

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eMethods:

Reperfusion grade was assessed on the first and final angiographic imaging series of the thrombectomy procedure using the expanded Thrombolysis in Cerebral Infarction (eTICI) and was scored as follows: 0, no reperfusion of the downstream territory; 1, antegrade reperfusion past the initial occlusion, but limited distal branch filling; 2a, reperfusion in less than half of the previously occluded target artery ischemic territory; 2b, reperfusion of more than half of the previously occluded target artery ischemic territory; 2c, near complete reperfusion except for slow flow/occlusion in a few distal cortical vessels; and 3, complete reperfusion of the previously occluded target artery ischemic territory.

Recanalization of intracranial occlusions was assessed using the revised arterial occlusion (rAOL) scale on the first angiographic imaging series of the thrombectomy procedure: 0, primary occlusive thrombus remains the same; 1, debulking of proximal part of the thrombus but without any recanalization; 2a, partial or complete recanalization of the primary thrombus with occlusion in major distal vascular branches; 2b, partial or complete recanalization of the primary thrombus with occlusion in minor distal vascular branches, or partial recanalization of the primary thrombus with no thrombus in the vascular tree at or beyond the primary occlusive thrombus; and 3, complete recanalization of the primary occlusive thrombus with no clot in the vascular tree beyond.

Standard of care imaging at 24 h after thrombolysis administration was assessed for any intracranial haemorrhage, and classified using the Heidelberg classification, which describes 4 types of haemorrhage within the infarcted tissue (haemorrhagic infarction type 1: scattered small petechiae; haemorrhagic infarction type 2: confluent petechiae; parenchymal hematoma type 1: hematoma occupying <30% of infarct with no substantive mass effect; and parenchymal hematoma type 2: hematoma occupying \geq 30% of infarct with obvious mass effect), 2 types of hematoma outside the infarcted tissue (remote parenchymal hematoma type 1 and 2) along with subdural hematoma, subarachnoid haemorrhage and intraventricular hemorrhage.

eTable 1. Baseline characteristics in patient who underwent versus did not undergo endovascular therapy.

	Non-EVT (n=112)	EVT (n=408)	P value
Baseline characteristics			
Age, median (IQR)	77.5 (66-90)	73 (63-81)	<0.001
Female sex	67 (59.8)	216 (52.9)	0.20
Baseline NIHSS, median (IQR)	14 (6- 20)	18 (12- 22)	<0.001
Workflow times, min			
Time from onset to hospital arrival	83 (52- 152)	72 (50- 115.5)	0.10
Time from onset to randomization	127 (87- 181)	101 (77- 144)	0.001
Time from onset to needle	134 (95- 189)	105 (83- 150)	<0.001
Time from hospital arrival to needle	37 (29- 50)	32 (25- 40)	<0.001
Type of enrolling centre			0.26
Primary stroke centre	9 (8.0)	21 (5.2)	
Comprehensive stroke centre	103 (92.0)	387 (94.8)	
Imaging characteristics			
Occlusion location			0.001
ICA	19 (17.0)	116 (28.4)	
M1-MCA	46 (41.1)	191 (46.8)	
M2-MCA	34 (30.4)	83 (20.3)	
Basilar artery	13 (11.6)	18 (4.4)	
Carotid tandem lesion	20 (18.3)	79 (19.6)	0.89
Collateral grade (anterior circulation occlusions)	n=97	n=389	0.04
Poor	19 (19.6)	44 (11.3)	
Intermediate	44 (45.4)	220 (56.5)	
Good	34 (35.0)	125 (32.1)	
ASPECTS, median (IQR)	9 (8-10)	8 (7-9)	0.01
Clot burden score, median (IQR)	7.5 (6-9)	6 (4-8)	<0.001

Clinical and safety outcomes			
mRS 0-1 at 90d	29 (25.9)	133 (32.6)	0.20
mRS 0-2 at 90d	48 (42.9)	212 (51.9)	0.11
Death at 90d	30 (26.8)	69 (16.9)	0.02
sICH	5 (4.5)	22 (5.4)	0.81

Data are n (%) or median (IQR). ASPECTS= Alberta Stroke Program Early CT Score.
EVT=endovascular thrombectomy. ICA= intracranial internal carotid artery. MCA=middle cerebral artery. NIHSS=National Institute of Health Stroke Scale. mRS=modified Rankin Scale score.
sICH=symptomatic intracranial haemorrhage.

eTable 2. Primary and secondary outcomes stratified by occlusion location and treatment type.

