

CURRICULAR VITAE

Matthew Wesley Colman, MD.
(December 2021)

Citizenship: United States

EDUCATION

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
1997 - 2001	B.A.	Dartmouth College (Chemistry with Italian language concentration) Hanover, NH
2003 - 2007	M.D.	University of Chicago Pritzker School of Medicine (Medicine) Chicago, IL
2007 - 2012	Resident	University of Pittsburgh Medical Center (Orthopedic Surgery) Pittsburgh, PA
2012 - 2013	Fellow	Harvard University, The Massachusetts General Hospital, Children's Hospital Boston (Adult and Pediatric Musculoskeletal Oncology)
2013 - 2014	Fellow	Boston, MA University of Utah (Orthopedic and Neurosurgical Spine Surgery) Salt Lake City, UT

LEADERSHIP TRAINING

1. Fellow, American Orthopedics Association (FAOA)
2. AAOS Clinician Scientist Development Program, Chicago, IL, 2012
3. Administrative Chief Resident, University of Pittsburgh Orthopedic Surgery, 2011-2012

ACADEMIC APPOINTMENTS

1. Associate Professor, Rush University Medical College, 2014-present
2. Director, Midwest Orthopedics at Rush Section on Spine Oncology

EMPLOYMENT

1. Partner, Midwest Orthopedics at Rush, 2016-present
2. Associate Consultant, The Parthenon Group, Boston, MA, 2001-2003

CERTIFICATION AND LICENSURE

1. Illinois State Medical Board, 2014-present

2. Indiana State Medical Board, 2014-present
3. Wisconsin State Medical Board, 2017-present
4. American Board of Orthopedic Surgery, 2016-present

HONORS AND AWARDS

1. Rush University Spine Fellowship Golden Apple Teaching Award, 2018
2. University of Pittsburgh Medical Center, 2012 Department of Orthopedic Surgery Research Day, Best clinical research paper, "Metastectomy for skeletal melanoma," Pittsburgh, PA, 2018
3. University of Pittsburgh, J Orthopedic Trauma, Best Resident Teaching Award, Pittsburgh, PA, 2010
4. University of Chicago Pritzker School of Medicine, Outstanding Achievement Award, For the most outstanding achievement over four years of medical school, Chicago, IL, 2007
5. Alpha Omega Alpha, University of Chicago, Chicago, IL, 2007
6. University of Chicago, Scientific Research Forum, Honorable Mention, Chicago, IL, 2004
7. Keith Edson International Health Fellowship for Clinical Study, Rome, Italy, 2004
8. Dartmouth College, B.A. Honors, Cum Laude, Hanover, NH, 2001
9. Dartmouth College, Academic All-Ivy, First Team Track and Field, 2001
10. Rhodes Scholar National Finalist, 2001
11. Dartmouth College, Presidential Scholar Research Fellow in Chemistry, Hanover, NH, 2001
12. Dartmouth College, Merck Prize for Achievement in Chemistry, Hanover, NH, 2001
13. Dartmouth College, Zabriskie Research Fellow in Chemistry, Hanover, NH, 2001

SOCIETY MEMBERSHIPS

1. American Orthopedics Association, 2021- present
2. Lumbar Spine Research Society, 2020- present
3. Cervical Spine Research Society, 2017-present
4. Musculoskeletal Tumor Society, 2017-present
5. International Society for Advancement of Spine Surgery, 2017-present
6. North American Spine Society, 2015-present
7. AO Spine, 2013-present
8. American Academy of Orthopedic Surgeons, 2007-present
9. Alpha Omega Alpha, University of Chicago Chapter, 2007-present

TEACHING

□ Rush University

1. Rush University Department of Orthopedic Surgery, Spine Service / Tumor Service
 - a. Direct clinical contact with residents (30 hours / week)
 - b. Lead weekly Tumor Service teaching conference (45 minutes)

- c. Co-lead weekly Spine Service deformity teaching conference (1 hour)
- d. Co-lead weekly Tumor Service tumor board (1 hour)
- e. Lead yearly OITE tumor review (2 hours)
- 2. Rush University Spine Fellowship
 - a. Direct clinical contact with spine fellows (15 hours / week)
 - b. Co-lead weekly Spine Service deformity teaching conference (1 hour)
 - c. Attend weekly Spine Service degenerative planning conference (1 hour)
- 3. EXPLORE RUSH, a clinical shadowing and mentorship program for Rush Medical College M1 students (20 hours per quarter with two medical students)

