroplasty: A Cadaveric Injection Study. Poster. Annual Meeting of American Orthopaedic Foot and Ankle Society, Hollywood, FL. 7/16-20/2013.

Tennant JN, Veljkovic A, Phisitkul P. Technique Tip: Percutaneous Endoscopically-Assisted Calcaneal Slide Osteotomy. Poster, Annual Meeting of American Orthopaedic Foot and Ankle Society, Hollywood, FL. 7/16-20/2013.

Tennant JN, Viswanathan S, Dirschl DR. Reliability and Validity of a Mobile Phone for Radiographic Assessment of Ankle Injuries: A Randomized Inter- and Intraobserver Agreement Study. Podium Presentation. North Carolina Orthopaedic Association Annual Meeting, Kiawah Island, SC. 10/8-9/2011.

Parekh SG, Hewitt J, Tennant JN, May R. Cost Effectiveness of a New Ankle Fracture System. Poster presentation. Annual Summer Meeting of the American Orthopaedic Foot & Ankle Society, 7/7-10/2010.

Regional Presentations

Tennant JN. Lateral Ankle Instability Challenges. Podium presentation. Extremity Summit at the Greenbrier. White Sulphur Springs, WV. 6/2-4/2023.

Clement RC, Tennant JN. Cost Effectiveness Analysis of Four Treatment Options for Displaced Intraarticular Calcaneus Fractures. Oscar Miller Day Symposium. Charlotte, NC. 10/30/2015.

Local Presentations

Tennant JN. How to Communicate with MDs. Presentation UNC Coders. Chapel Hill, NC. 4/5/16.

Teaching Activities

UNC

Institute for Healthcare Quality Improvement Faculty, September 2024-

Lab. Cadaveric ankle and foot dissection. Department of Family Medicine. UNC Sports Medicine Fellowship. Instructor. Annually October 2014-present.

Lecture. Ankle sports injuries. Department of Family Medicine. UNC Sports Medicine. Lunch lecture. Annually 2014-present.

MSK Course. UNC School of Medicine. Instructor. 5/23-5/28/2019.

MSK Course. UNC School of Medicine. Instructor. 5/10-5/18/2018.

MSK Course. UNC School of Medicine. Instructor. 11/1-11/13/2017.

MSK Course. UNC School of Medicine. Instructor. 11/5-11/16/2015.

MSK Course. UNC School of Medicine. Instructor. 04/16-4/30/2015.

MSK Course. UNC School of Medicine. Instructor. 4/17-5/1/2014.

Foot and Ankle Core Curriculum Lectures; Cadaver and Skills Lab Instruction, UNC Orthopaedic Residency, 5-10 lectures per year, 8/2013-present.

PhD dissertation advisor: Adam Lee, UNC Health Informatics, 2019-2020.

PhD dissertation advisor: Kyeontak Song, UNC Exercise and Sports Science, 2017- 5/2019.

PhD dissertation advisor: Jaeho Jang, UNC Exercise and Sports Science, 2021- 2023.

Outside UNC

Associate Faculty, Foot and Ankle Course. Arthroscopic Association of North America, Chicago, IL, 6/28-6/29/2019.

Associate Faculty, Foot and Ankle Course. Arthroscopic Association of North America, Chicago, IL, 10/5-10/6/2018.

Associate Faculty Foot and Ankle Course. Arthroscopic Association of North America, Chicago, IL, 9/8-9/9/2017.

Professional Service

To Discipline

Reviewer, Foot and Ankle International 2015 – Current.

Reviewer, Journal of Bone and Joint Surgery 2019 - Current.

Program committee, International Ankle Symposium, Chapel Hill, NC, 9/15/17 -9/17/17.

American Orthopaedic Foot and Ankle Society CPT/RUC Coding Committee Member, 2014-2017.

American Orthopaedic Foot and Ankle Society Fellowship Committee, 2019-2021

Within UNC Chapel Hill

UNC Epic Surgeon Improvement Group, 2017 – 2021.

UNC Orthopaedics Outpatient Leadership Committee, 2016 – 2019.

UNC Orthopaedics Documentation, Coding, and Compliance Committee – Chair – 2019 - 2022

UNC Orthopaedics Clinical Competency Committee – 2019 – present

Weaver Crossing Clinic Medical Director, 2016 – 2019.

UNC Hospitals Credentialing Committee Member, 2015 – 2019.

Epic Certified Physician Builder, 2014 – present.

Community

Samaritan Health Center Orthopaedic Free Clinic, Durham, NC --Faculty advisor and clinic attending, bimonthly, 6/2014-present.