

SUPPLEMENTAL MATERIAL

Supplemental Material I:

Dataset

CINE images were obtained using a 3-T MRI system (Verio, Siemens, Erlangen, Germany). Retrospectively gated balanced steady-state free-precession nonenhanced CINE images with 25 reconstructed phases were acquired (repetition time/echo time, 3.36 msec/1.47 msec; field of view, 286 × 340 mm²; matrix, 216 × 256; average temporal resolution, 40 msec). T1 maps were acquired using the Shortened Modified Look-Locker Inversion recovery protocol. LGE was performed in the same orientations and with the same section thickness using a two-dimensional segmented, fast low-angle shot, phase-sensitive inversion recovery sequence 10 min after intravenous injection of a gadolinium-based contrast agent (Magnevist, 0.2 mmol/kg; Bayer Healthcare, Berlin, Germany).

Supplemental Material II:

Experimental results

Table 1: Our CMKDM also achieves the best overall performance *at the region level*, focusing on myocardial infarction areas. These are the detailed experimental results.

Experiments	Methods	SSIM↑	PSNR↑
Comparative methods	PSCGAN	0.71	20.32
	VNE	0.68	17.73
	Pix2Pix	0.60	18.59
	BicycleGAN	0.57	17.37
	Res-Vit	0.62	19.28
Ablation Study	Only cine	0.61	21.23
	Only t1	0.65	18.52
	Data-drive CINE	0.70	20.64
	Data-drive T1	0.71	22.12
	Prue data	0.66	19.42
	CMKDM	0.74	24.84

Table 2: The clinical quantitative results are a correlation coefficient (R) of 0.91 and an intraclass correlation coefficient (ICC) of 0.95 for scar size (P<0.001), as well as an R of 0.85 and an ICC of 0.90 for transmuralty (P<0.001), demonstrating a high consistency between the synthesized myocardial scars and LGE images.

	P-value	R	ICC
Scar size	<0.001	0.91	0.95
Transmuralty	<0.001	0.85	0.90