Alexander Tuchman, M.D.

Cedars-Sinai Medical Center 127 S. San Vicente Boulevard AHSP, 6th floor, Suite A6226 Los Angeles, CA 90048

WORK EXPERIENCE

CEDARS-SINAI MEDICAL CENTER, Los Angeles, CA

Staff Physician 07/30/2018- current

Faculty, Department of Neurosurgery

COLUMBIA UNIVERSITY, New York, NY

Assistant Attending Physician of Neurosurgery 10/01/2017- 06/30/2018

Clinical Instructor, Department of Neurosurgery

NORTH MISSISSIPPI MEDICAL CENTER, Tupelo, MS

Staff Neurosurgeon (Locum Tenens) 08/21/2017- 09/25/2017

EDUCATION & TRAINING

COLUMBIA UNIVERSITY DEPARTMENT OF ORTHOPEDIC SURGERY, New York, NY

Adult and Pediatric Comprehensive Spine Surgery Fellowship
Assistant Attending Physician and Postdoctoral Clinical Fellow
New York Presbyterian Hospital – Columbia

UNIVERSITY OF SOUTHERN CALIFORNIA DEPARTMENT OF NEUROSURGERY, Los Angeles, CA

Residency Program in Neurosurgery 06/24/2009-06/30/2016 USC Neuro/Ortho Combined Spine Fellowship 06/24/2014-06/23/2015 Clinical Instructor, Los Angeles County Hospital 06/24/2015-06/30/2016

UNIVERSITY OF MIAMI MILLER SCHOOL OF MEDICINE, Miami, FL

2005-2009

Doctor of Medicine, May 16th 2009

WESLEYAN UNIVERSITY, Middletown, CT

2000-2004

Bachelor of Arts May 2004

Major: Molecular Biology and Biochemistry

MEDICAL AWARDS

| - Charlie Kuntz Scholar Award (Presented at AANS/CNS Spine Section Meeting) | 2016 |
|---|-----------|
| - Award for Highest Departmental Neurosurgical Board Score | 2012 |
| - Alpha Omega Alpha (Inducted as a Junior) | 2008 |
| - Treasurer | 2008-2009 |
| - Award for Excellence in Clinical Neurology | 2009 |
| - John K. Robinson Alumni Scholarship | 2005-2009 |

PUBLICATIONS

1. Tan LA, Yerneni K, <u>Tuchman A</u>, Li XJ, Cerpa M, Lehman RA Jr, Lenke LG. Utilization of the 3D-printed spine model for freehand pedicle screw placement in complex spinal deformity correction. J Spine Surg. 2018 Jun;4(2):319-327.

