APPENDIX E1. Expanded statistical analysis methods and results.

Analysis of covariance using the rank transformation[11] was performed to adjust for covariates. In the ranked analysis of covariance models, candidate covariates included the 4 levels of stratification at randomization (known coronary disease as binary, time of day of presentation 6 AM to 3 PM or 3 PM to 6 AM), age (continuous and binary as ≥65 years), TIMI risk score, sex, race, confirmed previous heart failure, confirmed previous MI, confirmed previous coronary revascularization, and chest pain at ED arrival. First, interactions between treatment group and each covariate were examined. One significant interaction was present between aged 65 years or older and treatment group but not included in the final model because its effect had a quantitative effect only and complicated the interpretation of the main effects of the model. The 4 stratification levels were then entered into the models. Confounding was evaluated by comparing the effect of treatment group between the full and reduced models. In the full model, the observation unit–cardiac MRI rank reduction was 18.5 (*P*<.001); in the reduced model, the observation unit–cardiac MRI rank reduction was 22.4 (*P*<.001). The full model is displayed in Table E3. For hypothesis-generation purposes, post hoc subgroup analyses were conducted and reported in Table E4.

Table E1. Typical cardiac imaging parameters.

Component	Pulse Sequence	Orientation	Matrix	FOV, mm	Slice Thickness, mm	Flip Angle, degrees	Bandwidth, Hz/Pixel	TE, ms	TR, ms
Resting wall motion	trueFISP	2-, 3-, And 4-chamber and 3 LV short-axis views	192×156	340	8	75	930	1	≈47
T2 dark blood (body coil)	IR turboSE 650 ms TI	3 LV short-axis views	192×140	360	7	60	180	87	1 RR
Contrast injection (gadopentetate dimeglumine 0.1 mmol/kg) and stress agent infusion (adenosine)									
Stress perfusion	Turbo-FLASH	3 LV short-axis views	192×144	360	8	12	650	1	≈190
Contrast injection (gadopentetate dimeglumine 0.1 mmol/kg)									
Rest perfusion	Turbo-FLASH	3 LV short-axis views	192×144	360	8	12	650	1	≈190
Delayed enhancement	FLASH IR 300-ms TI	2-, 3-, And 4-chamber and 10 short-axis views	192×140	320	8	25	1,530	2	2 RR

FOV, Field of view; *TE*, echo time; *TR*, pulse repetition time; *LV*, left ventricle; *IR*, inversion recovery; *TI*, inversion time; *trueFISP*, True fast imaging with steady state precession; *SE*, spin echo; *FLASH*, fast low angle shot.

Table E2. Imaging results for OU-CMR participants.*

	CMR Results		
	Inducible Ischemia	No Inducible Ischemia	
ACS	1	0	1
No ACS	5	43	48
Total	6	43	49

*Sensitivity 100% (95% CI 3% to 100%); specificity 90% (95% CI 77% to 97%).
Stress agent: adenosine 43 of 49; dobutamine 6 of 49.

Table E3. Median cost among subgroups and adjusted statistical significance from the full model.

Subgroup Name	Number of Participants	Median Cost, %	Adjusted P Value
Treatment group			.003
Inpatient care	53	2,680	
OU-CMR	57	2,062	
Age, y			.93
≥65	18	2,607	
<65	92	2,383	
Age, y (continuous)	110	N/A	.50
TIMI risk score (continuous)	110	N/A	.69
Sex			.37
Male	55	2,559	
Female	55	2,250	
Race			.18
Caucasian	75	2,551	
Other	35	2,243	
Time of presentation			.33
6 AM–3 PM	90	2,388	
3 PM–6 AM	20	2,507	
Established CAD			.58
Established CAD	28	2,606	
No established CAD	82	2,342	
Previous heart failure (confirmed)			.04
Previous heart failure	5	3,159	
No previous heart failure	105	2,357	
Previous MI (confirmed)			.46
Previous MI	22	2,644	
No previous MI	88	2,310	
Previous revascularization (confirmed)			.26
Previous revascularization	24	2,606	
No previous revascularization	86	2,342	
Chest pain at ED arrival			.03
Chest pain	76	2,635	
No chest pain	34	2,088	

Table E4. Post hoc subgroup analyses of median cost by subgroup.

Subgroup Name	Conventional Care		OU-CMR		P Value
	No.	Cost, $	No.	Cost, $	
Age, y					
≥65	10	2,661	8	2,114	.003
<65	47	3,250	45	1,985	.014
Sex					
Male	30	2,742	25	2,150	.12
Female	27	2,662	28	2,043	<.001
Race					
Caucasian	40	2,799	35	2,062	.002
Other	17	2,636	18	2,090	.092
Time of presentation					
6 AM–3 PM	46	2,674	44	2,057	.003
3 PM–6 AM	11	2,707	9	2,129	.047
Established CAD					
Established CAD	16	3,212	12	2,079	.030
No established CAD	41	2,661	41	2,062	.007
Previous heart failure (confirmed)					
Previous heart failure	3	2,661	2	5,296	.79
No previous heart failure	54	2,693	51	2,051	<.001
Previous revascularization (confirmed)					
Previous revascularization	15	3,068	9	2,044	.023
No previous revascularization	42	2,664	44	2,088	.006