spondylolisthesis were included. The primary outcome was major complication. Secondary outcomes were readmission, reoperation, and discharge to location other than home. Logistic regression analysis was done to investigate the association between outcomes and frailty. **Results:** There were 15 658 patients in this study. The mean age was 62.5 years (SD 12.2). Frailty, as measured by the Modified Frailty Index-5 was significantly associated with increased risk of major complication, unplanned readmission, reoperation, and non-home discharge. Increasing frailty was associated with increasing risk of morbidity. **Conclusions:** Frailty is independently associated with higher risk of morbidity after posterior surgery in patients with lumbar spondylolisthesis. These data are of significance to clinicians in planning treatment for these patients.

### P.222

### Subjective pattern of postoperative neurological recovery in degenerative cervical myelopathy varies by preoperative severity of disease

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doi: 10.1017/cjn.2021.386

Background: Degenerative cervical myelopathy is a spinal disorder resulting in progressive spinal cord compression and consequent neurological deficits that can be assessed and tracked using the modified Japanese Orthopedic Association (mJOA) questionnaire. However, it is difficult to predict which patients will recover neurological function after surgery, making it difficult for clinicians to set reliable postoperative patient expectations. Methods: Sixty-eight operative myelopathy patients (50 male, 14 female) consented to complete the mJOA questionnaire both preoperatively and 6-months postoperatively. Fifteen of these patients had mild, twenty-three had moderate, and thirty had severe preoperative disease. **Results:** We found that in mild myelopathy, sensation and strength recover in similar proportions. In moderate myelopathy, a greater proportion of patients recover in each domain except for sensation. Recovery in severe myelopathy was comparable to moderate disease, but showed more dramatic recovery in sensation and sphincter function. Conclusions: This study shows that the severity of myelopathic disease influences the pattern of postoperative recovery. Though limited in sample size, the recovery patterns identified above are an important first step in recognizing myelopathy as a disease that patients experience heterogeneously both pre- and post-operatively. Our results will aid clinicians in goals-of-surgery discussions and assist with managing postoperative patient expectations.

### P.223

# Correlating the pre- and post-operative subjective experience of myelopathic impairments with the objective clinical exam

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doi: 10.1017/cjn.2021.446

**Background:** Degenerative cervical myelopathy is a debilitating condition of the spinal column resulting in a progressive, clinically measurable loss of motor and sensory function secondary to spinal cord compression. We sought to correlate the patient's subjective experience of specific myelopathic impairments with components of the objective clinical exam, to determine if the latter provides any clinically-relevant information postoperatively. Methods: Thirty-eight myelopathy patients consented to complete the mJOA questionnaire and receive a physical exam preoperatively, and 6-weeks and 6-months postoperatively. mJOA components were correlated with the physical exam using Spearman correlations with an alpha of 0.05. Results: mJOA scores for sensation and lower limb motor function correlated with the sensory and lower limb motor exams respectively, both preoperatively and 6-weeks postoperatively. mJOA scores for upper limb motor function did not correlate with the upper limb motor exam at either timepoint. Conclusions: At baseline and immediately postoperatively, patients self-report sensation and lower limb motor function accurately. However, the patients' subjective experience of upper limb motor function does not align with clinical exam findings, suggesting either a continued need for this component of the physical exam or a need for tools that better correlate with the patient's experience of upper limb motor impairment.

#### P.224

## A Case Report of Spinal Screws Penetrating the Pulmonary Artery

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doi: 10.1017/cjn.2021.473

**Background:** Spinal instrumentation is commonly utilized to mechanically stabilize the spine in trauma, oncology and degenerative disease. Although several complications have been reported, this is the first case of screw penetration of the pulmonary artery. **Methods:** We present a case of a 74-year old gentleman who suffered from a thoracic spine chordoma. He underwent a T8 resection with T8-T12 instrumented fusion with