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# **M**inimally invasive fusion technologies in the surgical treatment of the patients with degenerative stenoses of the lumbar spinal canal: long-term results

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The authors  
declare no conflicts  
of interests in  
preparing this  
article

# Introduction

Neurol Neurochir Pol. 2018 Jul 2. pii: S0028-3843(17)30382-1. doi: 10.1016/j.pjnns.2018.06.004. [Epub ahead of print]

**Minimally invasive decompression in patients with degenerative spondylolisthesis associated with lumbar spinal stenosis. Report of a surgical series and review of the literature.**

Montano N<sup>1</sup>, Stifano V<sup>2</sup>, Papacci F<sup>2</sup>, Mazzucchi E<sup>2</sup>, Fernandez E<sup>2</sup>.

J Craniovertebr Junction Spine. 2018 Apr-Jun;9(2):107-115. doi: 10.4103/jcvjs.JCVJS\_45\_18.

**Navigated minimally invasive unilateral laminotomy with crossover for intraoperative prediction of outcome in degenerative lumbar stenosis.**

Cardali SM<sup>1</sup>, Cacciola F<sup>1</sup>, Raiffa G<sup>1,2</sup>, Conti A<sup>1</sup>, Caffo M<sup>1</sup>, Germanò A<sup>1</sup>.

Rheum Dis Clin North Am. 2018 Aug;44(3):501-512. doi: 10.1016/j.rdc.2018.03.008. Epub 2018 Jun 12.

**Lumbar Spinal Stenosis in Older Adults.**

Lafian AM<sup>1</sup>, Torralba KD<sup>2</sup>.

- Lumbar spinal stenosis (LSS) is a frequent cause of low back pain among adults, caused by a narrowing impinging on the spinal cord or nerve roots.
- Several conditions cause LSS, including disc herniation, spondylolisthesis, tumor, fractures, and other **degenerative changes**.

# Introduction

- Different surgical techniques have been described for treatment of degenerative LSS. Only postoperative measures have been identified as predictors of efficacy of decompression.

PLoS One. 2018 Jul 6;13(7):e0199623. doi: 10.1371/journal.pone.0199623. eCollection 2018.

## **Interspinous process devices for treatment of degenerative lumbar spine stenosis: A systematic review and meta-analysis.**

Poetscher AW<sup>1</sup>, Gentil AF<sup>1</sup>, Ferretti M<sup>1</sup>, Lenza M<sup>1</sup>.

Cochrane Database Syst Rev. 2016 Nov 1;11:CD012421.

