

Outpatient 360 Fusion: Is It Safe? An Analysis of 203 Patients Undergoing Anterior-Posterior Lumbar Interbody Fusions (also known as 360 fusions or ALIF+PSFs) in an Ambulatory Surgery Center.

Abstract

Introduction: Anterior lumbar interbody fusion (ALIF) is a procedure used to treat lumbar spine disorders traditionally performed in the inpatient setting. Recent trends have shifted toward performing spine surgeries in outpatient settings, allowing for reduced hospital stays, quicker recovery times, and significant cost reductions. This retrospective analysis evaluates the efficacy, safety, and cost-effectiveness of outpatient ALIF with posterior pedicle screw instrumentation (also known as 360 fusion or ALIF+PSF), comparing data from patients who underwent 360 fusion surgeries in a single outpatient setting between 2018 and 2024.

Methods: We conducted a retrospective review of data collected from patients who underwent outpatient 360 fusion surgeries at a single institution between 2018 and 2024. Data were collected from a surgical scheduling database, HST Case Coordination, and exported into Excel Version 16.92 for analysis.

Results: The study included 203 patients, with 18 patients in 2018, 26 in 2019, 17 in 2020, 35 in 2021, 45 in 2022, 40 in 2023, and 22 in 2024. Demographic data, ASA classification, surgical times, patient outcomes, and costs were reviewed. The cohort consisted of 125 male and 78 female patients. ASA scores were used to assess patient health status, with 76 patients classified as ASA 1, 118 as ASA 2, and 6 as ASA 3. The average age of patients was 50.8 years, ranging from 24 to 76 years. Surgical times ranged from 29 to 320 minutes, with an average OR time of 167 minutes. The average surgical time was 115 minutes, with minimal variation across years. Postoperative complications and hospital readmissions were also assessed. No patients required hospital transfer or postoperative blood transfusion in the immediate perioperative period prior to discharge from the outpatient facility. All patients were discharged within 24 hours.

Conclusion: The shift toward outpatient from inpatient care demonstrates potential for substantial cost savings, reduced hospital stays, and fewer resource utilizations. These results demonstrate the success of outpatient 360 fusion surgery with minimal complications within the immediate postoperative period. Outpatient 360 fusion surgery is an effective and cost-efficient approach for spine surgery traditionally performed in the inpatient setting. Reduced hospital stays, minimal complications, and significant cost savings compared to traditional inpatient models highlight the evolving landscape of spine surgery. Progression toward outpatient spine surgery is a favorable alternative to inpatient procedures by improving patient recovery and offering financial benefits. Further prospective studies are needed to validate these findings and expand usage of outpatient spine surgeries across various procedures.