Matthew D. Alvin, MD, MBA, MS, MA

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Summary

- Johns Hopkins-trained in Internal Medicine, Radiology, & Neuroradiology
- Specialization in Adult & Pediatric Brain, Spine, Head, & Neck Imaging (MRI, CT, US, XR, PET/CT)
- Additional Expertise in Chest, Abdomen, & Pelvis Imaging (CT, US, XR)
- Highest Case Volume Among Colleagues with Average 6,000 Studies/Month (70,000/Year)
- 10+ Years of Teaching with Kaplan Medical/Test Prep, Mentoring 100s of Students
- 60+ publications in high impact journals, including JAMA, Lancet, and Radiology
- Nationally Selected for the RSNA and AJNR Editorial Fellowships
- Award-Winning Medical Research Presented Extensively at the Local, Regional, and National Level
- Invited/Featured Expert for the New England Journal of Medicine
- American Medical Association Physician of Tomorrow
- Ranked #1 in Graduating MBA Class and Earned 3 Master's Degrees During Medical School

Radiology Work Experience

Renaissance Imaging Medical Associates, Inc.

Neuroradiologist/Emergency Department Radiologist

Feb 2023 – Present

July 2020 - Present

Vision Radiology, PLLC

- Neuroradiologist/Emergency Department Radiologist
- Provide Teleradiology Services for 90 Hospitals divided over 14 States, including Johns Hopkins and Stanford Hospitals
- Engage in 1-on-1 Teaching of Stanford Radiology Residents
- Radiology Co-Lead in PET/CT Amyloid and Tau Imaging Research for Alzheimer Dementia

Brown University School of Medicine/Rhode Island Medical Imaging, Inc.

July 2021 – Feb 2023

- Neuroradiologist/Emergency Department Radiologist of the Largest Radiology Group in Rhode Island
- Assistant Professor of Radiology at Brown with a Robust Radiology Residency Program
- Frequent Lead Radiology Presenter for Adult and Pediatric Neuro-oncology/Head & Neck Tumor Boards
- Director of the Radiology Quality Assurance/Quality Improvement Committee

Postgraduate Medical Training

The Johns Hopkins Hospital - Department of Radiology

Neuroradiology Fellowship Program

The Johns Hopkins Hospital - Department of Radiology

Diagnostic Radiology Residency Program

The Johns Hopkins Hospital – Department of Medicine

Preliminary Medicine Internship – Osler Medical Housestaff Training Program

July 2016 – June 2020

July 2020 - June 2021

July 2015 – June 2016

Education:

Case Western Reserve University School of Medicine

Doctor of Medicine (M.D.); Alpha Omega Alpha (AOA)

July 2010 – May 2015

Case Western Reserve University Graduate School

Master of Science (M.S.) in Applied Anatomy

August 2010 – December 2015 GPA: 4.00/4.00, Honors Distinction



University of Florida – Hough School of Business Accelerated M.B.A. Program

May 2012 – May 2013

Master of Business Administration (M.B.A.); Concentrations: Competitive Strategy, Management GPA: 3.95/4.00, Rank #1 in class

Case Western Reserve University Graduate School

Master of Arts (M.A.) in Bioethics

August 2010 – May 2012 GPA: 4.00/4.00

University of Illinois at Urbana-Champaign

Bachelor of Science (B.S.); Double Major in Chemistry, Molecular & Cellular Biology

August 2006 – May 2009 GPA: 3.97/4.00, Summa Cum Laude

Research Experience:

AJNR Editorial Fellowship

Mentor: Jeff Ross, MD

- July 2020 June 2021
- Awarded nationally to one radiology fellow or faculty member annually for scholarly publication and leadership potential
- Collaborated with the AJNR senior editors in manuscript review and selection for publication

RSNA William W. Olmsted Editorial Fellowship

July 2019 – June 2020

- Mentors: David Bluemke, MD, PhD; Jeff Klein, MD
- Awarded nationally to one radiology resident or fellow annually for scholarly publication and leadership potential
- Traveled to the editorial offices for and worked directly with the editors-in-chief for Radiology and Radiographics

RSNA - Radiographics Educational Exhibit Neuroradiology Reviewer

December 2019 – Present

- Selected nationally as the single resident/fellow to serve on the neuroradiology subcommittee
- Annually review over 300 exhibits and participated in the selection/manuscript solicitation process

High Value Practice Academic Alliance (HVPAA) – Member

July 2016 - June 2020

Baltimore, MD

- Mentor: Pamela T. Johnson, MD
- Aided in the development of a national alliance of >80 medical institutions to collaborate in promoting high-value care
- Coordinated an online abstract management system for the organization's annual national conference
- Published the first high value initiative as lead author for dissemination across our members' institutions nationally

Johns Hopkins Hospital Department of Radiology – Head of Resident Research

July 2016 – June 2020

Baltimore, MD

- Mentors: Pamela T. Johnson, MD and David Yousem, MD, MBA
- Coordinated research opportunities between faculty, residents, and medical students within a department of 200+ faculty
- Research focused on high-value care, radiology appropriateness in ordering, and patient quality of life

