Curriculum Vitae

Timothy Ryan Miller, M.D.

Professor, Department of Diagnostic Radiology and Nuclear Medicine

University of Maryland School of Medicine

**Date** August 5th, 2024

**Contact Information**

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Foreign Languages: Swedish (working knowledge)

**Education**

2000 B.A., Chemistry, Case Western Reserve University (Summa Cum Laude)

2005 M.D., Perelman School of Medicine, University of Pennsylvania

**Post Graduate Education and Training**

2005 - 2006 Internship, Penn Presbyterian Medical Center

2006 - 2007 Residency, Diagnostic Radiology, Harbor-UCLA Medical Center

2007 - 2010 Residency, Diagnostic Radiology,

2010 - 2011 Fellowship, Diagnostic Neuroradiology, Hospital of the University of Pennsylvania

2011 - 2012 Fellowship, Interventional Neuroradiology, Hospital of the University of Pennsylvania

**Certifications**

2010 Diplomat, American Board of Diagnostic Radiology

2016 Neuroradiology Certificate of Added Qualifications

**Medical Licensures**

2007 California, Inactive

2010 Pennsylvania, Inactive

2012 Maryland, Active

**Employment History**

**Academic Appointments**

2011-2012 Clinical Instructor, Radiology, Hospital of the University of Pennsylvania, Philadelphia PA

2012-2019 Assistant Professor, Diagnostic Radiology and Nuclear Medicine, UMSOM

2019-present Associate Professor, Diagnostic Radiology and Nuclear Medicine, UMSOM

2019-present Associate Professor, Neurosurgery, UMSOM

2019-present Associate Professor, Neurology, UMSOM

2023-present Professor, Diagnostic Radiology and Nuclear Medicine, UMSOM

2023-present Professor, Neurosurgery, UMSOM

2023-present Professor, Neurology, UMSOM

**Professional Society Memberships**

2005–present General Member, Radiological Society of North America (RSNA)

2005–present General Member, American College of Radiology

2010–present Senior Member, American Society of Neuroradiology (ASNR)

2013-present Senior Member, Society of Neurointerventional Surgery (SNIS)

2015-present General Member, Eastern Neuroradiological Society (ENRS)

2022-present Association of Program Directors in Radiology (APDR)

**Honors And Awards**

2000 Admission to Phi Beta Kappa Honor Society, Case Western Reserve University

2000 Graduated Summa Cum Laude, Case Western Reserve University

2021 Bruce Roberts Line Prize in Diagnostic Radiology, UMSOM

**Clinical Activities**

**Clinical Expertise**

Board certified diagnostic and interventional radiologist

Additional board certification in the sub-specialty of neuroradiology

Clinical and research focus are in the areas of cerebrovascular disorders, including cerebral aneurysms, vascular malformations, and acute large vessel ischemic stroke.

**Scope of Clinical Practice**

2012-present Currently working full time as an interventional and diagnostic neuroradiology attending at the University of Maryland Medical Center.

 ~ 200+ patients per year

 0.8 FTE clinical and educational duties, 0.2 FTE academic activities

**Administrative Service**

**Institutional Service**

2001–2002 Curriculum Committee Member, Perelman School of Medicine University of

Pennsylvania

2003­–2005 Admissions Committee Member, Perelman School of Medicine University of

Pennsylvania

2012–present Program Director, Neuro-Interventional Radiology Medical School Elective,

 UMSOM

2013-present Medical Student Education Committee Member, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM

2016–2020 Assistant Program Director, Interventional Neuroradiology Fellowship, UMSOM

2018–2020 Representative for the Department of Diagnostic Radiology and Nuclear Medicine, UMSOM Council

2019-2020 DISPA Board of Directors Member, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM Council

2020-2021 DISPA Board of Directors Treasurer, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM Council

2020-present Neuro Interventional Radiology Quality Officer, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM

2021-present DISPA Board of Directors Vice President, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM Council

2022-present Resident Education Committee Member, Department of Diagnostic Radiology and Nuclear Medicine, UMSOM

2023–present Program Director, Interventional Neuroradiology Fellowship, UMSOM

**National Service**

2012–present *Ad Hoc* Reviewer, Journal of Neurointerventional Surgery (6x/yr)

2013–present*Ad Hoc* Reviewer, The Neuroradiology Journal (2x/yr)

2013–present*Ad Hoc* Reviewer, British Medical Journal (2x/yr)

2013–present *Ad Hoc* Reviewer, American Journal of Neuroradiology (6-8/yr)

2014 American Heart Association Stroke Awareness Month Volunteer

2014–2016 Member, RSNA Educational Exhibits Awards Committee

2015–present *Ad Hoc* Reviewer, Allergy & Rhinology (1x/yr)

2016 ASNR Annual 54th Annual Meeting small session moderator

2022-present ASNR International Collaborations Committee Member

2022-present ASNR Quality, Safety, Value Committee Member

2022-present SNIS Mentor Match Program

2024 Session Moderator, The Eastern Neuroradiological Society Annual Meeting 2024

**Local Service**

1997–1998 Volunteer, Children’s Hospital, The Cleveland Clinic, Cleveland, Ohio

1997 Volunteer, The Ronald McDonald House, Cleveland, Ohio

2001 Volunteer, Students Teaching AIDS to Students, Philadelphia, Pennsylvania

2014 American Heart Association National Stroke Month Volunteer

**Teaching Service**

**Medical Student Teaching**

2016-2017 *Imaging of Cancer* small group

4 hours, 1 week, 80 students

UMSOM

2016-2017 *Neuroanatomy Review* small group

4 hours, 1 week, 50 students

UMSOM

2017-2018 *Structure and Development* small group

 4 hours, 1 week, 80 students

 UMSOM

2017-2018 *Introduction to Chest & Abdominal Imaging* small group

 4 hours, 1 week, 80 students

 UMSOM

**Resident and Fellow Teaching**

2006-2007 Radiology Resident Journal Club

Harbor-UCLA Medical Center

*Improvements in Cancer Staging with PET/CT: Literature Based Evidence*

Presented 1x over one year

2008-2010 Internal Medicine Morbidity and Mortality Interdisciplinary Conference University Hospitals Case Medical Center

