

Mark S. Eskander

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EMPLOYMENT

Spine Surgeon
Delaware Orthopedic Specialists, Newark, DE 2014-present
Christiana Spine Consultants, Newark, DE 2012-14

TEACHING

University of Delaware, Department of Physical Therapy, Affiliate Assistant Professor

EDUCATION

Board Certified	American Board of Orthopaedic Surgery, 7/2015 - present
Spine Surgery Fellow	University of Pittsburgh Orthopedics, Pittsburgh PA, 8/2011- 7/2012
Orthopedic Resident	University of Massachusetts Orthopedics, Worcester MA, 7/2006- 6/2011
Surgical Intern	University of Massachusetts General Surgery, Worcester MA, 7/2005- 6/2006
M.D.	Tufts University School of Medicine, Boston MA, 5/2005
B.A.	College of the Holy Cross, Worcester MA, 5/1999 Major: Chemistry, Minor: Studio Art

AWARDS AND HONORS

2016-2025	Top Doctor – Spine Surgery
2009	CSRS Live Session Poster Winner
2002	Association of American Medical Colleges and Pfizer Medical Humanities Initiative- Authored \$20,000 grant to The Sharewood Project.
2000	North Cambridge Catholic High School Teacher of the Year
1999	Cantor Art Award
1997-1999	Dean's List

PEER-REVIEWED PUBLICATIONS

1. Thomas Spoonmore PhD, Katherine Sage DO, Mark Eskander MD. A Retrospective Analysis of Early Outcomes from a Biphasic Calcium Phosphate Bone Graft With a Submicron, Needle-Like Surface Topography Used in Posterior Spinal Fusion Procedures. *Spine Open*. 2026
2. Gemma S. Krautzel, Steve Balsis, Alexandra Foote and Mark S. Eskander. Higher Incidence of Thrombotic Complications in Thoracic Spine Surgery. *International Journal of Spine Surgery* 5/29, 2025
3. Aguirre AO, Soliman MAR, Minissale NJ, Jowdy PK, Kuo CC, Khan A, Hess RM, Smolar DE, Woods BI, **Eskander MS**, Slosar PJ, Pollina J, Mullin JP: Outcomes of 2-Level versus 3- or 4-Level Anterior Cervical Discectomy and Fusion Using a Biomimetic Surface Titanium Cage: Multicenter Experience. Accepted for publication in *World Neurosurg* on June 17, 2023.
4. Balsis S, Carello W, Eskander TM, Balsis OR, Geraci L, **Eskander MS**. Reducing Surgical Complications in Spine Patients Through a Medication Management Support Program. *Spine (Phila Pa 1976)*. 2023 Jul 1;48(13):E198-E202. doi: 10.1097/BRS.0000000000004570. Epub 2022 Dec 28. PMID: 36607822; PMCID: PMC10249593.
5. Halloran D, Pandit V, MacMurray C, Stone V, DeGeorge K, **Eskander M**, Root D, McTague S, Pelkey H, Nohe A. Age-Related Low Bone Mineral Density in C57BL/6 Mice Is Reflective of Aberrant Bone Morphogenetic Protein-2 Signaling Observed in Human Patients Diagnosed with Osteoporosis. *International Journal of Molecular Sciences*. 2022; 23(19):11205. <https://doi.org/10.3390/ijms231911205>
6. Halloran DR, Heubel B, MacMurray C, Root D, **Eskander M**, McTague SP, Pelkey H, Nohe A. Differentiation of Cells Isolated from Human Femoral Heads into Functional Osteoclasts. *J Dev Biol*. 2022 Jan 18;10(1):6. doi: 10.3390/jdb10010006. PMID: 35225960; PMCID: PMC8883933.
7. Li R, Wilson WW, Schwartz NG, Hernandez-Romieu AC, Glowicz J, Hanlin E, Taylor M, Pelkey H, Briody CA, Gireesh L, **Eskander M**, Lingenfelter K, Althomsons SP, Stewart RJ, Free R, Annambhotla P, Basavaraju SV, Wortham JM, Morris SB, Benowitz I, Haddad MB, Hong R, Drees M. *Notes from the Field: Tuberculosis Outbreak Linked to a Contaminated Bone Graft Product Used in Spinal Surgery — Delaware, March–June 2021 Morb Mortal Wkly Rep*. 2021; 70:1261-1263
8. Durbano HW, Halloran D, Nguyen J, Stone V, McTague S, **Eskander M**, Nohe A. Aberrant BMP2 Signaling in Patients Diagnosed with Osteoporosis. *International Journal of Molecular Sciences*. 2020, 21(18), 6909
9. Weidner H, Yuan Gao V, Dibert D, McTague S, **Eskander M**, Duncan R, Wang L, Nohe A. CK2.3, a mimetic peptide of the BMP type I receptor, increases activity in osteoblasts over

