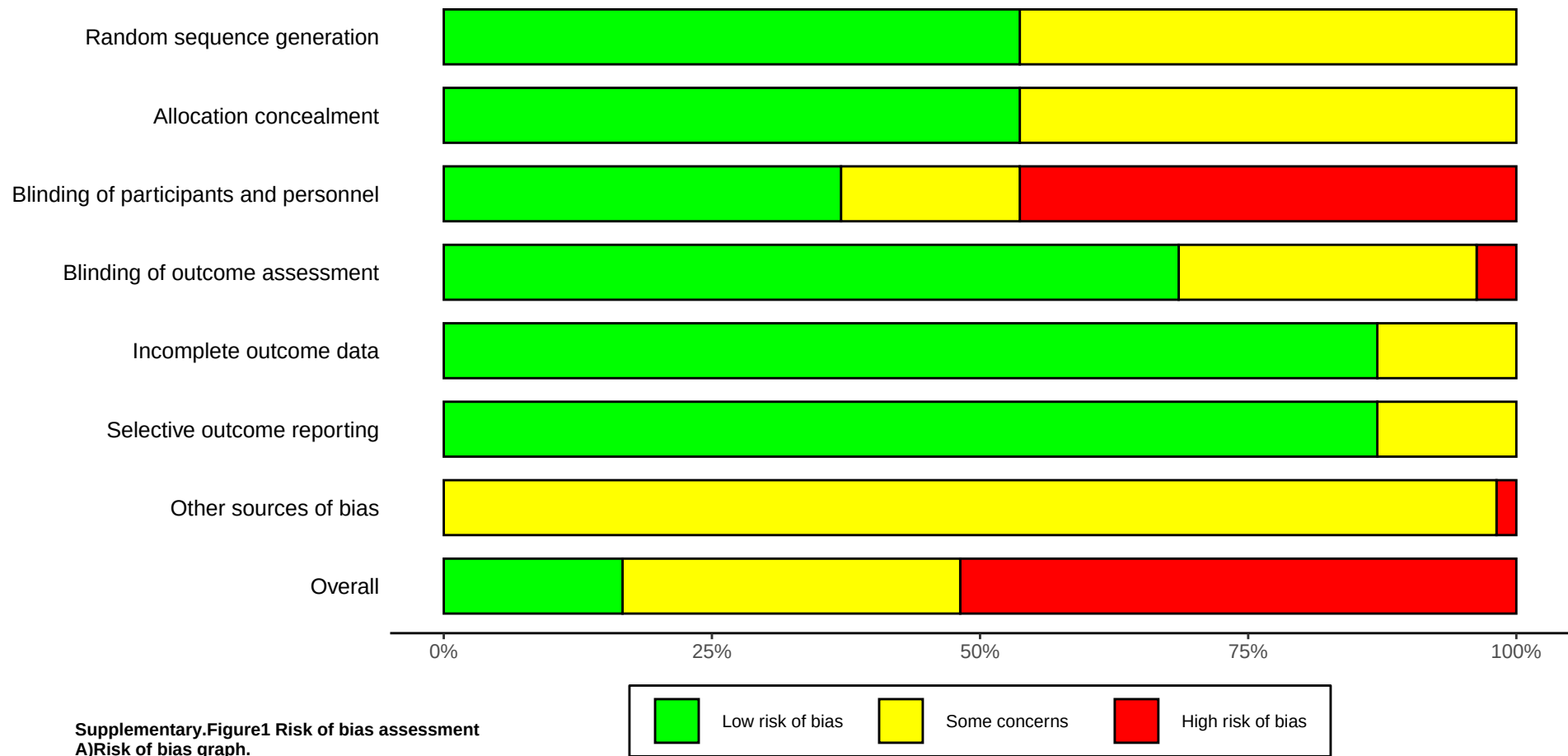




Supplementary.Figure1 Risk of bias assessment
A)Risk of bias graph.

