

Systemic Thrombolytic Therapy for PE

Risk of bleeding versus potential treatment benefit of using systemic thrombolytic therapy must be carefully weighed for each individual patient.

Risk factors for bleeding with and contraindications to use of thrombolytic therapy:

Major contraindications:

- Structural intracranial disease
- Previous intracranial hemorrhage
- Ischemic stroke within 3 months
- Active bleeding
- recent brain or spinal surgery
- Recent head trauma with fracture or brain injury
- Bleeding diathesis

Relative contraindications:

(also consider those associated with anticoagulant therapy, not included)

- SBP > 180 mmHg
- DBP > 110 mmHg
- Recent bleeding (nonintracranial)
- Recent surgery
- Recent invasive procedure
- Ischemic stroke more than 3 month previously
- Anticoagulation (eg. VKA therapy)
- Traumatic cardiopulmonary resuscitation
- Pericarditis or pericardial fluid
- Diabetic retinopathy
- Pregnancy
- Age > 75 yo
- Low body weight (eg. <60kg)
- Female sex
- Black race

Systemic thrombolytic therapy indications:

- Acute PE **with** hypotension (SBP <90 mmHg, documented drop in SBP >40 mmHg with evidence of poor perfusion) **AND** low risk of bleeding
- Acute PE **without** hypotension **AND** low risk of bleeding **AND** high risk of developing hypotension **AND** failed improvement on anticoagulant
 - Drop in SBP to >90 mmHG, tachycardia, elevated JVP, poor tissue perfusion, hypoxemia
 - May consider other indicators to supplement above clinical evidence (right ventricular dysfunction/enlargement, ECT, BNP, etc)

Recommended infusion dose and rate:

100 mg through peripheral vein over ≤ 2 hours.

Bolus infusion (50 mg in ≤ 15 minutes) in patients with imminent or actual cardiac arrest.