

and CMRI RV ejection fraction (48.31% +/- 10.54 vs 45.75% +/- 11.22). Dilated RV on 2DE was seen in n=9 (56%). Of these, n=7 (78%) were reclassified to normal RV size based on 3DE and CMRI. The addition of 3DE to 2DE increased the specificity, as compared to CMRI, of detecting a dilated RV from 50% to 100%.

Conclusion :

These findings show 3DE RV volumes are highly correlated and consistently smaller than CMRI RV volumes. The addition of 3DE to 2DE improves the specificity of detecting a dilated RV. All patients with RV dilatation on 3DE were found to have RV dilatation on CMRI, a specificity of 100%.

Conflict of Interest Nil

188 ABSTRACT WITHDRAWN

189 THE NATIONAL ECHOCARDIOGRAPHY DATABASE OF THE UNITED KINGDOM (NED-UK) PILOT STUDY

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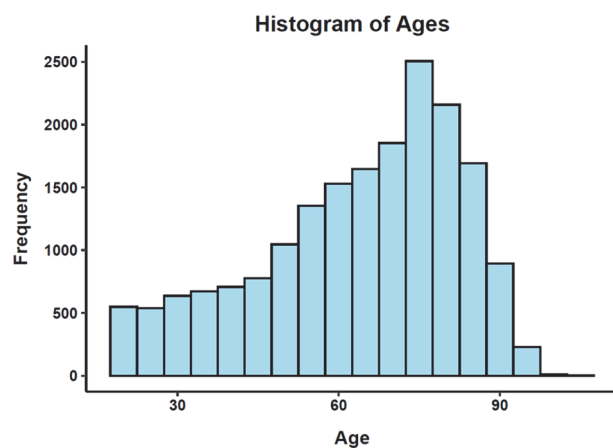
Background & Aim Large curated datasets of clinical echocardiographic measurements with associated interpretation are scarce. Due to standardised echocardiographic protocols and diverse patient populations, the UK offers a unique opportunity to link echocardiographic data to study patient outcomes

through nationwide records of primary care visits, hospitalisations, and mortality.

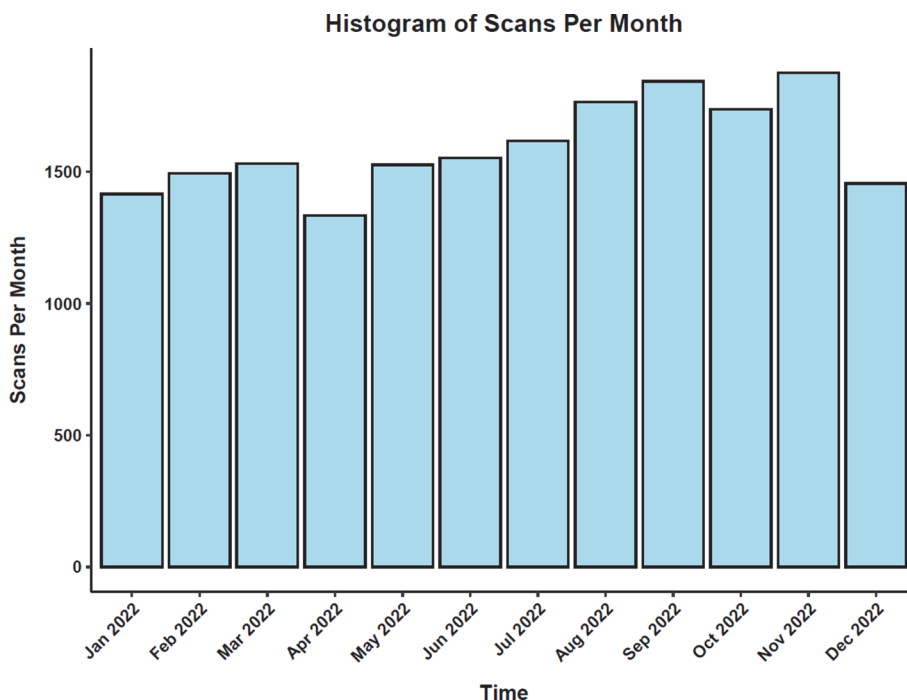
Our aims were to 1) Develop a toolkit for the extraction and anonymisation of clinical echocardiographic data and 2) Implement the toolkit in the first NHS Trust to demonstrate feasibility.

Methods The data were collected under the ‘EchoVision’ project – an expanding resource of echocardiographic data (UK HRA approval 251473). Customisation of database queries were undertaken by Philips (Koninklijke Philips N.V, Netherlands) staff with input from the first author.

Data (measurements, standardised interpretive phrases and free-text comments) from consecutive clinical echocardiograms, undertaken at an NHS Trust and reported upon within Philips Intellispace Cardiovascular system, were extracted using the built-in ‘Advanced Analytics’ functionality in date-ranged portions using the customised queries.



Abstract 189 Figure 1 Histogram of ages of n=18809 patients with an age on their echocardiogram report and age >18 years



Abstract 189 Figure 2 Histogram showing the number of scans performed per calendar month in the NHS Trust whose data were extracted and analysed for the NED-UK pilot

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Individual extract files (.csv) were formatted in Microsoft Excel using a 'Visual Basic for Applications' script to get a rectangular dataset, before being merged and processed in RStudio (v2023.09.1) using R (v4.2.1).

