



# CANADIAN STROKE BEST PRACTICE RECOMMENDATIONS

## **Acute Stroke Management Seventh Edition, Update 2022**

### **Box 5B: Criteria for Intravenous Thrombolysis Treatment**

*Heran M, Shamy M (Writing Group Chairs)  
on behalf of the Canadian Stroke Best Practice Recommendations  
Acute Stroke Management Writing Group and in collaboration with the  
Canadian Stroke Consortium*

© 2022 Heart and Stroke Foundation of Canada

### **Box 5B Criteria for Intravenous Thrombolysis Treatment**

*Refer to Section 4.2 and Box 4A for detailed recommendations on neuroimaging-based selection criteria*

While these criteria are designed to guide clinical decision-making, the decision to use thrombolysis should be based on the clinical judgment of the treating physician. The relative benefits of thrombolysis versus potential risks or contraindications should be weighed on an individual basis.

#### **Inclusion Criteria**

Patients should be considered eligible for intravenous thrombolysis and/or EVT if they fulfill the following clinical criteria:

- Diagnosed with an acute ischemic stroke.
- The stroke is disabling (i.e., significantly impacting function), usually defined as National Institutes of Health Stroke Scale (NIHSS) >4.
- The risks and benefits of thrombolysis are within the patient's goals of care and take into consideration their functional status prior to stroke.
- Life expectancy of 3 months or more.
- Age ≥18 years. (Refer to pediatric guidelines for treatment <18 years of age).
  - For adolescents, a decision to administer intravenous thrombolysis should be based on clinical judgment; presenting symptoms; patient age; and, if possible, consultation with a pediatric stroke specialist.
- Time from last known well (onset of stroke symptoms) is <4.5 hours before thrombolysis administration. *\*For patients >4.5 hours refer to Section 5.1 for additional information.*

#### **Absolute Exclusion Criteria**

- Any source of active hemorrhage or any condition that could increase the risk of major hemorrhage after intravenous thrombolysis administration.
- Any hemorrhage on brain imaging.

**Relative Exclusion Criteria** (requiring clinical judgement based upon the specific situation. Consult Stroke Specialist at Comprehensive Stroke Centre if there are any questions or concerns about these criteria).

#### **Historical**

- History of intracranial hemorrhage.
- Stroke or serious head or spinal trauma in the preceding 3 months.
- Major surgery (e.g., cardiac, thoracic, abdominal, or orthopedic) in the preceding 14 days. Risk varies according to the procedure.
- Arterial puncture at a non-compressible site in the previous 7 days.

#### **Clinical**

- Stroke symptoms due to another non-ischemic acute neurological condition such as seizure with post-ictal Todd's paralysis or focal neurological signs due to severe hypo- or hyperglycemia.
- Hypertension refractory to aggressive hyperacute antihypertensive treatment such that target blood pressure <180/105 cannot be both achieved and maintained.
- Currently prescribed and taking a direct non-vitamin K oral anticoagulant. *Refer to Section 5.2*

*Clinical Considerations for additional information.*

**CT or MRI Findings**

- CT showing early signs of extensive infarction (e.g., >1/3 of middle cerebral artery [MCA] territory, or ASPECTS score <6).

**Laboratory**

- Blood glucose concentration <2.7 mmol/L or >22.2 mmol/L.
- Elevated activated partial-thromboplastin time.
- International Normalized Ratio >1.7.
- Platelet count <100,000 per cubic millimetre.