

# Sharad Rajpal, M.D.

Board Certified Neurosurgeon

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## **EDUCATION**

- 2009-2010      **Clinical Spine Fellow**  
Cleveland Clinic  
Cleveland, OH
- 2008-2009      **Chief, Neurosurgery Residency**  
University of Wisconsin Hospitals and Clinics  
Madison, WI
- 2003-2008      **Neurosurgery Residency**  
University of Wisconsin Hospitals and Clinics  
Madison, WI
- 2002-2003      **General Surgery Internship**  
University of Wisconsin Hospitals and Clinics  
Madison, WI
- 1998-2002      **Medical Doctorate (M.D.)**  
University of Wisconsin Medical School  
Madison, WI
- 1993-1997      **Bachelor of Arts (Chemistry and Psychology Major)**  
St. Olaf College  
Northfield, MN  
Graduated: Summa Cum Laude

## **POSITIONS/EMPLOYMENT**

- 2017-present      **Foothills Surgery Group, LLC**  
President  
Boulder, CO
- 2015-2017      **Exempla Good Samaritan Medical Center Foundation**  
Member, Board of Directors  
Lafayette, CO
- 2014-present      **Justin Parker Neurological Institute**  
Member, Board of Directors  
Boulder, CO
- 2014-present      **Avista Adventist Hospital Spine Program**  
Spine Medical Director  
Louisville, CO
- 2012-2017      **Longmont United Hospital Orthopedic & Spine Co-Management Company, LLC**

Vice President  
Longmont, CO

2010-present **Boulder Neurosurgical & Spine Associates**  
Partner, 2012-present  
Associate, 2010-2012  
Boulder, CO

1997-1998 **Accenture, LLP**  
Computer Programmer and Analyst  
Minneapolis, MN

## **PROFESSIONAL MEMBERSHIPS**

- American Board of Neurological Surgery (ABNS) - Board Certified
- American Association of Neurological Surgeons (AANS)
- Congress of Neurological Surgeons (CNS)
- AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves
- North American Spine Society (NASS)
- American Medical Association (AMA)
- Colorado Neurosurgical Society
- Boulder County Medical Society

## **AWARDED GRANTS**

2006 **Congress of Neurological Surgeons (CNS) Synthes Spine Fellowship (\$50,000)**  
Advisor: Daniel Resnick, M.D.  
Project: The role of inflammatory mediators following contusive spinal cord injury  
University of Wisconsin Medical School Neurosurgery Residency Training Program  
University of Wisconsin Medical School, Madison, WI

## **HONORS AND AWARDS**

2019 **Marquis Who's Who®**, Lifetime Achievement Award  
2018 **Compassionate Doctor Award**, Vitals®, vitals.com  
2017 **America's Best Physicians Directory**, Today's Best Physicians National Consumer Advisory Board  
2011-2016, 2018 **Patients' Choice Award**, Vitals®, vitals.com  
2011, 2012, 2013 **Patients' Choice Physician**, Patients' Choice<sup>SM</sup>, patientschoice.org  
2011, 2012 **Compassionate Doctor Award**, Patients' Choice<sup>SM</sup>, patientschoice.org  
2010 **Outstanding Paper Award for Basic Science**, *The Spine Journal* & NASS  
2008 **Medical Student Teaching Award**, University of Wisconsin Department of Neurosurgery  
2007 **Resident Academic Achievement Award**, University of Wisconsin Department of Neurosurgery  
2007 **Mayfield Basic Science Award**, AANS/CNS Section on Disorders of the Spine and Peripheral Nerves  
2005 **Resident Academic Achievement Award**, University of Wisconsin Department of Neurosurgery  
2005 **Medtronic Sofamor Danek Health Care Professional In-Training Scholarship**  
2004 **Gold Star Recipient**, University of Wisconsin Hospitals and Clinics  
2002 **State Medical Society of Wisconsin Houghton Award for Scholastic Excellence, Extracurricular Achievement, and Interest in the Activities of Medical Organization**  
2000 **American Medical Student Association (AMSA) Leadership Recognition Award**  
1997 **Summa Cum Laude**, St. Olaf College  
1997 **Merck Index Award for Excellence in Chemistry**, St. Olaf College  
1997 **Departmental Distinction in Chemistry**, St. Olaf College  
1997 **Who's Who Among Colleges and Universities**  
1993-1997 **St. Olaf Buntrock Presidential Scholarship for High Academic Achievement**  
1995-1997 **Psi Chi Psychology Honor Society**, St. Olaf College  
1996-1997 **Beta Beta Beta Biology Honor Society**, St. Olaf College

1996 **Phi Beta Kappa Academic Honor Society**, St. Olaf College  
1993 **Rotary International Community Service Award**

## **RESEARCH**

2020-present **A Clinical Study to Assess the Safety and Effectiveness of the Premia Spine TOPS System.**  
Role: Sub-Investigator  
Sponsor: Premia Spine Ltd

2020-present **The STRUCTURE Study: A Prospective, Randomized, Controlled, Open-Label, Multi-Center Parallel Group Study of the Safety and Efficacy of KUR-113 Bone Graft versus Local Autograft for the Treatment of Patients Undergoing Single Level Transforaminal Lumbar Interbody Fusion (TLIF)**  
Role: Primary Investigator  
Sponsor: Kuros Bioscience

2020-present **A Multicenter, Randomized, Double-Blind, Sham-Controlled, Comparative Study of SI-6603 in Subjects with Lumbar Disc Herniation (Phase 3).**  
Role: Sub-Investigator  
Sponsor: Seikagaku Corporation

2017-2020 **A Concurrently Controlled Study of the LimiFlex™ Paraspinous Tension Band in the Treatment of Lumbar of Lumbar Degenerative Spondylolisthesis with Spinal Stenosis.**  
Role: Sub-Investigator  
Sponsor: Empirical Spine, Inc.

2017-2018 **Reduction of Adverse Drug Events and Readmissions (RADAX-PGx).**  
Role: Sub-Investigator  
Sponsor: Global, Inc.

2016- 2019 **A Phase 2b, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety and Efficacy of *Staphylococcus Aureus* 4-Antigen Vaccine (SA4Ag) in Adults Undergoing Elective Open Posterior Spinal Fusion Procedures with Multilevel Instrumentation.**  
Role: Sub-Investigator  
Sponsor: Pfizer

2014-2016 **A Prospective, Randomized, Double-blind, Phase II Study to Evaluate the Safety and Efficacy of Topical Thrombin (Human) Grifols as an Adjunct to Hemostasis during Vascular, Parenchymous, Soft Tissue, and Spinal Open Surgeries**  
Role: Sub-Investigator  
Sponsor: Grifols, Inc.

2014-2015 **A Multicenter, Prospective, Randomized Clinical Trial Using Dehydrated Human Amnion/Chorion Membrane (DHACM) in Decompressive Craniectomy Patients to Reduce Postoperative Scarring**  
Role: Sub-Investigator  
Sponsor: MiMedx

2013-2014 **Study of the Safety and Effectiveness of DIAM™ Spinal Stabilization System Versus Conservative Care**  
Role: Sub-Investigator  
Sponsor: Medtronic Spinal & Biologics

2013-2017 **The Investigational Plan for the Evaluation of the ACADIA™ Facet Replacement System**  
Role: Sub-Investigator  
Sponsor: Globus Medical, Inc.

