Pulmonary Embolism Risk Stratification Algorithm for Intermediate and High Risk Patients
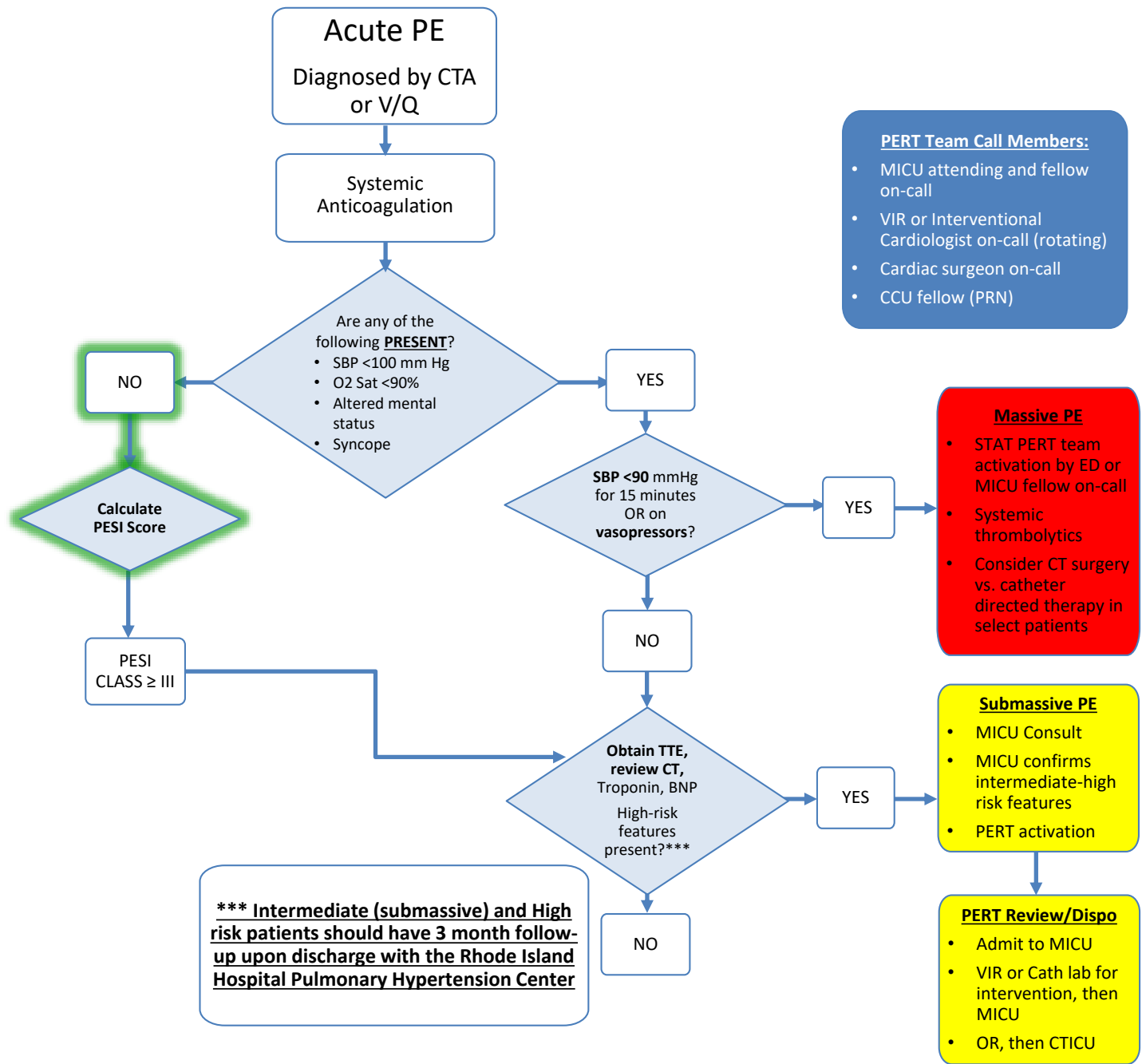
Pulmonary Embolism Severity Index (PESI):

Age	years
Male sex	+10
Cancer	+30
CHF	+10
Chronic lung Disease	+10
Hear Rate ≥110	+20
SBP < 100 Hg	+30
RR ≥30/min	+20
Temperature <36 C	+20
SpO2 <90% on RA	+20
Altered Mental Status	+60

Risk Stratification:

65 class I } Low Risk
66–85 class II

86–105 class III — Intermediate Risk

106–125 class IV } High Risk
> 125 class V

*** High risk features

- RV strain by TTE (RV dilation or dysfunction, RVSP ≥ 40mmHg)
- CTA RV/LV ratio ≥ 0.9
- Clot seen in RA on CTA or TTE
- Positive troponin (above baseline OR > 0.05ng/mL)
- Positive BNP (>100 pg/mL)

Acute PE

Diagnosed by CTA or V/Q

↓

Systemic Anticoagulation

↓

Are any of the following PRESENT?
- SBP <100 mm Hg
- O2 Sat <90%
- Altered mental status
- Syncope

→ **NO** → Calculate PESI Score → PESI CLASS ≥ III

→ **YES** →

SBP <90 mmHg for 15 minutes OR on vasopressors?

→ **YES** → **Massive PE**

→ **NO** →

Obtain TTE, review CT, Troponin, BNP

High-risk features present?***

→ **YES** → **Submassive PE**

→ **NO**

*** Intermediate (submassive) and High risk patients should have 3 month follow-up upon discharge with the Rhode Island Hospital Pulmonary Hypertension Center

PERT Team Call Members:
- MICU attending and fellow on-call
- VIR or Interventional Cardiologist on-call (rotating)
- Cardiac surgeon on-call
- CCU fellow (PRN)

Massive PE
- STAT PERT team activation by ED or MICU fellow on-call
- Systemic thrombolytics
- Consider CT surgery vs. catheter directed therapy in select patients

Submassive PE
- MICU Consult
- MICU confirms intermediate-high risk features
- PERT activation

PERT Review/Dispo
- Admit to MICU
- VIR or Cath lab for intervention, then MICU
- OR, then CTICU