ACCSCIENCE PUBLISHING

Advances in Radiotherapy & Nuclear Medicine

ORIGINAL RESEARCH ARTICLE

Association between ^{82}Rb positron emission tomography-derived regional myocardial blood flow, severity of angiographic coronary artery stenosis, and mortality in patients with chest pain

Supplementary Files

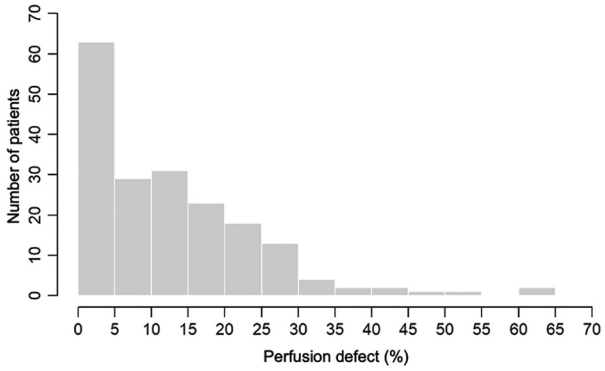

Figure S1. Histogram of the distribution of the percentage of perfusion defects

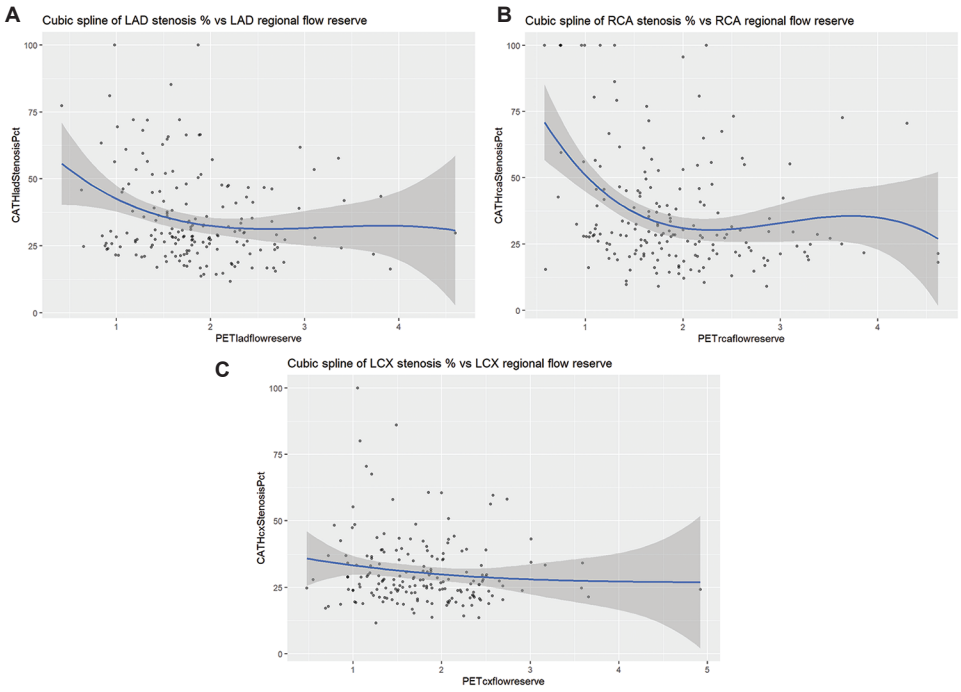

Figure S2. Cubic spline modeling for regional flow reserve. (A) Left descending artery (LAD) percent stenosis with respect to LAD territory myocardial flow reserve (MFR). (B) Right coronary artery (RCA) percent stenosis with respect to RCA territory MFR. (C) Left circumflex artery (LCX) percent stenosis with respect to LCX territory MFR.

