

Supplementary Material

Supplementary Table 1. Baseline characteristics of the study population based on the diagnosis.

Characteristics	TIA n=261	TSI n=91	DWI-neg AIS n=370	Incomplete Evaluation n=84	P
Interval from onset to imaging - day					
Carotid doppler	4(2-8)	5(3-6.5)	5(3-7)	6(3-7)	0.328
Intracranial artery evaluation	5(2-8)	4(2-8)	4(2-8)	3.5(1.5-7)	0.398
MRI	4(2-7)	4(2.5-7)	4(2-7)	3(1-6.5)	0.959
Age, y, median (IQR)	63(54-71)	59(51-65)	64(55-73)	66.5(57-73.5)	<0.001
Men, n (%)	177(67.8%)	63(69.2%)	250(67.6%)	52(61.9%)	0.728
mRS prior to current event, median (IQR)	0(0-0)	0(0-0)	0(0-1)	0(0-0)	0.001
BMI, median (IQR), kg/m ²	24.6(22.7-26.6)	25.1(23.1-27.4)	24.4(22.8-26.3)	24.3(22.6-26.0)	0.158
Medical history, n (%)					
Ischemic stroke	52(19.9%)	20(22.0%)	135(36.5%)	25(29.8%)	<0.001
Myocardial infarction	36(13.8%)	6(6.6%)	29(7.8%)	5(6.0%)	0.03
Hypertension	150(57.5%)	66(72.5%)	268(72.4%)	52(61.9%)	<0.001
Dyslipidemia	61(23.4%)	22(24.2%)	72(19.5%)	12(14.3%)	0.235
Diabetes mellitus	60(23.0%)	21(23.1%)	84(22.7%)	17(20.2%)	0.959
Current smoker, n (%)	81(31.0%)	41(45.1%)	112(30.3%)	16(19.1%)	0.003
Baseline NIHSS score, median (IQR)	0(0-0)	0(0-2)	3(1-5)	1(0-3)	<0.001
Circulation distribution					
Anterior	0(0%)	69(75.8%)	0(0%)	10(11.9%)	<0.001
Posterior	0(0%)	22(24.2%)	0(0%)	4(4.8%)	<0.001
Stenosis distribution					
Anterior	56(21.5%)	21(23.1%)	69(19.7%)	11(13.1%)	0.29
Posterior	18(6.9%)	12(13.2%)	29(7.8%)	10(11.9%)	0.183

Stenosis					
ICAS only	74(28.4%)	35(38.5%)	100(27.0%)	24(28.6%)	0.19 3
ECAS only	23(8.8%)	9(9.9%)	16(4.3%)	3(3.6%)	0.04 1
ICAS+ECAS	22(8.4%)	9(9.9%)	23(6.2%)	5(6.0%)	0.52 1
In-hospital treatment					
Thrombolysis	0(0%)	2(2.2%)	6(1.6%)	1(1.2%)	0.19
Antiplatelet	251(96.2%)	87(95.6%)	342(92.4%)	26(31.0%)	<0.001
Dual antiplatelet	40(15.3%)	23(25.3%)	38(10.3%)	3(3.6%)	<0.001
Lipid-lowering	222(85.1%)	78(85.7%)	285(77.0%)	48(57.1%)	<0.001
Statin	210(80.5%)	78(85.7%)	277(74.9%)	45(53.6%)	<0.001
Antidiabetics	63(24.1%)	23(25.3%)	93(25.1%)	13(15.5%)	0.29 6
Antihypertensive	126(48.3%)	47(51.7%)	200(54.1%)	39(46.4%)	0.41 2
Carotid endarterectomy	0(0%)	0(0%)	0(0%)	0(0%)	NE
Endovascular treatment implantation					
Stent	7(2.7%)	4(4.4%)	5(1.4%)	2(2.4%)	0.31 9
Intracranial stent	4(1.5%)	1(1.1%)	2(0.5%)	1(1.2%)	0.66 2
Extracranial stent	3(1.2%)	3(3.3%)	3(0.8%)	1(1.2%)	0.29 3
Thrombectomy	0(0%)	0(0%)	0(0%)	0(0%)	NE
Discharge medication					
Antiplatelet	240(92.0%)	88(96.7%)	332(89.7%)	71(85.7%)	0.06 2
Dual antiplatelet	19(7.3%)	9(9.9%)	14(3.8%)	4(4.8%)	0.07 7
Lipid-lowering	202(77.4%)	74(81.3%)	261(70.5%)	54(64.3%)	0.01 7
Statin	0(0%)	0(0%)	0(0%)	0(0%)	NE
Antidiabetics	60(23.0%)	26(28.6%)	91(24.6%)	11(13.1%)	0.08 3
Antihypertensive	119(45.6%)	41(45.1%)	206(55.7%)	43(51.2%)	0.05 6

TIA indicated transient ischemic attack; TSI, transient symptoms with infarction; DWI-neg AIS, DWI negative acute ischemic stroke; IQR, interquartile range; mRS, modified Rankin Scale; BMI, body mass index; NIHSS, National Institutes of Health Stroke Scale; ICAS, intracranial atherosclerotic stenosis; ECAS, extracranial atherosclerotic stenosis and NE, not estimable.

