

# Imaging to the Rescue in a Case of Double Trouble

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## Background

Immune checkpoint inhibitors have revolutionized the management of patients with advanced melanoma, however not without potential risks. Here we describe a case of nivolumab-induced myocarditis on a background of newly-diagnosed obstructive coronary artery disease (CAD).

## Case

A 69 year old gentleman, with no prior cardiac history, was referred to the cardio-oncology team having found to have a troponin of 949ng/L, whilst reporting all over body ache, following 3 cycles of Nivolumab for advanced melanoma. He underwent a cardiac magnetic resonance (CMR) scan which showed evidence of previous apical infarction (figure 1). Additionally there was non-ischaemic late gadolinium enhancement in the mid septal wall with normal T1 and T2 mapping values where sampled, consistent with myocarditis (figure 2). He was treated with intravenous steroids and experienced a marked improvement in his symptoms, together with his CK and troponin levels. A Computed coronary angiogram (CTCA) showed severe disease in the left anterior descending artery (LAD) (figure 3). CT fractional flow reserve (CT FFR) was performed confirming severe LAD disease (figure 4). Following discussion at the cardio-oncology meeting he was referred for consideration of a LAD bypass grafting.

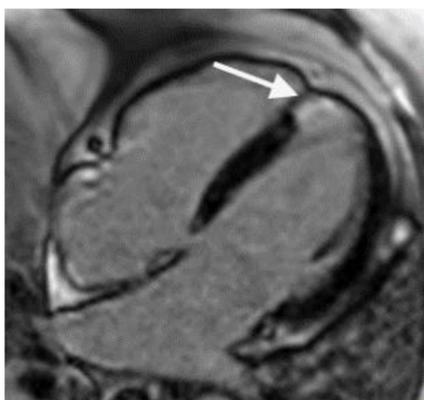


Figure 1

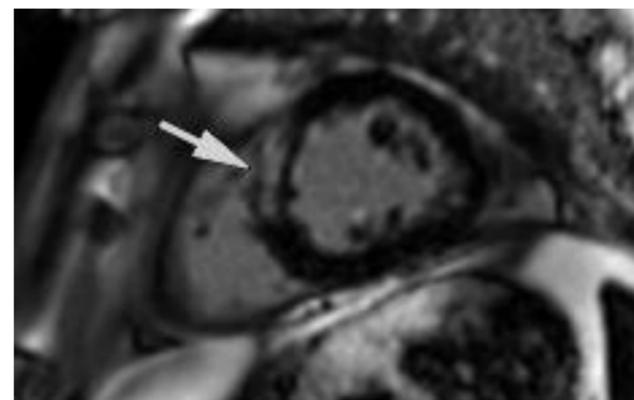


Figure 2



Figure 3

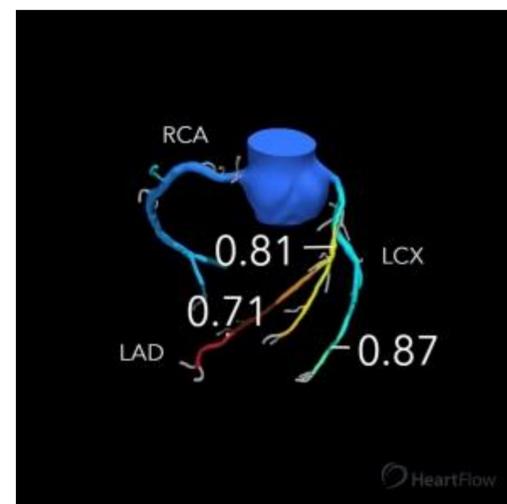


Figure 4

## Discussion

Multiple case reports have described nivolumab-induced myocarditis. However, a systematic approach should be adopted to elicit any co-existing cardiac pathologies which may significantly influence management and cardiac outcomes.