Supplementary Figure Legends

Supplementary Figure 1**:** Risk of bias assessment

Supplementary Figure 2: Forest plot displaying mean difference for left ventricular ejection fraction (LVEF) with intracoronary thrombolysis or placebo in ST-elevation myocardial infarction.

Squares and diamonds= weight mean difference. Lines=95% confidence intervals

Supplementary Figure 3: Forest plot displaying relative risk for heart failure (HF) with intracoronary thrombolysis or placebo in ST-elevation myocardial infarction.

Squares and diamonds= risk ratios. Lines=95% confidence intervals

Supplementary Figure 4: Forest plot displaying relative risk for mortality with intracoronary thrombolysis or placebo in ST-elevation myocardial infarction.

Squares and diamonds= risk ratios. Lines=95% confidence intervals

Supplementary Figure 5: Forest plot of major bleeding with intracoronary thrombolysis or placebo in ST-elevation myocardial infarction.

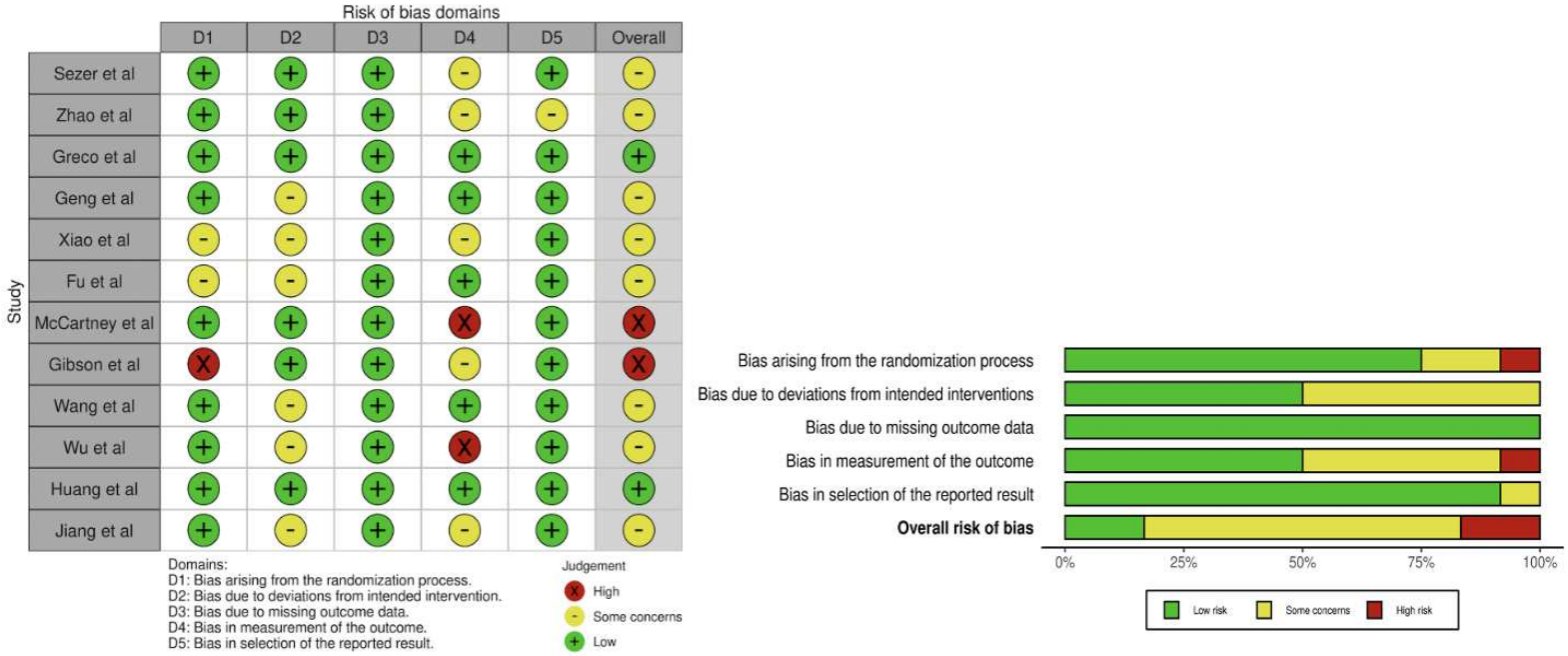
Squares and diamonds= risk ratios. Lines=95% confidence intervals

Supplementary Figure 6: Forest plot of minor bleeding with intracoronary thrombolysis or placebo in ST-elevation myocardial infarction.

