

A Right Ventricular Mass

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A 60-year-old male presented with a 2-day history of progressive dyspnea. Three months prior to presentation, he was diagnosed with a left calf undifferentiated pleomorphic sarcoma. He had known pulmonary and bony metastases and was receiving systemic chemotherapy with doxorubicin. Physical examination revealed tachypnea, tachycardia, and a left calf mass. A computed tomography (CT) of the chest revealed new bilateral small pulmonary emboli (yellow arrow) and a right ventricular (RV) mass (Figure 1, red arrow). A transthoracic echocardiogram (TTE) showed a large solid mass (arrow) that obliterated the RV apex (Figure 2). Cardiac magnetic resonance (CMR) confirmed the presence of a gadolinium-enhancing mass consistent with metastasis (Figure 3, arrows). The patient was started on anticoagulation for pulmonary embolism and on a new line of chemotherapy with gemcitabine and docetaxel.

Whereas primary cardiac tumors are rare and mostly benign, metastatic cardiac involvement is silent and occurs in up to 9% of patients with known malignancies. Cardiac tumors have been reported in up to 25% of autopsies of patients with soft-tissue sarcomas. In practice, cardiac metastatic involvement is incidentally found by staging imaging. Diagnostic evaluation involves different modalities: TTE is useful for initial evaluation, and transesophageal echocardiogram allows a more comprehensive evaluation; CT offers anatomic details of the mass and detects extracardiac involvement; and CMR identifies the precise location and pericardial invasion. Managing these lesions often requires palliative chemotherapy and/or radiotherapy. Surgery is usually reserved for life-threatening complications. Unfortunately, prognosis is poor despite treatment, and overall survival ranges from 6 to 12 months.

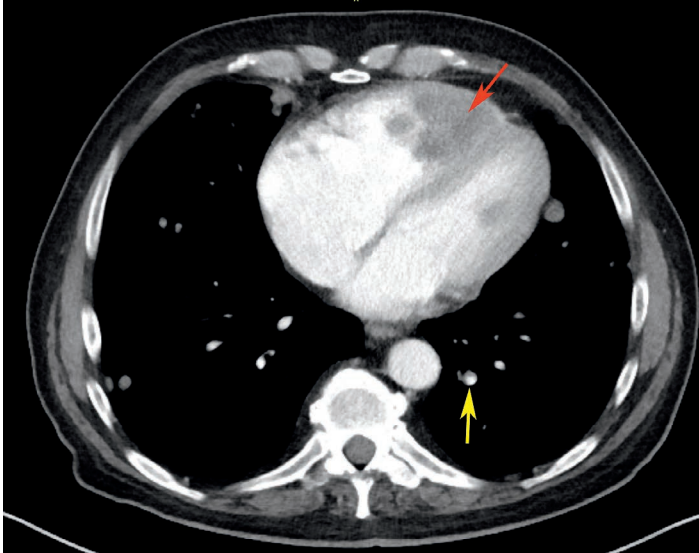


Figure 1.

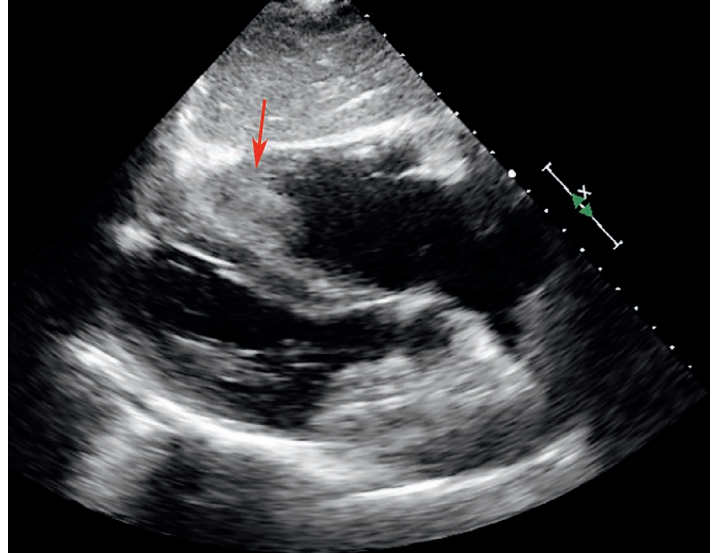


Figure 2.

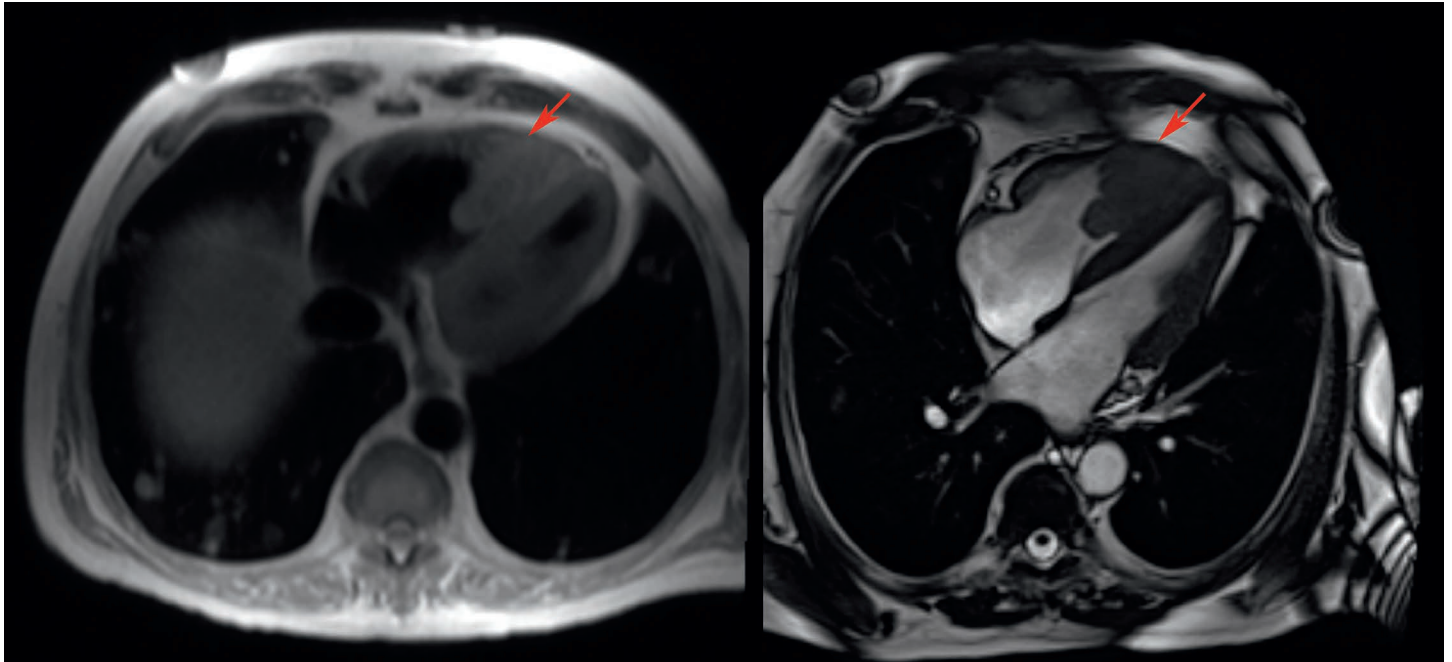


Figure 3.