- 2012-2014      **A Phase 3, Randomized, Single-Blind, Controlled Trial of Topical Fibrocaps™ in Intraoperative Surgical Hemostasis.**  
 Role: Sub-Investigator  
 Sponsor: ProFibrix, Inc.
- 2012-2016      **Prospective Randomized Clinical Trial Evaluating the Effectiveness of Lower Body Positive Pressure Treadmill Training in Patients after Lumbar Microdiscectomy and Fusion Surgeries**  
 Role: Sub-Investigator  
 Sponsor: Justin Parker Neurological Institute
- 2011-2016      **Project: DuraSeal™ Spine System Post-Approval Study**  
 Role: Sub-Investigator  
 Sponsor: Covidien
- 2011-2018      **Project: Prospective Randomized Clinical Trial Comparing PEEK and Allograft Spacers in Patients Undergoing Spinal Intervertebral Fusion Surgeries**  
 Role: Sub-Investigator  
 Sponsor: Justin Parker Neurological Institute
- 2011            **Project: A Pivotal Clinical Trial Evaluating the Safety and Effectiveness of Adherus Sealant When Used as a Dural Sealant in Cranial Procedures**  
 Role: Sub-Investigator  
 Sponsor: HyperBranch Medical Technology, Inc.
- 2006-2009      **Project: The role of inflammatory mediators in thermal hyperalgesia following contusive spinal cord injury**  
 Advisor: Daniel Resnick, M.D.  
 University of Wisconsin Medical School Neurosurgery Residency Training Program  
 University of Wisconsin Medical School, Madison, WI
- 1999            **Project: Utilization of Blood Transfusions in SICU Patients**  
 Advisor: Matilda Horst, M.D.  
 Medical Student Summer Fellowship Program for Anesthesiology and the Surgical Subspecialties  
 Henry Ford Health Hospitals, Department of Surgery, Detroit, MI
- 1996-1997      **Project: Role of Nitric Oxide Synthase in the Hippocampus**  
 Advisor: Konrad Talbot, Ph.D.  
 Independent Research Program  
 St. Olaf College, Department of Psychology, Northfield, MN
- 1995-1997      **Project: Structure, Stability, and Interaction of Cell Membrane Phospholipids**  
 Advisor: Anne Walter, Ph.D.  
 National Science Foundation Independent Research in Biology  
 St. Olaf College, Department of Biology, Northfield, MN
- 1992-1993      **Project: Serum Insulin-like Growth Factors after Liver Transplantation**  
 Advisor: Don Schalch, M.D.  
 NIH Minority High School Research Apprentice Program  
 University of Wisconsin Hospitals and Clinics, Madison, WI

## **POSTER PRESENTATIONS**

1. Villavicencio AT, **Rajpal S**, Hobbs SL, Nelson EL, Zielenski C, Beasley K, Kantha V, Burneikiene S. The Impact of Preventative Multi-modal Analgesia on Opioid Requirement and Pain Control in Patients Undergoing Lumbar Fusions. NASS 35<sup>th</sup> Annual Meeting: Virtual Experience. Oct 7-10, 2020.

2. Villavicencio AT, Nelson EL, **Rajpal S**, Beasley K, Kantha V, Burneikiene S. Local Retropharyngeal Space Anesthetic for Dysphagia Reduction after Anterior Cervical Discectomy and Fusion Surgery: A Single-Center, Prospective, Randomized Double-Blinded, Placebo-Controlled Clinical Trial. NASS 35<sup>th</sup> Annual Meeting: Virtual Experience. Oct 7-10, 2020.
3. Villavicencio AT, Nelson EL, **Rajpal S**, Beasley K, Kantha V, Burneikiene S. Local Retropharyngeal Space Anesthetic for Dysphagia Reduction after Anterior Cervical Discectomy and Fusion Surgery: A Single-Center, Prospective, Randomized Double-Blinded, Placebo-Controlled Clinical Trial. CNS Annual Meeting: Virtual Experience. Sept 12-16, 2020.
4. Villavicencio AT, **Rajpal S**, Nelson EL, Avoian S, Burneikiene S. Unplanned 30-Day Readmission Rates After Spine Surgery in a Community-Based Hospital Setting. CNS Annual Meeting: Virtual Experience. Sept 12-16, 2020.
5. Villavicencio AT, **Rajpal S**, Nelson EL, Avoian S, Burneikiene S. Unplanned 30-Day Readmission Rates After Spine Surgery in a Community-Based Hospital Setting. AANS Annual Scientific Meeting. Boston, MA. June 2020.
6. Villavicencio AT, **Rajpal S**, Shah M, Vivek N, Burneikiene S. Analyzing the Correlation Between Surgeon Experience and Patient Length of Stay. AANS Annual Scientific Meeting. Boston, MA. June 2020.
7. Villavicencio AT, **Rajpal S**, Nelson EL, Avoian S, Burneikiene S. Unplanned 30-Day Readmission Rates After Spine Surgery in a Community-Based Hospital Setting. AANS Annual Scientific Meeting. Boston, MA. June 2020.
8. Villavicencio AT, **Rajpal S**, Hobbs SL, Nelson EL, Zielenski C, Beasley K, Kantha V, Burneikiene S. The Impact of Preventative Multi-modal Analgesia on Opioid Requirement and Pain Control in Patients Undergoing Lumbar Fusions. Spine Summit. Las Vegas, NV. March 5-8, 2020.
9. Villavicencio AT, Nelson EL, **Rajpal S**, Beasley K, Kantha V, Burneikiene S. Local Retropharyngeal Space Anesthetic for Dysphagia Reduction after Anterior Cervical Discectomy and Fusion Surgery: A Single-Center, Prospective, Randomized Double-Blinded, Placebo-Controlled Clinical Trial. Spine Summit. Las Vegas, NV. March 5-8, 2020.
10. **Rajpal S**, Vivek N, Burneikiene S. *The Impact of BMI on Operating Room time, Blood Loss, and Hospital Stay in Patients Undergoing Spinal Fusion.* AANS Annual Scientific Meeting. San Diego, CA, April 13-18, 2019.
11. **Rajpal S**, Burneikiene S. *Minimally Invasive Sacroiliac Joint Fusion with Cylindrical Threaded Implants Using Intraoperative Stereotactic Navigation.* AANS Annual Scientific Meeting. San Diego, CA, April 13-18, 2019.
12. **Rajpal S**, Hobbs S, Nelson EL, Villavicencio AT, Zielenski C, Kantha V, Burneikiene S. *The Impact of Preventative Multimodal Analgesia on Postoperative Opioid Requirement and Pain control in Patients Undergoing Lumbar Fusions.* AANS Annual Scientific Meeting. San Diego, CA, April 13-18, 2019.
13. Villavicencio AT, **Rajpal S**, Nelson EL, Telang J, Kantha R, Burneikiene S. *You Are Never Too Old for Surgery: Spine Management in an Aging Population. Degenerative Stenosis/Spondylolisthesis Treatment Options.* AANS Annual Scientific Meeting. Los Angeles, CA, Apr 22-26, 2017.
14. **Rajpal S**, Villavicencio AT, Burneikiene S, Nelson EL. *The Timing of Surgery and Symptom Resolution in Patients Undergoing Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Disc Disease and Radiculopathy.* AANS Annual Scientific Meeting. Chicago, IL, April 30-May 4, 2016.
15. **Rajpal S**, Villavicencio AT, Nelson EL, Burneikiene S. *Unilateral and Bilateral Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion: Radiographic and Clinical Analysis.* AANS Annual Scientific Meeting. Chicago, IL, April 30-May 4, 2016.
16. Burneikiene S, Villavicencio AT, Mason A, **Rajpal S**. *The Timing of Surgery and Symptom Resolution in Patients Undergoing Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Disc Disease and Radiculopathy.* EuroSpine 2015. Copenhagen, Denmark, Sept 2-4, 2015.

