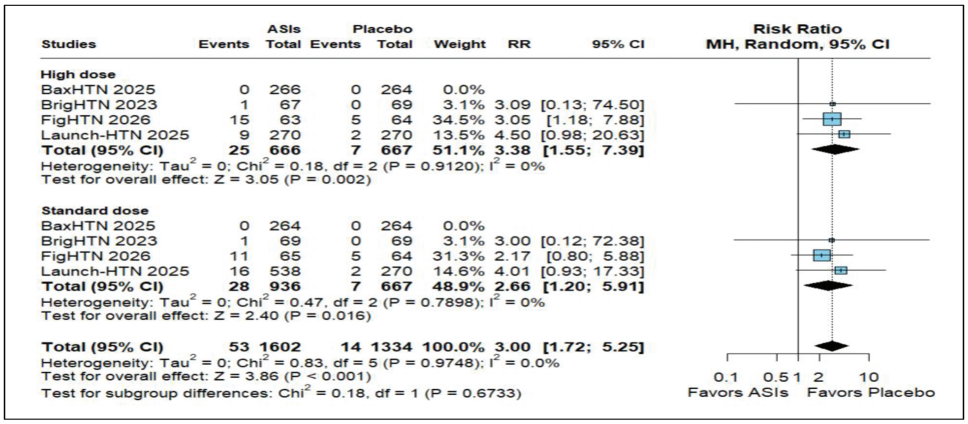
Supplementary Table S1: Detailed search strategy for all electronic databases

Database	Search strategy	No. of studies
PubMed	("Resistant Hypertension"[Mesh] OR "resistant hypertension" OR "uncontrolled hypertension" OR "treatment-resistant hypertension" OR "blood pressure"[Mesh] OR "systolic blood pressure" OR "diastolic blood pressure" OR "arterial hypertension" OR "high blood pressure") AND ("Aldosterone Synthase Inhibitors"[Mesh] OR "aldosterone synthase inhibitor*" OR "aldosterone synthesis inhibitor*" OR "CYP11B2 inhibitor*" OR "aldosterone biosynthesis inhibitor*" OR "mineralocorticoid synthesis inhibitor*" OR ASIs OR "selective CYP11B2 inhibitor" OR "aldosterone biosynthesis blocker" OR baxdrostat OR CIN-107 OR "(3S,3aR,6aS)-2-((1R,2R)-2-hydroxycyclohexyl)-N-(1H-imidazol-4-ylmethyl)-hexahydrofuro[3,2-b]pyrrole-3-carboxamide" OR "CID 137347801" OR LCI699 OR osilodrostat OR FAD286 OR LY3045697 OR dexfadrostat OR "dexfadrostat phosphate" OR lorundrostat OR "(4S,5R)-5-(hydroxymethyl)-1-(4-isopropylphenyl)-3-oxabicyclo[3.1.0]hexane-2,4-diol" OR "CS-3150" OR "1392587-81-7")	207
Embase	("Resistant hypertension" OR "uncontrolled hypertension" OR "treatment-resistant hypertension" OR "refractory hypertension" OR "uncontrolled hypertension" OR "difficult-to-treat hypertension" OR "poorly controlled hypertension") AND ("aldosterone synthase inhibitor*" OR "aldosterone synthesis inhibitor*" OR "CYP11B2 inhibitor*" OR "aldosterone biosynthesis inhibitor*" OR "aldosterone biosynthesis blocker*" OR "mineralocorticoid synthesis inhibitor*" OR ASI OR ASIs OR "selective CYP11B2 inhibitor*") AND (baxdrostat OR "CIN-107" OR "CID 137347801" OR "(3S,3aR,6aS)-2-((1R,2R)-2-hydroxycyclohexyl)-N-(1H-imidazol-4-ylmethyl)-hexahydrofuro[3,2-b]pyrrole-3-carboxamide" OR lorundrostat OR "CS-3150" OR "1392587-81-7" OR "(4S,5R)-5-(hydroxymethyl)-1-(4-isopropylphenyl)-3-oxabicyclo[3.1.0]hexane-2,4-diol")	88
Cochrane	("Resistant hypertension" OR "uncontrolled hypertension" OR "treatment-resistant hypertension" OR "refractory hypertension" OR "uncontrolled hypertension" OR "difficult-to-treat hypertension" OR "poorly controlled hypertension") AND ("aldosterone synthase inhibitor*" OR "aldosterone synthesis inhibitor*" OR "CYP11B2 inhibitor*" OR "aldosterone biosynthesis inhibitor*" OR "aldosterone biosynthesis blocker*" OR "mineralocorticoid synthesis inhibitor*" OR ASI OR ASIs OR "selective CYP11B2 inhibitor*") AND (baxdrostat OR "CIN-107" OR "CID 137347801" OR "(3S,3aR,6aS)-2-((1R,2R)-2-hydroxycyclohexyl)-N-(1H-imidazol-4-ylmethyl)-hexahydrofuro[3,2-b]pyrrole-3-carboxamide" OR lorundrostat OR "CS-3150" OR "1392587-81-7" OR "(4S,5R)-5-(hydroxymethyl)-1-(4-isopropylphenyl)-3-oxabicyclo[3.1.0]hexane-2,4-diol")	21

