# 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.

**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. (%).

**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.

**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.

**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.

**Supplementary table 6**

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

| Outcome | Conservative | Aggressive | Hazard ratio (95%CI) | *P* |
|---|---|---|---|---|
| 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.

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