BMP2. *International Journal of Molecular Sciences*. 2019 Nov 23;20(23):5877

10. Coyle PC, Pugliese JM, Sions JM, **Eskander MS**, Schrack JA, Hicks GE. Pain provocation and the energy cost of walking: a matched comparison study of older adults with and without chronic low back pain with radiculopathy. *J Geriatr Phys Ther*. Oct/Dec 2019;42(4):E97-E104
11. Coyle PC, Pugliese JM, Sions JM, **Eskander MS**, Schrack JA, Hicks GE. Energy Impairments in Older Adults With Low Back Pain and Radiculopathy: A Matched Case-Control Study. *Arch Phys Med Rehabil*. 2018 Nov;99(11):2251-2256. doi: 10.1016/j.apmr.2018.03.016. Epub 2018 Apr 24. PMID: 29698638; PMCID: PMC6200651.
12. Cai DZ, Liu G, Wolf CF, Mansell ZM, Eskander JP, **Eskander M**. Brown-Sequard Syndrome Caused by Blunt Cervical Trauma with Radiographic Correlation. *Asian J Neurosurg*. 2018 Jan-Mar; 13(1): 130-132.
13. Cai DZ, Roach RP, Weaver JP, McGillicuddy GT, Mansell ZM, Eskander JP, **Eskander MS**. Bow Hunter's Syndrome in a Patient with a Right Hypoplastic Vertebral Artery and a Dynamically Compressible Left Vertebral Artery. *Asian J Neurosurg*. 2018 Jan-Mar;13(1):133-135. doi: 10.4103/1793-5482.181129. PMID: 29492144; PMCID: PMC5820869.
14. Eskander JP, Kuris EO, Younghein JA, Landsman HS, Japko LS, **Eskander MS** Spinal Metastases From a Primary Fallopian Tube Serous Adenocarcinoma: A Case Report. *Global Spine Journal*. 2015.
15. Clark, T., J. P. Eskander, and **M. S. Eskander**. "Scapular Pain Caused By an Anomalous Vertebral Artery." *J Spine Neurosurg* 3 1 (2014): 2.
16. Campaigniac E, **Eskander M**, Jones M, Symptomatic Carpal Coalition: Scaphotrapezial Joint, *Am J of Ortho*, 2013 Dec E117-119
17. Younghein JA, Farmer RP, **Eskander MS**, Eloustaz M, Connolly PJ, Cervical Spondylolisthesis and Adjacent Segment Disease Following 3-Level Anterior Cervical Discectomy and Fusion, *Eur. Spine Journ*. 2013
18. **Eskander M**, et al. Bow Hunter's Syndrome in a Patient with a Right Hypoplastic Vertebral Artery and a Dynamically Compressible Left Vertebral Artery. *J.Orthopaedics* 2012;9(4)e10
19. Lunardini DJ, **Eskander MS**, Even JL, Dunlap JT, Chen AF, Lee JY, Ward T, Kang JD, Donaldson WF, CSRS-members survey of vertebral artery injuries. *Spine J*. 2014 Aug 1;14(8):1520-5.
20. **Eskander MS** et al. The Correlation Between Preoperative Spinal Cord Rotation and Postoperative C5 Nerve Palsy, *JBJS Am* 2012 Sep 5;94(17):1605-9.
21. Even J, **Eskander MS**, Kang JD The Current and Future Uses of BMP in Spine Surgery. *JAAOS* 2012 Sep;20(9):547-52.
22. **Eskander MS**, Murphy CM, Connolly PJ. Intra-operative cement embolization in the treatment of an aggressive vertebral hemangioama: A Case Report, *Spinal Cord* (Submitted)

