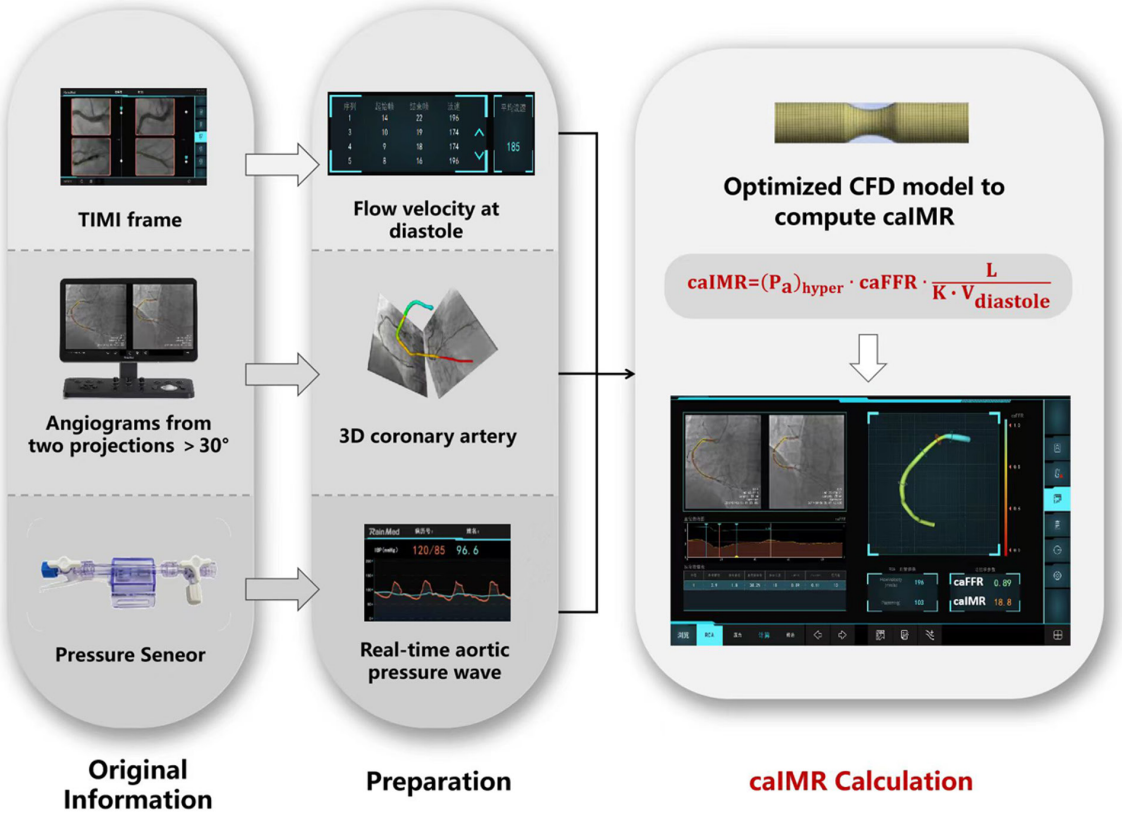

Figure S1 The schematic of the caIMR and caFFR systems. TIMI, thrombolysis in myocardial infarction; CFD, computational fluid dynamics; caIMR, coronary angiography-derived index of microvascular resistance; caFFR, coronary angiography-derived fractional flow reserve.

