




# Metastatic tumor of the interventricular septum mimicking myocardial calcification: The role of multimodality imaging

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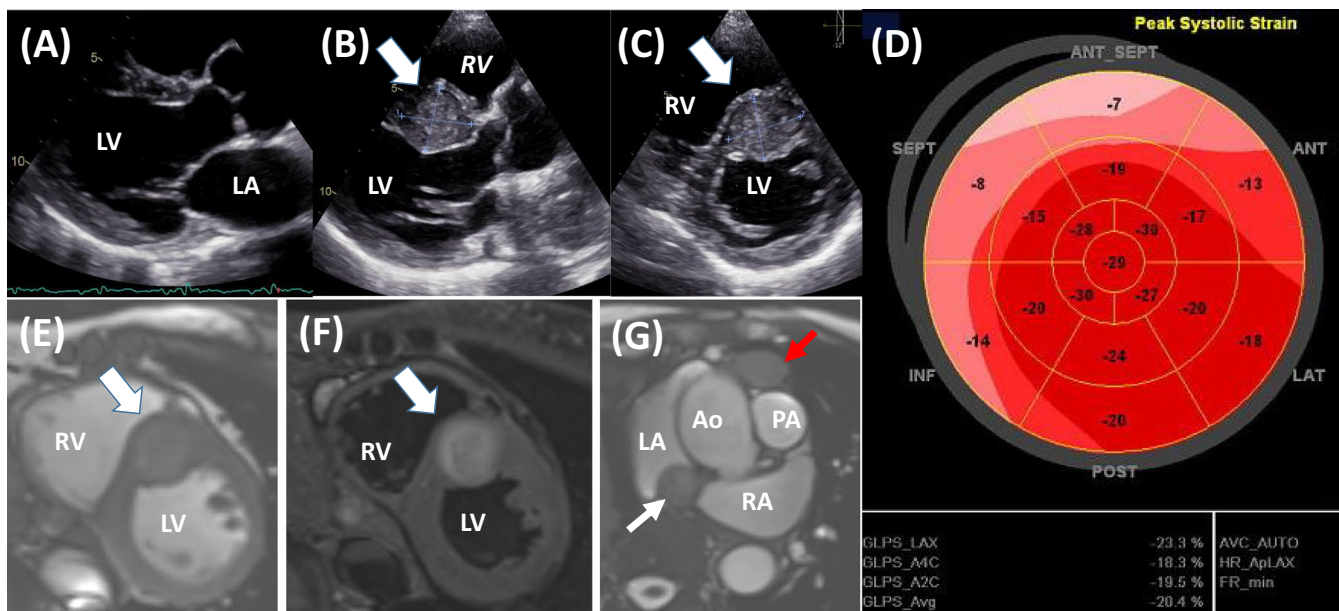
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None.

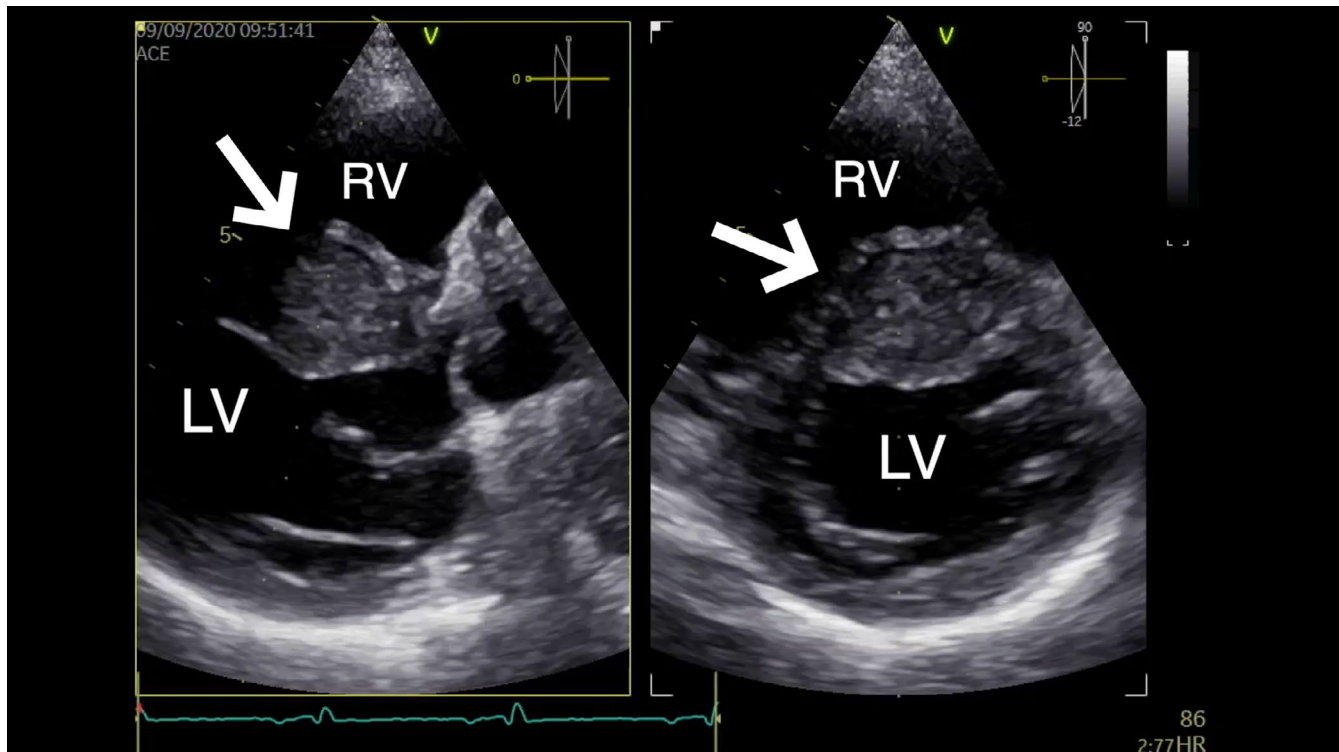
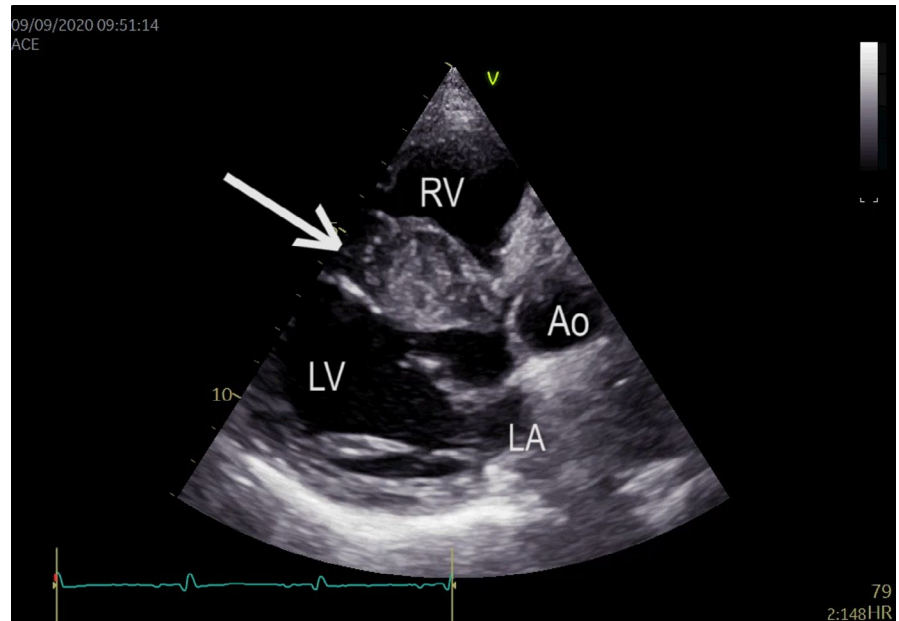