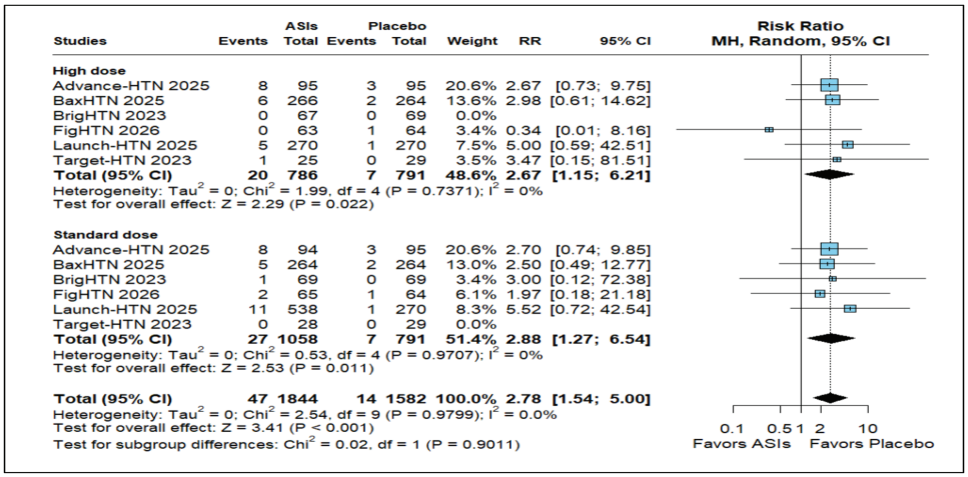
Supplementary Table S2: Meta-Regression Analyses of Factors Associated with Treatment Effect

Outcome	Covariant	β coefficient	95% CI	p-value	R^2 (%)
Mean SBP reduction	Dose*	0.16	-4.42- 4.74	0.939	0
	ASI type#	-2.34	-6.78-2.10	0.273	0
	Baseline SBP	0.08	-0.65-0.81	0.808	0
	Follow-up duration	0.19	-0.24-0.62	0.360	0
SBP control (<130 mmHg)	Dose*	-0.04	-0.78-0.70	0.919	0
	Baseline SBP	0.18	0.07-0.29	0.002	84.8
	Follow-up duration	0.03	-0.01-0.07	0.146	32.6

