

Supplementary Materials:

Three-dimensional QCA-based vessel fractional flow reserve (vFFR) in Heart Team decision-making: a multicenter, retrospective, cohort study

Online Table 1. Baseline characteristics in patients stratified according to presence of vFFR-confirmed lesion significance and revascularization discordance**SD – standard deviation; COPD – chronic obstructive pulmonary disease; PCI –**

	Concordant (N=292)	Discordant (N = 124)	p value
Demographics			
Age (years), mean ± SD	65.1 ± 12.8	66.2 ± 9.4	0.736
Male	210 (71.9%)	86 (69.4%)	0.598
Hypertension	190 (65.1%)	91 (73.4%)	0.097
Diabetes mellitus	96 (32.9%)	52 (41.9%)	0.078
Dyslipidemia	151 (51.7%)	80 (64.5%)	0.854
Renal function impairment	18 (6.2%)	12 (9.7%)	0.205
COPD	24 (8.2%)	14 (11.3%)	0.320
Positive family history	87 (29.8)	40 (32.3%)	0.618
Smoking	40 (13.7%)	26 (21.0%)	0.063
Previous PCI	67 (21.9%)	38 (33.1%)	0.098
Previous MI	68 (23.3%)	24 (19.4%)	0.377
Previous stroke or TIA	17 (5.8%)	8 (6.5%)	0.805

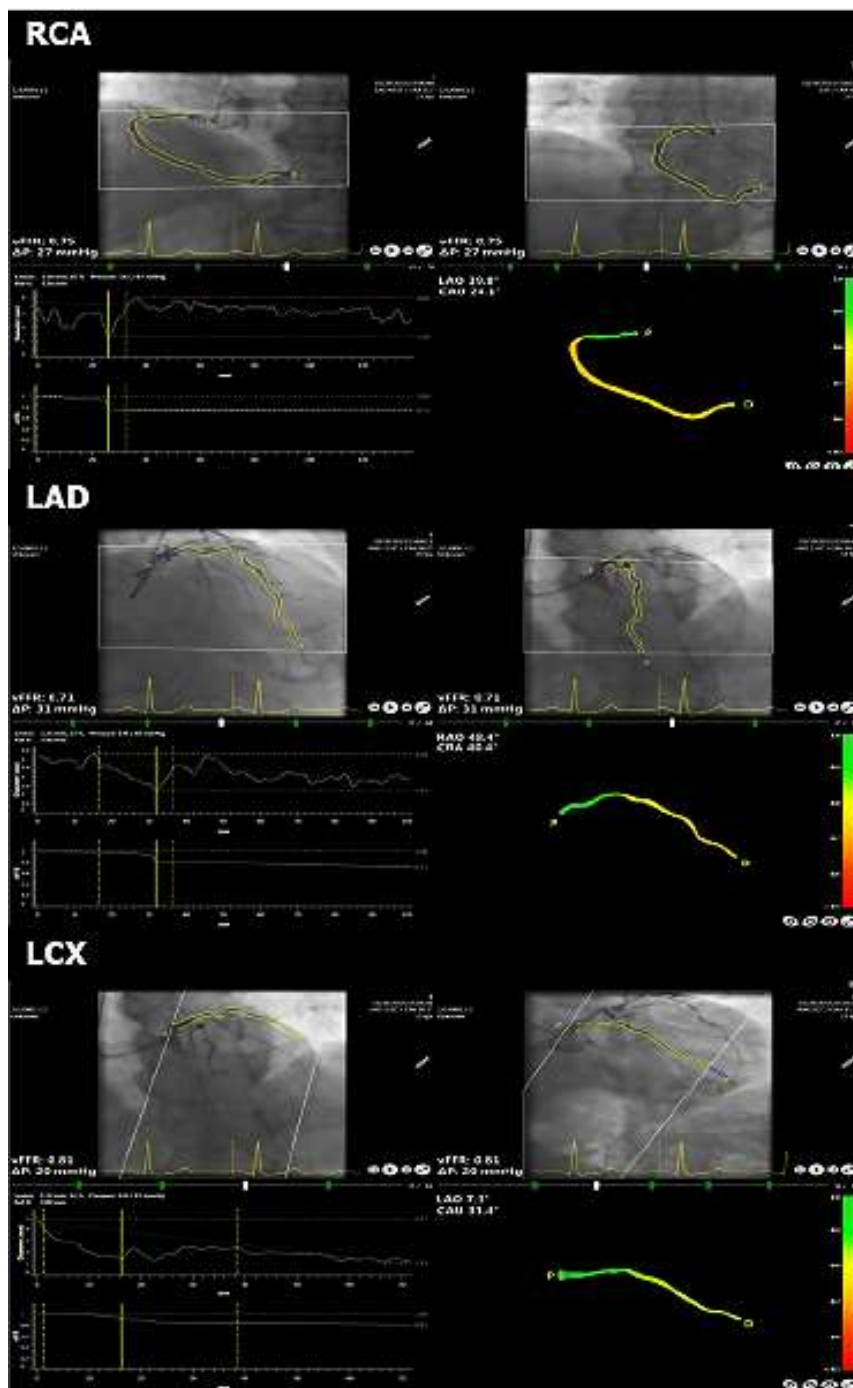
percutaneous coronary intervention, MI – myocardial infarction, TIA – transient ischemic attack

