

CURRICULUM VITAE

Eric Spencer Nussbaum, MD, FAANS

EDUCATION & TRAINING

Undergraduate

Johns Hopkins University
Baltimore, Maryland
BA, Mathematics, 1984-1987

Medical School

University of Maryland School of Medicine
Baltimore, Maryland
MD, 1987-1991

Post-Graduate

University of Minnesota Hospital
and Clinic
Minneapolis, Minnesota

Department of Surgery - Intern, 1991-1992
Department of Neurosurgery - Resident,
1992-1997

University of Western Ontario
London, Ontario, Canada
Department of Neurosurgery - Clinical
fellow, Cerebrovascular surgery
Januar-June, 1996

LICENSURE & CERTIFICATION

- Diplomate, National Board of Medical Examiners, 1992
- State of Minnesota Medical license, 1997-present
- Diplomate, American Board of Neurological Surgery, 1999

EMPLOYMENT/POSITIONS HELD

Chair, National Brain Aneurysm & Tumor Center
Twin Cities, MN, 2013-present

CEO, Minnesota Neurovascular & Skull Base Surgery, PA
2001-present

Associate Editor-in-Chief, Surgical Neurology International
2018-present

Ad Hoc Reviewer. *Neurosurgery, Stroke, Surgical Neurology International, Cerebellum, World Neurosurgery*, multiple other journals, 2000-present

Director of Cranial Neurosurgery, United Hospital
St. Paul, MN, 2013-2021

Coordinating Editor, Practical Reviews in Neurosurgery.
Oakstone Publishing. 2004-2017

Chair, HealthEast Neurovascular Institute, Affiliate, Barrow Neurological Institute.
St. Joseph's Hospital, St. Paul, Minnesota. 2002-2013

Editorial Board Member, Surgical Neurology International
2011-present

Clinical Associate Professor, Department of Otolaryngology Fairview University Medical Center. Minneapolis, Minnesota. 2002-2018

Clinical Associate Professor, Department of Neurosurgery Fairview University Medical Center. Minneapolis, Minnesota. 2002-2007

Assistant Professor, Departments of Neurosurgery and Otolaryngology, Director, Neurovascular & Cranial Base Surgery; University of Minnesota Hospital and Clinic. Minneapolis, Minnesota. 1997-2002

PATENTS

1. **Nussbaum ES:** Cerebral Ventricular Drainage Catheter with Guard. US Patent Number 5352207
2. **Nussbaum ES:** Surgical Compression clip and surgical method for treating an aneurysm. US Patent Number 8945159
3. **Nussbaum ES, Nussbaum LA:** Post stroke stimulation device and treatment method. US Patent Number 9668931

ADDITIONAL EXPERIENCE

Integrative Neuroscience Consultants, founding partner, 2021
consulting firm for neuroscience center-of-excellence development, medicolegal guidance, product development within the neurosciences

NeuroGlove, founding partner, 2021
biomedical start-up company focused on non-invasive treatment option for stroke and

Bibliography

BOOKS

Nussbaum ES. *Brain Aneurysms and Vascular Malformations. A Guide for Patients and Families.* Xlibris (Random House), Philadelphia, 2000.

Nussbaum ES, Mocco J: *Cerebral Revascularization. Microsurgical and Endovascular Techniques.* Thieme. 2011.

Nussbaum ES: *Video Atlas of Intracranial Aneurysm Surgery.* Thieme. 2012.

JOURNAL ARTICLES

1. Kessler CM, **Nussbaum ES**, Tuazon CU. In vitro correlation of platelet aggregation with occurrence of disseminated intravascular coagulation and subacute bacterial endocarditis. *J Lab Clin Med* 109: 647-652, 1987.
2. Kessler CM, **Nussbaum ES**, Tuazon CU. The disseminated intravascular coagulation associated with *S. aureus* septicemia is mediated by peptidoglycan-induced platelet aggregation. *J Inf Dis* 164:101-7, 1991.
3. **Nussbaum ES**, Wolf AL, Nussbaum LA, Mirvis SE: Complete temporal lobectomy for surgical resuscitation of patients with transtentorial herniation secondary to unilateral hemispheric swelling. *Neurosurgery* 29: 62-66, 1991.
4. **Nussbaum ES**, Nussbaum LA, Wolf AL, Mirvis SE, Gottlieb R: Myelographic and enhanced computed tomographic appearance of acute traumatic spinal cord avulsion. *Neurosurgery* 30: 43-47, 1992.
5. Wolf AL, Nussbaum LA, **Nussbaum ES**, Mirvis SE: Complete temporal lobectomy for surgical resuscitation of patients with transtentorial herniation secondary to unilateral hemispheric swelling. Reply to Letter. *Neurosurgery* 30: 143, 1992.
6. **Nussbaum ES**, Rigamonti D, Standiford H, Numaguchi Y, Wolf AL, Robinson WL: Spinal epidural abscess. A report of 40 cases and review. *Surgical Neurology* 38: 225-231, 1992.
7. Sadato N, Numaguchi Y, Rigamonti D, Kodama T, **Nussbaum ES**, Sato S, Rothman M: Spinal epidural abscess with gadolinium-enhanced MRI: serial follow-up studies and clinical correlations. *Neuroradiology* 36: 44-48, 1994.
8. **Nussbaum ES**, Hall WA: Rhinocerebral mucormycosis. Changing patterns of disease. *Surgical Neurology* 41:152-156, 1994.
9. Rigamonti D, Liem L, Wolf AL, Fiandaca MS, Numaguchi Y, Hsu FP, **Nussbaum ES**: Epidural abscess in the cervical spine. *Mount Sinai J Med* 61:357-62, 1994.
10. Hall WA, **Nussbaum ES**. Isolated cerebral mucormycosis: Case report and therapeutic considerations. *Letter. Neurosurgery* 36:623, 1995.
11. **Nussbaum ES**, Heros RC, Solien E, Madison MT, Nussbaum LA, Latchaw RE: Intra- aortic balloon counterpulsation augments cerebral blood flow in a canine model of subarachnoid hemorrhage-induced cerebral vasospasm. *Rapid Communication. Neurosurgery* 36:879-86, 1995.
12. **Nussbaum ES**, Maxwell RE, Bitterman P, Hertz M, Latchaw RE: Cyclosporine A toxicity presenting with acute cerebellar edema and brainstem compression. *J Neurosurgery* 82:1068-1070, 1995.
13. **Nussbaum ES**, Rockswold GL, Bergman TA, Erickson DL, Seljeskog EL. Spinal tuberculosis: a diagnostic and management challenge. *J Neurosurgery* 83:243-247, 1995.
14. **Nussbaum ES**, Wen DYK, Nelson MJ, Latchaw RE. Post-traumatic meningeal sarcoma mimicking an acute subdural hematoma on CT scan. *J Comp Assist Tomography* 19:643- 5, 1995.
15. **Nussbaum ES**, Heros RC, Camarata PC. Surgical treatment of intracranial arteriovenous malformations with an analysis of cost-effectiveness. *Clinical Neurosurgery* 42:348-369, 1995.
16. **Nussbaum ES**, Heros RC, Erickson DL. Cost-effectiveness of carotid endarterectomy. *Neurosurgery* 38:237-44, 1996.
17. **Nussbaum ES**, Hall WA. Rapid diagnosis of intracranial fungal infections: Technical note. *Ch Med J* 40:255-8, 1996.