☐ Grand rounds (local/regional)

1. “Orthopedic Oncology Panel Discussion” Rush University Medical College Medical Oncology Grand Rounds, 2020
2. “Cutting edge modalities in metastatic spine disease.” Rush University Medical College Medical Oncology Grand Rounds, 2019
3. “Management of spine tumors.” Advocate Health system-wide combined neurosurgery and orthopedic spine surgery Grand Rounds 2018
4. Benign Bone Tumors. Rush University Medical College Surgical Grand Rounds 2017
5. Subaxial Cervical Spine Trauma. Rush University Medical College Surgical Grand Rounds 2016
6. Malignant Bone Tumors. Rush University Medical College Surgical Grand Rounds 2016
7. Current Concepts in Primary Spine Tumors. Rush University Medical College Medical Oncology Grand Rounds 2015
8. Surgical management of chordoma and biomechanics of spinal-pelvic fixation. University of Pittsburgh, Department of Orthopedic Surgery Grand Rounds 2010
9. Complications of fractures of the axial skeleton in ankylosing spondylitis. University of Pittsburgh, Department of Orthopedic Surgery Grand Rounds 2009
10. Current controversies in operative fixation of fractures of the scapula. University of Pittsburgh, Department of Orthopedic Surgery Grand Rounds 2008

☐ National/International Courses

1. RUSH Blended Learning CME online module: “Diagnosis of Cervical Radiculopathy and Myelopathy”
2. Seattle Science Foundation Webinar
 - a. May 2020 “Interesting spine tumor cases” presentation
 - b. March 2021 “Strategies for difficult revision spine surgery”
3. Rush University/Cleveland Clinic/University of Utah Multidisciplinary Journal Club
 - a. May 2020, faculty
4. AO Spine Teaching Faculty (2018-present)
 - a. National webinars
 - i. Annual Fellow’s Course: Laminoplasty vs. Posterior decompression and fusion (2020)
 - ii. Lumbar segmental angular improvement: rationale in degenerative conditions (January 2020)
 - iii. Osteoporotic Spine Fractures (December 2018)
 - b. Teaching faculty at in-person AO courses

- i. Resident basic spine fracture course, Chicago, IL (July 2018)
 - ii. Fellow’s research forum, Banff, Canada (2014, 2015, 2017, 2019, 2020, 2021)
 - iii. North American Fellow Cadaver Course 2020
 - iv. Controversies in Complex Spine Surgery Fellow course 2021
 - v. REAL spine national in person lab and webinar, MIS TLIF with the REAL spine model
- 5. NASS Section on Spine Oncology
 - a. Resident and Fellow Course, Chicago, IL 2019
 - b. NASS Spine Oncology Symposium, Annual Meeting, 2019
 - c. NASS Spine Oncology Symposium, Annual Meeting 2021
- 6. Industry Courses
 - a. K2M/Stryker New Fellow Instructional Spine Cadaver Course, Chicago, IL, 2019, 2020, 2021
 - b. Spinal Elements “Basics of lateral spine surgery” 2021
 - c. K2M Stryker “Introduction to lateral spine surgery” 2021
 - d. K2M “Meeting of the Minds” Spine Oncology Course, Chicago, IL, 2018
 - e. Orthofix Spine Principles of Complex Reconstruction Course, 2018

☐ Mentorship

- 1. Obianuju Obioha, Rush University Medical College Orthopedic Surgery Resident Mentor/Mentee program (2019-present)
- 2. Timothy Keating, Rush University Medical College Orthopedic Surgery Resident Mentor/Mentee program (2017-present)
- 3. Timothy Luchetti, Rush University Medical College Orthopedic Surgery Resident Mentor/Mentee program (2015-2019)

CONSULTING POSITIONS

- 1. Alphatec Spine
- 2. K2M / Stryker Spine
- 3. Orthofix Spine
- 4. Spinal Elements

LEADERSHIP SERVICE/LEADERSHIP POSITIONS

- 1. Board Member, Little Wish Foundation. Donation sourcing, strategic initiatives, event organization and advisory for pediatric cancer foundation (2017-present)
- 2. Student Director, University of Chicago Pritzker School of Medicine, Washington Park Free Pediatric Clinic. Responsible for operations of the student-run, free pediatric clinic, including recruitment of physician and student volunteers, clinic referrals, community outreach and publicity, and supplies and finance management, Chicago, IL
- 3. Captain, Dartmouth College Varsity Track and Field (2001-2002)

