

Supplementary Table 1: OPT-CAD scoring criteria.

Item			Score
Medical history	1. Age (years)	<30	0
		30–39	6
		40–49	19
		50–59	32
		60–69	45
		70–79	58
		≥80	71
	2. OMI	No	0

		Yes	16
		No	0
	3. Cerebrovascular disease	Yes	16
		No	0
	4. Hypertension	Grade 1	0
		Grade 2	11
		Grade 3	20
Preliminary information	5. Heart rate (bpm/min)	<50	24
		50–79	0
		80–99	12
		100–119	22

	6. ST segment changes in electrocardiogram	≥120	36
		No	0
		Yes	13
Hospitalization information	7. eGFR (mL · min ⁻¹ · 1.73 m ⁻²)	<60	21
		≥60	0
	8. Anemia	No	0
		Yes	19
	9. Elevated cardiac troponin	No	0
		Yes	23
	10. LVEF (%)	<50	22
		≥50	0

Total score: 0~238

eGFR: Estimated glomerular filtration rate; OMI: Old myocardial infarction; OPT-CAD: Optimal Antiplatelet Therapy for Chinese Patients with Coronary Artery Disease, LVEF:left ventricular ejection fraction.

Supplementary Table 2: Baseline characteristics.

Characteristic	Clopidogrel group (<i>n</i> = 679)	Ticagrelor group (<i>n</i> = 469)	De-escalation group 1 (<i>n</i> = 76)	De-escalation group 2 (<i>n</i> = 111)	<i>F</i> / χ^2 value	<i>P</i> -value	Pairwise comparison
Age (years; <i>m</i> $\pm$ SD)	64.16 $\pm$ 8.54	60.94 $\pm$ 9.30	62.31 $\pm$ 8.62	61.05 $\pm$ 8.82	13.697	<0.001	① vs. ② <i>P</i> < 0.001 ① vs. ④ <i>P</i> = 0.001
Female, <i>n</i> (%)	239/679 (35.2%)	127/469 (27.1%)	11/76 (14.5%)	34/111 (30.6%)	18.957	0.001	① vs. ② <i>P</i> = 0.004 ① vs. ③ <i>P</i> < 0.001
BMI (kg/m ² ; <i>m</i> $\pm$ SD)	25.79 $\pm$ 2.39	25.99 $\pm$ 2.54	25.44 $\pm$ 2.30	25.83 $\pm$ 1.65	1.475	0.220	
Presentation							
UAP, <i>n</i> (%)	269/679 (39.6%)	97/469 (20.7%)	25/76 (32.9%)	39/111 (35.1%)	46.056	<0.001	① vs. ② <i>P</i> < 0.001 ② vs. ④ <i>P</i> = 0.001
NSTEMI, <i>n</i> (%)	48/679 (7.1%)	31/469 (6.6%)	5/76 (6.6%)	6/111 (5.4%)	0.447	0.930	
STEMI, <i>n</i> (%)	362/679 (53.3%)	341/469 (72.7%)	46/76 (60.5%)	66/111 (59.5%)	44.022	<0.001	① vs. ② <i>P</i> < 0.001

② vs. ④ $P=0.006$

① vs. ② $P < 0.001$

② vs. ③ $P = 0.008$

② vs. ④ $P < 0.001$

Primary PCI, n (%)

306/679 (45.1%) 314/469 (67.0%) 39/76 (51.3%) 50/111 (45.0%) 56.717 <0.001

Medical history, n (%)

Hypertension 508/679 (74.8%) 340/469 (72.5%) 54/76 (71.1%) 91/111 (82.0%) 4.615 0.202

Type 2 diabetes 160/679 (23.6%) 127/469 (27.1%) 14/76 (18.4%) 33/111 (29.7%) 4.904 0.179

Cerebrovascular disease 127/679 (18.7%) 68/469 (14.5%) 11/76 (14.5%) 17/111 (15.3%) 4.016 0.260

