Objective: Lumbar spinal stenosis surgery (LSSS) rates vary widely, suggesting there is considerable uncertainty among physicians regarding the indications for LSSS. The success rate for laminectomies also varies. More than 25% of patients were found to be dissatisfied with their surgery. It is well established that 3/4 of patients with LSS benefit from decompressive surgery in the first 2 years but the condition can deteriorate with longer follow up. There is a very little research on long term outcomes of LSSS. The purpose of this prospective, multicenter observational study is to determine 5 year outcomes of laminectomy (in terms of pain, function, satisfaction, reoperations, and death) and to identify preoperative factors associated with particularly favorable or poor outcomes.

Methods: 267 patients who underwent LSSS were evaluated at baseline and 60 months postoperatively in four academic centers. The principal outcomes, including walking capacity, back and leg pain, and satisfaction with surgery, were assessed with validated measures. The association between preoperative variables and outcomes were examined with univariate and multivariate techniques.

Results: 179 (78%) patients completed follow up questionnaires at five years (39 died and 49 refused or were lost to follow up). Mean age was 69 yrs and 60% were female. At five years, 72% were satisfied with their surgery, 61% had improvement in back and leg pain severity, 74% had improved walking capacity and 12.6% required a reoperation. In multivariate models, the predictors of persistent pain, worse function, and dissatisfaction included greater number of comorbidities and lower baseline functional status (p<.006).

Conclusion: Three quarters of patients were satisfied with their surgery 5 years postoperatively. Patients with better baseline function and fewer comorbidities had better outcomes. Advanced age, presence of neurologic compromise, and greater number of levels decompressed were not associated with outcome. These findings will help patients and their doctors make informed decisions of whether to proceed with surgery for spinal stenosis.