

SUPPLEMENTAL MATERIAL

Supplemental table 1: Missing data

| Variable | Number of available values (%) | Number of missing values (%) |
|------------------------------|--------------------------------|------------------------------|
| Age | 59,593 (99.9) | 51 (0.1) |
| Gender | 59,398 (99.6) | 246 (0.4) |
| Presentation syndrome | 59,628 (99.97) | 16 (0.03) |
| Cardiogenic shock | 54,043 (90.6) | 5,601 (9.4) |
| Smoking status | 51,626 (86.6) | 8,018 (13.4) |
| Hypertension | 55,770 (93.5) | 3,874 (6.5) |
| Diabetes | 56,493 (94.7) | 3,151 (5.3) |
| Previous MI | 53,973 (90.5) | 5,671 (9.5) |
| Q wave on ECG | 46,389 (77.8) | 13,255 (22.2) |
| Previous stroke | 55,770 (93.5) | 3,874 (6.5) |
| Peripheral vascular disease | 55,770 (93.5) | 3,874 (6.5) |
| Renal disease | 55,155 (92.5) | 4,489 (7.5) |
| Previous PCI | 57,998 (97.2) | 1,646 (2.8) |
| Previous CABG | 59,644 (100) | 0 (0) |
| CCS class | 41,818 (70.1) | 17,826 (29.9) |
| NYHA class | 39,735 (66.6) | 19,909 (33.4) |
| CTO present | 49,285 (82.6) | 10,359 (17.4) |
| Vessel attempted | 57,478 (96.4) | 2,166 (3.6) |
| No. vessels attempted | 58,362 (97.9) | 1,282 (2.1) |
| Trainee first operator | 53,701 (90.0) | 5,943 (10.0) |
| Rotational atherectomy | 53,656 (90.0) | 5,988 (10.0) |
| GPI use | 54,614 (91.6) | 5,030 (8.4) |
| IVUS/OCT | 53,293 (89.4) | 6,351 (10.6) |
| Distal protection | 54,078 (90.7) | 5,566 (9.3) |
| Access site | 57,667 (96.7) | 1,977 (3.3) |
| No. lesions success | 57,682 (96.7) | 1,962 (3.3) |
| Emergency surgery | 56,575 (94.9) | 3,069 (5.1) |
| Post-procedural complication | 56,575 (94.9) | 3,069 (5.1) |
| Perforation status | 59,644 (100) | 0 (0) |

Supplemental Table 2: Outcomes in graft and native vessel PCI by coronary perforation status

| Variable | Native Vessel PCI | | | Graft PCI | | | p* |
|-------------------------------------------|---------------------------|---------------------|--------|---------------------------|--------------------|--------|-------|
| | No perforation (n=40,988) | Perforation (n=210) | p | No perforation (n=16,921) | Perforation (n=83) | p | |
| Immediate procedural complications | | | | | | | |
| Tamponade, no. (%) | 0 (0) | 18 (9.8) | <0.001 | 0 (0) | 9 (12.5) | <0.001 | 0.512 |
| Shock induction, no. (%) | 67 (0.2) | 8 (3.8) | <0.001 | 21 (0.1) | 2 (2.4) | <0.001 | 0.730 |
| Heart block, no. (%) | 63 (0.2) | 4 (1.9) | <0.001 | 39 (0.2) | 2 (2.4) | 0.007 | 0.677 |
| Emergency surgery, no. (%) | 51 (0.1) | 4 (2.2) | <0.001 | 13 (0.1) | 0 (0) | 0.808 | 0.580 |
| Coronary dissection, no. (%) | 911 (2.4) | 28 (13.3) | <0.001 | 120 (0.8) | 3 (3.6) | 0.026 | 0.019 |
| Major side-branch loss, no. (%) | 232 (0.6) | 9 (4.3) | <0.001 | 23 (0.2) | 1 (1.2) | 0.310 | 0.292 |
| Slow flow, no. (%) | 212 (0.6) | 6 (2.9) | <0.001 | 397 (2.6) | 4 (4.8) | 0.376 | 0.477 |
| Access site complication, no. (%) | 275 (0.7) | 5 (2.5) | 0.006 | 124 (0.7) | 2 (2.5) | 0.017 | 1.000 |
| Clinical outcomes | | | | | | | |
| Transfusion, no. (%) | 67 (0.2) | 6 (3.3) | <0.001 | 30 (0.2) | 4 (4.2) | <0.001 | 0.477 |
| Q wave MI, no. (%) | 55 (0.1) | 5 (2.7) | <0.001 | 35 (0.2) | 3 (4.2) | <0.001 | 0.692 |
| Non-Q wave MI, no. (%) | 174 (0.4) | 11 (6.0) | <0.001 | 47 (0.3) | 4 (5.6) | <0.001 | 1.000 |
| Renal failure, no. (%) | 49 (0.1) | 3 (1.6) | <0.001 | 18 (0.1) | 0(0) | 0.775 | 0.561 |
| In-hospital major bleed, no. (%) | 330 (0.8) | 27 (14.6) | <0.001 | 155 (1.0) | 11 (15.1) | <0.001 | 1.000 |
| In-hospital death, no. (%) | 415 (1.0) | 20 (9.8) | <0.001 | 193 (1.0) | 9 (12.5) | <0.001 | 0.828 |
| Mortality at 30 days, no. (%) | 554 (1.6) | 21 (11.9) | <0.001 | 255 (1.7) | 10 (14.3) | <0.001 | 0.674 |
| Mortality at 1 year, no. (%) | 1899 (5.6) | 28 (17.9) | <0.001 | 919 (6.8) | 14 (21.5) | <0.001 | 0.461 |

