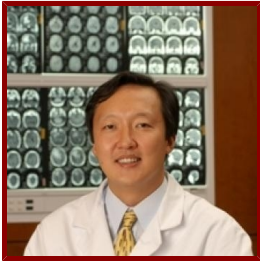


# Stanford

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## Jon Park, MD, FRCSC

Saunders Family Professor

Neurosurgery

### CLINICAL OFFICES

- **Stanford Neuroscience Health Center**

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### ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

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**Tel** (650) 736-8590

### Bio

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#### BIO

Jon Park, M.D., F.R.C.S.C is the Saunders Family Endowed Professor in Neurosurgery, the Chief of Spine Neurosurgery, Director of Spine Research Laboratory, and Director of Spine Fellowship Program at Stanford University Medical Center. His clinical practice specializes in surgically and non-surgically managing the spinal disorders that affect people's lives, such as debilitating pain and weakness that comes from spine disc problems, spine tumors, spine scoliosis, and spine trauma.

Dr. Park is an internationally recognized leader in the field of spine surgery. He is an active member of American Association of Neurosurgery, North American Spine Surgery, Scoliosis Research Society, and Cervical Spine Research Society. His research focuses on spinal disc regeneration in an effort to target the underlying causes using stem cells and mesenchymal stem cells for inter-vertebral disc regeneration. His research also pioneers in spinal bio-mechanics to apply mechanical principles to ensure spinal stability.

#### CLINICAL FOCUS

- Minimally Invasive Spine surgery
- Spine Trauma
- Cyberknife Spine Tumor
- Spine Tumor Surgery
- Spine Deformity Surgery
- Neurological Surgery

#### ACADEMIC APPOINTMENTS

- Professor - Med Center Line, Neurosurgery
- Member, Bio-X

#### ADMINISTRATIVE APPOINTMENTS

- Chief, Spine Neurosurgery, Stanford UMC., (2006- present)

- Professor, Stanford University School of Medicine, (2017- present)
- Associate Professor, Stanford Univ. School of Medicine, Department of Neurosurgery, (2010-2017)
- Director, Comprehensive Spine Neurosurgery Program. Spine Fellowship and Spine Research Program, Stanford UMC., (2006- present)
- Assistant Professor, Stanford Univ. School of Medicine, Department of Neurosurgery, (2003-2009)
- Assistant Professor, University of Washington School of Medicine, Neurological Surgery, (2000-2003)
- Clinical Instructor, UCLA School of Medicine, Neurological Surgery, (1999-2000)

## HONORS AND AWARDS

- Stanford University School of Medicine Academic Grant Recipient, Stanford (2003-2004)
- Saunders Family Endow Chair, Stanford University (2017)
- President of Fellow's Society, Montreal Neurological Institute, Montreal Neurological Institute (1998-1999)
- Kathleen Whipple Scholarship, University of Rochester School of Medicine (1990-1993)
- Robert I. Weed Hematology Research Fellowship, Johns Hopkins University (1991)
- HANA Graduate Merit Scholarship, Johns Hopkins University (1990)
- Health Commendation Award, City of Baltimore (1986)

## PROFESSIONAL EDUCATION

- Fellowship: UCLA David Geffen School Of Medicine Registrar CA
- Residency: University of Washington Medical Center WA
- Residency: Montreal Neurological Institute QC Canada
- Board Certification: Neurological Surgery, American Board of Neurological Surgery (2005)
- Spine Fellowship, UCLA Medical Center , Neurological Surgery (2000)
- Chief Resident, McGill University, Neurosurgery , Neurological Surgery (1999)
- Fellowship, Lahey Hitchcock Medical Center , Interventional Neuroradiology (1997)
- Intern & Resident, University of Washington , General Surgery (1995)
- B.A., Johns Hopkins University , Biophysics (1989)

## LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Non-fusion dynamic spinal stabilization, artificial disc technologies, and regenerative spinal technologies.

