

Appendix Table 2. Methodological quality of included studies, with an evaluation of bias.

First Author	Country	Level of Evidence	Type of study	Evaluation of risk of bias												
				Methodological Index for Non-Randomized Studies (MINORS)												
				It.1	It.2	It. 3	It. 4	It. 5	It. 6	It. 7	It. 8	It. 9	It. 10	It. 11	It. 12	TOTAL
Boileau et al. ⁴ (2018)	France	3	Clinical non-controlled	2	2	2	2	0	2	2	2	2	2	2	2	22
Hoenecke et al. ¹⁰ (2010)	USA	2	Clinical non-controlled	2	2	0	2	1	0	2	2	1	2	2	2	18
Saifi et al. ¹⁹ (2017)	USA	3	Clinical non-controlled	2	2	2	2	2	2	2	0	1	2	1	2	20
Scalise et al. ²¹ (2008)	USA	2	Clinical non-controlled	2	2	2	2	2	2	2	2	2	2	1	2	23
Werner et al. ⁶	Germany	2	Clinical non-controlled	2	2	2	2	2	2	2	0	2	2	2	2	22
				Cochrane Risk of Bias Tool (for randomised studies)												
				It. 1	It. 2	It. 3	It. 4	It. 5	It. 6	It. 7						
Iannotti et al. ¹³ (2015)	USA	1	Clinical Randomised	Low	Low	Low	Low	High	High	*						

The items are scored 0 (not reported), 1 (reported but inadequate) or 2 (reported and adequate). The MINOR index evaluates different domains of bias using eight (for non-controlled studies) and twelve (for controlled studies) categories, the global ideal score being 16 for non-comparative studies and 24 for controlled studies. NA = Not Applicable. Cochrane Risk of Bias assess studies using 7 domains of potential risk, rating them as either unclear, high, or low risk of bias.

*Other risk of bias: The three-dimensional imaging group and the three-dimensional intelligent reusable instrument group were compared with a non-randomized historical control group of seventeen patients who had surgical planning using only 2D CT imaging. Reference control group from 2009 with a potentially different surgical team. Prospective calculation of sample size for power was not calculated for the 2D CT group.