

Table 1. Patient characteristics

Demographics	
Age, years	61 ± 8
Male sex	66 (60)
Body mass index, kg/m ²	27 ± 4
Caucasian	110 (100)
Symptoms	
Typical angina	37 (34)
Atypical angina	37 (34)
Non-anginal chest pain	15 (13)
Dyspnoea	21 (19)
Diamond-Forrester Score, %	46 (30-63) [10-90]
Risk factors	
Smoking	66 (60)
Hypertension	55 (50)
Hypercholesterolemia	33 (31)
Diabetes	10 (9)
Family history of CVD*	46 (42)
Medical therapy	
Platelete inhibitors	30 (27)
Betablockers	8 (7)
Angiotensin inhibitors	38 (35)
Ca-antagonists	17 (15)
Diuretics	22 (20)
Peroral anti-diabetics	7 (6)
Insulin	4 (4)
Anti-coagulants	1 (1)

Values are mean ± SD, n (%) or median (interquartile range) [range]. *Defined as a family history of cardiovascular disease in a male first-degree relative before aged 55 years or in a female first-degree relative before aged 65 years.

*CVD = Cardiovascular disease.

Table 2. Coronary Computed Tomography Angiography

Preparation and basic information	
Nitroglycerine	107 (97)
Heart rate, beats/min	56 ± 9
Radiation dose, mSv	2.7 (1.7-3.4) [0.5-9.0]
Analysis	
Agatston Score, U	261 (63-687) [0-2998]
0-99	35 (32)
100-399	32 (29)
400-999	27 (25)
≥1000	16 (15)

Values are mean ± SD, n (%) or median (interquartile range) [range].

Table 3. Invasive procedures and treatment

<i>Angiography (n=110)</i>		
Most severe stenosis <30%		27 (24)
Most severe stenosis 30-90%		57 (52)
Most severe stenosis >90%		26 (24)
<i>FFR* measurement (n=69)</i>		
FFR* ≤ 0.80, no. of patients		23 (33)
FFR* ≤ 0.75, no. of patients		15 (22)
<i>Treatment</i>		
Medical treatment only		72 (65)
PCI†		25 (23)
1-vessel	20 (18)	
2-vessel	5 (5)	
3-vessel	0 (0)	
CABG§		13 (12)
1-vessel	4 (4)	
2-vessel	7 (6)	
3-vessel	2 (2)	

Values are given as n (%).

*FFR = Invasively measured fractional flow reserve; †PCI = Percutaneous coronary intervention; §CABG = Coronary artery by-pass grafting.

Table 4a. Association between patient-level minimum distal-tip FFR_{CT}^{*}, obstructive CAD[†] and standard of care guided coronary revascularization in stable chest pain.

FFR _{CT} range	Patients	Obstructive CAD [†]	Revascularization
>0.90	2 (2)	0 (0)	0 (0)
0.81-0.90	29 (26)	1 (3)	1 (3)
0.71-0.80	37 (34)	15 (41)	14 (37)
0.61-0.70	21 (19)	9 (43)	8 (38)
0.51-0.60	7 (6)	5 (71)	5 (71)
≤0.50	14 (13)	14 (100) [§]	10 (71) [§]

[§]Tests for trend p<0.001. Values are n (%). ^{*}Distal-tip FFR_{CT} defined as the per-patient lowest FFR_{CT}-value in coronary arteries ≥1.8 mm in diameter. [†]Defined as high-grade stenosis >90% (visual assessment) by invasive coronary angiography or a measured FFR-value ≤0.80 in at least one vessel.

^{*}FFR_{CT} = Fractional flow reserve derived from coronary computed tomography angiography; [†]CAD = Coronary artery disease.

Table 4b. Association between patient-level minimum lesion-specific FFR_{CT}^{*}, obstructive CAD[†] and standard of care guided coronary revascularization in stable chest pain.

FFR _{CT} range	Patients	Obstructive CAD [†]	Revascularization
>0.90	13 (12)	0 (0)	0 (0)
0.81-0.90	42 (38)	7 (17)	6 (14)
0.71-0.80	27 (25)	16 (63)	16 (59)
0.61-0.70	13 (12)	6 (46)	5 (38)
0.51-0.60	6 (5)	5 (83)	5 (83)
≤0.50	9 (8)	10 (100) [§]	6 (67) [§]

[§]Tests for trend p<0.001. Values are n (%). ^{*}Lesion-specific FFR_{CT} defined as the per-patient lowest FFR_{CT}-value 2 cm distal to lesions in coronary arteries ≥1.8 mm in diameter. [†]Defined as ≥1 high-grade stenosis >90% (visual assessment) by invasive coronary angiography or a measured FFR-value ≤0.80 in ≥1 coronary artery.

