The association between National Institutes of Health Stroke Scale score and clinical outcome in patients with large core infarctions undergoing endovascular treatment

### Authors:

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# eTable1. Multivariable Linear Regression shows the Predictors of baseline NIHSSVariableEstimateStandardPEstimateStandardP

	Effect	Error	value	Effect <sup>a</sup>	Error <sup>a</sup>	value
						a
Age	0.071	0.019	< 0.001	0.063	0.022	0.004
Sex	-1.426	0.462	< 0.001	-1.310	0.542	0.016
Hypertension	0.264	0.472	0.576	-0.099	0.487	0.839
Hyperlipidemia	-1.694	0.555	0.002	-1.555	0.539	0.004
Diabetes	0.023	0.648	0.972	-0.153	0.639	0.811
Atrial	1.234	0.460	0.008	0.146	0.495	0.768
fibrillation						
Smoking	-0.957	0.497	0.055	0.649	0.574	0.258
Occlusion site	-1.053	0.351	0.003	-0.546	0.365	0.135
Toast	-0.066	0.201	0.743	-0.004	0.201	0.985
SBP	0.018	0.009	0.044	-0.009	0.011	0.433
DBP	0.037	0.015	0.011	0.038	0.018	0.032
IVT	0.373	0.533	0.485	0.737	0.516	0.154
ASITN/SIR	-1.075	0.234	< 0.001	-0.621	0.251	0.014
ASPECTS	-0.600	0.139	< 0.001	-0.508	0.139	< 0.001

Note:

Abbreviations: ASPECTS=Alberta Stroke Program Early Computed Tomography Score; SBP= Systolic pressure; DBP= diastolic pressure; ASITN/SIR=the American Society of Interventional and Therapeutic Neuroradiology/Society of Interventional Radiology collateral score; Toast=Trial of Org 10172 in Acute Stroke Treatment.

<sup>a</sup> Adjusted estimates of NIHSS score were calculated using linear regression, taking the following variables into account: age, sex, medical history including hypertension, hyperlipidemia, diabetes, atrial fibrillation, baseline ASPECTS, occlusion site, toast, ASTTN/SIR, intravenous thrombolysis, SBP, DBP, and smoking.

#### eTable 2. Participating Center

1	Bazhong Central Hospital
2	Bazhongshi zhongyiyuan Bazhongshi Bazhouqu Renmin Yiyuan
3	Chongzhou Hospital

4	Affiliated Hospital of North Sichuan Medical College
5	Dali Bai Autonomous Prefecture People's Government
6	Dongguan People's Hospital
7	Nanfang Hospital, Ganzhou
8	Guang yuan Central Hospital
9	Hospital 302 Attached to Guizhou Aviation Group
10	Guiping People's Hospital
11	The Third People's Hospital of Hubei Province
12	Hubei Provincial Hospital of TCM
13	Huainan First People's Hospital
14	The First Bethune Hospital of Jilin University
15	Jiangmen Central Hospital
16	Jingdezhen NO.1 People's Hospital
17	The First Hospital of Liangshan
18	Maoming Central Hospital
19	Meishan City People's Hospital
20	Mianyang Central Hospital
21	Sichuan Mianyang 404 Hospital
22	Nanbu People's Hospital
23	The people's Hospital of PingChang
24	Qian Xi Nan People's Hospital
25	Qujing NO.1 Hospital
26	The People's Hospital of Renshou County
27	Shantou Central Hospital
28	Suining First People's Hospital
29	Weihai Municipal Hospital
30	Wuhan NO.1 Hospital
31	The Affiliated Hospital of Southwest Medical University
32	Xiangtan Central Hospital
33	Xiangyang NO.1 People's Hospital
34	Xinqiao Hospital Army Medical University
35	Xinyi People's Hospital
36	The First People's Hospital of Yibin
37	The First Affiliated Hospital of Wannan Medical College
38	The First People's Hospital of Yunnan Province

eFigure1. Flowchart.



eFigure2. Distribution of Modified Rankin Scale Scores at 90 Days and successful







eFigure3. Subgroup Analysis.

subgroup	NO.of patients		Odd Ratios(95%CI)	P Value
Age,y				
<75	323	<b>———</b>	1.151(1.088-1.217)	<0.001
≥75	167	•••••	1.277(1.149-1.420)	<0.001
Sex				
Female	209		1.176(1.091-1.267)	<0.001
Male	281	<b>⊢</b> ●−−1	1.179(1.105-1.258)	<0.001
Baseline ASPECTS				
0-2	135	<b>⊢</b>	1.242(1.102-1.399)	<0.001
3-5	355	<b>H</b>	1.159(1.099-1.223)	<0.001
TOAST				
LAA	146	<b>⊢</b> •−−1	1.174(1.078-1.280)	<0.001
CE	277	<b></b>	1.182(1.108-1.261)	<0.001
Others	20 ←	<b>+</b>	1.014(0.785-1.308)	0.917
Unknow	47	• • • • • • • • • • • • • • • • • • •	1.251(1.042-1.502)	0.016
Occlusion site				
ICA	206	<b>⊢</b> ●−−1	1.208(1.113-1.310)	< 0.001
M1	233	<b></b>	1.131(1.059-1.208)	< 0.001
M2	51	<b>⊢</b>	1.281(1.073-1.529)	0.006
IVT				
No	368	<b></b>	1.178(1.116-1.244)	< 0.001
Yes	122	<b>⊢</b>	1.190(1.075-1.318)	< 0.001
smoking				
No	339	<b></b>	1.176(1.111-1.246)	< 0.001
Yes	151	<b>⊢</b>	1.189(1.087-1.301)	< 0.001
Hypertension				
No	193	<b>⊢</b> •−•	1.127(1.045-1.214)	0.002
Yes	297		1.223(1.146-1.305)	< 0.001
Hyperlipidemia				
No	384	<b></b>	1.177(1.116-1.242)	< 0.001
Yes	106	<b>⊢</b>	1.196(1.070-1.338)	0.002
atrial fibrillation				
No	269	<b>———</b>	1.164(1.092-1.241)	< 0.001
Yes	221	<b></b>	1.195(1.110-1.288)	< 0.001
mTICI				
0 to 2a	67	• • • • • • • • • • • • • • • • • • •	1.262(1.041-1.529)	0.018
2b to 3	423		1.169(1.113-1.228)	< 0.001
	0.8	1 1.2 1.4 1.6		

This forest plot shows that the primary clinical outcome (common odds ratio indicating the odds of improvement of 1 point on the modified Rankin Scale at 90 days, analyzed with the use of ordinal logistic regression) in all prespecified subgroups.

Abbreviations: ASPECTS=Alberta Stroke Program Early Computed Tomography Score; TOAST=Trial of Org 10172 in Acute Stroke Treatment; ICA=Internal carotid artery; M1=M1 of middle cerebral artery; M2=M2 of middle cerebral artery; IVT= Intravenous thrombolysis; mTICI=modified Thrombolysis in Cerebral Infarction Score. eFigure4. Association of Baseline National Institutes of Health Stroke Scale Score with Percentage of Death.



Association between baseline NIHSS and age (A) and SBP (B) with the precentage of death after EVT in the patients with large core infarctions. There is an increase in the likelihood of death with increase in the baseline NIHSS score while the outcome probability is roughly stable over the age and systolic blood pressure.