- 2. Tan LA, Benkli B, <u>Tuchman A</u>, Li XJ, Desai NN, Bottiglieri TS, Pavel J, Lenke LG, Lehman RA Jr. High prevalence of greater trochanteric pain syndrome among patients presenting to spine clinic for evaluation of degenerative lumbar pathologies. J Clin Neurosci. 2018 Jul;53:89-91.
- 3. Shillingford JN, Laratta JL, Park PJ, Lombardi JM, <u>Tuchman A</u>, Saifi CS, Lehman RA, Lenke LG. Human versus Robot: A Propensity-Matched Analysis of the Accuracy of Free Hand versus Robotic Guidance for Placement of S2 Alar-Iliac (S2AI) Screws. Spine (Phila Pa 1976). 2018 Apr 18.
- Tuchman A, Turner AW, Metzger MF, Acosta FL. An in Vitro Biomechanical Model of Differing Pedicle Screw Configurations for Long Construct Segmental Thoracic Fixation. Operative Neurosurgery. 2017 Dec 1;13(6):718-723.
- 5. <u>Tuchman A</u>, Brodke DS, Youssef JA, Meisel HJ, Dettori JR, Park JB, Yoon ST, Wang JC. Autograft versus Allograft for Cervical Spinal Fusion: A Systematic Review. Global Spine J. 2017 Feb;7(1):59-70.
- 6. Sayari AJ, <u>Tuchman A</u>, Cohen JR, Hsieh PC, Buser Z, Wang JC. Risk and Cost of Reoperation After Single-Level Posterior Cervical Foraminotomy: A Large Database Study. Global Spine J. 2017 Apr;7(2):116-122.
- 7. Pendi A, Acosta FL, <u>Tuchman A</u>, Movahedi R, Sivasundaram L, Arif I, Gucev G. Intrathecal Morphine in Spine Surgery: A Meta-analysis of Randomized Controlled Trials. Spine (Phila Pa 1976). 2017 Apr 18.
- 8. <u>Tuchman A</u>, Brodke DS, Youssef JA, Meisel HJ, Dettori JR, Park JB, Yoon ST, Wang JC. Iliac Crest Bone Graft versus Local Autograft or Allograft for Lumbar Spinal Fusion: A Systematic Review. Global Spine J. 2016 Sep;6(6):592-606.
- 9. Attenello FJ, <u>Tuchman A</u>, Christian EA, Wen T, Chang KE, Nallapa S, Cen SY, Mack WJ, Krieger MD, McComb JG. Infection rate correlated with time to repair of open neural tube defects (myelomeningoceles): an institutional and national study. Childs Nerv Syst. 2016 Sep;32(9):1675-81.
- 10. Heindel P, <u>Tuchman A</u>, Hsieh PC, Pham MH, D'Oro A, Patel NN, Jakoi AM, Hah R, Liu JC, Buser Z, Wang JC. Reoperation Rates Following Single-Level Lumbar Discectomy. Spine (Phila Pa 1976). 2016 Aug 19.
- 11. Pham MH, <u>Tuchman A</u>, Smith L, Jakoi AM, Patel NN, Mehta VA, Acosta FL. Semitendinosus Graft for Interspinous Ligament Reinforcement in Adult Spinal Deformity. Orthopedics. 2016 Oct 13:1-5.
- 12. Pham MH, Cohen J, <u>Tuchman A</u>, Commins D, Acosta FL. Large solitary osteochondroma of the thoracic spine: Case report and review of the literature. Surg Neurol Int. 2016 May 17;7(Suppl 13):S323-7.
- 13. Weng C, Wang J, <u>Tuchman A</u>, Wang J, Fu C, Hsieh PC, Buser Z, Wang JC. The Influence of T1 Slope on the Cervical Sagittal Balance in Degenerative Cervical Spine: An Analysis Using Kinematic MRI. Spine (Phila Pa 1976). 2015 Dec 8. [Epub ahead of print]
- 14. Pham MH, Mehta VA, <u>Tuchman A</u>, Hsieh PC. Material Science in Cervical Total Disc Replacement. Biomed Res Int. 2015;2015:719123. Epub 2015 Oct 7.
- 15. Pham MH, <u>Tuchman A</u>, Platt A, Hsieh PC. Intracranial complications associated with spinal surgery. Eur Spine J. 2015 Sep 16.
- 16. Pham MH, <u>Tuchman A</u>, Chen TC, Acosta FL, Hsieh PC, Liu JC. Transpedicular Corpectomy and Cage Placement in the Treatment of Traumatic Lumbar Burst Fractures. J Spinal Disord Tech. 2015 Aug 19.
- 17. Wen T, Pease M, Attenello F, <u>Tuchman A</u>, Donoho D, Cen S, Mack WJ, Acosta FL. Evaluation of Weekend Admission on the Prevalence of Hospital Acquired Conditions in Patients Receiving Cervical Fusions. World Neurosurg. 2015 Feb 27.
- 18. Aaron KA, Lavinsky J, <u>Tuchman A</u>, Go JL, Giannotta SL, Friedman RA. A case report of two different skull base pathologies causing hearing loss in the same ear: vestibular schwannoma and superior semicircular canal dehiscence. Am J Otolaryngol. 2015 Feb 4.
- 19. <u>Tuchman A</u>, Mehta VA, Mack WJ, Acosta FL Jr. Novel application of pre-operative vertebral body embolization to reduce intraoperative blood loss during a three-column spinal osteotomy for non-oncologic spinal deformity. J Clin Neurosci. 2015 Jan 3.
- 20. <u>Tuchman A</u>, Yu C, Chang EL, Kim PE, Rusch MC, Apuzzo ML. Radiosurgery for Metastatic Disease at the Craniocervical Junction. World Neurosurg. 2014 Sep 3.
- 21. Smith JA, <u>Tuchman A</u>, Huoh M, Kaiser AM, Schooler WG, Hsieh PC. Locomotor Biomechanics Following Total Sacrectomy: A Case Report. Spine (Phila Pa 1976). 2014 Sep 8.
- 22. <u>Tuchman A</u>, Pham M, Hsieh PC. The indications and timing for operative management of spinal epidural abscess: literature review and treatment algorithm. Neurosurg Focus. 2014 Aug;37(2):E8
- 23. <u>Tuchman A</u>, Hsieh PC. Editorial: Comparing Minimally Invasive, Hybrid, and Open Surgical Techniques for Adult Spinal Deformity. Neurosurg Focus. 2014 May;36(5):E16.
- 24. <u>Tuchman A</u>, Platt A, Winer J, Pham M, Giannotta S, Zada G. Endoscopic-Assisted Resection of Intracranial Epidermoid Tumors. World Neurosurg. 2013 Mar 30.
- 25. <u>Tuchman A, Khalessi A, Attenello FJ, Amar AP, Zada G. Delayed Cavernous Carotid Artery Pseudoaneurysm Caused by Absorbable Plate Following Transsphenoidal Surgery: Case Report and Review of the Literature. J Neurol Surg Rep 2013; 74(01): 010-016</u>

