

epicardial borders were manually drawn and automatically tracked through the cardiac cycle.

Results As shown in the Table, circumferential strain (E_{cc}) was the most reproducible, followed by longitudinal strain (E_{LL}) and radial strain (E_{rr}). FT-CMR analysis time was 3 ± 1 mins.

Conclusions FT-CMR is highly reproducible within operators, particularly with respect to E_{cc} . This, together with a short time required for analysis, enhances the potential of this imaging modality in clinical practice.

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**THE REPRODUCIBILITY AND ANALYSIS TIME OF
CARDIAC MAGNETIC RESONANCE FEATURE
TRACKING: POTENTIAL FOR CLINICAL APPLICATION**

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Background Myocardial strain imaging has the potential for clinical application in the detection of pre-clinical disease, stress induced myocardial dysfunction and dyssynchrony. Feature-tracking cardiovascular magnetic resonance (FT-CMR) uses routine CMR imaging (steady-state free-precession imaging) to calculate myocardial strain.

Methods Healthy volunteers (n=20, age: 42 ± 13 years, 11 (55%) male) underwent a standard protocol CMR. Endocardial and

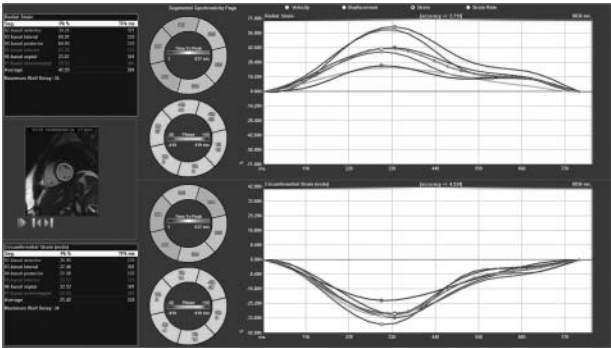


Figure 1

Table 1

Variable	Intra-observer variability CV (%)*	Intra-observer variability ICC**	Inter-observer variability CV (%)*	Inter-observer variability ICC**
Err	8.90	0.85 (0.66 to 0.94)	14.67	0.55 (0.11 to 0.81)
Ecc	3.55	0.96 (0.90 to 0.99)	4.95	0.93 (0.81 to 0.97)
ELL	7.68	0.88 (0.72 to 0.96)	5.48	0.98 (0.94 to 0.99)

*, coefficient of variation; **, ICC (95% CI).