What's New in the "2026 Acute Pulmonary Embolism in Adults" Multi-Society Guidelines

The highest risk patients are taken to the interventional lab for mechanical thrombectomy.

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New guidelines for the evaluation and management of acute pulmonary embolism (PE) in adults, a report of the American College of Cardiology (ACC) and American Heart Association (AHA) Joint Committee on clinical practice guidelines, are now published in the *Journal of the American College of Cardiology* and *Circulation*.[1] This 2026 update and expansion of the guidelines for the management of PE is a masterwork of guideline production, and is important for those managing patients with acute PE and developing care systems to expedite acute emergency management principles. I thought it would be worthwhile to recap the message of the guidelines for cath lab staff who are increasingly taking on roles with the PERT team (Pulmonary Embolism Response Team).

It is recognized that most cardiac catheterization laboratories are not the first point of medical care and do not deal with PE immediately. However, it is worth understanding the presentation and pathways that some of our chest pain patients may encounter. Acute PE management begins in the emergency department (ED) with the clinical presentation and providers' recognition of the syndrome and assessment of PE likelihood and risk (Figure 1). The patient's story and risk factors will then establish the probability of having a PE, followed by a rapid progression through a variety of laboratory and imaging assessments, mostly involving computed tomography (CT) angiography and echocardiographic measurements of right ventricular (RV) function. The RV size and function will then determine whether a conservative or an aggressive, often invasive, approach is required. The highest risk patients are taken to the interventional lab for mechanical thrombectomy. This pathway is described below and often directed by

