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Supplemental Material

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Predictors of futile recanalization after endovascular treatment in acute ischemic

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stroke: A meta-analysis

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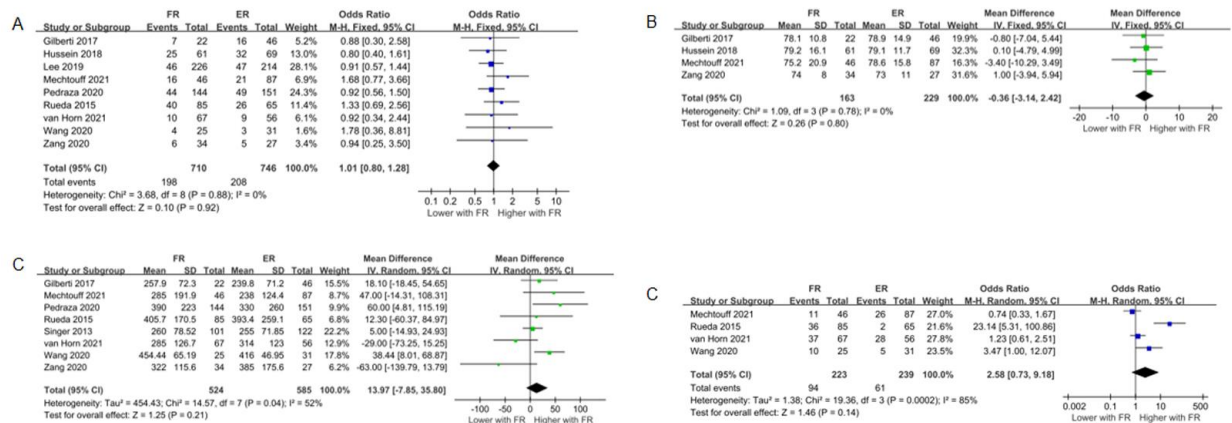
Supplemental table 1. Pooled analysis of the risk factors for futile recanalization after endovascular treatment.

Risk factors	No. of involved studies	Estimates (95% CI)	P value for overall effect	I ² , %	P value for Begg's Test	P value for Egger's test
Demographic						
Age	12	MD 5.81 (4.16, 7.46)	< 0.00001	54	0.640	0.481
Female	11	OR 1.40 (1.16, 1.68)	0.0004	0	0.533	0.309
Past medical history						
Hypertension	11	OR 1.73 (1.43, 2.09)	< 0.00001	35	0.482	0.990
Diabetes	11	OR 1.78 (1.41, 2.24)	< 0.00001	0	0.592	0.658
Atrial fibrillation	10	OR 1.24 (1.01, 1.51)	0.04	0	0.858	0.816
Dyslipidemia	9	OR 1.01 (0.80, 1.28)	0.92	0		
Baseline test						
NIHSS	11	MD 4.22 (3.38, 5.07)	< 0.00001	69	0.640	0.084
ASPECTS	9	MD -0.71 (-1.23, -0.19)	0.007	91		
SBP	5	MD 4.98 (1.87, 8.09)	0.002	0		
DBP	4	MD -0.36 (-3.14, 2.42)	0.80	0		
GLU	5	MD 0.59 (0.37, 0.81)	< 0.00001	0		
TOAST						
LAA	4	OR 0.92 (0.70, 1.21)	0.54	0		
Cardiogenic embolism	5	OR 1.06 (0.85, 1.33)	0.60	0		
Occlusion site						
ICA	9	OR 1.85 (1.17, 2.95)	0.009	53		
MCA-M1	7	OR 0.81 (0.51, 1.28)	0.37	49		
MCA-M2	6	OR 0.70 (0.42, 1.18)	0.19	9		
Tandem occlusion	5	OR 1.30 (0.72, 2.33)	0.38	53		
Poor collateral	4	OR 2.58 (0.73, 9.18)	0.14	85		
procedure-related factors						
IVT	8	OR 0.67 (0.55, 0.83)	0.0001	26		
OTP	7	MD 16.92 (6.52, 27.31)	0.001	24		
OTR	8	MD 13.97 (-7.85, 35.80)	0.21	52		
PTR	7	MD 12.37 (7.96, 16.79)	< 0.00001	21		
sICH	5	OR 6.09 (3.18, 11.68)	< 0.00001	16		