Cleveland Clinic Lerner Research Institute - Clinical Researcher

February 2011 – May 2015

Cleveland, OH; Department of Spine Health

- Mentors: Thomas E. Mroz, M.D. and Edward C. Benzel, M.D.
- Research focused on cost effectiveness analyses and preoperative predictors of quality-of-life outcomes
- Became proficient in drafting manuscripts and IRB protocols, reviewing medical charts, statistically analyzing data, communicating efficiently with study collaborators, and reviewing the literature with fast turnaround time
- Published in multiple high impact journals and presented at national conferences

University of Florida Orthopaedics and Sports Medicine Institute – Clinical Researcher

September 2012 – May 2013

- Gainesville, FL; Department of Spine Health
 Mentor: Michael MacMillan, M.D.
 - Assessed the feasibility of using a CT imaging clinical software program for preoperative planning in sacroiliac fusion

Northwestern University Feinberg School of Medicine – Clinical Research Coordinator

May 2009 – May 2010

Chicago, IL; Department of Physical Medicine and Rehabilitation

- Mentors: Thomas J. Schnitzer, M.D., Ph.D. and A. Vania Apkarian, Ph.D.
- Developed and executed a marketing plan to recruit patients for a study on subacute lower back pain

- Utilized a print and online campaign that secured 500 participants in 8 months, representing a more than four-fold increase over prior campaigns
- Managed the intake process, including reviewing medical history, interviewing potential patients, explaining / obtaining patient consent, and collaborating with physicians at the Rehabilitation Institute of Chicago

Teaching Experience:

The Johns Hopkins Hospital – Radiology Residency Admissions Committee Baltimore, MD

July 2018 – June 2020

- Reviewed electronic candidate applications and provided feedback to the program director
 - Interviewed selected candidates and participated in overall applicant ranking

Kaplan Medical - Medical School Admissions Consultant

May 2018 – June 2020

National USA

- Collaborated live 1-on-1 with premedical students on improving their medical school applications
- Performed mock interviews and provide detailed feedback to simulate real medical school interviews

Kaplan Medical – USMLE Steps 1/2 and COMLEX Level 1 Question Writer/Editor

October 2016 – June 2020

National USA

• Wrote and edited questions for Kaplan Medical's USMLE and COMLEX online question banks

Kaplan Test Prep and Admissions – MCAT and Medical School Admissions Mentor

July 2014 – June 2018

National USA

• Advised premedical college and postgraduate students and provided both one-on-one study plans for the MCAT and admissions counseling for medical school via an online web room audio/visual interface

Kaplan Test Prep and Admissions - Certified Elite-Level Instructor

October 2009 - May 2015

Downers Grove, IL Kaplan Center, Gainesville, FL Kaplan Center, and Cleveland, OH Kaplan Center

- Taught MCAT, ACT, SAT, and GMAT test preparation courses to classes of about 20-30 students
- Tutored students and served as a teaching assistant for Kaplan's Live Online courses for national distribution
- Consistently received averages of 100% ratings by students;
- Managed each session within a 3-hour time limit, met with students individually before class to foster a better grasp of the material, and provided consistent communication and feedback to students via e-mail and in person

$Kaplan\ Summer\ Intensive\ Program/UT\ Joint\ Admission\ Medical\ Program-Instructor$

May 2010 - June 2010

Dallas, TX; University of Texas at Dallas

- Selected as one of six top level teachers in the nation for this 6-week, 8-hours/day pre-medical program
- Taught and mentored a group of sixty disadvantaged Texas pre-medical students in preparation for the MCAT
- Worked with various Texas medical school admissions directors in providing support, guidance, and motivation to students through outside activities, lectures, and one-on-one meetings

Accelerated Freshmen Chemistry – Teaching Assistant

August 2008 – May 2009

Department of Chemistry, University of Illinois at Urbana-Champaign

- Lectured on quantum mechanics, kinetics, thermodynamics, equilibrium, acid-base, solubility, and electrochemistry
- Taught two discussion sections of about 25-30 students each; both sections were ranked the best of all students with regards to performance on examinations
- Consistently received the highest ratings from student feedback

Licensure/Certification:

- Active State Medical Licenses: RI, MD, MA, TX, HI, IL, IN, GA, PA, KY, NC, SC, CT, OR, CA, MO, OH, WA, NY
- Florida Medical Doctor Expert Witness (#9380)

American Board of Radiology (Neuroradiology CAQ) – Certified

September 2022

• American Board of Radiology (Diagnostic Radiology) - Certified

September 2021

• USMLE Step 1 – Passed – Score: 260

April 2012

• USMLE Step 2 CK – Passed – Score: 274

May 2014

• USMLE Step 2 CS – Passed

May 2014

USMLE Step 3 – Passed
 April 2016

Honors and Awards:

Radiology Leadership Institute Summit Scholarship

May 2019

• Selected nationally as one of ten radiology residents/fellows annually to attend on full scholarship

