SUPPLEMENTAL MATERIAL

Accuracy of artificial intelligence software for CT angiography in stroke

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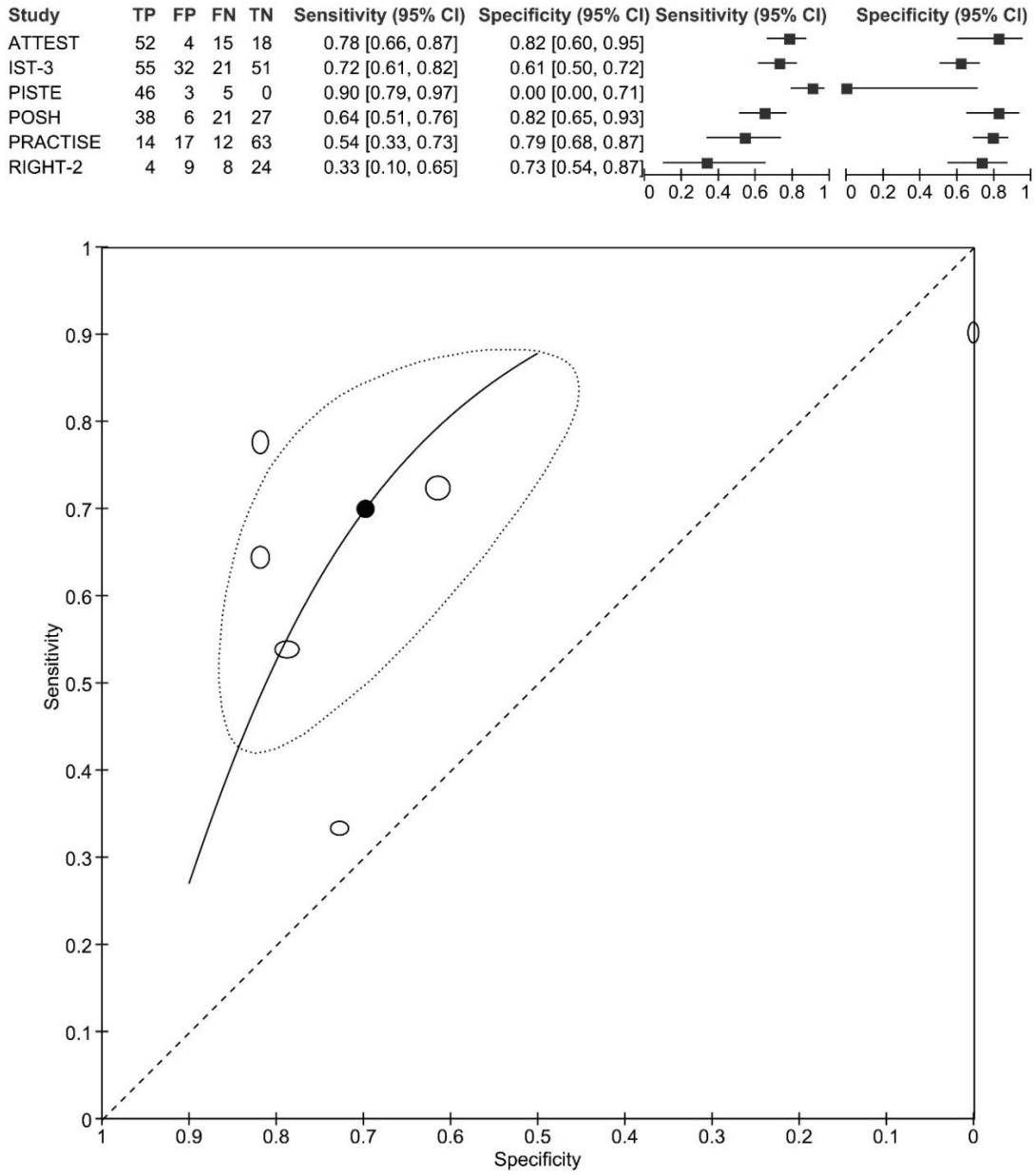
Includes: Supplemental Table 1 and Supplemental Figures 1-2

Supplemental Figure 1. Meta-analysis modelling for diagnostic accuracy testing of e-CTA using individual patient data stratified by contributing study, n=545.



Note: Includes patients with non-ICA/MCA occlusion (22/545, 4.0%).
In lower panel bivariate ROC curve, open circles are individual study results proportional to sample size, closed circle is summary result: sensitivity 70% (95%CI 56-81), specificity 70% (57-80). Dotted lines enclose 95% confidence regions.

We used MetaDTA (v2.0: https://crsu.shinyapps.io/dta_ma/) to summarise met-analysis data,* and Review Manager (RevMan 5.4, The Cochrane Collaboration) to produce bivariate ROC curves and forest plots.

* Freeman SC, Kerby CR, Patel A, Cooper NJ, Quinn T, et al. Development of an interactive web-based tool to conduct and interrogate meta-analysis of diagnostic test accuracy studies: MetaDTA. *BMC Med Res Methodol.* 2019;19:81

Supplemental Table 1. Demographic and clinical data of patients in RITeS, comparison with other datasets.

Clinical Feature		**RITeS Dataset**	**SSNAP Dataset**	**STTC Dataset**	**HERMES Dataset**
Total patient number		668	87,635	6,756	1,764
Female sex		332 (49.7%)	47.8%	45%	47%
Age, years		71 (66-81)	77 (66-85)	71 (13)	67 (57-76)
Cause of stroke symptoms	Ischaemia	640 (95.8%)	87.1%	100%	100%
	Mimic	28 (4.2%)	-	-	-
NIH Stroke Scale		9 (6-16)	5 (2-11)	12 (7)	17 (13-21)
Time from stroke onset, hours		2.3 (2.0-3.5)	4 (2-11)	4 (1.2)	3 (2-4)

Note: Data are percentage, median (inter-quartile range), or mean (standard deviation) as appropriate.
RITeS clinical variables were within the interquartile ranges, or ±1 SD of the mean, or <5 percentage points for all 3 comparative datasets: except time from stroke onset in STTC.
SSNAP - UK Sentinel Stroke National Audit Programme.
STTC – Stroke Thrombolysis Trialists' Collaboration.
HERMES – Highly Effective Reperfusion Evaluated in Multiple Endovascular Stroke Trials collaboration.

Supplemental Table 2. Comparison of angiography collateral scores between e-CTA and masked experts.

e-CTA Modified Tan	**Miteff Comparison 1**	**Miteff Comparison 2**	**Miteff Comparison 3**
3 – Excellent (>90%)	Good	Good	Good
2 – Good (50-90%)		Moderate	Moderate
1 – Poor (10-50%)	Moderate		Poor
0 – None (0-10%)	Poor	Poor	
Expert-software collateral score match	**318/465 (68%)**	**319/465 (69%)**	**325/465 (70%)**

Note: Results based on 465 result pairs.