

Supplements

Search Strategies for multiple databases

PubMed (NCBI)

Number of results: 89

Search	Term	Results
1	Myocardial Reperfusions[MeSH Terms]	529
2	Myocardial Reperfusion[MeSH Terms]	529
3	T-Plasminogen Activator	55097
4	TTPA[MeSH Terms]	2055
5	Activase[MeSH Terms]	2055
6	Alteplase[MeSH Terms]	2055
7	Percutaneous Transluminal Coronary Angioplasty[MeSH Terms]	2157
8	Coronary Balloon Angioplasty[MeSH Terms]	2157
9	Coronary Balloon Angioplasties[MeSH Terms]	2157
10	Transluminal Coronary Balloon Dilation[MeSH Terms]	2157
11	Percutaneous Coronary Revascularization[MeSH Terms]	4821
12	Percutaneous Coronary Intervention[MeSH Terms]	4821
13	Coronary Artery Bypass Grafting[MeSH Terms]	4046
14	Aortocoronary Bypass[MeSH Terms]	4046
15	Coronary Artery Bypass Surgery[MeSH Terms]	4046
16	Coronary Artery Bypass[MeSH Terms]	4046
17	OR/1-16	10273
18	Acetylcysteine[MeSH Terms]	2287
19	17 AND 18	53

Embase

Number of results: 122

Search	Terms	Results
1	't-plasminogen activator':ab	18
2	'ttpa':ab	130
3	'activase':ab	442
4	'alteplase':ab	3309

5	'percutaneous transluminal coronary angioplasty':ab	6374
6	'coronary balloon angioplasty':ab	302
7	'coronary balloon angioplasties':ab	1
8	'transluminal coronary balloon dilation':ab	0
9	'percutaneous coronary revascularization':ab	487
10	'percutaneous coronary intervention':ab	46799
11	'coronary artery bypass grafting':ab	25471
12	'aortocoronary bypass':ab	1856
13	'coronary artery bypass surgery':ab	6914
14	'coronary artery bypass':ab	47898
15	OR/1-14	99246
16	'Acetylcysteine':ab	14662
17	15 AND 16	122

Web of Science (Clarivate Analytics)

Number of results: 432

Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.

Search	Terms	Results
1	TS=t-plasminogen activator	12
2	TS= ttpa	133
3	TS=activase	1054
4	TS=alteplase	4409
5	TS=percutaneous transluminal coronary angioplasty	6648
6	TS=coronary balloon angioplasty	12779
7	TS=coronary balloon angioplasties	12779
8	TS=transluminal coronary balloon dilation	124
9	TS=percutaneous coronary revascularization	13284
10	TS=percutaneous coronary intervention	51,343
11	TS=coronary artery bypass grafting	36549
12	TS=aortocoronary bypass	2335
13	TS=coronary artery bypass surgery	35943

14	TS=coronary artery bypass	50131
15	OR/1-14	112568
16	TS=Acetylcysteine	18025
17	15 AND 16	432

CINAHL (EBSCOhost)

Number of Results: 24

Limiter: Human

Expanders: Apply equivalent subjects

Search modes: Boolean/Phrase

Search	Term	Results
1	AB t-plasminogen activator	1
2	AB ttpa	5
3	AB activase	6
4	AB alteplase	376
5	AB percutaneous transluminal coronary angioplasty	677
6	AB coronary balloon angioplasty	127
7	AB coronary balloon angioplasties	127
8	AB transluminal coronary balloon dilation	0
9	AB percutaneous coronary revascularization	279
10	AB percutaneous coronary intervention	4740
11	AB coronary artery bypass grafting	2228
12	AB aortocoronary bypass	57
13	AB coronary artery bypass surgery	2470
14	AB coronary artery bypass	5223
15	OR/1-14	10113
16	TX Acetylcysteine	992
17	15 AND 16	24

ClinicalTrials.gov

Number of Results: 10

Applied filters: Interventional Studies (Clinical Trials), Adults (18-64

Study Results: All Studies

Search	Term	Results
--------	------	---------

1	Condition or disease: Myocardial infarction	2432
2	Condition or disease: STEMI	674
3	Condition or disease: NSTEMI	208
4	Condition or disease: Coronary artery disease	7663
5	Condition or disease: Ischemic Heart Disease	7633
6	Condition or disease: Angina Pectoris	816
7	Condition or disease: Stable Angina	287
8	Condition or disease: Unstable Angina	223
9	Condition or disease: OR/ 1-9	7921
10	Intervention/treatment: Acetylcysteine	424
11	9 AND 10	10

Cochrane Library (Wiley)

