Appendix 1

Study search strategy

We searched "PubMed, Embase, Web of Science, Medline, Cochrane Library" databases using a search strategy consisting of MeSH terms and text words. Search terms include: (acute cerebral infarction OR acute ischemic stroke OR ischemic stroke OR acute ischemic stroke due to large vessel occlusion) AND (endovascular OR endovascular reperfusion OR endovascular treatment OR endovascular treatment OR thrombectomy OR emergency treatment OR reperfusion OR reperfusion treatment) AND (diffusion weighted imaging OR DWI OR reversal OR reversibility OR DWI reversal).

Eg: The search strategy for Web of Science.

Set	Search Term
#1	(TS= (acute cerebral infarction or acute ischemic stroke or ischemic stroke or acute ischemic stroke due to large vessel occlusion)) AND Language: (English) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
#2	(TS= (endovascular or endovascular reperfusion or endovascular treatment or endovascular treatment or thrombectomy or emergency treatment or reperfusion or reperfusion treatment)) AND Language: (English) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
#3	(TS= (diffusion weighted imaging or DWI or reversal or DWI reversal)) AND Language: (English) Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years
#4	#3 AND #2 AND #1 Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Timespan=All years

Table S1 Risk of bias in the included cohort studies (according to the QUADAS-2 quality assessment tool)

	Patient Selection	Index test	Reference Standard	Flow and Timing
Signaling questions(SQ) – Yes, No or Unclear (Y, N, U)	SQ1. Was a consecutive or random sample of patients enrolled? SQ2. Was a case control design avoided? SQ3. Did the study avoid inappropriate exclusions?	SQ1. Were the index results interpreted without the knowledge of the results of the reference standard? SQ2. If a threshold was used, was it prespecified?	SQ1. Is the reference standard likely to correctly classify the target condition? SQ2. Were the reference standard results interpreted without knowledge of the results of the index test?	SQ1. Was there an appropriate interval between index test(s) and reference standard? SQ2. Did all patients receive a reference standard? SQ3. Did all patients receive the same reference standard? SQ4. Were all patients in the study cohort included in the analysis?
Risk of bias (ROB) - High, Low or Unclear	ROB - Could the selection of patients have introduced bias? Yes for all three SQs: High ROB Yes for two SQs: Unclear ROB Yes for zero or one SQ: Low ROB	ROB – Could the conduct or interpretation of the index test introduced bias? No for SQ1 and SQ2: High ROB No/unclear for SQ1/SQ2: Unclear ROB Yes for SQ1 and SQ2: Low ROB	ROB – Could the reference standard, its conduct or its interpretation have introduced bias? No for SQ1 and SQ2: High ROB No/unclear for SQ1/SQ2: Unclear ROB Yes for SQ1 and SQ2: Low ROB	ROB – Could the patient flow have introduced bias? No to SQ1 or SQ3: High ROB Unclear for SQ1 or SQ3: Unclear ROB Yes for SQ1 and SQ3: Low ROB
Applicability concerns (AC) - High, Low or Unclear	AC - Are there concerns that the included patients do not match the review question?	AC – Are there concerns that the index test, its conduct, or its interpretation differ from the review question?	AC – Are there concerns that the target condition as defined by the reference standard does not match the review question?	

Study and Year	SQ1	SQ2	SQ3	ROB	AC	SQ1	SQ2	ROB	AC	SQ1	SQ2	ROB	AC	SQ1	SQ2	SQ3	SQ4	ROB
Inoue et al., 2014	N	Y	N	Low	Low	Y	Y	Low	Low	Y	Y	Low	Low	N	Y	Y	Y	High
Yoo et al., 2019	N	N	N	Low	Low	U	Y	Unclear	Low	Y	Y	Low	Low	Y	Y	Y	Y	Low
Panni et al., 2022	N	Y	N	Low	Low	Y	Y	Low	Low	Y	Y	Low	Low	Y	Y	Y	Y	Low
Umemura et al., 2022	N	Y	N	Low	Low	Y	Y	Low	Low	Y	Y	Low	Low	Y	Y	Y	Y	Low
Scopelliti et al., 2023	N	Y	N	Low	Low	U	Y	Unclear	Low	Y	Y	Low	Low	Y	Y	Y	Y	Low

QUADAS-2, Quality Assessment of Diagnostic Accuracy Studies-2.