- Pease M, Marquez YM, <u>Tuchman A</u>, Markarian A, Zada G. Diagnosis and Surgical Management of Traumatic Cerebrospinal Fluid Oculorrhea: Case Report and Systematic Review of the Literature. J Neurol Surg Rep 2013; 74(01): 057-066
- 27. Marquez Y, <u>Tuchman A</u>, Zada G. Surgery and radiosurgery for acromegaly: a review of indications, operative techniques, outcomes, and complications. Int J Endocrinol. 2012;2012:386401. Epub 2012 Mar
- 28. <u>Tuchman A</u>, Kalhorn SP, Mikolaenko I, Wisoff JH. Cystic choroid plexus papilloma in the cavum septum pellucidum. J Neurosurg Pediatr. 2009 Dec;4(6):580-3.
- 29. Papapetropoulos S, <u>Tuchman A</u>, Sengun C, Russell A, Mitsi G, Singer C Anterocollis: Clinical features and treatment options. Med Sci Monit. 2008 Sep;14(9):CR427-30
- 30. Papapetropoulos S, <u>Tuchman A</u>, Laufer D, Papatsoris AG, Papapetropoulos N, Mash DC. Causes of death in multiple system atrophy. J Neurol Neurosurg Psychiatry. 2007 Mar;78(3):327-9.
- 31. Papapetropoulos S, <u>Tuchman A</u>, Laufer D, Mash DC. Hallucinations in multiple system atrophy. Parkinsonism Relat Disord. 2007 Apr;13(3):193-4. Epub 2006 Oct 13.
- 32. Narasimhaiah R, <u>Tuchman A</u>, Lin SL, Naegele JR. Oxidative damage and defective DNA repair is linked to apoptosis of migrating neurons and progenitors during cerebral cortex development in Ku70-deficient mice. Cereb Cortex. 2005 Jun;15(6):696-707.