17. Villavicencio AT, Nelson EL, Otorora F, Mason A, **Rajpal S**, Burneikiene, S. *Case Series of Anterior Intervertebral Graft Extrusions in Transforaminal Lumbar Interbody Fusion Surgeries*. AANS Annual Scientific Meeting. Washington, DC, May 2-6, 2015.
18. Villavicencio AT, Serxner BJ, Mason A, **Rajpal S**, Burneikiene S. *Unilateral vs. Bilateral Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion: Radiographic and Clinical Analysis*. CNS Annual Meeting. Boston, MA, October 18-22, 2014.
19. Mason A, Paulsen R, Babuska J, **Rajpal S**, Nelson EL, Burneikiene S, Villavicencio AT. *The Accuracy of Pedicle Screw Placement Using Intraoperative Image Guidance: A Meta Analysis*. CNS Annual Meeting, San Francisco, CA, October 19-23, 2013.
20. Villavicencio AT, Serxner BJ, Mason A, Beasley KD, Nelson EL, **Rajpal S**, Faes N, Burneikiene S. *Comparative Study of Unilateral and Bilateral Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion: Radiological and Clinical Analysis*. CNS Annual Meeting. San Francisco, CA, October 19-23, 2013.
21. Burneikiene S, Serxner BJ, Nelson EL, Mason A, **Rajpal S**, Villavicencio AT. *Radiological Outcomes in Patients Undergoing Transforaminal Lumbar Interbody Fusion (TLIF) with Interspinous Process Fixation Plate as an Adjunct to Unilateral Pedicle Screws*. 2013 AANS Annual Scientific Meeting. New Orleans, LA, April 27-May 1, 2013.
22. Burneikiene S, Villavicencio AT, Nelson EL, Mason A, **Rajpal S**, Beasley K. *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion (ACDF) for Degenerative Disc Disease and Radiculopathy*. AANS Annual Scientific Meeting. New Orleans, LA, April 27-May 1, 2013.
23. Villavicencio AT, Mason A, Serxner B, Nelson EL, **Rajpal S**, Beasley KD, Burneikiene S. *Predictive Value of the Duration of Symptoms in Patients Undergoing Anterior Cervical Discectomy and Fusion (ACDF) for Degenerative Disc Disease and Radiculopathy*. Annual Meeting of the AANS/ CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 6-9, 2013.
24. Serxner B, Villavicencio AT, Mason A, Nelson EL, **Rajpal S**, Beasley KD, Burneikiene S. *Transforaminal Lumbar Interbody Fusion (TLIF) with Interspinous Process Fixation Plate as an Adjunct to Unilateral Pedicle Screws: Radiological Outcomes*. Annual Meeting of the AANS/ CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 6-9, 2013.
25. Mason A, Beloy V, Villavicencio AT, Nelson EL, Beasley K, Burneikiene S, **Rajpal S**. *Central cord syndrome with delayed abducens and hypoglossal nerve palsies, a novel triad: Case report, review of proposed mechanisms and relevant literature*. Annual Meeting of the AANS/ CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 6-9, 2013.
26. Burneikiene S, Serxner BJ, **Rajpal S**, Nelson EL, Mason A, Villavicencio AT. *Association of Duration of Symptoms and Clinical Outcomes in Patients Undergoing Cervical Spinal Fusion for Degenerative Disc Disease and Radiculopathy*. CNS Annual Meeting. Chicago, IL, Oct 6-10, 2012.
27. Serxner BJ, Burneikiene S, Nelson EL, Mason A, **Rajpal S**, Villavicencio AT. *Transforaminal Lumbar Interbody Fusion (TLIF) with Interspinous Process Fixation Plate as an Adjunct to Unilateral Pedicle Screws: Radiological Outcomes*. CNS Annual Meeting. Chicago, IL, Oct 6-10, 2012.
28. Villavicencio AT, Serxner BJ, Burneikiene S, Nelson EL, Mason A, **Rajpal S**. *Clinical Outcomes in Patients Undergoing Transforaminal Lumbar Interbody Fusion (TLIF) with Interspinous Process Plate Fixation as an Adjunct to Pedicle Screws*. Spine Across the Sea. Kauai, HI, July 29-Aug 2, 2012.
29. Serxner BJ, Burneikiene S, Nelson EL, Mason A, **Rajpal S**, Villavicencio AT. *Preliminary Clinical Outcomes in Patients Undergoing Transforaminal Lumbar Interbody Fusion with Interspinous Process Plate Fixation as an Adjunct to Pedicle Screws*. AANS Annual Meeting. Miami, FL, April 14 -18, 2012.

30. Babuska J, Villavicencio AT, Mason A, Nelson EL, **Rajpal S**, Burneikiene S. *Accuracy Comparison for Intraoperative Biplanar and Volumetric Image Guidance: A Systematic review*. CNS Annual Meeting. Washington, DC, October 1–6, 2011.
31. Villavicencio AT, Nelson EL, Mason A, Babuska J, Carr FA, **Rajpal S**, Burneikiene S. *CO<sub>2</sub> Laser-Assisted Lumbar Fusions: Safety, Clinical Outcomes and Technical Considerations*. AANS Annual Meeting. Denver, CO, April 9-13, 2011.
32. Villavicencio AT, Nelson EL, Mason A, **Rajpal S**, Carr FA, Burneikiene S. *The Safety of Transforaminal Interbody Fusion for Deformity Correction in Degenerative Scoliosis with Spinal Stenosis*. AANS Annual Meeting. Denver, CO, April 9-13, 2011.
33. Villavicencio AT, Mason A, Nelson EL, **Rajpal S**, Carr F, Weeks B, Burneikiene S. *A Systematic Review of Accuracy and Comparison of Intraoperative Biplanar and Volumetric Image Guidance Systems*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 9–12, 2011.
34. Villavicencio AT, Nelson EL, Mason A, Babuska J, Carr F, **Rajpal S**, Burneikiene S. *CO<sub>2</sub> Laser-Assisted Lumbar Fusions: Safety, Clinical Outcomes and Technical Considerations*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 9–12, 2011.
35. **Rajpal S**, Hwang R, Mroz T, Steinmetz M. *Comparing Vertebral Body Reconstruction Implants for the Treatment of Thoracic and Lumbar Metastatic Spinal Tumors*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 9-12, 2011
36. **Rajpal S**, Hwang R, Mroz T, Steinmetz M. *A Comparison of Vertebral Body Reconstruction Implants for the Treatment of Thoracic and Lumbar Spinal Tumors: A Consecutive Case Series of 30 Patients*. AO Spine Fellows Course. Banff, Canada, April 8-11, 2010.
37. **Rajpal S**, Gordon DB, Pellino TA, Strayer AL, Brost D, Trost GR, Zdeblick TA, Resnick DK. *Forget IV PCA; Perioperative multimodal oral analgesia for spine surgery*. Annual Scientific Meeting of the American Pain Society. Tampa, FL, May 8-10, 2008.
38. **Rajpal S**, Steinmetz MP, Cook TD, Resnick DK. *Predictors of pseudoarthrosis following single level ACDF*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 7-10, 2007.
39. Miranpuri GS, **Rajpal S**, Gerovac TA, Turner NA, Tilghman JI, Allcock BK, McChesney SL, Park SW, Resnick DK. *Anti-hyperalgesic effects of vanilloid-1 and bradykinin-1 receptor antagonists following spinal cord injury in rats*. Society for Neuroscience Annual Meeting. Atlanta, GA. October 14-18, 2006.
40. **Rajpal S**, Chanbusarakum K, Deshmukh PR. *High Cervical Myelopathy Due to Arachnoiditis and Cord Tethering from Adjacent C2 Osteomyelitis: A Case Report*. American Association of Neurological Surgeons Annual Meeting. San Francisco, CA. April 23-27, 2006.
41. Moftakhar R, Niemann DB, Hussain S, **Rajpal S**, Cook T, Geraghty M, Aagaard-Kienitz, B, Turski PA, Newman GC, Turk AS. *Influence of intracranial and extracranial stent revascularization on cerebral perfusion and cognition*. American Association of Neurological Surgeons Annual Meeting. New Orleans, LA. April 2005.
42. **Rajpal S**, Tubbs RS, George TM, Oakes JW, Hadley MN, Iskandar BJ. *Outcomes of tethered cord release in 61 adults with spina bifida occulta*. American Association of Neurological Surgeons Annual Meeting. New Orleans, LA. April 2005.
43. Musunuru S, Chen H, **Rajpal S**, Stephany N, McDermott JC, Holen K, Rikkers LF, Weber SM. *Metastatic neuroendocrine hepatic tumors: resection improves survival*. Society of Surgical Oncology 58<sup>th</sup> Annual Cancer Symposium. Atlanta, GA. March 2005.
44. **Rajpal S**, Turk AS, Aagaard-Kienitz B, Niemann DB. *Transverse sinus stenting as treatment for benign intracranial hypertension in a young male*. American Society of Neuroradiology 42<sup>nd</sup> Annual Meeting. Seattle, WA. June 2004.

