

Simplified diagnostic management of suspected pulmonary embolism (the YEARS study): a prospective, multicentre, cohort study.

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Over the last several years, the addition of D-dimers to emergency department laboratory panels and the widespread access of rapid diagnostic tools (i.e., CTA) has resulted in a decrease in the prevalence of pulmonary embolism to approximately 10% (because now we're scan happy and we'll scan people with a hangnail or dyspepsia). These researchers from the Netherlands prospectively evaluated a simple algorithm prediction model and also compared it with the Wells prediction model in 3465 consecutively recruited patients with suspected pulmonary embolism. The simple model (called YEARS—the authors don't tell us what this stands for) assesses 3 factors: **clinical signs of deep vein thrombosis, hemoptysis, and whether pulmonary embolism is the most likely diagnosis**. In addition to a D-dimer test result, each patient was scored using the YEAR and Wells models. If a patient had 0 YEARS and a D-dimer result of less than 1000 ng/mL, the authors ruled out pulmonary embolism (1320 patients fit this category). If a patient had 0 YEARS and a D-dimer result of 1000 ng/mL or greater, the clinician ordered a CTA (423 patients). If a patient had 1 or more YEARS and a D-dimer result of less than 500 ng/mL, pulmonary embolism was ruled out (331 patients), but if the D-dimer result was 500 ng/mL or greater the clinician ordered a CTA (1391 patients). The researchers followed up patients in whom a pulmonary embolism was ruled out for 3 months. Thirteen percent of the patients were diagnosed with pulmonary embolism at the outset, a handful of patients were anticoagulated for reasons other than thromboembolism (eg, atrial fibrillation) and 18 of the 2946 (0.6%) remaining patients were subsequently diagnosed with pulmonary embolism. Six of those were fatal. Based on the YEARS algorithm, 48% of the patients did not need a CTA compared with 34% using the Wells model.

