Autoimmune Myocarditis from Pembrolizumab
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Introduction
- The FDA approved pembrolizumab for all adult and pediatric metastatic malignancies with MSI-H or mismatch repair deficient tumors that have progressed on prior treatment.
- We report a patient with locally advanced head and neck cancer on chemotherapy and pembrolizumab, diagnosed with autoimmune myocarditis.

Case Presentation
- 55 year old man with locally aggressive SCC of the tongue, presented with chest pain and nausea.
- Oncologic history: Randomized to Pembrolizumab + carboplatin + 5-Fluorouracil of Merck study MK-3475-048. Completed 17 cycles of pembrolizumab (2 weeks prior) and 6 cycles of chemotherapy.
- EKG with ST elevation in the precordial leads. Troponin on arrival was 4.22, subsequently down-trended.
- Left heart catheterization with patent coronary arteries.

Conclusions
- This case report highlights a rare, but severe, side effect of immunotherapy.
- Early recognition and intervention is essential, as side effects from immunotherapy could be reversible. In this case, there was functional cardiac improvement following early recognition of autoimmune myocarditis and treatment with stress dose steroids.

Case reports of serious adverse effects from these therapies:
- Fatal myocarditis with combination ipilimumab and nivolumab for melanoma⁴ and nivolumab alone for lung cancer³,⁷
- 8 case study of myocarditis/heart failure with ipilimumab⁴
- A case report of acute heart failure due to autoimmune myocarditis with pembrolizumab in a patient with metastatic melanoma⁶

References