**Control Number:** 22

**Abstract Category:** Clinical Case Challenge in Cardio-Oncology

**Title:** Sipuleucel-T Immontherapy-related Cardiomyopathy: a Novel Observation

## ABSTRACT BODY


**Background and Purpose**

Sipuleucel-T is a therapeutic vaccine for metastatic hormone-refractory prostate cancer with rare reports of cardiotoxicity. This case highlights a patient who developed suspected cardiomyopathy (CMO) following sipuleucel-T.

**Case Description and Outcomes**

A 64 year-old male with a medical history of stage IV prostate cancer status post taxotere and enzalutamide in 11/2018 presented to the hospital with dyspnea 15 days after his first infusion of sipuleucel-T in 06/2019. Echocardiogram showed an EF of 35% and GLS of -9%. Cardiac MRI revealed LGE with a mottled mid wall pattern in the distal septum and basal inferolateral walls. Coronary angiogram showed no occlusive CAD. He was treated with guideline-directed medical therapy (GDMT) and completed sipuleucel-T in 07/2019. He presented in 09/2019 with dyspnea and palpitations found to be in heart failure with atrial fibrillation.

**Discussion**

As the etiology of the patient's CMO was not determined, an endomyocardial biopsy was pursued which showed chronic inflammation. Inflammatory cells were highly positive for CD4+ and CD8+ T cells. Cardiac adverse events from sipuleucel-T are extremely rare however our findings raise suspicion for sipuleucel-T-related CMO. The patient was continued on GDMT with close outpatient follow up. Conclusion: In the current era of advancing chemotherapy, a heightened awareness of cardiotoxicity from immune-based treatment is necessary to employ multimodality imaging and consideration of endomyocardial biopsy if unrevealing.


**References**


Anassi E and Ndefo UA. Sipuleucel-T (Provenge) injection: the first immunotherapy agent (vaccine) for hormone-refractory prostate cancer. PT 2011;36(4):197-202

**Image 1**

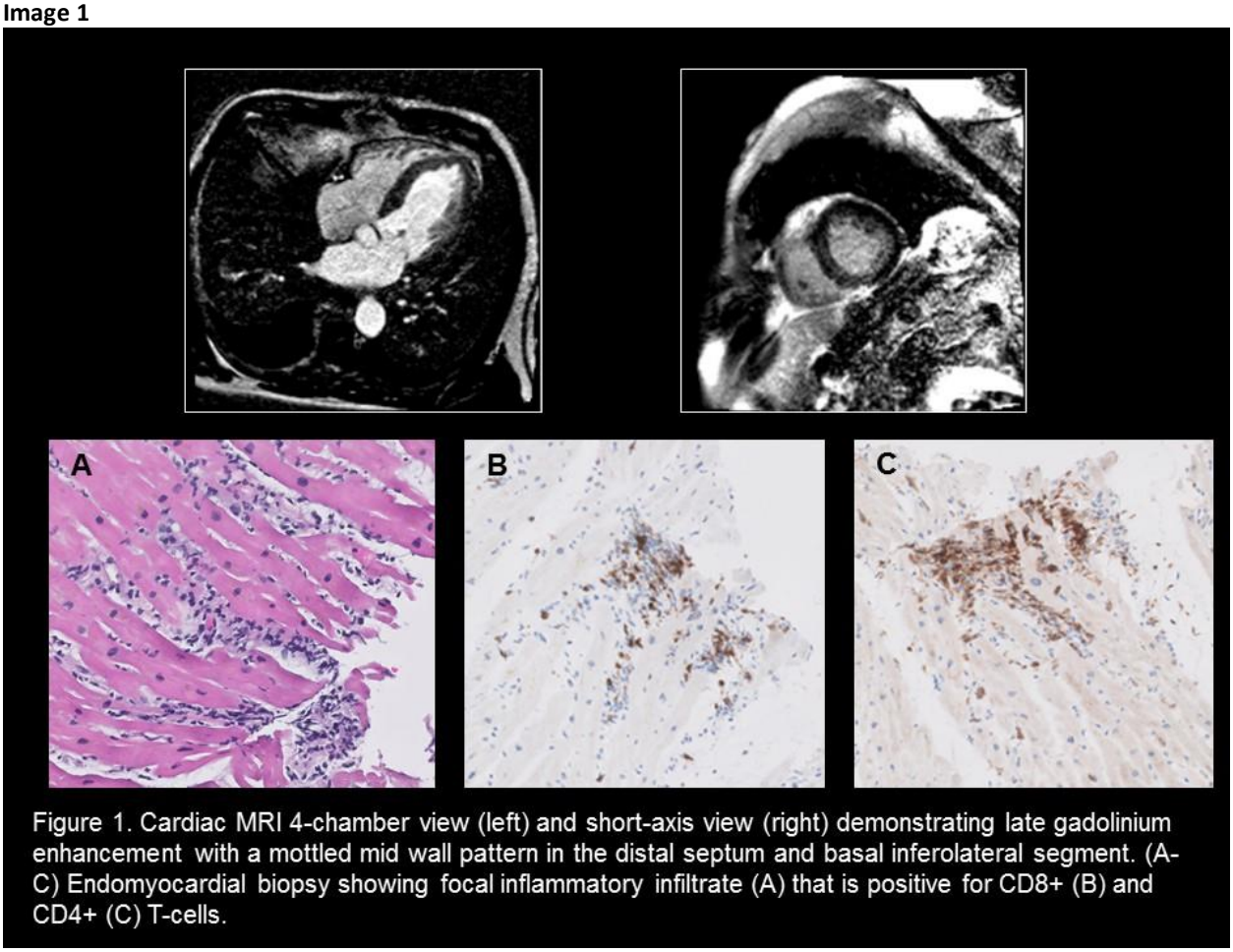


Figure 1. Cardiac MRI 4-chamber view (left) and short-axis view (right) demonstrating late gadolinium enhancement with a mottled mid wall pattern in the distal septum and basal inferolateral segment. (A-C) Endomyocardial biopsy showing focal inflammatory infiltrate (A) that is positive for CD8+ (B) and CD4+ (C) T-cells.