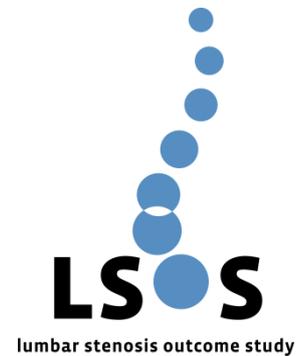


## Abstract

# Baseline Characteristics of Patients in the Lumbar Spinal Stenosis Outcome Study (LSOS)



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*NASS 30st Annual Meeting, Chicago (USA), October 2015  
(e-Poster)*

### Background and Purpose

Lumbar spinal stenosis is a frequent condition in elderly patients. In patients with moderate to severe symptoms, different conservative and/or surgical treatment modalities are recommended. It is still unclear which treatment is the most adequate for a specific patient. The main purpose of the Lumbar Spinal Stenosis Outcome Study (LSOS) is to identify prognostic factors in patients treated for lumbar spinal stenosis and to develop a probability function in order to predict the outcome of the disease. This is a preliminary report of the thus far included patient population in the LSOS.

### Methods/Materials

Multicenter cohort study in Switzerland. Patients with neurogenic claudication and radiological findings of lumbar spinal stenosis included in the LSOS and completed 6-month follow-up assessment. Outcome measures: the disease specific spinal stenosis measure (SSM, range 1-5). The SSM consists of a symptoms (SSM-sy) and a function (SSM-f) subscale. A Minimal Clinically Important Difference (MCID) for the SSM-sy is 0.48, for the SSM-f 0.52. Descriptive statistics were used to describe the patient population included in this cohort study between December 2010 and December 2014.

### Results

Between December 2010 and December 2014, 1,751 patients were potentially eligible and 683 patients agreed to participate. In December 2014, 500 (73.2%) patients completed the 6-month follow-up. Between baseline and 6-month follow-up, 48 (7%) patients were lost to follow-up (8 patients died, 2 entered assisted living residences, 30 were no longer interested, 1 due to missing contact information, 7 did not meet inclusion criteria). The median age was 75 years (IQR 12), 265 (53.0%) were female. Treatment modalities applied during the first 6 months were conservative care (physical therapy and/or oral medication) in 55 (11%) patients, epidural injections and conservative care in 156 (31.2%), surgical treatment in 131 (26.2%), and epidural injections followed by surgery in 158 (31.6%). The SSM-sy decreased in the conservative care group from 2.9 (1.4-4.6)\* to 2.3 (1-4.4) in the epidural injection group from 3.0 (1.8-4.7) to 2.7 (1-5), in the surgical group from 3.1 (1.6-4.9) to 2.1 (1-4.1), epidural injections followed by surgery from 3.1 (1.9-4.6) to 2.1 (1-3.9). The SSM-f decreased in the conservative group from 2 (1-3.6) to 1.4 (1-3.2); in the injection group from 2.3 (1-3.8) to 1.8 (1-3.6), surgical group from 2.2 (1-3.8) to 1.6 (1-3.2), injection and surgical care from 2.4 (1-3.6) to 1.4 (1-3.4), 27.3% in the conservative group, 26.9% in the injection group, 42.7% in the surgical group and 51.3% in the injection and surgical group fulfilled the criteria for an MCID in SSM-sy and SSM-f. \*Values are given in median (minimal and maximal value) if not otherwise indicated.

## **Conclusion**

Every second patient included in the LSOS study population underwent spinal surgery. A remarkable proportion of patients did not show a clinically important improvement of symptoms and function after surgery. There is a need to derive a prognostic probability function to identify patients before surgery with a very low probability of clinical improvement after surgery.