Zachary A Smith

List of Publications by Year
in descending order

125 papers	3,425 citations	136950 32 h-index	175258 52 g-index
127 all docs	127 docs citations	127 times ranked	3577 citing authors

#	Article	IF	Citations
1	Utility of machine learning algorithms in degenerative cervical and lumbar spine disease: a systematic review. Neurosurgical Review, 2022, 45, 965-978.	2.4	10
2	Long-term outcomes of spinal ependymomas: an institutional experience of more than 60 cases. Journal of Neuro-Oncology, 2021, 151, 241-247.	2.9	9
3	An Evaluation of Neurosurgical Practices During the Coronavirus Disease 2019 Pandemic. World Neurosurgery, 2021, 146, e91-e99.	1.3	5
4	Fatty infiltration in cervical flexors and extensors in patients with degenerative cervical myelopathy using a multi-muscle segmentation model. PLoS ONE, 2021, 16, e0253863.	2.5	9
5	Robotics in spine surgery: A systematic review. Journal of Clinical Neuroscience, 2021, 89, 1-7.	1.5	20
6	Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers. Scientific Data, 2021, 8, 219.	5.3	27
7	Generic acquisition protocol for quantitative MRI of the spinal cord. Nature Protocols, 2021, 16, 4611-4632.	12.0	65
8	Magnetic Resonance Imaging Atlas-Based Volumetric Mapping of the Cervical Cord Gray Matter in Cervical Canal Stenosis. World Neurosurgery, 2020, 134, e497-e504.	1.3	6
9	Magnetization Transfer Ratio and Morphometrics of the Spinal Cord Associates with Surgical Recovery in Patients with Degenerative Cervical Myelopathy. World Neurosurgery, 2020, 144, e939-e947.	1.3	13
10	An Evaluation of Neurosurgical Resident Education and Sentiment During the Coronavirus Disease 2019 Pandemic: A North American Survey. World Neurosurgery, 2020, 140, e381-e386.	1.3	50
11	Assessing the spatial distribution of cervical spinal cord activity during tactile stimulation of the upper extremity in humans with functional magnetic resonance imaging. NeuroImage, 2020, 217, 116905.	4.2	14
12	Using artificial intelligence (AI) to predict postoperative surgical site infection: A retrospective cohort of 4046 posterior spinal fusions. Clinical Neurology and Neurosurgery, 2020, 192, 105718.	1.4	48
13	Using machine learning to predict 30-day readmissions after posterior lumbar fusion: an NSQIP study involving 23,264 patients. Journal of Neurosurgery: Spine, 2020, 32, 399-406.	1.7	34
14	Macromolecular changes in spinal cord white matter characterize whiplash outcome at 1-year post motor vehicle collision. Scientific Reports, 2020, 10, 22221.	3.3	2
15	Assessing hand dysfunction in cervical spondylotic myelopathy. PLoS ONE, 2019, 14, e0223009.	2.5	19
16	Machine Learning for the Prediction of Cervical Spondylotic Myelopathy: A Post Hoc Pilot Study of 28 Participants. World Neurosurgery, 2019, 127, e436-e442.	1.3	26
17	Thoracic Decompression. , 2019, , 155-166.		0
18	Tract-Specific Volume Loss on 3T MRI in Patients With Cervical Spondylotic Myelopathy. Spine, 2018, 43, E1204-E1209.	2.0	14

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19	Predictors of Readmissions and Reoperations Related to Venous Thromboembolic Events After Spine Surgery: A Single-Institution Experience with 6869 Patients. World Neurosurgery, 2018, 111, e91-e97.	1.3	16
20	Management of Isolated Atlas Fractures: A Retrospective Study of 65 Patients. World Neurosurgery, 2018, 111, e316-e322.	1.3	19
21	Predictors of 30-Day Hospital Readmission After Posterior Cervical Fusion in 3401 Patients. Spine, 2018, 43, 356-363.	2.0	29
22	The Effect of Steroids on Complications, Readmission, and Reoperation After Posterior Lumbar Fusion. World Neurosurgery, 2018, 110, e526-e533.	1.3	16
