

Blood markers of ischemic stroke recovery

Supplemental Table 1. Search Strategies in PubMed, Embase, and CINAHL

PubMed	
Search strategies	Search keywords
(1) Biomarker	("Chemokines"[Mesh] OR "Cytokines"[Mesh] OR "cytokine"[Text Word] OR "cytokines"[Text Word] OR "chemokine"[Text Word] OR "chemokines"[Text Word] OR "Biomarkers"[Mesh] OR "biomarkers"[Text Word] OR "biomarker"[Text Word] OR "Immune Markers"[Text Word] OR "Immune Marker"[Text Word] OR "immunologic Markers"[Text Word] OR "immunologic Marker"[Text Word] OR "blood biomarker"[Text Word] OR "blood biomarkers"[Text Word] OR "serum biomarker"[Text Word] OR "serum biomarkers"[Text Word] OR "plasma biomarker"[Text Word] OR "plasma biomarkers"[Text Word] OR "plasma marker"[Text Word] OR "plasma markers"[Text Word] OR "serum marker"[Text Word] OR "serum markers"[Text Word] OR "blood marker"[Text Word] OR "blood markers"[Text Word] OR "blood indicator"[Text Word] OR "blood indicators"[Text Word] OR "serum indicator"[Text Word] OR "serum indicators"[Text Word] OR "plasma indicator"[Text Word] OR "plasma indicators"[Text Word] OR "plasma factors"[Text Word] OR "plasma factor"[Text Word] OR "serum factors"[Text Word] OR "serum factor"[Text Word] OR "blood factors"[Text Word] OR "blood factor"[Text Word] OR "biological marker"[Text Word] OR "biological markers"[Text Word] OR "biologic marker"[Text Word] OR "biologic markers"[Text Word])
(2) Ischemic stroke	("Cerebrovascular Disorders"[Mesh] OR "Cerebrovascular Disorders"[Text Word] OR "Cerebrovascular Disorder"[Text Word] OR "Cerebrovascular"[Text Word] OR "ischemic stroke"[Text Word] OR "Brain Ischemia"[Text Word] OR "cva"[Text Word] OR "ischemic strokes"[Text Word] OR "stroke syndrome"[Text Word] OR "Brain Ischemia"[Mesh] OR "cerebral vascular accident"[Text Word] OR "cerebrovascular accident"[Text Word] OR "stroke syndromes"[Text Word] OR "cerebrovascular accidents"[Text Word] OR "cerebral vascular accidents"[Text Word] OR "Brain Ischemias"[Text Word] OR "cerebral ischemia"[Text Word] OR "cerebral ischemias"[Text Word] OR "ischemic brain"[Text Word] OR "ischemic brains"[Text Word])
(3) Physical recovery	("Recovery of Function"[Mesh] OR "Recovery of Function"[Text Word] OR "function recovery"[Text Word] OR "function recoveries"[Text Word] OR "physical recovery"[Text Word] OR "physical recoveries"[Text Word] OR "functional recovery"[Text Word] OR "functional recoveries"[Text Word] OR "stroke recovery"[Text Word] OR "motor recovery"[Text Word] OR "motor recoveries"[Text Word] OR "Prognosis"[Mesh] OR "Stroke Rehabilitation"[Mesh] OR "Prognosis"[Text Word] OR "Prognoses"[Text Word] OR "Stroke Rehabilitation"[Text Word] OR "Stroke Rehabilitations"[Text Word]) AND ("severity"[Text Word] OR "disability"[Text Word] OR "mobility"[Text Word] OR "functional independence"[Text Word] OR "physical independence"[Text Word] OR "motor function"[Text Word] OR "motor functions"[Text Word] OR "health outcome"[Text Word] OR "health outcomes"[Text Word] OR "physical outcomes"[Text Word] OR "physical outcome"[Text Word] OR "functional outcomes"[Text Word] OR "functional outcome"[Text Word] OR "motor performance"[Text Word] OR "motor performances"[Text Word] OR "physical function"[Text Word] OR "physical functions"[Text Word])