18. **Nussbaum ES**, Djalilian H, Hall WA. Effects of histology, multiplicity, and surgery on survival in patients with metastatic cancer to the brain. *Cancer* 78:1781-8, 1996.
19. **Nussbaum ES**, Rockswold GL. Pott's Disease. Reply to letter. *J Neurosurgery* 87:136- 138, 1997.
20. **Nussbaum ES**, Nussbaum LA, Wen DYK. Intracranial aneurysm rupture presenting as delayed stroke secondary to cerebral vasospasm. *Stroke* 28:2078-80, 1997.
21. **Nussbaum ES**, Nussbaum LA, Ganz WF, Madison MT. Intra-aortic balloon counterpulsation augments cerebral blood flow in the patient with cerebral vasospasm. A xenon-enhanced CT study. *Rapid Communication. Neurosurgery.* 42:206-214, 1998.
22. Cho KH, Hall WA, Lee AK, Gerbi BJ, Higgins PD, Bohlen M, **Nussbaum ES**: Stereotactic radiosurgery for patients with single brain metastasis. *J Radiosurgery* 1:79-85, 1998.
23. **Nussbaum ES**, Heros RC, Madison MT, Awasthi D, Truwit CL. The pathogenesis of arteriovenous malformations. Insights provided by a case of multiple arteriovenous malformations developing in relation to a venous angioma. *Neurosurgery* 43:347-352, 1998.
24. Jean WC, Spellman SR, **Nussbaum ES**, Low WC. Reperfusion Injury after Focal Cerebral Ischemia: The Role of Inflammation and the Therapeutic Horizon. *Neurosurgery* 43:1382-1397, 1998.
25. Hall WA, Martin AJ, Liu H, Pozza CH, Casey SO, Michel E, **Nussbaum ES**, Maxwell RE, Truwit CL: High-field strength interventional MRI for pediatric neurosurgery. *Pediatric Neurosurgery* 29:253-259, 1998.
26. Lin JC, Le TH, Neves CM, Kato T, Roman D, **Nussbaum ES**, Truwit CL: Functional MRI in patients with Arteriovenous malformation. *Neuroimage* 7:451-2, 1998.
27. Hall WA, Martin AJ, Liu H, **Nussbaum ES**, Maxwell RE, Truwit CL. Brain biopsy using high-field strength interventional magnetic resonance imaging. *Neurosurgery* 44:807- 814, 1999.
28. **Nussbaum ES**, Erickson DL. The fate of intracranial microaneurysms treated with bipolar electrocoagulation and parent vessel reinforcement. *Neurosurgery* 45:1172-5, 1999.
29. **Nussbaum ES**: Diagnosis and management of carotid stenosis: A comprehensive review. *Minnesota Medicine* 83:45-49, 2000.
30. **Nussbaum ES**, Erickson DL: Extracranial-intracranial bypass for occlusive cerebrovascular disease refractory to maximal medical therapy. *Neurosurgery* 46:37-43, 2000.
31. **Nussbaum ES**, Casey SO, Nussbaum LA, Madison MT. The use of gadolinium as an intra-arterial contrast agent in digital subtraction angiography of the carotid arteries and intracranial circulation. *J Neurosurgery* 92:881-3, 2000.
32. **Nussbaum ES**, Nussbaum LA, Ostanny I, Nelson WB: Transient cardiac standstill induced by adenosine in the management of intraoperative aneurysm rupture. *Neurosurgery* 47:240-3, 2000.
33. **Nussbaum ES**, Hamlar D, Levine S, Madison MT: Carotid "extarterectomy" and stenting in the management of head and neck cancer involving the cervical internal carotid artery. *Neurosurgery* 47:981-4, 2000.
34. Hall WA, Djalilian HR, **Nussbaum ES**, Cho KH: Long-term survival with metastatic cancer to the brain. *Medical Oncology* 17:279-86, 2000.
35. Jaisinghani VJ, Levine SL, **Nussbaum ES**, et al: Hearing preservation after acoustic neuroma surgery. *Skull Base Surg* 10:141-7, 2000
36. Jean WC, Walski-Easton S, **Nussbaum ES**: Multiple intracranial aneurysms as a delayed complication of atrial myxoma: Case report. *Neurosurgery* 49:200-3, 2001.
37. **Nussbaum ES**: Ruptured intracranial aneurysms. A review of diagnosis and management. *Minnesota Medicine* 84:26-31, 2001.
38. Tummala RP, Chu R, Madison MT, Myers M, Tubman D, **Nussbaum ES**. Outcomes after aneurysm rupture during endovascular coil embolization. *Neurosurgery* 49:1059, 2001.
39. Tummala RP, Harrison A, Madison MT, **Nussbaum ES**. Pseudomyasthenia resulting from a posterior carotid artery wall aneurysm. A novel presentation. *Neurosurgery* 49:1466, 2001.
40. **Nussbaum ES**, Nussbaum LA, Neglia JP, Chu R, Mattsen ND, Erickson DL. Delayed cerebrovascular complications of intrathecal colloidal gold. *Neurosurgery* 49:1308, 2001.
41. **Nussbaum ES**, Hamlar D, Levine S, Madison MT: Carotid "extarterectomy" and stenting in the management of head and neck cancer involving the cervical internal carotid artery. *Yearbook of Vascular Surgery*. Mosby, St Louis, 2002.

42. **Nussbaum ES:** Cerebral Revascularization. *Neurosurgical Focus* 14(3):1-2, 2003.
43. Tummala R, Chu R, **Nussbaum ES:** EC-IC bypass for symptomatic occlusive cerebrovascular disease not amenable to carotid endarterectomy. *Neurosurgical Focus* 14:1-4, 2003.
44. **Nussbaum ES,** Mendez A, Camarata PJ, Nussbaum LA: The surgical management of fusiform aneurysms of the peripheral posterior inferior cerebellar artery. *Neurosurgery* 53:831-4, 2003.
45. **Nussbaum ES,** Madison MT, Myers ME, Goddard J: Microsurgical treatment of unruptured intracranial aneurysms. A consecutive surgical experience consisting of 450 aneurysms treated in the endovascular era. *Surgical Neurology* 67:457-66, 2007.
46. **Nussbaum ES,** Madison MT, Myers ME, Goddard J, Janjua TM: Dissecting aneurysms of the posterior inferior cerebellar artery. *J Neurosurg* 109:23-7, 2008.
47. **Nussbaum ES,** Janjua TM, Defillo A, Sinner P, Zelensky A: Perioperative use of recombinant factor VII to prevent intraoperative aneurysm rupture in high risk patients. A preliminary safety evaluation. *Neurocrit Care* 10:55-60, 2009.
48. **Nussbaum ES,** Madison MT, Goddard JG, Lassig JP, Nussbaum LA: Peripheral intracranial aneurysms. Management challenges in 60 consecutive cases. *J Neurosurg* 110:7-13, 2009.
49. **Nussbaum ES,** Madison MT, Goddard JG, Lassig JP, Janjua TM, Nussbaum LA: Remote distal outflow occlusion. A novel treatment options for dissecting aneurysms of the posterior inferior cerebellar artery. *J Neurosurg* 111:78-83, 2009.
50. **Nussbaum ES:** Distal arterial occlusion for dissecting aneurysms. Response to editorial. *J Neurosurg* 111:75-77, 2009.
51. **Nussbaum ES,** Defillo A, Janjua TM, Nussbaum LA: Microvascular Repair of an Injured Cortical Draining Vein. *Surgical Neurology* 72:530-531, 2009.
52. **Nussbaum ES,** Janjua TM, Defillo A, Nussbaum LA: Fenestration of the middle cerebral artery associated with a ruptured aneurysm. Case Report. *J Clin Neurosci* 16:845-7, 2009.
53. **Nussbaum ES,** Janjua TM, Lowary JL, Defillo A, Nussbaum LA: Emergency extracranial-intracranial bypass surgery for acute ischemic stroke. *J Neurosurg* 112:666- 673, 2010.
54. **Nussbaum ES,** Nussbaum LA: A Novel Aneurysm Clip Design for Atheromatous, Thrombotic, or Previously Coiled Lesions: Preliminary Experience with the "Compression Clip" in Six Cases. *Neurosurgery* 67 (2 Suppl Operative):333-41, 2010.
55. Defillo A, **Nussbaum ES:** Intracranial aneurysm formation in siblings with pseudoxanthoma elasticum: case report. *Journal Neurosurg Sci* 54:105-8, 2010.
56. **Nussbaum ES,** Defillo A, Zelensky A, Stoller R, Nussbaum LA: Dissecting peripheral superior cerebellar artery aneurysms: Report of two cases and review of the literature. *Surg Neurol Intl* 2:69, 2011.
57. **Nussbaum ES,** Defillo A, Janjua TM, Zelensky A, Tatman P, Stoller R, et al. Emergency surgical salvage for severe intracranial aneurysm rupture during endovascular coiling procedures not amenable to additional coiling. *Surg Neurol Intl* 2:87, 2011.
58. Nussbaum LA, Defillo A, Zelensky A, **Nussbaum ES:** A short segment intracranial- intracranial jump graft bypass followed by proximal arterial occlusion for a distal MCA aneurysm. *Surg Neurol Intl* 2:98, 2011.
59. Defillo A, **Nussbaum ES,** Zelensky A, Nussbaum L. Multiple non-branching dissecting aneurysms of the mid-basilar trunk presenting with sequential subarachnoid hemorrhages. *Surg Neurol Intl* 2:127, 2011.
60. **Nussbaum ES,** Defillo A, Nussbaum LA: The use of indocyanine green videoangiography to optimize the dural opening for intracranial parasagittal lesions. *Neurosurg (Op Neurosurg suppl)* 70:61-4, 2011.
61. Defillo A, Zelensky A, Pulivarthi S, Lowary JL, **Nussbaum ES,** Lassig JP, Madison MT: Non-infected carotid artery pseudoaneurysm 29 years after endarterectomy, endovascular management with covered stent. *J Neurosurg Sci* 6:145-50, 2012.
62. **Nussbaum ES,** Defillo A: Surgical management and alternative strategies for neighboring intracranial aneurysms. *J Neurosurg Sci* 56:345-8, 2012.