RSNA Travel Award and Introduction to Academic Radiology Award/Program

November 2017

- Travel award given to the highest ranked abstracts for the conference
- ITAR Award/Program selection one of 80 U.S. radiology residents chosen for this weeklong award/course

Case Western Reserve University – Herbert S. Steuer Award

May 2015

• Awarded annually at graduation to the top Master of Applied Anatomy student

Case Western Reserve University - Mayer Haber Award

May 2015

Awarded annually at graduation to a medical student with exceptional care and dedication to the mental health needs and issues of patients

American Medical Association - Physicians of Tomorrow Award

August 2014

Awarded nationally to only 19 medical students based on academic achievement and financial need

University of Florida MBA Program – The Outstanding Achievement Award in Core Curriculum

May 2013

• Awarded at graduation to the student ranked #1 by GPA in the core curriculum

Wake Forest University Biotechnology Conference and Case Competition – 3rd Place

February 2013

- Represented the University of Florida against 7 other MBA programs across the nation
- 12-hour real-world case analysis and solution presented to Boston Scientific's Healthcare Division

Case Western Reserve University School of Medicine Crile Fellowship

April 2011

• Financially supported summer research endeavors

Alpha Kappa Alpha Educational Advancement Foundation Merit Scholarship

• Awarded to graduate students on the basis of financial need, leadership, and volunteer services

Illinois Hospital and Research Educational Foundation Scholarship

July 2011, July 2010

October 2011, October 2010

- Awarded to Illinois residents pursuing a healthcare-related career
- Selected on the basis of academic and personal merit, community involvement, and financial need

North American Interfraternal Foundation Lloyd G. Balfour Fellowship

June 2010

- Nationally competitive fellowships awarded annually to initiated members of North American fraternities
- Awarded on the basis of scholastic achievement, campus/community involvement, and leadership

University of Illinois Honors/Bronze Tablet Designee

May 2009

 Bestowed upon the top 3% of all graduates, who have their names inscribed on a bronze tablet hung permanently in the Main Library each year

University of Illinois Senior 100 Honorary Designee

May 2009

Awarded to 100 senior students based upon leadership, academics, and campus involvement in all undergraduate years

Peter C. and Gretchen Miller Markunas Scholarship

May 2009

 Awarded to one graduating chemistry student annually on the basis of academics and contributions to the Chemistry Department throughout the undergraduate years

University of Illinois Campus Honors Program Chancellor's Scholar

August 2006-May 2009

- Selected as one of 125 incoming freshmen out of ~10,000 based upon high school academics, leadership, and involvement
- Offered small, intensive research-oriented courses in law, philosophy, and science to supplement my undergraduate education

University of Illinois Interfraternity Council 1872 Legacy Award

April 2008

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• Awarded annually to two individuals out of 43 different campus fraternities and based upon academics, campus involvement, leadership in one's fraternity, and potential as a future leader in the Greek community

University of Illinois James Scholar Honors Program

August 2006-May 2009

• Selected as part of the top 13% of 10,000 entering freshmen students; required to maintain a 3.5 GPA and take one honors course per semester

Publications (Journal Articles)

- 1. Jalilianhasanpour R, Huntley JH, Alvin MD, et al. Value of acute neurovascular imaging in patients with suspected transient ischemic attack. Eur J Radiol. 2022;154:110427.
- 2. Luna LP, Coffey W, Alvin MD. Parotid Warthin's tumor: novel MR imaging score. Clin Imaging. 2022;81:9-14.
- 3. Alvin MD, Toote C, Ross JS. Insights into the AJNR Review Process. AJNR Am J Neuroradiol. 2021;42:996-7.
- 4. Amir T, Ambinder EB, Harvey SC, et al. Benefits of digital breast tomosynthesis: A lesion-level analysis. J Med Screen. 2021;28:311-7.
- 5. Yousem DM, Zhou A, Alvin MD. CT Angiography for Triage of Minor Stroke: Controversial Analysis. <u>Radiology</u> 2020;296:E124-5.
- 6. Alvin MD, George E, Deng F, Warhadpande S, Lee SI. The Impact of COVID-19 on Radiology Trainees. <u>Radiology</u> 2020;296:246-8.
- 7. Alvin MD, Moshiri M, Bluemke DA. Prospective Clinical Trials: 10-year Trends in Radiology. Radiology 2020;295:1-2.
- 8. D'Sa A, Alvin MD, Brody R, et al. Imaging vertebral artery fenestration. Neuroradiology 2020;62:587-92.
- 9. Pennington Z, Swanson MA, Lubelski D, et al. Comparing the short-term cost-effectiveness of epidural steroid injections and medical management alone for discogenic lumbar radiculopathy. Clin Neurol Neurosurg 2020;191:105675.
- 10. Sahraian S, Alvin MD, Haj-Mirzaian A, et al. Musculoskeletal Radiology Reports: Overlooked or Valuable? <u>J Digit Imaging</u> 2020;33:348-54.
- 11. Pennington Z, Alentado VJ, Lubelski D, et al. Quality of life changes after lumbar decompression in patients with tandem spinal stenosis. Clin Neurol Neurosurg 2019;184:105455.
- 12. Pennington Z, Sundar SJ, Lubelski D, Alvin MD, Benzel EC, Mroz TE. Cost and quality of life outcome analysis of postoperative infections after posterior lumbar decompression and fusion. <u>J Clin Neurosci</u> 2019;68:105-110.
- 13. Alvin MD, Mehta V, Halabi HA, Lubelski D, Benzel EC, Mroz TE. Cost-Effectiveness of Cervical Epidural Steroid Injections: A 3-Month Pilot Study. Global Spine J. 2019;9:143-149.
- 14. Honig EL, Mullen LA, Amir T, Alvin MD, Jones MK, Ambinder EB, Falomo ET, Harvey SC. Factors Impacting False Positive Recall in Screening Mammography. <u>Acad Radiol.</u> 2019;26:1505-12.
- 15. Sahraian S, Beheshtian E, Haj-Mirzaian A, Alvin MD, Yousem DM. "Worst Headache of Life" in a Migraineur: Marginal Value of Emergency Department CT Scanning. <u>JACR</u> 2019;16:683-90.
- 16. Galinato A, Alvin MD, Yousem DM. Lost to Follow-Up: Analysis of Never-Viewed Radiology Examinations. <u>JACR</u> 2019;16:478-81.
- 17. Alvin MD, Lubelski D, Alam R, et al. Spine Surgeon Treatment Variability: The Impact on Costs. <u>Global Spine J.</u> 2018; 8:498-506.
- 18. Zhou A, Yousem DM, Alvin MD. Cost-Effectiveness Analysis in Radiology: A Systematic Review. <u>JACR</u> 2018; 15:1536-46. **Selected as **Best of JACR 2018** for the Health Services Research and Policy category.**

