

Supplementary Table 8. Full models of multivariable analyses

Variables	Adjusted OR (95% CI)	P
All patients: mRS shift at 3 months*		
Early statins	1.52 (1.13–2.03)	0.01
Age (per 1-year increase)	0.96 (0.95–0.97)	<0.01
Male sex	0.77 (0.56–1.05)	0.10
Premorbid mRS score = 0	1.68 (1.15–2.46)	0.01
NIHSS score at arrival (per 1-point increase)	1.03 (1.00–1.06)	0.03
Onset to treatment delay (per 1-hour increase)	1.00 (0.99–1.01)	0.82
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.86 (0.62–1.21)	0.40
Combined	1.02 (0.74–1.42)	0.89
NIHSS score after treatment (per 1-point increase)	0.82 (0.79–0.84)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	0.91 (0.46–1.80)	0.78
Cardioembolism	1.52 (0.97–2.39)	0.07
Other determined cause	0.33 (0.17–0.65)	<0.01
Undetermined cause	1.01 (0.68–1.49)	0.97
Hypertension	1.26 (0.95–1.68)	0.11
Hyperlipidemia	0.98 (0.67–1.45)	0.93
Atrial fibrillation	0.87 (0.57–1.32)	0.51
Regular smoking	1.41 (1.031.92)	0.03
Pre-stroke antithrombotics	0.90 (0.67–1.20)	0.47
Pre-stroke statins	1.16 (0.76–1.76)	0.49
Hemoglobin (per 1 g/dL increase)	1.06 (0.98–1.14)	0.14
HbA1c (per 1% increase)	0.87 (0.77–0.97)	0.02
Triglycerides (per 1 mg/dL increase)	1.001 (0.999–1.003)	0.54
LDL cholesterol (per 1 mg/dL increase)	0.995 (0.991–0.998)	0.01
All patients: mRS 0–1 at 3 months [†]		
Early statins	1.66 (1.09–2.52)	0.02
Age	0.64 (0.52–0.80)	<0.01
Male sex	0.75 (0.47–1.19)	0.22
Premorbid mRS score=0	1.88 (1.01–3.49)	0.047
NIHSS score at arrival (per 1-point increase)	1.02 (0.98–1.06)	0.35
Onset to treatment delay (per 1-hour increase)	0.988 (0.971–1.005)	0.16
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.64 (0.40–1.02)	0.06
Combined	0.87 (0.55–1.38)	0.56
NIHSS score after treatment (per 1-point increase)	0.82 (0.78–0.85)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	0.62 (0.26–1.50)	0.29
Cardioembolism	1.54 (0.82–2.92)	0.18
Other determined cause	0.78 (0.31–1.96)	0.60
Undetermined cause	1.01 (0.59–1.72)	0.98
Hypertension	1.10 (0.73–1.64)	0.65
Hyperlipidemia	1.50 (0.85–2.65)	0.16
Atrial fibrillation	1.01 (0.56–1.84)	0.96
Regular smoking	1.98 (1.27–3.08)	<0.01

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Pre-stroke antithrombotics	0.84 (0.55–1.27)	0.40
Pre-stroke statins	0.96 (0.51–1.78)	0.89
Hemoglobin (per 1 g/dL increase)	1.03 (0.93–1.14)	0.54
HbA1c (per 1% increase)	0.86 (0.72–1.02)	0.08
Triglycerides	1.02 (0.85–1.21)	0.87
LDL cholesterol	0.77 (0.64–0.92)	<0.01
All patients: symptomatic HT		
Early statins	0.44 (0.240.83)	0.01
Age (per 1-year increase)	1.00 (0.98–1.03)	0.89
Male sex	1.27 (0.69–2.35)	0.44
Premorbid mRS score=0	1.13 (0.51–2.52)	0.76
NIHSS score at arrival (per 1-point increase)	0.93 (0.89–0.99)	0.01
Onset to treatment delay (per 1-hour increase)	1.00 (0.98–1.03)	0.87
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.27 (0.56–2.90)	0.57
Combined	1.17 (0.53–2.61)	0.69
NIHSS score after treatment (per 1-point increase)	1.13 (1.07–1.18)	<0.01
Exposure (time of statin administration)-response analysis: mRS shift at 3 months [†]		
Statin time: <12 hours	1.70 (1.172.46)	0.01
Statin time: 12–24 hours	1.48 (1.03–2.12)	0.03
Statin time: 24–72 hours	1.43 (1.001–2.03)	0.049
Age (per 1-year increase)	0.96 (0.95–0.97)	<0.01
Male sex	0.77 (0.56–1.05)	0.10
Premorbid mRS score=0	1.69 (1.16–2.47)	0.01
NIHSS score at arrival (per 1-point increase)	1.03 (1.002–1.06)	0.03
Onset to treatment delay (per 1-hour increase)	1.00 (0.99–1.01)	0.81
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.84 (0.60–1.18)	0.32
Combined	1.01 (0.73–1.41)	0.95
NIHSS score after treatment (per 1-point increase)	0.82 (0.80–0.84)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	
Small vessel occlusion	0.89 (0.45–1.76)	0.73
Cardioembolism	1.53 (0.98–2.41)	0.06
Other determined cause	0.33 (0.17–0.66)	<0.01
Undetermined cause	1.01 (0.68–1.49)	0.96
Hypertension	1.26 (0.95–1.67)	0.12
Hyperlipidemia	0.98 (0.66–1.44)	0.91
Atrial fibrillation	0.88 (0.58–1.34)	0.55
Regular smoking	1.41 (1.03–1.92)	0.03
Pre-stroke antithrombotics	0.91 (0.68–1.21)	0.51
Pre-stroke statins	1.17 (0.77–1.78)	0.47
Hemoglobin (per 1 g/dL increase)	1.06 (0.98–1.14)	0.16
HbA1c (per 1% increase)	0.87 (0.77–0.97)	0.02
Triglycerides (per 1 mg/dL increase)	1.001 (0.999–1.003)	0.53
LDL cholesterol (per 1 mg/dL increase)	0.995 (0.991–0.998)	0.01

