

# Stanford

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## Todd Alamin, MD

Professor of Orthopaedic Surgery

### CLINICAL OFFICES

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### ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

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### Bio

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#### CLINICAL FOCUS

- Minimally Invasive Spine Surgery
- Cervical Spine Surgery
- Spinal Tumor Surgery
- Spinal Deformity Surgery
- Orthopaedic Surgery

#### ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Orthopaedic Surgery

#### PROFESSIONAL EDUCATION

- Medical Education: Yale School Of Medicine (1995) CT
- Fellowship: Stanford University Spine Fellowship (2001) CA
- Residency: UCSD Orthopaedic Surgery (2000) CA
- Internship: UCSD Surgery Residency (1996) CA
- Board Certification: Orthopaedic Surgery, American Board of Orthopaedic Surgery (2003)

#### LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

### Research & Scholarship

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#### CLINICAL TRIALS

- Study Comparing Local/ MAC Anesthesia in Lumbar Decompression, Recruiting

## Publications

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### PUBLICATIONS

- **Patient-Level Payment Patterns Prior to Single Level Lumbar Decompression are Associated with Resource Utilization, Postoperative Payments, and Adverse Events.** *The spine journal : official journal of the North American Spine Society*  
Koltsov, J. C., Sambare, T. D., Alamin, T. F., Wood, K. B., Cheng, I., Hu, S. S.  
2022
- **Need of vascular surgeon and comparison of value for anterior lumbar interbody fusion (ALIF) in lateral decubitus: Delphi consensus.** *European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society*  
Menezes, C. M., Alamin, T., Amaral, R., Carvalho, A. D., Diaz, R., Guiroy, A., Lam, K. S., Lamartina, C., Perez-Contreras, A., Rivera-Colon, Y., Smith, W., Taboada, N., Timothy, et al  
2022
- **Healthcare Resource Utilization and Costs Two Years Pre and Post Lumbar Spine Surgery for Stenosis: A National Claims Cohort Study of 22,182 Cases.** *The spine journal : official journal of the North American Spine Society*  
Koltsov, J. C., Sambare, T. D., Alamin, T. F., Wood, K. B., Cheng, I., Hu, S. S.  
2022
- **Rod-Screw Constructs Composed of Dissimilar Metals Do Not Affect Complication Rates in Posterior Fusion Surgery Performed for Adult Spinal Deformity.** *Clinical spine surgery*  
Denduluri, S. K., Koltsov, J. C., Ziino, C. n., Segovia, N. n., McMains, C. n., Falakassa, J. n., Ratliff, J. n., Wood, K. B., Alamin, T. n., Cheng, I. n., Hu, S. S.  
2021; 34 (2): E121–E125
- **Advanced Age Does Not Impact Outcomes After 1-level or 2-level Lateral Lumbar Interbody Fusion.** *Clinical spine surgery*  
Wadhwa, H., Oquendo, Y. A., Tigchelaar, S. S., Warren, S. I., Koltsov, J. C., Desai, A., Veeravagu, A., Alamin, T. F., Ratliff, J. K., Hu, S. S., Cheng, I.  
2021
- **Rod-Screw Constructs Composed of Dissimilar Metals Do Not Affect Complication Rates in Posterior Fusion Surgery Performed for Adult Spinal Deformity.** *Clinical spine surgery*  
Denduluri, S. K., Koltsov, J. C., Ziino, C., Segovia, N., McMains, C., Falakassa, J., Ratliff, J., Wood, K. B., Alamin, T., Cheng, I., Hu, S. S.  
2020
- **Preoperative epidural steroid injections are not associated with increased rates of infection and dural tear in lumbar spine surgery.** *European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society*  
Koltsov, J. C., Smuck, M. W., Alamin, T. F., Wood, K. B., Cheng, I., Hu, S. S.  
2020
- **Subacute Minimally Invasive Decompression of L5 and S1 Nerve Roots for Neurologic Deficit After Fixation of Unstable Pelvic Fracture: A Case Report and Review of the Literature.** *JBJS case connector*  
Warren, S., Gardner, M., Alamin, T.  
2020; 10 (3): e1900638
- **Remote Virtual Spinal Evaluation in the Era of COVID-19** *INTERNATIONAL JOURNAL OF SPINE SURGERY*  
Yoon, J. W., Welch, R. L., Alamin, T., Lavelle, W. F., Cheng, I., Perez-Cruet, M., Fielding, L. C., Sasso, R. C., Linovitz, R. J., Kim, K. D., Welch, W. C.  
2020; 14 (3): 433–40
- **Local anesthetic with sedation is a viable alternative to general anesthesia for lumbar spinal decompressions: A retrospective cohort feasibility study and short-term analysis of outcomes** *CURRENT ORTHOPAEDIC PRACTICE*  
Ziino, C., Guzman, R. A., Koltsov, J., Montgomery, B. K., McMains, C., Alamin, T.  
2020; 31 (3): 252–57
- **Timing of Lumbar Spinal Fusion Affects Total Hip Arthroplasty Outcomes.** *Journal of the American Academy of Orthopaedic Surgeons. Global research & reviews*  
Bala, A., Chona, D. V., Amanatullah, D. F., Hu, S. S., Wood, K. B., Alamin, T. F., Cheng, I.  
2019; 3 (11): e00133
- **Short-Term Outcomes of Staged Versus Same-Day Surgery for Adult Spinal Deformity Correction.** *Spine deformity*

