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EMPLOYMENT/EDUCATION

2014-Present Norton Leatherman Spine Center
Adult and Pediatric Spine Surgeon
September 1, 2014

2014 Assistant Clinical Professor
University of Louisville
Department of Orthopaedic Surgery
Gratis Appointment

2013-2014 Orthopedic Spine Fellowship
Complex Adult and Pediatric Spinal Deformity
Washington University; St. Louis, Missouri

2008 University of Louisville School of Medicine
Department of Orthopaedic Surgery
Residency/Internship

2004-2008 University of Kansas School of Medicine
Doctor of Medicine

1999-2003 University of Kansas
Bachelor of Science, Biochemistry

MEDICAL LICENSURE

2016 Medical Licensing Board of Indiana
Granted June 2016. License #01076997A

2014 State of Kentucky Board of Medical Licensure
Granted August 1, 2014. License # 47314

2013 State of Missouri Board of Healing Arts
Granted July 01, 2013. License # 2013005673

2009 State of Kentucky Board of Medical Licensure
Granted July 01, 2009. R-license # R1969

2009 Drug Enforcement Agency prescribing privileges
DEA # FG1643940

2008 National provider identification
NPI # 1982879607

PROFESSIONAL MEMBERSHIPS

2019	Scoliosis Research Society (SRS) Active Fellow (Applied For)
2014	International Spine Study Group (ISSG)
2014	Scoliosis Research Society (SRS) Candidate Fellow Member
2013	AO spine North America Fellow Member
2012	Emerging Leaders in Orthopedics Nominated and Accepted 2012
2012	American Orthopedic Association (AOA)
2009	North American Spine Society (NASS)
2008	American Academy of Orthopedic Surgeons (AAOS) Fellow Member
2006	International Research Society of Spinal Deformities (IRSSD)

EDITORIAL/REVIEW BOARDS

2019	Reviewer for IMAST Abstracts (2020)
2019	Reviewer for IMAST/SRS Abstracts (2019)
2019	Reviewer for ISASS Abstracts (2018)
2018	Advisory Board for Medtronic Robotics Committee (Chairman)
2017	Advisory Board for K2M (BACS)
2016	Reviewer for Spine Deformity Journal
2014-2018	Editorial board <i>American Journal of Orthopedics</i>
2014	Reviewer for <i>The Spine Journal</i>
2012	<i>American Journal of Orthopedics</i> Resident Advisory Board (invited position)

AWARDS

- 2019 NASS- SpineLine's Top 20 Spine Surgeon's under 40
- 2019 Nominated for Value Award: Introducing Navigation or Robotics into TLIF Techniques: Are We Optimizing Our Index Episode of Care or Just Spending More Money?
- 2019 Nominated for Value Award: Giving patients the info they want: Practical Answers to FAQs for Shared Decision Making in ASD surgery
- 2018 Louisville's Top Surgeon
Discectomy and Laminectomy, Louisville Magazine, Aug 2018
- 2016 Scoliosis Research Society Edgar G. Dawson Traveling Fellowship Scholarship
- 2016 Awarded the 2016 NASS Value Abstract Award. North American Spine Society Annual Meeting, Boston, MA, October 26-29, 2016. **Gum JL**, Glassman SD, Crawford CH II, Djurasovic M, Owens RK II, Dimar JR II, McGraw KE, Carreon LY. Cost-effectiveness of Circumferential Fusion for Lumbar Spondylolisthesis: Comparison of Transforaminal Lumbar Interbody Fusion versus Antero-Posterior Fusion.
- 2014 Nominated for "Value Care" Award North American Spine Society Annual Meeting, San Francisco, California, November 11-15, 2014. Baldus C, **Gum JL**, Bridwell KH, Ahmad A, Mesfin A, Carreon LY. Prevalence of Cancer in Spinal Deformity Patients Receiving High Dose ($\geq 40\text{mg}$) Bone Morphogenetic Protein (rhBMP-2).
- 2014 Nominated for "Value Care" Award North American Spine Society Annual Meeting, San Francisco, California, November 11-15, 2014. Gum JL, Carreon LY, Sugrue PA, Bumpass DB, Karkari IO, Lenke LG, Bridwell KH. SRS Appearance Domain correlates the most with Patient Satisfaction after Adult Deformity Surgery to the Sacrum at 5 year Follow-up.
- 2014 Nominated for "Value Care" Award North American Spine Society Annual Meeting, San Francisco, California, November 11-15, 2014. **Gum JL**, Lenke LG, Bridwell KH, Zhao J, Bumpass DB, Sugrue PA, Karikari IO, Rahman RK, Carreon LY. Does Planned Staging for Posterior-only Vertebral Column Resections in Spinal Deformity Surgery Increase Perioperative Complications?
- 2014 Culture Profile of Surgical Site Infections after Topical Vancomycin in Instrumented Spine Fusions. **Gum JL**, Crawford CH, Buchowski J, Lenke L, Edwards C, Glassman SD, Carreon LY
AAOS Poster nominated for "spine guided tour"

- 2013 AOA's Emerging Leaders "on the move"
- 2013 Vancomycin profile abstract nominated for "value care" award in spine (2013 NASS annual meeting). Presentation in October 2013, New Orleans.
- 2013 American Journal of Orthopedics Resident Writer's Award (3rd Place). Accepted at 2013 AAOS annual meeting (cash prize)
- 2013 Resident Research Dedication
Award given to resident most dedicated to research
Department of orthopedics June 2013
- 2013 Resident Research Award
2nd place resident research presentation in annual university of Louisville
Dept. of Orthopedic surgery June 2013
- 2012 Clinician Scholar Development Program (CSDP)
AAOS/OREF. Sponsored by SRS for October 2012
- 2012 Resident Research Dedication
Award given to resident most dedicated to research
Department of orthopedics June 2012
- 2012 Resident Research Award
Winner resident research presentation in annual University of Louisville
Dept. of Orthopaedic Surgery, June 2012
- 2011 Resident Research Award
2nd best resident research presentation in annual university of Louisville
Dept. of Orthopaedic Surgery
June 2011
- 2010 Best Paper Nominee NASS 2010 Annual Meeting
Orlando, Florida
- 2008 P.G. Carlinsky Family Award. University of Kansas School of medicine;
Wichita, KS. Distinguished clinical service during medical school
- 2008 D. Cramer Reed Award. University of Kansas School of medicine;
Wichita, KS. Department of preventive medicine and public health
- 2007 Ron Martin, MD award for best psychiatric paper from the dept. of
psychiatry and behavioral sciences. University of Kansas School of
medicine Wichita KS.
Gum JL, D'empaire I. Neuropsychiatric sequelae of herpes simplex virus
encephalitis during pregnancy: to treat or not to treat?

PUBLICATIONS (Peer-Reviewed or Invited)

