

## Supplementary material

**Supplementary Table 1** EMBASE search strategy.

No.	Query	Results
1.	endocuff* OR 'endo cuff*' OR endocuff*.dn	169
2.	colonoscop* OR coloscop* OR 'colonoscopy'/exp OR 'colonoscope'/exp OR 'colonoscopic accessory'/exp OR 'colonic endoscopy cuff'/exp	87484
3.	#1 AND #2	163
4.	#3 NOT ('animal experiment'/de OR 'case report'/de OR 'meta analysis'/de OR 'model'/de OR 'network meta-analysis'/de OR 'nonhuman'/de OR 'practice guideline'/de OR 'systematic review'/de)	126
5.	#4 NOT ('conference review'/it OR 'editorial'/it OR 'review'/it OR 'short survey'/it)	108

**Supplementary Table 2** Adverse events compared based on network meta-analysis.

Adverse event	No. of Studies compared	HD vs ECU	HD vs ECV	ECV vs ECU	
		RR (95 % CI)			I <sup>2</sup>
Any complication	11	<b>0.20 (0.08 – 0.50)*</b>	1.40 (0.31 – 6.33)	<b>0.14 (0.02 – 0.84)*</b>	15.3%
Perforation	11	1.17 (0.22 – 6.39)	1.25 (0.28 – 5.53)	0.94 (0.10 – 8.94)	0%
Laceration	11	<b>0.12 (0.05 – 0.29)*</b>	1.05 (0.21 – 5.17)	<b>0.11 (0.02 – 0.70)*</b>	0%
Bleeding	11	0.97 (0.24 – 3.88)	1.21 (0.25 – 5.72)	0.80 (0.10 – 6.45)	0%

CI, confidence interval; ECU, first-generation Endocuff colonoscopy; ECV, Endocuff

Vision colonoscopy; HD, high-definition colonoscopy; RR: relative risk.

## Supplementary material

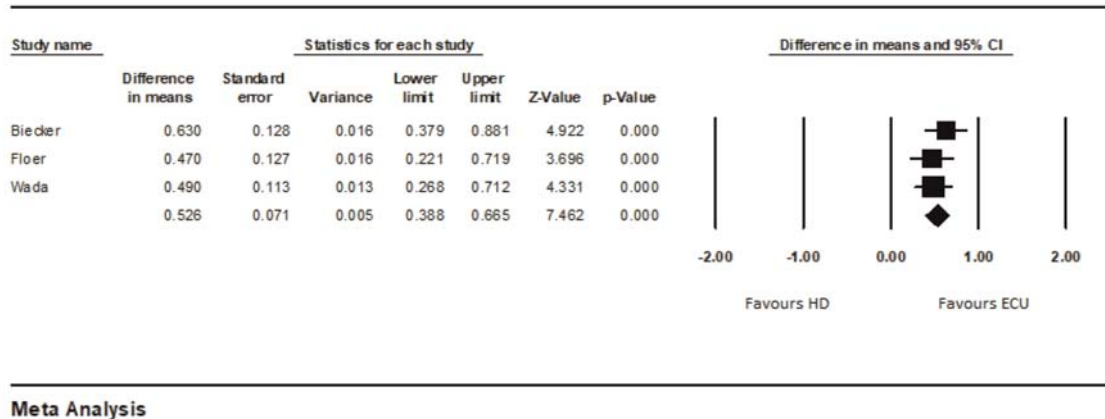
**Supplementary Table 3** Risk of bias for individual studies based on Cochrane risk of bias tools.