63. Graupman P, Defillo A, Nussbaum LA, **Nussbaum ES**: Limited vertical dural opening for lesions of the vermis, 4 th ventricle, and distal PICA segments. *Surg Neurol Int* 3:141- 3, 2012.
64. Defillo A, Zelensky A, Simmons BH, **Nussbaum ES**: Supratentorial metastatic enteropathy-associated T-cell lymphoma: A case report and literature review. *Surg Neurol Int* 3:144-7, 2012.
65. Defillo A, **Nussbaum ES**, Pulivarthi S, Zelensky A, Nussbaum LA: The Broken Heart Syndrome in acute neurological injury. A troublesome source of secondary brain insults. *Chirurgia* 26:1-2, 2013.
66. **Nussbaum ES**, Defillo A, Nussbaum LA: Developmental venous anomaly associated with hemi-Parkinsonism. *Cureus* 5(1): e80. doi:10.7759, 2013.
67. Janjua TM, **Nussbaum ES**, Lowary JL, BabbiniV: Bivalirudin as a bridge for anticoagulation in high risk neurosurgical patients with active DVT or high risk of thrombosis. *Neurocrit Care* 18: 349-353, 2013.
68. **Nussbaum ES**, Graupman P, Nussbaum LA: Moyamoya associated with Down Syndrome: Management Strategies. *Cureus* 5(2): e100. doi:10.7759, 2013.
69. **Nussbaum ES**: Awake craniotomy for trapping a giant fusiform aneurysm of the middle cerebral artery. Guest Commentary. *Surg Neurol Intl.* 4:39, 2013.
70. Madison MT, Defillo A, Lassig JP, Zelensky A, Pulivarthi S, **Nussbaum ES**: Pipeline Embolization for the Treatment of a Progressively Enlarging Symptomatic Carotid Artery Petrous Segment Pseudoaneurysm. Case Report. *Cureus* 5(7): e131. doi:10.7759, 2013.
71. **Nussbaum ES**: Vascular malformations of the brain. *Minnesota Medicine* 96:40-3, 2013.
72. **Nussbaum ES**, Defillo A, Nussbaum LA: Atypical and malignant meningiomas. Increasing Incidence? *Cureus* 5(10): e141. DOI:doi:10.7759, 2013.
73. **Nussbaum ES**, Defillo A, Zelensky A, Pulivarthi S, Nussbaum LA: Microbleeding from intracranial aneurysms. Local hemosiderin deposition identified during microsurgical treatment of unruptured intracranial aneurysms. Accepted for publication. *Surg Neurol Intl* 5:28-33, 2014.
74. Defillo A, Zelensky A, Lowary J, Nussbaum LA, **Nussbaum ES**: Bilateral Mirror Image Dural Arteriovenous Malformations Presenting with Aggressive Neurological Deterioration. Case report. *Cureus*, 2014.
75. **Nussbaum ES**, Defillo A, McDonald W, Hanson S, Zelensky A: Diffuse idiopathic intracranial fusiform aneurysm development. Case Report and literature review. *Surgical Neurology International* 5:107-12, 2014.
76. **Nussbaum ES**, Defillo AD, Qureshi MH, Zelensky A: Treatment Strategies for Management of MCA-MI Spontaneous Dissecting Aneurysms. *J Neurol & Stroke* 1(4):0022, 2014.
77. Defillo A, Qureshi M, **Nussbaum ES**: Are Multiple Intracranial Aneurysms, More Than 5 At One Time, Almost Exclusively A Female Disease? A Clinical Series and Literature Review. *J Neurol & Stroke.* 1(4):24, 2014.
78. Defillo A, Qureshi M, **Nussbaum ES**: Indocyanine Green Videoangiography and Intraoperative Catheter Digital Subtraction Angiography in the Treatment of Intracranial Aneurysms: A Consecutive Series of 235 Cases. *Cureus* 6(9):01. DOI: 10.7759/cureus.203, 2014.
79. **Nussbaum ES**: Current Challenges in the Management of Intracranial Aneurysms. *Surgery: Current Research*, 4:118, 2014.
80. **Nussbaum ES**: Distal outflow occlusion in the management of complex intracranial aneurysms. *Neurosurgery* 11:8-16, 2015.
81. **Nussbaum ES**, Lowary J, Nussbaum LA: Multidisciplinary management of severe cerebral vasospasm following bacterial meningitis. *Surg Neurol Intl* 6:148-52, 2016.
82. **Nussbaum ES**, Graupman P, Goddard JK, Kallmes KM: Air gun orbitocranial penetrating injury: emergency endovascular treatment and surgical bypass following pellet migration to the middle cerebral artery. *J Neurosurg Pediatrics*, 21(3):270-277, 2018.
83. **Nussbaum ES**, Madison MT, Goddard JK, Lassig JP, Kallmes KM, Nussbaum LA: Microsurgical Treatment of Unruptured Middle Cerebral Artery Aneurysms: A Large, Contemporary Experience. *J Neurosurg*, 2018 (accepted for publication)
84. **Nussbaum ES**, Kallmes KM, Lowary J, Nussbaum LA: Surgical treatment of a gauzoma with associated obliterative arteriopathy and review of the literature. *Acta Neurochirurgica*, 160:1195-1202, 2018
85. Spatz M, **Nussbaum ES**, Lyons L, Greenberg S, Kallmes KM, Nussbaum LA. Primary intracranial angiomatoid fibrous histiocytoma: a case report and literature review. *Br J Neurosurg*, 2018:1-3.

