

Matthew J. McGirt M.D. FAANS

Carolina Neurosurgery & Spine Associates
225 Baldwin Ave.
Charlotte, NC 28204
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Clinical Experience:

- 2014-present Carolina Neurosurgery & Spine Associates. ABNS Board Certified
Director of value-based contracting
Atrium University Hospital, Chief of Spine
Adjunct Research Associate Professor, **University of North Carolina**
- 2010-2014 Assistant Professor, Director of Clinical Research, Director of Quality Improvement & Patient Safety
Departments of Neurological Surgery and Orthopedic Surgery, **Vanderbilt University**

Post Doctoral Training:

- 2008 – 2009 Spine Fellowship (Surgical Oncology), **The Johns Hopkins Hospital**, Baltimore, MD
- 2004 - 2010 Resident, Department of Neurological Surgery, **The Johns Hopkins Hospital**, Baltimore, MD
- 2003 - 2004 Intern, Department of Surgery, **The Johns Hopkins Hospital**, Baltimore, MD

Education:

- 1998 – 2003 M.D., **Duke University School of Medicine**, Durham, NC
- 1994 – 1998 B.S., *Magna Cum Laude*, **Duke University**, Durham, NC
- 1992 – 1994 **Phillips Academy Andover**, Andover, MA

National Committee/Officer Experience

1. Executive Committee, Congress of Neurological Surgeons, 2014-2015
2. Executive Committee, AANS Neuropoint Alliance, 2015-present
3. NASS Registry Committee, North American Spine Society, 2012-2015
4. Executive Committee, AANS/CNS Joint Spine Section, 2012-2014
5. AO Spine North America, Research Committee, 2012-2015
6. AANS Maintenance of Certification/CME Committee, 2012-2015
7. North American Spine Society, Value Committee, 2012-2015
8. Vice Director, AANS National Neurosurgery Quality and Outcomes Database (N²QOD). 2010-present
9. Director, Scientific Advisory Committee, AANS Neuropoint Alliance 2011-2015.
10. Delegate, AANS Caucus, Council of State Neurosurgical Societies (CSNS), 2011-2014
11. Quality Improvement Workgroup, AANS/CNS Washington Committee, 2011-2015
12. NASS Professional, Economic & Regulatory Committee (PERC), 2011-2014
13. Secretary, Tennessee Neurosurgical Society, 2011-2012
14. Scientific Planning Committee, AANS/CNS Joint Spine Section. 2009-2015
15. AANS Young Neurosurgeons' Committee. 2005-2009
16. AANS Young Neurosurgeons' Committee NREF Fund Raising Committee Chair. 2007

Professional Society Memberships:

American Association of Neurological Surgeons (AANS)

Congress of Neurological Surgeons (CNS)

North American Spine Society (NASS)

AANS/CNS Joint Spine Section

AO Spine North America

Ruben J Williams Foundation (Board Member), Non-profit Facilitating Surgical Care in East Africa

Honors and Awards:

2014	Sam Hassenbusch Neurosurgeon Award, Congress of Neurological Surgeons
2013	Sam Hassenbusch Neurosurgeon Award, Congress of Neurological Surgeons
2013	Byron Cone Pevehouse Socioeconomic Award, American Association of Neurological Surgeons
2013	Louise Eisenhardt Best Paper Award, American Association of Neurological Surgeons
2013	Wiltse Award for Best research Paper, International Society for the Advancement of Spine Surgery
2013	Agustus McCravey Research Award Paper, Southern Society of Neurological Surgeons
2013	Mayfield Basic Science Award Paper, AANS/CNS Spine Section Annual Meeting
2013	Mayfield Clinical Research Award Paper, AANS/CNS Spine Section Annual Meeting
2012	NASS Editor's Choice Paper, North American Spine Society Annual Meeting
2012	NASS Value Abstract Award, North American Spine Society Annual Meeting
2012	Ronald Tasker Award Paper, Congress of Neurological Surgeons
2011	1 st Place, Top Abstract in Spine Research, Meeting of the Congress of Neurological Surgeons
2010	Julius Goodman Socioeconomic Research Award, Council of State Neurosurgical Societies
2010	CNS Resident Research Award, Congress of Neurological Surgeons
2009	Harvey Cushing Award for Achievement in Laboratory Research, Hopkins Department of Neurosurgery
2008	Walter Dandy Award for Achievement in Clinical Research, Hopkins Department of Neurosurgery
2008	Ronald Bittner Award for NeuroOncology Research, American Association of Neurological Surgeons
2007	American Syringomyelia Alliance Project Fellowship Award, Congress of Neurological Surgeons
2007	Award for Safety Research, Johns Hopkins Department of Neurosurgery
2007	Resident liaison to the executive Editorial Board of NEUROSURGERY
2006	Sherman Award for Top Performance in Clinical Neurosurgery, Hopkins Department of Neurosurgery
2004-2008	Elected Officer on CNS/AANS Young Neurosurgeons Committee
2004	Galbraith Award for Research in Cerebrovascular Disease, Congress of Neurological Surgeons
2004	Agustus McCravey Research Award, Southern Society of Neurological Surgeons
2003	Synthes Award for Research in Brain Injury, Congress of Neurological Surgeons
2002	Pre-doctoral Research Award, International Stroke Conference, American Heart Association
2002	Pre-doctoral Research Award, Keystone Stroke Symposia
2001-2002	1 st Place Poster Presentation, 13 th & 14 th Annual Duke University Academic Evening
2001	1 st Place Poster Presentation, Meeting of the Congress of Neurological Surgeons

Grant Support:

1. Principle Investigator: AANS/CNS Regis Haid Outcomes Award, \$30,000 (2012-2014). "Defining the value of Adult Spinal Deformity"
2. Principle Investigator: Depuy Research Grant, \$129,000 (2012-2014). "Cost-utility and Comparative Effectiveness Analysis of Surgical Correction of Adult Spinal Deformity"
3. Principle Investigator: American Association of Neurological Surgeons, \$750,000 (2012-2013). "Development and validation of a national neurosurgery quality reporting platform"
4. Co-investigator: R21 AR062880-01 - Cognitive-Behavioral Based Physical Therapy: Improving Surgical Spine Outcomes. NIH:NIAMS \$275,000 (4/1/12 - 3/31/14)

5. Principle Investigator: Depuy Research Grant, \$135,000 (2011-2012). “Comparative effectiveness and cost-utility of minimally invasive versus open TLIF for degenerative spondylolithesis”
6. Principle Investigator: AANS/CNS Larson Young Investigator Award, \$30,000 (2010-2011). “Efficacy and cost effectiveness of revision fusion for failed back syndrome”
7. Principle Investigator: Globus Medical Research Grant, \$110,000 (2010-2011). “Efficacy of direct lateral interbody fusion for back and leg pain for adjacent segment disease”
8. Principle Investigator: Depuy Education & Research Grant. \$75,000 (2008-2009). “In vitro biomechanics study of spinal rigidity and inter-vertebral graft subsidence in anterior and posterior fusion constructs.”
9. Principle Investigator: Codman Research Fellowship Grant, \$25,000 (2008-2009). “Physiologic and radiographic factors affecting outcome after spinal dysraphism and tethered cord surgery”.
10. Principle Investigator: NIH Pediatric Research Loan Repayment Grant, \$70,000 (2007-2009). “Predictive value of cine-MRI CSF flow patterns on resolution of syringomyelia after hindbrain decompression”
11. Principle Investigator: American Syringomyelia Alliance Project CNS Fellowship, \$10,000 (2007-2008). “Correlation of spinal CSF flow dynamics and syrinx outcome after decompression for Chiari I malformation”
12. Principle Investigator: Johns Hopkins Department of Neurosurgery Education & Research Grant \$30,000 (2007-2008) “Effect of combined temozolomide and BCNU wafer treatment on survival after craniotomy for GBM”
13. Principle Investigator: American Heart Association Pre-doctoral Fellowship, \$16,000 (2002-2003). “Molecular Mechanisms of Cerebral Vasospasm after Subarachnoid Hemorrhage”
14. Principle Investigator: American Stroke Association Scholarship in Cerebrovascular Disease, \$5,000 (2001-2002). “Role of Endothelial Nitric Oxide Synthase in Cerebral Vasospasm after Subarachnoid Hemorrhage.”
15. Principle Investigator: NIH Training Grant T35-GM08679, \$5,000 (2001-2002). “Correlation of Superoxide Production and Cerebral Vasospasm after Subarachnoid Hemorrhage”