23. Lange J, Archer B, **Eskander MS**, Franklin P, Connolly PJ, Eck JC. Midsagittal diameter is not related to functional status or disability in lumbar spinal stenosis. *Orthopedics* (Submitted)
24. Ye J, Ayyash O, **Eskander MS**, Kang JD. Control of the vertebral artery from a posterior approach: a technical report. *Spine J*. 2014 Jun 1;14(6):e37-41
25. Lucas J, Smith E, **Eskander MS**, McPhee J, Lapinsky A. Esophageal Perforation More Than 10 Years After Anterior Cervical Spine Plating. *Clin Neurol Neurosurg*. 2013 Mar 4
26. Youghein JA, **Eskander MS**, DeAngelis NA, Wixted JJ. Three-part Head-splitting Proximal Humerus Fracture Through a Unicameral Bone Cyst. *Orthopedics* 2012 Jun 1;35(6):e988-90
27. Liu MX, Cai DZ, **Eskander MS**, Connolly PJ. 54-year follow-up of lumbar posterior fusion with tibial graft. *Orthopedics* 2011 Nov;34(11):838-9.
28. **Eskander MS**, Aubin M, Huning, B, Lange J, Drew J, Marvin J, Connolly PJ. The Characteristics of Patients with Type 1: Interforaminal Vertebral Artery Anomalies. *Orthopedics* 2011 Jun 14;34(6):184
29. Briggs V, Li W, Kaplan MS, **Eskander MS**, Franklin PD. Injection treatment and back pain associated with degenerative lumbar spinal stenosis in older adults. *Pain Physician*. 2010 Dec;13(6):E347-55
30. Aubin M, **Eskander M**, Drew J, Marvin, J, Eck, J, Connolly P. Identification of Type 1: Intraforaminal Vertebral Artery Anomalies in Cervical Spine MRIs. *Spine* (Phila Pa 1976). 2010 Dec 15;35(26):E1610-1.
31. **Eskander MS**, Aubin ME, Drew J, Eskander J, Balsis S, Eck JC, Lapinsky A, Connolly P. Is there a difference between simultaneous or staged decompressions for combined cervical and lumbar stenosis? *J Spinal Disord Tech*. 2011 Aug;24(6):409-13.
32. Silva JA, **Eskander MS**, Lareau C, DeAngelis N. Treatment of distal biceps ruptures using a one-incision technique and biotenodesis screw fixation. *Orthopedics*. 2010 Jul 13;33(7).
33. **Eskander MS**, Onyedika II, Eck JC, Connolly PJ, Lapinsky A. Posterior extrusion of the Charite polyethylene core and the revision strategies used to correct this problem. *Spine* (Phila Pa 1976). 2010 Nov 15;35(24):E1430-4.
34. **Eskander MS**, Eskander JP, Drew J, Aidlen J, Eslami M, Connolly PJ. A modified technique for dowel fibular strut graft placement in the setting of L5-S1 spondylolisthesis and multilevel disc disease. *Neurosurgery*. 2010 Sep;67 91-5.
35. **Eskander MS**, Drew J, Eck JC. Intra- and epidural abscess presenting as sepsis two weeks following uncomplicated lumbar microdiscectomy: A case report. *Current Orthopaedic Practice* July/August 2010 - Volume 21 - Issue 4 - pp E23-E25.
36. **Eskander MS**, Drew J, Marvin J, Franklin PD, Eck JC, Connolly PJ. Vertebral Artery (V2) Anatomy: A review of 250 MRI scans. *Spine* (Phila Pa 1976). 2010 Nov 1;35(23):2035-40.

37. **Eskander MS**, Drew J, Osuch DB, Metzmaker J. Successful treatment of a lateral meniscus tear incarcerated behind the popliteus tendon: A case report. *Knee*. 2010 Oct;17(5):359-61.
38. Ayers DC, Hayes PL, Drew JM, **Eskander MS**, Osuch DB, Bragdon C. Two-year radiostereometric analysis evaluation of femoral head penetration in a challenging population of young total hip arthroplasty patients. *Journal of Arthroplasty* 2009 Sep;24(6 Suppl):9-14
39. **Eskander MS**, Connolly PJ, Eskander JP, Brooks DD. Injury of an aberrant vertebral artery during a routine corpectomy: A case report and literature review. *Spinal Cord*, 2009 Oct; 47(10):773-5.
40. **Eskander MS**, Drew J, DeAngelis NA, Wixted JJ. Use of the trauma pelvic orthotic device (T-POD) for provisional stabilization of anterior-posterior compression type pelvic fractures. *Injury*, 2009 Jun;40(6):673; 673-4.
41. Briggs, V., Franklin, P., McLaughlin, T., Li, W., Lombardi, D., Kaplan, M., & **Eskander, M.** Injection Treatment Effectively Reduces Lower Back Pain Associated with Lumbar Spinal Stenosis in Older Adults. *The Spine Journal*, 2009 9(10), 98S.
42. DeAngelis NA, Wixted JJ, Drew J, **Eskander MS**, Eskander JP, French BG. Use of the Trauma Pelvic Orthotic Device (T-POD) for provisional stabilization of anterior-posterior compression type pelvic fractures: A cadaveric study. *Injury*, 2008 Aug;39(8):903-6.
43. Wixted JJ, Reed M, **Eskander MS**, Millar B, Anderson R, Bagchi K, Kaur S, Leclair W. The effect of an orthopedic trauma room on after hours surgery at a level one trauma center. *Journal of Orthopaedic Trauma*. 2008 Apr;22(4):234-6.
44. **Eskander MS**, McPhee EM, Nascimento R, McCormick J, Eskander JP, Shepro D, Hao S, Johnson K. Postoperative lymphoma: An unusual complication after total knee arthroplasty. *Arch Orthop Trauma Surg*. 2008 Jan 23.
45. Brooks DD, **Eskander MS**, Eskander JP, Sagi HC, Franklin P, Connolly PJ, Riew KD. The risk of airway complications following anterior cervical spine surgery: *Orthopedics* 32:198 March 2008.
46. McPhee EM, Eskander JP, **Eskander MS**, Mahan ST, Mortimer E. Imaging in pelvic osteomyelitis: Support for early magnetic resonance imaging. *Journal of Pediatric Orthopaedics*. December 2007, 27(8):903-909.
47. Brooks DD, **Eskander MS**, Balsis S, Ordway N, Connolly PJ. Imaging assessment of lumbar pedicle screw placement sensitivity and specificity of plain radiographs and computer axial tomography. *Spine*. June 1, 2007, 32(13):1450-1453.
48. **Eskander MS**, Brooks DD, Ordway N, Dale E, Connolly PJ. Analysis of pedicle and translamina facet fixation in a multi-segment interbody fusion model. *Spine*. April 1, 2007, 32(7):E230-E235.