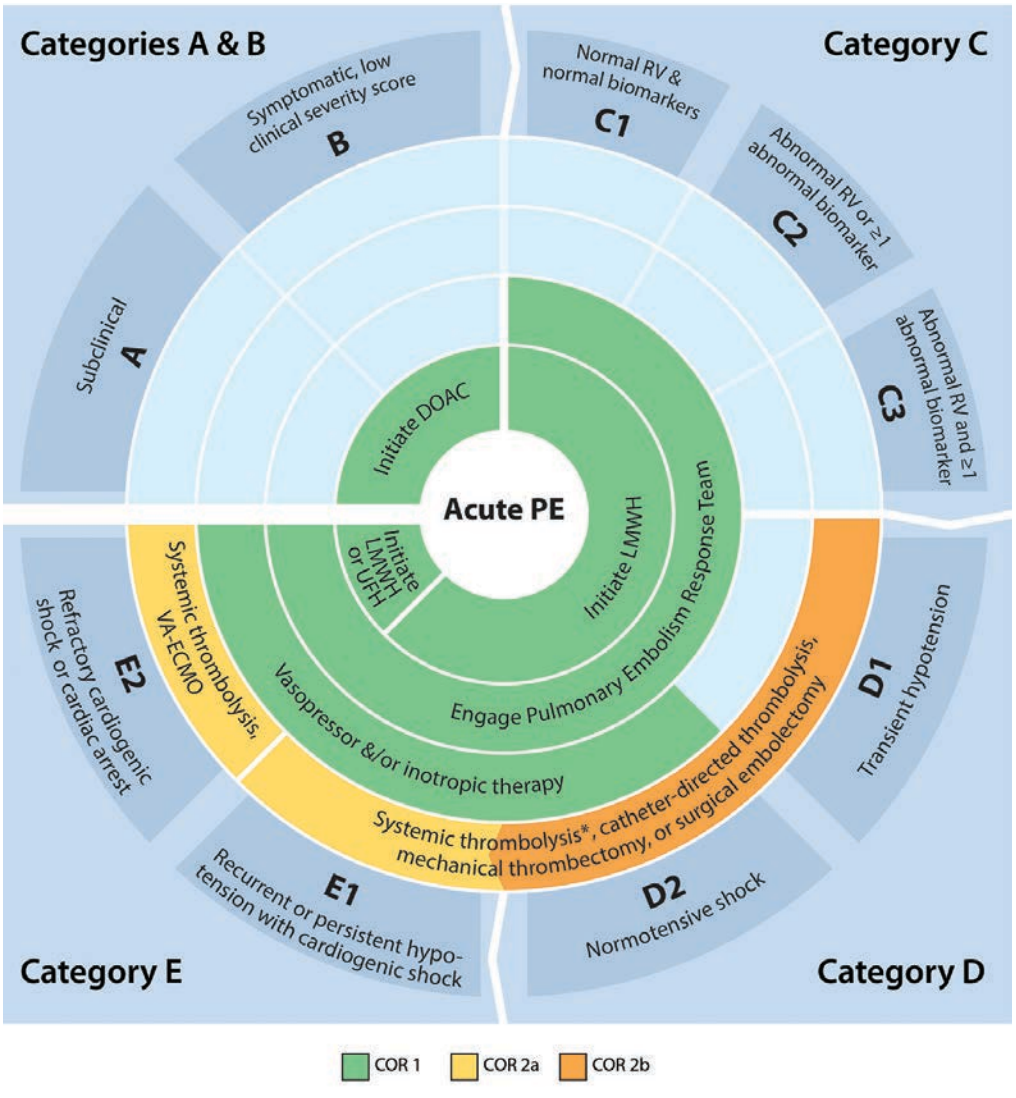

Figure 1. Selected management for acute PE patients by the AHA/ACC 2026 Clinical Categories from the 2026 Acute PE Guideline-at-a-Glance.

**If acceptable bleeding risk.*

ACC = American College of Cardiology; AHA = American Heart Association; COR = Class of Recommendation; DOAC = direct oral anticoagulants; LMWH = low-molecular-weight heparin; PE = pulmonary embolism; RV = right ventricle; UFH = unfractionated heparin; VA-ECMO = veno-arterial extracorporeal membrane oxygenation.

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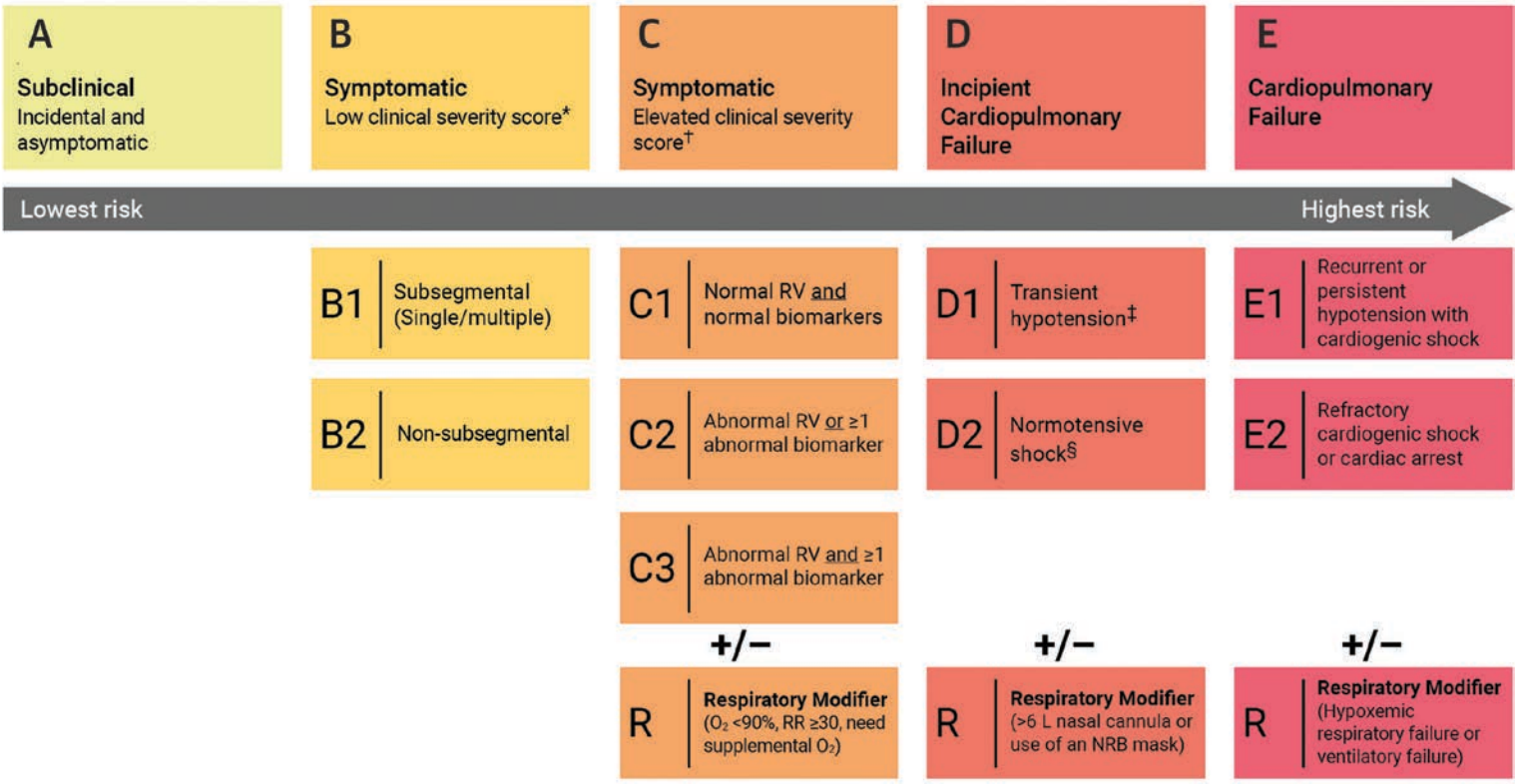

