

**To the Editor:**

*Laudato PA, Kulik G and Schizas C. Relationship between sedimentation sign and morphological grade in symptomatic lumbar spinal stenosis. Eur Spine J. Epub 2015 May 19.*

We were interested to read the recent publication by Laudato *et al.*<sup>1</sup> The authors evaluate the value of the Sedimentation Sign (SedSign)<sup>2</sup> and the morphological grading<sup>3</sup> as predictors of treatment modality in patients with symptomatic lumbar spinal stenosis (LSS). However, in LSS the appropriate diagnostic criteria to recommend treatment are not yet well defined. Thus the more central question is if and how these tests can help improve treatment decisions. To address this question we need prognostic information as reported in two recent publications on the clinical validity of the SedSign – one from the SPORT trial.<sup>4,5</sup> These studies found no significant difference between the patient group with a positive SedSign and the group with a negative sign undergoing decompression surgery in functional limitation nor in pain at baseline and at 24-month follow-up. Both groups demonstrated a comparable improvement after surgery. Conversely, in patients undergoing conservative treatment the ones with a positive SedSign did not show any improvement at follow-up whereas the group with a negative sign did. Unfortunately, clinical outcomes of LSS patients undergoing decompression surgery are not reported by Laudato *et al.* in their study. However, these clinical outcomes are necessary to understand the downstream consequences of different treatment modalities for LSS. In this respect previous studies went further in the evaluation of the SedSign than the present paper.<sup>4,5</sup> And this is where the SedSign may add value as surgery decider in SedSign-positive LSS patients currently undergoing conservative treatment who might benefit from decompression surgery. As a simple binary measure, the SedSign has the practical advantage of being easier to implement in clinical practice where the decision to operate is binary too. A study to investigate the potential role of the morphological grade in clinical decision-making would be valuable.

## References

1. Laudato PA, Kulik G and Schizas C. Relationship between sedimentation sign and morphological grade in symptomatic lumbar spinal stenosis. *Eur Spine J.* Epub 2015 May 19.
2. Barz T, Melloh M, Staub LP et al. Nerve root sedimentation sign: evaluation of a new radiological sign in lumbar spinal stenosis. *Spine.* 2010 Apr 15;35(8):892-7.
3. Schizas C, Theumann N, Burn A, Tansey R, Wardlaw D, Smith FW and Kulik G. Qualitative grading of severity of lumbar spinal stenosis based on the morphology of the dural sac on magnetic resonance images. *Spine.* 2010 Oct 1;35(21):1919-24.
4. Moses RA, Zhao W, Staub LP, Melloh M, Barz T and Lurie JD. Is the sedimentation sign associated with lumbar spinal stenosis surgical treatment effect in SPORT? *Spine.* 2015 Feb;40(3):129-36.
5. Barz T, Staub LP, Melloh M, Hamann G, Lord SJ, Chatfield MD, Bossuyt PM, Lange J and Merk HR. Clinical validity of the nerve root sedimentation sign in patients with suspected lumbar spinal stenosis. *Spine J.* 2014 Apr;14(4):667-74.