

**Title:** You Take My Breath Away: Tenecteplase for the Treatment of Acute Pulmonary Embolism

**Learning Objectives:**

1. Define the pathophysiology and classification of acute pulmonary embolism
2. Describe the data for the use of tenecteplase in pulmonary embolism
3. Discuss tenecteplase's place in therapy in comparison to current guideline directed therapy

**Abstract: 300 words**

The CHEST 2021 guidelines on antithrombotic therapy for venous thromboembolism disease does not provide a recommendation on which thrombolytic to use in intermediate- and high-risk pulmonary embolisms (PE). Currently, alteplase is widely utilized for the treatment of PEs. Due to recent literature favoring tenecteplase (TNK) over alteplase (tPA) for the treatment of acute ischemic stroke, there has been interest in evaluating TNK's role in acute PEs. In addition, the use of systemic thrombolysis in intermediate-risk PEs is controversial. The CHEST 2021 guidelines recommend the use of thrombolysis in intermediate risk pulmonary embolisms if the patient clinically deteriorates while on anticoagulant therapy. This presentation aims to evaluate current literature and determine TNK's place in therapy for intermediate- and high-risk PEs.

**References:**

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### Audience Response Questions:

JM is a 67 yom who presents to the ED with shortness of breath and chest pain. Upon further imaging, JM was found to have a PE.

BP: 135/90

HR: 91

Evidence of right ventricle strain  
(RV is significantly larger the LV)

Troponin I: 20 ng/mL

According to his vitals and labs, how would you classify JM's PE?

1. Massive / High Risk
2. Sub-massive / Intermediate Risk
3. Low Risk

JM is a 67 yom who presents to the ED with shortness of breath and chest pain. Upon further imaging, JM was found to have a sub-massive PE and was started on a heparin drip for PE/DVT. He has no major risk factors for bleeding.

Suddenly, his blood pressure dropped to 80/55 and is requiring a norepinephrine drip. What intervention would you consider now?

1. Switch to LMWH 1 mg/kg twice daily
2. Place an IVC filter
3. Administer a systemic thrombolytic
4. Start on apixaban 5 mg by mouth daily

Tenecteplase has a \_\_\_\_\_ affinity to fibrin and has a \_\_\_\_\_ half life in comparison to alteplase.

1. Higher; longer
2. Lower; longer
3. Higher; shorter
4. Lower; shorter