

Kunal Vakharia

@KunalVakhariaMD

Employment

Assistant Professor in Neurosurgery, University of South Florida
August 2021 – current Tampa, FL

Education

Skull Base Fellowship, Mayo Clinic
July 2020 – June 2021 Rochester, MN

Cerebrovascular Fellowship, University at Buffalo Neurosurgery
July 2017 – June 2019 Buffalo, NY

Neurosurgical Resident, University at Buffalo Neurosurgery
June 2013 – June 2020 Buffalo, NY

Johns Hopkins University
Masters of Business Administration, January 2017 – March 2020 Baltimore, MD

University of Pennsylvania
Masters of Bioethics, May 2016 Philadelphia, PA

Thomas Jefferson Medical College
M.D., September 2009 – May 2013 Philadelphia, PA

Pennsylvania State University
6-Year Accelerated Pre-Medical Medical Program
B.S. in Science, Minor in Economics, September 2007 – May 2009 University Park, PA

Honors

Beta Gamma Sigma Honor Society (Top 20% of Business School Class) (April, 2020)

Erie County Medical Society Resident Award (May 2020)

Resident Effective Communication Award (Awarded 2018-2019)

Gold Humanism Honor Society (Awarded in 2018)

George McClellan Surgical Honors Society (Awarded in 2012)

Received Francis R. Pentz and Helen M. Pentz Memorial Academic Excellence Scholarship (2007-2009)

Publications

Vakharia, K Predictive Value of Ki-67 Index in Evaluating Sporadic Vestibular Schwannoma Recurrence: Systematic Review and Meta-analysis

Lim J, Nyabuto E, Aguirre O, Waqas M, **Vakharia K**, Cappuzzo JM Siddiqui AH: Management of Saccular Superior Cerebellar Artery Aneurysms: The Buffalo Experience. Case Series and Systematic Review. Accepted for publication in *Interv Neuroradiol* on January 27, 2022.

Hasegawa H, **Vakharia K**, Link MJ, Stafford SL, Brown PD, Parney IF, Burns TC, Yan ES, Mahajan A, Laack NN, Pollock BE. The role of single-fraction stereotactic radiosurgery for atypical

meningiomas (WHO grade II): treatment results based on a 25-year experience. *J Neurooncol.* 2021 Dec;155(3):335-342. doi: 10.1007/s11060-021-03882-9. Epub 2021 Oct 27. PMID: 34705189.

Vakharia K, Naylor RM, Choby GW, Van Gompel JJ. Combined Endoscopic Endonasal and Exoscope-Assisted Open Transbasal Resection of Sinonasal Squamous Cell Carcinoma: 2-Dimensional Operative Video. *Operative Neurosurgery* (Hagerstown) (Accepted)

Vakharia K, Naylor R, Nassiri A, Driscoll CLW, Link MJ. Microsurgical resection of a petroclival epidermoid cyst using an anterior petrosectomy approach: 2-dimensional operative video. Accepted for publication in *Oper Neurosurg* on August 10, 2021.

Vakharia K, Naylor R, Van Gompel J. Endoscope-assisted resection of extra-axial pre-medullary neurenteric cyst via far lateral-supracondylar approach: 2-dimensional operative video. Accepted for publication in *Oper Neurosurg* on July 6, 2021.

Vakharia K, Hasegawa H, Stafford S L, et al. (July 18, 2021) Salvage Radiosurgery for Optic Nerve Sheath Meningioma. *Cureus* 13(7): e16450. doi:10.7759/cureus.16450

Vakharia K, Lim J, Waqas M, et al. (June 21, 2021) Preoperative Embolization of Fisch Grades II–IVa Juvenile Nasopharyngeal Angiofibromas: Transarterial Embolization in the Age of Onyx. *Cureus* 13(6): e15804. DOI 10.7759/cureus.15804

Helal A, **Vakharia K**, Carlson M, Driscoll CLW, Link MJ, Brinjikji W, Cloft H. Preoperative embolization of jugular paraganglioma tumors using particles is a safe and effective. Accepted for publication in *Interventional Neuroradiology* April 29, 2021.

Hasegawa H, **Vakharia K**, Carlstrom L, Van Gompel JV, Driscoll CLW, Carlson, MC, Meyer F, Link MJ: Long-term surgical outcomes of intracranial epidermoid: impact of extent of resection on recurrence and functional outcomes in 63 patients. Accepted for publication in *Journal of Neurosurgery* on May 27, 2021.

Tso MK, Rajah GB, Dossani RH, Meyer MJ, McPheeters MJ, **Vakharia K**, Waqas M, Snyder KV, Levy EI, Siddiqui AH, Davies JM: Learning Curves for Transradial Access versus Transfemoral Access in Diagnostic Cerebral Angiography: A Case Series. Accepted for publication in *J Neurointerv Surg* on May 19, 2021.

Cherian J, Chen SR, Puri A, **Vakharia K**, Levy E, Eshraghi S, Howard BM, Tong FC, Cawley CM, Gross B, Alexander MD, Grandhi R, Srinivasan VM, Burkhardt JK, Johnson JN, Kan P. Postmarket American Experience With Woven EndoBridge Device: Adjudicated Multicenter Case Series. *Neurosurgery.* 2021 May 14:nyab158. doi: 10.1093/neuros/nyab158. Epub ahead of print. PMID: 33989398.

Hasegawa H, **Vakharia K**, Graffeo CS, Carlson ML, Pollock BE, Brown PD, Perry A, Van Gompel JJ, Driscoll CLW, Link MJ. Long-term outcomes of grade I/II skull base chondrosarcoma: an insight into the role of surgery and upfront radiotherapy. *J Neurooncol.* 2021 Apr 27. doi: 10.1007/s11060-021-03764-0. Epub ahead of print. PMID: 33907967.

Chin F, Chou R, Waqas M, **Vakharia K**, Rai H, Levy E, Holmes D. Efficacy of prayer in inducing immediate physiological changes: a systematic analysis of objective experiments. *J Complement Integr Med.* 2021 Feb 1. doi: 10.1515/jcim-2020-0075. Epub ahead of print. PMID: 33544510.

