

## CURRICULUM VITAE

**NAME:** Aquilla S. Turk, III, DO

**OFFICE ADDRESS:**  
Prisma Health-Upstate  
SouthEastern Neurosurgical and Spine Institute  
109 Doctors Drive, Cross Creek Medical Park  
Greenville SC, 29605

**PHONE:** (864) 797-7150

**EMAIL:**  
Quill.Turk@Prismahealth.org

### FACULTY APPOINTMENTS:

July 2017 – Current	Chief Medical Officer Imperative Care
July 2018- October 2020	Chief Medical Officer Corindus Vascular Robotics
October 2020 – Present	Professor, Dept of Surgery University of South Carolina, School of Medicine – Greenville. Physician, Prisma Health- Upstate.
October 2018 – August 2020	Director, Stroke and Cerebrovascular program Professor, Dept of Surgery University of South Carolina, School of Medicine – Greenville. Physician, Prisma Health- Upstate.
July 2016 – October 2018	Professor, Director, Neuroendovascular Surgery Medical University of South Carolina Department of Neurosurgery
July 2013 – July 2016	Professor, Director, Neuroendovascular Surgery Medical University of South Carolina Department of Radiology
October 2007 – July 2013	Associate Professor, Director Interventional Neuroradiology Medical University of South Carolina Department of Radiology

*Imperative Care v. Inari Medical*  
U.S. Patent 11,974,910  
**Imperative Care Ex. 1023**

November 2003 – October 2007	Assistant Professor (CHS) University of Wisconsin Hospital and Clinics 600 Highland Ave., E1/320 Madison, WI 53792
May 2003 – October 2003	Instructor (CHS) University of Wisconsin Hospital and Clinics 600 Highland Ave., E1/320, Madison, WI 53792
June 2002 – April 2003	Interventional and Diagnostic Neuroradiologist, Texas Neuroradiology, P.A. 8440 Walnut Hill Lane, Suite 510 Dallas, TX 75231
July 2001 - June 2002	Clinical Instructor, Neuroradiology and Interventional Neuroradiology University of Wisconsin Hospital and Clinics 600 Highland Ave., E1/320, Madison, WI 53792

**EDUCATION**

July 2000 - June 2001	Accredited Fellow, Neuroradiology, University of Wisconsin Hospital and Clinics, Madison, Wisconsin
July, 1997 – June, 2000	Residency, Diagnostic Radiology, University of Wisconsin Hospital and Clinics, Madison, Wisconsin
July, 1996 – June, 1997	Resident, Radiology, The Cleveland Clinic Foundation, Department of Diagnostic Radiology, Cleveland, Ohio.
August, 1992 - May, 1996	D.O. Nova Southeastern University, College of Osteopathic Medicine, North Miami Beach, Florida
August, 1989 - May, 1992	B.S. University of Florida, Gainesville, Florida, Major: Microbiology
September, 1986 – May, 1989	Dekalb College, Atlanta, Georgia

**AWARDS**

1999	Michael Brothers Award for outstanding interventional neuroradiology paper, presented at ASNR annual meeting.
	Cornelius Dyke Award for outstanding original research in neuroradiology, presented at ASNR annual meeting.

RSNA Resident/Fellow Research Award.

- 1996 Nova Southeastern University College of Osteopathic Medicine, Graduated with Highest Honors (class rank 5 of 123 students).
- 1992 - 1996 Dean's List: Nova Southeastern University College of Osteopathic Medicine.
- 1991 Dean's List of Academic Achievement: University of Florida.

## PUBLICATIONS

158. Vargas J, Blalock J, Venkatraman A, Anagnostakou V, King RM, Ewing JA, Gounis MJ, Turner RD, Chaudry I, **Turk A**. Efficacy of beveled tip aspiration catheter in mechanical thrombectomy for acute ischemic stroke. *J Neurointerv Surg*. 2020 Oct 6:neurintsurg-2020-016695. doi: 10.1136/neurintsurg-2020-016695. Online ahead of print.
157. Martini M, Mocco J, **Turk A**, Siddiqui AH, Fiorella D, Hanel RA, Woodward K, Rai A, Frei D, Delgado Almandoz JE, Kelly ME, Peeling L, Arthur AS, Baxter B, English J, Linfante I, De Leacy R. 'Real-world' comparison of first-line direct aspiration and stent retriever mechanical thrombectomy for the treatment of acute ischemic stroke in the anterior circulation: a multicenter international retrospective study. *J Neurointerv Surg*. 2019 Oct;11(10):957-963. doi: 10.1136/neurintsurg-2018-014624. Epub 2019 Apr 11.
156. **Turk AS 3rd**, Siddiqui A, Fifi JT, De Leacy RA, Fiorella DJ, Gu E, Levy EI, Snyder KV, Hanel RA, Aghaebrahim A, Woodward BK, Hixson HR, Chaudry MI, Spiotta AM, Rai AT, Frei D, Almandoz JED, Kelly M, Arthur A, Baxter B, English J, Linfante I, Fargen KM, Mocco J. Aspiration thrombectomy versus stent retriever thrombectomy as first-line approach for large vessel occlusion (COMPASS): a multicentre, randomised, open label, blinded outcome, non-inferiority trial. *Lancet*. 2019 Mar 9;393(10175):998-1008. doi: 10.1016/S0140-6736(19)30297-1.
155. Mokin M, Waqas M, Fifi J, De Leacy R, Fiorella D, Levy EI, Snyder K, Hanel R, Woodward K, Chaudry I, Rai AT, Frei D, Delgado Almandoz JE, Kelly M, Arthur AS, Baxter BW, English J, Linfante I, Fargen KM, **Turk A**, Siddiqui AH, Mocco J. Clot perviousness is associated with first pass success of aspiration thrombectomy in the COMPASS trial. *J Neurointerv Surg*. 2020 Jul 17:neurintsurg-2020-016434. doi: 10.1136/neurintsurg-2020-016434.
154. Vargas J, Blalock J, Venkatraman A, Anagnostakou V, King RM, Ewing JA, Gounis MJ, Turner RD, Chaudry I, **Turk A**. Efficacy of beveled tip aspiration catheter in mechanical thrombectomy for acute ischemic stroke. *J Neurointerv Surg*. 2020 Oct 6:neurintsurg-2020-016695. doi: 10.1136/neurintsurg-2020-016695. Online ahead of print.

153. Martini M, Mocco J, **Turk A**, Siddiqui AH, Fiorella D, Hanel R, Woodward K, Rai A, Frei D, Delgado Almandoz JE, Kelly ME, Peeling L, Arthur AS, Baxter B, English J, Linfante I, De Leacy R. An international multicenter retrospective study to survey the landscape of thrombectomy in the treatment of anterior circulation acute ischemic stroke: outcomes with respect to age. *J Neurointerv Surg.* 2020 Feb;12(2):115-121. doi: 10.1136/neurintsurg-2019-015093. Epub 2019 Jun 25.
152. Raymond J, Ghostine J, van Adel BA, Shankar JJS, Iancu D, Mitha AP, Kvamme P, Turner RD, **Turk A**, Mendes-Pereira V, Carpenter JS, Boo S, Evans A, Woo HH, Fiorella D, Alaraj A, Roy D, Weill A, Lavoie P, Chagnon M, Nguyen TN, Rempel JL, Darsaut TE. Does Increasing Packing Density Using Larger Caliber Coils Improve Angiographic Results of Embolization of Intracranial Aneurysms at 1 Year: A Randomized Trial. *AJNR Am J Neuroradiol.* 2020 Jan;41(1):29-34. doi: 10.3174/ajnr.A6362. Epub 2020 Jan 2.
151. Mendes Pereira V, Cancelliere NM, Nicholson P, Radovanovic I, Drake KE, Sungur JM, Krings T, **Turk A**. First-in-human, robotic-assisted neuroendovascular intervention. *J Neurointerv Surg.* 2020 Apr;12(4):338-340. doi: 10.1136/neurintsurg-2019-015671.rep. Epub 2020 Mar 3.
150. Mokin M, Primiani CT, Ren Z, Piper K, Fiorella DJ, Rai AT, Orlov K, Kislitsin D, Gorbatykh A, Mocco J, De Leacy R, Lee J, Vargas Machaj J, Turner R, Chaudry I, **Turk AS**. Stent-assisted coiling of cerebral aneurysms: multi-center analysis of radiographic and clinical outcomes in 659 patients. *J Neurointerv Surg.* 2020 Mar;12(3):289-297. doi: 10.1136/neurintsurg-2019-015182. Epub 2019 Sep 17.
149. Turner RD, Chaudry M, **Turk AS**, Tillman H, Spiotta AS. Vascular Injury and ICH In Patients Who Underwent Thrombectomy: ADAPT techniques and Stent-Retriever Single Center Experience *J NeuroInterven Surg* *Accepted*
148. Alawieh A, Vargas J, Fargen KM, Langley EF, Starke RM, De Leacy R, Chatterjee R, Rai A, Dumont T, Kan P, McCarthy D, Nascimento FA, Singh J, Vilella L, **Turk A**, Spiotta AM. Impact of Procedure Time on Outcomes of Thrombectomy for Stroke. *J Am Coll Cardiol.* 2019 Mar 5;73(8):879-890. doi: 10.1016/j.jacc.2018.11.052. PMID: 30819354
147. Primiani CT, Vicente AC, Brannick MT, **Turk AS**, Mocco J, Levy EI, Siddiqui AH, Mokin M. Direct Aspiration versus Stent Retriever Thrombectomy for Acute Stroke: A Systematic Review and Meta-Analysis in 9127 Patients. *J Stroke Cerebrovasc Dis.* 2019 Feb 13. pii: S1052-3057(19)30043-6. doi: 10.1016/j.jstrokecerebrovasdis.2019.01.034. [Epub ahead of print] PMID: 30772159
146. Mehta T, Male S, Quinn C, Kallmes DF, Siddiqui AH, **Turk A**, Grande AW, Tummala RP, Jagadeesan BD. Institutional and provider variations for mechanical thrombectomy in the treatment of acute ischemic stroke: a survey analysis. *J Neurointerv Surg.* 2019 Feb

13. pii: neurintsurg-2018-014614. doi: 10.1136/neurintsurg-2018-014614. [Epub ahead of print] PMID: 30760625
145. Jankowitz BT, Hanel R, Jadhav AP, Loy DN, Frei D, Siddiqui AH, Puri AS, Khaldi A, **Turk AS**, Malek AM, Sauvageau E, Hetts SW, Zaidat OO. Neuroform Atlas Stent System for the treatment of intracranial aneurysm: primary results of the Atlas Humanitarian Device Exemption cohort. *J Neurointerv Surg*. 2019 Jan 22. pii: neurintsurg-2018-014455. doi: 10.1136/neurintsurg-2018-014455. [Epub ahead of print] PMID: 30670625
144. Aghaebrahim A, Agnoletto GJ, Aguilar-Salinas P, Granja MF, Monteiro A, Siddiqui AH, Levy EI, Shallwani H, Kim SJ, Haussen DC, Nogueira RG, Lopes D, Saied A, Jovin TG, Jadhav AP, Limaye K, **Turk AS**, Spiotta AM, Chaudry MI, Turner RD, Brasiliense LBC, Dumont TM, Cherian J, Kan P, Sauvageau E, Hanel RA. Endovascular Recanalization of Symptomatic Intracranial Arterial Stenosis Despite Aggressive Medical Management. *World Neurosurg*. 2019 Mar;123:e693-e699. doi: 10.1016/j.wneu.2018.12.008. Epub 2018 Dec 18. PMID: 30576811
143. Anadani M, Alawieh A, Vargas J, Chatterjee AR, **Turk A**, Spiotta A. First attempt recanalization with ADAPT: rate, predictors, and outcome. *J Neurointerv Surg*. 2018 Dec 7. pii: neurintsurg-2018-014294. doi: 10.1136/neurintsurg-2018-014294. [Epub ahead of print] PMID: 30530772
142. Anadani M, Ajinkya S, Alawieh A, Vargas J, Chatterjee A, **Turk A**, Spiotta AM. Intra-Arterial Tissue Plasminogen Activator Is a Safe Rescue Therapy with Mechanical Thrombectomy. *World Neurosurg*. 2019 Mar;123:e604-e608. doi: 10.1016/j.wneu.2018.11.232. Epub 2018 Dec 7. PMID: 30529522
141. Alawieh A, Chatterjee AR, Vargas J, Chaudry MI, Lena J, Turner R, **Turk A**, Spiotta A. Lessons Learned Over More than 500 Stroke Thrombectomies Using ADAPT With Increasing Aspiration Catheter Size. *Neurosurgery*. 2018 Nov 10. doi: 10.1093/neuros/nyy444. [Epub ahead of print] PMID:30418596
140. Alawieh A, Starke RM, Chatterjee AR, **Turk A**, De Leacy R, Rai AT, Fargen K, Kan P, Singh J, Vilella L, Nascimento FA, Dumont TM, McCarthy D, Spiotta AM. Outcomes of endovascular thrombectomy in the elderly: a 'real-world' multicenter study. *J Neurointerv Surg*. 2018 Nov 2. pii: neurintsurg-2018-014289. doi: 10.1136/neurintsurg-2018-014289. [Epub ahead of print] PMID: 30389899
139. Fiorella D, Boulos A, **Turk AS**, Siddiqui AH, Arthur AS, Diaz O, Lopes DK; The safety and effectiveness of the LVIS stent system for the treatment of wide-necked cerebral aneurysms: final results of the pivotal US LVIS trial. LVIS investigators. *J Neurointerv Surg*. 2019 Apr;11(4):357-361. doi: 10.1136/neurintsurg-2018-014309. Epub 2018 Oct 8. PMID: 30297543
138. Spiotta AM, Fiorella D, Arthur AS, Frei D, **Turk AS**, Hirsch JA. The semiotics of distal thrombectomy: towards a TICI score for the target vessel. *J Neurointerv Surg*. 2019

Mar;11(3):213-214. doi: 10.1136/neurintsurg-2018-014353. Epub 2018 Oct 8. No abstract available. PMID:30297542