23	Quantitative Magnetization Transfer MRI Measurements of the Anterior Spinal Cord Region are Associated With Clinical Outcomes in Cervical Spondylotic Myelopathy. Spine, 2018, 43, 675-680.	2.0	25
24	Cervical sagittal balance: a biomechanical perspective can help clinical practice. European Spine Journal, 2018, 27, 25-38.	2.2	90
25	Fatty infiltration of the cervical multifidus musculature and their clinical correlates in spondylotic myelopathy. Journal of Clinical Neuroscience, 2018, 57, 208-213.	1.5	28
26	Venous thromboembolism events following spinal fractures: A single center experience. Clinical Neurology and Neurosurgery, 2018, 174, 7-12.	1.4	19
27	The Role of Minimally Invasive Techniques in Scoliosis Correction Surgery. Minimally Invasive Surgery, 2018, 2018, 1-6.	0.5	1
28	Comparing Short-term Complications of Inpatient Versus Outpatient Single-level Anterior Cervical Discectomy and Fusion. Clinical Spine Surgery, 2018, 31, 43-47.	1.3	47
29	Neuro-surgical considerations for treating IgG4-related disease with rare spinal epidural compression. , 2018, 9, 209.		13
30	Impact of Anemia and Transfusion on Readmission and Length of Stay After Spinal Surgery. Clinical Spine Surgery, 2017, 30, E1338-E1342.	1.3	40
31	Anterior Cervical Infection: Presentation and Incidence of an Uncommon Postoperative Complication. Global Spine Journal, 2017, 7, 12S-16S.	2.3	23
32	Rare Complications of Cervical Spine Surgery: Pseudomeningocoele. Global Spine Journal, 2017, 7, 109S-114S.	2.3	5
33	Epidemiology and Outcomes of Vertebral Artery Injury in 16â€‰582 Cervical Spine Surgery Patients: An AOSpine North America Multicenter Study. Global Spine Journal, 2017, 7, 21S-27S.	2.3	31
34	Esophageal Perforation Following Anterior Cervical Spine Surgery: Case Report and Review of the Literature. Global Spine Journal, 2017, 7, 28S-36S.	2.3	34
35	Prevalence and Outcomes in Patients Undergoing Reintubation After Anterior Cervical Spine Surgery: Results From the AOSpine North America Multicenter Study on 8887 Patients. Global Spine Journal, 2017, 7, 96S-102S.	2.3	10
36	A Multicenter Study of the Presentation, Treatment, and Outcomes of Cervical Dural Tears. Global Spine Journal, 2017, 7, 58S-63S.	2.3	8

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37	Recurrent Laryngeal Nerve Palsy After Cervical Spine Surgery: A Multicenter AOSpine Clinical Research Network Study. Global Spine Journal, 2017, 7, 53S-57S.	2.3	29
38	C5 Palsy After Cervical Spine Surgery: A Multicenter Retrospective Review of 59 Cases. Global Spine Journal, 2017, 7, 64S-70S.	2.3	51
39	Epidural Hematoma Following Cervical Spine Surgery. Global Spine Journal, 2017, 7, 120S-126S.	2.3	27
40	Brachial Plexopathy After Cervical Spine Surgery. Global Spine Journal, 2017, 7, 17S-20S.	2.3	11
41	Timing and risks of chemoprophylaxis after spinal surgery: a single-center experience with 6869 consecutive patients. Journal of Neurosurgery: Spine, 2017, 27, 681-693.	1.7	28
42	Risk Factors for Medical and Surgical Complications Following Single-Level ALIF. Global Spine Journal, 2017, 7, 141-147.	2.3	35
43	Thirty-Day Readmission Risk Factors Following Single-Level Transforaminal Lumbar Interbody Fusion (TLIF) for 4992 Patients From the ACS-NSQIP Database. Global Spine Journal, 2017, 7, 220-226.	2.3	24
44	Evaluation of American Society of Anesthesiologists classification as 30-day morbidity predictor after single-level elective anterior cervical discectomy and fusion. Spine Journal, 2017, 17, 313-320.	1.3	19
45	Lumbar Spinous Process Fixation and Fusion. Clinical Spine Surgery, 2017, 30, E1279-E1288.	1.3	9
46	Initial Experience With Real-Time Continuous Physical Activity Monitoring in Patients Undergoing Spine Surgery. Clinical Spine Surgery, 2017, 30, E1434-E1443.	1.3	18
