

**Supplement Table 1.** ROBINS-I assessing the risk of bias in studies included in the systematic review, classified according to parameters evaluated and year of publication

Author (year of publication)	Baseline confounding	Selection of participants	Classification of intervention	Deviation from intended intervention	Missing data	Measurement of outcomes	Selection of reported results	Overall risk of bias
<b>Semen parameters</b>								
Joseph et al [47] (2021)	Moderate risk	Low risk	Moderate risk	Low risk	Moderate risk	Low risk	Low risk	Moderate risk
Berthaut et al [38] (2017)	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Berthaut et al [45] (2008)	Moderate risk	Severe risk	Moderate risk	Moderate risk	Moderate risk	Low risk	Low risk	Moderate risk
Grigg [44] (2007)	Severe risk	Severe risk	Low risk	Low risk	Severe risk	Low risk	Moderate risk	Severe risk
Masood et al [48] (2007)	Moderate risk	Moderate risk	Moderate risk	Low risk	Moderate risk	Low risk	Low risk	Moderate risk
<b>Testicular specimen</b>								
Gille et al [41] (2021)	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Portela et al [39] (2020)	Moderate risk	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk	Moderate risk
Stukenborg et al [43] (2018)	Severe risk	Severe risk	Moderate risk	Low risk	Severe risk	Moderate risk	Moderate risk	Severe risk