45. Obeid NI, **Rajpal S**, Visovatti S, Strieb, Horst HM. *Utilization of blood transfusions in SICU patients*. Society of Critical Care Medicine 29<sup>th</sup> Educational and Scientific Symposium. July 2000.

## **ORAL PRESENTATIONS**

1. **Rajpal S**. *Options for Relieving Spinal Disc Pain*. Invited Community Lecture. Boulder, CO. March 18, 2020.
2. **Rajpal S**. *Life After Residency: Navigating to a Job and Being Successful in Private Practice*. Invited Alumni Visiting Professor Lectureship, University of Wisconsin Madison Department of Neurological Surgery Graduation. Madison, Wisconsin. June 21-22, 2019.
3. **Rajpal S**. *You are Never Too Old for Surgery: Spine Management in an Aging Population*. Annual meeting of the American Association of Neurological Surgeons. San Diego, California, April 13-17, 2019.
4. **Rajpal S**. *The Benefits of Navigation*. Spine Technology Summit. San Francisco, California, Feb 28, 2019.
5. **Rajpal S**. *Posterior Cervical Techniques with Navigation*. Spine Tech Summit. San Francisco, California, March 1, 2019.
6. **Rajpal S**. *MAST MIDLF Procedure & Spinal Navigation*. Residents and Fellows Premier Event. New Orleans, LA, Jan 19, 2019.
7. **Rajpal S**. *Surgical Synergy: Navigated Spine Surgery 101*. Residents and Fellows Premier Event. New Orleans, LA, Jan 18, 2019.
8. **Rajpal S**. *Expandable Cages*. Residents and Fellows Premier Event. New Orleans, LA, Jan 18, 2019.
9. Burneikiene S, Villavicencio AT, Nelson EL, Kantha R, Beasley K, **Rajpal S**. *Medical Complications and Mortality in Octogenarians Undergoing Elective Spinal Fusion Surgeries*. Eurospine 2018, Barcelona, Spain, September 19 – 21, 2018.
10. **Rajpal S**. *Sagittal Alignment and Adult Deformity*. Decisions in Spine: Transitioning into Practice Residents and Fellows Course. Dallas, TX, Nov 3-4, 2017.
11. **Rajpal S**. *OLIF25<sup>TM</sup> Procedure*. Decisions in Spine: Transitioning into Practice Residents and Fellows Course. Dallas, TX, Nov 3-4, 2017.
12. **Rajpal S**. *The Impact of Preventative Multimodal Analgesia on Postoperative Opioid Requirements and Pain Control in Patients Undergoing Lumbar Fusions*. 15th Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, November 3, 2018.
13. Villavicencio AT, Nelson EL, **Rajpal S**, Burneikiene S. *Prediction Based on Preoperative Opioid Use of Clinical Outcomes after Transforaminal Lumbar Interbody Fusion*. NASS Annual Meeting, Orlando, FL, October 25 – 28, 2017.
14. **Rajpal S**. *The Argument for Total Disc Replacement*. 14th Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, October 21, 2017.
15. Villavicencio AT, Nelson EL, Kantha V, **Rajpal S**, Tomberlin C, Burneikiene S. *Prediction Based on Preoperative Opioid Use of Clinical Outcomes after Transforaminal Lumbar Interbody Fusion*. Annual Meeting of the Neurosurgical Society of America. Jacksonville, FL, Apr 2 – 5, 2017.
16. Villavicencio AT, Nelson EL, Kantha V, **Rajpal S**, Tomberlin C, Burneikiene S. *Prediction of Clinical Outcomes after Transforaminal Lumbar Interbody Fusions Based on Preoperative Opioid Use*. AANS Annual Scientific Meeting. Los Angeles, CA, Apr 22 – Apr 26, 2017.



17. **Rajpal S.** *Neuromodulators and Pre-emptive Analgesia.* Annual Meeting of the Section on Disorders of the Spine and Peripheral Nerves. Las Vegas, NV, Mar 8-11, 2017.
18. **Rajpal S,** Villavicencio AT, Burneikiene S, Nelson EL. *Timing of Surgery and Symptom Resolution in Patients Undergoing Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Disc Disease and Radiculopathy.* Annual Meeting of the Section on Disorders of the Spine and Peripheral Nerves. Las Vegas, NV, Mar 8-11, 2017.
19. Villavicencio AT, Nelson EL, Kantha V, **Rajpal S,** Burneikiene S. *Prediction of Clinical Outcomes after Transforaminal Lumbar Interbody Fusions Based on Preoperative Opioid Use.* Annual Meeting of the Section on Disorders of the Spine and Peripheral Nerves. Las Vegas, NV, Mar 8-11, 2017.
20. Villavicencio AT, Nelson EL, **Rajpal S,** Burneikiene S. *Association of Timing of Surgery and Clinical Outcomes in Patients Undergoing Transforaminal Lumbar Interbody Fusion.* NASS Annual Meeting, Boston, MA, Oct 26-29, 2016.
21. **Rajpal S.** *Spine Surgery in the Elderly.* 13<sup>th</sup> Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, October 8, 2016.
22. **Rajpal S.** *Decompression and Stabilization Techniques in the Posterior Cervical Spine.* Decisions in Spine: Transitioning into Practice Residents and Fellow Course. Denver, CO, May 20, 2016.
23. **Rajpal S.** *The Argument for Non-Surgical Management of C2 Fractures in the Elderly.* 12<sup>th</sup> Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, Oct 10, 2015.
24. Burneikiene S, Villavicencio AT, Nelson EL, **Rajpal S.** *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion for Degenerative Disc Disease and Radiculopathy.* 13<sup>th</sup> Annual Baltic Neurosurgery Association Meeting, Vilnius, Lithuania, Sept 11-12, 2015.
25. Burneikiene S, Villavicencio AT, Nelson EL, Mason A, **Rajpal S.** *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion for Degenerative Disc Disease and Radiculopathy.* EuroSpine 2015, Copenhagen, Denmark, September 2-4, 2015.
26. Villavicencio AT, Nelson EL, Mason A, **Rajpal S,** Burneikiene S. *The Timing of Surgery and Symptom Resolution in Patients Undergoing Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Disc Disease and Radiculopathy.* NASS and JSSR/Spine Across the Sea, Kohala Coast, HI, July 26-30, 2015.
27. **Rajpal S.** *The Argument for SI Joint Fusions.* Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, October 18, 2014.
28. **Rajpal S.** *Spinal & Neurogenic Shock.* Boulder Community Hospital. Boulder, CO, May 28, 2014.
29. **Rajpal S.** *Treatment of O-C dislocation, Jefferson fracture, and Hangman's fractures.* Special Advanced Course: Spinal Trauma in the Elderly. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, March 5-8, 2014.
30. **Rajpal S.** *Expanding Indications for Tubular and Percutaneous Access of the Spine.* Special Advanced Course: Advanced MIS Techniques - Managing MIS Complications. Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, March 5-8, 2014.
31. **Rajpal S.** *Cervical Translaminar Fixation, Cervical Lateral Mass Fixation, Anterior Cervical Discectomy and Fusion, and Corpectomy.* Special Advanced Course: Hands On Spine: Indications, Techniques and Complication Avoidance for the NP/PA Assistant. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, March 5-8, 2014.
32. **Rajpal S.** *Lateral spinal approaches.* Special Advanced Course: Special Advanced Cadaver Course: Innovative Technologies in Spine and Peripheral Nerve Surgery. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, March 5-8, 2014.

