Table S1. Demographic data of included studies

Study +ref	**No patients recruited (stroke + controls)**	**Inclusion criteria**	**Exclusion criteria**	**Demographic data (age/ sex) (stroke patients vs controls)**	**Differing comorbidities and lab parameters ($p<0.05$)**	**Disability scale used**	**Score mean at admission**
Ma et al, 2022 [1]	188 (72 AIS, 60 patients with high risk of stroke and 56 healthy controls)	-AIS diagnosis (clinical + CT/MRI)	- infectious disease; -history of autoimmune disease or cancer; -peripheral vascular disease, cerebral hemorrhage, transient ischemic attack, cardiac dysfunction.	AIS: 69.54±13.69; At risk subjects: 68.64±10.14; Controls: 66.36±11.19 M:F= 43/29	Hypertension, homocysteinemia, intima – media thickness, carotid atherosclerosis,	NIHSS	NIHSS <7, 40 (55.56%). NIHSS ≥ 7 32 (44.44%).
Peng et al., 2015 [2]	124 (72 AIS + 52 controls)	- first stroke Diagnosis (clinical + CT/MRI) -ages 55 to 75 -patient arrival at the hospital after 4.5 h but within 24 h - NIHSS score 4 to 15, - without hemorrhagic transformation	-recurrent stroke, tumors, abnormal renal or liver function, infectious diseases, immune diseases, blood disorders, psychiatric illness	AIS: 72.4 (9.2) vs controls: 70.7 (7.5) M:F=41/31	No significant differences	NIHSS	8.4±2.2
Wu et al., 2017 [3]	181 (50 AIS, 81 TIA patients and 50 healthy controls)	- focal neurological deficit lasting for more than 24 h -AIS diagnosis (clinical + CT/MRI)	-history of hemorrhagic infarction, peripheral arterial occlusive diseases, chronic liver/kidney disease, cancer	AIS: 60.1 (11.3) vs TIA 60.8 (11.3) vs Controls 58.3 (9.5) M:F=160:67	Hypertension Glucose, TG, HDL-C, LDL-C Antihypertensive drug use, Previous stroke	NIHSS on admission BI at discharge mRS at discharge	- 14.0 (10.0-17.0) - 40.0 (25.0-85.0) - 4.0 (3.0-4.0)
Kijpaisalratana et al. 2020 [4]	23 AIS + central vertigo + 35 peripheral	-age ≥45 - acute vertigo	-Altered state of consciousness, -BT > 100.4 °F,	AIS with central vertigo: 64.52 (11.80) vs Peripheral	Diabetes mellitus, History of myocardial infarction,	NIHSS	3 (2-6)

	vertigo without AIS	-diagnosis of central vertigo caused by ischemic stroke -hospital admission within 72 h of onset	-WBC > 15,000 cell/μL, -Serum creatinine > 2 mg/dl, -Liver enzymes > 3 fold of upper normal limit, cirrhosis, active malignancy or autoimmune disease, -concurrent intracranial pathology.	Vertigo: 63.69 (9.42) AIS, M:F=18:5	Smoking, Hemoglobin, WBC count, Creatinine, Fasting blood sugar, HbA1C.		
Kautzky et al., 2022 [5]	80 (40 AIS+40 Controls)	AIS diagnosis (clinical and imaging) within 24 h of onset	Infection, inflammatory disease, active malignancy, major surgery in the last 3 months, heparin treatment in the last 4 weeks, head trauma I the last 2 weeks	Stroke:74.7±13.8 Controls: 70.2±8.7; Stroke: 55% Controls: 40%	Atrial fibrillation, peripheral artery disease, previous stroke CRP, AST, glucose, monocytes Albumin, total cholesterol, LDL, HDL, TG, hematocrit	NIHSS	6.7±5.7
Zhu et al., 2019 [6]	340 (170 AIS + 170 controls)	- first AIS diagnosis (clinical +C T/MRI) - age >18 years old; - admission within 24 hours of onset	- intracranial hemorrhage, severe infection, inflammatory disease, malignancy, immunosuppressive treatment, pregnancy, lactation.	-AIS: 64.9 ± 12.5 vs Controls: 63.9 ± 10.5 M:F= 124:46	No significant differences	NIHSS	7.9 ± 3.4
Niu et al., 2021 [7]	596 (453 AIS + 143 controls)	- admission within 72 h of onset - AIS diagnosis (clinical +C T/CTA/MRI/MRA)	NR	LAA (193): 62.9 (10.5), SAO (155) 62.9 (11.8) As (105): 63.4 (9.6) vs Controls (143) 64.7 (8.9) AIS, M:F=241:212	No significant differences	NIHSS	-