- 2019 Laratta JL, Gum JL, Shillingford JN, Reddy H, Lehman RA, Crawford CH, Glassman SD, Carreon L. Job Selection after Orthopedic Surgery Training: Why Are Our Trainees Failing to Select the Right Job? *Cureus*, 2019 Aug 31;11(8):e5539. Doi: 10.7759/cureus.5539.
- 2019 Djurasovic M, **Gum JL**, Crawford CH, Owens K, Brown M, Steele P, Glassman SD, Carreon LY. Cost-effectiveness of minimally invasive midline lumbar interbody fusion versus traditional open Transforaminal lumbar interbody fusion. *J Neurosurg Spine*. 2019 Sep 13:1-5. Doi: 10.3171/2019.6.SPINE.1965. [Epub ahead of print]
- 2019 Ames CP, Smith JS, **Gum JL**, Kelly M, Vila-Casademunt A, Burton DC, Hostin R, Yeramanehi S, Lafage V, Schwab FJ, Shaffrey CI, Bess S, Pellise F, Serra-Burriel M. Utilization of Predictive Modeling to Determine Epidode of Care Costs and to Accurately Identify Catastrophic Cost Non-warranty Outlier Patients in Adult Spinal Deformity Surgery: A Step Toward Bundled Payments and Risk Sharing. *Spine (Phila Pa 1976)*. 2019 Sep 6. Doi: 10.1097/BRS.0000000000003242. [Epub ahead of print]
- 2019 Glassman SD, Carreon LY, Dimar JR 2nd, **Gum JL**, Djurasovic M. Neurologic Disease Is a Risk Factor for Revision After Lumbar Spine Fusion. *Global Spine J*. 2019 Sep;9(6):630-634. Doi: 10.1177/2192568218821670. Epub 2019 Feb 6
- 2019 Khoshhal Y, Jalali M Babae T, Ghandhari H, **Gum JL**. The Effect of Bracing on spinopelvic rotation and Psychosocial Parameters in Adolescents with Idiopathic Scoliosis. *Asian Spine J*. 2019 Aug 23. Doi: 10.316/asj.2018.0307. [Epub ahead of print]
- 2019 Ogura Y, Dimar JR, **Gum JL**, Crawford CH 3rd, Djurasovic M, Glassman SD, Carreon LY. Hidden Blood Loss following 2- to 3- level Posterior Lumbar Fusion. *Spine J*. 2019 July 18. Pii: S1529-9430(19)30891-5. Doi: 10.1016/j.spine.2019.07.010
- 2019 Ames CP, Smith JS, Pellise F, Kelly M, **Gum JL**, Alanay A, Acaroglu E, Perez-Grueso FJS, Kleinstuck FS, Obeid I, Vila-Casademunt A, Shaffrey CI Jr, Burton DC, Lafage V, Schwab FJ, Shaffrey CI Sr, Bess S, Serra-Burriel M. Development of predictive models for all individual questions of SRS-22R after adult spinal deformity surgery: a step toward individualized medicine. *Eur Spine J*. 2019 Jul 19. Doi: 10.1007/s00586-019-06079-x
- 2019 Bortz CA, Passias PG, Segreto FA, Horn SR, Lafage R, Smith JS, Line BG, Mundis GM Jr, Kelly MP, Park P, Sciubba DM, Hamilton DK, **Gum JL**, Burton DC, Hart RA, Schwab FJ, Bess S, Shaffrey C, Klineberg EO.

Grading of Complications after Cervical Deformity-corrective Surgery: Are Existing Classification Systems Applicable? International Spine Study Group. Clin Spine Surg. 2019 Jul; 32(6): 263-268. Doi: 10.1097/BSD.0000000000000748.

- 2019 Pellise F, Serra-Burriel M, Smith JS, Haddad S, Kelly MP, Vila-Casademunt A, Sanchez Perez-Grueso FJ, Bess S, **Gum JL**, Burton DC, Acaroglu E, Kleinstuck F, Lafage V, Obeid I, Schwab F, Shaffrey CI, Alanay A, Ames C. Development and validation of rick stratification midels for adult spinal deformity surgery. International Spine Study Group; European Spine Study Group. J Neurosurg Spine. 2019 Jun 28:1-13. Doi: 10.3171/2019.3.SPINE181452.[Epub ahead of print]
- 2019 Ames CP, Smith JS, Pellise F, Kelly MP, **Gum JL**, Alanay A, Acaroglu E, Perez-Grueso FJS, Kleinstuck FS, Obeid I, Vila-Casadermunt A, burton DC, Lafage V, Schwab FJ, Shaffrey CI, Bess S, Serra-Burrel M, European Spine Study Group, International Spine Study Group. Development of Deployable Predictive Models for Minimal Clinically Important Defference Achievement Across the Commonly Used Health-Related Quality of Life Instruments in Adult Spinal Deformity Surgery. Spine: March 13, 2019- Volume Publish Ahead of Print-Issue-p doi: 10.1097/BRS.00000000000003031 Deformity: PDF Only
- 2019 Passias PG, Bortz CA, Lafage V, Lafage R, Smith JS, Lines B, Eastlack R, Gupta MC, Hostin RA, Horn SR, Segreto FA, Egers M, Sciubba DM, **Gum JL**, Kebaish KM, Klineberg EO, Burton DC, Schwab FJ, Shaffrey CI, Ames CP, Bess S, ISSG. "Durability of Satisfactory Functional Outcomes Following Surgical Adult Spinal Deformity Correction: A 3- Year Survivorship Analysis. Oper Neurosurg (Hagerstown). 2019 May31. Pii: opz093. Doi: 10.1093/ons/opz093. [Epub ahead of print]
- 2019 Segreto FA, Passias PG, Lafage R, Lafage V, Smith JS, Line BG, Mundis GM, Bortz CA, Stekas ND, Horn SR, Diebo BG, Brown AE, Ihejirika Y, Nunley PD, Daniels AH, Gupta MC, **Gum JL**, Hamilton DK, Klineberg EO, Burton DC, Hart RA, Schwab FJ, Bess S, Shaffrey CI, Ames CP. Incidence of Acute, Progressive, and Delayed Proximal Junctional Kyphosis over an 8-Yeat Period in Adult Spinal Deformity Patients. Oper Neurosurg (Hagerstown). 2019 Jun 7.piii: opz128. Doi: 10.1093/ons/opz128.
- 2019 Glassman SD, Carreon LY, Dimar JR, **Gum JL**, Djurasovic M. Neurologic Disease Is a Risk Factor for Revision after Lumbar Spine Fusion. Global Spine Journal, February 6, 2019

- 2019 Crawford CH 3rd, Glassman SD, Djurasovic M, Owens RK 2nd, **Gum JL**, Carreon LY. Prognostic factors associated with best outcomes (minimal symptom state) following fusion for lumbar degenerative conditions. *Spine J.* 2019 Feb; 19(2): 187-190. doi: 10.1016/j.spine.2018.06.348. Epub 2018 Jun 28.
- 2018 Bortz CA, Passias PG, Segreto FA, Horn SR, Lafage R, Smith JS, Line BG, Mundis GM Jr, Kelly MP, Park P, Sciubba DM, Hamilton DK, **Gum JL**, Burton DC, Hart RA, Schwab FL, Bess S, Shaffrey C, Klineberg EO, International Spine Study Group. Grading of Complications after Cervical Deformity-corrective Surgery: Are Existing Classification Systems Applicable? *Clin Spine Surg.* 2018 Nov 16. Doi: 10.1097/BSD.0000000000000748. [Epub ahead of print]
- 2018 Laratta JL, Shillingford JN, Meredith JS, Lenke LG, Lehman RA, **Gum JL**. Robotic versus freehand S2 alar iliac fixation: in-depth technical considerations. *J Spine Surg.* 2018 Sep; 4(3): 638644. doi: 10.21037/jss.2018.06.13 Review
- 2018 Yeramaneni S, Ames CP, Bess S, Burton D, Smith JS, Glassman S, **Gum JL**, Carreon L, Jain A, Zygourakis C, Avramis I, Hostin R, International Spine Study Group. Center variation in episode-of-care costs for adult spinal deformity surgery: results from a prospective, multicenter database. *Spine J.* 2018 Oct; 18(10): 1829-1836. doi: 10.1016/j.spine.2018.03.012. Epub 2018 Mar 22.
- 2018 Karikari IO, Sugrue, PA, Lenke LG, Bridwell KH, Kelly MP, Luhmann SJ, Sides BA, Bumpass DB, **Gum JL**. Key Role of Preoperative Recumbent films in the Treatment of Severe Sagittal Malalignment. *Spine Deform.* 2018 Sep- Oct; 6(5): 568-575. doi: 10.1016/j.jspd.2018.02.009.
- 2018 Ailon T, Smith JS, Shaffrey CI, Soroceanu A, Lafage V, Schwab FJ, Burton DC, Hart RA, **Gum JL**, Hostin RA, Kelly MP, Glassman SD, Bess RS, Ames CP, ISSG, Patients with Adult Spinal Deformity Patients with Previous Fusions have an Equal Chance of Reaching Substantial Clinical Benefit Thresholds in Health-related Quality of Life Measures but do not reach the Same Absolute Level of Improvement. International Spine Study Group. *World Neurosurg.* 2018 Aug; 116: e354-e361. Doi: 10.1016/j.wneu.2018.04204. Epub 2018 May 9
- 2018 Jazini E, **Gum JL**, Glassman SD, Crawford CH III, Djurasovic M, Owens RK II, Dimar JR II, McGraw KE, Carreon LY. Cost-effectiveness of circumferential fusion for lumbar spondylolistheses: Propensity-matched comparison of Transforaminal lumbar interbody fusion with anterior-posterior fusion. *Spine J.* 2018 Apr 26. Pii: S1529-9430(18)30130-X.

