Peter A Cripton

List of Publications by Year in descending order

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140 papers 4,822 citations

36 h-index 62 g-index

141 all docs

141 docs citations

times ranked

141

4233 citing authors

#	Article	IF	Citations
1	Prophylactic augmentation implants in the proximal femur for hip fracture prevention: An in silico investigation of simulated sideways fall impacts. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 126, 104957.	1.5	4
2	Incorporating neck biomechanics in helmet testing: Evaluation of commercially available WaveCel helmets. Clinical Biomechanics, 2022, 94, 105628.	0.5	4
3	Neck Muscle and Head/Neck Kinematic Responses While Bracing Against the Steering Wheel During Front and Rear Impacts. Annals of Biomedical Engineering, 2021, 49, 1069-1082.	1.3	3
4	Development of a novel, sensitive translational immunoassay to detect plasma glial fibrillary acidic protein (GFAP) after murine traumatic brain injury. Alzheimer's Research and Therapy, 2021, 13, 58.	3.0	9
5	Duraplasty in Traumatic Thoracic Spinal Cord Injury: Impact on Spinal Cord Hemodynamics, Tissue Metabolism, Histology, and Behavioral Recovery Using a Porcine Model. Journal of Neurotrauma, 2021, 38, 2937-2955.	1.7	7
6	The effect of end condition on spine segment biomechanics in compression with lateral eccentricity. Journal of Biomechanics, 2021, 128, 110617.	0.9	0
7	The Lack of Sex, Age, and Anthropometric Diversity in Neck Biomechanical Data. Frontiers in Bioengineering and Biotechnology, 2021, 9, 684217.	2.0	2
8	Anteroposterior shear stiffness of the upper thoracic spine at quasiâ€static and dynamic loading ratesâ€"AnÂin vitro biomechanical study. Journal of Orthopaedic Research, 2021, , .	1,2	0
9	The diagnostic precision of computed tomography for traumatic cervical spine injury: An in vitro biomechanical investigation. Clinical Biomechanics, 2021, 92, 105529.	0.5	2
10	Increased severity of the CHIMERA model induces acute vascular injury, sub-acute deficits in memory recall, and chronic white matter gliosis. Experimental Neurology, 2020, 324, 113116.	2.0	30
11	Shear stiffness in the lower cervical spine: Effect of sequential posterior element injury. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 141-147.	1.0	3
12	Skiing and snowboarding head injury: A retrospective centre-based study and implications for helmet test standards. Clinical Biomechanics, 2020, 73, 122-129.	0.5	6
13	A neck compression injury criterion incorporating lateral eccentricity. Scientific Reports, 2020, 10, 7114.	1.6	9
14	An Automated Kinematic Measurement System for Sagittal Plane Murine Head Impacts. Journal of Biomechanical Engineering, 2020, 142, .	0.6	1
15	The Effect of Compression Applied Through Constrained Lateral Eccentricity on the Failure Mechanics and Flexibility of the Human Cervical Spine. Journal of Biomechanical Engineering, 2020, 142, .	0.6	3
16	Technique and preliminary findings for in vivo quantification of brain motion during injurious head impacts. Journal of Biomechanics, 2019, 95, 109279.	0.9	8
17	Explicit Finite Element Models Accurately Predict Subject-Specific and Velocity-Dependent Kinetics of Sideways Fall Impact. Journal of Bone and Mineral Research, 2019, 34, 1837-1850.	3.1	25
18	Subject-specific ex vivo simulations for hip fracture risk assessment in sideways falls. Bone, 2019, 125, 36-45.	1.4	13