Invited National Lectures and Course Directorships

1. Modern data science in healthcare. *Atrium Musculoskeletal Institute Grand Rounds*, 2019
2. ACDF in the ambulatory surgery center setting. *Annual meeting of the AANS/CNS Spine Section*, 2018
3. Utilizing spine registries to improve quality and cost of spine care. *Annual meeting of the Western Neurosurgery Society*, 2017
4. Demonstrate the value of your healthcare services: Opportunity for hospital engagement. *AANS Annual Meeting*, 2015
5. Advancements in TLIF. *Annual Course Director. Stryker Spine* 2014-present
6. Defining value of care through integrated outcomes reporting platforms. *Value in HealthCare Forum*, 2014
7. Defining waste and variation through integrated registry solutions. *Selby Spine Conference*, 2014
8. N²QOD *NERVES Annual Meeting* Oct 2014
9. The need for clinical registries to measure outcomes. *North American Neuromodulation Society*, Dec 2013
10. N²QOD: Methodological review and initial results. *Geisinger Conf. on Comparative Effectiveness Research*, Nov, 2013
11. Cost effectiveness of minimally invasive surgery. *Society of Minimally Invasive Surgery*, Nov, 2013
12. N²QOD: Early results and next steps. *Indiana University*, Sept, 2013
13. Chiari malformation: Who not to operate on. *Congress of Neurological Surgeons Annual Meeting*, 2013
14. Utility of registry participation: The provider’s perspective. *Congress of Neurological Surgeons Annual Meeting*, 2013
15. Complication avoidance in cervical instrumentation. *North American Spine Society Annual Meeting*, Oct 2014
16. Course Director: Southeastern neurosurgery resident forum on spinal trauma and oncology. *June, 2013*
17. Integrating REDCap data collection as standard of care: Methodological overview and results. *University of Miami*, December, 2013
18. Course Director: The Science of Practice Data Collection. *AANS Annual meeting*, April, 2013
19. Comparative Effectiveness research: Why it matters to your practice. *AANS Annual meeting*, April, 2013
20. Where is spine surgery headed in the future climate of healthcare reform. *AO Spine North America, Advanced Concepts Meeting, Park City, UT, Feb 2013*
21. Defining the value of surgical spine care. *Selby Spine Conference, Park City, UT, Jan, 2013*
22. The National Neurosurgery Quality & Outcomes Database. *University of Rochester*, November, 2013
23. Defining the value of surgical care through a longitudinal quality of life registry. *Yale University*, Sept, 2013

24. Good or Ineffective: What Makes a Good Registry. *North American Spine Society Annual Meeting*, Oct 2012
25. The Science of Defining Quality Spine Care. *Annual Meeting of the Congress of Neurological Surgeons*, Oct 2012
26. Anterior approaches to the cervical-thoracic spine: Technical considerations. *Future Leaders Southeastern Spine Summit*, Aug, 2012.
27. Outcomes Data Collection: Why it will matter in your practice. *Tennessee Neurosurgery Society*, Aug, 2012
28. The National Neurosurgery Quality and Outcomes Database. *Partnership to Improve Patient Care (PIPC) Medical Society Roundtable*, Washington DC, June, 2012.
29. Course Director: Prospective Practice Data Collection in Clinical Practice- Uses, Opportunities, Requirements. *Annual meeting of the AANS*, April, 2012
30. Comparative Effectiveness research: Why you need to care about this topic. *Annual meeting of the AANS*, April, 2012
31. Value analysis in spine surgery. *Division of Neurosurgery Grand Rounds, Carolinas Medical Center*, March 2012
32. Cost-utility and comparative effectiveness analyses of laminectomy versus comprehensive medical management for lumbar stenosis. *Plenary Session, Annual meeting of the AANS*, April, 2012
33. Third party payers and value-based purchasing: The emerging role of outcomes and quality reporting. *Course at CNS/AANS Joint Spine Section*, March, 2012
34. Outcomes data collection in the changing healthcare landscape: Defining the quality and value of your patient care. *AANS Winter Spine Clinics*, February, 2012
35. Developing and validating a national neurosurgery quality reporting platform. *Council of State Neurosurgical Societies Annual Meeting*, October, 2011
36. Surgical management of spinal metastasis: What has evidence taught us? *10th Annual NeuroOncology Update Meeting*
37. Defining Value in Neurosurgical Care in Era of Comparative Effectiveness. *Tennessee Neurosurgery Society*, Aug. 2011
38. Assessing Quality of Neurosurgical Care and Innovation. *Minimally Invasive Neurosurgery Society (MINS) Annual Meeting*, July 2011.
39. The Call for a National Neurosurgery Quality Reporting Platform. *U of Florida*, May, 2011.
40. Quality and Value Assessment of Spine Surgery in the Era of Healthcare Reform. *AANS Annual Meeting*, April 2011
41. Cost effectiveness of TLIF for grade I lumbar spondylolisthesis. *Plenary Session, Annual meeting of the AANS*, April, 2011
42. Cost-Utility Analysis in Spine Surgery. *AANS/CNS Joint Section on Spinal Disorders Annual Meeting*, February, 2011
43. The New Quality Paradigm in Healthcare Reform. *Cornel University*, February, 2011
44. The New Quality Paradigm: Compliance with Healthcare Reform Requirements. *CNS Annual Meeting Special Course*, October, 2010
45. Course Director: The new quality paradigm. *CNS Annual Meeting Special Course*, October, 2010
46. Lumbar Pelvic Instrumentation for Adult Deformity. *Globus Medical Resident and Fellows Course*, May 23, 2010
47. Optimal Indications and Patient Selection for Vertebral Augmentation. *North American Spine Society, Compression Fracture Symposium*, April 23-25, 2009.
48. Cranial Cervical Junction Instrumentation Techniques. *Synthes Resident and Fellows Course*, September 15, 2009
49. Integrating Clinical Outcomes Research into Neurosurgical Practice. *Invited lecturer at Johns Hopkins Department of Neurosurgery Grand Rounds*, October, 2008

Laboratory Directorships:

Vanderbilt Spine Surgery Quality and Outcomes Laboratory (2010-2013): Director of clinical research laboratory (14 member lab) investigating the comparative effectiveness, quality, and cost-utility of various surgical interventions for spinal pathology via prospective web-based registries and multi-center collaborations.

Johns Hopkins Spinal Column Biomechanics and Surgical Outcomes Laboratory. (2007 – 2010): Director of spinal biomechanics and outcomes research laboratory (10 member lab) investigating: 1) factors associated with progressive spinal deformity after resection of intramedullary and intradural tumors, 2) clinical and operative factors

affecting healthcare cost and neurological outcome after surgical treatment of spinal column tumors, 3) validating long-term outcomes measured for degenerative spine disease, and 3) in vitro rigidity and fatigability of various anterior and posterior spinal constructs.

Johns Hopkins NeuroOncology Surgical Outcomes Research Laboratory (2006 – 2010): Director of clinical outcomes research laboratory (12 member lab) investigating: 1) effects of perioperative physiological parameters on surgical morbidity, 2) effect of perioperative neurological morbidity on quality of life and survival, and 3) efficacy of various surgical and adjuvant treatment modalities for benign and malignant brain tumors.