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Exposure (time of statin administration)-response analysis: mRS 0-1 at 3 months [†]		
Statin time: <12 hours	1.91 (1.13-3.24)	0.02
Statin time: 12-24 hours	1.39 (0.84-2.32)	0.20
Statin time: 24-72 hours	1.74 (1.06-2.86)	0.03
Age	0.64 (0.51-0.79)	<0.01
Male sex	0.74 (0.47-1.18)	0.21
Premorbid mRS score=0	1.88 (1.01-3.50)	0.045
NIHSS score at arrival (per 1-point increase)	1.02 (0.98-1.06)	0.38
Onset to treatment delay (per 1-hour increase)	0.99 (0.97-1.01)	0.17
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	0.62 (0.39-1.01)	0.053
Combined	0.86 (0.55-1.36)	0.52
NIHSS score after treatment (per 1-point increase)	0.82 (0.78-0.85)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	
Small vessel occlusion	0.59 (0.24-1.44)	0.25
Cardioembolism	1.53 (0.81-2.90)	0.19
Other determined cause	0.75 (0.30-1.89)	0.55
Undetermined cause	1.00 (0.59-1.72)	0.99
Hypertension	1.10 (0.73-1.64)	0.65
Hyperlipidemia	1.51 (0.85-2.65)	0.16
Atrial fibrillation	1.02 (0.56-1.86)	0.94
Regular smoking	1.97 (1.26-3.06)	<0.01
Pre-stroke antithrombotics	0.84 (0.55-1.27)	0.40
Pre-stroke statins	0.95 (0.51-1.79)	0.89
Hemoglobin (per 1 g/dL increase)	1.03 (0.93-1.14)	0.55
HbA1c (per 1% increase)	0.86 (0.72-1.02)	0.08
Triglycerides	1.01 (0.85-1.21)	0.88
LDL cholesterol	0.76 (0.63-0.91)	<0.01
Exposure (time of statin administration)-response analysis: symptomatic HT		
Statin time: <12 hours	0.73 (0.34-1.57)	0.42
Statin time: 12-24 hours	0.19 (0.05-0.64)	0.01
Statin time: 24-72 hours	0.42 (0.18-1.02)	0.06
Age (per 1-year increase)	1.00 (0.98-1.03)	0.93
Male sex	1.26 (0.68-2.33)	0.47
Premorbid mRS score=0	1.13 (0.50-2.52)	0.77
NIHSS score at arrival (per 1-point increase)	0.94 (0.89-0.99)	0.02
Onset to treatment delay (per 1-hour increase)	1.00 (0.98-1.03)	0.84
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	1.16 (0.51-2.68)	0.72
Combined	1.17 (0.53-2.61)	0.70
NIHSS score after treatment (per 1-point increase)	1.12 (1.07-1.18)	<0.01
Exposure (statin intensity)-response analysis: mRS shift at 3 months [‡]		
Statins: low to moderate intensity	1.78 (1.22-2.60)	<0.01
Statins: high intensity	1.40 (1.02-1.93)	0.04
Age (per 1-year increase)	0.96 (0.95-0.97)	<0.01

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Male sex	0.77 (0.56–1.06)	0.11
Premorbid mRS score=0	1.69 (1.15–2.46)	0.01
NIHSS score at arrival (per 1-point increase)	1.03 (1.003–1.06)	0.03
Onset to treatment delay (per 1-hour increase)	1.00 (0.99–1.01)	0.79
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	0.88 (0.63–1.23)	0.45
Combined	1.04 (0.75–1.45)	0.81
NIHSS score after treatment (per 1-point increase)	0.82 (0.79–0.84)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	
Small vessel occlusion	0.91 (0.46–1.80)	0.78
Cardioembolism	1.50 (0.96–2.36)	0.08
Other determined cause	0.32 (0.16–0.64)	<0.01
Undetermined cause	1.01 (0.68–1.48)	0.98
Hypertension	1.28 (0.96–1.70)	0.09
Hyperlipidemia	1.01 (0.68–1.50)	0.96
Atrial fibrillation	0.85 (0.56–1.29)	0.45
Regular smoking	1.39 (1.02–1.91)	0.04
Pre-stroke antithrombotics	0.90 (0.67–1.19)	0.45
Pre-stroke statins	1.09 (0.71–1.67)	0.71
Hemoglobin (per 1 g/dL increase)	1.06 (0.98–1.14)	0.15
HbA1c (per 1% increase)	0.87 (0.77–0.97)	0.02
Triglycerides (per 1 mg/dL increase)	1.001 (0.999–1.002)	0.60
LDL cholesterol (per 1 mg/dL increase)	0.995 (0.991–0.998)	0.01
Exposure (statin intensity)–response analysis: mRS 0–1 at 3 months [†]		
Statins: low to moderate intensity	2.04 (1.20–3.47)	0.01
Statins: high intensity	1.51 (0.97–2.35)	0.07
Age	0.64 (0.51–0.79)	<0.01
Male sex	0.76 (0.48–1.21)	0.25
Premorbid mRS score=0	1.90 (1.02–3.54)	0.04
NIHSS score at arrival (per 1-point increase)	1.02 (0.98–1.06)	0.37
Onset to treatment delay (per 1-hour increase)	0.99 (0.97–1.005)	0.16
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	0.65 (0.41–1.04)	0.07
Combined	0.89 (0.57–1.41)	0.62
NIHSS score after treatment (per 1-point increase)	0.82 (0.78–0.85)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	
Small vessel occlusion	0.61 (0.25–1.48)	0.28
Cardioembolism	1.51 (0.80–2.86)	0.21
Other determined cause	0.76 (0.30–1.91)	0.56
Undetermined cause	1.01 (0.59–1.72)	0.97
Hypertension	1.12 (0.75–1.68)	0.58
Hyperlipidemia	1.56 (0.89–2.76)	0.12
Atrial fibrillation	0.99 (0.54–1.79)	0.97
Regular smoking	1.96 (1.26–3.05)	<0.01
Pre-stroke antithrombotics	0.83 (0.55–1.25)	0.37

