

events.  $^{18}\text{F}$ -NaF PET-CT holds promise as a non-invasive marker of disease severity and future risk in patients with acute aortic syndrome.

**Conflict of Interest** None

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## MULTI-MODALITY IMAGING IN SURVIVORS OF COVID-19

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**Background** Widespread abnormalities of the myocardium have been reported in patients with COVID-19. However, these patients often have substantial co-morbidities and it is essential to understand whether cardiac abnormalities represent pre-existing disease or are the consequence of COVID-19.

**Objective** To determine the contribution and cardiac impact of co-morbidities in patients who have recovered from COVID-19.

**Methods** In a prospective observational study, adult patients hospitalized with confirmed COVID-19 were recruited from the Edinburgh Heart Centre between May and November 2020 and compared to healthy and co-morbidity-matched volunteers. Patients underwent gadolinium and manganese-enhanced magnetic resonance imaging and coronary computed tomography angiography.

**Results** Twenty-three patients ( $54 \pm 11$  years, 20 male) who recovered from COVID-19 were recruited. Half ( $n=11$ , 48%) required admission to the intensive care unit and a third ( $n=7$ , 31%) received non-invasive or invasive ventilation. Patients had a high prevalence of known cardiovascular disease

( $n=18$ , 78%), associated risk factors ( $n=11$ , 45%) and coronary artery disease ( $n=8$ , 35%). Compared with younger healthy volunteers ( $n=10$ ), myocardial native T1 values ( $1202 \pm 25$  versus  $1162 \pm 27$  ms,  $P=0.008$ , **figure 1**) and extracellular volume fraction ( $31.9 \pm 1.7$  versus  $29.8 \pm 0.5$  %,  $P=0.001$ , **figure 1**) were higher with no differences in manganese uptake. Compared to co-morbidity-matched volunteers ( $n=20$ ), there were no differences in native T1 values ( $1202 \pm 25$  versus  $1196 \pm 39$  ms,  $P=0.61$ , **figure 1**), extracellular volume fraction ( $31.9 \pm 1.7$  versus  $31.0 \pm 0.5$  %,  $P=0.11$ ), presence of late gadolinium enhancement or manganese uptake. These findings remained irrespective of COVID-19 disease severity, presence of concomitant myocardial injury or coronary artery disease.

**Conclusions** Patients who have recovered following hospitalization with COVID-19 have no evidence of a major excess in myocardial injury or dysfunction compared to co-morbidity-matched volunteers. The presence of co-morbidities likely explains many of the previously reported myocardial abnormalities.

**Conflict of Interest** None

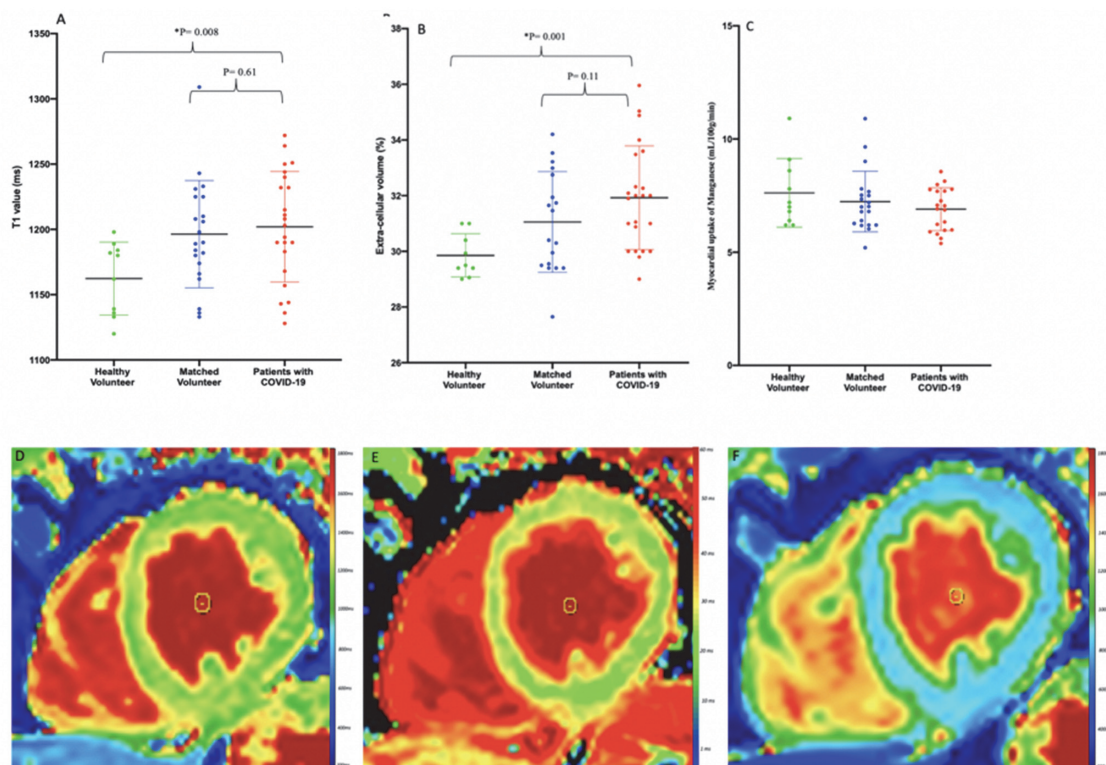
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## FIRST IN VIVO PRETARGETED PET IMAGING OF ATHEROSCLEROSIS WITH ANTIBODIES AGAINST FORMS OF MODIFIED LIPOPROTEINS

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Atherosclerosis is a cardiovascular disease initiated by the deposition of Low Density Proteins (LDL) within the intima and



Abstract 162 Figure 1