COMMUNITY SERVICE

1. Volunteer, University of Pittsburgh, William F. and Jean Donaldson Travelling Fellowship in Pediatric Orthopedic Surgery, San Pedro Sula, Honduras. Organized and participated in medical/surgical mission through CURE International with Senior Vice Chairman Morey Moreland, MD (2011)
2. Team Physician, South Park High School, Football, Class AA, South Park, PA (2007-2009)
3. Team Physician, Woodland Hills High School, Football, Class AAAA, Pittsburgh, PA, 2010-2011)
4. Teaching Assistant, University of Chicago Pritzker School of Medicine, Human Morphology, Biochemistry and Neurobiology (2004-2007)
5. Volunteer, University of Chicago Pritzker School of Medicine, Keith Edson International Health Fellowship. Spent 3 weeks volunteering at two city hospitals, working closely with Italian physicians in Internal Medicine, and learning about the Italian health care system, Rome, Italy (2003)
6. Medical Volunteer, Helping Hands Nepal, Volunteered for 6 months in urban, rural village, and mobile health clinics. Taught health education and basic science to Nepali school children, Nepal (2003)

COMMITTEE AND ADMINISTRATIVE SERVICES

Departmental / Institutional (Department of Orthopedic Surgery)

1. Resident Clinical Competency Committee
2. Education Committee
3. Resident Selection Committee
4. Spine Fellowship Selection Committee

SCIENTIFIC AND SCHOLARLY ACTIVITIES

Membership or Offices in Professional Societies

1. Lumbar Spine Research Society, Research committee, 2021-2023
2. Musculoskeletal Tumor Society, Evidence-based medicine committee, 2020-2023
3. AAOS / AANS American Spine Registry and Musculoskeletal Tumor Registry working group on Spine Tumors 2020-
4. Scientific Program Committee, Cervical Spine Research Society, 2019-2021
5. North American Spine Society, Section on Spine Oncology, 2018-present
6. Musculoskeletal Tumor Society, Annual Meeting Committee, 2018-2021
7. AO Spine North America, Fellowship Committee, 2018-2021
8. International Society for the Advancement of Spine Surgery, Publications Committee (2017-2018)

Reviewer for Professional Journals

1. The Spine Journal
2. Clinical Orthopedics and Related Research
3. Journal of Neurosurgery
4. Journal of Surgical Oncology
5. Journal of the American Academy of Orthopedics Surgeons
6. Journal of Pediatric Orthopedics
7. International Journal of Spine Surgery

❑ **Invited Podium Presentations at National and International Meetings**

1. Zavras, AG., Piracha, AZ., Siyaji, ZK., Qadri, T., Sayari, AJ., Shepard, NA., Sood, SS., Saleh, N., **Colman, MW.** “*Preoperative Diagnosis of a Mental Health Disorder is Associated with Increased Postoperative Rates of Dysphagia after Anterior Cervical Spine Surgery.*” Podium Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
2. Zavras, AG., Siyaji, ZK., Piracha, AZ., Qadri, T., Nolte, MT., Sayari, AJ., Harada, GK., Basques, BA., Singh, K., **Colman, MW.** “*Stand-Alone Cages versus Cage and Plate Constructs for One- and Two-level Anterior Cervical Discectomy and Fusion: A Prospective Randomized Controlled Trial.*” Podium Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
3. Zavras, AG., Dandu, N., Espinoza Orias, AA., Sheha, E., An, HS., Inoue, N., **Colman, MW.** “*Computed Tomography Osteoabsorptiometry (CT-OAM) Evaluation of Subchondral Bone Mineral Density in Cervical Endplates and Uncovertebral Joints: Implications for Subsidence and Clinical Practice.*” Podium Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
4. Zavras, AG., Siyaji, ZK., Dandu, N., Nolte, MT., Sayari, AJ., Sullivan, TB., **Colman, MW.** “*Range of Motion on Flexion and Extension at Long-Term Follow-Up After Cervical Total Disc Arthroplasty: A Systematic Review and Meta-Analysis.*” Podium Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
5. Zavras, AG., Sullivan, TB., Singh, K., Phillips, FM., **Colman, MW.** “*Failure in Cervical Total Disc Arthroplasty: Single Institutional Experience, Systematic Review of the Literature, and Proposal of the RUSH TDA Failure Classification System.*” Podium Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
6. Zavras, AG., Rossi, DM., Nolte, MT., Shepard, NA., Singh, K., **Colman, MW.** “*ISOVUE Contrast for Intraoperative Assessment of Discectomy Quality in TLIF: A Preliminary Report of a Prospective Randomized Controlled Trial.*” Podium Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
7. Zavras, AG., Siyaji, ZK., Piracha, AZ., Qadri, T., Nolte, MT., Sayari, AJ., Harada, GK., Basques, BA., Singh, K., **Colman, MW.** “*Stand-Alone Cages versus Cage and Plate Constructs for One- and Two-level Anterior Cervical Discectomy and Fusion: A Prospective Randomized Controlled Trial.*” Podium Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
8. Zavras, AG., Siyaji, ZK., Piracha, AZ., Qadri, T., Manzoor, U., Qadri, S., Nolte, MT., Sayari, AJ., **Colman, MW.** “*Anterior Lumbar Interbody Fusion with Porous Titanium Interbody Cages is Associated with Equivalent Fusion Rates and Patient Reported*