Squares and diamonds= risk ratios. Lines=95% confidence intervals

Supplementary Figure 7: Funnel Plot of SE by log risk ratio, for assessment of publication bias. Open circles represent studies included in the present meta-analysis.

Supplementary Figure 1

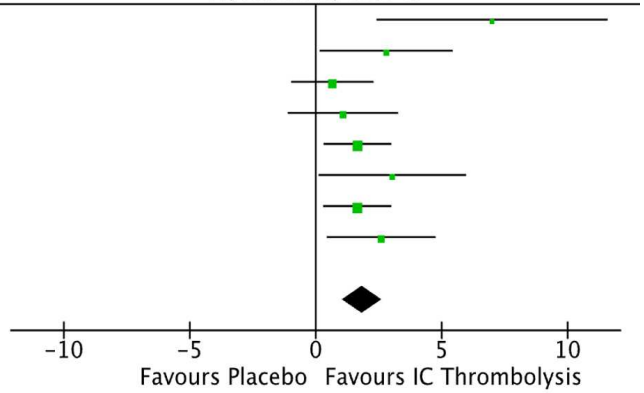


Supplementary Figure 2

Study or Subgroup	IC Thrombolysis Mean	SD	Total	Placebo Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI	Year
Sezer et al., 2009	55.5	9.5	48	48.5	11.4	37	2.9%	7.00 [2.45, 11.55]	2009
Zhao et al., 2015	56.3	9.8	91	53.5	8.1	92	8.0%	2.80 [0.19, 5.41]	2015
Geng et al., 2018	58.02	5.4	118	57.36	6.84	112	17.0%	0.66 [-0.94, 2.26]	2018
Xiao et al., 2019	56.52	5.3	38	55.44	3.94	33	10.9%	1.08 [-1.08, 3.24]	2019
Wu et al, 2020	60.84	2.29	25	59.18	2.44	25	21.8%	1.66 [0.35, 2.97]	2020
Wang et al, 2020	55.22	10.5	92	52.18	9.39	90	6.7%	3.04 [0.15, 5.93]	2020
Jiang et al., 2021	57.44	5.36	125	55.79	5.49	135	21.6%	1.65 [0.33, 2.97]	2021
Huang et al., 2021	58.2	7.8	111	55.6	8.6	117	11.1%	2.60 [0.47, 4.73]	2021
Total (95% CI)			**648**			**641**	**100.0%**	**1.87 [1.07, 2.67]**	

Heterogeneity: $Tau^2 = 0.32$; $Chi^2 = 9.30$, df = 7 (P = 0.23); $I^2 = 25\%$

Test for overall effect: Z = 4.58 (P < 0.00001)