p*= comparison between perforation in native vessel and graft

Supplemental Table 3: Baseline demographics and risk factors of 12-month survivors vs. non-survivors in those patients who survived to 30 days post-PCI

| Variable | 12-month survivors (n=43,642) | 12-month non-survivors (n=2,094) | p-value |
|-----------------------------------|------------------------------------------|---------------------------------------------|----------------|
| Age (years) \pm SD | 68.7 \pm 9.4 | 73.8 \pm 9.0 | <0.001 |
| Female gender, no. (%) | 7,370 (17.0) | 387 (18.5) | 0.068 |
| Stable presentation, no. (%) | 24,751 (56.7) | 766 (36.6) | <0.001 |
| Cardiogenic shock, no. (%) | 307 (0.7) | 42 (2.2) | <0.001 |
| CCS class \pm SD | 2.49 \pm 0.94 | 2.55 \pm 1.09 | 0.039 |
| NYHA class \pm SD | 2.05 \pm 0.86 | 2.30 \pm 0.94 | <0.001 |
| Previous MI, no. (%) | 23,662 (60.8) | 1,330 (70.5) | <0.001 |
| Previous PCI, no. (%) | 16,716 (39.4) | 831 (40.7) | 0.268 |
| Diabetes (%) | 12,780 (30.9) | 795 (39.9) | <0.001 |
| Body mass index \pm SD | 28.6 \pm 4.8 | 27.6 \pm 5.1 | <0.001 |
| Ejection fraction <30%, no. (%) | 1,806 (8.1) | 277 (24.6) | <0.001 |
| Smoking history (%) | 24,011 (64.1) | 1,180 (66.2) | 0.070 |
| Hypertension (%) | 27,824 (67.7) | 1,404 (70.9) | 0.003 |
| Previous stroke (%) | 2,363 (5.7) | 210 (10.6) | <0.001 |
| Peripheral vascular disease (%) | 3,807 (9.3) | 374 (18.9) | <0.001 |
| Valvular heart disease (%) | 1,063 (2.6) | 124 (6.2) | <0.001 |
| Chronic renal disease (%) | 1,613 (4.0) | 333 (17.2) | <0.001 |
| Baseline no. CTO present \pm SD | 0.94 \pm 1.00 | 1.13 \pm 1.09 | <0.001 |
| Left main stenosis >75% (%) | 5,206 (16.2) | 367 (23.4) | <0.001 |
| Proximal LAD disease >75% (%) | 5,206 (69.5) | 1,223 (75.1) | <0.001 |
| Q wave on ECG (%) | 6,925 (20.2) | 459 (27.8) | <0.001 |