- Outcomes as Bone Morphogenetic Protein-2.” North American Spine Society (NASS) 36th Annual Meeting; Sep 29th-Oct 2nd, 2021; Boston, MA
9. Zavras, AG., Siyaji, ZK., Piracha, AZ., Qadri, T., Nolte, MT., Sayari, AJ., Singh, K., **Colman, MW.** “Stand-Alone Cages versus Cage and Plate Constructs for One- and Two-level Anterior Cervical Discectomy and Fusion: A Prospective Randomized Controlled Trial.” North American Spine Society (NASS) 36th Annual Meeting; Sep 29th-Oct 2nd, 2021; Boston, MA
 10. Siyaji, ZK., Zavras, AG., Berkowitz, M., Piracha, AZ., Rudisill, SS., Harada, GK., Nolte, MT., Basques, BA., **Colman, MW.**, “At One Year Follow-Up There is No Difference in Patient Reported Outcomes or Radiographic Alignment in Cortical Bone Trajectory Versus Traditional Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion.” American Academy of Orthopedic Surgeons (AAOS) Annual Meeting; August 31-September 4th, 2021; San Diego, CA
 11. Zavras, AG., Piracha, AZ., Siyaji, ZK., Qadri, T., Sayari, AJ., Shepard, NA., **Colman, MW.** “The Use of Table-Mounted Retraction Does Not Lead to Higher Incidence of Postoperative Dysphagia After Anterior Cervical Spine Surgery.” American Academy of Orthopedic Surgeons (AAOS) Annual Meeting; August 31-September 4th, 2021; San Diego, CA
 12. **Colman, MW.** CT osteoabsorbiometry predicts vertebral endplate subsidence in a human cervical cadaveric model. Cervical Spine Research Society, New York, New York, 2019.
 13. **Colman, MW.** Complex reconstruction in osteoporotic spine patients. State of Spine Surgery Annual Meeting, 2019.
 14. Khan J, Michalski J, Basques B, Louie P, Chen O, Hayani Z, Kalish C, Elboghdady I, An H, **Colman M.** Do Clinical and Radiographic Outcomes Differ between Diabetics and Non-Diabetics following Posterior Lumbar Spinal Fusion? Lumbar Spine Research Society Annual Meeting. Chicago, IL. 2019 Apr 5.
 15. Mormol J, Basques B, Alter K, Khan J, Louie P, Goldberg E, **Colman M,** An H. Risk Factors Associated with Development of Urinary Retention Following Posterior Lumbar Spinal Fusion. Lumbar Spine Research Society Annual Meeting. Chicago, IL. 2019 Apr 4-5.
 16. Khan J, Basques B, Gosse J, Hayani Z, Grewal G, Hwang J, Tchalukov K, Derman P, **Colman M,** An H. Does the Number of Patient-Reported Allergies Impact Clinical Outcomes after Lumbar Spinal Fusion? Lumbar Spine Research Society Annual Meeting. Chicago, IL. 2019 Apr 4.
 17. Khan J, Basques B, Kunze K, Grewal G, Hong Y, Pardo C, Louie P, **Colman M,** An H. Does Obesity Impact Clinical Outcomes and Lumbar Sagittal Alignment after a Posterior Lumbar Spine Fusion? Lumbar Spine Research Society Annual Meeting. Chicago, IL. 2019 Apr 5.
 18. Khan J, Basques B, Vetter C, Kunze K, Pardo C, Chen O, Mormol J, An H, **Colman M.** “Equivalent Outcomes in Patients Undergoing Open Posterior Lumbar Fusion With and Without a History of Prior Lumbar Laminectomy”. International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
 19. Basques B, Khan J, Chen O, Michalski J, Hayani Z, Hwang J, Kalish C, An H, **Colman M.** “Do Clinical and Radiographic Outcomes Differ Between Diabetics and Non-Diabetics following Posterior Lumbar Spinal Fusion?” International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.