Number of results: 81

Search limits: Trials

No.	Query	Results
1	"t-plasminogen activator":ab	4
2	"ttpa":ab	17
3	"activase":ab	20
4	"alteplase":ab	758
5	"percutaneous transluminal coronary angioplasty":ab	775
6	"coronary balloon angioplasty":ab	37
7	"coronary balloon angioplasties":ab	37
8	"transluminal coronary balloon dilation":ab	0
9	"percutaneous coronary revascularization":ab	77
10	"percutaneous coronary intervention":ab	7633
11	"coronary artery bypass grafting":ab	6470
12	"aortocoronary bypass":ab	315
13	"coronary artery bypass surgery":ab	1299
14	"coronary artery bypass":ab	7893
15	OR/1-14	16276
16	"Acetylcysteine":ab	1456
17	15 AND 16	81

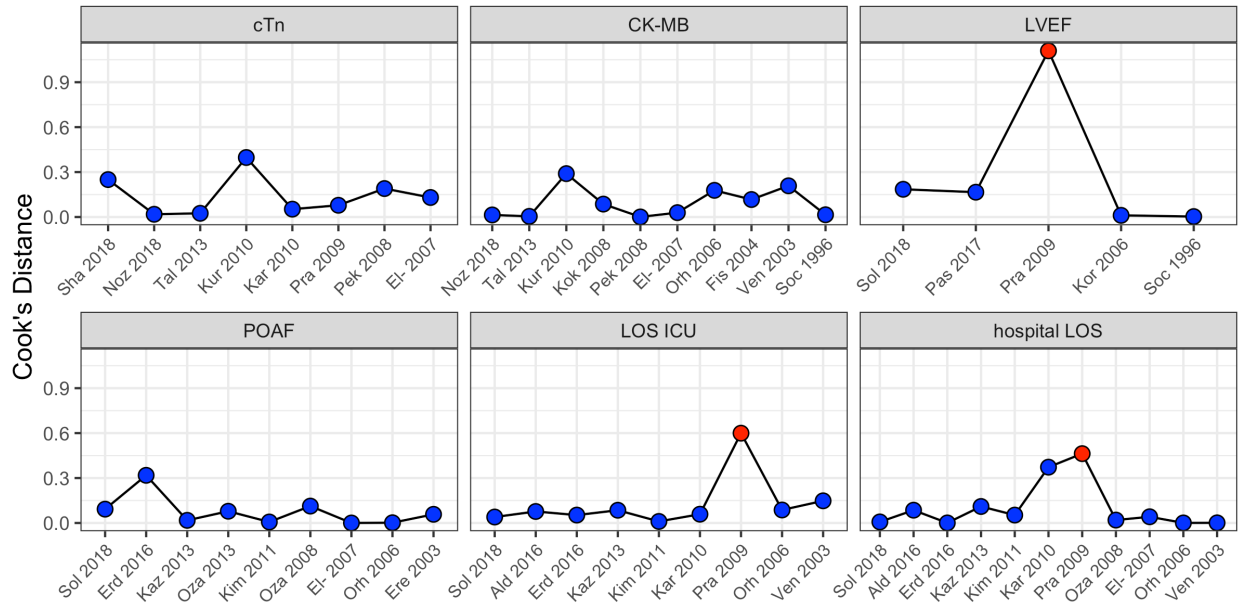


Figure S1. Diagnostic plots for a potential influential trial. X-axis represents the studies used in each measure for meta-analyses. Y-axis is the Cook's distance for each trial. If the Cook's distance is greater than 0.45, the corresponding trial is highlighted in red, as an indicator of a potentially influential trial.