47	Neurosurgery concepts: Key perspectives on imaging characteristics of spinal metastases, surgery for low back pain, anesthesia for disc surgery, and laminectomy versus laminectomy and fusion for lumbar spondylolisthesis. , 2017, 8, 9.		1
48	Neurosurgery concepts: Key perspectives on endoscopic versus microscopic resection for pituitary adenomas, surgical decision-making in tuberculum sellae meningiomas, optic nerve mobilization during resection of craniopharyngiomas, and evaluation of headache and quality of life after endoscopic transphenoidal surgery for pituitary adenomas. , 2017, 8, 52.		2
49	Management of acute combined fractures of the atlas and axis: A retrospective study of two trauma centers. Journal of Craniovertebral Junction and Spine, 2017, 8, 311.	0.8	1
50	Is Cervical Sagittal Imbalance a Risk Factor for Adjacent Segment Pathomechanics After Multilevel Fusion?. Spine, 2016, 41, E580-E588.	2.0	26
51	The Application of the Revised Condyleâ€“C1 Interval Method to Diagnose Traumatic Atlanto-occipital Dissociation in Adults. Global Spine Journal, 2016, 6, 529-534.	2.3	13
52	Thirty-day readmission rate and risk factors for patients undergoing single level elective anterior lumbar interbody fusion (ALIF). Journal of Clinical Neuroscience, 2016, 32, 104-108.	1.5	27
53	An Outcome and Cost Analysis Comparing Single-Level Minimally Invasive Transforaminal Lumbar Interbody Fusion Using Intraoperative Fluoroscopy versus Computed Tomographyâ€“Guided Navigation. World Neurosurgery, 2016, 94, 255-260.	1.3	12
54	Dimensions of the cervical neural foramen in conditions of spinal deformity: an ex vivo biomechanical investigation using specimen-specific CT imaging. European Spine Journal, 2016, 25, 2155-2165.	2.2	14

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55	Role of preoperative embolization for intradural spinal hemangioblastomas. Journal of Clinical Neuroscience, 2016, 24, 83-87.	1.5	15
56	Management of delayed posttraumatic cervical kyphosis. Journal of Clinical Neuroscience, 2016, 23, 152-159.	1.5	0
57	Incidence of graft extrusion following minimally invasive transforaminal lumbar interbody fusion. Journal of Clinical Neuroscience, 2016, 24, 88-93.	1.5	9
58	Key perspectives on Woven EndoBridge device for wide-necked bifurcation aneurysms, endoscopic endonasal clipping of intracranial aneurysms, retrosigmoid versus translabyrinthine approaches for acoustic neuromas, and impact of local intraoperative steroid administration on postoperative dysphagia following anterior cervical discectomy and fusion. , 2016, 7, 720.		1
59	Neurosurgery concepts: Key perspectives on intrathecal fluorescein for detecting intraoperative cerebrospinal fluid leak during endoscopic endonasal surgery, spinal intraarterial chemotherapy, oligoastrocytoma classification by in situ molecular genetics, and prenatal myelomeningocele closure and the need for cerebrospinal fluid shunt placement. , 2016, 7, 715.		0
60	Key perspectives on stenting of symptomatic vertebral artery stenosis, resident involvement in neurosurgery, antithrombotic therapy following sellar and parasellar tumor resection, and radiosurgery for vestibular schwannomas. , 2016, 7, 733.		0
61	Key perspectives on auditory outcomes following radiosurgery for vestibular schwannoma, tumor treating fields for glioblastoma, and a proposed myelopathy score for cervical decompression surgery, intracranial pressure monitoring in diffuse traumatic brain injury. , 2016, 7, 725.		0
62	Key perspectives on the learning curve of pedicle screw placement, stereotactic radiosurgery for brain metastases, growth of incidentally found meningiomas, and the Barrow Ruptured Aneurysm Trial. , 2016, 7, 729.		0