86. **Nussbaum ES**, Lowary JL, Kallmes K, Nussbaum LA: Routine screening for hepatitis C and HIV viral infection in patients undergoing elective craniotomy. *J Neurosurg*, 1-8, 2018
87. **Nussbaum ES**, Hilton C, Defillo A, Passe T, Kallmes KM, Nussbaum LA: Extradural Petromastoid Calcifying Pseudoneoplasm of the Neuraxis (CAPNON): Case Report and Literature Review. *Clinical Neurol and Neurosurg* 166:99-106, 2018.
88. **Nussbaum ES**, Erickson DL, Kallmes KM, Nussbaum LA. Unexpected immediate postoperative resolution of long-standing neurological deficits following extracranial-intracranial bypass: a report of three cases. *Acta Neurochir (Wien)*. 2019.
89. Nussbaum LA, Kallmes KM, Bellairs E, McDonald W, **Nussbaum ES**. De novo cavernous malformation arising in the wall of vestibular schwannoma following stereotactic radiosurgery: case report and review of the literature. *Acta Neurochir (Wien)*. 2019;161(1):49-55.
90. Graupman P, Feyma T, Sorenson T, **Nussbaum ES**. Microvascular decompression with partial occipital condylectomy in a case of pediatric spasmodic torticollis. *Childs Nerv Syst*.35:1263-66, 2019.
91. **Nussbaum ES**, Lassig JP, Pederson JM. 3D rotational angiography of a rare corkscrew basilar artery. *Journal of Clinical Neuroscience*, 2019.
92. **Nussbaum ES**, Torok CM, Carroll J, Gunderman AM. Delayed development of a de novo contralateral middle cerebral artery aneurysm in a patient with hyperimmunoglobulin E syndrome: A case report. *Interventional Neuroradiology*. 2019.
93. Goddard JK, **Nussbaum ES**, Madison M, et al. Endovascular aspiration to treat acute ischemic stroke caused by embolic carcinoma. *Interventional Neuroradiology* 2019.
94. **Nussbaum ES**, Kallmes KM, Lassig JP, Goddard JK, Madison MT, Nussbaum LA. Cerebral revascularization for the management of complex intracranial aneurysms: a single-center experience. *J Neurosurg*. 2018:1-11.
95. **Nussbaum ES**, Kallmes K. Contralateral approach for the treatment of a distal supraclinoid aneurysm: A technical case report. *British Journal of Neurosurgery*, DOI: 10.1080/02688697.2019.1648754
96. Nussbaum LA, Hilton C, Walton R, **Nussbaum ES**. Vestibular Schwannoma: A Review of Contemporary Diagnosis and Management Strategies (2020). *Minnesota Medicine*. March/April 2020:16-21.
97. Nussbaum LA, Kallmes KM, **Nussbaum ES**. The use of frameless stereotactic guidance in the treatment of peripheral intracranial aneurysms. Technical note. *Br J Neurosurg*, 2019.
98. Nussbaum LA, Walton R, **Nussbaum ES**. Non-islet cell tumor-induced hypoglycemia in the setting of metastatic intracranial hemangiopericytoma: Case report and review of the literature. *Br J Neurosurg*, 2019.
99. Souslian FG, **Nussbaum ES**, Patel PD. Intraventricular hemorrhage due to re-ruptured arteriovenous malformation cleared by tissue plasminogen activator through a pre-existing ventriculoperitoneal shunt. *Br J Neurosurg*, 2019.
100. **Nussbaum ES**, Graupman P, Patel PD. Repair of the superior sagittal sinus following penetrating intracranial injury caused by nail gun accident: Case report and technical note. *Br J Neurosurgery*, 2019.
101. **Nussbaum ES**, Goddard JK, Lowary J, Robinson JM, Nussbaum LA. Delayed sudden hearing recovery after treatment of a large vertebral artery aneurysm causing hearing loss and imbalance: A case report. *Br J Neurosurg*, 2019.
102. **Nussbaum ES**, Paranjape G, Nussbaum LA. Superficial temporal artery to middle cerebral artery (STA-MCA) bypass via retrograde arterial anastomosis in a patient with common carotid artery occlusion: A case report (2020). *Acta Neurochirurgica (Wien)*. 162(1):183-186.
103. **Nussbaum ES**, Mikoff N, Paranjape G. Cognitive deficits among patients surviving aneurysmal subarachnoid hemorrhage. A contemporary systematic review (2020). *Br J Neurosurg*. 1-18. doi: 10.1080/02688697.2020.1859462.
104. **Nussbaum ES**, Torok CM, Khalil ZM, Pederson JM. Non-myxoma neoplastic cerebral aneurysms: A systematic review (2020). *J Clin Neurosci*. 82(Pt B):200-206.
105. Graupman P, **Nussbaum ES**, Mishra HK. Delayed onset of an intradural epidermoid tumor in the lumbar region after seven years of spinal anesthesia for child birth: A case report (2020). *Cureus*. 12(9):e10517.

106. Nussbaum PE, Patel PD, Nussbaum LA, Hilton C, **Nussbaum ES**. Bilateral vestibular schwannomas in a patient with ring chromosome 22. Case report and review of the literature. *Ped Neurosurgery*. 56:56-60. 2021.
107. Nussbaum LA, Schwarzrock C, Burke E, Torok C, **Nussbaum E**. CT Cisternography to Visualize Epidermoid Tumors for Stereotactic Radiosurgery Treatment Planning: Technical Note. *J Clin Neurosci* 89:91-6, 2021.
108. **Nussbaum ES**, Touchette J, Madison MT, Goddard J, Lassig JP, Nussbaum LA: Microsurgical treatment of unruptured anterior communicating artery aneurysms. Approaches and outcomes in a large contemporary series and review of the literature. *Operative Neurosurgery*. 2020.
109. **Nussbaum ES**, Goddard JK, David AR. Systematic review of intracranial aneurysms in the pregnant patient – A clinical conundrum (2020). *Eur J Obstet Gynecol Reprod Biol*. 254:79-86.
110. **Nussbaum ES**, Torok C, Khalil ZM, Pederson JM: Neoplastic cerebral aneurysm from triple-negative breast cancer. A case report. *Surg Neurology Intl*. 12:204-9, 2021
111. **Nussbaum ES**, Graupman P, Lacey M, Harrison A, Lowary J, Touchette J, Nussbaum LA: Transport of patients with giant disfiguring cranial tumors from Africa to the US for collaborative multidisciplinary treatment. *Surg Neurology Intl*. 12:1-6, 2021.
112. **Nussbaum ES**, Burke E, Nussbaum LA: Adenosine-induced transient asystole to control intraoperative rupture of intracranial aneurysms. Institutional experience and systematic review of the literature. *Br J Neurosurgery* 35:98-102, 2020.
113. Graupman P, **Nussbaum ES**, Patel PD. Preventing cerebral spinal fluid leakage following endoscopy through a burr hole using a novel watertight closure: Technical note (2020). *Br J Neurosurg*. 1-13, 2020. doi: 10.1080/02688697.2020.1903392.
114. Madison MT, Graupman PC, Carroll JM, Torok CM, Touchette JC, **Nussbaum ES**. Traumatic epidural hematoma treated with endovascular coil embolization. *Surg Neurol Int*. 12:322, 2021.
115. Defillo A, Nussbaum PE, Hariharan P, Mebane A, **Nussbaum ES**. Hypothermia as an adjunctive treatment in pediatric patients with Naegleria fowleri: A systematic review. *J Pediatr Neurol Neurosci*. 5(1):105-110, 2021.
116. **Nussbaum ES**, Touchette J, Madison M, et al. Procedural complications in patients undergoing microsurgical treatment of unruptured intracranial aneurysms: a single-center experience with 1923 aneurysms. *Acta Neurochir*, 2021. <https://doi.org/10.1007/s00701-021-04996-9>
117. **Nussbaum ES**, Janjua TM, Lowary JL, Defillo AD, Myers M, Nussbaum LA: Peripheral somatosensory stimulation of the hand in the treatment of stroke. A preliminary study of safety and effectiveness. *J Neurol Dis* 11:1-8, 2023.
118. Nussbaum BR, Graupman P, Torok CM, Yesavage TA, **Nussbaum ES**: Delayed migration of onyx embolic agent after preoperative embolization of an AVM in a pediatric patient. A case report and review of the literature. *Ped Neurosurg* 58:45-52, 2023. <https://doi.org/10.1159/000529629>.
119. Janjua TM, Pederson J, **Nussbaum ES**: Peripheral somatosensory stimulation in the treatment of post-traumatic stress disorder. A clinical trial. *J Neurol Dis* 11:58-64, 2023.
120. Nussbaum HA, **Nussbaum ES**: Peripheral sensory stimulation for neurologic disorders. A novel, noninvasive therapeutic option. Review article. *J Neurosci Neurol Surg* 13:267-271, 2023. doi:10.31579/2578-8868/267
121. Nussbaum LA, Janjua TM, **Nussbaum ES**: The potential role of peripheral somatosensory stimulation in the treatment of mental health symptoms following traumatic brain injury. *J Neurosci Neurol Surg* 12, 2023. doi: 10.20944/preprints202309.1542.v1
122. Nussbaum LA, Janua TM, Pederson J, **Nussbaum ES**: Peripheral somatosensory stimulation in the treatment of depression and anxiety. A clinical trial. *J Depression Anxiety*. 12 (4): 525-531, 2023. DOI: 10.35248/2167-1044.23.12.525

