SUPPLEMENTARY MATERIALS

Search Strategies:

Pubmed:

("Fournier Gangrene"[Mesh] OR "Fournier gangrene*" OR "necrotizing fasciitis"[Mesh] OR "necrotiz* fasciitis" OR "necrotiz* soft tissue infection*" OR "genital gangrene*" OR "scrotal gangrene*" OR "perineal gangrene*" OR "synergistic gangrene*" OR "streptococcal gangrene*" OR ("gas gangrene*" AND ("perine*" OR "genital*")) OR "polymicrobial necrotiz* infection*" OR ("flesh-eating disease" AND ("perine*" OR "genital*")) OR "perine* sepsis" OR "perine* infection*" OR "perine* necros*") AND ("Fecal Diversion*" OR "Colostomy"[Mesh] OR "colostom*" OR "stoma*" OR "diverting colostom*" OR "diverting stom*" OR "loop colostom*" OR "end colostom*" OR "ileostom*" OR "bowel diversion*" OR "fecal stream diversion*" OR "temporary colostom*" OR "defunctioning stom*" OR "proximal diversion*")*

Embase:

('fournier gangrene'/exp OR 'fournier gangrene*' OR 'necrotizing fasciitis'/exp OR 'necrotiz* fasciitis' OR 'necrotizing soft tissue infection'/exp OR 'necrotiz* soft tissue infection*' OR 'necrotizing infection*' OR 'genital gangrene*' OR 'scrotal gangrene*' OR 'perineal gangrene*' OR 'synergistic gangrene*' OR 'streptococcal gangrene*' OR ('gas gangrene*' AND (perine* OR genital*)) OR 'polymicrobial necrotiz* infection*' OR ('flesh-eating disease' AND (perine* OR genital*)) OR 'perine* sepsis' OR 'perine* infection*' OR 'perine* necros*') AND ('feces diversion'/exp OR 'fecal diversion*' OR 'colostomy'/exp OR colostom* OR stoma* OR 'diverting colostom*' OR 'diverting stoma*' OR 'loop colostom*' OR 'end colostom*' OR ileostom* OR 'bowel diversion*' OR 'fecal stream diversion*' OR 'temporary colostom*' OR 'defunctioning stoma*' OR 'proximal diversion*')*

Scopus search:

("Fournier" OR "Fournier gangrene" OR "Fournier's gangrene" OR "perineal necrotizing infection*" OR "perineal necrotiz* fasciitis" OR "perineal soft tissue infection*" OR "perineal sepsis" OR "perineal infection*") AND ("fecal diversion*" OR "colostomy" OR colostom* OR stoma* OR "diverting colostom*" OR "diverting stoma*" OR ileostom* OR "bowel diversion*" OR "fecal stream diversion*")*

Cochrane

(“Fournier” OR “Fournier gangrene” OR “Fournier’s gangrene” OR “perineal necrotizing infection*” OR “perineal necrotiz* fasciitis” OR “perineal soft tissue infection*” OR “perineal sepsis” OR “perineal infection*” OR “necrotizing fasciitis” AND perine*) AND (“fecal diversion*” OR “colostomy” OR colostom* OR stoma* OR “diverting colostom*” OR “diverting stoma*” OR ileostom* OR “bowel diversion*” OR “fecal stream diversion*”)*

Web of Science

("Fournier" OR "Fournier's gangrene" OR "perineal necrotiz*" OR "perineal gangrene*" OR "perineal sepsis" OR "genital gangrene*" OR "perineal infection*") AND ("fecal diversion*" OR "colostomy" OR colostom* OR "diverting colostom*" OR "diverting stoma*" OR "bowel diversion*" OR "fecal stream diversion*")*