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Pre-stroke statins	0.88 (0.46–1.66)	0.69
Hemoglobin (per 1 g/dL increase)	1.03 (0.93–1.14)	0.62
HbA1c (per 1% increase)	0.86 (0.72–1.02)	0.08
Triglycerides	1.01 (0.85–1.20)	0.92
LDL cholesterol	0.76 (0.64–0.92)	<0.01
Exposure (statin intensity)–response analysis: symptomatic HT		
Statins: low to moderate intensity	0.49 (0.20–1.19)	0.12
Statins: high intensity	0.42 (0.21–0.85)	0.02
Age (per 1-year increase)	1.00 (0.98–1.03)	0.90
Male sex	1.27 (0.69–2.34)	0.44
Premorbid mRS score=0	1.13 (0.51–2.52)	0.77
NIHSS score at arrival (per 1-point increase)	0.93 (0.89–0.99)	0.01
Onset to treatment delay (per 1-hour increase)	1.00 (0.98–1.03)	0.87
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	1.28 (0.56–2.93)	0.56
Combined	1.18 (0.53–2.63)	0.68
NIHSS score after treatment (per 1-point increase)	1.13 (1.07–1.18)	<0.01
Subgroup (combined IV–endovascular treatment): mRS shift at 3 months [¶]		
Early statins	1.88 (1.18–3.00)	0.01
Age (per 1-year increase)	0.96 (0.94–0.98)	<0.01
Male sex	0.41 (0.24–0.72)	<0.01
Premorbid mRS score=0	1.05 (0.55–2.04)	0.88
NIHSS score at arrival (per 1-point increase)	1.06 (1.01–1.11)	0.01
Onset to treatment delay (per 1-hour increase)	1.02 (0.98–1.06)	0.42
NIHSS score after treatment (per 1-point increase)	0.80 (0.77–0.84)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Cardioembolism	3.27 (1.34–8.01)	0.01
Other determined cause	0.45 (0.12–1.67)	0.23
Undetermined cause	1.89 (0.88–4.05)	0.10
Hypertension	1.40 (0.82–2.39)	0.22
Hyperlipidemia	0.83 (0.41–1.68)	0.61
Atrial fibrillation	0.79 (0.37–1.69)	0.54
Regular smoking	2.00 (1.15–3.45)	0.01
Pre-stroke antithrombotics	0.77 (0.47–1.27)	0.30
Pre-stroke statins	1.25 (0.59–2.63)	0.56
Hemoglobin (per 1 g/dL increase)	1.19 (1.02–1.39)	0.03
HbA1c (per 1% increase)	0.85 (0.66–1.10)	0.22
Triglycerides (per 1 mg/dL increase)	1.003 (0.999–1.007)	0.12
LDL cholesterol (per 1 mg/dL increase)	0.995 (0.988–1.001)	0.12
Subgroup (combined IV–endovascular treatment): mRS 0–1 at 3 months [†]		
Early statins	2.28 (1.05–4.94)	0.04
Age	0.72 (0.47–1.09)	0.12
Male sex	0.18 (0.07–0.47)	<0.01
Premorbid mRS score=0	1.19 (0.39–3.63)	0.76
NIHSS score at arrival (per 1-point increase)	1.03 (0.97–1.09)	0.40
Onset to treatment delay (per 1-hour increase)	1.04 (0.97–1.11)	0.24
NIHSS score after treatment (per 1-point increase)	0.77 (0.72–0.83)	<0.01

