Supplementary Table 1: Heterogeneity Assessment, ICC Interpretation and Publication Bias for Primary Meta-Analyses.

Analysis Type	Studies (Comparisons)	Pooled ICC (95% CI)	Heterogeneity I² (%)	Cochran's Q p-value	ICC Interpretation	Publication Bias (Egger's p-value)
Between-expert inter-rater reliability	7 (10)	0.72 (0.63, 0.79)	82.7	<0.001	Good	0.3145
Software vs expert readings	5 (7)	0.54 (0.40, 0.67)	89.3	<0.001	Moderate	0.6782
Expert readings vs reference standard	8 (12)	0.62 (0.52, 0.71)	91.0	<0.001	Good	0.6978
Software vs. reference standard	7 (9)	0.72 (0.61, 0.80)	93.2	<0.001	Good	0.2145

Notes: ICC = Interclass Correlation Coefficient; I² values >50% indicate substantial heterogeneity; ICC interpretation: poor (<0.40), moderate (0.40-0.59), good (0.60-0.74), and excellent (0.75-1.00); Egger's p-value >0.05 indicates no significant publication bias. All analyses were conducted using random effects models due to high heterogeneity.

Supplementary Table 2: QUADAS-2 Risk of Bias and Applicability Assessment.

Study (Author, Year)	Patient Selection	Index Test: Automated ASPECTS	Reference Standard	Flow and Timing	Reference Standard (App)	Overall Quality Score
Brinjikji et al., 2021	Low	NR	Unclear	Low	Low	6/7 (86%)
Delio et al., 2021	Low	NR	Unclear	High	Low	5/7 (71%)
Kuang et al., 2020	High	Low	Unclear	High	Unclear	5/9 (56%)
Hoelter et al., 2020	Low	Low	Unclear	Low	Low	6/7 (86%)
Wolff et al., 2020	Low	Low	High	High	Low	7/9 (78%)
Neuhaus et al., 2019	Low	NR	NR	NR	NR	3/3 (100%)
Goebel et al., 2019	Low	NR	NR	Low	NR	4/4 (100%)
Li et al., 2019	Low	Low	Low	Low	Low	8/8 (100%)
Albers et al., 2019	Low	Low	Low	Low	Low	9/9 (100%)
Guberina et al., 2018	Low	Low	High	Low	Low	8/9 (89%)
Kuang et al., 2018	Unclear	Low	Unclear	Low	Low	5/7 (71%)

Detailed Assessment Legend

Assessment	Description
Low Risk	The study adequately addresses this domain with minimal potential for bias.
Unclear Risk	The study provides insufficient information to determine the risk of bias in this domain.
High Risk	Study design or execution introduces potential bias in this domain.
Not Reported (NR)	The domain is not assessed or applicable in the original study.

ASPECTS: Alberta Stroke Program Early CT Score; App: Applicability; Low: Low risk of bias; High: High risk of bias; NR: Not Reported; Unclear: Unclear risk of bias or applicability concern; QUADAS-2: Quality Assessment of Diagnostic Accuracy Studies-2.