Figure 2. AHA/ACC PE guidelines acute risk categories and suggested management strategies. When patients meet the respiratory modifier status criteria, then add "R" to the category description (e.g., C3R, D2R).

**Low Clinical Severity Score includes PESI #85 or sPESI =0 or Bova # 4.*

†Elevated Clinical Severity Score includes PESI >85 or sPESI $1 or Bova > 4.

‡Systolic blood pressure <90 or decrease >40 mm Hg lasting <15 min or responding to IV fluids. Lactate >2 mmol/L, acute kidney injury, urine output <0.5 mL/kg/hr., mental status change, cardiac index <2.2 L/min/m2, mean arterial pressure <60 mm Hg, increased shock score/stage (SCAI stage, CPES score).

ACC indicates American College of Cardiology; AHA, American Heart Association; CPES, Composite Pulmonary Embolism Shock; IV, intravenous; NC, nasal cannula; NRB, nonrebreather; O2, oxygen; PE, pulmonary embolism; PESI, Pulmonary Embolism Severity Index; RR, respiratory rate; RV, right ventricle; and sPESI, simplified PESI.

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TABLE 1. Example of Pulmonary Embolus Risk Scores.

PESI	Age, sex, history of cancer, heart failure, chronic lung disease, abnormal hemodynamics, altered mental status and	Patients are divided into classes I through V with low risk <65 points and highest risk >126 points
sPESI*	For seniors (>65 years old), the simplified PESI risk categories are modified into a dichotomous presentation	Low risk of 30-day mortality = 0 points High risk of 30-day mortality ≥1 point

*Lankeit M, Jiménez D, Kostrubiec M, et al. Predictive value of the high-sensitivity troponin T assay and the simplified Pulmonary Embolism Severity Index in hemodynamically stable patients with acute pulmonary embolism: a prospective validation study. *Circulation*. 2011; 124: 2716-2724.

the PERT team. Post-acute PE management involves treating underlying risk factors as well as long-term anticoagulation (described in the guidelines in detail).

The 2026 acute PE guidelines establish 5 new risk categories (Figures 1-2). The categories are designated A through E, and each has sub-categories to provide a refined classification of prognostic accuracy to guide therapeutic decision-making across the spectrum of risk from the early acute phase of the PE. Categories A and B describe subclinical or mildly symptomatic, low-clinical severity patients in whom novel oral anticoagulants are administered.

For patients presenting in category C or

higher, the PERT team becomes active, and all patients receive low-molecular-weight heparin. The 'C' subcategories include those patients with normal RV without biomarkers (C1), abnormal RV with one or more biomarkers (C2) and abnormal RV with positive biomarkers (C3). As the patient's status becomes more clinically severe, they enter risk category D1 transient hypotension or D2 with normotensive shock. Depending on the severity of hypotension, vasopressor/inotropic therapy may be required, as well as systemic thrombolysis, catheter-directed thrombolysis or mechanical/surgical embolectomy. For those patients with cardiogenic shock with either recurrent (E1) or refractory (E2) courses, the management escalates. In addition to vasopressors, inotropes, and pharmaco-mechanical thrombolysis, systemic mechanical circulatory support with venoarterial extracorporeal membrane oxygenation (VA-ECMO) may be required.