- Arzeno, A. H., Koltsov, J., Alamin, T. F., Cheng, I., Wood, K. B., Hu, S. S.  
2019; 7 (5): 796-804
- **Short-Term Outcomes of Staged Versus Same-Day Surgery for Adult Spinal Deformity Correction.** *Spine deformity*  
Arzeno, A. H., Koltsov, J., Alamin, T. F., Cheng, I., Wood, K. B., Hu, S. S.  
2019; 7 (5): 796
  - **Correction to: Intervertebral disc penetration by antibiotics used prophylactically in spinal surgery: implications for the current standards and treatment of disc infections.** *European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society*  
Capoor, M. N., Lochman, J., McDowell, A., Schmitz, J. E., Solansky, M., Zapletalova, M., Alamin, T. F., Coscia, M. F., Garfin, S. R., Jancalek, R., Ruzicka, F., Shamie, A. N., Smrcka, et al  
2019
  - **The Relationship Between Lumbar Lateral Listhesis and Radiculopathy in Adult Scoliosis.** *Spine*  
Kleimeyer, J. P., Liu, N. n., Hu, S. S., Cheng, I. n., Alamin, T. n., Grottkau, B. E., Kukreja, S. n., Wood, K. B.  
2019; 44 (14): 1003-9
  - **Intervertebral disc penetration by antibiotics used prophylactically in spinal surgery: implications for the current standards and treatment of disc infections.** *European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society*  
Capoor, M. N., Lochman, J., McDowell, A., Schmitz, J. E., Solansky, M., Zapletalova, M., Alamin, T. F., Coscia, M. F., Garfin, S. R., Jancalek, R., Ruzicka, F., Shamie, A. N., Smrcka, et al  
2018
  - **Selective Anterior Lumbar Interbody Fusion for Low Back Pain Associated With Degenerative Disc Disease Versus Nonsurgical Management** *SPINE*  
Kleimeyer, J. P., Cheng, I., Alamin, T. F., Hu, S. S., Cha, T., Yanamadala, V., Wood, K. B.  
2018; 43 (19): 1372-80
  - **The effect of standing vs. variants of the seated position on lumbar intersegmental angulation and spacing: a radiographic study of 20 asymptomatic subjects.** *Journal of spine surgery (Hong Kong)*  
Alamin, T. F., Agarwal, V., Zagel, A., Qeli, A.  
2018; 4 (3): 509-15
  - **Improved biomechanics of two alternative kyphoplasty cementation methods limit vertebral recollapse.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*  
Alamin, T., Kleimeyer, J. P., Woodall, J. R., Agarwal, V., Don, A., Lindsey, D.  
2018
  - **Lumbar Epidural Steroid Injections for Herniation and Stenosis: Incidence and Risk Factors of Subsequent Surgery.** *The spine journal : official journal of the North American Spine Society*  
Koltsov, J. C., Smuck, M. W., Zagel, A., Alamin, T. F., Wood, K. B., Cheng, I., Hu, S. S.  
2018
  - **Answer to the letter to the editor of MN Capoor et al. concerning "Ribosomal PCR assay of excised intervertebral discs from patients undergoing single-level primary lumbar microdiscectomy" by Alamin TF, Munoz M, Zagel A, et al.: Eur Spine J; 2017 EUROPEAN SPINE JOURNAL**  
Alamin, T., Munoz, M., Zagel, A., Budvytiene, I., Banaei, N.  
2018; 27 (2): 518-19
  - **Treatment of Degenerative Lumbar Spondylolisthesis With Fusion or Decompression Alone Results in Similar Rates of Reoperation at 5 Years.** *Clinical spine surgery*  
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2018; 31 (1): E74-E79
  - **Does timing of transplantation of neural stem cells following spinal cord injury affect outcomes in an animal model?** *Journal of spine surgery (Hong Kong)*  
Cheng, I., Park, D. Y., Mayle, R. E., Githens, M., Smith, R. L., Park, H. Y., Hu, S. S., Alamin, T. F., Wood, K. B., Kharazi, A. I.  
2017; 3 (4): 567-71
  - **Ribosomal PCR assay of excised intervertebral discs from patients undergoing single-level primary lumbar microdiscectomy.** *European spine journal*  
Alamin, T. F., Munoz, M., Zagel, A., Ith, A., Carragee, E., Cheng, I., Scuderi, G., Budvytiene, I., Banei, N.  
2017