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19	Optical Assessment of Spinal Cord Tissue Oxygenation Using a Miniaturized Near Infrared Spectroscopy Sensor. Journal of Neurotrauma, 2019, 36, 3034-3043.	1.7	25
20	A Review of Impact Testing Methods for Headgear in Sports: Considerations for Improved Prevention of Head Injury Through Research and Standards. Journal of Biomechanical Engineering, 2019, 141, .	0.6	35
21	Repetitive closed-head impact model of engineered rotational acceleration (CHIMERA) injury in rats increases impulsivity, decreases dopaminergic innervation in the olfactory tubercle and generates white matter inflammation, tau phosphorylation and degeneration. Experimental Neurology, 2019, 317, 87-99.	2.0	19
22	CHIMERA repetitive mild traumatic brain injury induces chronic behavioural and neuropathological phenotypes in wild-type and APP/PS1 mice. Alzheimer's Research and Therapy, 2019, 11, 6.	3.0	50
23	A novel helmet-mounted device for reducing the potential of catastrophic cervical spine fractures and spinal cord injuries in head-first impacts. Clinical Biomechanics, 2019, 64, 22-27.	0.5	5
24	Radiography used to measure internal spinal cord deformation in an in vivo rat model. Journal of Biomechanics, 2018, 71, 286-290.	0.9	0
25	Age at injury and genotype modify acute inflammatory and neurofilament-light responses to mild CHIMERA traumatic brain injury in wild-type and APP/PS1 mice. Experimental Neurology, 2018, 301, 26-38.	2.0	37
26	Clinical hip fracture is accompanied by compression induced failure in the superior cortex of the femoral neck. Bone, 2018, 108, 121-131.	1.4	16
27	Comparison of in vivo and ex vivo viscoelastic behavior of the spinal cord. Acta Biomaterialia, 2018, 68, 78-89.	4.1	19
28	Material mapping strategy to improve the predicted response of the proximal femur to a sideways fall impact. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 78, 196-205.	1.5	33
29	On the Failure Initiation in the Proximal Human Femur Under Simulated Sideways Fall. Annals of Biomedical Engineering, 2018, 46, 270-283.	1.3	15
30	Review of the UBC Porcine Model of Traumatic Spinal Cord Injury. Journal of Korean Neurosurgical Society, 2018, 61, 539-547.	0.5	20
31	The neutral posture of the cervical spine is not unique in human subjects. Journal of Biomechanics, 2018, 80, 53-62.	0.9	5
32	High-Speed Fluoroscopy to Measure Dynamic Spinal Cord Deformation in an <i>In Vivo</i> Rat Model. Journal of Neurotrauma, 2018, 35, 2572-2580.	1.7	6
33	A novel sideways fall simulator to study hip fractures ex vivo. PLoS ONE, 2018, 13, e0201096.	1.1	21
34	On the internal reaction forces, energy absorption, and fracture in the hip during simulated sideways fall impact. PLoS ONE, 2018, 13, e0200952.	1.1	19
35	Defining the biomechanical and biological threshold of murine mild traumatic brain injury using CHIMERA (Closed Head Impact Model of Engineered Rotational Acceleration). Experimental Neurology, 2017, 292, 80-91.	2.0	61
36	Optical monitoring of spinal cord hemodynamics, a feasibility study. , 2017, , .		2