- 2018 Yeramaneni S, Ames CP, Bess S, Burton D, Smith JS, Glassman SD, **Gum JL**, Carreon L, Polly D, Jain A, Zygorakis C, Avramis I, Hostin R. Center Variation in Episode-of-Care Costs for Adult Spinal Deformity Surgery: Results from a Prospective, Multicenter Database.
- 2018 Yeramaneni S, **Gum JL**, Carreon LY, Klineberg EO, Smith JS, Jain A, Hostin RA. Impact of Readmissions in Episodic Care of Adult Spinal Deformity: Event-Based Cost Analysis of 695 Consecutive Cases. *J Bone Joint Surg Am.* 2018 Mar; 100(6): 487-495.
- 2018 Crawford CH, **Gum JL**, Lenke LG, Buchowski JM, Edwards CC, Glassman SD, Carreon LY. Does topical Vancomycin powder use in instrumented lumbar spine fusions increase the incidence of Vancomycin resistant "superbug" infections? *JSM Neurosurg Spine* 6(1): 1095. (2018)
- 2018 **Gum JL**, Lenke LG, Mohapatra, A, Sun SQ, Kelly MP. Posterior-only Vertebral Column Resection for Spondyloptosis: A report of two cases. *Spine Deform.* 2018 Jan; 6(1): 84-95.
- 2018 Karikari IO, **Gum JL** et al. Decompression in Adult Lumbar Deformity Surgery is Associated with Increased Perioperative Complications but Favorable Long Term Outcomes. *Global Spine J.* 2018 Apr; 8(2): 110-113. Doi: 10.1177/2192568217735509. Epub 2017 Oct 25.
- 2017 Kelly MP, Kim HJ, Ames CP, Burton DC, Carreon LY, Polly DW Jr., Hostin R, Jain A, **Gum JL** et al. Minimum detectable measurement difference (MDMD) for health related quality of life (HRQL) measures varies according age and disability in adult spinal deformity (ASD): Implications for calculating minimal clinically important difference (MCID). *Spine.* 2017 Dec 5
- 2017 Bumpass DB, Lenke LG, **Gum JL**, Shaffrey CI, Smith JS, Ames CP, Bess S, Neuman BJ, Klineberg E, Mundis GM Jr., et al. Male sex may not be associated with worse outcomes in primary all-posterior adult spinal deformity surgery: a multicenter analysis. *Neurosurg Focus.* 2017 Dec; 43(6): E9.
- 2017 Hart RA, Rastegar F, Contag A, Kane M, Daniels A, Klineberg E, Eastlack R, Smith JS, Hostin R, Hamilton DK, **Gum JL**. Inter- and intra-rater reliability of the Hart-ISSG proximal junctional failure severity scale. *Spine* 2017 Nov 20.

- 2017 Lafage R, Line B, Liabaud B, Schwab FJ, Smith JS, **Gum JL**, Ames CP, Hostin RA, Mundis GM, Burton DC, Kim HJ, Bess RS, Klineberg EO, Lafage V, ISSG
Orientation of The Upper-Most Instrumented Segment Influences Proximal Junctional Disease Following Adult Spinal Deformity (ASD) Surgery. *SPINE*. 2017 Oct 15;42(20):1570-1577.
- 2017 Kelly MP, **Gum JL**, Shaffrey C, Ames C, Smith J, Yagi M, Alanay A, Ha Y. DEC Male gender is not associated with worse outcomes in adult spinal deformity surgery: A multi-center analysis. Accepted to *Neurosurgical Focus*, [FOCUS17-494R1] September 2017.
- 2017 Oh T, Shaffrey C, Ames C, Smith J, Yagi, Alanay A, Ha Y, **Gum JL**
DEC predictive computer models for preoperative patient selection have the potential to enhance overall QALYs gained at 2-year follow up: a simulation in 234 adult spinal deformity patients. *Neurosurg Focus*. 2017 Dec;43(6):E2
- 2017 Yeramaneni Y, Shaffrey C, Ames C, Smith J, Yagi M, Alanay A, Ha Y, **Gum JL**
DEC Center variation in episode-of-care costs for adult spinal deformity surgery: results from a prospective, multicenter database. Submitted to *Neurosurgical Focus* October 2017.
- 2017 Shaffrey C, **Gum JL**, Ames C, Smith J, Yagi M, Alanay A, Ha Y
DEC predictive computer models for preoperative patient selection have the potential to enhance overall QALYs gained at 2-year follow up: a simulation in 234 adult spinal deformity patients. Accepted to *Neurosurgical Focus*, [FOCUS17-494R1] September 2017.
- 2017 Kim YC, Lenke LG, Lee SJ, **Gum JL**, Wilartratsami S, Blanke KM
The cranial sagittal vertical axis (CrSVA) is a better radiographic measure to predict clinical outcomes in adult spinal deformity surgery than the C7 SVA. *Eur Spine J*. 2017 Aug;26(8):2167-2175.
- 2017 **Gum JL**, Carreon LY, Kelly MP, Hostin RA, Robinson C, Burton DC, Polly DW, Shaffrey CI, LaFage V, Schwab FJ, Ames CP, Kim HJ, Smith JS, Bess RS, ISSG.
Cell saver in Adult Spine Deformity Reduces Cost. *Spine Deform*. 2017 Jul;5(4):272-276.
- 2017 Karikari I, Bumpass DB, **Gum JL**, Sugrue PA, Chapman TM, Elsamadicy AA, Riew KD.
Use of Bivector Traction for Stabilization of the Head and Maintenance of Optimal Cervical Alignment in Posterior Cervical Fusions. *Global Spine J*. 2017 May;7(3):227-229.

- 2017 Smith JS, Line B, Bess S, Shaffrey CI, Kim HJ, Mundis G, Scheer JK, Klineberg E, O'Brien M, Hostin R, Gupta M, Daniels A, Kelly M, **Gum JL**, et al.
The health impact of adult cervical deformity in patients presenting for surgical treatment: comparison to United States population norms and chronic disease states based on the EQ-5D Questionnaire. *Neurosurgery*. 2017 May 1;80(5):716-725.
- 2017 O'Neill KR, Fehlings MG, Mroz TE, Smith ZA, Hsu WK, Kanter AS, Steinmetz MP, Arnold PM, Mummaneni PV, Chou D, Nassr A, Qureshi SA, Cho SK, Baird EO, Smith JS, Shaffrey C, Tannoury CA, Tannoury T, Gokaslan ZL, **Gum JL**, et al
A Multi-Center Study of the Presentation, Treatment, and Outcomes of Cervical Dural Tears. *Global Spine J*. 2017 Apr;7(1 Suppl):58S-63S.
- 2017 Nagoshi N, Fehlings MG, Nakashima H, Tetreault L, **Gum JL**, Smith ZA, Hsu WK, Tannoury CA, Tannoury T, Traynelis VC, Arnold PM, Mroz TE, Gokaslan Z, Bydon M, DeGiacomo AF, Jobse BC, Massicotte EM, Riew KD
Prevalence and outcomes in patients undergoing reintubation after anterior cervical spine surgery: Results from the AOSpine North American Multicenter Study on 8,887 patients. *The Global Spine J*. 2017 Apr;7(1 Suppl):96S-102S.
- 2017 Schroeder GD, Hilibrand AS, Arnold PM, Fish DE, Wang JC, **Gum JL**, Smith ZA, Hsu WK, Gokaslan Z, Isaacs RE et al
Epidural hematoma following cervical spine surgery. *Global Spine J*. 2017 Apr; 7(1 Suppl):120S-126S.
- 2017 Hershman SH, Kunkle WA, Kelly MP, Buchowski JM, Ray WZ, Bumpass DB, **Gum JL**, et al
Esophageal Perforation Following Anterior Cervical Spine Surgery: Case Report and Review of the Literature. *Global Spine J*. 2017 Apr; 7(1 Suppl):P28S-36S.
- 2017 Bakhsheshian J, Scheer JK, **Gum JL**, Horner L, Hostin R, Lafage V, Bess S, Protosaltis TS, Burton DC, Keefe M, Hart RA, Mundis GM, Shaffrey CI, Schwab F, Smith JS, Ames C.
Comparison of Structural Disease Burden to Health Related Quality of Life Scores in 264 Adult Spinal Deformity Patients with 2-year Follow-up: Novel Insights into Drivers of Disability. *Clin Spine Surg*. 2017 Mar;30(2):E124-E131.
- 2017 Bakhsheshian J, Scheer J, **Gum JL**, Hostin R, Lafage V, Bess S, Protosaltis T, Burton D, Keef M, Hart R, Mundis G, Shaffrey C, Schwab F, Smith J, Ames C
The Impact of Poor Mental Health in Adult Spinal Deformity Patients with Poor Physical Function: A Retrospective Analysis with a 2-year Follow-up. *J Neurosurg Spine*. 2017 Jan;26(1):116-124.

