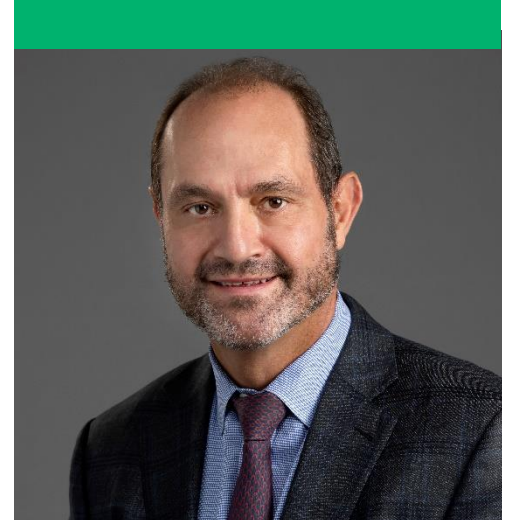




Frank M. Phillips, MD

The Ronald L. DeWald, MD, Professor of Spinal Deformities



Advancement of Medicine

Rush remains a national leader in spinal deformity and minimally invasive spine surgery. Minimally invasive procedures and techniques we have pioneered have become widely adopted in spinal surgery, such as the use of augmented reality. We have now developed an artificial intelligence program studying applications in spinal deformity surgery and predicting outcomes. We have initiated translational research studies into the gut biome and how it might affect low back pain and disc degeneration, adjacent segment disease and spondylolisthesis. Members of the section have published and lectured extensively in these areas nationally and internationally.

Research

These funds have assisted numerous research efforts, including supporting basic scientists, support staff, publication submission and meeting participation.

Grants

The basic science research pilot studies supported by the endowment have been productive leading to funding of additional projects by the National Institutes of Health. The research performed and manuscripts published because of the endowment have enabled support for additional studies on spinal devices and procedures including supporting our involvement in multicenter studies.

Selected Publications

- Nguyen AQ, Harvey JP, Federico VP, Nolte MT, Khanna K, Gandhi SD, Sheha ED, Colman MW, Phillips FM. The Effect of Changes in Segmental Lordosis on Global Lumbar and Adjacent Segment Lordosis After L5-S1 Anterior Lumbar Interbody Fusion. *Global Spine J.* 15(1):112-120 2025
- Basques BA, Gandhi SD, Rudisill SS, Perez-Albela A, Phillips FM. Degenerative disc disease and isthmic spondylolisthesis have similar outcomes after L5-S1 anterior lumbar interbody fusion. *J Clin Neurosci.* 2025 Jun;136:111207. doi: 10.1016/j.jocn.2025.111207. Epub 2025 Mar 28. PMID: 40156989.
- Lee MY, Shahzad H, Singh VK, Price RL, Phillips FM, Khan SN. S2 Alar-Iliac Screw Insertion Safety With Augmented Reality-Assisted Surgical Navigation. *J Am Acad Orthop Surg Glob Res Rev.* 2025 Apr 1;9(4):e25.00012. doi: 10.5435/JAAOSGlobal-D-25-00012. PMID: 40184583; PMCID: PMC11964378.
- Sullivan TB, Ordaz A, Phillips FM. Lateral Transpsoas Interbody Fusion. *Int J Spine Surg.* 2025 Feb 24;19(S1):S7-S18. doi: 10.14444/8711. PMID: 39773399; PMCID: PMC12052935.
- Shilo Y, Phillips FM, Witham TF, Poelstra K, Hodeda L, Stavsky M. Generating a Synthetic Lumbar CT from a Standard MRI Protocol. *Journal of Clinical Medicine.* 2025; 14(8):2809. <https://doi.org/10.3390/jcm14082809>
- Bhale R, Shahzad H, Price R, Ray WZ, Phillips F, Le HV, Javidan Y, Khan SN. The Role of Enabling Technologies in the Surgical Management of Cervical Spine Deformity. *Clin Spine Surg.* 2025 Nov 1;38(9):459-465. doi: 10.1097/BSD.0000000000001938. Epub 2025 Oct 6. PMID: 41166597.

The Year Ahead: 2026 and Beyond

We will be prioritizing advancement of our AI program with a focus on spinal disorders and surgery and specifically on spinal deformity.

We continue to expand the spine section with the recruitment of a deformity-focused spinal surgeon **Nate Lee, MD**, who trained under **Larry Lenke, MD**, at Columbia who is developing a robust



deformity practice. Dr. Lee has over 150 publications, the majority of which are focused on spinal deformity. We have also recruited **Dan Park, MD**, a prominent spine surgeon with significant deformity experience, to join our practice starting January 2026. The endowment will be used to collaborate with these surgeons on their research efforts.

With Gratitude

I want to sincerely thank Dr. DeWald for the support provided by the endowed professorship of spinal deformities. Your generosity has helped our section continue your proud legacy of advancing the field of spinal surgery and providing better outcomes for our patients. The support from this endowment allows us to remain one of the most highly regarded spine programs in the nation.