## **Surgical options for lumbar spinal stenosis.**

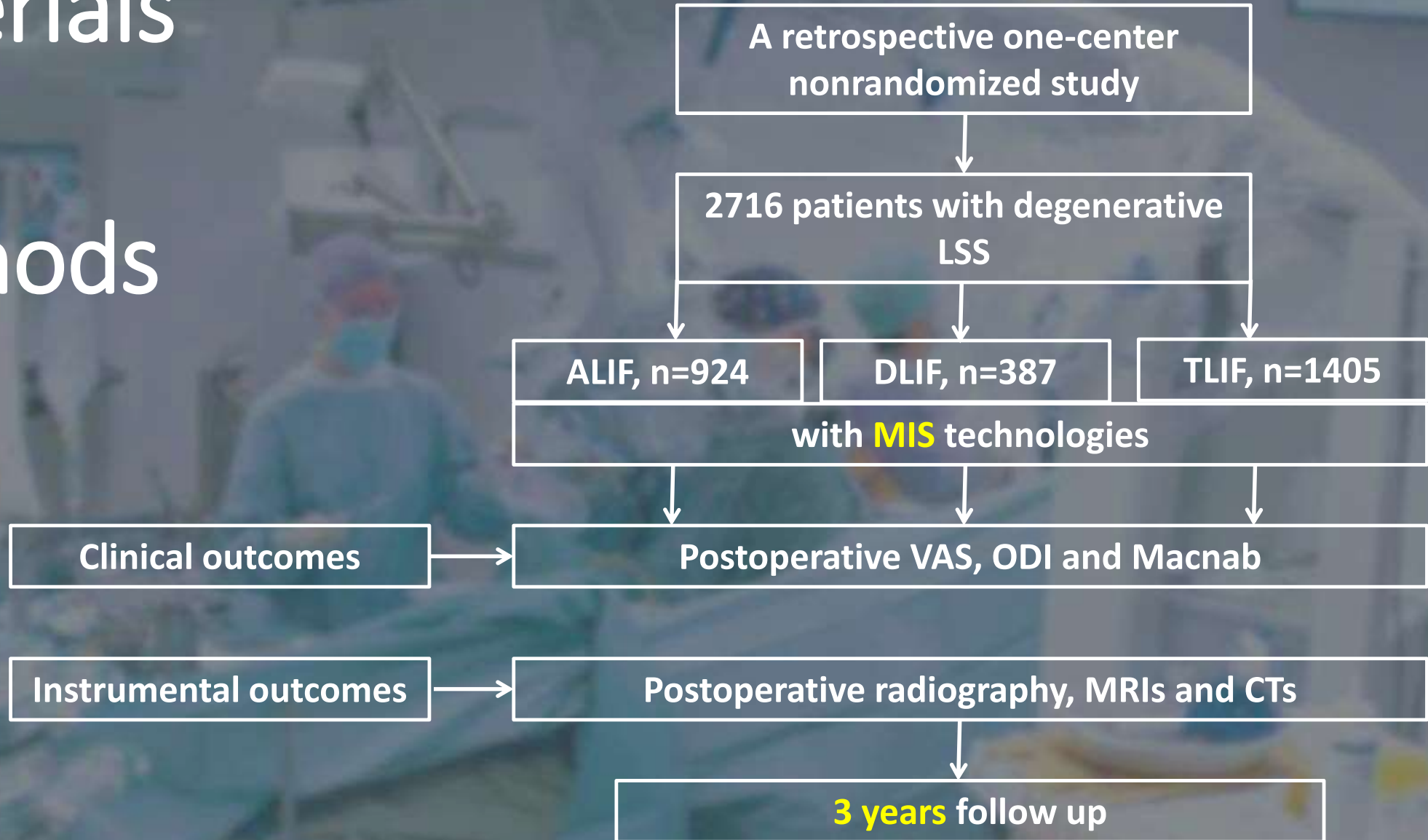
Machado GC<sup>1</sup>, Ferreira PH, Yoo RI, Harris IA, Pinheiro MB, Koes BW, van Tulder MW, Rzewuska M, Maher CG, Ferreira ML.