Lim J, Nyabuto E, **Vakharia K**, Levy EI: Rare Incidence of Tension Pneumocephalus 2 Months After Repeat Microvascular Decompression. *Surg Neurol Int* 12:311 (epub June 28, 2021 DOI 10.25259/SNI_917_2020). Free articles [surgicalneurologyint.com/wp-content/uploads/2021/06/10925/SNI-12-311.pdf](https://www.surgicalneurologyint.com/wp-content/uploads/2021/06/10925/SNI-12-311.pdf)

Lim J, **Vakharia K**, Waqas M, Affana C, Siddiqui AH, Davies JM, Levy EI: Comaneci Device for Temporary Coiling Assistance for Treatment of Wide-Necked Aneurysms: Initial Case Series and Systematic Literature Review. *World Neurosurg* S1878-8750(21)00273-4 (Epub February 25, 2021 DOI 10.1016/j.wneu.2021.02.080). PMID [33640525](#)

Waqas M, Gong AD, Levy BR, Dossani RH, **Vakharia K**, Cappuzzo JM, Becker A, Sonig A, Tutino VM, Almayman F, Davies JM, Snyder KV, Siddiqui AH, Levy EI: Is Endovascular Therapy for Stroke Cost-Effective Globally? A Systematic Review of the Literature. *J Stroke Cerebrovasc Dis* 30(4):105557 (epub February 4, 2021 DOI 10.1016/j.jstrokecerebrovasdis.2020.105557). PMID 33556672

Housley SB, **Vakharia K**, Waqas M, Siddiqui AH. Cerebral hypoperfusion necessitating additional bypass following hunterian ligation of the internal carotid artery despite reassuring intraoperative challenges: Video case report. *Surg Neurol Int* 2021;12:22.

Binning MJ, Maxwell CR, McAree M, Veznedaroglu E, Felbaum DR, Arthur A, Goyal N, Wolfe SQ, Tschoe C, Crowley RW, Levy E, **Vakharia K**, Rai HH, Pandey AS, Daou BJ, Tawk RG, Ringer AJ, Liebman KM. The Use of Antiplatelet Agents and Heparin in the 24-Hour Postintravenous Alteplase Window for Neurointervention. *Neurosurgery*. 2021 Jan 13:nyaa530. doi: 10.1093/neuros/nyaa530. Epub ahead of print. PMID: 33442725.

Waqas M, **Vakharia K**, Levy BR, Housley SB, Dossani RH, Gong A, Cappuzzo J, Levy EI: Rapid Temporary Coiling of the Parent Artery for the Management of Intraprocedural Aneurysm Rupture. *Brain Circ* 6(4):274-279, October–December 2020 (epub December 29, 2020 DOI 10.4103/bc.bc_54_20). Free article link <https://www.braincirculation.org/article.asp?issn=2394-8108;year=2020;volume=6;issue=4;spage=274;epage=279;aulast=Waqas;type=0>

Housley SB, **Vakharia K**, Waqas M, Siddiqui AH: Cerebral Hypoperfusion Necessitating Additional Bypass Following Hunterian Ligation of the Internal Carotid Artery Despite Reassuring Intraoperative Challenges: Video Case Report. Accepted for publication in *Surg Neurol Int* on December 16, 2020.

Waqas M, Dossani RH, **Vakharia K**, Rai HH, Chin F, Tso MK, Rajah GB, Snyder KV, Davies JM, Levy EI, Iyer VS, Siddiqui AH: Complete Flow Control Using Transient Concurrent Rapid Ventricular Pacing or Intravenous Adenosine and Afferent Arterial Balloon Occlusion During Transvenous Embolization of Cerebral Arteriovenous Malformations: Case Series. Accepted for publication in *J Neurointervent Surg* on December 14, 2020.

Tso M, Meyer M, Dossani R, Rajah G, Waqas M, McPheeters M, **Vakharia K**, Davies J, Snyder K, Levy EI, Siddiqui AH: Systematic Review of Balloon Angioplasty for Vasospasm After Subarachnoid Hemorrhage: Compliant versus Noncompliant Balloons, *Neurosurgery*, Volume 67, Issue Supplement_1, December 2020, nyaa447_344, https://doi.org/10.1093/neuros/nyaa447_344

Tso M, Dossani R, Waqas M, Rajah G, **Vakharia K**, Siddiqui AH: Coil occlusion of right M2 fusiform aneurysm after balloon-test occlusion: 2-dimensional video. Accepted for publication in *World Neurosurgery* on October 24, 2020.

Vakharia K, Housley SB, Waqas M, Davies JM, Levy EI: Management of Iatrogenic Internal Carotid Artery Injury during Medial Sphenoid Wing Meningioma Resection. Accepted for publication in *Oper Neurosurg* on July 20, 2020.

Waqas M, **Vakharia K**, Dossani RH, Rajah GB, Tso MK, Gong AD, Rho K, Rai HH, Snyder KV, Levy EI, Siddiqui AH, Davies JM: Transradial Access for Flow Diversion of Intracranial Aneurysms: Case Series. *Interv Neuroradiol*, June 10, 2020.

Vakharia K. The right to know: ethical implications of antibody testing for healthcare workers and overlooked societal implications. *Journal of Medical Ethics* Published Online First: 03 June 2020. doi: 10.1136/medethics-2020-106467

Rajah GB, Waqas M, Dossani RH, **Vakharia K**, Gong AD, Rho K, Housley SB, Rai HH, Chin F, Tso MK, Snyder KV, Levy EI, Siddiqui AH, Davies JM: Transradial Middle Meningeal Artery Embolization for Chronic Subdural Hematoma Using Onyx: Case Series. *J Neurointerv Surg* (epub June 29, 2020 DOI 10.1136/neurintsurg-2020

Housley SB, **Vakharia K**, Waqas M, Davies JM, Siddiqui AH: Mechanical Venous Thrombectomy and Prolonged Infusion of Tissue Plasminogen Activator for Cerebral Venous Sinus Thrombosis: Video Case Report. Accepted for publication in *Surg Neurol Int* on May 27, 2020.

Rajabzadeh-Oghaz H, Waqas M, Veeturi SV, **Vakharia K**, Tso MK, Kenneth SV, Davies JM, Siddiqui AH, Levy EI, Meng H: A Data-Driven Model to Identify High-Risk Aneurysms and Guide Management Decisions: Rupture Resemblance Score. Accepted for publication in *J Neurosurg* on May 15, 2020.

