



IRA M. GARONZIK, M.D.

Baltimore Neurosurgery and Spine Center
Mirowski Medical Office Building
5051 Greenspring Avenue, Suite 101
Baltimore, Maryland 21209
Office: (410) 664-3680
Fax: (410) 664-3686
www.baltimoreneurosurgery.com

EDUCATION

- Medical School: Emory University School of Medicine
Atlanta, Georgia
Degree: Doctor of Medicine, 1997
Summa cum laude, Valedictorian
- Undergraduate: The Johns Hopkins University
Baltimore, Maryland
Degree: Bachelor of Arts, 1993
Major: Biology
General and Departmental Honors
- High School: Pikesville High School
Pikesville, Maryland, 1989

PROFESSIONAL EXPERIENCE

- 07/1997 – 06/1998 Intern, Department of General Surgery
The Johns Hopkins Hospital, Baltimore, Maryland
- 07/1998 – 06/2000 Assistant Resident, Department of Neurosurgery
The Johns Hopkins Hospital, Baltimore, Maryland
- 07/2000 – 06/2001 Chief Resident, Department of Neurosurgery
The Johns Hopkins Hospital, Baltimore, Maryland
The Johns Hopkins Bayview Medical Center
Pediatric Neurosurgery Service
Walker Functional Neurosurgery Service
- 07/2001 – 06/2003 Functional Clinical and Research Fellow
The Johns Hopkins Hospital, Baltimore, Maryland



Frederick Lenz, M.D.

07/2003 – 06/2004	Assistant Chief of Service, Instructor Department of Neurosurgery The Johns Hopkins Hospital, Baltimore, Maryland
07/2004-06/2005	Advanced Specialty Training in Spinal Surgery Department of Neurosurgery The Johns Hopkins Hospital, Baltimore, Maryland Ziya Gokaslan, M.D.
07/2004-12/2010	Assistant Professor Department of Neurosurgery The Johns Hopkins Hospital Johns Hopkins Bayview Medical Center
07/2005-present	Director, Baltimore Neurosurgery and Spine Center Attending Neurosurgeon Sinai Hospital Northwest Hospital Medical Center Baltimore, Maryland
07/2007-present	Director of Medical Education Lifebridge Brain and Spine Institute Sinai Hospital, Baltimore, Maryland
07/2007-06/2009	Director of Deep Brain Stimulation Program Lifebridge Brain and Spine Institute Sinai Hospital, Baltimore, Maryland
07/2009-present	Director of Spine Lifebridge Brain and Spine Institute Sinai Hospital, Baltimore, Maryland
10/2012-present	Chief of Neurosurgery Northwest Hospital Medical Center Baltimore, Maryland

CERTIFICATION AND LICENSURE



2008 Diplomate American Board of Neurological Surgeons
 2001 American Board of Neurological Surgery Primary Examination
 2001 State of Maryland Medical License D0057725

AWARDS AND HONORS

Otenasek Neurosurgery Faculty Teaching Award, Johns Hopkins Hospital
 Walter Dandy Clinical Research Award
 Neurosurgery Research and Education Foundation-Medtronic Research Fellowship
 Summa cum laude; Emory University School of Medicine
 Alpha Omega Alpha, Junior Year; Emory University School of Medicine
 Alpha Omega Alpha Research Fellowship
 Joseph B. Whitehead Surgery Merit Scholarship
 Southern Medical Association Scholarship
 Gate Pharmaceuticals Achievement Award
 Phi Beta Kappa, Junior Year; The Johns Hopkins University
 Barry Goldwater Research Scholarship
 General and Departmental Honors; The Johns Hopkins University

PROFESSIONAL SOCIETIES and BOARD MEMBERSHIPS

American Association of Neurological Surgeons
 Congress of Neurological Surgeons
 North American Spine Society
 The Movement Disorder Society
 AO Spine North America
 Neuromodulation Academy
 Board Member: Hopkins Hillel 2009-present

RESEARCH EXPERIENCE

1990 – 1993 Saul Roseman, Ph.D.
 Department of Biology; The Johns Hopkins University
 Baltimore, Maryland
 Chemotactic response and enzymatic pathway of bacteria toward
 carbohydrates

1994 Frederick Lenz, M.D.
 Department of Neurosurgery; The Johns Hopkins Hospital



Baltimore, Maryland

Neuronal activity of sensory thalamus in patients with amputations

- 1996 – 1997 Mahlon DeLong, M.D. and Jerrold Vitek, M.D.
 Department of Neurology; Emory University School of Medicine
 Atlanta, Georgia
 Effects of pallidotomy on motor function in patients with
 Parkinson's Disease
- 2001 – 2003 Frederick Lenz, M.D.
 Department of Neurosurgery; The Johns Hopkins Hospital
 Baltimore, Maryland
 AANS NREF-Medtronic Fellowship(2002-2003)
 Thalamic and cortical mechanisms of pain and effects of deep
 brain stimulation on movement disorders and chronic pain