Scans from patients with an age <18 years or missing age were excluded. After creating the unique study identifier for each scan via a one-way hash function (<https://www.quickhash-gui.org/>), protected health information was removed. Subsequently, the data were transferred to the research team, and stored on secure servers with password protected access by the study research staff.

Results Standard operating procedures and training materials were written for the use of Philips software and for data anonymisation (the 'toolkit').

Data from n=19100 echocardiograms performed in 2022 were extracted, with n=291 exclusions leaving n=18809 scans. The median age was 68 [interquartile range 26] years – the age distribution is shown in figure 1. Female patients comprised n=8324 scans (44.3%), males n=10108 (53.7%) and n=377 (2.0%) had their sex unrecorded.

'Transthoracic' scan type represented n=18475 (98.2%), with the remainder being transoesophageal (n=190), stress (n=82), bubble (n=58), and intracardiac (n=4). The number of echocardiograms performed per month varied from n=1314 in April to n=1841 in November (figure 2).

Conclusions The NED-UK pilot study demonstrates the ability to develop a functional toolkit for the extraction and anonymisation of clinical echocardiographic report data and the feasibility of large-scale extraction of echocardiographic data. Future aims should be focused on expanding NED-UK to become a multi-site multi-vendor resource for clinical research with the potential for predicting cardiovascular risk across diverse patient populations.

Conflict of Interest None

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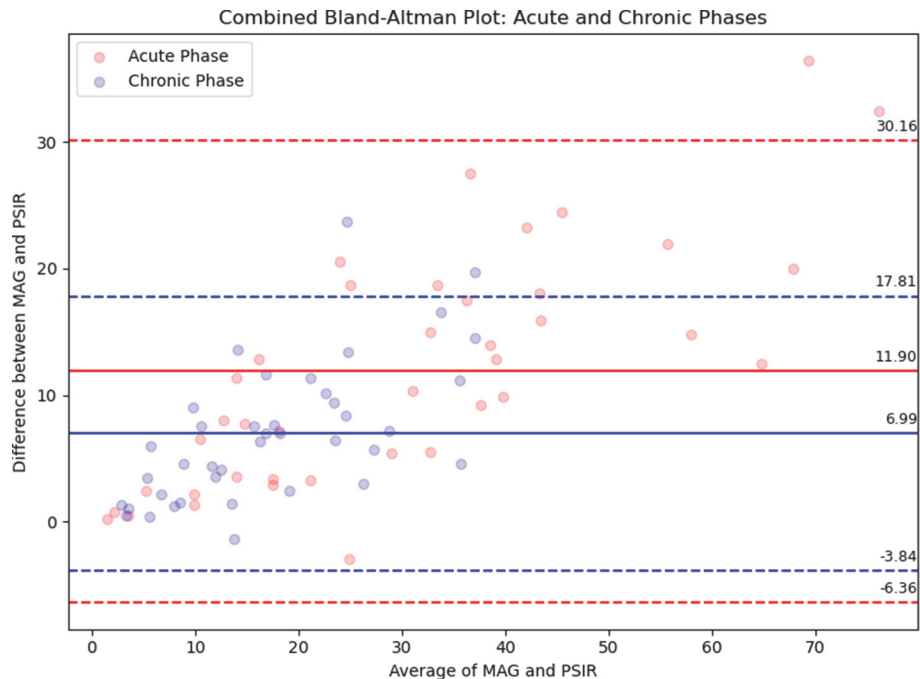
QUANTIFICATION OF MYOCARDIAL INFARCTION BY CARDIOVASCULAR MAGNETIC RESONANCE LATE GADOLINIUM ENHANCEMENT IMAGING: COMPARISON OF MAGNITUDE-BASED VERSUS PHASE-SENSITIVE INVERSION RECOVERY

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Introduction Late gadolinium enhancement (LGE) imaging with cardiovascular magnetic resonance (CMR) is considered the non-invasive gold standard for identifying and quantifying myocardial scar. The diagnostic and prognostic importance of myocardial scar quantification by CMR has been demonstrated in a variety of cardiac pathologies. With CMR imaging, phase-sensitive inversion recovery (PSIR) techniques have been integrated alongside traditional magnitude-based LGE (MAG) protocols in order to provide resilience to inversion time (TI) variations. PSIR techniques effectively mitigate against the challenges of inadequate myocardial signal nulling. Traditionally, MAG and PSIR techniques have been used interchangeably in clinical settings. However, the comparative accuracy in myocardial scar quantification of these techniques remains uncertain. The aim of this study was to compare scar quantification using both methods in a population with ischaemic heart disease.

Methods In a prospective study involving post-reperfusion ST elevation myocardial infarction (STEMI) patients, CMR was performed at acute (4–5 days post-MI) and chronic (4 months



Abstract 190 Figure 1 Bland-Altman plot comparing MAG and PSIR measurements for Acute (red) and Chronic (blue) phases, with mean differences (solid lines) and ± 1.96 SD limits of agreement (dashed lines)