Munich SA, **Vakharia K**, McPheeters MJ, Waqas M, Tso MK, Levy EI, Snyder KV, Siddiqui AH, Davies JM: Transition to Transradial Access for Mechanical Thrombectomy – Lessons Learned and Comparison to Transfemoral Access in a Single-Center Case Series. Accepted for publication in *Oper Neurosurg* on May 4, 2020.

Housley SB, **Vakharia K**, Winograd EK, Siddiqui AH: Endoscopic Carpal Tunnel Release. Accepted for publication in *World Neurosurg* on April 15, 2020.

Chin F, Waqas M, Chou R, Gerace PG, Rai H, **Vakharia K**, Dossani RM, Davies JM, Snyder KV, Levy EI, Siddiqui AH: Impact of Endovascular Reperfusion on Low National Institutes of Health Stroke Scale Score Large-Vessel Occlusion Stroke. Accepted for publication in *J Stroke Cerebrovasc Dis* on March 20, 2020.

Waqas M, Mokin M, Lim J, **Vakharia K**, Springer ME, Meess KM, Ducharme RW, Ionita CN, Setlur Nagesh SV, Gutierrez LC, Snyder KV, Davies JM, Levy EI, Siddiqui AH: Design and Physical Properties of 3-Dimensional Printed Models Used for Neurointervention: a Systematic Review of the Literature. Accepted for publication in *Neurosurgery* on March 11, 2020.

Waqas M, Chin F, Rajabzadeh-Oghaz H, Gong AD, Rai HH, Mokin M, **Vakharia K**, Dossani RH, Meng H, Snyder KV, Davies JM, Levy EI, Siddiqui AH: Size of Ruptured Intracranial Aneurysms: A Systematic Review and Meta-analysis. Accepted for publication in *Acta Neurochir* on March 4, 2020.

Vakharia K, Waqas M, Fayyaz N, Young A, Levy EI, Davies JM, Siddiqui AH: Instantaneous Wave-free Ratio Measurement During Intracranial Submaximal Angioplasty: Case Series and Two-Dimensional Operative Video. Accepted for publication in *Oper Neurosurg* on February 3, 2020.

Munich SA, **Vakharia K**, McPheeters MJ, Tso MK, Waqas M, Snyder KV, Siddiqui AH, Davies JM, Levy EI: Make Clipping Great Again: Microsurgery for Cerebral Aneurysms by Dual-Trained Neurosurgeons. Accepted for publication in *World Neurosurg* on February 1, 2020.

Setlur Nagesh SV, **Vakharia K**, Waqas M, Munich SA, Bednarek DR, Davies JM, Snyder KV, Mokin M, Rudin S, Levy EI, and Siddiqui AH: Single Center Experience of Using High Definition (Hi-Def) Imaging During Neurointervention Treatment of Intracranial Aneurysms Using Flow Diverters. Accepted for publication in *J Neurointerv Surg* on January 6, 2020.

Vakharia K, Waqas M, Shakir HJ, Chin F, Hartke JN, Shallwani H, Beecher JS, Siddiqui AH, Levy EI: Versatile Use of Catheter Systems for Deployment of the Pipeline Embolization Device: A Comparison of Biaxial and Triaxial Catheter Systems. Accepted for publication in *J Neurointerv Surg* on December 15, 2019

Munich SA, **Vakharia K**, McPheeters MJ, Tso MK, Siddiqui AH, Snyder KV, Davies JM, Levy EI: "Strokenomics": Bending the Cost Curve in Stroke Care. Accepted for publication in *J Neurosurg* on November 20, 2019.

Akinduro OO, Gopal N, Hasan TF, Nourollah-Zadeh E, **Vakharia K**, De Leacy R, Burkhard JK, Yamamoto J, Mocco J, Castilla LR, Tze Man Kan P, Boulos A, Levy E, Tawk RG: Pipeline Embolization Device for Treatment of Extracranial Internal Carotid Artery Pseudoaneurysms: A Multicenter Evaluation of Safety and Efficacy. *Neurosurgery* (epub January 24, 2020 DOI: 10.1093/neuros/nyz548). PMID 31980826

Waqas M, **Vakharia K**, Gong AD, Rai HH, Wack A, Fayyaz N, Snyder KV, Davies JM, Siddiqui AH, Levy EI: One and Done? The Effect of Number of Pipeline Embolization Devices on Aneurysm Treatment Outcomes. *Interv Neuroradiol* (epub November 25, 2019:1591019919888130 DOI 10.1177/1591019919888130). PMID 31766960

Rajah GB, Tso MK, Dossani R, **Vakharia K**, Siddiqui AH: Transradial Embolization of the Left Middle Meningeal Artery and Accessory Middle Meningeal Artery for Treatment of Subacute–Chronic Subdural Hematoma (Endovascular Operative Technique Video). Accepted for publication in *J Neurointerv Surg* on October 1, 2019.

Vakharia K, Waqas M, Munich SA, Lim J, Gong A, Chin F, Snyder KV, Siddiqui AH, Levy EI: Is Contrast Stasis After Pipeline Embolization Device Deployment Associated With Higher Aneurysm Occlusion Rates? Accepted for publication in *World Neurosurg* on September 7, 2019.

Lim J, Shallwani H, **Vakharia K**, Siddiqui AH: Adenosine-Induced Cardiac Arrest for Transvenous Embolization of Midbrain Arteriovenous Malformation. *Oper Neurosurg* (epub November 21, 2019 DOI 10.1093/ons/opz330). PMID 31748780

Waqas M, Rai AT, **Vakharia K**, Chin F, Siddiqui AH: Effect of Definition and Methods on Estimates of Prevalence of Large Vessel Occlusion in Acute Ischemic Stroke: A Systematic Review and Meta-analysis. *J Neurointerv Surg* (epub August 23, 2019 DOI 10.1136/neurintsurg-2019-015172). PMID 3144289

Waqas M, Rajabzadeh-Oghaz H, Tutino VM, **Vakharia K**, Poppenberg KE, Mowla A, Meng H, Siddiqui AH: Morphological Parameters and Location Associated with Rupture Status of Intracranial Aneurysms in Elderly Patients. *World Neurosurg* (epub June 14, 2019 DOI 10.1016/j.wneu.2019.06.045). PMID 31207378

Setlur Nagesh SV, **Vakharia K**, Waqas M, Fennell VS, Atwal GS, Shallwani H, Bednarek DR, Davies JM, Snyder KV, Mokin M, Rudin S, Levy EI, Siddiqui AH: High-Definition Zoom Mode, a High-Resolution X-ray Microscope for Neurointerventional Treatment Procedures. Accepted for publication in *J Neuroimaging* on June 20, 2019.