Study, year	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)
Biecker, 2015 [26]	Low	Unclear	High	High	Low	Low
De Palma, 2018 [27]	Low	Low	High	High	Low	Low
Floer, 2014 <sup>28</sup>	Low	Low	High	High	Low	Low
Van Doorne, 2017 [31]	Low	Unclear	High	High	Low	Low
Wada, 2018 [32]	Low	Low	High	High	Low	Low
Rex (1), 2018 [34]	Low	Low	High	High	Low	Low
Bhattacharyya, 2017 [25]	Low	Low	High	High	Low	Low
Jacob, 2019 [29]	Low	Low	High	High	Low	Low
Ngu, 2017 [15]	Low	Unclear	High	High	Low	Low
Rex (2), 2019 [30]	Low	Low	High	High	Low	Low
Von Figura, 2019 [33]	Low	Low	High	High	Low	Low
Karsenti, 2020 [35]	High	High	High	High	Low	Low

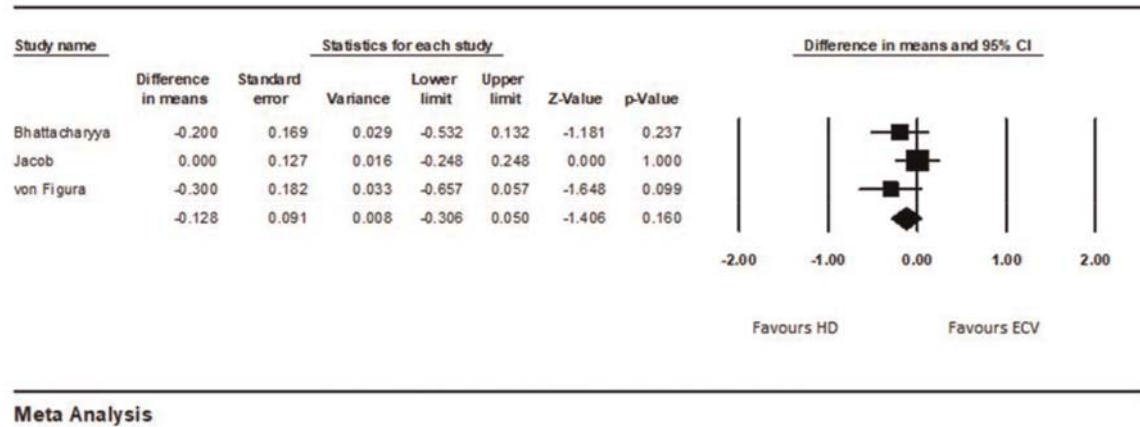
## Supplementary material

**Supplementary Fig. 1** Forrest plot for direct meta-analysis comparing **a** MPP for ECU vs HD, **b** MPP for ECV vs HD, **c** MAP for ECU vs HD, and **d** MAP for ECV vs HD. CI, confidence interval; ECU, first-generation Endocuff colonoscopy; ECV, Endocuff Vision colonoscopy; MAP, mean adenoma per procedure; MPP, mean polyp per procedure.

(A)

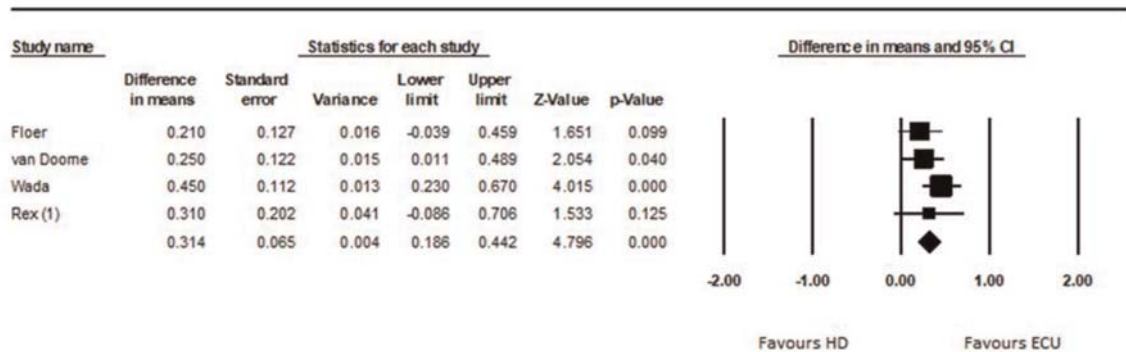


(B)