Supplementary Table 2. Outcomes of the study population based on the diagnosis.

Characteristics	TIA n=261	TSI n=91	DWI-neg AIS n=370
Recurrent stroke within one-year	5(1.9%)	10(11.0%)	11(3.0%)
Composite vascular events within one-year	7(2.7%)	10(11.0%)	14(3.8%)

Supplementary Table 3. One-year outcomes stratified by severity and location of atherosclerosis.

Outcomes		Adjusted model†		Adjusted model‡	
		HR, 95% CI	P	HR, 95% CI	P
Recurrent Stroke	non-stenosis*	REF	REF	REF	REF
	ICAS only	1.94(0.85-4.42)	0.117	1.79(0.77-4.15)	0.176
	ECAS only	2.55(0.68-9.57)	0.167	2.99(0.78-11.41)	0.108
	ICAS+ECAS	3.17(1.07-9.42)	0.038	3.20(1.03-9.91)	0.044
Composite Vascular Events	non-stenosis*	REF	REF	REF	REF
	ICAS only	1.60(0.74-3.48)	0.236	1.57(0.70-3.52)	0.274
	ECAS only	2.13(0.59-7.69)	0.250	2.65(0.72-9.84)	0.144
	ICAS+ECAS	3.64(1.43-9.29)	0.007	3.58(1.31-9.77)	0.013

*indicated as reference.

†Multivariate cox regression model adjusted for diagnosis (TIA, TSI or DWI-negative AIS) and demographic factors, medical history (age, sex, mRS prior to the current event, history of ischemic stroke, history of hypertension).

‡Multivariate cox regression model adjusted for diagnosis (TIA, TSI or DWI-negative AIS) as well as demographic factors, medical history, essential treatment strategy (age, sex, mRS prior to the current event, history of ischemic stroke, history of hypertension, time interval from onset to MRI evaluation, stent implantation treatment during hospitalization, angioplasty treatment during hospitalization, prescription of dual antiplatelet treatment at discharge and prescription of lipid lowering medication at discharge).

Supplementary Table 4. Baseline characteristics based on subgroups of stenosis in TIA and DWI-negative AIS patients.

Characteristics	non-stenosis (n=425)	ICAS only (n=198)	ECAS only (n=42)	ICAS + ECAS(n=50)	P value
-----------------	-------------------------	----------------------	---------------------	----------------------	------------

Age, y, median (IQR)	63.0(54.0-72.0)	63.0(55.0-71.0)	68.0(59.0-75.0)	65.0(57.0-73.0)	0.207
Men, n (%)	280(65.9%)	131(66.2%)	31(73.8%)	37(74.0%)	0.514
mRS prior to current event, median (IQR)	0(0-0)	0(0-0)	0(0-0)	0(0-1)	0.005
BMI, median (IQR), kg/m ²	24.3(22.5-26.1)	24.4(22.9-26.7)	25.1(22.2-26.5)	25.4(23.5-27.7)	0.226
Medical history, n (%)					
Ischemic stroke	103(24.2%)	68(34.3%)	14(33.3%)	27(54.0%)	<0.001
Myocardial infarction	32(7.5%)	26(13.1%)	7(16.7%)	5(10.0%)	0.065
Known atrial fibrillation or flutter	0(0%)	0(0%)	0(0%)	0(0%)	NE
Hypertension	273(64.2%)	141(71.2%)	22(52.4%)	34(68.0%)	0.09
Dyslipidemia	80(18.8%)	47(23.7%)	11(26.2%)	7(14.0%)	0.246
Diabetes mellitus	88(20.7%)	53(26.8%)	5(11.9%)	15(30.0%)	0.067
Current smoker, n (%)	119(28.0%)	60(30.3%)	16(38.1%)	14(28.0%)	0.561
Baseline NIHSS score, median (IQR)	1(0-3)	1(0-5)	1(0-2)	1(0-3.5)	0.067
Interval from onset to imaging - day					
Carotid doppler	4(2-7)	5(3-8)	4(2-7)	4.5(2-7)	0.023
Intracranial artery evaluation	4(2-7)	5(3-8.5)	7(2-8)	7(3-11)	0.093
MRI	4(2-7)	4(2-7)	4(2-7)	6(3-10)	0.983
In-hospital treatment					
Thrombolysis	5(1.2%)	1(0.5%)	1(2.4%)	0(0%)	0.578
Antiplatelet	363(85.4%)	170(85.9%)	41(97.6%)	45(90.0%)	0.139
Dual antiplatelet	26(6.1%)	27(13.6%)	10(23.8%)	18(36.0%)	<0.001

