### **CURRICULUM VITAE**

### PERSONAL DATA

Name : Gun Woo Lee

Sex : Male

Place of Birth : Busan, Republic of Korea

## **EDUCATION**

M. D. : Kosin University, College of Medicine

Ph. D. (2001-2007): Seoul National University, College of

Medicine

(2014-2016)

## **POSTGRADUATE TRAINING**

March, 2008 - February, 2012 : Residency in the Department of Orthopaedic Surgery,

Kosin University Gospel Hospital,

Busan, Republic of Korea

#### **FELLOWSHIP**

March, 2012 - February, 2013 : Clinical Fellow in Spine Center and Department of

Orthopaedic Surgery, Seoul National University, Seoul National University Bundang Hospital,

Sungnam, Republic of Korea

July, 2018 - September, 2018 : Clinical Fellow

Spine Center and Department of Orthopaedic Surgery,

Showa University and Showa University Hospital,

Tokyo, Japan

# ACADEMIC AND HOSPITAL APPOINTMENT

March, 2013 – April, 2016 : Chief Surgeon (Spine section)

Department of Orthopaedic Surgery,

Armed Forces Yangju Hospital,

Yangju, Republic of Korea

May, 2016 – August, 2016 : Clinical Assistant Professor

Department of Orthopaedic Surgery and Spine Center,

Yeungnam University Hospital,

Yeungnam University College of Medicine

Daegu, Republic of Korea

September, 2016 – December, 2021 : Assistant Professor

Department of Orthopaedic Surgery and Spine Center,

Yeungnam University Hospital,

Yeungnam University College of Medicine

Daegu, Republic of Korea

March, 2022 – at Present : Associate Professor

Department of Orthopaedic Surgery and Spine Center,

Yeungnam University Hospital,

Yeungnam University College of Medicine

Daegu, Republic of Korea

# EDITORIAL BOARD MEMBER

Journal of Spine Surgery

Biology (Section editor)

Asian Spine Journal

Spine Research

Orthopedics Research and Traumatology

International Journal of Clinical Research and Trials

Journal of Minimally Invasive Orthopaedic Surgery

Journal of Musculoskeletal Regeneration

International Journal of Surgery and Surgical Procedure

### **REVIEWING BOARD MEMBER**

The Spine Journal

Spine (Phila Pa 1976)

BMJ (British Medical Journal) Open

Scientific Report

International Journal of Molecular Sciences

Life

**Biology** 

Medicine (Baltimore)

Neurosurgical Review

Journal of Orthopaedic Surgery

Journal of Orthopaedic Surgery and Research

Journal of Clinical Neuroscience

**BMC** Musculoskeletal Disorders

**Current Medical Imaging Reviews** 

Asian Spine Journal

Clinics in Orthopaedic Surgery

Musculoskeletal Surgery

Journal of Minimally Invasive Orthopaedic Surgery

# **SOCIETY MEMBERSHIP**

The Korean Orthopaedic Association

The Korean Society of Spine Surgery

North American Spine Society (NASS)

AOSpine (Korean Delegate)

Asia-Pacific Orthopaedic Association (APOA)

Cervical Spine Research Society, Asia-Pacific Section (CSRS-AP)

Written by Gun Woo Lee

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# **Publication List**

				Jo	urnal		
No	Title	Authors	Date	Journal name	SCI(E)	Impact factor	Author
71	Predictors of vertebral endplate fracture after oblique lumbar interbody fusion	Park WT, Woo IH, Park SJ, <u>Lee GW</u>	Accepted for publication	Clinics in Orthopedic Surgery	SCIE	2.503	Corresponding author
70	Therapeutic potential of small extracellular vesicles derived from mesenchymal stem cells for spinal cord and nerve injury	Lim YJ, Jung KN, Park WT, Seo MS, <u>Lee GW</u>	2023-03	Frontiers in Cell and Developmental Biology	SCIE	6.081	Corresponding author
69	Reply to letter to the editor regarding,  "To cross or not to cross the cervicothoracic junction in multilevel posterior cervical fusion: a systematic review and meta-analysis".	Chang MC, Park WT, <u>Lee GW</u>	2023-02	Spine J	SCIE	4.297	Corresponding author
68	High reliability and accuracy of dynamic magnetic resonance imaging in the diagnosis of cervical Spondylotic myelopathy: a multicenter study	Park WT, Min WK, Shin JH, Ko SB, Son ES, Kim J, Jang J, <u>Lee GW</u>	2022-12	BMC Musculoskeletal Disorders	SCIE	2.562	Corresponding author

