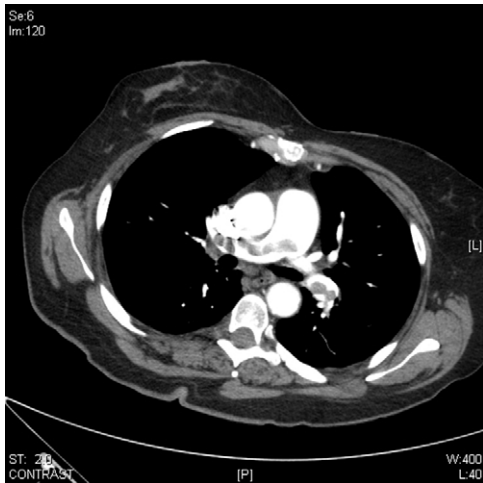


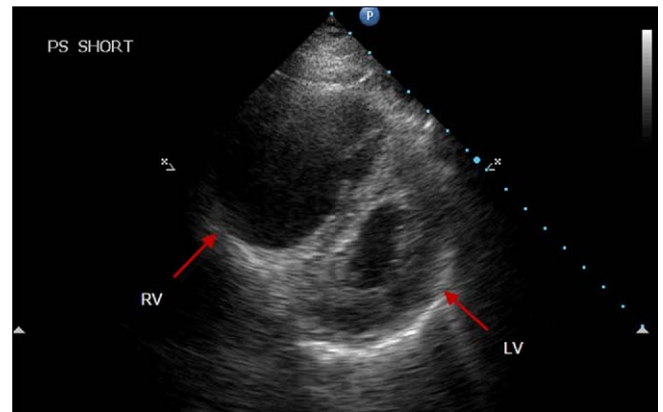
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**Figure 1.** CT of chest with intravenous contrast.



**Figure 2.** Transthoracic parasternal short-axis view. Used with permission of Thompson Kehrl, MD, Department of Emergency Medicine, MetroHealth Medical Center, Cleveland, OH.

[Ann Emerg Med. 2009;54:e16-e17.]

A 59-year-old woman with history of adenocarcinoma of the rectum, receiving preoperative radiation and chemotherapy, presented to the emergency department with a complaint of 3 days of generalized weakness and chills. Her vital signs on presentation included temperature 35.8°C (96.4°F), blood pressure 101/44 mm Hg, pulse rate 126 beats/min, respiratory rate 20 breaths/min, and oxygen saturation of 91% on room air. Her chest radiograph showed no signs of infiltrate. A computed tomography (CT) scan of the patient's chest with intravenous contrast and bedside echocardiography were performed.

*For the diagnosis and teaching points, see page e17.  
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## IMAGES IN EMERGENCY MEDICINE

*(continued from p. e16)***DIAGNOSIS:**

*Pulmonary embolism.* Figure 1 shows CT evidence of pulmonary embolism with a massive clot burden consistent with saddle embolism. Figure 2 is a parasternal short-axis view of the heart, showing significant enlargement of the right ventricle, with a small left ventricle and paradoxical septal movement, known as the  $\Delta$  sign. An apical 4-chamber view showed a stunned, hypokinetic right ventricular wall, with maintained function of the apical portion of the right ventricle, known as McConnell's sign, as well as a hyperkinetic left ventricle. In the absence of chronically increased right ventricular pressure, this is suggestive of acute right ventricular dysfunction. These findings were used to help make the decision to treat with intravenous thrombolytics, in addition to intravenous heparin. She was admitted to the ICU and was ultimately discharged, receiving long-term oral anticoagulation.

Bedside echocardiography can be particularly helpful in patients with undifferentiated shock and can be used to evaluate for global left ventricular function, tamponade physiology, and acute right-sided heart strain. Familiarity with these echocardiographic findings can help the emergency physician rapidly diagnose and treat these conditions.