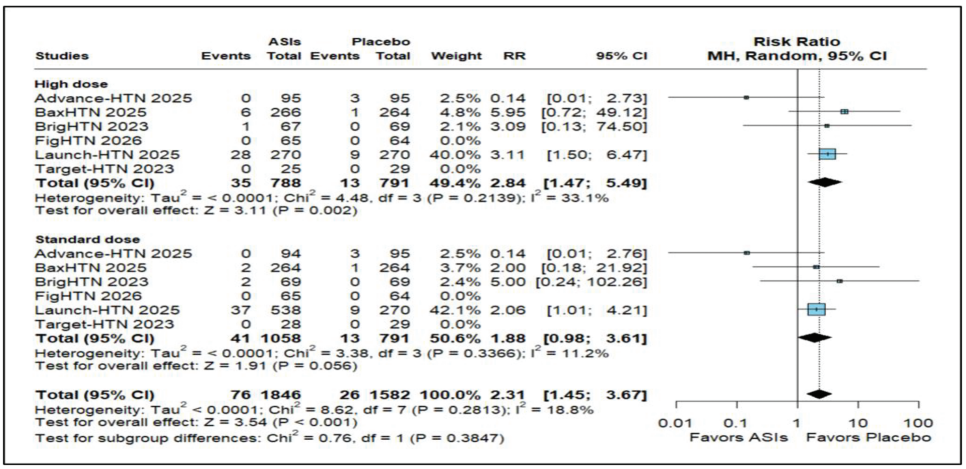
* = standard vs high dose, # ASI type = baxdrostat vs lorundrostat; ASI = aldosterone synthase inhibitors; CI = confidence interval; R^2 = heterogeneity; SBP = systolic blood pressure.



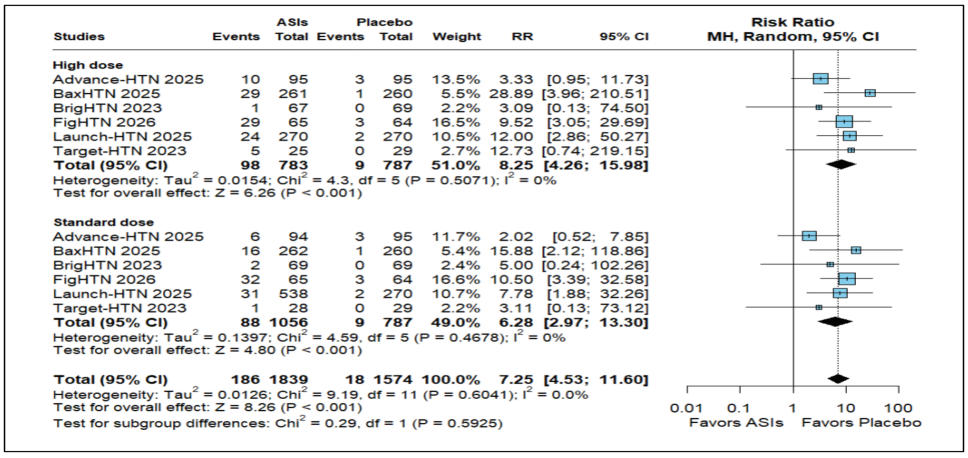
Supplementary Figure S1: The incidence of reduction in renal function



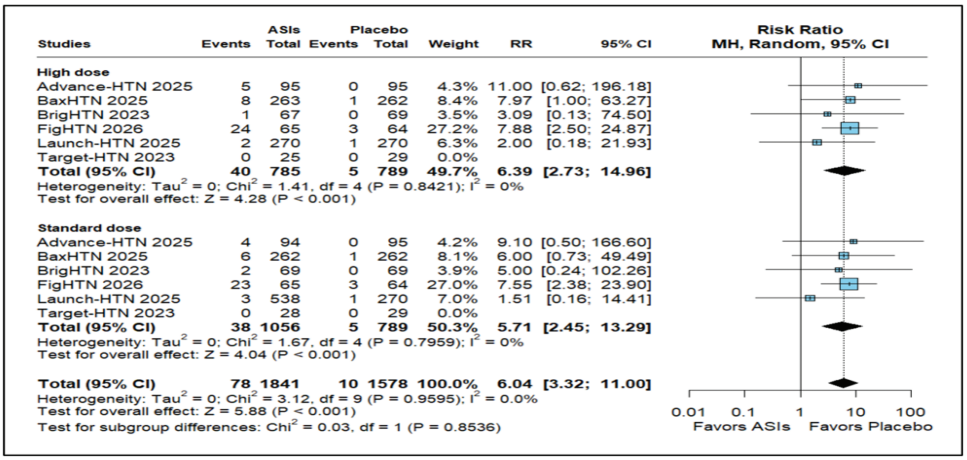
Supplementary Figure S2: The incidence of hypotension