Supplementary Table 1 - Baseline characteristics of included studies

Study	Surgical Fecal Diversion Indications	Complications related to Surgical Diversion	Follow-up, days	Type of Study	Non-Diversion Group	Surgical Fecal Diversion Group	No. of patients	Age Years (±sd)†	Male, n (%)
Aijaz, 2025	"Colostomy was required in 12 patients (24%) due to an anal sphincter impairment or contamination of a debrided wound."	NR	NR	Retrospective case series	38	12	50	62	33 (24.3)
Akcan, 2009	"A diverting colostomy was performed in patients if perineal wounds could not be appropriately managed as a consequence of constant fecal contamination. Other indications for diverting colostomy were suspicion of rectal perforation or fistulas"	Wound infection, stomal ischemia, prolonged ileus, evisceration (all stoma-related; 1 patient required reoperation).	NR	Retrospective cohort study	18	19	37	52.7 (13.1)	22 (59.5)
Chan, 2018	Not reported; only general discussion comments (severe perineal involvement, theoretical wound protection).	NR	NR	Retrospective cohort study	29	21	50	55(range 22–88)	50 (100)
Çitgez, 2019	Not reported; only general discussion comment (may be preferred if anorectal area and sphincters are involved).	NR	NR	Retrospective cohort study	43	5	48	53.90 (12.61)	48 (100)
Corman, 1999	Not reported; article provides no criteria for colostomy creation	NR	NR	Retrospective descriptive case series (single center)	12	11	23	51.7 (13.3)	NR
Dahm, 2000	Not reported; article does not describe criteria for surgical fecal diversion.	NR	NR	Retrospective cohort (single center), 15-year review	26	18	44	56.3 (range 28 to 79)	50 (100)
Egin, 2022	selectively in patients with larger perineal wounds or sphincter involvement, that is, in more severe cases.	NR	NR	Retrospective case series	63	10	73	57.29 (13.36)	42 (57.5)

Eksi, 2020	Colostomy performed in cases of perirectal infection or anal sphincter involvement	NR	NR	Retrospective cohort (single center)	70	10	80	55.1 (7.6)	65 (81.2)
Eray, 2015	Does not report indications	Colostomy necrosis (1), colostomy prolapse (1), parastomal hernia (1), incisional hernia (2)	NR	Retrospective comparative cohort	16	32	48	51.0 (15.0)	24 (75)
Ersay, 2007	"Colostomy was carried out for faecal diversion when the source of infection originated from the anorectum and the sphincter was infected. Furthermore, evidence of a rectal perforation and a large rectal wound or persistence of systemic sepsis were indications of colostomy, in spite of optimal radical debridement."	NR	Not reported (only hospitalization time reported)	Retrospective cohort study	60	10	70	46.22 (16.81)	65 (92.85)
Ersoz, 2012	Not reported; discussion only cites literature (anal insufficiency, rectal perforation, excessive perineal necrosis, fistula).	NR	NR	Retrospective cohort study	39	13	52	55 (range 37–78)	36 (69.23)
Garcia Marin, 2015	Not reported; article does not describe criteria for colostomy	NR	NR	Retrospective cohort study (15-year observational retrospective cohort)	49	10	59	68 (range 51–73)	53 (90)
Gürdal, 2003	Not reported; only general discussion comments, not actual criteria	NR	NR	Retrospective case series	26	2	28	58 (range 12–87)	27 (96.4)
Hong, 2017	"Colostomy was required in 11 patients (55%) due to an anal sphincter impairment or contamination of a debridement wound."	NR	NR	Retrospective cohort	9	11	20	61·8 (12·7)	18 (90)
Hung, 2016	"Colostomy combined with a first-time debridement was reserved for patients with involvement of the anorectal region and sphincter."	NR	NR	Retrospective cohort study	30	30	60	59.6 (14.5)	50 (83.33)
Kılıç, 2001	"A diverting colostomy may be required if a colonic source is	NR	NR	Retrospective cohort study	15	8	23	52.04 (15.56)	22 (95.7)