(4) Adult	("Adult"[Mesh] OR "adult"[Text Word] OR "adults"[Text Word] OR "aged 18 years"[Text Word] OR "age 18 years"[Text Word] OR "aged"[Text Word] OR "elderly"[Text Word] OR "aged 65 years"[Text Word] OR "age 65 years"[Text Word] OR "Aged"[Mesh] OR "working age"[Text Word] OR "working-age"[Text Word] OR "working aged"[Text Word] OR "working-aged"[Text Word])
Embase	
Search strategies	Search keywords
(1) Biomarker	Immune markers':ti,ab,kw OR 'immune marker':ti,ab,kw OR 'immunologic markers':ti,ab,kw OR 'immunologic marker':ti,ab,kw OR 'blood biomarker':ti,ab,kw OR 'blood biomarkers':ti,ab,kw OR 'serum biomarker':ti,ab,kw OR 'serum biomarkers':ti,ab,kw OR 'plasma biomarker':ti,ab,kw OR 'plasma biomarkers':ti,ab,kw OR 'plasma marker':ti,ab,kw OR 'plasma markers':ti,ab,kw OR 'serum marker':ti,ab,kw OR 'serum markers':ti,ab,kw OR 'blood marker':ti,ab,kw OR 'blood markers':ti,ab,kw OR 'blood indicator':ti,ab,kw OR 'blood indicators':ti,ab,kw OR 'serum indicator':ti,ab,kw OR 'serum indicators':ti,ab,kw OR 'plasma indicator':ti,ab,kw OR 'plasma indicators':ti,ab,kw OR 'plasma factors':ti,ab,kw OR 'plasma factor':ti,ab,kw OR 'serum factor':ti,ab,kw OR 'serum factors':ti,ab,kw OR 'blood factors':ti,ab,kw OR 'blood factor':ti,ab,kw OR 'biologic markers':ti,ab,kw OR 'biologic marker':ti,ab,kw OR 'cytokine'/exp OR 'cytokine':ti,ab,kw OR 'cytokines':ti,ab,kw OR 'biomarkers':ti,ab,kw OR 'biomarker':ti,ab,kw OR 'biological markers':ti,ab,kw OR 'biologic marker'/exp OR 'chemokine':ti,ab,kw OR 'chemokines':ti,ab,kw OR 'biological marker'/exp OR 'biological marker':ti,ab,kw
(2) Ischemic stroke	Cerebrovascular disease'/exp OR 'cerebrovascular disorders':ti,ab,kw OR 'cerebrovascular disorder':ti,ab,kw OR 'cerebrovascular':ti,ab,kw OR 'brain ischemia'/exp OR 'brain ischemia':ti,ab,kw OR 'brain ischemias':ti,ab,kw OR 'ischemic stroke':ti,ab,kw OR 'ischemic strokes':ti,ab,kw OR 'cva':ti,ab,kw OR 'stroke syndrome':ti,ab,kw OR 'stroke syndromes':ti,ab,kw OR 'cerebral vascular accident':ti,ab,kw OR 'cerebral vascular accidents':ti,ab,kw OR 'cerebrovascular accident':ti,ab,kw OR 'cerebrovascular accidents':ti,ab,kw OR 'brain ischemias':ti,ab,kw OR 'cerebral ischemia':ti,ab,kw OR 'cerebral ischemias':ti,ab,kw OR 'ischemic brain':ti,ab,kw OR 'ischemic brains':ti,ab,kw
(3) Physical recovery	Functional recovery'/exp OR 'prognosis'/exp OR 'stroke rehabilitation'/exp OR 'functional recovery':ti,ab,kw OR 'prognosis':ti,ab,kw OR 'stroke rehabilitation':ti,ab,kw OR 'recovery of function':ti,ab,kw OR 'function recovery':ti,ab,kw OR 'function recoveries':ti,ab,kw OR 'physical recovery':ti,ab,kw OR 'physical recoveries':ti,ab,kw OR 'functional recoveries':ti,ab,kw OR 'stroke recovery':ti,ab,kw OR 'stroke recoveries':ti,ab,kw OR 'motor recovery':ti,ab,kw OR 'motor recoveries':ti,ab,kw OR 'prognoses':ti,ab,kw OR 'stroke rehabilitations':ti,ab,kw AND 'functional independence':ti,ab,kw OR 'disability':ti,ab,kw OR 'severity':ti,ab,kw OR 'mobility':ti,ab,kw OR 'physical independence':ti,ab,kw OR 'motor functions':ti,ab,kw OR 'motor function':ti,ab,kw OR 'health outcome':ti,ab,kw OR 'health outcomes':ti,ab,kw OR 'physical outcomes':ti,ab,kw OR 'physical outcome':ti,ab,kw OR 'functional outcomes':ti,ab,kw OR 'functional outcome':ti,ab,kw OR 'motor performance':ti,ab,kw OR 'motor performances':ti,ab,kw OR 'physical function':ti,ab,kw OR 'physical functions':ti,ab,kw