## Teaching

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### STANFORD ADVISEES

#### Postdoctoral Faculty Sponsor

Zhonglin Lyu

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)
- Neurosciences (Phd Program)

## Publications

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### PUBLICATIONS

- **Patient Satisfaction and Press Ganey Scores for Spine Versus Nonspine Neurosurgery Clinics.** *Clinical spine surgery*  
Chen, Y., Johnson, E., Montalvo, C., Stratford, S., Veeravagu, A., Tharin, S., Desai, A., Ratliff, J., Shuer, L., Park, J.  
2019
- **Objective measures of functional impairment for degenerative diseases of the lumbar spine: a systematic review of the literature.** *The spine journal : official journal of the North American Spine Society*  
Stienen, M. N., Ho, A. L., Staartjes, V. E., Maldaner, N., Veeravagu, A., Desai, A., Gautschi, O. P., Bellut, D., Regli, L., Ratliff, J. K., Park, J.  
2019
- **Characterization of Brain Dysfunction Induced by Bacterial Lipopeptides That Alter Neuronal Activity and Network in Rodent Brains** *JOURNAL OF NEUROSCIENCE*  
Kim, K., Zamaleeva, A. I., Lee, Y., Ahmed, M., Kim, E., Lee, H., Pothineni, V., Tao, J., Rhee, S., Jayakumar, M., Inayathullah, M., Sivanesan, S., Red-Horse, et al  
2018; 38 (50): 10672–91
- **Radiographic Rate and Clinical Impact of Pseudarthrosis in Spine Radiosurgery for Metastatic Spinal Disease.** *Cureus*  
Zhang, M., Appelboom, G., Ratliff, J. K., Soltys, S. G., Adler, J. R., Park, J., Chang, S. D.  
2018; 10 (11): e3631
- **Posterior open reduction and internal fixation of C1 fractures: the C-clamp technique.** *Acta neurochirurgica*  
Gelinias-Phaneuf, N., Stienen, M. N., Park, J.  
2018
- **Characterization of brain dysfunction induced by bacterial lipopeptides that alter neuronal activity and network in rodent brains.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*  
Kim, K., Zamaleeva, A. I., Woo Lee, Y., Ahmed, M. R., Kim, E., Lee, H., Raveendra Pothineni, V., Tao, J., Rhee, S., Jayakumar, M., Inayathullah, M., Sivanesan, S., Red-Horse, et al  
2018
- **Assessment of Biomechanical Changes After Sacroiliac Joint Fusion by Application of the 3-Dimensional Motion Analysis Technique** *WORLD NEUROSURGERY*  
Jeong, J., Leasure, J. M., Park, J.  
2018; 117: E538–E543
- **Predicting complication risk in spine surgery: a prospective analysis of a novel risk assessment tool.** *Journal of neurosurgery. Spine*  
Veeravagu, A., Li, A., Swinney, C., Tian, L., Moraff, A., Azad, T. D., Cheng, I., Alamin, T., Hu, S. S., Anderson, R. L., Shuer, L., Desai, A., Park, et al  
2017: 1-11
- **Building an electronic health record integrated quality of life outcomes registry for spine surgery** *JOURNAL OF NEUROSURGERY-SPINE*  
Azad, T. D., Kalani, M., Wolf, T., Kearney, A., Lee, Y., Flannery, L., Chen, D., Berroya, R., Eisenberg, M., Park, J., Shuer, L., Kerr, A., Ratliff, et al  
2016; 24 (1): 176-185
- **3D patterned stem cell differentiation using thermo-responsive methylcellulose hydrogel molds** *Scientific Reports*  
Lee, W., Park, J.  
2016; 6: 29408
- **3D patterned stem cell differentiation using thermo-responsive methylcellulose hydrogel molds.** *Scientific reports*  
Lee, W., Park, J.  
2016; 6: 29408
- **Clavicle pain and reduction of incisional and fascial pain after posterior cervical surgery.** *Journal of neurosurgery. Spine*  
Duetzmann, S., Cole, T., Senft, C., Seifert, V., Ratliff, J. K., Park, J.  
2015; 23 (6): 684-689
- **Sacral Peak Pressure in Healthy Volunteers and Patients With Spinal Cord Injury: With and Without Liquid-Based Pad.** *Nursing research*  
Duetzmann, S., Forsey, L. M., Senft, C., Seifert, V., Ratliff, J., Park, J.  
2015; 64 (4): 300-305