137. Brasiliense LBC, Aguilar-Salinas P, Lopes DK, Nogueira D, DeSousa K, Nelson PK, Moran CJ, Mazur MD, Taussky P, Park MS, Dabus G, Linfante I, Chaudry I, Turner RD, Spiotta AM, **Turk AS**, Siddiqui AH, Levy EI, Hopkins LN, Arthur AS, Nickele C, Gonsales D, Sauvageau E, Hanel RA. Multicenter Study of Pipeline Flex for Intracranial Aneurysms. *Neurosurgery*. 2018 Sep 17. doi: 10.1093/neuros/nyy422. [Epub ahead of print] PMID:30239959
136. **Turk AS**, Frei D, Fiorella D, Mocco J, Baxter B, Siddiqui A, Spiotta A, Mokin M, Dewan M, Quarfordt S, Battenhouse H, Turner R, Chaudry I. ADAPT FAST study: a direct aspiration first pass technique for acute stroke thrombectomy. *J Neurointerv Surg*. 2018 Jul;10(Suppl 1):i4-i7. doi: 10.1136/neurintsurg-2014-011125.rep. PubMed PMID: 30037944.
135. Goyal N, Tsivgoulis G, Frei D, **Turk A**, Baxter B, Froehler MT, Mocco J, Ishfaq MF, Malhotra K, Chang JJ, Hoit D, Eljovich L, Loy D, Turner RD, Mascitelli J, Espaillat K, Alexandrov AV, Arthur AS. Comparative Safety and Efficacy of Modified TICI 2b and TICI 3 Reperfusion in Acute Ischemic Strokes Treated With Mechanical Thrombectomy. *Neurosurgery*. 2018 Sep 1;83(3):593. doi: 10.1093/neuros/nyy320. PubMed PMID: 30010960.
134. Spiotta AM, Chaudry MI, Turner RD 4th, **Turk AS**, Derdeyn CP, Mocco J, Tateshima S. An Update on the Adjunctive Neurovascular Support of Wide-Neck Aneurysm Embolization and Reconstruction Trial: 1-Year Safety and Angiographic Results. *AJNR Am J Neuroradiol*. 2018 May;39(5):848-851. doi: 10.3174/ajnr.A5599. Epub 2018 Mar 29. PubMed PMID: 29599174.
133. **Turk AS**, Spiotta A, Frei D, Mocco J, Baxter B, Fiorella D, Siddiqui A, Mokin M, Dewan M, Woo H, Turner R, Hawk H, Miranpuri A, Chaudry I. Initial clinical experience with the ADAPT technique: A direct aspiration first pass technique for stroke thrombectomy. *J Neurointerv Surg*. 2018 Jul;10(Suppl 1):i20-i25. doi: 10.1136/neurintsurg-2013-010713.rep. PubMed PMID: 30037948.
132. **Turk AS 3rd**, Siddiqui A, Fifi JT, De Leacy RA, Fiorella DJ, Gu E, Levy EI, Snyder KV, Hanel RA, Aghaebrahim A, Woodward BK, Hixson HR, Chaudry MI, Spiotta AM, Rai AT, Frei D, Almandoz JED, Kelly M, Arthur A, Baxter B, English J, Linfante I, Fargen KM, Mocco J. Aspiration thrombectomy versus stent retriever thrombectomy as first-line approach for large vessel occlusion (COMPASS): a multicentre, randomised, open label, blinded outcome, non-inferiority trial. *Lancet*. 2019 Mar 9;393(10175):998-1008. doi: 10.1016/S0140-6736(19)30297-1. PMID: 30860055
131. Spiotta AM, Arthur AS, Fiorella D, Frei D, Baxter B, Mocco J, Hirsch JA, Turner RD, **Turk AS** Is discretion the better part of valor? *J Neurointerv Surg*. 2018 Apr 21. pii: neurintsurg-2018-013938. doi: 10.1136/neurintsurg-2018-013938. [Epub ahead of print] No abstract available. PMID: 29680820

130. Alawieh A, Chatterjee A, Feng W, Porto G, Vargas J, Kellogg R, **Turk AS**, Turner RD, Imran Chaudry M, Spiotta AM. Thrombectomy for acute ischemic stroke in the elderly: a 'real world' experience. *J Neurointerv Surg*. 2018 Apr 17. pii: neurintsurg-2018-013787. doi: 10.1136/neurintsurg-2018-013787. [Epub ahead of print] PMID: 29666180
129. Goyal N, Tsivgoulis G, Frei D, **Turk A**, Baxter B, Froehler MT, Mocco J, Ishfaq MF, Malhotra K, Chang JJ, Hoit D, Eljovich L, Loy D, Turner RD, Mascitelli J, Espaillat K, Alexandrov AV, Arthur AS. Comparative Safety and Efficacy of Modified TICI 2b and TICI 3 Reperfusion in Acute Ischemic Strokes Treated With Mechanical Thrombectomy. *Neurosurgery*. 2019 Mar 1;84(3):680-686. doi: 10.1093/neuros/nyy097. PMID:29618102
128. Goyal N, Tsivgoulis G, Frei D, **Turk A**, Baxter B, Froehler MT, Mocco J, Pandhi A, Zand R, Malhotra K, Hoit D, Eljovich L, Loy D, Turner RD, Mascitelli J, Espaillat K, Katsanos AH, Alexandrov AW, Alexandrov AV, Arthur AS. Comparative safety and efficacy of combined IVT and MT with direct MT in large vessel occlusion. *Neurology*. 2018 Apr 10;90(15):e1274-e1282. doi: 10.1212/WNL.0000000000005299. Epub 2018 Mar 16. PMID: 29549221
127. Mokin M, China A, Primiani CT, Ren Z, Kan P, Srinivasan VM, Hanel R, Aguilar-Salinas P, **Turk AS**, Turner RD, Chaudry MI, Ringer AJ, Welch BG, Mendes Pereira V, Renieri L, Piano M, Eljovich L, Arthur AS, Cheema A, Lopes DK, Saied A, Baxter BW, Hawk H, Puri AS, Wakhloo AK, Shallwani H, Levy EI, Siddiqui AH, Dabus G, Linfante I. Treatment of blood blister aneurysms of the internal carotid artery with flow diversion. *J Neurointerv Surg*. 2018 Feb 24. pii: neurintsurg-2017-013701. doi: 10.1136/neurintsurg-2017-013701. [Epub ahead of print] PMID: 29478029
126. **Turk AS**, Siddiqui AH, Mocco J. A comparison of direct aspiration versus stent retriever as a first approach ('COMPASS'): protocol. *J Neurointerv Surg*. 2018 Feb 20. pii: neurintsurg-2017-013722. doi: 10.1136/neurintsurg-2017-013722. [Epub ahead of print] PMID: 29463619
125. Nogueira RG, Frei D, Kirmani JF, Zaidat O, Lopes D, **Turk AS 3rd**, Heck D, Mason B, Haussen DC, Levy EI, Mehta S, Lazzaro M, Chen M, Dörfler A, Yoo AJ, Derdeyn CP, Schwamm L, Langer D, Siddiqui A; Penumbra Separator 3D Investigators. Safety and Efficacy of a 3-Dimensional Stent Retriever With Aspiration-Based Thrombectomy vs Aspiration-Based Thrombectomy Alone in Acute Ischemic Stroke Intervention: A Randomized Clinical Trial. *JAMA Neurol*. 2018 Jan 2. doi: 10.1001/jamaneurol.2017.3967. [Epub ahead of print] PubMed PMID: 29296999.
124. Goyal N, Tsivgoulis G, Frei D, **Turk A**, Baxter B, Froehler MT, Mocco J, Vachhani J, Hoit D, Eljovich L, Loy D, Turner RD, Mascitelli J, Espaillat K, Alexandrov AV, Alexandrov AW, Arthur AS. A multicenter study of the safety and effectiveness of mechanical thrombectomy for patients with acute ischemic stroke not meeting top-tier evidence criteria. *J Neurointerv Surg*. 2018 Jan;10(1):10-16. doi: 10.1136/neurintsurg-2016-012905. Epub 2017 Jan 31. PubMed PMID: 28143898.

123. Alawieh A, Vargas J, Turner RD, **Turk AS**, Chaudry MI, Lena J, Spiotta A. Equivalent favorable outcomes possible after thrombectomy for posterior circulation large vessel occlusion compared with the anterior circulation: the MUSC experience. *J Neurointerv Surg.* 2017 Dec 8. pii: neurintsurg-2017-013420. doi: 10.1136/neurintsurg-2017-013420. [Epub ahead of print] PubMed PMID: 29222394.
122. Wang J, Vargas J, Spiotta A, Chaudry I, Turner RD, Lena J, **Turk A**. Stent-assisted coiling of cerebral aneurysms: a single-center clinical and angiographic analysis. *J Neurointerv Surg.* 2017 Nov 16. pii: neurintsurg-2017-013272. doi: 10.1136/neurintsurg-2017-013272. [Epub ahead of print] PubMed PMID: 29146831.
121. Mokin M, Fargen KM, Primiani CT, Ren Z, Dumont TM, Brasiliense LBC, Dabus G, Linfante I, Kan P, Srinivasan VM, Binning MJ, Gupta R, **Turk AS**, Elijovich L, Arthur A, Shallwani H, Levy EI, Siddiqui AH. Vessel perforation during stent retriever thrombectomy for acute ischemic stroke: technical details and clinical outcomes. *J Neurointerv Surg.* 2017 Oct;9(10):922-928. doi: 10.1136/neurintsurg-2016-012707. Epub 2016 Sep 29. PubMed PMID: 27688267.
120. Fargen KM, Spiotta AM, Hyer M, Lena J, Turner RD, **Turk AS**, Chaudry I. Comparison of venous sinus manometry gradients obtained while awake and under general anesthesia before venous sinus stenting. *J Neurointerv Surg.* 2017 Oct;9(10):990-993. doi: 10.1136/neurintsurg-2016-012608. Epub 2016 Sep 15. PubMed PMID: 27634954.
119. Al Kasab S, Almadidy Z, Spiotta AM, **Turk AS**, Chaudry MI, Hungerford JP, Turner RD 4th. Endovascular treatment for AIS with underlying ICAD. *J Neurointerv Surg.* 2017 Oct;9(10):948-951. doi: 10.1136/neurintsurg-2016-012529. Epub 2016 Aug 8. PubMed PMID: 27502403.
118. Hungerford JP, Hyer M, **Turk AS**, Turner RD, Chaudry MI, Fargen KM, Spiotta AM. Impact of ASPECT scores and infarct distribution on outcomes among patients undergoing thrombectomy for acute ischemic stroke with the ADAPT technique. *J Neurointerv Surg.* 2017 Sep;9(9):823-829. doi: 10.1136/neurintsurg-2016-012528. Epub 2016 Aug 22. PubMed PMID: 27550306.
117. Day AL, Siddiqui AH, Meyers PM, Jovin TG, Derdeyn CP, Hoh BL, Riina H, Linfante I, Zaidat O, **Turk A**, Howington JU, Mocco J, Ringer AJ, Veznedaroglu E, Khalessi AA, Levy EI, Woo H, Harbaugh R, Giannotta S. Training Standards in Neuroendovascular Surgery: Program Accreditation and Practitioner Certification. *Stroke.* 2017 Aug;48(8):2318-2325. doi: 10.1161/STROKEAHA.117.016560. Epub 2017 Jul 13. Review. PubMed PMID: 28706116.

116. Mokin M, Primiani CT, Ren Z, Kan P, Duckworth E, Turner RD 4th, Turk AS, Fargen KM, Dabus G, Linfante I, Dumont TM, Brasiliense LBC, Shallwani H, Snyder KV, Siddiqui AH, Levy EI. Endovascular Treatment of Middle Cerebral Artery M2 Occlusion Strokes: Clinical and Procedural Predictors of Outcomes. *Neurosurgery*. 2017 Nov 1;81(5):795-802. doi: 10.1093/neuros/nyx060. PMID:28328002
115. Spiotta AM, Derdeyn CP, Tateshima S, Mocco J, Crowley RW, Liu KC, Jensen L, Ebersole K, Reeves A, Lopes DK, Hanel RA, Sauvageau E, Duckwiler G, Siddiqui A, Levy E, Puri A, Pride L, Novakovic R, Chaudry MI, Turner RD, **Turk AS**. Results of the ANSWER Trial Using the PulseRider for the Treatment of Broad-Necked, Bifurcation Aneurysms. *Neurosurgery*. 2017 Jul 1;81(1):56-65. doi: 10.1093/neuros/nyx085. PubMed PMID: 28449126.
114. Mokin M, Primiani CT, Siddiqui AH, **Turk AS**. ASPECTS (Alberta Stroke Program Early CT Score) Measurement Using Hounsfield Unit Values When Selecting Patients for Stroke Thrombectomy. *Stroke*. 2017 Jun;48(6):1574-1579. doi: 10.1161/STROKEAHA.117.016745. Epub 2017 May 9. PubMed PMID: 28487329.
113. Lowe SR, Bhalla T, Tillman H, Chaudry MI, **Turk AS**, Turner RD, Spiotta AM. A Comparison of Diffusion-Weighted Imaging Abnormalities Following Balloon Remodeling for Aneurysm Coil Embolization in the Ruptured vs Unruptured Setting. *Neurosurgery*. 2017 May 17. doi: 10.1093/neuros/nyx240. [Epub ahead of print] PubMed PMID: 28520916.
112. Alawieh A, Pierce AK, Vargas J, **Turk AS**, Turner RD, Chaudry MI, Spiotta AM. The golden 35 min of stroke intervention with ADAPT: effect of thrombectomy procedural time in acute ischemic stroke on outcome. *J Neurointerv Surg*. 2017 May 2. pii: neurintsurg-2017-013040. doi: 10.1136/neurintsurg-2017-013040. [Epub ahead of print] PubMed PMID: 28465405.
111. Vargas J, Spiotta A, Fargen K, Turner R, Chaudry I, **Turk A**. Long term experience using the ADAPT technique for the treatment of acute ischemic stroke. *J Neurointerv Surg*. 2017 May;9(5):437-441. doi: 10.1136/neurintsurg-2015-012211. Epub 2016 Apr 18. PubMed PMID: 27091750.
110. Li Y, Turan TN, Chaudry I, Spiotta AM, **Turk AS**, Turner RD, Chatterjee AR. High-Resolution Magnetic Resonance Imaging Evidence for Intracranial Vessel Wall Inflammation Following Endovascular Thrombectomy. *J Stroke Cerebrovasc Dis*. 2017 May;26(5):e96-e98. doi: 10.1016/j.jstrokecerebrovasdis.2017.02.006. Epub 2017 Feb 27. PubMed PMID: 28256418.
109. Dabus G, Hacin-Bey L, Varjavand B, Tomalty RD, Han PP, Yerokhin V, Linfante I, Mocco J, Oxley T, Spiotta A, Chaudry MI, Turner RD, **Turk AS**. Safety, immediate and mid-term results of the newer generation of hydrogel coils in the treatment of ruptured aneurysms: a multicenter study. *J Neurointerv Surg*. 2017 Apr;9(4):419-424. doi: 10.1136/neurintsurg-2016-012780. Epub 2016 Oct 18. Review.