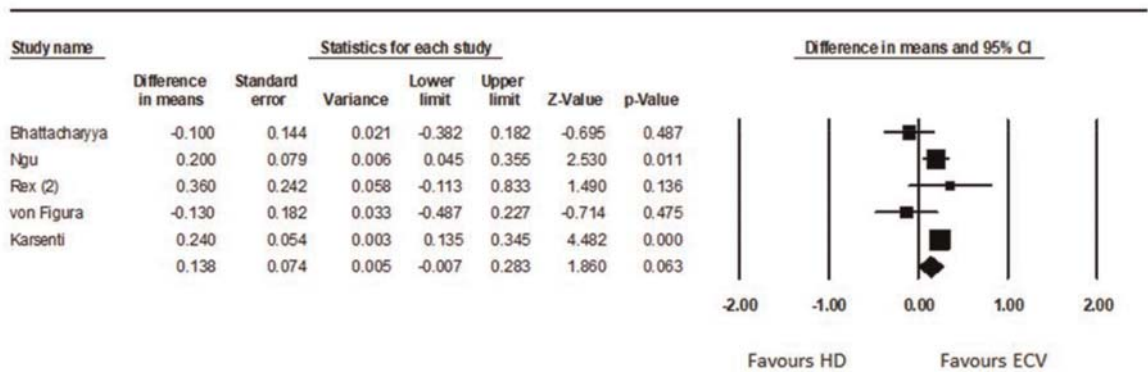
## Supplementary material

(C)



### Meta Analysis

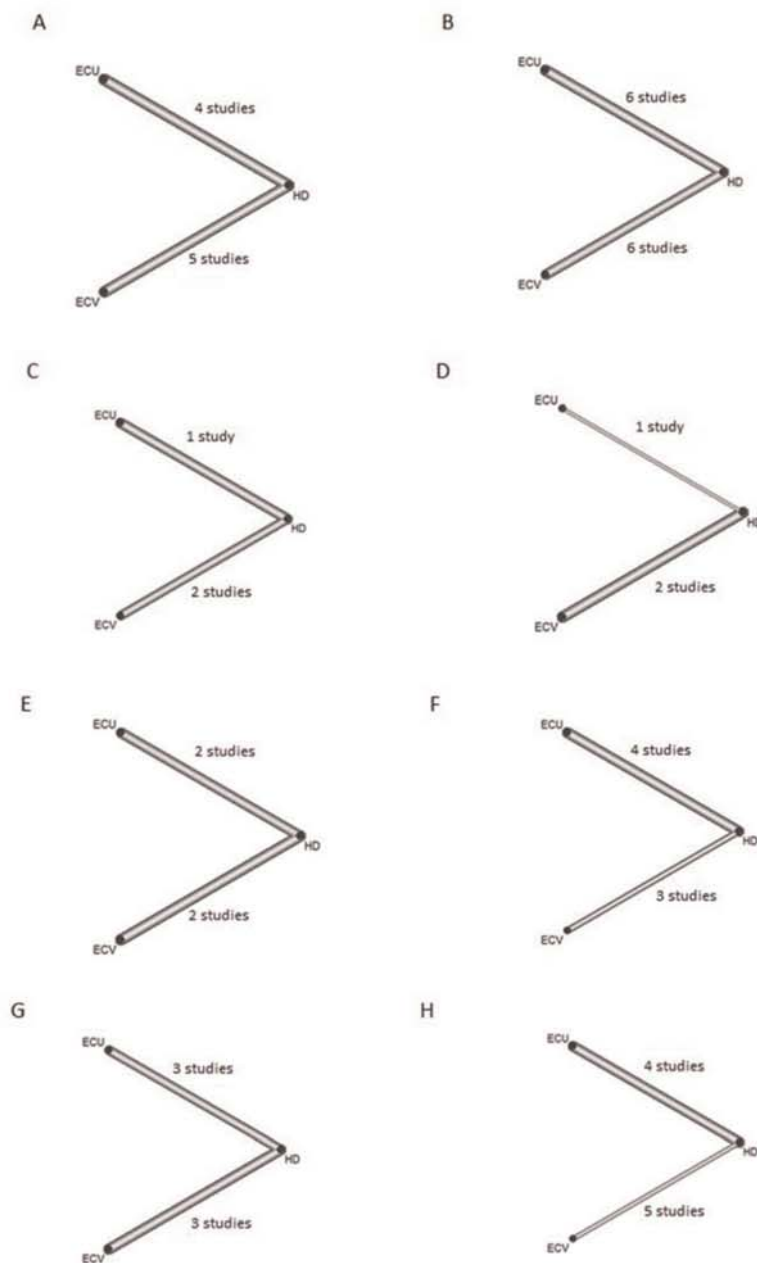
(D)