The complex and escalating care of the acute PE patient is facilitated in large measure by the PERT team[2,3] with multiple care disciplines activated and ready to participate when called upon (Figure 3). The benefits of the PERT team are derived from the various members which include vascular medicine, pharmacy, intensive care unit/ED nursing, emergency medicine, cardiac surgery, and pulmonologists and cardiologists.

Acute PE Clinical Risk Prediction Scores

Predicting clinical risk of PE is critical to the initial decisions for patient management. The risk score supports decisions to take a conservative or aggressive approach. There are many different acute risk prediction scores used by EDs, the choice of which is usually determined by local custom. Table 1 shows two common scores for PE risk assessment. Many others can be seen in the guidelines document. The PERT activation pathway (Figure 3) identifies where interventions are most needed. Additional clinical decision rules about invasive treatment also may incorporate the reassessment with additional scoring systems, like Wells' Criteria or the Geneva Score (Revised).[4,5]

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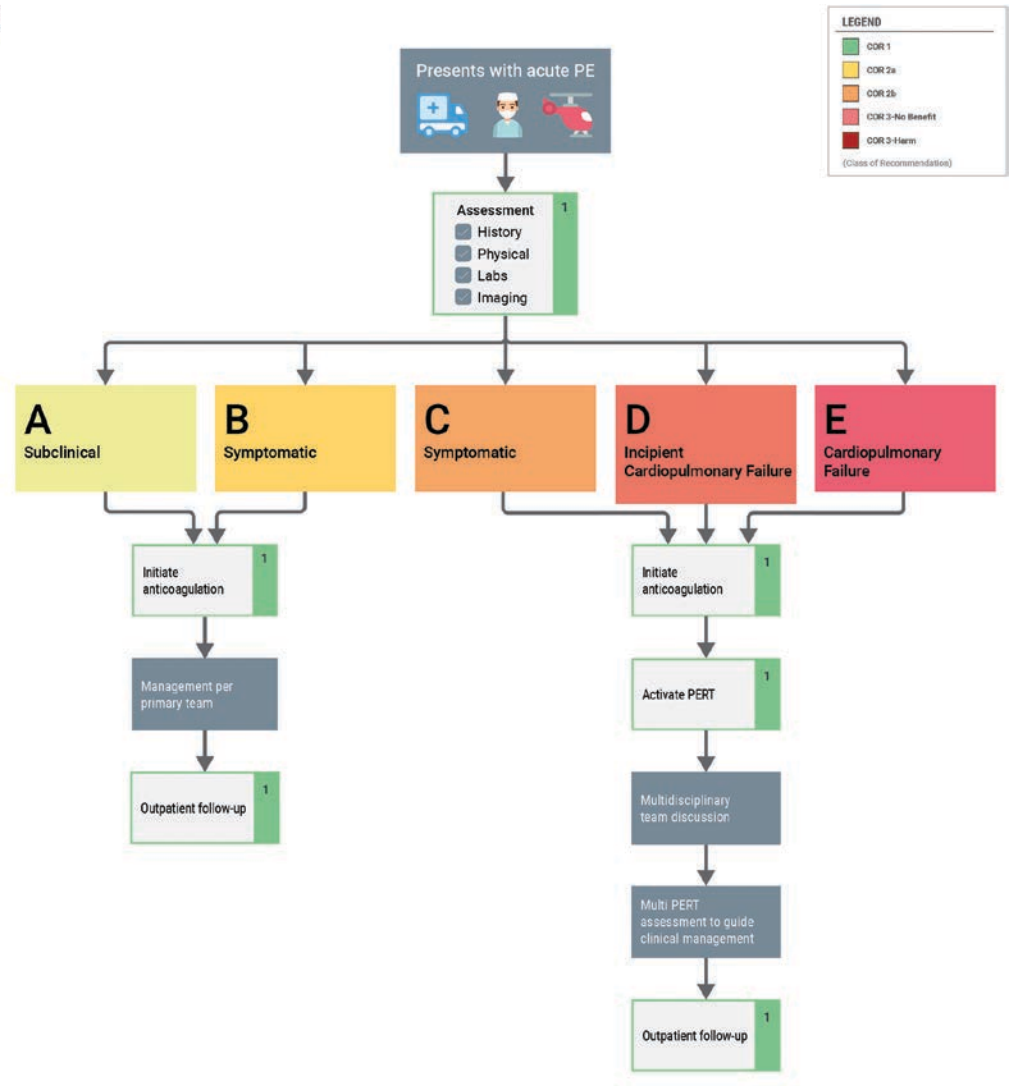

