Sensitivity of prehospital stroke scales for different intracranial large vessel occlusion locations

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Item and NIHSS correspondence	RACE <sup>1</sup>	C-STAT <sup>2</sup>	PASS <sup>3</sup>	G-FAST <sup>4</sup>	FAST-	FAST-	EMSA <sup>7</sup>	CG-FAST <sup>8</sup>	NIHSS-89	3I SS <sup>10</sup>	SAVE <sup>11</sup>	FPSS <sup>12</sup>	sNIHSS-	3 Item NIHSS <sup>14</sup>
					ED⁵	PLUS <sup>6</sup>							EMS <sup>13</sup>	
LOC responsiveness - 1a														
0 - Alert									0	0			0	
1 - Rousable to minor stimulation									1	1			1	
2 - Rousable to painful stimulation									2	2			2	
3 - Reflex response/unrousable									3				3	
LOC questions - 1b														
0 – answers correctly		0	0					0	0					
1 – incorrectly answer one question		U							1					
2 – incorrectly answers both		1^	1					1	2					
questions		1/						_						
LOC commands - 1c														
0 – performs both tasks	0*	0							0					
1 - performs one task	1*	1^							1					
2- performs neither tasks	2*	1							2					
Best gaze - 2														
0 - normal	0	0	0	0	0		0	0	0	0	0	0		
1 – partial gaze palsy	1	2	1	1	1		1	1	1	1	1	4		
2 – forced deviation	1	2	1	1	2		T	T	2	2	1	4		
Visual fields - 3														
No visual loss											0	0		
Partial hemianopia														
Complete hemianopia											1	1		
Bilateral hemianopia		1												1
Facial paresis - 4										1				1
0 – normal	0			0		0	0	0	0			0	0	
1 – minor paralysis	1				0				1				1	
2 – partial paralysis				1		1	1	1	2			1	2	
3 – complete paralysis	2			1	1				3				3	
Arm - 5a and 5b									LR				LR	
0 – no drift	0	0	0	0	0	0	0		0 0	0~	0	0~	0 0	0
1 – drift	0	0						0	1 1	1~			1 1	1
2 – some effort against gravity	1		]		1	0			2 2				2 2	2
	1	1	1	1		1 #	1	1		2~	1∞	1~		
3 – no effort against gravity	2	1			2	1		Ť	3 3	1			3 3	3
4 – no movement	<u> </u>				<u> </u>	#			4 4				4 4	4
Leg - 6a and 6b													LR	
0 – no drift	0						0			0~		0~	0 0	
1 – drift	-					0#				1~			1 1	
2 – some effort against gravity	1						1**					1~	2 2	
3 – no effort against gravity	2					1#	-			2~		-	3 3	_
4 – no movement						-"							4 4	
Sensory - 8														
0 - normal													0	0
1 - mild-moderate loss		Į.	I										1	1
2 - complete loss													2	2

## Table 1. Prehospital stroke with corresponding NIHSS items and breakdowns.

Language & Dysartria - 9 and 10								only 10			9	10	
0 – absent			0	0	0	0	0	0	0	0	0	0	
1 – mild to moderate				1				1			1	1	
2 – severe			1	2	1	2	1	2	1	1	2	2	
3 - mute				2				х			3	х	
Neglect - 11													
0 – absent	0ŧ			0				0					0
1 – extinction in one modality	1‡			1				1					1
2 – extinction in more than one	2ŧ			2				2					2
modality	ZŤ												

^ 1 point if only one of questions and 1 of the commands performed

§ only answers

\* if right hemiparesis

<sup>‡</sup> if left hemiparesis

# score only if FAST positive

\*\* 1 point if item left ≠ right

~ score highest of four extremities

∞ only scored when asymmetric drift or weakness

RACE: Rapid Arterial oCclusion Evaluation, , C-STAT: Cincinnati Stroke Triage Assessment Tool, PASS: Prehospital Acute Stroke Severity scale, G-FAST: Gaze-Face-Arm-Speech-Time, FAST-ED: Field Assessment Stroke Triage for Emergency Destination, EMSA: Emergency Medical Stroke Assessment, CG-FAST: Conveniently-Grasped Field Assessment Stroke Triage, NIHSS-8: National Institutes of Health Stroke Scale-8, 31 SS: 3-Item Stroke Scale, SAVE: Speech Arm Vision Eyes Scale, FPSS: Finnish Prehospital Stroke Scale, sNIHSS-EMS: shortened NIH Stroke Scale for emergency medical services.

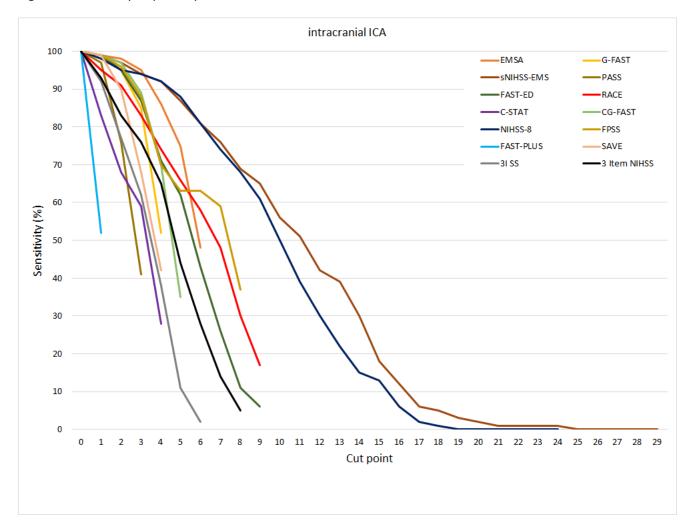


Figure 1: Sensitivity of prehospital stroke scales for intracranial ICA occlusions