SELECTED NATIONAL & REGIONAL PLATFORM/ INVITED PRESENTATIONS

1. Nussbaum LA, **Nussbaum ES**, Wolf AL. Complete temporal lobectomy in head injury patients with unilateral hemispheric swelling. Congress of Neurological Surgeons. Los Angeles, California. October, 1990.
2. **Nussbaum ES**, Rigamonti D, Standiford H: Spinal epidural abscess: Report of 20 cases. Annual Meeting of the Joint Section of Spine and Peripheral Nerve. Palm Springs, California. February, 1991.

3. Monasky M, Wolf AL, Nussbaum LA, Mirvis S, **Nussbaum ES**: MRI evaluation of laminectomy for multilevel spondylosis or stenosis in traumatic central cord syndrome. Annual Meeting of the Joint Section of Spine and Peripheral Nerve. Palm Springs, California. February, 1991.
4. **Nussbaum ES**, Rigamonti D, Standiford H. Spinal epidural abscess. Diagnostic and therapeutic considerations in 40 cases. Congress of Neurological Surgeons. Orlando, Florida. October, 1991.
5. Heros RC, **Nussbaum ES**, Camarata PJ. Surgical management of intracranial arteriovenous malformations. Congress of Neurological Surgeons. Chicago, Illinois. October, 1994.
6. **Nussbaum ES**, Heros RC, Erickson DL. Complications and cost-effectiveness of carotid endarterectomy at an academic center. American Academy of Neurological Surgeons. Sea Island, Georgia. November, 1994.
7. **Nussbaum ES**, Heros RC, Erickson DL. Cost-effectiveness of carotid endarterectomy in patients with high-grade, symptomatic carotid artery stenosis. Annual Richard Lende Neurosurgical Conference. Snowbird, Utah. February, 1995.
8. **Nussbaum ES**, Rockswold GL, Bergman TA, Erickson DL, Seljeskog EL. Spinal tuberculosis. A diagnostic and management challenge. Annual Meeting of the Joint Section of Spine and Peripheral Nerve. Phoenix, Arizona. February, 1995.
9. **Nussbaum ES**, Heros RC, Erickson DL. A decision analysis model of the cost-effectiveness of carotid endarterectomy. American Association of Neurological Surgeons. Orlando, Florida. April, 1995.
10. Mendez A, Nussbaum LA, **Nussbaum ES**. Intra-aortic balloon counterpulsation augments cerebral blood flow in cerebral vasospasm. Part I: Experimental evidence. 28th Latin American Congress of Neurosurgery, Santiago, Chile October 15, 1998.
11. Mendez A, Nussbaum LA, **Nussbaum ES**. Intra-aortic balloon counterpulsation augments cerebral blood flow in cerebral vasospasm. Part II: Clinical experience. 28th Latin American Congress of Neurosurgery, Santiago, Chile October 15, 1998.
12. **Nussbaum ES**, Spellman S, Low WC. Antisense oligodeoxynucleotides directed against the NMDA receptor in the treatment of cerebral ischemic reperfusion injury. Joint Section of Cerebrovascular Surgery. Nashville, TN. February, 1998.
13. **Nussbaum ES**. Ischemic Stroke – Evaluation and Prophylaxis. Moderator. 5th Annual Symposium. A Multidisciplinary Approach to the Evaluation and Management of Peripheral Vascular and Cerebrovascular Diseases. Minneapolis, MN. September, 1999.
14. **Nussbaum ES**. Carotid Endarterectomy – Current indications and treatment options. 5th Annual Symposium. A Multidisciplinary Approach to the Evaluation and Management of Peripheral Vascular and Cerebrovascular Diseases. Minneapolis, MN. September, 1999.
15. **Nussbaum ES**, Erickson DL. Extracranial-intracranial bypass for refractory ischemic cerebrovascular disease – time for a new bypass trial. Congress of Neurological Surgeons. Boston, MA. November, 1999.
16. **Nussbaum ES**, Casey SO. Computed tomographic angiography evaluation of EC-IC bypass. Congress of Neurological Surgeons. Boston, MA. November, 1999.
17. **Nussbaum ES**, Erickson DL. Bipolar electrocoagulation and parent vessel reinforcement in the treatment of intracranial microaneurysms. Long-term follow-up results. Joint Section of Cerebrovascular Surgery. New Orleans, LA. February, 2000.
18. **Nussbaum ES**, Madison MT. A global approach to cerebral revascularization for ischemic disease. Combined surgical and endovascular options. 6th Annual Symposium. A Multidisciplinary Approach to the Evaluation and Management of Peripheral Vascular and Cerebrovascular Diseases. Minneapolis, MN. September, 2000.
19. **Nussbaum ES**, Camarata PJ, Nussbaum LA, Erickson DL. Surgical revascularization of the posterior circulation for ischemic disease. A recent experience. Congress of Neurological Surgeons, San Antonio, TX. September, 2000.
20. **Nussbaum ES**, Nussbaum LA, Neglia J, Erickson DL. Delayed cerebrovascular complications of intrathecal colloidal gold in childhood medulloblastoma. Congress of Neurological Surgeons, San Antonio, TX. September, 2000.
21. **Nussbaum ES**, Madison MT. The risk of silent cerebral embolization: Carotid endarterectomy versus carotid angioplasty and stenting. A controlled trial. American Association of Neurological Surgeons, Toronto, Ontario, CA. April, 2001.