 Multidisciplinary conference including staff, fellows, and residents

 Responsibilities included presenting radiological findings of selected cases

 Presented 6x over three years

2009-2010 Radiology Resident Lecture Series

University Hospitals Case Medical Center

 Radiology residents

 Presented 3x over one year

 *- Nuclear Cardiac Imaging in the Era of Molecular Medicine*

*- Degenerative Abdominal Aortic Aneurysms, Endografts, & Endoleaks*

*- Embryology, Anatomy, and Variations of the Aortic Arch and Internal*

 *Carotid Artery*

2010-2011 Neurology-Imaging Case Conference

 Hospital of the University of Pennsylvania

 Radiology fellows and residents

Weekly neurology conference correlating clinical and radiological findings of interesting cases for one year

2010-2011 Neuroradiology Case Conference

 Children's Hospital of Philadelphia

 Radiology fellows and residents

 Weekly neuroradiology case conference over two months

2010-2011 Neurology Case Conference

 Hospital of the University of Pennsylvania

 Multi-disciplinary conference including staff, fellows, and residents

 Presented four times over one year

2010-2011 Neuroradiology Journal Club

Hospital of the University of Pennsylvania

Radiology fellows and residents

 Presented four times on varying subjects over one year

2012-present Radiology Resident Conference Series

 UMSOM

 Radiology residents

 Approx 15-20 residents, 2x/year

2012-present Neuroradiology Case Conference Series

 UMSOM

 Radiology residents

 Approx 15-20 residents, 4x/year

2012-present Neuroradiology Fellow Conference Series

 UMSOM

 Radiology fellows and neurosurgery residents

 Approx 4-5 residents and fellows, 4x/year

2013-present Interventional Neuroradiology Fellow Didactic Lecture Series

 UMSOM

 Radiology fellows and neurosurgery residents

 Approx 4-5 residents and fellows, 3-4x/year

2013-present Interventional Neuroradiology Morbidity and Mortality Conference

 UMSOM

 Radiology fellows and neurosurgery residents

 Approx 4-5 residents and fellows, 3-4x/year

2013-present Interventional Neuroradiology Journal Club

 UMSOM

 Radiology fellows and neurosurgery residents

 Approx 4-5 residents and fellows, 3-4x/year

2015-present Radiology Resident Journal Club

 UMSOM

 Radiology residents

 Approx 15-20 residents, 12x/year

2020-present Neurointerventional Multidisciplinary conference

 UMSOM

 Radiology fellows and neurosurgery residents

 Approx 5-20 residents and fellows, 50x/year

**Grant Support**

###### Active Grants

09/01/14-present Co-Inv, Site-PI: Dheeraj Gandhi (1%)

 *“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”*

Multi-center trial

Sponsor: Medtronic

Award amount: $26,232

Assist in patient recruitment, data collection

09/15/15-present Co-Inv, Site-PI: Gaurav Jindal (1%)

*“A Prospective, Multi-center, Single Arm Study to Evaluate the Safety and Effectiveness of the CODMAN ENTERPRISE® Vascular Reconstruction Device and Delivery System when Used in Conjunction with Endovascular Coil Embolization in the Treatment of Wide-necked Saccular Intracranial Aneurysms”*

Multi-center trial

Sponsor: Cerenovus, DePuy Synthes Products, Inc.

Award amount: $99,995

Assist in patient recruitment, data collection

###### 01/30/18-present Co-Inv, Site-PI: Howard Eisenberg (1%)

*“A Pivotal Clinical Trial of the Management of the Medically-Refractory Dyskinesia Symptoms or Motor Fluctuation of Advanced Idiopathic Parkinson’s Disease With Unilateral Lesioning of the Globus Pallidum Using the ExAblate Neuro System”*

Multi-center trial

Sponsor: InSightec

Award amount: $830,971

Assist in treatment planning and execution

02/21/18-present Co-Inv, Site PI: Gaurav Jindal (1%)

 “Ruptured Aneurysms Treated with Hydrogel Coils – RAGE”

 Multi-center trial

 Sponsor: Microvention

 Award amount: $126,350

Assist in patient recruitment, data collection

07/11/18-present Co-Inv, Site-PI: Graeme Woodworth (1%)

*“A Study to Evaluate the Safety and Feasibility of Exablate Model 4000 Type-2 to Temporarily Mediate Blood-Brain Barrier Disruption (BBBD) in Patients with Suspected Glioblastoma in the Setting of Planned Surgical Interventions”*

Single center trial

Sponsor: InSightec

Award amount: $239,027

Assist in treatment planning and execution

08/16/18-present Co-Inv, Site-PI: Dheeraj Gandhi (1%)

*“PHIL DAVF: Study of PHIL Embolic System in the Treatment of Intracranial Dural Arteriovenous Fistulas”*

Multi-center trial

Sponsor: MicroVention

Award amount: $130,000

Assist in patient recruitment, data collection

04/25/19-present Co-Inv, Site-PI: Dheeraj Gandhi (1%)