20. Khan J, Basques B, Hong Y, Gosse J, Alter K, Banks L, Chitneni A, **Colman M**, An H. "Duration of Preoperative Symptoms Does Not Affect Clinical Outcome after Lumbar Arthrodesis". International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
21. Basques B, Louie P, Khan J, Chen O, Michalski J, Kunze K, **Colman M**, Samartzis D, An H. "Discharge to a Facility Following Posterior Lumbar Fusion: Risk Factors and the Development of a Predictive Scoring System". International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019. April 5.
22. Khan J, Basques B, Hong Y, Gosse J, Chen O, Banks L, Chitneni A, **Colman M**, An H. "Patients with Isolated Back Pain at the Time of Posterior Lumbar Fusion Experience Similar Clinical Improvement to Patients with Leg Pain with or without Back Pain". International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
23. Khan J, Basques B, Hayani Z, Pardo C, Banks L, Hong Y, Tchalukov K, **Colman M**, An H. "Does Obesity Impact Clinical Outcomes and Lumbar Sagittal Alignment after a Posterior Lumbar Spine Fusion?" International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
24. Basques B, Khan J, Kunze K, Chen I, Gosse J, Friedman L, Maschhoff C, **Colman M**, An H. "Do Clinical Outcomes and Sagittal Parameters Differ Between Transforaminal Lumbar Interbody Fusion and Posterolateral Lumbar Fusion for Degenerative Spondylolisthesis?" International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
25. Basques B, Nolte M, Khan J, Kadakia K, Gosse J, Mormol J, Derman P, **Colman M**, An H. "Patients with Predominantly Back Pain at the Time of Posterior Lumbar Fusion Experience Similar Clinical Improvement To Patients With Predominantly Leg Pain". International Society for the Advancement of Spine Surgery. Anaheim, CA. 2019 April 5.
26. **Colman, MW**. Degenerative spondylolisthesis: open technique with or without interbody is the best treatment option. North American Spine Society Evidence and Technology Spine Summit 2019
27. **Colman, MW**. Esophageal perforation in cervical spine surgery: incidence, etiology, and management . North American Spine Society Evidence and Technology Spine Summit 2019
28. **Colman, MW**, Singh K. Lasers in Spine Surgery. North American Spine Society Evidence and Technology Spine Summit 2019
29. **Colman, MW**, Sweeney K, Robichaud H, Nystrom L, Balach T. Patient Specific 3D Cutting Guides Provide Similar Cut Accuracy And Superior Far-Side Cut Penetration Accuracy Compared With Computer Navigation Or Freehand Technique In An Idealized Sawbones Pelvic Resection Model. Musculoskeletal Tumor Society, 2018 (New York, NY)
30. **Colman, MW**. En Bloc Spondylectomy: technical tips and tricks. Rush Alumni Spine Symposium 2018
31. **Colman, MW**. New and evolving treatments in the management of spine tumors. Spine Technology and Education Group International Meeting, 2018
32. **Colman, MW**. Incorporating new technology into practice. North American Spine Society Evidence and Technology Spine Summit 2018
33. **Colman, MW**. Staying out of trouble in spine tumors. K2M Meeting of the Minds, 2018