- 19. Alvin MD, Shahriari M, Honig E, Liu L, Yousem DM. Clinical Access and Utilization of Reports and Images in Neuroradiology. <u>JACR</u> 2018; 15:1723-31.
- Alvin MD, Magid D. Free-Market Approach to the Match: An Unfair and Unfeasible Proposal. <u>Acad Med.</u> 2018; 93:671-672.
- 21. Alvin M, Al Jalbout N. Emphysematous gastritis secondary to Sarcina ventriculi. BMJ Case Rep. 2018; 8: bcr-2018-224233.
- 22. Alvin MD, Alvin ML. The Couples Match: Navigating the Trail Together. Acad Med. 2018; 93:677.
- 23. Alvin MD, Alentado VJ, Lubelski D, Benzel EC, Mroz TE. Cervical spine surgery for tandem spinal stenosis: The impact on low back pain. Clin Neurol Neurosurg. 2018; 166:50-53.
- 24. Knowles KA, Alvin M, Dunn E. Mycotic pulmonary artery aneurysm secondary to septic emboli. <u>BMJ Case Rep.</u> 2017; 13: bcr-2017-223439.
- 25. Johnson PT, Alvin MD, Ziegelstein RC. Transitioning to a High Value Health Care Model: Academic Accountability. <u>Acad Med.</u> 2018; 93: 850-5.
- 26. Honig EL, Fransman R, Alvin M, Azar F. Shotgun wound to the leg: strategies in managing acute arterial injury and bullet emboli to the heart and lungs. <u>BMJ Case Rep.</u> 2017; 20: bcr-2017-222985.
- 27. Alvin MD, Jaffe AS, Ziegelstein RC, Trost JC. Eliminating Creatine Kinase-Myocardial Band Testing in Suspected Acute Coronary Syndrome: A Value-Based Quality Improvement. <u>JAMA Intern Med.</u> 2017; 177:1508-12.
- 28. Honig EL, Alvin MD. A man with dyspnea, chest pain and leukocytosis. Eur J Intern Med. 2017; 46:e7-e8.
- 29. Alvin MD. iCOMPARE: An Intern's Perspective. Journal of Graduate Medical Education 2017; 9:261-2.
- 30. Alvin MD, Horton KM, Johnson PT. Training Radiology Residents to be Stewards in Healthcare Value. <u>Academic Radiology</u> 2017; 24:755-6.
- 31. Holz K, Harvey SC, Alvin MD, et al. Communication in Breast Imaging: Lessons learned at diagnostic evaluation. <u>JACR</u> 2017; 14:665-7.
- 32. Syed N and Alvin MD. Hepatic hydrothorax: pathogenesis, evaluation and management. <u>Gastroenterology, hepatology, and</u> endoscopy 2016;1:73-5.
- 33. Alvin MD, Miller JA, Lubelski D, Nowacki A, McGirt MJ, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes after anterior cervical discectomy and fusion. Global Spine Journal 2016; 6:306-13.
- 34. Alvin MD. The USMLE Step 2 CS: Time for a change. Medical Teacher 2016; 38:854-6.
- 35. Rahman S and Alvin MD. Etiologies and Initial Evaluation of Neonatal Jaundice. Journal of Neonatal Biology. 2016; 5:2.
- 36. Alvin MD, Miller PE. Compensated Hydrocephalus. Lancet. 2016; 387:2422.
- 37. Alvin MD, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of instrumented fusion versus decompression alone for grade I L4-L5 spondylolisthesis at 1-year follow-up. <u>Clinical Spine Surgery</u> 2016;29:E80-6.
- 38. Alvin MD, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of anterior cervical discectomy and fusion with plating (ACDFP) versus posterior cervical foraminotomy (PCF) for patients with single-level cervical radiculopathy. <u>Clinical Spine Surgery</u> 2016;29:E67-72.