22. **Nussbaum ES.** Management of Cerebral Vasospasm. Breakfast Seminar: Perioperative Management of Subarachnoid Hemorrhage. American Association of Neurological Surgeons, Toronto, Ontario, CA. April, 2001.
23. Tummala R, Madison MT, **Nussbaum ES.** Large and giant intracranial aneurysms. Contemporary management using a multimodality approach. Minnesota Surgical Society, St. Paul, MN, April, 2001.
24. **Nussbaum ES,** Madison MT. A global approach to cerebral revascularization for ischemic disease. 7th Annual Symposium. A Multidisciplinary Approach to the Evaluation and Management of Peripheral Vascular and Cerebrovascular Diseases (Program Co- chair). Minneapolis, MN. October, 2001.
25. Chu R, Tummala R, **Nussbaum ES.** EC-IC bypass for symptomatic occlusive cerebrovascular disease. Joint Section of Cerebrovascular Surgery. Dallas, Texas, February, 2002.
26. Tummala R, Chu R, Madison M, **Nussbaum ES.** Migration of GDC coils after endovascular treatment of intracranial aneurysms. Joint Section of Cerebrovascular Surgery. Dallas, Texas, February, 2002.
27. Chu R, Tummala R, Levine SL, **Nussbaum ES.** Use of the combined subtemporal-presigmoid approach for the management of cerebrovascular and skull base lesions. North American Skull Base Society. San Diego, California, February, 2002.
28. **Nussbaum ES.** Management of Cerebral Vasospasm. Breakfast Seminar: Perioperative Management of Subarachnoid Hemorrhage. American Association of Neurological Surgeons, Chicago, IL, April, 2002.
29. **Nussbaum ES.** A critical appraisal of the role of extracranial-intracranial bypass in neurosurgery. Mayo Clinic, Visting Lecturer. Rochester, Minnesota. August, 2002.
30. **Nussbaum ES,** Tummala R, Chu R, Nussbaum LA: Immediate resolution of longstanding neurological deficit following extracranial-intracranial bypass. Joint Section of Cerebrovascular Surgery. Phoenix, AZ, February, 2003.
31. **Nussbaum ES:** Contemporary management of complex intracranial aneurysms. Annual Fee Lecture, St. Joseph's Hospital, St. Paul, MN, February, 2003.
32. **Nussbaum ES.** Update on the surgical management of cerebrovascular disorders. Annual Lillehei Symposium. Minneapolis, MN, May, 2003.
33. **Nussbaum ES.** Extracranial-Intracranial Bypass. Surgical technique. Invited Speaker. Symposium on Cerebral Revascularization. Joint Section Cerebrovascular Surgery and ASITN. San Diego, CA, February, 2004.
34. **Nussbaum ES.** STA-MCA anastomosis. Practical Clinic on cerebral revascularization. Joint Section Cerebrovascular Surgery and ASITN. San Diego, CA, February, 2004.
35. **Nussbaum ES.** The role of cerebral revascularization in neurosurgical practice. Barrow Neurological Institute Annual Neurology Neurosurgery Update. Phoenix, AZ, March, 2005.
36. **Nussbaum ES,** Erickson DL: Emergency EC-IC bypass for the management of crescendo TIAs. American Association of Neurosurgeons Annual Meeting. New Orleans, LA, April, 2005.
37. **Nussbaum ES:** Management of the poor grade aneurysm patient. Luncheon seminar. Joint Section Cerebrovascular Surgery and ASITN. Orlando, FL, February, 2006.
38. **Nussbaum ES:** Moderator. Oral presentation program. Joint Section Cerebrovascular Surgery and ASITN. Orlando, FL, February, 2006.
39. **Nussbaum ES,** Erickson DL: Preliminary EC-IC bypass to allow for prolonged temporary occlusion during surgery for giant intracranial aneurysms. Joint Section Cerebrovascular Surgery and ASITN. Orlando, FL, February, 2006.
40. **Nussbaum ES,** Janjua TM, Madison MT, Goddard J: Emergency surgical salvage procedures for severe intracranial aneurysm rupture during endovascular coiling procedures. American Association of Neurologic Surgeons. Chicago, IL, April, 2008.
41. **Nussbaum ES,** Madison MT, Myers ME, Goddard J: Intraoperative angiography in intracranial aneurysm surgery. Experience with 1025 cases. American Association of Neurologic Surgeons. Chicago, IL, April, 2008.
42. **Nussbaum ES,** Lowary JL, Nussbaum LA: Long-term follow-up results and complications of the middle fossa approach for hearing preservation in acoustic neuromas. American Association of Neurologic Surgeons. San Diego, CA, 2009.

43. **Nussbaum ES**, Janjua TM, Defillo A, Lowary JL, Nussbaum LA: Emergency Extracranial-Intracranial Bypass for Acute Ischemic Stroke. American Association of Neurological Surgeons, Philadelphia, PA, 2010.
44. Nussbaum LA, Kim J, Lowary J, Harrision A, **Nussbaum ES**: Fractionated stereotactic irradiation for perioptic lesions. American Association of Neurological Surgeons. Denver, CO, 2011.
45. **Nussbaum ES**: Cerebral revascularization for complex intracranial aneurysms. Indications, techniques, and results in 102 cases. Congress of Neurological Surgeons, Washington, D.C., 2011.
46. **Nussbaum ES**: Practical approaches to aneurysm surgery. American Association of Neurological Surgeons. New Orleans, LA, 2013.
47. **Nussbaum ES**: Techniques in aneurysm surgery in the endovascular era. American Association of Neurological Surgeons. San Francisco, CA, April, 2014.
48. **Nussbaum ES**: Complex pediatric cerebral vascular malformations. Pediatric Neurological Disorders Update Conference, Gillette Hospital. Minneapolis, MN, May 2014
49. **Nussbaum ES**: Cerebral Revascularization: STA-MCA Bypass. Masters of Neurosurgery. Hall of Fame. Invited Video Presentation/Publication. Queens' Square Hospital. June, 2016.
50. **Nussbaum ES**: Contemporary management of acoustic neuroma. International Acoustic Neuroma Society Meeting. Mayo Clinic. Rochester, MN, 2019
3. **Nussbaum ES**, Kessler CM, Tuazon CU. Aspirin prevents the disseminated intravascular coagulation induced by *S. aureus* and its purified peptidoglycans. American Society of Hematology Meeting. San Antonio, Texas. December, 1988.
4. Nussbaum LA, Wolf AL, **Nussbaum ES**, Thompson RK, Mirvis S. Acute traumatic brainstem hemorrhage: a new classification based on CT, clinical findings, and an experimental canine model. Congress of Neurological Surgeons. Orlando, FL, October, 1991.
5. **Nussbaum ES**, Rigamonti D. Gastrointestinal Dysfunction in patients with aneurysmal subarachnoid hemorrhage. Congress of Neurological Surgeons. Washington, DC, 1993.
6. Nussbaum LA, **Nussbaum ES**, Hall WA, Clark HB. Primary extracranial mesenchymal chondrosarcoma with multiple cerebral metastases. report of two cases. Congress of Neurological Surgeons. Washington, DC, 1993.
7. **Nussbaum ES**, Mendez A, Michel E, Truwit CL. MRI during balloon test occlusion of the carotid artery. Prediction of delayed ischemia. Joint Section Cerebrovascular Surgery. Nashville, TN, 1999.
8. **Nussbaum ES**, Erickson DL. EC-IC bypass. Dead or alive after the cooperative study? Joint Section Cerebrovascular Surgery. Nashville, TN, 1999.
9. **Nussbaum ES**, Mendez A, Michel E, Truwit CL. The use of interventional MR imaging during balloon test occlusion of the carotid artery. American Association of Neurological Surgeons. New Orleans, LA, 1999.
10. Sethi K, **Nussbaum ES**. Pseudoaneurysm of the superficial temporal artery. An historical overview. Congress of Neurological Surgeons. Boston, MA, November 1999.
11. Sethi K, Erickson DL, **Nussbaum ES**. Neighboring posterior communicating and anterior choroidal artery aneurysms. Surgical treatment strategies for successful outcome. Joint Section of Cerebrovascular Surgery. New Orleans, LA, February, 2000.
12. Tummala R, **Nussbaum ES**, Madison MT, Myers M, Tubman D. Outcome from aneurysm rupture during GDC coiling. Joint Section of Cerebrovascular Surgery. New Orleans, LA, February, 2000.

SELECTED NATIONAL POSTER PRESENTATIONS

1. **Nussbaum ES**, Kessler CM, Tuazon CU. The role of peptidoglycan and alternate complement pathway in the occurrence of disseminated intravascular coagulation in patients with serious *S. aureus* sepsis. American Society of Hematology Meeting. December, 1986.
2. **Nussbaum ES**, Kessler CM, Tuazon CU. The occurrence of disseminated intravascular coagulation complicating *S. aureus* septicemia is mediated by peptidoglycans and modulated by teichoic acid. American Society of Hematology Meeting. Washington, D.C. December, 1987.