# The purpose

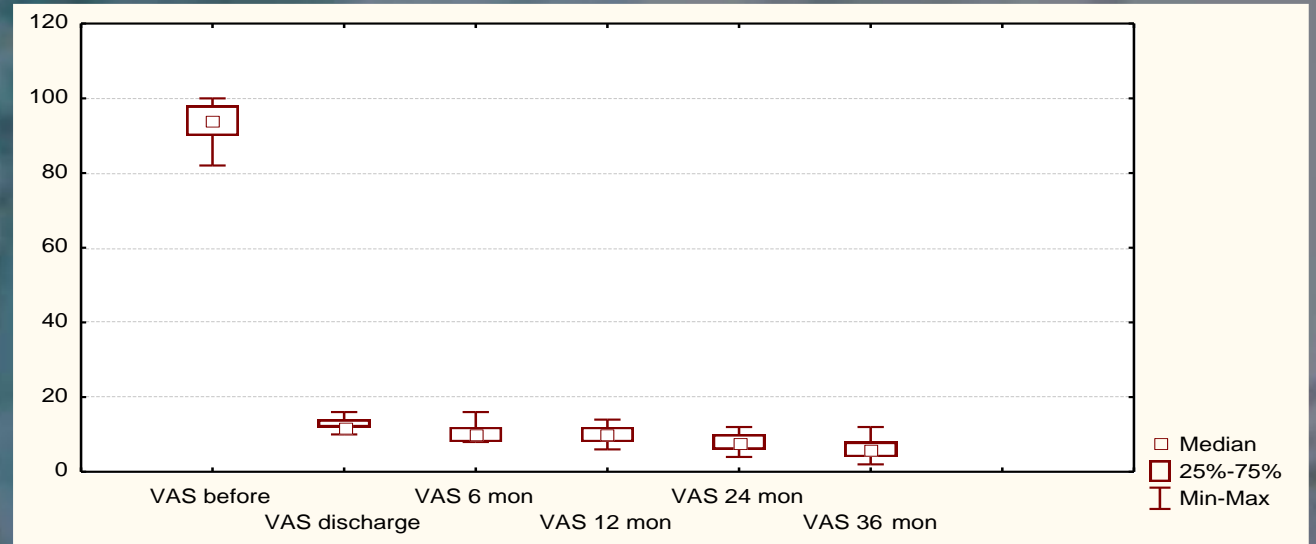
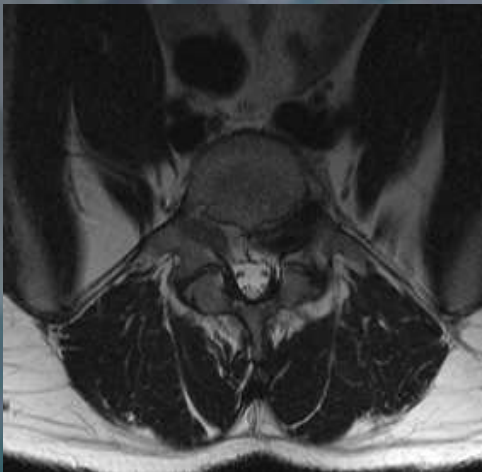
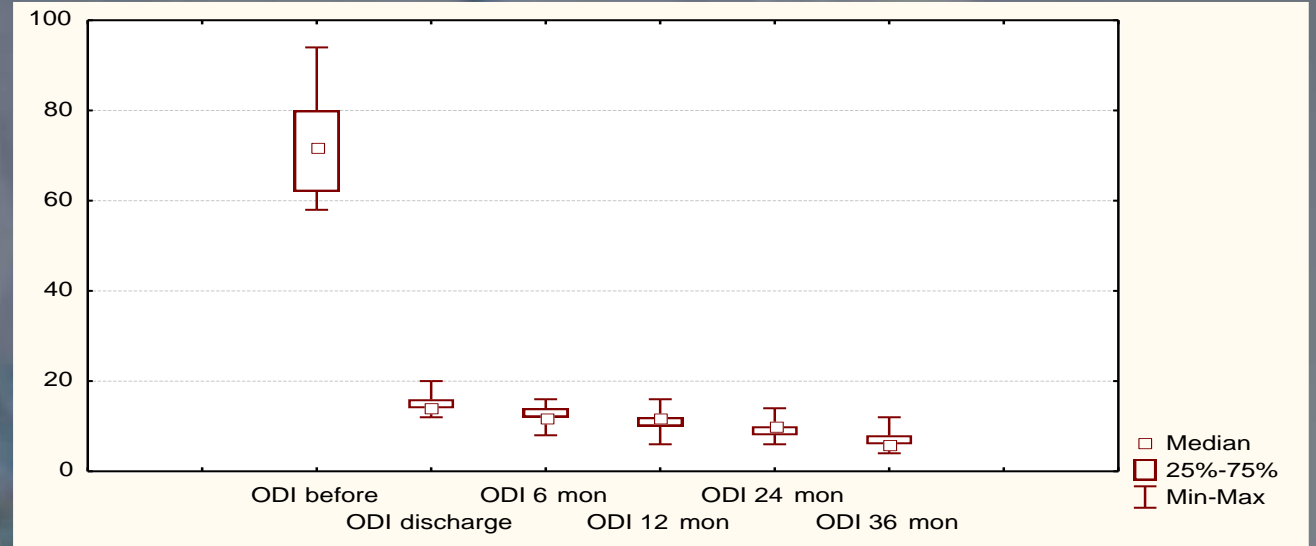
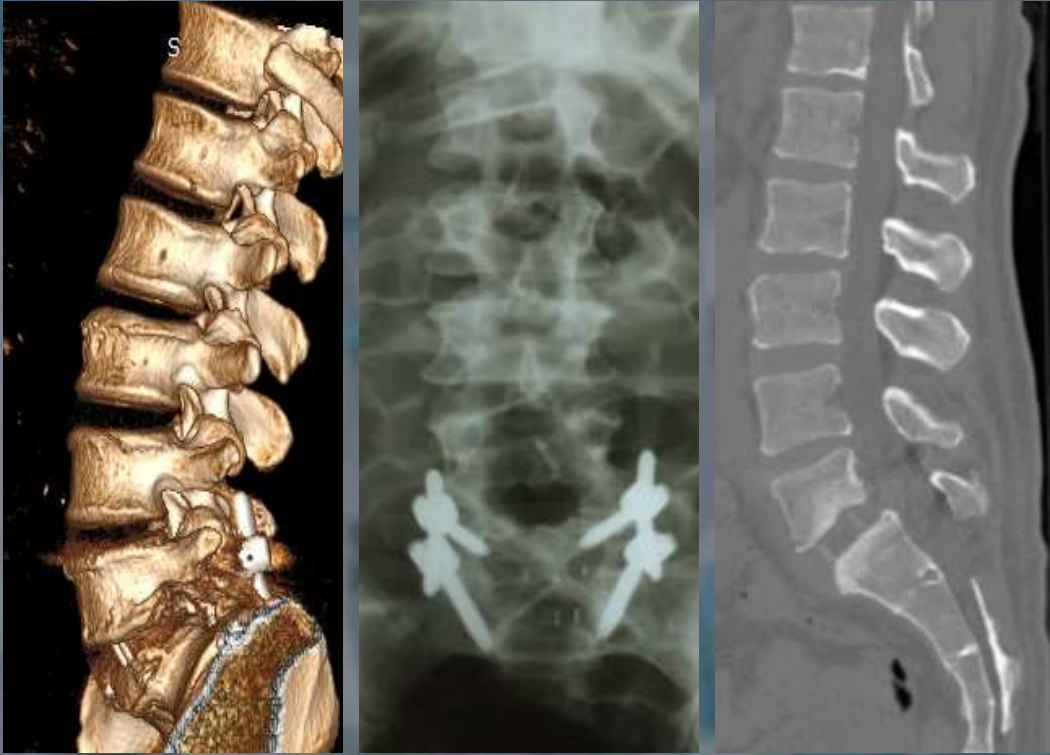
- The purpose of this study was to present the long-term results and to evaluate the safety and effectiveness of minimally invasive fusion technologies in the surgical treatment of the patients with degenerative LSS.