EVT, endovascular treatment; CI, confidence interval; MD, mean difference; OR, odds ratio; NIHSS, NIH Stroke Scale; ASPECTS, Alberta Stroke Program Early Computed Tomography score; SBP, systolic blood pressure; DBP, diastolic blood pressure; GLU, glucose; TOAST, Trial of Org 10172 in Acute Stroke Treatment; LAA, large artery atherosclerosis; ICA, internal carotid artery; MCA, middle cerebral artery; IVT, intravenous thrombolysis; OTP, onset-to-puncture time; OTR, onset-to-recanalization time; PTR, puncture-to-recanalization time; sICH, symptomatic intracerebral hemorrhage.

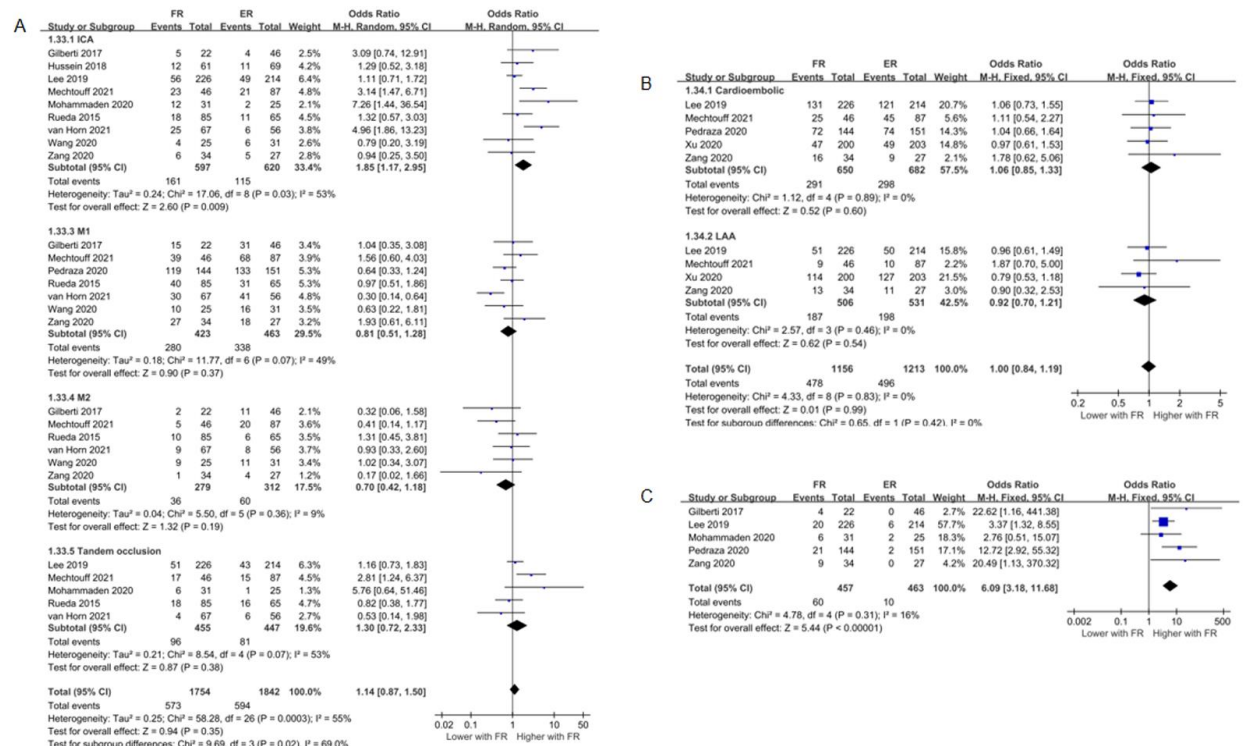
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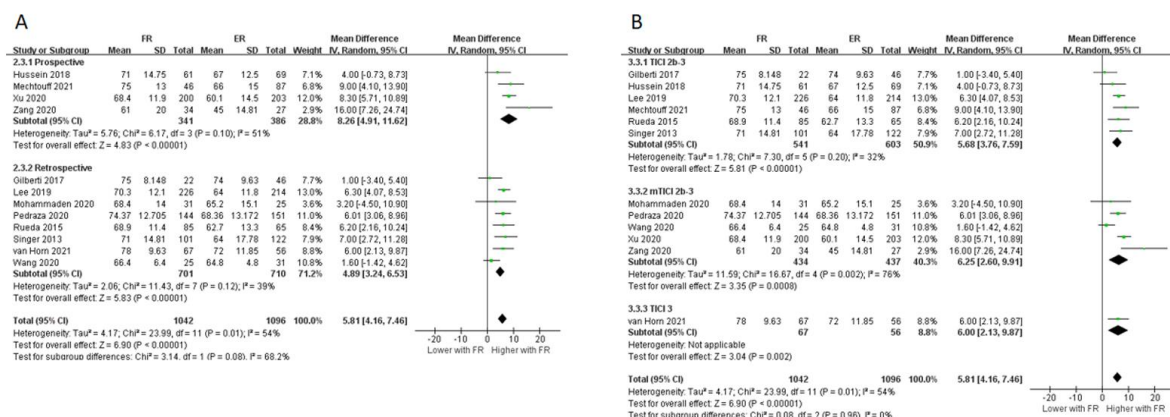
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2 **Online supplemental figure 1.** Forest plots illustrating association of dyslipidemia (A),
3 diastolic blood pressure (B), poor collaterals (C), and onset-to-recanalization time (D) with
4 futile recanalization after endovascular therapy for acute ischemic stroke. FR, futile
5 recanalization; ER, effective recanalization.