### Meta Analysis

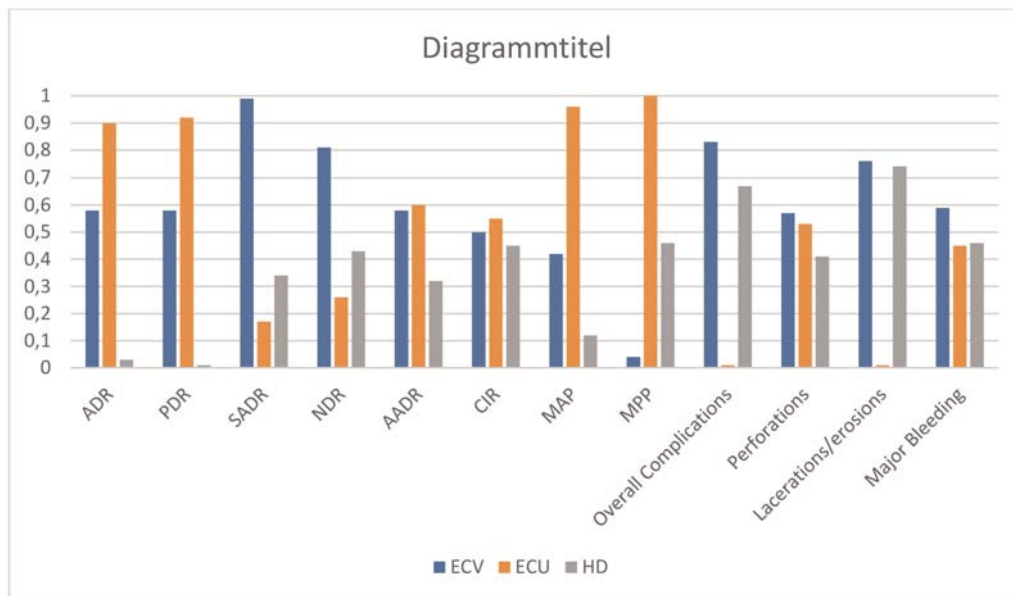
## Supplementary material

**Supplementary Fig. 2** Network diagram for **a** PDR, **b** ADR, **c** SADR, **d** NDR, **e** AADR, **f** CIR, **g** MPP, and **h** MAP. AADR, advanced adenoma detection rate; ADR, adenoma detection rate; CIR, cecal intubation rate; ECU, first-generation Endocuff; ECV, Endocuff Vision; HD, high-definition colonoscopy; MAP, mean adenoma per procedure; MPP, mean polyp per procedure; NDR, neoplasia detection rate; PDR, polyp detection rate. Note: Line represents a direct comparison, width of line corresponds to weight, overall effect and number of studies).



## Supplementary material

**Supplementary Fig. 3** Ranking for intervention based on outcomes. A higher P score correspond to superior detection rates or lower complication rates. AADR, advanced adenoma detection rate; ADR, adenoma detection rate; CIR, cecal intubation rate; ECU, first-generation Endocuff colonoscopy; ECV, Endocuff Vision colonoscopy; HD, high-definition colonoscopy; MAP, mean adenoma per procedure; MPP, mean polyp per procedure; NDR, neoplasia detection rate; PDR, polyp detection rate; SADR, serrated adenoma detection rate.



## Supplementary material

**Supplementary Fig. 4** Funnel plot based on overall ADR for all interventions with visible symmetry.