33. **Rajpal S.** *Intracranial Hemorrhages & Traumatic Brain Injury: Basic Concepts.* 3<sup>rd</sup> Annual Nursing Education Meeting: Hot Topics in 2014. Broomfield, Colorado, Feb 15, 2014.
34. **Rajpal S.** *Spine Surgery: How Indications and Complication Avoidance Influence Decisions.* Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, Colorado, Oct 26, 2013.
35. **Rajpal S.** *Treatment of O-C Dislocation, Jefferson Fracture, and Hangman's Fracture.* Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 6-9, 2013.
36. Villavicencio AT, Serxner BJ, Nelson EL, Mason A, **Rajpal S**, Burneikiene S. *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion (ACDF) for Degenerative Disc Disease and Radiculopathy.* Annual NASS Meeting, Dallas, TX, October 24-27, 2012.
37. **Rajpal S.** *Management of Spine Infections.* 9<sup>th</sup> Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, October 20, 2012.
38. Villavicencio AT, Serxner BJ, Babuska J, Nelson EL, Mason A, **Rajpal S**, Busch E, Ashton A, Burneikiene S. *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion (ACDF) for Degenerative Disc Disease and Radiculopathy.* Spine Across the Sea , Kauai, Hawaii, July 29 – August 2, 2012.
39. Burneikiene S, Carr F, Nelson EL, **Rajpal S**, Villavicencio AT. *Higher Patient Expectations Before Surgery May Be Related to Improved Clinical Outcomes.* NASS Annual Meeting, Chicago, IL, November 1-5, 2011.
40. **Rajpal S.** *Preventing Spine Site Infections.* 8<sup>th</sup> Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, CO, October 29, 2011.
41. Villavicencio AT, Carr FA, Hernandez TD, Healy KM, Nelson EL, Mason A, **Rajpal S**, Burneikiene S. *Effects of Preoperative SF-36 Mental Component Scores and Patient Pain Expectations on Clinical Outcomes Following Anterior Cervical Discectomy and Fusion.* AANS Annual Meeting, Denver, CO, April 9-13, 2011.
42. Villavicencio AT, Nelson EL, Mason A, **Rajpal S**, Carr F, Burneikiene S. *The Safety and Efficacy of Transforaminal Lumbar Interbody Fusion for Deformity Correction in Degenerative Scoliosis with Spinal Stenosis.* Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves, Phoenix, AZ, March 9-12, 2011.
43. Ahmed M, **Rajpal S**, Sweeney C, Gerovac TA, Allcock B, McChesney S, Patel A, Tilghman J, Miranpuri GS, Resnick DK. *Cannabinoid subtype-2 receptors modulate the antihyperalgesic effect of WIN 55,212-2 in rats with neuropathic SCI pain.* Annual NASS Meeting. Orlando, FL. October 5-9, 2010.
44. **Rajpal S.** *Pain Following Spine Surgery: A multimodality Approach.* 7<sup>th</sup> Annual Symposium Current Techniques in the Treatment of Cranial and Spinal Disorders. Broomfield, Colorado, Sept 11, 2010.
45. **Rajpal S**, Sweeney C, Gerovac TA, Allcock B, McChesney S, Patel A, Tilghman J, Miranpuri G, Resnick D. *The role of cannabinoids in chronic neuropathic pain development following contusive spinal cord injury.* Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ. March 11-14, 2009.
46. **Rajpal S**, Baggott C, Cain JH, Cramer S, Tilghman J, Allcock B, Miranpuri GS, Sun D, Resnick DK. *The effect of bumetanide administration on thermal hyperalgesia following contusive spinal cord injury in rats.* Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, Feb 27-March 1, 2008.
47. **Rajpal S**, Gordon D, Pellino T, Strayer A, Trost GR, Zdeblick TA, Resnick DK. *Forget IV PCA; Perioperative multimodal oral analgesia for spine surgery.* Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Orlando, FL, Feb 27-March 1, 2008.

48. **Rajpal S**, Cain JH, Allcock B, Tilghman J, Baggott C, Miranpuri GS, Resnick DK. *Intrathecal COX-2 inhibitor therapy on chronic neuropathic pain development in a rat model of contusive spinal cord injury*. Annual Meeting of the Rachidan Society. Kona, HI, Feb 3-7, 2008.
49. Trost GR, **Rajpal S**, Gordon D, Strayer A, Resnick DK. *Multimodal oral analgesia in the postoperative spinal surgery patient*. Annual Meeting of the Rachidan Society. Kona, HI, Feb 3-7, 2008.
50. **Rajpal S**, Miranpuri GS, Gerovac TA, Turner NA, Tilghman JI, Allcock BK, McChesney SL, Park SW, Resnick DK. *Anti-hyperalgesic effects of vanilloid-1 and bradykinin-1 receptor antagonists following spinal cord injury in rats*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 7-10, 2007.
51. Boisen ML, **Rajpal S**, Cheema AA, Seebruck CJ, Gerovac TA, Tilghman JI, Miranpuri GS, Resnick DK. *Celecoxib inhibits the development of chronic pain following spinal cord injury*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 7-10, 2007.
52. Cheema AA, Seebruck CJ, Boisen ML, **Rajpal S**, Horn KP, Gerovac TA, Tilghman JI, Miranpuri GS, Resnick DK, Steinmetz MP. *Effects of acute rolipram administration on functional recovery in rats following spinal cord injury*. 23<sup>rd</sup> Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 7-10, 2007
53. Steinmetz MP, Miranpuri GS, Seebruck CJ, **Rajpal S**, Gerovac TA, Horn KP, Resnick DK. *The effect of rolipram administration on thermal hyperalgesia following spinal cord injury in rats*. Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, March 7-10, 2007
54. Miranpuri GS, **Rajpal S**, Gerovac TA, Turner NA, Tilghman JI, Allcock BK, McChesney SL, Park SW, Resnick DK. *Anti-hyperalgesic effects of vanilloid-1 and bradykinin-1 receptor antagonists following spinal cord injury in rats*. Society for Neuroscience Annual Meeting. Atlanta, GA, Oct 14-18, 2006.
55. **Rajpal S**, Tubbs RS, Salamat MS, Oakes WJ, Iskandar BJ. *Tethering tracts in spina bifida occulta: a re-evaluation*. Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery. Orlando, FL. Nov 2005.
56. **Rajpal S**. UW Physical Therapy Conference. University of Wisconsin Hospitals and Clinics. "Neurosurgery – An Overview". Madison, WI, Aug 8, 2005.
57. **Rajpal S**. UW Pharmacy Conference. University of Wisconsin Hospitals and Clinics. "Neurosurgery – An Overview". Madison, WI, Aug 8, 2005.
58. Moftakhar R, Niemann DB, Hussain S, **Rajpal S**, Cook T, Geraghty M, Aagaard-Kienitz, B, Turski PA, Newman GC, Turk AS. *Influence of intracranial and extracranial stent revascularization on cerebral perfusion and cognition*. Wisconsin Neurological Society 2004 Annual Conference. Milwaukee, WI, Oct 2004.
59. **Rajpal S**, Newman GP. *Traumatic and non-traumatic carotid and vertebral artery dissection*. Department of Neurology Grand Rounds, University of Wisconsin Hospitals and Clinics. Madison, WI, Sept 2005.
60. **Rajpal S**, Newman GP. *Blunt carotid & vertebral trauma*. Department of Surgery Trauma Conference. University of Wisconsin Hospitals and Clinics. Madison, WI, Aug 2005.
61. **Rajpal S**, Walter A. *Understanding the interaction between brain phosphatidylcholine and brain sphingomyelin using fluorescent probes*. 65<sup>th</sup> Annual Meeting of the Minnesota Academy of Science Winchell Undergraduate Research Symposium. April 1997.

