

Stroke Protocols and Assessment Scales

Eastern Idaho
Regional Medical
Center
Neurological
Services

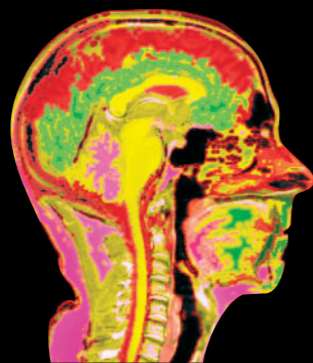


In the case of ischemic stroke, fast but accurate assessment and proper application of thrombolytics are crucial to minimizing brain tissue damage.

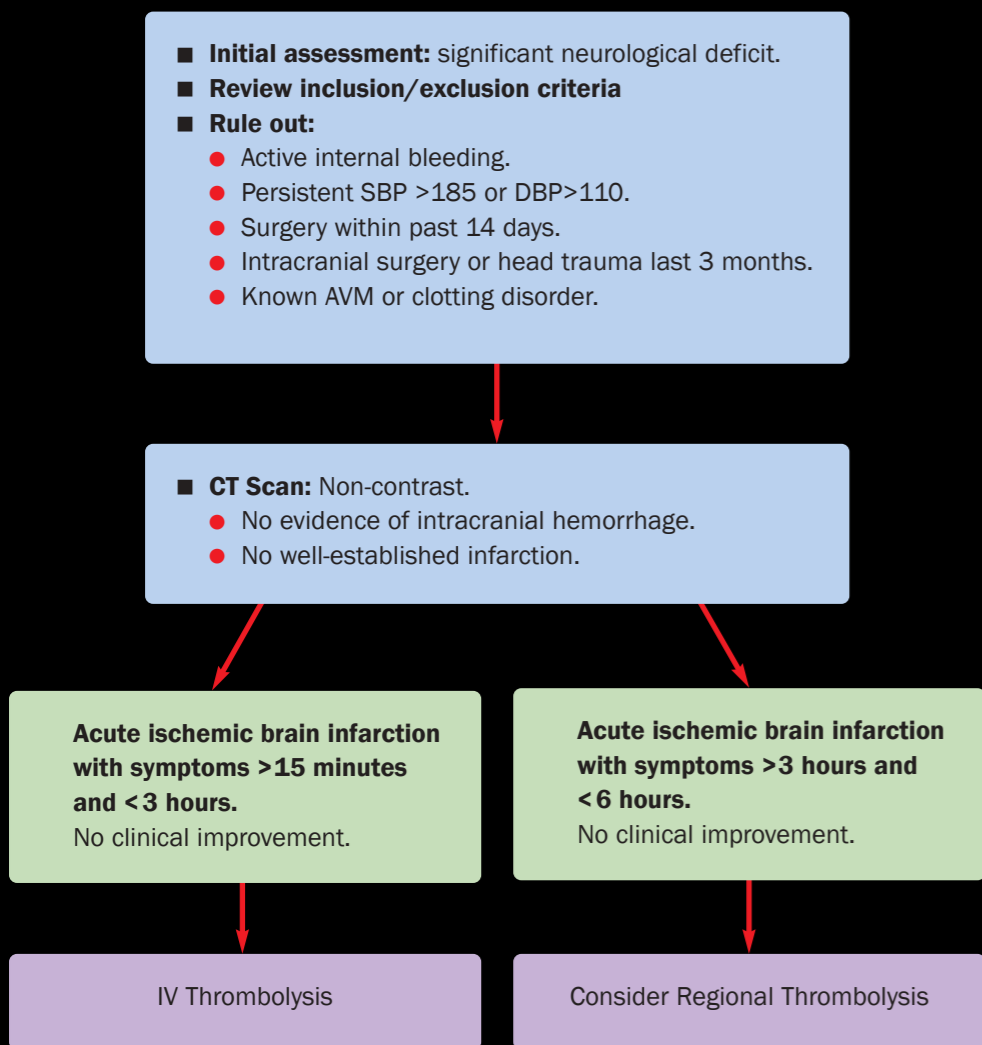
Use the Thrombolysis Decision Tree in conjunction with the Decision Guidelines for Thrombolysis to determine if the patient is a candidate for thrombolysis. The NIH Stroke Scale should accompany the patient in transport to Eastern Idaho Regional Medical Center.

The EMS Pre-Hospital Delegated Protocol should be used by EMS personnel en route to the EIRMC Stroke Center. The most important principle is fast action: "Load and GO!"

Eastern Idaho Regional Medical Center's Neurology Services can be contacted 24 hours a day: (208) 227-2000.



Decision Tree for Thrombolysis in Acute Ischemic Stroke



EMS Pre-Hospital Delegated Protocol CVA/STROKE-Adult

"Load and GO!"