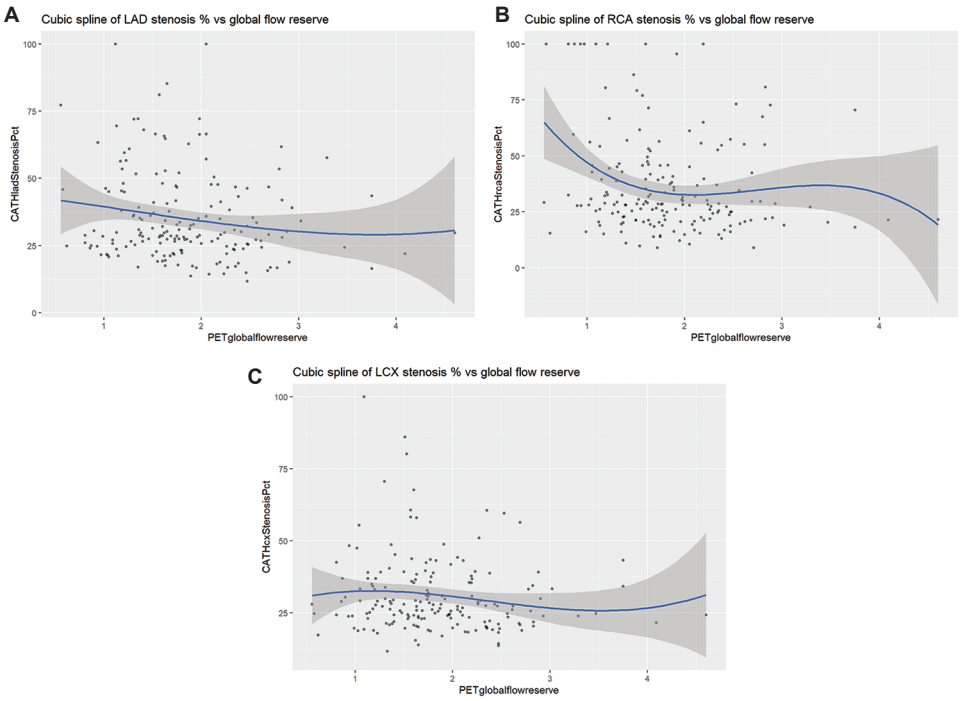

Figure S3. Cubic spline modeling for global flow reserve. (A) Left descending artery (LAD) percent stenosis with respect to global myocardial flow reserve (MFR). (B) Right coronary artery (RCA) percent stenosis with respect to global MFR. (C) Left circumflex artery (LCX) percent stenosis with respect to global MFR.

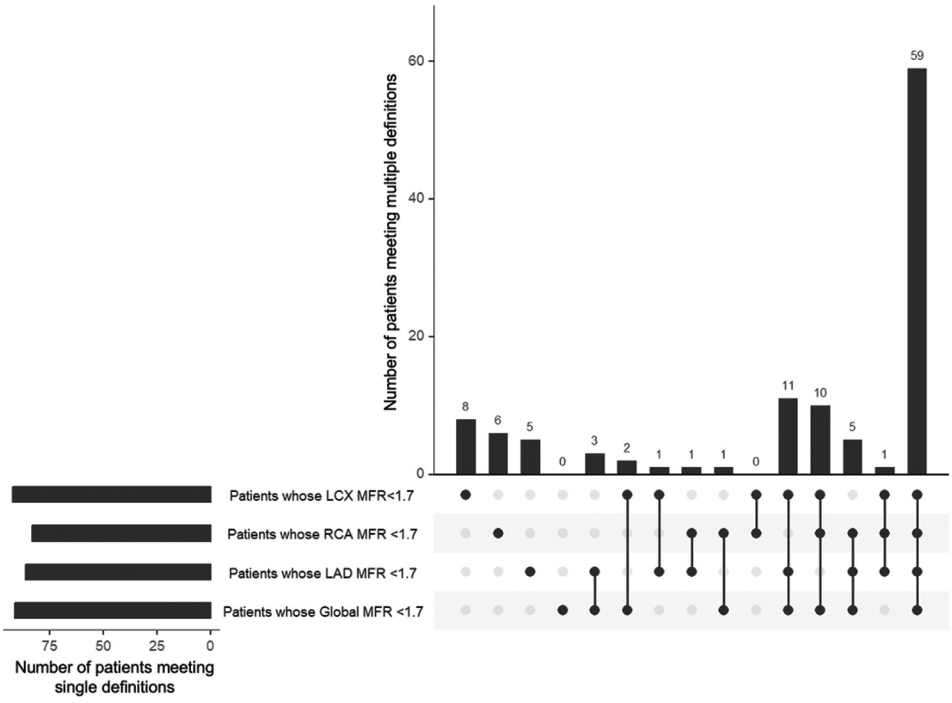

Figure S4. Set intersection analysis of patients who had left descending artery territory MFR <1.7, right coronary artery territory MFR <1.7, left circumflex artery territory MFR <1.7, or global MFR <1.7
Abbreviations: LAD: Left descending artery; LCX: Left circumflex artery; MFR: Myocardial flow reserve; pts: Patients; RCA: Right coronary artery.

