CARDIAC FINDINGS ON BODY CT: A REVIEW OF IMPACTS OF THE COVID-19 PANDEMIC ON THE USE OF CARDIAC MRI (CMR) AND THE ECG IN ACUTE CORONARY SYNDROMES WITH NON-OBSTRUCTIVE CORONARY ARTERIES

Objective
Patients presenting with acute coronary syndromes with non-obstructive coronary arteries are increasingly prevalent and challenge clinicians. Currently, diagnosis is aided by cardiac magnetic resonance imaging (CMR). This prospective single centre cohort study aimed to determine whether location of ECG changes correlated with the location of myocardial oedema and fibrosis on CMR, and whether the size of ECG changes correlated with the amount of oedema or fibrosis present.

Methods
This prospective study included 71 participants and 27 ST-elevation myocardial infarction (STEMI) patients. ECGs were taken on arrival. A standard CMR protocol was performed during the index admission including T2-weighted short tau-inversion recovery and late gadolinium enhanced imaging.

Results
Median age 59 (18); 42% female. Diagnoses on CMR included 56% MI, 15% myocarditis, 11% takotsubo cardiomyopathy, 2% other cardiomyopathies, 16% non-specific. On multivariable regression, both QTc and amount of ST-depression predicted oedema mass on CMR in patients with ACS and non-obstructive coronary arteries (coefficient 0.11; CI 0.06 – 0.16; p=0.02; coefficient 0.21; CI 0.19 – 0.23; p=0.04). The anatomical location of oedema or fibrosis on CMR did not predict the location of ECG changes except for ST elevation and gadolinium position in STEMI patients (p=0.02).

Conclusion
Increasing QTc interval and amount of ST depression predict mass of myocardial oedema on CMR in patients with ACS and non-obstructive coronary arteries, while location of myocardial oedema and fibrosis on CMR do not predict location of ST changes seen on the ECG.

Abstracts

P12 CARDIAC FINDINGS ON BODY CT: A REVIEW OF 275,000 CT REPORTS OVER THE PAST 14 YEARS

Samer Alabed, Mahan Salehi, Dalia Mohammad, Lorraine Ochieng, Ahmed Maiter, Kitti Devkidi, Chris Johns, Catherine Hill, Smitha Rajaram, Douglas Tuner, Steve Thomas, Andy J Swift, Kavita Karanasaagarar. Sheffield Teaching Hospitals

Objective
Cardiac pathologies are increasingly identified on general body computed tomography (CT). This trend is driven by advancements in CT techniques improving non-gated image quality combined with the vast increase in CT imaging over recent years. We aimed to assess reported cardiac findings on general body CT.

Methods
The reports of all CT scans between January 2008 and December 2021 were obtained from the radiology information system at Sheffield Teaching Hospitals. The radiology reports of any studies that included the thorax and abdomen were analysed for terms that indicate findings relevant to the coronary arteries, heart chambers, valves or pericardium. Cardiac specific CT was excluded. In patients with multiple scans, the reports with the largest number of cardiac findings per patient per year was analysed.

Results
A total of 274,246 body CT reports were analysed, including 90,882 CTs of the abdomen and 183,364 CTs including the thorax. Between 2008 and 2021, the rate of abdominal CT scans with reported cardiac findings increased from 5% to 10%, while the rate of positive thorax CT increased from 23% to 38%. Overall, the most commonly reported findings on abdominal CTs were chamber abnormalities such as cardiomegaly (44%) and coronary artery calcifications (39%). Almost 61% of positive thorax CTs mentioned coronary calcification and 56% noted chamber abnormalities.

Conclusion
Over the past 14 years, general radiologists have increasingly detected cardiac findings on body CT. More than a third of thorax CTs and one in ten of abdominal CTs showed cardiac findings, highlighting the heart as an important review area on body CT.

P13 CARDIAC MRI (CMR) AND THE ECG IN ACUTE CORONARY SYNDROMES WITH NON-OBSTRUCTIVE CORONARY ARTERIES

1Chloe Thomas, 2Matthew Williams, 3Chiara Bucciarelli-Ducci. 1University of Bristol Medical School, UK; 2University Hospital Bristol and Weston, UK; 3Royal Brompton and Harefield NHS Trust, UK

Objective
Patients presenting with acute coronary syndromes with non-obstructive coronary arteries are increasingly