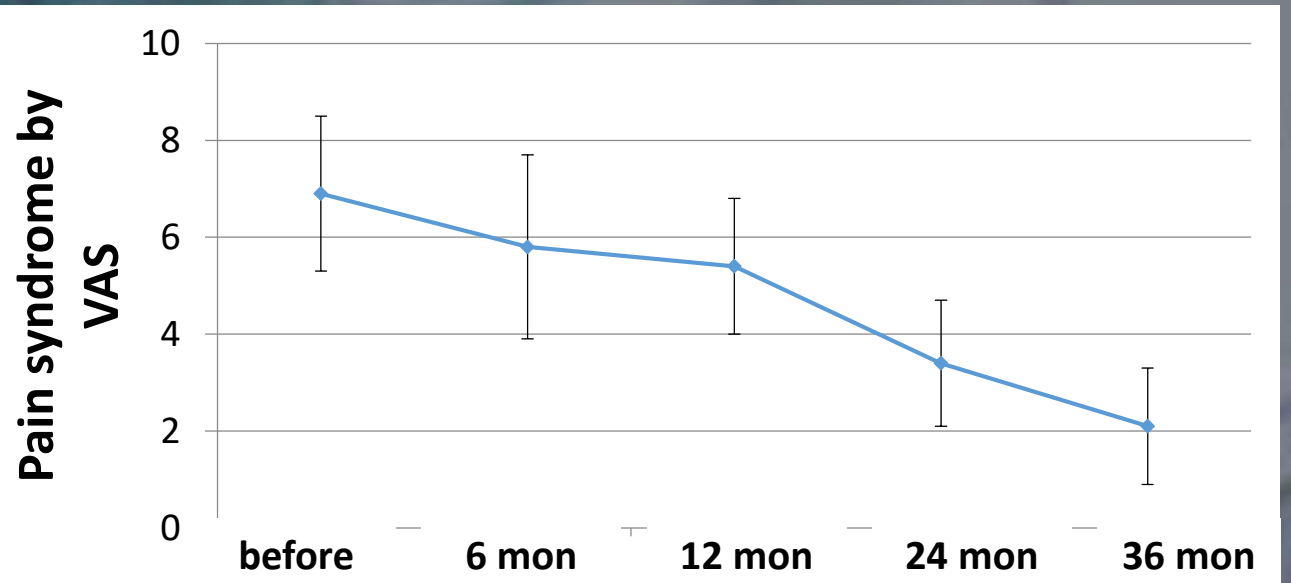
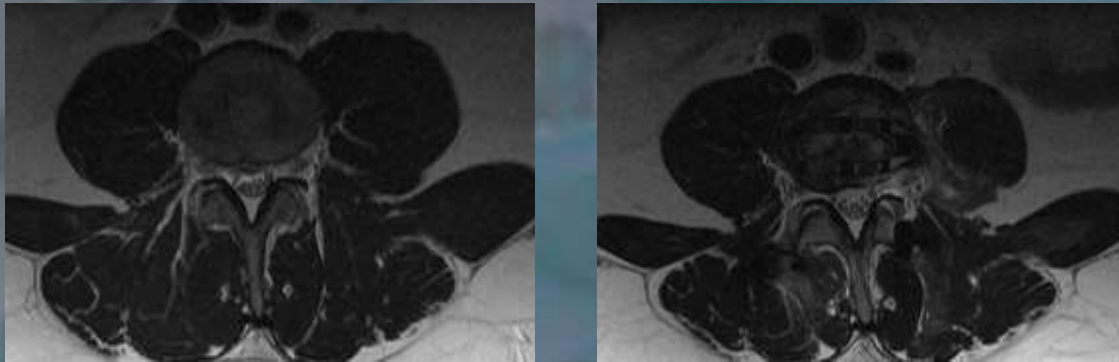
