

Supplementary data

Supplementary table 1

Baseline clinical characteristics according to treatment strategy in the overall population

	Conservative (N = 101)	Aggressive (N = 105)	P
Age, y	64.1 ± 8.8	65.5 ± 9.6	.272
Male sex	75 (74.3)	80 (76.2)	.873
Body mass index, kg/m ²	24.8 ± 2.8	24.4 ± 3.0	.323
Hypertension	66 (65.3)	73 (69.5)	.623
Diabetes mellitus	37 (36.6)	42 (40.0)	.724
Dyslipidemia	43 (42.6)	42 (40.0)	.815
Current smoker	28 (27.7)	30 (28.6)	> .999
Peripheral artery disease	4 (4.0)	7 (6.7)	.580
Cerebrovascular accident	5 (5.0)	14 (13.3)	.066
Chronic kidney disease	9 (8.9)	7 (6.7)	.733
Previous myocardial infarction	7 (6.9)	7 (6.7)	> .999
Previous PCI	21 (20.8)	16 (15.2)	.392
Previous CABG	0 (0.0)	2 (1.9)	.495
LVEF (%)	61.3 ± 9.0	61.9 ± 8.3	.406

CABG, coronary artery bypass grafting; LVEF, left ventricular ejection fraction; PCI, percutaneous coronary intervention.

Values are presented as No. (%) or mean ± standard deviation.

Optimal strategy for side branch treatment in patients with left main coronary bifurcation lesions

Supplementary table 2

Procedural characteristics according to treatment strategy in the overall population

	Conservative (N = 101)	Aggressive (N = 105)	P
General procedure			
Vascular access			.425
Radial artery	67 (66.3)	63 (60.0)	
Femoral artery	34 (33.7)	42 (40.0)	
Extent of coronary artery disease			.203
1-vessel disease	30 (29.7)	20 (19.0)	
2-vessel disease	43 (42.6)	52 (49.5)	
3-vessel disease	28 (27.7)	33 (31.4)	
Left main bifurcation lesions			
Medina classification			
Non-true bifurcation lesions	78 (77.2)	82 (78.1)	.726
1.0.0	13 (12.9)	13 (12.4)	
0.1.0	23 (22.8)	29 (27.6)	
1.1.0	42 (41.6)	40 (38.1)	
True bifurcation lesions	23 (22.8)	23 (21.9)	.111
1.1.1	16 (15.8)	19 (18.1)	
1.0.1	3 (3.0)	4 (3.8)	
0.1.1	4 (4.0)	0 (0.0)	
IVUS-guided	78 (77.2)	80 (76.2)	.991

IVUS, intravascular ultrasound.

Values are presented as No. (%).

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Supplementary table 3

Procedural outcomes according to treatment strategy in the overall population

	Conservative (N = 101)	Aggressive (N = 105)	P
General procedure			
Total number of stents	1.8 ± 0.9	2.0 ± 1.0	.057
Mean time of fluoroscopy, min	52.5 ± 31.4	57.7 ± 33.3	.264
Mean amount of contrast dye, mL	227.1 ± 79.7	265.9 ± 123.4	.022
Procedure-related myocardial infarction ^a	12 (11.9)	12 (11.4)	> .999
Main vessel			
Number of stents per lesion, mm	1.1 ± 0.3	1.1 ± 0.4	.324
Total stent length, mm	24.7 ± 10.7	27.1 ± 12.6	.180
Maximal stent diameter, mm	3.6 ± 0.4	3.6 ± 0.4	.759
Side branch			
Balloon inflation	26 (25.7)	105 (100.0)	<.001
Final kissing balloon inflation	23 (22.8)	104 (99.0)	<.001
Stent implantation	9 (8.9)	25 (23.8)	.007
Number of stents per lesion, mm	1.0 ± 0.5	1.0 ± 0.2	.746
Total stent length, mm	18.8 ± 5.8	19.2 ± 8.4	.815
Maximal stent diameter, mm	3.2 ± 0.3	3.0 ± 0.5	.133
Treatment according to randomization ^b	99 (98.0)	105 (100.0)	.460

IVUS, intravascular ultrasound.

Values are presented as No. (%) or mean ± standard deviation.

^a Procedure-related myocardial infarction was defined by the myocardial band fraction of creatine kinase > 3 times the upper normal limit.

^b In the conservative strategy group, 2 patients were treated not according to randomization by the operator's clinical judgment.