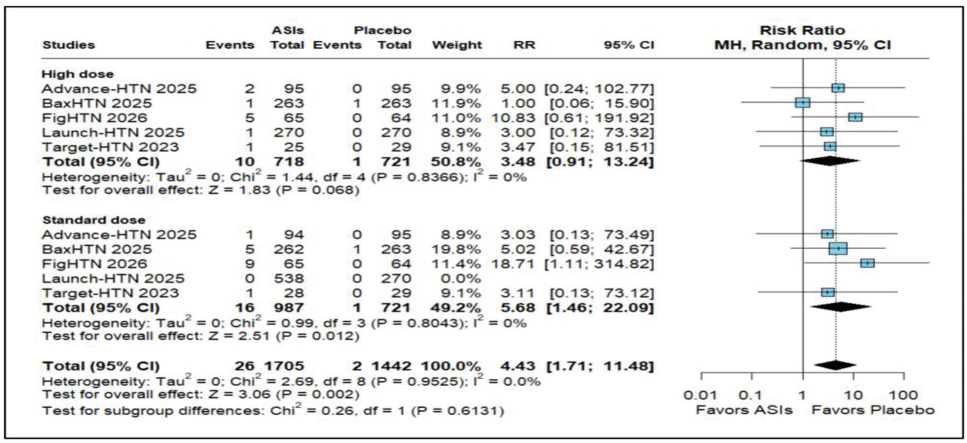
Supplementary Figure S3: The incidence of hyponatraemia



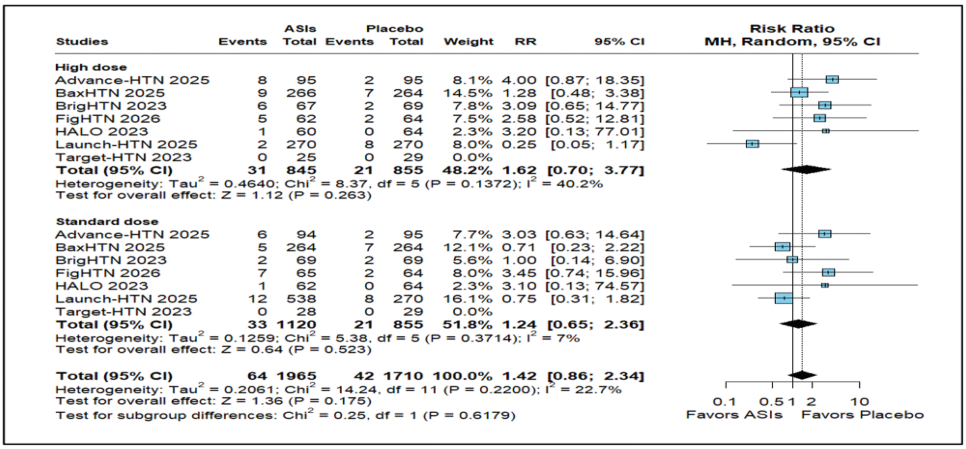
Supplementary Figure S4: The incidence of mild hyperkalaemia



