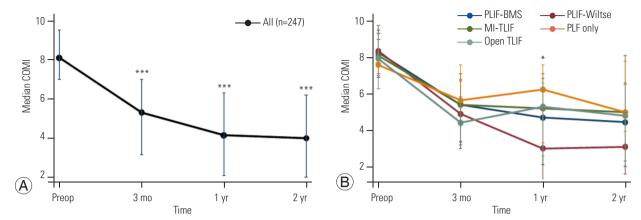
Clinical Study



Supplement 1. Changes in patients self-reported outcomes score in subgroup of patients with complete core outcomes measure index (COMI) data at all four time-points (n=247). Median and interquartile range of overall COMI score at each timepoint shown. (A) Change in overall COMI score over time. COMI scores were lower at 3 months, 1 year, and 2 years post-surgery compared to pre-treatment (p<0.001, mixed-effects model). The largest decrease in COMI score was seen in the first 3 months post-surgery. p-value shown represents difference from pre-surgery COMI score and calculated using a repeated measures mixed-effects model with imaging time-point as a fixed effects variable. Post hoc analysis of pairwise comparisons between different timepoints was performed using the Bonferroni method. (B) Change in overall COMI score stratified by lumbar fusion approach. p-value shown represents differences in COMI score between surgical approaches at each timepoint. p-value calculated using Kruskal-Wallis test. PLIF-BMS, posterior lumbar interbody fusion with midline posterior approach/bilateral muscle strip; PLIF-Wiltse, PLIF with bilateral Wiltse/muscle splitting approach; MI-TLIF, minimally invasive transforaminal lumbar interbody fusion; Open TLIF, open transforaminal lumbar interbody fusion; PLF-only, pedicle screw/posterolateral fusion only; Preop, preoperative. *p<0.05. ****p<0.001.

Supplement 2. Patient self-reported outcomes stratified by lumbar fusion approach

Procedure	All (N=247)	PLIF bilateral muscle strip (N=116)	PLIF Wiltse approach (N=65)	MI-TLIF (N=43)	Open TLIF (N=12)	Posterolateral fusion only (N=11)	<i>p</i> -value
Preop COMI score	8.10 (7.0–9.5)	8.30 (6.9–9.5)	8.35 (7.1–9.0)	8.10 (7 .0-9.75)	7.95 (6.3–9.4)	7.60 (7.0–9.3)	0.95
3-Month postop COMI score	5.30 (3.2-7.0)	5.40 (3.0-7.1)	4.90 (3.4–6.70)	5.40 (3.2-6.8)	4.42 (3.4–5.9)	5.65 (5.3–7.6)	0.61
1-Year postop COMI score	4.15 (2.1–6.3)	4.70 (2.1-6.9)	3.00 (1.3–5.2)	5.20 (2.1-7.1)	5.30 (2.6–6.6)	6.25 (3.3–7.6)	0.03
2-Year postop COMI score	4.00 (2.0-6.2)	4.45 (2.0–6.6)	3.10 (1.6–5.0)	5.00 (2.3–8.1)	4.80 (2.0-6.5)	5.00 (4.0-7.9)	0.06

Values are presented as median (interquartile range). Subgroup analysis of patients with complete COMI data at all four timepoints (n=247). For differences between lumbar fusion approaches, p-value calculated using using Kruskal-Wallis test. Significant results ($p \le 0.05$) shown in bold.

PLIF, posterior lumbar interbody fusion; MI-TLIF, minimally invasive transforaminal lumbar interbody fusion; Open TLIF, open transforaminal lumbar interbody fusion.