PRESENTATIONS/ ABSTRACTS

- Tuchman A, Lenke LG, Fehlings MG, Lewis SJ, Shaffrey CI, Cheung KM, Carreon LY, Dekutoski MB, Schwab FJ, Boachie-Adiei O, Kebaish K, Ames CP, Oiu Y, Matsuyama Y, Dahl BT, Mehdian H, Pellise F Berven SH. Unilateral vs. Bilateral Lower Extremity Motor Deficit Following Complex Adult Spinal Deformity Surgery: Is there a Difference in Recovery Up to 2 Year F/U? SRS 52nd Annual Meeting. 2017 sept 6-9; Philadelphia, PA, USA.
- Shillingford J, Larratta J, Lombardi JM, <u>Tuchman A</u>, Alrabaa RG. Human versus Robot a Propensity-Matched Analysis of the Accuracy of Free Hand versus Robotic Guidance for Placement of S2 Alar-Illiac (S2AI) Screws. 24th International Meeting on Advanced Spine Techniques (IMAST) 2017 July 12-15; Cape Town, South Africa.
- 3. Pendi A, Acosta F, <u>Tuchman A</u>, Movahedi R, Sivasundaram L, Arif I, Gucev G. Adjunctive intrathecal morphine analgesia for postoperative pain in adult spinal surgery. Poster presentation given at: Society for Technology in Anesthesia (STA) Annual Meeting; 2017 Jan 11-14; San Diego, CA, USA.
- 4. <u>Tuchman A</u>, Turner A, Metzger M, Acosta FL. An In Vitro Biomechanical Model of Segmental Thoracic Fixation for Spinal Deformity Correction. AANS/CNS Spine Section Annual Meeting, Orlando, FL, March 16-19, 2016
- 5. Pham MH, <u>Tuchman A</u>, Smith L, Mehta VA, Acosta FL. Semitendinosus Graft for Interspinous Ligament Reinforcement of the Proximal Adjacent Segment in Multilevel Instrumentation to the Upper Thoracic Spine: Report of a Novel Technique for Proximal Junctional Kyphosis Prevention in Adult Spinal Deformity (oral presentation). AANS/CNS Spine Section Annual Meeting, Orlando, FL: March 16-19, 2016
- Tuchman A. Iliac Crest Bone Graft vs. Allograft vs. non ICBG Autograft in the Cervical and Lumbar Spine: a Systemic Review. 12th Annual World Congress of the Society for Brain Mapping and Therapeutics. Los Angeles, CA. March 6-8, 2015
- Attenello FA, <u>Tuchman A.</u> Christian E, Wen T, Giannotta S, Swathi J, Cen S, Mack W, McComb JG, Krieger M. Infection Rates Following Prolonged Time to Open Neural Tube Repair: A National Study. 2015 CNS Annual Meeting, New Orleans, LA, September 26-30, 2015
- 8. Pham M, <u>Tuchman A</u>, Platt A, Hsieh PC. Intracranial Complications Associated with Spinal Surgery. 2015 CNS Annual Meeting, New Orleans, LA, September 26-30, 2015
- 9. Pham M, <u>Tuchman A</u>, Platt A, Hsieh PC, Acosta F, Chen T, Wong JC, Liu JC. Transpedicular Corpectomy and Cage Palcement in the treatment of Traumatic Lumbar Burst Fractures. 2014 CNS Annual Meeting, Boston Massachussetts, October 18-22, 2014
- 10. <u>Tuchman A</u>, Attenello FA, Pham M, et al. Prevalence of Hospital Acquired Conditions in Patients Receiving Cervical Fusions. AANS/CNS Spine Section Meeting, Orlando, Florida, March 6-8, 2014
- 11. Attenello FA, <u>Tuchman A</u>, Pham M, et al. Prevalence of Hospital Acquired Conditions in Patients Receiving Thoracolumbar Fusions. AANS/CNS Spine Section Meeting, Orlando, Florida, March 6-8, 2014
- 12. Pham M, <u>Tuchman A</u>, Attenello FA, Hsieh PC. Revison Surgeries for Malpositioned Pedicle Screws, Before and After the O-arm. AANS/CNS Spine Section Meeting, Orlando, Florida, March 6-8, 2014
- 13. <u>Tuchman A</u>. Guidelines for Surgical Management of Traumatic Brain Injury. 2nd Annual Neurotrauma Symposium, Los Angeles, CA, June 1, 2013