Book Chapters

1. Ladner TR, **McGirt MJ**, Strother MK. Errors in diagnosing spinal disease. In Kruskal JB, Sandrasegaran K, Siewart B (eds). *The Radiology M&M Meeting: Misinterpretations, Misses, Mimics*. ARRS, 2014
2. Weingart J, **McGirt MJ**, Brem H. High grade astrocytoma. In Tonn JC, Grossman S, Rutka J, Westphal M (eds): *Neuro-Oncology of CNS Tumors*. New York: Springer-Verlag 2006.
3. Attenello F, **McGirt MJ**, Carson B. Cervicomedullary decompression without duraplasty. In Jallo GI, Pradilla G (eds): *Controversies in Pediatric Neurosurgery*. New York: Thieme 2008.
4. Steurt A, **McGirt MJ**, Bydon M, Bydon A. Spinal Cord: Anatomical overview and selected pathologies. In *Encyclopedia of Life Sciences*. John Wiley & Sons, 2008.
5. Chaichana K, **McGirt MJ**. Malignant Brain Astrocytoma: Extent of resection effects survival. In Hayat MA (ed): *Tumors of the Central Nervous System*. Springer 2011.
6. Parker SL, **McGirt MJ**. Malignant Astrocytomas of the Spinal Cord: Aggressive surgery and outcome. In Hayat MA (ed): *Tumors of the Central Nervous System*. Springer 2011.
7. Cheng J, **McGirt MJ**, Devin C. Neck Pain. In James O'Dell (ed): *Differential Diagnosis of Regional and Diffuse Musculoskeletal Pain*, 2011.

Peer-Reviewed Publications:

1. Villavicencio AT, **McGirt MJ**, Dimitrov DF, Turner D. Management of acute cervical spinal cord injury. *The Neurologist* 7(5):287-294; 2001.
2. **McGirt MJ**, Villavicencio AT, Friedman H, Friedman AH. Management of tumor bed cysts after chemotherapeutic wafer implantation: A report of 4 cases. *Journal of Neurosurgery* 96(5):941-945, 2002.
3. **McGirt MJ**, Leveque JC, Wellons J, Villavicencio AT, Hopkins J, Fuchs H, George TM. Cerebrospinal fluid shunt survival and etiology of failures: A seven-year institutional experience. *Pediatric Neurosurgery* 36(5):248-255, 2002.
4. Parra A, **McGirt MJ**, Sheng H, Laskowitz D, Pearlstein RD, Warner DS. Murine model of aneurysmal subarachnoid hemorrhage associated cerebral vasospasm. *Neurological Research* 24:510-516, 2002.
5. **McGirt MJ**, Parra A, Higuchi Y, Sheng H, Laskowitz D, Pearlstein RD, Warner DS. Attenuation of cerebral vasospasm after subarachnoid hemorrhage in mice overexpressing extracellular superoxide dismutase. *Stroke* 33(9):2317-23, 2002.
6. **McGirt MJ**, Lynch J, Blessing B, Warner DS, Friedman AH, Laskowitz DT. Serum von Willebrand factor, matrix metalloproteinase-9, and vascular endothelial growth factor predicts the development of cerebral vasospasm after aneurysmal subarachnoid hemorrhage. *Neurosurgery* 51(5):1128-35, 2002.
7. **McGirt MJ**, Lynch J, Sheng H, Laskowitz D, Pearlstein RD, Warner DS. Simvastatin increases endothelial nitric oxide synthase and ameliorates cerebral vasospasm following aSAH. *Stroke* 33(12):2950-56, 2002.
8. **McGirt MJ**, Villavicencio AT, Bulsara KR, Gorecki JP. MRI guided frameless stereotactic percutaneous cordotomy. *Stereotactic and Functional Neurosurgery* 78(2):53-63, 2002
9. **McGirt MJ**, Wellons J, Nimjee S, Bulsara KR, Fuchs H, George TM. Comparison of total versus partial revision of initial ventriculoperitoneal shunt failures. *Pediatric Neurosurgery* 38(1):34-40, 2003.

10. **McGirt MJ**, Bulsara KR, Cummings T, New K, Little K, Friedman AH. Prognostic value of MRI guided stereotactic biopsy in the evaluation of recurrent astrocytoma versus therapeutic effect. *Journal of Neurosurgery* 98(1):14-20, 2003.
11. Bulsara KR, **McGirt MJ**, Villavicencio AT, Borel C, Alexander M, Friedman AH. Peak troponin value differentiates reversible neurogenic left ventricular dysfunction associated with aneurysmal subarachnoid hemorrhage from myocardial infarction. *Journal of Neurosurgery* 98(3):524-28, 2003.
12. Bulsara KR, Villavicencio AT, Shah AJ, **McGirt MJ**, Adamson C, George TM. Successful aqueductal plasty and stenting for tectal plate tumor after failed third ventriculostomy. *Surgical Neurology* 59(1):58-61, 2003.
13. **McGirt MJ**, Zaas A, George TM, Fuchs H, Kaye K, Sexton D. Risk factors for pediatric ventriculoperitoneal shunt infection and predictors of infectious pathogens. *Clinical Infectious Disease* 36(7):858-62, 2003.
14. **McGirt MJ**, Blessing B, Goldstein LB. The impact of transcranial doppler vasospasm monitoring on clinical decision-making after subarachnoid hemorrhage. *Journal of Stroke and Cerebrovascular Disease* 12(2):88-92, 2003.
15. **McGirt MJ**, Villavicencio AT, Bulsara KR, Friedman AH. MRI guided stereotactic biopsy in the diagnosis of glioma: Comparison of biopsy and surgical resection specimen. *Surgical Neurology* 59(4):277-81. 2003
16. Villavicencio AT, Leveque JC, **McGirt MJ**, Hopkins J, Fuchs H, George TM. Comparison of revision rates following endoscopically versus non-endoscopically placed shunt catheters. *Surgical Neurology* 59(5):375-9. 2003
17. **McGirt MJ**, Mavropoulos JC, McGirt LY, Alexander M, Friedman AH, Laskowitz DT, Lynch JR. Leukocytosis is an independent risk factor for cerebral vasospasm after aneurysmal subarachnoid hemorrhage. *Journal of Neurosurgery* 98(6):1222-26, 2003.
18. Tubbs RS, **McGirt MJ**, Oakes JW. Experience with 130 pediatric Chiari I decompressions. *Journal of Neurosurgery* 99(2):291-96, 2003.
19. Tubbs RS, **McGirt MJ**, Smyth M, Wellons JC, Warder DE, Blount JP, Oakes JW. Neurologic presentation and long-term outcome following operative intervention in patients with meningocele manqué. *British Journal of Neurosurgery* 17(3):230-33, 2003.
20. **McGirt MJ**, Blessing B, Nimjee S, Friedman AH, Laskowitz DT, Lynch J. Elevation in serum brain natriuretic peptide correlates with cerebral vasospasm and hyponatremia after subarachnoid hemorrhage. *Neurosurgery* 54(6):1369-74. 2004
21. **McGirt MJ**, Woodworth G, Lynch JR, Laskowitz DT. Statins for the treatment of neurological injury: A role beyond cholesterol lowering. *Clinical Neurosurgery* 51:320-8. 2004
22. **McGirt MJ**, Woodworth G, Thomas G, Miller N, Williams M, Rigamonti D. Cerebrospinal fluid shunting for pseudotumor cerebri associated intractable headache: Predictors of treatment response and analysis of long-term outcomes. *Journal of Neurosurgery* 101(4):627-32. 2004
23. **McGirt MJ**, Cowan JA, Gala V, Garton HJ, Muraszko KM, Thompson BG. Surgical reversal of long standing blindness from a sphenoidal metastatic neuroblastoma: A case report. *Child's Nervous System* Jan. 2005
24. Woodworth G, **McGirt MJ**, Rigamonti D. Frameless stereotactic ventricular shunt placement for pseudotumor cerebri. *Stereotactic and Functional Neurosurgery* 83(1):12-16. 2005
25. Amundson E, **McGirt MJ**, Olivi A. A contralateral, transfrontal, extraventricular approach to stereotactic brainstem biopsies. *Journal of Neurosurgery* 102(3):656-70. 2005
26. Huang J, **McGirt MJ**, Tamargo RJ. Intracranial aneurysms in the pediatric population: a meta-analysis. *Surgical Neurology* 63(5):424-32. 2005
27. **McGirt MJ**, Nimjee S, Floyd J, Bulsara KR, George TM. Correlation of cerebrospinal fluid flow dynamics and headache in Chiari I malformation. *Neurosurgery* 56(4):716-20. 2005
28. **McGirt MJ**, Woodworth G, Amundson E, Frazier J, Coon A, Olivi A, Weingart J. Predictors of morbidity after of image-guided stereotactic brain biopsy: A risk assessment of 270 cases. *Journal of Neurosurgery* 102(5):897-901. 2005
29. Scuibba D, Morgan RS, **McGirt MJ**, Woodworth G, Samdani A, Jallo J, Carson B. Antibiotic impregnated ventricular catheters decrease the incidence of shunt infection in the treatment of pediatric hydrocephalus. *Journal of Neurosurgery: Pediatrics* 103(2):103-108. 2005
30. Woodworth G, **McGirt MJ**, Rigamonti D. Use of ventriculoperitoneal shunts in patients with intracranial hypertension secondary to HIV associated cryptococcal meningitis. *Surgical Neurology* 63(6):529-31. 2005
31. Cowan JA, **McGirt MJ**, Woodworth G, Rigamonti DR, Williams MA. The syndrome of hydrocephalus in young and middle-aged adults (SHYMA). *Neurological Research* 27(5):540-47. 2005