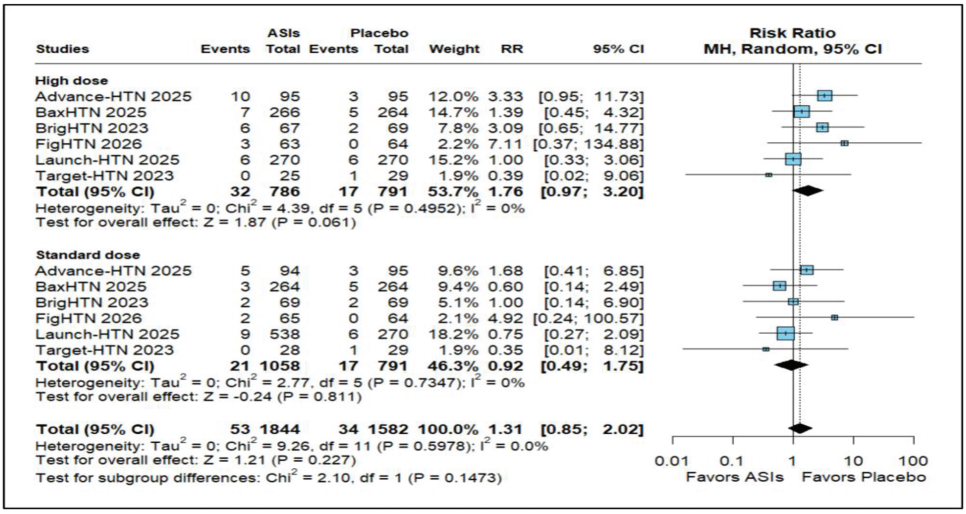
Supplementary Figure S5: The incidence of moderate hyperkalaemia



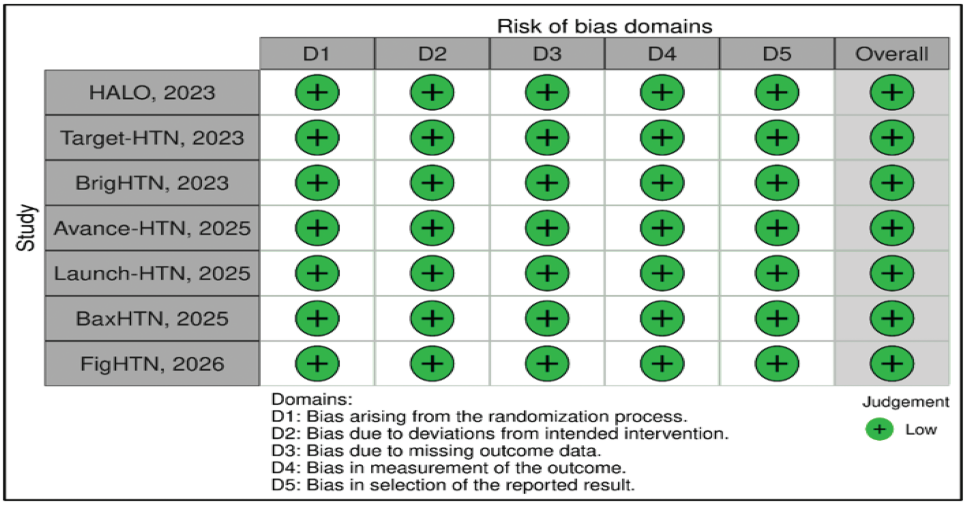
Supplementary Figure S6: The incidence of severe hyperkalaemia



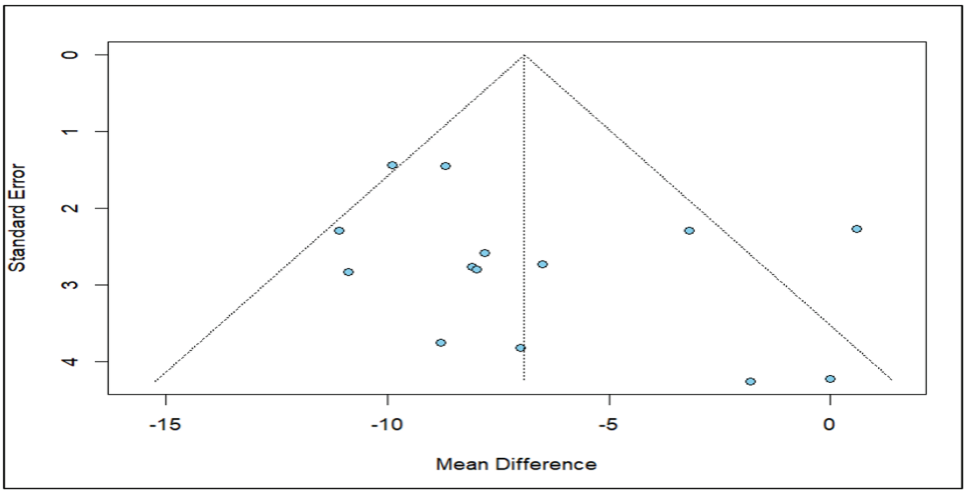
Supplementary Figure S7: The incidence of serious adverse events



