

Early Versus Delayed Diverting Ileostomy Closure After Low Anterior Resection for Rectal Cancer: A GRADE-Assessed Systematic Review and Meta-Analysis of Comparative Studies

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01 INTRODUCTION

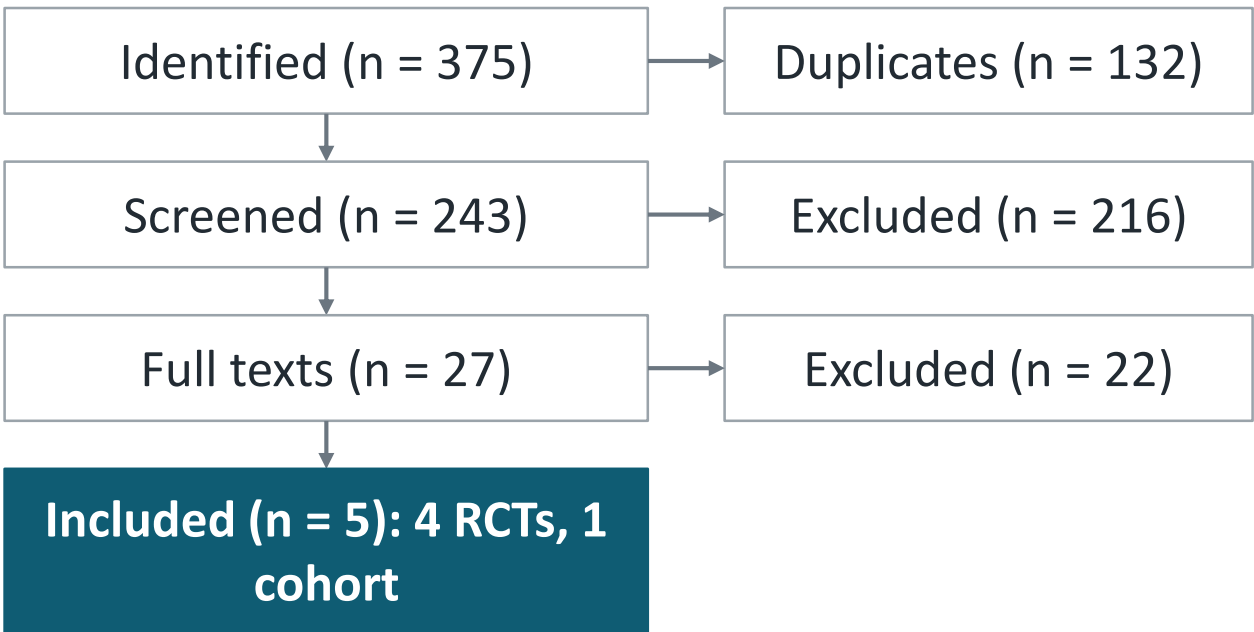
- Diverting loop ileostomy mitigates the consequences of anastomotic leakage after LAR with TME
- The stoma carries its own morbidity: high output, dehydration, acute kidney injury, peristomal skin injury and readmission
- Conventional reversal is delayed ≥12 weeks and is often postponed further by adjuvant chemotherapy
- Early closure shortens exposure to stoma-related morbidity and the need for stoma care
- Prolonged diversion may impair neorectal function and add to LARS
- Earlier restoration of continuity may ease delivery of adjuvant therapy
- Concern: reversal during the inflammatory phase, with possible occult pelvic sepsis
- Trials suggest early closure is feasible once leak is excluded

02 AIM

To compare postoperative safety and stoma-related outcomes of early versus delayed diverting ileostomy closure after LAR for rectal cancer.