PubMed PMID: 27798856.

108. Raymond J, Klink R, Chagnon M, Barnwell SL, Evans AJ, Mocco J, Hoh BH, **Turk AS**, Turner RD, Desal H, Fiorella D, Bracard S, Weill A, Guilbert F, Lanthier S, Fox AJ, Darsaut TE, White PM, Roy D. Hydrogel versus Bare Platinum Coils in Patients with Large or Recurrent Aneurysms Prone to Recurrence after Endovascular Treatment: A Randomized Controlled Trial. *AJNR Am J Neuroradiol*. 2017 Mar;38(3):432-441. doi: 10.3174/ajnr.A5101. Epub 2017 Jan 12. PubMed PMID: 28082261.
107. Vargas J, Spiotta AM, Fargen K, Turner RD, Chaudry I, **Turk A**. Experience with A Direct Aspiration First Pass Technique (ADAPT) for Thrombectomy in Distal Cerebral Artery Occlusions Causing Acute Ischemic Stroke. *World Neurosurg*. 2017 Mar;99:31-36. doi: 10.1016/j.wneu.2016.11.035. Epub 2016 Nov 29. PubMed PMID: 27913263.
106. Fargen KM, Arthur AS, Spiotta AM, Lena J, Chaudry I, Turner RD, **Turk AS**. A survey of neurointerventionalists on thrombectomy practices for emergent large vessel occlusions. *J Neurointerv Surg*. 2017 Feb;9(2):142-146. doi: 10.1136/neurintsurg-2015-012235. Epub 2016 Apr 21. PubMed PMID: 27102198.
105. Lena J, Eskandari R, Infinger L, Fargen KM, Spiotta A, **Turk A**, Turner RD, Chaudry I. Basilar artery occlusion in a child treated successfully with mechanical thrombectomy using ADAPT. *J Neurointerv Surg*. 2017 Jan;9(1):e2. doi: 10.1136/neurintsurg-2015-012195.rep. Epub 2016 Apr 13. PubMed PMID: 27075484.
104. Spiotta AM, Fargen KM, Lena J, Chaudry I, Turner RD, **Turk AS**, Huddle D, Loy D, Bellon R, Frei D. Initial Technical Experience with the SMART Coil for the Embolization of Intracranial Aneurysms. *World Neurosurg*. 2017 Jan;97:80-85. doi: 10.1016/j.wneu.2016.06.009. Epub 2016 Sep 15. PubMed PMID: 27641255.
103. Fiorella D, Arthur A, Boulos A, Diaz O, Jabbour P, Pride L, **Turk AS**, Woo HH, Derdeyn C, Millar J, Clifton A. Final results of the US humanitarian device exemption study of the low-profile visualized intraluminal support (LVIS) device. *J Neurointerv Surg*. 2016 Sep;8(9):894-7. doi: 10.1136/neurintsurg-2015-011937. Epub 2015 Sep 21. PubMed PMID: 26391016.
102. **Turk AS**, Johnston SC, Hetts S, Mocco J, English J, Murayama Y, Prestigiacomo CJ, Lopes D, Gobin YP, Carroll K, McDougall C. Geographic Differences in Endovascular Treatment and Retreatment of Cerebral Aneurysms. *AJNR Am J Neuroradiol*. 2016 Jul 7. [Epub ahead of print] PubMed PMID: 27390314.
101. Lena J, Eskandari R, Infinger L, Fargen KM, Spiotta A, Turk A, Turner RD, Chaudry I. Basilar artery occlusion in a child treated successfully with mechanical thrombectomy using ADAPT. *BMJ Case Rep*. 2016 Apr 11;2016. pii: bcr2015012195. doi: 10.1136/bcr-2015-012195. PMID:27068722

100. Mokin M, Sonig A, Sivakanthan S, Ren Z, Elijovich L, Arthur A, Goyal N, Kan P, Duckworth E, Veznedaroglu E, Binning MJ, Liebman KM, Rao V, Turner RD 4th, **Turk AS**, Baxter BW, Dabus G, Linfante I, Snyder KV, Levy EI, Siddiqui AH. Clinical and Procedural Predictors of Outcomes From the Endovascular Treatment of Posterior Circulation Strokes. *Stroke*. 2016 Mar;47(3):782-8. doi: 10.1161/STROKEAHA.115.011598. PubMed PMID: 26888533.
  
99. Fiorella D, Mocco J, Athur A, Siddiqui A, Heck D, Albuquerque F, **Turk A**. Randomized controlled trials for everything? *J Neurointerv Surg*. 2015 Dec;7(12):861-3. doi: 10.1136/neurintsurg-2015-012110. PubMed PMID: 26567250.
  
98. Larrew T, Pryor W 3rd, Weinberg J, Webb S, Battenhouse H, **Turk AS**, Chaudry I, Spiotta A, Turner R. Aneurysmal subarachnoid hemorrhage: a statewide assessment of outcome based on risk factors, aneurysm characteristics, and geo-demography. *J Neurointerv Surg*. 2015 Nov;7(11):855-60. doi: 10.1136/neurintsurg-2014-011359. Epub 2014 Sep 8. PubMed PMID: 25200246.
  
97. MacIsaac RL, Khatri P, Bendszus M, Bracard S, Broderick J, Campbell B, Ciccone A, Dávalos A, Davis SM, Demchuk A, Diener HC, Dippel D, Donnan GA, Fiehler J, Fiorella D, Goyal M, Hacke W, Hill MD, Jahan R, Jauch E, Jovin T, Kidwell CS, Liebeskind D, Majoie CB, Martins SC, Mitchell P, Mocco J, Muir KW, Nogueira R, Saver JL, Schonewille WJ, Siddiqui AH, Thomalla G, Tomsick TA, **Turk AS**, White P, Zaidat O, Lees KR; VISTA Endovascular collaboration. A collaborative sequential meta-analysis of individual patient data from randomized trials of endovascular therapy and tPA vs. tPA alone for acute ischemic stroke: ThRombEctomy And tPA (TREAT) analysis: statistical analysis plan for a sequential meta-analysis performed within the VISTA-Endovascular collaboration. *Int J Stroke*. 2015 Oct;10 Suppl A100:136-44. doi: 10.1111/ij.s.12622. Epub 2015 Sep 9. PubMed PMID: 26352438.
  
96. Spiotta AM, Kellogg RT, Vargas J, Chaudry MI, **Turk AS**, Turner RD. Diagnostic angiography skill acquisition with a secondary curve catheter: phase 2 of a curriculum-based endovascular simulation program. *J Neurointerv Surg*. 2015 Oct;7(10):777-80. doi: 10.1136/neurintsurg-2014-011353. Epub 2014 Sep 3. PubMed PMID: 25186445.
  
95. Spiotta AM, James RF, Lowe SR, Vargas J, **Turk AS**, Chaudry MI, Bhalla T, Janjua RM, Delaney JJ, Quintero-Wolfe S, Turner RD. Balloon-augmented Onyx embolization of cerebral arteriovenous malformations using a dual-lumen balloon: a multicenter experience. *J Neurointerv Surg*. 2015 Oct;7(10):721-7. doi: 10.1136/neurintsurg-2014-011285. Epub 2014 Aug 12. PubMed PMID: 25118193.
  
94. **Turk AS**, Turner R, Spiotta A, Vargas J, Holmstedt C, Ozark S, Chalela J, Turan T, Adams R, Jauch EC, Battenhouse H, Whitsitt B, Wain M, Chaudry MI. Comparison of endovascular treatment approaches for acute ischemic stroke: cost

- effectiveness, technical success, and clinical outcomes. *J Neurointerv Surg.* 2015 Sep;7(9):666-70. doi: 10.1136/neurintsurg-2014-011282. Epub 2014 Jul 15. PubMed PMID: 25028502.
93. Turner RD, Chaudry I, **Turk A**, Spiotta A. Onyx embolization of an avulsed thalamoperforator following endoscopic colloid cyst and lamina terminalis fenestration. *J Neurointerv Surg.* 2015 Aug;7(8):e27. doi: 10.1136/neurintsurg-2014-011292.rep. Epub 2014 Jul 25. PubMed PMID: 25063695.
  92. Spiotta AM, Vargas J, Hawk H, Turner R, Chaudry MI, Battenhouse H, **Turk AS**. Impact of the ASPECT scores and distribution on outcome among patients undergoing thrombectomy for acute ischemic stroke. *J Neurointerv Surg.* 2015 Aug;7(8):551-8. doi: 10.1136/neurintsurg-2014-011195. Epub 2014 Jun 10. PubMed PMID: 24916415.
  91. Spiotta AM, Fiorella D, Vargas J, Khalessi A, Hoit D, Arthur A, Lena J, **Turk AS**, Chaudry MI, Gutman F, Davis R, Chesler DA, Turner RD. Initial multicenter technical experience with the Apollo device for minimally invasive intracerebral hematoma evacuation. *Neurosurgery.* 2015 Jun;11 Suppl 2:243-51; discussion 251. doi: 10.1227/NEU.0000000000000698. PubMed PMID: 25714520.
  90. Khatri P, Hacke W, Fiehler J, Saver JL, Diener HC, Bendzus M, Bracard S, Broderick J, Campbell B, Ciccone A, Dávalos A, Davis S, Demchuk AM, Dippel D, Donnan G, Fiorella D, Goyal M, Hill MD, Jauch EC, Jovin TG, Kidwell CS, Majoie C, Martins SC, Mitchell P, Mocco J, Muir K, Nogueira RG, Schonewille WJ, Siddiqui AH, Thomalla G, Tomsick TA, **Turk AS**, White PM, Zaidat OO, Liebeskind DS, Fulton R, Lees KR; VISTA-Endovascular Collaboration. State of acute endovascular therapy: report from the 12th thrombolysis, thrombectomy, and acute stroke therapy conference. *Stroke.* 2015 Jun;46(6):1727-34. doi: 10.1161/STROKEAHA.115.008782. Epub 2015 May 5. PubMed PMID: 25944325.
  89. Spiotta AM, Vargas J, Zuckerman S, Mokin M, Ahmed A, Mocco J, Turner RD, **Turk AS**, Chaudry MI, Myers P. Acute stroke after carotid endarterectomy: time for a paradigm shift? Multicenter experience with emergent carotid artery stenting with or without intracranial tandem occlusion thrombectomy. *Neurosurgery.* 2015 Apr;76(4):403-10. doi: 10.1227/NEU.0000000000000642. PubMed PMID: 25621982.
  88. Hirsch JA, **Turk AS**, Mocco J, Fiorella DJ, Jayaraman MV, Meyers PM, Yoo AJ, Manchikanti L. Evidence-based clinical practice for the neurointerventionalist. *J Neurointerv Surg.* 2015 Mar;7(3):225-8. doi: 10.1136/neurintsurg-2014-011155. Epub 2014 Feb 27. Review. PubMed PMID: 24578482.
  87. Spiotta AM, Lena J, Vargas J, Hawk H, Turner RD, Chaudry MI, **Turk AS**. Proximal to distal approach in the treatment of tandem occlusions causing an acute stroke. *J Neurointerv Surg.* 2015 Mar;7(3):164-9. doi: 10.1136/neurintsurg-2013-011040. Epub 2014 Feb 21. PubMed PMID: 24561885.

86. Turner RD, Vargas J, **Turk AS**, Chaudry MI, Spiotta AM. Novel device and technique for minimally invasive intracerebral hematoma evacuation in the same setting of a ruptured intracranial aneurysm: combined treatment in the neurointerventional angiography suite. *Neurosurgery*. 2015 Mar;11 Suppl 2:43-50; discussion 50-1. doi: 10.1227/NEU.0000000000000650. PubMed PMID: 25599210.
85. Spiotta AM, Turner RD, **Turk AS**, Chaudry MI. The case for a milestone-based simulation curriculum in modern neuroendovascular training. *J Neurointerv Surg*. 2015 Feb 2. pii: neurintsurg-2014-011546. doi: 10.1136/neurintsurg-2014-011546. [Epub ahead of print] Review. PubMed PMID: 25646131.
84. Fargen KM, Neal D, Fiorella DJ, **Turk AS**, Froehler M, Mocco J. A meta-analysis of prospective randomized controlled trials evaluating endovascular therapies for acute ischemic stroke. *J Neurointerv Surg*. 2015 Feb;7(2):84-9. doi: 10.1136/neurintsurg-2014-011543. Epub 2014 Nov 28. PubMed PMID: 25432979.
83. Humphries W, Hoit D, Doss VT, Eljovich L, Frei D, Loy D, Dooley G, **Turk AS**, Chaudry I, Turner R, Mocco J, Morone P, Fiorella D, Siddiqui A, Mokin M, Arthur AS. Distal aspiration with retrievable stent assisted thrombectomy for the treatment of acute ischemic stroke. *J Neurointerv Surg*. 2015 Feb;7(2):90-4. doi: 10.1136/neurintsurg-2013-010986. Epub 2014 Jan 24. PubMed PMID: 24463439.
82. Mokin M, Kan P, Sivakanthan S, Veznedaroglu E, Binning MJ, Liebman KM, Jethwa PR, Turner RD 4th, **Turk AS**, Natarajan SK, Siddiqui AH, Levy EI. Endovascular therapy of wake-up strokes in the modern era of stent retriever thrombectomy. *J Neurointerv Surg*. 2015 Jan 29. pii: neurintsurg-2014-011586. doi: 10.1136/neurintsurg-2014-011586. [Epub ahead of print] PubMed PMID: 25634902.
81. **Turk AS**, Maia O, Ferreira CC, Freitas D, Mocco J, Hanel R. Periprocedural safety of aneurysm embolization with the Medina Coil System: the early human experience. *J Neurointerv Surg*. 2015 Jan 27. pii: neurintsurg-2014-011585. doi: 10.1136/neurintsurg-2014-011585. [Epub ahead of print] PubMed PMID: 25628374.
80. Vargas J, Walsh K, Turner R, Chaudry I, **Turk A**, Spiotta A. Lenticulostriate aneurysms: a case series and review of the literature. *J Neurointerv Surg*. 2015 Mar;7(3):194-201. doi: 10.1136/neurintsurg-2013-010969. Epub 2014 Feb 26. Review. PMID: 24574545
79. Spiotta AM, Chaudry MI, **Turk AS**, Turner RD. Initial experience with the PulseRider for the treatment of bifurcation aneurysms: report of first three cases in the USA. *J Neurointerv Surg*. 2015 Jan 5. pii: neurintsurg-2014-011531. doi: 10.1136/neurintsurg-2014-011531. [Epub ahead of print] PubMed PMID: 25561583.
78. Spiotta AM, Chaudry MI, Hui FK, Turner RD, Kellogg RT, **Turk AS**. Evolution of thrombectomy approaches and devices for acute stroke: a technical review. *J Neurointerv Surg*. 2015 Jan;7(1):2-7. doi: 10.1136/neurintsurg-2013-011022. Epub