	IV Tenecteplase	IV Alteplase	P value
ICA occlusion (n=135)	n=69	n=66	
mRS 0-1 at 90d	18 (26.1)	12 (18.2)	0.30
mRS 0-2 at 90d	26 (37.7)	26 (39.4)	0.86
Death at 90d	20 (29.0)	17 (25.7)	0.70
Initial run rAOL 2b-3 (n=114)	1 (1.7)	5 (9.1)	0.10
Initial run eTICI score 2b-3 (n=114)	3 (5.1)	6 (10.9)	0.31
Final eTICI score 2b-3 (n=114)	50 (84.7)	49 (89.1)	0.58
sICH	5 (7.2)	2 (3.0)	0.44
PH2	5 (7.3)	3 (4.8)	--
M1-MCA occlusion (n=237)	n=118	n=119	
mRS 0-1 at 90d	41 (34.7)	36 (30.2)	0.49
mRS 0-2 at 90d	64 (54.2)	60 (50.4)	0.60
Death at 90d	17 (14.4)	21 (17.6)	0.59
Initial run rAOL 2b-3 (n=190)	24 (25.5)	14 (14.6)	0.07
Initial run eTICI score 2b-3 (n=190)	13 (13.8)	10 (10.4)	0.51
Final eTICI score 2b-3 (n=190)	80 (85.1)	87 (90.6)	0.27
sICH	3 (2.5)	5 (4.2)	0.72
PH2	3 (2.5)	3 (2.6)	--
M2-MCA occlusion (n=117)	n=65	n=52	
mRS 0-1 at 90d	22 (33.8)	19 (36.5)	0.85
mRS 0-2 at 90d	32 (49.2)	31 (59.6)	0.35
Death at 90d	13 (20.0)	6 (11.5)	0.31
Initial run rAOL 2b-3 (n=83)	9 (20.0)	8 (21.0)	0.99
Initial run eTICI score 2b-3 (n=83)	2 (4.4)	4 (10.5)	0.40

Final eTICI score 2b-3 (n=83)	37 (82.2)	32 (84.2)	0.99
sICH	7 (10.8)	3 (5.8)	0.51
PH2	4 (6.2)	4 (7.7)	0.99
Basilar occlusion (n=31)	n=11	n=20	
mRS 0-1 at 90d	5 (45.4)	9 (45.0)	--
mRS 0-2 at 90d	7 (63.6)	14 (70.0)	0.99
Death at 90d	2 (18.2)	3 (15.0)	--
Initial run rAOL 2b-3 (n=18)	2 (25.0)	2 (20.0)	--
Initial run eTICI score 2b-3 (n=18)	1 (12.5)	1 (10.0)	--
Final eTICI score 2b-3 (n=18)	7 (87.5)	9 (90.0)	--
sICH	1 (9.1)	1 (5.0)	--
PH2	1 (9.1)	1 (5.0)	--

P value was not reported if number of events was smaller than 15.

Data are n/N (%). eTICI=extended Thrombolysis in Cerebral Infarction. mRS=modified Rankin Scale. rAOL=revised Arterial Occlusive Lesion score. sICH=symptomatic intracranial hemorrhage. PH2=parenchymal hematoma type 2.

eTable 3. Baseline characteristics of patients with large vessel occlusion who did not underwent endovascular therapy (n=112)

