

Supplementary Table 1: Summary of procedural characteristics, device specifics and limitations of each study

S. No.	Author/ Year/ Location	Type of Colonoscopy	Number of Subjects/ Number analysed	Device/ Colonoscope used	Cap specifics	Endoscopist experience	Bowel Preparation method	Quality of Bowel Preparation	Anesthesia type/ Anesthetic agent/ Anesthetic dose	Withdrawal Time (Minutes)	Study Limitations
1	Floer M et al/ 2014/ Germany (7)	Endocuff colonoscopy (EC)	252/ 249	1. Fujifilm (EC-590 WM4/ WL4) with AEC 120 2. Olympus (CF-H180/AI/ AL) with AEC140	Not applicable (NA)	1. 10 gastroenterologists 2. Each had performed ≥3000 prior colonoscopy and at least 5 EC	Moviprep	1. Good: 74% 2. Fair: 21% 3. Poor: 5% p = 0.797	1. Conscious sedation 2. Propofol +/- Fentanyl 3. Median amount (mg) of propofol (IQR): 150 (100-200) p=0.004	Median (Interquartile range- IQR): 6.32 (5.5-8.0) p = 0.524	Bias secondary to lack of blinding
		Standard colonoscopy (SC)	248/ 243	1. Fujifilm (EC-590 WM4/ WL4) 2. Olympus (CF-H180/AI/ AL)				1. Good: 72% 2. Fair: 22% 3. Poor: 5%	1. Conscious sedation 2. Propofol +/- Fentanyl 3. Median amount (mg) of propofol (IQR): 170 (130-210)	Median (IQR): 6.05 (5.5-8.0)	

2	Biecker et al/ 2013/ Germany (8)	EC	245/ 240	1. Fujifilm (EC-590 WM4, EC-590 WL4) with AEC120 2. Olympus (CH H180 AI) with AEC140	NA	1. 6 board certified gastroenterologists 2. Each had performed at least 3000 c-scopes before.	12 hours (hrs) fasting + standard bowel prep protocol using Moviprep	1. Good: 170 (69%) 2. Fair: 64 (26%) 3. Poor: 11 (4%) p - not significant (NS)	1. Conscious sedation 2. Propofol: 60-80 mg initial dose, repeated dose- 40-60 mg prn 3. Analgesia: Fentanyl 50 µgm intravenous (IV) ± prn	DNA	1. Investigator bias - endoscopists not blinded. 2. Withdrawal time not calculated.
		SC	253/ 249	1. Fujifilm (EC-590 WM4, EC-590 WL4) 2. Olympus (CH H180 AI)				1. Good: 164 (65%) 2. Fair: 76 (30%) 3. Poor: 13 (5%)		DNA	
3	Lenze et al/ 2014/ Germany (9)	EC	50	Data not available (DNA)	NA	DNA	DNA	DNA	DNA	Mean (95% confidence interval- CI): 6.9 (6.3-7.5)	-

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4	Frieling et al/ 2013/ Germany (10)	Cap assisted colonoscopy (CAC)	252	1. Fujinon (EC-590WM)	Olympus D201 cap Length: 5-10 mm	1. 8 gastroenterologists 2. 5 years (yrs) experience and each performed >3000 c-scopes	3 day low residue diet with 4litres (lt) of Moviprep or 90ml of Phosphosoda	1. Excellent: 12.3% 2. Good: 43.3% 3. Fair: 40.1% p - NS	1. Conscious sedation 2. Propofol (mg, mean \pm SD): 75.4 \pm 52.4 3. Midazolam (mg, mean \pm SD): 1.8 \pm 1.7 p- NS	Mean \pm SD: 9.7 \pm 5.1 p > 0.05
		Conventional colonoscopy (CC)	252	1. Fujinon (EC-590WM)	NA			1. Excellent: 19.4% 2. Good: 47.2% 3. Fair: 26.2%	1. Conscious sedation 2. Propofol (mg, mean \pm SD): 75.9 \pm 54.2 3. Midazolam (mg, mean \pm SD): 1.8 \pm 1.5	Mean \pm SD: 9.9 \pm 5.2

5	Lee YT et al/ 2008/ Hong Kong (11)	CAC	499/ 480	1. Olympus (CF-240 or CF-Q240)	Olympus MAJ-665 or MH-596 cap	1. 11 colonoscopists 2. 8 with 5 yrs experience with >3000 cases 3. 3 with 2 yrs experience with >1000 cases	3 day low residue diet with 4L of Moviprep or 90ml of Phosphosoda	1. Excellent: 52.7%	1. Conscious sedation	Mean \pm SD: 8.6 \pm 7.0 p = 0.07	1. Bias in difficulty of procedure score and bowel prep for CAC- no blinding
		Regular Colonsopy (RC)	501/ 474	1. Olympus (CF-240 or CF-Q240)	NA			2. Fair: 33.5%	2. Diazepam (mg, mean \pm SD): 2.6 \pm 2.6 p=0.70		
								3. Poor: 13.8%	3. Pethidine (mg, mean \pm SD): 13 \pm 13.1 p=0.91		
								p = 0.006			
									2. Fair: 28.1%		
									3. Poor: 9.6%		
									3. Pethidine (mg, mean \pm SD): 13.2 \pm 12.9		