*“Phase 1 Clinical Trial for MR Guided Focused Ultrasound (FUS) thalamotomy of Central lateral thalamic nucleus for the treatment of Neuropathic Pain”*

Single center trial

Sponsor: InSightec

Award amount: $312,626

Assist in data gathering, data analysis

05/30/20-present Site-PI (3%)

*“Sofia Aspiration System as First Line Technique”*

Multi-center registry

Sponsor: MicroVention

Award amount: $90,270

Assist in data gathering, data analysis

01/25/21-present Co-Inv, Site-PI: Dheeraj Gandhi (1%)

*“MR Guided Focused Ultrasound (FUS) for the treatment of Trigeminal Neuralgia”*

Single center trial

Sponsor: InSightec

Award amount: $347,880

Assist in patient recruitment, data gathering, data analysis

05/28/21-present Site-PI (3%)

*“A Prospective, Open-Label, Multi-Center, Single-Arm Trial Designed to Assess the Safety, Performance and Efficiency of the NeVa Stent Retriever in the Treatment of Large Vessel Occlusion Strokes”*

Multi-center trial

Sponsor: Vesalio

Award amount: $86,241

Assist in patient recruitment, data gathering, data analysis

**Pending Grants**

 Site-PI (3%)

*“Post-Market Surveillance Study to Evaluate the Long-Term Safety and Effectiveness of the Web Device”*

Multi-center trial

Sponsor: Microvention

Award amount: Pending

Assist in patient recruitment, data gathering, data analysis

**Completed Grants**

11/02/11-06/02/17 Co-Inv (1%), Site-PI: Gaurav Jindal

*“Hydrogel Endovascular Aneurysm Treatment Trial (HEAT)”*

Multi-center trial

 Sponsor: Stryker

 Award amount: $34,889

 Assist in patient recruitment, data collection

08/01/13-03/31/21 Co-Inv (1%), PI: Gaurav Jindal

*“ULTRA: Ultra Coils from Start to Finish for the Endovascular Repair of Small Intracranial Aneurysms”*

Multi-center trial

 Sponsor: Stryker

Award amount: $744,774

Assist in patient recruitment, data collection

11/16/13-11/25/14 Co-Inv (1%), Site PI: Elias Melhem

*“Gadobutrol Enhanced MRA of the Supra-aortic Vessels”*

Multi-center trial

Sponsor: Bayer

Award amount: $79,295

Assist in patient recruitment, data collection

11/25/13-12/11/17 Site-PI (5%)

 *“Trevo Retriever Registry: Post Market Surveillance Study”*

Multi-center trial

Sponsor: Stryker

Award amount: $337,430

Assist in patient recruitment, data gathering, data analysis

11/10/14-08/20/15 Co-Inv (1%), Site-PI: Dheeraj Gandhi

*“A Pivotal Study of MicroVention, Inc. Neurovascular Self-expanding Retrievable Stent System LVIS”*

Multi-center trial

Sponsor: MicroVention

Award amount: $45,350

Assist in patient recruitment, data collection

12/08/15-04/03/17 Co-Inv (1%), Site-PI: Gaurav Jindal

*“Systemic Evaluation of Patients Treated with Neurothrombectomy Devices for Acute Ischemic Stroke (STRATIS) Registry”*

Multi-center acute stroke registry

 Sponsor: Medtronic

 Award amount: $96,000

 Assist in patient recruitment, data collection

12/20/15-07/21/16 PI (3%)

*“Pipeline Flex versus Classic Retrospective Study”*

Single-center retrospective trial

Sponsor: Medtronic

 Award amount: $20,000

 Assist in study design, data gathering, data analysis

01/13/16-06/01/19 Site-PI (3%)

*“Apollo Onyx Delivery Micro Catheter Post Market Safety Study”*

Multi-center trial

 Sponsor: Medtronic

 Award amount: $32,500

 Assist in patient recruitment, data gathering, data analysis

**Publications**

**Peer-reviewed journal articles**

1.    **Miller TR**, Eskey CJ, Mamourian AC. Absence of abnormal vessels in the subarachnoid

       space on conventional magnetic resonance imaging in patients with spinal dural

       arteriovenous fistulas. *Neurosurgical focus.*May 2012;32(5):E15.

2.    **Miller TR**, Mohan S, Tondon R, et al. Intravascular papillary endothelial hyperplasia of the

       skull base and intracranial compartment. *Clinical neurology and neurosurgery.*Oct

       2013;115(10):2264-2267.

3.    Jindal G, Fortes M, **Miller T**, Scalea T, Gandhi D. Endovascular stent repair of traumatic

       cervical internal carotid artery injuries. *The journal of trauma and acute care surgery.*Nov

       2013;75(5):896-903.

4.    Prasad V, Gandhi D, Stokum C, **Miller T**, Jindal G. Incidence of contrast material-induced

 nephropathy after neuroendovascular procedures. *Radiology*. 2014; 273:853-858.

5.    **Miller TR**, Mohan S, Choudhri AF, Gandhi D, Jindal G. Advances in multiple sclerosis and

       its variants: Conventional and newer imaging techniques. *Radiologic clinics of North*

*America.*Mar 2014;52(2):321-336.

6.    **Miller TR**, Jindal G, Krejza J, Gandhi D. Impact of endovascular technique on fluoroscopy

       usage: Stent-assisted coiling versus flow diversion of paraclinoid internal carotid artery

       aneurysms. *Neuroradiology journal*. 2014 Dec;27(6):725-731.