- 39. Alvin MD, Derakhshan A, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of one and two-level dorsal lumbar fusions with and without recombinant human bone morphogenic protein-2. <u>Clinical Spine Surgery</u> 2016;29:E28-33.
- 40. Lubelski D, Alvin MD, Nesterenko S, Sundar S, Thompson NR, Benzel EC, Mroz TE. Correlation of Quality of Life and Functional Outcome Measures for Cervical Spondylotic Myelopathy. <u>Journal of Neurosurgery</u>: <u>Spine</u> 2016;24:483-9.
- 41. Lubelski D, Thompson NR, Agrawal B, Abdullah KG, Alvin MD, Khalaf T, Mazanec DJ, Benzel EC, Mroz TE, Krishnaney A. Prediction of quality of life improvements in patients with lumbar stenosis following use of membrane stabilizing agents. Clin Neurol Neurosurg. 2015;139:234-40.
- 42. Kuhns B, Lubelski D, Alvin MD, Taub J, Benzel EC, Mroz TE. Cost and quality of life outcome analysis of postoperative infections after subaxial posterior cervical fusions. Journal of Neurosurgery: Spine 2015;22:381-6.
- 43. Lubelski D, Senol N, Alvin MD, Benzel EC, Mroz TE, Schlenk R. Quality of life outcomes after revision lumbar discectomy. J Neurosurgery: Spine 2015;22:173-8.
- 44. Kuhns BD, Kouk S, Buchanan C, Lubelski D, Alvin MD, Mroz TE, Benzel EC. Sensitivity of Magnetic Resonance Imaging in the Diagnosis of L4-5 Degenerative Spondylolisthesis. <u>The Spine Journal</u> 2015;15:1956-62.
- 45. Alvin MD, Miller JA, Sundar S, Lockwood M, Lubelski D, Nowacki A, McGirt MJ, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes after posterior cervical fusion. <u>The Spine Journal</u> 2015;15:79-85.
- 46. Miller JA, Derakhshan A, Lubelski D, Alvin MD, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes following lumbar surgery. The Spine Journal 2015;15:58-64.
- 47. Lubelski D, Healy AT, Silverstein MP, Alvin MD, Abdullah KG, Benzel EC, Mroz TE. Association of Postoperative Outcomes with Preoperative MRI for Patients with Concurrent Multiple Sclerosis and Cervical Stenosis. <u>The Spine Journal</u> 2015;15:18-24.
- 48. Lubelski D, Abdullah KG, Steinmetz MP, Alvin MD, Nowacki AS, Chakka S, Benzel EC, Mroz TE. Adverse Events with the Use of rhBMP2 in Thoracolumbar and Lumbar Spine Fusions: A Nine Year Institutional Analysis. <u>JSDT</u> 2015;28:E277-83.
- 49. Alvin MD, Mroz TE. The Mobi-C Cervical disc for one-level and two-level cervical disc replacement: A review of the literature. Medical Devices: Evidence and Research 2014;7:397-403.
- 50. Lubelski D, Alvin MD, Abdullah KG, Nowacki AS, Steinmetz MP, Benzel EC, Mroz TE. Quality-of-Life Outcomes following Thoracolumbar and Lumbar Fusion with and without the Use of Recombinant Human Bone Morphogenetic Protein-2: Does Recombinant Human Bone Morphogenetic Protein-2 Make a Difference? Global Spine Journal 2014;4:245-54.
- 51. Alvin MD, Qureshi S, Klineberg E, Riew KD, Fischer DJ, Norvell DC, Mroz TE. Cervical Degenerative Disease: Systematic Review of Economic Analyses. Spine (Phila Pa 1976) 2014;39:S53-64.
- 52. Alvin MD, Miller JA, Lubelski D, Rosenbaum BP, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Variations in cost calculations in spine surgery cost effectiveness research. <u>Neurosurgical Focus</u> 2014;36:E1.
- 53. Alvin MD, Abbott EE, Lubelski D, Kuhns B, Nowacki AS, Steinmetz M, Benzel EC, Mroz TE. Cervical Arthroplasty: A Critical Review of the Literature. Spine Journal 2014; 14:2231-45.
- 54. Miller JA, Lubelski D, Alvin MD, Benzel EC, Mroz TE. C5 palsy following posterior cervical decompression and fusion: cost and quality of life implications. Spine Journal 2014;14:2854-60.
- 55. Lubelski D, Senol N, Silverstein M, Alvin MD, Abdullah KG, Benzel EC, Mroz TE. Quality of Life Outcomes Following Surgery for Patients with Coexistent Cervical Stenosis and Multiple Sclerosis. <u>European Spine Journal</u> 2014;23:1699-704.

