

Supplement Table 1 – Included study characteristics

Study Country Type of study Quality score	Patient population	Early colonoscopy	Control	Definition of rebleeding
Randomised controlled trials				
Green et al., 2005 ¹ (USA) RCT	Acute LGIB	< 8 hours of hospitalization for the diagnosis of hematochezia	Standard of care*	Hematochezia developing after index colonoscopy or angiography was defined as that occurring after clinical cessation of the index bleeding event
Laine et al., 2010 ² (USA) RCT	LGIB	< 12 hours after presentation	Elective colonoscopy (36-60 hours after presentation)	Hematochezia persisting for > 24 h, recurrent hematochezia after initial resolution of hematochezia (e.g., brown stool followed by recurrent hematochezia), heart rate > 100 beats/ min or systolic blood pressure < 100 mm Hg after hemodynamic stability for ≥ 1 h, or hemoglobin drop > 2 g/ dl after stable hemoglobin values
Prospective studies				
Jensen et al., 2000 ³ (USA) Jadad score: 8	Severe hematochezia and diverticulosis*	6-12 hours after hospitalization or the diagnosis of hematochezia and within 1 hour after clearance of stool, blood, and clots, as documented by a physician	Medical or surgical treatment	Not specified
Repaka et al., 2012 ⁴ (USA) Jadad score: n/a	Severe Lower GI Bleeding	6-24 hours of bloody bowel movement	None	Maroon or red blood from the rectum after a 24 hour period of no observed bleeding associated with a 5% drop in hematocrit or recurrence of hemodynamic instability

Albeldawi et al., 2014 ⁵ (USA) Jadad score: 8	Acute lower GI bleeding	≤ 24 hours of admission	Elective endoscopy (>24 hours)	Bleeding occurring after colonoscopy and clinical cessation of index bleeding event during the hospitalization
Berrozpe et al., 2010 ** Abstract Jadad score: n/a	Lower gastrointestinal bleeding	≤ 24 hours of admission	None	Rectal bleeding together with decrease in hematocrit of ≥20% and/or additional blood transfusions, and/or readmission due to the same condition within 1 week of discharge
Retrospective studies				
Ohyama et al., 2000 (Japan) Jadad score: n/a	Acute hematochezia	≤ 24 hours (after bleeding episode)	None	Not specified
Angtuaco et al., 2001 ⁶ (USA) Jadad score: 8	Acute lower GI tract bleeding	≤ 24 hours of admission	No colonoscopy	Not specified
Bloomfeld et al., 2001 ⁷ (USA) Jadad score: n/a	Diverticular hemorrhage	Included as per definition above: * Colonoscopy was performed within 24 hours of presentation in nine patients and between 24-72 hours of presentation in three patients	None	Early rebleeding was defined as clinical evidence of recurrent lower GI hemorrhage, and was deemed to be present if the patient had one or more episodes of bright red blood per rectum within 30 days of the index bleed
Strate et al., 2003 (USA) Jadad score: 8	Acute LGIB (excluded small bowel source)	<12 hours from admission and 12-24 hours from admission	Colonoscopy (24-48 hours) and colonoscopy (>48 hours) No colonoscopy	Blood per rectum after 24 h of stability accompanied by a drop in Hct of at least 20%, and/or a requirement of additional blood transfusions.
Strate et al., 2005 ⁸ (USA) Jadad score: 9	Acute lower intestinal bleeding	≤ 24 hours of admission	Radiographic evaluation	Bleeding occurring after 24 hours without evidence of bleeding that resulted in additional blood transfusions, and/or a further

				decrease in hematocrit of at least 20%, and/or rehospitalization for bleeding within 7 days of discharge.
Lim et al., 2013 (Korea) Jadad score: n/a	Hematochezia	≤ 24 hours of admission	None (study compared enema vs PEG groups, they were combined for the purpose of our study)	Not specified
Smoot et al., 2003 ⁹ (USA) Jadad score: n/a	Diverticular hemorrhage	Included as per definition above: Not defined in methods. Colonoscopies were performed a mean of 18 ± 11 hours after admission. 21 patients (27%) had the index colonoscopy within 12 hours, 39 patients (50%) between 12 and 24 hours, and 18 patients (23%) 24 hours after admission.	None	Not specified
Lin et al., 2011 (Taiwan) Jadad score: n/a	Acute LGIB	≤ 24 hours (after the onset of bleeding)	None	Not specified
Ishii et al., 2012 ¹⁰ (Japan) Jadad score: n/a	Colonic diverticular hemorrhage	6 to 12 hours after hospitalization or the diagnosis of hematochezia and within 1 hour after clearance of stool and clots	None	clinical evidence of recurrent lower GI bleeding within 30 days after initial treatment,
Navaneethan et al., 2014 ¹¹ (USA) Jadad score: 8	Lower GI bleeding	≤ 24 hours of admission	Delayed colonoscopy (>24 hours)	Not specified
Niikura et al., 2015 (Japan) Jadad score: 9	Acute, continuous, or severe hematochezia	≤ 24 hours	24-48 hours and >48 hours	significant amount of fresh bloody or wine-colored stool (>200 mL) without lower abdominal pain after discharge and was evaluated by colonoscopy with or without multidetector computed tomography wherever possible.
Nagata et al., 2016 (Japan)	Acute Lower GI Bleeding	≤ 24 hours of admission	Elective endoscopy (>24 hours after hospital admission)	significant amounts of fresh bloody or wine-colored stools after index