- **Sacral Peak Pressure in Healthy Volunteers and Patients With Spinal Cord Injury With and Without Liquid-Based Pad** *NURSING RESEARCH*  
Duetzmann, S., Forsey, L. M., Senft, C., Seifert, V., Ratliff, J., Park, J.  
2015; 64 (4): 300-305
- **Biomechanical Analysis of a Novel Pedicle Screw Anchor Designed for the Osteoporotic Population** *WORLD NEUROSURGERY*  
Gates, T. A., Moldavsky, M., Salloum, K., Dunbar, G. L., Park, J., Bucklen, B.  
2015; 83 (6): 965-969
- **Biomechanical Comparisons of Pull Out Strengths After Pedicle Screw Augmentation with Hydroxyapatite, Calcium Phosphate, or Polymethylmethacrylate in the Cadaveric Spine** *WORLD NEUROSURGERY*  
Yi, S., Rim, D., Park, S. W., Murovic, J. A., Lim, J., Park, J.  
2015; 83 (6): 976-981
- **Spinal Sealant System Provides Better Intraoperative Watertight Closure Than Standard of Care During Spinal Surgery A Prospective, Multicenter, Randomized Controlled Study** *SPINE*  
Wright, N. M., Park, J., Tew, J. M., Kim, K. D., Shaffrey, M. E., Cheng, J., Choudhri, H., Krishnaney, A. A., Graham, R. S., Mendel, E., Simmons, N.  
2015; 40 (8): 505-513
- **Biomechanical Comparison of Cervical Fixation via Transarticular Facet Screws without Rods versus Lateral Mass Screws with Rods** *WORLD NEUROSURGERY*  
Yi, S., Rim, D., Nam, K., Keem, S., Murovic, J. A., Lim, J., Park, J.  
2015; 83 (4): 548-552
- **Does a Medial Retraction Blade Transmit Direct Pressure to Pharyngeal/Esophageal Wall During Anterior Cervical Surgery?** *SPINE*  
Han, I. H., Lee, S. H., Lee, J. M., Kim, H. S., Nam, K. H., Duetzmann, S., Park, J., Choi, B. K.  
2015; 40 (1): E18-E22
- **Biomechanical Analysis of Disc Pressure and Facet Contact Force After Simulated Two-Level Cervical Surgeries (Fusion and Arthroplasty) and Hybrid Surgery** *WORLD NEUROSURGERY*  
Park, J., Shin, J. J., Lim, J.  
2014; 82 (6)
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Lee, W., Frank, C. W., Park, J.  
2014; 26 (29): 4936-4940
- **Directed axonal outgrowth using a propagating gradient of IGF-1** *ADVANCED MATERIALS*  
Lee, W., Frank, C. W., Park, J.  
2014; 26: 4936-4940
- **Minimally Invasive Surgery for Lumbar Decompression in Obese Patients.** *J Spine*  
Smith, Z. A.  
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- **Primary surgical management by reduction and fixation of unstable hangman's fractures with discoligamentous instability or combined fractures: clinical article.** *Journal of neurosurgery. Spine*  
Shin, J. J., Kim, S. H., Cho, Y. E., Cheshier, S. H., Park, J.  
2013; 19 (5): 569-575
- **Primary surgical management by reduction and fixation of unstable hangman's fractures with discoligamentous instability or combined fractures** *JOURNAL OF NEUROSURGERY-SPINE*  
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- **Radiofrequency Ablation of Spine An Experimental Study in an Ex Vivo Bovine and In Vivo Swine Model for Feasibility in Spine Tumor** *SPINE*  
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- **Modified Polyaxial S1 Screw Placement in Patients with Difficult Sacral Anatomy - Technical Report** *Cureus 5(1): e83. doi:10.7759/cureus.83*  
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- **The Design of a Heterocellular 3D Architecture and its Application to Monitoring the Behavior of Cancer Cells in Response to the Spatial Distribution of Endothelial Cells** *ADVANCED MATERIALS*  
Lee, W., Park, J.  
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- **Morbidity and Mortality of C2 Fractures in the Elderly: Surgery and Conservative Treatment** *NEUROSURGERY*  
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- **Biomechanical analysis of Goel technique for C1-2 fusion** *JOURNAL OF NEUROSURGERY-SPINE*  
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- **Biomechanical Evaluations of Various C1-C2 Posterior Fixation Techniques** *SPINE*  
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- **Open Posterior Reduction and Stabilization of a C1 Burst Fracture Using Mono-axial Screws** *SPINE*  