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Cardioembolism	7.02 (1.49–32.95)	0.01
Other determined cause	3.02 (0.52–17.46)	0.22
Undetermined cause	3.94 (1.19–13.04)	0.02
Hypertension	0.82 (0.35–1.91)	0.64
Hyperlipidemia	2.52 (0.69–9.24)	0.16
Atrial fibrillation	1.00 (0.28–3.58)	0.995
Regular smoking	3.75 (1.61–8.78)	<0.01
Pre-stroke antithrombotics	0.59 (0.26–1.37)	0.22
Pre-stroke statins	0.60 (0.14–2.50)	0.48
Hemoglobin (per 1 g/dL increase)	1.35 (1.05–1.74)	0.02
HbA1c (per 1% increase)	0.91 (0.61–1.36)	0.65
Triglycerides	1.61 (1.04–2.51)	0.03
LDL cholesterol	0.63 (0.44–0.90)	0.01
Subgroup (combined IV-endovascular treatment): symptomatic HT		
Early statins	0.29 (0.09–0.87)	0.03
Age (per 1-year increase)	1.01 (0.96–1.06)	0.68
Male sex	1.70 (0.58–4.98)	0.33
Premorbid mRS score=0	1.56 (0.31–7.79)	0.59
NIHSS score at arrival (per 1-point increase)	0.96 (0.87–1.05)	0.39
Onset to treatment delay (per 1-hour increase)	1.03 (0.98–1.09)	0.27
NIHSS score after treatment (per 1-point increase)	1.12 (1.04–1.21)	<0.01
Subgroup (endovascular only): mRS shift at 3 months [†]		
Early statins	1.48 (0.86–2.54)	0.16
Age (per 1-year increase)	0.96 (0.94–0.99)	<0.01
Male sex	0.83 (0.47–1.47)	0.52
Premorbid mRS score=0	2.62 (1.41–4.90)	<0.01
NIHSS score at arrival (per 1-point increase)	1.02 (0.98–1.07)	0.31
Onset to treatment delay (per 1-hour increase)	1.01 (0.99–1.02)	0.45
NIHSS score after treatment (per 1-point increase)	0.82 (0.78–0.86)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Cardioembolism	0.92 (0.41–2.07)	0.84
Other determined cause	0.21 (0.06–0.73)	0.01
Undetermined cause	0.69 (0.35–1.36)	0.28
Hypertension	1.03 (0.62–1.72)	0.90
Hyperlipidemia	1.46 (0.75–2.85)	0.27
Atrial fibrillation	0.76 (0.35–1.66)	0.49
Regular smoking	1.03 (0.58–1.82)	0.91
Pre-stroke antithrombotics	1.02 (0.60–1.71)	0.95
Pre-stroke statins	1.07 (0.51–2.24)	0.87
Hemoglobin (per 1 g/dL increase)	1.11 (0.98–1.26)	0.10
HbA1c (per 1% increase)	0.82 (0.66–1.02)	0.08
Triglycerides (per 1 mg/dL increase)	1.001 (0.997–1.004)	0.77
LDL cholesterol (per 1 mg/dL increase)	0.996 (0.989–1.003)	0.25
Subgroup (endovascular only): mRS 0–1 at 3 months [†]		
Early statins	1.92 (0.80–4.59)	0.14
Age	0.63 (0.41–0.95)	0.03

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Male sex	0.85 (0.33–2.17)	0.73
Premorbid mRS score=0	3.14 (0.84–11.74)	0.09
NIHSS score at arrival (per 1-point increase)	0.99 (0.92–1.06)	0.71
Onset to treatment delay (per 1-hour increase)	0.98 (0.96–1.01)	0.19
NIHSS score after treatment (per 1-point increase)	0.84 (0.77–0.90)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Cardioembolism	0.83 (0.24–2.89)	0.77
Other determined cause	0.46 (0.08–2.71)	0.39
Undetermined cause	0.45 (0.17–1.19)	0.11
Hypertension	0.96 (0.43–2.14)	0.92
Hyperlipidemia	1.57 (0.57–4.35)	0.39
Atrial fibrillation	1.00 (0.29–3.40)	0.997
Regular smoking	1.34 (0.55–3.27)	0.52
Pre-stroke antithrombotics	1.15 (0.51–2.60)	0.74
Pre-stroke statins	1.42 (0.44–4.59)	0.56
Hemoglobin (per 1 g/dL increase)	1.02 (0.85–1.23)	0.81
HbA1c (per 1% increase)	1.08 (0.78–1.49)	0.63
Triglycerides	1.02 (0.74–1.40)	0.90
LDL cholesterol	0.83 (0.58–1.18)	0.29
Subgroup (endovascular only): symptomatic HT		
Early statins	0.44 (0.16–1.19)	0.11
Age (per 1-year increase)	0.97 (0.93–1.01)	0.14
Male sex	0.62 (0.23–1.67)	0.35
Premorbid mRS score=0	1.78 (0.46–6.83)	0.40
NIHSS score at arrival (per 1-point increase)	0.92 (0.84–0.99)	0.03
Onset to treatment delay (per 1-hour increase)	1.00 (0.97–1.03)	0.86
NIHSS score after treatment (per 1-point increase)	1.13 (1.04–1.22)	<0.01
Subgroup (intravenous only): mRS shift at 3 months**		
Early statins	1.17 (0.67–2.04)	0.57
Age (per 1-year increase)	0.95 (0.93–0.97)	<0.01
Male sex	1.44 (0.81–2.54)	0.21
Premorbid mRS score=0	2.42 (1.10–5.31)	0.03
NIHSS score at arrival (per 1-point increase)	1.01 (0.96–1.07)	0.66
Onset to treatment delay (per 1-hour increase)	0.986 (0.968–1.004)	0.13
NIHSS score after treatment (per 1-point increase)	0.82 (0.77–0.87)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	0.99 (0.47–2.09)	0.97
Cardioembolism	1.76 (0.83–3.69)	0.14
Other determined cause	0.61 (0.18–2.02)	0.42
Undetermined cause	1.07 (0.53–2.13)	0.86
Hypertension	1.58 (0.98–2.56)	0.06
Hyperlipidemia	0.92 (0.46–1.84)	0.82
Atrial fibrillation	0.97 (0.48–2.00)	0.94
Regular smoking	1.16 (0.65–2.10)	0.61
Pre-stroke antithrombotics	0.90 (0.52–1.56)	0.71
Pre-stroke statins	1.03 (0.47–2.24)	0.94
Hemoglobin (per 1 g/dL increase)	0.92 (0.81–1.05)	0.23