- 2014 Jan 2. PubMed PMID: 24385554.
77. Starke RM, **Turk A**, Ding D, Crowley RW, Liu KC, Chalouhi N, Hasan DM, Dumont AS, Jabbour P, Durst CR, Turner RD. Technology developments in endovascular treatment of intracranial aneurysms. *J Neurointerv Surg*. 2014 Nov 20. pii: neurintsurg-2014-011475. doi: 10.1136/neurintsurg-2014-011475. [Epub ahead of print] Review. PubMed PMID: 25412618.
  76. Spiotta AM, Turner RD, Chaudry MI, **Turk AS**, Hui FK, Schonholz C. Carotid sacrifice with a single Penumbra occlusion device: a feasibility study in a swine model. *J Neurointerv Surg*. 2014 Nov 17. pii: neurintsurg-2014-011461. doi: 10.1136/neurintsurg-2014-011461. [Epub ahead of print] PubMed PMID: 25404407.
  75. Raymond J, Klink R, Chagnon M, Barnwell SL, Evans AJ, Mocco J, Hoh BL, **Turk AS**, Turner RD, Desal H, Fiorella D, Bracard S, Weill A, Guilbert F, Roy D; PRET Collaborative Group. Patients prone to recurrence after endovascular treatment: periprocedural results of the PRET randomized trial on large and recurrent aneurysms. *AJNR Am J Neuroradiol*. 2014 Sep;35(9):1667-76. doi: 10.3174/ajnr.A4035. Epub 2014 Jun 19. PubMed PMID: 24948508.
  74. Spiotta AM, Miranpuri AS, Vargas J, Magarick J, Turner RD, **Turk AS**, Chaudry MI. Balloon augmented Onyx embolization utilizing a dual lumen balloon catheter: utility in the treatment of a variety of head and neck lesions. *J Neurointerv Surg*. 2014 Sep;6(7):547-55. doi: 10.1136/neurintsurg-2013-010833. Epub 2013 Sep 11. PubMed PMID: 24026949.
  73. Spiotta AM, Vargas J, Turner R, Chaudry MI, Battenhouse H, **Turk AS**. The golden hour of stroke intervention: effect of thrombectomy procedural time in acute ischemic stroke on outcome. *J Neurointerv Surg*. 2014 Sep;6(7):511-6. doi: 10.1136/neurintsurg-2013-010726. Epub 2013 Sep 7. PubMed PMID: 24014466.
  72. Turner RD, Chaudry I, **Turk A**, Spiotta A. Onyx embolization of an avulsed thalamoperforator following endoscopic colloid cyst and lamina terminalis fenestration. *BMJ Case Rep*. 2014 Jul 21;2014. pii: bcr2014011292. doi: 10.1136/bcr-2014-011292. PubMed PMID: 25053667.
  71. **Turk AS 3rd**, Martin RH, Fiorella D, Mocco J, Siddiqui A, Bonafe A. Flow diversion versus traditional endovascular coiling therapy: design of the prospective LARGE aneurysm randomized trial. *AJNR Am J Neuroradiol*. 2014 Jul;35(7):1341-5. doi: 10.3174/ajnr.A3968. Epub 2014 May 15. PubMed PMID: 24831596.
  70. Fiorella D, **Turk A**, Chaudry I, Turner R, Dunkin J, Roque C, Sarmiento M, Deuerling-Zheng Y, Denice CM, Baumeister M, Parker AT, Woo HH. A prospective, multicenter pilot study investigating the utility of flat detector derived parenchymal blood volume maps to estimate cerebral blood volume in stroke

- patients. *J Neurointerv Surg*. 2014 Jul;6(6):451-6. doi: 10.1136/neurintsurg-2013-010840. Epub 2013 Aug 13. PubMed PMID: 23943817; PubMed Central PMCID: PMC4112493.
69. Spiotta AM, Vargas J, Hawk H, Turner R, Chaudry MI, Battenhouse H, **Turk AS**. Hounsfield unit value and clot length in the acutely occluded vessel and time required to achieve thrombectomy, complications and outcome. *J Neurointerv Surg*. 2014 Jul;6(6):423-7. doi: 10.1136/neurintsurg-2013-010765. Epub 2013 Jul 31. PubMed PMID: 23904449.
  68. McDougall CG, Johnston SC, Gholkar A, Barnwell SL, Vazquez Suarez JC, Massó Romero J, Chaloupka JC, Bonafe A, Wakhloo AK, Tampieri D, Dowd CF, Fox AJ, Imm SJ, Carroll K, **Turk AS**; MAPS Investigators. Bioactive versus bare platinum coils in the treatment of intracranial aneurysms: the MAPS (Matrix and Platinum Science) trial. *AJNR Am J Neuroradiol*. 2014 May;35(5):935-42. doi: 10.3174/ajnr.A3857. Epub 2014 Jan 30. PubMed PMID: 24481333.
  67. **Turk AS**, Frei D, Fiorella D, Mocco J, Baxter B, Siddiqui A, Spiotta A, Mokin M, Dewan M, Quarfordt S, Battenhouse H, Turner R, Chaudry I. ADAPT FAST study: a direct aspiration first pass technique for acute stroke thrombectomy. *J Neurointerv Surg*. 2014 May;6(4):260-4. doi: 10.1136/neurintsurg-2014-011125. Epub 2014 Feb 25. PubMed PMID: 24569575.
  66. **Turk AS**, Spiotta A, Frei D, Mocco J, Baxter B, Fiorella D, Siddiqui A, Mokin M, Dewan M, Woo H, Turner R, Hawk H, Miranpuri A, Chaudry I. Initial clinical experience with the ADAPT technique: a direct aspiration first pass technique for stroke thrombectomy. *J Neurointerv Surg*. 2014 Apr 1;6(3):231-7. doi: 10.1136/neurintsurg-2013-010713. Epub 2013 Apr 27. PubMed PMID: 23624315.
  65. Spiotta AM, Hawk H, Kellogg RT, Turner RD, Chaudry MI, **Turk AS**. Transfemoral venous approach for Onyx embolization of anterior fossa dural arteriovenous fistulae. *J Neurointerv Surg*. 2014 Apr 1;6(3):195-9. doi: 10.1136/neurintsurg-2012-010642. Epub 2013 Mar 23. PubMed PMID: 23525571.
  64. Goyal M, Fargen KM, **Turk AS**, Mocco J, Liebeskind DS, Frei D, Demchuk AM. 2C or not 2C: defining an improved revascularization grading scale and the need for standardization of angiography outcomes in stroke trials. *J Neurointerv Surg*. 2014 Mar;6(2):83-6. doi: 10.1136/neurintsurg-2013-010665. Epub 2013 Feb 6. Review. PubMed PMID: 23390038; PubMed Central PMCID: PMC4156591.
  63. John S, Spiotta AM, Turner RM, Chaudry MI, **Turk AS**, Hui F. Initial experience with the coaxial dual-lumen Scepter C balloon catheter for endovascular management of cerebral vasospasm from subarachnoid hemorrhage. *J Neurointerv Surg*. 2014 Mar;6(2):125-8. doi: 10.1136/neurintsurg-2012-010572. Epub 2013 Jan 31. PubMed PMID: 23371937.

62. **Turk AS 3rd**, Campbell JM, Spiotta A, Vargas J, Turner RD, Chaudry MI, Battenhouse H, Holmstedt CA, Jauch E. An investigation of the cost and benefit of mechanical thrombectomy for endovascular treatment of acute ischemic stroke. *J Neurointerv Surg.* 2014 Jan;6(1):77-80. doi: 10.1136/neurintsurg-2012-010616. Epub 2013 Feb 1. PubMed PMID: 23378431.
61. Spiotta AM, Lena J, Chaudry MI, Turner RD, **Turk AS**. Y-Stenting for Bifurcation Aneurysm Coil Embolization: What is the Risk? *Stroke Res Treat.* 2014;2014:762389. doi: 10.1155/2014/762389. Epub 2014 Jul 10. PubMed PMID: 25120940; PubMed Central PMCID: PMC4121189.
60. **Turk AS**, Magarick JA, Frei D, Fargen KM, Chaudry I, Holmstedt CA, Nicholas J, Mocco J, Turner RD, Huddle D, Loy D, Bellon R, Dooley G, Adams R, Whaley M, Fanale C, Jauch E. CT perfusion-guided patient selection for endovascular recanalization in acute ischemic stroke: a multicenter study. *J Neurointerv Surg.* 2013 Nov;5(6):523-7. doi: 10.1136/neurintsurg-2012-010491. Epub 2012 Nov 26. PubMed PMID: 23182902; PubMed Central PMCID: PMC3812895.
59. Spiotta AM, Miranpuri A, Chaudry MI, Turner RD 4th, **Turk AS**. Combined balloon stent technique with the Scepter C balloon and low-profile visualized intraluminal stent for the treatment of intracranial aneurysms. *J Neurointerv Surg.* 2013 Nov;5 Suppl 3:iii79-iii82. doi: 10.1136/neurintsurg-2012-010553. Epub 2012 Nov 20. PubMed PMID: 23172541.
58. Spiotta AM, Miranpuri A, Hawk H, Chaudry MI, **Turk AS**, Turner RD. Balloon remodeling for aneurysm coil embolization with the coaxial lumen Scepter C balloon catheter: initial experience at a high volume center. *J Neurointerv Surg.* 2013 Nov;5(6):582-5. doi: 10.1136/neurintsurg-2012-010552. Epub 2012 Nov 7. PubMed PMID: 23136237.
57. **Turk AS**, Nyberg EM, Chaudry MI, Turner RD, Magarik JA, Nicholas JS, Holmstedt CA, Chalela JA, Hays A, Lazaridis C, Chimowitz MI, Turan TN, Adams RJ, Jauch EC. Utilization of CT perfusion patient selection for mechanical thrombectomy irrespective of time: a comparison of functional outcomes and complications. *J Neurointerv Surg.* 2013 Nov;5(6):518-22. doi: 10.1136/neurintsurg-2012-010452. Epub 2012 Aug 30. PubMed PMID: 22935349.
56. Nyberg EM, Chaudry MI, **Turk AS**, Spiotta AM, Fiorella D, Turner RD. Report of two cases of a rare cause of subarachnoid hemorrhage including unusual presentation and an emerging and effective treatment option. *J Neurointerv Surg.* 2013 Sep 1;5(5):e30. doi: 10.1136/neurintsurg-2012-010387. Epub 2012 Jul 28. PubMed PMID: 22842211.
55. Nyberg EM, Chaudry MI, **Turk AS**, Turner RD. Novel use of the pipeline embolization device for reperfusion of the middle cerebral artery post surgical aneurysm clipping. *J Neurointerv Surg.* 2013 Sep 1;5(5):e29. doi:

- 10.1136/neurintsurg-2012-010383. Epub 2012 Jul 5. PubMed PMID: 22766535.
54. Fargen KM, Mocco J, Neal D, Dewan MC, Reavey-Cantwell J, Woo HH, Fiorella DJ, Mokin M, Siddiqui AH, **Turk AS**, Turner RD, Chaudry I, Kalani MY, Albuquerque F, Hoh BL. A multicenter study of stent-assisted coiling of cerebral aneurysms with a Y configuration. *Neurosurgery*. 2013 Sep;73(3):466-72. doi: 10.1227/NEU.0000000000000015. PubMed PMID: 23756744.
53. Nyberg EM, Chaudry MI, **Turk AS**, Turner RD. Transient cranial neuropathies as sequelae of Onyx embolization of arteriovenous shunt lesions near the skull base: possible axonometric traction injuries. *J Neurointerv Surg*. 2013 Jul;5(4):e21. doi: 10.1136/neurintsurg-2012-010328. Epub 2012 Jun 20. PubMed PMID: 22717920.
52. **Turk A**, Turner RD, Tateshima S, Fiorella D, Jang KS, Chaudry I, Kelly M. Novel aneurysm neck reconstruction device: initial experience in an experimental preclinical bifurcation aneurysm model. *J Neurointerv Surg*. 2013 Jul;5(4):346-50. doi: 10.1136/neurintsurg-2012-010312. Epub 2012 Jun 3. PubMed PMID: 22661600; PubMed Central PMCID: PMC3686258.
51. Luigetti M, **Turk A**, Cianfoni A. Vanishing aneurysm. *J Neurointerv Surg*. 2013 Jul;5(4):e26. doi: 10.1136/neurintsurg-2012-010373. Epub 2012 May 22. PubMed PMID: 22619469.
50. Mokin M, Dumont TM, Veznedaroglu E, Binning MJ, Liebman KM, Fessler RD 2nd, To CY, Turner RD 4th, **Turk AS**, Chaudry MI, Arthur AS, Fox BD, Hanel RA, Tawk RG, Kan P, Gaughen JR Jr, Lanzino G, Lopes DK, Chen M, Moftakhar R, Billingsley JT, Ringer AJ, Snyder KV, Hopkins LN, Siddiqui AH, Levy EI. Solitaire Flow Restoration thrombectomy for acute ischemic stroke: retrospective multicenter analysis of early postmarket experience after FDA approval. *Neurosurgery*. 2013 Jul;73(1):19-25; discussion 25-6. doi: 10.1227/01.neu.0000429859.96652.57. PubMed PMID: 23719060.
49. Frei D, Gerber J, **Turk A**, McPherson M, Heck D, Hui F, Joseph G, Jahan R, Miskolczi L, Carpenter J, Grobelny T, Goddard J, Turner RD, Huddle D, Bellon R, Chaudry I. The SPEED study: initial clinical evaluation of the Penumbra novel 054 Reperfusion Catheter. *J Neurointerv Surg*. 2013 May;5 Suppl 1:i74-6. doi: 10.1136/neurintsurg-2012-010585. Epub 2013 Jan 7. PubMed PMID: 23299104.
48. Fargen KM, Chaudry I, Turner RD, Bennett JA, **Turk A**, Mocco J. A novel clinical and imaging based score for predicting outcome prior to endovascular treatment of acute ischemic stroke. *J Neurointerv Surg*. 2013 May;5 Suppl 1:i38-43. doi: 10.1136/neurintsurg-2012-010513. Epub 2012 Nov 10. PubMed PMID: 23144081.
47. Krishna V, Walsh K, Turner RD, Chalela J, **Turk A**, Patel SJ. Impact of integrated cerebrovascular program on outcomes in patients with intracranial