Morr S, **Vakharia K**, Fanous AA, Waqas M, Siddiqui AH: Utility of Intravascular Ultrasound During Carotid Angioplasty and Stenting with Proximal Protection. *Cureus* 11(6):e4935, June 18, 2019 (DOI 10.7759/cureus.4935). Open access <https://www.cureus.com/articles/19089-utility-of-intravascular-ultrasound-during-carotid-angioplasty-and-stenting-with-proximal-protection>

Vakharia K, Munich SA, Waqas M, McPheeters MJ, Levy EI: Dual Microwire Rail Technique to Advance a Microcatheter Past the Ostium of a Dissecting Carotid Artery Aneurysm for Flow Diverter Deployment: 2-Dimensional Operative Video. *Oper Neurosurg* (epub August 23, 2019 DOI 10.1093/ons/opz251).

Vakharia K, Munich SA, Waqas M, Levy EI, Siddiqui AH: Treatment of Anterior Circulation Aneurysms in the Internal Carotid Artery with Flow Diverters. *Neurosurgery* 86(Supplement_1):S55-S63, January 2020 (epub December 16, 2019 DOI 10.1093/neuros/nyz315). PMID 31838527

Stapleton CJ, Chen Y-F, Shallwani H, **Vakharia K**, Turan TN, Woo HH, Derdeyn CP, Charbel FT, Siddiqui AH, Sepideh A-H: Submaximal Angioplasty for Symptomatic Intracranial Atherosclerotic Disease: a Meta-Analysis of Peri-Procedural and Long-Term Risk. *Neurosurgery* (epub August 21, 2019 DOI 10.1093/neuros/nyz337). PMID 31435656.

Vakharia K, Munich SA, Levy EI: COMMENTARY: The Continued Role and Value of Imaging for Acute Ischemic Stroke. Accepted for publication in *Neurosurgery* on February 25, 2019.

Fanou A, Jowdy PK, Morr S, **Vakharia K**, Shallwani H, Lorincz K, Hopkins LN, Davies JM, Snyder KV, Siddiqui AH, Levy EI: Vascular Anatomy and Not Age is Responsible for Increased Risk of Complications in Symptomatic Elderly Patients Undergoing Carotid Artery Stenting. Accepted for publication in *World Neurosurg* on April 23, 2019.

Waqas M, **Vakharia K**, Weimer PV, Hashmi E, Davies JM, Siddiqui AH: Safety and Effectiveness of Embolization for Chronic Subdural Hematoma: Systematic Review and Case Series. *World Neurosurg* (epub March 13, 2019 DOI 10.1016/j.wneu.2019.02.208). PMID 30878752

Munich SA, **Vakharia K**, Levy EI: Overview of Mechanical Thrombectomy Techniques. *Neurosurgery*, February 4, 2019.

Munich SA, **Vakharia K**, Levy EI: Left M2 Occlusion with Thrombolysis in Cerebral Infarction (TICI) 2b Recanalization using “Solombra” Technique. Accepted for publication in *Neurosurgery* on January 23, 2019.

Waqas M, **Vakharia K**, Munich SA, Morrison JF, Mokin M, Levy EI, Siddiqui AH: Initial Emergency Room Triage of Acute Ischemic Stroke. Accepted for publication in *Neurosurgery* on January 2, 2019.

Vakharia K, Waqas M, Munich SA, McPheeters MJ, Levy EI: Management of Iatrogenic Internal Carotid Artery Dissection and Middle Cerebral Artery Restenosis during Endovascular Treatment of Acute Stroke: Video Case, *Neurosurgery*, December 10, 2018.

Munich SA, Waqas M, **Vakharia K**, McPheeters MJ, Siddiqui AH: Use of Intra-arterial Tissue Plasminogen Activator in Acute Stroke: Video Case. *Neurosurgery*, November 29, 2018.

Tutino VM, Rajabzadeh-Oghaz H, Chandra AR, Gutierrez LC, Schweser F, Preda M, Chien A, **Vakharia K**, Ionita C, Siddiqui A, Kolega J. 9.4 T Magnetic Resonance Imaging of the Mouse Circle of Willis Enables Serial Characterization of Flow-Induced Vascular Remodeling by Computational Fluid Dynamics. *Current neurovascular research*. 2018 Nov 1;15(4):312-25.

Vakharia K, Munich SA, Waqas M, Setlur Nagesh SV, Levy EI: Deployment of Distal Posterior Cerebral Artery Flow Diverter in Tortuous Anatomy. *Neurosurg Focus* 46 (Suppl 1):V8, January 2019.

Vakharia K, Munich SA, Tso MK, Waqas M, Levy EI: Stent Anchor Technique to Reduce Microcatheter Loop for Stent-Assisted Coiling of Anterior Communicating Artery Aneurysm. *Neurosurg Focus* 46 (Suppl 1):V7, January 2019.

Vakharia K, Kamal H, Atwal GS, Budny JL: Transtentorial Herniation from Tumefactive Multiple Sclerosis Mimicking Primary Brain Tumor: Case Report. Accepted for publication in *Surg Neurol Int* on August 9, 2018.

Rajabzadeh-Oghaz H, Varble N, Shallwani H, Tutino VM, Mowla A, Shakir HJ, **Vakharia K**, Atwal GS, Siddiqui AH, Davies JM, Meng H. [Computer-Assisted Three Dimensional Morphology Evaluation of Intracranial Aneurysms](#). *World Neurosurg*. 2018 Jul 31. pii: S1878-8750(18)31688-7. doi: 10.1016/j.wneu.2018.07.208. [Epub ahead of print] PubMed PMID: 30075262.

Franke, AJ, Skelton IV WP, Woody LE, Bregy A, Shah AH, **Vakharia, K**, et al. Role of bevacizumab for treatment-refractory meningiomas: A systematic analysis and literature review. *Surg Neurol Int* 2018; 9.

Siasios I, Winograd E, Khan A, **Vakharia K**, Dimopoulos VG, Pollina J. Cervical sagittal balance parameters after single-level anterior cervical discectomy and fusion: Correlations with clinical and functional outcomes. *J Craniovert Jun Spine* 2018; 9:56-62.