Figure 3. The model and process of PERT activation. When a PE is diagnosed, the designated in-house PERT physician is paged, pertinent clinical information is gathered, and the severity of the case is assessed. If necessary, members of a multidisciplinary team discuss the case via phone, virtual meeting, or in person. Diagnostic and treatment options are discussed, recommendations are generated, and appropriate resources are mobilized. Upon discharge, patients follow up in a multidisciplinary clinic.

COR indicates class of recommendation; PE, pulmonary embolism; PERT, pulmonary embolism response team.

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Modified from Rosovsky R, Borges J, Kabrhel C, Rosenfield K. Pulmonary embolism response team: inpatient structure, outpatient follow-up, and is it the current standard of care? Clin Chest Med. 2018 Sep; 39(3): 621-630. doi:10.1016/j.ccm.2018.04.019

Cath labs are increasingly involved in PE care. The role of the cath lab in the management of pulmonary embolus is more often in the chronic phase, where dyspnea and pulmonary hypertension play a major role as the cause of the patient's symptoms. Right heart catheterization with or without coronary angiography becomes a paramount diagnostic test to determine where this patient lies in the management spectrum of their dyspnea and chronic disease.

2026 AHA/ACC Acute PE Guidelines: Take-Home Messages

I've encapsulated some of the take-home points to consider when perusing the guidelines. I think this will promote more in-depth reading for those involved in the care of the PE patient.

1. The clinical risk of the acute PE patient falls into one or more of the 5 categories A-E. These groups provide an evidence-based approach to therapeutic decision making.
2. Acute PE patients who are asymptomatic in category A or who are symptomatic but have a low clinical severity score (category B) can be candidates for early hospital discharge, sometimes from the ED.
3. Symptomatic patients with elevated clinical severity score (category C or D) with biomarkers, RV dysfunction, or cardiopulmonary failure should be hospitalized to optimize treatment approaches.
4. The more acutely ill patients (category D2 or E) with hypotension should be considered for mechanical or catheter-based thrombolysis as well as hemodynamic cardiac support.
5. PERT teams are recommended to improve timeliness of care delivery.
6. Low-molecular-weight heparin is recommended over unfractionated heparin for patients with acute PE requiring parental anticoagulation (category A-C).
7. Direct oral anticoagulants (DOACs) are recommended over vitamin K antagonists (warfarin) unless contraindicated to prevent recurrent venous thromboembolism and bleeding.
8. For post-acute PE care, in patients with first PE without major reversible risk factors, continue anticoagulation beyond 3-6 months. Annual screening of patients who have had acute PE should assess symptoms and functional status to reduce the likelihood of chronic thromboembolic pulmonary disease or other cause of dyspnea, and functional limitation.

The Bottom Line

Cath labs are increasingly involved in PE care. The role of the cath lab in the management of pulmonary embolus is more often in the chronic phase, where dyspnea and pulmonary hypertension play a major role as the cause of the patient's symptoms. Right heart catheterization with or without coronary angiography becomes a paramount diagnostic test to determine where this patient lies in the management spectrum of their dyspnea and chronic disease.

The 2026 acute PE guidelines are worth reading for all those involved in the care of these patients. As some in the cath lab may work in interventional radiology, we should all be aware of patients with pulmonary embolism who can be acutely managed and supported to prevent future adverse events and improve their overall clinical course. ■

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Disclosures: Dr. Morton Kern reports he is a consultant for Abiomed, Abbott Vascular, Philips, ACIST Medical, and Opsens Inc.

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