TEACHING EXPERIENCE

- 1993 Instructor, Biochemistry Laboratory
 The Johns Hopkins University
 Baltimore, Maryland
- 1994 Instructor, Problem-Based Learning Course
 Emory University School of Medicine
 Atlanta, Georgia
- 2002 Instructor, Neuroscience Course
 Johns Hopkins School of Medicine
 Baltimore, Maryland
- 2003 Instructor, Neuroscience Course
 Johns Hopkins School of Medicine
 Baltimore, Maryland
- 2005 Faculty, AO Spine North America
- 2008 Teaching Consultant, Boston Scientific Spinal Cord Stimulation
- 2008 Teaching Consultant, ANS Spinal Cord Stimulation



LECTURES AND TALKS

1. Careers in Biology Panel: Why Neurosurgery? Introduction to Biology Undergraduate Course, The Johns Hopkins University, October 5, 2001.
2. Back and Neck Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, November 16, 2001.
3. Cranial Nerves and Eye. Discussion Group Clinical Correlation, Human Anatomy Course, Johns Hopkins School of Medicine, January 29, 2002.
4. Human CNS Pain Related Activity: Thalamo-corticolimbic Connections. Blaustein Pain Conference, Johns Hopkins School of Medicine, February 8, 2002.
5. Surgical Advances and Medical Management for the Treatment of Parkinson's Disease and Essential Tremor. Medtronic Neurological, Harbor Court Hotel, Baltimore, MD, February 12, 2002.
6. Stereotactic Functional Neurosurgery: Treatment of Parkinson's Disease and Tremor. Geriatric Medicine Grand Rounds, Johns Hopkins Bayview Medical Center, March 12, 2002.
7. Deep Brain Stimulation for Movement Disorders: Medicare Policy Advisory Talk. TrailBlazer Health Enterprises, LLC, Timonium, MD, March 27, 2002.
8. Brain Tumors and Subarachnoid Hemorrhage. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, May 17, 2002.
9. Deep Brain Stimulation for Parkinson's Disease. Young Onset Parkinson's Support Group, Johns Hopkins Outpatient Center, June 8, 2002.
10. Surgical Management of Movement Disorders: The Johns Hopkins Experience. Neurology Rounds, Johns Hopkins Bayview Medical Center, June 21, 2002.
11. DBS for Parkinson's Disease. York Area Parkinson's Disease Support Group, York, PA, October 10, 2002.



12. Neurosurgery 101. Introduction to Biology Undergraduate Course, The Johns Hopkins University, October 12, 2002.
13. Stereotactic Functional Neurosurgery: The Johns Hopkins Experience with Microelectrode Recording. Medtronic Neurological, Minneapolis, MN, October 30, 2002.
14. Brain Tumors and Subarachnoid Hemorrhage. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, December 13, 2002.
15. Cranial Nerves and Eye. Discussion Group Clinical Correlation, Human Anatomy Course, Johns Hopkins School of Medicine, January 29, 2003.
16. Techniques of DBS for Parkinson's Disease. DBS Support Group, Columbia, MD, February 22, 2003.
17. Deep Brain Stimulation for Movement Disorders at The Johns Hopkins Hospital. Neurology Rounds, Johns Hopkins Bayview Medical Center, March 8, 2003.
18. Brain Tumors. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, May 16, 2003.
19. Spine Anatomy. AO ASIF ORP Course, Mystic Marriott Hotel and Spa, Groton, CT, June 5, 2004.
20. Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, September 10, 2004.
21. Surgical Management of Spinal Neoplasms. First Annual Current Concepts of Cancer Pain Management, Johns Hopkins Department of Oncology, October 15, 2004.
22. Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, November 12, 2004.
23. Cervical Spine Instrumentation. Neurospine Operating Room Grandrounds, Johns Hopkins Hospital, January 13, 2005.
24. Cervical Spine Instrumentation. Johns Hopkins Bayview Operating Room Personnel, Baltimore, Maryland, January 13, 2005.
25. Anatomy of Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, February 16, 2005.



26. Surgical Approaches to the Spine. AO ASIF ORP Course, Sheraton Inner Harbor, Baltimore, MD, February 19, 2005.
27. Innovations in Spine Surgery. AO ASIF ORP Course, Sheraton Inner Harbor, Baltimore, MD, February 20, 2005.
28. Anatomy of Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, April 8, 2005.
29. Surgical Approaches to the Spine. AO ASIF ORP Course, Westin Hotel, Atlanta, GA, April 9, 2005.
30. Patient Positioning in OR for Spine Surgery. AO ASIF Challenges and Complications in Complex Spine Surgery Symposium, Wyndham Inner Harbor Hotel, Baltimore, MD, April 30, 2005.
31. Surgical Anatomy of Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, May 6, 2005.
32. Thoracic and Lumbar Spine Instrumentation. Neurospine Operating Room Grandrounds, Johns Hopkins Hospital, May 12, 2005.
33. Challenges in Patient Positioning in OR for Spine Surgery. Neurosurgery Grand Rounds, Johns Hopkins Hospital, June 2, 2005.
34. Neurosurgical Management of Back Pain, Neurology Resident Conference, Johns Hopkins Hospital, June 29, 2005.
35. Surgical Anatomy of Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, July 8, 2005.
36. Degenerative Lumbar Spine: Complications, Avoidance, Pearls. AO ASIF Resident and Fellows Course, Hilton Hotel, Boston, MA, September 11, 2005.
37. Anatomy of Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, September 16, 2005.
38. Low Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, November 11, 2005.
39. Examining the Patient with Low Back Pain. Pain Medicine Update for Pain Specialists and Primary Care Providers, Johns Hopkins University School of Medicine, Baltimore, MD, December 10, 2005.