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
HbA1c (per 1% increase)	0.88 (0.73–1.04)	0.14
Triglycerides (per 1 mg/dL increase)	0.999 (0.996–1.003)	0.69
LDL cholesterol (per 1 mg/dL increase)	0.992 (0.985–0.999)	0.03
Subgroup (intravenous only): mRS 0–1 at 3 months [†]		
Early statins	1.20 (0.56–2.54)	0.64
Age	0.53 (0.36–0.78)	<0.01
Male sex	1.61 (0.76–3.41)	0.21
Premorbid mRS score=0	2.53 (0.83–7.72)	0.10
NIHSS score at arrival (per 1–point increase)	1.05 (0.97–1.15)	0.24
Onset to treatment delay (per 1–hour increase)	0.97 (0.94–1.01)	0.13
NIHSS score after treatment (per 1–point increase)	0.81 (0.74–0.89)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	0.70 (0.26–1.89)	0.49
Cardioembolism	1.84 (0.67–5.09)	0.24
Other determined cause	0.81 (0.16–4.15)	0.80
Undetermined cause	1.22 (0.49–3.03)	0.66
Hypertension	1.45 (0.76–2.79)	0.26
Hyperlipidemia	1.41 (0.53–3.75)	0.49
Atrial fibrillation	0.68 (0.26–1.79)	0.43
Regular smoking	1.25 (0.59–2.64)	0.56
Pre-stroke antithrombotics	0.74 (0.35–1.56)	0.43
Pre-stroke statins	0.86 (0.29–2.55)	0.78
Hemoglobin (per 1 g/dL increase)	0.93 (0.78–1.10)	0.41
HbA1c (per 1% increase)	0.70 (0.53–0.93)	0.01
Triglycerides	0.90 (0.66–1.24)	0.52
LDL cholesterol	0.71 (0.50–1.00)	0.05
Subgroup (intravenous only): symptomatic HT		
Early statins	0.85 (0.18–3.87)	0.83
Age (per 1-year increase)	1.05 (0.98–1.12)	0.14
Male sex	4.02 (0.84–19.16)	0.08
Premorbid mRS score=0	0.53 (0.09–3.02)	0.47
NIHSS score at arrival (per 1–point increase)	0.91 (0.79–1.05)	0.18
Onset to treatment delay (per 1–hour increase)	0.66 (0.38–1.16)	0.15
NIHSS score after treatment (per 1–point increase)	1.20 (1.05–1.36)	0.01
Subgroup (large artery atherosclerosis): mRS shift at 3 months ^{††,††}		
Early statins	2.02 (1.07–3.82)	0.03
Age (per 1-year increase)	0.96 (0.94–0.99)	<0.01
Male sex	1.27 (0.66–2.43)	0.48
Premorbid mRS score=0	1.65 (0.70–3.90)	0.25
NIHSS score at arrival (per 1–point increase)	1.03 (0.98–1.08)	0.26
Onset to treatment delay (per 1–hour increase)	1.01 (0.99–1.03)	0.28
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.07 (0.58–1.99)	0.83
Combined	0.76 (0.39–1.49)	0.43
NIHSS score after treatment (per 1–point increase)	0.82 (0.78–0.87)	<0.01
Hypertension	1.53 (0.86–2.73)	0.15
Hyperlipidemia	0.80 (0.41–1.55)	0.51

