

**Appendix 4.** Breakdown of quality assessment scores for each study included in the review.

Author	Cohort representative (1)	Number of hospital/surgeons (2)	Sample size (1)	Number of adverse events (2)	Unit of analysis (3)	Patient selection appropriate (2)	Volume categories (1)	Risk adjustment (3)	Clinical processes of care (2)	Outcomes (1)	Total (18)
Alle et al	1	1	1	1	0	1	1	2	0	0	8
Becker/Sun et al	1	2	1	2	0	0	1	1	0	1	9
Guapel et al	0	2	0	1	0	0	1	2	1	1	8
Donn et al	1	2	1	2	0	0	1	1	0	1	9
Green et al	1	2	0	2	3	0	1	1	0	1	11
Jouassaly et al	1	2	1	2	3	0	1	1	0	1	12
Leip et al	1	2	0	1	2	0	1	3	0	1	11
Manchale et al	1	2	1	2	0	0	1	1	0	1	9
Munaga et al 2010	1	2	1	2	0	0	1	1	0	1	9
Nitchell et al	1	2	1	2	0	0	1	1	0	1	9
Munaga et al 2008	0	2	1	2	2	0	1	2	0	1	11
Northport et al	0	2	0	1	0	0	0	0	0	1	4
Yoghane et al	0	1	0	1	0	0	0	0	0	1	3
Hub et al	1	2	1	2	0	0	1	1	0	1	9
Markmeyer et al	0	2	1	2	0	0	1	1	0	0	7