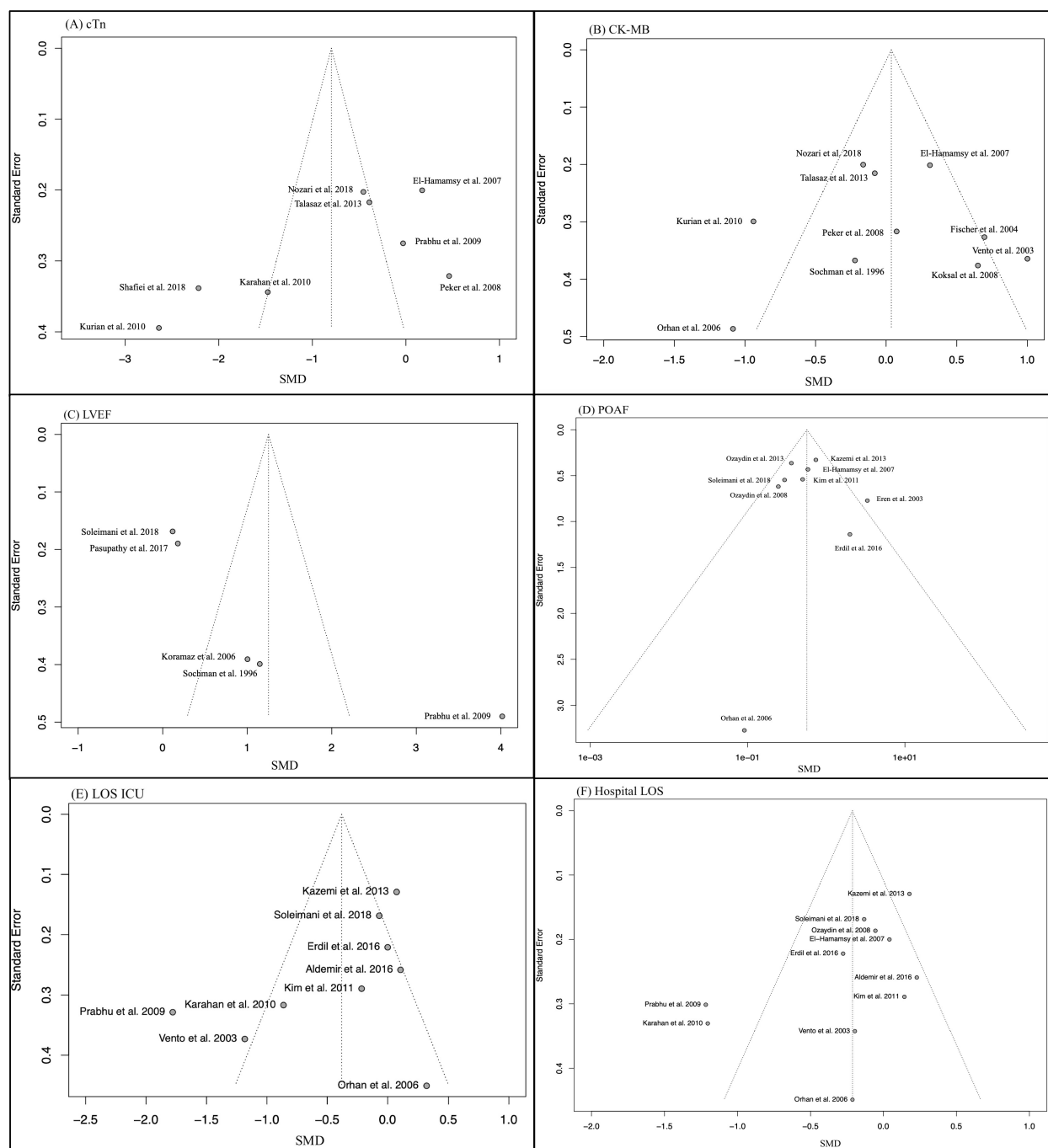


Figure S2. Funnel plot for (A) cTn, (B) CK-MB, (C) LVEF, (D) POAF, (E) LOS ICU, (F) Hospital LOS. Each dot represents a trial. The x-axis represents the SMD for each study, whereas the y-axis indicates the standard error for each trial. The middle dashed line shows the pooled SMD, with two other dashed lines indicate 95% CI for the pooled SMD. When there is no publication bias, the assembly of trials should form a roughly symmetrical, upside-down funnel.

Table S1. Comparison of Meta-Analysis Results for Inclusion versus Exclusion of the Potential Influential Trial.

Outcome	Analysis	Pooled effect size	95% CI	p value	Heterogeneity
LVEF	Include all studies	1.251	[-0.701, 3.204]	0.150	94%
	Remove Prabhu et al. 2009	0.515	[-0.324, 1.353]	0.146	68%
LOS ICU	Include all studies	-0.381	[-0.913, 0.151]	0.137	81%
	Remove Prabhu et al. 2009	-0.200	[-0.601, 0.200]	0.276	61%
Hospital LOS	Include all studies	-0.213	[-0.541, 0.116]	0.180	70%
	Remove Prabhu et al. 2009	-0.109	[-0.380, 0.162]	0.386	52%

Prabhu, et al., 2019 trial was detected as a potential influential trial for LVEF, LOS ICU and hospital LOS but not for cTn, CK-MB or POAF (Fig 4). LVEF: left ventricular ejection, LOS: length of stay.

Table S2. Test Results for Asymmetry in the Funnel Plots.

Outcome	t statistics	p value
cTn	-2.155	0.075
CK-MB	0.001	0.999
LVEF	2.987	0.058
POAF	0.530	0.614
LOS ICU	-1.841	0.108
Hospital LOS	-1.968	0.081

The Egger's regression test was employed for evaluating the asymmetry of continuous clinical outcome measures, cTn, CK-MB, LVEF, LOS ICU, and hospital LOS, whereas the Peters' regression test was used for the binary outcome measure POAF. A p value greater than 0.05 indicates the asymmetry of the funnel plot is not significant at 5% level, and there is no publication bias related to the trials with a small sample size. cTn: cardiac troponins, LVEF: left ventricular ejection, POAF: post-operative atrial fibrillation, LOS: length of stay.