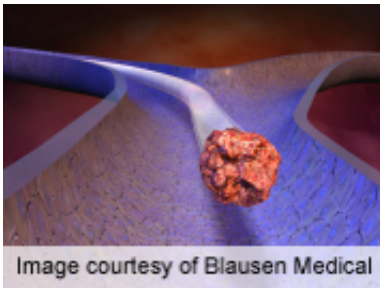


# Risk of death up for PE patients with high plasma lactate levels

January 24 2013

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Adult patients with acute pulmonary embolism with elevated plasma lactate levels are at a high risk of death and adverse outcomes, regardless of whether they also present with shock or hypotension; right-sided ventricular dysfunction; or elevation of troponin I, according to research published online Jan. 9 in the *Annals of Emergency Medicine*.

(HealthDay)—Adult patients with acute pulmonary embolism (PE) with elevated plasma lactate levels are at a high risk of death and adverse outcomes, regardless of whether they also present with shock or hypotension; right-sided ventricular dysfunction; or elevation of troponin I, according to research published online Jan. 9 in the *Annals of Emergency Medicine*.

Simone Vanni, M.D., Ph.D., of the Azienda Ospedaliero-Universitaria Careggi in Florence, Italy, and colleagues conducted a prospective study involving 270 patients (mean age, 73 years) with symptomatic, objectively confirmed PE who presented at a single emergency

department. Plasma lactate levels were measured to examine their [prognostic value](#).

In total, 6.3 percent of patients died, and of these, 4.4 percent of deaths were attributed to PE; a further 13.7 percent reached the composite end point of all-cause death and clinical deterioration. The researchers found that mortality was significantly higher for those with a lactate level  $\geq 2$  mmol/L compared with those with a lower level (17.3 versus 1.6 percent). Independent of shock or hypotension, right-sided ventricular dysfunction, or elevation of troponin I values, elevated plasma lactate levels correlated with a significantly increased risk of all-cause death (hazard ratio, 11.67) and the composite end point (hazard ratio, 8.14).

"Patients with acute pulmonary embolism and high plasma lactate levels should undergo strict medical surveillance and monitoring," Vanni said in a statement. "A multicenter prospective study is now warranted to confirm or to extend our knowledge about the prognostic value of plasma [lactate](#) levels in these patients."

**More information:** [Abstract](#)  
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