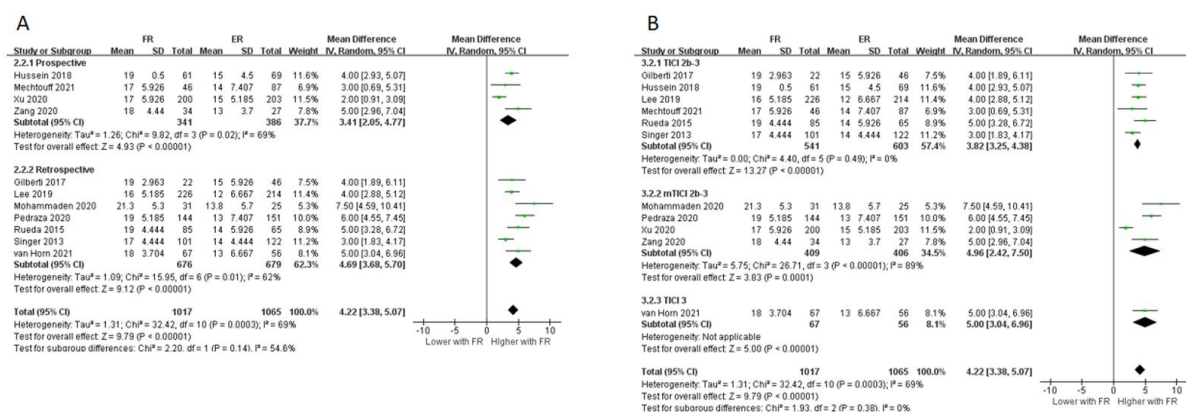


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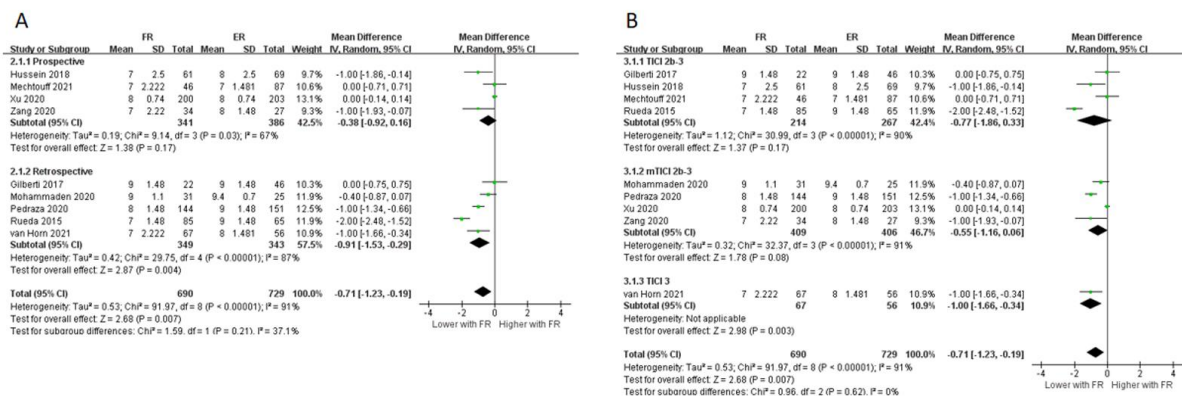
3 **Online supplemental figure 2.** Forest plots illustrating association of occlusion sties (A),
4 etiology classification according to TOAST (B), and symptomatic intracerebral hemorrhage (C)
5 with futile recanalization after endovascular therapy for acute ischemic stroke. FR, futile
6 recanalization; ER, effective recanalization.



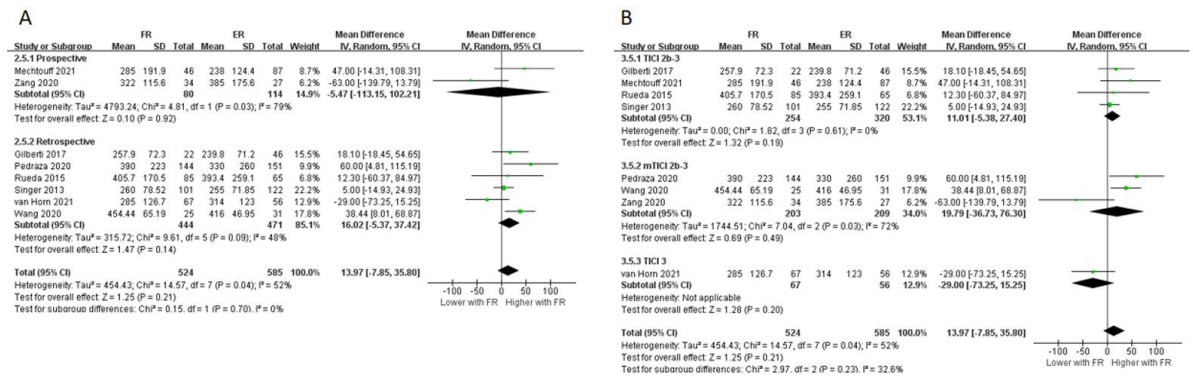
Online supplemental figure 3. Subgroup analysis of meta-analysis assessing age correlation with futile recanalization according to study design (A) and recanalization scale (B). FR – futile recanalization; ER – effective recanalization.