7.    **Miller TR**, Jindal G, Mohan S, Fortes M, Hurst R, Pukenas B, et al. Diagnosis and

       management of trigemino-cavernous fistulas: Case reports and review of the literature.

     *Journal of* *neurointerventional surgery.*2015 Jan;7(1):73-78.

8. Jindal G, **Miller T**, Beaty N, Puri A, Gandhi D. Ultra-small diameter coils for treatment of

       intracranial aneurysms. *Interventional neuroradiology*. 2015;21:50-54

9.   **Miller TR,** Gandhi D. Intracranial dural arteriovenous fistulae: Clinical presentation and

       management strategies. *Stroke.*Jul 2015;46(7):2017-2025.

10.   **Miller TR**, Shivashankar R, Mossa-Basha M, Gandhi D. Reversible cerebral

       vasoconstriction syndrome, part 1: Epidemiology, pathogenesis, and clinical course.

*American journal of neuroradiology*. 2015 Aug;36(8):1392-1399.

11.   **Miller TR**, Shivashankar R, Mossa-Basha M, Gandhi D. Reversible cerebral

       vasoconstriction syndrome, part 2: Diagnostic work-up, imaging evaluation, and differential

       diagnosis. *American journal of neuroradiology*. 2015 Sep;36(9):1580-1588.

12. **Miller TR**, Jindal G, Gandhi D. Focal, transient mechanical narrowing of a pipeline

       embolization device following treatment of an internal carotid artery aneurysm. *Journal of*

*neurointerventional surgery.*2015 Oct;7(10):e35.

13.  Le EJ, **Miller T**, Serulle Y, et al. Use of Pipeline Flex is associated with reduced

 Fluoroscopy time, procedure time, and technical failure compared with the first-generation

 Pipeline embolization device. *J Neurointerv Surg*. Jan 13 2017;9(2):188-191.

14.   Jindal G, **Miller T**, Iyohe M, Shivashankar R, Prasad V, Gandhi D. Small

       intracranial aneurysm treatment using target ultrasoft coils. *Journal of vascular*

*interventional neurolology,*2016 Jun;9(1):46-51.

15.   **Miller TR**, Serulle Y, Gandhi D. Arterial abnormalities leading to tinnitus. *Neuroimaging*

*clinics of North America.*2016;26(2):227-236.

16.  Serulle Y, **Miller TR**, Gandhi D. Dural arteriovenous fistulae: Imaging and management.

*Neuroimaging clinics of North America.*2016;26(2):247-258.

17.   **Miller TR**, Zhuo J, Jindal G, Shivashankar R, Beaty N, Gandhi D. The efficacy of shielding

       systems for reducing operator exposure during neurointerventional procedures: A real-

        world prospective study. *American journal of neuroradiology*. 2017 Mar;38(3):450-454.

18.  Jindal G, **Miller TR**, Serulle Y, Gandhi D. Stent retrieval thrombectomy in acute stoke is

       facilitated by the concurrent use of intracranial aspiration catheters. *Journal of*

*neurointerventional surgery* 2017 Oct;9(10):944-947.

19.  Jindal G, Giacon L, Iyoha M, **Miller T**, Aldrich F, Simard M. Navien catheter experience in

       neuroendovascular interventions. *Interventional neuroradiology* 2017 Oct;23(5):551-555.

20.   Mueller-Kronast NH, Zaidat OO, Froehler MT, et al. (**STRATIS Investigators**). Systematic

        evaluation of patients treated with neurothrombectomy devices for acute ischemic

       stroke: Primary results of the STRATIS registry. *Stroke.*2017;48(10):2760-2768.

21.  Patel A, **Miller TR**, Shivashankar R, Jindal G, Gandhi D. Early angiographic signs of acute

       thrombus formation following cerebral aneurysm treatment with the pipeline embolization

       device. *Journal of neurointerventional surgery*. 2017 Nov;9(11):1125-1130.

22.  Jindal G, **Miller T**, Raghavan P, Gandhi D. Imaging evaluation and treatment of vascular

       lesions at the skull base. *Radiologic clinics of North America*. 2017;55:151-166.

23.  Froehler MT, Saver JL, Zaidat OO, et al. (**STRATIS Investigators**). Interhospital transfer

       before thrombectomy is associated with delayed treatment and worse outcome in the

       STRATIS Registry (Systematic Evaluation of Patients Treated With Neurothrombectomy

       Devices for Acute Ischemic Stroke). *Circulation.*2017;136(24):2311-2321.

24.   Leekoff ML, Masur JE, Burke AP, Pollock JS, Peters MN, Pham SM, **Miller**

        **TR**, Cole JW. Clinical reasoning: An unusual cause of adult cryptogenic ischemic

       stroke. *Neurology.*2018 Feb20;90(8):386-391.

25.  Wessel A, Kole M, Cannarsa G, Oliver J, Jindal G, **Miller T**, Gandhi D, Parikh G,

       Badjatia N, Aldrich EF, Simard MD. A sustained systemic inflammatory response

       syndrome is associated with shunt-dependent hydrocephalus after aneurysmal

       subarachnoid hemorrhage. *Journal of neurosurgery*. 2018 Jun 1;1-8.

26.   **Miller T**, Kole M, Giacon L, Cheng R, Jindal G, Gandhi D. Onyx embolization with the

       Apollo detachable tip microcatheter: A single-center experience. *Interventional*

*neuroradiology*. *24*(3), 2018:339-344.

27. Naragum V, Jindal G, **Miller T**, Kole M, Shivashankar R, Merino J, Cole J, Chen R, Kohler

       N, Gandhi D. Functional independence after stroke thrombectomy using thrombolysis In

       cerebral infarction Grade 2c-a new aim of successful revascularization. *World Neurosurg*.

