A 26-year old male patient presented with a 9 month history of progressive shortness of breath, easy fatigability, abdominal distension, and lower limb oedema. He had large bilateral pleural effusion on the chest X-ray, right-axis deviation and incomplete right bundle branch block on the ECG.

Transthoracic echocardiography and transoesophageal echocardiography (TEE) 2D and 3D showed a large mass within the right atrium, extending into the right ventricle and right ventricular outflow tract (Figure 1). The mass was obstructing the tricuspid valve (TV) resulting in right ventricular inflow stenosis with a mean diastolic gradient of 13 mmHg. Given haemodynamic instability, the patient was referred for urgent surgical excision to relief the TV obstruction.

A large 8.5 × 4.5 cm encapsulated mass originated from the right atrioventricular (AV) groove invading the septal leaflet of the tricuspid valve was excised and TV repair with reconstruction of the TV septal leaflet, annulus, and placement of an annuloplasty ring was performed. Pathology revealed synovial sarcoma. Extensive work-up did not show any other masses.

Supplementary data
Supplementary data are available at European Journal of Echocardiography online.