

Supplementary Fig. 1. Risk of bias evaluation of the included trials using ROBINS-E (The Risk Of Bias In Non-randomized Studies - of Exposure) tool.

Overall risk of bias assessment

Study	POD	PACU LoS	Hospital LoS	Mortality
Fields A et al (2018)	High Risk	Some Concerns	High Risk	High Risk
Assefa S et al (2019)	No data	Very-high risk	No data	No data
Gutiérrez RG et al. (2019)	Very-high risk	No data	No data	No data
Hesse S et al (2019)	No data	Very-high risk	Very-high risk	No data
Huang J et al (2020)	Some Concerns	No data	Very-high risk	No data
Kim HC et al (2015)	No data	Some Concerns	Very-high risk	No data
Lepouse C et al (2006)	No data	Very-high risk	No data	Some Concerns
Munk L et al (2016)	No data	Very-high risk	No data	No data
Neufeld KJ et al (2013)	Very-high risk	No data	No data	No data
Olbert M et al (2019)	No data	Very-high risk	Very-high risk	No data
Punita T Sharma et al (2005)	Very-high risk	No data	No data	No data
Radtke FM et al (2008)	No data	Some Concerns	Very-high risk	No data
Radtke FM et al (2010)	Very-high risk	No data	No data	No data
Radtke FM et al (2010)	No data	Some Concerns	Some Concerns	No data
Saller T et al (2019)	No data	Some Concerns	Very-high risk	No data
Wang C et al (2020)	High Risk	No data	No data	No data
Wiinholdt D et al (2019)	No data	Very-high risk	Very-high risk	Very-high risk
Winter A et al (2015)	No data	Very-high risk	No data	No data
Wu J et al (2021)	No data	Very-high risk	Very-high risk	No data
Xará D et al (2013)	Very-high risk	Some Concerns	Some Concerns	No data
Yu D et al (2010)	No data	Very-high risk	No data	No data
Zhang Y et al (2020)	High Risk	Some Concerns	High Risk	No data

PACU, Post Anesthesia Care Unit; POD, Postoperative Delirium; LoS, Length of Stay

In this color-coded ranking, yellow color represents some concerns (moderate risk of bias), red color represents high risk of bias and black color very-high risk of bias.