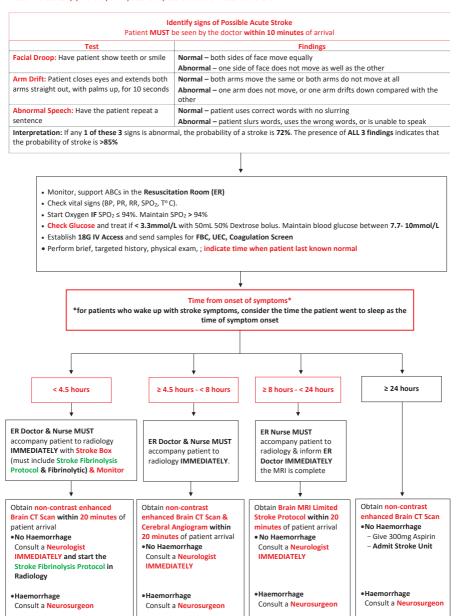
18. Stroke Algorithm

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.



National Institutes of Health Stroke Scale (NIHSS)

(Available in MDCalc)

	□ 0 = Alert; keenly responsive							
	□ 1 = Not alert, but rousable by minor stimulation □ 2 = Not alert; requires repeated stimulation		7. Limb ataxia					
1a. Level of					□ 0 = 1	□ 0 = Absent		
consciousness					□ 1 = I	☐ 1 = Present in one limb		
consciousness	, , ,	□ 2 = I			☐ 2 = Present in two limbs			
	☐ 3 = Unresponsive or responds only wit							
b. Level of	renex							
consciousness								
questions:	□ 0 = Both answers correct	8. Sensory		□ 0 = I	□ 0 = Normal; no sensory loss			
What is the	☐ 1 = Answers one question correctly			□ 1 = I	□ 1 = Mild-to-moderate sensory loss			
what is the month?	\square 2 = Answers both questions incorrectly			□ 2 = 5	☐ 2 = Severe to total sensory loss			
What is your age?					-0	No onlocal		
c. Level of	□ 0 = Performs both tasks correctly	forms both tasks correctly				□ 0 = No aphasia; normal		
consciousness	 □ 1 = Performs one task correctly □ 2 = Performs neither task correctly 		9. Best language			☐ 1 = Mild to moderate aphasia		
commands:						2 = Severe aphasia 3 = Navia = Teleplantasia		
						□ 3 = Mute, global aphasia		
2. Best gaze	□ 0 = Normal		10. Dysarthria			□ 0 = Normal		
	□ 1 = Partial gaze palsy				□ 1 = Mild to moderate dysarthria			
	☐ 2 = Forced deviation					□ 2 = Severe dysarthria		
3. Visual	□ 0 = No visual loss		11. Extinction and inattention			□ 0 = No abnormality		
	□ 1 = Partial hemianopia					□ 1 = Visual, tactile, auditory, spatial, or		
	□ 2 = Complete hemianopia					personal inattention		
	□ 3 = Bilateral hemianopia				□ 2 = Profound hemi-inattention or			
	·				exti	extinction		
4. Facial palsy	□ 0 = Normal symmetric movements							
	□ 1 = Minor paralysis	Total Score = 0 - 42						
	□ 2 = Partial paralysis							
	☐ 3 = Complete paralysis of one or both sides							
5. Motor Arm		LA	RA	LL	RL	Time	Total Score	
a. Left Arm (LA)	0 = No drift	□ 0	□ 0	□ 0	□ 0			
b. Right Arm (RA)	1 = Drift	□ 1	□ 1	□ 1	□ 1			
6. Motor Leg	2 = Some effort against gravity	□ 2	□ 2	□ 2	□ 2			
a. Left Leg (LL)	3 = No effort against gravity; limb falls	□ 3	□ 3	□ 3	□ 3			
b. Right Leg (RL)	4 = No movement	□ 4	□ 4	□ 4	□ 4			
	I .	1		1			l .	