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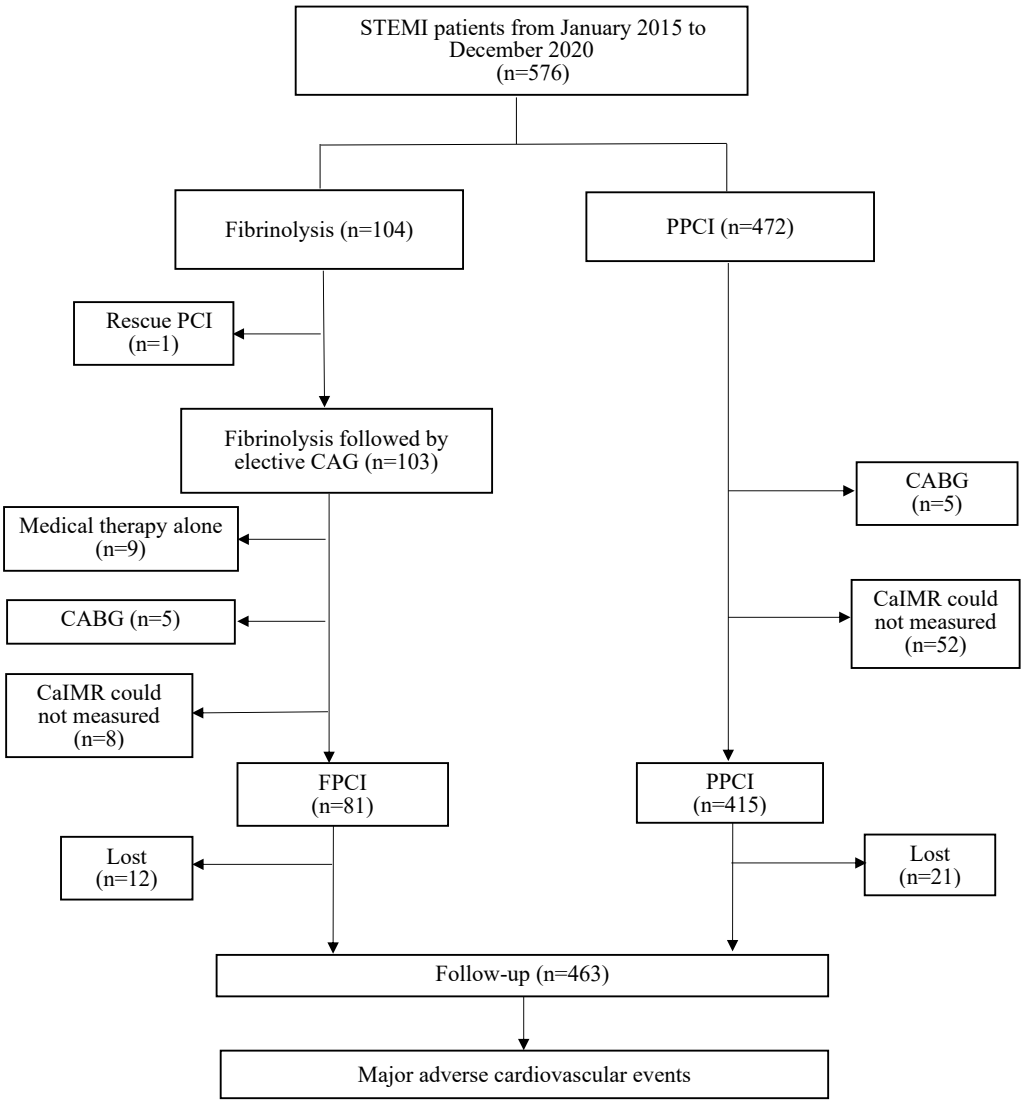

Figure S2 Flowchart for the study. STEMI, ST-segment-elevation myocardial infarction; PPCI, primary percutaneous coronary intervention; CAG, coronary angiogram; CABG, coronary artery bypass grafting; caIMR, coronary angiography-derived index of microvascular resistance; FPCI, fibrinolysis followed by elective percutaneous coronary intervention.

Table S1 The caIMR results in the FPCI and PPCI groups before and after propensity score matching

	Unmatched groups			Propensity score matched groups		
	FPCI (n=81)	PPCI (n=415)	P	FPCI (n=76)	PPCI (n=173)	P
caIMR	20.34 (16.42–26.87)	40.33 (25.70–59.73)	<0.001	20.19 (16.37–26.24)	39.38 (25.05–56.75)	<0.001
caFFR	0.93 (0.91–0.95)	0.93 (0.90–0.95)	0.366	0.93 (0.91–0.95)	0.93 (0.90–0.95)	0.730

caIMR, coronary angiography-derived index of microvascular resistance; FPCI, fibrinolysis followed by elective percutaneous coronary intervention; PPCI, primary percutaneous coronary intervention; caFFR, coronary angiography-derived fractional flow reserve.