Blood markers of ischemic stroke recovery

(4) Adult Adult'/exp OR 'aged'/exp OR 'adult':ti,ab,kw OR 'adults':ti,ab,kw OR 'aged':ti,ab,kw OR 'elderly':ti,ab,kw OR 'aged 18 years':ti,ab,kw OR 'age 18 years':ti,ab,kw OR 'aged 65 years':ti,ab,kw OR 'age 65 years':ti,ab,kw OR 'working age':ti,ab,kw OR 'working-age':ti,ab,kw OR 'working aged':ti,ab,kw OR 'workingaged':ti,ab,kw

CINAHL

Search strategies	Search keywords
(1) Biomarker	(MH "Biological Markers") OR "Biomarkers" OR "Biomarker" OR "Immune Markers" OR "Immune Marker" OR "immunologic Markers" OR "immunologic Marker" OR "blood biomarker" OR "blood biomarkers" OR "serum biomarker" OR "serum biomarkers" OR "plasma biomarker" OR "plasma biomarkers" OR "plasma marker" OR "plasma markers" OR "serum marker" OR "serum markers" OR "blood marker" OR "blood markers" OR "blood indicator" OR "blood indicators" OR "serum indicator" OR "serum indicators" OR "plasma indicator" OR "plasma indicators" OR "plasma factors" OR "plasma factor" OR "serum factor" OR "serum factors" OR "blood factors" OR "blood factor" OR "biological marker" OR "biological markers" OR "biologic markers" OR "biologic marker" OR (MH "Cytokines") OR (MH "Chemokines") OR "cytokine" OR "cytokines" OR "chemokines" OR "chemokine"
(2) Ischemic stroke	MH "Cerebrovascular Disorders" OR "Cerebrovascular Disorders" OR "Cerebrovascular Disorder" OR "Cerebrovascular" OR "ischemic stroke" OR "Brain Ischemia" OR "cva" OR "ischemic strokes" OR "stroke syndrome" OR "cerebral vascular accident" OR "cerebrovascular accident" OR "cerebrovascular accidents" OR "stroke syndromes" OR "cerebral vascular accidents" OR (MH "Cerebral Ischemia") OR "Brain Ischemias" OR "cerebral ischemia" OR "cerebral ischemias" OR "ischemic brain" OR "ischemic brains"
(3) Physical recovery	"Recovery of Function" OR "function recovery" OR "function recoveries" OR "physical recovery" OR "physical recoveries" OR "functional recovery" OR "functional recoveries" OR "stroke recovery" OR "motor recovery" OR "motor recoveries" OR MH "Prognosis" OR "Prognosis" OR "Prognoses" OR "Stroke Rehabilitation" OR "Stroke Rehabilitations" AND "severity" OR "disability" OR "mobility" OR "functional independence" OR "physical independence" OR "motor function" OR "motor functions" OR "health outcome" OR "health outcomes" OR "physical outcome" OR "physical outcomes" OR "functional outcomes" OR "functional outcome" OR "motor performance" OR "motor performances" OR "physical function" OR "physical functions"
(4) Adult	(MH "Adult") OR "Adult" OR "adults" OR (MH "Aged") OR "Aged" OR "aged 18 years" OR "age 18 years" OR "elderly" OR "aged 65 years" OR "age 65 years" OR "working age" OR "working-age" OR "working aged" OR "working-aged"

These four search strategies were combined as follow: (1) and (2) and (3) and (4).