Li et al., 2022 [8]	92 (50 AIS, 42 controls)	-AIS diagnosis (clinical + DWI-MRI) -first ischemic stroke -age 18 – 80 -NIHSS<25 points - admission within 6 h	NR	AIS patients: 18– 80 years	No significant differences	NIHSS	
Kotb 2019 et al., [9]	44 stroke patients + 22 age and sex matched controls	- age ≥ 18 - admission within 24 h of onset - thrombotic stroke, anterior circulation	- Intracerebral hemorrhage, hemorrhagic infarction, - Extensive infarction, anticoagulant or thrombolytic treatment -Other neurological disorders	63.69, 6.42 (62.50, 54.00) vs 81.00 +- 64.38 -6.23 (65.00,56)	Cholesterol, Hemoglobin, Platelets, Urea, Serum creatinine	GCS- short-term prognosis of ACI	**NA**
Wu et al., 2020 [10]	112 ACI + 112 controls	- first ischemic stroke within 6 hours after the symptom onset - CT/MRI showing focal neurological deficits	- cancer, renal, cardiovascular disease, autoimmune disease	64.56 ± 6.03 vs 63.42 ± 5.71 M:F=68/44 vs 70/42	BMI, Hypertension, Hyperlipidemia, Diabetes	GOS- short-term prognosis of ACI	**NA**
Huang et al., 2016 [11]	76 IS patients (39 PSCI + 37 PSCN) vs 38 age-matched controls	- history of stroke and/or CT/MRI consistent with cerebrovascular disease - cognitive impairment judged due to a vascular cause - MoCA score <26 - first stroke event, and within 1 year - conscious with stable vital signs	- other causes of cognitive impairment, long duration of cognitive impairment, treatment for cognitive impairment - serious speech, vision, hearing impairment or psychiatric disorders, alcohol or drug abuse - BDI Score > 13 - heart failure, respiratory failure, or other organ failure;	66.2±88 vs 65.6±7.4 M:F=20/19	Diabetes, Hypertension	MoCA score	7.6±5.0

			-pregnancy and lactation				
Zhai et al., [12]	108 vs 76 controls	- AIS diagnosis - admission within 72 h of onset	- hemorrhagic stroke, -malignancy, - severe liver and kidney dysfunctions - history of cerebral hemorrhage or head trauma surgery. - acute or chronic infection or trauma - cerebral infarction or myocardial infarction within 3 months - hormone and anti-inflammatory drug use within 3 months - difficult cooperation, cognitive and communication difficulties - surgery or lost to follow-up no	53.78±11.32 vs 54.07±11.18; M:F= 67: 39	Family history of stroke, Diabetes, Hypertension	- NIHSS score in the patient group ($P<0.05$), - MoCA score lower in patient group ($P<0.05$)	NA
Ma et al., 2019 [13]	33 AIS + 20 healthy controls	- first ischemic stroke - admission within 6 h of onset - NIHSS<25 - CT/MRI showing focal neurological deficits	- recurrent stroke - hematological diseases, malignancy, renal or liver failure - mental disorders, severe dementia, or coronary artery disease - other diseases affecting the hemogram	NA	No significant differences	NIHSS, BI, mRS	NA
Lin et al., 2022 [14]	96 AIS-59 FSTP & 37 NFSTP	- NIHSS ≥ 4 - diagnosis (clinical and CT/CTP) within ≤ 4 h of onset	- contraindications to thrombolysis - other associated disorders, brain trauma and brain tumor	63.37 ± 7.09	No significant differences	NIHSS, mRS at 3 months	NIHSS-15.02 ± 5.27

