



## Supplementary material

### Association Between Ischemic and Bleeding Risk Scores and the Use of new P2Y<sub>12</sub> Inhibitors in Patients With Acute Coronary Syndrome

Table 1 of the supplementary material

Univariate Logistic Regression Analyses for Predicting new P2Y<sub>12</sub> Inhibitor Prescription at Discharge

	Univariate	
	OR (95%CI)	P
<i>Age (per 10 y)</i>	0.56 (0.53-0.60)	< .001
<i>Sex, male</i>	1.84 (1.54-2.20)	< .001
<i>Medical history</i>		
Hypertension	0.60 (0.51-0.69)	< .001
Diabetes mellitus	1.07 (0.91-1.25)	.428
Hyperlipidemia	1.20 (1.03-1.41)	.021
Current smoking	2.47 (2.12-2.87)	< .001
Low weight (< 60 kg)	0.60 (0.43-0.83)	.002
Previous ACS	0.85 (0.70-1.05)	.129
Previous atrial fibrillation	0.02 (0.01-0.07)	< .001
Mechanical valve prosthesis	-	-

Peripheral artery disease	0.48 (0.35-0.67)	< .001
Previous stroke	0.42 (0.29-0.62)	< .001
Previous major bleeding	0.34 (0.18-0.64)	.001
<i>Clinical status at admission</i>		
Systolic blood pressure (per 10 mmHg)	0.97 (0.94-0.99)	.014
Heart rate (per 10 bpm)	0.97 (0.93-1.01)	.145
Killip class (per I class)	0.79 (0.69-0.90)	.001
Cardiac arrest at admission	1.51 (0.93-4.46)	.094
<i>Complementary test results</i>		
Hematocrit (per 3%)	1.29 (1.23-1.36)	< .001
eGFR (per 10 mL/min/1.73 m <sup>2</sup> )	1.26 (1.22-1.31)	< .001
Elevated cardiac markers	2.39 (1.86-3.08)	< .001
ST-segment deviation	1.61 (1.38-1.88)	< .001
LVEF ≤ 50%	0.88 (0.75-1.03)	.107
<i>In-hospital procedures and treatments</i>		
LM and/or 3-vessel disease	0.62 (0.52-0.75)	< .001
Percutaneous coronary intervention	6.51 (5.08-8.34)	< .001
Coronary artery bypass grafting	0.07 (0.03-0.17)	< .001
Thrombolysis	2.16 (1.28-3.63)	.004
Conservative management	0.20 (0.15-0.26)	< .001
<i>In-hospital events</i>		
Stent thrombosis	5.54 (1.70-18.0)	.004

Atrial fibrillation	0.32 (0.21-0.47)	< .001
Left ventricular thrombus	0.05 (0.01-0.39)	.004
Stroke	0.65 (0.22-1.96)	.445
Major bleeding	0.31 (0.15-0.64)	.002
<i>Final diagnosis</i>		
STEACS	2.32 (2.00-2.69)	< .001
NSTEACS	0.56 (0.48-0.65)	< .001
Undetermined ACS	0.28 (0.19-0.42)	< .001
<i>Risk scores</i>		
GRACE 6-mo mortality risk score (per 10 points)	0.87 (0.85-0.89)	< .001
CRUSADE bleeding risk score (per 10 points)	0.90 (0.88-0.91)	< .001
<i>Other</i>		
Indication for OAT at discharge*	0.13 (0.10-0.19)	< .001
Stroke (previous and in-hospital)	0.45 (0.31-0.64)	< .001
Major bleeding (previous and in-hospital)	0.33 (0.20-0.53)	< .001

95%CI, 95% confidence interval; ACS, acute coronary syndrome; eGFR, estimated glomerular filtration rate using CKD-EPI equation; LM, left main artery; LVEF, left ventricular ejection function; NSTEACS, non-ST-segment elevation acute coronary syndrome; OAT, oral anticoagulation therapy; OR, odds ratio; STEACS, ST-segment elevation acute coronary syndrome.

\*Indications for OAT at discharge including atrial fibrillation (previous or in-hospital), mechanical valve prosthesis, left ventricular thrombus, and other conditions.

**Table 2A of the supplementary material**

**Multivariate Logistic Regression Analysis Evaluating GRACE Risk Score Influence on new P2Y<sub>12</sub> Inhibitor Prescription at Discharge**

	Multivariate	
	OR (95%CI)	P
<i>Both P2Y<sub>12</sub> inhibitors</i>		
GRACE risk score (per 10 points)	0.89 (0.86-0.92)	< .001
Diabetes	1.59 (1.31-1.92)	< .001
Hyperlipidemia	1.34 (1.12-1.61)	.002
Current smoking	1.46 (1.22-1.75)	< .001
Peripheral artery disease	0.61 (0.42-0.88)	.008
Hematocrit (per 3%)	1.05 (1.03-1.07)	< .001
Percutaneous coronary intervention	5,01 (3.82-6.56)	< .001
Coronary artery bypass grafting	0.24 (0.09-0.59)	.002
STEACS	1.34 (1.16-1.56)	< .001
In-hospital stent thrombosis	5.58 (1.44-21.7)	.013