63	Postural Consequences of Cervical Sagittal Imbalance. Spine, 2015, 40, 783-792.	2.0	56
64	Utility of Readmission Rates as a Quality of Care Measure and Predictors of Readmission Within 30 Days After Spinal Surgery. Spine, 2015, 40, 1769-1774.	2.0	18
65	Intraoperative and perioperative complications in minimally invasive transforaminal lumbar interbody fusion: a review of 513 patients. Journal of Neurosurgery: Spine, 2015, 22, 487-495.	1.7	75
66	The impact of steroids, methotrexate, and biologics on clinical and radiographic outcomes in patients with rheumatoid arthritis undergoing fusions at the craniovertebral junction. Journal of Craniovertebral Junction and Spine, 2015, 6, 60.	0.8	18
67	Cement extravasation into the C7â€“T1 neural foramen after C7 vertebroplasty. Spine Journal, 2015, 15, 1911.	1.3	0
68	Predictors of survival in patients with spinal ependymoma. Neurological Research, 2015, 37, 650-655.	1.3	41
69	The Use of Vancomycin Powder In Modern Spine Surgery: Systematic Review and Meta-Analysis of the Clinical Evidence. World Neurosurgery, 2015, 83, 816-823.	1.3	184
70	Minimally invasive spinal surgery for the treatment of traumatic thoracolumbar burst fractures. Journal of Clinical Neuroscience, 2015, 22, 42-47.	1.5	17
71	Exertional ventral epidural hematoma in the lumbar spine. Spine Journal, 2015, 15, 373-374.	1.3	1
72	Evidence-based management of deep wound infection after spinal instrumentation. Journal of Clinical Neuroscience, 2015, 22, 238-242.	1.5	52

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73	Encapsulated lumbar hematoma after fall from standing height. Spine Journal, 2015, 15, e11.	1.3	0
74	Minimally Invasive Transforaminal Lumbar Interbody Fusion (TLIF) for Spondylolisthesis in 282 Patients: In Situ Arthrodesis versus Reduction. World Neurosurgery, 2015, 84, 108-113.	1.3	29
75	Evidence-Based Medicine of Traumatic Thoracolumbar Burst Fractures: A Systematic Review of Operative Management across 20 Years. Global Spine Journal, 2015, 5, 73-82.	2.3	59
76	The concave versus convex approach for minimally invasive lateral lumbar interbody fusion for thoracolumbar degenerative scoliosis. Journal of Clinical Neuroscience, 2015, 22, 1588-1593.	1.5	17
77	Comparison of open and minimally invasive surgery for intradural-extramedullary spine tumors. Neurosurgical Focus, 2015, 39, E11.	2.3	69
78	Management of flexion distraction injuries to the thoracolumbar spine. Journal of Clinical Neuroscience, 2015, 22, 1853-1856.	1.5	19
79	Seroma observed 6 months after anterior lumbar interbody fusion that included use of recombinant bone morphogenetic protein 2. Spine Journal, 2015, 15, e33.	1.3	5
80	Neurosurgery Concepts: Key perspectives on quality of life in children with spina bifida, cilengitide for the treatment of newly diagnosed glioblastoma, surgery and stereotactic radiosurgery in the management of intracranial metastasis, Gamma Knife radiosurgery in patients with Neurofibromatosis Type 2, patient misconceptions on the diagnosis and treatment of lumbar spondylosis. , 2015, 6, 110.		1
81	Neurosurgery concepts: Key perspectives on embolectomy for stroke with emergent large vessel occlusion (MR CLEAN), endonasal endoscopic craniopharyngioma resection, gamma knife radiosurgery for meningiomas, therapeutic hypothermia for severe traumatic brain injury. , 2015, 6, 165.		2
82	Key perspectives on donepezil following brain irradiation, sacroiliac joint fusion, indocyanine green fluorescence endoscope in endonasal transsphenoidal surgery, postconcussion syndrome in young athletes. , 2015, 6, 647.		0