67	Assessment of Fusion after Anterior Cervical Discectomy and Fusion Using Convolutional Neural Network Algorithm	Park S, Kim JK, Park JJ, Yang JJ, Chang MC, <u>Lee GW</u>	2022-12	Spine (Phila Pa 1976)	SCI	3.241	Corresponding author
66	Diagnostic Technology for Spine Pathology	Kim GU, Park WT, Chang MC, <u>Lee GW</u>	2022-10	Asian Spine J	-	-	Corresponding author
65	Combined Anterior-Posterior Fusion versus Posterior Alone Fusion For Cervical Myelopathy in Athetoid- Cerebral Palsy	Kim GU, <u>Lee GW</u>	2022-10	Global Spine J	SCIE	2.23	Corresponding author
64	The comparison between transarticular screw fixation and segmental screw-rod fixation for posterior fusion of C1-2 segment: A systematic review and meta-analysis	Chang MC, Choo YJ, <u>Lee GW</u>	2022-08	World Neurosurg	SCIE	2.21	Corresponding author
63	Pain relief after selective nerve root block as a predictor of postoperative functional outcome in patients with degenerative lumbar spinal stenosis patients undergoing decompressive surgery	Ko S, Chun CM, Min WK, Son ES, Lee SJ, Lee GW, Yoo H	2022-05	Spine (Phila Pa 1976)	SCI	3.241	Co-author
62	To cross or not to cross the cervicothoracic junction in multilevel posterior cervical fusion: a systematic review and meta-analysis	Chang MC, Kim GU, Choo YJ, <u>Lee GW</u>	2022-05	Spine J	SCIE	4.297	Corresponding author

61	Deep Learning Algorithm to Evaluate Cervical Spondylotic Myelopathy Using Lateral Cervical Spine Radiograph	Lee GW, Shin HK, Chang MC	2022-04	BMC Neurology	SCIE	2.474	1 <sup>st</sup> author
60	Isolation and Characterization of Extracellular Vesicle from Mesenchymal Stem Cells of Epidural Fat of the Spine	Sung SE, Seo MS, Kang KK, Choi JH, Lee SJ, Lim JH, Yang SY, Kim SK, <u>Lee GW</u>	2022-04	Asian Spine J	-	-	Corresponding author
59	Human Epidural AD–MSC Exosomes Improve Function Recovery after Spinal Cord Injury in Rats	Sung SE, Seo MS, Kim YI, Kang KK, Choi JH, Lee SJ, Sung MK, Yim SG, Lim JH, Seok HG, Yang SY, Lee GW	2022-03	Biomedicine	SCIE	4.757	Corresponding author
58	Therapeutic Potential of Mesenchymal Stem Cells (MSCs) and MSC-Derived Extracellular Vesicles for the Treatment of Spinal Cord Injury	Kim GU, Sung SE, Kang KK, Choi JH, Lee SJ, Sung MK, Yang SY, Kim SK, Kim YI, Lim JH, Seo MS, Lee GW	2021-12	Int J Mol Sci	SCIE	6.208	Corresponding author

57	Serum-Derived Neuronal Exosomal microRNAs as Stress-Related Biomarkers in an Atopic Dermatitis Model	Sung MK, Sung SE, Kang KK, Choi JH, Lee SJ, Kim K, Lim JH, Lee GW, Lim HD, Won SH, et al.	2021-12	Biomedicine	SCIE	4.757	Co-author
56	The impact of novel COVID-19 initial pandemic on orthopedic healthcare: experience from a single institution of South Korea	Lee GW, Lee IJ, Kim GB	2021-11	J Kor Med Assoc.	-	-	1 <sup>st</sup> author
55	Serum-Derived Neuronal Exosomal miRNAs as Biomarkers of Acute Severe Stress	Sung MK, Sung SE, Kang KK, Choi JH, Lee SJ, Kim K, Lim JH, Lee GW, et al.	2021-09	Int J Mol Sci	SCIE	6.208	Co-author
54	Mesenchymal Stem Cell Exosomes  Derived from Feline Adipose Tissue  Enhance the Effects of Anti- Inflammation Compared to Fibroblasts-  Derived Exosomes	Sung MK, Sung SE, Kang KK, Choi JH, Lee SJ, Kim K, Lim JH, Lee GW, et al.	2021-09	Vet Sci	SCIE	2.518	Co-author