 Nov 2018;119:e928-e933.

28.   **Miller TR**, Kole M, Le E, Cannarsa G, Jones S, Wessell A, Jindal G, Aldrich EF, Simard M,

       Gandhi D. Pipeline diameter significantly impact the long-term fate of jailed side

       branches during treatment of intracranial aneurysms. *American journal of*

 *neuroradiology*. 2018;39(12):2270-2277.

29.  Malhotra A, Wu X, **Miller T**, Matouk C, Sanelli P, Gandhi D. Comparative effectiveness

       analysis of Pipeline device versus coiling in unruptured aneurysms <10 mm.  *J Neurosurg*.

 Jan 11 2019;132(1):42-50.

30.  Wallace AN, Madaelil TP, Kamran M, **Miller TR**, et al. Pipeline Embolization of

       Vertebrobasilar Aneurysms-A Multicenter Case Series. *World Neurosurg.*2019.

31.  Kole MJ, **Miller TR**, Cannarsa G, et al. Pipeline embolization device diameter is an

       important factor determining the efficacy of flow diversion treatment of small intracranial

       saccular aneurysms. *J Neurointerv Surg*. Oct 2019;11(10):1004-1008.

32.  Jindal G, Carvalho HP, Wessell A, Le E, Naragum V, **Miller TR**, Wozniak M, Shivashankar

       R, Cronin CA, Schrier C, Gandhi D. Beyond the first pass: revascularization remains

       Critical in stroke thrombectomy. *J Neurointerv Surg*. Nov 2019;11(11):1095-1099.

33.  Malhotra A, Wu X, Brinjikji W, **Miller TR**, Matouk CC, Sanelli P, Gandhi D. Pipeline

       Endovascular Device vs Stent-Assisted Coiling in Small Unruptured Aneurysms: A Cost-

     Effectiveness Analysis. *Neurosurgery*. Dec 1 2019;85(6):E1010-E1019.

34.   **Miller TR**, Zhuo J, Eisenberg HM, Fishman P, Melhem E, Gullapalli R, Gandhi D.

 Targeting of the dentato-rubro-thalamic tract for MR-guided focused ultrasound treatment

 of essential tremor. *The Neuroradiology Journal.*2019;32(6):401-407.

35.  Wessell AP, Cannarsa G, Carvalho H, Kole M, Le E, Jindal G, **Miller T**, Gandhi D.

       Thrombectomy for acute ischemic stroke with the new Sofia 6-French PLUS distal access

       reperfusion catheter: A single-center experience. *Neuroradiol J*. Feb 2020;33(1):17-23.

36.  Kole M, Cannarsa G, Phelan S, Albrecht J, Jindal G, **Miller TR**, Gandhi D, Aldrich EF,

       Simard MJ. Utility of the hijdra sum score in predicting risk of aneurysm in patients with

       subarachnoid hemorrhage – a single center experience with 550 patients. *Neurosurgery*.

       2020;86(6):783-791.

37.   **Miller TR**, Guo S, Melhem ER, et al. Predicting final lesion characteristics during MR

        guided focused ultrasound pallidotomy for treatment of Parkinson's disease. *J Neurosurg.*

2020:1-8.

38.   Meyers, P. M., Fifi, J. T., Cockroft, K. M., **Miller, T. R**., Given, C. A., Zomorodi, A. R., ...

 Aziz-Sultan, M. A. (2021). Safety of the APOLLO Onyx delivery microcatheter for

 embolization of brain arteriovenous malformations: results from a prospective post-market

 study. *J Neurointerv Surg*. Feb 1 2021;doi:10.1136/neurintsurg-2020-016830

39. Hostetter, J., **Miller, TR**, & Gandhi, D. (2021). Imaging for Treated Aneurysms (Including

 Clipping, Coiling, Stents, Flow Diverters). *Neuroimaging Clin N Am*, 2021:31(2):251-263.

40. Cannarsa, G. J., Olexa, J., Chryssikos, T., Wessell, A. P., Sharma, A., **Miller, TR.,** Jindal,

 G., Arabi, B., Gandhi, D. Stand-Alone Middle Meningeal Artery Embolization for

 Treatment of Giant Chronic Subdural Hematoma in Elderly Frail Patients: A Case

 Series. *Neurosurgery Open.* 2021:*2*(1).

41. Nogueira RG, Mohammaden MH, Haussen DC, Budzik RF, Gupta R, Krajina A…**Miller**

 **TR**… et al. Endovascular therapy in the distal neurovascular territory: results of a large

 prospective registry. J Neurointerv Surg. 2021;13(11):979-84.

42. **Miller TR**, Wessell A, Jindal G, Malhotra A, Simard JM, Gandhi D. The utility of platelet

 inhibition testing in patients undergoing Pipeline embolization of intracranial aneurysms. J

 Neurointerv Surg. 2022 Jan;14(1):neurintsurg-2021-017681. doi: 10.1136/neurintsurg-

 2021-017681

43.   Ahmed AK, Guo S, Kelm N, Clanton R, Melhem ER, Gullapalli RP, Ksendzovsky A,

 Eisenberg HM, **Miller TR**, Gandhi D. Technical Comparison of Treatment Efficiency of

 Magnetic Resonance-Guided Focused Ultrasound Thalamotomy and Pallidotomy in Skull

 Density Ratio-Matched Patient Cohorts. Front Neurol. 2022 Jan 21;12:808810. doi:

 10.3389/fneur.2021.808810.