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- **Predictors of Survival After Surgical Treatment of Spinal Metastasis** *NEUROSURGERY*  
Arrigo, R. T., Kalanithi, P., Cheng, I., Alamin, T., Carragee, E. J., Mindea, S. A., Park, J., Boakye, M.  
2011; 68 (3): 674-681
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2010; 13 (5): 576-580
- **Biomechanical Analysis of the Range of Motion After Placement of a Two-Level Cervical ProDisc-C Versus Hybrid Construct** *SPINE*  
Cho, B. Y., Lim, J., Sim, H. B., Park, J.  
2010; 35 (19): 1769-1776
- **Biomechanical comparison of single-level posterior versus transforaminal lumbar interbody fusions with bilateral pedicle screw fixation: segmental stability and the effects on adjacent motion segments Laboratory investigation** *JOURNAL OF NEUROSURGERY-SPINE*  
Sim, H. B., Murovic, J. A., Cho, B. Y., Lim, T. J., Park, J.  
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- **A biomechanical study of the instrumented and adjacent lumbar levels after In-Space interspinous spacer insertion Laboratory investigation** *JOURNAL OF NEUROSURGERY-SPINE*  
Park, S. W., Lim, T. J., Park, J.  
2010; 12 (5): 560-569
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Cho, S. C., Katzberg, H. D., Rama, A., Kim, B., Roh, H., Park, J., Katz, J., So, Y. T.  
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- **Surgical strategies for managing foraminal nerve sheath tumors: the emerging role of CyberKnife ablation** *EUROPEAN SPINE JOURNAL*  
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- **Imaging Correlation of the Degree of Degenerative L4-L5 Spondylolisthesis with the Corresponding Amount of the Facet Fluid.** *Journal of Neurosurgery: Spine*  
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Yoo C, Ryu C, Park J  
2007; 7 (Supplement): 120S-121S
- **Posterior Dynamic Stabilization Systems** *Korean Journal of Spine*  
Park SW, Park J  
2007; 4 (4): 171-187
- **The Effect of a Posterior Dynamic Stabilization Device on Extension Using Finite Element Analysis** *Korean Journal of Spine*  
Min SW, Park J  
2007; 4 (Suppl. 1): 58-59
- **Expandable Cage for Cervical Spine Reconstruction** *J Korean Neurosurgery*  
Ho Yeol Zhang, Thongtrangan I, Le H, Park J, Kim, DH  
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- **Biomechanical comparison: stability of lateral-approach anterior lumbar interbody fusion and lateral fixation compared with anterior-approach anterior lumbar interbody fusion and posterior fixation in the lower lumbar spine** *JOURNAL OF NEUROSURGERY-SPINE*  
Kim, S. M., Lim, T. J., Paterno, J., Park, J., Kim, D. H.  
2005; 2 (1): 62-68
- **A biomechanical comparison of three surgical approaches in bilateral subaxial cervical facet dislocation** *JOURNAL OF NEUROSURGERY-SPINE*  
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2004; 1 (1): 108-115
- **Cauda equina syndrome in patients with low lumbar fractures.** *Neurosurgical focus*  
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- **Minimally invasive spinal surgery: a historical perspective.** *Neurosurgical focus*  
Thongtrangan, I., Le, H., Park, J., Kim, D. H.

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- **Surgical treatment of tumors involving the cervicothoracic junction.** *Neurosurgical focus*

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- **Vertebral body replacement with an expandable cage for reconstruction after spinal tumor resection.** *Neurosurgical focus*

Thongtrangan, I., Balabhadra, R. S., Le, H., Park, J., Kim, D. H.

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- **Surgical Treatment of Tumors Involving Cervicothoracic Junction** *Neurosurgery Focus*

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- **Thoracolumbar Vertebral Reconstruction for Metastatic Spine Tumors** *Neurosurgery*

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