		- occlusion of MCA M1, M2 / ICA on CTA	- anticoagulant treatment, INR >1.5, - no CT examination or poor image quality - no significant artery occlusion - mental disorders or other diseases that affect examination				
Xiang et al., 2017 [15]	86 (40 AIS+46 controls)	AIS diagnosis (clinical+CT) age>18, aspirin upon admission, NIHSS≥ 4,	Infection, severe liver, kidneyor cardiopulmonary disease, malignancy, rheumatic immune disease, TIA, ICH, previous AIS within last 3 months	Stroke: 63.1±11.7 Controls 65.5±11.4 controls; Stroke: 63.0% Controls: 61.5%	NR	NIHSS	12.0±6.2
Wang et al. 2020 [16]	76 (36 PSCI + 38 no PSCI)	history of a single stroke episode within the last year or compatible imaging imaging, cognitive impairment judged of vascular cause, conscious and stable,	other causes of cognitive impairment, long duration of cognitive impairment, treatment for cognitive impairment , Beck Depression Inventory Score >13, alcohol or drug abuse, organ failure, pregnancy, lactation	PSCI: 67 (57–72) PSCN: 68 (52–66) (median and range); PSCI: 44.4%, No PSCI: 39.5%	No significant differences	MoCA<26 for PSCI,>=26 for PSCN	PSCI: 19 ±2.6 PSCN: 27±1.5
Jickling et al. 2016 [17]	212 (106 IS+106 controls)	AIS diagnosis (clinical+DWI-MRI)	Active or recent infection, immunosuppression, leukemia, lymphoma	Stroke: 61.9±12.5Controls: 60±13.8; Stroke: 51.8% Controls: 49.1%	No significant differences	NIHSS	5.3 (2–9)

Wang et al. 2019 [18]	80 (40 IS+40 controls)	AIS diagnosis	Malignancy, autoimmune disease, "another unidentified disease", short survival time	Stroke:63 (50–75) Controls: 63 (50–75) (median and range); Stroke: 55% Controls: 52.5%	BDNF	NIHSS	10 (5–15) (median and IQR)
Yuan et al. 2022 [19]	77 (45 PSCI, 32 PSCN)	AIS diagnosis (clinical + CT/MRI), age>18, First AIS episode	Infection, other neurological disease, cancer, pregnancy	PSCI: 65.80±11.39 PSCN: 66.28±13.97; PSCI:51.11% PSCN:56.25%	Body weight	MMSE≤24 for PSCI, MMSE>24 for PSCN mRS at diagnosis	PSCI mRS 3.53±1.10 PSCN mRS 3.19±0.97
Zhou and Qi 2021[20]	216 (108 IS+108 controls)	First AIS episode, diagnosis within 24 h	malignancy, severe liver and kidney disease, ICH	Stroke: 66.3±11.5 Controls: 64.5±12.8; Stroke: 51.85% Controls: 57.41%	BMI, total cholesterol, LDL, TG, Homocysteine	GOS at 30 days	NR
Ji et al. 2016 [21]	131 (65 IS+66 controls)	AIS diagnosis (clinical + CT/MRI)	ICH, unknown stroke etiology	Stroke: 64 (54–70) Controls: 60 (53–64) (median and range); Stroke: 61.5% Controls: 54.5%	No significant differences	NIHSS	8 (6-11) (median and IQR)
He et al. 2019 [22]	94 (no controls)	AIS patients receiving rt-PA within 4.5 h of onset	Infection, severe kidney, liver, thyroid failure, rheumatic, or immune disease, hematologic disease and cancer, significant missing data.	68.3±12.6; 70.2%	No significant differences	NIHSS at diagnosis mRS at 3 months	NIHSS: 5 (2-12) (median and IQR)

