

LETTER

Authors' response: risk stratification of patients with acute pulmonary embolism

We thank Dr Ahmad and colleagues for their thoughtful comments.¹ Haemodynamic instability has significant prognostic implications for patients diagnosed as having acute pulmonary embolism (PE), and guidelines generally recommend consideration of treatment with thrombolytic agents.²⁻³ At the other end of the spectrum, different studies suggest that risk stratification models (particularly the Pulmonary Embolism Severity Index (PESI) and the simplified PESI) may accurately identify patients at low risk of death within the first 3 months after the diagnosis of PE.⁴⁻⁵ One study found that the addition of troponin testing to the PESI did not increase the prognostic value of the PESI for the identification of low-risk patients who might benefit from a shortened hospital stay or outpatient therapy.⁶ Although recent data suggest that the use of a highly sensitive troponin T (hsTnT) assay may improve the risk stratification of PE,⁷ future studies should address the usefulness of hsTnT and risk stratification models,

alone or in combination, for identifying low-risk patients who can be discharged early from the hospital and treated as outpatients. Our recent study adds to the body of evidence that a combination of cardiac biomarkers, echocardiographic findings and lower limb ultrasound testing are useful for fine-tuning risk stratification in the subgroup of intermediate-risk patients with acute symptomatic PE.⁸

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Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 2 February 2011

Thorax 2011; **66**:1. doi:10.1136/thx.2011.160812

REFERENCES

1. **Ahmad N**, Srinivasan K, Moudgil H. Risk stratification in pulmonary embolism: an algorithmic tool approach. *Thorax* Published Online First: 2011. doi:10.1136/thx.2011.159699.

2. **Torbicki A**, Perrier A, Konstantinides SV, *et al*; ESC Committee for Practice Guidelines (CPG). Guidelines on the diagnosis and management of acute pulmonary embolism: The Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). *Eur Heart J* 2008;**29**:2276–315.
3. **Kearon C**, Kahn SR, Agnelli G, *et al*; American College of Chest Physicians. Antithrombotic therapy for venous thromboembolic disease: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). *Chest* 2008;**133**(Suppl 6):454S–545S.
4. **Aujesky D**, Obrosky DS, Stone RA, *et al*. Derivation and validation of a prognostic model for pulmonary embolism. *Am J Respir Crit Care Med* 2005;**172**:1041–6.
5. **Jiménez D**, Aujesky D, Moores L, *et al*; RIETE Investigators. Simplification of the pulmonary embolism severity index for prognosticating patients with acute symptomatic pulmonary embolism. *Arch Intern Med* 2010;**170**:1383–9.
6. **Moores L**, Aujesky D, Jiménez D, *et al*. Pulmonary embolism severity index and troponin testing for the selection of low-risk patients with acute symptomatic pulmonary embolism. *J Thromb Haemost* 2010;**8**:517–22.
7. **Lankeit M**, Friesen D, Aschoff J, *et al*. Highly sensitive troponin T assay in normotensive patients with acute pulmonary embolism. *Eur Heart J* 2010;**31**:1836–44.
8. **Jiménez D**, Aujesky D, Moores L, *et al*. Combinations of prognostic tools for identification of high-risk normotensive patients with acute symptomatic pulmonary embolism. *Thorax* 2011;**66**:75–81.