32. Woodworth G, **McGirt MJ**, Samdani A, Garonzik I, Olivi A, Weingart J. Frameless and frame-based MRI-guided stereotactic brain biopsy in the diagnosis of glioma: Comparison of biopsy and open resection specimen. *Neurological Research* 27(4):358-62. 2005
33. Thomas G, **McGirt MJ**, Woodworth G, Williams M, Hillis A, Rigamonti D. Neuropsychological profile can predict cognitive response to CSF shunting for idiopathic normal pressure hydrocephalus. *Dementia, Geriatrics, and Cognitive Disorders* 20(2-3):163-68. 2005
34. Lynch J, Wang H, **McGirt MJ**, Floyd J, Friedman AH, Coon AL, Blesing R, Alexander MJ, Graffagnino C, Warner DS, Laskowitz DT. Simvastatin reduces vasospasm after aneurysmal SAH: results of a pilot randomized clinical trial *Stroke* 36(9): 2024-26. 2005
35. Woodworth G, **McGirt MJ**, Gailloud P, Clatterbuck RE. Evaluation of a distal, non-mycotic pericallosal artery aneurysm visualized with 3-dimensional digital-subtraction angiography *Surgical Neurology* 64(2005):321-4. 2005
36. **McGirt MJ**, Coon AC, Thomas G, Woodworth G, Williams M, Rigamonti D. Diagnosis, treatment and analysis of long-term outcomes in idiopathic normal pressure hydrocephalus. *Neurosurgery* 57(4):699-705. 2005
37. **McGirt MJ**, Coon A, Brooke B, Woodworth G, Buck D, Jain S, Tamargo R, Perler B. Statins, HMG CoA-reductase inhibitors, reduce the risk of neurological sequelae after carotid endarterectomy. *Journal of Vascular Surgery* 42(5):829-36. 2005
38. **McGirt MJ**, Gustavo P, Woodworth G, Lynch J, Warner D, Tamargo R, Clatterbuck R, Laskowitz DT. Simvastatin attenuates experimental cerebral vasospasm and ameliorates serum markers of neuronal and endothelial injury in patients after subarachnoid hemorrhage: A dose-response effect dependent on endothelial nitric oxide synthase. *Clinical Neurosurgery* 52:371-378. 2005
39. Woodworth GF, **McGirt MJ**, Samdani A, Garonzik I, Gokaslan Z, Olivi A, Weingart JD. Frameless image-guided stereotactic brain biopsy: Diagnostic yield, operative morbidity, and comparison with the frame-based technique. *Journal of Neurosurgery* 104(2):233-237. 2005
40. **McGirt MJ**, Pradilla G, Legnani F, Tamargo RJ, Clatterbuck RE. Systemic administration of simvastatin after the onset of experimental subarachnoid hemorrhage ameliorates cerebral vasospasm *Neurosurgery* 58(5):945-951. 2006
41. **McGirt MJ**, Coon A, Brooke B, Woodworth G, Buck D, Jain S, Tamargo R, Perler B. Hyperglycemia independently increases the risk of perioperative stroke and death after carotid endarterectomy: Analysis of 1566 cases. *Neurosurgery* 58(6):1066-1073. 2006
42. **McGirt MJ**, Nimjee S, Fuchs H, George TM. Relationship of cine phase-contrast magnetic resonance imaging with outcome after decompression for Chiari I malformations. *Neurosurgery* 58(7):1168-1176. 2006
43. Sciubba DS, Galia G, Mavinkurve P, Garonzik IM, Recinos PF, **McGirt MJ**, Witham T, Khavkin Y, Gokalsan Z, Wolinsky J. Preoperative imaging of cervical spine hemangioblastomas using three-dimensional fusion digital subtraction angiography (3D-FDSA): Technical case report. *Journal of Neurosurgery: Spine* 5(1):96-100. 2006
44. **McGirt MJ**, Lynch J, Nimjee S, Warner DS, Alexander M, Laskowitz DT. HMG-CoA reductase inhibitors reduce the risk of cerebral vasospasm after aneurysmal subarachnoid hemorrhage: A multivariate analysis of an institutional experience. *Journal of Neurosurgery* 105(5): 671-4. 2006
45. **McGirt MJ**, Buck D, Woodworth GW, Sciubba D, Weingart J, Jallo G. Adjustable versus set-pressure valves decrease the risk of shunt failure in the treatment of pediatric hydrocephalus. *Child's Nervous System* Nov. 2007
46. Brooke BS, **McGirt MJ**, Woodworth GF, Chang DC, Roseborough GS, Freischlag JA, Perler BA. Preoperative statin and diuretic use influence the presentation of patients undergoing carotid endarterectomy: results of a large single institution case control study. *Journal of Vascular Surgery* 45(2):298-303. 2007
47. Woodworth G, **McGirt MJ**, Thomas G, Williams M, Rigamonti D. Prior shunt failure or concurrent ventriculoperitoneal shunting increases the risk of endoscopic third ventriculostomy failure for the treatment of obstructive hydrocephalus in adults. *Neurological Research* 29(1):27-31. 2007
48. Sciubba DS, Galia G, **McGirt MJ**, Woodworth G, Garonzik IM, Witham T, Gokalsan Z, Wolinsky JP. Transpedicular vertebrectomy with posterior placement of a distractible titanium cage for the correction of kyphotic deformity of the thoracic spine: Technical case report. *Neurosurgery* 60(4):223-31. 2007
49. Sciubba DS, **McGirt MJ**, Woodworth G, Carson B, Jallo GI. Prolonged exposure to antibiotic-impregnated shunt catheters does not increase incidence of late shunt infections. *Child's Nervous System* Mar 27, 2007
50. Sciubba DS, Li-Mei L, Woodworth G, **McGirt MJ**, Carson B, Jallo GI. Factors contributing to the medical costs of cerebrospinal fluid shunt infection treatment in pediatric patients with standard shunt components compared with those in patients with antibiotic-impregnated components. *Neurosurgical Focus* 22(4):1-4. 2007

