Table S1 Clinical trial ROB assessed using the RoB 2 tool (13)

Study ID	Domain	Signalling question	Response
Soriani, 2023 (15)	Bias arising from the randomization process	1.1 Was the allocation sequence random?	PY
		1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY
		1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N
		Risk of bias judgement	Low
	Bias due to deviations from intended interventions	2.1 Were participants aware of their assigned intervention during the trial?	Y
		2.2 Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y
		2.3 If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN
		2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA
		2.5 If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA
		2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y
		2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA
		Risk of bias judgement	Low
	Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	PY
		3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA
		3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA
		3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA
		Risk of bias judgement	Low
	Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N
		4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N
		4.3 Were outcome assessors aware of the intervention received by study participants?	Y
		4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN
		4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA
		Risk of bias judgement	Low
	Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y
		5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	PN
		5.3 ... multiple eligible analyses of the data?	PN
		Risk of bias judgement	Low
	Overall bias	Risk of bias judgement	Low
Chan, 2023 (16)	Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y
		1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	Y
		1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N
		Risk of bias judgement	Low
	Bias due to deviations from intended interventions	2.1 Were participants aware of their assigned intervention during the trial?	Y
		2.2 Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y
		2.3 If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	N
		2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA
		2.5 If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA
		2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y
		2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA
		Risk of bias judgement	Low
	Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	PY
		3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA
		3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA
		3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA
		Risk of bias judgement	Low
	Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	PN
		4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N
		4.3 Were outcome assessors aware of the intervention received by study participants?	Y
		4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN
		4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA
		Risk of bias judgement	Low
	Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y
		5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	PN
		5.3 ... multiple eligible analyses of the data?	PN
		Risk of bias judgement	Low
	Overall bias	Risk of bias judgement	Low
Jensen, 2021 (17)	Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y
		1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	Y
		1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	PN
		Risk of bias judgement	Low
	Bias due to deviations from intended interventions	2.1 Were participants aware of their assigned intervention during the trial?	N
		2.2 Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y
		2.3 If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN
		2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA
		2.5 If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA
		2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y
		2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA
		Risk of bias judgement	Low
	Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	PY
		3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA
		3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA
		3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA
		Risk of bias judgement	Low
	Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	PN
		4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N
		4.3 Were outcome assessors aware of the intervention received by study participants?	Y
		4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN
		4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA
		Risk of bias judgement	Low
	Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	PY
		5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	PN
		5.3 ... multiple eligible analyses of the data?	PN
		Risk of bias judgement	Low
	Overall bias	Risk of bias judgement	Low

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Table S2 Observational studies ROB assessed using the Newcastle-Ottawa Scale (12)

	Qiu J 2022 (19)	Buddam 2021 (18)	Robles-Medranda 2021 (17)
Selection			
Representativeness of the exposed cohort	1	0	0
Selection of the non exposed cohort	1	1	1
Ascertainment of exposure	1	1	1
Demonstration that outcome of interest was not present at start of study	1	1	1
Comparability**	2	1	1
Outcome			
Assessment of outcome	1	1	1
Was follow-up long enough for outcomes to occur	1	1	1
Adequacy of follow up of cohorts	1	1	1
Total score	9	7	8
Evaluation	Low risk	Low risk	Low risk

