

Curriculum vitae

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Education

School of Medicine, Seoul National University Doctor of Philosophy in Medicine (2019-03~2021-02)	Seoul, Korea.
School of Medicine, Seoul National University Master degree course (2013-09~2019-02)	Seoul, Korea.
Orthopedic department, Seoul National University Hospital Surgical fellowship (2017-05~2018-04)	Seoul, Korea.
Aerospace Medical Center, Republic of Korea Air Force Aviation medical course (2014-06) Flight surgeon (2014-06~2017-04)	Cheongju, Korea.
The Spine Clinic of Los Angeles Clinical Research Fellowship in Minimally Invasive Spinal Surgery (2013-09-01~2013-09-30)	LA, USA
Orthopedic department, Seoul National University Hospital Surgical residency (2010-03~2014-02) Specialist in Orthopedics (2014-03)	Seoul, Korea.
School of Medicine, Seoul National University Hospital Internship (2009-03~2010-02)	Seoul, Korea.
School of Medicine, Seoul National University Medical school (2002-03~2008-02)	Seoul, Korea.

Certifications & Memberships

Asian Pacific Spine Society (APSS) Lifetime membership (2021-02~)	Asia-Pacific
Asian Spine Journal Section editor (Deformity, Tumor) (2020-03~)	Korea
North American Spine Society (NASS) Full membership (2020-03~)	USA
The Korean Paediatric Orthopaedic Society Full membership (2020-02~)	Korea
AO Spine Full membership (2019-03~)	Switzerland

The Korean Spinal Deformity Society Full membership & Science committee (2019-03~)	Korea
The Korean Society of Spine Tumor Full membership & Science committee (2019-03~)	Korea
The Korean Society of Spine Surgery Full membership (2018-06~)	Korea
Educational Commission for Foreign Medical Graduates ECFMG certification (2014-10)	USA
Aerospace Medical Center, Republic of Korea Air Force Flight surgeon certification (2014-06)	Korea
The Korean Orthopaedic Association Specialist in Orthopedics (2014-03)	Korea
Korean Medical Association Doctor of Medicine(M.D.) (2008-03)	Korea

Awards

1. “Best Resident of the Year Award, 2012”. Department of orthopedic surgery, Seoul National University Hospital
2. “Best Resident of the Year Award, 2013”. Department of orthopedic surgery, Seoul National University Hospital
3. “Best free paper presentation, 2017”. Autumn Congress of the Korean Society of Spine Tumor, Seoul, Korea. (The paper, ““Availability of systemic treatment option: A valuable Predictor of Survival and Functional Outcome in Spinal Metastasis.”)
4. “Best free paper presentation, 2019”. Spring Congress of the Korean Society of Spine Tumor, Seoul, Korea. (The paper “Posterior decompression and fixation with or without corpectomy for metastasis in the thoracic spine: A retrospective comparative study.”)
5. Nominated in the “Best Paper Award Session, 2019”. 46th International Society for the Study of the Lumbar Spine, Kyoto, Japan. (The paper “Remaining systemic treatment options: a valuable predictor of survival and functional outcomes after surgical treatment for spinal metastasis.”)
6. “Best Clinical Paper, 2020”. Spring Congress of the Korean Society of Spine Tumor, Seoul, Korea. (The paper “Clinical Significance of Resection Type and Margin following Surgical Treatment for Primary Sarcoma of the Spine: A Multi-Center Retrospective Study.”)

7. “Young Investigator Award, 2021”. Fall Congress of Korean Society of Spine Surgery, Pusan, Korea.
8. “Best Editorial Member for the Asian Spine Journal, 2021”. Fall Congress of Korean Society of Spine Surgery, Pusan, Korea.