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Supplementary table 4

Quantitative coronary analysis of left main bifurcation lesions

	Non-true bifurcation lesions			True bifurcation lesions		
	Conservative (N = 78)	Aggressive (N = 82)	P	Conservative (N = 23)	Aggressive (N = 23)	P
Main vessel lesion length, mm	14.1 ± 6.0	15.5 ± 8.3	.658	16.1 ± 8.6	11.8 ± 5.0	.076
Bifurcation angle, degree	91.7 ± 27.2	92.6 ± 29.5	.843	98.6 ± 29.2	96.4 ± 23.8	.779
Main vessel						
Reference diameter, mm	3.7 ± 0.5	3.8 ± 0.5	.348	3.5 ± 0.4	3.6 ± 0.5	.422
Minimal lumen diameter, mm						
Pre-PCI	1.2 ± 0.5	1.1 ± 0.5	.210	0.9 ± 0.5	1.3 ± 0.6	.016
Post-PCI	3.5 ± 0.6	3.6 ± 0.6	.258	3.4 ± 0.5	3.4 ± 0.6	.936
Acute gain	2.2 ± 0.7	2.4 ± 0.8	.136	2.5 ± 0.8	2.1 ± 0.7	.078
At follow-up ^a	3.2 ± 0.7	3.3 ± 0.6	.673	3.3 ± 0.5	2.6 ± 1.3	.108
Late loss	-0.2 ± 0.5 (-5.8%)	-0.3 ± 0.5 (-8.5%)	.337	-0.3 ± 0.3 (-7.1%)	-0.9 ± 0.9 (-21.8%)	.057
Diameter stenosis, %						
Pre-PCI	67.8 ± 11.6	70.6 ± 13.0	.182	75.2 ± 13.8	63.8 ± 12.9	.018
Post-PCI	12.8 ± 8.9	11.3 ± 9.8	.209	12.1 ± 8.5	14.2 ± 8.9	.420
At follow-up	16.9 ± 11.0	14.7 ± 11.4	.317	12.1 ± 6.9	36.4 ± 27.4	.011
Side branch ^b						
Reference diameter, mm	3.1 ± 0.5	3.1 ± 0.5	.539	2.7 ± 0.5	2.8 ± 0.5	.287
Minimal lumen diameter, mm						
Pre-PCI	2.6 ± 0.7	2.6 ± 0.7	.689	1.0 ± 0.6	0.9 ± 0.4	.644
Post-PCI	2.4 ± 0.7	2.6 ± 0.6	.110	2.1 ± 0.9	2.9 ± 0.5	.001
Acute gain	-0.2 ± 0.6	0.0 ± 0.5	.005	1.1 ± 1.0	1.9 ± 0.5	.001
At follow-up	2.2 ± 0.8	2.3 ± 0.7	.556	1.4 ± 0.8	2.2 ± 0.9	.015
Late loss	-0.3 ± 0.6 (-10.9%)	-0.4 ± 0.5 (-12.7%)	.304	-0.5 ± 0.7 (-17.5%)	-0.8 ± 0.7 (-20.3%)	.196
Diameter stenosis, %						
Pre-PCI	15.8 ± 15.6	15.8 ± 16.2	.916	63.1 ± 16.5	66.8 ± 13.9	.420
Post-PCI	20.8 ± 17.4	14.1 ± 14.6	.013	25.1 ± 26.0	5.9 ± 7.0	.002
Binary stenosis (> 50%)	7 (9.3)	1 (1.3)	.059	4 (17.4)	0 (0.0)	.116
At follow-up	29.3 ± 23.0	25.7 ± 18.0	.704	48.0 ± 25.2	22.5 ± 27.3	.019
Binary (re)stenosis (> 50%)	9 (23.1)	5 (10.9)	.233	6 (40.0)	3 (25.0)	.681

PCI, percutaneous coronary intervention.

Values are presented as No. (%) or mean ± standard deviation.

^a The 9-month follow-up angiography was performed in 55 patients (54.5%) in the conservative strategy group and in 58 patients (55.2%) in the aggressive strategy group.

^b Post-PCI analysis of the side branch was not performed in 3 patients of the conservative group (3.0%) and in 3 patients of the aggressive group (2.9%) due to poor-quality angiographical images.

Optimal strategy for side branch treatment in patients with left main coronary bifurcation lesions

Supplementary table 5

Clinical outcomes at 1 year according to treatment strategy in the overall population

Outcome	Conservative (N = 101)	Aggressive (N = 105)	Hazard ratio (95%CI)	P
TLF	9 (9.0)	9 (8.7)	1.03 (0.41-2.59)	.955
Cardiac death	4 (4.0)	3 (3.0)	1.41 (0.31-6.29)	.655
MI	2 (2.1)	4 (4.1)	0.53 (0.10-2.89)	.462
TLR	5 (5.2)	6 (6.1)	0.88 (0.27-2.87)	.827
Cardiac death or MI	5 (5.0)	6 (5.8)	0.86 (0.26-2.83)	.808
Definite or probable ST	2 (2.0)	1 (1.0)	2.10 (0.19-23.16)	.545
Target vessel revascularization	6 (6.3)	7 (7.1)	0.91 (0.30-2.70)	.860

95%CI, 95% confidence interval; MI, myocardial infarction; NA, not available; ST, stent thrombosis; TLF, target lesion failure; TLR, target lesion revascularization. Values are presented as No. (%).

TLF is a composite of cardiac death, MI, and TLR.

Optimal strategy for side branch treatment in patients with left main coronary bifurcation lesions

Supplementary table 6

Clinical outcomes at 3 years according to treatment strategy in the overall population

Outcome	Conservative	Aggressive	Hazard ratio (95%CI)	<i>P</i>
TLF	11 (12.6)	10 (10.4)	1.13 (0.48-2.66)	.778
Cardiac death	4 (4.0)	5 (6.4)	0.84 (0.23-3.14)	.798
MI	3 (3.9)	4 (4.1)	0.79 (0.18-3.52)	.754
TLR	7 (8.9)	6 (6.1)	1.22 (0.41-3.64)	.718
Cardiac death or MI	6 (6.7)	8 (9.2)	0.77 (0.27-2.22)	.630
Definite or probable ST	2 (2.0)	1 (1.0)	2.10 (0.19-23.16)	.545
Target vessel revascularization	9 (11.6)	8 (8.9)	1.19 (0.46-3.08)	.724

95%CI, 95% confidence interval; MI, myocardial infarction; TLF, target lesion failure; TLR, target lesion revascularization; ST, stent thrombosis.

Values are presented as No. (%).

TLF is a composite of cardiac death, MI and TLR.

Optimal strategy for side branch treatment in patients with left main coronary bifurcation lesions

Visual Overview: Optimal Strategy for Provisional Side Branch Approach After Main Vessel Stenting in Left Main Disease