## **PUBLICATIONS: JOURNAL ARTICLES**

1. **Rajpal S**, Fox T, Burneikiene S. *Selective Laminectomies and Intradural Ventriculostomy Catheter-based Evacuation of Multisegmental Subdural and Epidural Extramedullary Spinal Abscess: Case Report and Review of the Literature*. SN Comprehensive Clinical Medicine. 2021 April 29. <https://doi.org/10.1007/s42399-021-00930-3>.
2. Villavicencio AT, **Rajpal S**, Nelson EL, Beasley K, Kantha V, Burneikiene S. *Local Retropharyngeal Space Anesthetic for Dysphagia Reduction after Anterior Cervical Discectomy and Fusion Surgery: A Single-Center, Prospective, Randomized Double-Blinded, Placebo-Controlled Clinical Trial*. World Neurosurgery. 2021 Feb; 146: E1 377-E383.
3. **Rajpal S**, Shah M, Vivek N, Burneikiene S. *Analyzing the Correlation Between Surgeon Experience and Patient Length of Hospital Stay*. Cureus. 2020 Aug 28; e10099.
4. **Rajpal S**, Bauer A, Forsythe RC, Burneikiene S. *Diagnostic Challenges Between Chiari Malformation and Neurocysticercosis*. Atlas of Science. 2019 May 3.
5. **Rajpal S**, Hobbs S, Nelson EL, Villavicencio AT, Zielenski C, Beasley K, Kantha V, Mesenbrink J, Burneikiene S. *The Impact of Preventative Multimodal Analgesia on Postoperative Opioid Requirement and Pain Control in Patients Undergoing Lumbar Fusions*. Clin Spine Surg. 2020 April; 33:E135-E140.
6. Villavicencio AT, Nelson EL, **Rajpal S**, Vivek N, Burneikiene S. *The Impact of BMI on Perioperative Outcomes in Patients Undergoing Transforaminal Lumbar Fusion for Degenerative Disc Disease*. Clinical Neurology and Neurosurgery. Published online Feb 11, 2019.
7. **Rajpal S**, Burneikiene S. *Minimally Invasive Sacroiliac Joint Fusion with Cylindrical Threaded Implants Using Intraoperative Stereotactic Volumetric Navigation*. World Neurosurg. 2019 Feb; 122: e1588-e1591.
8. **Rajpal S**, Colson T, Bauer A, Forsythe RC, Burneikiene S. *Chiari Malformation and Hydrocephalus Masking Neurocysticercosis: A Case Report*. World Neurosurgery. 2018 Jun;114:68-71.
9. **Rajpal S**, Nelson EL, Villavicencio AT, Telang J, Kantha R, Beasley K, Burneikiene S. *Medical Complications and Mortality in Octogenarians Undergoing Elective Spinal Surgeries*. Acta Neurochir (Wien). 2018 Jan; 160 (1):171-179.
10. Villavicencio AT, Nelson EL, Mason A, **Rajpal S**, Burneikiene S. *The Timing of Surgery and Symptom Resolution in Patients Undergoing Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Disc Disease and Radiculopathy*. Clin Spine Surg. 2017 Jul; 30(6): E765-769.
11. Villavicencio AT, Nelson EL, **Rajpal S**, Otalora F, Burneikiene S. *Case Series of Anterior Intervertebral Graft Extrusions in Transforaminal Lumbar Interbody Fusion Surgeries*. World Neurosurg: 2016 Jan; 85:130-5.
12. Villavicencio AT, Serxner BJ, Mason A, Nelson EL, **Rajpal S**, Faes N, Burneikiene S. *Unilateral and Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion: Radiographic and Clinical Analysis*. World Neurosurg 2015 Apr; 8:553-559.
13. Burneikiene S, Nelson EL, Mason A, **Rajpal S**, Villavicencio AT. *The Duration of Symptoms and Clinical Outcomes in Patients Undergoing Anterior Cervical Discectomy and Fusion for Degenerative Disc Disease and Radiculopathy*. The Spine J (15):427-432, 2015.
14. Mason A, Paulsen R, Babuska J, **Rajpal S**, Burneikiene S, Nelson EL, Villavicencio AT. *The accuracy of Pedicle Screw Placement Using Intraoperative Image Guidance Systems: A Meta Analysis*. J Neurosurg Spine. 2014 Feb; 20(2):196-203.
15. Villavicencio AT, Nelson EL, Mason A, **Rajpal S**, Burneikiene S. *Outpatient Instrumented Lumbar Interbody Fusion*. J of Spinal Disorders & Techniques. 2013 Aug;26(6): 298-304.