He et al. 2019 [23]	84 (no controls)	AIS patients receiving rt-PA within 4.5 h of onset	Infection, severe kidney, liver, thyroid failure, rheumatic, or immune disease, hematologic disease and cancer,	68.1 ± 12.2 70.2%	Smoking, Lipid-lowering medication use	NIHSS at diagnosis mRS at 3 months	NIHSS: 5 (2-12) (median and IQR)
Qi et al. 2021 [24]	20 (10 IS+10 controls)	AIS patients receiving rt-PA within 6 h of onset	NR	Stroke (grouped by serum collection timing): • 2h:72.5 ± 7.2 • 4h:73.0 ± 6.8 • 6h: 75.6 ± 7.2 Controls: 65.2 ± 8.0;	NR	NIHSS	NR
Jin and Xing 2017 [25]	216 (106 IS +110 controls)	AIS diagnosis (clinical + CT/MRI/MRA)	Infection, kidney or liver failure, malignancy, immunosuppression, thrombolysis	Stroke: 60.8 ± 9.7 Controls: 58.6 ± 15.2; Stroke: 45% Controls: 54%	No significant differences	NIHSS	NR
Jin and Xing 2018 [26]	296 (148 IS +148 controls)	AIS diagnosis (clinical + CT/MRI/MRA), age>18	Infection, kidney or liver failure, malignancy, immunosuppression, thrombolysis	Stroke: 61.5 ± 9.2 Controls: 59.8 ± 9.6; Stroke: 62.2% Controls: 56.8%	No significant differences	NIHSS	NR
Chen et al. 2020 [27]	430 (215 IS +215 controls)	age>18 Stroke: AIS diagnosis (clinical + CT/MRI) within 24 h of onset, Controls: at least 2 AIS risk factors	Severe infection, cerebral hemorrhage, epilepsy, malignancy, immunosuppression (<3 months), pregnancy, lactation	Stroke: 62.7 ± 11.0 Controls: 61.7 ± 9.3; Stroke: 72.6% Controls: 76.7%	Hypertension, diabetes mellitus, CKD	NIHSS	8.2 ± 3.5
Yang et al. 2018 [28]	141 (96 IS + 45 controls)	Stroke: AIS diagnosis (clinical + imaging) Controls: trauma and comorbidities, but	NR	Stroke: 61.5 (53–71) (median and IQR) Controls: NR;	NR	NIHSS	6 (2–11) (median and IQR)

		neurologically healthy		Stroke: 62.5% Controls: NR			
Zhai et al. 2020 [12]	184 (108 IS+76 controls)	AIS diagnosis, diagnosis within 72 h of onset;	infection, hemorrhagic stroke, malignancy, history of brain hemorrhage or head trauma surgery, cerebral or myocardial infarction in the last 3 months no hormones, no anti-inflammatory drugs (<3 months), no cognitive/communication barrier	Stroke: 53.78±11.32 Controls: 54.07±11.18; Stroke: 62.04% Controls: 51.32%	Family history of stroke, diabetes, hypertension	NIHSS and MoCA	NR
Liu et al. 2021 [29]	270 (170 IS +100 controls)	age>18 Stroke: AIS diagnosis (ASA criteria), no cerebral hemorrhagic infarction Controls: at least 2 risk factors for AIS	Infection, malignancy, chronic inflammatory/immune diseases, pregnancy, lactation	Stroke: 66.7±9.8 Controls: 65.3±8.4; Stroke: 70% Controls: 66%	Hyperuricemia	NIHSS	10 (6–12) (median and IQR)
Zhou and Zhang 2014 [30]	89 (68 IS+21controls)	Stroke: AIS diagnosis (clinical + MRI/MRA) Controls: age-matched	Acute infection, malignancy, liver or kidney failure, immune diseases	Stroke: 66 (55-76) Controls: 58 (54-67) (median and range); Stroke: 66.2% Controls: 47.6%	NR	NIHSS	NR
Wang et al. 2015 [31]	117 (58 IS+59 controls)	Stroke: AIS diagnosis (clinical + imaging) Controls: age and gender-matched	Acute infection, history of stroke, intracranial tumor, polytrauma, hematological diseases, kidney or liver failure, “other diseases	Stroke: 61.7±6.3 Controls: 63.5±9.6; Stroke: 75.9% Controls: 69.5%	Hypertension, diabetes, and hyperlipidemia	NIHSS at diagnosis mRS at 3 months (<2: good outcome)	4.22 (0-12) (mean and range)