Blood markers of ischemic stroke recovery

Supplemental Table 2. REMARK Quality Questionnaire

Item	Yes	No
1		
Was the study prospective?		
YES: The study reported that patients and blood samples were collected prior to the development of an outcome		
NO: No report or clearly retrospective (e.g. patients with poor prognosis collected prior to biomarker measurement)		
2		
Was the evaluation of prognostic marker blinded to patient outcome?		
YES: The study reported an attempt to blind the person measuring the level of biomarker to patient outcome		
NO: There was no such report		
3		
Was there a defined time period during which patients were enrolled?		
YES: Study defined time period, end of follow up period and median follow up time		
NO: Did not define above criteria		
4		
Were there precisely defined clinical outcomes at the beginning of the study?		
YES: Study defined which clinical endpoints are to be measured		
NO: No such definition		
5		
Did the study provide a rationale for study sample size?		
YES: Evidence of a sensible sample size calculation (e.g. 10 outcomes/variable in a multiple regression model)		
NO: No attempt to define sample size		
6		
Did the study provided a list of candidate variables?		
YES: A list of variables to be considered in multiple regression analysis were provided at the beginning of the study		
NO: Evidence that variables were measured and not reported		
7		
Were the methods for measuring the prognostic marker adequately described and referenced?		
YES		
NO		
8		
Were the characteristics of the study patients described?		
YES: The study described the source and inclusion and exclusion criteria		
NO: Did not provide the information or it was unclear description		

REMARK = REporting recommendations for tumour MARKer prognostic studies. Modified from "Blood markers for the prognosis of ischemic stroke: A systematic review" by Whiteley et al., 2009, *Stroke*, 40(5), e380-389.

Blood markers of ischemic stroke recovery

Supplemental Table 3. Characteristics of Studies that Examined the Blood Biomarkers on Physical Recovery in Ischemic Stroke