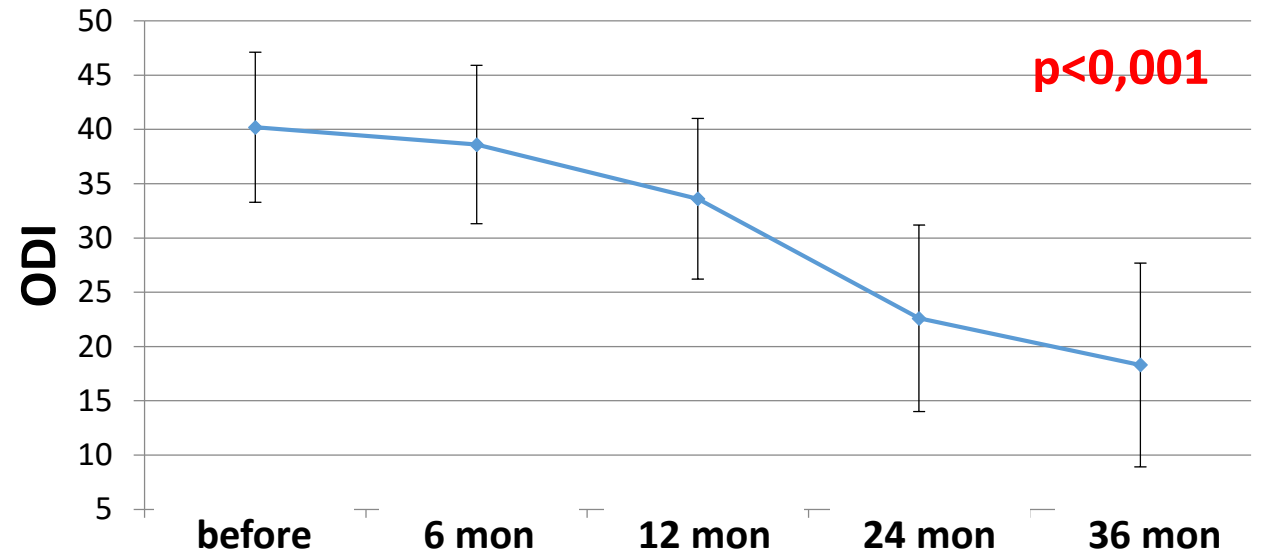
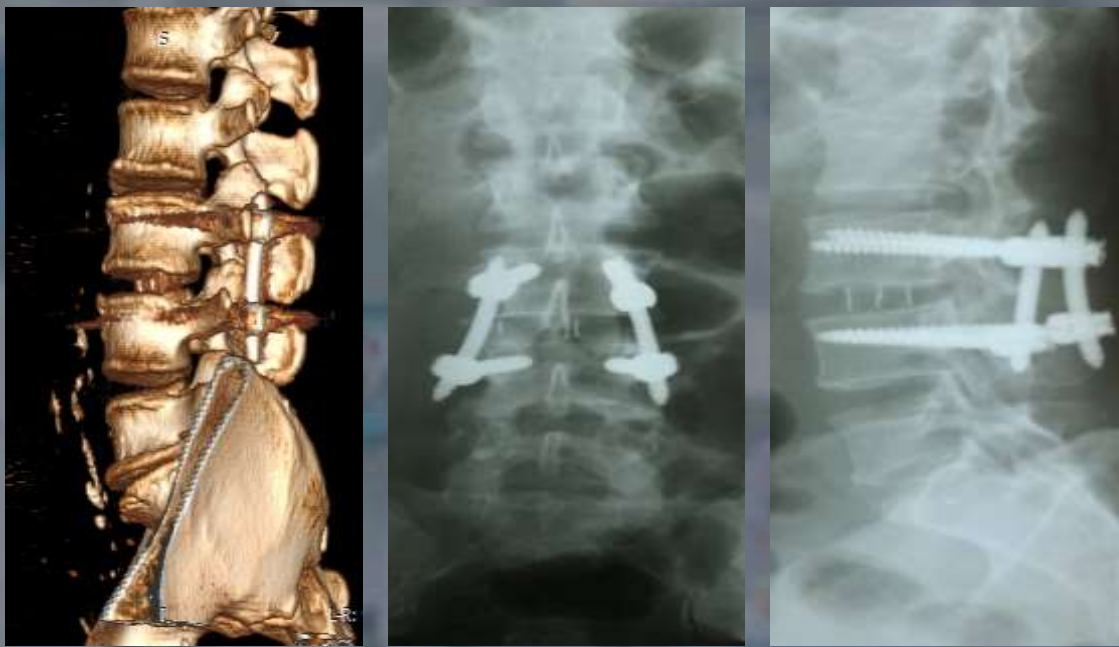
# Materials and Methods