			affecting the hemogram"				
Ma et al. 2020 [32]	100 (60 IS+40 controls)	AIS diagnosis	NR	NR; NR	No significant differences	NIHSS	NR
Abdelaleem et al. 2022 [33]	223 (77 diabetics with stroke, 75 diabetics without stroke, 71 controls)	AIS diagnosis (clinical + CT/MRI)	Acute infection, cerebral hemorrhage, recurrent stroke, family history of stroke, head trauma, hypertension, liver or kidney disease, immune diseases, hematological diseases	Diabetics with stroke: 57.08 ± 16.31 Diabetics without stroke: 53.19 ± 17.78 Controls:54.58 ± 18.75; Diabetics with stroke: 61.0% Diabetics without stroke:65.3% Controls: 64.8%	Diabetics with stroke vs diabetics without stroke: BMI, fasting blood glucose, 2 h post-prandial glucose, LDL (higher for diabetics with stroke)	NIHSS	11.38 ± 5.12
Xue et al. 2018 [34]	125 (65 IS+55Controls)	AIS diagnosis (clinical + CT/MRI) diagnosis within 24 h of onset	NR	Stroke: 65.2±6.7 Controls: 62.3±7.4; Stroke: 61.5% Controls: 50.9%	No significant differences	NIHSS	NR
Xie et al. 2019 [35]	80 (40 IS+40 Controls)	AIS diagnosis (clinical + MRI), infarction volume assessed by MRI	NR	NR	NR	NIHSS	NR
Guo et al. 2020 [36]	235 (170 IS +65 Controls)	NA	NA	NA	NA	NIHSS	NA
Yuan et al., 2016 [37,38]	288 (152 IS+ 136 Controls)	AIS diagnosis (clinical + MRI/MRA) within 24 h of onset	- acute infection - liver, kidney disease - autoimmune disease - malignancy - pregnancy,	63.8 ± 11.4 vs 61.7 ± 11.8 M:F= 100/52 vs 88/48	Smoking, hypertension, diabetes, dyslipidemia (LDL, HDL)	NIHSS	Patients with high scores (0.48 ± 0.25) and patients with low

		- large artery atherosclerotic cerebral infarction - Hospital stay ≤ 14 days.					scores (0.74 ± 0.32)
Zhaou et al., 2016 [39]	272 (168 IS + 104 Controls)	AIS diagnosis (clinical+ MRI/MRA) within 24 h of onset	recurrent stroke, blood disorders, acute infectious diseases, renal or liver failure, malignancy	70 ± 8 vs 69 ± 9 M:F= 88/80	No significant differences	NIHSS	NR
Zhong et al., 2021 [40]	128 (89 IS + 39 Controls)	AIS patients	- infectious disease or antibiotics within 3 months - other cardiovascular and cerebrovascular diseases - autoimmune disease - psychiatric disorders - malignancy - organ dysfunction or treatment - surgery within 3 months - pregnancy, lactation - life expectancy <1 month	59.96 ± 7.24 vs 59.21 ± 7.18 M:F=46:43	NR	NIHSS	20.39 ± 7.43
Song et al., 2021 [41]	110 (80 IS + 30 Controls)	AIS diagnosis (clinical + MRI)	- patients not receiving vasodilation or thrombolysis before blood sampling - head trauma or surgery - cancer, immune disorders	57.0 ± 21.1 vs 6.0 ± 20.9 M:F= 53/27	Diabetes mellitus, Hyperlipidemia	NIHSS	7.89 ± 1.42
Zhang et al., 2020 [42]	163 (93 IS+70 Controls)	-age 18–85 - AIS diagnosis (clinical + CT/ MRI)	-Patients received rt-PA or thrombectomy	67.5 ± 11.2 vs 66.2 ± 10.8 M:F=57/36	systolic blood pressure, glucose, lipoprotein	NIHSS	