13. Nussbaum LA, Levine SL, **Nussbaum ES**. The surgical management of cranial base tumors involving the occipital condyle. Joint Section of Spine and Peripheral Nerve. Palm Springs, CA, February, 2000.
14. Sethi K, Erickson DL, **Nussbaum ES**. Neighboring posterior communicating and anterior choroidal artery aneurysms. American Association of Neurological Surgeons. San Francisco, CA, April, 2000.
15. Graupman P, Sethi K, Nussbaum LA, **Nussbaum ES**. Neurosurgical amusement park injuries. American Association of Neurological Surgeons. San Francisco, CA, April, 2000.
16. Nussbaum LA, Levine SL, **Nussbaum ES**. The surgical management of cranial base tumors involving the occipital condyle. American Association of Neurological Surgeons, San Francisco, CA, April 2000.
17. Chu R, **Nussbaum ES**, Casey SO, Nussbaum LA. The use of gadolinium as an intra-arterial contrast agent for digital subtraction angiography in patients with renal insufficiency. Oral poster. Congress of Neurological Surgeons, San Antonio, TX, September, 2000.
18. **Nussbaum ES**, Mendez A, Erickson DL. Surgical Management of fusiform peripheral PICA aneurysms. Congress of Neurological Surgeons, San Antonio, TX, September, 2000.
19. Allen BJ, Mendez A, **Nussbaum ES**. An analysis of risk factors for enlargement or rupture of previously unruptured intracranial aneurysms. Congress of Neurological Surgeons, San Antonio, TX, September, 2000.
20. **Nussbaum ES**, Mendez A, Erickson DL. Surgical Management of fusiform peripheral PICA aneurysms. American Association of Neurological Surgeons, Toronto, Ontario, CA, April, 2001.
21. Allen BJ, Mendez A, **Nussbaum ES**. An analysis of risk factors for enlargement or rupture of previously unruptured intracranial aneurysms. American Association of Neurological Surgeons, Toronto, Ontario, CA, April, 2001.
22. Chu R, Tummala R, **Nussbaum ES**. Extracranial-Intracranial Bypass for Ischemic cerebrovascular disease. Congress of Neurological Surgeons. San Diego, CA. September, 2001.
23. Tummala R, Chu R, Madison M, **Nussbaum ES**. Large and giant intracranial aneurysms: Contemporary management using a multimodality approach. Joint Section of Cerebrovascular Surgery. Dallas, Texas, February, 2002.
24. Tummala R, Chu R, Walski-Easton S, **Nussbaum ES**. The role of cerebrovascular biomodeling in neurosurgical resident education. Joint Section of Cerebrovascular Surgery. Dallas, Texas, February, 2002.
25. Walski-Easton S, Tummala R, Chu R, Nussbaum LA, **Nussbaum ES**. Familial moyamoya disease in caucasians. Joint Section of Cerebrovascular Surgery. Dallas, Texas, February, 2002.
26. Tummala R, Chu R, Madison M, **Nussbaum ES**. Surgical treatment of previously coiled intracranial aneurysms. American Association of Neurological Surgeons. Chicago, Illinois, April, 2002.
27. Tummala R, Chu R, Madison M, **Nussbaum ES**. Large and giant intracranial aneurysms: Contemporary management using a multimodality approach. American Association of Neurological Surgeons. Chicago, Illinois, April, 2002.
28. Walski-Easton S, Tummala R, Chu R, Nussbaum LA, **Nussbaum ES**. Familial moyamoya disease in caucasians. American Association of Neurological Surgeons. Chicago, Illinois, April, 2002.
29. Tummala R, Chu R, **Nussbaum ES**. Migration of Guglielmi detachable coils (GDC) following endovascular obliteration of intracranial aneurysms. American Association of Neurological Surgeons. Chicago, Illinois, April, 2002.
30. Tummala R, Nussbaum LA, **Nussbaum ES**. Microvascular repair of an injured cortical vein during removal of a parasagittal meningioma. Technical Note. Joint Section of Cerebrovascular Surgery. Phoenix, AZ, February, 2003.
31. Nussbaum LA, **Nussbaum ES**. A novel retractor designed for anterior cervical exposure of the vertebral artery. Joint Section of Cerebrovascular Surgery. Phoenix, AZ, February, 2003.
32. **Nussbaum ES**, Graupman P: Moya moya and Down's syndrome. Joint Section Cerebrovascular Surgery. San Diego, CA. February, 2004.
33. **Nussbaum ES**, Graupman P, Nussbaum LA, Mendez A: Microsurgical repair of inadvertent vascular injury during intracranial procedures. American Association of Neurosurgeons. Orlando, FL, May, 2004.

34. **Nussbaum ES**, Madison MT, Myers ME, Goddard J: Microsurgery for unruptured intracranial aneurysms. Surgical experience in the endovascular era. Joint Section Cerebrovascular Surgery and ASITN. Orlando, FL, February, 2006.
35. **Nussbaum ES**, Madison MT, Myers ME, Goddard J: Peripheral intracranial aneurysms. Surgical experience with 60 cases. American Association of Neurological Surgeons, Washington, D.C., April, 2007.
36. **Nussbaum ES**, Madison MT, Myers ME, Goddard J: Microsurgery for unruptured intracranial aneurysms. Experience with 550 consecutive cases. American Association of Neurological Surgeons, Washington, D.C., April, 2007.
37. **Nussbaum ES**, Madison MT, Goddard J, Janjua TM: Microsurgical experience with intracranial micro-aneurysms. Results in 90 cases. American Association of Neurological Surgeons, Chicago, IL, April, 2008.
38. **Nussbaum ES**, Janjua TM: Effectiveness of cerebral revascularization in adult moyo moyo patients. 40 consecutive cases. American Association of Neurological Surgeons, Chicago, IL, April, 2008.
39. Defillo A, Madison MT, **Nussbaum ES**, et al: Can lower fluoroscopy time safely lead to high occlusion rates and low contrast induced nephropathy for patients with aneurysmal SAH during coil embolization. Congress of Neurological Surgeons, 2009.
40. **Nussbaum ES**, Janjua TM, Defillo A, Sinner P, Zelensky A, Nussbaum LA: Perioperative use of recombinant Factor VII to prevent intraoperative aneurysm rupture in high risk patients. A preliminary safety evaluation. Joint Section of Cerebrovascular Surgery. San Diego, CA. February, 2009.
41. **Nussbaum ES**, Lowary JL, Edberg B, Sears M, Nussbaum LA: Frameless stereotactic guidance in the treatment of distal anterior cerebral artery aneurysms. Joint Section of Cerebrovascular Surgery. San Diego, CA. February, 2009.
42. **Nussbaum ES**, Lowary JL, Edberg B, Nussbaum LA: Intraoperative aneurysm rupture during elective aneurysm surgery. Joint Section of Cerebrovascular Surgery. San Diego, CA. February, 2009.
43. **Nussbaum ES**, Lowary JL, Edberg B: The use of a microsuture technique to reposition aneurysm clips compressing local critical structures. American Association of Neurological Surgeons, San Diego, CA, May, 2009.
44. **Nussbaum ES**, Lowary JL, Edberg B, Nussbaum LA: Intraoperative aneurysm rupture during elective aneurysm surgery. American Association of Neurological Surgeons, San Diego, CA, May, 2009.
45. **Nussbaum ES**, Lowary JL, Edberg B, Sears M, Nussbaum LA: Frameless stereotactic guidance in the treatment of distal anterior cerebral artery aneurysms. American Association of Neurological Surgeons, San Diego, CA, May, 2009.
46. **Nussbaum ES**, Lowary JL, Nussbaum LA: Removal Of The Anterior Clinoid Process Using The Sonopet Ultrasonic Bone Dissector: Surgical Experience In 100 Consecutive Cases. Annual Meeting of the Joint Section of Cerebrovascular Diseasee. San Antonio, TX, Feb 2010.
47. **Nussbaum ES**, Madison MT, Janjua TM: Surgical Management Strategies For Neighboring Posterior Communicating Artery – Anterior Choroidal Artery Aneurysms. Annual Meeting of the Joint Section of Cerebrovascular Diseasee. San Antonio, TX, Feb 2010.
48. **Nussbaum ES**, Madison MT, Janjua TM: Emergency Extracranial-intracranial Bypass For Acute Ischemic Stroke. Annual Meeting of the Joint Section of Cerebrovascular Diseasee. San Antonio, TX, Feb 2010.
49. **Nussbaum ES**, Nussbaum LA: The Development of and Initial Experience with a Novel Aneurysm Clip Designed for Atheromatous, Thrombotic, or Previously Coiled Lesions. AANS, Philadelphia, PA, 2010.
50. **Nussbaum ES**, Defillo A, Nussbaum LA: Neighboring Intracranial Aneurysms: Management Strategies in 73 Cases . AANS, Philadelphia, PA, 2010
51. **Nussbaum ES**, Janjua TM, Lowary JL, Nussbaum LA: Defying the Odds and Confounding the Experts: A Series of Patients with Severe Neurological Injury who Recovered Despite Attending Physician Recommendations to Withdraw Support. Congress of Neurological Surgeons. San Francisco, CA, 2010.
52. Defillo A, zelensky A, Tatman P, Nussbaum LA, **Nussbaum ES**: Are midwestern females more susceptible to aneurysm formation? Congress of Neurological Surgeons, San Francisco, CA, 2010
53. **Nussbaum ES**, Lowary JL, Nussbaum LA: Atypical and Malignant Meningiomas. Increasing Incidence? American Association Neurological Surgeons, Denver, CO, 2011.