- 56. Lubelski D, Abdullah KG, Alvin MD, Wang T, Nowacki AS, Steinmetz MP, Ransohoff RM, Benzel EC, Mroz TE. Clinical Outcomes Following Surgical Management of Coexistent Cervical Stenosis and Multiple Sclerosis: A Cohort Controlled Analysis. Spine Journal 2014;14:331-7.
- 57. Alvin MD, Yang M, MacMillan M. Feasibility of merging sacroiliac fusion computed tomography preoperative planning to original computed tomography scans. <u>The Open Spine Journal</u> 2013;5:6-11.
- 58. Alvin MD, Lubelski D, Benzel EC, Mroz TE. Ventral Fusion vs. Dorsal Fusion: Determining the optimal treatment for cervical spondylotic myelopathy. <u>Neurosurgical Focus</u> 2013;35:E5.
- 59. Lubelski D, Abdullah KG, Nowacki AS, Alvin MD, Steinmetz MP, Chakka S, Benzel EC, Mroz TE. Urological Complications Following Use of rhBMP-2 in Anterior Lumbar Interbody Fusion. <u>Journal of Neurosurgery:Spine</u> 2013;18:126-131.
- Lubelski D, Abdullah KG, Mroz TE, Shin JH, Alvin MD, Benzel EC, Steinmetz MP. Lateral Extracavitary vs. Costotransversectomy Approaches to the Thoracic Spine: Reflections on Lessons Learned. <u>Neurosurgery</u> 2012;71:1096-1102.
- 61. Alvin MD, Abdullah KG, Steinmetz MP, Lubelski D, Nowacki AS, Benzel EC, Mroz TE. Translaminar Screw Fixation in the Subaxial Cervical Spine: Quantitative Laminar Analysis and Feasibility of Unilateral and Bilateral Translaminar Virtual Screw Placement. Spine (Phila Pa 1976) 2012;37:E745-51.
- 62. Alvin M, Alan N, Leone J, Fredieu JR. A Unilateral Accessory Flexor Carpi Ulnaris Muscle Observed During Cadaveric Dissection. <u>Clinical Anatomy</u> 2011;24:971-3.
- 63. Chanda ML, Alvin M, Schnitzer TJ, Apkarian AV. Pain Characteristic Differences Between Subacute and Chronic Back Pain Patients. Journal of Pain 2011;12:792-800.

Publications (Book Chapters)

- 1. Alvin MD, Shanechi AM, Kiczek M, Khan M. Imaging Osseo-Ligamentous Spine Anatomy. <u>Image-Guided Interventions of the Spine</u>. Ed. M. Khan, S. Kushchayev, and S. Faro. Switzerland: Springer International Publishing, 2020. Pending publication. Print.
- 2. Alvin MD, Steinmetz MP. Emerging therapies for spinal cord injury. <u>Spine Surgery: Technique, Complication Avoidance, & Management, Section 4: Surgical Procedures, Part 4.5 Trauma.</u> Ed. M.P. Steinmetz and E.C. Benzel. Philadelphia: Elsevier, 2017. Print.
- 3. Alvin MD, Lubelski D, Mroz TE, Steinmetz MP. Costs and economic implications. <u>Textbook of Minimally Invasive Lateral Spine Surgery</u>. Ed. M.Y. Wang et al. Switzerland: Springer International Publishing, 2017. 27-31. Print.
- 4. Alvin M, Leff B, et al. Quantitative Ability 1 and 2. Kaplan Test Prep PCAT Lesson Book 2011.

Scientific Abstract Presentations

- 1. Alvin MD, Lee KHK, Horton KM, Johnson PT. In pursuit of high value practice: Designing a strategic plan to reduce unnecessary imaging in an academic radiology department.
 - Poster presentation at the American College of Radiology Annual Meeting. Washington, DC. May 23, 2017.
- 2. Alvin MD, Reh DT, Saylor D, Johnson PT. Choosing Wisely®: The Importance of Cross-Departmental Collaboration for Reducing Low Value Practice.
 - Poster presentation at the Association of University Radiologists Annual Meeting. Hollywood, FL. May 9, 2017.
- 3. Alvin MD, Shahriari M, Honig E, Liu L, Yousem D. Clinical Access to Reports and Images: The Value of Radiology.
 - Oral presentation at the RSNA National Meeting, Chicago, IL, November 28, 2017.