40. Degenerative Lumbar Spine: Complications, Avoidance, Pearls. AO ASIF Resident and Fellows Course, Loews Hotel, Philadelphia, PA, January 15, 2006.
41. Low Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, January 20, 2006.
42. Approaches to Occipitocervical Spine. Neurospine Operating Room Grandrounds, Johns Hopkins Hospital, January 26, 2006.
43. Update in Traumatic Spinal Cord Injury. Seminars in Trauma 2006: A Continuing Education Series for Nurses, Johns Hopkins Hospital, March 1, 2006.
44. Patient Positioning in OR for Spine Surgery. AO ASIF Challenges and Complications in Complex Spine Surgery Symposium, Eden Roc Resort and Spa, Miami Beach, FL, April 1, 2006.
45. CSF Leak in Spine Surgery. AO ASIF Challenges and Complications in Complex Spine Surgery Symposium, Eden Roc Resort and Spa, Miami Beach, FL, April 1, 2006.
46. How to Become a Neurosurgeon. Introduction to Biology Undergraduate Course, The Johns Hopkins University, April 29, 2006.
47. Low Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, May 5, 2006.
48. Spine Anatomy and Instrumentation of the Occipitocervical Spine. Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course, VISTA Lab, Baltimore, MD, June 2, 2006.
49. Issues in Coding for Cervical and Lumbar Spine Surgery. American Academy of Professional Coders Charm City Chapter, Baltimore, MD, March 20, 2007.
50. Odontoid Screw Fixation. Zimmer Hands-On Spine Surgery Review Course for Residents and Fellows, Johns Hopkins Medical Institutions, Baltimore, MD, April 1, 2007.
51. Techniques in Spinal Cord Stimulation. ANS Cadaver Lab Course, VISTA Lab, Baltimore, MD, July 9, 2007.
52. Low Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, May 5, 2007.



53. Lower Cervical Spine Injuries, Stryker Spine Controversies in Cervical Spine Surgery, Vista Lab, Baltimore, MD, September 7, 2007.
54. Low Back Pain. Neurology Medical Student Clerkship, Johns Hopkins School of Medicine, October 12, 2007.
55. Cervical Trauma. AOSpine Advanced Concepts in the Management of Spinal Disorders, Sun Valley Resort, Sun Valley, Idaho, February 23, 2008.
56. Aging Spine and Interspinous Process Devices. AOSpine Advanced Concepts in the Management of Spinal Disorders, Sun Valley Resort, Sun Valley, Idaho, February 24, 2008.
57. Novel Techniques to Cervical Spine: Zero-P and ProDisc-C, Long Island Jewish Department of Neurosurgery, Great Neck, New York, April 17, 2008.
58. Interspinous Process Devices. Lifebridge Health Brain and Spine Institute PA Group, Baltimore, Maryland, May 6, 2008.
59. Zero Profile Devices for the Anterior Spine. Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course, VISTA Lab, Baltimore, MD, July 18, 2008.
60. Lateral Approaches to the Lumbar Spine. Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course, VISTA Lab, Baltimore, MD, July 18, 2008.
61. Cyberknife Treatment of Cavernous Malformation Causing Epilepsy: Risks and Benefits, Lifebridge Cancer Institute Tumor Board, Baltimore, MD, July 29, 2008.
62. Management of Spinal Instability for Metastatic Spine Disease, Lifebridge Cancer Institute Tumor Board, Baltimore, MD, March 17, 2009.
63. Practical Exercise: Lateral Mass Plating, Odontoid Screw, Occipital Cervical Fixation Techniques. AO ASIF Resident and Fellows Course, Doubletree Hotel, Philadelphia, PA, April 24-26, 2009.
64. Cervical Radiculopathy with Neurological Deficit. AO ASIF Resident and Fellows Course, Doubletree Hotel, Philadelphia, PA, April 24-26, 2009.
65. Management of Cervical Radiculopathy. Lifebridge Health Brain and Spine Institute PA Neuroscience Group, Baltimore, Maryland, June 2, 2009.



