

Supplementary Materials

Appendix S1

Technical parameters of quantitative cardiac magnetic resonance sequences:

T1 mapping and ECV

For myocardial T1 mapping, a standard, electrocardiogram synchronized 3(3)3(3)5 modified Look-Locker inversion recovery (MOLLI) acquisition scheme¹⁷ was applied using the following parameters: time of repetition 2.2 ms, time of echo 1.02 ms, flip angle 35°, parallel imaging factor 2, acquired voxel size 1.97 x 2 × 10 mm, reconstructed voxel size 1.17 × 1.17 x 10 mm, scan duration/breath hold 15.0 s, 3 slices. Post-contrast T1 maps were performed 10 minutes after contrast injection in the same positions as pre-contrast examinations using the same imaging technique.

T2 mapping

For myocardial T2 mapping, a six-echo gradient spin echo (GraSE) sequence¹⁶ was used with application of the following parameters: time of repetition 1 RR interval, time of echo 23.6/ΔTE = 11.8 (6Ec), flip angle 90°, parallel imaging factor 2, acquired voxel size 1.97 × 2.03 × 10 mm, reconstructed voxel size 1.03 × 1.03 x 10 mm, scan duration/breath hold 14.0 s, 3 slices.

Table S1. Exemplary sequence parameters of the cardiac magnetic resonance scan protocol.

Parameter	SSFP Cine (SA)	Black-blood T2 STIR (SA)	LGE (SA)
Field of view (mm)	350 x 350	350 x 350	360 x 311
TR (ms) TE (ms)	2.8 1.38	2 RR intervals 70	3.5 1.71
Flip angle (°)	60	90	15
Voxel size (mm) acquired, reconstructed	1.79 x 2 x 8 0.99 x 0.99 x 8	1.51 x 2.43 x 8 0.91 x 0.91 x 8	1.65 x 1.88 x 10 0.9 x 0.9 x 5
Parallel imaging factor	3	2.5	2
Scan duration	1 min 24 s	1 min 36 s	27 s
Scan time/ breath-hold	13 s	8 s	12 s
Cardiac phases per RR interval Shot duration (ms)	40 -	- 134	- 151

SSFP=steady-state free precession, STIR=short-tau inversion recovery, LGE=late gadolinium enhancement, SA=short axis view, TR=time of repetition, TE=time to echo.