	IV Tenecteplase (n=56)	IV Alteplase (n=56)	P value
Baseline characteristics			
Age, median (IQR)	80 (66.5-90.5)	75.5 (63.5-87.5)	0.25
Female sex	34 (60.7)	33 (58.9)	0.99
Baseline NIHSS, median (IQR)	14 (6- 20)	14 (4- 20)	0.72
Workflow times, min			
Time from onset to hospital arrival (n=111)	88 (56- 143)	82 (48- 156)	0.56
Time from onset to needle (n=111)	131 (101- 183)	137 (88- 190)	0.74
Type of enrolling centre			0.99
Primary stroke centre	4 (7.1)	5 (8.9)	
Comprehensive stroke centre	52 (92.9)	51 (91.7)	
Imaging characteristics			
Occlusion location			0.18
ICA	10 (17.9)	9 (16.1)	
M1-MCA	23 (41.1)	23 (41.1)	
M2-MCA	20 (35.7)	14 (25.0)	
Basilar artery	3 (5.4)	10 (17.8)	
Carotid tandem lesion (n=109)	16 (30.2)	8 (14.3)	0.06
Collateral grade (anterior circulation occlusions, n=97)	n=232	n=248	0.40
Poor	9 (17.3)	10 (22.2)	
Intermediate	27 (51.9)	17 (37.8)	
Good	16 (30.8)	18 (40.0)	
ASPECTS, median (IQR)	9 (8-10)	9 (8-10)	0.39

Data are n (%) or median (IQR). ASPECTS= Alberta Stroke Program Early CT Score. EVT=endovascular thrombectomy. ICA= intracranial internal carotid artery. MCA=middle cerebral artery. NIHSS=National Institute of Health Stroke Scale. mRS=modified Rankin Scale score. sICH=symptomatic intracranial haemorrhage.

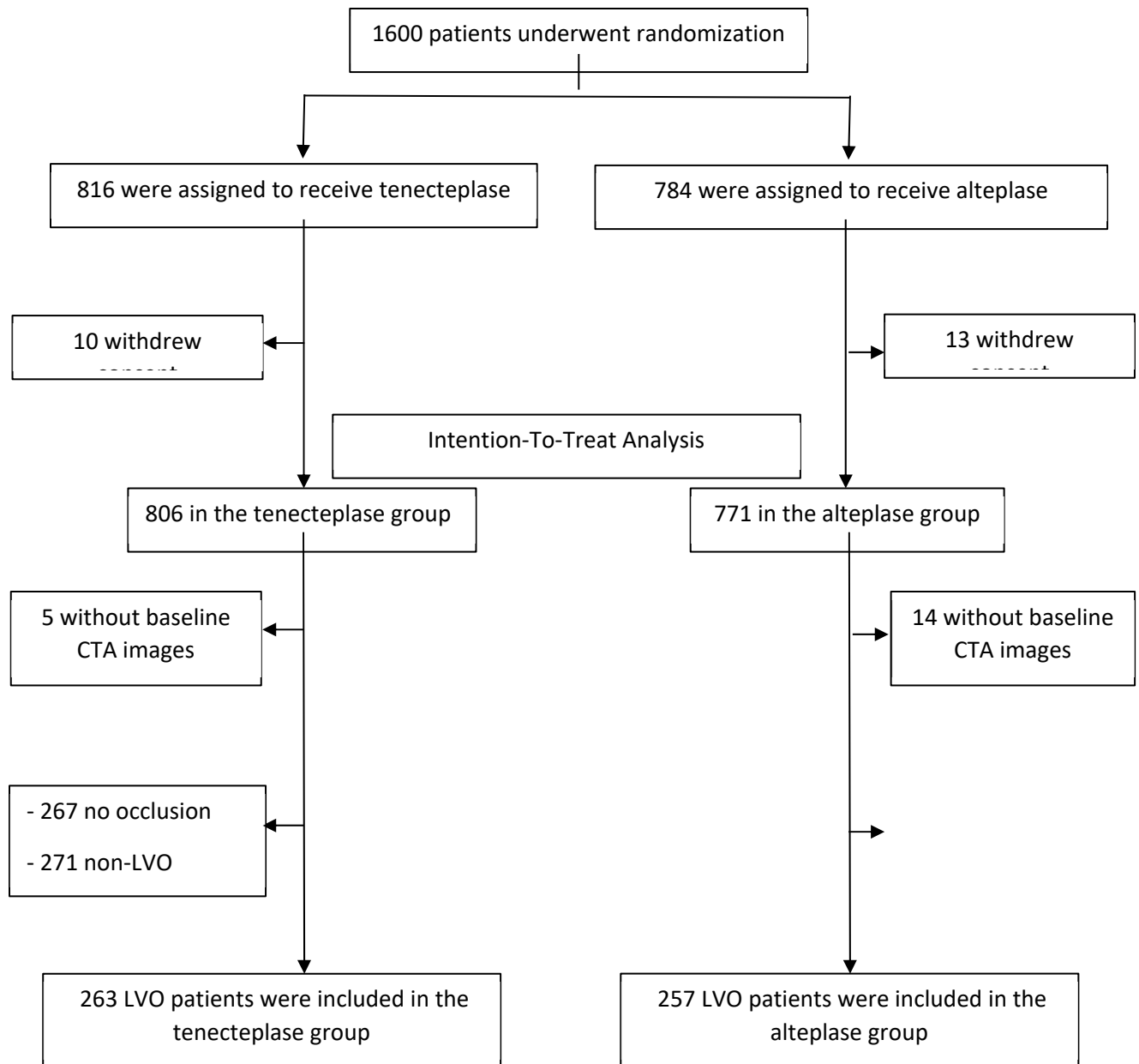
eTable 4. Univariable and multivariable analyses of association of drug type with primary and secondary outcomes in patients who did not undergo EVT.