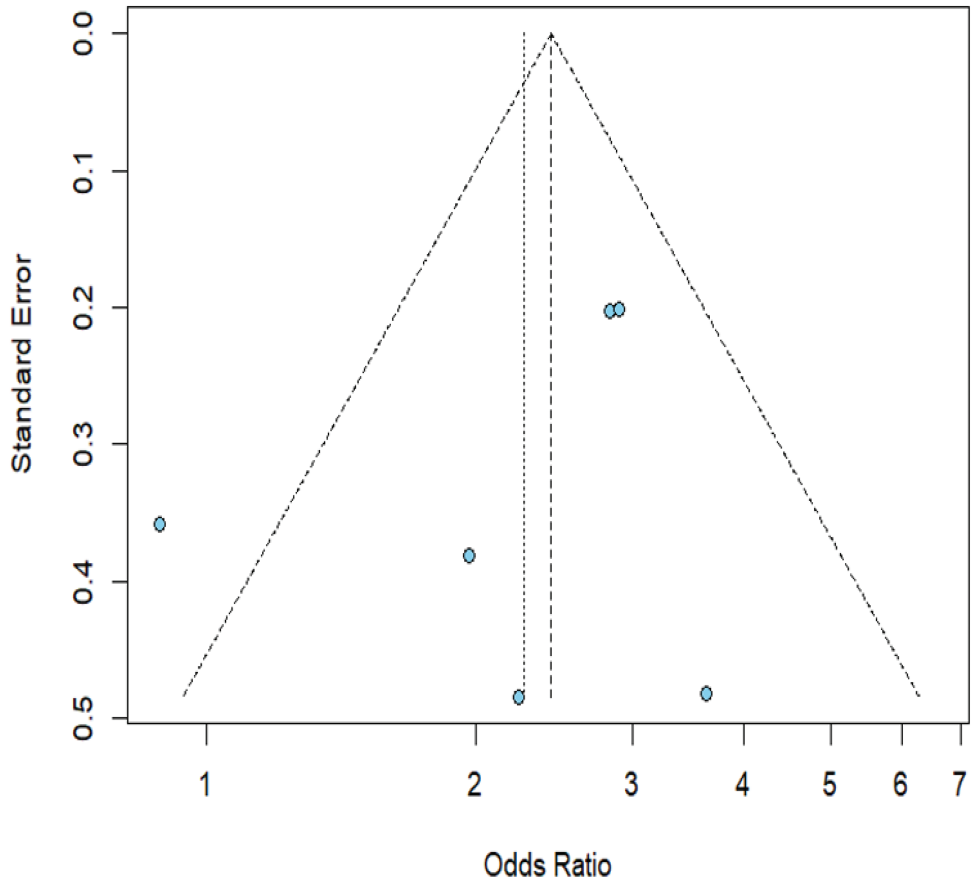
Supplementary Figure S8: The incidence of severe adverse events