- 2017 **Gum JL**, Hostin RA, Robinson C, Kelly MP, Carreon LY, Polly DW, Bess RS, Burton DC, Shaffrey CI, Smith JS, LaFage V, Schwab FJ, Ames CP, Glassman SD, ISSG.
Impact of Cost Valuation on Cost-effectiveness in Adult Spine Deformity Surgery, *Spine J* 2017 Jan; 17(1):96-101.
- 2017 Crawford CH III, Glassman SD, **Gum JL**, Carreon LY. Conflicting Calculations of Pelvic Incidence and Pelvic Tilt Secondary to Transitional Lumbosacral Anatomy (Lumbarization of S1). *J Neurosurg Spine*. 2017 Jan; 26(1):45-49.
- 2016 Kang DG, **Gum JL**, et al
Reliability of shoulder height assessment in adolescent idiopathic scoliosis. Submitted to *SPINE*. November 29, 2016
- 2016 **Gum JL**, Carreon LY, Buchowski J, Lenke L, Glassman S. Utilization trends of pedicle subtraction osteotomies compared to posterior spinal fusion for deformity: A national database analysis between 2008-2011. *Scoliosis Spinal Disord*. 2016 Aug 24; 11(1):25.
- 2016 Kim YC, Lenke LG, Bridwell KH, Zebala LP, **Gum JL**, Ryoji T, Li Q, Kim YW, Kim SW, Koester L, Blanke K
Novel radiographic parameters for the assessment of total body sagittal alignment in adult spinal deformity patients. *Spine (Philadelphia Pa 1976)*.
- 2016 **Gum JL**, Lenke LG, Bumpass DB, Zhao J, Sugrue P, Karikari IO, IO, Rahman RK, Carreon LY.
Does Planned Staging for Posterior-only Vertebral Column Resections in Spinal Deformity Surgery Increase Perioperative Complications? *Spine Deform* 2016 Mar; 4(2):131-137.
- 2016 Gupta M, Henry JK, Schwab F, Klineberg E, Smith J, **Gum JL**, Polly DW, Liabaud B, Diebo BG, Hamilton DK, Eastlack R, Passias, PG, Burton D, Protosaltis T, Lafage V, on behalf of the International Spine Study Group
Dedicated Spine Measurement Software Quantifies Key Spino-Pelvic Parameters More Reliably Than Traditional picture Archiving and Communication Systems Tools. *Spine*. 2016 Jan; 41(1):E22-E27.
- 2016 Lafage R, Schwab F, Challier V, Henry JK, **Gum JL**, Smith J, Hostin R, Shaffrey C, Kim HJ, Ames C, Scheer J, Klineberg E, Bess S, Burton D, Lafage V, International Spine Study Group
Defining Spino-Pelvic Alignment Thresholds: Should Operative Goals in Adult Spinal Deformity Surgery Account for Age? *Spine (Phil PA 1976)*. 2016 Jan; 41(1):62-68.

- 2015 Kim YC, Lenke LG, **Gum JL**, Tauchi R, Yang CJ, You KH, Kim YW, Change HG, Metz LN, Koester LA, Blanke KM, Bumpass DB
Novel radiographic parameters for the assessment of total body sagittal alignment in adult spinal deformity patients. Submitted 2015.
- 2015 Karikari I, **Gum JL**, et al
Use of bivector traction for Stabilization of the head and maintenance of optimal cervical alignment in posterior cervical fusions. Submitted to Spine October 2015.
- 2015 **Gum JL**, Crawford CH 3rd, Collis PC, Carreon LY.
Characteristics associated with active defects in juvenile spondylolysis. Am J Orthop, 2015 Oct; 44(10):E379-83.
- 2015 Bronson WH, Lafage V, Liabaud B, Mundis G, **Gum JL**, Burton D, Smith JS, Ames C, Schwab F, Protopsaltis TS, International Spine Study Group.
Reliability of intraoperative prone lateral radiographs in predicting postoperative standing sagittal alignment. Submitted October 2015.
- 2015 Kim YC, Lenke LG, **Gum JL**, Chang HG, Yang CJ, Wilartratsami S, Koester L, Blanke KM
Is the C7 Sagittal Vertical Axis (SVA) the Best Radiographic Measure to Predict Clinical Outcomes in Adult Spinal Deformity? In Review, Spine October 2015.
- 2015 **Gum JL**, Carreon LY, Kelly MP, Hostin RA, Robinson C, Burton DC, Polly DW, Shaffrey CI, LaFage V, Schwab FJ, Ames CP, Kim HJ, Smith JS, Bess RS, ISSG.
Cell Saver for Adult Spinal Deformity Surgery Minimizes Cost. Submitted to Spine Journal October 2015.
- 2015 Scheer JK, **Gum JL**, Kelly MP, Schwab FJ, Hostin RA, LaFage V, Bess RS, Protopsaltis TS, Burton DC, Gupta MC, Hart RA, Mundis GM, Smith JS, Ames CP, ISSG
Ratio of Disability to Deformity Burden in 264 Adult Spinal Deformity Patients with 2- year Follow-up: Novel Insight into Drivers of Disability. In Review, The Spine Journal Oct 2015.
- 2015 Buckland AJ, Vigdorichik J, Lafage R, Mindis GM, **Gum JL**, Kelly MP, Hart RA, Ames CP, Smith JS, Bess RS, Errico TJ, Schwab FJ, Lafage V, ISSG.
Acetabular Anteversion Changes in Spinal Deformity Correction – Implications for Hip and Spine Surgeons. In Review, JBJS September 2015.
- 2015 Polley N, **Gum JL**, Chan G, Meier J, Harston D, Carreon LY,.
Is Tertiary Pediatric Orthopedic Referral of Idiopathic Intoeing Necessary? Submitted to Journal of Pediatrics in August 2015.

- 2015 **Gum JL**, Carreon LY, Sugrue PA, Bumpass DB, Karikari IO, Lenke LG, Bridwell KH.
SRS-22R Appearance Domain correlates the most with Patient Satisfaction after Adult Deformity Surgery to the Sacrum at 5 year Follow-up. *Spine*. 2015 Aug 15; 40(16):1297-1302.
- 2015 Gupta, M, Henry JK, Schwab F, Klineberg E, Smith J, **Gum J**, Polly DW, Liabaud, B, Diebo BG, Hamilton DK, Eastlack R, Passias P, Burton D, Protopsaltis T, Lafage V, ISSG.
Dedicated Spino-pelvic Measurement Software (SMS) more reliably quantifies key parameters than standard PACS tools. In Press, *Spine*.
- 2015 **Gum JL**
The Business Side of Medicine for Orthopedic Residents and Fellows: When Were We Supposed to Hear This? Invited Editorial for American Journal of Orthopedics. *Am J Orthop*. 2014; 43(8):E189-90.
- 2014 Sugrue PA, Lenke LG, Bridwell KH, Kelly MP, Luhmann SJ, Sides BA, Bumpass DB, Karikari IO, **Gum JL**.
Halo-Gravity Traction Improves Thoracic Correction for those early onset scoliosis patients undergoing growing Spine Techniques. Submitted to *Spine* July 2015.
- 2014 **Gum JL**
The Business Side of Medicine for Orthopedic Residents and Fellows: When Were We Supposed to Lear This? Invited Editorial for American Journal of Orthopedics. *Am J Orthop*. 2014 Aug; 43(8):E189-90.
- 2013 **Gum JL**, Glassman SD, Carreon LY
Clinically Important Deterioration in Lumbar Spine Surgery Patients: A Choice of Methods Using the Oswestry Disability Index, MOS SF 36, and Pain Scales. *J Neurosurgery Spine*. 2013 Nov; 19(5):564-8.
- 2013 **Gum JL**, Stimac J, Glassman SD, Carreon LY
Predictors of ODI Worsening in 1054 Patients after Lumbar Fusion and Is this a Good Marker for Deterioration? *Orthopedics* 2013 Apr 1; 36(4):e478-83.
- 2013 **Gum JL**, Glassman SD, Carreon LY
Is the Type of Compensation a Predictor of Outcome After Lumbar Spinal Fusion? *Spine (Phil, Pa 1976)*. 2013 Mar 1; 38(5):443-8.
- 2012 **Gum JL**, Seligson D
Update on the management of open fractures. *Orthopaedic Knowledge Online Journal*
2012; 10(9):http://orthoportal.aaos.org/oko/article.aspx?article=OKO_TRA042. Accessed August 27, 2012.