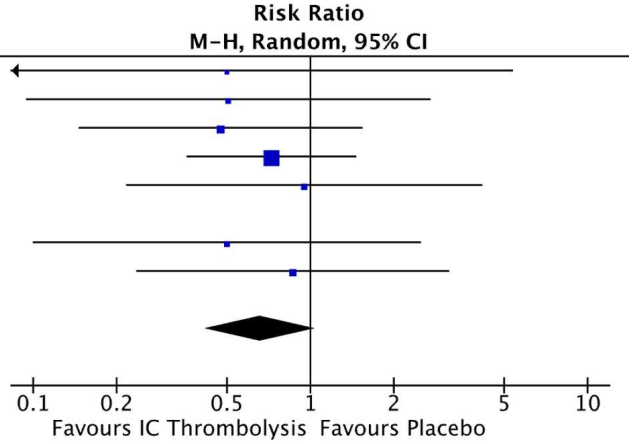


Supplementary Figure 3

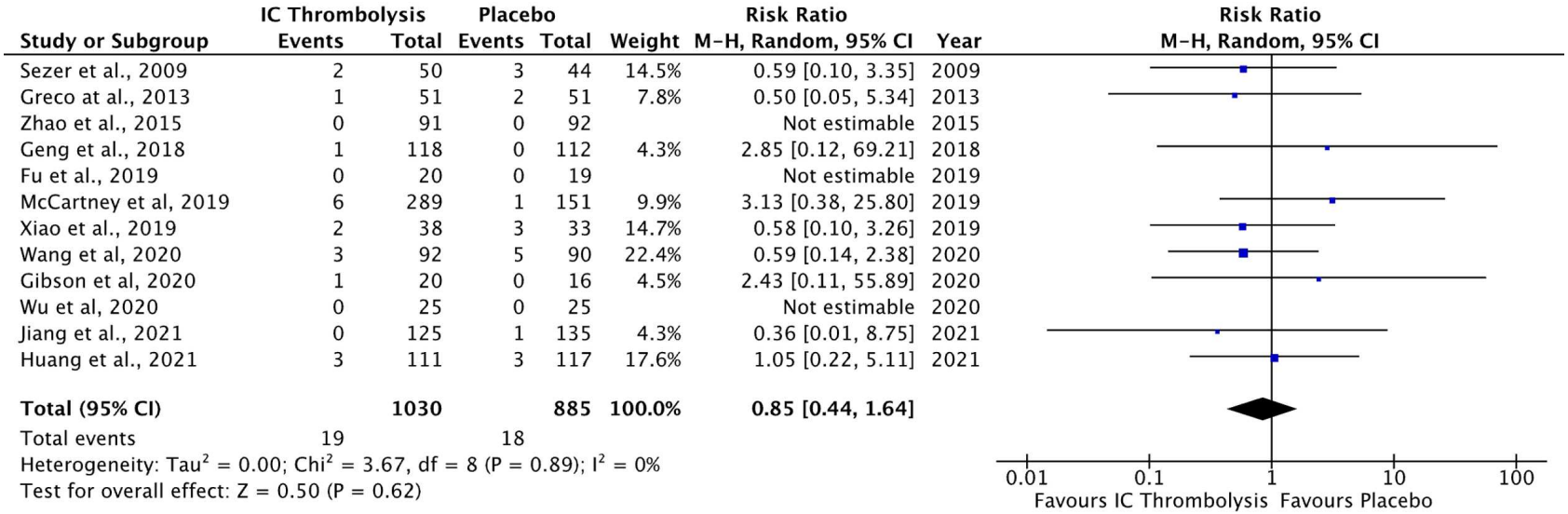
Study or Subgroup	IC Thrombolysis Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Greco at al., 2013	1	51	2	51	3.7%	0.50 [0.05, 5.34]	2013
Zhao et al., 2015	2	91	4	92	7.5%	0.51 [0.09, 2.69]	2015
Geng et al., 2018	4	118	8	112	15.3%	0.47 [0.15, 1.53]	2018
Xiao et al., 2019	10	38	12	33	43.1%	0.72 [0.36, 1.45]	2019
Fu et al., 2019	3	20	3	19	9.7%	0.95 [0.22, 4.14]	2019
Gibson et al, 2020	0	20	0	16		Not estimable	2020
Wu et al, 2020	2	25	4	25	8.2%	0.50 [0.10, 2.49]	2020
Jiang et al., 2021	4	125	5	135	12.6%	0.86 [0.24, 3.15]	2021
Total (95% CI)		**488**		**483**	**100.0%**	**0.66 [0.42, 1.05]**	
Total events	26		38				

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 1.05$, df = 6 (P = 0.98); $I^2 = 0\%$

Test for overall effect: Z = 1.75 (P = 0.08)