51. Woodworth G, **McGirt MJ**, Gokaslan Z, Witham T, Jallo GI, Wolinski JP. Predictors of ambulatory function after surgical resection of intramedullary spinal cord tumors. *Neurosurgery* 61(1):99-105. 2007
52. **McGirt MJ**, Woodworth G, Ali M, Tamargo R, Clatterbuck R. Perioperative hyperglycemia is an independent predictor of poor outcome after aneurysmal subarachnoid hemorrhage. *Journal of Neurosurgery* 107: 1080-85, 2007
53. **McGirt MJ**, Chaichana K, Attenello F, Witham T, Bydon A, Yao K, Jallo GI. Resection of intramedullary tumors of the cervical spinal cord: Incidence, time course, and risk factors for subsequent spinal deformity. *Child's Nervous System* Oct, 2007.
54. **McGirt MJ**, Chaichana K, Attenello F, Atiba A, Woodworth G, Jallo GI. Neurological outcome after resection of intramedullary spinal cord tumors in children. *Child's Nervous System* July, 2007.
55. Tobias ME, **McGirt MJ**, Goldstein IM, Kothbauer KF, Epstein F, Jallo GI. Surgical management of holocord intramedullary spinal cord tumors in children. *Child's Nervous System* July, 2007
56. Yao K, **McGirt MJ**, Chaichana K, Jallo GI. Risk factors for progressive spinal deformity following surgical resection of intramedullary spinal cord tumors in children: Analysis of 161 consecutive cases. *Journal of Neurosurgery: Pediatrics* 107: 463-7. 2007
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1. **McGirt MJ**, Parra A, Higuchi Y, Sheng H, Laskowitz DT, Pearlstein RD, Warner DS. Attenuation of cerebral vasospasm after subarachnoid hemorrhage in mice overexpressing extracellular superoxide dismutase. *Annual meeting of the Congress of Neurological Surgeons, September, 2001*.
2. **McGirt MJ**, George T, Grossi P, Bulsara KR. Prognostic factors associated with cerebrospinal fluid shunt survival in premature infants. *AANS/CNS Section on Pediatric Neurological Surgery, November, 2001*.
3. **McGirt MJ**, Villavicencio AT, Leveque JC, Wellons J, Fuchs H, George TM. Cerebrospinal fluid shunt survival and etiology of failures: A seven-year institutional experience. *AANS/CNS Section on Pediatric Neurological Surgery, November, 2001*.
4. **McGirt MJ**, Wellons J, Fuchs H, George T. Comparison of revision rates following total versus partial revision of failed cerebrospinal fluid shunts. *Annual meeting of the American Association of Neurological Surgeons, April, 2002*.
5. **McGirt MJ**, Lynch J, Parra A, Blessing B, Borel C, Warner DS, Laskowitz DT. Serum markers of neointimal proliferation effectively predict the onset of cerebral vasospasm after aneurysmal subarachnoid hemorrhage. *Annual meeting of the Congress of Neurological Surgeons, September, 2002*.
6. **McGirt MJ**, Bulsara KR, Cummings T, Friedman AH. MRI-guided stereotactic biopsy differentiation of recurrent malignant glioma versus radiation necrosis is not associated with subsequent survival when performed less than five months after radiation therapy. *Annual meeting of the Congress of Neurological Surgeons, September, 2002*.

7. **McGirt MJ**, Lynch J, Sheng H, Laskowitz DT, Pearlstein RD, Warner DS. Simvastatin, an HMG CoA reductase inhibitor, attenuates cerebral vasospasm after subarachnoid hemorrhage in the mouse via up-regulation of endothelial nitric oxide synthase. *Annual meeting of the Congress of Neurological Surgeons, September, 2002.*
8. **McGirt MJ**, Blessing RJ, Goldstein LB. The impact of transcranial doppler vasospasm monitoring on clinical decision making after subarachnoid hemorrhage. *Annual American Neurological Association Outcomes Meeting, October, 2002.*
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11. **McGirt MJ**, Lynch J, Pearlstein RD, Warner DS, Laskowitz DT. Simvastatin and lovastatin improve neurological outcome and attenuate hippocampal neuronal degeneration after closed head injury in the mouse. *Annual Meeting of the Congress of Neurological Surgeons, October, 2003.*
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14. **McGirt MJ**, Woodworth G, Thomas G, Miller N, Williams M, Rigamonti D. Frameless stereotactic ventriculoperitoneal shunting for pseudotumor cerebri: An outcomes comparison versus lumboperitoneal shunting. *Annual Meeting of the Congress of Neurological Surgeons, October, 2004.*
15. **McGirt MJ**, Woodworth G, Coon A, Thomas G, Williams M, Rigamonti D. Ventriculoperitoneal shunting for idiopathic normal pressure hydrocephalus: Predictors of treatment response and analysis of long-term outcomes. *Annual Meeting of the Congress of Neurological Surgeons, October, 2004.*
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27. **McGirt MJ**, Attenello F, Weingart J, Carson B, Jallo GI. Clinical and radiological predictors of treatment failure after suboccipital decompression for pediatric Chiari I malformation: Analysis of 279 consecutive cases. *Annual Meeting of the International Society of Pediatric Neurosurgery, September, 2007*
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48. **McGirt MJ**, Gok B, Sciubba D, Garces-Ambrossi G, Nelson C, Noggle J, Bydon A, Witham T, Wolinski JP, Gokaslan Z. Adjuvant treatment with locally delivered Oncogel delays the onset of paresis after surgical resection or radiotherapy of experimental spinal column metastasis. *Annual meeting of the Congress of Neurological Surgeons, Sept, 2008*.
49. **McGirt MJ**, Parker S, Mehta V, Sciubba D, Ambrossi G, Witham T, Gokaslan Z, Wolinski JP. Translaminar versus pedicle screws for instrumented fixation at C2: Review of 323 cases. *Cervical Spine Research Society Annual Meeting, December, 2008*.
50. **McGirt MJ**, Ambrossi G, Parker S, Sciubba D, Wolinski JP, Bydon A, Gokaslan Z, Witham T. Spinal deformity following laminoplasty versus laminectomy for resection of intradural spinal tumors: Analysis of 238 patients. *Cervical Spine Research Society Annual Meeting, December, 2008*.
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59. **McGirt MJ**, Eustacchio S, Varga P, Vilendecic M, Trummer M, Gorenssek M, Ledic D, Carragee E. A prospective cohort study of close interval CT and MRI imaging after primary lumbar discectomy: Factors associated with recurrent disc herniation and disc height loss. *Annual Meeting of the North American Spine Society, November 2009*.

