

# Do you differentiate between TNKase® (tenecteplase) and Activase® (alteplase)?



In September 2015, the FDA recommended using either the brand or generic name when prescribing TNKase® (tenecteplase) or Activase® (alteplase) instead of the abbreviation “tPA” in written or verbal orders.<sup>1</sup>

The FDA cites 21 cases of medication errors of TNKase between October 2000 and June 2014. In 4 cases, patients were given TNKase instead of the intended Activase when the prescription order was written as “tPA.”<sup>1</sup>

## Avoid medication errors when prescribing thrombolytics

### TNKase® (tenecteplase)

#### INDICATION

**Acute Ischemic Stroke** (maximum dose: 25 mg)<sup>2</sup>

TNKase (tenecteplase) is indicated for the treatment of acute ischemic stroke (AIS) in adults.

**Acute ST Elevation Myocardial Infarction** (maximum dose: 50 mg)<sup>2</sup>

TNKase is indicated to reduce the risk of death associated with acute ST elevation myocardial infarction (STEMI) in adults.

#### IMPORTANT SAFETY INFORMATION

##### CONTRAINDICATIONS

TNKase is contraindicated in any patients with active internal bleeding; intracranial or intraspinal surgery or trauma within 2 months; known bleeding diathesis; current severe uncontrolled hypertension; presence of intracranial conditions that may increase the risk of bleeding (eg, intracranial neoplasm, arteriovenous malformation, or aneurysm). TNKase is contraindicated in AIS patients with active intracranial hemorrhage. TNKase is contraindicated in acute STEMI patients with history of intracranial hemorrhage and/or history of ischemic stroke within 3 months.



### Activase® (alteplase)

#### Indication

**Acute Ischemic Stroke**

Activase (alteplase) is indicated for the treatment of acute ischemic stroke.

Exclude intracranial hemorrhage as the primary cause of stroke signs and symptoms prior to initiation of treatment. Initiate treatment as soon as possible but within 3 hours after symptom onset.

**Acute Myocardial Infarction**

Activase is indicated for use in acute myocardial infarction (AMI) for the reduction of mortality and reduction of the incidence of heart failure.

Limitation of Use: The risk of stroke may outweigh the benefit produced by thrombolytic therapy in patients whose AMI puts them at low risk for death or heart failure.

**Pulmonary Embolism**

Activase is indicated for the lysis of acute massive pulmonary embolism (PE), defined as:

- Acute pulmonary emboli obstructing blood flow to a lobe or multiple lung segments.
- Acute pulmonary emboli accompanied by unstable hemodynamics, e.g., failure to maintain blood pressure without supportive measures.

#### Important Safety Information

##### Contraindications

Do not administer Activase to treat acute ischemic stroke in the following situations in which the risk of bleeding is greater than the potential benefit: current intracranial hemorrhage (ICH); subarachnoid hemorrhage; active internal bleeding; recent (within 3 months) intracranial or intraspinal surgery or serious head trauma; presence of intracranial conditions that may increase the risk of bleeding (e.g., some neoplasms, arteriovenous malformations, or aneurysms); bleeding diathesis; and current severe uncontrolled hypertension.



Each indication has different dosing; refer to the respective prescribing information. To reduce medication errors, the FDA recommends avoiding the use of abbreviations (eg, tPA or TNK) and using either the full brand name (ie, TNKase or Activase) or generic name (ie, tenecteplase or alteplase) of the intended drug product on all written or verbal orders.<sup>1</sup>

FDA=US Food and Drug Administration; TNK=tenecteplase.

Please see next page for additional Important Safety Information and the full Prescribing Information for [TNKase](#) and [Activase](#).

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## Important Safety Information (cont'd)

### WARNINGS AND PRECAUTIONS

#### Bleeding

TNKase can cause significant, sometimes fatal, internal or external bleeding, especially at arterial and venous puncture sites. Concomitant use of other drugs that impair hemostasis increases the risk of bleeding. Avoid intramuscular injections and trauma to the patient while on TNKase. Perform arterial and venous punctures carefully and only as required. To minimize bleeding from noncompressible sites, avoid internal jugular and subclavian venous punctures. If an arterial puncture is necessary during TNKase administration, use an upper extremity vessel that is accessible to manual compression, apply pressure for at least 30 minutes, and monitor the puncture site closely. Should serious bleeding that is not controlled by local pressure occur, discontinue any concomitant heparin or antiplatelet agents immediately and treat appropriately.