Online Table 2.**Summary of studies evaluating impact invasive FFR/iFR assessment on reclassification of treatment strategy.**

Study Population	Pressure Wire Assessment/ Included Lesions	Change in Treatment Strategy	Trial	Year
Multivessel disease	FFR and/or iFR	26.9% (130 / 484 patients)	DEFINE	2018
	Intermediate lesions		REAL	
FFR in ≥ 1 vessel	FFR	44.2% (406 / 918 patients)	POST-IT	2016
	Operator's discretion			
NSTEMI	FFR	21.6% (38 / 176 patients)	FAMOUS-NSTEMI	2015
	All lesions with $\geq 30\%$ stenosis			
Ambiguous stenosis +	FFR	43.2% (464 / 1,075 patients)	R3F	2014
	Angiographically 35% to 65% stenosis			
Stable chest pain	FFR	26.5% (53 / 200 patients)	RIPCORDER	2014
	All coronary arteries ≥ 2.25 mm			

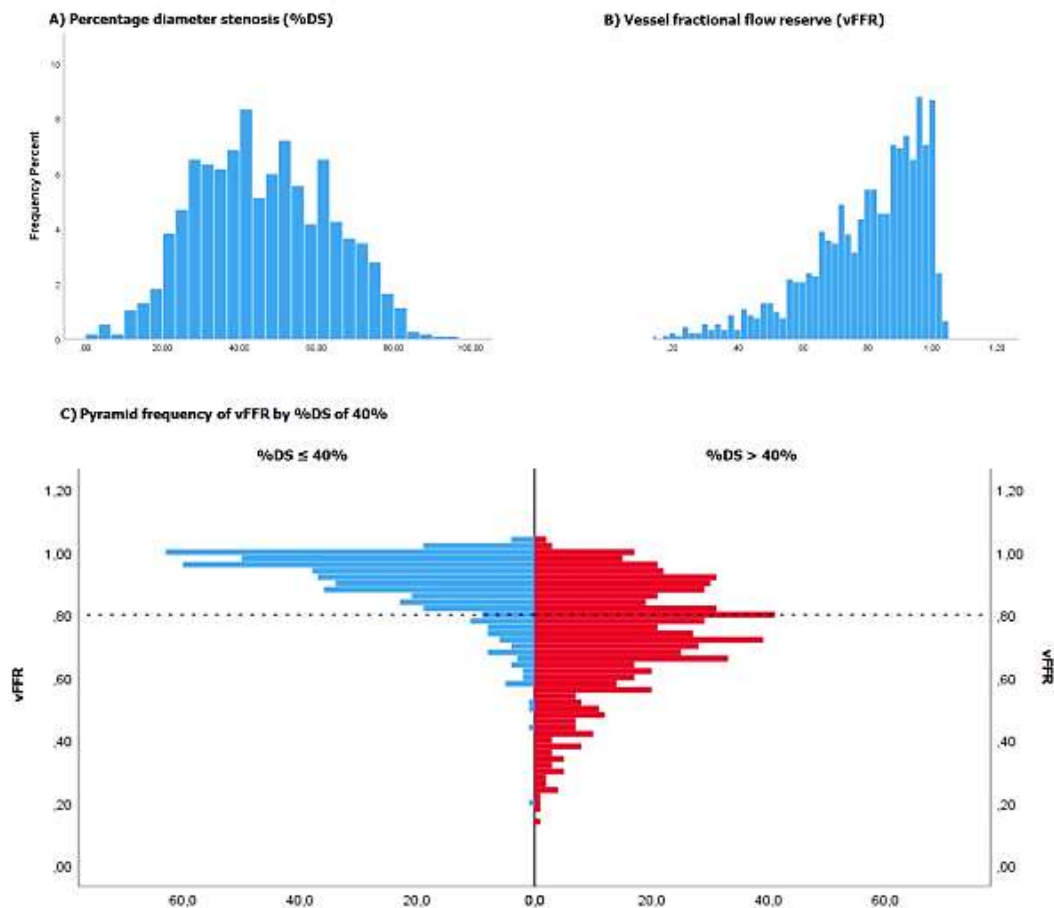
FFR – fractional flow reserve

Online Fig. 1 Computation of three-vessel vessel fractional flow reserve (vFFR)