53	Transforaminal lumbar interbody fusion (TLIF) versus oblique lumbar interbody fusion (OLIF) in Interbody Fusion Technique for Degenerative Spondylolisthesis: A systematic review and meta-analysis	Chang MC, Kim GU, Choo YJ, <u>Lee GW</u>	2021-07	Life	SCIE	3.251	Corresponding author
52	Pedicle Screws versus Cortical Screws in Posterior Lumbar Interbody Fusion Surgery for Degenerative Spondylolisthesis: A Systematic Review and Meta-analysis	Chang MC, Choo YJ, <u>Lee GW</u>	2021-07	Spine J	SCIE	4.297	Corresponding author
51	Mesenchymal stem cell-derived exosomes and its therapeutic potential for osteoarthritis	Kim GB, Shon OJ, Seo  MS, Choi Y, Park WT, <u>Lee GW</u>	2021-04	Biology	SCIE	5.168	Corresponding author
50	Comparisons of Extracelluar Vesicles from Human Epidural Fat-Derived Mesenchymal Stem Cells and Fibroblast Cells	Sung SE, Kang KK, Choi JH, Lee SJ, Kim KS, Lim JH, Yang SY, Kim SK, Seo MS, <u>Lee</u> <u>GW</u>	2021-03	Int J Mol Sci	SCIE	6.208	Corresponding author

49	Mesenchymal Stem Cells Decrease Oxidative Stress in the Bowels of Interleukin-10 Knockout Mice	Jung KJ, <u>Lee GW</u> , Park  CH, Lee TJ, Kim JY,  Sung EG, Kim SY, Jang  BI, Song IH	2021-01	Gut Liver	SCI	4.321	Co-author
48	Diagnostic modality in spine disease: A Review	Kim GU, Chang MC, Kim TU, <u>Lee GW</u>	2020-12	Asian Spine J	-		Corresponding author
47	The C2 cortical screw, an alternative fixation technique for the C2 segment during high cervical spine surgery: a technical note	Kim GU, <u>Lee GW</u>	2020-10	World Neurosurg	SCIE	2.21	Corresponding author
46	Intra-articular bone marrow aspirate concentrate injection in patients with knee osteoarthritis	Kim GB, Kim JD, Choi Y, Choi CH, <u>Lee GW</u>	2020-08	Applied Sciences	SCIE	2.838	Corresponding author
45	Bone Marrow Aspirate Concentrate: Its Uses in Osteoarthritis	Kim GB, Seo MS, Park WT, Lee GW	2020-05	Int J Mol Sci	SCIE	6.208	Corresponding author
44	The Impact of Posterior Epidural Adipose Tissue on Postoperative Outcomes After Posterior Decompression Surgery for Lumbar Spinal Stenosis: A Prospectively Randomized Non-Inferiority Trial	<u>Lee GW</u> , Mun JW, Ahn MH	2020-01	J Orthop Surg	SCIE	1.482	1 <sup>st</sup> and Corresponding author

43	Epidural Fat-Derived Mesenchymal Stem Cell: First Report of Epidural Fat- Derived Mesenchymal Stem Cell	Lee GW, Seo MS,  Kang KK, Oh SK	2019-06	Asian Spine J	-	-	1 <sup>st</sup> and Corresponding author
42	Selective Blocking Laminoplasty in Cervical Laminectomy and Fusion to Prevent Postoperative C5 Palsy	Kim GU, <u>Lee GW</u>	2019-04	Spine J	SCIE	4.297	Corresponding author
41	PET/CT-negative malignant spine tumor with pathologic fracture: A case report of malignant solitary bone plasmacytoma	Kim GU, Chio JH, <u>Lee</u> <u>GW</u>	2018-12	Medicine	SCI	1.889	Corresponding author
40	Effect of water glass coating of tricalcium phosphate granules on in vivo bone formation	Ryu SM, Ahn MW, Park CH, <u>Lee GW</u> , Song IH, Ahn HS, Kim J, Kim S	2018-11	J Biomater Appl	SCIE	2.712	Co-author
39	Comparative Study of Two Surgical Techniques for Proximal Adjacent Segment Pathology after Posterior Lumbar Interbody Fusion with Pedicle Screw: Fusion Extension using Conventional Pedicle Screw versus Cortical Bone Trajectory-Pedicle Screw (Cortical Screw)	<b>Lee GW</b> , Shin JH	2018-09	World Neurosurg	SCIE	2.21	1 <sup>st</sup> and Corresponding author