Jadad score: 9				colonoscopy with unstable vital signs, systolic blood pressure ≥ 90 mm Hg or pulse ≥ 110 beats/min, and/or the need for blood transfusion
Jensen et al., 2016 Abstract Jadad score: n/a	Severe hematochezia and diverticulosis*	As reported in previous included study	None	Not specified
Vitale et al., 2016 (Italy) Abstract Jadad score: n/a	Lower GI Bleeding	≤ 24 hours	None	Not specified
Hassan et al., 2016 (USA) Abstract Jadad score: 5	Diverticular hemorrhage	≤ 24 hours of admission	Elective endoscopy (>24 hours)	Not specified

LGIB: lower GI bleed; RCT: randomized controlled trial ; n/a: not applicable

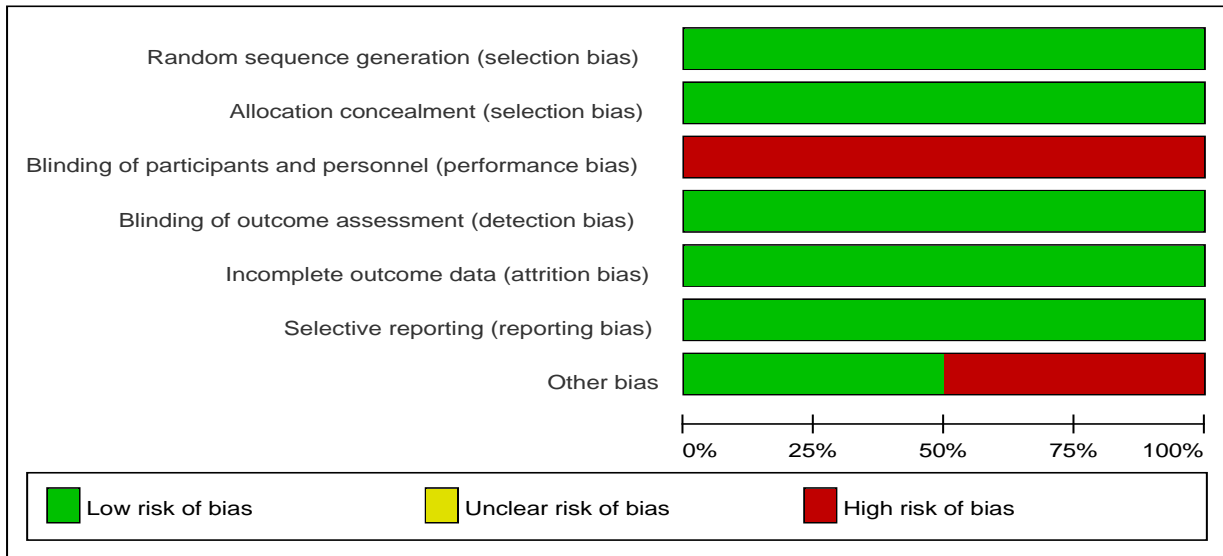
* Standard care algorithm. "Technetium RBC scanning was performed on patients with suspected active bleeding while those without active bleeding had an elective colonoscopy. Patients with a positive technetium scan went to visceral angiography while those with a negative scan had an elective colonoscopy. Active bleeding on angiography was treated. All patients receiving angiography (whether positive or negative) had an elective colonoscopy."

Appendix – 1 Search String

Search Strategy adapted to Embase and Medline

- 1 Gastrointestinal Hemorrhage/
- 2 (gastrointestinal adj5 bleed\$).tw.
- 3 (gastrointestinal adj5 hemorrhag\$).tw.
- 4 (gastrointestinal adj5 haemorrhag\$).tw.
- 5 (fecal adj1 hemoglobin).tw.
- 6 (GI adj25 bleed\$).tw.
- 7 LGIB.tw.
- 8 or/1-7
- 9 (Urgent\$ adj5 colonos\$).tw.
- 10 (Emergenc\$ adj5 colonos\$).tw.
- 11 (<'24' adj5 colonos\$).tw.
- 12 (early adj5 colonos\$).tw.
- 13 or/9-12
- 14 8 and 13