34. **Colman MW**, Innovative and evolving treatments for metastatic spine tumors. Instructional Course Lecture, American Academy of Orthopedic Surgeons, 2019 (Las Vegas), 2018 (New Orleans), 2017 (San Diego)
35. **Colman MW**, Osteotomy level selection and technical pearls. Ohio State University, Future Leaders Deformity Workshop, 2017
36. **Colman, MW**. Point/Counterpoint: ACDF is the most reliable operation for two level cervical disease. Spine Technology and Education Group International Meeting, 2017
37. **Colman, MW**. How we treat spine tumors differently today as compared to 10 years ago. Spine Technology and Education Group International Meeting, 2017
38. **Colman MW**, Massel DH, Mayo BC, Long WW, Modi KD, Singh K. Cervical sagittal imbalance is associated with a higher rate of reoperation for adjacent segment disease following ACDF. Cervical Spine Research Society 2016 (Toronto)
39. Fillingham YA, Hellman MD, Erickson BJ, Blank A, Gitelis S, **Colman MW**. Unicameral Bone Cyst: Does Surgical Technique And Type Of Graft Affect Clinical Outcomes? Podium, presented at the Mid-America Orthopaedic Association 2016 Annual Meeting, Bonita Springs, FL
40. Fillingham YA, Hellman MD, Erickson BJ, Blank A, Gitelis S, **Colman MW**. Unicameral Bone Cyst: Indications, Techniques, and Outcomes. Scientific Exhibit, presented at the American Academy of Orthopaedic Surgeons 2016 Annual Meeting, Orlando, FL
41. **Colman, MW**. Malignant Primary and Secondary Spine Tumors. AO Spine Research Forum, 2016
42. **Colman, MW**. Point/Counterpoint: Don't throw away ACDF. Spine Technology and Education Group International Meeting, 2016
43. **Colman, MW**. Point/Counterpoint: Current concepts in lumbar interbody fixation. Spine Technology and Education Group International Meeting, 2016
44. **Colman MW**. Malignant and Benign Tumor Review. American Society for Surgery of the Hand / American Academy of Orthopedic Surgeons Annual Board Review, 2016.
45. **Colman, MW**. What's new in Spine Tumors. Spine Technology and Education Group International Meeting, 2015
46. **Colman, MW**. The ABCs of Spinal Deformity: What's really important? Spine Technology and Education Group International Meeting, 2015
47. **Colman, MW**. Outcomes data in spine surgery: What to measure. Rush Alumni Spine Symposium 2016
48. **Colman MW**, Spiker WR, Lawrence BD, Brodke DS. Interbody vs. no interbody for degenerative spondylolisthesis: is there a difference in fusion or quality of life? Lumbar Spine Research Society, 2015
49. **Colman MW**, Spiker WR, Lawrence BD, Daubs MD, Curry PC, Brodke DS. Outcomes after acute proximal junctional failure in adult spinal deformity. Lumbar Spine Research Society, 2015
50. **Colman MW**. Point/Counterpoint: Epidemiology of degenerative scoliosis. Lumbar Spine Research Society 2015.
51. **Colman MW**. Point/Counterpoint: Open traditional approach to degenerative scoliosis. Lumbar Spine Research Society 2015.
52. **Colman MW**. Malignant and Benign Tumor Review. American Society for Surgery of the Hand / American Academy of Orthopedic Surgeons Annual Board Review, 2015.

53. **Colman MW**, Karim SM, Lozano-Calderon S, Shah V, Hirsch JA, Yoo AJ, Schwab JS, Hornicek FJ, Raskin KA. Percutaneous acetabuloplasty compared with surgery for high grade periacetabular carcinoma metastases. American Academy of Orthopedic Surgeons 2014, New Orleans, LA; Musculoskeletal Tumor Society 2013, San Francisco, CA
54. Gebhardt MC, **Colman MW**. Tumors of the Hand. New England Hand Society Annual Meeting 2013
55. Gebhardt MC, **Colman MW**. Complications of allografts for bone tumor reconstruction. American Academy of Orthopedic Surgeons Annual Meeting Specialty Day Lecture, 2013
56. **Colman MW**, Karim SM, Lozano-Calderon S, Raskin KA, Hornicek FJ, Schwab JS. Quality of life after en-bloc resection of mobile spine tumors. Musculoskeletal Tumor Society 2013, San Francisco, CA; American Academy of Orthopedic Surgeons 2014, New Orleans, LA
57. **Colman MW**, Choi LE, Chen AF, Goodman MA, Crossett LC, Tarkin IS, McGough RM. Proximal femoral replacement in the management of acute periprosthetic fractures of the hip. American Academy of Orthopedic Surgeons 2012, San Francisco, CA
58. **Colman MW**, Ye J, Weiss KR, Goodman MA, McGough RL 3rd. Does combined open and arthroscopic synovectomy for diffuse PVNS of the knee improve recurrence rates? Symposium Selection, combined Musculoskeletal Tumor Society and Connective Tissue Oncology Society, Chicago, IL, 2011
59. **Colman MW**, Kirkwood JM, Schott T, Irrgang JJ, Goodman MA, McGough RL 3rd. Does Metastasectomy Improve Survival in Skeletal Melanoma? Musculoskeletal Tumor Society 2010, Philadelphia, PA; American Academy of Orthopedic Surgeons 2011, San Diego, CA
60. Donaldson WF, **Colman MW**. Complications of cervical fractures in ankylosing spondylitis. Cervical Spine Research Society 2009
61. **Colman M**, Mass DP, Draganich LF. Effects of the deep anterior oblique and dorsoradial ligaments on trapeziometacarpal joint stability. American Academy of Orthopedic Surgeons 2007, San Diego, CA
62. **Colman MW**, Glueck DS. Gold nanoclusters with functional surface modifications. Dartmouth College, Molecular Materials Group Research Symposium, Defense of Senior Honors Thesis, Hanover, NH, 2001