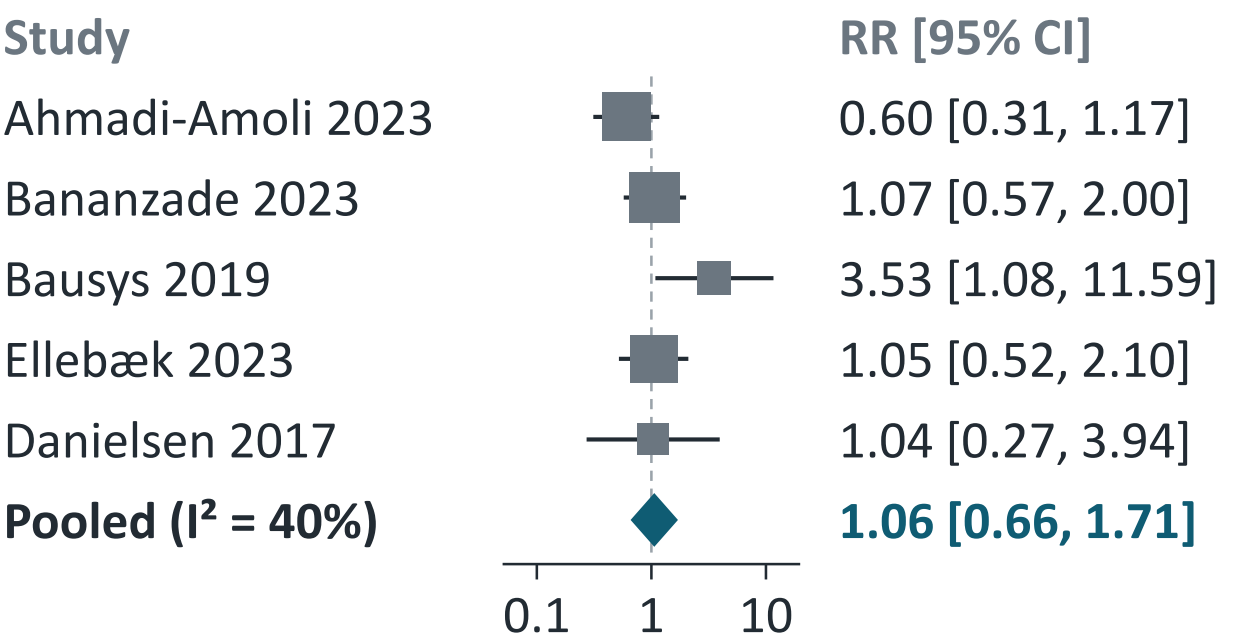
03 METHODS

- PRISMA 2020 / MOOSE; four databases searched
- RCTs and comparative cohort studies
- Random-effects RR/MD; RoB 2, ROBINS-I, GRADE



04 RESULTS

Overall morbidity after closure (primary outcome)



Events 52/257 vs 50/255; P = 0.81

Outcome	Effect (95% CI)	P
Overall morbidity	RR 1.06 (0.66–1.71)	0.81
Severe morbidity	RR 0.77 (0.32–1.86)	0.56
Reoperation	RR 1.46 (0.56–3.83)	0.44
Stoma duration	MD -107 d (-153, -61)	<0.001
Hospital stay	MD 0.2 d (-1.1, 1.4)	0.79
Operative time	MD -19 min (-41, 3)	0.09

GRADE: moderate (low: stay, operative time)

05 DISCUSSION

- No rise in morbidity, severe morbidity, reoperation
- Stoma duration reduced by ~107 days
- Safety requires exclusion of leak and pelvic sepsis
- Heterogeneity: variable timing and screening protocols

06 CONCLUSION

Early ileostomy closure is safe in selected patients and shortens stoma duration.

- Protocolised pre-closure assessment is essential
- Not advised in unrecovered or high-risk patients

References (included studies): 1. Ahmadi-Amoli H, et al. Langenbecks Arch Surg. 2023;408:234. 2. Bananzade A, et al. Asian J Surg. 2023;46:4277–82. 3. Bausys A, et al. J Surg Oncol. 2019;120:294–9. 4. Ellebæk MB, et al. Sci Rep. 2023;13:5818. 5. Danielsen AK, et al. Ann Surg. 2017;265(2):284–90.