66. Overview of Cervical Myelopathy and Radiculopathy. PMR Resident Lecture Series, Sinai Hospital, Baltimore, Maryland, July 3, 2009.
67. Crossing the Cervico-thoracic junction. Depuy Spine Future Leaders Workshop, Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course, VISTA Lab, Baltimore, MD, July 10, 2009.
68. Management of Cervical and Lumbar Spine Injuries in the Injured Worker: Guest Lecturer with Dr Ross Sugar at Traveler's, Hunt Valley, MD, November 17, 2009.
69. Intro to Neurosurgery. Introduction to Biology Undergraduate Course, The Johns Hopkins University, February 16, 2010.
70. Commencement Speaker, Bedford Elementary School, Baltimore, MD, June 11, 2010.
71. Surgical Management of Lumbar Spinal Stenosis, Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course, VISTA Lab, Baltimore, MD, July 9, 2010.
72. Intro to Neurosurgery. Introduction to Biology Undergraduate Course, The Johns Hopkins University, February 22, 2011.
73. Moderator, Perspectives on Assessment and Treatment of Spinal Pain, Brain and Spine Institute Symposium for Community Physicians, Baltimore, Maryland, May 7, 2011.
74. Approach to the Patient with Low Back Pain, Brain and Spine Institute Symposium for Community Physicians, Baltimore, Maryland, May 7, 2011.
75. Spine Injuries in the Injured Worker: Guest Lecturer with Dr Ross Sugar at Traveler's, Hunt Valley, MD, June 28, 2011.
76. Indications for Spinal Fusions in the Injured Worker: Guest Lecturer at Key Risk, Baltimore, Maryland, November 15, 2011.
77. Intro to Neurosurgery. Introduction to Biology Undergraduate Course, The Johns Hopkins University, February 21, 2012.
78. Invited Panel Debate: Spinal Fusion for Injured Workers, MWCEA Conference, Ocean City, MD, October 15, 2012.



79. Lumbar Spine Surgery for the Injured Worker: Role of Spinal Cord Stimulation, Selective Insurance Company, Hunt Valley, MD, December 12, 2012.

ARTICLES

1. Lenz FA, **Garonzik IM**, Zirh TA, Dougherty PM: Neuronal activity in the region of the thalamic principal sensory nucleus (ventralis caudalis) in patients with pain following amputations. Neuroscience 86: 1065-1081, 1998.
2. Lenz FA, Lee JI, **Garonzik IM**, Rowland LH, Dougherty PM, Hua SE: Plasticity of pain-related neuronal activity in the human thalamus. Progress in Brain Research 129: 259-273, 2000.
3. Hua SE, **Garonzik IM**, Lee JI, Lenz FA: Microelectrode studies of normal organization and plasticity of human somatosensory thalamus. Journal of Clinical Neurophysiology 17 (6): 559-574, 2000.
4. **Garonzik IM**, Samdani AF, Ohara S, Lenz FA: Deep brain stimulation for the control of pain. Epilepsy and Behavior 2: S55-S60, 2001.
5. Reavey-Cantwell JF, **Garonzik IM**, Viglione M, McCarthy E, Belzberg A: A brachial plexopathy due to myositis ossificans: case report and review of literature. Journal of Neurosurgery 95: 525-528, 2001.
6. **Garonzik IM**, Samdani AF, Carson BS, Avellino AM: Pneumocephalus in a newborn with an open myelomeningocele. Pediatric Neurosurgery 35: 334, 2001.
7. Liu JM, **Garonzik IM**, Eberhart CG, Sampath P, Brem H: Ectopic recurrence of craniopharyngioma after an interhemispheric, transcallosal approach. Neurosurgery 50: 639-645, 2002.
8. **Garonzik IM**, Hua SE, Ohara S, Lenz FA: Intraoperative microelectrode and semi-microelectrode recording during the physiologic localization of the thalamic nucleus ventral intermediate. Movement Disorders 17: S135-S144, 2002.
9. Ziai WC, Port JD, Cowan J, Bhardwaj A, **Garonzik IM**, Rigamonti D: Decompressive hemicraniectomy for intractable cerebral edema: experience of a single center. Journal of Neurosurgical Anesthesiology 15: 25-32, 2003.



10. Long DM, Gordon T, Bowman H, Etzel A, Burleyson G, Betchen S, **Garonzik IM**, Brem H: Outcome and cost of craniotomy for tumor performed in regional academic referral centers. Neurosurgery 52: 1056-1063, 2003.
11. Samdani AF, **Garonzik IM**, Jallo G, Eberhart CG, Zahos P: Spinal angioliopoma: case report and review of the literature. Acta Neurochirurgica 146: 299-302, 2004.
12. Frazier J, **Garonzik IM**, Tihan T, Olivi A: Recurrent gliependymal cyst of the posterior fossa: an unusual entity containing mixed glial elements. Journal of Neuro-Oncology 68: 13-17, 2004.
13. Samdani AF, **Garonzik IM**, Zahos P: Subdural hematoma following diagnostic lumbar puncture. American Journal of Emergency Medicine 22: 316-317, 2004.
14. Woodworth GF, McGirt MJ, Samdani AF, **Garonzik IM**, Olivi A, Weingart JD: Accuracy of frameless and frame-based MRI-guided stereotactic brain biopsy in the diagnosis of glioma: comparison of biopsy and open resection specimen. Neurological Research 27: 358-362, 2005.
15. McGirt MJ, Woodworth GF, Coon AL, Frazier JM, Amundson E, **Garonzik IM**, Olivi A, Weingart JD: Independent predictors of morbidity after image-guided stereotactic brain biopsy: a risk assessment of 270 consecutive cases. Journal of Neurosurgery 102: 897-901, 2005.
16. Mantha A, Legnani FG, Bagley, CA, Gallia, GL, **Garonzik IM**, Pradilla G, Amundson E, Tyler BM, Brem H, Gokaslan ZL: A novel rat model for the study of intraosseous metastatic spine cancer. Journal of Neurosurgery Spine 2: 303-307, 2005.
17. Samdani AF, Storm PB, Kuchner EB, **Garonzik IM**, Sciubba D, Carson BS: Ventriculoperitoneal shunt malfunction presenting with pleuritic chest pain. Pediatric Emergency Care 21: 261-263, 2005.
18. Amundson E, Pradilla G, Bastianos PK, Bagley CA, Riley LH, **Garonzik IM**, McCarthy EF, Gokaslan ZL: A novel intraosseous intravertebral tumor model in rabbits. Neurosurgery 57: 341-346, 2005.
19. Gallia G L, Haque R, **Garonzik IM**, Witham TF, Khavkin YA, Wolinsky JP, Suk I, Gokaslan ZL: Spinal pelvic reconstruction after total sacrectomy for en bloc resection of a giant sacral chordoma. Journal of Neurosurgery Spine 3: 501-506, 2005.