83	Neurosurgery concepts: Key perspectives on deferoxamine and chronic hydrocephalus from intraventricular hemorrhage, laboratory dissection training in neurosurgical residency, tetanus toxoid and dendritic cell vaccines for glioblastoma, and intracranial hypertension after surgery for craniosynostosis. , 2015, 6, 139.		0
84	Neurosurgery Concepts: Key perspectives on C2 nerve root transection following C1 lateral mass screw fixation, choroid plexus cauterization in infants with hydrocephalus, quality of life following treatment of vestibular schwannoma, dynamic magnetic resonance imaging for glioblastoma pseudoprogression, cost-utility analysis of lumbar spinal stenosis treatment. , 2015, 6, 108.		0
85	Biomechanical Effects of a Unilateral Approach to Minimally Invasive Lumbar Decompression. PLoS ONE, 2014, 9, e92611.	2.5	32
86	Letter to the Editor: Nonexpandable tubular retractors and spinal tumors. Journal of Neurosurgery: Spine, 2014, 20, 769-771.	1.7	2
87	Incidence of Lumbar Spine Pedicle Breach After Percutaneous Screw Fixation. Journal of Spinal Disorders and Techniques, 2014, 27, 358-363.	1.9	68
88	Interspinous process device versus standard conventional surgical decompression for lumbar spinal stenosis results in increased reoperation rates and costs without improving patient outcomes. Evidence-Based Medicine, 2014, 19, 136-136.	0.6	8
89	Bilateral neurological deficits following unilateral minimally invasive TLIF: A review of four patients. , 2014, 5, 317.		8
90	K-Wire fracture during minimally invasive transforaminal lumbar interbody fusion: Report of six cases and recommendations for avoidance and management. , 2014, 5, 520.		9

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91	Malignant peripheral nerve sheath tumors of the spine: A SEER database analysis. Journal of Clinical Neuroscience, 2014, 21, 1106-1111.	1.5	7
92	Comparison of Symptomatic Cerebral Spinal Fluid Leak Between Patients Undergoing Minimally Invasive versus Open Lumbar Foraminotomy, Discectomy, or Laminectomy. World Neurosurgery, 2014, 81, 634-640.	1.3	64
93	The Effect of Surgical Level on Self-Reported Clinical Outcomes After Minimally Invasive Transforaminal Lumbar Interbody Fusion: L4-L5 versus L5-S1. World Neurosurgery, 2014, 81, 177-182.	1.3	12
94	Minimizing Radiation Exposure in Minimally Invasive Spine Surgery. Neurosurgery Clinics of North America, 2014, 25, 247-260.	1.7	7
95	Preface. Neurosurgery Clinics of North America, 2014, 25, xiii.	1.7	1
96	Comment on the biomechanical analysis of four- versus six-screw constructs for short-segment pedicle screw and rod instrumentation of unstable thoracolumbar fractures. Spine Journal, 2014, 14, 1810-1811.	1.3	2
97	Letters to the editor: Validating the Thoracolumbar Injury Classification and Severity Score. Journal of Neurosurgery: Spine, 2014, 21, 495-497.	1.7	1
98	Minimally Invasive Treatment of Thoracic Disc Herniations. Neurosurgery Clinics of North America, 2014, 25, 271-277.	1.7	28
99	Minimally Invasive Transforaminal Lumbar Interbody Fusion (MI-TLIF). Neurosurgery Clinics of North America, 2014, 25, 279-304.	1.7	125
100	Lateral Transpsoas Lumbar Interbody Fusion. Neurosurgery Clinics of North America, 2014, 25, 353-360.	1.7	31
101	Biomechanics of thoracolumbar burst fractures: Methods of induction and treatments. Journal of Clinical Neuroscience, 2014, 21, 2059-2064.	1.5	12
102	Minimally invasive thoracic decompression for multi-level thoracic pathologies. Journal of Clinical Neuroscience, 2014, 21, 467-472.	1.5	8
103	Percutaneous Pedicle Screw Fixation for Thoracolumbar Fractures. Neurosurgery Clinics of North America, 2014, 25, 337-346.	1.7	27