- Tuchman A, Platt A, Pham M, Giannotta S, Zada G. Endoscope Assisted Resection of Epidermoid Tumors. 80th
 Annual Scientific Meeting of the American Association of Neurological Surgeons, Miami, Florida, April 14 18, 2012.
- 15. Pham M, <u>Tuchman A</u>, Platt A, Kingston S, Chen TC, Hsieh PC. Intracranial Complications associated with spinal surgery. 28th Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, Florida March 7-10 2012.
- 16. Jeelani Y, Mosich G, Souster J, <u>Tuchman A</u>, Standafer C, Krieger M, McComb JG. Closed Neural Tube defects in children with multisystem malformations and caudal regression syndrome. 80th Annual Scientific Meeting of the American Association of Neurological Surgeons, Miami, Florida, April 14-18, 2012.
- 17. <u>Tuchman A.</u> Khalessi A, Attenello FJ, Amar AP, Zada G. Delayed Cavernous Carotid Artery Pseudoaneurysm Caused by Absorbable Plate Following Transsphenoidal Surgery. 22nd Annual North American Skull Base Society Meeting, Los Vegas, Nevada, February 17-19, 2012.
- 18. Jeelani Y, Mosich G, Souster J, <u>Tuchman A</u>, Standafer C, Krieger M, McComb JG. Closed Neural Tube defects in children with multisystem malformations and caudal regression syndrome. 40th Annual Meeting of the AANS/CNS on Pediatric Neurological Surgery, Austin, Texas, November 29-December 2, 2011.
- 19. Winer J, Solchanyk D, <u>Tuchman A</u>, Bowen I, Krieger M, McComb JG. The Effect of Gel Film on Retethering of Neural Tube Defects. Abstract presented at AANS as poster presentation at AANS 2011 Denver, CO
- Winer J, Solchanyk D, <u>Tuchman A</u>, Bowen I, Krieger M, McComb JG. The Effect of Gel Film on Retethering of Neural Tube Defects. Abstract presented as oral presentation at Pediatric Neurosurgery Section CNS/AANS 2010, Cleveland, OH.
- 21. <u>Tuchman A</u>, Bullock R. Microdialysis as a Possible Predictor of Significant Secondary Injury in Patients with Severe Traumatic Brain Injury. Presented at the National Neurotrauma Society Symposium. July 27-30, 2008.
- 22. Patel N, Farra J, <u>Tuchman A</u>, Caulfield C. The Department of Community Service (DOCS) and the Area Health Education Center (AHEC): A Partnership Alleviating Health Care Disparity Across South Florida. Presented at The National Area Health Education Center Organization Conference: Moving Mountains to Overcome Health Disparities. Denver, Colorado, 2008
- 23. <u>Tuchman A</u>, Sengun C, Russell A, Singer C, Papapetropoulos S. Anterocollis: Classification, Clinical Phenotype, Treatment Outcomes, and Risk Factors. Presented at the 21st Annual Symposium on Etiology, Pathogenesis, and Treatment of Parkinson's Disease and Other Movement Disorders. Washington D.C., 2007