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37	Changes in Pressure, Hemodynamics, and Metabolism within the Spinal Cord during the First 7 Days after Injury Using a Porcine Model. Journal of Neurotrauma, 2017, 34, 3336-3350.	1.7	51
38	Damage Identification on Vertebral Bodies During Compressive Loading Using Digital Image Correlation. Spine, 2017, 42, E1289-E1296.	1.0	7
39	Comparison of specimen-specific vertebral body finite element models with experimental digital image correlation measurements. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 801-807.	1.5	21
40	Defining an Analytic Framework to Evaluate Quantitative MRI Markers of Traumatic Axonal Injury: Preliminary Results in a Mouse Closed Head Injury Model. ENeuro, 2017, 4, ENEURO.0164-17.2017.	0.9	32
41	Responses of the Acutely Injured Spinal Cord to Vibration that Simulates Transport in Helicopters or Mine-Resistant Ambush-Protected Vehicles. Journal of Neurotrauma, 2016, 33, 2217-2226.	1.7	20
42	Reply: The effect of disc degeneration on anterior shear translation in the lumbar spine. Journal of Orthopaedic Research, 2016, 34, 730-731.	1.2	0
43	The influence of the modulus–density relationship and the material mapping method on the simulated mechanical response of the proximal femur in side-ways fall loading configuration. Medical Engineering and Physics, 2016, 38, 679-689.	0.8	40
44	Morphology based anisotropic finite element models of the proximal femur validated with experimental data. Medical Engineering and Physics, 2016, 38, 1339-1347.	0.8	29
45	Ice hockey shoulder pad design and the effect on head response during shoulder-to-head impacts. Sports Biomechanics, 2016, 15, 385-396.	0.8	3
46	Relating Histopathology and Mechanical Strain in Experimental Contusion Spinal Cord Injury in a Rat Model. Journal of Neurotrauma, 2016, 33, 1685-1695.	1.7	15
47	Comparison of Strain Rosettes and Digital Image Correlation for Measuring Vertebral Body Strain. Journal of Biomechanical Engineering, 2016, 138, 054501.	0.6	19
48	Quantifying the internal deformation of the rodent spinal cord during acute spinal cord injury $\hat{a} \in \text{``the validation of a method. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 386-395.}$	0.9	9
49	In Vivo Measurement of Cervical Spinal Cord Deformation During Traumatic Spinal Cord Injury in a Rodent Model. Annals of Biomedical Engineering, 2016, 44, 1285-1298.	1.3	10
50	Chronic Exposure to Androgenic-Anabolic Steroids Exacerbates Axonal Injury and Microgliosis in the CHIMERA Mouse Model of Repetitive Concussion. PLoS ONE, 2016, 11, e0146540.	1.1	31
51	The Effect of Whole-Body Resonance Vibration in a Porcine Model of Spinal Cord Injury. Journal of Neurotrauma, 2015, 32, 908-921.	1.7	19
52	Severity of urban cycling injuries and the relationship with personal, trip, route and crash characteristics: analyses using four severity metrics. BMJ Open, 2015, 5, e006654-e006654.	0.8	45
53	Comparison of explicit finite element and mechanical simulation of the proximal femur during dynamic drop-tower testing. Journal of Biomechanics, 2015, 48, 224-232.	0.9	34
54	Characterization of the behavior of a novel low-stiffness posterior spinal implant under anterior shear loading on a degenerative spinal model. European Spine Journal, 2015, 24, 775-82.	1.0	4

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55	The effect of disc degeneration on anterior shear translation in the lumbar spine. Journal of Orthopaedic Research, 2015, 33, 450-457.	1.2	4
56	Cervical spine injuries and flexibilities following axial impact with lateral eccentricity. European Spine Journal, 2015, 24, 136-147.	1.0	8
57	A scoping review of biomechanical testing for proximal humerus fracture implants. BMC Musculoskeletal Disorders, 2015, 16, 175.	0.8	16
58	A scoping review of the proximal humerus fracture literature. BMC Musculoskeletal Disorders, 2015, 16, 112.	0.8	48
59	Effects of hip abductor muscle forces and knee boundary conditions on femoral neck stresses during simulated falls. Osteoporosis International, 2015, 26, 291-301.	1.3	29
60	Shear deformation and fracture of human cortical bone. Bone, 2015, 71, 25-35.	1.4	57
61	Moment Measurements in Dynamic and Quasi-Static Spine Segment Testing Using Eccentric Compression are Susceptible to Artifacts Based on Loading Configuration. Journal of Biomechanical Engineering, 2014, 136, 124505.	0.6	2
62	Bicycling crash circumstances vary by route type: a cross-sectional analysis. BMC Public Health, 2014, 14, 1205.	1.2	40
63	Merging pathology with biomechanics using CHIMERA (Closed-Head Impact Model of Engineered) Tj ETQq1 1 0.78 Neurodegeneration, 2014, 9, 55.	34314 rgE 4.4	3T /Overlock 148
64	Cervical Vertebral Realignment When Voluntarily Adopting a Protective Neck Posture. Spine, 2014, 39, E885-E893.	1.0	10
65	The effect of lateral eccentricity on failure loads, kinematics, and canal occlusions of the cervical spine in axial loading. Journal of Biomechanics, 2014, 47, 1164-1172.	0.9	9
66	Nonlinear viscoelastic characterization of the porcine spinal cord. Acta Biomaterialia, 2014, 10, 792-797.	4.1	32
67	Proximal femur elastic behaviour is the same in impact and constant displacement rate fall simulation. Journal of Biomechanics, 2014, 47, 3744-3749.	0.9	29
68	Development of a balanced experimental–computational approach to understanding the mechanics of proximal femur fractures. Medical Engineering and Physics, 2014, 36, 793-799.	0.8	45
69	Bicycle helmets are highly effective at preventing head injury during head impact: Head-form accelerations and injury criteria for helmeted and unhelmeted impacts. Accident Analysis and Prevention, 2014, 70, 1-7.	3.0	109
70	Development of an Advanced Football Helmet to Provide Increased Protection against Concussion. , 2014, , 84-101.		4
71	Compressive Follower Load Influences Cervical Spine Kinematics and Kinetics During Simulated Head-First Impact in an in Vitro Model. Journal of Biomechanical Engineering, 2013, 135, 111003.	0.6	17
72	Development of an Inertia-Driven Model of Sideways Fall for Detailed Study of Femur Fracture Mechanics. Journal of Biomechanical Engineering, 2013, 135, 121001.	0.6	41