49. DeAngelis NA, **Eskander MS**, French BG. Does medial tenderness predict deep deltoid ligament incompetence in supination-external rotation type ankle fractures? *Journal of Orthopaedic Trauma*. April 2007, 21(4):244-247.
50. Herrick RS, Ziegler CJ, Bohan H, Corey M, **Eskander M**, Giguere J, McMicken N, Preparation and characterization of molybdenum and tungsten compounds with diazabutadiene ligands constructed from amino esters and glyoxal crystal structures of meso and C2-symmetric isomers of Mo(CO)₄(dab-asp(OMe)-OMe). *Journal of Organometallic Chemistry*, 2003, 687 178-184.

BOOK CHAPTERS

1. Lapinsky AS, **Eskander MS**, Sherk HH. Developmental anatomy of the normal cervical spine. In: Benzel EC *The Cervical Spine the 5th ed*. Lippincott Williams & Wilkins, Philadelphia 2009.
2. **Eskander MS**, Eck EC. Mechanisms of injury in the cervical spine: Basic concepts, biomechanical modeling, experimental evidence, and clinical applications. In: Benzel EC *The Cervical Spine the 5th ed*. Lippincott Williams & Wilkins, Philadelphia 2009.
3. **Eskander MS**, Brooks DD. Cervical orthoses and cranioskeletal traction. In: Benzel EC *The Cervical Spine the 5th ed*. Lippincott Williams & Wilkins, Philadelphia 2009.
4. **Eskander MS**, Eck JC. Thoracic disc herniations. In: Vaccaro AR and Eck JC, eds. *Controversies in Spine Surgery: Evidence-Based Treatment Recommendations*, New York: Thieme Medical Publishers, Inc 2009.
5. Lapinsky A, **Eskander MS**. Cervical spine clearance. In: Vaccaro AR and Eck JC, eds. *Controversies in Spine Surgery: Evidence-Based Treatment Recommendations*, New York: Thieme Medical Publishers, Inc 2009.
6. **Eskander MS**, Kang JD. Spondylolisthesis. In Kim DH. *Surgical Anatomy and Techniques to the Spine*. Saunders 2012
7. **Eskander MS**, Even JL, Kang JD. Transpedicular Fixation-Open In: Zdeblick TA and Albert TJ, eds *Master Techniques in Orthopaedic Surgery: The Spine* Lippincott Williams & Wilkins, Philadelphia 2012
8. **Eskander MS**, Dunlap JT, Lee JY. Surgical Indications and Management of Thoracolumbar trauma In Vaccaro AR eds *The Spine* (in press)
9. Even JL, **Eskander MS**, Donaldson WF. Cervical Spine Injuries In: Miller and Thompson eds. *DeLee & Dre's Orthopedics Sports Medicine 4e* Saunders 2012