- **Predicting complication risk in spine surgery: a prospective analysis of a novel risk assessment tool.** *Journal of neurosurgery. Spine*  
Veeravagu, A., Li, A., Swinney, C., Tian, L., Moraff, A., Azad, T. D., Cheng, I., Alamin, T., Hu, S. S., Anderson, R. L., Shuer, L., Desai, A., Park, et al  
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- **Propionibacterium acnes biofilm is present in intervertebral discs of patients undergoing microdiscectomy** *PLOS ONE*  
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2017; 12 (4)
- **Intervertebral disc/bone marrow cross-talk with Modic changes.** *European spine journal*  
Dudli, S., Sing, D. C., Hu, S. S., Berven, S. H., Burch, S., Deviren, V., Cheng, I., Tay, B. K., Alamin, T. F., Ith, M. A., Pietras, E. M., Lotz, J. C.  
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- **Prevalence of Propionibacterium acnes in Intervertebral Discs of Patients Undergoing Lumbar Microdiscectomy: A Prospective Cross-Sectional Study.** *PloS one*  
Capoor, M. N., Ruzicka, F., Machackova, T., Jancalek, R., Smrcka, M., Schmitz, J. E., Hermanova, M., Sana, J., Michu, E., Baird, J. C., Ahmed, F. S., Maca, K., Lipina, et al  
2016; 11 (8)
- **Sacral spinous processes: a morphologic classification and biomechanical characterization of strength** *SPINE JOURNAL*  
Wang, T., Fielding, L. C., Parikh, A., Kothari, M., Alamin, T.  
2015; 15 (12): 2544-2551
- **Decompression and paraspinous tension band: a novel treatment method for patients with lumbar spinal stenosis and degenerative spondylolisthesis.** *spine journal*  
Gibson, J. N., Depreitere, B., Pflugmacher, R., Schnake, K. J., Fielding, L. C., Alamin, T. F., Goffin, J.  
2015; 15 (3): S23-32
- **Decompression and paraspinous tension band: a novel treatment method for patients with lumbar spinal stenosis and degenerative spondylolisthesis** *SPINE JOURNAL*  
Gibson, J. N., Depreitere, B., Pflugmacher, R., Schnake, K. J., Fielding, L. C., Alamin, T. F., Goffin, J.  
2015; 15 (3): 23S-32S
- **Compressive preload reduces segmental flexion instability after progressive destabilization of the lumbar spine.** *Spine*  
Fry, R. W., Alamin, T. F., Voronov, L. I., Fielding, L. C., Ghanayem, A. J., Parikh, A., Carandang, G., McIntosh, B. W., Havey, R. M., Patwardhan, A. G.  
2014; 39 (2): E74-81
- **Parametric and cadaveric models of lumbar flexion instability and flexion restricting dynamic stabilization system** *EUROPEAN SPINE JOURNAL*  
Fielding, L. C., Alamin, T. F., Voronov, L. I., Carandang, G., Havey, R. M., Patwardhan, A. G.  
2013; 22 (12): 2710-2718
- **Does the presence of the fibronectin-aggrecan complex predict outcomes from lumbar discectomy for disc herniation?** *The spine journal : official journal of the North American Spine Society*  
Smith, M. W., Ith, A., Carragee, E. J., Cheng, I., Alamin, T. F., Golish, S. R., Mitsunaga, K., Scuderi, G. J., Smuck, M.  
2013
- **Failure strength of lumbar spinous processes loaded in a tension band model** *JOURNAL OF NEUROSURGERY-SPINE*  
Golish, S. R., Fielding, L., Agarwal, V., Buckley, J., Alamin, T. F.  
2012; 17 (1): 69-73
- **Morbidity and Mortality of C2 Fractures in the Elderly: Surgery and Conservative Treatment** *NEUROSURGERY*  
Chen, Y., Boakye, M., Arrigo, R. T., Kalanithi, P. S., Cheng, I., Alamin, T., Carragee, E. J., Mindea, S. A., Park, J.  
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- **Charlson Score is a Robust Predictor of 30-Day Complications Following Spinal Metastasis Surgery** *SPINE*  
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2011; 36 (19): E1274-E1280