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73	A Novel Porcine Model of Traumatic Thoracic Spinal Cord Injury. Journal of Neurotrauma, 2013, 30, 142-159.	1.7	123
74	Proximal femur bone strength estimated by a computationally fast finite element analysis in a sideways fall configuration. Journal of Biomechanics, 2013, 46, 1231-1236.	0.9	92
75	Neck posture and muscle activity are different when upside down: A human volunteer study. Journal of Biomechanics, 2013, 46, 2837-2843.	0.9	16
76	Towards clinical management of traumatic brain injury: a review of models and mechanisms from a biomechanical perspective. DMM Disease Models and Mechanisms, 2013, 6, 1325-38.	1.2	84
77	Comparing the effects of infrastructure on bicycling injury at intersections and non-intersections using a case–crossover design. Injury Prevention, 2013, 19, 303-310.	1.2	120
78	Perspective: Protecting the neck. Nature, 2013, 503, S13-S13.	13.7	2
79	Cerebrospinal Fluid Pressures Resulting From Experimental Traumatic Spinal Cord Injuries in a Pig Model. Journal of Biomechanical Engineering, 2013, 135, 101005.	0.6	17
80	An In Vitro Model of Degenerative Lumbar Spondylolisthesis. Spine, 2013, 38, E870-E877.	1.0	11
81	In Vitro Nonlinear Viscoelastic Characterization of the Porcine Spinal Cord., 2013,,.		0
82	Exposure-based Traffic Crash Injury Rates by Mode of Travel in British Columbia. Canadian Journal of Public Health, 2013, 104, e75-e79.	1.1	20
83	Mechanisms of cervical spine injury in rugby union: is it premature to abandon hyperflexion as the main mechanism underpinning injury?. British Journal of Sports Medicine, 2012, 46, 545-549.	3.1	26
84	Development of a large-animal model to measure dynamic cerebrospinal fluid pressure during spinal cord injury. Journal of Neurosurgery: Spine, 2012, 16, 624-635.	0.9	32
85	Retrospective Assessment of Occupational Exposure to Whole-Body Vibration for a Case-Control Study. Journal of Occupational and Environmental Hygiene, 2012, 9, 371-380.	0.4	13
86	Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. American Journal of Public Health, 2012, 102, 2336-2343.	1.5	235
87	The Pressure Distribution of Cerebrospinal Fluid Responds to Residual Compression and Decompression in an Animal Model of Acute Spinal Cord Injury. Spine, 2012, 37, E1422-E1431.	1.0	34
88	Transmission of Force in the Lumbosacral Spine During Backward Falls. Spine, 2012, 37, E519-E527.	1.0	16
89	Load Transfer Characteristics Between Posterior Spinal Implants and the Lumbar Spine Under Anterior Shear Loading. Spine, 2012, 37, E1126-E1133.	1.0	12
90	Gross Morphological Changes of the Spinal Cord Immediately After Surgical Decompression in a Large Animal Model of Traumatic Spinal Cord Injury. Spine, 2012, 37, E890-E899.	1.0	35