OMI 33/679 (4.9%) 20/469 (4.3%) 1/76 (1.3%) 2/111 (1.8%) 4.839 0.184

Atrial fibrillation 15/679 (2.2%) 10/469 (2.1%) 4/76 (5.3%) 5/111 (4.5%) 3.806 0.283

Current smoker 336/679 (49.5%) 239/469 (51.0%) 38/76 (50.0%) 54/111 (48.6%) 0.325 0.955

① vs. ④ $P = 0.008$

CAD family history 24/679 (3.5%) 14/469 (3.0%) 6/76 (7.9%) 10/111 (9.0%) 9.541 0.023

Peripheral artery disease 8/679 (1.2%) 6/469 (1.3%) 1/76 (1.3%) 0/111 (0.0%) 0.613 0.434

Previous RV	67/679 (9.9%)	48/469 (10.2%)	11/76 (14.5%)	16/111 (14.5%)	3.547	0.315	
OPT-CAD	119.23 ± 22.23	119.32 ± 18.46	118.79 ± 18.05	116.34 ± 22.37	0.673	0.568	
ARC-HBR	198/679 (29.2%)	81/469 (17.3%)	15/76 (19.7%)	17/111 (15.3%)	27.092	<0.001	① vs ② $P < 0.001$ ① vs. ④ $P = 0.002$

①: Clopidogrel group; ②: Ticagrelor group; ③: De-escalation group 1; ④De-escalation group 2; BMI: Body mass index; CAD: Coronary artery disease; M: Mean; NSTEMI: Non-ST segment elevation myocardial infarction; OMI: Old myocardial infarction; OPT-CAD: Optimal Antiplatelet Therapy for Chinese Patients with Coronary Artery Disease; PCI: Percutaneous coronary intervention; RV: Revascularization; SD: Standard deviation; STEMI: ST segment elevation myocardial infarction; UAP: Unstable angina pectoris.

Supplementary Table 3: Laboratory tests.

Characteristic	Clopidogrel group (<i>n</i> = 679)	Ticagrelor group (<i>n</i> = 469)	De-escalation group 1 (<i>n</i> = 76)	De-escalation group 2 (<i>n</i> = 111)	<i>F</i> / χ^2 value	<i>P</i> -value	Pairwise comparison
HGB (g/L)							① vs. ② <i>P</i> < 0.001
	134.09 ± 15.43	137.87 ± 15.12	142.02 ± 13.63	142.02 ± 13.63	9.548	<0.001	① vs. ③ <i>P</i> < 0.001
							③ vs. ④ <i>P</i> = 0.008
WBC (×10 ⁹ /L)							① vs. ② <i>P</i> < 0.001
	7.70 ± 2.35	8.31 ± 2.60	8.65 ± 2.82	8.05 ± 2.58	9.178	<0.001	① vs. ③ <i>P</i> = 0.002
							① vs. ④ <i>P</i> < 0.001
PLT (×10 ⁹ /L)	234.95 ± 64.23	238.05 ± 70.23	241.06 ± 75.34	241.92 ± 67.56	0.415	0.742	
FIB (g/L)	3.60 ± 1.02	3.44 ± 0.95	3.48 ± 1.10	3.56 ± 0.92	1.719	0.161	
cTnI (μg/L)	0.31 (0.01, 8.40)	2.48 (0.16, 11.11)	4.30 (0.05, 11.00)	0.57 (0.04, 4.74)	4.879	0.181	
NT-pro BNP (ng/L)	465.00 (153.25,	569.00 (233.75,	393.00 (107.00,	372.50 (143.25,	8.658	0.034	① vs. ③ <i>P</i> = 0.005

