

Acute Stroke Protocol Update for ED TNK Instead of tPA for Patients with Ischemic Stroke at KHSC-KGH Site



Rationale for use of TNK with Ischemic Stroke

The use of recombinant tissue plasminogen activator (tPA) has been the standard thrombolytic therapy for ischemic stroke for many years. The [Act](#) randomized controlled trial (Menon et al., June, 2022) combined with evidence to date, demonstrate that tenecteplase (TNK) is a reasonable choice of thrombolytic therapy for ischemic stroke. The use of IV thrombolysis, when administered within four and a half hours of onset of an acute ischemic stroke, has been shown to reduce morbidity, mortality and improve functional outcome.

On behalf of the Stroke team, a big Thank You to all the ED team for participating in the Act clinical trial about TNK versus tPA!! (click [here](#) for the summary of the publication)

What Does this Mean to Me?

TNK will be easier to prepare and administer. Only a bolus is needed. You no longer need to prepare an infusion as you do for tPA. Many of you are already familiar with preparing and administering TNK for ischemic stroke as per the Act trial. The [Acute Stroke Protocol](#) (ASP) packages and the ASP Checklist for Nurses located on the Stroke Cart are being updated and will include everything you need to know about TNK. The new TNK dosage guide (see below) for ischemic stroke will also be included in the Acute Stroke Protocol packages on pink paper and posted in the CT suite.

The stroke physician and the ED nurse will work together to prepare & administer TNK; whomever is free and is comfortable can help with this task.

Reminders:

- Obtain TNK and stroke medication kit from Omnicell prior to transporting patient to CT
- Monitoring and care of the patient pre and post TNK administration is exactly the same as tPA
- If TNK is NOT given, return the vial to the ED Omnicell

Evidence indicates that **time is brain** - administration of IV thrombolysis as early as possible post stroke is associated with better outcomes.

Start Date: September 1st after 09:00h

TNK will be available in the ED Omnicell at this time.

Any questions?

Contact Emily Murphy, Dr. Al Jin, or Colleen Murphy (ext. 6306 or Colleen.Murphy@kingstonhsc.ca)
For pharmacy-related question, you can contact Heather Wise or Michelle Methot

Tenecteplase (TNK) Dosing, Reconstitution and Administration Guide for Acute Ischemic Stroke

Reconstitution Procedure:

1. Using a blunt fill needle, draw up 10 mL of Sterile Water for Injection into the TNK vial.
2. Inject all 10 mL into the 50 mg TNK vial directing the water into the powder. Slight foaming is not unusual; any large bubbles will dissipate if the product is allowed to stand undisturbed.
3. GENTLY swirl until contents are completely dissolved. DO NOT SHAKE. Solution should be colourless or pale yellow and transparent.

Dosing Information:

Intravenous tenecteplase (TNK; 0.25 mg/kg, maximum 25 mg) Dosing Information (50 mg Vial diluted with 10 mL Sterile Water)			
Patient Weight (kg)	Patient Weight (lbs)	TNK dose (mg)	Volume TNK to be administered (mL)
Less than 60	Less than 132	15	3
60 to less than 70	132 to less than 154	17.5	3.5
70 to less than 80	154 to less than 176	20	4
80 to less than 90	176 to less than 198	22.5	4.5
90 or more	198 or more	25	5

Administration Procedure:

1. Withdraw the appropriate dosage as per Dosing Table above.
2. Administer TNK as IV direct over 5 seconds.
3. Discard syringe with needle & remaining TNK in vial.