PROBABLE PE

- STAT: ECG, TROP I, BNP
- Consider POC US
- Consider anticoagulation with IV heparin

Candidate for CT PA?1

No

Refer to "No CT PA Algorithm"

Yes

PE Excluded

Negative

STAT: CT PA

Positive

PE Confirmed

START ANTICOAGULATION ²

Shock?

No

PE Excluded

Any Signs of Sub-massive PE?
- EKG w/RV strain
- Trop I > 0.04
- BNP > 90
- CT PA RV/LV ratio > 0.9
- POC US w/RV dysfxn
- PESI³ Class III or higher

Yes

STAT: TTE ⁴,⁵

Evidence of RV strain?

No

Yes

Standard Risk PE

- Safe for Acute Care Floor or Home with risk stratification
- Treat with anticoagulant (refer to UW anticoagulation website VTE treatment algorithm)

Sub-Massive PE

- Call Modified PERT⁶
- Consider ICU Admit
- Start IV heparin
- Consider:
  a) Systemic rtPA⁷
  b) CDT⁷

Massive PE

- Call Full PERT⁶,⁸
- ICU Admit
- Start IV Heparin
- STAT TTE if not done
- Consider:
  a) Systemic rtPA⁷
  b) CDT⁷
  c) ECMO
Appendix & Glossary

1. CT-PA Candidate?
   • Refer to “No CT PA Algorithm” if low GFR or severe contrast allergy

2. Anticoagulation
   • Start IV heparin if patient is at risk for or meets submassive/massive PE criteria. If no evidence of submassive or massive PE, consider LMWH for patients with active malignancy and CrCl >30ml/min or DOAC for patients without active malignancy and CrCl >30ml/min

3. Pulmonary Embolism Severity Index (PESI)
   Predictors
   Demographic characteristics Points
   Age + 1 per year
   Age > 80 years –
   Male sex 10
   Comorbid Illnesses
   Cancer (active or history of) 30
   Heart failure (systolic or diastolic) 10
   Chronic lung disease (includes asthma) 10
   Clinical findings
   Pulse ≥ 110/min beats per min 20
   Systolic blood pressure < 100 mmHg 30
   Respiratory rate ≥ 30 breaths per min 20
   Temperature < 36 °C 20
   Altered mental status 60
   Arterial oxygen saturation < 90%f 20
   Scoring: sum patient’s age in years and points for each prognostic variable. Scores and risk of 30-day mortality:
   Class I: Very Low ≤ 65
   Class II: Low 66–85
   Class III: Mod 86–105
   Class IV: Mod 106–125
   Class V: Very High > 125
   Patients with 85 points or less (Classes I and II) are considered low risk.

4. Consider activation of Modified PERT (PE Response Team) prior to TTE
   • To discuss if TTE can be delayed until business hours (M-F 8am-4:30pm) if the patient is clinically stable or low likelihood to give thrombolysis

5. STAT TTE
   • Place order in ORCA AND
   • Call Echo Lab at 8-7000 during business hours (M-F 8am-4:30pm) or page Echo Fellow during non-business hours

6. PERT (PE Response Team)
   Modified PERT Activation, Dial 222:
   Phone Call with
   • Primary Clinician
   • Pulmonary Consult (Consult SCCA Pulm if SCCA patient with cancer. Consult Gen Pulm if not an SCCA patient)
   Full PERT Activation, Dial 222
   Bedside Meeting with:
   • Primary Attending (may join by phone)
   • MICU Attending/Nocturnist
   • ECMO Consult (may join by phone)
   • STAT Nurse
   • IR Attending (may join by phone)
   • ICU Pharmacist

7. Thrombolitics
   • If patient has active malignancy, obtain head CT prior to giving thrombolitics

8. Massive PE
   • In a rapidly decompensating patient, orders for alteplase (code dose 50mg IV x 3min or 100mg IV over 2hrs if pulse) should be written while enacting a Full PERT. Alteplase is not a contraindication to ECMO.

Glossary
CT PA – CT Pulmonary Angiogram
Trop I – Troponin I
BNP – Brain Natriuretic Peptide
POC US – 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)