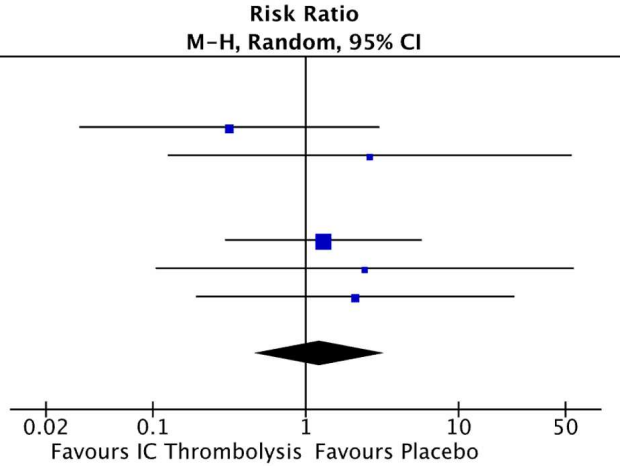
Supplementary Figure 4



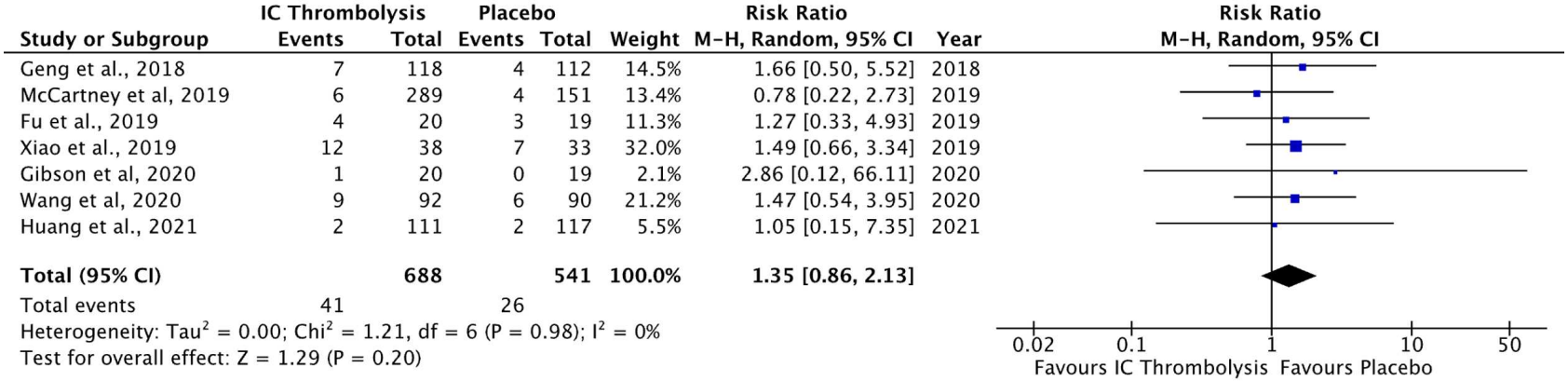
Supplementary Figure 5

Study or Subgroup	IC Thrombolysis Events	Total	Placebo Events	Total	Weight	Risk Ratio M-H, Random, 95% CI	Year
Sezer et al., 2007	0	21	0	20		Not estimable	2007
Sezer et al., 2009	0	50	0	44		Not estimable	2009
Geng et al., 2018	1	118	3	112	18.9%	0.32 [0.03, 3.00]	2018
McCartney et al, 2019	2	289	0	151	10.4%	2.62 [0.13, 54.24]	2019
Xiao et al., 2019	0	38	0	33		Not estimable	2019
Fu et al., 2019	0	20	0	19		Not estimable	2019
Wang et al, 2020	4	92	3	90	44.3%	1.30 [0.30, 5.66]	2020
Gibson et al, 2020	1	20	0	16	9.7%	2.43 [0.11, 55.89]	2020
Huang et al., 2021	2	111	1	117	16.8%	2.11 [0.19, 22.92]	2021
Total (95% CI)		**759**		**602**	**100.0%**	**1.24 [0.47, 3.28]**	
Total events	10		7				