20. Fournay DR, Rhines LD, Hentschel SJ, Skibber JM, Wolinsky JP, Weber KL, Suki D, Gallia GL, **Garonzik IM**, Gokaslan ZL: En bloc resection of primary sacral tumors: classification of surgical approaches and outcomes. Journal of Neurosurgery Spine 3: 111-122, 2005.
21. Woodworth GF, McGirt MJ, Samdani A, **Garonzik IM**, Olivi A, Weingart JD: Frameless image-guided stereotactic brain biopsy procedure: diagnostic yield, surgical morbidity, and comparison with the frame-based technique. Journal of Neurosurgery 104: 1-5, 2006.
22. Kretzer R, Sciubba DM, Bagley CA, Wolinsky JP, Gokaslan ZL, **Garonzik IM**: Translaminar screw fixation in upper thoracic spine. Journal of Neurosurgery Spine 6: 527-533, 2006.
23. Sciubba DM, **Garonzik IM**, Suk I, Gallia GL, Tufaro A, Wolinsky JP, Gokaslan ZL: Frameless stereotaxy in a transmandibular, circumglossal, retropharyngeal cervical decompression in a klippel-feil patient: technical note. European Spine Journal 2006.
24. Sciubba DM, Gallia GL, Recinos P, **Garonzik IM**, Clatterbuck RE: Intracranial aneurysm following radiation therapy during childhood for tumor. Journal of Neurosurgery 105(Suppl): 134-139, 2006.
25. Gallia G L, Burger PC, Suk I, Wolinsky JP, **Garonzik IM**, Gokaslan ZL: Concomitant conus medullaris myxopapillary ependymoma and filum terminale lipoma: case report. Journal of Neurosurgery Spine 58: 1214, 2006.
26. Sciubba DM, Gallia G L, McGirt MJ, Woodworth GF, **Garonzik, IM**, Witham T, Gokaslan ZL, Wolinsky JP: Thoracic kyphotic deformity reduction with a distractable titanium cage via an entirely posterior approach. Neurosurgery 60(suppl 2): 223-231, 2007.
27. Sciubba DM, Noggle JC, Vellimana AK, Conway JE, Kretzer RM, Long DM, **Garonzik, IM**: Laminar screw fixation of the axis. Journal of Neurosurgery Spine 8: 327-334, 2008.
28. Anderson WS, Kiyofuji S, Conway JE, Busch C, North RB, **Garonzik IM**: Dysphagia and neuropathic facial pain treated with motor cortex stimulation: case report. Neurosurgery 65: E626, 2009.
29. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: A CT-based morphometric study of thoracic pedicle anatomy in a random US trauma population. Spine. In preparation.



30. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: A CT-based feasibility study of translaminar screw fixation in the upper thoracic spine. Journal of Neurosurgery Spine 12: 286-292, 2010.
31. Kretzer RM, Hu N, Kikkawa J, **Garonzik IM**, Jallo GI, Tortolani PJ, McAfee PC, Cunningham BW: Multidirectional flexibility properties of the cervicothoracic junction: comparison of translaminar screw vs pedicle screw fixation, an in-vitro cadaveric model. Spine submitted.
32. Hsu W, Pradilla G, Garonzik IM, Conway JE: Pretruncal nonaneurysmal subarachnoid hemorrhage causing basilar artery vasospasm. Neurocritical Care April 2010.
33. Kretzer RM, Hu N, Kikkawa J, **Garonzik IM**, Jallo GI, Tortolani PJ, McAfee PC, Cunningham BW: Surgical management of 2- vs 3-column injuries of the cervicothoracic junction: comparison of translaminar screw and pedicle screw fixation, using a cadaveric model. Spine 2010.

BOOK CHAPTERS

1. Lenz FA, Byl NN, **Garonzik IM**, Lee JL, Hua SE: Microelectrode studies of basal ganglia and VA, VL, and VP thalamus in patients with dystonia: dystonia-related activity and somatic sensory reorganization. In: Basal Ganglia and Thalamus in Health and Movement Disorders. Edited by Ilinsky KK and Ilinsky IA. Kluwer Academic/Plenum Publishers: New York, 225-237, 2001.
2. Ohara S, **Garonzik IM**, Hua SE, Lenz FA: Microelectrode studies of the thalamus in patients with central pain and in control patients with movement disorders. In: Spinal Cord Injury Pain: Assessment, Mechanisms, Management. Progress in Pain Research and Management. Edited by Yeziarski RP and Burchiel KJ. IASP Press: Seattle, 219-236, 2002.
3. Hua SE, **Garonzik IM**, Lee JL, Lenz FA: Thalamotomy for tremor. In: Surgical treatment of Parkinson's Disease and other Movement Disorders. Edited by Tarsy D, Vitek J, and Lozano, A. Humana: New Jersey, 99-113, 2003.