Stroke Fibrinolysis Protocol

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

Probable Acute Ischaemic Stroke BEGIN 18. STROKE ALGORITHM

Review/Complete Fibrinolysis Checklist

Inclusion and Exclusion Characteristics of Patients With Ischemic Stroke Who Could Be Treated With IV rtPA Within 3 Hours From Symptom Onset

Inclusion criteria

- Diagnosis of ischemic stroke causing measurable neurological deficit
- Onset of symptoms < 3 hours before beginning treatment
- Aged ≥18 years

Exclusion criteria

- Severe head trauma or prior stroke in the previous 3 months
- · Symptoms suggest subarachnoid haemorrhage
- · History of previous intracranial haemorrhage
- Intracranial neoplasm, AVM, or aneurysm
- · Recent intracranial or intraspinal surgery
- Elevated blood pressure (systolic >185 mmHg or diastolic >110 mmHg). Lower BP first before fibrinolysis
- · Active internal bleeding
- Seizure at onset with postictal residual neurological impairments secondary to a postictal phenomenon and not a stroke
- · Acute bleeding diathesis, including but not limited to
 - Platelet count <100 000/mm
 - Heparin received within 48 h resulting in abnormally elevated aPTT above the upper limit of normal
 - Current use of anticoagulant with INR >1.7 or PT >15 s
 - Current use of direct thrombin inhibitors or direct factor Xa inhibitors with elevated sensitive laboratory tests (eg, aPTT, INR, platelet count, ECT, TT, or appropriate factor Xa activity assays)
- Blood glucose concentration <50 mg/dL (2.7 mmol/L)
- Mild nondisabling stroke (NIHSS score 0-5)

Relative exclusion criteria

Recent experience suggests that under some circumstances, with careful consideration and weighting of risk to benefit, patients may receive fibrinolytic therapy despite 21 relative contraindications. Consider risk to benefit of intravenous rtPA administration carefully if any of these relative contraindications is present

- Pregnancy
- Arterial puncture at non-compressible site in previous 7 days
- . Major surgery or serious trauma within previous 14 days
- Recent gastrointestinal or urinary tract haemorrhage (within previous 21 days)
 Recent acute myocardial infarction (within previous 3 months)

Additional Inclusion and Exclusion Characteristics of Patients with Acute Ischemic Stroke Who Could Be Treated With IV rTPA within 3 to 4.5 Hours From Symptom Onset

Main inclusion criteria

- \bullet Diagnosis of ischemic stroke causing measurable neurologic deficit
- Onset of symptoms within 3 to 4.5 hours before beginning treatment
 Patients with AIS who awake with stroke symptoms or have unclear time of onset >4.5 h from last known well or at baseline state and
- who have a DW-MRI lesion smaller than one-third of the MCA territory and no visible signal change on FLAIR.

Exclusion criteria

- Age > 80 years
- Very severe stroke symptoms (NIHSS score >25) or Mild nondisabling stroke (NIHSS score 0-5)
- Taking oral anticoagulant regardless of INR
- · History of both diabetes and prior ischemic stroke
- Those with imaging evidence of ischemic injury involving more than one third of the middle cerebral artery territory

NOTES

- A physician with expertise in acute stroke care may modify this list.
 Onset time is defined as either the witnessed onset of symptoms or the
- Onset time is defined as either the witnessed onset of symptoms or the time last known normal if symptom onset was not witnessed.
 In patients without recent use of oral anticoaculants or heparin.
- treatment with IV rtPA can be initiated before availability of coagulation test results but should be discontinued if INR is >1.7 or PT is abnormally elevated by local laboratory standards.
- In patients without history of thrombocytopenia, treatment with IV rtPA can be initiated before availability of platelet count but should be discontinued if platelet count is <100 000/mm³.

Repeat NIH Stroke Scale: are deficits rapidly improving to normal?

· Patient remains candidate for fibrinolytic therapy?

Candidate Not a Candidate

Review risks/benefits with patient and family. If acceptable, obtain CONSENT FOR FIBRINOLYSIS

- Ensure patient is attached to monitor (ECG, SPO₂, BP) and repeat baseline vitals. Treat BP if indicated ()
- Set up second IV line for the fibrinolysis. Run NS/RL TKVO in other line
- ALTEPLASE (give within 60 minutes of patient arrival)
- The recommended dose of alteplase is 0.9 mg/kg (maximum 90 mg) infused over 60 minutes, with 10% of the total dose administered as an initial IV bolus over 1 minute.
- Measure blood pressure and perform neurological assessments every 15
 minutes during and after IV rtPA infusion for 2 hours, then every 30 minutes
 for 6 hours, then hourly until 24 hours after IV rtPA treatment.
- Admit to stroke unit

- Admit to stroke unit
- Administer aspirin 325mg PO/PR
- In patients already taking statins, continue treatment
 Monitor blood glucose and temperature and treat if indicated.
 Maintain blood glucose between 7.7mmol/L and 10mmol/L
- Initiate supportive therapy; treat comorbidities