Study	Risk of bias domains							Overall
	D1	D2	D3	D4	D5	D6	D7	
AVAIL	⊖	⊕	⊕	⊕	⊕	⊕	⊖	⊖
BEYOND2016	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
BR24	⊕	⊕	⊗	⊖	⊕	⊕	⊖	⊗
BR29	⊕	⊕	⊕	⊖	⊕	⊕	⊖	⊖
Canel	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
Canel-sq	⊖	⊖	⊕	⊕	⊖	⊖	⊖	⊖
Janira P Belandj	⊕	⊕	⊗	⊗	⊕	⊕	⊖	⊗
CheckMate 026	⊖	⊖	⊗	⊕	⊕	⊕	⊗	⊗
CheckMate 227	⊖	⊖	⊗	⊕	⊕	⊕	⊖	⊗
CheckMate 9LA	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
hid H. Johnson20	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
DENG Tac2014	⊕	⊖	⊖	⊖	⊕	⊕	⊖	⊖
E499	⊕	⊖	⊖	⊕	⊕	⊕	⊖	⊖
Empower-lung1	⊕	⊕	⊗	⊖	⊕	⊕	⊖	⊗
ERACLE	⊖	⊕	⊖	⊖	⊕	⊕	⊖	⊖
ESCAPE	⊖	⊖	⊖	⊕	⊕	⊕	⊖	⊖
SEMrSTONE-302	⊖	⊖	⊕	⊕	⊖	⊖	⊖	⊖
Govindar2017	⊖	⊖	⊕	⊕	⊕	⊕	⊖	⊖
HANB2011	⊕	⊖	⊕	⊕	⊕	⊕	⊖	⊖
HANL2009	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊗
Impower110	⊖	⊖	⊗	⊖	⊕	⊕	⊖	⊗
Impower130	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
Impower131	⊖	⊖	⊗	⊕	⊕	⊕	⊖	⊗
Impower132	⊕	⊕	⊗	⊖	⊕	⊕	⊖	⊗
Impower150	⊖	⊖	⊗	⊕	⊕	⊕	⊖	⊗
JO19907	⊖	⊕	⊗	⊕	⊕	⊕	⊖	⊗
JSICC-001	⊖	⊖	⊗	⊖	⊖	⊖	⊖	⊗
KEYNOTE-021q	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
KEYNOTE-024	⊖	⊖	⊗	⊕	⊕	⊕	⊖	⊗
KEYNOTE-042	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
KEYNOTE-189	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
KEYNOTE-407	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
pynde-407-Chif	⊖	⊖	⊕	⊕	⊕	⊕	⊖	⊖
Keynote-598	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
LOGIK1201	⊖	⊖	⊖	⊕	⊕	⊕	⊖	⊖
LuisG2012	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
Lyndt2012	⊖	⊖	⊖	⊕	⊕	⊕	⊖	⊖
MONET1-NSQ	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
MONET1-SQ	⊖	⊖	⊕	⊕	⊕	⊕	⊖	⊖
MONET-A	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
Muralam2010	⊖	⊖	⊖	⊗	⊖	⊖	⊖	⊗
MYSTIC	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
TASUKI-52	⊖	⊖	⊕	⊕	⊖	⊖	⊖	⊖
ORIENT-11	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
ORIENT-12	⊕	⊕	⊕	⊕	⊕	⊕	⊖	⊕
Prounce	⊖	⊖	⊗	⊖	⊕	⊕	⊖	⊗
Qun Chen2017	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊗
RATIONALE304	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
RATIONALE307	⊕	⊕	⊗	⊕	⊕	⊕	⊖	⊗
jeat C Doebele21	⊕	⊕	⊗	⊖	⊕	⊕	⊖	⊗
S. Thomas2018	⊕	⊕	⊗	⊖	⊕	⊕	⊖	⊗
low Ming Lee200	⊖	⊕	⊕	⊖	⊕	⊕	⊖	⊖
Sun2013	⊕	⊖	⊕	⊕	⊕	⊕	⊖	⊖
Xin Zhao2012	⊖	⊖	⊗	⊖	⊕	⊕	⊖	⊗

D1: Random sequence generation
D2: Allocation concealment
D3: Blinding of participants and personnel
D4: Blinding of outcome assessment
D5: Incomplete outcome data
D6: Selective outcome reporting
D7: Other sources of bias

Supplementary Figure 1 Risk of bias assessment
BJ Risk of bias summary

Judgement

⊕ Low
⊖ Unclear
⊗ High