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67. **McGirt MJ**, Farber SH, Parker S, Rigamonti D. Cost-utility Analysis of a Single Institution's Experience with Antibiotic Impregnated Shunt Catheters for Adult Hydrocephalus, *Annual Meeting of the Congress of Neurological Surgeons, Oct, 2010*
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70. Parker SL, Chaichana KL, Mukherjee D, Adogwa O, Cheng J, **McGirt MJ**. Correlation of Pre-operative Depression and Somatic Perception Scales with Post-operative Disability and Quality of Life after Lumbar Discectomy. *Annual Meeting of the North American Spine Society, Oct, 2010*
71. Mukherjee D, Chaichana K, Parker SL, Gokaslan Z, Cheng J, **McGirt MJ**. Survival of Patients with Malignant Primary Osseous Spinal Neoplasms from the Surveillance, Epidemiology and End Results (SEER) Database from 1973-2005. *Annual Meeting of the North American Spine Society, Oct, 2010*
72. Mukherjee D, Chaichana K, Parker SL, Gokaslan Z, Cheng J, **McGirt MJ**. Association of Extent of Local Tumor Invasion and Survival in Patients with Malignant Primary Osseous Spinal Neoplasms from the Surveillance, Epidemiology and End Results (SEER) Database. *Annual Meeting of the North American Spine Society, Oct, 2010.*
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74. Adogwa O, Parker SL, Aaronson O, Cheng J, **McGirt MJ**. Minimally Invasive vs. Open Transforaminal Lumbar Interbody Fusion (TLIF): An Evidenced-based Review of the Literature. *Annual Meeting of the North American Spine Society, Oct, 2010.*
75. Lebow SL, Adogwa O, Parker SL, Sharma A, Cheng J, **McGirt MJ**. Same-level Recurrent Disc Herniation after Lumbar Discectomy: Results of a Prospective Cohort Study with Two-Year Serial Imaging. *Annual Meeting of the North American Spine Society, Oct, 2010.*
76. Mukherjee D, Chaichana K, Parker SL, Gokaslan Z, Cheng J, **McGirt MJ**. Association of Extent of Surgical Resection and Survival in Patients with Malignant Primary Osseous Spinal Neoplasms: A 30-Year Population-Based Study. *Annual Meeting of the North American Spine Society, Oct, 2010.*
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78. Wong C, Corn C, Crosby C, Even J, Mencio G, Devin C, **McGirt MJ**. Biomechanical Analysis of Iliac Screws versus S2 Alar-Iliac Screws. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 79. Adogwa O, Parker SL, Aaronson O, Cheng J, Devin C, **McGirt MJ**. Cost effectiveness of transforaminal lumbar inter-body fusion (TLIF) for grade I degenerative spondylolisthesis. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 80. Parker SL, Adogwa O, Cheng J, Devin C, **McGirt MJ**. Effects of Epidural Steroid Injections on Blood Glucose Levels in Patients with Diabetes Mellitus. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 81. Parker SL, Adogwa O, Aaronson O, Cheng J, Devin C, **McGirt MJ** Microdiscectomy Improves Pain-Associated Depression, Somatic Anxiety, and Mental Well Being in Patients with Herniated Lumbar Disc. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 82. Parker SL, Adogwa O, Aaronson O, Cheng J, Devin C, **McGirt MJ**. Cost effectiveness of multilevel hemilaminectomy for lumbar stenosis associated radiculopathy. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 83. Parker SL, Adogwa O, Aaronson O, Cheng J, Devin C, **McGirt MJ**. Comparative effectiveness of minimally invasive versus open transforaminal lumbar interbody fusion: Two-year assessment of narcotic use, return to work, disability, and QOL. *Annual meeting of the American Association of Neurological Surgeons, April, 2011.*
 84. Chaichana K, Parker S, Adogwa O, Mukherjee D, Aaronson O, Cheng J, Gokaslan Z, **McGirt MJ**. Survival of Patients with Malignant Primary Osseous Spinal Neoplasms from the Surveillance, Epidemiology, and End Results (SEER) Database from 1973-2005. *AANS/CNS Spine Section Annual Meeting, March, 2011.*
 85. Parker S, Lebow R, Adogwa O, Aaronson O, Cheng J, **McGirt MJ**. Radiographic Same-level Recurrent Disc Herniation After Lumbar Discectomy: Prospective Longitudinal Study with Two-year Follow-up. *AANS/CNS Spine Section Annual Meeting, March, 2011*
 86. Fulchiero E, Davis B, Adogwa O, Aaronson O, Cheng J, Devin C, **McGirt MJ**. Cost Effectiveness of Multilevel Hemilaminectomy for Lumbar Stenosis Associated Radiculopathy. *AANS/CNS Spine Section Annual Meeting, March, 2011*
 87. Adogwa O, Even J, McCullough K, Devin C, **McGirt MJ**. Effects of Epidural Steroid Injections on Blood Glucose Levels in Patients with Diabetes Mellitus. *AANS/CNS Spine Section Annual Meeting, March, 2011*
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 89. Wong C, Corn C, Crosby C, Even J, Mencio G, Devin C, **McGirt MJ**. Biomechanical Analysis of Iliac Screws versus S2 Alar-Iliac Screws. *AANS/CNS Spine Section Annual Meeting, March, 2011*
 90. Adogwa O, O'Neill K, Smith J, Abtahi A, Devin C, **McGirt MJ**. Reduced Surgical Site Infections in Patients Undergoing Posterior Spinal Stabilization of Traumatic Injuries Using Vancomycin Powder. *AANS/CNS Spine Section Annual Meeting, March, 2011*
 91. Parker S, Adogwa O, Davis B, Devin C, **McGirt MJ**. Determination of the Minimum Improvement in Pain, Disability, and Health State Associated with Cost-effectiveness: Introduction of the Concept of Minimum Cost Effective Difference (MCED). *AANS/CNS Spine Section Annual Meeting, March, 2011*
 92. Adogwa O, Parker S, Aaronson O, Cheng J, **McGirt MJ**. Comparative Effectiveness of Minimally Invasive versus Open Transforaminal Lumbar Interbody Fusion: Two-year Assessment of Narcotic Use, Return to Work, Disability, and Quality of Life. *AANS/CNS Spine Section Annual Meeting, March, 2011*
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 94. Adogwa O, Davis B, Fulchiero E, Aaronson O, Cheng J, Devin C, **McGirt MJ**. Cost-utility Analysis of Minimally Invasive Versus Open Multilevel Decompression for Lumbar Stenosis. *AANS/CNS Spine Section Annual Meeting, March, 2011*
 95. Parker S, Chaichana K, Adogwa O, Cheng J, **McGirt MJ**. Correlation of Pre-operative Depression and Somatic Perception Scales with Post-operative Disability and Quality of Life after Lumbar Discectomy. *AANS/CNS Spine Section Annual Meeting, March, 2011*

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97. Parker S, Adogwa O, Paul A, Anderson B, Aaronson O, Cheng J, **McGirt MJ**. Determination of Minimum Clinically Important Difference (MCID) in Pain, Disability, and Health State Utility After Transforaminal Lumbar Interbody Fusion (TLIF) for Degenerative Lumbar Spondylolisthesis. *AANS/CNS Spine Section Annual Meeting, March, 2011*
98. Adogwa O, Parker SL, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Long-term outcome after revision lumbar fusion for pseudoarthrosis. *Annual meeting of the Congress of Neurological Surgeons, October, 2011*
99. Parker SL, Adogwa O, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. What Is the Minimum Improvement in Pain, Disability, and Quality of Life That Is Associated with Cost-effectiveness: Introduction of the Concept of Minimum Cost Effective Difference (MCED). *Annual meeting of the Congress of Neurological Surgeons, October, 2011*
100. Adogwa O, Parker SL, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Preoperative Zung Depression Scale Predicts Outcome after Revision Lumbar Surgery. *Annual meeting of the North American Spine Society, November, 2011.*
101. Parker SL, Adogwa O, Cheng J, Devin C, **McGirt MJ**. Determination of the Minimum Improvement in Pain, Disability, and Health State Associated with Cost-Effectiveness: Introduction of the Concept of Minimum Cost Effective Difference (MCED). *Annual meeting of the North American Spine Society, November, 2011.*
102. Parker SL, Adogwa O, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Determination of the Minimum Clinical Important Difference in Pain, Disability, and Quality of Life after Revision decompression and Fusion. *Annual meeting of the North American Spine Society, November, 2011.*
103. Parker SL, Adogwa O, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Determination of the Minimum Clinical Important Difference in Pain, Disability, and Quality of Life after Extension of Fusion for Adjacent Segment Disease. *Annual meeting of the North American Spine Society, November, 2011.*
104. O'Neill K, Smith J, Abtahi A, Archer-Swygert KR, Spengler DM, **McGirt MJ**, Devin CJ. Reduced surgical site infections in patients undergoing posterior spinal stabilization of traumatic injuries using vancomycin powder. *Annual Lumbar Spine Research Society Meeting, May 5, 2011*
105. Wong C, Gates M, Parker SL, **McGirt MJ**. The Relative Impact of Lumbar Spondylosis on Quality of Life in the United States: A Population Health Perspective. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
106. Parker SL, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Factors Influencing Two-year Healthcare Costs in Patients Undergoing Revision Lumbar Fusion Procedures. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
107. Parker SL, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Cost per Quality-adjusted Life Year Gained of Revision Lumbar Surgery for Adjacent Segment Disease, Pseudoarthrosis, and Same-level Recurrent Stenosis: Defining the Value of Surgical Intervention. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
108. Parker SL, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Preoperative Zung Depression Scale Predicts Patient Satisfaction Independent of Extent of Improvement After Revision Lumbar Surgery. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
109. Parker SL, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Extent of Preoperative Depression Predicts Outcome After Revision Lumbar Surgery for Adjacent Segment Disease, Recurrent Stenosis, and Pseudoarthrosis. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
110. Parker SL, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Cost-utility and Comparative Effectiveness Analyses of Trans-foraminal Lumbar Interbody Fusion (TLIF) vs. Comprehensive Medical Management for Lumbar Spondylolisthesis. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
111. Parker SL, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Cost-utility and Comparative Effectiveness Analyses of Laminectomy vs. Comprehensive Medical Management for Lumbar Stenosis. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*
112. Parker SL, Mendenhall S, Shau D, Cheng J, Devin C, **McGirt MJ**. Comprehensive Assessment of One-year Outcomes After Suboccipital Craniectomy for Chiari I Malformation in Adults. *Annual Meeting of the AANS/CNS Joint Spine Section, March 2012*

