

**Brand Name:** Activase/TNKase

**Generic:** alteplase/tenecteplase

**Type:** enzyme

**Year Accepted/Phase:**

Activase:

AMI: November 1987

Acute Ischemic Stroke: 1996

Pulmonary Embolism: 1990

TNKase: 2000

### **Mechanism:**

Tocilizumab is a monoclonal antibody that targets the interleukin-6 receptor (IL-6R), reducing inflammation and modifying the immune response in various inflammatory diseases.

**Chemical Structure:** N/A

### **Indication:**

Both alteplase and tenecteplase are tissue plasminogen activators (tPAs) that convert plasminogen to plasmin, the major enzyme responsible for clot breakdown.

## **Clinical trials:**

### **Acute Myocardial Infarction (AMI)**

#### **GUSTO-I Trial (Activase)**

**Pubmed:** <https://pubmed.ncbi.nlm.nih.gov/8822974>

**Purpose:** Compare the efficacy of alteplase (Activase) with other thrombolytics in patients with AMI.

**Dates:** Conducted in the early 1990s, with results published in 1993.

**Results:** Alteplase was found to be effective in reducing mortality in AMI patients.

#### **ASSENT-2 Trial (TNKase)**

**Pubmed:** <https://pubmed.ncbi.nlm.nih.gov/10475182/>

**Purpose:** Compare the efficacy and safety of tenecteplase (TNKase) with alteplase in patients with AMI.

**Dates:** Conducted between 1997 and 1999, with results published in 2000.

**Results:** Tenecteplase was found to be as effective as alteplase but with a simpler administration protocol.

### **Acute Ischemic Stroke**

#### **NINDS Trial (Activase)**

**Pubmed:** <https://pubmed.ncbi.nlm.nih.gov/7477192/>

**Purpose:** Evaluate the efficacy of alteplase in the treatment of acute ischemic stroke.

**Dates:** Conducted in the mid-1990s, with results published in 1995.

**Results:** Alteplase significantly improved clinical outcomes when administered within 3 hours of stroke onset.

### **Pulmonary Embolism**

#### **Various Trials (Activase)**

**Purpose:** Assess the efficacy of alteplase in the treatment of acute massive pulmonary embolism.

**Dates:** Various trials conducted in the 1990s and 2000s.

**Results:** Alteplase was effective in rapidly resolving pulmonary emboli and improving hemodynamics.