	1105.00)	1337.75)	450.00)	759.25)	② vs. ③ $P < 0.001$	
CK-MB (U/L)	20.00 (8.00, 100.50)	36.00 (9.00, 115.47)	21.00 (5.00, 87.99)	22.50 (8.50, 86.50)	4.224	0.283
Cr (μmol/L)	67.37 ± 19.98	67.55 ± 19.33	65.78 ± 19.64	67.50 ± 16.46	0.150	0.930
eGFR	67.48 ± 37.69	68.65 ± 40.52	78.13 ± 40.46	65.72 ± 40.01	1.494	0.215
UA (μmol/L)	319.41 ± 94.82	332.18 ± 91.23	331.46 ± 111.03	317.03 ± 94.13	1.580	0.192
FBG (mmol/L)	6.66 ± 2.29	7.02 ± 2.61	6.79 ± 2.34	6.28 ± 1.59	2.339	0.072
HbA1C (%)	6.85 ± 1.69	6.75 ± 1.58	6.54 ± 1.56	6.11 ± 0.99	0.636	0.592
TC (mmol/L)	4.81 ± 1.378	4.90 ± 1.28	4.97 ± 1.41	4.77 ± 1.25	0.517	0.670
TG (mmol/L)	1.80 ± 1.11	1.91 ± 1.16	1.65 ± 0.78	1.67 ± 0.95	1.541	0.202
LDL-C (mmol/L)	2.82 ± 0.93	2.86 ± 0.93	2.99 ± 0.80	2.61 ± 0.88	1.400	0.241
HDL-C (mmol/L)	1.19 ± 0.51	1.25 ± 0.80	1.13 ± 0.37	1.20 ± 0.42	0.815	0.486
Lp (a) (mg/L)	195.90 (90.15, 405.90)	156.25 (77.63, 377.58)	178.40 (91.90, 336.43)	208.40 (88.38, 379.23)	2.692	0.442

①: Clopidogrel group; ②: Ticagrelor group; ③: De-escalation group ; cTnI: Cardiac troponin; eGFR: Estimated glomerular filtration rate; FBG: Fasting blood glucose; FIB: Fibrinogen; HDL-C: High-density lipoprotein-cholesterol; HGB: Hemoglobin; LDL-C: Low-density lipoprotein-cholesterol; Lp (a): Lipoprotein (a); NT-pro BNP: N-terminal B type natriuretic peptide; PLT: Platelet; TC: Total cholesterol; TG: Triglyceride; WBC: White blood cell count.

Supplementary Table 4: Coronary angiography and PCI.

Characteristic	Clopidogrel group (<i>n</i> = 679)	Ticagrelor group (<i>n</i> = 469)	De-escalation group 1 (<i>n</i> = 76)	De-escalation group 2 (<i>n</i> = 111)	<i>F</i> / χ^2 value	<i>P</i> value	Pairwise comparison
Culprit artery, <i>n</i> (%)							
LM	20/679 (2.9%)	16/469 (3.4%)	2/76 (2.6%)	1/111 (0.9%)	2.581	0.461	
LAD							① vs. ② <i>P</i> < 0.001
	547/679 (80.6%)	384/469 (81.9%)	62/76 (81.6%)	70/111 (63.1%)	20.777	<0.001	① vs. ④ <i>P</i> < 0.001 ② vs. ④ <i>P</i> < 0.001
							③ vs. ④ <i>P</i> = 0.006
LCX	431/679 (63.5%)	291/469 (62.0%)	49/76 (64.5%)	58/111 (52.3%)	5.302	0.151	
RCA	466/679 (68.6%)	334/469 (71.2%)	49/76 (64.5%)	66/111 (59.5%)	6.387	0.094	
Ostial lesion, <i>n</i> (%)							① vs. ④ <i>P</i> = 0.001
	175/679 (25.8%)	120/469 (25.6%)	12/76 (15.8%)	13/111 (11.7%)	13.827	0.003	② vs. ④ <i>P</i> = 0.002