- aneurysms. *J Neurointerv Surg*. 2013 May;5(3):264-8. doi: 10.1136/neurintsurg-2012-010309. Epub 2012 Apr 11. PubMed PMID: 22496066.
46. **Turk A**, Manzoor MU, Nyberg EM, Turner RD, Chaudry I. Initial experience with distal guide catheter placement in the treatment of cerebrovascular disease: clinical safety and efficacy. *J Neurointerv Surg*. 2013 May;5(3):247-52. doi: 10.1136/neurintsurg-2011-010256. Epub 2012 Mar 13. Review. PubMed PMID: 22416112.
  45. Turner RD, **Turk A**, Chaudry I. Low-profile visible intraluminal support device: immediate outcome of the first three US cases. *J Neurointerv Surg*. 2013 Mar;5(2):157-60. doi: 10.1136/neurintsurg-2011-010187. Epub 2012 Feb 18. PubMed PMID: 22345109.
  44. Mokin M, Dumont TM, Veznedaroglu E, Binning MJ, Liebman KM, Fessler RD 2nd, To CY, Turner RD 4th, **Turk AS**, Chaudry MI, Arthur AS, Fox BD, Hanel RA, Tawk RG, Kan P, Gaughen JR Jr, Lanzino G, Lopes DK, Chen M, Moftakhar R, Billingsley JT, Ringer AJ, Snyder KV, Hopkins LN, Siddiqui AH, Levy EI, Solitaire FR. Thrombectomy for Acute Ischemic Stroke: Retrospective Multicenter Analysis of Early Postmarket Experience after FDA Approval. *Neurosurgery*. 2013 Feb 25. [Epub ahead of print] PubMed PMID: 23442517.
  43. Chaudry MI, Manzoor MU, Turner RD, **Turk AS**. Diagnostic imaging of vascular anomalies. *Facial Plast Surg*. 2012 Dec;28(6):563-74. doi: 10.1055/s-0032-1329931. Epub 2012 Nov 27. Review. PubMed PMID: 23188683.
  42. Magarik JA, Jauch EC, Patel SJ, Adams RJ, Turner RD, Chaudry MI, Chalela JA, Hays A, Chimowitz MI, Turan TN, Holmstedt CA, Debenham E, Lackland DT, **Turk AS**. MUSC's comprehensive stroke program: changing what's possible in stroke care across South Carolina. *J S C Med Assoc*. 2012 Oct-Dec;108(5):128-31. Review. PubMed PMID: 23431916; PubMed Central PMCID: PMC3816504.
  41. Waldau B, **Turk AS 3rd**, Yashar P, Khaldi A, Turner RD 4th, Chaudry MI, Siddiqui AH, Levy EI, Hoh BL, Mocco J. Perioperative safety of Hydrosoft coils. *J Neurointerv Surg*. 2012 Sep;4(5):375-8. doi: 10.1136/neurintsurg-2011-010106. Epub 2011 Sep 13. PubMed PMID: 21990538.
  40. **Turk A**, Magarik JA, Chaudry I, Turner RD, Nicholas J, Holmstedt CA, Chalela J, Hays A, Lazaridis C, Jauch E, Chimowitz M, Turan T, Adams R. CT perfusion-guided patient selection for endovascular treatment of acute ischemic stroke is safe and effective. *J Neurointerv Surg*. 2012 Jul;4(4):261-5. doi: 10.1136/neurintsurg-2011-010067. Epub 2011 Sep 19. PubMed PMID: 21990520.
  39. Yoo AJ, Frei D, Tateshima S, **Turk AS**, Hui FK, Brook AL, Heck DV, Hirsch JA. The Penumbra Stroke System: a technical review. *J Neurointerv Surg*. 2012 May;4(3):199-205. doi: 10.1136/neurintsurg-2011-010080. Epub 2011 Jul 14. Review.

PubMed PMID: 21990525.

38. Hungerford JP, Chaudry I, Turner R, **Turk AS**. Distal protection for treatment of complete cervical internal carotid occlusion. *J Neurointerv Surg*. 2012 Jan 1;4(1):40-2. doi: 10.1136/jnis.2010.004267. Epub 2011 May 13. PubMed PMID: 21990446.
37. Rajpal S, Moftakhar R, Bauer AM, **Turk AS**, Niemann DB. Superselective Wada test for ruptured spontaneous fusiform middle cerebral artery aneurysm: a technical case report. *J Neurointerv Surg*. 2011 Sep;3(3):237-41. doi: 10.1136/jnis.2010.002220. Epub 2011 Feb 2. PubMed PMID: 21990832.
36. Turner RD, Chaudry MI, **Turk AS**. Novel non-occlusive temporary endoluminal neck protection device to assist in the treatment of aneurysms in a canine model. *J Neurointerv Surg*. 2011 Sep;3(3):214-8. doi: 10.1136/jnis.2010.003913. Epub 2011 Jan 25. PubMed PMID: 21990827.
35. **Turk AS**, Turner RD, Chaudry MI. Evaluation of the Nfocus LUNA, a new parent vessel occlusion device: a comparative study in a canine model. *Neurosurgery*. 2011 Sep;69(1 Suppl Operative):ons20-6. doi: 10.1227/NEU.0b013e318214ab9c. PubMed PMID: 21368686.
34. Fiorella DJ, **Turk AS**, Levy EI, Pride GL Jr, Woo HH, Albuquerque FC, Welch BG, Niemann DB, Aagaard-Kienitz B, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG. U.S. Wingspan Registry: 12-month follow-up results. *Stroke*. 2011 Jul;42(7):1976-81. doi: 10.1161/STROKEAHA.111.613877. Epub 2011 Jun 2. PubMed PMID: 21636812.
33. Klisch J, **Turk A**, Turner R, Woo HH, Fiorella D. Very late thrombosis of flow-diverting constructs after the treatment of large fusiform posterior circulation aneurysms. *AJNR Am J Neuroradiol*. 2011 Apr;32(4):627-32. doi: 10.3174/ajnr.A2571. Epub 2011 Mar 24. PubMed PMID: 21436336.
32. Chaudry I, Feng W, Holmstedt C, Turner R, Adams R, **Turk AS**. Delayed basilar artery recanalization 100 hours after symptom onset. *J Neurointerv Surg*. 2010 Dec;2(4):345-7. doi: 10.1136/jnis.2010.002576. Epub 2010 Jul 23. PubMed PMID: 21990643.
31. Samaniego EA, Hetzel S, Thirunarayanan S, Aagaard-Kienitz B, **Turk AS**, Levine R. Outcome of symptomatic intracranial atherosclerotic disease. *Stroke*. 2009 Sep;40(9):2983-7. doi: 10.1161/STROKEAHA.109.549972. Epub 2009 Jun 25. PubMed PMID: 19556534; PubMed Central PMCID: PMC2770373.
30. Fiorella DJ, Levy EI, **Turk AS**, Albuquerque FC, Pride GL Jr, Woo HH, Welch BG, Niemann DB, Purdy PD, Aagaard-Kienitz B, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG. Target lesion revascularization after wingspan: assessment of

- safety and durability. *Stroke*. 2009 Jan;40(1):106-10. doi: 10.1161/STROKEAHA.108.525774. Epub 2008 Oct 16. PubMed PMID: 18927447.
29. Albuquerque FC, Levy EI, **Turk AS**, Niemann DB, Aagaard-Kienitz B, Pride GL Jr, Purdy PD, Welch BG, Woo HH, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG, Fiorella DJ. Angiographic patterns of Wingspan in-stent restenosis. *Neurosurgery*. 2008 Jul;63(1):23-7; discussion 27-8. doi: 10.1227/01.NEU.0000335067.53190.A2. PubMed PMID: 18728565.
  28. Raymond J, White P, Kallmes DF, Spears J, Marotta T, Roy D, Guilbert F, Weill A, Nguyen T, Molyneux AJ, Cloft H, Cekirge S, Saatci I, Bracard S, Meder JF, Moret J, Cognard C, Qureshi AI, **Turk AS**, Berenstein A. ICONA: An International Consortium of Neuro Endovascular Centres. *Interv Neuroradiol*. 2008 Jun 30;14(2):203-8. Epub 2008 Jun 30. PubMed PMID: 20557763; PubMed Central PMCID: PMC3313725.
  27. Brooks NP, **Turk AS**, Niemann DB, Aagaard-Kienitz B, Pulfer K, Cook T. Frequency of thromboembolic events associated with endovascular aneurysm treatment: retrospective case series. *J Neurosurg*. 2008 Jun;108(6):1095-100. doi: 10.3171/JNS/2008/108/6/1095. PubMed PMID: 18518710.
  26. **Turk AS**, Chaudry I, Haughton VM, Hermann BP, Rowley HA, Pulfer K, Aagaard-Kienitz B, Niemann DB, Turski PA, Levine RL, Strother CM. Effect of carotid artery stenting on cognitive function in patients with carotid artery stenosis: preliminary results. *AJNR Am J Neuroradiol*. 2008 Feb;29(2):265-8. Epub 2007 Nov 7. PubMed PMID: 17989371.
  25. **Turk AS**, Levy EI, Albuquerque FC, Pride GL Jr, Woo H, Welch BG, Niemann DB, Purdy PD, Aagaard-Kienitz B, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG, Fiorella D. Influence of patient age and stenosis location on wingspan in-stent restenosis. *AJNR Am J Neuroradiol*. 2008 Jan;29(1):23-7. Epub 2007 Nov 7. PubMed PMID: 17989366.
  24. **Turk AS**, Luty CM, Carr-Brendel V, Polyakov I, Consigny D, Grinde J, Mukherjee R, Strother CM. Angiographic and histological comparison of canine bifurcation aneurysms treated with first generation matrix and standard GDC coils. *Neuroradiology*. 2008 Jan;50(1):57-65. Epub 2007 Sep 27. PubMed PMID: 17899048.
  23. Lum DP, Johnson KM, Paul RK, **Turk AS**, Consigny DW, Grinde JR, Mistretta CA, Grist TM. Transstenotic pressure gradients: measurement in swine--retrospectively ECG-gated 3D phase-contrast MR angiography versus endovascular pressure-sensing guidewires. *Radiology*. 2007 Dec;245(3):751-60. PubMed PMID: 18024452.
  22. Wu Y, Kim N, Korosec FR, **Turk A**, Rowley HA, Wieben O, Mistretta CA, Turski PA. 3D time-resolved contrast-enhanced cerebrovascular MR angiography with subsecond frame update times using radial k-space trajectories and highly

- constrained projection reconstruction. *AJNR Am J Neuroradiol.* 2007 Nov-Dec;28(10):2001-4. Epub 2007 Oct 10. PubMed PMID: 17928376.
21. **Turk AS**, Luty CM, Grum K, Grinde J, Consigny D, Pulfer K, Rappe A, Strother CM. Comparison of platinum and first-generation Matrix coils in under-packed canine side-wall aneurysms: evaluation of progressive thrombosis. *Neuroradiology.* 2007 Nov;49(11):939-45. Epub 2007 Aug 16. PubMed PMID: 17701406.
  20. **Turk AS**, Grayev A, Rowley HA, Field AS, Turski P, Pulfer K, Mukherjee R, Haughton V. Variability of clinical CT perfusion measurements in patients with carotid stenosis. *Neuroradiology.* 2007 Nov;49(11):955-61. Epub 2007 Jul 24. PubMed PMID: 17646976.
  19. **Turk AS**, Rowley HA, Niemann DB, Fiorella D, Aagaard-Kienitz B, Pulfer K, Strother CM. CT angiographic appearance of in-stent restenosis of intracranial arteries treated with the Wingspan stent. *AJNR Am J Neuroradiol.* 2007 Oct;28(9):1752-4. Epub 2007 Sep 24. PubMed PMID: 17893212.
  18. Moftakhar R, Aagaard-Kienitz B, Johnson K, Turski PA, **Turk AS**, Niemann DB, Consigny D, Grinde J, Wieben O, Mistretta CA. Noninvasive measurement of intra-aneurysmal pressure and flow pattern using phase contrast with vastly undersampled isotropic projection imaging. *AJNR Am J Neuroradiol.* 2007 Oct;28(9):1710-4. Epub 2007 Sep 20. PubMed PMID: 17885239.
  17. Levy EI, **Turk AS**, Albuquerque FC, Niemann DB, Aagaard-Kienitz B, Pride L, Purdy P, Welch B, Woo H, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG, Fiorella DJ. Wingspan in-stent restenosis and thrombosis: incidence, clinical presentation, and management. *Neurosurgery.* 2007 Sep;61(3):644-50; discussion 650-1. PubMed PMID: 17881980.
  16. **Turk AS**, Ahmed A, Niemann DB, Aagaard-Kienitz B, Brooks N, Levine RL. Utilization of self-expanding stents in the treatment of intracranial atherosclerotic disease in the distal small cerebral vessels. *Neuroradiology.* 2007 Aug;49(8):659-63. Epub 2007 Mar 27. PubMed PMID: 17387464.
  15. Erdol H, **Turk A**, Caylan R. An unusual cause of central retinal artery occlusion: acquired immunodeficiency syndrome. *Eur J Ophthalmol.* 2007 Jul-Aug;17(4):671-3. PubMed PMID: 17671949.
  14. **Turk AS**, Niemann DB, Ahmed A, Aagaard-Kienitz B. Use of self-expanding stents in distal small cerebral vessels. *AJNR Am J Neuroradiol.* 2007 Mar;28(3):533-6. PubMed PMID: 17353331.
  13. **Turk AS**, Aagaard-Kienitz B, Niemann D, Consigny D, Rappe A, Grinde J, Strother CM. Natural history of the canine vein pouch aneurysm model. *AJNR Am J Neuroradiol.* 2007 Mar;28(3):531-2. PubMed PMID: 17353330.