- 2012 **Gum JL**, Glassman SD, Douglas L, Carreon Ly
Correlation Between Cervical Spine Sagittal Alignment and Outcome after ACDF. *Am J Orthop (Belle Mead NJ)*. 2012 Jun; 41(6):E81-4.
- 2010 Glassman SD, **Gum JL**, Crawford C, Shields CB, Carreon LY
Complications with recombinant human bone morphogenetic protein-2 in posterolateral spine fusion associated with a dural tear. *Spine J* 2011 Jun; 11(6):522-6. Epub 2010 Jul 2.
- 2010 Asher MA, Lai SM, Carlson BB, **Gum JL**, Burton DC
Transverse plane pelvic rotation increase (TPPRI) following rotationally corrective instrumentation of adolescent idiopathic scoliosis double curves. *Scoliosis* 2010 Aug 26; 5: 18.
- 2007 **Gum JL**, Asher MA, Burton DC, Lai SM, Lambart LM
Transverse plane pelvic rotation in adolescent idiopathic scoliosis: primary or compensatory? *Eur Spine J* Oct; 16(10): 1579-1586.

TEXTBOOKS/CHAPTERS

- 2016 **Gum JI**, Buchowski JM.
Advanced Concepts in Lumbar Degenerative Disk Disease
Degenerative Scoliosis. *The Surgical Treatment* Springer Publishing. J.I. Pinheiro-Franco et al. (eds) 2016.
- 2015 **Gum JL**, Glassman SD, Carreon LY, LaFage V
Global Spinal Alignment. Principles, Pathologies and Procedures. Ed: Drs. Haid Jr., Schwab, Shaffrey, Youssef. Book Chapter. Relationship between Spinal Alignment, Imaging Studies, and Clinical Symptoms. Chapter 4, page 43-51, 2015.
- 2015 Zhao J, **Gum JI**, Dimar J, Buchowski JM.
Chapter 14: Anterior Lumbar Interbody Fusions
A.L. Wollowick and V. Sarwahi (eds.), *Spondylolisthesis: Diagnosis, Non-Surgical Management, and Surgical Techniques*, DOI 10.1007/978-1-4899-7575-1_14, © Springer Science+ Business Media New York 2015.
- 2013 **Gum JI**, Bess RS, Lenke L.
The Lenke Classification System of Adolescent Idiopathic Scoliosis. *Spinal Deformities: The essentials*, 2nd edition. Heary and Albert. Thieme Publishing.

VIDEOS/WEBINARS

- 2015 JBJS Essential Surgical Techniques
Transforaminal Lumbar Interbody Fusion (TLIF) Operative Technique. Invited Key procedures article.
Gum JL, Reddy D, Glassman SD

- 2014 LifeSpine: Spotlight -Spine Deformity Fundamentals Webinar as Paid Consultant; February 19, 2014.
- 2013 SRS/OREF Surgical Technique Video
Posterior Column Osteotomy and Vertebral Column Resection
Assistant to Lawrence Lenke

INVITED REVIEWS/COMMENTARY

- 2020 Commentary for Spine Health Journal, Opioid Free Lumbar Fusion: A Commentary on Opioid Use in Spine Care & the Downstream Negative Impacts. Gum JL, Steele P
- 2019 Commentary for Orthopedics Today on “finding the right job....” Gum, Laratta, Buza
- 2019 Phone interview with Orthopedics today (just did 11/1/19) it's on robotics in spine surgery – will get proofs soon
- 2019 Opioid CME talk with Norton Healthcare
- 2017 **Gum JL** Commentary: Orthopaedics Today, December 2017.
- 2015 Spine Surgery Today, 1/8/2015. One-level ACDF patients had better 5-year outcomes than multi-level patients. Zigler JE. Paper #21. Presented at: Cervical Spine Research Society Annual Meeting; Dec. 4-6, 2014; Orlando, Florida.
- 2015 CNS Essential Papers in Neurosurgery. Cervical laminoplasty: a critical review; Ratliff and Cooper. **Gum JL** and Riew KD
- 2014 **Gum JL**, Buchowski J
Commentary: Methods of Evaluating Lumbar and Cervical Fusion. Spine J. 2014 Mar1; 14(3):540-1.

Publications (miscellaneous)

- 2019 Orthopedics Today: Work out robotics value equation before adoption. DiGioia AM, Dudley B, Gum JL, Leiberman IH, Stulberg B.
- 2019 The article in the SRF handout (on robotics I think) – this came from Jazini/Chris Goode's group in Virginia
- 2010 Rapp, Susan m. editorial perspective

No correlation between better post-ACDF sagittal alignment and quality of life results. Orthopedics today November 2010 vol 30(10);54
Commentary on presentation at NASS

GRANTS

2015	\$6000 Fischer Owen Grant ISSG Travel and participation
2013	OREF Fellowship Grant in Spine Fellowship Support at Washington University Spine fellowship ½ of yearly stipend support
2012	\$3000 Medtronic Travel Grant NASS annual Meeting
2010	\$3000 Medtronic Travel Grant NASS Annual Meeting

PRESENTATIONS (professional and international meetings)

2019	Gum JL , Crawford CR, Djurasovic M, Owens RK, Brown ME, Steele PA, Carreon LY. Introducing navigational robotics into TLIF techniques: Are we optimizing our index episode of care or just spending more money?
2019	Gum JL , Serra-Burriel M, Line B, Protopsaltis TS, Soroceanu A, Hostin RA, Passias PG, Kelly MP, Burton DC, Smith JS, Shaffrey CI, Lafage V, Klineberg EO, Kim HJ, Harris AB, Kebaish KM, Schwab FJ, Shay Bess RS, Ames CP. Predicting ASD Surgeries That Exceed Medicare Allowable Payment Thresholds: A Comparison of Hospital Costs to What the Government Will Actually Pay
2018	Lineberg IO, Lafage V, Sorocianu A, Pellisé, Smith JS, Shaffrey CI, Gum JL , Protopsaltis TS, Schwab FJ, Pannu TS, De Kleuver M, Ames CP, Bess S, Lenke LG, Berven SH, International Spine Study Group. Preliminary review of an ISSG AO Multi-domain spinal deformity complication classification system. SRS October 11, 2018
2018	Steele PA, Gum JL , Crawford CH III, Owens RK II, Djurasovic M, Brown ME, Glassman SD, Carreon LY. Immediate postoperative narcotic use is not associated with preoperative opiate use or surgery invasiveness. SRS October 10, 2018
2018	Owen R, Mardam-Bey S, Lenke LG, Gum JL , Kelly MP, Does Preoperative Opioid Use lead to Poorer Outcomes and Continued Opioid Abuse at 2 Years Postoperative? SRS October 10, 2018