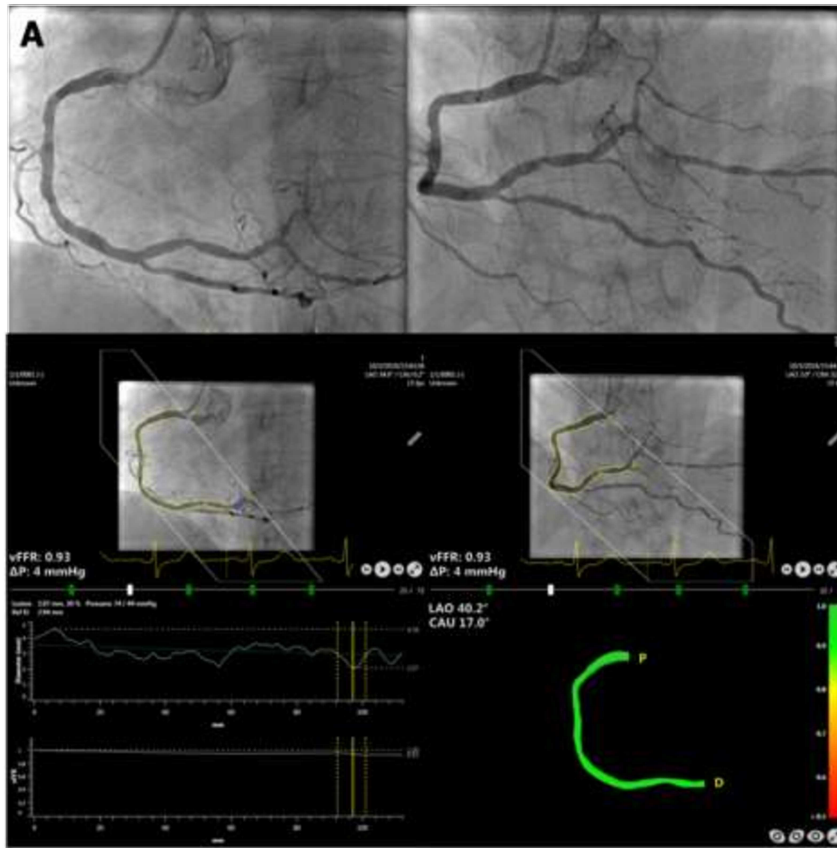
RCA – right coronary artery, LAD- left anterior descending, LCX – left circumflex artery

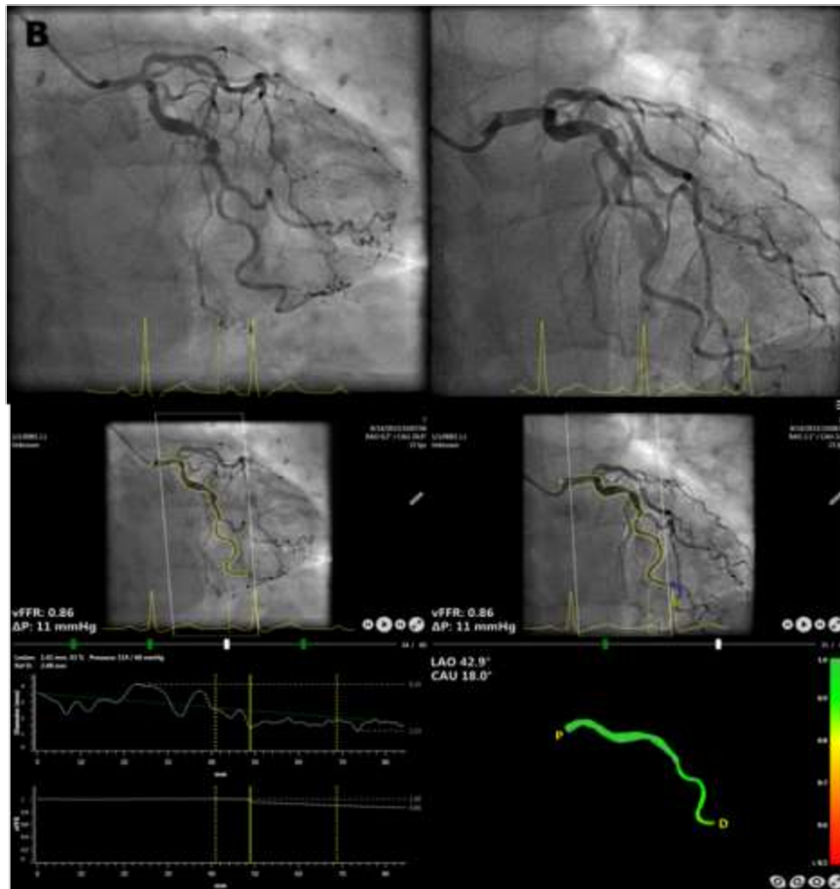
Online Fig. 2 Cumulative frequency of A) 3D-QCA based percentage diameter stenosis (%DS), B) vessel fractional flow reserve (vFFR), and C) a cumulative frequency of vFFR values in lesions categorized according to %DS cut-off of 40% [4].



3D-QCA – three dimensional quantitative coronary angiography, %DS – percentage diameter stenosis, vFFR – vessel fractional flow reserve

Online Fig. 3 Example of two patients who underwent coronary artery bypass grafting (CABG) with graft implantation to three major coronary arteries.





A) Whereas the lesions in LAD and LCX were concordantly significant by angiography and vFFR, the lesion in RCA was found not to be functionally significant by vFFR.

B) Whereas the lesions in LAD and RCA were concordantly significant by angiography and vFFR, the lesion in CX was not to be functionally significant by vFFR.

