



Footnotes

1. See appendix and glossary
2. Contraindications for CT-PA include: unsafe for transport, low eGFR (relative contraindication), pregnant, contrast allergy
3. LMWH or DOAC. IV Heparin if considering thrombolysis.
4. Trans-Thoracic Echocardiogram: for "STAT" page Echo Fellow on-call to arrange. Otherwise may be done as "routine".
5. RV Strain documentation on TTE read: "Severe RV enlargement", "Severe RV systolic dysfunction", "Septal flattening"
6. PERT – PE Response Team, see PERT Protocol on OCCAM
7. Contact paging operator and ask for "Urgent Pulmonary Critical Care Consult" (PCCM Consult 7AM-7PM when in available, otherwise MICU Attending)
8. PERT Attending will involve ECLS Consult if appropriate

Appendix

Glossary

CT PA – CT Chest PE Protocol

Trop I – Troponin I

BNP – Brain Natriuretic Peptide

POCUS – Point-of-care Ultrasound

TTE – Transthoracic Echocardiogram

IV UFH - Intravenous Unfractionated Heparin

DOAC – Direct Oral Anticoagulant (e.g. Rivaroxaban, Dabigatran)

LMWH – Low Molecular Weight Heparin (e.g. Enoxaparin)

rtPA – Recombinant Tissue Plasminogen Activator

CDT – Catheter Directed Thrombolysis (mechanical or chemical)

Wells Score:

- No better alternative dx (3 pts)
- Symptoms of DVT (3 pts)
- HR > 100 (1.5 pts)
- Immobilization > 3d or surgery in <4 wks (1.5 pts)
- Hx of DVT or PE (1.5 pts)
- Hemoptysis (1 pt)
- Malignancy (1 pt)

PE risk: Unlikely ≤ 4 , Likely > 4

Age Adjusted D-Dimer if ≥ 50 yrs old

- Calculated as age*10

Ex: 88 y/o threshold for excluding VTE is <880 ng/ml

Simplified PESI (sPESI)

- Age > 80 years
- History of Cancer
- Chronic Cardiopulmonary disease
- HR ≥ 110 bpm
- SpO₂ < 90%

If all negative then very low risk of death.

Contraindications for Systemic Thrombolysis with tPA for Massive PE*

Major Contraindications

- Intracranial or intraspinal surgery within previous 90 days
- Active internal bleeding
- Recent head or facial trauma with evidence of fracture or brain injury
- Intracranial hemorrhage within previous 90 days
- Ischemic stroke within previous 90 days
- Known intracranial neoplasm
- Suspected aortic dissection

Relative Contraindications

- Bleeding diathesis or anticoagulant use including:
 - Platelets <100,000
 - Heparin infusion with PTT > 40 or anti-Xa > 0.2
 - Warfarin with INR >1.7
 - DOAC within 24 hours
 - Therapeutic LMWH within 12 hours
 - Other coagulopathy (eg, severe hepatic or renal dysfunction)
- Surgery or biopsy of solid organ within previous 30 days
- Major surgery (non-CNS/spinal) or trauma within previous 30 days
- Major GI or urinary tract hemorrhage within previous 21 days
- Arterial or venous puncture at non-compressible site within previous 7 days
- Current uncontrolled HTN (SBP >185 or DBP >110)
- Pregnancy
- Acute pericarditis or pericardial effusion

**If massive PE with refractory shock or cardiac arrest use clinical judgment to weigh risk of bleeding versus benefit of tPA in presence of these contraindications.*