			-ICH or other intracranial pathology (vascular malformation, tumor, abscess, other nonischemic disease), - prior stroke, myocardial infarction, atrial fibrillation, congestive heart failure -pregnancy, lactation		phospholipase A, intima-media thickness, homocysteine		
Zeng et al, 2013 [43]	105 (40 good outcomes + 65 poor outcomes)	AIS diagnosis (clinical + imaging)	prior stroke abnormal liver, kidney function - infectious diseases - immune diseases - malignancy	66 (54-74) for good outcome group vs 68 (57-78) for poor outcome group	IL-6, FDP, PAI-1, differ between stroke patients with mRS≤2 vs mRS>2	NIHSS, mRS	
Yang et al., 2020 [44]	139 (79 AIS vs 60 healthy controls)	- AIS diagnostic (clinical + CT/MRI)	- hemorrhagic stroke, brain trauma, hypertensive encephalopathy, encephalitis - history of stroke or head trauma surgery -other neurological diseases (meningitis, myelitis, epilepsy, multiple sclerosis) - brain malignancy;	54.68±10.98 vs 53.72±11.26 M:F=55/21	Hypertension, Hemocysteine level, Uric acid, FBG, Platelets, INR	NIHSS	18.82±5.14
Liu et al., 2019 [45]	65 (40 AIS + 25 healthy controls)	- first ischemic - AIS diagnosis (clinical + MRI) - age 55–65 - admission within 72 h of onset; -NIHSS 4–15; - large-artery atherosclerosis.	NR	55–65	No significant differences	NIHSS mRS	

Zhao et al., 2020 [46]	69 (43 AIS + 26 healthy controls)	- AIS diagnosis (clinical + MRI)	- cerebral infarction secondary to other conditions - diabetes mellitus, coronary artery disease hypertension, kidney disease, hematological and autoimmune diseases	60.41 ± 10.11 vs 57.96 ± 10.13, M:F= 54/22	No significant differences	NIHSS	
Sheikhbahaei et al., 2019 [47]	50 (33 AIS vs 17 controls)	- AIS diagnosis (clinical + CT/MRI) within 72 h of onset	- history of GI and CNS tumors, - pulmonary, neurodegenerative, cardiovascular, autoimmune diseases - prior stroke (<1 year), - hemorrhagic transformation or AMI during hospital stay	67.9 ± 11.3 AIS vs 66.85 ± 11 controls M:F=20/13	NR	NIHSS mRS acute mRS chronic	12 ± 5.25 3.35 ± 1.25 2.6 ± 3.4
Guo et al., 2022 [48]	192 (142 AIS + 50 controls)	- AIS diagnosis according to Chinese Stroke Association criteria and CT/MRI - admission within 24 h of onset	- hemorrhagic stroke, traumatic brain injury, hypertensive encephalopathy, encephalitis, other cerebrovascular diseases. - cardiopulmonary disease, multiple sclerosis, malignancy, hematological disease -altered state of consciousness, psychiatric disorders	52.40±2.35 vs 52.15±2.83 M:F=97:45	No significant differencesc	NIHSS mRS	10.50±3.25 (good prognosis group) 17.62±3.58 (poor prognosis group) 1.42±0.28 (good prognosis group) 4.17±0.56 (poor prognosis group)

Fu et al., 2019 [49]	205 (108 AIS + 97 controls)	- AIS diagnosis (CT/MRI)	- thrombolytic therapy, renal or liver failure, tumor, infectious disease, hematologic disease.	64 ± 9.2 vs 59 ± 6.4 M:F=75/33	Diabetes, Cardiopathy	NIHSS	3.86 (1, 12)
Ye et al., 2021 [50]	86 (43 AIS vs 43 controls)	- AIS diagnosis (MRI)	NR	64.42 ± 10.25 vs 63.33 ± 14.32 M:F=22/21	No significant differences	NIHSS mRS	3.30 ± 1.67 mRS ≤ 2 28 (64.0%) mRS > 2 15(36.0%)
Otero-Ortega et al., 2021 [51]	103 (81 AIS vs 22 controls)	- age>18 - admission within 25 h of onset - pre-stroke mRS ≤1 - SC or CSC lesion and compatible clinical presentation	-prior ischemic stroke, dementia, transient ischemic attack, brain tumor, cerebral hemorrhage, - drug or alcohol abuse - clinical conditions that precluded diagnosis - participation in a clinical trial	CSC: 70.65 (15.39), SC:61.65 (11.83) vs controls 61(12.74)	Hypertension, Dyslipidemia, Smoker, Atrial fibrillation, Charlson comorbidity index,	NIHSS at admission NIHSS at 3 months mRS at 3 months	CSC: 9.00 (9.75) and SC: 3.00 (3.25) CSC: 0.00 (1.00) and SC: 0.00 (1.00) CSC: 1.00 (2.00) and SC: 1.00 (2.00)
Yang et al., 2016 [52]	172 (114 AIS vs 58 controls)	- AIS diagnosis (clinical + CT/MRI)	- embolic brain infarction, transient ischemic attack, cerebrovascular malformation, subarachnoid hemorrhage, brain tumor - severe systemic diseases (collagenosis, liver or renal)	61±11.3 vs 56±3.9 M:F=78 (68.4)	Cholesterol, mmol/L, HDL-C, mmol/L, Hypertension, Diabetes mellitus, Smoking	NIHSS	