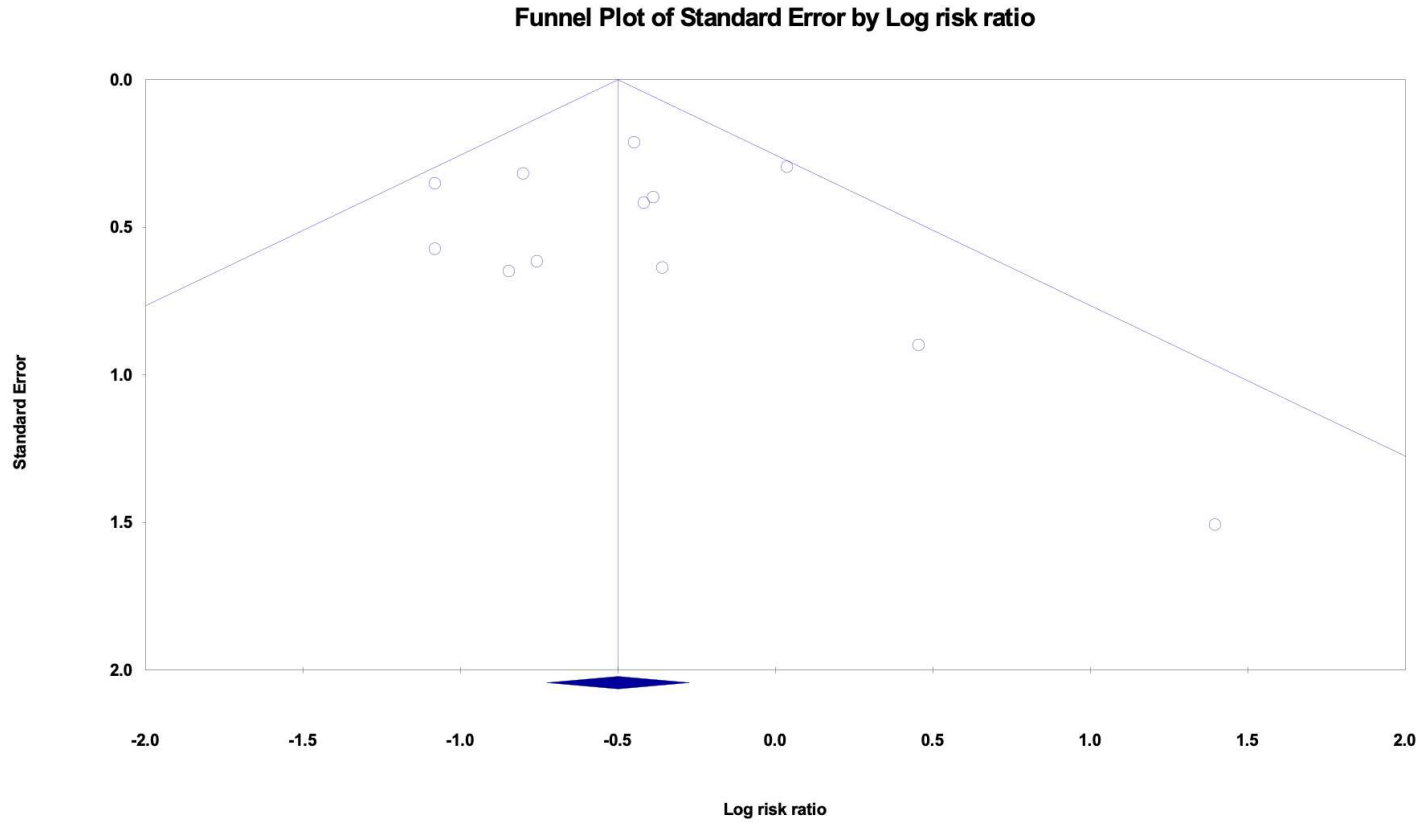
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 2.02$, df = 4 (P = 0.73); $I^2 = 0\%$
Test for overall effect: Z = 0.42 (P = 0.67)



Supplementary Figure 6



Supplementary Figure 7



Supplementary Table Legends

Supplementary Table 1**:** Individual components of MACE as defined by each individual study. Abbreviations, MACE: major adverse clinical events, MI: myocardial infarction, TVR: target vessel revascularisation