4. **Garonzik IM**, Hua SE, Ohara S, Lenz FA: Microelectrode techniques: single cell and field potential recordings in the thalamus and basal ganglia. In: Microelectrode Recording in Movement Disorder Surgery. Edited by Burchiel K, and Israel Z. Thieme: New York, 28-37, 2004.
5. Hua SE, **Garonzik IM**, Lee JL, Lenz FA: Thalamotomy for tremor. In: Youmans Neurological Surgery. Edited by Winn HR. Saunders: Philadelphia, 2769-2784, 2004.
6. Frazier JL, **Garonzik IM**, Rhines L: Metastatic Lung Cancer. In: Intracranial Metastases Current Management Strategies. Edited by Sawaya R. Futura Publishing: New York, 2004.
7. Weiss N, **Garonzik I**, Samdani A, Ohara S, Lenz FA. Deep Brain Stimulation. In: Encyclopedia of Pain. Edited by Schmidt RF and Willis WD. Springer: 2007.
8. Bagley CA, Lenz FA, **Garonzik IM**: Neck Pain. In: Principles of Ambulatory Medicine. In: Principles of Ambulatory Medicine. Edited by Barker LR et al. Lippincott Williams and Wilkins: 2006.
9. Conway JE, Baird CJ, Li KW, **Garonzik IM**, Jallo GI: Ventricular Anatomy. In: Neuroendoscopy of the Central Nervous System. Edited by Jallo GI, Conway JE, and Bogner L. Plural Publishing: 2008.
10. Conway JE, Baird CJ, Li KW, **Garonzik IM**, Jallo GI: Surgical Approaches for Neuroendoscopic Procedures. In: Neuroendoscopy of the Central Nervous System. Edited by Jallo GI, Conway JE, and Bogner L. Plural Publishing: 2008.
11. Kretzer RM, Conway JE, Garonzik IM: Spinal Cord Stimulator. In: Core Techniques in Operative Neurosurgery. Edited by Jandial R, McCormick P, and Black P. Elsevier: 2011.

ABSTRACTS

1. Lenz FA, Zirh TA, **Garonzik IM**, Richardson RT, Ringkamp M, Rowland LH, Dougherty PM: Characteristics of neuronal activity in the region of the thalamic nucleus Vc in patients with amputations. Society for Neuroscience Abstracts. 22: 1054, 1996.
2. **Garonzik IM**, Liu JM, Sampath P, Wang PP, Brem H: Ectopic recurrence of craniopharyngioma after an interhemispheric, transcallosal approach. Congress of Neurological Surgeons, San Antonio, Texas, September 2000.



3. **Garonzik IM**, Ohara S, Hua SE, Belzberg A, Lenz FA: Sites in the region of the thalamic principal somatic sensory nucleus (Vc) and VMpo where threshold microstimulation (TMIS) evokes thermal (cold and warm sites) or pain sensations (pain sites). Society for Neuroscience Abstracts, Orlando, Florida, November 2002.
4. Ohara S, **Garonzik IM**, Hua SE, Lenz FA: Threshold microstimulation (TMIS) in the region of the human thalamic principal somatic sensory nucleus (Vc) evokes sensations like those of mechanical stimulation and movement. Society for Neuroscience Abstracts, Orlando, Florida, November 2002.
5. **Garonzik IM**, Barnes M, Rowland LH, Hua SE, Lenz FA, Ohara S: Surgical treatment of patients with movement disorders at The Johns Hopkins Hospital: a 12-year experience. The Movement Disorder Society, Miami, Florida, November 2002.
6. **Garonzik IM**, Weiss N, Ohara S, Hua SE, Rowland LH, Grill S, Lenz FA: Contralateral GPI-DBS in patients with prior unilateral pallidotomy. American Society for Stereotactic and Functional Neurosurgery, New York, New York, May 2003.
7. Woodworth GF, McGirt MJ, Samdani AF, **Garonzik IM**, Olivi A, Weingart JD: Accuracy of image-guided stereotactic brain biopsy in the diagnosis of glioma: comparison of biopsy and open resection specimen. Congress of Neurological Surgeons, San Francisco, California, October 2004.
8. McGirt MJ, Woodworth GF, Frazier J, Coon A, **Garonzik IM**, Olivi A, Weingart JD: Independent predictors of morbidity after image-guided stereotactic brain biopsy: a risk assessment of 270 consecutive patients. Congress of Neurological Surgeons, San Francisco, California, October 2004.
9. Woodworth GF, McGirt MJ, Coon A, Huang J, **Garonzik IM**, Olivi A: Stereotactic biopsy of the brainstem: neurological sequelae, technical and diagnostic considerations. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
10. Gallia G L, Haque R, **Garonzik IM**, Wolinsky JP, Suk I, Gokaslan ZL: Spinal pelvic reconstruction after total en bloc sacrectomy for giant sacral chordoma. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
11. Haque R, Sciubba D, Gallia GL, Nelson C, Wolinsky JP, Gokaslan ZL, **Garonzik, IM**: Active correction of kyphotic deformity using an anterior



