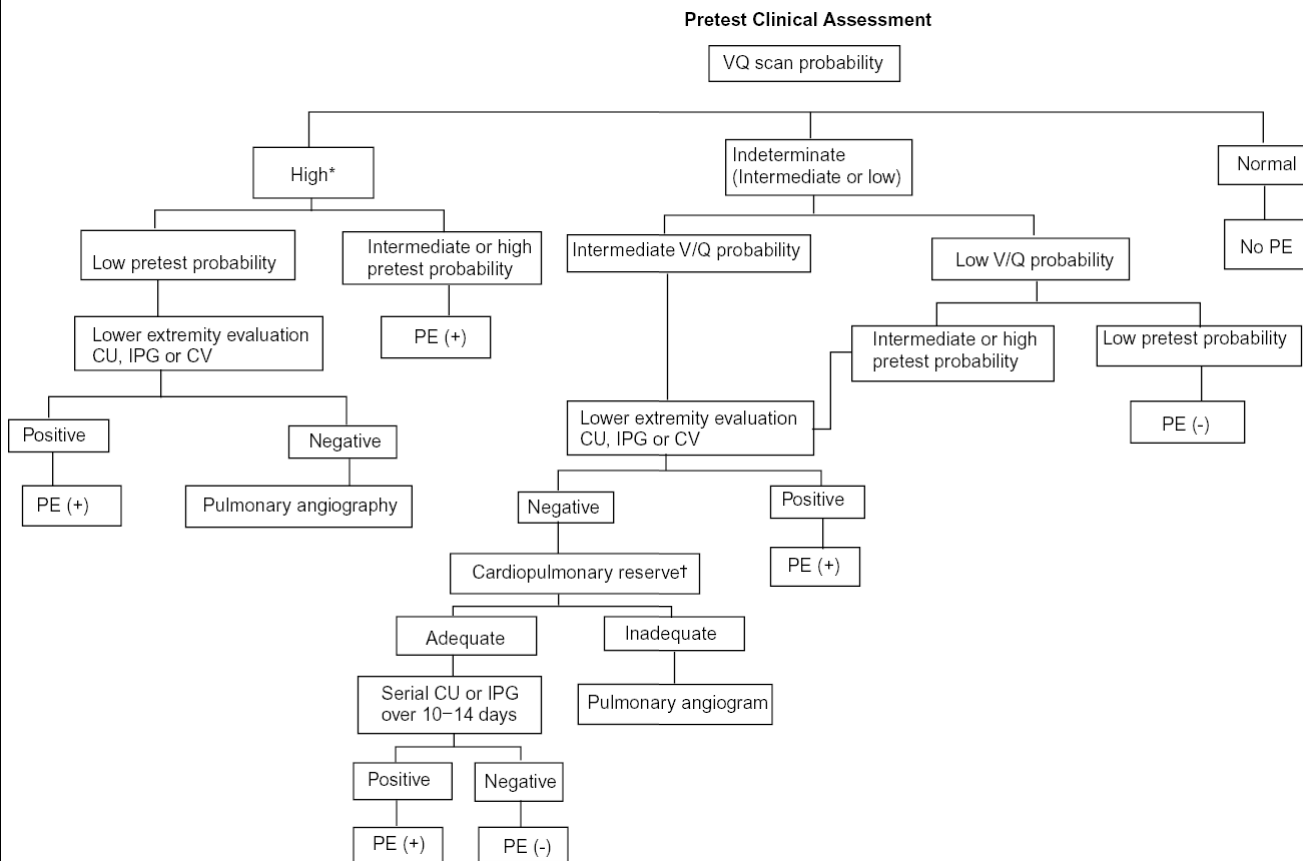


Algorithm for Diagnosis of Pulmonary Embolism with V/Q Scanning



Inadequate cardiopulmonary reserve is defined as presence of one of the following clinical features: syncope, hypotension (systolic BP < 90 mm Hg), pulmonary edema, acute tachyarrhythmia, evidence of right ventricular failure, severe hypoxemia (PaO₂ < 50 mm Hg), or respiratory insufficiency (PaCO₂ > 45 mm Hg, FEV₁ < 1.0, and VC < 1.5 L) (1). The role of D-dimer assays, CT, or MR angiography in this algorithm is not yet established. A negative D-dimer result may be helpful to exclude pulmonary embolism, especially in patients with low pretest probability or nondiagnostic V/Q scan. A positive CT or MRI angiogram is useful to confirm the diagnosis of pulmonary embolism, but safety of withholding anticoagulation in patients with negative results has not been established. These studies also require expertise for adequate performance and accurate interpretation.

* Positive predictive value of a high-probability V/Q scan is significantly lower in patients with a previous pulmonary embolism. Therefore, further testing is recommended if the previous V/Q scan is not available for comparison.

† Inadequate cardiopulmonary reserve is defined as presence of one of the following clinical features: syncope, hypotension (systolic BP < 90 mm Hg), pulmonary edema, acute tachyarrhythmia, evidence of right ventricular failure, severe hypoxemia (PaO₂ < 50 mm Hg), or respiratory insufficiency (PaCO₂ > 45 mm Hg, FEV₁ < 1.0, and VC < 1.5 L) (1).

CT = computed tomography; CU = compression ultrasonography; CV = contrast venography; IPG = impedance plethysmography; MRI = magnetic resonance imaging; PE = pulmonary embolism.

1. Hull RD, Raskob GE, Ginsberg JS, Panju AA, Brill-Edwards P, Coates G, et al. A noninvasive strategy for the treatment of patients with suspected pulmonary embolism. *Arch Intern Med.* 1994;154:289-97. (PMID: [8297195](https://pubmed.ncbi.nlm.nih.gov/8297195/))

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