

## Clinical Image

# Cardiac Tamponade in Multiple Myeloma

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A 62-year-old patient presented at the emergency department with progressive exertional dyspnea, nausea, tachycardia and poor peripheral circulation. No chest pain was present. Medical history mentioned multiple myeloma ISS stage III IgG lambda with unfavorable genetics (loss RB1- and TP53 gene, gain 1q and IGH-FGFR3/t4:14 rearrangement) refractory to first line chemotherapy (bortezomib, cyclophosphamide, dexamethasone) because of a new extramedullary localization near vertebra L5. He recently received a second course of second line chemotherapy (lenalidomide, adriamycin, dexamethasone). An echocardiography showed a large

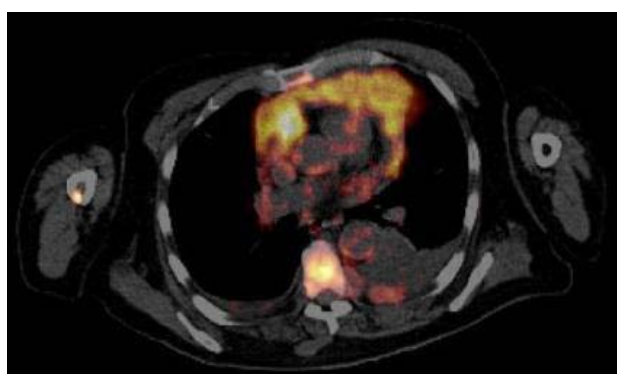


Figure 1: FDG-avid pericardial effusion on PET-CT scan.



Figure 2: CT-thorax with pericardial and pleural effusion.

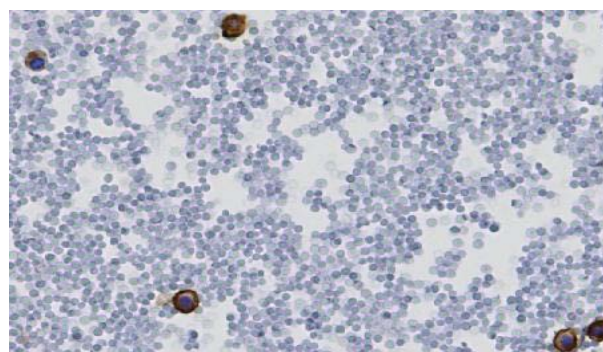


Figure 3: CD138 staining of pericardial fluid.

pericardial effusion for which a pericardiocentesis was performed. FDG-PET/CT showed progression of multiple myeloma with FDG uptake in pericardial effusion, bone lesions and pleural effusion (Figure 1,2). Immunocytochemistry of the bloody pericardial fluid revealed CD138 positive cells (Figure 3). The patient received palliative care and deceased 4 weeks later. Extramedullary disease is more prevalent in genomically defined high risk multiple myeloma and is associated with poor survival. Pericardial involvement is rare.