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91	Biomechanical evaluation of the Total Facet Arthroplasty System® (TFAS®): loading as compared to a rigid posterior instrumentation system. European Spine Journal, 2012, 21, 1660-1673.	1.0	19
92	Mechanical indicators of injury severity are decreased with increased thecal sac dimension in a bench-top model of contusion type spinal cord injury. Journal of Biomechanics, 2012, 45, 1003-1010.	0.9	8
93	Acoustic emission signals can discriminate between compressive bone fractures and tensile ligament injuries in the spine during dynamic loading. Journal of Biomechanics, 2012, 45, 1643-1649.	0.9	25
94	An ex vivo biomechanical comparison of a novel vertebral compression fracture treatment system to kyphoplasty. Clinical Biomechanics, 2012, 27, 346-353.	0.5	15
95	Personal and trip characteristics associated with safety equipment use by injured adult bicyclists: a cross-sectional study. BMC Public Health, 2012, 12, 765.	1.2	17
96	Shear force measurements on low- and high-stiffness posterior fusion devices. Medical Engineering and Physics, 2012, 34, 1260-1267.	0.8	4
97	Safe Cycling: How Do Risk Perceptions Compare With Observed Risk?. Canadian Journal of Public Health, 2012, 103, S42-S47.	1.1	75
98	Kinematic evaluation of one- and two-level Maverick lumbar total disc replacement caudal to a long thoracolumbar spinal fusion. European Spine Journal, 2012, 21, 599-611.	1.0	18
99	Head and Neck Injury Potential With and Without Helmets During Head-First Impacts on Snow. , 2012, , 235-249.		5
100	Cervical spinal cord deformation during simulated head-first impact injuries. Journal of Biomechanics, 2011, 44, 2565-2571.	0.9	36
101	The Bicyclists' Injuries and the Cycling Environment study: a protocol to tackle methodological issues facing studies of bicycling safety. Injury Prevention, 2011, 17, e6-e6.	1.2	20
102	Hip protectors: recommendations for conducting clinical trialsâ€"an international consensus statement (part II). Osteoporosis International, 2010, 21, 1-10.	1.3	38
103	A New Biofidelic Sagittal Plane Surrogate Neck for Head-First Impacts. Traffic Injury Prevention, 2010, 11, 309-319.	0.6	11
104	Biomechanical Aspects of Spinal Cord Injury. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 159-180.	0.7	5
105	Hip protectors: recommendations for biomechanical testing—an international consensus statement (part I). Osteoporosis International, 2009, 20, 1977-1988.	1.3	66
106	The development of an improved physical surrogate model of the human spinal cordâ€"Tension and transverse compression. Journal of Biomechanics, 2009, 42, 878-883.	0.9	22
107	During sideways falls proximal femur fractures initiate in the superolateral cortex: Evidence from high-speed video of simulated fractures. Journal of Biomechanics, 2009, 42, 1917-1925.	0.9	173
108	The impact of transportation infrastructure on bicycling injuries and crashes: a review of the		