❑ **Poster presentations**

1. Espinoza Orias, AA., Sheha, E., Zavras, AG., John, P., Fitch, AA., An, HS., Inoue, N., **Colman, MW**. “*CT Osteoabsorptiometry Assessment of Subchondral Bone Density Predicts Intervertebral Subsidence in a Human Cadaver Model.*” Poster Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
2. Zavras, AG., Piracha, AZ., Siyaji, ZK., Qadri, T., Sayari, AJ., Shepard, NA., Ahmed, M., Dhivra, J., **Colman, MW**. “*The Use of Table-Mounted Retraction Does Not Lead to Higher Incidence of Postoperative Dysphagia After Anterior Cervical Spine Surgery.*” Poster Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
3. **Colman, MW.**, Zavras, AG., Federico, VP., Nolte, MT., Singh, K., Phillips, FM. “*A Longitudinal Assessment of Segmental Motion of the Cervical Spine Following Total*

- Disc Arthroplasty: A Comparative Analysis of Devices.*” Poster Presentation at the Cervical Spine Research Society Annual Meeting; December 2-4, 2021; Atlanta, GA
4. Zavras, AG., Piracha, AZ., Siyaji, ZK., Qadri, T., Sayari, AJ., Shepard, NA., Sood, SS., Saleh, N., **Colman, MW.** “*Preoperative Diagnosis of a Mental Health Disorder is Associated with Increased Postoperative Rates of Dysphagia after Anterior Cervical Spine Surgery.*” Poster Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
 5. Zavras, AG., Siyaji, ZK., Piracha, AZ., Qadri, T., Manzoor, U., Nolte, MT., Sayari, AJ., Qadri, SS., Khan, M., **Colman, MW.** “*Anterior Lumbar Interbody Fusion with Porous Titanium Interbody Cages is Associated with Equivalent Fusion Rates and Patient Reported Outcomes as Bone Morphogenetic Protein-2.*” Poster Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
 6. Siyaji, ZK., Zavras, AG., Berkowitz, M., Piracha, AZ., Rudisill, SS., Harada, GK., Nolte, MT., Basques, BA., **Colman, MW.**, “*At One Year Follow-Up There is No Difference in Patient Reported Outcomes or Radiographic Alignment in Cortical Bone Trajectory Versus Traditional Pedicle Screw Fixation in Transforaminal Lumbar Interbody Fusion.*” Poster Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
 7. Espinoza Orias, AA., Sheha, E., Zavras, AG., John, P., Fitch, AA., An, HS., Inoue, N., **Colman, MW.** “*CT Osteoabsorptiometry Assessment of Subchondral Bone Density Predicts Intervertebral Subsidence in a Human Cadaver Model.*” Poster Presentation at AO Spine Global Spine Conference; Nov 3-6, 2021; Paris, France
 8. Zavras, AG., Siyaji, ZK., Qadri, T., Nolte, MT., Sayari, AJ., Basques, BA., Singh, K., **Colman, MW.** “*Stand-Alone Cages versus Cage and Plate Constructs for One- and Two-level Anterior Cervical Discectomy and Fusion: A Prospective Randomized Controlled Trial.*” American Academy of Orthopedic Surgeons (AAOS) Annual Meeting; August 31-September 4th, 2021; San Diego, CA
 9. Zavras, AG., Dandu, N., Fice, MP., Levine, BR., Gitelis, S., Blank, AT., **Colman, MW.** “*Indication for Proximal Femoral Resection is Associated with Risk of Failure.*” American Academy of Orthopedic Surgeons (AAOS) Annual Meeting; August 31-September 4th, 2021; San Diego, CA
 10. Zavras, AG., Siyaji, ZK., Qadri, T., Nolte, MT., Sayari, AJ., Basques, BA., Singh, K., **Colman, MW.** “*Stand-Alone Cages versus Cage and Plate Constructs for One- and Two-level Anterior Cervical Discectomy and Fusion: A Prospective Randomized Controlled Trial.*” Poster Presentation at the International Society for the Advancement of Spine Surgery (ISASS) 21st Annual Conference; May 13-15, 2021; Miami, FL
 11. Zavras, AG., Rossi, DM., Nolte, MT., Shepard, NA., Singh, K., **Colman, MW.** “*ISOVUE Contrast for Intraoperative Assessment of Discectomy Quality in TLIF: A Preliminary Report of a Prospective Randomized Controlled Trial.*” Poster Presentation at the International Society for the Advancement of Spine Surgery (ISASS) 21st Annual Conference; May 13-15, 2021; Miami, FL
 12. Farnaz D, Fan Y, Bloom J, Fillingham YA, Mahon B, **Colman M**, Gitelis S, Blank AT. A Clinicopathologic Examination of Myxofibrosarcoma. Rates of Local Recurrence, Metastases and Patient Survival From a Single Institution Review of 40 Cases. Poster, presented at the Connective Tissue Oncology Society 2018 Meeting, Rome, Italy

