

# Dyspnoea and impaired ventricular filling due to infiltration of the left atrium with a lung adenocarcinoma

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## Case report

A 59-year-old patient without a history of heart failure complained of progressive dyspnoea of two weeks' duration. The chest radiograph showed a large left-sided pleural effusion, but the symptoms did not improve after drainage of 1700 ml fluid. Transthoracic echocardiography demonstrated an unclear left atrial mass. Transoesophageal echocardiography showed an elongated, free floating mass originating from the left lower lung vein. This mass reached up to the posterior mitral leaflet and partially obstructed ventricular diastolic filling (fig. 1A). Computer tomography confirmed a centrally located mass measuring 7 × 6 × 6 cm and infiltrating the left lower lung vein and left atrium (fig. 1B). After metastatic disease was ruled out via positron emission tomography and brain-magnetic resonance imaging, the patient was scheduled for surgery. In toto resection of the tumour bulk including left pneumectomy, partial resection of the left atrium and reconstruction of the atrium with xenopericard was performed under extracorporeal circulation (fig. 1C). Histopathological examination of the resected tissue showed a low-differentiated adenocarcinoma (fig. 1D). The patient was discharged 14 days postoperatively. At follow-up after 18 months the patient is free of dyspnoea and well.

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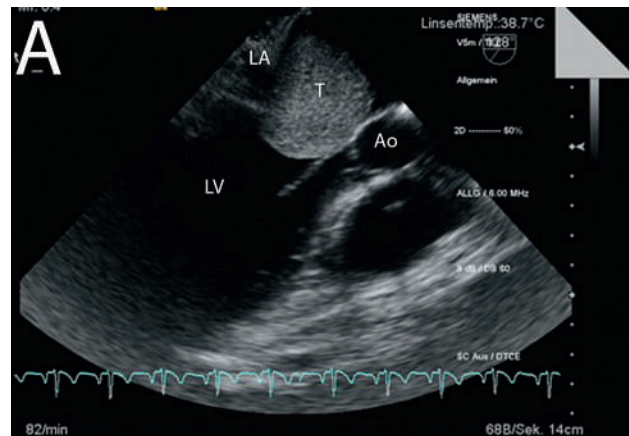
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### Authors' contribution:

F. Moccetti and B. Müller-Edenborn contributed equally to this submission.

## Figure 1

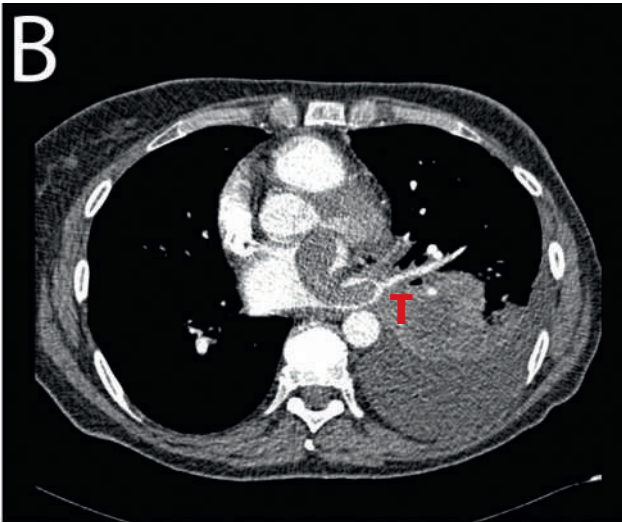
**A** The mass reaches up to the posterior mitral leaflet and partially obstructs ventricular diastolic filling.  
T = tumour; LA = left atrium; LV = left ventricle; Ao = aortic outflow.



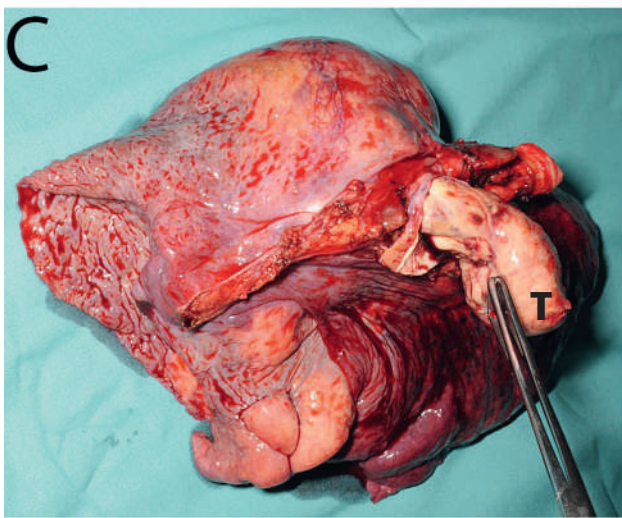
*Key words: adenocarcinoma; dyspnoea; echocardiography*

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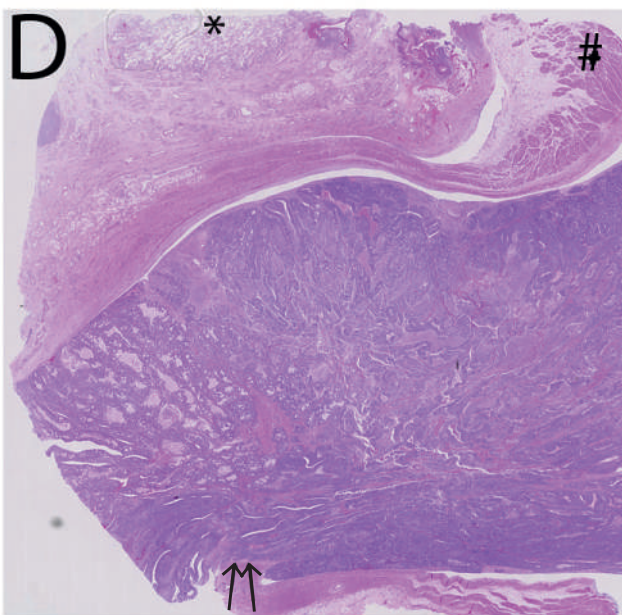
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**B** Computer tomography: a centrally located mass, measuring 7 × 6 × 6 cm, infiltrating the left lower lung vein and left atrium.  
T = tumour.



**C** In toto resection of the tumour bulk including left lung and a part of the left atrium.  
T = tumour.



**D** Histopathological examination of the resected tissue showed a low-differentiated adenocarcinoma.  
\* = remaining lung parenchyma; # = atrial myocardium; arrows indicating tumour infiltrating the endocardium.