

# ➤ AI Solutions to Improve Patient Care

Friday May 6, 2022 at 12:30-13:30 (BST)



Prof. Sven Plein



Prof. James Moon



Prof. Tim Leiner

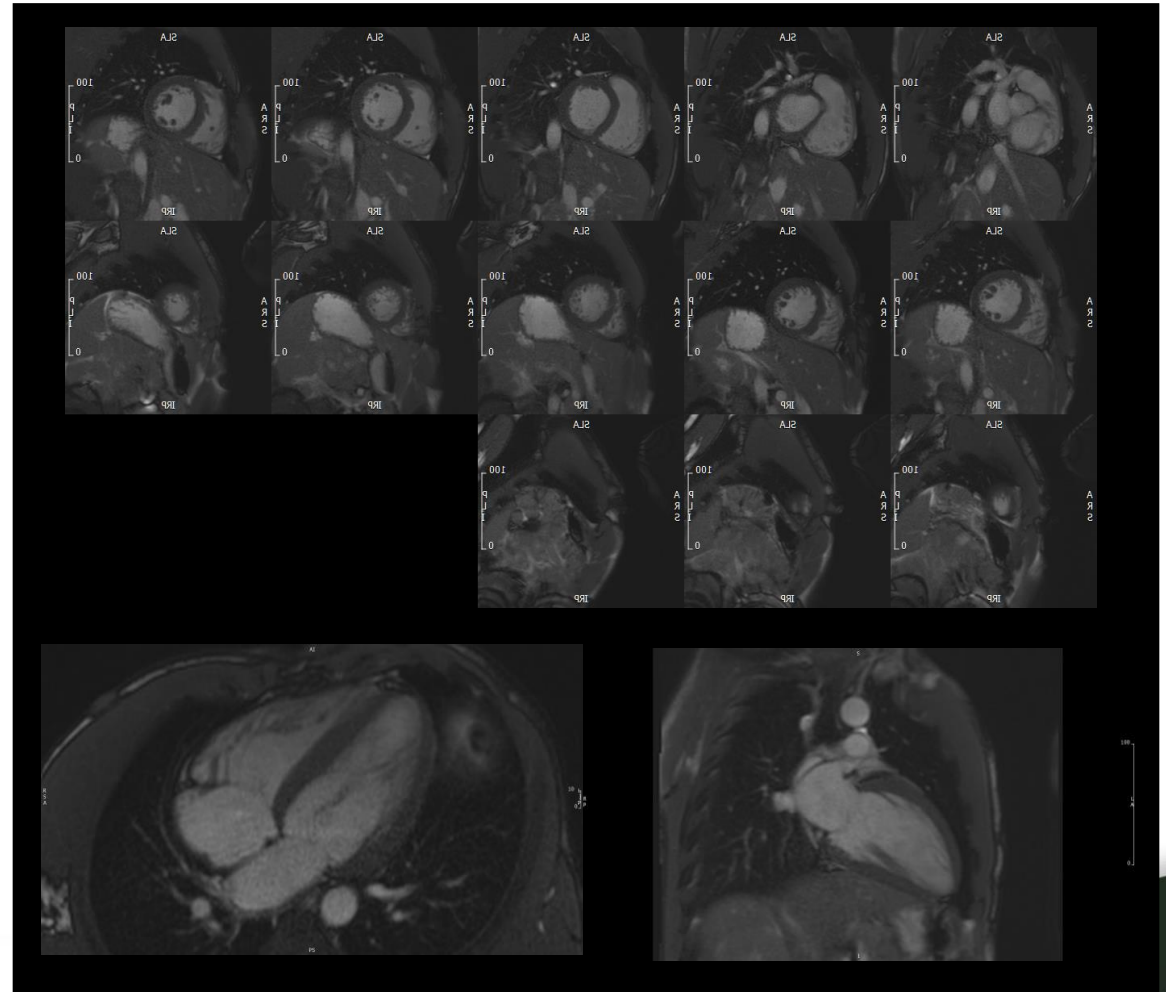


Dr. Nicole Seiberlich

# Case Example- Prof. James Moon

## Indication:

- 20 something year old professional footballer
- Previous history of syncope
- Late R wave transition on ECG
- CMR to rule out cardiomyopathy