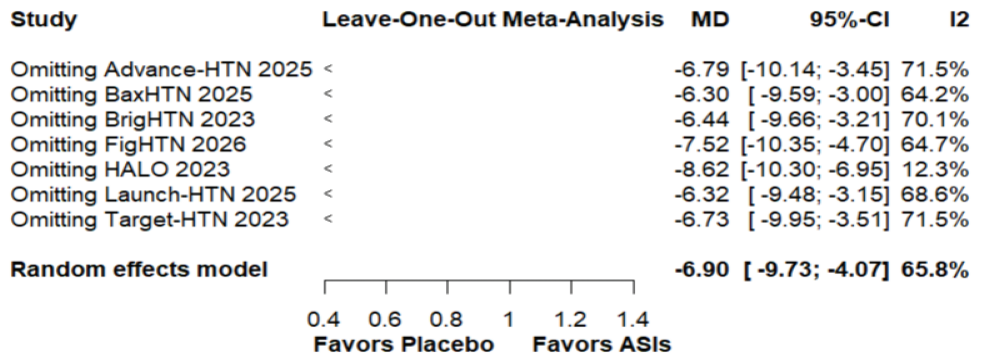
Supplementary Figure S9: Risk of bias 2 for randomised controlled trials



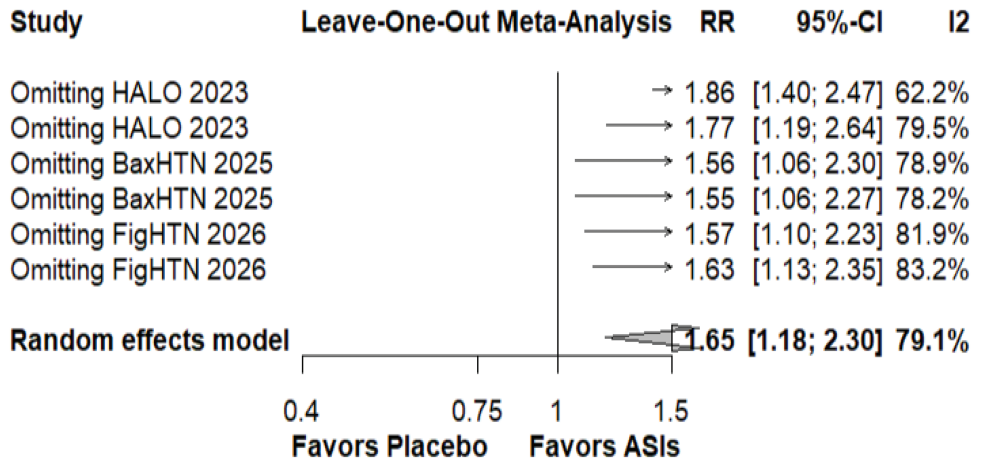
Supplementary Figure S10: Funnel plot of mean change in SBP mmHg



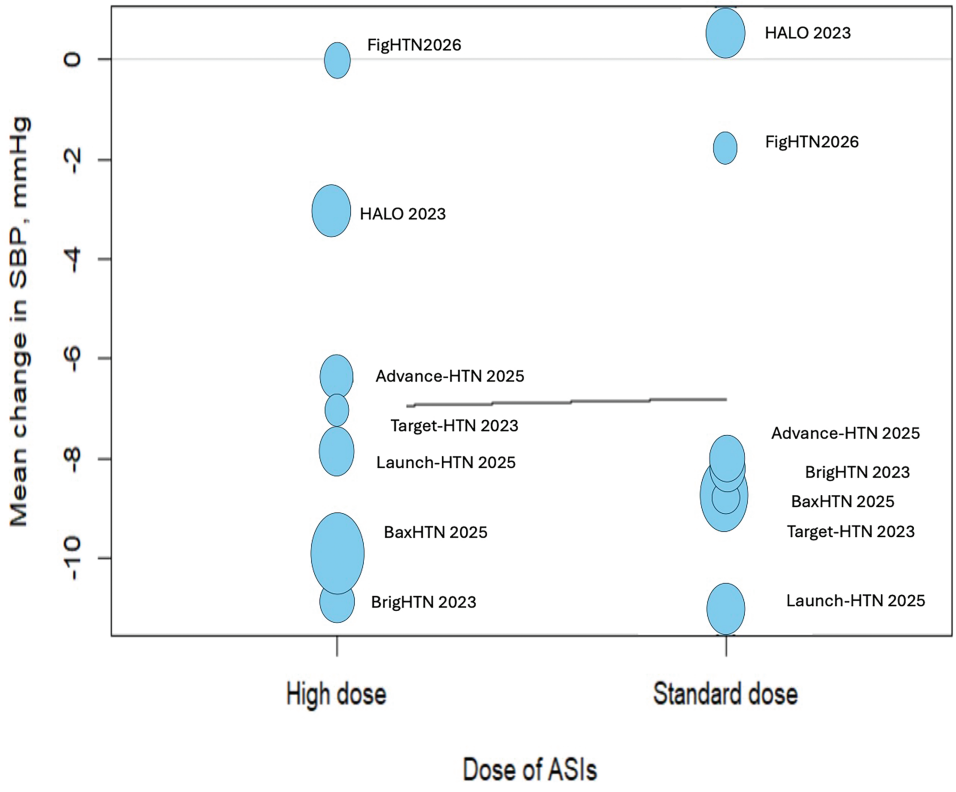
Supplementary Figure S11: Funnel plot of proportion of participants achieving SBP < 130 mmHg Each point represents an individual study or comparison. The distribution appears symmetrical around the pooled effect estimate, with no evidence of small-study effects. Egger's regression test was not statistically significant