Siasios I, **Vakharia K**, Khan A, Meyers JE, Yavorek S, Pollina J, Dimopoulos V: Bowel Injury in Lumbar Spine Surgery: A Review of the Literature. *J Spine Surg* 4:130-137, March 2018. (DOI 10.21037/jss.2018.03.10). PMID 29732433 Open Access <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5911753/>

Meyers JE, **Vakharia K**, Kowalski JM, Dimopoulos VG, Pollina J: Steinmann Pins for C1 Lateral Mass Screw Placement During Atlantoaxial Stabilization. Accepted for publication in *World Neurosurg* on September 9, 2017.

Morrison JF, **Vakharia K**, Moreland DB: Lumbar Laminectomy in a Captive, Adult Polar Bear (*Ursus Maritimus*). *Surg Neurol Int* 8:112, June 13, 2017.

Siasios I, **Vakharia K**, Kowalski JM, Dimopoulos VG, Pollina J: C1-C2 Posterior Cervical Fixation by a Harms Technique Modification: Technical Note. *The Journal of Spine Surgery* 4:14-18, January-March 2017.

Vakharia K, Siasios ID, Dorsch AB, Leonardo J: Symptomatic Intraventricular Rupture of a Craniopharyngioma Cyst: A Case Report. Accepted for publication in *Int J Crit Illn Inj Sci* (in press, April 2017).

Siasios I, **Vakharia K**, Gibbons KJ, Dimopoulos VG: Large, Spontaneous Spinal Subdural-Epidural Hematoma After Epidural Anesthesia for Caesarean Section: Conservative Management with Excellent Outcome. *Surg Neurol Int* 7:S664-S667, September 22, 2016 (DOI 10.4103/2152-7806.191073).

Siasios I, Kapsalaki EZ, Fountas KN, Fotiadou A, Dorsch A, **Vakharia K**, Pollina J, Dimopoulos V: The Role of Diffusion Tensor Imaging and Fractional Anisotropy in the Evaluation of Patients with Idiopathic Normal Pressure Hydrocephalus: A Literature Review. *Neurosurg Focus* 41:E12, September 2016 DOI 0.3171/2016.6.FOCUS16192).

Vakharia K, Siasios I, Dimopoulos VG, Pollina J: Posterior Reversible Encephalopathy Syndrome Resolving Within 48 Hours in a Normotensive Patient Who Underwent Thoracic Spine Surgery. *J Clin Med Res* 8:263-266, March 2016 (epub January 26, 2016)

Tanquilut, N., Alonzo, N., James, A., Rowlands, D., **Vakharia, K.**, Sanchez, G., Yesner, E., San Jose, R., Tanquilut, M.R., Reyes, B.A.S. (2012) Hypoglycemic activity of *Antidesma bunioides* L and *Mollugo oppositifolia* L fresh and alcoholic extracts in the db/db diabetic mouse model. *Journal of Ethnopharmacology*.

Reyes, B.A.S., **Vakharia, K.**, Ferraro, T.N., Levenson, R., Berrettini, W.H. & Van Bockstaele, E.J. (2011) Opiate agonist-induced re-distribution of Wntless, a mu-opioid receptor interacting protein, in rat striatal neurons. *Experimental Neurology*.

Reyes, B.A.S., Carvalho, A.F., **Vakharia, K.** & Van Bockstaele, E.J. (2011) Amygdalar peptidergic circuits regulating noradrenergic locus coeruleus neurons: linking limbic and arousal centers. *Experimental Neurology* 230: 96-105.

Vakharia K, Courynea M, Levy EI. Worth of neurosurgeons in academic departments must not be measured in relative value units. Congress of Neurological Surgeons. Congress Quarterly, Winter Issue, January 2021.

Munich SA, **Vakharia K**, McPheeters MJ, Tso MK, Waqas M, Snyder KV, Siddiqui AH, Davies JM, Levy EI: Response to Letter to the Editor Regarding Ms. WNS-20-1331R1 “Make Clipping Great Again: Microsurgery for Cerebral Aneurysms by Dual-Trained Neurosurgeons.” Accepted for publication in *Neurosurgery* on April 6, 2020.

McPheeters MJ, **Vakharia K**, Munich SA, Siddiqui AH: Wide-Necked Cerebral Artery Aneurysms: Where Do We Stand? *Endovascular Today* 18:70-79, February 2019. Open access https://evtoday.com/pdfs/et0219_F8_Siddiqui.pdf

McPheeters MJ, **Vakharia K**, Munich SA, Davies JM, Siddiqui AH, Snyder KV, Levy EI: Managing and Maintaining Quality Stroke Care in a Rising Tide of Enthusiasm. *Endovascular Today* 18:42-46, January 2019. Open access https://evtoday.com/pdfs/et0119_F1_Snyder.pdf

Siddiqui AH, **Vakharia K** (moderators); Rai AT, Turk AS (panelists): Carotid Occlusion with Middle Cerebral Artery Thrombus (Stroke Challenging Cases: What Would You Do?). *Endovascular Today* 17:41-47, August 2018. <https://evtoday.com/2018/08/carotid-occlusion-with-middle-cerebral-artery-thrombus/>

Munich SA, **Vakharia K**, Leonardo J: Publication Comment for Zaidi HA, Montoure A, Elhadi A, Nakaji P, McDougall CG, Albuquerque FC, Spetzler RF, Zabramski JM: Long-term Functional Outcomes and Predictors of Shunt-Dependent Hydrocephalus After Treatment of Ruptured Intracranial Aneurysms in the BRAT Trial: Revisiting the Clip vs Coil Debate. *Neurosurgery* 76:614, May 2015.

Poster Presentations

Tso, M., Rajah, G., Dossani, R., McPheeters, M., **Vakharia, K.**, Davies, J. Learning Curve For Diagnostic Cerebral Angiography: Transradial Access Versus Transfemoral Access. SNIS 17th Annual Meeting, August 2020.

Vakharia, K., Setlur Nagesh, S.V., Munich, S., Waqas, M., Bednarek, D., Davies, J., Snyder, K., Mokin, M., Rudin, S., Levy, E., Siddiqui, A.H. Initial Clinical Experiences of a New Generation of X-Ray Detector Systems with High Definition (Hidef) Imaging Capabilities for Neurointervention Procedures. AANS Annual Meeting. San Diego, April 2019.

Vakharia, K., Waqas, M., Davies, J. Safety and Effectiveness of Embolization for Chronic Subdural Hematoma: A Case Series and Systematic Review. Cerebrovascular Section. Honolulu, February 2019.