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6	Wijkerslooth TR et al/ 2011/ Amsterdam, Rotterdam, Netherlands (12)	Cap-assisted Colonoscopy (CAC)	686/ 656	1. Olympus [CF-Q160 (140°), CF-Q180 (160°), PCF-Q180 (140°)]	Olympus D-201-12704-13.4 mm diameter or D-201-14304- 15.0 mm diameter The cap edge protruded 4 mm beyond the colonoscope tip	1. 5 endoscopists 2. Each had performed \geq 1000 c-scopes 3. Trained in CAC with at least 20 CAC procedures	Low fibre diet, per oral (PO) 2 litre transparent fluid and 2 litre of Moviprep	1. Ottawa Score: 5.8 \pm 3.1 2. Good: 434 (66%)	1. Conscious sedation 2. Analgesia-Fentanyl/ Midazolam IV prn	Median (IQR): 10 (8-15) p = 0.64	1. Investigator bias: blinding not possible at time of colonoscope 2. Investigator bias: discomfort during colonoscope scored by staff
		Conventional Colonoscopy (CC)	694/ 683	1. Olympus [CF-Q160 (140°), CF-Q180 (160°), PCF-Q180 (140°)]	NA			1. Ottawa Score: 5.5 \pm 3.7 2. Good: 434 (68%)		Median (IQR): 10 (8-14)	

7	Rastogi A et al/ 2011/ Kansas, USA (13)	CAC	212/ 210	1. Olympus (CF-H180AL)	Olympus D-201-15004 cap The cap edge protruded 4 mm beyond the colonoscope tip	1. 3 endoscopists 2. >3000 c-scopes performed by each 3. 20 CAC performed	DNA	1. Excellent: 18% 2. Good: 74% 3. Fair: 8% p = 0.29	1. Moderate conscious sedation 2. Midazolam (Mean \pm SD): 3.7 \pm 1 mg p= 0.88 3. Meperidine (Mean \pm SD): 89.5 \pm 23.6 mg p= 0.95 4. Fentanyl (Mean \pm SD): 129.4 \pm 66.9 mg p= 0.93	1. > 6min: 44% p = 1.0 2. Mean \pm SD: 5.95 \pm 1.58 p = 0.75	1. > 50% cases performed by one endoscopist 2. Study group included male veterans >60 yrs 3. Investigator bias- no blinding
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		SC	215/ 210	1. Olympus (CF-H180AL)	NA			1. Excellent: 23% 2. Good: 70% 3. Fair: 6%	1. Moderate conscious sedation 2. Midazolam (Mean \pm SD): 3.6 \pm 1 mg 3. Meperidine (Mean \pm SD): 89.4 \pm 21.4 mg 4. Fentanyl (Mean \pm SD): 131.2 \pm 53.6 mg	1. > 6min: 44% 2. Mean \pm SD: 5.98 \pm 1.45	
8	Seon- Young et al/ 2011/ South Korea (14)	CAC	166	1. Olympus (CF-240 or CF-Q240)	Olympus D-201-12704 cap Diameter- 13.4 mm The cap edge protruded 4 mm beyond the colonoscope tip	1. 2 colonoscopists 2. Total of >3000 cases cumulatively	3 day low residue diet with 4L of polyethylene glycol (PEG)	DNA	DNA	Mean \pm SD: 20.3 \pm 13.1 p = 0.074	1. Only 2 operators and unblinded

		RC	163	1. Olympus (CF-240 or CF-Q240)	NA			DNA		Mean \pm SD: 18.1 \pm 10.1	
9	Tee HP et al/ 2009/ Sydney (15)	CAC	200/ 192	1. Olympus (CF-Q160 AL) 2. Olympus (CF-Q180AL) 3. Olympus (PCF-160 AL) 4. Olympus (PCF-180 AL)	1. Olympus D-201-15004 cap, 15.3 mm diameter 2. Olympus D-201-14304 cap, 14.6 mm diameter 3. Olympus D-201-12704 cap, 13.0 mm diameter The cap edge protruded 4 mm beyond the colonoscope tip	1. 5 consultant gastroenterologists (C) 2. 10 trainees (T)	1 day prior-clear diet with sodium phosphate or picosulfate based prep and fasting for 8 hrs	1. Good: 54% 2. Satisfactory: 35.9% 3. Poor: 10.1% p = 0.10	1. Conscious or deep sedation 2. Midazolam 3. Fentanyl 4. Propofol 5. prn hyoscine butylbromide-antispasmodic	DNA	Investigator bias-unblinded study
		SC	200/ 195	1. Olympus (CF-Q160 AL, CF-Q180AL, PCF-160 AL, PCF-180 AL)	NA			1. Good: 65.7% 2. Satisfactory: 26.8% 3. Poor: 7.6%		DNA	

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10	Lee et al/ 2005/ Hong Kong (16)	CAC	100		1. C-scope detail- Data Not Available (DNA)	1. Olympus MH- 597 cap	1. Gastroenterology fellows with at least 1 year of experience	DNA	DNA	DNA	DNA	1. 76/ 100 CAC performed by same endoscopist 2. Cannot rule out confounder that repeat colonoscopy by second endoscopist increases the success rate
11	Dik et al/ 2015/ Israel, Netherlands and USA (17)	Endorings colonoscopy	First	62/57	1. Olympus Evis Exera II 180 and 190 series or Pentax 3890 series	1. Endoring attached to distal tip of colonoscopy	1. Six experienced gastroenterologists performed the procedure for all subjects in the study	4 L split dose polyethylene glycol based solution or picosulfate solution	BBPS (mean ± SD)- 7.8 ± 1 p = 0.838	1. Concious sedation 2. Combination of midazolam and fentanyl, with or without propofol	1. Mean ± SD- 7.4 ± 1.9	
			Second						DNA			
		SC	First	64/59		NA			BBPS (mean ± SD)- 7.8 ± 1 p = 0.838		1. Mean ± SD- 7.2 ± 2.2	
			Second						DNA			