PATIENT CRITERIA

- **Use the Cincinnati Pre-Hospital Stroke Scale**
 - Facial droop (have patient smile or show teeth)
 - Arm drift (patient closes eyes and holds both arms out)
 - Altered speech (have patient say: "You can't teach an old dog new tricks.")
- **Other neurological signs:**
 - Abrupt onset of an unusually severe atypical headache, may or may not be associated with loss of consciousness, nausea, vomiting or focal neurological deficits
- **Systolic BP>220 and / or Diastolic BP >110**

ASSESSMENT

- ABC's (Airway, Breathing, Circulation)
- Vital Signs
- EKG
- Pulse Oximetry
- Blood Glucose
 - If BS < 80, refer to Hypoglycemia Standing Orders
- **Neurological exam using pre-hospital stroke scale**

REQUIRED INTERVENTION

- O2 **100%**
- IV: **0.9% NaCl**
- Contact receiving Stroke Center
 - * Determine time of onset for signs and symptoms

INTERVENTION OPTIONS

- Any changes in condition, refer to appropriate protocol (BCLS, ACLS)

NIH Stroke Scale

Acute Stroke Assessment

1. a **Level of Consciousness**
0 = Alert, keenly responsive
1 = Not alert, arousable by minor stimulation
2 = Not alert, requires repeated stimulation, obtunded, and requires painful stimuli
3 = Unresponsive
SCORE _____
 1. b **LOC Questions** (Month and Age)
0 = Answers both correctly
1 = Answers one correctly
2 = Performs neither correctly
SCORE _____
 1. c **LOC Commands** (Open/Close Eyes/Fist)
0 = Performs both correctly
1 = Performs one correctly
2 = Performs neither correctly
SCORE _____
 2. **Lateral Gaze Paresis**
0 = None
1 = Partial paresis one or both eyes
2 = Total or forced gaze paresis
SCORE _____
 3. **Visual Field Loss**
0 = No visual field loss
1 = Partial hemianopia
2 = Complete hemianopia
3 = Bilateral hemianopia (Blind)
SCORE _____
 4. **Facial Palsy**
0 = Normal symmetrical movement
1 = Minor paralysis
2 = Partial, near, or total lower facial paralysis
3 = Complete, one or both sides upper and lower
SCORE _____
 5. **Motor Arm** (10 Second Hold)
0 = No drift
1 = Drift; does not touch bed
2 = Drift; effort, yet touches bed
3 = No effort; limb falls
4 = No movement
5. a Left Arm _____
5. b Right Arm _____
Not testable (Amputation, Joint Fusion)
Explain: _____
SCORE _____
 6. **Motor Leg** (5 Seconds Hold)
0 = No drift
1 = Drift; does not touch bed
2 = Drift; effort, yet touches bed
3 = Effort; limb falls
4 = No movement
6. a Left Leg _____
6. b Right Leg _____
Not testable (Amputation, Joint Fusion)
Explain: _____
SCORE _____
 7. **Limb Ataxis** (Finger/Nose; Heel/Shin)
0 = Absent
1 = Present one limb
2 = Present in two limbs
SCORE _____
If present, is ataxia in:
Right Arm Yes=1 No=2
SCORE _____
Left Arm Yes=1 No=2
SCORE _____
Right Leg Yes=1 No=2
SCORE _____
Left Leg Yes=1 No=2
SCORE _____
 8. **Sensory Loss** (Pinprick Arms/Legs/Face)
0 = No sensory loss
1 = Mild, aware yet dulled
2 = Severe to total loss. Comatosa.
SCORE _____
 9. **Language Aphasia** (Description Naming)
0 = No Aphasia-normal
1 = Mild, obvious loss of fluency, reduction of speech & comprehension
2 = Severe fragmentary, non-understandable
3 = Mute. Global aphasia.
SCORE _____
 10. **Dyarthria** (Speech Clarity)
0 = Normal
1 = Slurring, intelligible
2 = Severe slurring, unintelligible or mute
 11. **Extinction and Inattention**
0 = No abnormality
1 = Abnormal in one modality
2 = Profound hemi-inattention in multiple modalities
SCORE _____
- TOTAL STROKE SCALE POINTS** _____
- Physician's Signature _____
Date _____
NIH Stroke Scale > 30 or low score generally not candidate for thrombolysis especially if improving.

Physician's Decision Guidelines for Thrombolysis

Thrombolytic Inclusion Criteria

- Ischemic stroke clearly defined at time of treatment.
- Deficit measurable with NIHSS scoring.
- Baseline CT with no evidence of intracranial hemorrhage.
- Onset of symptoms within 180 minutes to the beginning of treatment.

Thrombolytic Exclusion Criteria

- Surgery or serious head trauma within 3 months.
- Major surgery within 14 days.
- History of subarachnoid hemorrhage.
- Systolic BP >185 or diastolic >110 despite aggressive treatment.
- Rapidly improving minor symptoms.
- Symptoms suggestive of SAH.
- GI or GU hemorrhage within 21 days.
- Seizure at onset of stroke.
- Heparin within 48 hours and elevated PTT.
- Protome >15 seconds.
- Platelets <100,000.
- Glucose <50.
- NIHSS > 30.**

National Institute of Health Stroke Scale

Score on arrival at ED _____ Time _____

Follow-up score _____ Time _____

Follow-up score _____ Time _____

Stroke Team Decision

- No Thrombolysis
- IV Thrombolysis
- Angiography with possible IA Thrombolysis
- Other

Call (208) 227-2000



3100 Channing Way
Idaho Falls, ID 83403

Neurologic Services

Diagnostics and Management (208-227-2600)

- Spinal cord injuries
- Tumors of the brain and spine
- Traumatic brain injuries
- Spine deformities
- Aneurysms
- Stroke and hemorrhages
- Multiple Sclerosis
- Epilepsy
- Parkinson's Disease
- ALS
- Severe or recurrent headaches
- Dementia/Alzheimer's
- Spine and extremity pain
- Muscle disorders

Therapeutics

- Lumbar/cervical
- Peripheral nerve
- Stereotactic procedures

Trauma Management (208-529-7690)

- Intracranial pressure monitoring
- Sedation
- Ventilation
- Air beds
- Swan-Ganz and arterial pressure catheters
- Brain tissue oxygen monitoring

Stroke Care (208-227-2000)

Sleep Disorder Treatment (208-529-6139)

Acute Inpatient Rehab (208-529-7660)



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