	suspected."								
Kilinc Tuncer, 2023	Not reported for this cohort; authors note generally that stoma creation is usually based on anal sphincter tone and may be used to divert fecal content.	NR	NR	Retrospective cohort (single center	34	32	66	57.9 (12.9)	44 (66.7)
Korkut, 2003	Not reported; article lists when surgical fecal diversion was performed but provides no clinical criteria	NR	NR	Retrospective case series	27	18	45	54.6 (range 17–82)	37 (82.22)
Li 2014	Not reported; no clinical criteria given for performing enterostomy	NR	NR	Retrospective cohort study	23	28	51	49.3 ± 7.8 (colostomy) 50.1 ± 8.9 (Non-Colostomy)	48 (94.11)
Lin, 2019	Not reported; only general discussion comments (sphincter dysfunction, rectal perforation, immunodeficiency).	NR	NR	Retrospective cohort study	50	10	60	53.06 (15.9)	56 (93.33)
Mahmood, 2023	Does not report clinical indications; colostomy performed after first debridement; allocation based on patient acceptance/refusal.	NR	NR	Prospective comparative cohort	15	15	30	59.6 (13.0)	27 (90)
Mayoral, 2024	Elective (wound soiling, large perineal wound, bad septic evolution, proximity to anus, pre-grafting) and imperative (infected/occlusive colorectal cancer, colonic perforation, anal sphincter impairment).	Parastomal hernia (4), Peristomal cellulitis (1), Stomal prolapse (1). Following intestinal recovery: Parietal abscess (7), Anastomotic leakage and peritonitis (6), Intestinal obstruction by fecaloma (1), Severe metabolic disorders (1), Ulcerea with digestive hemorrhage (1).	NR	Retrospective cohort (single tertiary center)	30	59	89	60.2 (14.0)	70 (78.7)
Mehl, 2010	"If there was impairment of anal sphincters or possibility of fecal contamination of the wound, a colostomy was performed."	NR	NR	Retrospective case series	23	17	40	47.2 (range 18-78)	31 (77)
Omisanjo, 2014	Temporary colostomy for extensive scrotoperineal and abdominal involvement.	NR	NR	Retrospective case series	10	1	11	51.9 (range 24-71)	11 (100)

Ortega Ferrete, 2023	Perianal origin of infection Extensive perineal wound requiring isolation from fecal contamination Severe disease requiring multiple re-interventions Diabetes mellitus (higher risk and greater disease severity)	NR	Minimum 30 days (required for inclusion; exact median not reported)	Retrospective cohort (22-year retrospective study)	116	33	149	63.69 (14.8)	NR (78)
Ozturk, 2010	"If there was significant incontinence or obvious anal sphincter damage after a 48-h observation and examination under anesthesia, a stoma was constructed."	NR	NR	Retrospective cohort study	26	18	44	57 (range 28-77)	23 (52.27)
Ozkan, 2016	Perirectal origin of infection OR anal sphincter involvement (same criteria for both colostomy and Flexi-Seal)	NR	NR	Retrospective cohort study	6	6	12	62.4 (14.6)	7 (58.3)
Planellas Gine, 2015	High severity of gangrene; anal canal tumor with severe perineal infiltration; previous fecal incontinence; or delayed due to lack of local infection control requiring repeated debridements.	NR	NR	Prospective cohort (single center)	24	22	46	62.1 (14.6)	39 (85)
Rosen, 2016	"In our series, surgeons using a colostomy cited need for long-term fecal diversion for healing purposes when there was a particularly extensive wound."	"Two have not been able to have their stoma reversed due to multiple admissions for medical comorbidities, and two had complications during their reversal (one with urinary retention and one with leak that resolved with percutaneous drainage, antibiotics, and bowel rest)"	Non Colostomy (3.9 ±0.7 mo) Colostomy (9.2 ± 4.2 mo)	Retrospective cohort study	28	7	35	49.5 (range 29.0-76.0)	34 (92.14)
Simsek 2011	"Colostomy was performed on the patients with gangrene involving the anal sphincter, and on those with inevitable fecal contamination."	NR	NR	Retrospective case series	13	7	20	52.2 (range 30–80)	13 (65%)
Tarchouli, 2015	Not reported; authors only cite literature	NR	NR	Retrospective cohort	58	14	72	51.8 (6.5)	64 (88.9)

	recommendations (perforation, sphincter injury, fecal contamination prevention)			(prognostic mortality study)					
Unal, 2006	Colostomy was generally preferred in patients who had involvement of the perineum and genital region together with the damage of the sphincter.	NR	NR	Retrospective cohort	12	14	26	52.8 (range 19-90)	18 (69.2)
Unalp, 2008	"Colostomy was generally preferred in patients who had involvement of the perineum and genital region together with the damage of the sphincter."	NR	Not reported (only hospitalization time reported)	Retrospective cohort study	46	22	68	54.7 (15.6)	59 (86.8%)
Villanueva Sáenz, 2002	Colostomy performed due to loss of sphincter complex at first surgery	NR	NR	Retrospective case series	14	14	28	57.8 (range 22-82)	28 (100)
Wong, 2021	Colostomy was not assigned by protocol	NR	Not reported (ICU-based study; outcomes measured only to hospital discharge)	Retrospective cohort study using the Manitoba ICU Registry (1999–2019)	71	8	79	60 (range 48–67)	65 (82.3)
Yağci, 2005	Rectal perforation, anal sphincter insufficiency, or pelvic fistulization were identified, and a diverting colostomy was performed in addition to debridement.	NR	NR	Retrospective case series	9	6	15	55.9 (range 40-78)	13 (83.7)