	IV Tenecteplase (n=56)	IV Alteplase (n=56)	Unadjusted RR (95% CI)	Adjusted RR (95% CI)*
mRS 0-1 at 90d	17 (30.4)	12 (21.4)	1.42 (0.74-2.69)	2.01 (1.21-3.30)
mRS 0-2 at 90d	25 (44.6)	23 (41.1)	1.09 (0.84-1.41)	1.21 (0.87-1.68)
Death at 90d	14 (25.0)	16 (28.6)	0.87 (0.51-1.50)	0.74 (0.47-1.17)
sICH	3 (5.4)	2 (3.6)	1.11 (0.48-2.53)	--
Imaging identified intracranial haemorrhage	10 (17.9)	9 (16.1)	1.33 (0.31-5.72)	--
Any PH	4 (7.1)	3 (5.4)	1.50 (0.26-8.70)	--

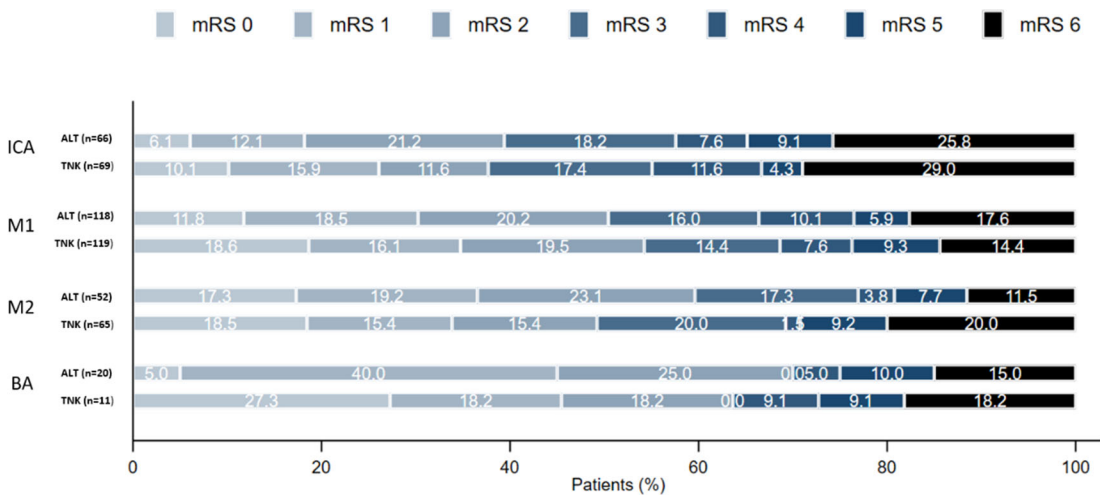
*Effect estimates were derived from Mixed-effects Poisson regression with adjustments for age, occlusion location, carotid tandem occlusion, and site as a random-effects variable.

mRS=modified Rankin Scale. sICH=symptomatic intracranial hemorrhage. PH=parenchymal hematoma

eFigure. CONSORT Flow diagram. CTA= computed tomography angiography. LVO=large vessel occlusion



Modified Rankin Scale Score by Occlusion Location



eFigure 2. Distribution of modifies Rankin Scale score stratified by occlusion location.