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Regular smoking	1.17 (0.64–2.14)	0.61
Pre-stroke antithrombotics	0.64 (0.35–1.17)	0.15
Pre-stroke statins	0.92 (0.43–1.97)	0.84
Hemoglobin (per 1 g/dL increase)	1.03 (0.89–1.18)	0.72
HbA1c (per 1% increase)	0.87 (0.72–1.05)	0.15
Triglycerides (per 1 mg/dL increase)	1.001 (0.997–1.005)	0.61
LDL cholesterol (per 1 mg/dL increase)	0.994 (0.987–1.001)	0.07
Subgroup (large artery atherosclerosis): mRS 0–1 at 3 month ^{†††}		
Early statins	2.39 (0.90–6.40)	0.08
Age	0.67 (0.45–1.02)	0.06
Male sex	1.56 (0.59–4.10)	0.37
Premorbid mRS score=0	1.43 (0.35–5.85)	0.62
NIHSS score at arrival (per 1-point increase)	1.06 (0.97–1.14)	0.19
Onset to treatment delay (per 1-hour increase)	0.99 (0.96–1.02)	0.52
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.05 (0.44–2.49)	0.91
Combined	0.38 (0.15–0.98)	0.05
NIHSS score after treatment (per 1-point increase)	0.81 (0.74–0.89)	<0.01
Hypertension	0.84 (0.38–1.87)	0.67
Hyperlipidemia	1.48 (0.54–4.10)	0.45
Regular smoking	1.38 (0.61–3.14)	0.44
Pre-stroke antithrombotics	0.84 (0.36–1.95)	0.68
Pre-stroke statins	0.90 (0.28–2.88)	0.86
Hemoglobin (per 1 g/dL increase)	1.14 (0.94–1.38)	0.17
HbA1c (per 1% increase)	0.82 (0.60–1.11)	0.20
Triglycerides	0.95 (0.68–1.33)	0.75
LDL cholesterol	0.74 (0.52–1.05)	0.09
Subgroup (large artery atherosclerosis): symptomatic HT		
Early statins	0.19 (0.04–0.96)	0.04
Age (per 1-year increase)	1.33 (0.56–3.18)	0.52
Male sex	0.79 (0.17–3.59)	0.76
Premorbid mRS score=0	1.25 (0.15–10.16)	0.83
NIHSS score at arrival (per 1-point increase)	0.93 (0.83–1.05)	0.26
Onset to treatment delay (per 1-hour increase)	1.01 (0.98–1.04)	0.44
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.01 (0.17–5.96)	0.99
Combined	1.04 (0.14–7.60)	0.97
NIHSS score after treatment (per 1-point increase)	1.11 (0.99–1.25)	0.08
Subgroup (cardioembolism): mRS shift at 3 months ^{§§}		
Early statins	1.28 (0.87–1.88)	0.22
Age (per 1-year increase)	0.95 (0.93–0.97)	<0.01
Male sex	0.71 (0.46–1.10)	0.13
Premorbid mRS score=0	1.66 (1.01–2.74)	0.05
NIHSS score at arrival (per 1-point increase)	1.01 (0.98–1.05)	0.45
Onset to treatment delay (per 1-hour increase)	1.00 (0.97–1.03)	0.88
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Endovascular therapy alone	0.76 (0.44–1.30)	0.31
Combined	1.04 (0.65–1.66)	0.88
NIHSS score after treatment (per 1-point increase)	0.82 (0.79–0.85)	<0.01
Hypertension	1.28 (0.84–1.94)	0.25
Hyperlipidemia	1.04 (0.58–1.85)	0.90
Atrial fibrillation	1.08 (0.66–1.79)	0.75
Regular smoking	1.26 (0.80–2.00)	0.32
Pre-stroke antithrombotics	0.83 (0.56–1.23)	0.35
Pre-stroke statins	1.28 (0.70–2.32)	0.42
Hemoglobin (per 1 g/dL increase)	0.99 (0.88–1.10)	0.79
HbA1c (per 1% increase)	0.82 (0.67–1.00)	0.05
Triglycerides (per 1 mg/dL increase)	1.003 (0.999–1.006)	0.13
LDL cholesterol (per 1 mg/dL increase)	0.993 (0.988–0.999)	0.02
Subgroup (cardioembolism): mRS 0–1 at 3 months [†]		
Early statins	1.32 (0.74–2.37)	0.35
Age	0.66 (0.47–0.91)	0.01
Male sex	0.62 (0.32–1.20)	0.16
Premorbid mRS score=0	1.76 (0.72–4.34)	0.22
NIHSS score at arrival (per 1-point increase)	0.99 (0.94–1.04)	0.69
Onset to treatment delay (per 1-hour increase)	0.99 (0.95–1.03)	0.52
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.60 (0.27–1.30)	0.19
Combined	1.14 (0.58–2.21)	0.71
NIHSS score after treatment (per 1-point increase)	0.82 (0.77–0.87)	<0.01
Hypertension	1.22 (0.64–2.31)	0.55
Hyperlipidemia	1.20 (0.48–2.97)	0.70
Atrial fibrillation	1.19 (0.57–2.45)	0.64
Regular smoking	1.81 (0.92–3.56)	0.08
Pre-stroke antithrombotics	0.70 (0.38–1.27)	0.24
Pre-stroke statins	1.06 (0.41–2.76)	0.90
Hemoglobin (per 1 g/dL increase)	0.95 (0.80–1.12)	0.54
HbA1c (per 1% increase)	0.97 (0.73–1.30)	0.86
Triglycerides	1.23 (0.93–1.64)	0.15
LDL cholesterol	0.68 (0.50–0.91)	0.01
Subgroup (cardioembolism): symptomatic HT		
Early statins	0.60 (0.26–1.38)	0.23
Age (per 1-year increase)	0.98 (0.94–1.01)	0.21
Male sex	1.09 (0.49–2.44)	0.83
Premorbid mRS score=0	1.19 (0.40–3.47)	0.76
NIHSS score at arrival (per 1-point increase)	0.91 (0.84–0.98)	0.02
Onset to treatment delay (per 1-hour increase)	0.97 (0.89–1.06)	0.53
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.69 (0.49–5.82)	0.41
Combined	1.11 (0.38–3.21)	0.85
NIHSS score after treatment (per 1-point increase)	1.15 (1.07–1.23)	<0.01
Subgroup (other stroke mechanisms): mRS shift at 3 months [‡]		
Early statins	1.89 (1.02–3.53)	0.04

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Age (per 1-year increase)	0.97 (0.95–0.99)	0.01
Male sex	0.46 (0.23–0.94)	0.03
Premorbid mRS score=0	1.84 (0.80–4.23)	0.15
NIHSS score at arrival (per 1-point increase)	1.06 (0.997–1.12)	0.06
Onset to treatment delay (per 1-hour increase)	0.99 (0.97–1.01)	0.19
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.82 (0.42–1.58)	0.55
Combined	0.99 (0.50–1.95)	0.98
NIHSS score after treatment (per 1-point increase)	0.80 (0.75–0.85)	<0.01
Hypertension	1.19 (0.67–2.12)	0.55
Hyperlipidemia	0.70 (0.28–1.77)	0.45
Atrial fibrillation	0.82 (0.34–1.99)	0.66
Regular smoking	2.19 (1.10–4.36)	0.03
Pre-stroke antithrombotics	1.33 (0.71–2.49)	0.37
Pre-stroke statins	2.36 (0.79–7.07)	0.12
Hemoglobin (per 1 g/dL increase)	1.25 (1.08–1.44)	<0.01
HbA1c (per 1% increase)	0.83 (0.66–1.06)	0.14
Triglycerides (per 1 mg/dL increase)	1.000 (0.996–1.003)	0.84
LDL cholesterol (per 1 mg/dL increase)	0.999 (0.991–1.006)	0.73
Subgroup (other stroke mechanisms): mRS 0–1 at 3 months [†]		
Early statins	1.93 (0.78–4.79)	0.15
Age	0.59 (0.39–0.89)	0.01
Male sex	0.45 (0.15–1.29)	0.14
Premorbid mRS score=0	2.07 (0.60–7.14)	0.25
NIHSS score at arrival (per 1-point increase)	1.05 (0.97–1.14)	0.23
Onset to treatment delay (per 1-hour increase)	0.98 (0.95–1.01)	0.29
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.50 (0.19–1.31)	0.16
Combined	1.14 (0.43–3.03)	0.79
NIHSS score after treatment (per 1-point increase)	0.78 (0.70–0.86)	<0.01
Hypertension	1.57 (0.69–3.54)	0.28
Hyperlipidemia	1.66 (0.48–5.80)	0.43
Atrial fibrillation	1.20 (0.32–4.49)	0.79
Regular smoking	4.14 (1.47–11.64)	0.01
Pre-stroke antithrombotics	0.92 (0.36–2.35)	0.87
Pre-stroke statins	1.47 (0.33–6.56)	0.62
Hemoglobin (per 1 g/dL increase)	1.03 (0.84–1.27)	0.74
HbA1c (per 1% increase)	0.69 (0.47–1.02)	0.06
Triglycerides	0.98 (0.69–1.39)	0.91
LDL cholesterol	0.96 (0.65–1.43)	0.86
Subgroup (other stroke mechanisms): symptomatic HT		
Early statins	0.49 (0.12–1.99)	0.32
Age (per 1-year increase)	1.02 (0.97–1.08)	0.43
Male sex	3.19 (0.68–14.93)	0.14
Premorbid mRS score=0	0.94 (0.15–5.86)	0.95
NIHSS score at arrival (per 1-point increase)	0.94 (0.83–1.07)	0.36
Onset to treatment delay (per 1-hour increase)	0.98 (0.89–1.08)	0.72