https://dx.doi.org/10.21037/atm-2026-1-0011

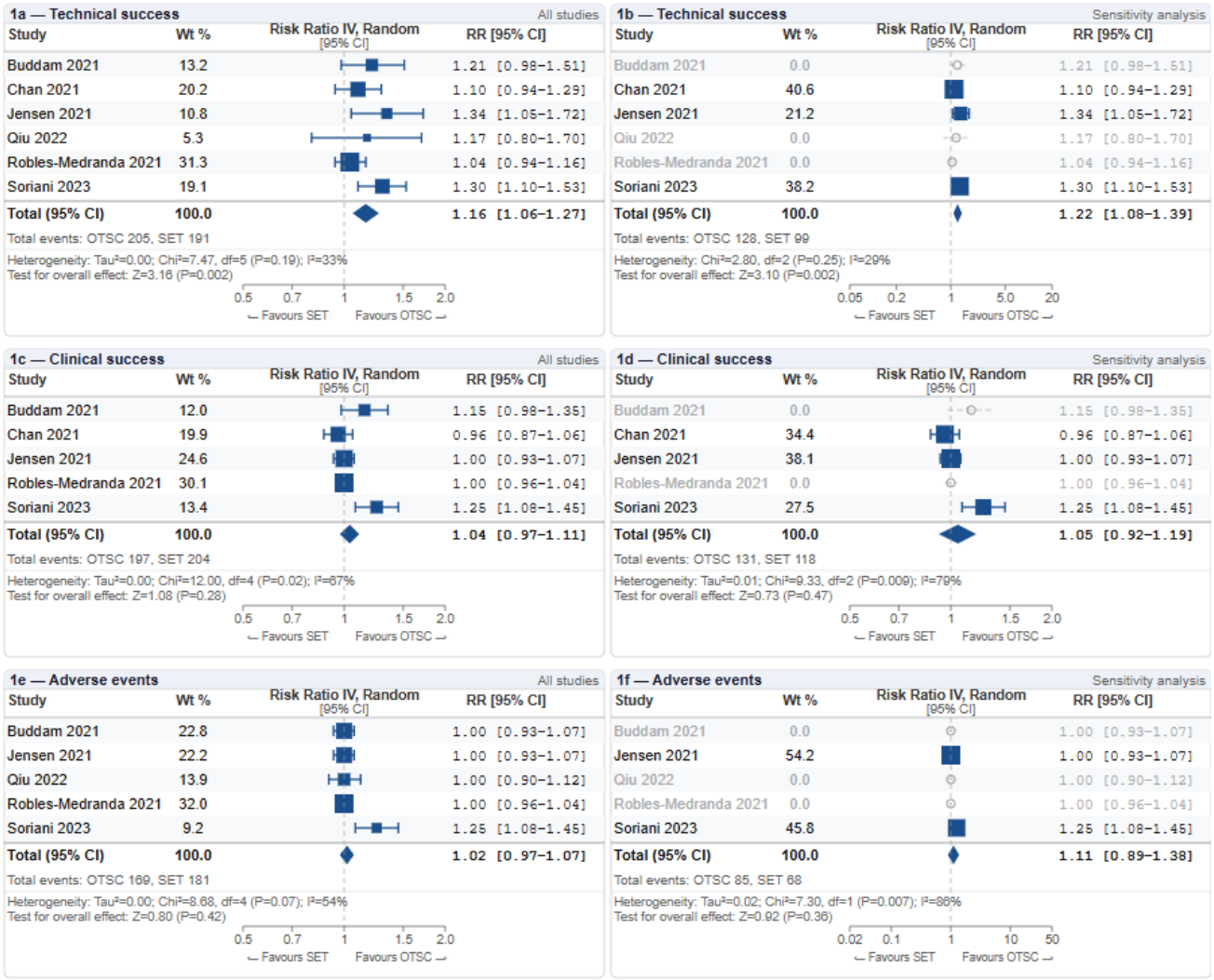

Figure S1 Forest plots of clinical outcomes comparing OTSC versus SET. Forest plots displaying risk ratios (RR) with 95% confidence intervals (CI) for (A,B) clinical success, (C,D) primary success, and (E,F) technical success. The left panel of each pair (A,C,E) represents the pooled analysis of all included studies, while the right panel (B,D,F) presents the analysis restricted to randomized controlled trials (RCTs). A random-effects inverse-variance model was applied throughout. Diamonds represent the pooled effect estimate; squares represent individual study weights. Values greater than 1 favour OTSC; values less than 1 favour SET.