54. Defillo A, **Nussbaum ES**: The use of indocyanine green angiography to optimize dural opening for intracranial parasagittal lesions. Congress of Neurological Surgeons, Washington, D.C., 2011
55. **Nussbaum ES**, Defillo A: Remote Distal outflow occlusion for management of posterior fossa peripheral aneurysms. Congress of Neurological Surgeons, Washington, D.C., 2011
56. Defillo A, **Nussbaum ES**, Madison M, et al: Is the presence of more than five intracranial aneurysms almost exclusively a female disease? Congress of Neurological Surgeons, Washington, D.C., 2011
57. Defillo A, **Nussbaum ES**, Nussbaum LA: The use of indocyanine green in neurosurgery. 8th Annual World Congress on Brain, Spinal Cord Mapping, & Image Guided Therapy. San Francisco, CA, 2011
58. Defillo A, **Nussbaum ES**, Janjua TM, et al: Takatsubo's broken heart syndrome in acute neurological injury. Int'l Conference Heart and Brain, Paris, 2012
59. **Nussbaum ES**, Janjua TM, Nussbaum LA: The use of adenosine in the treatment of severe intraoperative aneurysm rupture. Neurocritical Care Society Meeting. Denver, CO, 2012
60. **Nussbaum ES**, Janjua TM, Nussbaum LA: Intraoperative rupture during elective aneurysm surgery. Neurocritical Care Society Meeting. Denver, CO, 2012
61. **Nussbaum ES**, Janjua TM, Nussbaum LA: EEmergency EC-IC bypass surgery for acute ischemic stroke. Neurocritical Care Society Meeting. Denver, CO, 2012
62. Janjua TM, **Nussbaum ES**, Lowary J, Nussbaum LA, Zelensky A, Steffen D: Financial implications and outcomes of poor grade SAH patients at a high volume neurovascular center. American Association of Neurological Surgeons. New Orleans, LA, 2013
63. **Nussbaum ES**, Defillo A, Nussbaum LA: Local Hemosiderin Deposition Identified During Microsurgical Treatment of Unruptured Intracranial Aneurysms. Congress of Neurological Surgeons, San Francisco, 2013
64. **Nussbaum ES**, Defillo A, Madison MT, Goddard J, Lassig J, Nussbaum LA: Treatment Strategies for Management of MCA-MI Spontaneous Dissecting Aneurysms. Congress of Neurological Surgeons, San Francisco, 2013
65. Janjua TM, **Nussbaum ES**, Nussbaum LA: Role of neuromonitoring in the acute phase after EC-IC bypass surgery. American Clinical Neurophysiology Society (ACNS) Annual Meeting, Miami, FL, 2013
66. Janjua TM, **Nussbaum ES**, Nussbaum LA, Lowary J: Safety of electrical cardioversion using continuous EEG with underlying cerebral edema. American Clinical Neurophysiology Society (ACNS) Annual Meeting, Miami, FL, 2013
67. **Nussbaum ES**, Lowary J, Nussbaum LA: Routine Screening for Hepatitis C Viral Infection in Patients Undergoing Elective Cranial Neurosurgery. American Association of Neurological Surgeons. San Francisco, 2014
68. Nussbaum LA, Kim J, **Nussbaum ES**: Normal excursion of the optic nerves in healthy volunteers. Implications for stereotactic radiosurgical planning and treatment. American Association of Neurological Surgeons. San Francisco, 2014
69. **Nussbaum ES**, Lowary J, Nussbaum LA: Microsurgical experience with intracranial microaneurysms. Experience with 140 cases. American Association of Neurological Surgeons. San Francisco, 2014
70. **Nussbaum ES**: Microsurgical Treatment of Unruptured Middle Cerebral Artery Aneurysms: A Consecutive Experience with 750 Cases. American Association of Neurological Surgeons Meeting. Chicago, IL, 2016
71. **Nussbaum ES**: A Comparison of Intraoperative Digital Subtraction Angiography and ICG Video Angiography in a Consecutive Series of 500 Aneurysm Surgeries. American Association of Neurological Surgeons Meeting. Chicago, IL, 2016
72. **Nussbaum ES**, Nussbaum LA, Harrison A, Mokhtarzadeh A: Placement of an Intraoperative Interposition Fat Graft Between Residual Skull Base Tumor and the Optic Apparatus to Facilitate Postoperative Stereotactic Radiosurgery. American Association of Neurological Surgeons Meeting. 2017
73. **Nussbaum ES**: Complications and Outcomes Following Surgical Repair of Unruptured MCA Aneurysms: A Large Single Center Experience. American Association of Neurological Surgeons Meeting. 2017

74. **Nussbaum ES**, Madison MT, Lowary J, et al: Microsurgical Treatment of Unruptured Anterior Communicating Artery Aneurysms: Approaches and Outcomes in a Large Contemporary Series. American Association of Neurological Surgeons Meeting. 2019
75. **Nussbaum ES**, Nussbaum LA, Lowary J: We thought it was a Meningioma: Other Dural-Based Tumors Mimicking Meningioma on Preoperative Radiological Imaging. American Association of Neurological Surgeons Meeting. 2020
76. Nussbaum PE, **Nussbaum ES**: Bilateral Vestibular Schwannomas in a Patient with Ring Chromosome 22: Case Report and Review of the Literature. American Association of Neurological Surgeons Meeting. 2020
77. **Nussbaum ES**, Madison MT, Janjua TM, et al: Cerebral Revascularization for the Management of Complex Intracranial Aneurysms: A Single Center Experience. American Association of Neurological Surgeons Meeting. 2020
78. **Nussbaum ES**: Adenosine-induced transient asystole to control intraoperative rupture of intracranial aneurysms: Institutional experience and review of the literature. American Association of Neurological Surgeons Meeting. 2020
79. **Nussbaum ES**, Graupman P, Lacy M, et al: Transport of Patients with Complex Neurosurgical Disorders to the US for Collaborative Multidisciplinary Treatment. American Association of Neurological Surgeons Meeting. 2021