Waqas, M., **Vakharia, K.**, Tutino, V., Rajazadeh, H., Poppenberg, K., Siddiqui, A. Aneurysm Rupture Discriminants in the Elderly Population: A study of Aneurysm Morphology. Cerebrovascular Section. Honolulu, February 2019.

Vakharia, K., Waqas, M., Munich, S., Lim, J., Gong, A., Siddiqui, A., Levy E. Contrast Stasis After PED Deployment Shows No Correlation to Occlusion Rates at 6 and 12 months. Cerebrovascular Section. Honolulu, February 2019.

Shallawani, H., **Vakharia, K.**, Morrison, J., Shakir, H., Davies, J. Cerebrovascular Vessel Length: Aortic Arch to Distal Branches. Congress of Neurological Surgeons. Boston, October 2017.

Becker, A., **Vakharia, K.**, Kuhn, J. Antibiotic-Impregnated External Ventricular Drains and Infection in Prolonged Placement. Congress of Neurological Surgeons. Boston, October 2017.

Kamal, H., Ahmad, M.K., **Vakharia, K.**, Sawyer, R. Minor Strokes with proximal large vessel occlusion in anterior circulation; is intravenous thrombolysis enough. American Academy of Neurology. Boston, April 2017.

Shallwani, H., **Vakharia, K.**, Davies, J., Shakir, H., Rangel-Castilla, L., Sonig, A., Snyder, K., Levy, E. I., Siddiqui, A. H. Angioplasty for Intracranial Atherosclerotic Disease involving Posterior Circulation: Literature review and meta-analysis of all cases reported in the literature. Congress of Neurological Surgeons. San Diego, September 2016.

Shallwani, H., **Vakharia, K.**, Dorsch, A., Leonardo, J., Siddiqui, A. Endoscopic Third Ventriculostomy As A Treatment For Hydrocephalus Secondary To Subarachnoid Hemorrhage. Congress of Neurological Surgeons. San Diego, September 2016.

Winograd, E., Galbo, M., Ciesielski, M., **Vakharia, K.**, Fenstermaker, R. Prognostic Value Of BIRC2 And BIRC3 Expression In TCGA-Defined Glioblastoma Variant Categories. Congress of Neurological Surgeons. San Diego, September 2016.

Siasios, I., **Vakharia, K.**, Pollina, J., Dimopoulos, V. Anterior Cervical Discectomy and Fusion (ACDF) associated complications: preliminary results from a retrospective review study at University of Buffalo. Congress of Neurological Surgeons. San Diego, September 2016.

Siasios, I., **Vakharia, K.**, Pollina, J., Dimopoulos, V. Vertebral Artery Anatomical Variations: Preliminary Results from a Retrospective Review Study in a WNY Academic Neurosurgical Center. Congress of Neurological Surgeons. San Diego, September 2016.

Atwal GS, **Vakharia, K.** Meyers, J., Sorkin G., Fanous, F., Levy, E., Siddiqui, A. The Endovascular Management of Superior Cerebellar Artery Aneurysms: The Buffalo Experience. Congress of Neurological Surgeons, Boston, September 2014.

Reyes, B.A.S., **Vakharia, K.**, Wood, S.K., Valentino, R.J., & Van Bockstaele, E.J. Fate of internalized corticotropin releasing factor receptors in the rat locus coeruleus in a social defeat paradigm. Society for Neuroscience 42nd Annual Meeting, New Orleans, October 13-17, 2012. Abstract accepted.

Vakharia, K., Wood, S.K., Reyes, B.A.S., Valentino, R.J. & Van Bockstaele, E.J. Stress-induced trafficking of mu-opioid receptors in the rat locus coeruleus. Society for Neuroscience 41th Annual Meeting, Washington DC, November 12-16, 2011.

Vakharia, K., Reyes, B.A.S. & Van Bockstaele, E.J. Kappa opioid receptor agonist-induced changes in adrenergic receptor expression in rat frontal cortex. Society for Neuroscience 40th Annual Meeting, San Diego, CA, November 13-17, 2010.

Oral Presentations

Vakharia, K. Microsurgery for Dural Arteriovenous Fistulas. University of South Florida Grand Rounds, Tampa, Florida. December 17, 2021.

Vakharia, K. Microsurgery for Arteriovenous Malformations. University of South Florida Grand Rounds, Tampa, Florida. December 17, 2021.

Vakharia, K. Microsurgery for Posterior Circulation Aneurysms. University of South Florida Grand Rounds, Tampa, Florida. December 10, 2021.

Vakharia, K. Microsurgery for Anterior Circulation Aneurysms. University of South Florida Grand Rounds, Tampa, Florida. December 3, 2021.

Vakharia, K. Inferior Petrosal Sinus Sampling. University of South Florida Pituitary Tumor Board, Tampa, Florida. November 2021.

Vakharia, K. The Evolving Mindset of a Cerebrovascular Neurosurgeon: Multimodal Treatment of Cerebral AVMs. Virginia Commonwealth University Grand Rounds, Richmond, Virginia, November 2020.

Jean, W., Schwartz, T., Kong, D., Rosito, D., **Vakharia, K.** Le Faux Miroir. NASBS Surgeons Log 2020, Webinar, July 2020.

Vakharia, K. Pushing the Envelope with Transradial Access. Neurosurgical Grands Rounds, Gates Vascular Institute, February 2020.

Vakharia, K. Transcarotid Stenting. Neurosurgical Grands Rounds, Gates Vascular Institute, October 2019.

Vakharia, K. Minimally Invasive Intracranial Clot Evacuation. Neurosurgical Grands Rounds, Gates Vascular Institute, August 2019.

Vakharia, K. Training with Models. University at Buffalo, Gates Vascular Institute, March 2019.

Vakharia, K. Recognizing the Ivy Sign: Moyamoya Disease and Management. University at Buffalo, Gates Vascular Institute, October 2018.

Vakharia, K. 3D DSA Rotational Spin Rupture Complication. Failure Analysis Advisory Council Meeting, Jackson Hole, Wyoming. August 2018.

Kamal, H., Ahmad, M.K., **Vakharia, K.**, Sawyer, R. Minor Strokes with proximal large vessel occlusion in anterior circulation; is intravenous thrombolysis enough. American Academy of Neurology. Boston, April 2017.

