SUPPLEMENTARY MATERIAL I – LAVO-prediction scale characteristics

	RACE[10]	3I-SS[9]	CPSSS[11]	VAN[12]	PASS[13]	FAST-ED[14]	G-FAST[15]
Clinical scale							
Scale items	facial asymmetry, arm motor function, leg motor function, gaze, aphasia or agnosia	LOC, gaze, 'hemiparesis'	gaze, LOC questions, LOC commands, arm motor function	arm motor function, 'visual disturbance', aphasia, gaze, extinction/ inattention	LOC questions, gaze, arm motor function	facial asymmetry, arm motor function, aphasia, gaze, extinction/ inattention	gaze, facial asymmetry, arm motor function, aphasia
Scoring range (points)	0-9	0-6	0-4	N/A	0-3	0-13	0-4
Cut-off point[a]	RACE ≥ 5	3I-SS ≥ 4	CPSSS ≥ 2	VAN-positive	PASS ≥ 2	FAST-ED ≥ 4	G-FAST ≥ 3
Validation cohort							
n	357	83	303	62	1057	727	3505
Multicenter	no	no	yes	no	yes	yes	yes
Suspected stroke patients, potentially eligible for reperfusion therapy	yes	yes	yes	yes	yes	yes	yes
NIHSS at admission, median [IQR]	8 [3-16]	N/S	>8 [N/S]	N/S	N/S	5 [2-12]	9 [6-16]
Reperfusion therapy, % (IVT/IAT)	N/S	N/S	100 (IVT)	N/S	100 (IVT)	N/S	100 (N/S)
Final diagnosis							
- Ischemic stroke, n (%)	240 (67.2)	N/S	303 (100)	N/S	N/S	N/S	N/S
- TIA, n (%)	20 (5.6)	N/S	excluded	N/S	N/S	N/S	N/S
- ICH, n (%)	52 (14.6)	excluded	excluded	N/S	N/S	excluded	excluded
- Stroke mimic, n (%)	45 (12.6)	N/S	excluded	N/S	N/S	N/S	N/S

Setting

Study design	prospective	prospective	retrospective	prospective	retrospective	retrospective	retrospective
Setting	prehospital	in-hospital	in-hospital	in-hospital	in-hospital	in-hospital	in-hospital
Raters	EMS personnel	neurologists	physicians	ER nurses	N/S	research personnel	N/S
Interrater reliability	N/S	0.95	N/A	1.00	N/A	N/A	N/A

Outcome

LAVO definition (site of occlusion)	ICA, M1, tandem, basilar artery	MCA	ICA, M1, tandem, basilar artery	ICA, M1, M2	anterior or posterior circulation	ICA, M1, M2, basilar artery	ICA, M1
Imaging modality	transcranial duplex, CTA, MRA	MRA	CTA	CTA	CTA, MRA	CTA	i.a. CTA, MRA
Vessel imaging done before IVT	N/S	N/S	yes	no	yes	N/S	yes
LAVO rate, n (%)	76 (21.3)	27 (32.5)	222 (73.3)	14 (22.6)	N/S	240 (33)	827 (23.6)

Performance

Sensitivity[b]	0.85	0.67	0.83	1.00	0.61	0.60	0.89
Specificity[b]	0.68	0.92	0.40	0.90	0.83	0.89	0.39
accuracy	0.72	0.86	N/S	0.92	N/S	0.79	0.51
AUC (95% CI)	0.82 (0.77-0.87)	N/S	0.67 (N/S)	N/S	0.72 (0.69-0.75)	0.81 (N/S)	0.72 (0.71-0.74)

Characteristics of identified LAVO-prediction scales.

Abbreviations: 3I-SS = 3-Item Stroke Scale; CPSSS = Cincinnati Prehospital Stroke Severity Scale; CTA = CT angiography; EMS = Emergency Medical Services; ER = Emergency Room; FAST-ED = Face-Arm-Speech-Time-Eye deviation-Denial/neglect; G-FAST = Gaze-Face-Arm-Speech-Time; ICA = intracranial carotid artery; ICH = intracerebral haemorrhage; IVT = intravenous thrombolysis; LAVO = large anterior vessel occlusion; LOC = level of consciousness; MCA = middle cerebral artery; MRA = magnetic resonance angiography; NIHSS = National Institutes of Health Stroke Scale; PASS = Prehospital Acute Stroke Severity; RACE = Rapid Arterial Occlusion Evaluation; VAN = Vision Aphasia Neglect

[a] as defined by original authors

[b] based on cut-off point, as defined by original authors

SUPPLEMENTARY MATERIAL II – DUST investigators

The DUST investigators are:

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