Author, year	Sample collection Country, year	Cohort	Patient number (male %)	Patient age (mean ± SD)	Blood biomarkers	Outcome measures (time point)		Results: blood biomarker levels according to functional outcomes
						Disability	Severity	
Navarro-Sobrinó et al., 2011 [1]	Spain	Healthy controls vs Ischemic stroke (with tPA treatment)	26 (46.2%) vs 109 (55%)	69 ± 9.5 vs 70.9 ± 15.1	*Endostatin SDF-1 HCG KGF HGF TSP-1 TSG-1 VEGF VEGF-R2 PDGF-BB PDGF-AA Angiostatin	mRS (3 M)	NIHSS (Admission, 1 h, 2 h, 12 h, 24 h, 48 h and discharge)	<ol style="list-style-type: none"> Higher endostatin is associated with poor outcome (mRS ≥ 3). Lower KGF/endostatin, KGF/TSP-1, and VEGF-R2/TSP-1 are associated with worse severity (admission). Lower KGF/TSP-1 and VEGF-R2/TSP-1 are associated with worse severity (1 h). Lower HCG, HCG/endostatin, KGF/endostatin, KGF/TSP-1, VEGF, PDGF-BB/Angiostatin, PDGF-AA/TSG-1, VEGF/TSP-1, VEGF/endostatin, VEGF-R2/TSP-1, and HGF/Angiostatin are associated with worse severity (2 and 12 h). VEGF, PDGF-BB/Angiostatin, PDGF-AA/TSG-1, VEGF/endostatin, and HGF/Angiostatin are associated with worse severity (24 h). VEGF, PDGF-BB/Angiostatin, and VEGF/endostatin are associated with worse severity (48 h and discharge).
Mendioroz et al., 2011 [2]	Spain, Dec. 2006-June 2008	Healthy controls vs Ischemic stroke (with tPA treatment)	40 (46.2%) vs 178 (52.8%)	71.5 ± 13.4 vs 71.91 ± 8.1	*Osteopontin Glucose	mRS (3 M)	NIHSS (Admission)	<ol style="list-style-type: none"> Higher osteopontin is associated with poor outcome (mRS ≥ 3). No relationship between glucose and stroke disability (mRS ≥ 3). No relationship between osteopontin and stroke severity.
Brea et al., 2011 [3]	Spain, Feb. 2009-Aug 2009	Ischemic stroke	110 (58.2%) mRS < 3: 48 mRS ≥ 3: 62	74.6 ± 9.8 mRS < 3: 71.9 ± 8.9 mRS ≥ 3: 72.9 ± 10.9	*Glucose WBC Platelets Fibrinogen *CPR TLR3 TLR7 TLR8 TLR9	mRS (3 M)	NIHSS (Admission, 24 h, 72 h, 7 days, 3 M)	<ol style="list-style-type: none"> Higher glucose and CRP are associated with poor outcome (mRS ≥ 3). TLR3, 7, 8, and 9 are not associated with stroke disability.
Campos et al., 2011 [4]	Spain	First episode of ischemic stroke	365 (57.5%) mRS < 3: 168 mRS ≥ 3: 197	70.5 ± 11.4	*Glucose WBC Platelets *Fibrinogen *Glutamate *GOT *GPT	mRS (3 M)	NIHSS (Admission)	<ol style="list-style-type: none"> Higher glucose, fibrinogen, and blood glutamate are associated with poor outcome (mRS ≥ 3). Lower GOT and GPT are associated with poor outcome (mRS ≥ 3).
Groschel et al., 2012 [5]	Germany, Mar. 2009-Feb. 2010	Ischemic stroke	264 (55.3%)	70.3 ± 12.7	*GDF-15 WBC CRP Cholesterol LDL-C HDL-C Triglyceride	mRS (3 M)	NIHSS (Admission)	<ol style="list-style-type: none"> Higher GDF-15 is associated with poor outcome (mRS ≥ 2). Higher GDF-15 is associated with worse severity.