- 2018 Neuman BJ, Raad M, Sciubba DM, Paddias PG, Klineberg EO, Hassanzadeh H, Protopsaltis TSS, Gupta MC, Mundis GM, Ames CP, Shaffrey CI, **Gum JL**, Smith JS, Lafage V, Bess S, Kebaish KM, International Spine Study Group. The Impact of Surgical Invasiveness and Patient Factors on Long-Term Opioid Use in ASD Surgery. SRS October 10, 2018
- 2018 **Gum JL**, Crawford CH III, Djurasovic M, Owens RK II, Brown ME, Carreon LY, Propensity-Matched Index Episode of Care Cost Comparison Between Minimally Invasive Midline Lumbar Interbody Fusion (MIDLIF) Versus Traditional Open Transforaminal Interbody fusion (TLIF) NASS September 26, 2018
- 2018 Owens RK II, Crawford CH II, Djurasovic M, **Gum JL**, Brown ME, Carreon LY, Cost-benefit analysis of intraoperative EMG for pedicle screw placement in routine lumbar fusions. September 26, 2018
- 2018 **Gum JL**, Yermaneni S, Raad M, Hostin R, Kelly MP, Lafage V, Smith JS, Passias PG, Kebaish KM, Shaffrey CI, Burton DC, Ames CP, Schwab FJ, Bess S, International Spine Study Group. Improvement in SRS-22r Self-Image and Activity Correlate Most with Patient Satisfaction after 3-Column Osteotomy. July 12, 2018
- 2018 Hart RA, Rastegar F, Contag A, Kane M, Daniels A, Klineberg E, Eastlack R, Smith JS, Hostin R, Hamilton DK, **Gum JL**, Burton DC, Sheer JK, Ames C, Schwab F, Lafage V, Bess S, Shaffrey C, Kebaish K. Inter – and Itra-rater Reliability of the Hart- ISSG Proximal Juantional Failure Severity Scale.
- 2017 Smith GA, Steinmetz MP, Sundar S, Tanenbaum JE, Barber E, **Gum JL**, Flick CR.
The sequence of locking cap placement through reduction towers during rod reduction in deformity surgery has a significant effect on strain placed on the construct: use of a novel Wireless Rod Strain Sensor. North American Spine Society Annual Meeting, ePoster Orlando, FL, October 25-28, 2017.
- 2017 Crawford CH, Glassman SD, Djurasovic M, Owens RK, **Gum JL**, Head RJ, Carreon LY.
Prognostic factors associated with best outcomes following fusion for lumbar degenerative conditions. North American Spine Society, Orlando, FL, October 27, 2017.
- 2017 **Gum JL**, Line B, Carreon L, Hostin R, Yermaneni S, Glassman S, Kelly M, Burton D, Polly D, Smith J, Shaffery C, Schwab F et al.
Reaching the Medicare allowable threshold in ASD surgery: Multicenter cost analysis comparing actual direct hospital costs versus Medicare. North American Spine Society, Orlando, FL, October 27, 2017.

- 2017 Jazini E, Carreon L, Fleming J, Kannapel M, Karr J, Head R, Crawford C, Djurasovic M, Owens R, Glassman S, **Gum JL**
Direct costs for treatment of spine osteomyelitis exceeds the Medicare allowable threshold. North American Spine Society, Orlando, FL, October 27, 2017.
- 2017 Tejbir P, Renaud L, Smith J, Shaffrey C, Mundis G, Hostin R, Ames C, Lenke L, Gupta M, Kim HJ, Bess S, **Gum JL**, Schwab F, Lafage V, ISSG.
Mechanical loading of the upper-most instrumented vertebra: Normative values and impact on proximal junctional kyphosis in adult spinal deformity surgery. North American Spine Society, Orlando, FL, July 14, 2017.
- 2017 Passias P, Poorman G, Vasquez D, Mundis G, Anand N, Horn S, Diebo B, Burton D, **Gum JL**, Buckland A, Gerling M, Hart, R, Schwab FJ, LaFage V, Shaffrey CI, Bess RS, Ames CP, Klineberg EO, ISSG
Predictive analytics for determining extended operative time in corrective ASD surgery. North American Spine Society, Orlando, FL, October 27, 2017.
- 2017 Soroceanu A, **Gum JL**, Kelly M, Passias P, Smith J, Protopsaltis T, Lafage V, Kim HJ, Scheer J, Gupta M, Mundis G, Klineberg E, Burton D, Bess S, Ames C.
Establishing the minimum clinically important difference in NDI and mJOA for adult cervical deformity. Scoliosis Research Society, Philadelphia, Pennsylvania, September 8, 2017. North American Spine Society, Orlando, FL, October 27, 2017.
- 2017 Neuman BJ, Raad M, Klineberg E, Sciubba D, Mundis G, Passias P, Scheer J, **Gum JL** et al.
ASD-SR invasiveness index predicts the magnitude of deformity surgery essential to stage to reduce the risk of complications. North American Spine Society, Orlando, FL, October 27, 2017.
- 2017 **Gum JL**, Jain A, Carreon L, Hostin R, Yeramaneeni S, Glassman S, Kelly M, Burton D, Polly D, Smith J, Shaffery C, Schwab F, Sethi R, Neuman B, Ames C, Bess S, ISSG (Eposter)
Planned staging of complex ASD surgery does not result in increased length of stay or increased cost. Scoliosis Research Society meeting, Philadelphia, PA, September 6-9, 2017.
- 2016 **Gum JL**, Glassman SD, Crawford CH II, Djurasovic M, Owens RK II, Dimar JR II, McGraw KE, Carreon LY
Cost-effectiveness of Circumferential Fusion for Lumbar Spondylolisthesis: Comparison of Transforaminal Lumbar Interbody Fusion versus Antero-Posterior Fusion. North America Spine Society meeting, Boston, MA, October 26, 2016.

- 2016 Hostin RA, Robinson C, O'Brien MF, **Gum JL**, Kelly MP, Glassman SD, Burton DC, Ames CP, Bess RS, Polly DW, ISSG
Analysis of Variation in Inpatient Two Year Episode of Care Costs for Adult Spinal Deformity across US centers. North America Spine Society meeting, Boston, MA, October 26, 2016.
- 2016 **Gum JL**, Hostin RA, Robinson C, Glassman SD, Burton DC, Polly DW, Bess RS, Kelly MP, Shaffrey CI, Smith JS, Lafage V, Schwab FJ, Ames CP, Carreon LY, ISSG
Cost-effectiveness of Surgical Treatment of Adult Spinal Deformity: Comparison of Posterior-only versus Anterior-Posterior Approach. North America Spine Society meeting, Boston, MA, October 28, 2016.
- 2016 **Gum JL**, Carreon LY, Hostin RA, Robinson C, Glassman SD, Kelly MP, Burton DC, Polly DW, Smith JS, Shaffrey CI, Schwab FJ, Lafage V, Hart RA, Ames CP, Bess RS, ISSG
Propensity-Matched Cost-effectiveness Comparison of Bone Morphogenetic Protein (BMP) Utilization in Adult Spinal Deformity (ASD) Surgery using Direct Costs. North America Spine Society meeting, Boston, MA, October 28, 2016. American Academy of Orthopaedic Surgeons, San Diego, CA. March 14, 2017.
- 2016 Ailon T, Smith JS, Shaffrey CI, Soroceanu A, Lafage V, Schwab FJ, Burton DC, Hart RA, **Gum JL**, Hostin RA, Kelly MP, Glassman SD, Bess RS, Ames CP, ISSG
Adult Spinal Deformity Patients with Previous Fusions have an Equal Chance of Reaching Substantial Clinical Benefit Thresholds in Health-related Quality of Life Measures but do not reach the Same Absolute Level of Improvement.
Scoliosis Research Society Meeting, Prague, Czech Republic September 23, 2016.
- 2016 Lafage R, Line B, Liabaud B, Schwab FJ, Smith JS, **Gum JL**, Ames CP, Hostin RA, Mundis GM, Burton DC, Kim HJ, Bess RS, Klineberg EO, Lafage V, ISSG
Orientation of The Upper-Most Instrumented Segment Influences Proximal Junctional Disease Following Adult Spinal Deformity (ASD) Surgery. Scoliosis Research Society Meeting, Prague, Czech Republic September 23, 2016. North American Spine Society Annual Meeting, Boston MA, October 26-29, 2016.
- 2016 **Gum JL**, Carreon LY, Kelly MP, Jain A, Hostin RA, Smith JS, Lafage V, Lafage R, Burton DC, Schwab FJ, Hart RA, Klineberg EO, Shaffrey CI, Bess RS, Glassman SD, ISSG
What Drives Improvement in Self-Image after ASD Surgery?
Scoliosis Research Society Meeting, Prague, Czech Republic September 23, 2016.
- 2016 Varghese J, Patel A, Liabaud B, Ames CP, Smith JS, **Gum JL**, Shaffrey CI, Diebo B, Lafage R, Bess RS, Schwab FJ, Lafage V, Kim HJ, ISSG

The Impact of Pre-Operative Supine Radiographs on Surgical Strategy in Adult Spinal Deformity.
Scoliosis Research Society Meeting, Prague, Czech Republic September 23, 2016.