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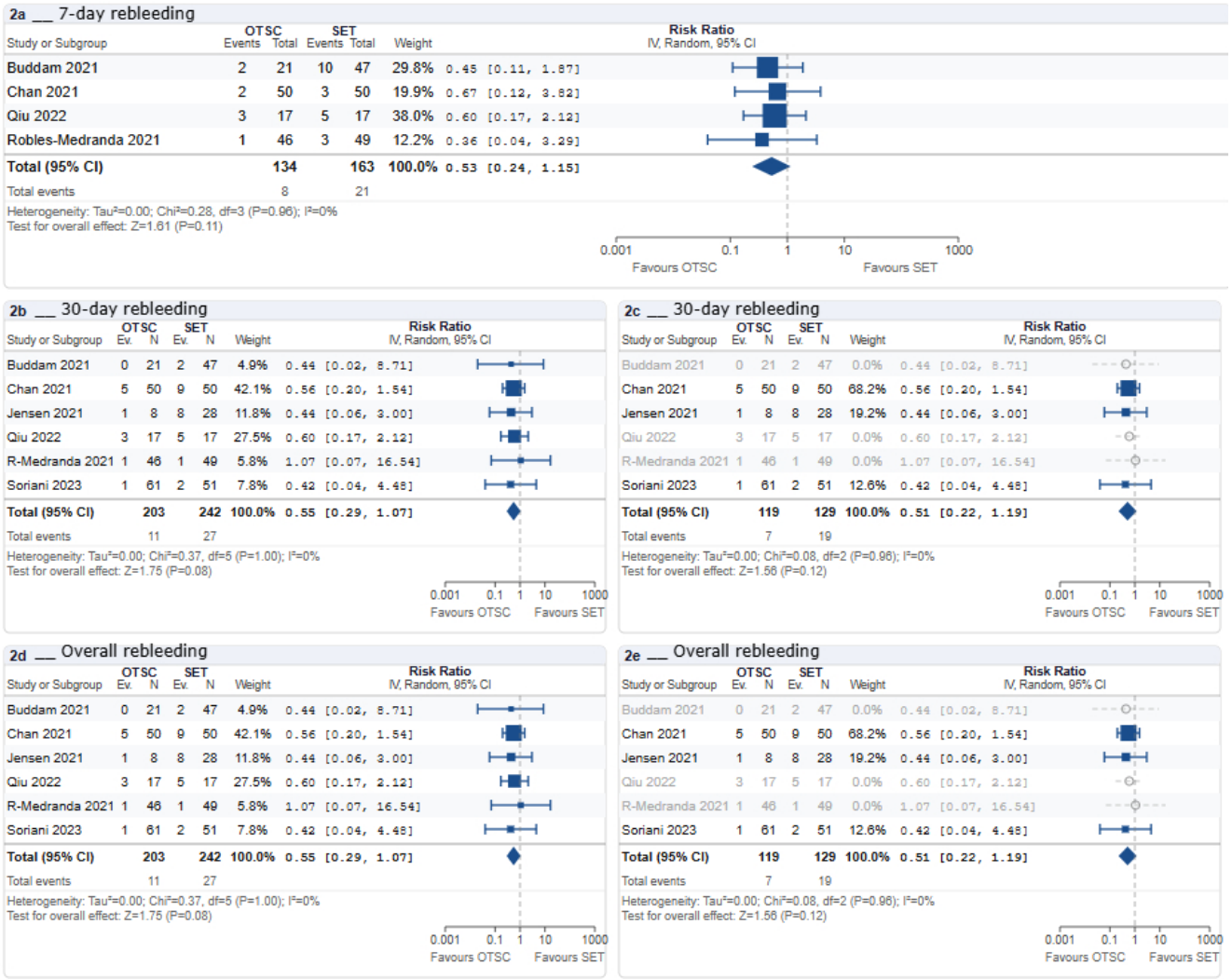

Figure S2 Forest plots of rebleeding outcomes comparing OTSC versus SET. Forest plots displaying risk ratios (RR) with 95% confidence intervals (CI) for (A) 7-day rebleeding, (B,C) 30-day rebleeding, and (D,E) overall rebleeding. The left panel of each pair represents the pooled analysis of all included studies, while the right panel presents the analysis restricted to randomized controlled trials (RCTs). A random-effects inverse-variance model was applied throughout. Values greater than 1 favour OTSC; values less than 1 favour SET.