Vakharia, K. The Efficacy of Hemicraniectomy in Stroke Patients. Neurosurgical Grand Rounds, University at Buffalo, Gates Vascular Institute, September 2016.

Vakharia K. Post-operative C5 Neuropraxia. Spine Conference, University at Buffalo, Gates Vascular Institute, May 2016.

Vakharia K. Treatment of Cerebral AVMs: ARUBA and beyond. Neurosurgical Grand Rounds, University at Buffalo, Gates Vascular Institute, March 2016.

Vakharia K. Carotid Endarterectomy: Operative Techniques. Neurosurgical Grand Rounds, University at Buffalo, Gates Vascular Institute, September 2015.

Reyes, B.A.S., Richards, J.L., Heldt, N.A., **Vakharia, K.**, Valentino, R.J. & Van Bockstaele, E.J. Targeting of amygdalar corticotropin-releasing factor neurons that project to the locus coeruleus by noradrenergic afferents. Society for Neuroscience 41th Annual Meeting, Washington DC, November 12-16, 2011.

Dalyai, R., Theofanis T., **Vakharia, K.**, Dumont, A., Jabbour, P., Gonzalez, F., Rosenwasser, R., Tjoumakaris, S.I., Follow-Up Angiography in Subarachnoid Hemorrhage with Negative Initial Angiography. Congress of Neurological Surgeons. Washington, DC. October 2011.

Book Chapters

Vakharia K, Link M, Van Gompel J: Recurrent Esthesioneuroblastoma. In Agazzi S (eds): Radiosurgery of the Skullbase, Elsevier, 2021.

Vakharia K, Parney I, Van Gompel J: Olfactory Upfront Radiosurgery. In Agazzi S (eds): Radiosurgery of the Skullbase, Elsevier, 2021.

Vakharia K, Link M, Van Gompel J: Boost Dosing Esthesioneuroblastoma. In Agazzi S (eds): Radiosurgery of the Skullbase, Elsevier, 2021.

Vakharia K, Link M, Van Gompel J: Planum Meningioma Upfront Radiosurgery. In Agazzi S (eds): Radiosurgery of the Skullbase, Elsevier, 2021.

Vakharia K, Link M, Lanzino G, Van Gompel J: Planum Meningioma Radiosurgery after Microsurgery. In Agazzi S (eds): Radiosurgery of the Skullbase, Elsevier, 2021.

Vakharia K, Cesar L, Peris-Celda M, Link M: Jugular Foramen Schwannomas. In Youssef S (eds): Contemporary Skull Base Surgery: A Comprehensive Guide to Functional Preservation, Springer Nature, 2022.

Vakharia K, Neff B, Carlson M, Driscoll C, Link M: Vestibular Schwannomas. In Youssef S (eds): Contemporary Skull Base Surgery: A Comprehensive Guide to Functional Preservation, Springer Nature, 2022.

Vakharia K, Van Gompel J: Jugular Foramen Meningiomas. In Youssef S (eds): Contemporary Skull Base Surgery: A Comprehensive Guide to Functional Preservation, Springer Nature, 2022.

Lim J, Waqas M, **Vakharia K**, Siddiqui AH: Challenges in Thrombectomy: Impossible Aortic Arches and Tortuous Vessels. In Pierce A, Hui F, Spiotta A, Turk H, Hanel R (eds): Acute Ischemic Stroke: A Case-based Guide to Management, Springer Nature, January 2021.

Vakharia K, Waqas M, Hopkins LN, Siddiqui AH, Levy EI: Endovascular Treatment of Intracranial Occlusive Disease (chapter 61). In Quinones-Hinojosa A (ed): *Schmidek & Sweet: Operative Neurosurgical Techniques* (7th Edition), Elsevier (in press, 2021).

Vakharia K, Waqas M, Siddiqui AS, Levy EI: Mechanical Thrombectomy with Intracranial Stenting/Angioplasty (Section 4, Chapter 20) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Levy EI, Siddiqui AH: Intracranial Atherosclerotic Disease – Intracranial Angioplasty (Section 4, Chapter 22) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Siddiqui AS, Levy EI: Primary (Section 5, Chapter 23) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Waqas M, Tso MK, Siddiqui AS, Levy EI: Ateriovenous Embolization with N-butyl-2-cyanoacrylate (Section 6, Chapter 32) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Waqas M, Levy EI, Siddiqui AH: Spinal Arteriovenous Fistula and Malformation Embolization (Section 6, Chapter 34) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Waqas M, Levy EI, Siddiqui AH: Central Nervous System Tumors (Section 7, Chapter 37) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

Vakharia K, Waqas M, Neary AR, Siddiqui AS, Levy EI: Embolization of Carotid Body Tumors (Section 7, Chapter 38) In Rangel-Castilla L, Siddiqui AH, Levy EI (authors), Lanzino G, Hopkins LN, Davies JM (contributors): Video Atlas of Neuroendovascular Procedures (1st edition). New York, Thieme Publishers, February 2020.

McPheeters MJ, Munich SA, **Vakharia K**, Mokin MM, Siddiqui AH: Carotid Artery Angioplasty and Stenting (Section XIII, Part 4, Chapter 415), in Winn H (ed): *Youmans and Winn Neurological Surgery* (8th edition), Elsevier. Submitted December 19, 2019

Eross L, Riley J, Levy EI, **Vakharia K**: Neuroimaging of Deep Brain Stimulation. *Neurol Clin* 38(1):201-214, February 2020 (DOI 10.1016/j.ncl.2019.09.005). PMID 31761059

Vakharia K, Natarajan SK, Shallwani H, Levy EI: Asymptomatic Cervical Carotid Stenosis (Chapter 16). In Nakaji P, Levitt M (eds): *Cerebrovascular Surgery: Neurosurgery by Example Series*. Oxford University Press, New York, New York; September 2019. p 145-154.

McPheeters MJ, **Vakharia K**, Munich SA, Hopkins LN: Stroke After Cardiac Surgery: More Common Than Appreciated. In Greenhalgh RM (ed.): *Charing Cross 2019 - Vascular and Endovascular Challenges Update*, 2019 edition, BIBA Medical, Fulham, London, UK. p 41-48. ISBN: 97809570419819. <https://www.cxsymposium.com/product/charing-cross-2019-vascular-and-endovascular-challenges-update-book/>

Vakharia K, Shallwani H, Beecher JS, Jowdy P, Levy EI: Endovascular Treatment of Acute Stroke and Occlusive Cerebrovascular Disease (chapter 23). In Ellenbogen RG, Sekhar LN, and Kitchen N (eds): *Principles of Neurological Surgery, 4th edition*. Elsevier, Philadelphia, February 2018, p 343-354.