Publications

1. Yoo WJ, Choi IH, Moon HJ, **Chang S**. “Valgus femoral osteotomy for non-containable Perthes’ hips: Prognostic factors of remodeling.” *J Pediatr Orthop*. 2013 Sep;33(6):650-5
2. **Chang SY**, Yoo WJ, Park MS, Chung CY, Choi IH, Cho TJ. “Slipped capital femoral epiphysis caused by neurogenic heterotopic ossification.” *J Pediatr Orthop B*. 2013 Nov;22(6):553-6
3. Jeong JH, Choi B, **Chang SY**, Kim EK, Kang E, Heo CY, Myung Y. The Effect of Immediate Breast Reconstruction on Thoracic Spine Alignment After Unilateral Mastectomy. *Clin Breast Cancer*. 2018 Jun;18(3):214-219
4. **Chang SY**, Ha JH, Seo SG, Chang BS, Lee CK, Kim H. Prognosis of Single Spinal Metastatic Tumors: Predictive Value of the Spinal Instability Neoplastic Score System for Spinal Adverse Events. *Asian Spine J*. 2018;12(5):919-926.
5. **Chang SY**, Nam Y, Lee J, Chang BS, Lee CK, Kim H. Impact of preoperative diagnosis on clinical outcomes of oblique lateral interbody fusion for lumbar degenerative disease in a single-institution prospective cohort. *Orthop Surg*. 2019 Feb;11(1):66-74.
6. Wi SM, Lee HJ, **Chang SY**, Kwon OH, Lee CK, Chang BS, Kim H. Restoration of the Spinous Process Following Muscle-Preserving Posterior Lumbar Decompression via Sagittal Splitting of the Spinous Process. *Clin Orthop Surg*. 2019 Mar;11(1):95-102.
7. **Chang SY**, Chang BS, Lee CK, Kim H. Remaining systemic treatment options: a valuable predictor of survival and functional outcomes after surgical treatment for spinal metastasis. *Orthop Surgery*. 2019 Aug;11(4):552-559.
8. Park SJ, Lee CS, Chang BS, Kim YH, Kim HM, Kim SI, **Chang SY**. Korean Spine Tumor Study Group. Rod fracture and related factors after total en bloc spondylectomy. *Spine J*. 2019 Oct;19(10):1613-1619.
9. **Chang SY**, Nam Y, Lee JI, Lee NK, Kim H, Chang BS, Lee CK. Predicting the Natural Course of Hemivertebra in Early Childhood: Clinical Significance of Anteroposterior Discordance based on Three-Dimensional Analysis. *Spine (Phila Pa 1976)*. 2019 Dec 1;44(23):E1362-E1368.
10. **Chang SY**, Kim H, Park SJ, Chang BS, Lee CS, Lee CK. Clinical Significance of Resection Type and Margin following Surgical Treatment for Primary Sarcoma of the Spine: A Multi-

Center Retrospective Study. *J Korean Soc Spine Surg.* 2019 Dec;26(4):117-125.

11. Wi SM, Lee HJ, Kang T, **Chang SY**, Kim SM, Chang BS, Lee CK, Kim H. Clinical Significance of Improved Intraoperative Neurophysiological Monitoring Signal during Spine Surgery: A Retrospective Study of a Single-Institution Prospective Cohort. *Asian Spine J.* 2020 Jan;14(1):79-87.
12. Kim J, Kim Y, Kim H, Chang BS, Lee CK, **Chang SY**. Kaposiform hemangioendothelioma in adolescent-onset scoliosis: case report and review of literature. *Case Reports in Orthopedics.* 2020 Feb 7;2020:1839053.
13. **Chang SY**, Nam Y, Lee J, Chang BS, Lee CK, Kim H. Clinical significance of the radiologic improvement following single-level oblique lateral interbody fusion with percutaneous pedicle screw fixation: a prospective case series study. *Orthopedics.* 2020 Jul 1;43(4):e283-e290.
14. **Chang SY**, Mok SJ, Park SC, Kim H, Chang BS. Treatment Strategy for Metastatic Spine Tumors: A Narrative Review. *Asian Spine J.* 2020 Aug;14(4):513-525
15. Kim Y, Kim J, **Chang SY**, Kim H, Chang BS. Treatment Strategy for Impending Instability in Spinal Metastases. *Clin Orthop Surg.* 2020 Sep;12(3):337-342
16. **Chang SY**, Son J, Park SM, Chang BS, Lee CK, Kim H. Predictive Value of Comprehensive Geriatric Assessment on Early Postoperative Complications Following Lumbar Spinal Stenosis Surgery: A Prospective Cohort Study. *Spine (Phila Pa 1976).* 2020 Nov; 45(21):1498-1505
17. **Chang SY**, Kim Y, Kim J, Kim H, Kim HJ, Yeom JS, Lee CK, Chang BS. Sagittal Alignment in Patients with Thoracic Myelopathy Caused by the Ossification of the Ligamentum Flavum: A Retrospective Matched Case-Control Study. *Spine (Phila Pa 1976)* 2021 Mar;46(5):300-306.
18. Park SC, **Chang SY**, Mok S, Kim H, Chang BS, Lee CK. Risk Factors for Postoperative Ileus after Oblique Lateral Interbody Fusion: A Multivariate Analysis. *Spine J.* 2021 Mar;21(3):438-445
19. Kim H, **Chang SY**, Son J, Mok S, Park SC, Chang BS. The Effect of Adding Biological Factors to the Decision-Making Process for Spinal Metastasis of Non-Small Cell Lung Cancer. *J Clin Med.* 2021 Mar;10(5):1119.
20. **Chang SY**, Son J, Zheng GB, Chang BS, Lee CK, Kim H. Clinical Outcomes of Selective Fusion for the Thoracolumbar-Lumbar Curve in Patients with Lenke Type 6C Adolescent Idiopathic Scoliosis: A Preliminary Study. *J Pediatr Orthop B.* 2021 May 1;30(3):211-217.
21. **Chang SY**, Kim H, Chang BS, Lee CK. Treatment for Gorham-Stout Disease Involving the Spinal Column: A Narrative Review. *J Korean Soc Spine Surg.* 2021 Jun;28(2):16-23.
22. **Chang SY**, Chae IS, Mok S, Park SC, Chang BS, Kim H. Can Indirect Decompression Reduce Adjacent Segment Degeneration and the Associated Reoperation Rate After