44. Cannarsa GJ, Wessell AP, Chryssikos T, Stokum JA, Kim K, De Paula Carvalho H…**Miller**

 **TR**… et al. Initial Stress Hyperglycemia Is Associated With Malignant Cerebral Edema,

 Hemorrhage, and Poor Functional Outcome After Mechanical Thrombectomy.

 Neurosurgery. 2022;90(1):66-71.

45. **Miller, TR**, Khunte M, Caffes N, Anders M, Rock P, Beitelshees AL, Malhotra A...et al.

 Excessive Platelet Inhibition Following Pipeline Embolization of Intracranial Aneurysms. *J*

 *Neurointerv Surg*. doi: 10.1136/jnis-2022-018858 [Epub ahead of print: 20220621].

46.  Huanwen C, Ahmad G, Colasurdo M, Yarbrough K, Schrier C, Phipps M,…**Miller**

 **TR**… et al. Mildly evelated INR is associated with worse outcomes following mechanical

thrombectomy for acute ischemic stroke. *J* *Neurointerv Surg*. doi: 10.1136/jnis-2022-

 019283 [Epub ahead of print: 20220812].

47. Pasrija C, Kon ZN, Mazzeffi MA,…**Miller TR**… et al. Spinal Cord Infarction With Prolonged

 Femoral Venoarterial Extracorporeal Membrane Oxygenation. *J Cardiothorac Vasc Anesth*

 2023;37(5):758-66. doi: 10.1053/j.jvca.2022.12.025 [published Online First: 20230105

48. Colasurdo M, Chen H, Schrier C,…**Miller TR**… et al. Predictors for large vessel

 recanalization before stroke thrombectomy: the HALT score. *J Neurointerv Surg* 2023 doi:

 10.1136/jnis-2023-020220 [published Online First: 20230426

49. Ahmed AK, Zhuo J, Gullapalli R,…**Miller T**… et al. Focused Ultrasound Central Lateral

 Thalamotomy for the Treatment of Refractory Neuropathic Pain: Phase I Trial

 *Neurosurgery* 2024;94(4); p 690-699.

**Submitted or In-revision peer-reviewed journal articles**

1. Jindal G, Almardawi R, Gupta R, Colby G, Schrimer C, Sudhakar S, Pukenas B, Hui F,

 Caplan J, **Miller TR**… et al. Target Ultra and Nano Coils in the Endovascular Treatment of

 Small Intracranial Aneurysms (ULTRA Registry). *Journal of Neruosurgery.* Accepted for

 Publication May 2022.

2. Batolini B, Krajina A,Budzik R, Gupta R, Nogueira R, Malek A… **Miller TR**… et

 al. Outcomes of Mechanical Thrombectomy of Acute Basilar Artery Occlusion Due to

 Underlying Intracranial Atherosclerotic Disease. *Stroke: Vascular and Interventional*

 *Neurology*. Accepted for Publication October 2022.

**Non-peer reviewed journal articles**

1. Shivashankar R, **Miller TR**, Jindal G, Simard JM, Aldrich EF, Gandhi D. Treatment of

 cerebral aneurysms-surgical clipping or endovascular coiling: the guiding principles.

 *Seminars in Neurology.* Nov 2013;33(5):476-487.

2. **Miller TR,** Gandhi D. Response to letter regarding article "Intracranial dural

 arteriovenous fistulae: Clinical presentation and management strategies” *Stroke; a journal*

 *of cerebral circulation.* August 2015.

**Book Chapters**

1. Mullen MT, **Miller TR**, Asymptomatic Carotid Stenosis, In *Atlas of Vascular Medicine: A*

*Case-Based Approach to Current Management*, Edited by Mohler EM, Litt H, New York: Demos Medical Publishing, 2011.

2. Mullen MT, **Miller TR**, Symptomatic Carotid Stenosis, In *Atlas of Vascular Medicine: A*

*Case-Based Approach to Current Management*, Edited by Mohler EM, Litt H, New York: Demos Medical Publishing, 2011.

3. Rybinnik I, **Miller TR**, Mullen MT, Extracranial Carotid and Vertebral Artery Dissection,

In *Atlas of Vascular Medicine: A Case-Based Approach to Current Management*, Edited by Mohler EM, Litt H, New York: Demos Medical Publishing, 2011.

4. Rybinnik I, **Miller TR**, Mullen MT, Lacunar Infarct, In *Atlas of Vascular Medicine: A*

*Case-Based Approach to Current Management*, Edited by Mohler EM, Litt H, New York: Demos Medical Publishing, 2011.

5. **Miller T**, Shivashankar R, Jindal G, Gandhi D, Carotid Cavernous Fistula, In *Neurovascular Imaging,* Edited by Saba L, Raz E, New York: Springer, 2014:1-30.

6. Gowda R, **Miller T**, Morris N, Atypical Aneurysms: Mycotic Aneurysms, Dissecting

 Aneurysms, Pseudoaneurysms. In: Al-Mufti, MD F., Amuluru MD K. (eds) Cerebrovascular

 Disorders. Neuromethods, vol 170. Humana, New York, NY, 2021.

7. Ahmed AK, Gandhi D, Miller T, Gullapalli R, Melhem ER. Neurological Applications of

 Magnetic Resonance-Guided Focused Ultrasound Therapy. Scott H. Faro, Feroze B.

 Mohamed (eds). Functional Neuroradiology Principles and Clinical Applications. Springer

 Nature. New York, NY 2023.

**Submitted Book Chapters**

2. Hostetter J, **Miller T**, Gandhi D**.** Neuroimaging of Acute Ischemic Stroke. (Submitted for

 publication).

