

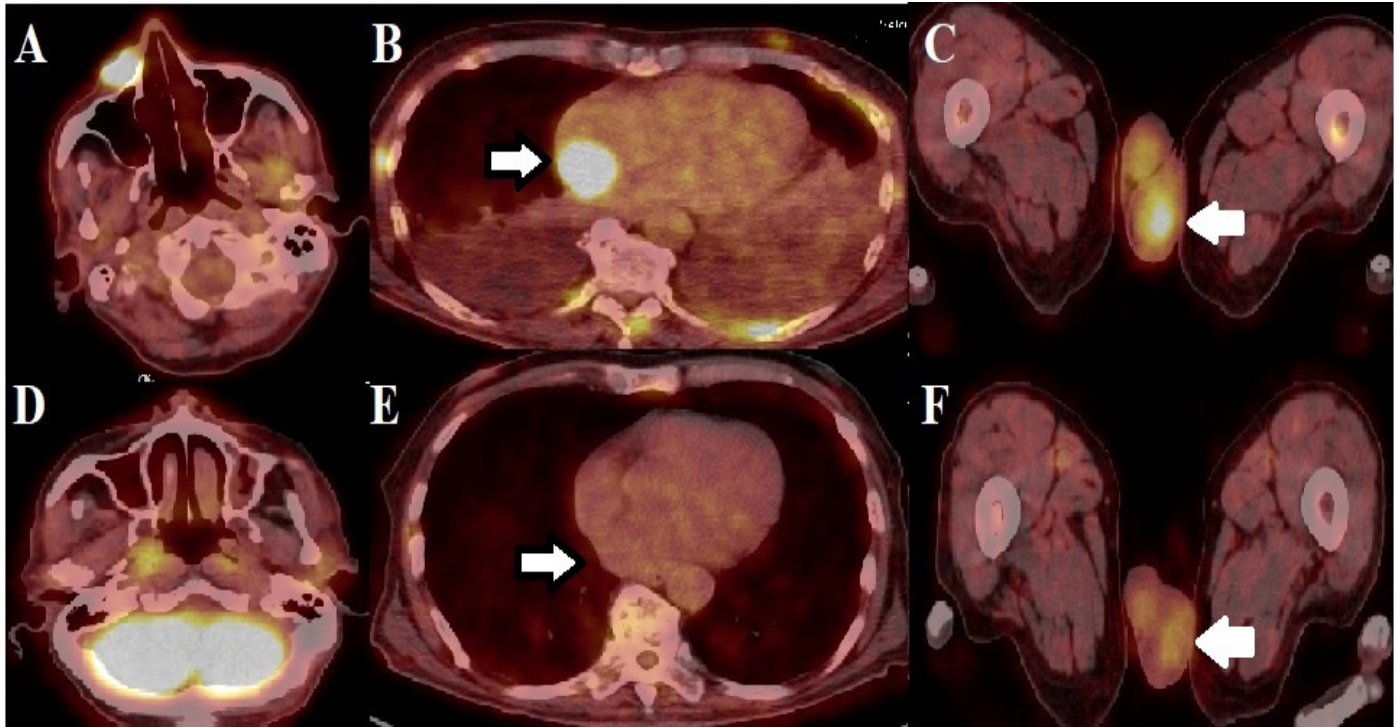
# A Rare Case of Multiple Myeloma with Extramedullary Right Atrium and Testicular Involvement at Initial Diagnosis

Tanıda Ekstramedüller Sağ Atriyum ve Testis Tutulumu Olan Nadir Bir Multipl Miyeloma Olgusu

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**Figure 1.** Axial <sup>18</sup>F-fluorodeoxyglucose (FDG) positron emission tomography/computed tomography fusion images demonstrating focal FDG uptake (A) in the right nasal wall, (B) in the right atrial appendage and right chest wall, and (C) in the left testicle on the pre-treatment scan. Corresponding post-treatment images (D, E, and F) show nearly complete resolution of hypermetabolic foci in the same regions.