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.00 (0.16–6.35)	1.00
Combined	1.34 (0.24–7.59)	0.74
NIHSS score after treatment (per 1-point increase)	1.13 (1.01–1.27)	0.03
Subgroup (pre-stroke statins: yes): mRS shift at 3 months ^{¶¶}		
Early statins	1.58 (0.84–2.99)	0.16
Age (per 1-year increase)	0.96 (0.92–0.99)	0.01
Male sex	0.91 (0.45–1.84)	0.78
Premorbid mRS score=0	2.85 (1.35–5.99)	0.01
NIHSS score at arrival (per 1-point increase)	1.01 (0.95–1.07)	0.82
Onset to treatment delay (per 1-hour increase)	1.00 (0.98–1.03)	0.77
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.37 (0.65–2.91)	0.40
Combined	1.30 (0.64–2.66)	0.47
NIHSS score after treatment (per 1-point increase)	0.80 (0.75–0.85)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	4.00 (0.54–29.51)	0.17
Cardioembolism	2.32 (0.85–6.33)	0.10
Other determined cause	0.41 (0.06–2.82)	0.36
Undetermined cause	1.89 (0.78–4.61)	0.16
Hypertension	1.54 (0.73–3.23)	0.26
Hyperlipidemia	0.71 (0.27–1.87)	0.49
Atrial fibrillation	0.92 (0.37–2.26)	0.85
Regular smoking	0.90 (0.45–1.83)	0.78
Pre-stroke antithrombotics	1.61 (0.84–3.06)	0.15
Hemoglobin (per 1 g/dL increase)	1.15 (0.97–1.38)	0.11
HbA1c (per 1% increase)	1.21 (0.91–1.60)	0.19
Triglycerides (per 1 mg/dL increase)	1.00 (0.99–1.01)	0.81
LDL cholesterol (per 1 mg/dL increase)	0.993 (0.984–1.001)	0.09
Subgroup (pre-stroke statins: yes): mRS 0–1 at 3 months [†]		
Early statins	2.63 (0.94–7.38)	0.07
Age	0.60 (0.36–1.00)	0.0499
Male sex	0.62 (0.21–1.82)	0.38
Premorbid mRS score=0	2.34 (0.68–8.09)	0.18
NIHSS score at arrival (per 1-point increase)	0.98 (0.91–1.07)	0.67
Onset to treatment delay (per 1-hour increase)	0.99 (0.96–1.03)	0.61
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	1.71 (0.58–5.06)	0.33
Combined	1.31 (0.47–3.68)	0.60
NIHSS score after treatment (per 1-point increase)	0.82 (0.75–0.90)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	6.66 (0.43–103.28)	0.17
Cardioembolism	1.38 (0.32–5.97)	0.67
Other determined cause	0.62 (0.04–10.76)	0.74