104	Clinical Outcomes of Microendoscopic Foraminotomy and Decompression in the CervicalÂSpine. World Neurosurgery, 2014, 81, 422-427.	1.3	40
105	Intraoperative Navigation in Minimally Invasive Transforaminal Lumbar Interbody Fusion and Lateral Interbody Fusion. Neurosurgery Clinics of North America, 2014, 25, 377-382.	1.7	11
106	Thoracic Decompression. , 2014, , 99-108.		0
107	Risk factors and long-term survival in adult patients with primary malignant spinal cord astrocytomas. Journal of Neuro-Oncology, 2013, 115, 493-503.	2.9	50
108	Evidence-based management of central cord syndrome. Neurosurgical Focus, 2013, 35, E6.	2.3	27

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109	Minimally Invasive Resection of a High-Thoracic Intradural Extramedullary Tumor: An Operative 3-D Video. Operative Neurosurgery, 2013, 73, ons1-ons1.	0.8	3
110	Minimally Invasive Thoracic Corpectomy: 3-Dimensional Operative Video of a Posterolateral Approach to Decompression and Anterior Column Reconstruction. Operative Neurosurgery, 2013, 73, ons141-ons141.	0.8	1
111	Minimally Invasive Tubular Microdiscectomy: A 3-Dimensional Operative Video. Operative Neurosurgery, 2013, 73, ons142-ons142.	0.8	0
112	Measuring Surgical Outcomes in Cervical Spondylotic Myelopathy Patients Undergoing Anterior Cervical Discectomy and Fusion: Assessment of Minimum Clinically Important Difference. PLoS ONE, 2013, 8, e67408.	2.5	73
113	The Microendoscopic Decompression of Lumbar Stenosis: A Review of the Current Literature and Clinical Results. Minimally Invasive Surgery, 2012, 2012, 1-11.	0.5	43
114	Minimally invasive lateral extracavitary corpectomy: cadaveric evaluation model and report of 3 clinical cases. Journal of Neurosurgery: Spine, 2012, 16, 463-470.	1.7	24
115	Minimally Invasive Thoracic Corpectomy: Surgical Strategies for Malignancy, Trauma, and Complex Spinal Pathologies. Minimally Invasive Surgery, 2012, 2012, 1-10.	0.5	25
116	Intraoperative neurophysiological monitoring in spine surgery: indications, efficacy, and role of the preoperative checklist. Neurosurgical Focus, 2012, 33, E10.	2.3	150
117	Paradigm changes in spine surgeryâ€"evolution of minimally invasive techniques. Nature Reviews Neurology, 2012, 8, 443-450.	10.1	113
118	Emerging techniques in the minimally invasive treatment and management of thoracic spine tumors. Journal of Neuro-Oncology, 2012, 107, 443-455.	2.9	27
119	Dedicated Linear Accelerator Radiosurgery for Trigeminal Neuralgia: A Single-Center Experience in 179 Patients With Varied Dose Prescriptions and Treatment Plans. International Journal of Radiation Oncology Biology Physics, 2011, 81, 225-231.	0.8	68
120	Minimally invasive extracavitary approach for thoracic discectomy and interbody fusion: 1-year clinical and radiographic outcomes in 13 patients compared with a cohort of traditional anterior transthoracic approaches. Journal of Neurosurgery: Spine, 2011, 14, 250-260.	1.7	71
121	Complications associated with the treatment for spinal ependymomas. Neurosurgical Focus, 2011, 31, E13.	2.3	50
122	Ossification of the posterior longitudinal ligament: pathogenesis, management, and current surgical approaches. Neurosurgical Focus, 2011, 30, E10.	2.3	80
123	Anatomical Considerations for Subaxial (C2) Pedicle Screw Placement. Journal of Spinal Disorders and Techniques, 2010, 23, 176-179.	1.9	32
124	Symptomatic ectopic bone formation after off-label use of recombinant human bone morphogenetic protein-2 in transforaminal lumbar interbody fusion. Journal of Neurosurgery: Spine, 2010, 12, 40-46.	1.7	137
125	Dedicated linear accelerator radiosurgery for the treatment of trigeminal neuralgia. Journal of Neurosurgery, 2003, 99, 511-516.	1.6	80