

## Introduction

Anterior lumbar interbody fusion (ALIF) is a commonly utilized lateral access technique for a number of lumbar spine pathologies. To date, no study has specifically examined trends in the utilization of ALIF.

## Methods

We performed a retrospective cohort study of population-based administrative claims data using the MarketScan database. We selected patients aged 18 years or older who received an ALIF procedure from 2007 to 2014. We excluded patients with less than 30 days of follow up and patients with a billing code for a revision fusion procedure at time of the index ALIF.

## Results

We identified 49,507 adult patients (mean age, 52; 58.2% female; mean follow up 774.5 days) in the MarketScan database who received an ALIF procedure between 2007-2014. The majority of patients received instrumentation (80.1%) and 34.6% of patients had multi-level procedures. Average length of stay was 3.7 days (SD, 3.8), average hospital payments were \$62,617.51, and average physician payments were \$8,067.43. Inpatient mortality was rare, occurring in 21 patients (0.4%). The most common indications for ALIF were lumbar disc degeneration (35.2%), lumbar disc displacement (14.1%), acquired spondylolisthesis (11.4%), and lumbosacral spondylolysis (8.9%). These indications accounted for roughly 70% of the primary surgical indications for ALIF. We observed that the annual incidence of ALIF procedures increased more than two-fold from 2007 to 2012 (3,649 to 7,717 ALIFs) but decreased in both 2013 and 2014. We find that the 2014 incidence of ALIF procedures most closely resembles 2008. Notably, 42.3% of all ALIF procedures in our cohort were performed in the southern United States (U.S.). The trend of ALIF procedure incidence peaking in 2012 was observed across all geographic regions.

## Conclusions

Our analysis of trends in utilization of ALIF procedures revealed a 2.1-fold increase from 2007-2012, but a decrease in utilization from 2013-2014. The southern U.S. performed the majority of ALIF procedures.

## Learning Objectives

1. Anterior lumbar interbody fusion (ALIF) is a commonly utilized lateral access technique for a number of lumbar spine pathologies.
2. Recently, utilization of ALIF appears to have decreased