- **Bacteriologic Culture of Excised Intervertebral Disc From Immunocompetent Patients Undergoing Single Level Primary Lumbar Microdiscectomy** *JOURNAL OF SPINAL DISORDERS & TECHNIQUES*  
Agarwal, V., Golish, S. R., Alamin, T. F.  
2011; 24 (6): 397-400
- **Provocative lumbar discography versus functional anesthetic discography: a comparison of the results of two different diagnostic techniques in 52 patients with chronic low back pain** *SPINE JOURNAL*  
Alamin, T. F., Kim, M. J., Agarwal, V.  
2011; 11 (8): 756-765
- **Predictors of Survival After Surgical Treatment of Spinal Metastasis** *NEUROSURGERY*  
Arrigo, R. T., Kalanithi, P., Cheng, I., Alamin, T., Carragee, E. J., Mindea, S. A., Park, J., Boakye, M.  
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- **Gluteal-Sparing Approach for Posterior Iliac Crest Bone Graft Description of a New Technique and Assessment of Morbidity in Ninety-Two Patients After Spinal Fusion** *SPINE*  
Merritt, A. L., Spinnicke, A., Pettigrew, K., Alamin, T. F.  
2010; 35 (14): 1396-1400
- **Facet Pain in Thoracic Compression Fractures** *PAIN MEDICINE*  
Mitra, R., Do, H., Alamin, T., Cheng, I.  
2010; 11 (11): 1674-1677
- **Lumbar intersegmental spacing and angulation in the modified lateral decubitus position versus variants of prone positioning** *SPINE JOURNAL*  
Agarwal, V., Wildstein, M., Tillman, J. B., Pelkey, W. L., Alamin, T. F.  
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- **Lumbar Tumor Resections and Management** *ORTHOPEDIC CLINICS OF NORTH AMERICA*  
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Carragee, E., Alamin, T., Cheng, I., Franklin, T., van den Haak, E., Hurwitz, E.  
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- **Surgical treatment for unstable low-grade isthmic spondylolisthesis in adults: a prospective controlled study of posterior instrumented fusion compared with combined anterior-posterior fusion.** *spine journal*  
Swan, J., Hurwitz, E., Malek, F., van den Haak, E., Cheng, I., Alamin, T., Carragee, E.  
2006; 6 (6): 606-614
- **Vertebroplasty versus kyphoplasty: Biomechanical behavior under repetitive loading conditions** *SPINE*  
Kim, M. J., Lindsey, D. P., Hannibal, M., Alamin, T. F.  
2006; 31 (18): 2079-2084
- **A gold standard evaluation of the "discogenic pain" diagnosis as determined by provocative discography** *SPINE*  
Carragee, E. J., Lincoln, T., Parmar, V. S., Alamin, T.  
2006; 31 (18): 2115-2123
- **Comparison of minimally invasive and conventional open posterolateral lumbar fusion using magnetic resonance imaging and retraction pressure studies** *JOURNAL OF SPINAL DISORDERS & TECHNIQUES*  
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Carragee, E. J., Spinnickie, A. O., Alamin, T. F., Paragioudakis, S.  
2006; 31 (6): 653-657
- **Low-pressure positive discography in subjects asymptomatic of significant low back pain illness** *SPINE*  
Carragee, E. J., Alamin, T. F., Carragee, J. M.  
2006; 31 (5): 505-509
- **The monotonic and fatigue properties of osteoporotic thoracic vertebral bodies** *SPINE*  
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- **Prospective controlled study of the development of lower back pain in previously asymptomatic subjects undergoing experimental discography** *SPINE*  
Carragee, E. J., Barcohana, B., Alamin, T., van den Haak, E.  
2004; 29 (10): 1112-1117
- **Provocative discography in volunteer subjects with mild persistent low back pain.** *spine journal*  
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- **Preossified longitudinal epiphyseal bracket of the foot: Treatment by partial bracket excision before ossification** *JOURNAL OF PEDIATRIC ORTHOPAEDICS*  
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2001; 21 (3): 360-365