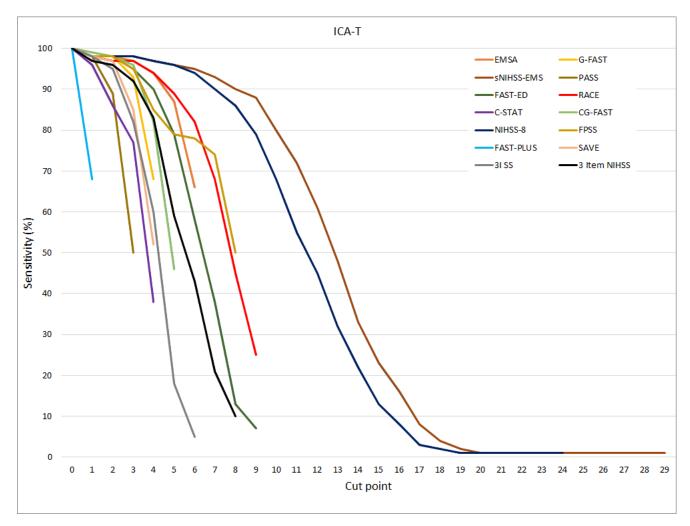
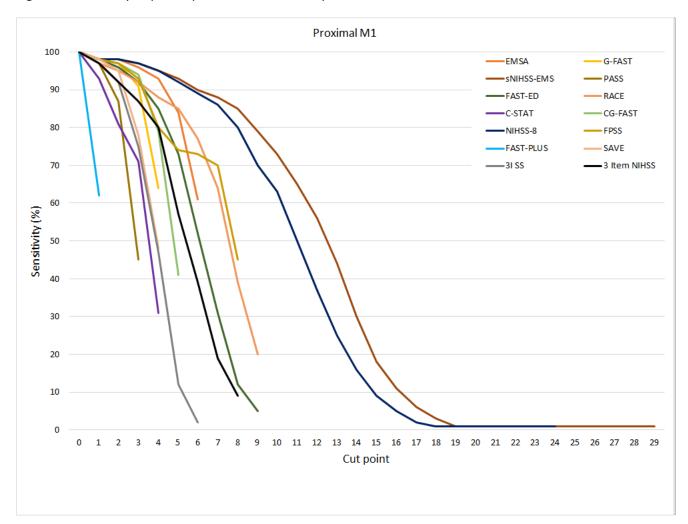
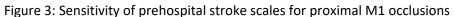


Figure 2: Sensitivity of prehospital stroke scales for ICA-T occlusions





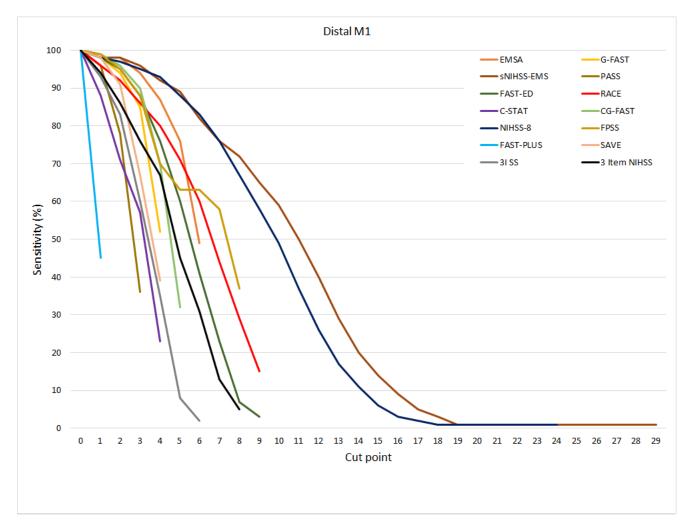


Figure 4: Sensitivity of prehospital stroke scales for distal M1 occlusions

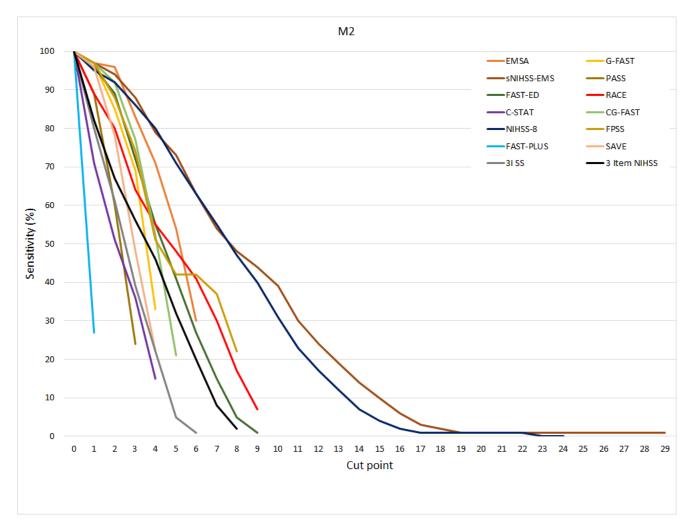


Figure 5: Sensitivity of prehospital stroke scales for M2 occlusions

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