Zhou et al., 2018 [53]	100 (50 AIS vs 50 controls)	- AIS diagnosis (MRI)	NR	65.42 ± 10.25 vs 63.33 ± 14.32 M:F=26/24	Diabetes mellitus, Hyperlipidemia	NIHSS score mRS ≤2 mRS>2	7.82 ± 1.36 32 (64.0%) 18 (36.0%)
Chen et al., 2018 [54]	230 (128 AIS vs 102 controls)	- admission within 24 hours of onset - age >18	- suspected infection -thrombolytic or anticoagulant therapies - ICH, transformation, other neurological complications, - malignancy, - comorbidities, proinflammatory conditions	68.42±17.26 vs 65.36±16.32 M:F=109 (85.2%)	No significant differences	NIHSS	6.2 (±7.4)
Chen et al., 2017 [55]	83 (50 AIS + 33 controls)	- AIS diagnosis	- acute infectious disease -recurrent stroke - presentation within more than 72 h of onset - renal or liver failure - malignancy - hematological disease - difficult cooperation	64 ± 9.4 vs 63 ± 7.9 M:F=32/18	Diabetes mellitus, Cardiopathy	NIHSS mRS≤2 mRS>2	3.32 (0.14) 30 (60.0%) 20 (40.0%)
Liang et al., 2016 [56]	199 (102 AIS + 97 controls)	-AIS diagnosis (clinical + CT/MRI)	NR	65.1±10.0 vs 6.52 (51~68) M:F= 69/33	Hypertension, Diabetes, Hyperlipidemia, Cardiopathy	NIHSS	3.95 (0, 20)
Wang et al., 2014 [57]	154 (79 AIS + 75 controls)	-AIS diagnosis (CT/MRI/MRA) -<72 h from onset to sample collection	- Acute infectious disease - recurrent stroke, intracranial tumor, multiple trauma - liver, kidney failure - hematological disease, other diseases	65.1 ± 10.0 vs 62.5 ± 6.3 M:F=58/21	Hypertension, Diabetes, Hyperlipidemia	NIHSS	3.95 (0, 20)

			affecting the hemogram				
Wang et al., 2021 [58]	176 (88 AIS vs 88 controls)	- AIS diagnosis (clinical + CT /MRI) - diagnosis within 6 h of onset - age > 18	- history of ICH or intracranial tumor - heart, liver and kidney failure,	63.22±5.43 vs 62.42±3.64 M:F= 48/40	-BMI Hypertension Hyperlipidemia (HDL, LDL) Diabetes -	mRS	-
Jia et al., 2015 [59]	242 (146 AIS vs 96 controls)	Admission within 24 h of - age > 18	- suspected infection -thrombolytic or anticoagulant therapies - ICH, , transformation, other neurological complications, - malignancy, - comorbidities, proinflammatory conditions	67.29 ± 14.16 vs 63.23 ± 15.24 Stroke: 112 (76.7%)	-	NIHSS	5.3 (±8.2)
Liang et al., 2019 [60]	124 (62 AIS + 62 controls)	- AIS diagnosis (clinical + CT/MRI) - Age > 18; - admission within 7 days of s onset - anticipated life expectancy of at least 6 months.	- history of major depressive disorder or other psychiatric disorders, family history of depression - altered state of consciousness - difficult cooperation due to aphasia, hearing impairment, severe comprehension or cognitive deficit - other life-threatening or severe illness	Early onset PSD: 68.02 ± 9.86 vs Late-onset PSD: 66.89 ± 7.36 Controls: 65.56 ± 11.95 M:F=40:22	Hypertension, Carotid Artery Stenosis, Fasting blood-glucose, HbA1c,	NIHSS HAMD 2–3 weeks HAMD 3 months	Early onset PSD: 4.86 ± 3.19 Late-onset PSD:4.21 ± 2.35 Early onset PSD: 9 [8,15] Late-onset PSD: 4 [3,4] Early onset PSD: 8 [7,11]