- distractable cage via a posterior approach. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
12. Bagley CA, Pindrik JA, Ozmen GP, Bookland M, Pradilla G, **Garonzik IM**, Gokaslan ZL: Toxicity of fractionated, single-port spinal column radiotherapy in a rat model. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
 13. Bagley CA, Pindrik JA, Ozmen GP, Pradilla G, **Garonzik IM**, Gokaslan ZL: Efficacy of fractionated, single-port radiotherapy for the treatment of interosseous spinal metastases in a rat model. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
 14. Sciubba DM, Taghva A, **Garonzik IM**, Samdani AF, Suk I, Gokaslan ZL: Frameless stereotaxy in a transmandibular, circumglossal, retropharyngeal cervical decompression in a klippel-feil patient: technical note. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
 15. Woodworth GF, McGirt MJ, **Garonzik IM**, Samdani AF, Olivi A, Weingart JD: Frameless versus frame-based image-guided stereotactic brain biopsy: comparison of diagnostic yield, operative morbidity, and technical limitations. American Association of Neurological Surgeons, New Orleans, Louisiana, April 2005.
 16. Bagley CA, Pindrik JA, Bookland M, Ozmen GP, **Garonzik IM**, Gokaslan ZL: Intraosseous administration of oncogel 6.0% (paclitaxel) is safe and effective for metastatic spine tumors in rats. Congress of Neurological Surgeons, Boston, Massachusetts, October 2005.
 17. Bagley CA, Pindrik JA, Bookland M, Ozmen GP, **Garonzik IM**, Gokaslan ZL: Efficacy of local administration of oncogel 6.0% (paclitaxel) in a rat metastatic spine tumors model. Congress of Neurological Surgeons, Boston, Massachusetts, October 2005.
 18. Sciubba DM, Kretzer R, Conway J, Pindrik J, Long DM, Gokaslan ZL, **Garonzik IM**: Ipsilaminar screw fixation of the axis. Congress of Neurological Surgeons, Chicago, Illinois, October 2006.
 19. Anderson WS, Kiyofuji S, Conway JE, Busch C, North RB, **Garonzik IM**: Case of dysphagia and neuropathic facial pain treated with motor cortex stimulation. North American Neuromodulation Society, Las Vegas, Nevada, December 2008.



20. Wicks R, Dorsi MJ, Kretzer RM, Busch C, Hurley R, Conway JE, **Garonzik IM**: Spinal cord stimulation for relief of brachial plexus avulsion pain. North American Neuromodulation Society, Las Vegas, Nevada, December 2008.
21. Busch C, Kretzer RM, Dorsi MJ, Wicks R, Sugar R, Conway JE, **Garonzik IM**: Spinal cord stimulation for post-amputation leg pain. North American Neuromodulation Society, Las Vegas, Nevada, December 2008.
22. Kretzer RM, Chaput C, Sciubba DM, Conway JE, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: A CT-based feasibility study of translaminar screw fixation vs pedicle screw fixation in the upper thoracic spine. Congress of Neurological Surgeons, New Orleans, LA, October, 2009.
23. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: The effect of spinal level on thoracic pedicle screw trajectory in a random US trauma population. Congress of Neurological Surgeons, New Orleans, LA, October, 2009.
24. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: Variation in thoracic pedicle screw entry point by spinal level. Congress of Neurological Surgeons, New Orleans, LA, October, 2009.
25. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: The effect of gender on choice of thoracic pedicle screw length and diameter. Congress of Neurological Surgeons, New Orleans, LA, October, 2009.
26. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: The effect of the aorta on pedicle screw trajectory in the thoracic spine. Congress of Neurological Surgeons, New Orleans, LA, October, 2009.
27. Kretzer RM, Chaput C, Sciubba DM, **Garonzik IM**, Jallo GI, McAfee PC, Cunningham BW, Tortolani PJ: A CT-based feasibility study of translaminar screw fixation in the upper thoracic spine. Cervical Spine Research Society, Salt Lake City, UT, December, 2009.
28. Kretzer RM, Hu N, Kikkawa J, **Garonzik IM**, Jallo GI, Tortolani PJ, McAfee PC, Cunningham BW: Multidirectional flexibility properties of the cervicothoracic junction: comparison of translaminar screw vs pedicle screw fixation, an in-vitro cadaveric model. American Association of Neurological Surgeons, Philadelphia, PA, May, 2010.