- Oral presentation at the American Society for Neuroradiology National Meeting. Long Beach, CA. April 24, 2017.
- Poster presentation at the American College of Radiology Annual Meeting. Washington, DC. May 23, 2017.
- 4. Alvin MD, Leizman D. Clear mind or clear bowels: a case of metoclopramide-induced delirium.
 - Poster presentation at the American College of Physicians Ohio Chapter Meeting. Columbus, OH. October 16, 2014.
- 5. Alvin MD, Miller JA, Lubelski D, Rosenbaum BP, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Variations in cost calculations in spine surgery cost effectiveness research.
 - Poster presentation at the 2014 Congress of Neurological Surgeons Annual Meeting. Boston, MA. October 21, 2014
- 6. Alvin MD, Abbott EE, Lubelski D, Kuhns B, Nowacki AS, Steinmetz M, Benzel EC, Mroz TE. Cervical Arthroplasty: A Critical Review of the Literature
 - Poster presentation at the Cleveland Clinic Neurological Institute Research Day (NIRD). Cleveland, OH. May 22, 2014
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
 - Poster presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
- 7. Alvin MD, Miller JA, Sundar S, Lockwood M, Lubelski D, Nowacki A, McGirt MJ, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes after posterior cervical fusion.
 - Poster presentation at the 2014 Congress of Neurological Surgeons Annual Meeting. Boston, MA. October 21, 2014
 - Poster presentation at the Case Western Reserve University School of Medicine Lepow Research Day. February 20, 2014
- 8. Alvin MD, Miller JA, Lubelski D, Nowacki A, McGirt MJ, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes after anterior cervical discectomy and fusion.
 - Poster presentation at the 2014 Congress of Neurological Surgeons Annual Meeting. Boston, MA. October 21, 2014
- 9. Lubelski D, Senol N, Alvin MD, Benzel EC, Mroz TE, Schlenk R. Quality of life outcomes following revision lumbar discectomy.
 - Poster presentation at the 2014 Congress of Neurological Surgeons Annual Meeting. Boston, MA. October 21, 2014
 - Poster presentation at the NASS Annual Meeting. San Francisco, CA. November 11-14, 2014
- 10. Kuhns BD, Kouk S, Buchanan C, Lubelski D, Alvin MD, Mroz TE, Benzel EC. Sensitivity of Magnetic Resonance Imaging in the Diagnosis of L4-5 Degenerative Spondylolisthesis.
 - Platform presentation at the NASS Annual Meeting. San Francisco, CA. November 11-14, 2014
 - Poster presentation at the 2014 Congress of Neurological Surgeons Annual Meeting. Boston, MA. October 21, 2014
- 11. Alvin MD, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of anterior cervical discectomy and fusion with plating (ACDFP) versus posterior cervical foraminotomy (PCF) for patients with single-level cervical radiculopathy.
 - Platform presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
 - Platform presentation at Case Western Reserve University School of Medicine Lepow Research Day. February 20, 2014
 - Platform presentation at the 2013 Congress of Neurological Surgeons Annual Meeting. San Francisco, CA. October 21, 2013
 - Platform presentation at the Cleveland Clinic Neurological Institute Research Day (NIRD). Cleveland, OH. May 23, 2013
 - i. Received the top medical student presentation award
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
 - Poster presentation at the NASS 28th Annual Meeting. New Orleans, LA. October 9-11, 2013
- 12. Alvin MD, Derakhshan A, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of one and two-level dorsal lumbar fusions with and without recombinant human bone morphogenic protein-2
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014

- Poster presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
- Poster presentation at the Case Western Reserve University School of Medicine Lepow Research Day. February 20, 2014
- Neurosurgical forum presentation at the 2013 Congress of Neurological Surgeons Annual Meeting. San Francisco, CA. October 21, 2013
- 13. Alvin MD, Lubelski D, Abdullah KG, Whitmore RG, Benzel EC, Mroz TE. Cost-utility analysis of instrumented fusion versus decompression alone for grade I L4-L5 spondylolisthesis at 1-year follow-up.
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
 - Poster presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
 - Poster presentation at the 2013 Congress of Neurological Surgeons Annual Meeting. San Francisco, CA. October 21, 2013
- 14. Miller JA, Lubelski D, Alvin MD, Benzel EC, Mroz TE. C5 palsy following posterior cervical decompression and fusion: cost and quality of life implications.
 - Platform presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
- 15. Miller JA, Derakhshan A, Lubelski D, Alvin MD, Benzel EC, Mroz TE. The impact of preoperative depression on quality of life outcomes following lumbar surgery.
 - Platform presentation at the NASS Annual Meeting. San Francisco, CA. November 11-14, 2014
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
- 16. Sundar S, Alvin MD, Lubelski D, Benzel EC, Mroz TE. Cost and quality of life outcome analysis of postoperative infections after posterior lumbar decompression and fusion.
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
 - Poster presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 5-8, 2014
- 17. Kuhns B, Lubelski D, Alvin MD, Taub J, Benzel EC, Mroz TE. Cost and quality of life outcome analysis of postoperative infections after subaxial posterior cervical fusions.
 - Poster presentation at the AANS Annual Meeting. San Francisco, CA. April 5-9, 2014
 - Poster presentation at the Cleveland Clinic Neurological Institute Research Day (NIRD). Cleveland, OH. May 23, 2013
- 18. Lubelski D, Abdullah KG, Alvin MD, Wang T, Nowacki AS, Steinmetz MP, Ransohoff RM, Benzel EC, Mroz TE. Clinical Outcomes Following Surgical Management of Coexistent Cervical Stenosis and Multiple Sclerosis: A Cohort Controlled Analysis.
 - Platform presentation at the NASS 28th Annual Meeting. New Orleans, LA. October 9-11, 2013
 - Poster presentation at the Cleveland Clinic Neurological Institute Research Day (NIRD). Cleveland, OH. May 23, 2013
- 19. Lubelski D, Abdullah KG, Mroz TE, Shin JH, Alvin MD, Benzel EC, Steinmetz MP. Lateral Extracavitary vs. Costotransversectomy Approaches to the Thoracic Spine: Reflections on Lessons Learned.
 - Platform presentation at Spine Across the Sea. Kauai, HA. July 29-August 2, 2012
 - Poster presentation at the SpineWeek Annual Meeting. Rai, Amsterdam. May 28-June 1, 2012
- 20. Lubelski D, Abdullah KG, Steinmetz MP, Alvin MD, Nowacki AS, Chakka S, Benzel EC, Mroz TE. Adverse Events with the Use of rhBMP2 in Thoracolumbar and Lumbar Spine Fusions: A Nine Year Institutional Analysis.
 - Platform presentation at Spine Across the Sea. Kauai, HA. July 29-August 2, 2012
 - Platform presentation at the Lumbar Spine Research Society Annual Meeting. Chicago, IL. May 2012
 - Platform presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 2012
 - Poster presentation at the SpineWeek Annual Meeting. Rai, Amsterdam. May 28-June 1, 2012
 - Poster presentation at the AANS Annual Scientific Meeting. Miami, FL. April 14-18, 2012