- 2016 Kim YC, Lenke LG, Kim TH, Jang CY, Kim YW, Chang HG, **Gum JL**, Wilartratsami S, Blanke KM
Does Coronal or Sagittal Correction for Adult Spinal Deformity More Significantly Affect Acetabular Coverage? SRS annual meeting, Minneapolis, MN; September 30 – October 3, 2015.
Scoliosis Research Society Meeting, Prague, Czech Republic September 23, 2016. E-poster
- 2016 Degenerative and Complex Conditions in the Aging Spine
DePuy Synthes Spine, Denver, CO April 22-23, 2016.
- 2015 Kim YC, Lenke LG, **Gum JL**, Chang HG, Yang CJ, Wilartratsami S, Koester L, Blanke KM
Is the C7 Sagittal Vertical Axis (SVA) the Best Radiographic Measure to Predict Clinical Outcomes in Adult Spinal Deformity?
North American Spine Society meeting, Chicago, IL. October 15, 2015.
- 2015 Karikari IO, Lenke LG, Bridwell KH, Tauchi R, Kelly MP, Sugrue P, Bumpass DB, **Gum JL**
Do adult spinal deformity patients with severe but flexible sagittal malalignment need a 3-column osteotomy. North American Spine Society meeting, Chicago, IL. October 15, 2015.
- 2015 **Gum JL**, Carreon LY, Kelly MP, Hostin RA, Robinson C, Burton DC, Polly DW, Shaffrey CI, LaFage V, Schwab FJ, Ames CP, Kim HJ, Smith JS, Bess RS, ISSG.
Cell Saver for Adult Spinal Deformity Surgery Minimizes Cost.
SRS Annual Meeting, Minneapolis, MN; October 10, 2015.
- 2015 **Gum JL**, Hostin RA, Robinson C, Kelly MP, Carreon LY, Polly DW, Bess RS, Burton DC, Shaffrey CI, Smith JS, LaFage V, Schwab FJ, Ames CP, Glassman SD, ISSG.
Impact of Cost Valuation on Cost-effectiveness in Adult Spine Deformity Surgery. SRS Annual Meeting, Minneapolis, MN; October 10, 2015.
- 2015 **Gum JL**, Carreon LY, Buchowski JM, Lenke LG, Glassman SD. Utilization trends of Pedicle Subtraction Osteotomies compared to Posterior Spinal Fusion for Deformity: A National Database Analysis Between 2008-2011. Poster at the AAOS annual meeting, Las Vegas, NV; March 23-29, 2015.
- 2015 **Gum JL**, Carreon LY, Polley N, Chan G, Meier J, Harston D.
Is Tertiary Pediatric Orthopedic Referral of Idiopathic Intoeing Necessary? AAOS annual meeting, Las Vegas, NV; March 27, 2015.

- 2015 **Gum JL**, Lenke LG, Bridwell KH, Salehi A, Bumpass DB, Sugrue PA, Karikari IO, Kelly MP.
What is the Fate of Adult and Pediatric Spinal Deformity Reconstruction after Prior Deep Wound Infection? AAOS annual meeting, Las Vegas, NV; March 26, 2015.
- 2015 **Gum JL**, Carreon LY, Bumpass DB, Sugrue PA, Wright M, Sun SQ, Kelly MP, Karikari IO, Riew DR.
Diagnosing Congenital Cervical Stenosis on Lateral Radiographs: The Utility of Laminar Depth. AAOS annual meeting, Las Vegas, NV; March 27, 2015.
- 2015 Baldus C, **Gum JL**, Bridwell KH, Ahmad A, Mesfin A, Carreon LY.
Prevalence of Cancer in Spinal Deformity Patients Receiving High Dose ($\geq 40\text{mg}$) Bone Morphogenetic Protein (rhBMP-2). AAOS annual meeting, Las Vegas, NV; March 26, 2015.
- 2015 **Gum JL**, Lenke LG, Bridwell KH, Zhao J, Bumpass DB, Sugrue PA, Karikari IO, Rahman RK, Carreon LY.
Does Planned Staging for Posterior-only Vertebral Column Resections in Spinal Deformity Surgery Increase Perioperative Complications? AAOS annual meeting, Las Vegas, NV; March 24, 2015.
- 2015 **Gum JL**, Carreon LY, Glassman SD.
Pharmacologic Treatment for Osteoporosis after Vertebral Fractures: Do We Really Own the Bone? AAOS annual meeting, Las Vegas, NV; March 26, 2015.
- 2014 **Gum JL**, Carreon LY, Bumpass DB, Sugrue PA, Wright M, Sun SQ, Kelly MP, Karikari IO, Riew DR.
Diagnosing Congenital Cervical Stenosis on Lateral Radiographs: The Utility of Laminar Depth. Cervical Spine Research Society, Orlando, FL December 5, 2014.
- 2014 **Gum JL**, Lenke LG, Bridwell KH, Zhao J, Bumpass DB, Sugrue PA, Karikari IO, Rahman RK, Carreon LY.
Does Planned Staging for Posterior-only Vertebral Column Resections in Spinal Deformity Surgery Increase Perioperative Complications? North American Spine Society Annual Meeting, San Francisco, CA, November 11-15, 2014.
- 2014 **Gum JL**, Carreon LY, Sugrue PA, Bumpass DB, Karkari IO, Lenke LG, Bridwell KH.
SRS Appearance Domain correlates the most with Patient Satisfaction after Adult Deformity Surgery to the Sacrum at 5 year Follow-up. North American Spine Society Annual Meeting, San Francisco, CA, November 11-15, 2014.
- 2014 Baldus C, **Gum JL**, Bridwell KH, Ahmad A, Mesfin A, Carreon LY.

Prevalence of Cancer in Spinal Deformity Patients Receiving High Dose ($\geq 40\text{mg}$) Bone Morphogenetic Protein (rhBMP-2). North American Spine Society Annual Meeting, San Francisco, CA, November 11-15, 2014.

- 2014 **Gum JL**, Carreon LY, Buchowski JM, Lenke LG, Glassman SD. Utilization trends of Pedicle Subtraction Osteotomies compared to Posterior Spinal Fusion for Deformity: A National Database Analysis Between 2008-2011. Scoliosis Research Society Annual Meeting, Anchorage, Alaska, September 10-13, 2014.
- 2014 **Gum JL**, Lenke LG, Bridwell KH, Zhao J, Bumpass DB, Sugrue PA, Karikari IO, Rahman RK, Carreon LY. Does Planned Staging for Posterior-only Vertebral Column Resections in Spinal Deformity Surgery Increase Perioperative Complications? International meeting on Advanced Spine Technologies, Valencia, Spain, July 10-13, 2014.
- 2014 **Gum JI**, Glassman SD, Crawford C, Carreon LY. Culture Profile of Surgical Site Infections after Topical Vancomycin use in Instrumented Spine Fusions. Multicenter (6 spine centers). AAOS Annual Meeting; Poster March 2014. New Orleans, LA.
- 2013 **Gum JI**, Crawford C, Glassman S, Carreon LY. Characteristics associated with Active defects in juvenile spondylolysis. 16th Annual OREF/ORS Resident Research Symposium; Indianapolis, IN. April 2013. IMAST 20th Annual Meeting July 2013 Vancouver, BC.
- 2012 **Gum JL**, Glassman SD, Carreon LY. Is the Type of Compensation a Predictor of Outcome After Lumbar Spinal Fusion? 19th Annual IMAST; July 2012. Istanbul, Turkey.
- 2011 **Gum JL**, Glassman SD, Carreon LY. Is Disability Status A Predictor of Outcomes after Lumbar Fusion? Kentucky Orthopedic Society (KOS); September 2011. Louisville, KY.
- 2011 **Gum JI**, Mauffrey C, Madsen M, Bowles R, Seligson D. Bone graft harvest site options in orthopaedic trauma, a prospective in vivo quantification study. Osteosynthese International Annual Meeting Kuntsher Society 2011 annual meeting. September 14-17 Thessaloniki, Greece.
- 2011 Robinson L, Mauffrey C, **Gum JI**, Seligson D. The Invisible Intramedullary Nail (PEEK). Osteosynthese International Annual Meeting Kuntsher Society 2011 September 14-17 Thessaloniki, Greece.
- 2010 **Gum JL**, Glassman SD, Douglas L, Carreon Ly

Correlation Between Cervical Spine Sagittal Alignment and clinical Outcome after ACDF. North American Spine Society Annual Meeting (best paper category) Oct 5-9, Orlando FL.