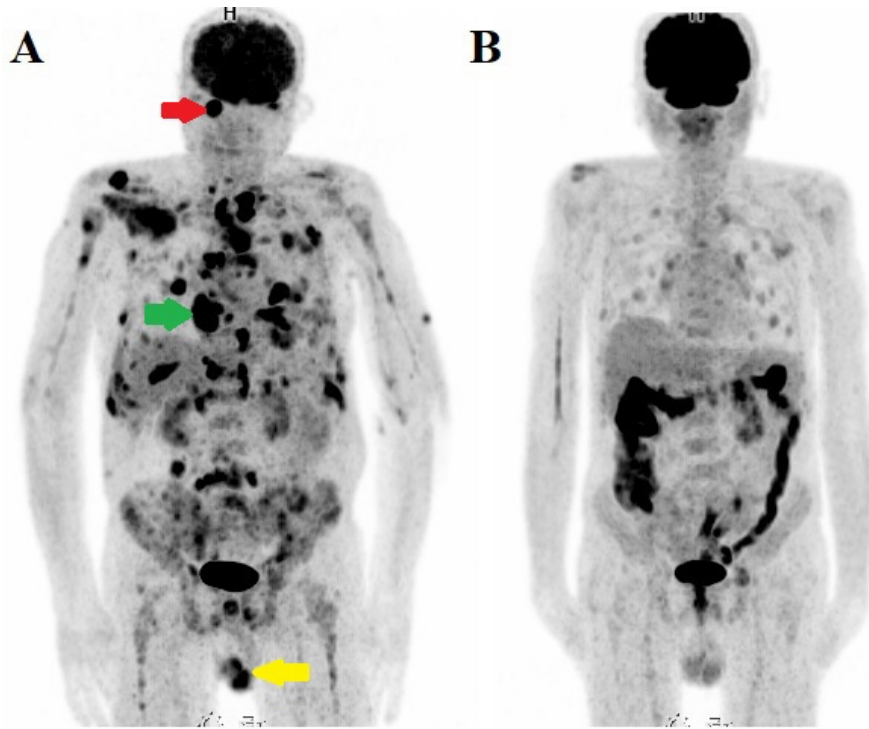


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Received/Geliş tarihi: August 13, 2025  
Accepted/Kabul tarihi: September 11, 2025  
Epub: September 11, 2025



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**Figure 2.** Maximum-intensity projection images from whole-body  $^{18}\text{F}$ -fluorodeoxyglucose positron emission tomography/computed tomography in a patient with multiple myeloma, obtained (A) before treatment and (B) after treatment. Following therapy, there was a marked reduction in overall metabolic activity. The red arrow denotes a soft tissue lesion on the right nasal wall, the green arrow a lesion in the right atrial appendage, and the yellow arrow left testicular involvement. Other sites of involvement included multifocal bone and bone marrow disease.

A 75-year-old male patient presented with weight loss, bilateral shoulder pain, and chest pain. No pathology was detected in the patient's physical examination other than cachexia and widespread rhonchi in the respiratory system examination. Laboratory tests revealed anemia (8.7 g/dL), hypercalcemia (13 mg/dL), and elevated creatinine levels (2 mg/dL). Additionally, total protein was 8.9 g/dL, albumin was 3.2 g/dL, and  $\beta_2$ -microglobulin was 5.6 mg/L. Levels of immunoglobulin classes were in the normal ranges; however, serum-free kappa light chain was 1090 mg/L. The patient was diagnosed with kappa light chain-type multiple myeloma (MM) due to the presence of 80% monoclonal plasma cells in the bone marrow biopsy and CRAB findings (hypercalcemia, renal failure, anemia, and bone disease). Right nasal wall, right atrial appendage in the heart, right chest wall, and left testicle involvement were detected in the patient's  $^{18}\text{F}$ -fluorodeoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) results (Figures 1 and 2). After four cycles of bortezomib, lenalidomide, and dexamethasone chemotherapy, the patient responded and a marked reduction in overall metabolic activity was observed, including involvement of the right atrium and testicles (Figures 1 and 2). The patient is currently being followed with maintenance

lenalidomide after autologous stem cell transplantation.  $^{18}\text{F}$ -FDG PET/CT is well known for its ability to detect extramedullary plasmacytoma (EMP) and assess treatment response in MM [1]. EMP can occur in various extramedullary sites, such as the head and neck region [2]. Although they are uncommon, intracardiac EMPs have poor prognosis and can cause severe symptoms such as heart failure, arrhythmia, pericardial tamponade, and superior vena cava syndrome [3,4]. Recently, Benharrats et al. [5] reported a case with a tumor that primarily presented as a solitary EMP with extensive infiltration into the right ventricle, leading to symptoms such as dyspnea. Similarly, it is quite uncommon for MM patients to have testicular involvement. Doshi et al. [6] reported an interesting case in which the patient relapsed with testicular plasmacytoma 12 years after diagnosis. Although rare, cardiac and testicular plasmacytomas should be considered in patients known to have MM.

**Keywords:** Right atrium, Multiple myeloma, Positron emission tomography/computed tomography, Testicular involvement

**Anahtar Sözcükler:** Sağ atrium, Multipl miyeloma, Pozitron emisyon tomografi/bilgisayarlı tomografi, Testis tutulumu

## Ethics

**Informed Consent:** Written informed consent was obtained from the patient for the publication of any potentially identifiable images or data included in this article.

## Footnotes

### Authorship Contributions

Surgical and Medical Practices: H.Ö., R.Ç.; Concept: R.Ç.; Design: R.Ç.; Data Collection or Processing: H.Ö.; Analysis or Interpretation: R.Ç.; Literature Search: C.S.; Writing: R.Ç.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study received no financial support.

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