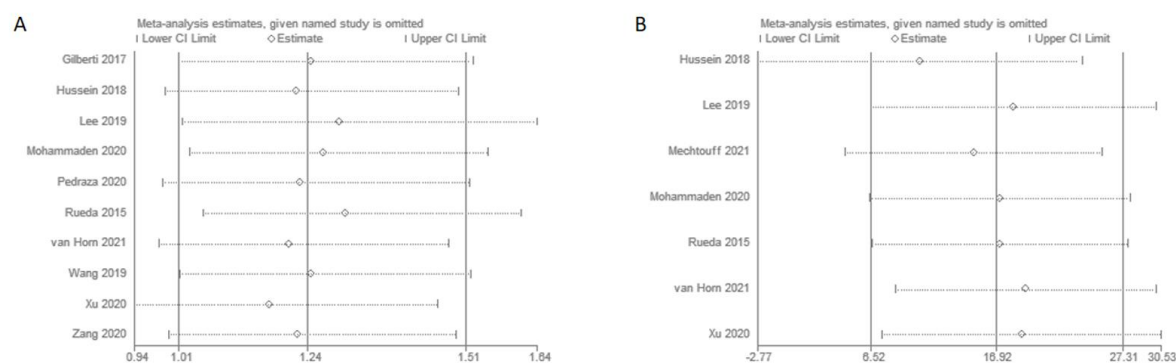
Online supplemental figure 4. Subgroup analysis of meta-analysis assessing NIHSS correlation with futile recanalization according to study design (A) and recanalization scale (B). FR – futile recanalization; ER – effective recanalization.



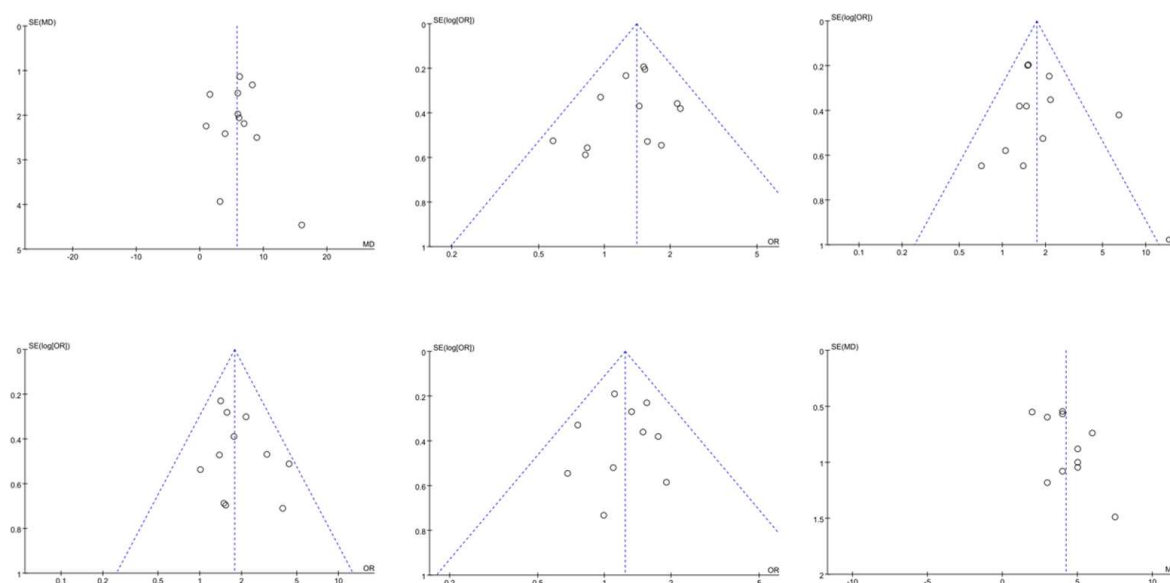
Online supplemental figure 5. Subgroup analysis of meta-analysis assessing ASPECTS correlation with futile recanalization according to study design (A) and recanalization scale (B). FR – futile recanalization; ER – effective recanalization.



Online supplemental figure 6. Subgroup analysis of meta-analysis assessing onset-to-recanalization time correlation with futile recanalization according to study design (A) and recanalization scale (B). FR – futile recanalization; ER – effective recanalization.



Online supplemental figure 7. Sensitivity analysis of studies pooled for atrial fibrillation (A) and onset-to-puncture time (B) correlation with futile recanalization. CI, confidence intervals.



Online supplemental figure 8. Funnel plots for assessing publication bias of studies. (A) Age, (B) Female, (C) National Institute of Health Stroke Scale (NIHSS) score, (D) Hypertension, (E) Diabetes mellitus, (F) Atrial fibrillation.