113. Parker SL, Mendenhall S, Shau D, **McGirt MJ**. Cost per quality-adjusted life year gained of revision lumbar surgery for adjacent segment disease, pseudoarthrosis, and same-level recurrent stenosis: Defining the value of surgical intervention. *Annual Meeting of the American Association of Neurological Surgeons, April 2012*.
114. Parker SL, Mendenhall S, Shau D, **McGirt MJ**. The relative impact of lumbar spondylosis on quality of life in the United States: A population health perspective. *Annual Meeting of the American Association of Neurological Surgeons, April 2012*.
115. Parker SL, Mendenhall S, Shau D, **McGirt MJ**. Cost-utility and comparative effectiveness analyses of laminectomy versus comprehensive medical management for lumbar stenosis. *Annual Meeting of the American Association of Neurological Surgeons, April 2012*.
116. Parker SL, Mendenhall S, Shau D, Zuckerman S, **McGirt MJ**. Minimally invasive versus open transforaminal lumbar interbody fusion (TLIF) for degenerative spondylolisthesis: Comparative effectiveness and cost-utility analysis. *Southern Neurosurgical Society Annual Meeting, March 2012*.
117. Parker SL, Zuckerman S, Shau D, Mendenhall S, **McGirt MJ**. Comprehensive assessment of one-year outcomes after suboccipital craniectomy for Chiari I malformation in adults. *Southern Neurosurgical Society Annual Meeting, March 2012*.
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120. Parker SL, Mendenhall S, Shau D, Zuckerman S, **McGirt MJ**. Minimally invasive versus open transforaminal lumbar interbody fusion (TLIF) for degenerative spondylolisthesis: Comparative effectiveness and cost-utility analysis. *Lumbar Spine Research Society Annual Meeting, April 2012*.
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122. Godil SS, Parker SL, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Accurately Measuring the Quality and Effectiveness of Lumbar Surgery in Registry Efforts: Determining the most Valid and Responsive Instruments. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
123. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Defining the relative utility of lumbar spine surgery: A systematic literature review of common surgical procedures and their impact on health states. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
124. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Factors influencing two-year healthcare costs in patients undergoing revision lumbar fusion procedures: A guide to where should we target our cost and quality improvement initiatives. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
125. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Minimally Invasive versus Open Transforaminal Lumbar Interbody Fusion (TLIF) for Degenerative Spondylolisthesis: Comparative Effectiveness and Cost-utility Analysis. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
126. Godil SS, Parker SL, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Accurately Measuring Outcomes after Surgery for Adult Chiari I Malformation: Determining the most Valid and Responsive Instruments. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
127. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Cost-utility and comparative effectiveness analyses of laminectomy versus comprehensive medical management for lumbar stenosis. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
128. Godil SS, Parker SL, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Accurately Measuring the Quality and Effectiveness of Cervical Spine Surgery in Registry Efforts: Determining the most Valid and Responsive Instruments. *Annual Meeting of North American Spine Society (NASS), October, 2012*.
129. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. The relative impact of lumbar spondylosis on quality of life in the United States: A population health perspective. *Annual Meeting of North American Spine Society (NASS), October, 2012*.

130. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. Use of a prospective web-based registry to determine the relative value of surgical treatments of degenerative spine disorders: Proving the real-world value of surgical care. *Annual Meeting of North American Spine Society (NASS), October, 2012.*
131. Parker SL, Godil SS, Zuckerman S, Mendenhall S, Shau D, Devin C, **McGirt MJ**. A pre-operative grading scale that predicts two-year healthcare costs following revision lumbar fusion procedures: How we can improve the cost of care we provide *Annual Meeting of North American Spine Society (NASS), October, 2012.*
132. Parker SL, Wong C, Godil SS, Zuckerman S, Mendenhall S, Shau D, **McGirt MJ**. The relative impact of lumbar spondylosis on quality of life in the United States: A population health perspective. *Annual meeting of the Congress of Neurological Surgeons, October, 2012*
133. Godil SS, Parker SL, Mendenhall S, Shau D, **McGirt MJ**. Accurately Measuring Outcomes After Surgery for Adult Chiari I Malformation: Determining the Most Valid and Responsive Instruments. *Annual meeting of the Congress of Neurological Surgeons, October, 2012*
134. Parker SL, Godil SS, Mendenhall S, Shau D, **McGirt MJ** Defining the Relative Utility of Lumbar Spine Surgery: A Systematic Literature Review of Common Surgical Procedures and their Impact on Health States. *Annual meeting of the Congress of Neurological Surgeons, October, 2012*
135. Parker SL, Godil SS, Mendenhall S, Shau D, **McGirt MJ**. Determining The Quality and Effectiveness of Spine Surgery: Is Patient Satisfaction a Valid Proxy? *Annual meeting of the Congress of Neurological Surgeons, October, 2012*
136. Parker SL, Godil SS, Mendenhall S, Shau D, **McGirt MJ**. Comprehensive Medical Management of Lumbar Stenosis and Spondylolisthesis is not Effective in Real-world Care: A Value Analysis of Cost, Pain, Disability and Quality of Life. *Annual meeting of the Congress of Neurological Surgeons, October, 2012.*
137. Parker SL, Godil SS, Zuckerman SL, Mendenhall SK, Shau DN, Devin CJ, **McGirt MJ**. Assessment Of The Minimum Clinically Important Difference In Pain, Disability, And Quality Of Life After Anterior Cervical Discectomy And Fusion (ACDF). *Annual Meeting of Cervical Spine Research Society (CSRS), December 2012.*
138. Parker SL, Godil SS, Mendenhall SK, Shau DN, Devin CJ, **McGirt MJ**. Comprehensive Assessment Of One-year Outcomes After Suboccipital Decompression For Chiari I Malformation In Adults. *Annual Meeting of Cervical Spine Research Society (CSRS), December 2012.*
139. Parker SL, Godil SS, Devin CJ, **McGirt MJ**. Relative Value Of Anterior Cervical Discectomy And Fusion (ACDF) Compared To Other Common Surgical And Medical Spine Treatments. *Annual Meeting of Cervical Spine Research Society (CSRS), December 2012.*
140. Godil SS, Parker SL, Zuckerman SL, Mendenhall SK, Shau DN, Devin CJ, **McGirt MJ**. Determining the Quality and Effectiveness of Surgical Spine Care: Patient Satisfaction is Not a Valid Proxy. *Annual Meeting of Cervical Spine Research Society (CSRS), December 2012.*
141. Godil SS, Zuckerman SL, Parker SL, Mendenhall SK, Shau DN, Devin CJ, **McGirt MJ**. Use of Intra-Operative Neuromonitoring in Cervical Spine Surgery: Does it affect outcomes? *Annual Meeting of Cervical Spine Research Society (CSRS), December 2012.*
142. Parker SL, Godil SS, Zuckerman SL, Shau DN, Mendenhall SK, Cheng JS, **McGirt MJ**. Comprehensive medical management of lumbar disc herniation, stenosis and spondylolisthesis is not effective in real-world care: A value analysis of cost, pain, disability, and QOL. *AANS/CNS Joint Spine Section, March 2013.*
143. Godil SS, Zuckerman SL, Parker SL, Aaronson OA, Devin CJ, **McGirt MJ**. Comparative Effectiveness, Cost Utility and Cost Benefit Analysis of Intra-Operative Neuromonitoring in Lumbar Spine Surgery: Where is the Value? *AANS/CNS Joint Spine Section, March 2013.*
144. Zuckerman SL, Godil SS, Parker SL, Cheng JS, Devin CJ, **McGirt MJ**. Comparative Effectiveness, Cost Utility and Cost Benefit Analysis of Intra-Operative Neuromonitoring in Cervical Spine Surgery: Where is the Value? *AANS/CNS Joint Spine Section, March 2013.*
145. Godil SS, Parker SL, Zuckerman SL, Mendenhall SK, **McGirt MJ**. Accurately Measuring Outcomes after Surgery for Adult Chiari I Malformation: Determining the most Valid and Responsive Instruments. *AANS/CNS Joint Spine Section, March 2013.*
146. Parker SL, Mendenhall SK, Shau DN, Godil SS, **McGirt MJ**. Extent of Pre-operative Depression is associated with Return to Work after Lumbar Fusion for Spondylolisthesis. *AANS/CNS Joint Spine Section, March 2013.*
147. Dewan MC, Godil SS, Mendenhall SK, Shau DN, Parker SL, Devin CJ, **McGirt MJ**. Comparative Effectiveness and Cost-Benefit Analysis of Topical Vancomycin Powder in Posterior Spinal Fusion for Spine Trauma and Degenerative Spine Disease. *AANS/CNS Joint Spine Section, March 2013.*