3. Manners J, **Miller T**, Morris N**.** How Do We Manage Intracranial Large-Vessel Dissection.

 (Submitted for publication).

**Major Invited Speeches**

Local

1. **Miller T**, Medical Malpractice Seminar, University of Pennsylvania School of Medicine AMA

Chapter, Philadelphia, Pennsylvania, 2002.

2. **Miller T**, *Temporal Bone Anatomy and Pathology*, Radiology Grand Rounds, University

 Hospitals Case Medical Center, Cleveland, Ohio, 2010.

3. **Miller T**, *Neurointerventional Procedures,* Radiology Technologist Lecture Series,

 University of Pennsylvania, Philadelphia, Pennsylvania, 2012.

4. **Miller T**, *Arteriovenous Fistulae of the Brain,* Neurosurgery Grand Rounds, UMSOM,

 Baltimore, Maryland, 2012.

5. **Miller T**, *Utilization of Flow Diversion in Treatment of Cerebrovascular Disease,*

Neurosurgery Grand Rounds, UMSOM, Baltimore, Maryland, 2012.

6. **Miller T**, Your Health, Direct Connection, Maryland Public Television, Acute Ischemic

 Stroke, March 2015.

7. **Miller T**, *Spinal Vascular Anatomy and Pathology,* UMSOM Radiology Resident Lecture

 Series, March 2015.

8. **Miller T**, *Intra-arterial Treatment of Acute Large Vessel Ischemic Stroke,* UMSOM Annual

 Nurses Stroke Workshop, May 2015.

9. **Miller, T**, *Acute Large Vessel Ischemic Stroke,* UMSOM Town and Gown Event, June

 2015.

10. **Miller, T**, *Intra-arterial Treatment of Acute Large Vessel Ischemic Stroke,* UMSOM Nursing

 Grand Rounds, August 2015.

11**. Miller, T**, *Imaging Evaluation and Treatment of Stroke,* UMSOM Radiology Resident

 Lecture Series, October 2015.

12. **Miller, T**, *Imaging of Craniofacial Trauma,* UMSOM Radiology Resident Lecture Series,

 January 2016.

13. **Miller, T**, *Reversible Cerebral Vasoconstriction Syndrome,* UMSOM Neurology Grand

 Rounds, April 2016.

14*.* **Miller, T**, *Neuroradiology Board Review,* UMSOM Radiology Resident Lecture Series, May

 2016.

15. **Miller, T**, *Introduction to Imaging of the Craniocervical Vasculature,* UMSOM Neurology

 Resident Lecture Series, July 2016.

16. **Miller, T**, *Reversible Cerebral Vasoconstriction Syndrome,* UMSOM Neurosurgery Grand

 Rounds, August 2016.

17. **Miller, T**, *Flow Diversion: What We’ve Learned from out First 200 Cases,* University of

 Pennsylvania Radiology Grand Rounds, February 2017.

*18.* **Miller, T**, *Congenital Malformations of the CNS,* UMSOM Radiology Resident Lecture

 Series, March 2017.

*19.* **Miller, T**, *Imaging of Craniofacial Trauma,* UMSOM Radiology Resident Lecture Series,

 October 2017.

20. **Miller T**, *Spinal Vascular Anatomy and Pathology,* UMSOM Radiology Resident Lecture

 Series, April 2018.

21. **Miller, T**, *Introduction to Cerebral Aneurysms & Vascular Malformations,* UMSOM

 Neurology Resident Lecture Series, April 2018.

22. **Miller, T**, *Introduction to Cerebral Aneurysms,* UMSOM Neuro Interventional Fellow Lecture

 Series, August 2018.

23. **Miller, T**, *Introduction to Arteriovenous Malformations,* UMSOM Radiology Resident Lecture

 Series, September 2018.

24. **Miller, T**, *Introduction to Vascular Imaging of the Head and Neck Aneurysms & Neck,*

 UMSOM Radiology Resident Lecture Series, October 2018.

25. **Miller, T**, *Flow Diversion of Intracranial Aneurysms,* UMSOM Neurosurgery Grand

 Rounds, October 2018.

*26.* **Miller, T**, *Congenital Malformations of the CNS,* UMSOM Radiology Resident Lecture

 Series, November 2018.

27. **Miller** T, *Introduction to Intracranial Aneurysms & Vascular Malformation*, UMSOM

 Neurology Resident Didactic Series, April 2019.

28. **Miller** T, *Spinal Vascular Anatomy and Pathology,* UMSOM Radiology

 Resident Lecture Series, September 2019.

29. **Miller, T**, *Introduction to Vascular Imaging of the Head and Neck Aneurysms & Neck,*

 UMSOM Radiology Resident Lecture Series, April. 2020.

30. **Miller** T, *Introduction to Cerebral Arteriovenous Malformations*, UMSOM

 Department of Neurology Didactic Series, August 2020.

31. **Miller, T**, *Flow Diversion: What We’ve Learned from 400+ Cases,* University of

 Maryland School of Medicine Radiology Grand Rounds, April 2021.

32. **Miller, T**, *Flow Diversion: What We’ve Learned from 400+ Cases,* University of

 Maryland School of Medicine Neurosurgery Grand Rounds, May 2021.

33. **Miller, T**, *Starting & Sustaining a Career in Clinical Research,* University of

 Maryland School of Medicine Radiology Research Academy, November 2021.

34. **Miller** T, *Introduction to Cerebral Arteriovenous Malformations*, UMSOM Radiology

 Resident Lecture Series, March 2022.

35*.* **Miller, T**, *Imaging of Craniofacial Trauma,* UMSOM Radiology Resident Lecture Series,

 October 2023.