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109	Pediatric and Adult Three-Dimensional Cervical Spine Kinematics. Spine, 2009, 34, 1650-1657.	1.0	24
110	Translational constraint influences dynamic spinal canal occlusion of the thoracic spine: An in vitro experimental study. Journal of Biomechanics, 2008, 41, 171-179.	0.9	18
111	Ex vivo measurement of lumbar intervertebral disc pressure using fibre-Bragg gratings. Journal of Biomechanics, 2008, 41, 221-225.	0.9	40
112	Pediatric lumbar Chance fractures in British Columbia: Chart review and analysis of the use of shoulder restraints in MVAs. Accident Analysis and Prevention, 2008, 40, 1424-1429.	3.0	25
113	A minimally invasive in-fiber Bragg grating sensor for intervertebral disc pressure measurements. Measurement Science and Technology, 2008, 19, 085201.	1.4	24
114	The appropriate and inappropriate use of child restraint seats in Manitoba. International Journal of Injury Control and Safety Promotion, 2008, 15, 151-156.	1.0	17
115	BIOMECHANICAL EVALUATION OF INTERVERTEBRAL DISCS FOLLOWING A BURST FRACTURE. Journal of Musculoskeletal Research, 2008, 11, 97-106.	0.1	0
116	Validation of a Novel Minimally Invasive Intervertebral Disc Pressure Sensor Utilizing In-Fiber Bragg Gratings in a Porcine Model. Spine, 2008, 33, E589-E594.	1.0	22
117	A Repeatable Ex Vivo Model of Spondylolysis and Spondylolisthesis. Spine, 2008, 33, 2387-2393.	1.0	16
118	The Effect of Cerebrospinal Fluid on the Biomechanics of Spinal Cord. Spine, 2008, 33, E580-E588.	1.0	36
119	Title is missing!. Journal of Rehabilitation Research and Development, 2008, 45, 1280.	1.6	12
120	Comparison of wheelchair wheels in terms of vibration and spasticity in people with spinal cord injury. Journal of Rehabilitation Research and Development, 2008, 45, 1269-79.	1.6	1
121	Biomechanical Evaluation of the Total Facet Arthroplasty Systemâ,,¢. Spine, 2007, 32, 55-62.	1.0	65
122	Cement Augmentation of Vertebral Screws Enhances the Interface Strength Between Interbody Device and Vertebral Body. Spine, 2007, 32, 334-341.	1.0	34
123	Musculature Actuation and Biomechanics of the Spine. , 2006, , 99-143.		3
124	Wear and Corrosion in Retrieved Thoracolumbar Posterior Internal Fixation. Spine, 2006, 31, 2454-2462.	1.0	37
125	The Biomechanical Effects of Kyphoplasty on Treated and Adjacent Nontreated Vertebral Bodies. Journal of Spinal Disorders and Techniques, 2005, 18, 84-91.	1.8	99
126	Biofidelic whole cervical spine model with muscle force replication for whiplash simulation. European Spine Journal, 2005, 14, 346-355.	1.0	43

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127	The Clinical Performance of UHMWPE in the Spine. , 2004, , 219-243.		0
128	Kinematic response of lumbar functional spinal units to axial torsion with and without superimposed compression and flexion/extension. European Spine Journal, 2004, 13, 560-566.	1.0	46
129	A Method to Simulate In Vivo Cervical Spine Kinematics Using In Vitro Compressive Preload. Spine, 2002, 27, 43-48.	1.0	90
130	Development of a System for In Vitro Neck Muscle Force Replication in Whole Cervical Spine Experiments. Spine, 2001, 26, 2214-2219.	1.0	55
131	A minimally disruptive technique for measuring intervertebral disc pressure in vitro: application to the cervical spine. Journal of Biomechanics, 2001, 34, 545-549.	0.9	60
132	Animation of in vitro biomechanical tests. Journal of Biomechanics, 2001, 34, 1091-1096.	0.9	23
133	Load-Sharing Characteristics of Stabilized Lumbar Spine Segments. Spine, 2000, 25, 170.	1.0	71
134	In vitro axial preload application during spine flexibility testing: towards reduced apparatus-related artefacts. Journal of Biomechanics, 2000, 33, 1559-1568.	0.9	105
135	Compressive strength of interbody cages in the lumbar spine: the effect of cage shape, posterior instrumentation and bone density. European Spine Journal, 1998, 7, 132-141.	1.0	171
136	Interbody cage stabilisation in the lumbar spine: Biomechanical evaluation of cage design, posterior instrumentation and bone density. Journal of Bone and Joint Surgery: British Volume, 1998, 80, 351-359.	3.4	194
137	The Relative Importance of Vertebral Bone Density and Disc Degeneration in Spinal Flexibility and Interbody Implant Performance. Spine, 1996, 21, 2558-2569.	1.0	97
138	Pull-out strength of pedicle hooks with fixation screws: influence of screw length and angulation. European Spine Journal, 1996, 5, 71-73.	1.0	25
139	New means in spinal pedicle hook fixation. European Spine Journal, 1995, 4, 114-122.	1.0	17
140	Improvement of spine implant performance through analysis of retrieved implants: preliminary results. , 0, , .		0