# Results

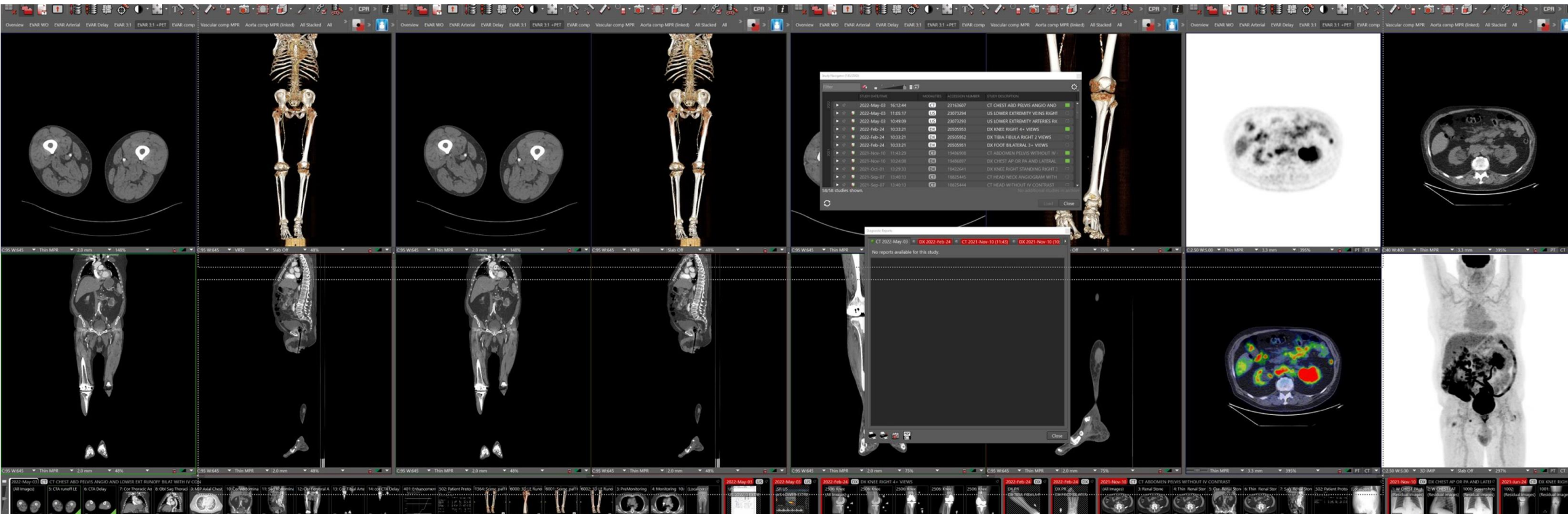
- **Scan comments:** HR 63bpm (sinus).
- **Extra-cardiac anatomy:** Athletic habitus with low body fat. Normal aorta.
- **Left ventricle:** Mild LV dilatation. No LVH. Normal function. No regional wall motion abnormalities
- **Right ventricle:** High normal size, no RVH, normal function (EF 59%, TAPSE 17mm).
- **Atria:** Normal atrial size (LA 23cm<sup>2</sup>, 12cm<sup>2</sup>/m<sup>2</sup>; RA 25cm<sup>2</sup>, 13cm<sup>2</sup>/m<sup>2</sup>).
- **Valves:** Normal. Tricuspid aortic valve.
- **Tissue Characterization:** No fat. Normal myocardial T1 at 1019ms (NR: 950 – 1060ms at 1.5T). No LGE (a probable healed muscular VSD – not rare, see the 2 chamber)

BSA(m2): 1.94; Height(cm): 176; Weight(kg): 77					
<b>LEFT VENTRICLE</b>					
EDV(ml)_____	212	Normal: 167 (126-208)	EDVi(ml/m2)___	109	Normal: 86 (68-103)
ESV(ml)_____	79	Normal: 58 (35-80)	ESVi(ml/m2)___	41	Normal: 30 (19-41)
SV(ml)_____	132	Normal: 109 (81-137)	SVi(ml/m2)___	68	Normal: 56 (44-68)
EF(%)_____	63	Normal: 65 (57-74)			
Mass(g)_____	163	Normal: 148 (109-186)	Mass-i(g/m2)___	84	Normal: 76 (59-93)
<b>RIGHT VENTRICLE</b>					
EDV(ml)_____	209	Normal: 177 (127-227)	EDVi(ml/m2)___	108	Normal: 91 (68-114)
ESV(ml)_____	85	Normal: 68 (38-98)	ESVi(ml/m2)___	44	Normal: 35 (21-50)
SV(ml)_____	124	Normal: 108 (74-143)	SVi(ml/m2)___	64	Normal: 56 (40-72)
EF(%)_____	59	Normal: 61 (48-74)			
Mass(g)_____		Normal: 70 (42-99)	Mass-i(g/m2)___		Normal: 36 (23-50)
Normal ranges (absolute and BSA normalised quoted is that for Caucasian Males 20 - 29 Years old					

# Conclusion- Athletic habitus

- Normal aorta
- Mild LV dilatation, no LVH, normal function. High normal RV size (in proportion)
- No infarction, no focal fibrosis (probably a small healed VSD – not rare and of no known significance)
- All changes are concordant with a degree of athletic adaptation. No imaging features of cardiomyopathy

# Leap into the future



John Q. Doe  
12345678