12. Fiorella D, Levy EI, **Turk AS**, Albuquerque FC, Niemann DB, Aagaard-Kienitz B, Hanel RA, Woo H, Rasmussen PA, Hopkins LN, Masaryk TJ, McDougall CG. US multicenter experience with the wingspan stent system for the treatment of intracranial atheromatous disease: periprocedural results. *Stroke*. 2007 Mar;38(3):881-7. Epub 2007 Feb 8. PubMed PMID: 17290030.
11. **Turk AS**, Johnson KM, Lum D, Niemann D, Aagaard-Kienitz B, Consigny D, Grinde J, Turski P, Haughton V, Mistretta C. Physiologic and anatomic assessment of a canine carotid artery stenosis model utilizing phase contrast with vastly undersampled isotropic projection imaging. *AJNR Am J Neuroradiol*. 2007 Jan;28(1):111-5. PubMed PMID: 17213435.
10. Moftakhar R, Rowley HA, **Turk A**, Niemann DB, Kienitz BA, Van Gimple J, Başkaya MK. Utility of computed tomography perfusion in detection of cerebral vasospasm in patients with subarachnoid hemorrhage. *Neurosurg Focus*. 2006 Sep 15;21(3):E6. PubMed PMID: 17029345.
9. **Turk A**, Iskandar BJ, Haughton V, Consigny D. Recording CSF pressure with a transducer-tipped wire in an animal model of Chiari I. *AJNR Am J Neuroradiol*. 2006 Feb;27(2):354-5. PubMed PMID: 16484409.
8. Meyer M, Zaehle T, Gountouna VE, Barron A, Jancke L, **Turk A**. Spectro-temporal processing during speech perception involves left posterior auditory cortex. *Neuroreport*. 2005 Dec 19;16(18):1985-9. PubMed PMID: 16317339.
7. Moftakhar R, **Turk AS**, Niemann DB, Hussain S, Rajpal S, Cook T, Geraghty M, Aagaard-Kienitz B, Turski PA, Newman GC. Effects of carotid or vertebrobasilar stent placement on cerebral perfusion and cognition. *AJNR Am J Neuroradiol*. 2005 Aug;26(7):1772-80. PubMed PMID: 16091529.
6. Rajpal S, Niemann DB, Aagaard-Kienitz B, **Turk AS**. Intracranial endovascular stent placement for symptomatic metastatic non-hodgkin lymphoma. Case report. *J Neurosurg*. 2005 May;102(5):922-6. PubMed PMID: 15926722.
5. Sanford MF, **Turk AS**, Niemann DB, Pulfer KA, Aagaard-Kienitz BA. Intraoperative perfusion computerized tomography scanning for management of intracranial stent placement in a patient with tandem intracranial stenoses. Case report. *J Neurosurg*. 2005 May;102(5):918-21. PubMed PMID: 15926721.
4. Rajpal S, Niemann DB, **Turk AS**. Transverse venous sinus stent placement as treatment for benign intracranial hypertension in a young male: case report and review of the literature. *J Neurosurg*. 2005 Apr;102(3 Suppl):342-6. PubMed PMID: 15881764.
3. Sorteberg A, Sorteberg W, **Turk AS**, Rappe A, Nakstad PH, Strother CM. Effect

- of Guglielmi detachable coil placement on intraaneurysmal pressure: experimental study in canines. *AJNR Am J Neuroradiol*. 2001 Oct;22(9):1750-6. PubMed PMID: 11673173.
2. **Turk AS**, Rappe AH, Villar F, Virmani R, Strother CM. Evaluation of the TriSpan neck bridge device for the treatment of wide-necked aneurysms: an experimental study in canines. *Stroke*. 2001 Feb;32(2):492-7. PubMed PMID: 11157188.
  1. Strother CM, Unal O, Frayne R, **Turk A**, Omary R, Korosec FR, Mistretta CA. Endovascular treatment of experimental canine aneurysms: feasibility with MR imaging guidance. *Radiology*. 2000 May;215(2):516-9. PubMed PMID: 10796934.

### **EDITORIALS, COMMENTS and NON-PEER REVIEWED PUBLICATIONS**

10. Turner R, Fiorella D, Mocco J, Frei D, Baxter B, Siddiqui A, Spiotta A, Chaudry I, **Turk AS**. Authors' reply. *J Neurointerv Surg*. 2014 Oct 21. pii: neurintsurg-2014-011508. doi: 10.1136/neurintsurg-2014-011508. [Epub ahead of print] PubMed PMID: 25335790.
9. Goyal M, Almekhlafi M, Menon B, Hill M, Fargen K, Parsons M, Bang OY, Siddiqui A, Andersson T, Mendes V, Davalos A, **Turk A**, Mocco J, Campbell B, Nogueira R, Gupta R, Murphy S, Jovin T, Khatri P, Miao Z, Demchuk A, Broderick JP, Saver J. Challenges of acute endovascular stroke trials. *Stroke*. 2014 Oct;45(10):3116-22. doi: 10.1161/STROKEAHA.114.006288. Epub 2014 Aug 28. PubMed PMID: 25169945.
8. Levy EI, Hopkins LN, **Turk AS**, Fiorella DJ, Rasmussen PA, Masaryk TJ, Albuquerque FC, McDougall CG, Pride GL Jr, Welch BG, Purdy PD, Woo HH, Niemann DB, Aagaard-Kienitz B. Response to the commentary "how do we spin wingspan?". *AJNR Am J Neuroradiol*. 2008 Sep;29(8):e67-8; author reply e70. doi: 10.3174/ajnr.A1081. Epub 2008 Apr 3. PubMed PMID: 18388208.
7. Fiorella D, Mocco J, Arthur AS, Lavine S, Albuquerque FC, Frei D, Turner RD, **Turk A**, Siddiqui AH, Mack WJ, Alexandrov A, Hirsch JA, Tarr RW. Too much guidance. *J Neurointerv Surg*. 2015 Sep;7(9):626-7. doi: 10.1136/neurintsurg-2015-011957. Epub 2015 Jul 23. PubMed PMID: 26206804.
6. Fargen KM, Jauch E, Khatri P, Baxter B, Schirmer CM, **Turk AS**, Mocco J. Needed dialog: regionalization of stroke systems of care along the trauma model. *Stroke*. 2015 Jun;46(6):1719-26. doi: 10.1161/STROKEAHA.114.008167. Epub 2015 Apr 30. PubMed PMID: 25931466.
5. McDougall CG, Johnston SC, Gholkar A, **Turk AS**. Counterpoint-target aneurysm recurrence: measuring what matters. *AJNR Am J Neuroradiol*. 2015 Jan;36(1):4-6.

doi: 10.3174/ajnr.A4205. Epub 2014 Nov 27. PubMed PMID: 25430860.

4. **Turk AS**, Fiorella D, Mocco J, Derdeyn C. Counterpoint-response to "in memoriam: the matrix coil". *AJNR Am J Neuroradiol*. 2014 May;35(5):828-9. doi:10.3174/ajnr.A3929. Epub 2014 Apr 3. PubMed PMID: 24699096.
3. Turner R, Fiorella D Mocco J, Drei D, Bascter B, Siddiqui A, Spiotta A, Chaudry I, **Turk AS**. Author's Reply regarding Letter to Editor. *Journal of Neurointerventional Surgery*. 2014
2. Mocco J, O'Kelly C, Arthur A, Meyers PM, Hirsch JA, Woo HH, Rasmussen PA, Albuquerque FC, **Turk A**, Tarr R, Fiorella D. Randomized clinical trials: the double edged sword. *J Neurointerv Surg*. 2013 Sep 1;5(5):387-90. doi: 10.1136/neurintsurg-2013-010882. PubMed PMID: 23935169.
1. Fiorella D, Hirsch JA, Woo HH, Rasmussen PA, Shazam Hussain M, Hui FK, Frei D, Meyers PM, Jabbour P, Gonzalez LF, Mocco J, **Turk A**, Turner RD, Arthur AS, Gupta R, Cloft HJ. Should neurointerventional fellowship training be suspended indefinitely? *J Neurointerv Surg*. 2012 Sep;4(5):315-8. doi: 10.1136/neurintsurg-2012-010471. PubMed PMID: 22933732.

## EDITORIAL BOARD

American Journal of Neuroradiology (AJNR)

## MANUSCRIPT REVIWER

American Journal of Neuroradiology (AJNR)  
Journal of NeuroInterventional Surgery (JNIS)  
Neurosurgery (Red Journal)  
Stroke

## BOOK CHAPTERS

Direct Aspiration thrombectomy for acute stroke: Evolution of technique and evidence. Alejandro M. Spiotta, **Aquilla S. Turk**. In *Management of Ischemic Stroke in 21 Century*. Thieme Publishers. TBP 2018

Thrombecomy Techniques: A Direct aspiration first pass technique (ADAPT). Alejandro M. Spiotta, **Aquilla S. Turk**. In *Acute Ischemic Stroke - A Case-based Guide to Management*. Springer Publishers. TBP 2018

Venous Sinus Stenting for Idiopathic Intracranial Hypertension. Jan Vargas, MD, Raymond D. Turner, MD, **Aquilla S. Turk, DO**, Alejandro M. Spiotta, MD, Jonathan Lena, MD, M. Imran Chaudry, MD. In *Management of Cerebrovascular Disorders*. Springer Publishers. TBP 2018

Intracranial Atherosclerotic Disease. Handbook of Neuroendovascular Surgery, Thieme 2012. Chaudry MI, Turner RD, **Turk AS**

Spinal Vascular Anatomy. Handbook of Neuroendovascular Surgery, Thieme 2012 Chaudry MI, Turner RD, **Turk AS**

Radiation Physics and Safety. Handbook of Neuroendovascular Surgery, Thieme 2012 Chaudry MI, Turner RD, **Turk AS**, Chimowitz I

Cerebral Revascularization: Microsurgical and Endovascular Techniques. Thieme 2011. Chapter 12 Technical Aspects of Intracranial Angioplasty and Stenting. Nussbaum ES, Mocco J, Fiorella D, Masaryk T, **Turk AS**

Handbook of Neuroendovascular Surgery. Thieme 2010. Chapter 3 Spinal Vascular Anatomy. Turner R, Chaudry MI, **Turk AS**

Handbook of Neuroendovascular Surgery. Thieme 2010. Chapter 16 Intracranial Stenosis Turner R, Chaudry MI, **Turk AS**

Handbook of Neuroendovascular Surgery. Thieme 2010. Chapter: Radiation Physics and Safety. Chaudry MI, Turner R, **Turk AS**

## **ON GOING CLINICAL TRIALS**

- 2018 CATCH: A Proof-of-Concept Study to Evaluate the Administration of CN 105 in Participants with Acute Supratentorial Intracerebral Hemorrhage
- 2018 MIND: A Prospective, Multicenter Study of Artemis a Minimally Invasive Neuro Evacuation Device, in the Removal of Intracerebral Hemorrhage
- 2017 VITAL 2.0: Volumetric Integral Phase-shift Spectroscopy (VIPS) for the Noninvasive Detection of Hemispheric Bioimpedance Asymmetry in Acute Brain Pathology
- 2017 RAGE: Ruptured Aneurysms Treated with Hydrogel Coils
- 2017 PILOT ICH:
- 2015 DYNA Embo: A Pilot Study of IV Dyna CT and CBV Imaging Techniques in Preparation for Vascular Embolization Procedures. Principal Investigator

- 2015 ATLAS: Safety and Effectiveness of the Treatment of Wide Neck, Saccular Intracranial Aneurysms with the Neuroform Atlas Stent System. Principal Investigator
- 2015 COMPASS: A COMPARISON of DIRECT ASPIRATION vs STENT RETRIEVER AS A FIRST APPROACH. National Principal Investigator
- 2015 WEB-IT The WEB Intrasaccular Therapy Study. Co-Investigator
- 2014 COAST: COILING OF ANEURYSMS SMALLER THAN 5 MM WITH HYPERSOFT®. National Principal Investigator
- 2014 FEAT: Framing Eighteen coils in cerebral Aneurysms Trial. Principal Investigator
- 2014 MISTIE III A phase III, randomized, open-label, 500-subject clinical trial of minimally invasive surgery plus rt-PA in the treatment of intracerebral hemorrhage. Co-Investigator
- 2013 SCENT The Surpass IntraCranial Aneurysm Embolization System Pivotal Trial to treat large OR giant wide neck aneurysms. Co-Investigator
- 2013 POSITIVE: Perfusion imaging Selection of Ischemic Stroke Patients for Endovascular Therapy. National Principal Investigator
- 2013 FRED: Pivotal Study of the MicroVention Flow Re-Direction (FRED) Endoluminal Device Stent System in the Treatment of Intracranial Aneurysms. Principal Investigator
- 2012 HEAT: New Generation Hydrogel Endovascular Aneurysm treatment Trial "HEAT" A Randomized controlled trial of new generation Hydrogel coils versus bare platinum coils in the endovascular treatment of intracranial aneurysms. Co-Investigator

## **COMPLETED CLINICAL TRIALS**

- 2018 COMPASS:
- 2017 POSITIVE:
- 2016 CEREBROTECH: Evaluation of Large Vessel Occlusion (LVO in Stroke Using Volumetric Integral Phase-shift Spectroscopy (VIPS)) – a Feasibility Study
- 2015 LVIS Jr: Pivotal Study of the MicroVention, Inc. Neurovascular Self-Expanding Retrievable STent System LVIS™ in the Treatment of Wide-Necked Intracranial Artery Aneurysms. Principal Investigator
- 2015 LIBERTY: Safety and Effectiveness in the Treatment of Wide-Neck Intracranial Aneurysms. Principal Investigator