							Late-onset PSD: 9 [9,10]
Hu et. al, 2020 [61]	257 (73 PSD group, 184 non-PSD group)	-AIS diagnosis byWHO-MONICA criteria, - MRI assessment within 24 h of admission; - < 1 week from onset to diagnosis; - age > 18 years.	- psychiatric conditions s significant cognitive impairment, severe aphasia or dysarthria, visual or auditory impairment - metabolic abnormalities - tumors - other medical illness - patients without MRI scans	PSD group: 62.7±10.1 vs Non-PSD group: 62.1±10.3 M:F= 151:72	BMI	NIHSS HAMD	PSD group: 9 (7-12) vs Non-PSD group: 8 (6-11)
Cui et al., 2021 [62]	136 (76 PSD + 60 Non-PSD)	-initially confirmed with stroke;	- acute infectious disease - other brain diseases - malignancy - hormone and anti-inflammatory use in the past 3 months -cognitive impairment	<45: PSD: 40 (52.63) ≥45: PSD: 36 (47.37) <45: Non-PSD: 28 (46.67) ≥45: Non-PSD: M:F=32 (53.33) M:F=48:28	History of mental illness	NIHSS HAMD	4.84±2.30 6.32±2.03
Zeng et al., 2011 [63]	172 (112 AIS+ 60 controls)	AIS diagnosis (clinical + DWI-MRI and MRA)	- prior stroke - acute infectious disease - malignancy - immune, hematological disease - liver, kidney failure	AIS: 68(57,76) vs 67(64,73) M:F= 78/34	No significant differences	NIHSS	5 (1,10)

Notes: Values denoted as *a±b* represent mean and standard deviation, those denoted as *a (b)* denote median and interquartile range, those denoted as a (b-c) denote median and range. Significant differences for age and gender are marked. Abbreviations AIS, Acute ischemic stroke; ASA, American Stroke Association; AST, Aspartate aminotransferase; BDI, Beck Depression Inventory; BDNF, Brain derived neurotrophic factor; BI, Barthel Index; BI, Body Index; BMI, Body mass index; BT, Body temperature; CKD, Chronic kidney disease; CSC, Cortical-subcortical; CT, Computed tomography; CRP, C Reactive Protein; CTP, CT perfusion; DWI-MRI, Diffusion-weighted imaging-MRI; EMVs, Endothelial Microvesicles; FBG, fasting blood glucose; FDP, Fibrin degradation product; FSTP, Favorable short-term prognosis; GCS, Glasgow Coma Scale; GOS, Glasgow Outcome Scale; HbA1C, Glucose-bound (glycated) hemoglobin; HDL-C, HAMD, Hamilton depression scale; High-density

lipoprotein-cholesterol; ICH, intracerebral hemorrhage; IL-6, Interleukin-6; INR, International normalized ratio; LAA, Large-artery atherosclerosis; LDL-C, low-density lipoprotein cholesterol; MCA, Middle Cerebral Artery; MMSE, Mini-Mental State Examination; MoCA, Montreal Cognitive Assessment scale; miR, microRNAs; MRA, Magnetic Resonance Angiography; MRI: Magnetic resonance imaging; mRS, Modified Rankin score; NA, not applicable; NIHSS, National Institutes of Health Stroke Scale; NFSTP, Unfavorable short-term prognosis; NR, not reported; PAI-1, Plasminogen Activator Inhibitor 1; PSCI, post-stroke cognitive impairment; PSCN, post-stroke cognitive normality; PSD, Post-stroke depression; rt-PA, Recombinant tissue plasminogen activator; SAO, Small artery occlusion; SC, Subcortical; TG, Triglycerides; TIA, Transient ischemic attack; WBC, White blood cells;

Supplemental references

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