*Includes repeat hospitalisation

**Includes new onset HF and/or hospitalisation for HF

Supplementary Table 2**:** Summary of outcomes in studies investigating intracoronary thrombolysis for STEMI patients. Abbreviations, TG: thrombolysis group, CG: control group, MACE: major adverse clinical events, LVEF: left ventricular ejection fraction, TIMI: thrombolysis in myocardial infarction, TMPG: TIMI myocardial perfusion grade, CTFC: corrected TIMI frame count, NR: not reported

Supplementary Table 1

Study	Mortality	Cardiac Mortality	MI/Reinfarction	Angina	TVR	Stent thrombosis	Heart Failure	Malignant Arrythmia	Stroke
Sezer et al	No	Yes	Yes	No	Yes	No	No	No	No
Zhao et al	Yes	No	No	Yes	Yes	No	Yes	No	Yes
Greco et al	Yes	No	Yes	No	No	No	Yes**	No	No
Geng et al	No	Yes	Yes	Yes	No	Yes	Yes	No	No
Xiao et al	No	Yes	No	No	Yes	No	Yes	Yes	No
Fu et al	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes
McCartney et al	No	Yes	Yes	No	No	No	Yes	No	No
Gibson et al*	Yes	No	Yes	No	No	No	Yes	Yes	No
Wang et al	No	Yes	Yes	No	Yes	No	No	No	No
Wu et al	No	Yes	Yes	No	Yes	No	Yes	Yes	No
Huang et al	No	Yes	Yes	No	Yes	No	No	No	No
Jiang et al	No	Yes	Yes	Yes	No	Yes	Yes	No	No

Supplementary Table 2

Study	Group	MACE (N =)	LVEF (mean ± SD)*	Heart Failure (N =)	Mortality (N =)	Major Bleeding (N =)	Minor Bleeding (N =)	TIMI flow grade >3 (N =)	TMPG > 3 (N =)	ST-resolution (N =)	CTFC (mean ± SD)
Sezer et al	TG	4	55.5±9.5	NR	2	0	NR	46	20	47	29.9±9.2
	CG	5	48.5±11.4	NR	3	0	NR	39	7	37	31.2±8.7
Zhao et al	TG	4	56.3±9.8	2	0	NR	NR	83	NR	85	21.2±10.7
	CG	12	53.5±8.1	4	0	NR	NR	71	NR	76	29.6±15.3
Greco et al	TG	3	NR	1	1	NR	NR	46	35	42	19 ± 15
	CG	11	NR	2	2	NR	NR	34	24	28	25 ± 17
Geng et al	TG	10	58±5.4	4	1	1	7	109	NR	105	NR
	CG	14	57.3±6.8	8	0	3	4	96	NR	89	NR
Xiao et al	TG	17	53.2±5.5	10	2	0	12	37	35	NR	23.05±5.35
	CG	23	51.6±6	12	1	0	7	29	24	NR	26.51±4.95
Fu et al	TG	3	52.4 ± 12.2	3	0	0	4	17	16	15	21.7±10.2
	CG	6	49.9 ± 11.5	3	0	0	3	10	9	14	28.59±9.94
McCartney et al	TG	30	NR	NR	3	2	6	227	70	NR	NR
	CG	15	NR	NR	143	0	4	125	43	NR	NR
Gibson et al	TG	2	NR	0	1	1	1	17	9	NR	NR

	CG	0	NR	0	0	0	0	15	2	NR	NR
Wang et al	TG	10	55.2±10.5	NR	3	4	9	82	53	52	19.6±9.1
	CG	20	52.2±9.4	NR	5	3	6	72	35	35	22.9±10.2
Wu et al	TG	3	60.9±2.3	2	0	NR	NR	22	21	24	16.7±7.3
	CG	7	59.2±2.4	4	0	NR	NR	20	10	16	19.1±6.7
Huang et al	TG	3	58.2±7.8	NR	3	2	2	101	38	64	27.1±14.2
	CG	2	55.6 ± 8.6	NR	2	1	2	90	26	45	34.6±18.3
Jiang et al	TG	8	57.4±5.4	4	0	NR	NR	123	NR	114	NR
	CG	13	55.8±5.5	5	1	NR	NR	130	NR	109	NR