OBJECTIVES: Lumbar spinal stenosis (LSS) occurs as a degeneration of the spine in aging populations. Treatment options comprise surgical and non-surgical intervention. The aim of this study was to compare annual costs between LSS patients treated with instrumental spinal surgery (ISS) and those non-surgically treated. METHODS: A retrospective claims data analysis was conducted using anonymized claims data from the Health Risk Institute research database. The study period comprised the years 2009 to 2011. All patients receiving an ISS were compared to an age and gender matched non-operated control group with comparable disease state. Patients were identified by ICD-10-GM code M48.0 in the inpatient setting. Direct inpatient costs and procedures used to identify ISS. Comparable disease state was achieved by matching total costs in an individual period of 12 months before the first LSS caused hospitalization. Annual costs after surgical treatment were compared for LSS patients receiving ISS and those with no surgical treatment. Costs could be achieved in an extended timeframe. Nevertheless, cost savings were already observed in pharmaceuticals decrease after the surgery. A cost offset is not achievable in this period due to the high cost of the surgical procedure codes (OPS) identified primary ISS and following reoperations. Reoperation rates were calculated for an individual period of 12 months after the primary ISS in 2010. Annual costs for reoperations were calculated based on group comparison of patients with reoperation and those without reoperation (control group). Existing differences in cost levels in the year before the primary ISS were adjusted by the difference in reoperation and non-reoperation. RESULTS: A total of 5,936 individuals had a primary ISS in 2010. The reoperation rate was 9.98% (95% CI = 8.98% to 11.02%). Mean cost per ISS was €11,331 for all patients (€13,358 reoperation group, €11,106 control group). The mean adjusted annual cost for a reoperation was €11,170, with 35% attributed to the reoperation procedure and €2,938 to excess costs in the first year after the primary ISS. CONCLUSIONS: The direct cost of ISS has a significant impact on health insurance budgets. With 10% of primary ISS patients requiring a reoperation in Germany, their associated annual costs are relevant from the SHI perspective. As demonstrated elsewhere, these costs might be partly avoidable by using intra-operative 3-D imaging with navigation.

OBJECTIVE: This study aims to estimate the incidence and costs of osteoporotic fractures in The Netherlands in 2010 and project them to 2030. METHODS: The incidence and health care costs of fractures were derived from claims data of all health care insurers in The Netherlands. We obtained 5-year age- and gender-specific costs of patients with and without fractures. These costs included hospita- l admission, physical therapy, occupational therapy, general practitioner and medication. In order to attribute fractures to osteoporosis we used a large dataset from a general hospital that included patients with a fracture screened with DexamScan®. Fracture projections were based on four different types of scenario: 1. demographic-trend scenario, 2. demographic-trend+gender scenario, 3. demographic-trend+incidence scenario, and 4. increased treatment scenario. RESULTS: Of all registered fractures 32% could be attributed to osteoporosis. In women this percentage was larger than in men (36 versus 21%). This resulted in an incidence for all osteoporotic fractures of 964 per 100,000 in women and 245 per 100,000 in men for 2010. Over time (2010-2030) the overall increase in incidence of osteo- porotic fractures was 40% (scenario 1). The increase in hip fractures ranged from 60% (scenario 1) to 79% (scenario 2). In 2010 approximately 200 million Euros was spend on treatment of osteoporotic fractures. The costs for osteoporotic fractures increased by 50% from 2010 to 2030 (scenario 1). The incremental survey was conducted among AS patients, which was filled out voluntarily and anonymously. Missing data was not imputed in the analysis; considered patient number is pre- sented next to results if lower than total patient number. RESULTS: 152 patients completed the questionnaire, of which 3% were women. Mean age was 51 years (Standard Deviation [SD] = 13 years) and average disease duration was 17 years (SD: 14 years). At primary diagnosis of AS, 80% of patients had a full-time job, 2% a part-time job, and only 8% were completely disabled. 36% of patients worked full-time, 1% part-time, and the proportion of disability pensions increased to 42%. Cost calculation results showed that the average annual indirect cost per AS patient was €11,106. Within this time frame, mean medical cost was over €1,976 and average annual indirect cost per patient was approximately 3,126€ (145 patients). Wage loss due to disability pension generated the highest average annual indirect cost per patient (3,290€ – 124 patients). In the working age population (18-64 years), total average cost per patient was 5,996€. CONCLUSIONS: Due to their disease, AS patients can become par- tially or completely disabled, which imposes a significant burden directly on their environment and indirectly to society. Average costs were associated with disease duration. Patients may already be driven out from the labour market in their active

OBJECTIVES: Complications in instrumental spinal surgeries (ISS) pose a considerable burden on patients. Necessary reoperations are associated with significant increased mortality and morbidity. Therefore, the assistance of the迤性的 perspective is mandatory. Health Insurance (SHI). Dependable data on the frequency of reoperations and associated costs are lacking for Germany. The aim of this study was to estimate the costs of ISS reoperations, and the associated costs. METHODS: We conducted a retrospective claims data analysis using the Health Risk Institute research database, which contains anonymized claims data and covers approximately 42% of the German population. The study period comprised the years 2009 to 31 December 2011. All patients receiving an ISS were compared to an age and gender matched non-operated control group with comparable disease state. Patients were identified by ICD-10-GM code M48.0 in the inpatient setting. Direct inpatient costs were calculated based on group comparison of patients with reoperations and those without reoperations (control group). Existing differences in cost levels in the year before the primary ISS were adjusted by the difference in reoperations and non-reoperations. RESULTS: A total of 3,516 individuals had a primary ISS in 2010. The reoperation rate was 9.98% (95% CI = 8.98% to 11.02%). Mean cost per ISS was €11,331 for all patients (€13,358 reoperation group, €11,106 control group). The mean adjusted annual cost for a reoperation was €11,170, with 35% attributed to the reoperation procedure and €2,938 to excess costs in the first year after the primary ISS. CONCLUSIONS: The direct cost of ISS has a significant impact on health insurance budgets. With 10% of primary ISS patients requiring a reoperation in Germany, their associated annual costs are relevant from the SHI perspective. As demonstrated elsewhere, these costs might be partly avoidable by using intra-operative 3-D imaging with navigation.