Vakharia K, Atwal GS, Levy E: Management of Acute Ischemic Thrombosis. *Neurosurg Clin N Am* 29:595-604, October 2018 (epub August 14, 2018 DOI 10.1016/j.nec.2018.06.012) PMID 30223972

Vakharia K, Lim J., Beecher JS, Siddiqui AH: Complications in the Endovascular Treatment of Intracranial Aneurysms (chapter 51). In Dryjski M, Harris LM (eds): *Complications in Endovascular Surgery*, 1e. Elsevier. (in press, 2018)

Fennell VS, Atwal GS, **Vakharia K**, Snyder KV: Complications in the Endovascular Treatment of Intracranial Arteriovenous Malformations (chapter 53). In Dryjski M, Harris LM (eds): *Complications in Endovascular Surgery*, 1e. Elsevier. (in press, 2018)

Atwal GS, **Vakharia K**, Fennell VS, Levy EI: Embolic Protection Issues (chapter 46). In Dryjski M, Harris LM (eds): *Complications in Endovascular Surgery*, 1e. Elsevier. (in press, 2018)

Vakharia K, Shallwani H, Beecher JS, Jowdy P, Levy EI: Endovascular Treatment of Acute Stroke and Occlusive Cerebrovascular Disease. Ellenbogen, Sekhar and Kitchen's *Principle of Neurological Surgery, 4th ed*. Philadelphia: Elsevier Saunders (in press, 2018).

Vakharia K, Cress MC, Levy EI: Mycotic Intracranial Aneurysms (chapter __). *Decision Making in Cerebrovascular Diseases* edited by Rangel-Castilla, Nakaji P, Siddiqui AH, Spetzler RF, Levy EI. Thieme Publishers, New York, New York (in press).

Vakharia K, Snyder KV, Siddiqui AH: Intracranial Atherosclerotic Disease (chapter __). *Decision Making in Cerebrovascular Diseases* edited by Rangel-Castilla, Nakaji P, Siddiqui AH, Spetzler RF, Levy EI. Thieme Publishers, New York, New York (in press).

Vakharia K, Shakir HJ, Levy EI: Anticoagulation and Thrombolysis in the Pediatric Population (chapter 18). In Agrawal A, Britz G (eds): *Pediatric Vascular Neurosurgery*. Principles and Practice

of Neurovascular Disorders (Part 1) Springer International Publishing, Cham Switzerland, 2016, p.263-272. DOI 10.1007/978-3-319-43636-4_18 ISBN: 9783319436340

Activities

Operative Neurosurgery Speaks (May 2021 – present)

Prepare and translate operative neurosurgery abstracts and prepare audio files for online international distribution.

Cerebrovascular Section Website Committee (July 2020 – present)

Preparing online news and article reviews for the website.

Cerebrovascular Section YNC Liaison (July 2020 – present)

Serve as liaison between YNC and CV section.

Cerebrovascular Section Social Media Team Director (January 2020 – present)

Prepare posts and coordinate social media outreach, events, and correspondence for the cerebrovascular neurosurgery section through social media outreach.

Congress of Neurological Surgeons Resident Liaison (April 2016 – May 2020)

Helped involve residents in CNS activities and made sure that residents were aware of resources that CNS was offering as well as helping coordinate applications and submissions for resident staff.

Cadaver Courses Coordinator (January 2014 – December 2018)

Helped manage and prepare two endoscopic cadaver course as well as create a foundation for liaising with companies to help continue resident education with several other cadaveric courses, teaching sessions, and coordinating the University at Buffalo as well as the Jacobs Institute.

Research Experience

Research Assistant, Jefferson Medical College, Dr. Elisabeth Van Bockstaele, 7/2009-7/2012

Collected and analyzed data for projects related to tracing of circuits to and from the locus coeruleus, receptor quantification in the frontal cortex, and modulation of receptors after stimulation of opioid receptors. Used techniques including stereotactic tracing, immunofluorescence, electron microscopy, and Western blot as well as worked in stereotactic injections and rat brain dissections.

Research Assistant, Pennsylvania State University, Dr. Matthew Whim, 9/2007-7/2008

Analyzed data for experimentation on neuropeptide Y to see trafficking between isolated neurons on a Petri dish. Performed PCR, Southern and Western blotting, gel electrophoresis, immuno-fluorescent microscopy, and live imaging.

Research Assistant, University of Connecticut, Dr. Nilanjana Maulik, 6/2006-8/2006

Gathered data for projects related to angiogenesis in myocardial infarction and diabetic rat models to study the pattern of growth and change in severity of infarction with the use of several compounds including bromelain and sildenafil. Participated in performing perfusion studies, doing surgery and dissection with analysis of tissue with immunofluorescence and light microscopy. Developed method of myocardial injections of mice under anesthesia with aid of echocardiography.

Community Service

Physician Coordinator (2010), JeffHOPE, 2009-2013

JeffHOPE is a student run organization that has several free clinics set up in homeless shelters in Philadelphia. Triage cases and patients at several free clinics managed by JeffHOPE. Coordinated physician schedule for several clinics.

Institutional Review Board Committee Member, Children's Hospital of Philadelphia, July 2010-2014

Served on IRB committee reviewing research proposals for human research. On committee for revising protocols and consent forms for trials.

Guyana Clean Water Initiative, Spring 2009

Coordinated fundraising and set-up several fresh water tanks for families in Guyana. Helped teach local school students and helped with minor medical problems in the neighboring area.

Professional Memberships

American Medical Association
American Association of Neurological Surgeons
Congress of Neurological Surgeons
Cerebrovascular Section
North American Skull Base Society
Society for Neuroscience
American Society of Bioethics and Humanities

Journal Review

Journal of Neurosurgery
Neurosurgery
Journal of Skull Base Part B
Stroke: Vascular and Interventional Neurology
AMA Journal of Bioethics
Journal of Neurointerventional Studies
Therapeutic Advances in Neurological Disorders
Journal of Clinical Imaging
Cureus

Medical Licensure

Minnesota – 2019-present
Florida – 2021 - present