Lumbar Interbody Fusion? A Systemic Review and Meta-analysis. *World Neurosurg.* 2021 Sep;153:e435-e445

23. Park SC, **Chang SY**, Gimm G, Mok S, Kim H, Chang BS, Lee CK. Involvement of L5-S1 level as an independent risk factor for adverse outcomes after surgical treatment of lumbar pyogenic spondylitis: A multivariate analysis. *J Orthop Surg (Hong Kong)*. 2021 May-Aug;29(2):23094990211035570.
24. **Chang SY**, Kim J, Kim Y, Im BE, Chang BS, Lee CK, Kim H. The Fate of Lumbar Facet Cyst After Indirect Decompression Using Oblique Lateral Interbody Fusion in Degenerative Spondylolisthesis. *Orthopedics*. 2021 Sep-Oct;44(5):306-312.
25. Wi SM, Park SM, **Chang SY**, Lee J, Kim SM, Chang BS, Kim H. Surgical Causes of Significant Intraoperative Neuromonitoring Signal Changes in Three-Column Spinal Surgery. *Asian Spine J.* 2021 Dec;15(6):831-839.
26. Kim H, Chang BS, **Chang SY**. Pearls and Pitfalls of Oblique Lateral Interbody Fusion: A Comprehensive Narrative Review. *Neurospine*. 2022 Mar;19(1):163-176.
27. Kang DH, Chang BS, Kim H, Hong SH, **Chang SY**. Separation surgery followed by stereotactic ablative radiotherapy for metastatic epidural spinal cord compression: A systematic review and meta-analysis for local progression rate. *J Bone Oncol.* 2022 Aug 3;36:100450.
28. **Chang SY**, Lee WS, Mok S, Park SC, Kim H, Chang BS. Anterior Thigh Pain Following Minimally Invasive Oblique Lateral Interbody Fusion: Multivariate Analysis from a Prospective Case Series. *Clin Orthop Surg.* 2022 Sep;14(3):401-409.
29. Mok S, **Chang SY**, Park SC, Chae IS, Kim H, Chang BS, Cho TJ, Ko JM. Radiographic Factors for Progression of Thoracolumbar Kyphosis in Achondroplasia Patients after Walking Age: A Generalized Estimating Equation Analysis. *Clin Orthop Surg.* 2022 Sep;14(3):410-416.
30. Hong SH, Chang BS, Kim H, Kang DH, **Chang SY**. An Updated Review on the Treatment Strategy for Spinal Metastasis from the Spine Surgeon's Perspective. *Asian Spine J.* 2022 Oct;16(5):799-811.
31. Son HJ, Chang BS, **Chang SY**, Park HS, Kim H. Anterior Cervical Discectomy and Fusion Using Escherichia coli-Derived Recombinant Human Bone Morphogenetic Protein-2: A Pilot Study. *Clin Orthop Surg.* 2022 Dec;14(4):557-563.