Appendix – 2 Cochrane risk bias tool



Appendix 3 - GRADE

Quality assessment							№ of patients		Effect		Quality	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Early	Control	Relative (95% CI)	Absolute (95% CI)		
Overall rebleeding rate												
2	observational studies	not serious	not serious	not serious	serious ^a	none	58/381 (15.2%)	80/551 (14.5%)	OR 0.89 (0.49 to 1.94)	14 fewer per 1,000 (from 68 fewer to 103 more)	⊕○○○ ○ VERY LOW	CRITICAL
Mortality (all causes)												
6	observational studies	not serious	not serious	not serious	serious ^a	none	7/371 (1.9%)	5/538 (0.9%)	OR 0.89 (0.35 to 2.31)	1 fewer per 1,000 (from 6 fewer to 12 more)	⊕○○○ ○ VERY LOW	CRITICAL
Mortality (Related to LGIB)												
4	observational studies	not serious	not serious	not serious	serious ^a	none	1/184 (0.5%)	3/338 (0.9%)	OR 0.61 (0.12 to 3.23)	3 fewer per 1,000 (from 8 fewer to 19 more)	⊕○○○ ○ VERY LOW	CRITICAL
Surgery												

Quality assessment							№ of patients		Effect		Quality	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Early	Control	Relative (95% CI)	Absolute (95% CI)		
5	observational studies	not serious	not serious	not serious	serious ^a	none	16/306 (5.2%)	19/302 (6.3%)	OR 0.78 (0.39 to 1.55)	13 fewer per 1,000 (from 31 more to 37 fewer)	⊕○○○ ○ VERY LOW	IMPORTANT
Definite cause of Acute LGIB (including SHR)												
6	observational studies	serious ^b	not serious	not serious	serious ^a	none	147/486 (30.2%)	71/579 (12.3%)	OR 4.12 (2.00 to 8.49)	243 more per 1,000 (from 96 more to 420 more)	⊕○○○ ○ VERY LOW	IMPORTANT
Definite cause of Acute LGIB												
6	observational studies	serious ^b	not serious	not serious	serious ^a	none	199/347 (57.3%)	175/449 (39.0%)	OR 2.94 (0.81 to 10.64)	263 more per 1,000 (from 49 fewer to 482 more)	⊕○○○ ○ VERY LOW	IMPORTANT

CI: Confidence interval; OR: Odds ratio

a. low sample size

b. Heterogeneity noted

1. Green BT, Rockey DC, Portwood G, et al. Urgent colonoscopy for evaluation and management of acute lower gastrointestinal hemorrhage: a randomized controlled trial. *The American journal of gastroenterology* 2005;100:2395-402.
2. Laine L, Shah A. Randomized trial of urgent vs. elective colonoscopy in patients hospitalized with lower GI bleeding. *The American journal of gastroenterology* 2010;105:2636-41; quiz 42.
3. Jensen DM, Machicado GA, Jutabha R, Kovacs TO. Urgent colonoscopy for the diagnosis and treatment of severe diverticular hemorrhage. *The New England journal of medicine* 2000;342:78-82.
4. Repaka A, Atkinson MR, Faulx AL, et al. Immediate unprepared hydroflush colonoscopy for severe lower GI bleeding: a feasibility study. *Gastrointestinal endoscopy* 2012;76:367-73.
5. Albeldawi M, Ha D, Mehta P, et al. Utility of urgent colonoscopy in acute lower gastro-intestinal bleeding: a single-center experience. *Gastroenterology report* 2014;2:300-5.
6. Angtuaco TL, Reddy SK, Drapkin S, Harrell LE, Howden CW. The utility of urgent colonoscopy in the evaluation of acute lower gastrointestinal tract bleeding: a 2-year experience from a single center. *The American journal of gastroenterology* 2001;96:1782-5.
7. Bloomfeld RS, Rockey DC, Shetzline MA. Endoscopic therapy of acute diverticular hemorrhage. *The American journal of gastroenterology* 2001;96:2367-72.
8. Strate LL, Syngal S. Predictors of utilization of early colonoscopy vs. radiography for severe lower intestinal bleeding. *Gastrointestinal endoscopy* 2005;61:46-52.
9. Smoot RL, Gostout CJ, Rajan E, et al. Is early colonoscopy after admission for acute diverticular bleeding needed? *The American journal of gastroenterology* 2003;98:1996-9.
10. Ishii N, Setoyama T, Deshpande GA, et al. Endoscopic band ligation for colonic diverticular hemorrhage. *Gastrointestinal endoscopy* 2012;75:382-7.
11. Navaneethan U, Njei B, Venkatesh PG, Sanaka MR. Timing of colonoscopy and outcomes in patients with lower GI bleeding: a nationwide population-based study. *Gastrointestinal endoscopy* 2014;79:297-306 e12.