Abbreviations as in Table 4a.

Table 5. Association between the size of RPD[†] by CMR^{*} stress perfusion imaging, obstructive CAD and standard of care guided coronary revascularization in stable chest pain.

Size of RPD [†]	Patients	Obstructive CAD ^{††}	Revascularization
No RPD	83 (75)	23 (27)	20 (24)
Small RPD	6 (5)	4 (67)	3 (50)
Moderate RPD	10 (9)	7 (70)	7 (70)
Large RPD	11 (10)	10 (90) [§]	8 (73) [§]

[§]Tests for trend p<0.001. Values are n (%). ^{††}Defined as ≥ 1 high-grade stenosis >90% (visual assessment) by invasive coronary angiography or a measured FFR-value ≤ 0.80 in ≥ 1 coronary artery.

[†]RPD = Reversible perfusion defect

^{*}CMR = Cardiac magnetic resonance; Other abbreviations as in Table 4a.

Table 6. Subgroup sensitivity analysis of FFR_{CT} and CMR stress perfusion imaging for prediction of standard of care guided coronary revascularization in stable chest pain.

	Distal-tip FFR _{CT} [*]		Lesion-specific FFR _{CT} [§]		CMR	
	Sensitivity	p-value	Sensitivity	p-value	Sensitivity	p-value
<u>Sex</u>						
Male	100	0.316	85	1.000	46	1.000
Female	92		83		50	
<u>Age</u>						
<64 years	96	1.000	87	0.663	48	1.000
≥64 years	100		80		47	
<u>Agatston Score</u>						
<100	88	0.421	75	0.061	50	0.765
100-399	100		63		36	
400-999	100		100		45	
≥1000	100		100		63	
<u>Grade of stenosis by ICA[†]</u>						
30-90%	100	1.000	73	0.188	27	0.052
>90%	96		91		62	
<u>Revascularization</u>						
1 vessel	96	1.000	79	0.383	46	1.000
≥2 vessels	100		93		50	
<u>LAD**</u>						
LAD**	100	0.263	86	0.644	39	0.144
Non-LAD**	90		80		70	
<u>Proximal</u>						
Proximal	97	1.000	85	0.513	47	1.000
<u>Distal</u>						
Distal	100		75		50	

Values are %. *Distal-tip FFR_{CT} defined as the per-patient lowest FFR_{CT}-value in coronary vessels ≥1.8 mm in diameter.

§Lesion-specific FFR_{CT} defined as the per-patient lowest FFR_{CT}-value 2 cm distal to lesions in coronary vessels ≥1.8 mm in diameter. The results of core laboratory FFR_{CT} analysis and CMR test assessments had no impact on referral to invasive angiography and were blinded to decision makers.

†ICA: Invasive coronary angiography; **LAD: Left anterior descending coronary artery. Other abbreviations as in Tables 4a and 5.

Table 7. Lesion-specific FFR_{CT}^{*} versus CMR stress perfusion imaging for prediction of standard of care guided coronary revascularization in stable chest pain.

	FFR _{CT} [*]	CMR	p-value
Sensitivity	84 (69-94)	47 (31-64)	0.001
Specificity	68 (56-79)	88 (78-94)	0.003
PPV[†]	58 (45-71)	67 (49-84)	0.314
NPV[‡]	89 (81-97)	76 (67-85)	0.017
Accuracy	74 (64-82)	74 (64-82)	1.000

Values are % (95% confidence interval). ^{*}Lesion-specific FFR_{CT} defined as the per-patient lowest FFR_{CT}-value 2 cm distal to lesion in coronary vessels ≥ 1.8 mm in diameter. The results of core laboratory FFR_{CT} analysis and CMR test assessments had no impact on referral to invasive angiography and were blinded to decision makers.

[†]PPV = Positive predictive value; [‡]NPV = Negative predictive value. Other abbreviations as in Tables 4a and 5.