CONFERENCE PRESENTATIONS

1. Aguirre A, Soliman M, Minissale N, Jowdy P, Kuo C, Khan A, Hess R, Smolar D, Woods B, **Eskander M**, Slosar P, Pollina J, Mullin J, Outcomes of 2-Levels Versus 3-or4-Levels Anterior Cervical Discectomy and Fusion Using Biomimetic Surface Titanium Cage: Multicenter Experience. Global Spine Congress (AO Spine) 2022
2. Mu J, **Eskander M**, An Anatomical Study Examining the Feasibility of Atlantoaxial Fixation with the Posterior Arch of C1. 2014 INBRE research symposium
3. **Eskander MS**, Lunardini DJ, Even JL, Dunlap JT, Chen AF, Lee JY, Ward T, Kang JD, Donaldson WF, CSRS-members survey of vertebral artery injuries AAOS Mtg 2013
4. **Eskander MS**, Lunardini DJ, Even JL, Dunlap JT, Chen AF, Lee JY, Ward T, Kang JD, Donaldson WF, CSRS-members survey of vertebral artery injuries CSRS Mtg 2012
5. **Eskander MS**, Lunardini DJ, Even JL, Dunlap JT, Chen AF, Lee JY, Ward T, Kang JD, Donaldson WF, CSRS-members survey of vertebral artery injuries DOS Mtg 2012
6. Ayers D, Walcot M, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, Bragdon C, Greene M, Malchau H. Tantalum versus Titanium Acetabular Shells in Young Active THR Patients: A Radiostereometric Analysis (RSA) Study AAOS Annual Meeting, San Francisco, CA February 7-11 2012.
7. Ayers D, Walcot M, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, Bragdon C, Greene M, Malchau H. RSA Study of Tantalum vs. Titanium Acetabular Shells and Crosslinked vs. Conventional Liners in Young THR Patients. AAOS Annual Meeting, San Francisco, CA February 7-11 2012.
8. **Eskander M**, Aubin, M, Drew, J, Eskander J, Balsis S, Eck J, Lapinsky, A, Connolly, P. Is there a difference between simultaneous or staged decompressions for combined cervical and lumbar stenosis? ISSLS, Gothenburg, Sweden, June 14-18, 2011.
9. Lange J, Archer B, **Eskander MS**, Franklin P, Connolly PJ, Eck JC. Midsagittal diameter is not related to functional status or disability in lumbar spinal stenosis. ISSLS, Gothenburg, Sweden, June 14-18, 2011.
10. Ayers D, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Bragdon C, Greene M, Malchau H. Stability of a Tapered Femoral Stem in Young THR Patients: An RSA Study. AAOS Annual Meeting, San Diego, CA February 15-19 2011.
11. Ayers D, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Bragdon C, Greene M, Malchau H. RSA Study of Tantalum vs. Titanium Shells and Highly Crosslinked vs. Conventional Liners. AAOS Annual Meeting, San Diego, CA February 15-19 2011.
12. **Eskander M**, Aubin M, Balinger C, Lange J, Lewing N, Howard C, Connolly P, Eck J, Jenis L. Does the Rotation of the Spinal Cord Predict Postoperative C5 Nerve Palsies? AAOS Annual Meeting, San Diego, CA February 15-19 2011.

13. Aubin M, Lange J, **Eskander M**, Eck J, Lapinsky A, Connolly P. A Survey of Spine Surgeons on Spinal Fusion Graft Substances. AAOS Annual Meeting, San Diego, CA February 15-19 2011.
14. **Eskander M**, Aubin M, Drew J, Marvin J, Eck J, Connolly P. Identification of Vertebral Artery Anatomy in Cervical Spine MRIs. AAOS Annual Meeting, San Diego, CA February 15-19 2011.
15. **Eskander M**, Aubin M, Balinger C, Lange J, Lewing N, Howard C, Connolly P, Eck J, Jenis L. Does the Rotation of the Spinal Cord Predict Postoperative C5 Nerve Palsies? CSRS Charlotte, North Carolina, December 2 - 4, 2010.
16. **Eskander M**, Aubin M, Drew J, Marvin J, Eck J, Connolly P. Identification of Vertebral Artery Anatomy in Cervical Spine MRIs. CSRS Charlotte, North Carolina, December 2 - 4, 2010.
17. **Eskander M**, Lange J, Yang W, Aubin M, Lapinsky A, Eck J, Franklin P, Connolly P, The Effect of Lower SF-36 MCS on the Outcomes of Degenerative Anterior Cervical Spine Surgeries. CSRS Charlotte, North Carolina, December 2 - 4, 2010.
18. Ayers D, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Bragdon C, Greene M, Malchau H. A Prospective, Double Randomized Radiostereometric Analysis (RSA) of Tantalum vs. Titanium Acetabular Shells and Highly Crosslinked vs. Conventional Polyethylene Liners in Young THR Patients. AAHKS 20th Annual Meeting Dallas, TX, Nov. 5-7, 2010.
19. **Eskander M**, Aubin M, Drew J, Marvin J, Eck J, Connolly P. Identification of Type 1: Interforaminal Vertebral Artery Anomalies in Cervical Spine MRIs. Congress of Neurological Surgeons Annual Meeting (CNS), San Francisco, CA, Oct. 16-21, 2010.
20. Aubin M, Drew J, **Eskander M**, Connolly P, Lapinsky A. Clinical and Radiological Fusion Rates Following Transforaminal Lumbar Interbody Fusion (TLIF) With Silicate Substituted Calcium-Phosphate Bone Graft Substitute Without ICBG for the Surgical Treatment of Degenerative Lumbar Spine Disease. Congress of Neurological Surgeons Annual Meeting (CNS), San Francisco, CA, Oct. 16-21, 2010.
21. **Eskander MS**, Aubin M, Briggs V, Franklin P, Connolly PJ, Eck JC. The use of magnetic resonance imaging to predict the non-operative treatment of lumbar spinal stenosis. Congress of Neurological Surgeons Annual Meeting (CNS), San Francisco, CA, Oct. 16-21, 2010.
22. Aubin M, Lange J, **Eskander M**, Eck J, Lapinsky A, Connolly P. Should Iliac Crest Bone Graft Remain the Gold Standard in Spinal Fusion Surgery: A Survey of Spine Surgeons. Congress of Neurological Surgeons Annual Meeting (CNS), San Francisco, CA, Oct. 16-21, 2010.
23. Aubin M, Huning B, Lange J, Drew J, Eck J, Connolly J, **Eskander M**. The Characteristics of Patients with Interforaminal Vertebral Artery Anomalies. Congress of Neurological Surgeons Annual Meeting (CNS), San Francisco, CA, Oct. 16-21, 2010.