Table S1. Sensitivity and specificity of each level of regional (top table) coronary territory and global (bottom table) myocardial flow reserve for predicting >50% stenosis in each vessel

LAD stenosis >50%			RCA stenosis >50%			LCX stenosis >50%		
MFR	**Sens**	**Spec**	**MFR**	**Sens**	**Spec**	**MFR**	**Sens**	**Spec**
LAD MFR <2.0	0.875	0.355	RCA MFR <2.0	0.622	0.390	LCX MFR <2.0	0.706	0.349
LAD MFR <1.9	0.844	0.432	RCA MFR <1.9	0.622	0.445	LCX MFR <1.9	0.706	0.373
LAD MFR <1.8	0.719	0.497	RCA MFR <1.8	0.622	0.521	LCX MFR <1.8	0.647	0.473
LAD MFR <1.7*	0.688*	0.600*	RCA MFR <1.7	0.595	0.610	LCX MFR <1.7	0.647	0.533
LAD MFR <1.6	0.625	0.658	RCA MFR <1.6	0.459	0.678	LCX MFR <1.6	0.647	0.598
LAD MFR <1.5	0.500	0.748	RCA MFR <1.5	0.459	0.753	LCX MFR <1.5*	0.647*	0.663*
LAD MFR <1.4	0.469	0.806	RCA MFR <1.4*	0.459*	0.801*	LCX MFR <1.4	0.471	0.698
LAD MFR <1.3	0.375	0.839	RCA MFR <1.3	0.351	0.836	LCX MFR <1.3	0.412	0.775
Global MFR <2.0	0.781	0.374	Global MFR <2.0	0.622	0.336	Global MFR <2.0	0.765	0.355
Global MFR <1.9	0.719	0.413	Global MFR <1.9	0.595	0.384	Global MFR <1.9	0.765	0.402
Global MFR <1.8	0.688	0.471	Global MFR <1.8	0.595	0.452	Global MFR <1.8	0.765	0.462
Global MFR <1.7*	0.656*	0.561*	Global MFR <1.7*	0.568*	0.548*	Global MFR <1.7	0.765	0.550
Global MFR <1.6	0.531	0.658	Global MFR <1.6	0.459	0.651	Global MFR <1.6*	0.647*	0.65*1
Global MFR <1.5	0.438	0.723	Global MFR <1.5	0.378	0.719	Global MFR <1.5	0.353	0.704
Global MFR <1.4	0.406	0.748	Global MFR <1.4	0.324	0.740	Global MFR <1.4	0.353	0.734
Global MFR <1.3	0.313	0.826	Global MFR <1.3	0.324	0.829	Global MFR <1.3	0.176	0.805

Note: In each scenario, the cutoffs with the optimal sensitivity and specificity are marked with asterisks (*).
Abbreviations: MFR: Myocardial flow reserve; LAD: Left descending artery; LCX: Left circumflex artery; RCA: Right coronary artery; Sens: Sensitivity; Spec: Specificity.

Table S2. Sensitivity, specificity, positive and negative predictive value, accuracy, and positive and negative likelihood ratio for each coronary territory myocardial flow reserve level in predicting >50% stenosis in respective vessels

MFR	Prevalence	Sample size	True positives	False positives	False negatives	True negatives	Sensitivity	Specificity	Positive predictive value	Negative predictive value	Accuracy	Positive likelihood ratio	Negative likelihood ratio
LAD MFR <1.7 for >50% LAD stenosis	17%	187	22	62	10	93	0.69	0.60	0.26	0.90	0.62	1.72	0.52
RCA MFR <1.4 for >50% RCA stenosis	20%	183	17	29	20	117	0.46	0.80	0.37	0.85	0.73	2.31	0.68
LCX MFR <1.5 for >50% LCX stenosis	9%	186	11	57	6	112	0.65	0.66	0.16	0.95	0.66	1.92	0.53
Global MFR <1.7 for >50% LAD stenosis	17%	187	21	68	11	87	0.66	0.56	0.24	0.89	0.58	1.50	0.61
Global MFR <1.7 for >50% RCA stenosis	20%	183	21	66	16	80	0.57	0.55	0.24	0.83	0.55	1.26	0.79
Global MFR <1.6 for >50% LCX stenosis	9%	186	11	59	6	110	0.65	0.65	0.16	0.95	0.65	1.85	0.54

Abbreviations: MFR: Myocardial flow reserve; LAD: Left descending artery; LCX: Left circumflex artery; RCA: Right coronary artery.

Table S3. Mean myocardial flow reserve in each coronary territory and globally in patients with left ventricular perfusion defect ≤10% and >10%

MFR	Patients with LV perfusion defect ≤10% (*n*=92)	Patients with LV perfusion defect >10% (*n*=97)	*P*
LAD MFR	1.77 (1.43, 2.27)	1.74 (1.37, 2.13)	0.666
RCA MFR	1.79 (1.42, 2.24)	1.74 (1.33, 2.30)	0.763
LCX MFR	1.67 (1.33, 2.08)	1.79 (1.27, 2.29)	0.443
Global MFR	1.71 (1.37, 2.20)	1.75 (1.34, 2.23)	0.886

Abbreviations: MFR: Myocardial flow reserve; LAD: Left descending artery; LCX: Left circumflex artery; LV: Left ventricular; RCA: Right coronary artery.