

**Table S1** Baseline Characteristics Before Propensity Score Matching

Variable	PJK (n=45)	Non-PJK (n=43)	SMD	P value
Age (years)	64.0±11.6	59.3±10.3	0.43	0.03
Females, n (%)	25 (55.6%)	22 (51.2%)	0.09	0.67
BMI	29.0±5.4	30.8±6.3	0.31	0.12
Smoking, n (%)	6 (13.3%)	9 (20.9%)	0.20	0.32
ASA Score	2.4±0.5	2.3±0.6	0.18	0.42
T-Score	-1.6±0.5	-1.4±0.6	0.36	0.08
Fusion Levels	9.2±1.4	8.7±1.5	0.34	0.11
Prior Fusion, n (%)	12 (26.7%)	15 (34.9%)	0.18	0.38
SPO Patients, n (%)	40 (88.9%)	38 (88.4%)	0.02	0.94
SPO Levels	8.5±1.3	8.2±1.4	0.22	0.33
PSO Patients, n (%)	9 (20.0%)	12 (27.9%)	0.18	0.37
PSO Levels	4.2±1.1	3.9±1.2	0.26	0.39
Interbody Fusion Patients, n (%)	33 (73.3%)	29 (67.4%)	0.13	0.55
Interbody Fusion Levels	3.4±1.7	2.9±1.5	0.31	0.17
Time to PJK (months)	21.1±18.3	—	—	NA

Data are presented as mean ± standard deviation or frequency (percentage). PJK: Proximal Junctional Kyphosis; BMI: Body Mass Index; ASA: American Society of Anesthesiologists Physical Status; SPO: Smith-Petersen Osteotomy; PSO: Pedicle Subtraction Osteotomy.

**Table S2** Preoperative and Postoperative Spinopelvic Parameters in the Propensity Score-Matched Cohort

Parameter	PJK (n=28)	Non-PJK (n=28)	P value
<b>Preoperative</b>			
Pelvic Incidence (PI, °)	54.9±9.7	55.3±10.1	0.88
Pelvic Tilt (PT, °)	25.8±7.8	23.4±7.2	0.24
Sagittal Vertical Axis (SVA, mm)	96.7±54.3	81.5±46.8	0.31
PI-LL mismatch (°)	22.4±13.5	19.1±11.6	0.35
<b>Postoperative</b>			
Pelvic Incidence (PI, °)	54.9±9.7	55.3±10.1	0.88
Pelvic Tilt (PT, °)	19.5±6.9	17.8±6.3	0.33
Sagittal Vertical Axis (SVA, mm)	47.3±36.2	34.8±30.5	0.19
PI-LL mismatch (°)	9.2±8.9	6.8±7.4	0.27

Data are presented as mean ± standard deviation. P-values were calculated using independent-samples t-test. Pelvic incidence (PI) is an anatomical constant and remains unchanged after surgery.