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2. Lindsay B, **Colman MW**, Goodman MA, Weiss KR, McGough RM. Resection vs. intralesional surgery for isolated renal cell metastases. Combined Musculoskeletal Tumor Society and Connective Tissue Oncology Society 2011
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❑ Funding History of Peer-Reviewed Grants

1. STRIDES NIH RO1 grant, Rush Medical College specific PI, study Co-I
 - a. Multicenter randomized prospective trial of ambulatory outcomes in patients with metastatic spine disease treated with or without surgery
 - b. Currently under review under application cycle 2019/2020
2. Colman, MW. CSRS seed/starter grant (\$25,000, 1 year): *CT Osteoabsorbptiometry assessment of subchondral bone density predicts intervertebral subsidence in a human cadaver model*
3. Basque, BA, Colman MW. Mid America Orthopedic Association (\$4,000) *TXA use in degenerative and deformity spine surgery: a prospective comparison of oral and IV formulations*
4. AO Spine Fellowship Grant (2019-2021, Co-investigator, \$75,000)
5. AO Spine Fellowship Grant (2015-2017 Co-investigator, \$75,000)

Funding History of Industry Support

1. Pfizer STRIVE (Staph Aureus Surgical Inpatient Vaccine Efficacy)
 - a. PI 3% effort
 - b. \$15,000 over 1 year
 - c. Study completed and closed in 2019

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Unpublished Manuscripts in process

1. Spine phantom spondylectomy model of dosimetric radiotherapy perturbation using traditional titanium, carbon, or magnesium alloy implants
2. A randomized prospective trial of anterior lumbar interbody fusion using a novel low density, minimal graft-window porous titanium ingrowth implant without biologic supplementation (enrolling)
3. A randomized prospective trial of plate/cage vs. stand alone devices for one and two level acdf (enrolling)
4. A randomized prospective trial of intraoperative disc preparation feedback during transforaminal interbody fusion (enrolling)
5. A randomized prospective trial of the use and formulation options for tranexamic acid in degenerative and deformity spine surgery (enrolling)
6. Comparison of freehand, computer navigation, and 3D- printed cutting guides in a saw-bones-simulated sacro-iliac pelvic resection model (manuscript preparation)
7. A randomized prospective trial of abaloparatide before and after adult thoracolumbar deformity surgery: feasibility, outcomes, and complications (enrolling)
8. Conceptualization and implementation of a porcine-based soft tissue sarcoma resection model in orthopedic resident-level education (laboratory testing)

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❑ **Book chapters**

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