Blood markers of ischemic stroke recovery

Makihara et al., 2012 [6]	Japan, Oct. 2005- July 2008	Ischemic stroke with tPA treatment	489 (65%) mRS < 2: 188 mRS ≥ 2: 301	70.8 ± 11.6	Total cholesterol *HDL-C LDL-C Triglyceride	mRS (3 M)	NIHSS (Admission)	1. Lower HDL-C is associated with poor outcome (mRS ≥ 2).
Delgado et al., 2012 [7]	Spain	Healthy controls vs Ischemic stroke with tPA treatment	135 vs 99 (51%)	72	Lp-PLA2 mass Lp-PLA2 activity	mRS (3 M)	NIHSS (Admission)	1. Neither Lp-PLA2 mass or Lp-PLA2 activity is not associated with stroke severity. 2. No differences were found in either Lp-PLA2 mass or activity according to the third month.
Rodriguez et al., 2013 [10]	Spain	Healthy controls vs Ischemic stroke (with vs without tPA)	With tPA: 76 (58%) Without tPA: 202 (54%)	With tPA: 66.9 ± 11.3 Without tPA: 73.5 ± 11.3	MMP9 *proMMP-10 TIMP-1 *C-Fibronectin *IL-6 *TNFα	mRS (3 M)	NIHSS (Admission, 24 h, 48 h)	1. ProMMP-10, C-Fibronectin, IL-6, and TNFα are significantly higher in tPA treated patients with poor outcome (mRS ≥ 3). *proMMP-10 is significantly higher in non-tPA treated patients with poor outcome (mRS ≥ 3).
Luitse et al., 2013 [8]	Netherlands, Jan. 2007-June 2008	Ischemic stroke (NG vs HG)	Total: 80 NG: 47 (58.8%) HG: 33 (41.3%)	NG: 59 ± 15.3 HG: 69 ± 10.9	*Glucose	mRS (6 M)	NIHSS (Admission)	1. Hyperglycemia is associated with poor outcome (mRS ≥ 3). 2. Hyperglycemia is associated with worse severity (no statistics data).
De Marchis et al., 2013 [9]	Germany and Switzerland, Mar. 2009-Apr. 2011	Ischemic stroke	Total: 783 Without tPA: 465 (59.4%) With tPA: 318 (40.6%)	71.0 (60.6-80.0)	*Copeptin *Glucose *CRP Creatinine *eGFR	mRS (3 M)	NIHSS (Admission)	1. Higher copeptin, glucose, and CRP are associated with poor outcome (mRS ≥ 3). 2. Lower eGFR is associated with poor outcome.
Selçuk et al., 2014 [11]	Turkey, May 2011- Oct. 2011	Ischemic stroke	50 (48%)	68 ± 13	*S100B	mRS (dis- charge, 1 M)	NIHSS (1st, 2nd, 3rd day)	1. The first day S100B level is not associated with post-stroke disability at 1 month. 2. There was a poor correlation between functional outcome at 1-month post-stroke and the third day S100B level. 3. No correlation between stroke severity and S100B level.
Potpara et al., 2014 [12]	UK	Ischemic stroke	240 (57.9%)	70.0 ± 8.9	*CRP *Fibrinogen *Cardiac Tnl *D-dimer *WBC *CrCl *Total cholesterol HDL-C *LDL-C *Hematocrit Hemoglobin	mRS (1 M)	-	1. Higher CRP, fibrinogen, cardiac Tnl, D-dimer, WBC, LDL, and total cholesterol are associated with poor outcome (mRS ≥ 3). 2. Lower CrCl and hematocrit are associated with poor outcome.
Kuwashiro et al., 2014 [13]	Japan, Nov. 2007- Apr. 2010	Healthy controls vs Ischemic stroke	342 (67.3%)	68.3 ± 10.1	*Adiponectin	mRS (3 M)	NIHSS (Admission)	1. Higher adiponectin is associated with worse severity and poor outcome (mRS ≥ 3).

Blood markers of ischemic stroke recovery

Bustamante et al., 2014 [14]	Spain, Mar. 2003- Nov 2005	Ischemic stroke (with tPA treatment)	159 (55.3%)	70.1 ± 11.4	ChT	mRS (3 M)	NIHSS (Admission, 48 h)	1. ChT activity is not related to base- line stroke severity. 2. Higher ChT activity is associated with poor outcome (mRS ≥ 3), but ChT activity is not an independent predictor.
Lasek-Bal et al., 2015 [15]	Poland, June 2014-April 2015	First episode of ischemic stroke (with tPA treatment)	87 (51.7%)	71.7 ± 11.8	*BDNF	mRS (2 W, 3 M)	NIHSS (Admission)	1. Lower BDNF is associated with poor outcome at 3 months post- stroke (mRS ≥ 3).
Roy-O'Reilly et al., 2017 [16]	USA, 2011-2015	Ischemic stroke	133 (57.1%)	70.42 ± 13.87	*CCL11	mRS and mBI (in- hospital, 3 M, 12 M)	NIHSS (Admission)	1. Lower CCL11 is associated with poor outcome at 3 months (mBI ≤ 14) and 12 months (mRS ≥ 3) post-stroke.
Gori et al., 2017 [17]	Italy, Oct. 2008- June 2011	Ischemic stroke (with tPA treatment)	327 (58.1%)	68.9 ± 12.1	*IL-1β *IL-1RA IL-4 *IL-6 *IL-8 *IL-10 *IL-12 IL-17 IFNγ IP10 *MCP1 MIP1β *TNFα, *CRP A2M SAP Haptoglobin MMP1, 2, 3, 7, 8, and 9 TIMP1, 2, and 4	mRS (3 M)	NIHSS (Admission)	1. CRP, IL-1β, IL-1Ra, IL-6, IL-8, IL-10, IL-12, TNFα, and MCP1 (Pre-post tPA) were associated with three- month (mRS ≥ 3).
De Marchis et al., 2018 [18]	Germany and Switzerland, Mar. 2009-Apr. 2011	Ischemic stroke	Total: 783 Without tPA: 465 (59.4%) With tPA: 318 (40.6%)	71 (61-80)	*MR-proANP *Glucose *CRP *eGFR	mRS (3 M)	NIHSS (Admission)	1. Higher MR-proANP, glucose, and CRP are associated with poor outcome (mRS ≥ 3). 2. Lower eGFR is associated with poor outcome.