- 2015 EDGE Phase 1/2a Multicenter, controlled, randomized, open-label, dose escalation, safety, tolerability and pharmacokinetic study comparing EG-1962 and Nimodipine in patients with aneurysmal subarachnoid hemorrhage. Co-Investigator
- 2015 MAPS Trial: Matrix and Platinum Science a Prospective, Randomized, Multi-Center Trial Investigating Matrix2 and GDC Coils for the Treatment of Intracranial Saccular Aneurysms. Principal Investigator
- 2015 ANSWER Adjunctive Neurovascular Support for Wide-neck aneurysm Embolization and Reconstruction. Principal Investigator
- 2014 BARREL Prospective, Multi-Center, Single-Arm Study of the Reverse Medical Barrel Vascular Reconstruction Device (VRD) for Adjunctive Treatment to Embolic Coils for Wide-Neck, Intracranial, Bifurcating/Branching Aneurysms of Middle Cerebral and Basilar Arteries. Principal Investigator
- 2014 DELTA: Does Embolization with Larger coils lead to better Treatment of Aneurysms trial. Principal Investigator
- 2014 Complete Occlusion of Coilable Aneurysms (COCOA) Study. Principal Investigator
- 2012 ACE: An Aneurysm Coiling Efficiency Study of the Penumbra Coil 400 System. Principal Investigator
- 2012 Hydrocoil Cerecyte Aneurysm Treatment Trial (H-CAT). Principal Investigator
- 2012 LARGE Aneurysm Randomized Trial: Flow Diversion Versus Traditional Endovascular Coiling Therapy. National Principal Investigator
- 2012 Separator 3D: A randomized concurrent controlled trial to assess the safety and effectiveness of the Separator 3D as a component of the Penumbra System in the revascularization of the large vessel occlusion in acute ischemic stroke. Principal Investigator
- 2011 The START Trial: Clinical Outcome in Acute Stroke Treatment after Image Guided Patient Selection for Interventional Revascularization Therapy. Principal Investigator
- 2011 Validation of Dyna-CT Perfusion in Patients with Ischemic Cerebrovascular Disease. Principal Investigator
- 2011 Validation of Dyna-CT Perfusion in Patients with Severe Ischemic Cerebrovascular Disease. Principal Investigator
- 2011 A Retrospective Case Review of Revascularization Time and Clinical Outcome in Patients Treated by the Penumbra System(R) 054 Reperfusion Catheter. Principal Investigator

- 2011 Gaining Efficacy Long Term: Hydrosoft, an Emerging, New, Embolic Coil(Gel-the-nec) A Prospective, Registry Evaluating the Safety, Ease of Use, and Efficacy of the HydroSoft Coil as a Finishing Device. Co-Investigator
- 2010 Validation of Dyna-CT Perfusion in Patients with Severe Ischemic Cerebrovascular Disease. Principal Investigator
- 2010 ev3 Researching AXIUM(tm) Coiling Experience and Recanalization (RACER). Principal Investigator
- 2010 PAC Large and Giant Aneurysms REGISTRY: Presidio and Cerecyte Coils Evaluation in Large and Giant Aneurysms. Principal Investigator
- 2009 AXIUM (TM) Detachable Coil TRAC Evaluation Participation. Principal Investigator
- 2009 Penumbra Imaging Collaborative Study (PICS): A Multi-Center Trial to Assess Outcome of Patients Revascularized by the Penumbra(tm) System. Principal Investigator
- 2009 PRET: Patients Prone to Recurrence after Endovascular Treatment: A Randomized Trial Comparing Platinum and Hydrogel-Coated Coils. Principal Investigator
- 2008 Aneurysm and Parent Vessel Occlusion. Principal Investigator
- 2008 Safety and Efficacy of Endovascular Treatment of Unruptured Intracranial Aneurysms in the Prevention of Aneurysmal Hemorrhages: A Randomized Comparison with Indefinite Deferral of Treatment in 2002 Patients Followed for 10 Years. Principal Investigator
- 2007 Comparison of CTA and DSA for determination of significant intracranial stenosis. Principal Investigator
- 2007 Matrix vs Platinum Coil Trial. Principal Investigator
- 2007 Evaluation of Neurostring coil for aneurysm occlusion. Principal Investigator
- 2006 Evaluation and Development of Next Generation Coils for Aneurysm Occlusion. Principal Investigator
- 2006 Wingspan Registry. Principal Investigator
- 2005 Evaluation of novel treatment paradigms for ischemic stroke. Principal Investigator
- 2005 Effects of Carotid or Vertebrobasilar Stent Placement on Cerebral Perfusion and Cognition. Principal Investigator
- 2005 CEASE Trial. Principal Investigator

## COMMITTEES

### Hospital

Director, Stroke and Cerebrovascular program, 2017- current.

Director, Neuroendovascular Surgery program, 2007- current.

MUSC Stroke Task Force

Neuroscience Operations Committee

MUSC Future Vision Strategy Committee

### State

SC Stroke Task Force- 2008-2010.

### National

2017	SNIS International Endovascular Stroke Conference, Program Chair
2015 - Current	CAST-NESAC Radiology representative for NES credentialing committee
2007 - 2015	Steering Committee Member- MAPS Trial
2011	SNIS IESC Meeting- Programming Committee
2010	Pipeline™ for Uncoilable or Failed Aneurysms (PUFS) Trial- Data Safety Management Board member
2008	American Society of Interventional and Therapeutic Neuroradiology (ASITN) Annual Meeting Co Chair
2007	American Society of Interventional and Therapeutic Neuroradiology (ASITN) Annual Meeting Planning Committee
2007	American Society of Interventional and Therapeutic Neuroradiology (ASITN) Practicum Co-Chair
2006	American Society of Interventional and Therapeutic Neuroradiology (ASITN) Annual Meeting Planning Committee

## SOCIETY MEMBERSHIPS

### National

American Society of Neuroradiology

Society of Neurointerventional Surgery

### State

SC Med Society

## BOARD CERTIFICATIONS

American Board of Radiology; Neuroradiology Subspecialty

Society of Neurological Surgeons CAST Certification

### Proctor

2014 – 2016	FRED flow diverter
2014 – 2016	LVIS Stent
2005 – 2009	Wingspan stent system
2005 - 2009	Neuroform stent

## **INDUSTRY ADVISORY BOARDS**

Penumbra  
 Medina Medical  
 Pulsar Vascular  
 Lazarus Effect  
 Siemens  
 NFocus Medical  
 Silk Road  
 Blockade  
 Three Rivers Medical  
 Failure Analysis Advisory Council  
 Corindus Robotics  
 Imperative Care  
 Endostream  
 Vastrax  
 BlinkTBI

## **SCIENTIFIC SESSION MODERATOR**

Moderator, AANS/CNS Joint Cerebrovascular Section, Annual Meeting, Los Angeles, CA  
January 2018

Moderator, 6<sup>th</sup> Annual Charleston Summit, Charleston, SC January 2017

Moderator, 14<sup>th</sup> Annual SNIS Annual Meeting & Fellows Course, Colorado Springs, CO July  
2017

Moderator, 6<sup>th</sup> Annual International Endovascular Stroke Conference, New York, NY May 2017

Moderator, AANS/CNS Joint Cerebrovascular Section, Annual Meeting, Houston, TX February  
2017

Moderator, 13<sup>th</sup> Annual SNIS Meeting, Boston, MA, July 2016

Moderator, AANS/CNS Joint Cerebrovascular Section, Annual Meeting, Los Angeles, CA,  
February 2016

Moderator, 5<sup>th</sup> Annual Charleston Summit, Charleston, SC January 2016

Moderator, 5<sup>th</sup> SNIS International Endovascular Stroke Conference (IESC), Queensland, Australia, November 2015

Moderate neurological deficit (NIHSS 4) associated with a complete right middle cerebral artery (MCA) M1 segment occlusion, SLICE (Stroke Live Course) The Multidisciplinary Stroke Team Meeting, Nice, France, September 7-9, 2015

Moderator AVM Session, SNIS 12<sup>th</sup> Annual Meeting, San Francisco, CA, July 27-30, 2015

Moderator, 4<sup>th</sup> Annual Charleston Summit, Charleston, SC January 2015

Best New Stroke Revascularization Devices, Moderator, AIM Symposium, 22<sup>nd</sup> Symposium on Current Issues and New Techniques in Interventional Radiology and Endovascular Therapy, New York, NY, November 17-20, 2014

Moderator PseudoLIVE, SNIS Section Meeting, Denver, CO July 30, 2014

Moderator, 3C Conference. Jackson Hole, WY July 13, 2014

Which Method of Mechanical Thrombectomy is Best: A Debate, ADAPT, SNIS Section Meeting, Denver, CO July 30, 2014

Moderator, 3<sup>rd</sup> Annual Charleston Summit, Charleston, SC January 2014

Moderator, 3C Conference. Jackson Hole, WY July 13, 2013

Moderator, 2<sup>nd</sup> Annual Charleston Summit, Charleston, SC January 2013

Moderator, RSNA, Chicago, IL, December 2013

Moderator, Charleston Summit, Charleston, SC January 2012

Moderator, Acute stroke session. RSNA November 28, 2010.

Moderator, Acute Stroke treatment session. 3C Conference. Jackson Hole, WY July 13, 2010

Moderator and Neuro Program Coordinator. Society of Endovascular Therapy- Kiawah, Feb. 19, 2010

Moderator and Course Director. MUSC 2009 Wild Dunes Stroke Course, Charleston SC. 3/2009

Aneurysm Session Moderator. SNIS Annual Meeting, 7/2008

Aneurysms, Complications and Saves, Session Moderator ASITN, 2006

Aneurysms, New devices and techniques, Session Moderator ASNR, 2006

Interventional: Intracranial Aneurysms, Session Moderator, ASNR 2005.

Aneurysms, New Devices. Session Moderator, RSNA 2000.

### **INTERNATIONAL INVITED LECTURES**

Thrombectomy in the Post Mr. Clean Era, 12<sup>th</sup> Asian Australasian Federation of Interventional and Therapeutic Neuroradiology (AAFITN), Bali – Indonesia March 2016

Does Equipoise Exist for Patients After 6 Hours?, 5<sup>th</sup> SNIS International Endovascular Stroke Conference (IESC), Gold Coast, Queensland, Australia, November 2015

Moderate neurological deficit (NIHSS 4) associated with a complete right middle cerebral artery (MCA) M1 segment occlusion, SLICE (Stroke Live Course) The Multidisciplinary Stroke Team Meeting, Nice, France, September 7-9, 2015

Ischemic stroke patient with left MCA occlusion and a severe neurological deficit, presenting with unusual perfusion-CT results with extended CBV abnormalities contrasting with moderate MTT abnormalities, SLICE (Stroke Live Course) The Multidisciplinary Stroke Team Meeting, Nice, France, September 7-9, 2015

Straight forward, optimal workflow for a perfect patient, SLICE (Stroke Live Course) The Multidisciplinary Stroke Team Meeting, Nice, France, September 7-9, 2015

New Technologies Hemorrhagic Stroke, SIMI, Buenos Aires, Argentina, September 14-16, 2015

ACE™ 64 the New Clot Extraction Device, SIMI, Buenos Aires, Argentina, September 14-16, 2015

Direct recanalization with or without stent retrievers, CIRSE 2015, Lisbon, Portugal, September 26-30, 2015

Acute stroke revascularization: from simple to challenging, CIRSE 2015, Lisbon, Portugal, September 26-30, 2015

LARGE aneurysm trial: Flow diversion versus traditional endovascular coiling therapy, ABC-WIN Meeting, Val d'Isere, France, January 2014

Multi-Center Experience with the Penumbra PC 400 Detachable Coil, ABC-WIN Meeting, Val d'Isere, France, January 2014

The US Multi-center ADAPT Technique Experience, ABC-WIN Meeting, Val d'Isere, France, January 2014

Proximal – to – Distal Approach in the Treatment of Tandem Occlusions Causing an Acute Stroke, ABC-WIN Meeting, Val d'Isere, France, January 2014

Direct thromboaspiration/adapt technique: How I do it, CIRSE 2014. Glasgow, UK, September 13-17, 2014

New concepts and tools for acute stroke revascularization: case based discussion, CIRSE 2014. Glasgow, UK, September 13-17, 2014

ADAPT: A Direct Aspiration First Pass Technique for Acute Stroke Thrombectomy, CIRSE 2014. Glasgow, UK, September 13-17, 2014

Stroke Thrombectomy: Tips & Tricks, CIRSE 2014. Glasgow, UK, September 13-17, 2014

ADAPT: Case Based Learning Approach, CIRSE 2014, Glasgow, UK, September 13-17, 2014

ADAPT: A Direct Aspiration First Pass Technique for Acute Stroke Thrombectomy, 30<sup>th</sup> Annual Meeting of the Japanese Society for Neuroendovascular Therapy, JSNET, Yokohama, Japan, December 1-5, 2014

ADAPT: A Direct Aspiration First Pass Technique for Acute Stroke Thrombectomy: Concepts and Techniques, JSNET, Japan, December 1-5, 2014

Recent and On Going Trials in Interventional Neuroradiology, WFTIN, Buenos Aires, Argentina, November 2013

Thrombolysis or Thrombectomy or Thrombolysis and Thrombectomy, WFTIN, Buenos Aires, Argentina, November 2013

ESMINT, Nice, France, September 2013

MAPS Trial Results, Stryker Lunch Symposium. EACON, Korea August 31, 2012

Initial Experience with the Target Detachable Coil: The MUSC Experience. Australian Society of Neuroradiology Annual Meeting. March 17, 2011.

