

with mechanical complications had lower BMD than the control group. GAP score could not be applicable to predict postoperative mechanical complications in this DLS group.

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### **A047: What segmental and global radiographic parameter influence decision making in treatment of lumbar degenerative spondylolisthesis?**

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**Introduction:** Surgical treatment of lumbar spondylolisthesis remains highly varied (from direct decompression, indirect decompressions, to various fusion methods) due to the high heterogeneity of the clinical and radiographical presentations. The underlying concern amongst surgeons is to minimize risks of iatrogenic spinal deformities. In recent years, there has been increasing awareness and adoption of applying our understanding of local segmental and spinopelvic alignment in treating degenerative lumbar conditions. The aim of the current study was to assess which spinopelvic radiological parameters are deemed important by surgeons and whether demographics and practice pattern affects the use of those parameters. **Material and Methods:** Three lumbar spondylolisthesis cases were electronically presented to AOSpine international members to study surgeons' preferences for treatment considerations. Data collected includes demographics, training background, years of experience, and treatment decisions based on various radiographical findings, including segmental measures and global and spinopelvic parameters. Comparative analysis was performed using the Pearson Chi-Squared Test. **Results:** A total of 479 responses were collected with a response rate of 50.8%. The most critical parameter that alters treatment decisions among the

surveyed surgeons was translation on dynamic X-rays, followed by SVA value and PI-LL mismatch. The least important factor for decision-making was radiographic differences between static MRI/CT and X-rays. 71.4% of the surgeons opined that global SVA measurements affect their decision of treatments, and most of them feel that SVA > 5 cm or SVA > 10 cm are thresholds that influence their decisions. Surgeons who are fellowship trained ( $p = 0.01$ ) or in academics/university practices ( $p = 0.05$ ) are likelier to use SVA value in treatment decisions. 69.7% of surgeons reported that PI-LL mismatch affects their treatment decisions. Those in academic/university practice ( $p = 0.01$ ) and who had fellowship training (0.008) were most likely to consider PI-LL mismatch in their decision-making. There was no difference between orthopedics and neurosurgery in applying global SVA ( $p = 0.14$ ) and PI-LL mismatch ( $p = 0.06$ ) in their treatment decisions for lumbar spondylolisthesis. **Conclusion:** Treatment of lumbar spondylolisthesis in our study was influenced by translation on dynamic X-rays, global SVA alignment, and PI-LL mismatch. Fellowship-trained surgeons and in academic/university-affiliated practices are likelier to apply SVA measurement and PI-LL mismatch in their treatment decision for lumbar spondylolisthesis.

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### **A048: Comparison of clinical outcome and fusion rate between ALIF and endoscopic/percutaneous TLIF with a large-footprint interbody cage**

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**Introduction:** Anterior lumbar interbody fusion (ALIF) is considered a gold-standard technique for lumbar fusion. Endoscopic/percutaneous transforaminal lumbar interbody fusion (TLIF) is a relatively novel technique that uses Kambin's triangle to place an interbody device into the disk. Recently, endo-TLIF allows delivering large-footprint interbody cages comparable in size to anterior and/or lateral interbody cages. Aim of this study is to evaluate and compare the the clinical outcome and fusion rate, as well as post-operative complications of ALIF and trans-Kambin TLIF using a large-footprint interbody cage. **Material and Methods:** This is a prospective, non-randomized case-control study. Inclusion criteria comprised degenerative disk disease, foraminal stenosis and spondylolisthesis up to grade II. Exclusion criteria comprised infection, tumor and vertebral body fracture. For the "ALIF group", anterior lumbar interbody fusion surgery was performed following the standard left retroperitoneal approach. For the "endo-group", endoscopic TLIF surgery was performed using an extensive manual and/or endoscopic foraminoplasty. After percutaneous disk preparation,