38	Comparative study of two spinous process (SP) osteotomy techniques for posterior decompressive surgery in lumbar spinal stenosis: SP base versus splitting osteotomy	<u>Lee GW</u> , Ahn MW	2018-07	Eur Spine J	SCIE	2.721	1 <sup>st</sup> and Corresponding author
37	The Impact of L5 Sacralization on Fusion Rates and Clinical Outcomes after Single-level Posterior Lumbar Interbody Fusion (PLIF) at L4-5 Level	Lee GW , Shin JH, Ahn	2018-02	Clin Spine Surg	SCIE	1.723	1 <sup>st</sup> and Corresponding author
36	Comparative study of Cortical bone trajectory-pedicle screw (cortical screw) versus conventional pedicle screw in single-level posterior lumbar interbody fusion: A 2-year post hoc analysis from prospectively randomized data	<u>Lee GW</u> , Ahn MW	2018-01	World Neurosurg	SCIE	2.21	1 <sup>st</sup> and Corresponding author
35	Impact of wedge-shaped resection of the posterior bony arch on postoperative outcomes after open door laminoplasty in the cervical spine: two-year follow-up study	Lee GW, Suh BG, Yeom JS, Ryu SM, Ahn MW	2017-09	Spine J	SCIE	4.297	1 <sup>st</sup> and Corresponding author
34	The Efficacy of Vitamin C on Postoperative Outcomes after Posterior Lumbar Interbody Fusion: A Randomized, Placebo-Contolled Trial	Lee GW, Yang HS, Yeom JS, Ahn MW	2017-09	Clin Orthop Surg	SCIE	2.503	1 <sup>st</sup> and Corresponding author

33	Which Technique is Better Option for C3 Segment in Multi-Level Open-Door Laminoplasty of the Cervical Spine: Laminectomy versus Laminoplasty	Lee GW, Cho CW, Shin JH, Ahn MW	2017-07	Spine (Phila Pa 1976)	SCI	3.241	1 <sup>st</sup> and Corresponding author
32	Wedge-shaped Resection of the Posterior  Bony Arch during Open Door  Laminoplasty to Prevent Postoperative  Motion Limitation	Suh BG, Ahn MW, Kim HJ, Yeom JS, <u>Lee GW</u>	2017-02	Spine (Phila Pa 1976)	SCI	3.241	Corresponding author
31	A Sternum-Disk Distance Method to Identify the Skin Level for Approaching a Surgical Segment without Fluoroscopy Guidance during Anterior Cervical Discectomy And Fusion	Lee GW, Ahn MW, Shin JH, Park JW, Uh JH, Park JH, Lee JH, Kim DW, Yeom JS, Suh BG	2017-02	Asian Spine J	-	-	1 <sup>st</sup> author
30	The Impact of Generalized Joint Laxity (GJL) on the Posterior Neck Pain, Cervical Disc Herniation, and Cervical Disc Degeneration in the Cervical Spine	Lee SM, Oh SC, Yeom  JS, Shin JH, Park SG,  Shin DS, Ahn MW, <u>Lee</u> <u>GW</u>	2016-12	Spine J	SCIE	4.297	Corresponding author
29	Significance of Coronal Proset Magnetic Resonance Imaging to Detect Hidden Zone of the Mid-Zone Stenosis in the Lumbar Spine and Morphometric Analysis of the Mid-Zone Stenosis	Ahn HS, Son WS, Shin JH, Ahn MW, <u>Lee GW</u>	2016-08	Asian Spine J	-	-	Corresponding author

