**Supplemental table 1:** Missing data

|  |  |  |
| --- | --- | --- |
| **Variable** | **Number of available values (%)** | **Number of missing values (%)** |
| Age  | 11,257 (99.9) | 7 (0.1) |
| Gender | 11,245 (99.8) | 19 (0.2) |
| NYHA class | 7,424 (65.9) | 3,840 (34.1) |
| Past medical history | 10,744 (95.4) | 520 (4.6\_ |
| Diabetes mellitus | 10,952 (97.2) | 312 (2.8) |
| Previous MI | 10,358 (92.0) | 906 (8.0) |
| Q wave on ECG | 10,107 (89.7) | 1,157 (10.3) |
| Baseline disease severity | 9,912 (88.0) | 1,352 (12.0) |
| Left main protection status | 11,264 (100.0) | 0 (0.0) |
| Chronic renal disease | 10,731 (95.3) | 533 (4.7) |
| Previous PCI | 10,987 (97.5) | 277 (2.5) |
| Ejection fraction | 7,223 (64.1) | 4,041 (35.9) |
| Target vessel | 11,264 (100.0) | 0 (0.0) |
| Arterial access | 11,264 (100.0) | 0 (0.0) |
| No. CTO attempted | 10,913 (96.9) | 351 (3.1) |
| No. vessels attempted | 11,190 (99.3) | 74 (0.7) |
| No. lesions attempted | 11,200 (99.4) | 64 (0.6) |
| First operator status | 10,681 (94.8) | 583 (5.2) |
| Intra-coronary imaging | 11,264 (100.0) | 0 (0.0) |
| Procedural device use | 9,069 (80.5) | 2,195 (19.5) |
| Glycoprotein inhibitor | 10,755 (95.5) | 509 (4.5) |
| Coronary complication | 10,373 (92.1) | 891 (7.9) |
| In-hospital MACCE | 10,943 (97.2) | 321 (2.8) |
| In-hospital mortality | 11,107 (98.6) | 157 (1.4) |
| 12-month mortality  | 11,264 (100.0) | 0 (0.0) |

**Supplemental table 2:** Patient characteristics after propensity score matching

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Statistics** | **No imaging(N=5,056)** | **Imaging(N=5,056)** | **Total(N=10,112)** | **P-value** |
| Gender | N (missing) | 5044 (10) | 5047 (7) | 10091 (17) | 0.932 |
| 0 | 3643 (72.2%) | 3649 (72.3%) | 7292 (72.3%) | . |
| 1 | 1401 (27.8%) | 1398 (27.7%) | 2799 (27.7%) | . |
| Clinical syndrome | N (missing) | 5052 (2) | 5054 (0) | 10106 (2) | 0.125 |
| No | 2235 (44.2%) | 2361 (46.7%) | 4596 (45.5%) | . |
| Yes | 2817 (55.8%) | 2693 (53.3%) | 5510 (54.5%) | . |
| Previous MI | N (missing) | 4640 (414) | 4647 (407) | 9287 (821) | 0.127 |
| No | 2944 (63.4%) | 3019 (65%) | 5963 (64.2%) | . |
| Yes | 1696 (36.6%) | 1628 (35%) | 3324 (35.8%) | . |
| Previous PCI | N (missing) | 4936 (118) | 4954 (100) | 9890 (218) | 0.192 |
| No | 3538 (71.7%) | 3492 (70.5%) | 7030 (71.1%) | . |
| Yes | 1398 (28.3%) | 1462 (29.5%) | 2860 (28.9%) | . |
| Diabetes | N (missing) | 4914 (140) | 4919 (135) | 9833 (275) | 0.095 |
| No | 3722 (75.7%) | 3796 (77.2%) | 7518 (76.5%) | . |
| Yes | 1192 (24.3%) | 1123 (22.8%) | 2315 (23.5%) | . |
| Hypertension | N (missing) | 4852 (202) | 4779 (275) | 9631 (477) | 0.030 |
| No | 1784 (36.8%) | 1860 (38.9%) | 3644 (37.8%) | . |
| Yes | 3068 (63.2%) | 2919 (61.1%) | 5987 (62.2%) | . |
| PVD | N (missing) | 4852 (202) | 4779 (275) | 9631 (477) | 0.113 |
| No | 4324 (89.1%) | 4306 (90.1%) | 8630 (89.6%) | . |
| Yes | 528 (10.9%) | 473 (9.9%) | 1001 (10.4%) | . |
| Previous stroke | N (missing) | 4852 (202) | 4779 (275) | 9631 (477) | 0.362 |
| No | 4499 (92.7%) | 4454 (93.2%) | 8953 (93%) | . |
| Yes | 353 (7.3%) | 325 (6.8%) | 678 (7%) | . |
| Renal impairment | N (missing) | 4841 (213) | 4798 (256) | 9639 (469) | 0.221 |
| No | 4556 (94.1%) | 4543 (94.7%) | 9099 (94.4%) | . |
| Yes | 285 (5.9%) | 255 (5.3%) | 540 (5.6%) | . |
| G2b23a inhibitors | N (missing) | 4835 (219) | 4803 (251) | 9638 (470) | 0.671 |
| No | 3703 (76.6%) | 3696 (77%) | 7399 (76.8%) | . |
| Yes | 1132 (23.4%) | 1107 (23%) | 2239 (23.2%) | . |
| Mechanical support | N (missing) | 4946 (108) | 4923 (131) | 9869 (239) | 0.004 |
| No | 4690 (94.8%) | 4728 (96%) | 9418 (95.4%) | . |
| Yes | 256 (5.2%) | 195 (4%) | 451 (4.6%) | . |