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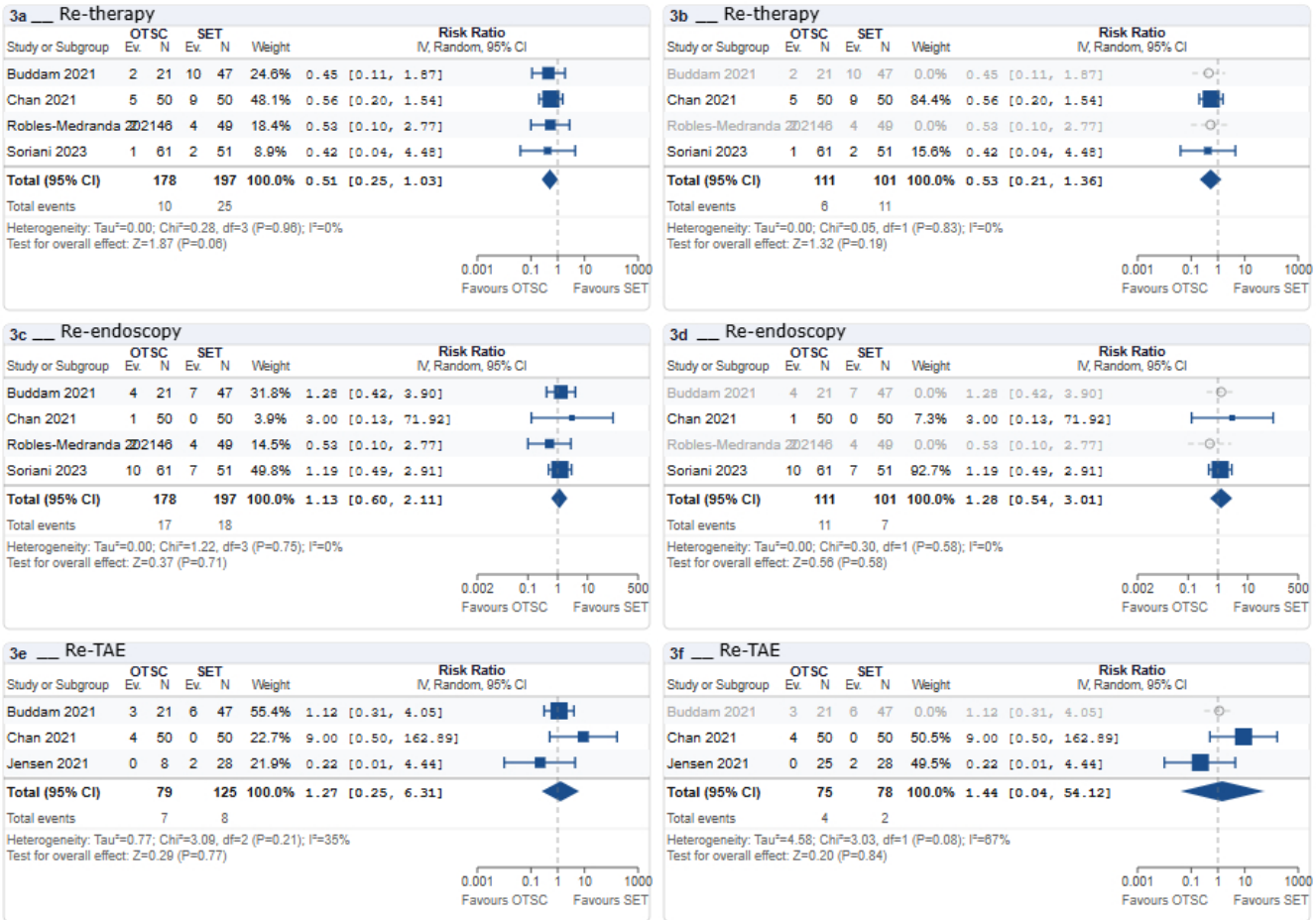

Figure S3 Forest plots of re-intervention outcomes comparing OTSC versus SET. Forest plots displaying risk ratios (RR) with 95% confidence intervals (CI) for (A,B) re-therapy, (C,D) re-endoscopy, and (E,F) re-transcatheter arterial embolization (re-TAE). The left panel of each pair represents the pooled analysis of all included studies, while the right panel presents the analysis restricted to randomized controlled trials (RCTs). A random-effects inverse-variance model was applied throughout. Values greater than 1 favour OTSC; values less than 1 favour SET.