WFITN Wingspan How to do it Workshop. World Federation of Interventional and Therapeutic Neuroradiology- Montreal, June 26, 2009

US Multi-Center Wingspan Stent Registry for Symptomatic Intracranial Atherosclerotic Disease: 1 year results. World Federation of Interventional and Therapeutic Neuroradiology - Montreal, June 25, 2009

Do animal Experiments Accurately Predict What Will Happen With a Device in Humans? World Federation of Interventional and Therapeutic Neuroradiology- Montreal, June 25, 2009

How I Do It. Session on Intracranial Stenting. WFITN 2009 Montreal CAN. 6/2009

International Symposium on Intracranial Stenting. WFITN 2009 6/2009

International Symposium on Preclinical Research: How accurately do animal models predict the success of a device in humans? WFITN 2009 6/2009

Intracranial Atherosclerosis: Follow-up Imaging After Stenting. ASNR- Vancouver, May 18, 2009

Imaging Strategy for Following Coiling Patients using MRA. SNIS Practicum- Vancouver, May 17, 2009

Stump the Experts Panel Discussion: Aneurysms. SNIS 2008 Practicum, Vancouver CAN. 5/2009

Noninvasive imaging for the follow up of previously treated aneurysms - Is MRA good enough? SNIS 2008 Practicum, Vancouver CAN. 5/2009

## **NATIONAL INVITED LECTURES**

My Last 50 Thrombectomies, AANS/CNS Joint Cerebrovascular Section Annual Meeting, Los Angeles, CA, January 22-23, 2018

A Comparison of Direct Aspiration vs. Stent Retriever as a First Approach (COMPASS): A Randomized Trial, ISC Stroke Conference, Los Angeles, CA January 2018

Stroke Recorded Case – Expert Panel & Audience Discussion, 6<sup>th</sup> International Endovascular Stroke Conference, New York, NY, May 1-3, 2017

What are the Major Questions the Data Can Answer, AANS/CNS Joint Cerebrovascular Section Annual Meeting, Los Angeles, CA, February 15-16, 2016

Intervention after 6 hours. ISC/AANS/CNS Cerebrovascular Joint Section Annual Meeting, Nashville, TN Feb 9-11, 2015

ELVO Treatment Devices, SNIS 12<sup>th</sup> Annual Meeting, San Francisco, CA, July 27-30, 2015

Moderator AVM Session, SNIS 12<sup>th</sup> Annual Meeting, San Francisco, CA, July 27-30, 2015

Coil Assist Devices, SNIS 12<sup>th</sup> Annual Meeting, San Francisco, CA, July 27-30, 2015

New Devices for IA Stroke, SNIS/CVS, San Diego, CA February 2014

PseudoLIVE, SNIS Section Meeting, Boulder, CO July 30, 2014

Which Method of Mechanical Thrombectomy is Best: A Debate, ADAPT, SNIS Section Meeting, Boulder, CO July 30, 2014

ADAPT: This Sucks, But it works, AIM Symposium, 22<sup>nd</sup> Symposium on Current Issues and New Techniques in Interventional Radiology and Endovascular Therapy, New York, NY, November 17-20, 2014

Best New Stroke Revascularization Devices, Moderator, AIM Symposium, 22<sup>nd</sup> Symposium on Current Issues and New Techniques in Interventional Radiology and Endovascular Therapy, New York, NY, November 17-20, 2014

Endovascular Stroke Device Update. RSNA Annual Meeting – Chicago, IL, December 2013

CT Based Imaging of Acute Ischemic Stroke: Irrespective of Time. CNS Meeting, Boston, MA, October 2013

Coiling for Small, Narrow-Necked Aneurysms, SNIS Annual Meeting, Miami, FL July 2013

Thrombectomy: Summary of The Clotted Data & Outcomes. AIM Meeting, November 16, 2012

IV Dyna CTA. Siemens Breakfast Symposium. ICS Meeting, Madison, WI October 10, 2012

Is This Stenosis Really Asymptomatic? Assessing Hemodynamic and Cognitive Changes In The Patient With An “Asymptomatic” Stenosis. ICS Meeting, Madison, WI October 10, 2012

Managing Industry Relations. SNIS Fellows Course. Miami, FL July 2012

New Technologies In Neurointerventional. SNIS, Miami, FL July 2012

Dyna CT Perfusion: New Frontiers in Stroke Therapy. Siemens Innovations, Orlando FL July 19, 2012

Endovascular Treatment of Complex Aneurysms. Codman Dinner Symposium, Washington DC May 24, 2012

Delayed Stroke Therapy: Imaging and Intervention. SNIS IESC April 27, 2012

Death and Disability after Coil Embolization of Aneurysms in the Matrix And Platinum Science (MAPS) Trial. ISC. Feb 5, 2012

Complex Aneurysm Treatment: Balloon Assisted Coiling. ISC Covidien Dinner Symposium. Feb. 1, 2012

Siemens Artis Zee Biplane Suite for Neurointerventional Surgery. AANS Fellows Course. Jan 28 2012

Cerebral Aneurysms. Gore Scientific Advisory Board Meeting. December 2, 2011

Emergency Stroke CT: Imaging and Intervention. RSNA. November 30, 2011  
Penumbra Thrombectomy: Sucking The Relevant Safety And Efficacy Out Of The Literature: Do The Outcomes Justify? AIM Conference. November 16, 2011

Endovascular Aneurysm Treatment: Balloon and Stent Assist Coiling. SNIS July 27, 2011

Initial Multicenter Experience with Hydrosoft Coils. SNIS Microvention Lunch Symposium July 27, 2011

Lazarus Effect Funnel. SNIS, July 27, 2011.

MAPS Trial Results. SNIS Stryker Lunch Symposium. July 27, 2011.

Treatment of Complex Aneurysms with a New Stent. SNIS July 27, 2011

Best treatment for large and giant aneurysms: Clip vs Coil? 3C Conference Jackson Hole, WY July 2011

Stryker Neurovascular Global Sales Meeting. February 5, 2011

Emergency Stroke CT: Imaging and Intervention. RSNA, November 28, 2010.

Use of Distal Access Guide Catheters. Penumbra PEER meeting November 17, 2010

The Case I Should Not Have Chosen IA Therapy And Why: Identifying Nasty Anatomy And Pathology To Avoid. AIM Conference. November 17, 2010

Practice Building in the Academic Workplace. SNIS July 30, 2010

Acute Stroke Treatment: Without Time Limitations. SNIS July 27, 2010

The START Trial: Clinical Outcome in Acute Stroke Treatment After Image Guided Patient Selection for Interventional Revascularization Therapy. SNIS July 26, 2010

Acute Stroke Treatment in 2010. Tri-State Stroke Summit, 5/21/2010

Imaging Approach to Acute Stroke Treatment in 2010. Association of Vascular and Interventional Radiology- Tampa, March 15, 2010

Role of Physiological Imaging in Acute Stroke. Penumbra National Sales Meeting- San Francisco, Jan. 7, 2010

Intra-Arterial Thrombectomy Devices: State of the Art Options and Risks. AIM Conference- New York, November 18, 2009

Interventional Treatment Options for Intracranial Atherosclerosis. AIM Conference- New York, November 18, 2009

Treatment of Symptomatic Intracranial Atherosclerotic Disease. SAMMPRIS Trial Dinner Symposium- Oct. 28, 2009

SAMMPRIS Trial and Treatment of Intracranial Stenosis. Advanced Interventional Meeting (AIM), New York. 11/2008

Intracranial Angioplasty and Stenting: Setting the Stage for SAMMPRIS. Spokane Neurosciences Symposium, Washington. 11/2008

Neurointerventional treatment of Stroke. American Heart Assoc., Get with the Guidelines Stroke Talk, 10/2008

Surgical Treatment of Intracranial Atherosclerotic Disease (ICAD) International Stroke Conference, Boston Scientific Dinner Symposium 2007

Bioactive Coil Frontiers International Stroke Conference, 2007

Neurovascular Applications of CTA and MRA: The Interventionalist Perspective. ISMRM 2005.

CT Angiography of Carotids: Vertebrals and Intercerebral Arteries. Imaging Subclinical Atherosclerosis: Beyond Framington. May 2004.

A Symposium on Advanced Brain Aneurysm Therapy. Sponsored by Boston Scientific Inc. during ASNR 2001.

## **REGIONAL INVITED LECTURES**

Charleston Summit, Charleston, SC, January 2017

Charleston Summit, Charleston, SC, January 2016

POSITIVE Trial Update, 2015 Charleston Summit, Charleston, SC January 10, 2015

MUSC Summit of New Ideas & Technology, Charleston, SC January 2014

Thrombolytics and Endovascular Therapy: Where Are We @ Where Are We Going, NC Stroke Conference, Winston Salem, NC, September 2013

Medical therapy vs Intracranial Thrombolysis. Duke CV Course, Battle at Pinehurst. May 5, 2012

Acute Stroke 2012. SET Meeting Feb 24, 2012

Neurointerventional Surgery: A Minimally Invasive Approach to Cerebrovascular Disease. SET Meeting Feb 24, 2012

Complex Aneurysm Treatment: Balloon Assisted Coiling. MUSC Covidien Fellows Course. Feb. 1, 2012.

Large Animal Models of Stroke & Aneurysms: Endovascular Perspective. MUSC AALAC Meeting February 3, 2012

Neurointerventions in Neuro-ophthalmology. MUSC Ophthalmology Conference. Dec 1, 2010

Endovascular Treatment of Cerebral Aneurysm: Past, Present and Future Directions. South Carolina Association of Neurological Surgeons 2010 Annual Meeting. November 13, 2010

Neurointerventional treatment of acute stroke: Physiologic not chronologic approach. South Carolina Neurological Association 2010 Annual Meeting. October 8, 2010

Acute Stroke Treatment in 2010. Society of Endovascular Therapy- Kiawah, Feb. 19, 2010

Neurointerventional Surgery: A Minimally Invasive Approach to Cerebrovascular Disease. MUSC Critical Care Nursing Forum- Feb. 3 and 10, 2010

Emerging Devices and Techniques in Balloon Assisted Coiling. Micrus Sponsored MUSC Fellows Training Course. January 14, 2010

Neurointerventional Surgery: A Minimally Invasive Approach to Cerebrovascular Disease. MUSC Medicine Grand Rounds- Dec. 15, 2009

Endovascular Treatment of Cerebral Ischemia. SC Assoc. of Neurological Surgeons Annual Meeting- November 6, 2009

Neurointerventional Surgery: Endovascular Treatment of Cerebrovascular Disease. UMA Executive Committee Dinner - June 3, 2009

Endovascular Treatment of Acute Stroke. MUSC EMS Course- May 19, 2009

Endovascular Treatment of Acute Stroke. MUSC 2009 EMS Course, Charleston SC. 5/2009

Endovascular Treatment of Acute Stroke. MUSC 2009 Wild Dunes Stroke Course, Charleston SC. 3/2009

Radiological evaluation of acute stroke: a Neurointerventional perspective. MUSC 2009 Wild Dunes Stroke Course, Charleston SC. 3/2009

MUSC Cerebrovascular and Endovascular Strategies. MUSC 2009 Wild Dunes Stroke Course, Charleston SC. 3/2009

Neurointerventional Radiology. SC Neurological Nurses Association Dinner Talk, 8/2008

Endovascular Treatment of Cerebrovascular Disease. MUSC Radiology Kiawah Course, 2/2008

Endovascular Treatment of Acute Stroke. SCAIVR Course, 2/2008

Neuroendovascular Multi-disciplinary Collaboration University of Wisconsin Leadership

Effects of Carotid or Vertebrobasilar Stent Placement on Cerebral Perfusion and Cognition. NorthWestern Univ. 4TH International Symposium on CT and MR Brain Perfusion.

### **SCIENTIFIC AND EDUCATIONAL POSTERS**

Direct Aspiration (ADAPT) and Primary Stent Retriever Thrombectomy for Acute Ischemic Stroke: A Systematic Review of Radiographic and Clinical Outcomes in 3339 Patients, International Stroke Conference, Los Angeles, CA, January 24-26, 2018

Age-stratified Outcomes After Mechanical Thrombectomy for Large Vessel Occlusion, International Stroke Conference, Los Angeles, CA, January 24-26, 2018

Endovascular Recanalization of Intracranial Arterial Stenosis in Patients with Recurrent or Progressive Symptoms Despite Medical Management, International Stroke Conference, Los Angeles, CA, January 24-26, 2018

Equivalent Favorable Outcomes Possible After Thrombectomy for Posterior Circulation Large Vessel Occlusion Compared to Anterior Circulation: The MUSC Experience, International Stroke Conference, Los Angeles, CA, January 24-26, 2018

A Multi-center Study of Safety and Efficacy of Mechanical Thrombectomy for Acute Ischemic Stroke Patients with Emergent Large Vessel Occlusions Not Meeting Top Tier Evidence Criteria, International Stroke Conference, Houston, TX, February 22-24, 2017

Analysis of Outcomes From the Endovascular Treatment of Posterior Circulation Strokes in the Modern Era of Stent Retriever Thrombectomy, International Stroke Conference, Los Angeles, CA, February 17-19, 2016

Long Term Experience Using the ADAPT Technique for the Treatment of Acute Ischemic Stroke, International Stroke Conference, Los Angeles, CA, February 17-19, 2016

Initial Human Experience with Next Generation Medina Coil System, AANS/CNS Cerebrovascular Section Annual Meeting, Nashville, TN, February 9-11 2015

ADAPT: A Cost Analysis, SNIS Section Meeting, Denver, CO July 30, 2014

The Pulsar Vascular Aneurysm Neck Reconstruction Device For Bifurcation Aneurysms: In Vitro Study and First Clinical Experience. SNIS, July 2012

Novel aneurysm neck reconstruction device: initial experience in an experimental preclinical bifurcation aneurysm model. SNIS, July 2012

Initial Experience with Distal Guide Catheter Placement in the Treatment of Cerebrovascular Disease: Clinical Safety and Efficacy. SNIS, July 2012

Initial Multi-Center International Experience with the Target Detachable Coil. SNIS, July 2012

Treatment of Very Small Cerebral Aneurysms. SNIS, July 2012

A Study of the novel 054 Penumbra aspiration device in the ICA and MCA SNIS 8th annual meeting oral poster abstracts: 2011

A mathematical model of vascular tortuosity using optimality analysis SNIS 8th annual meeting oral poster abstracts: 2011

Incidence of very small ruptured aneurysms (<3 mm) in the stroke belt: a single center experience and outcome analysis SNIS 8th annual meeting oral poster abstracts: 2011

Emergency Onyx embolization of avulsed basilar artery perforator following an endoscopic colloid cyst resection SNIS 7th annual meeting oral poster abstracts: 2010

Onyx embolization of facial arteriovenous malformations SNIS 7th annual meeting oral poster abstracts: 2010

Novel dual approach treatment of an internal carotid artery traumatic pseudoaneurysm SNIS 7th annual meeting oral poster abstracts: 2010

Impact and outcomes of physiologic imaging for acute stroke patient selection for endovascular therapy SNIS 7th annual meeting oral poster abstracts: 2010

Combined endovascular embolization and surgical resection of a massive lumbosacral arteriovenous malformation in a patient with Cobb syndrome SNIS 7th annual meeting oral poster abstracts: 2010

070 Neuron conduit technique for intracranial delivery and deployment of 6 mm and 8 mm carotid stents in the setting of proximal vessel tortuosity SNIS 7th annual meeting oral poster abstracts: 2010

Enterprise stent assisted coil embolization of cerebral aneurysms SNIS 7th annual meeting oral poster abstracts: 2010

Pilot study to assess the vascular response of the Wingspan intracranial stent system in the intracranial vessels of the canine SNIS 6th annual meeting oral poster abstracts: 2009

Brain Hyperperfusion: A Distinct Dynamic Perfusion Imaging Finding Noted in Various Clinical Conditions ASNR, 2007

Subsecond 4D Contrast Enhanced MRA (TRICKS and HYPR TRICKS) for Cerebrovascular Applications Western Neuroradiological Society, 2006

Advances in Neurovascular CT: A Combined Anatomic and Physiologic Approach. RSNA 2004, Hot topics.

Comparison of PC VIPR with 3D TOF. The 16th International MR Angio Club Workshop, London ON Canada 2004.