SHORT COURSES

Armed Forces Institute of Pathology Neuroradiology Course
Course Director: Kelly Koeller
Bethesda, Maryland, February 19-20, 2000

AO ASIF Comprehensive Spine Course
Course Director: Mark Dekutoski, Ziya Gokaslan
Tucson, Arizona, May 31-June 3, 2001

Johns Hopkins Spinal Symposium, Synthes Spine
Course Director: James Campbell
Paoli, Pennsylvania, October 12-13, 2001

Advanced Stereotactic and Functional Neurosurgery Symposium
Course Director: Ali Rezai
Charleston, South Carolina, June 2-3, 2002

Advances in Neurosurgery, The Anspach Effort, Inc.
Course Director: Johnny Delashaw
Palm Beach Gardens, Florida, July 19-20, 2002

Cyberknife Surgeon Training Course
Course Director: Neal Naff, Mark Brenner
Baltimore, Maryland, May 9-10, 2003

Principles and Practice of Gamma Knife Surgery
Course Director: Dade Lunsford, Douglas Kondziolka, John Flickinger
Pittsburgh, Pennsylvania, June 2-6, 2003

AO ASIF Spine Course for Operating Room Personnel
Course Director: Jeffrey Sumner
Groton, Connecticut, June 5-6, 2004

Anterior Lumbar Spine: Exposure Strategies and Techniques
Course Director: Richard Balderston
Philadelphia, Pennsylvania, September 19-20, 2004

AO ASIF Spine Course for Operating Room Personnel
Course Director: Daniel Gelb
Baltimore, Maryland, February 19-20, 2005



Kyphon Bone Tamp Technology Course
Course Director: Aleksander Curcin
Baltimore, Maryland, March 12, 2005

AO ASIF Spine Course for Operating Room Personnel
Course Director: Mac Sims
Atlanta, Georgia, April 9-10, 2005

Charite Artificial Disc Surgeon Training
Course Director: Mohammad Majd, Scott Tromanhauser
Cincinnati, Ohio, April 14-15, 2005

AO ASIF Challenges and Complications in Complex Spine Surgery Symposium
Course Director: Ziya Gokaslan, Lee Riley
Baltimore, Maryland, April 30-May 1, 2005

Cyberknife Surgeon Training Course
Course Director: Mark Brenner
Baltimore, Maryland, May 18-19, 2005

AO ASIF Principles and Treatment of Spinal Disorders for Residents and Fellows
Course Director: Laurence Rhines, Norman Chutkan
Boston, Massachusetts, September 9-11, 2005

Pain Medicine Update for Pain Specialists and Primary Care Providers
Course Director: Srinivasa Raja, Paul Christo
Baltimore, Maryland, December 10-11, 2005

AO ASIF Principles and Treatment of Spinal Disorders for Residents and Fellows
Course Director: Scott Rushton, James Shuster
Philadelphia, Pennsylvania, January 13-15, 2006

AO ASIF Challenges and Complications in Complex Spine Surgery Symposium
Course Director: Douglas Beard, Laurence Rhines
Miami Beach, Florida, April 1-2, 2006

Baltimore Neurosurgery and Spine Center's: Spine Anatomy and Instrumentation Course
Course Director: Ira Garonzik
Baltimore, Maryland, June 2, 2006

Zimmer Hands-On Spine Surgery Review Course for Residents and Fellows



Course Director: Mesfin Lemma, Jay Khanna
Baltimore, Maryland, March 31- April 1, 2007

Stryker Spine Controversies in Cervical Spine Surgery
Course Director: John Carbone
Baltimore, MD, September 7, 2007

Baltimore Neurosurgery and Spine Center's: 2nd Annual Spine Anatomy and Instrumentation Course
Course Director: Ira Garonzik
Baltimore, Maryland, May 25, 2007

ANS Spinal Cord Stimulation Cadaver Course
Course Director: Ira Garonzik
Baltimore, Maryland, July 9, 2007

AOSpine Advanced Concepts in the Management of Spinal Disorders
Course Director: Daniel Gelb, Julie York
Sun Valley, Idaho, February 21-24, 2008

Advanced Cervical Solutions: ProDisc-C Training Course
Course Director: Jeff Goldstein
New York, New York, March 8, 2008

Boston Scientific Spinal Cord Stimulation Physician Workshop
Guest Faculty
Boston, Massachusetts, April 5, 2008

Cyberknife Surgeon Training Course
Course Director: Mark Brenner
Baltimore, Maryland, April 23, 2008

Boston Scientific SCS Cadaver Workshop
Course Director: Ira Garonzik
Baltimore, Maryland, June 21, 2008

Baltimore Neurosurgery and Spine Center's: 3rd Annual Spine Anatomy and Instrumentation Course
Course Director: Ira Garonzik, James Conway
Baltimore, Maryland, July 18, 2008

Neuromodulation Academy Planning Meeting
Course Director: Tim Deer, Kenneth Alo, Robert Levy, Giancarlo Barolat
Las Vegas, Nevada, December 4-6, 2008



AO ASIF Principles and Treatment of Spinal Disorders for Residents and Fellows
Course Director: Ira Garonzik, Thomas Mroz
Philadelphia, Pennsylvania, April 24-26, 2009

Baltimore Neurosurgery and Spine Center's: 4th Annual Spine Anatomy and
Instrumentation Course
Course Director: Ira Garonzik, James Conway
Baltimore, Maryland, July 10, 2009

Baltimore Neurosurgery and Spine Center's: 5th Annual Spine Anatomy and
Instrumentation Course
Course Director: Ira Garonzik, James Conway
Baltimore, Maryland, July 9, 2010