36*.* **Miller, T**, *MMA Embolization for the Treatment of Chronic Subdural Hematomas.* UMMS

 Neuroscience Network Meeting Agenda, December 2023.

National

37. **Miller, T**, American Heart/Stroke Association Together to End Strokes Campaign,

 Comcast Newsmakers, Washington, DC, May 2014.

38. **Miller, T**, *MRI-Guided Focused Ultrasound: Neurologic Applications,* Eastern

 Neuroradiology Society Annual Meeting, Newport, Rhode Island, September 2015.

39. **Miller, T**, *MMA Embolization for the Treatment of Chronic Subdural Hematomas: Ready*

 *for Prime Time?* 33rd AnnualEastern Neuroradiology Society Annual Meeting, September

 2021.

40. **Miller, T**, *Flow Diversion: How to Minimize Complications and Increase Safety.* 34th

 AnnualEastern Neuroradiology Society Annual Meeting, August 2022.

**Exhibits and Posters**

1. Paspulati RM, Dalal TA, **Miller TR**, *Imaging of Complications Following Gynecologic*

 *Surgery*, RSNA, Educational Exhibit, Chicago, 2008.

2. **Miller TR**, Eskey CJ, Mamourian AC, *Absence of Flow Voids with Spinal Dural*

 *Fistula: Who Needs Vascular Imaging?* ASNR 49th Annual Meeting, Scientific Poster,

Seattle, 2011.

3. **Miller TR**, Eskey CJ, Mamourian AC, *Absence of Flow Voids with Spinal Dural*

 *Fistula: Who Needs Vascular Imaging?* ASNR 49th Annual Meeting, Electronic Scientific

 Poster, Seattle, 2011.

4. **Miller TR**, Gandhi D, Jindal G, Fortes M. *Onyx Embolization of Dural Arterio-venous*

 *Fistulas Using a Dual Microcatheter Embolization Technique,* ASNR 51st Annual Meeting,

 Scientific Poster, San Diego, 2013.

5. Messina G, Iyoha M, Jindal, G, **Miller TR**, Gandhi D, *Ultra Registry: Designing a Multicenter*

 *Registry in Interventional Radiology.* Society of Clinical Research Associates 23rd Annual

 Conference, Scientific Poster, Orlando, 2014.

6. Sajedi P, **Miller TR**, Gandhi D, *Flow-Diversion with Pipeline Stents: What the*

 *Neuroradiologist Needs to Know,* ASNR 55th Annual Meeting, Electronic Scientific Poster,

 Long Beach, 2017.

7. Jones S, **Miller TR**, Le E, Jindal G, Gandhi D, *Predicting Success of Endovascular Flow*

 *Diversion for Cerebral Aneurysms: Single-Center Experience of 150 Consecutive Cases,*

 CNS 2017 Annual Meeting, Scientific Poster, Boston, 2017.

8. Kole M, Cannarsa G, **Miller TR**, *Branch Vessel Patency Following Pipeline Embolization:*

 *Role of Vessel Diameter,* AANS 2018 Annual Meeting, Electronic Scientific Poster, New

 Orleans, 2018.

9. Choksi A, Tsymbalyuk S, Tolaymat B, Li G, Gandhi D, **Miller T**, Jindal G, Chao C, “First

 Independent Review of the Vascade Vascular Closure Device: The Only Device Marketed

 as “Proven” Safer than Manual Compression,” Society of Interventional Radiology’s 44th

 Annual Scientific Meeting, March 23-28, 2019.

10. Ahmed A, Guo S, Miller T, Zhuo J, Eisenberg H, Melhem ER, Gullapalli R, Gandhi D. *MR-*

 *Guided Focused Ultrasound Thalamotomy of the Central Lateral Nucleus for Neuropathic*

 *Pain: Early Phase I Trial*. AANS 2020 Annual Meeting, Scientific Exhibit, Boston, 2020.

11. Ahmed A, Melhem M, Greenspan J, **Miller T**, Zhuo J, Gullapalli R, Russell J, Gandhi D.
 Treatment Efficiency of MR-Guided Focused Ultrasound Thalamotomy and Pallidotomy in

 Skull Density Ratio-Matched Cohorts. AANS 2020 Annual Meeting, Scientific Exhibit,

 Boston, 2020.

12. **Miller T**, Carvalho H, Jindal G, Gandhi D. Incidence and Timing of Conversion to Hyper-

 Response to Clopidogrel in Patients Undergoing Pipeline Embolization Device Treatment of

 Intracranial Aneurysms. ASNR 2020 Annual Meeting, Scientific Exhibit, Las Vegas, 2020.

13. Jindal G, Carvalho H, Wessell A, Cannarsa G, **Miller T**, Gandhi D. Stroke

 Thrombectomy Time of Day or Night Does Not Impact Patient Outcomes. ASNR 2020

 Annual Meeting, Scientific Exhibit, Las Vegas, 2020.

14. Colasurdo M, Ahmad G, Jindal G, Cherian J, Gandhi D, **Miller T**. Transient Mechanical

 Narrowing After Embolization with the Pipeline Flow-Diverter. SNIS 2022 Annual Meeting,

 Scientific Poster, Toronto, Ontario, Canada.

15. Yoo A, Geyik S, Forehler M, Maurer C,…**Miller TR**… et al. Primary Results from The

 CLEAR Study of the Safety and Effectiveness of The Neva Stent Retriever for Large Vessel

 Thrombectomy. International Stroke Conference 2023, Scientific Poster, Dallas, Texas,

 2023.