#### Hypersensitivity

Hypersensitivity, including urticarial/anaphylactic reactions, have been reported after administration of TNKase (eg, anaphylaxis, angioedema, laryngeal edema, rash, and urticaria). Monitor patients treated with TNKase during and for several hours after administration. If symptoms of hypersensitivity occur, initiate appropriate therapy (eg, antihistamines, corticosteroids, or epinephrine).

#### Thromboembolism

The use of thrombolytics can increase the risk of thrombo-embolic events in patients with high likelihood of left heart thrombus, such as patients with mitral stenosis or atrial fibrillation.

#### Cholesterol Embolization

Cholesterol embolism has been reported in patients treated with thrombolytic agents. Investigate cause of any new embolic event and treat appropriately.

#### Arrhythmias

Coronary thrombolysis may result in arrhythmias associated with reperfusion. It is recommended that anti-arrhythmic therapy for bradycardia and/or ventricular irritability be available when TNKase is administered.

#### Increased Risk of Heart Failure and Recurrent Ischemia When Used With Planned Percutaneous Coronary Intervention (PCI) in STEMI

In patients with large ST-segment elevation myocardial infarction, physicians should choose either thrombolysis or PCI as the primary treatment strategy for reperfusion. Rescue PCI or subsequent elective PCI may be performed after administration of thrombolytic therapies if medically appropriate.

### ADVERSE REACTIONS

The most common adverse reaction is bleeding.

You may report side effects to the FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch). You may also report side effects to Genentech at 1-888-835-2555.

Please see full [Prescribing Information](#) for additional Important Safety Information.



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## Important Safety Information (cont'd)

### Contraindications (cont'd)

Do not administer Activase to treat acute myocardial infarction or pulmonary embolism in the following situations in which the risk of bleeding is greater than the potential benefit: active internal bleeding; history of recent stroke; recent (within 3 months) intracranial or intraspinal surgery or serious head trauma; presence of intracranial conditions that may increase the risk of bleeding; bleeding diathesis; and current severe uncontrolled hypertension.

### Warnings and Precautions

#### Bleeding

Activase can cause significant, sometimes fatal internal or external bleeding. Avoid intramuscular injections and trauma to the patient. Perform venipunctures carefully and only as required. Fatal cases of hemorrhage associated with traumatic intubation in patients administered Activase have been reported. Heparin, aspirin, or Activase may cause bleeding complications; therefore, carefully monitor for bleeding. If serious bleeding occurs, terminate the Activase infusion, and treat properly.

#### Hypersensitivity

Hypersensitivity, including urticarial/anaphylactic reactions, have been reported. Rare fatal outcome for hypersensitivity was reported. Angioedema has been observed during and up to 2 hours after Activase infusion in patients treated for acute ischemic stroke and acute myocardial infarction. In many cases, patients received concomitant angiotensin-converting enzyme inhibitors. Monitor patients treated with Activase during and for several hours after infusion for hypersensitivity. If signs of hypersensitivity occur, e.g. anaphylactoid reaction or angioedema develops, discontinue the Activase infusion and promptly institute appropriate therapy (e.g., antihistamines, intravenous corticosteroids, epinephrine).

#### Thromboembolism

The use of thrombolytics can increase the risk of thrombo-embolic events in patients with high likelihood of left heart thrombus, such as patients with mitral stenosis or atrial fibrillation. Activase has not been shown to treat adequately underlying deep vein thrombosis in patients with PE. Consider the possible risk of re-embolization due to the lysis of underlying deep venous thrombi in this setting.

#### Cholesterol Embolization

Cholesterol embolism, sometimes fatal, has been reported rarely in patients treated with thrombolytic agents.

#### Coagulation Tests May be Unreliable during Activase Therapy

Coagulation tests and/or measures of fibrinolytic activity may be unreliable during Activase therapy.

#### Adverse Reactions

The most frequent adverse reaction associated with Activase therapy is bleeding.

Please see full [Prescribing Information](#) for additional Important Safety Information.

**References:** 1. US Food and Drug Administration. FDA information on medication errors involving Activase and TNKase. Published September 2015. Accessed February 27, 2025. <https://fda.report/media/93606/FDA-Information-on-Medication-Errors-Involving-Activase-and-TNKase.pdf>  
2. TNKase Prescribing Information. South San Francisco, CA. Genentech, Inc.