**FIGURE 1** A, Baseline echocardiography, parasternal long axis, showing no tumour. B and C, Echocardiography, parasternal long and short axis, showing IVS tumor marked with white arrow. D, Global longitudinal strain, Bulls Eye representation, showing regional impaired strain values due to IVS Tumor. E, CMR Short axis T2 weighted sequence of the IVS tumor marked with white arrow. F, CMR Short axis T2 weighted sequence with fat-suppression (STIR) of the IVS tumor marked with white arrow. G, CMR Short axis T2 weighted sequence showing additional lesions in the pericardium, ventral to the ascending aorta (red arrow), and in the interatrial septum towards the right atrium (white arrow)

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**VIDEO 1** Parasternal long axis echocardiography video showing an interventricular septum tumor (white arrow). Ao = aorta; LA = left atrium; LV = left ventricle; RV = right ventricle. To view this version please visit <https://onlinelibrary.wiley.com/doi/10.1111/echo.14991>



**VIDEO 2** Parasternal X-plane (Long axis and short axis) echocardiography video showing an interventricular septum tumor (white arrow). LV = left ventricle; RV = right ventricle. To view this version please visit <https://onlinelibrary.wiley.com/doi/10.1111/echo.14991>

Recently, there has been focus on how a round-shaped metastatic or dystrophic myocardial calcification, a rare type of myocardial pathology with different imaging appearances, can mimic a tumor in the basal interventricular septum (IVS)<sup>1</sup> on transthoracic echocardiography. However, we should also be focused on myocardial tumors without calcification. Here, we present a case of a 67-year-old woman with a tumor in the basal IVS detected by a routine echocardiography. She was previously diagnosed with a metastatic leiomyosarcoma, but did not have a known cardiovascular disorder. She did

not have history of coronary artery disease, diabetes, or hypertension, and her blood pressure values at outpatient clinic were within normal range (<140/90 mmHg). A well-defined, round-shaped tumor (26 × 23 mm) was seen in the basal IVS (Supplementary data online, Videos 1 and 2) that was not present on an echocardiogram only 16 months earlier (Figure 1A), but evident at follow-up (Figure 1B-C). There was no signs of left ventricular hypertrophy or significant valvular heart disease. For better tissue characterization and assessment of the atrial septum and adjacent epicardium, a cardiac

magnetic resonance (CMR) was performed (Figure 1E–G), confirming findings observed on echocardiography. In addition, it also identified two other tumors, one in the atrial septum (Figure 1G, *white arrow*) and another in the pericardium (Figure 1G, *red arrow*), highlighting the importance of multimodality imaging.

## 1 | DISCUSSION

When assessing the precise localization and size/morphology of intra-cardiac tumors, CMR is particularly useful. In our case, the sudden development, rapid progression of the tumor, different tissue density with a clear demarcation against the surrounding myocardium (though not calcified and hyperechogenic), not contracting or changing size during systole compared with adjacent myocardium, and significantly reduced regional strain values despite normal global values (Figure 1D) were typical features of a tumor in myocardium/IVS compared with metastatic or dystrophic myocardial calcification or other benign tumors in the IVS. The patient was discussed in a multidisciplinary team meeting and was not found eligible for curative/operative treatment, forcing a palliative strategy.

### CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

### DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated.

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