NOTE: *Simplified Fournier Gangrene Severity Index ; †The combined mean age (± SD) was derived from weighted group averages and is reported solely for descriptive purposes.; NR = not reported; NR indicates absence of explicit reporting; it does not imply absence of confounding. Clinical practice suggests that surgical fecal diversion decisions were commonly severity-based, in agreement with ROBINS-I judgments. ± SD = standard deviation.

Supplementary Table 2 - ROBINS-I assessment of risk of bias for studies evaluating non-diversion compared with surgical fecal diversion in perineal necrotizing infections

Study	Confounding	Selection of participants	Classification of interventions	Deviations from intended interventions	Missing data	Measurement of outcomes	Selection of reported results	Overall ROBINS-I	Justification
Aijaz 2025	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – colostomy required due to anal sphincter impairment or contamination of a debrided wound. Classification: Serious – surgical fecal diversion used for sphincter impairment and high contamination risk, restricting it to more severe presentations. Missing data: Low. Selection of reported results: Moderate.
Akcan 2009	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – surgical fecal diversion performed for uncontrolled fecal contamination, suspected rectal perforation or fistulas. Classification: Serious – criteria clearly tied to wound contamination and possible colorectal source, favouring surgical fecal diversion in more severe cases. Missing data: Moderate. Selection of reported results: Moderate.
Chan 2018	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – cohort criteria not reported; discussion emphasises surgical fecal diversion for severe perineal involvement. Classification: Serious – surgical fecal diversion likely used in more extensive disease despite absence of explicit rules in

									the methods. Missing data: Moderate. Selection of reported results: Moderate.
Çitgez 2019	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – no cohort indications reported; authors note surgical fecal diversion may be preferred when anorectal area and sphincters are involved. Classification: Serious – narrative suggests severity-based surgical fecal diversion, even if not formally prespecified. Missing data: Moderate. Selection of reported results: Moderate.
Corman 1999	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – indications for colostomy not reported; confounding by indication cannot be excluded in a small surgical series. Classification: Serious – unknown but likely severity-driven allocation in a retrospective cohort with no protocol. Missing data: Moderate. Selection of reported results: Moderate.
Dahm 2000	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – no criteria for surgical fecal diversion described; non-random allocation likely influenced by severity and contamination. Classification: Serious – absence of explicit rules with clinical decision-making in a severe infection setting implies severity-related allocation. Missing data: Moderate. Selection of reported results: Moderate.
Egin 2022	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion selectively used in patients with larger

									perineal wounds or sphincter involvement. Classification: Serious – explicit statement that stoma is reserved for more severe cases. Missing data: Low. Selection of reported results: Moderate.
Eray 2015	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – indications for surgical fecal diversion not reported; high risk of unmeasured confounding by indication in a surgical cohort. Classification: Serious – absence of explicit criteria suggests clinician-driven allocation likely linked to severity. Missing data: Low. Selection of reported results: Moderate.
Eksi 2020	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – surgical fecal diversion reserved for perirectal infection or anal sphincter involvement, both markers of more advanced disease. Classification: Serious – indications tightly coupled to anorectal source and sphincter damage, limiting comparability between groups. Missing data: Moderate. Selection of reported results: Moderate.
Ersay 2007	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – surgical fecal diversion when infection originated from anorectum with sphincter infection, rectal perforation, large rectal wounds or persistent sepsis. Classification: Serious – indications are tightly linked to anorectal source, perforation and uncontrolled sepsis. Missing data: Moderate. Selection of

									reported results: Moderate.
Ersoz 2012	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – cohort criteria not reported; discussion cites surgical fecal diversion for anal insufficiency, rectal perforation, necrosis and fistula. Classification: Serious – indications described in discussion are strongly severity-based, even if not systematically reported in the cohort. Missing data: Moderate. Selection of reported results: Moderate.
Garcia Marin 2015	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – indications not described; surgical fecal diversion likely applied to more compromised presentations. Classification: Serious – lack of explicit criteria with probable severity-based use of colostomy in a retrospective series. Missing data: Low. Selection of reported results: Moderate.
Gürdal 2003	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – specific criteria not reported; likely clinician-based decision in a heterogeneous, severe population. Classification: Serious – surgical fecal diversion probably favoured in more extensive or contaminated disease despite lack of explicit thresholds. Missing data: Low. Selection of reported results: Moderate.
Hung 2016	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – colostomy combined with first debridement reserved for anorectal region and sphincter involvement. Classification:

									Serious – reservation of surgical fecal diversion for anorectal and sphincter disease identifies a more severe subgroup. Missing data: Low. Selection of reported results: Moderate.
Hong 2017	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – colostomy required in patients with sphincter impairment or contaminated debrided wounds. Classification: Serious – severity and contamination explicitly drive the decision to divert, constraining exchangeability. Missing data: Low. Selection of reported results: Moderate.
Kılıç, 2001	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – surgical fecal diversion considered when a colonic source was suspected, which denotes a worse anatomical scenario. Classification: Serious – suspected colonic origin used as a trigger for surgical fecal diversion, restricting surgical fecal diversion to a higher-risk subgroup. Missing data: Moderate. Selection of reported results: Moderate.
Kilinc Tuncer 2023	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – authors state stoma creation is usually based on anal sphincter tone; severity-driven criteria likely used. Classification: Serious – surgical fecal diversion generally linked to sphincter dysfunction and need to divert stool in more severe presentations. Missing data: Low. Selection of reported results:

									Moderate.
Korkut 2003	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – article lists when surgical fecal diversion was performed but gives no clinical criteria; indication likely linked to severity. Classification: Serious – pattern of practice suggests stoma use in more extensive disease with higher contamination risk. Missing data: Low. Selection of reported results: Moderate.
Li 2014	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – no clinical criteria given for enterostomy; non-random decisions in a severe infection context. Classification: Serious – unknown but likely severity- and contamination-driven decision-making in the absence of a protocol. Missing data: Low. Selection of reported results: Moderate.
Lin 2019	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – no explicit criteria; general comments link surgical fecal diversion to sphincter dysfunction, perforation and immunodeficiency. Classification: Serious – likely used in patients with worse anorectal or systemic status, not in a neutral fashion. Missing data: Low. Selection of reported results: Moderate.
Mahmood 2023	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – allocation after first debridement and partly based on patient acceptance/refusal; severity criteria not reported. Classification: Serious – decision combines post-operative course and

									patient preference, diluting but not excluding severity-linked allocation. Missing data: Low. Selection of reported results: Moderate.
Mayoral 2024	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – imperative indications include infected/occlusive colorectal cancer, colonic perforation and sphincter impairment. Classification: Serious – both elective and imperative indications are driven by wound size, soiling and advanced colorectal disease. Missing data: Moderate. Selection of reported results: Moderate.
Mehl 2010	Serious	Serious	Serious	Serious	Moderate	Low	Moderate	Serious	Serious – surgical fecal diversion performed when anal sphincter impairment or high risk of fecal contamination was present. Classification: Serious – allocation clearly severity- and contamination-driven, with limited overlap between exposure groups. Missing data: Moderate. Selection of reported results: Moderate.
Omisanjo 2014	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – temporary colostomy used for extensive scrotoperineal and abdominal involvement. Classification: Serious – surgical fecal diversion reserved for the most extensive anatomical involvement, indicating limited comparability with non-diverted cases. Missing data: Low. Selection of reported results: Moderate.

Ortega Ferrete 2023	Serious	Serious	Serious	Serious	Moderate	Low	Serious	Serious	Serious – surgical fecal diversion indications include perianal origin, extensive perineal wounds, severe disease with multiple re-interventions and diabetes. Classification: Serious – surgical fecal diversion applied to patients with more severe local and systemic disease characteristics. Missing data: Moderate. Selection of reported results: Serious.
Ozkan 2016	Serious	Serious	Serious	Serious	Serious	Low	Serious	Serious	Serious – perirectal origin of infection or anal sphincter involvement used as indication for both colostomy and Flexi-Seal. Classification: Serious – surgical fecal diversion reserved for anorectal-source or sphincter-involved disease, defining a more severe subgroup. Missing data: Serious. Selection of reported results: Serious.
Ozturk 2010	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion triggered by significant incontinence or obvious sphincter damage after observation under anaesthesia. Classification: Serious – decision rule based on sphincter dysfunction and contamination risk, favouring surgical fecal diversion in more compromised patients. Missing data: Low. Selection of reported results: Moderate.
Planellas Gine 2015	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion mainly used in high-severity gangrene, anal canal tumour with severe infiltration, or uncontrolled local infection. Classification:

									Serious – surgical fecal indications strongly severity-based (tumour, severe perineal involvement, repeated debridements). Missing data: Low. Selection of reported results: Moderate.
Rosen 2016	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion used when a particularly extensive wound was present and long-term diversion deemed necessary. Classification: Serious – allocation guided by wound extent and anticipated healing difficulty, favouring surgical fecal diversion in more severe cases. Missing data: Low. Selection of reported results: Moderate.
Simsek 2011	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion used when gangrene involved the sphincter or fecal contamination was considered inevitable. Classification: Serious – indications reflect more extensive anorectal disease and unavoidable contamination, limiting exchangeability. Missing data: Low. Selection of reported results: Moderate.
Tarchouli 2015	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – no cohort-specific criteria; authors reference literature indications (perforation, sphincter injury, contamination), implying severity-based practice. Classification: Serious – surgical fecal diversion likely applied in more severe or anorectal-source disease, despite lack of explicit criteria. Missing data: Low.

									Selection of reported results: Moderate.
Unal 2006	Serious	Serious	Serious	Serious	Moderate	Low	Serious	Serious	Serious – colostomy generally preferred in patients with perineal/genital involvement and sphincter damage. Classification: Serious – surgical fecal diversion explicitly aimed at more extensive and sphincter-involving disease. Missing data: Moderate. Selection of reported results: Serious.
Unalp 2008	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – colostomy generally preferred in patients with perineal and genital involvement plus sphincter damage. Classification: Serious – surgical fecal diversion explicitly aimed at more extensive, sphincter-involving disease, limiting group comparability. Missing data: Low. Selection of reported results: Moderate.
Villanueva Sáenz 2002	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – surgical fecal diversion performed in patients with loss of sphincter complex; other patients managed without diversion despite severe disease. Classification: Serious – colostomy tied to sphincter loss but some overlap in severity remains, precluding a low-risk classification. Missing data: Low. Selection of reported results: Moderate.
Wong 2021	Serious	Serious	Serious	Serious	Low	Low	Moderate	Serious	Serious – colostomy not assigned by protocol; likely surgeon-driven use in more complicated cases. Classification: Serious – absence of protocol suggests

									variable practice with probable but not fully documented severity-related allocation. Missing data: Low. Selection of reported results: Moderate.
Yagci 2005	Serious	Serious	Serious	Serious	Moderate	Low	Serious	Serious	Serious – surgical fecal diversion performed in rectal perforation, sphincter insufficiency or pelvic fistulisation. Classification: Serious – indications correspond to advanced anorectal pathology, clearly differentiating surgical fecal diverted from non-diverted patients. Missing data: Moderate. Selection of reported results: Serious.

Legend: ROBINS-I risk of bias classification: Low = low risk of bias; Moderate = moderate risk; Serious = important risk; Critical = critical risk with unreliable results. These levels reflect the degree of confidence in the comparison between non-diversion and surgical fecal diversion.

Supplementary Table 3. Summary of findings and certainty of evidence (GRADE) for all outcomes

Outcome	Study design	No. of studies	Non diversion	Surgical fecal diversion	Effect estimate	Certainty (GRADE)	Reasons for downgrading
Mortality	Retrospective observational studies (cohort and case series)	33	179/1080	139/556	OR 0.65(95% CI 0.46–0.91)	Very low	Risk of bias; confounding; imprecision
ICU admission	Retrospective cohort studies	4	33/77	34/66	OR 0.65 (95% CI 0.32–1.33)	Very low	Risk of bias; small samples; imprecision
Hospital length of stay	Retrospective observational studies (cohort and case series)	10	251 patients	197 patients	MD −3.01 (95% CI −10.75–4.74)	Very low	Heterogeneity; imprecision; risk of bias
Number of surgical procedures	Retrospective observational studies (cohort and case series)	9	182 patients	190 patients	MD −0.14 (95% CI −0.68–0.40)	Very low	Heterogeneity; imprecision; risk of bias