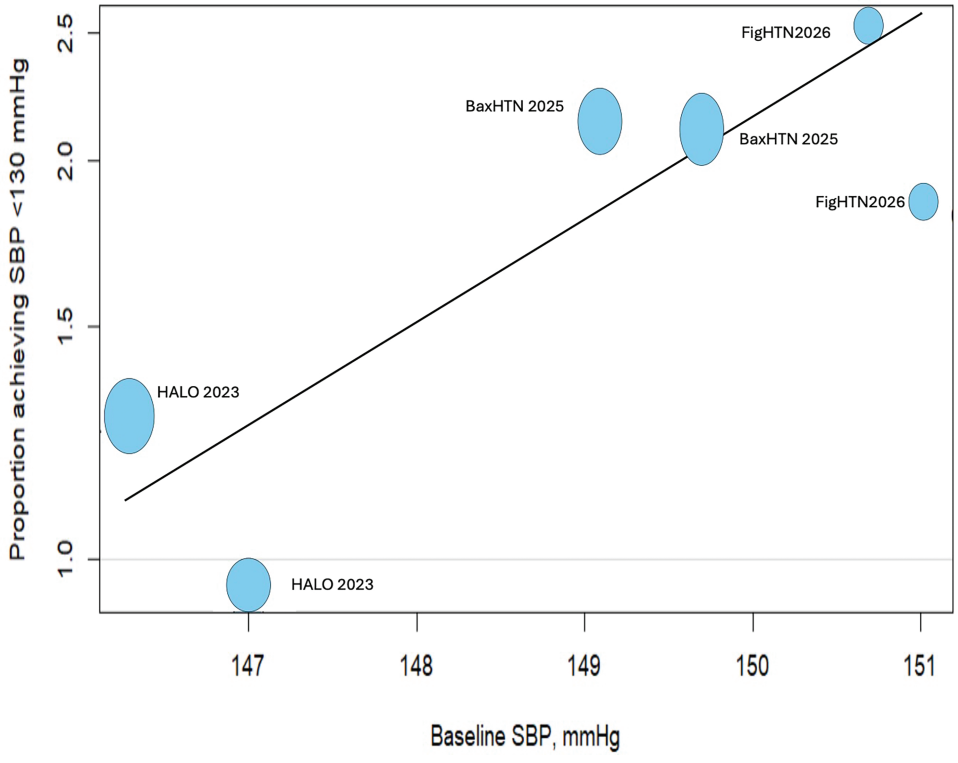
Supplementary Figure S12: Leave-one-out sensitivity analysis for mean change in SBP



Supplementary Figure S13: Leave-one-out sensitivity analysis for the proportion of patients that achieved SBP < 130 mmHg



Supplementary Figure S14: Meta-regression of the effect of ASI dose and mean change in SBP



Supplementary Figure S15: Meta-regression of the effect of baseline SBP and achieving SBP control