- 21. Lubelski D, Abdullah KG, Nowacki AS, Alvin MD, Steinmetz MP, Chakka S, Benzel EC, Mroz TE. Urological Complications Following Use of rhBMP-2 in Anterior Lumbar Interbody Fusion
 - Platform presentation at the NASS Annual Meeting. October 24-27, 2012
 - Platform presentation at Spine Across the Sea. Kauai, HA. July 29-August 2, 2012
 - Platform presentation at the SpineWeek Annual Meeting. Rai, Amsterdam. May 28-June 1, 2012
 - Platform presentation at the AANS Annual Scientific Meeting. Miami, FL. April 14-18, 2012
 - Platform presentation at the Lumbar Spine Research Society Annual Meeting. Chicago, IL. May 2012
 - Platform presentation at the AANS/CNS Spine Section Annual Meeting. Orlando, FL. March 2012
- 22. Alvin MD, Abdullah KG, Steinmetz MP, Lubelski D, Nowacki AS, Benzel EC, Mroz TE. Translaminar Screw Fixation in the Subaxial Cervical Spine: Quantitative Laminar Analysis and Feasibility of Unilateral and Bilateral Translaminar Virtual Screw Placement.
 - Platform presentation at the Cleveland Clinic Neurological Institute Research Day (NIRD). Cleveland, OH. May 24, 2012
 - Poster presentation at Spine Across the Sea. Kauai, HA. July 29-August 2, 2012
 - Poster presentation at the SpineWeek Annual Meeting. Rai, Amsterdam. May 28-June 1, 2012
 - Poster presentation at the AANS Annual Scientific Meeting. Miami, FL. April 14-18, 2012
 - Poster presentation at the Case Western Reserve University School of Medicine Lepow Research Day. February 1, 2012
 - i. Selected as one of twelve awardees for a top poster presentation among a group of 150+ presenters
 - Poster presentation at the Cleveland Clinic Lerner Research Day. Cleveland, OH. November 8, 2011
- 23. Lubelski D, Abdullah KG, Nowacki AS, Alvin MD, Steinmetz MP, Chakka S, Benzel EC, Mroz TE. Surgical Approaches to the Thoracic Spine: Identifying the Optimal Exposure Location.
 - Poster presentation at the AANS Annual Scientific Meeting. Miami, FL. April 14-18, 2012
 - Poster presentation at the Cleveland Clinic Lerner Research Day. Cleveland, OH. November 8, 2011
- 24. Chanda ML, Alvin M, Schnitzer TJ, Apkarian AV. Pain Characteristic Differences Between Subacute and Chronic Back Pain Patients.
 - Poster presentation at the Society for Neuroscience 2010 National Meeting, San Diego, CA. November 13-17, 2010
- 25. Herrmann KM, Chanda ML, Alvin MD, Schnitzer TJ, Apkarian AV. Sex and race differences in the experience of low back pain.
 - Poster presentation at the Society for Neuroscience 2010 National Meeting, San Diego, CA. November 13-17, 2010

Invited Lectures:

Featured Expert – The New England Journal of Medicine – Group Open Forum. The Future of the Step 2 Clinical Skills Exam. April 25-May 4, 2018.

Featured Expert – The New England Journal of Medicine – Group Open Forum. Prepping for PGY1: What You Need to Know Before Starting Residency. June 13-22, 2016.

Active Reviewer:

- Journal of the American College of Radiology
- Academic Radiology
- American Journal of Roentgenology
- American Journal of Neuroradiology
- Radiology
- Radiographics