28	The Impact of Lumbosacral Transitional Vertebrae on Therapeutic Outcomes of Transforaminal Epidural Injection in Patients with Lumbar Disc Herniation	Son KM, Lee SM, <u>Lee</u> <u>GW</u> , Ahn MH, Son JH	2016-07	Pain Pract	SCIE	3.079	Corresponding author
27	A Feasibility Study of Free-hand Technique for Pedicle Screw Insertion of C7 without aiding Fluoroscopy	Lee GW, Kim HJ, Yeom JS, Uh JH, Park JH, Lee JH, Kim DW, Suh BG	2016-02	Asian Spine J	-	-	1 <sup>st</sup> author
26	Distraction Arthrodesis of the C1-C2 Facet Joint with Preservation of the C2 Root for the Management of Intractable Occipital Neuralgia Caused by C2 Root Compression	Yeom JS, Riew KD, Kang SS, Yi J, <u>Lee GW</u> , Yeom A, Chang BS, Lee CK, Kim HJ	2015-10	Spine (Phila Pa 1976)	SCI	3.241	Co-author
25	A preliminary study on surgical navigation for epiduroscopic laser neural decompression	Jeon SS, <u>Lee GW</u> , Jeon YD, Park IH, Hong J, Kim JD	2015-10	J Engineering in Medicine	SCI	1.758	Co-author
24	Comparison of Lumbar Discectomy Alone and Lumbar Discectomy with Direct Repair of Pars Defect for Patients with Disc Herniation and Spondylolysis at the Nearby Lumbar Segment	Lee GW, Ryu JH, Kim JD, Ahn MW, Kim HJ, Yeom JS	2015-10	Spine J	SCIE	4.297	1 <sup>st</sup> and Corresponding author
23	Comparison between Surgical Treatment with Direct Repair versus Conservative Treatment in young patients with spondylolysis: a Prospective, Comparative, Clinical Trial	Lee GW, Lee SM, Ahn MW, Kim HJ, Yeom JS	2015-07	Spine J	SCIE	4.297	1 <sup>st</sup> and Corresponding author

22	The Comparison of Pedicle Screw and Cortical Screw in Posterior Lumbar Inter-body Fusion: a Prospective Randomized Non-inferiority Trial	Lee GW, Son JH, Ahn MW, Kim HJ, Yeom JS	2015-07	Spine J	SCIE	4.297	1 <sup>st</sup> and Corresponding author
21	The Impact of Generalized Joint Laxity (GJL) on the Clinical and Radiological Outcomes of Single-level Posterior Lumbar Inter-body Fusion (PLIF)	Lee SM, <u>Lee GW</u>	2015-05	Spine J	SCIE	4.297	Corresponding author
20	Generalized Joint Laxity is Associated with Primary Occurrence and Treatment Outcome of Lumbar Disc Herniation	Han WJ, Kim HB, <u>Lee</u> <u>GW</u> , Choi JH, Jo WJ,  Lee SM	2015-05	Korean J Fam Med	-	-	Co-author
19	Repair using Conventional Implant for Ruptured Annulus Fibrosus after Lumbar Discectomy: Surgical Technique and Case Series	Suh BG, Uh JH, Park SH, <u>Lee GW</u>	2015-02	Asian Spine J	-	-	Corresponding author
18	A Prospective Randomized Clinical Trial Comparing Bone Union Rate Following Anterior Cervical Discectomy and Fusion Using a Polyetheretherketone Cage: Hydroxyapatite/B-Tricalcium Phosphate Mixture versus Hydroxyapatite/Demineralized Bone Matrix Mixture	Yi J, <u>Lee GW</u> , Nam WD, Han KY, Kim MH, Kang JW, Won J, Kim SW, Noh W, Yeom JS	2015-02	Asian Spine J	-	-	Corresponding author