16. Mason A, Ayres K, Burneikiene S, Villavicencio AT, Nelson E, **Rajpal S**. *A Novel Case of Resolved Post-Herpetic Neuralgia with Subsequent Development of Trigeminal Neuralgia: Case Report and Review of the Literature*. Case Rep Med. 2013:398513
17. **Rajpal S**, Hwang R, Mroz T, Steinmetz M. *Comparing Vertebral Body Reconstruction Implants for the Treatment of Thoracic and Lumbar Metastatic Spinal Tumors: A Consecutive Case Series of 37 Patients*. J of Spinal Disorders & Techniques. 2012 Apr; 25(2):85-91.
18. Burneikiene S, Nelson EL, Mason A, **Rajpal S**, Villavicencio AT. *Complications in Patients Undergoing Transforaminal Lumbar Interbody Fusion with Deformity Correction for Degenerative Scoliosis and Spinal Stenosis* Surg Neurol Int. 2012 3(1):25.
19. Miranpuri AS, **Rajpal S**, Salamat SS, Kuo KS. *Upper cervical intramedullary spinal metastasis of ovarian carcinoma. Case report and review of the literature*. Journal of Medical Case Reports. 2011 5(1):311.
20. **Rajpal S**, Moftakhar R, Bauer AM, Turk AS, Niemann DB. *Superselective Wada Test for Ruptured Spontaneous Fusiform Middle Cerebral Artery Aneurysm: A Technical Case Report*. Journal of Neurointerventional Surgery. 2011 3(3):237-41.
21. Ahmed M, **Rajpal S**, Sweeney C, Gerovac TA, Allcock B, McChesney S, Patel A, Tilghman J, Miranpuri GS, Resnick DK. *Cannabinoid subtype-2 receptors modulate the antihyperalgesic effect of WIN 55,212-2 in rats with neuropathic SCI pain*. The Spine Journal. 2010 10(12):1049-54.
22. **Rajpal S**, Gordon DB, Pellino TA, Strayer AL, Brost D, Trost GR, Zdeblick TA, Resnick DK. *Comparison of perioperative multimodal analgesia versus IV PCA for spine surgery*. Journal of Spinal Disorders and Techniques. Journal of Spinal Disorder and Techniques. 2010 23(2):139-45.
23. Resnick DK, **Rajpal S**, Steinmetz MK, Cook T. *Common pitfalls in interpretation of medical evidence: a case demonstration of misleading interpretation in the analysis of cervical spine fusions*. The Spine Journal. 2009 9(1):905-9.
24. Steinmetz MP, **Rajpal S**, Trost GT. *Segmental spinal instrumentation in the management of scoliosis*. Neurosurgery. 2008 63(3 suppl):131-8.
25. **Rajpal S**, Resnick DK. *Rod cantilever techniques*. Neurosurgery 2008 63(3 suppl):157-62.
26. Cramer SW, Baggott C, Cain J, Tilghman J, Allcock B, Miranpuri GS, **Rajpal S**, Sun D, Resnick D. *The role of cation-dependent chloride transporters in neuropathic pain following spinal cord injury*. Molecular Pain. 2008 4:36.
27. **Rajpal S**, Steinmetz MP, Cheema AA, Seebrock CJ, Gerovac TA, Miranpuri GS, Resnick DK. *Effect of delayed rolipram on thermal hyperalgesia following spinal cord injury*. Annals of Neurosciences. 2008 15:27-30.
28. Cain JH, Baggott C, Tilghman JI, **Rajpal S**, Miranpuri GS, Resnick DK. *Recent developments in the study of spinal cord injury and neuropathic pain*. Annals of Neurosciences. 2007 14:96-107.
29. **Rajpal S**, Salamat SS, Tubbs RS, Kelly DR, Oakes WJ, Iskandar BJ. *Tethering tracts in spina bifida occulta: revisiting an established nomenclature*. Journal of Neurosurgery (Spine) 2007 7:1-8.
30. **Rajpal S**, Resnick DK, Baskaya MK. *The role of journal club in neurosurgical training*. Neurosurgery. 2007 61:397-401.
31. **Rajpal S**, Gerovac TA, Turner NA, Tilghman JI, Allcock B, McChesney S, Miranpuri GS, Park SW, Resnick DK. *Anti-hyperalgesic effects of vanilloid-1 and bradykinin-1 receptor antagonists following spinal cord injury in rats*. Journal of Neurosurgery (Spine). 2007 6:420-424.
32. **Rajpal S**, Tubbs RS, George TM, Oakes JW, Fuchs H, Hadley MN, Iskandar BJ. *Tethered Cord from Spina Bifida Occulta Presenting in Adulthood: A Tri-Center Review of 61 Patients*. Journal of Neurosurgery (Spine). 2007 6:210-215.

33. **Rajpal S**, Chanbusarakum K, Deshmukh PR. *High Cervical Myelopathy Due to Arachnoiditis and Cord Tethering from Adjacent C2 Osteomyelitis: A Case Report*. Journal of Neurosurgery (Spine). 2007 6:64-67.
34. Musunuru S, Chen H, **Rajpal S**, Stephani N, McDermott J, Holen K, Rikkers LF, Weber SM. *Metastatic Neuroendocrine Hepatic Tumors: Resection Improves Survival*. Archives of Surgery. 2006 141:1000-1004.
35. Moftakhar R, Turk AS, Niemann DB, Hussain S, **Rajpal S**, Cook T, Geraghty M, Aagaard-Kienitz, B, Turski PA, Newman GC. *Effects of carotid and vertebral stent placement on cerebral perfusion and cognition*. AJNR. 2005 26:1772-1780.
36. **Rajpal S**, Niemann DB, Turk AS. *Transverse sinus stenting as treatment for benign intracranial hypertension in a young male. Case report and review of the literature*. Journal of Neurosurgery (Pediatrics). 2005 3:102:342-346.
37. **Rajpal S**, Niemann DB, Aagaard-Kienitz B, Turk AS. *Intracranial endovascular stent placement for symptomatic metastatic non-Hodgkin lymphoma. Case report*. Journal of Neurosurgery. 2005 102:922-926.
38. Nichol PF, Corliss RF, **Rajpal S**, Helin M, Lund DP. *Perforation of the appendix from intestinal mucormycosis in a neonate*. Journal of Pediatric Surgery. 2004 39:1133-1135.
39. Schalch DS, Kalayoglu M, Pirsch JD, Yang H, Raslich M, **Rajpal S**. *Serum insulin-like growth factors and their binding proteins in patients with hepatic failure and after liver transplantation*. Metabolism. 1998 47:200-206.

## **PUBLICATIONS: BOOK CHAPTERS**

1. Nelson EL, **S Rajpal**, Villavicencio AT, Bauer A, Burneikiene S. "Neurosurgery" in *Cannabis in Medicine: An Evidence-Based Approach*. Finn K. (ed). Springer Nature. Switzerland AG. 2020.
2. **S Rajpal**, S Burneikiene. "Lumbar spondylolisthesis" in *Spine Surgery in an Aging Population*. Brooks and Strayer (eds). Thieme Medical Publishers, Inc. New York, NY. 2019.
3. **S Rajpal**, Erika Freiberg, Sara Kadlec. "Hazards in the Neurosurgical Operating Room," in the *Handbook of Neurosurgery, Neurology, and Spinal Medicine for Nurses and Advanced Practice Health Professionals*. Routledge. Philadelphia, PA. 2017.
4. **S Rajpal**, MP Steinmetz. "Intraoperative Assessment of Neurological Evaluation" in *The Cervical Spine*, 5<sup>th</sup> ed. Benzel EC. (ed). Wulters Kluwer: Philadelphia, PA. 2012.
5. **S Rajpal**, Orr D, MP Steinmetz. "Sacral Tumors: Regional Challenges" in *Spine Surgery: Techniques, Complication Avoidance, and Management*, 3<sup>rd</sup> ed. Benzel EC. (ed). Elsevier: Philadelphia, PA. 2012.
6. **S Rajpal**, DK Resnick. "Medical Management of Acute Spinal Cord Injury. No administration of Steroids" in *Spine Surgery: Techniques, Complication Avoidance, and Management*, 3<sup>rd</sup> ed. Benzel EC. (ed). Elsevier. Philadelphia, PA. 2012.
7. **S Rajpal**, Iskandar BJ. "Lipomyelomeningocele" in *Youmans Neurological Surgery*, 6<sup>th</sup> ed. Winn (ed) (*in print*).
8. BG Rocque, **S Rajpal**, DK Resnick. "Post-laminectomy Kyphosis in the Thoracic and Lumbar Spine" in *The Textbook of Spinal Surgery*, 3<sup>rd</sup> ed, Bridwell (editor). Lippincott, Williams Wilkins: 2011
9. **S Rajpal**, DK Resnick. "Anterior Retroperitoneal Flank Approach" in *Fundamentals of Operative Techniques in Neurosurgery*, 2<sup>nd</sup> ed. Connolly, McKhann, Huang, Choudhri, Mocco (eds). Thieme Medical Publishers, Inc. New York, NY. 2010.
10. **S Rajpal**, SB Lapsiwala, BJ Iskandar. "Tethered Cord Syndrome in Adults with Spina Bifida Occulta" in *Tethered Cord Syndrome*, 2<sup>nd</sup> ed. Yamada (ed). Thieme Medical Publishers, Inc. New York, NY. 2010.

