

# Can echocardiography improve care of patients with pulmonary embolism?

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Gel applied to chest of patient undergoing echocardiogram, which tests function of the heart. Credit: stock.adobe.com

The use of echocardiography, which creates two-dimensional images of the heart, can help clinicians better predict outcomes for individuals with pulmonary embolisms, says a Yale author of a new study.

Acute pulmonary embolism is a serious, potentially fatal condition in which a clot impedes blood flow in [pulmonary arteries](#). Increasingly, clinicians have used echocardiography in these patients to assess structural and functional changes to the heart.

To study the impact of using echocardiography for assessing pulmonary embolisms, the study authors analyzed data from RIETE, a large international registry of patients with the condition, from 2001 to 2017. They observed that among 35,935 patients, 15,375 (42.8%) underwent early echocardiographic assessment. The authors noted that certain factors—such as enlargement of the right atrium, weak contraction of the right ventricle, and presence of thrombi in the right side of the heart—were associated with increased odds of 30-day mortality from pulmonary [embolism](#). The

results remained substantively similar even after they considered patient demographics and other clinical factors.

The large size of the study underscores the importance of [echocardiography](#) in the early assessment of patients with [acute pulmonary embolism](#), said first author Behnood Bikdeli of Yale's Center for Outcomes Research and Evaluation (CORE). "This is an important step forward in understanding that these patients have higher risk. The next step is to start testing more advanced strategies to determine how we can improve the outcomes of patients who present with these features," he noted.

**More information:** Early Use of Echocardiography in Patients With Acute Pulmonary Embolism: Findings From the RIETE Registry. *Journal of the American Heart Association* [doi.org/10.1161/JAHA.118.009042](https://doi.org/10.1161/JAHA.118.009042)

Provided by Yale University

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