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Table S2 Linear regression analysis for the prediction of microvascular dysfunction

	Univariable analysis		Multivariable analysis	
	β (95% CI)	P value	β (95% CI)	P value
Reperfusion strategy		<0.001		<0.001
PPCI	Control		Control	
FPCI	−23.191 (−29.943 to −16.440)		−18.758 (−26.361 to −11.155)	
Symptom onset to reperfusion time	1.055 (0.627 to 1.484)	<0.001	1.354 (0.843 to 1.865)	< 0.001
Peak CK-MB	0.019 (0.010 to 0.027)	<0.001	0.019 (0.010 to 0.028)	< 0.001
Age	0.220 (0.025 to 0.415)	0.027	0.026 (−0.191 to 0.244)	0.813
Sex		0.980		0.628
Male	Control		Control	
Female	−0.086 (−6.769 to 6.596)		−1.711 (−8.648 to 5.227)	
Stent numbers	−2.214 (−6.741 to 2.313)	0.337	1.444 (−3.020 to 5.908)	0.525
Hypertension		0.098		0.231
No	Control		Control	
Yes	4.449 (−0.829 to 9.727)		3.280 (−2.095 to 8.654)	
Diabetes mellitus		0.958		0.991
No	Control		Control	
Yes	−0.155 (−5.962 to 5.653)		0.032 (−5.923 to 5.988)	
Hyperlipidemia		0.628		0.699
No	Control		Control	
Yes	1.407 (−4.292 to 7.106)		−1.129 (−6.864 to 4.605)	
Previous stroke/TIA		0.470		0.194
No	Control		Control	
Yes	−2.902 (−10.784 to 4.980)		−5.256 (−13.197 to 2.685)	
Previous MI		0.138		0.076
No	Control		Control	
Yes	−8.397 (−19.489 to 2.694)		−10.172 (−21.429 to 1.085)	
Chronic kidney disease		0.907		0.257
No	Control		Control	
Yes	−0.877 (−15.639 to 13.885)		−8.346 (−22.803 to 5.111)	
Killip class		0.721		0.767
I	Control		Control	
II–IV	0.662 (−2.980 to 4.305)		0.561 (−3.159 to 4.281)	
LDL-C	−0.733 (−3.887 to 2.422)	0.315	−1.537 (−4.540 to 1.467)	0.291

PPCI, primary percutaneous coronary intervention; FPCI, fibrinolysis followed by elective percutaneous coronary intervention; CK-MB, creatine kinase-MB; TIA, transient ischemic attacks; MI, myocardial infarction; LDL-C, low-density lipoprotein cholesterol.

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Table S3 Major adverse cardiovascular events during the follow-up period

Major adverse cardiovascular events	All Patients				Adjusted model		Propensity score matched patients			
	FPCI (n=69)	PPCI (n=394)	Unadjusted HR (95% CI)	P value	Adjusted HR (95% CI)	P value	FPCI (n=61)	PPCI (n=170)	Adjusted HR (95% CI)	P value
Cardiovascular death	0 (0)	30 (7.6)	1.78e–19	–	4.08e–07	<0.001	0 (0)	10 (5.9)	5.06e–20	<0.001
Non-fatal recurrent MI	2 (2.9)	15 (3.8)	0.71 (0.16–3.16)	0.656	1.30 (0.29–5.81)	0.735	1 (1.6)	4 (2.4)	0.65 (0.07–5.83)	0.697
Target-vessel revascularization	6 (8.7)	25 (6.3)	1.33 (0.56–3.15)	0.512	1.47 (0.59–3.67)	0.404	5 (6.4)	9 (5.3)	0.94 (0.26–3.41)	0.929
Stroke/TIA	3 (4.3)	18 (4.6)	0.90 (0.27–3.02)	0.861	1.51 (0.33–7.00)	0.596	3 (4.9)	8 (4.7)	0.99 (0.26–3.66)	0.982
Total	7 (10.1)	82 (20.8)	0.46 (0.21–0.99)	0.048	0.83 (0.37–1.87)	0.652	5 (8.2)	29 (17.1)	0.49 (0.19–1.28)	0.148

Model was adjusted for age, sex, diabetes, hypertension, dyslipidemia, chronic kidney disease, creatine kinase-MB peak value, symptom onset to reperfusion time, stent numbers. FPCI, fibrinolysis followed by elective percutaneous coronary intervention; PPCI, primary percutaneous coronary intervention; HR, hazard ratio; CI, confidence interval; MI, myocardial infarction; TIA, transient ischemic attacks.

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