Diffused lesion, <i>n</i> (%)	324/679 (47.7%)	187/469 (39.9%)	25/76 (32.9%)	33/111 (29.7%)	19.143	<0.001	① vs. ④ <i>P</i> < 0.001
CTO, <i>n</i> (%)	11/679 (1.6%)	22/469 (4.7%)	2/76 (2.6%)	0/111 (0%)	15.378	0.002	① vs. ② <i>P</i> = 0.002
ISR, <i>n</i> (%)	8/679 (1.2%)	9/469 (1.9%)	5/76 (6.6%)	3/111 (2.7%)	8.008	0.046	① vs. ③ <i>P</i> = 0.003
Small vessel, <i>n</i> (%)							① vs. ③ <i>P</i> = 0.003
							① vs. ④ <i>P</i> = 0.004
	116/679 (17.1%)	101/469 (21.5%)	3/76 (3.9%)	7/111 (6.3%)	25.008	<0.001	② vs. ③ <i>P</i> < 0.001
							② vs. ④ <i>P</i> < 0.001
LADp, <i>n</i> (%)							① vs. ② <i>P</i> = 0.001
	137/679 (20.2%)	59/469 (12.6%)	14/76 (18.4%)	28/111 (25.2%)	15.539	0.001	② vs. ④ <i>P</i> = 0.001
Culprit artery (<i>n</i> ; <i>m</i> ± <i>SD</i>)	1.41 ± 0.62	1.41 ± 0.59	1.43 ± 0.59	1.35 ± 0.57	0.280	0.840	

①: Clopidogrel group; ②: Ticagrelor group; ③: De-escalation group; CTO: Chronic total occlusion; LAD: Left anterior descending; LADp: Proximal segment of left anterior descending; LCX: Left circumflex coronary artery; LM: Left main; PCI: Percutaneous coronary intervention; RCA: Right coronary artery; RV: Revascularization.

Supplementary Table 5: Cox regression.

Outcome	Variable	Quotient		Wald	HR	95% CI	P-value
		B	SE				
MACCEs	Complete RV	-0.678	0.251	7.331	0.507	0.311–0.829	0.007
	De-escalation group 2 vs. Clopidogrel group	0.858	0.331	6.727	2.359	1.233–4.512	0.009

CI: Confidence interval; HR: Hazard ratio; MACCEs: Major adverse cardiovascular and cerebrovascular events; RV: Revascularization.

Supplementary Table 6: Endpoints during follow-up.

Characteristic	Clopidogrel group (<i>n</i> = 679)	Ticagrelor group (<i>n</i> = 469)	De-escalation group 1 (<i>n</i> = 76)	De-escalation group 2 (<i>n</i> = 111)	χ^2 value	<i>P</i> -value	Pairwise comparison
MACCEs, <i>n</i> (%)	37/679 (5.4%)	13/469 (2.8%)	3/76 (3.9%)	10/111 (9.0%)	9.515	0.023	② vs. ④ <i>P</i> = 0.003
MI, <i>n</i> (%)	12/679 (1.8%)	5/469 (1.1%)	1/76 (1.3%)	6/111 (5.4%)	7.127	0.068	
TVR, <i>n</i> (%)	16/679 (2.4%)	6/469 (1.3%)	2/76 (2.6%)	2/111 (1.8%)	1.984	0.576	
Stroke, <i>n</i> (%)	9/679 (1.3%)	2/469 (0.4%)	0/76 (0.0%)	1/111 (0.9%)	1.315	0.257	
Cardiac death, <i>n</i> (%)	12/679 (1.8%)	4/469 (0.9%)	1/76 (1.3%)	2/111 (1.8%)	1.912	0.591	
Bleeding events, <i>n</i> (%)	75/679 (11.0%)	66/469 (14.1%)	6/76 (7.9%)	10/111 (9.0%)	4.654	0.199	
Major bleeding	18/679 (2.7%)	12/469 (2.6%)	3/76 (3.9%)	1/111 (0.9%)	2.152	0.542	
Minor bleeding	61/679 (9.0%)	56/469 (11.9%)	4/76 (5.3%)	4/111 (9.0%)	4.785	0.188	

①: Clopidogrel group; ②: Ticagrelor group; ③: De-escalation group; MACCEs: Major adverse cardiovascular and cerebrovascular events; MI: Myocardial infarction; TVR: Target vessel revascularization.