**Simplified UW PE Algorithm: Probable PE, CT PA**

1-6: see appendix and glossary

**PROBABLE PE**

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

**Candidate for CT PA?**

- **Yes**
  - **PE Excluded**
    - **Negative**
      - **STAT: CT PA**
        - **Positive**
          - **PE Confirmed**

          - **START ANTICOAGULATION**

            - **Yes**
              - **Shock? (SBP <90mmHg)**
                - **No**
                  - On CT PA is RV: LV > 0.9?
                    - **Yes**
                      - **Does patient have any of the following**
                        - EKG w/RV strain
                        - Trop I > 0.04
                        - BNP > 90

                      - Does patient have any of the following?

                      - **Likely Sub-Massive PE**
                        - **Call Modified PERT**
                          to discuss urgency of TTE and to discuss ICU vs floor admission
                          - **Start IV heparin**
                          - **Consider:**
                            - a) Systemic rtPA
                            - b) CDT
                          - **Massive PE**
                            - **Call Full PERT**
                              - **ICU Admit**
                              - **Start IV Heparin**
                              - **STAT TTE** if not done
                              - **Consider:**
                                - a) Systemic rtPA
                                - b) CDT
                                - c) ECMO

                      - **No**
                        - **Standard Risk PE**
                          - **Safe for Acute Care Floor or Home with PESI risk stratification**
                          - **Treat with anticoagulant (refer to UW anticoagulation website VTE treatment algorithm)**
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%  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. PERT (PE Response Team)
   Modified PERT Activation, Dial 222:
   Phone Call with
   • Primary Clinician
   • MICU attending (7am-7pm) or MICU Nocturnist (7pm-7am)

   Full PERT Activation, Dial 222
   Bedside Meeting with:
   • MICU Attending (7am-7pm) / Nocturnist (7pm-7am)
   • Primary Attending (may join by phone)
   • ECMO Consult (may join by phone)
   • STAT Nurse
   • ICU Pharmacist

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. Thrombolytics
   • If patient has active malignancy, obtain head CT prior to giving thrombolytics

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)