# Results: ALIF

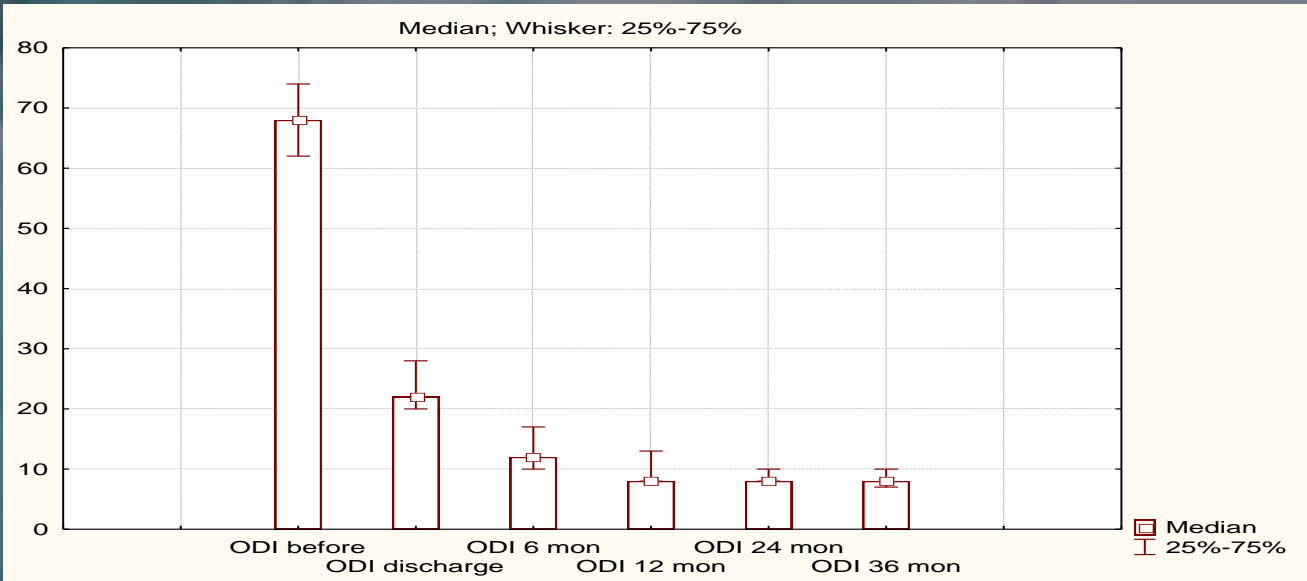
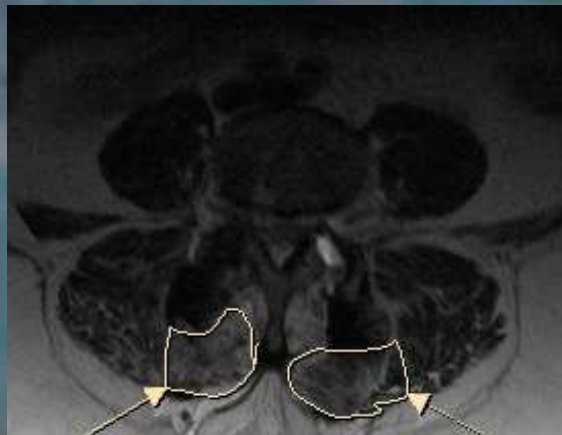
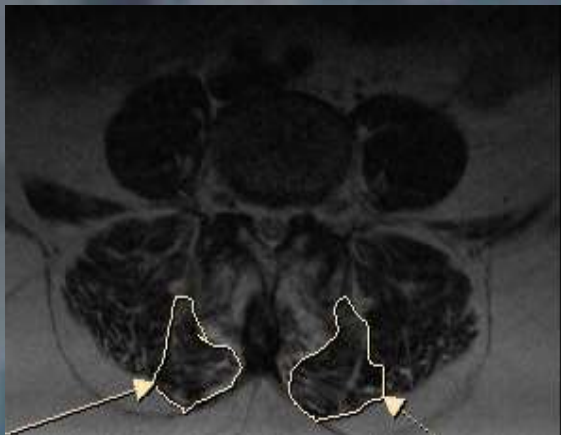
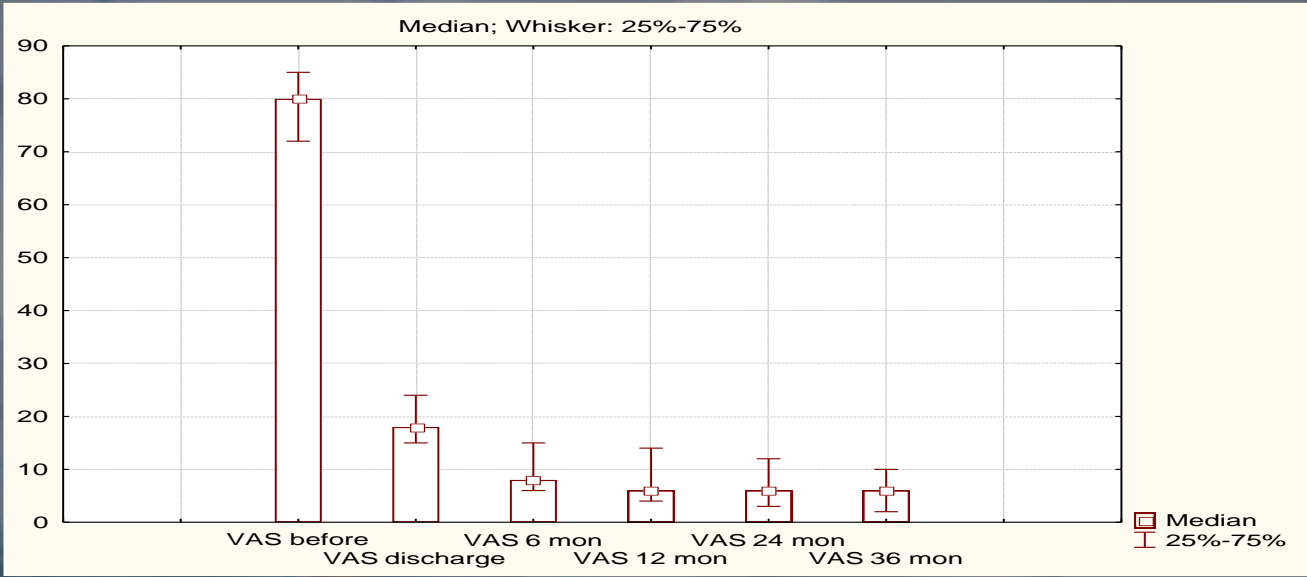


# Results: DLIF





# Results: TLIF



# Conclusions

- MIS fusion technologies (ALIF, DLIF, TLIF) have high clinical efficacy, confirmed by significant reduction in the severity of pain according to VAS, improve the quality of life of patients at ODI and a low number of postoperative complications.
- Also described minimally invasive methods of surgical treatment of patients with degenerative stenoses spinal canal of the lumbar spine allows to restore the sagittal profile of the lumbar spine and implement an effective stabilization of the operated spinal units with a high degree of formation of interbody bone block.

# References

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3. Kalichman L, Cole DH, Li L, et al. Spinal stenosis prevalence and association with symptoms: Framingham study. *Spine J* 2009;9(7):545–50.
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Thank you  
for your  
attention!

