

## Image in cardiology

## When the second comes first

## Cuando el segundo viene primero



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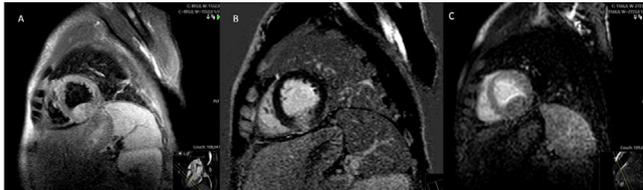


Fig. 1

A 46-year-old male presented with shortness of breath, fatigue, and weight loss in the past 2 months. His medical history was unremarkable except for active tobacco smoking. Upon admission, the chest X-ray revealed a mild left pleural effusion. The laboratory evaluation showed anemia, impaired renal function with hypercalcemia, and an elevated N-terminal pro-B-type natriuretic peptide level of 2757 pg/mL, which prompted the request for an echocardiographic examination. Overall left ventricular systolic function was normal, without valvular abnormalities. A focal area of myocardial thickening within the mid-apical segments of the inferior wall was noted ([videos 1–6 of the supplementary data](#)).

The cardiac magnetic resonance (CMR) revealed an infiltrative mass measuring 23 mm in the mid and apical segments of the inferior wall. The characteristics of the mass, such as increased T2 signal ([Fig. 1A](#)) and delayed enhancement sequences ([Fig. 1B](#)), heterogeneous enhancement on perfusion ([Fig. 1C](#)), were consistent with cardiac tumor, and possible metastasis. Pericardium showed no alterations. Additionally, the CMR also identified a paraesophageal lesion.

Further imaging with computed tomography scan confirmed a paraesophageal lesion and diffuse osteolytic lesions, whose biopsy was suggestive of squamous-cell lung carcinoma. At this stage, palliative care consultation was requested to assist with symptom management and the patient died a few weeks later.

This case displays the role of multimodality imaging in the diagnostic workup of a suspected tumor.

Secondary cardiac tumors are the most frequent and usually present in patients with widespread malignancy. Potentially any structure of the heart may be involved, although left heart metastasis is very unusual.

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## Ethical considerations

Authors confirm that written consent was obtained and that the procedures were performed under the Declaration of Helsinki. SAGER guidelines have been followed.

## Statement on the use of artificial intelligence

No artificial intelligence software was used to write this article.

## Authors' contributions

P. Rocha Carvalho was in charge of the conceptualization and writing the original draft. S. Borges, C. Ferreira and J.I. Moreira were in charge of reviewing and editing the manuscript. All authors approved the final manuscript.

## Conflicts of interest

None declared.

## Appendix A. Supplementary data

Supplementary data associated with this article can be found in the online version at <https://doi.org/10.1016/j.rccl.2023.10.010>.

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