11. **S Rajpal, GR Trost.** “Cervical Spine Kinematics and the Biomechanics of the Injured Cervical Spine: Craniocervical Junction (Occiput-C2)” in Cervical Spine Trauma. Vaccaro, Anderson (eds). Rothman Institute. Philadelphia, PA. 2010.
12. **S Rajpal, GR Trost.** “Posterolateral Fusion with or without Pedicle Screws for Low Back Pain” in Surgical Management of Low Back Pain, 2<sup>nd</sup> ed. Resnick, Haid, Wang (eds). Thieme Medical Publishers, Inc. New York, NY. 2009.
13. **S Rajpal, BJ Iskandar.** “Cranial, non-tumoral neuroendoscopy: a review” in Pan Arab Neurosurgical Journal, Pediatric Neurosurgery Supplement. Iskandar BJ (ed). MSD Printing Press. 2008.
14. **S Rajpal, BJ Iskandar.** “Surgical Approaches to Pediatric Midline Posterior Fossa Tumors” in Neurosurgical Operative Atlas 2E: Neuro-oncology. Badie (ed). Thieme Medical Publishers, Inc. New York, NY. 2006.

## **PUBLICATIONS: MISCELLANEOUS**

- **S Rajpal, DK Resnick.** A practical guide to adult spine clearance. University of Wisconsin Hospitals and Clinics Trauma Notes. Aug 2006.
- **S Rajpal, GR Trost.** Traumatic brain injury. University of Wisconsin Hospitals and Clinics Trauma Notes. Jan 2004.

## **EDUCATIONAL COURSES**

- Faculty. “Future Spine Leaders Event” Miami, FL, May 21-May 22, 2021.
- Faculty. “Spine Tech Summit”, Virtual, March 5-6, 2021.
- Community Lecture: Latest Treatments for Back Pain, Boulder, CO, March 4, 2021.
- Chairman. “Advancements in Spine Surgery” Austin, TX, Feb 5-6, 2021.
- Faculty. Webex: “Mazor Robotics 101”, Louisville, CO, Jan 29, 2021.
- Faculty. “Mazor Robotic Guidance Workflow Training”, Aurora, CO, Jan 21-23, 2021.
- Faculty. “Mazor Robotic Guidance OLIF360 Single-Position Procedure Workflow Training”, Aurora, CO, Jan 21-23, 2021.
- Faculty. Webex: Navigated Nanotechnology. An Evening with the Experts”, Boulder, CO, Jan 7, 2021.
- Faculty. Webex: “Spine Navigation 201”, Louisville, CO, Oct 2, 2020.
- Faculty. Webex: “How to Ask for the Technology and Partner with Your Hospital Administration”, Boulder, CO, July 22, 2020.
- Faculty. Webex: “Spine Navigation 201”, Louisville, CO, July 17, 2020.
- Faculty. Webex: “Anterior vs. Complex Posterior Cervical Approaches”, Boulder, CO, May 21, 2020.
- Community Lecture: Back Pain: Causes and Simple Treatments Boulder, CO, April 30, 2020.
- Community Lecture: Relieving Spinal Disc Pain & Treatment of Common Spinal Conditions, Boulder, CO, March 18, 2020.
- Chairman. “Advancements in Stealth Navigated and Robotic Spine Surgery” Las Vegas, NV, Jan 31-Feb 1, 2020.
- Faculty. “Spine Tech Summit” Austin, TX, Jan 16-17, 2020.
- Chairman. “Advancements in Stealth Navigated and Robotic Spine Surgery” Chicago, IL, Nov 8-9, 2019.
- Chairman. “The Power of a Complete Navigated TLIF” Denver, CO, June 27, 2019.
- Chairman. “Fundamentals of Navigated Spine Surgery” Denver, CO, June 14-15, 2019.
- Faculty. “Minimally Invasive Techniques Training” Dallas, TX, April 27, 2019.
- Program Advisor. “Spine Tech Summit” San Francisco, CA, Feb 28-March 1, 2019.
- Chairman. “Fundamentals of Navigated Spine Surgery” Las Vegas, NV, Feb 1-2, 2019.
- Faculty. “Residents and Fellows Premier Medical Educational Event” New Orleans, LA, Jan 17-19, 2019.
- Faculty. “Navigated Surgical Techniques Training” Springfield, MO, Jan 16, 2019.
- Chairman. “Fundamentals of Navigated Spine Surgery” Las Vegas, NV, Nov 10-11, 2018.
- Faculty. “Surgical Synergy Techniques Training” Long Beach, CA, Oct 21, 2018.
- Faculty. “Surgical Synergy Techniques Training” Dallas, TX, Sept 22, 2018.
- Faculty. “Navigated Spinal Workflow Training” Morgantown, WV, Aug 25, 2018
- Faculty. “Navigated OLIF L2-L5 Technique Training” Nashville, TN, Aug 24, 2018.

- Faculty. “Surgical Synergy Techniques Training” Madison, WI, Aug 3, 2018.
- Faculty. “Fundamentals of Navigated Spine Surgery” Las Vegas, NV, Feb 9-10, 2018.
- Chairman. “Decisions in Spine: Transitioning into Practice Residents and Fellow Course” Dallas, TX, Nov 3-4, 2017.
- Faculty. “Decisions in Spine: Transitioning into Practice Residents and Fellow Course” Denver, CO, May 20-21, 2016.
- Faculty. “Surgical Navigation Technology Workflows New Surgeons”, Henderson, NV, Oct 23, 2015.
- Faculty. “Spinal Pelvic Realignment in the Adult Patient” Orlando, FL, Feb 21-22, 2014.
- Faculty. “Boulder Neurosurgical and Spine Associates Nursing Symposium”, Boulder, CO, 2014.
- Faculty. “Cleveland Clinic Spine Review” Cleveland, OH, 2009-present.
- Faculty. “Boulder Neurosurgical and Spine Associates Neurosurgical Symposium”, Boulder, CO, 2010-present

## **COMMITTEES/ACTIVITIES**

- Planning Committee Member. Justin Parker Neurological Institute (JPNI): Annual Nursing Education: Hot Topics Meeting (2014-2016)
- Examiner. Medical Student Neurosciences Rotation OSCE Examination (2007-2009)
- Committee Member. University of Wisconsin Hospitals and Clinics Graduate Medical Education Committee (2006-2009)
- Committee Member. University of Wisconsin Hospitals and Clinics Graduate Medical Education Appeals Committee (2007-2009)
- Committee Member. Congress of Neurological Surgeons (CNS): Case of the Month Website Section (2005-current)
- Committee Member. Congress of Neurological Surgeons (CNS): Education Committee (2006-current)
- Member. ThinkFirst Education Program (2005-2009)
- Participant. Verona Area High School Junior Career Days (2007-2009)
- Reference Committee Member, State Medical Society of Wisconsin House of Delegates (2000-2001)
- Membership Committee of the Board, State Medical Society of Wisconsin House of Delegates (1999)
- President, Dane County Medical Society (1999)