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# European Heart Journal - Cardiovascular Imaging

## Active cardiac sarcoidosis on standard chest CT

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## Active cardiac sarcoidosis on standard chest CT

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**Conflicts:** We have no conflicts to disclose.

A 50-year old female patient underwent a standard non-ECG gated CT thorax with IV contrast for worsening constitutional symptoms. She had a known diagnosis of extra-cardiac sarcoidosis from a previous lymph node biopsy, and was not on immunosuppression. A standard chest CT demonstrated multistation mediastinal lymphadenopathy and multiple peribronchovascular pulmonary nodules. There was also a focal, hypoattenuating, thickened appearance of the left ventricular (LV) basal anteroseptum (A, axial CT thorax, arrow; B, LV short axis CT multi-planar reformat, arrow), which raised the suspicion of cardiac sarcoid involvement. A  $^{18}\text{F}$ -FDG PET-CT demonstrated increased myocardial metabolic activity in the basal septum (C, arrow), with CMR showing corresponding oedema in the basal septum, as demonstrated on this quantitative colour T2 map (D, arrow). These findings confirmed the diagnosis of active cardiac sarcoidosis and the patient was placed on immunosuppression.

Cardiac sarcoidosis is diagnosed using a combination of histopathological, clinical, ECG and cardiac imaging findings, with CMR and  $^{18}\text{F}$ -FDG PET-CT playing a complementary role. Delayed iodine enhancement cardiac CT can demonstrate areas of cardiac sarcoid related LV scar, but the role of CT is usually limited to the assessment of extra-cardiac sarcoidosis. To our knowledge this is the first reported case of active cardiac sarcoidosis visible on standard chest CT, manifesting as oedematous LV myocardial thickening. In a different clinical scenario, the same CT appearance could be caused by myocarditis, or hypertrophic cardiomyopathy. This case underlies the importance of closely interrogating the myocardium on all chest CTs in patients with known or suspected sarcoid.

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