A2M = Alpha-2-Macroglobulin; BDNF = Brain-derived neurotrophic factor; CCL11 = C-C motif chemokine 11; ChT = Chitotriosidase; CrCl = Creatinine Clearance; CRP = C-reactive protein; eGFR = Estimated glomerular filtration rate; GDF-15 = Growth Differentiation Factor-15; GOT = Glutamic oxaloacetic transaminase; GPT = Glutamic pyruvic transaminase; h = hour(s); HDL-C = High-density lipoproteins cholesterol; HG = Hyperglycaemia; HGF = Hepatocyte growth factor; IFNγ = Interferon gamma; IL = Interleukin; IP10 = Interferon gamma-induced protein 10; KGF = Keratinocyte growth factor; LDL-C = Low-density lipoproteins cholesterol; Lp-PLA2 = Lipoprotein-associated phospholipase A2; M = month(s); mBI = modified Barthel index; MCP1 = Monocyte chemoattractant protein 1; MIP1β = Macrophage inflammatory protein-1β; MMP = Matrix Metalloproteinase; MR-proANP = Midregional proatrial natriuretic peptide; mRS = modified Rankin score; NG = Normoglycaemia; NIHSS = National Institutes of Health Stroke Scale; PDGF = Derived growth factor; S100B = S100 calcium-binding protein B; SAP = Serum amyloid P-component; SD = Standard deviation; SDF-1 = Stromal cell-derived factor-1; TIMP-1 = Tissue inhibitor of matrix metalloproteinases-1; TLR = Toll-like receptor; TNFα = Tumor necrosis factor-alpha; Tnl = Troponin I; tPA = Tissue plasminogen activator; TSG-1 = Tumor necrosis factor-inducible gene-1; TSP-1 = Thrombospondin-1; VEGF = Vascular endothelial growth factor; W = week(s); WBC = White blood cell; *indicates statistical significant difference.

Blood markers of ischemic stroke recovery

Supplemental Table 4. Quality Assessment of Each Study Included in the Systematic Review by Using the Modified REMARK Questionnaire

Article	Item of REMARK questionnaire								Percentage of Yes
	1	2	3	4	5	6	7	8	
1	Yes	No	No	Yes	No	Yes	Yes	Yes	62.5
2	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	87.5
3	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	87.5
4	Yes	No	No	Yes	No	Yes	No	Yes	50.0
5	Yes	Yes	Yes	Yes	No	Yes	No	Yes	75.0
6	No	No	Yes	Yes	No	Yes	No	Yes	50.0
7	Yes	No	No	Yes	No	Yes	Yes	Yes	62.5
8	Yes	No	Yes	Yes	No	Yes	No	Yes	62.5
9	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	87.5
10	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	87.5
11	Yes	No	Yes	Yes	No	No	Yes	Yes	62.5
12	Yes	No	No	Yes	No	Yes	Yes	Yes	75.0
13	Yes	No	Yes	Yes	No	Yes	Yes	Yes	75.0
14	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	87.5
15	Yes	No	Yes	Yes	No	Yes	No	Yes	62.5
16	Yes	No	Yes	Yes	No	Yes	No	Yes	62.5
17	Yes	No	Yes	Yes	No	Yes	Yes	Yes	75
18	Yes	No	Yes	Yes	No	Yes	Yes	Yes	75
Percentage of Yes	94.4	33.3	72.2	100.0	5.6	94.4	66.7	100.0	

REMARK = REporting recommendations for tumour MARKer prognostic studies.

Blood markers of ischemic stroke recovery

Supplemental References

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