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Undetermined cause	0.92 (0.25–3.36)	0.90
Hypertension	1.84 (0.57–5.89)	0.30
Hyperlipidemia	1.71 (0.37–7.95)	0.49
Atrial fibrillation	1.18 (0.31–4.55)	0.81
Regular smoking	1.14 (0.41–3.12)	0.80
Pre-stroke antithrombotics	2.04 (0.74–5.60)	0.17
Hemoglobin (per 1 g/dL increase)	1.09 (0.84–1.43)	0.50
HbA1c (per 1% increase)	1.27 (0.85–1.88)	0.24
Triglycerides	1.06 (0.69–1.63)	0.79
LDL cholesterol	0.60 (0.39–0.94)	0.02
Subgroup (pre-stroke statins: yes): symptomatic HT		
Early statins	0.16 (0.04–0.60)	0.01
Age (per 1-year increase)	0.99 (0.92–1.07)	0.87
Male sex	2.31 (0.57–9.39)	0.24
Premorbid mRS score=0	0.73 (0.16–3.33)	0.68
NIHSS score at arrival (per 1-point increase)	0.99 (0.86–1.14)	0.92
Onset to treatment delay (per 1-hour increase)	1.04 (0.996–1.08)	0.08
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.17 (0.02–1.79)	0.14
Combined	1.30 (0.28–6.09)	0.74
NIHSS score after treatment (per 1-point increase)	1.10 (0.97–1.24)	0.13
Subgroup (pre-stroke statins: no): mRS shift at 3 months***		
Early statins	1.43 (1.03–1.98)	0.03
Age (per 1-year increase)	0.96 (0.95–0.97)	<0.01
Male sex	0.73 (0.51–1.04)	0.08
Premorbid mRS score=0	1.39 (0.88–2.18)	0.16
NIHSS score at arrival (per 1-point increase)	1.03 (1.004–1.06)	0.03
Onset to treatment delay (per 1-hour increase)	1.00 (0.99–1.01)	0.90
Recanalization treatment		
Intravenous thrombolysis alone	Referent	
Endovascular therapy alone	0.77 (0.52–1.13)	0.18
Combined	0.98 (0.67–1.43)	0.91
NIHSS score after treatment (per 1-point increase)	0.82 (0.79–0.84)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	
Small vessel occlusion	0.70 (0.33–1.46)	0.34
Cardioembolism	1.45 (0.87–2.43)	0.16
Other determined cause	0.25 (0.12–0.53)	<0.01
Undetermined cause	0.84 (0.54–1.31)	0.44
Hypertension	1.28 (0.93–1.75)	0.13
Hyperlipidemia	0.70 (0.42–1.15)	0.16
Atrial fibrillation	0.78 (0.48–1.26)	0.31
Regular smoking	1.68 (1.17–2.40)	<0.01
Pre-stroke antithrombotics	0.81 (0.59–1.12)	0.20
Hemoglobin (per 1 g/dL increase)	1.04 (0.96–1.13)	0.35
HbA1c (per 1% increase)	0.77 (0.67–0.89)	<0.01
Triglycerides (per 1 mg/dL increase)	1.001 (0.999–1.003)	0.55
LDL cholesterol (per 1 mg/dL increase)	0.998 (0.994–1.003)	0.46

Supplementary Table 8. Continued

Variables	Adjusted OR (95% CI)	P
Subgroup (pre-stroke statins: no): mRS 0–1 at 3 months [†]		
Early statins	1.36 (0.84–2.20)	0.22
Age	0.66 (0.51–0.84)	<0.01
Male sex	0.77 (0.45–1.32)	0.35
Premorbid mRS score=0	1.81 (0.82–4.00)	0.14
NIHSS score at arrival (per 1–point increase)	1.02 (0.98–1.07)	0.31
Onset to treatment delay (per 1–hour increase)	0.98 (0.96–1.01)	0.16
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.53 (0.31–0.93)	0.03
Combined	0.80 (0.47–1.35)	0.40
NIHSS score after treatment (per 1–point increase)	0.81 (0.77–0.85)	<0.01
Stroke mechanism		
Large artery atherosclerosis	Referent	-
Small vessel occlusion	0.38 (0.14–1.02)	0.05
Cardioembolism	1.61 (0.75–3.47)	0.22
Other determined cause	0.67 (0.24–1.86)	0.44
Undetermined cause	0.92 (0.49–1.72)	0.78
Hypertension	1.06 (0.68–1.66)	0.79
Hyperlipidemia	0.98 (0.48–2.03)	0.96
Atrial fibrillation	0.95 (0.46–1.95)	0.89
Regular smoking	2.44 (1.46–4.10)	<0.01
Pre-stroke antithrombotics	0.68 (0.42–1.10)	0.12
Hemoglobin (per 1 g/dL increase)	1.03 (0.92–1.16)	0.61
HbA1c (per 1% increase)	0.75 (0.60–0.93)	0.01
Triglycerides	0.98 (0.80–1.21)	0.88
LDL cholesterol	0.93 (0.75–1.16)	0.54
Subgroup (pre-stroke statins: no): symptomatic HT		
Early statins	0.16 (0.04–0.60)	0.01
Age (per 1–year increase)	0.99 (0.92–1.07)	0.87
Male sex	2.31 (0.57–9.39)	0.24
Premorbid mRS score=0	0.73 (0.16–3.33)	0.68
NIHSS score at arrival (per 1–point increase)	0.99 (0.86–1.14)	0.92
Onset to treatment delay (per 1–hour increase)	1.04 (0.996–1.08)	0.08
Recanalization treatment		
Intravenous thrombolysis alone	Referent	-
Endovascular therapy alone	0.17 (0.02–1.79)	0.14
Combined	1.30 (0.28–6.09)	0.74
NIHSS score after treatment (per 1–point increase)	1.10 (0.97–1.24)	0.13

OR, odds ratio; CI, Confidence interval; mRS, modified Rankin Scale; NIHSS, National Institute of Health Stroke Scale; LDL, low-density lipoprotein; IV, intravenous; HT, hemorrhage transformation.

*Likelihood ratio test of non-proportional odds for early statins: $P=0.16$; [†]Age, triglycerides, and LDL cholesterol were standardized for the mixed model; [‡]Likelihood ratio test of non-proportional odds for early statins: $P=0.76$; [§]Likelihood ratio test of non-proportional odds for early statins: $P=0.55$; ^{||}Likelihood ratio test of non-proportional odds for early statins: $P=0.58$; [¶]Likelihood ratio test of non-proportional odds for early statins: $P=0.67$; ^{**}Likelihood ratio test of non-proportional odds for early statins: $P=0.80$; ^{††}Atrial fibrillation was excluded from the model due to its singularity; ^{†††}Likelihood ratio test of non-proportional odds for early statins: $P=0.95$; ^{§§}Likelihood ratio test of non-proportional odds for early statins: $P=0.77$; ^{|||}Likelihood ratio test of non-proportional odds for early statins: $P=0.33$; ^{¶¶}Likelihood ratio test of non-proportional odds for early statins: $P=0.24$; ^{***}Likelihood ratio test of non-proportional odds for early statins: $P=0.04$.