24. Ayers D, Aubin M, Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Bragdon C, Greene M, Malchau H. *RSA Study of Tantalum vs. Titanium Shells and Highly Crosslinked vs. Conventional Liners*. Accepted for Podium Presentation, 41st annual meeting Eastern Orthopaedics Association (EOA), Naples, FL, Oct.13-16, 2010.
25. Aubin M. MD, Lange, J. MD, **Eskander, M.** MD, Eck J. DO MS, Lapinsky A. MD, Connolly P. MD. *A Survey of Spine Surgeons on Spinal Fusion Graft Substances*. Accepted for Podium Presentation, 5th Triennial Congress of International Federation of the Paediatric Societies 2010 (IFPOS), Seoul, South Korea, Sept. 8-11, 2010.
26. Aubin M, Lange, J, **Eskander, M**, Eck J, Lapinsky A, Connolly P. *A Survey of Spine Surgeons on Spinal Fusion Graft Substances*. 45th Annual Meeting Scoliosis Research Society (SRS), Kyoto, Japan, Sept. 21-24, 2010.
27. Aubin M, Drew J, **Eskander M**, Lange J, Connolly P, Lapinsky A. *Clinical and Radiological Fusion Rates Following TLIF With Silicate Substituted Calcium-Phosphate Bone Graft Substitute for the Surgical Treatment of Degenerative Lumbar Spine Disease*. E-Poster, The 17th International Meeting on Advanced Spine Techniques (IMAST), Toronto, Canada, July 21-24, 2010.
28. **Eskander, M**, Aubin, M, Drew, J, Eskander J, Balsis S, Eck J, Lapinsky, A, Connolly, P. *Is there a difference between simultaneous or staged decompressions for combined cervical and lumbar stenosis?* E-Poster, The 17th International Meeting on Advanced Spine Techniques (IMAST), Toronto, Canada, July 21-24, 2010.
29. Aubin M, Drew, J, **Eskander M**, Yang, W, Franklin, P, Connolly. *Clinical Attributes Predict Successful Radiographic Fusion Using Silicated Calcium Phosphate in Patients with Degenerative Disease of the Lumbar Spine*. E-Poster, Global Spine Congress, San Francisco, CA, June 23-26, 2009.
30. Aubin M, Drew J, **Eskander M**, Eck J, Connolly P, Lapinsky A. *Clinical and radiological fusion rates following transforaminal lumbar interbody fusion (TLIF) with silicate substituted calcium-phosphate bone graft substitute without ICBG for the surgical treatment of degenerative lumbar spine disease*. NEOS Woodstock, VT, June 4-6, 2010
31. Aubin M, Drew J, **Eskander M**, Connolly P, Lapinsky A. *Clinical and Radiological Fusion Rates Following Transforaminal Lumbar Interbody Fusion (TLIF) With Silicate Substituted Calcium-Phosphate Bone Graft Substitute Without ICBG for the Surgical Treatment of Degenerative Lumbar Spine Disease*. Inaugural Translational Medicine & Science Retreat, Worcester, MA, April 30th, 2010
32. **Eskander MS**, Aubin M, Briggs V, Franklin P, Connolly PJ, Eck JC. *The use of magnetic resonance imaging to predict the non-operative treatment of lumbar spinal stenosis*. Inaugural Translational Medicine & Science Retreat, Worcester, MA, April 30th, 2010
33. Aubin M, Lange J, **Eskander M**, Eck J, Lapinsky A, Connolly P. *Should Iliac Crest Bone Graft Remain the Gold Standard in Spinal Fusion Surgery: A Survey of Spine Surgeons*. Inaugural Translational Medicine & Science Retreat, Worcester, MA, April 30th, 2010