BOOK CHAPTERS

- <u>Tuchman A</u>, Pham M, Hsieh P. Intradural extramedullary spinal tumors in Clinical Decision Support: Spine Surgery, edited by Vaccaro A, Prasad S, Rihn J, Wang M 2014. Decision Support in Medicine, LLC. Wilmington, DE
- 2. Christian E. Tuchman A. Zada G. Khalessi AA. Nanotechnology and Neurological Surgery. Springer. 01/2011
- 3. <u>Tuchman A</u>, Pham M, Liu JC. Chapter IV.B.12: MIS Retroperitoneal Lateral Lumbar Interbody Fusion, edited by Fessler RG. Atlas of Neurosurgical Techniques, 2nd edition, Thieme Publishers. New York, NY
- 4. <u>Tuchman A</u>, Yen C, Liu JC. Chapter IV.B.13: MIS Retroperitoneal Vertebrectomy, edited by Fessler RG. Atlas of Neurosurgical Techniques, 2nd edition, Thieme Publishers. New York, NY
- Tuchman A, Hsieh. Chapter 9: Radiation Exposure in Spine Surgery, edited by Baaj AA, Mummaneni PV, Uribe JS, Vaccaro AR, Greenberg MS. Handbook of Spine Surgery, 2nd edition, Thieme Publishers. New York, NY 2016
- Tuchman A, Hsieh. Chapter 9: Radiation Therapy in Spine Surgery, edited by Baaj AA, Mummaneni PV, Uribe JS, Vaccaro AR, Greenberg MS. Handbook of Spine Surgery, 2nd edition, Thieme Publishers. New York, NY 2016
- 7. Pham M, <u>Tuchman A</u>, Liu JC. Are tubular or endoscopic discectomies better than traditional microdiscectomy? edited by Vaccaro AR, Fessler RG, Eck JC, Sandhu F, Voyadzis JM, Kepler CK. Controversies in Spine Surgery (In Press)
- 8. Peck E, <u>Tuchman A</u>, Wang JC. Cervical Disk Arthroplasty, edited by Wolfa C, Resnick D. Neurosurgical Operative Atlas: Spine and Peripheral Nerves, 3rd Edition, Thieme Publishers. New York, NY (In Press)
- 9. <u>Tuchman A</u>, Lenke LG. Surgical Techniques Cervical Osteotomies: High Thoracic VCR for Kyphoscoliosis Correction. Edited by Koller H, Robinson Y. Cervical Spine Surgery: Standard & Advanced Techniques. (In Press)\
- 10. Tan LA, <u>Tuchman A</u>, Lehman RA. "Lumbar Spine, Sacrum and Coccyx", Gray's Applied Surgical Anatomy, Elsevier, 2017. In Press.

ACTIVITIES

| Professional | |
|--|--|
| - Editorial Board for "World Neurosurgery" | |
| - Feature Editor, Editor's Choice | |

- Reviewer for "Global Spine Journal" 2014-present

2014-present

2008-2009

2006

Medical School

- Department of Community Service (DOCS)

Director (2007-2008 school year)

2006-2008

 Oversaw planning of the 8 DOCS health fairs, providing screening and health education services to approximately 2,000 South Florida Residents

Project Manager- Jack and Jill Health Education Fair (2007)

- Co-Director of Harvey Academic Society

- CMA Spring '06 Medical Mission to Managua, Nicaragua

- Organized screening and health education activity for an underserved Broward population

Project Manager- Tamiami Health Fair (2006)

- Implemented screening and education services to the West Dade community

- Worked with community leaders to publicize and tailor the fair to community needs

- Academic Societies

| - Academics Chair of Harvey Academic Society | 2007-2008 |
|---|-----------|
| - Assistant Physical Exam Trainer Harvey Academic Society | 2006-2007 |
| - International Medicine Volunteer Experience | |
| - CMA Spring '08 Medical Mission Trip to Managua, Nicaragua | 2008 |
| - Project Medishare Spring '07 Pediatric Neurosurgery Trip to Port Au Prince, Haiti | 2007 |
| - CMA Spring '07 Medical Mission to Managua, Nicaragua | 2007 |
| - Project Medishare Winter '06 Medical Mission Trip to Thomonde, Haiti | 2006 |

Athletics

| - Wesleyan University, Providence, and Miami Tritons Rugby Club Member | 2002-2005 |
|---|-----------|
| - Wesleyan University Varsity Football Team: Defensive Back (letter winner) | 2000-2003 |