17	Direct Repair Surgery with Screw Fixation for Young Patients with Lumbar Spondylolysis: Patient-Reported Outcomes and Fusion Rate in a Prospective Interventional Study	<u>Lee GW</u> , Lee SM, Suh BG	2015-02	Spine (Phila Pa 1976)	SCI	3.241	1 <sup>st</sup> and Corresponding author
16	The impact of generalized joint laxity on the occurrence and disease course of primary lumbar disc herniation	Lee GW, Lee SM, Suh BG	2015-01	Spine J	SCIE	4.297	1 <sup>st</sup> and Corresponding author
15	Clinical outcome of autologous bone marrow aspirates concentrate (BMAC) injection in degenerative arthritis of the knee.	Kim JD, <u>Lee GW</u> , Jung GH, Kim CK, Kim T, Park JH, Cha SS, You YB	2014-12	Eur J Orthop Surg Traumatol	-	-	Co-author
14	Comparison of posterolateral lumbar fusion and posterior lumbar interbody fusion for patients younger than 60 years with isthmic spondylolisthesis	Lee GW, Lee SM, Ahn MW, Kim HJ, Yeom JS	2014-11	Spine (Phila Pa 1976)	SCI	3.241	1 <sup>st</sup> and Corresponding author
13	The Effectiveness of Transforaminal Epidural Injection for Discal Cyst of Lumbar Spine	Park JM, Lee SM, <u>Lee</u> <u>GW</u>	2014-08	J Minim Invasive Orthop	-	-	Corresponding author
12	The efficacy of epiduroscopic neural decompression with Ho:YAG laser ablation in lumbar spinal stenosis	<u>Lee GW</u> , Jang SJ, Kim JD	2014-07	Eur J Orthop Surg Traumatol	-	-	1 <sup>st</sup> author
11	Clinical and radiological outcomes following microscopic decompression utilizing tubular retractor or conventional microscopic decompression in lumbar spinal stenosis with a minimum of 10- year follow-up	Lee GW, Jang SJ, Shin SM, Jang JH, Kim JD	2014-07	Eur J Orthop Surg Traumatol	-	-	1 <sup>st</sup> author

10	The influence of pain sensitivity on the treatment outcome of transforaminal epidural steroid injection in patients with lumbar spinal stenosis	Kim HJ, Yeom JS, Lee JW, Chang BS, Lee CK, <u>Lee GW</u> , Im SB, Kim HJ	2014-06	Pain Pract	SCIE	3.079	Co-author
9	The influence of pain sensitivity on the symptom severity in patients with lumbar spinal stenosis	Kim HJ, Suh BG, Lee DB, <u>Lee GW</u> , Kim DW, Kang KT, Chang BS, Lee CK, Yeom JS	2014-03	Pain Physician	SCIE	4.965	Co-author
8	The efficacy of percutaneous long- segmental posterior fixation of unstable thoracolumbar fracture with partial neurologic deficit	Lee GW, Jang SJ, Kim JD, Son JH, Jang JH	2013-07	Asian Spine J	1	-	1 <sup>st</sup> author
7	Is platelet-rich plasma able to enhance the results of arthroscopic microfracture in early osteoarthritis and cartilage lesion over 40 years of age?	Lee GW, Son JH, Kim JD, Jung GH.	2013-07	Eur J Orthop Surg Traumatol	-	-	1 <sup>st</sup> author
6	Accessory anterolateral portal in arthroscopic PCL reconstruction	Lee GW, Jang SJ, Choi Y, Son JH	2013-05	Knee Surg Sports Traumatol Arthrosc	SCIE	4.114	1 <sup>st</sup> author
5	A therapeutic efficacy of the transpedicular intracorporeal bone graft with short-segmental posterior instrumentation in osteonecrosis of vertebral body: a minimum 5-year follow-up study	<u>Lee GW</u> , Yeom JS, Kim HJ, Suh BG.	2013-02	Spine (Phila Pa 1976)	SCI	3.241	1 <sup>st</sup> author
4	The efficacy of patellar decompression for improving anterior knee pain following total knee arthroplasty without patellar resurfacing	Lee GW, Lee SM, Jang SJ, Son JH	2013-02	Arch Orthop Trauma Surg	SCI	2.928	1 <sup>st</sup> author
3	Primary Candida guilliermondii Infection of the Knee in a Patient without Predisposing Factors	Lee GW, Kim TH, Son JH	2012-02	Case Rep Med	-	-	1 <sup>st</sup> author

2	The Efficacy of Scalene Injection in Thoracic Outlet Syndrome	Lee GW, Kwon YH, Jeong JH, Kim JW	2011-07	J Korean Neurosurg Soc	SCIE	2.249	1 <sup>st</sup> author
1	A Reconstruction With Extracorporeal Irradiated Autograft in Osteosarcoma Around the Knee	Kim JD, <u>Lee GW</u> , Chung SH	2011-03	J Surg Oncol	SCI	2.885	Co-author