148. Godil SS, Mistry AM, Kilaru BK, Parker SL, **McGirt MJ**. Comparative Effectiveness of Anterior versus Posterior Approach for Treatment of Thoracolumbar Burst Fractures Without Neurological Deficit. *AANS/CNS Joint Spine Section, March 2013*.
149. Godil SS, Zuckerman SL, Parker SL, Shau DN, Mendenhall SK, **McGirt MJ**. Clinical Outcomes and Cost Utility of Adult Spinal Deformity Surgery in Real-World Care. *AANS/CNS Joint Spine Section, March 2013*.
150. Godil SS, Parker SL, Zuckerman SL, Mendenhall SK, **McGirt MJ**. Determining The Quality and Effectiveness of Spine Surgery: Patient Satisfaction is Not a Valid Proxy. *AANS/CNS Joint Spine Section, March 2013*.
151. **McGirt MJ**, Speroff T, Glassman SD, Knightly J, Mummaneni P, Oetting G, Theodore N, Gottfried O, Khairi S, Kalkanis S, Ryken T, Balturshot G, Fasset D, Reeder R, Miller C, Briggs T, Grahm T, Guthrie B, Harrington J, Shaffrey C, Elowitz E, Foley K, Harrell F, Dittus R, Asher AL. The National Neurosurgery Quality and Outcomes Database (N²QOD) Pilot: Patient-centered measurement of quality and effectiveness of care. *AANS/CNS Joint Spine Section, March 2013*.
152. Parker SL, Godil SS, Wong C, **McGirt MJ**. Defining the relative utility of lumbar spine surgery: A systematic literature review of common surgical procedures and their impact on health states. *AANS/CNS Joint Spine Section, March 2013*.
153. **McGirt MJ**, Parker SL, Godil SS, Devin CJ. Use of a web-based registry to determine the relative value of surgical and medical treatments of spine disorders: Proving the real-world value of surgical care. *AANS/CNS Joint Spine Section, March 2013*.
154. Godil SS, Parker SL, Zuckerman SL, Mendenhall SK, **McGirt MJ**. Accurately Measuring the Quality and Effectiveness of Cervical Spine Surgery in Registry Efforts: Determining the most Valid and Responsive Instruments. *AANS/CNS Joint Spine Section, March 2013*.
155. Godil SS, Parker SL, Zuckerman SL, Mendenhall SK, **McGirt MJ**. Accurately Measuring the Quality and Effectiveness of Lumbar Surgery in Registry Efforts: Determining the most Valid and Responsive Instruments. *AANS/CNS Joint Spine Section, March 2013*.
156. Parker SL, Godil SS, Mendenhall SK, Shau DN, Zuckerman SL, **McGirt MJ**. Minimally Invasive versus Open Transforaminal Lumbar Interbody Fusion (TLIF) for Degenerative Spondylolisthesis: Comparative Effectiveness and Cost-utility Analysis. *International Society for the Advancement of Spine Surgery (ISASS) Meeting, April 2013*.
157. Parker SL, Grahovac G, Vukas D, Ledic D, Vilendecic M, **McGirt MJ**. Comparative Effectiveness and Cost-utility of a Novel Annular Closure Device for Prevention of Recurrent Disc Herniation Following Lumbar Discectomy: A Prospective Cohort Study. *International Society for the Advancement of Spine Surgery (ISASS) Meeting, April 2013*.
158. Parker SL, Godil SS, Mendenhall SK, Shau DN, Zuckerman SL, **McGirt MJ**. Effectiveness and Cost per Quality Adjusted Life Year (QALY) Gained from Comprehensive Medical Management of Lumbar Spondylosis. *International Society for the Advancement of Spine Surgery (ISASS) Meeting, April 2013*.
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160. **McGirt MJ**, Speroff T, Glassman SD, Knightly J, Mummaneni P, Oetting G, Theodore N, Gottfried O, Khairi S, Kalkanis S, Ryken T, Balturshot G, Fasset D, Reeder R, Miller C, Briggs T, Grahm T, Guthrie B, Harrington J, Shaffrey C, Elowitz E, Foley K, Harrell F, Dittus R, Asher AL. The National Neurosurgery Quality and Outcomes Database (N²QOD): General Overview and Initial Results of the Pilot Year. *International Society for the Advancement of Spine Surgery (ISASS) Meeting, April 2013*.
161. Godil SS, Zuckerman SL, Parker SL, Aaronson OA, Devin CJ, **McGirt MJ**. Comparative Effectiveness, Cost Utility and Cost Benefit Analysis of Intra-Operative Neuromonitoring in Lumbar Spine Surgery: Where is the Value? *Annual Meeting of the American Association of Neurological Surgeons, April 2013*.
162. Godil SS, Parker SL, Mendenhall SK, Zuckerman SL, Shau DN, **McGirt MJ**. Cost-Utility and Comparative Effectiveness Analyses of Surgery versus Comprehensive Medical Management for Lumbar Spondylosis in Elderly. *International Meeting on Advanced Spine Techniques, July 2013*.
163. Dewan MC, Godil SS, Devin CJ, **McGirt MJ**. C2 nerve root transection during C1 Lateral Mass Screw Fixation: Does it affect Functionality and Quality of Life? *International Meeting on Advanced Spine Techniques, July 2013*.
164. Godil SS, Dewan MC, Parker SL, **McGirt MJ**. Mechanical versus Chemical Prophylaxis for Deep Venous Thrombosis in Patients undergoing Lumbar Spinal Fusion: Comparative Effectiveness and Cost-Benefit. *International Meeting on Advanced Spine Techniques, July 2013*.

165. Godil SS, **McGirt MJ**. A novel 6-item outcome instrument (VBI-6) for assessing the effectiveness of lumbar surgery in registry efforts: Utilizing the most valid and responsive items from Oswestry Disability Index and Short Form 12. *International Meeting on Advanced Spine Techniques, July 2013*.
166. Dewan MC, Godil SS, Mendenhall SK, Shau DN, Zuckerman SL, Devin CJ, **McGirt MJ**. Comparative Effectiveness and Cost-Benefit Analysis of Topical Vancomycin Powder in Posterior Spinal Fusion for Degenerative Spine Disease. *International Meeting on Advanced Spine Techniques, July 2013*.
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