Indication for OAT at discharge	0.18 (0.13-0.26)	< .001
<i>Prasugrel</i>		
GRACE risk score (per 10 points)	0.86 (0.82-0.90)	< .001
Diabetes	4.60 (3.48-6.07)	< .001
Current smoking	1.53 (1.16-2.02)	.002
Hematocrit (per 3%)	1.54 (1.14-1.37)	< .001
Low weight (< 60 kg)	0.40 (0.18-0.92)	.032
Percutaneous coronary intervention	18.3 (9.24-36.1)	< .001
STEACS	1.96 (1.56-2.46)	< .001
In-hospital stent thrombosis	20.4 (4.78-87.4)	< .001
Indication for OAT at discharge	0.19 (0.10-0.34)	< .001
Stroke (previous and in-hospital)	0.26 (0.10-0.65)	.004
<i>Ticagrelor</i>		
GRACE risk score (per 10 points)	0.91 (0.88-0.94)	< .001
Hyperlipidemia	1.34 (1.10-1.64)	.004
Current smoking	1.48 (1.21-1.81)	< .001
Hematocrit (per 3%)	1.13 (1.06-1.21)	< .001
Peripheral artery disease	0.53 (0.34-0.83)	.005
Percutaneous coronary intervention	3.85 (2.90-5.11)	< .001
Coronary artery bypass grafting	0.17 (0.06-0.46)	.001
Indication for OAT at discharge	0.17 (0.11-0.27)	< .001

95%CI, 95% confidence interval; ACS, acute coronary syndrome; LM, left main artery; LVEF, left ventricular ejection function; OAT, oral anticoagulation therapy; OR, odds ratio; STEACS, ST-segment elevation acute coronary syndrome.

The multivariate models included GRACE risk score, sex, hypertension, diabetes, hyperlipidemia, current smoking, low weight < 60 kg, previous ACS, peripheral artery disease, hematocrit, LVEF  $\leq$  50%, LM and/or 3-vessel disease, percutaneous coronary intervention, coronary artery bypass grafting, conservative management, in-hospital stent thrombosis, final ACS diagnosis, indications for OAT at discharge (atrial fibrillation [previous or in-hospital], mechanical valve prosthesis, left ventricular thrombus and other), stroke (previous and in-hospital), and major bleeding (previous and in-hospital).

**Table 2B of the supplementary material.****Multivariate Logistic Regression Analysis Evaluating CRUSADE Risk Score Influence on new P2Y<sub>12</sub> Inhibitor Prescription at Discharge**

	Multivariate	
	OR (95%CI)	P
<i>Both P2Y<sub>12</sub> inhibitors</i>		
CRUSADE risk score (per 10 points)	0.96 (0.94-0.98)	< .001
Age (per 10 y)	0.62 (0.57-0.68)	< .001
Hyperlipidemia	1.42 (1.18-1.71)	< .001
Elevated cardiac markers	1.66 (1.23-2.23)	.001
ST-segment deviation	1.29 (1.07-1.56)	.009
Percutaneous coronary intervention	4.80 (3.65-6.32)	< .001
Coronary artery bypass grafting	0.23 (0.09-0.58)	.002
In-hospital stent thrombosis	5.42 (1.45-20.3)	.012
Major bleeding (previous and in-hospital)	0.53 (0.31-0.89)	.018
Indication for OAT at discharge	0.19 (0.13-0.27)	< .001
<i>Prasugrel</i>		
CRUSADE risk score (per 10 points)	0.95 (0.92-0.99)	.009
Age (per 10 y)	0.54 (0.47-0.62)	< .001
Diabetes	5.44 (3.98-7.42)	< .001

Hyperlipidemia	1.38 (1.03-1.85)	.033
Elevated cardiac markers	1.85 (1.06-3.23)	.031
ST-segment deviation	2.22 (1.61-3.08)	< .001
Percutaneous coronary intervention	16.8 (8.50-33.3)	< .001
In-hospital stent thrombosis	13.8 (2.54-74.9)	.002
Stroke (previous and in-hospital)	2.26 (0.10-0.66)	.005
Indication for OAT at discharge	0.20 (0.11-0.37)	< .001
<i>Ticagrelor</i>		
CRUSADE risk score (per 10 points)	0.96 (0.94-0.99)	.003
Age (per 10 y)	0.67 (0.61-0.74)	< .001
Hyperlipidemia	1.48 (1.20-1.81)	< .001
Elevated cardiac markers	1.67 (1.23-2.83)	.001
Percutaneous coronary intervention	3.68 (2.77-4.90)	< .001
Coronary artery bypass grafting	0.17 (0.06-0.46)	.001
Indication for OAT at discharge	0.18 (0.11-0.28)	< .001

95%CI, 95% confidence interval; ACS, acute coronary syndrome; LM, left main artery; LVEF, left ventricular ejection function; OAT, oral anticoagulation therapy; OR, odds ratio; STEACS, ST-segment elevation acute coronary syndrome.

The multivariate model included CRUSADE risk score, age, hypertension, diabetes, hyperlipidemia, current smoking, low weight < 60 kg, previous

ACS, cardiac arrest at admission, elevated cardiac markers, ST-segment deviation, LVEF  $\leq 50\%$ , LM and/or 3-vessel disease, percutaneous coronary intervention, coronary artery bypass grafting, conservative management, in-hospital stent thrombosis, final ACS diagnosis, indications for OAT at discharge (atrial fibrillation [previous or in-hospital], mechanical valve prosthesis, left ventricular thrombus and other), stroke (previous and in-hospital) and major bleeding (previous and in-hospital).