34. Aubin M, Lange J, **Eskander M**, Eck J, Lapinsky A, Connolly P. Is Iliac Crest Bone Graft Still the Gold Standard in Spinal Fusion Surgery? A Survey of Spine Surgeons ISSLS Annual Meeting in Auckland, New Zealand April 13-17, 2010
35. Aubin M, Drew J, **Eskander M**, Eck J, Connolly P, Lapinsky A. Clinical and radiological fusion rates following transforaminal lumbar interbody fusion (TLIF) with silicate substituted calcium-phosphate bone graft substitute without ICBG for the surgical treatment of degenerative lumbar spine disease. ISSLS Annual Mtg. Auckland, New Zealand, April 13-17, 2010.
36. **Eskander MS**, Aubin M, Briggs V, Franklin P, Connolly PJ, Eck JC. The use of magnetic resonance imaging to predict the non-operative treatment of lumbar spinal stenosis. LSRS 3rd Annual Mtg. Chicago, IL, April 8-9, 2010
37. **Eskander MS**, Drew JM, Patel N, Marvin J, Boyle K, Eck JC, Connolly PJ. Aberrant Course of the Vertebral Artery as Demonstrated by Magnetic Resonance Imaging: A Review of 281 Consecutive Scans ORS 56th Annual Mtg. New Orleans, LA, March 6-9, 2010.
38. **Eskander MS**, Drew JM, Patel N, Marvin J, Boyle K, Eck JC, Connolly PJ. Aberrant Course of the Vertebral Artery as Demonstrated by Magnetic Resonance Imaging: A Review of 281 Consecutive Scans CSRS 37th Annual Mtg. Salt Lake City, Utah, December 2-5, 2009.
39. Briggs V, Franklin P, McLaughlin T, Li W, Lombardi D, **Eskander M**. Injection treatment effectively reduces lower back pain associated with lumbar spinal stenosis in older adults. NASS 24th Annual Mtg. San Francisco CA, Feb 10-14, 2009.
40. **Eskander MS**, Drew J, Aidlen J, Connolly P. A series of patients treated with a dowel fibular strut graft and 360 fusion for isthmic spondylolisthesis in the setting of multilevel degenerative disc disease. CNS Annual Mtg. New Orleans, LA, October 24-29, 2009.
41. **Eskander MS**, Drew J, Aidlen J, Connolly P. A series of patients treated with a dowel fibular strut graft and 360 fusion for isthmic spondylolisthesis in the setting of multilevel degenerative disc disease. NASS Spine Across the Sea 2009 Maui Hawaii, July 26-30, 2009.
42. Drew J, **Eskander MS**, Yang W, Franklin P, Connolly P. Clinical attributes predict successful radiographic fusion using silicated calcium phosphate bone graft substitute in patients with degenerative disease of the lumbar spine. Global Spine Congress 2009, San Francisco, California, June 23-6, 2009.
43. **Eskander MS**, Drew J, Pelow J, Connolly P. Modified fibular strut graft for the treatment of low grade isthmic spondylolisthesis with concomitant disk disease in at least one cephalad level. NASS Spring Break, San Juan, Puerto Rico, April 23-5, 2009.
44. Drew J, **Eskander MS**, Franklin P, Yang W, Connolly P. The use of silicate substituted calcium-phosphate bone graft substitute without ICBG for the surgical treatment of degenerative lumbar spine disease: one year results. NASS Spring Break, San Juan, Puerto Rico, April 23-5, 2009.

45. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Radiostereometric analysis demonstrates decreased wear of highly crosslinked polyethylene compared to conventional acetabular liners in young primary total hip replacement patients. AOA Annual Mtg, Florida, June 10-13, 2009.
46. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Early micromotion of a tapered femoral stem in cementless total hip replacement. AOA Annual Mtg, Florida, June 10-13, 2009.
47. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Reduced wear of highly crosslinked polyethylene compared to conventional acetabular liners in young THA patients: A radiostereometric analysis study. 10th EFORT Congress, Vienna, Austria, June 3-6, 2009.
48. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Early micromotion of a tapered femoral stem in cementless total hip replacement. 10th EFORT Congress, Vienna, Austria, June 3-6, 2009.
49. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Reduced wear of highly crosslinked polyethylene compared to conventional acetabular liners in young THA patients: A radiostereometric analysis study. ORS Annual Meeting, Las Vegas, Nevada, February 21-25, 2009.
50. Drew J, Hays P, **Eskander M**, Osuch D, McPhee E, Malchau H, Bragdon C, Greene M, Ayers D. Early micromotion of a tapered femoral stem in cementless total hip replacement. ORS Annual Meeting, Las Vegas, Nevada, February 21-25, 2009.
51. **Eskander M**, Balsis S, Eskander J, Franklin P, Brooks D, Lapinsky A, Connolly P. A patient oriented functional outcome of tandem cervical and lumbar spinal stenosis after single and dual surgical decompressions. CSRS Austin TX. Dec. 2008.
52. Ayers DC, Hays P, Osuch D, **Eskander M**, McPhee E, Malchau, H, Bragdon C, 2 Year RSA evaluation of femoral head penetration in a challenge population of young, active THR patients; AAHKS Annual Meeting Dallas, TX, November 2008.
53. **Eskander M**, Balsis S, Eskander J, Franklin P, Brooks D, Lapinsky A, Connolly P. A patient oriented functional outcome of tandem cervical and lumbar spinal stenosis after single and dual surgical decompressions. Spine Society of Europe Spineweek Geneva, Switzerland, May 2008.
54. **Eskander M**, Balsis S, Eskander J, Franklin P, Brooks D, Lapinsky A, Connolly P. A patient oriented functional outcome of tandem cervical and lumbar spinal stenosis after single and dual surgical decompressions. CNS Annual Mtg. Orlando FL., Sept. 2008.
55. **Eskander MS**, Eskander JP, Weiss D, Deangelis NA. Treatment of distal biceps ruptures using a one-incision technique and biotenesodesis screw fixation: A preliminary report on patient-oriented outcomes. AAHS Annual Mtg Beverly Hills, CA 2008.

56. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of degenerative spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; NASS World Spine IV conference, Istanbul Turkey 2007.
57. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of degenerative spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; Eastern Orthopaedic Association and Southern Orthopaedic Association Combined meeting, Victoria, British Columbia, Canada 2007.
58. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of degenerative spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; IMAST, Paradise Island, Bahamas 2007.
59. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of traumatic spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; NASS World Spine IV conference, Istanbul Turkey 2007.
60. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of traumatic spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; Eastern Orthopaedic Association and Southern Orthopaedic Association Combined meeting, Victoria, British Columbia, Canada 2007.
61. **Eskander MS**, Brooks DD, Franklin P, Connolly PJ. Treatment of traumatic spinal pathology utilizing silicated calcium -phosphate graft in posterolateral fusion; IMAST, Paradise Island, Bahamas 2007.
62. Germano J, **Eskander M**, Nairus J. A new technique for intra-operative leg length measurement in total hip arthroplasty: The capsular technique. New England Orthopedic Society 2007.
63. Hsin M, Agrawal R, Visovatti S, Laurence R, Wee J, Sepic J, **Eskander M**, Cohn L, Eriksson E, Aklog L, Epicardial plasmid gene transfer by microseeding, Cardiothoracic Techniques and Technologies (CTT) Conference, New Orleans, LA, January 2001.
64. Herrick RS, Ziegler CJ, Bohan H, Corey M, **Eskander M**, Giguere J, McMicken N, "Preparation and Characterization of novel molybdenum compounds with diazabutadiene ligands." American Chemical Society (ACS) conference - Anaheim, CA 1999.

EDITORIAL ACTIVITIES

Reviewer, *Spine*

Reviewer, *Orthopedics*

Reviewer, *Clinical Anatomy*

Reviewer, *International Journal of Nephrology and Renovascular Disease*

Reviewer, *Molecular Biology Reports*

Reviewer, *Frontiers in Neuroscience*

PROFESSIONAL AFFILIATIONS

American Association of Orthopedic Surgeons
 North American Spine Society
 American Medical Association
 Massachusetts Medical Society

TEACHING

- 2004 **Section Leader**, Interviewing and the Patient/Doctor Relationship, Boston MA
 1st year course at Tufts University School of Medicine. Facilitate small groups of medical students in their first clinical encounters with patients.
- 2000-2001 **Science Teacher**, North Cambridge Catholic High School, Cambridge MA
 Taught biology, physiology, and chemistry. Supervised senior projects. Coordinated science fair.

VOLUNTEER ACTIVITIES

- 1-2005 **Interviewer**, Tufts Medical School Admissions Committee, Boston MA
 Selected to be a member of the Admissions Committee and to interview prospective medical students.
- 1-1.2002 **Clinic Director**, The Sharewood Project, Malden MA
 A Tufts' student-run, free-care clinic providing urgent care, Hepatitis B screening, HIV counseling and dental services to the community. Coordinated moving clinic locations, grant writing, opening of a second site, staffing, and outreach.

PERSONAL INTERESTS

Cooking, Exercise, Spending time with my family.

Current Professional Endeavors

Young Physician Section Liaison for the Medical Society of Delaware
 Member of the Old Medical Surgical Journal Club of Delaware
 Developed Multidisciplinary Spine Tumor Clinic at the Helen Graham Cancer Center
 Spine Surgery Liaison for the Trauma Performance Improvement Projects
 Spine Governance Committee Member
 Developed spine specialist program at Concentra
 Initiated research projects with University of Delaware researchers in PT and Biology
 Developed treatment pathway for CCHS osteoporotic compression fractures
 Invited lecturer at the Delaware Orthopedic Symposium

Current Research collaboration with U of D

1. Nohe A, Eskander M, Determine the response of bone cells isolated from osteoporosis patients undergoing hip replacement to BMP2 and CK2.3

2. Hicks G, Eskander M, Exploring Performance-Based Walking Tests as Outcomes in Lumbar Spinal Stenosis