https://dx.doi.org/10.21037/atm-2026-1-0011

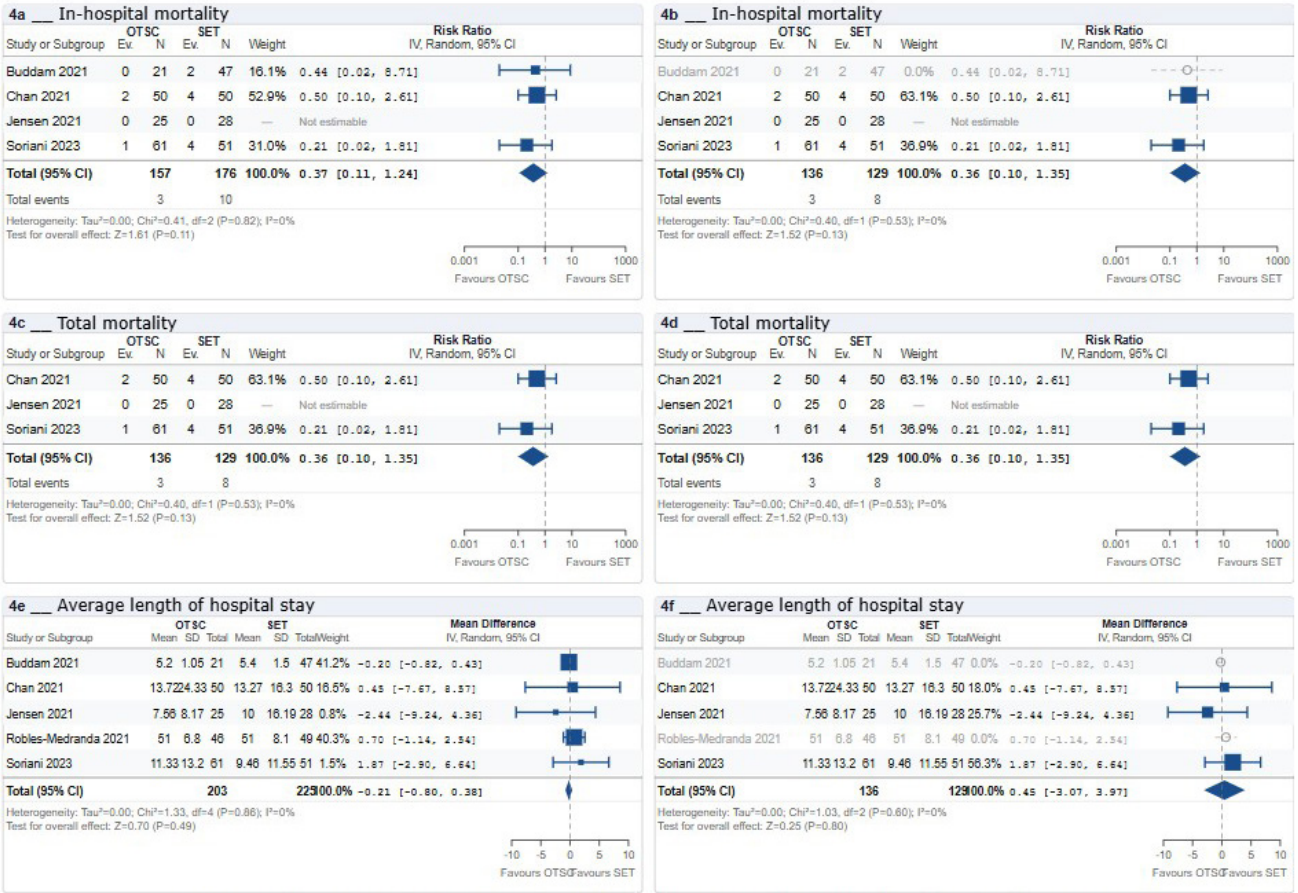

Figure S4 Forest plots of mortality and length of stay outcomes comparing OTSC versus SET. Forest plots displaying risk ratios (RR) with 95% confidence intervals (CI) for (A,B) in-hospital mortality and (C,D) total mortality, and mean difference (MD) with 95% CI for (E,F) average length of hospital stay. The left panel of each pair represents the pooled analysis of all included studies, while the right panel presents the analysis restricted to randomized controlled trials (RCTs). A random-effects inverse-variance model was applied throughout. For RR outcomes, values greater than 1 favour OTSC; values less than 1 favour SET. For length of stay, values below zero favour OTSC.

https://dx.doi.org/10.21037/atm-2026-1-0011