Lipid-lowering	316(74.4%)	158(79.8%)	41(97.6%)	40(80.0%)	0.005
Statin	300(70.6%)	153(77.3%)	40(95.2%)	39(78.0%)	0.003
Antidiabetics	89(20.9%)	57(28.8%)	5(11.9%)	18(36.0%)	0.007
Antihypertensive	221(52.0%)	100(50.5%)	19(45.2%)	25(50.0%)	0.857
Carotid endarterectomy	0(0%)	0(0%)	0(0%)	0(0%)	NE
Endovascular treatment					
Stent implantation	2(0.5%)	5(2.5%)	3(7.1%)	4(8.0%)	<0.001
Intracranial stent	1(0.2%)	5(2.5%)	0(0%)	1(2.0%)	0.041
Extracranial stent	1(0.2%)	0(0%)	3(7.1%)	3(6.0%)	<0.001
Angioplasty	0(0%)	1(0.5%)	1(2.4%)	1(2.0%)	0.034
Intracranial angioplasty	0(0%)	1(0.5%)	0(0%)	0(0%)	0.455
Extracranial angioplasty	0(0%)	0(0%)	1(2.4%)	1(2.0%)	0.003
Thrombectomy	0(0%)	0(0%)	0(0%)	0(0%)	NE
Discharge medication					
Antiplatelet	379(89.2%)	179(90.4%)	41(97.6%)	45(90.0%)	0.379
Dual antiplatelet	10(2.4%)	14(7.1%)	6(14.3%)	7(14.0%)	<0.001
Lipid-lowering	303(71.3%)	139(70.2%)	38(90.5%)	37(74.0%)	0.054
Statin	0(0%)	0(0%)	0(0%)	0(0%)	NE
Antidiabetics	88(20.7%)	54(27.3%)	6(14.3%)	14(28.0%)	0.121
Antihypertensive	225(52.9%)	100(50.5%)	19(45.2%)	24(48.0%)	0.721

IQR indicates interquartile range; mRS, modified Rankin Scale; TIA, transient ischemic attack and NIHSS, National Institutes of Health Stroke Scale.

Supplementary Table 5. One-year outcomes stratified by severity and location of atherosclerosis in TIA or DWI-negative AIS patients.

Outcomes	Event (%)	Adjusted model†		Adjusted model‡		
		HR, 95% CI	P	HR, 95% CI	P	
Recurrent Stroke	non-stenosis*	8(1.9%)	REF	REF	REF	
	ICAS only	9(4.5%)	2.30(0.88-6.00)	0.088	2.96(0.80-10.93)	0.104
	ECAS only	1(2.4%)	1.27(0.16-10.23)	0.825	NE	0.995
	ICAS+ECA S	4(8.0%)	3.51(1.02-12.13)	0.047	4.95(1.04-23.64)	0.045
Composite Vascular Events	non-stenosis*	11(2.6%)	REF	REF	REF	
	ICAS only	9(4.5%)	1.87(0.78-4.52)	0.163	1.95(0.59-6.37)	0.271
	ECAS only	1(2.4%)	0.98(0.13-7.653)	0.988	NE	0.992
	ICAS+ECA S	6(12.0%)	5.32(1.96-14.48)	0.001	4.72(1.31-17.05)	0.018

*indicated as reference.

†Multivariate cox regression model adjusted for age and sex.

‡Multivariate cox regression model adjusted for diagnosis (TIA, TSI or DWI-negative AIS) as well as demographic factors, medical history, essential treatment strategy (age, sex, mRS prior to the current event, history of ischemic stroke, time interval from onset to carotid doppler/intracranial artery evaluation/MRI evaluation, stent implantation treatment during hospitalization, angioplasty treatment during hospitalization and prescription of dual antiplatelet treatment at discharge).

NE indicated not estimable.

Supplementary Figure Legends: A: Number of bleeding events of patients with or without dual antiplatelet treatment; B: Rate of bleeding events of patients with or without dual antiplatelet treatment.