- 2010 Glassman SD, **Gum JL**, Crawford C, Shields CB, Carrion LY
Complications with recombinant human bone morphogenetic protein-2 in posterolateral spine fusion associated with a dural tear. North American Spine Society Annual Meeting October 5-9, 2010, Orlando, FL.
- 2010 **Gum JL**, Glassman SD, Douglas L, Carreon Ly
Correlation Between Cervical Spine Sagittal Alignment and clinical Outcome after ACDF. 2010 IMAST Annual Meeting July 21-24, 2010, Toronto, Canada.
- 2006 **Gum JL**, Asher MA, Burton DC, Lai SM, Lambart LM
Transverse plane pelvic rotation in spinal deformity: measurement reliability and relation to diagnosis and deformity; 6th Biennial Meeting of International Research Society of Spinal Deformities (IRSSD) June 2006 Ghent, Belgium.

PRESENTATIONS (INVITED GRAND ROUNDS, GUEST SPEAKER, OTHER)

- 2018 SRS- Italy
"Adult Spinal Deformity: From Aversive Corrections to More Harmonious Ones"
- 2018 NASS
Propensity-matched Index Episode of Care Cost Comparison between Minimally Invasive Midline Lumbar Interbody Fusion (MIDLIF) Versus Traditional Open Transforaminal Interbody Fusion (tLIF)
- 2018 IMAST
Improvement in SRS-22r Self-Image and Activity Correlate Most with Patient Satisfaction after 3-Column Osteotomy
- IMAST
Techniques for Correcting Cervical Spine Deformities
- IMAST
Adult Spinal Deformity and Sagittal Malalignment
- 2016 Spine Symposium
Basic Anatomy of the Spine

Deformity in the Aging Population: Which patients require treatment?
Louisville, KY May 13, 2016.

- 2012 Pediatric Quality improvement Conference
Neuromuscular scoliosis: posterior fusion with pre-existing intradural baclofen pumps and associated complications. January 2012.
- 2011 Spine Review. Resident OITE review conference.
Louisville, KY August 2011 and 2012.
- 2011 Is Disability or Government-Type Medical Insurance a Predictor of Outcome after Lumbar Spinal Fusion?
University of Louisville Department of Orthopaedic Surgery Resident research meeting. June 9, 2011, Louisville, KY.
- 2011 Split cord malformations and sacral agenesis: case presentations.
Leatherman Spine Conference. Louisville KY February 2011.
- 2010 Osteonecrosis of the hip and knee. Adult Reconstruction service
Louisville KY December 14, 2010.
- 2010 Thermal injuries to the hand. Louisville Arm and Hand Conference
Louisville KY February 2010.
- 2010 Pelvic and lower extremity trauma. Resident OITE review conference.
Louisville, KY October 2010.
- 2009 Hand and upper extremity trauma. Resident OITE review conference,
Louisville, KY August 2009.
- 2007 Decubitus ulcers in trauma patients: a case series. University of Kansas
School of medicine-Wichita student research forum; Wichita, KS May 2007.
- 2006 Transverse plane pelvic rotation in adolescent idiopathic scoliosis.
University of Kansas School of Medicine, Student Research Forum;
Kansas City, KS April 2006.

TEACHING

- 2019 Robotic Workflow Course (Medtronic)
University of San Diego, California
- 2019 Skull to Sacrum (Medtronic)
Scientific Advisor
New York City, New York
- 2019 NASS- Chicago
• Bio-skills Lab- hands on

- An Event-based cost Analysis of Hospital readmissions following Adult Spinal Deformity Surgery: Impact of Readmissions in Episodic Care of Adult Spinal deformity
 - Risk Factors for Exceeding Medicare Allowable Payment Thresholds Following ASD Surgery: A Comparison of Hospital Costs to what the government will Actually Pay.
- 2019 Spine Tech Summit
- Robotics in MIDLFT
 - Introduction of Mazor X Stealth Edition & First case review
- 2019 Medtronic- San Francisco-Faculty
- Robotic in MIDLF techniques
 - Introduction of Mazor X Stealth Edition & First Case Review
- 2019 Medtronic-New Orleans
- Lessons I learned my first year.
 - How to market yourself as a spine surgeon
 - Robotic assisted spine surgery
- 2018 Scientific Advisor
Medtronic "Skull to Sacrum" course
- In charge of faculty selection and content
 - Lecture- Economics In ASD
 - Lecture- New/Emerging Techniques Including Robotic Surgery
 - PJK
- New York City, NY September 2018
- 2017 ISDS
- 2014 Medtronic Young Surgeon's Course
New Orleans, La. November 2014
Choosing and evaluating a practice
- 2003 HEAD TEACHING ASSISTANT
University of Kansas Advanced biochemistry laboratory course
- 2003 PROGRAM DIRECTOR
University of Kansas research experience for undergraduates (REU) program
- 2002 PEER MENTOR
University of Kansas REU program

ELECTED POSITIONS

2012	Administrative Chief Resident University of Louisville Department of Orthopaedic Surgery Staff/Attending Selected
2012	Resident Leadership Forum (RLF) Washington D.C. June 26-27, 2012
2011	University of Louisville Department of Orthopedic Surgery communications and ULH task force operations committee Resident member. Attending selected
2010-2011	Resident representative for house staff council One of two residents to represent Dept. of Orthopaedics
2011	Internal GME review board Resident representative for University of Louisville GME internal review of Dept. of Pathology
2010	GME Resident research development Department of Orthopaedic resident representative for council meeting on resident research innovation

RESEARCH EXPERIENCE

2014-current	International Spine Study Group
2013-current	Washington University Spine Fellowship Larry Lenke, Keith Bridwell, Dan Riew, Jacob Buchowski
2012-2014	Norton Orthopedic and Sports Medicine Specialists Direct Anterior Total Hip Arthroplasty Jonathan Yerasimides Functional Outcomes and Technique Development
2009-current	University of Louisville School of Medicine and Leatherman spine center. Clinical research on spine outcome measures
2009-current	Kutz and Kleinert hand surgeons. Clinical work on synthetic interposition spacer (artelon). Sunil Thirkannad
2004-2010	University of Kansas School of Medicine Dept of Orthopaedic surgery. Clinical work on pelvic rotation in scoliosis. Dr. Marc Asher.
2003-2004	University of Kansas School of Medicine. Internal medicine dept hepatology and gastroenterology. Protein purification and

characterization, a novel protein in hepatitis C induced cirrhosis. Dr Curt Hagedorn MD

2001-2003 University of Kansas Biochemistry Laboratory
Isolation of spinach RNase P. Basic Science
Peter Gegenheimer PHD

OTHER EMPLOYMENT

2015 Derby Select Investments
CEO

2014 TotalCare Consultants PLLC
Owner/CEO

2011-current Baptist Urgent Care
Moonlighting Urgent Care

2010-current TotalCare Orthopedics PLLC
Disability exams IME, impairment ratings for moonlighting
Owner

2010-current WellCare Inc Disability examiners
Moonlighting disability exams. Paris KY.

1997-2004 Interior trim and Cabinet carpenter
Stater Construction, Wichita KS

1999 Residential Home Framing and construction
King Homes Inc., Wichita KS