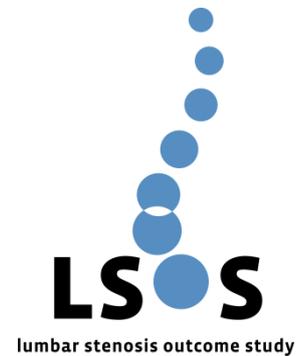


## Abstract

# Choice of outcome measure and minimal important difference influence treatment success in elderly patients with symptomatic degenerative lumbar spinal stenosis: experiences from the Lumbar Spinal Stenosis Outcome Study (LSOS)



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### Purpose

In patients with lumbar spinal stenosis several outcome measures are used to quantify treatment efficacy. To facilitate the judgments about the clinical relevance of reported efficacies, the concept of the minimal important difference (MID) has been introduced. To assess the agreement on proportion of patients fulfilling MID criteria between different outcome measures in patients treated for lumbar spinal stenosis.

### Methods/Materials

Analysis of patients participating in a multi-center prospective cohort study in Switzerland for the treatment of symptomatic spinal stenosis. All consecutive patients who completed data at baseline and 6 months follow-up were included. MID for the following pain measures were compared: Spinal Stenosis Measure symptom subscale (SSM-Sy), numeric rating scale (NRS), and feeling thermometer (FT). MID for the functional outcome measure SSM function (SSM-F), and the Roland Morris questionnaire (RMQ) were compared.

### Results

302 patients (65%) received surgical treatment, 71 patients (15%) epidural injections, and 93 patients (20%) conservative care (total n= 466). The median age was 75 years (IQR 67-80), and 52 per cent were women. Proportions of patients with at least minimal improvement ranged, depending on the cut-off level for MID between 40 and 70%. Compared to the RMQ the quantification by the SSM F found more favorable functional outcomes (40% vs 70%). Disagreement between MID in the SSM Sy and NRS, between SSM Sy and FT, between SSM F and the RMQ was present in about one third of patients. The observed kappa values ranged from 0.24 to 0.5, indicating that it did not exceed the expected by chance agreement.

### Conclusion

The findings presented in this study indicate that treatment efficacy is influenced by the choice of outcome measure and the corresponding cut-off used for definition of MID. There is a need for consensus among clinicians and researchers on standardized outcome measures in studies evaluating treatment effects in patients with lumbar spinal stenosis.