## Appendix:

**Online supplement Table 1. Postoperative ECG grading by each of the criteria in the test cohort**

|  | *ECG Grade* | | | | |
| --- | --- | --- | --- | --- | --- |
|  | *0* | *1* | *2* | *3* | *4* |
| Last postoperative ECG grade | 53.8% | 10.3% | 10.6% | 4.0% | 21.3% |
| Lowest postoperative ECG grade | 76.1% | 5.0% | 10.8% | 1.7% | 6.4% |
| Median postoperative ECG grade | 50.6% | 13.2% | 15.6% | 5.0% | 15.6% |
| Highest postoperative ECG grade | 31.9% | 13.6% | 11.4% | 7.9% | 35.2% |

ECGs were sampled according to four different criteria. The last ECG is the last ECG before discharge. The lowest, highest, and median grades refer to the corresponding grades for all ECGs acquired during a patient's hospitalization up to postoperative day 5. Median grades are rounded to the next higher grade (e.g. a grade of 3.5 is rounded to 4).

**Online supplement Table 2: POD1 cTnI and CKMB levels stratified by the ECG diagnosis of PMI**

| | cTnI (µg/L) | | | CKMB (µg/L) | | |
|---|---|---|---|---|---|---|
| | PMI by ECG | No PMI by ECG | P-value | PMI by ECG | No PMI by ECG | P-value |
| Last ECG ( grade 3 or 4) | 1.50 (0.7-4.5) (N=137) | 1.17 (0.7-2.3) (N=400) | 0.068 | 27.5 (11.3-69.4) (N=137) | 21.2 (9.6-56.5) (N=400) | 0.196 |
| Last ECG (grade 4) | 1.40 (0.7-4.7) (N=115) | 1.17 (0.7-2.3) (N=422) | 0.034 | 28.6 (12.2-78.3) (N=115) | 21.2 (9.5-55.2) (N=422) | 0.043 |
| Lowest ECG (grade 3 or 4) | 1.96 (0.8-6.3) (N=44) | 1.21 (0.7-2.4) (N=493) | 0.012 | 46.2 (17.4-92.2) (N=44) | 21.2 (9.5-54.7) (N=493) | 0.006 |
| Lowest ECG (grade 4) | 1.37 (0.8-4.7) (N=35) | 1.22 (0.7-2.4) (N=502) | 0.090 | 49.5 (17.8-91.3) (N=35) | 21.8 (9.5-55.1) (N=502) | 0.008 |
| Median ECG (grade 3 or 4) | 1.59 (0.8-4.7) (N=105) | 1.17 (0.7-2.3) (N=432) | 0.013 | 33.1 (14.2-90.3) (N=105) | 20.9 (9.4-48.8) (N=432) | 0.003 |
| Median ECG (grade 4) | 1.77 (0.7-4.9) (N=84) | 1.17 (0.7-2.3) (N=453) | 0.013 | 39.7 (12.8-90.8) (N=84) | 21.1 (9.5-49.4) (N=453) | 0.008 |
| Highest ECG (grade 3 or 4) | 1.55 (0.8-3.6) (N=233) | 1.12 (0.7-2.1) (N=304) | 0.003 | 27.4 (10.8-70.7) (N=233) | 20.2 (9.3-53.4) (N=304) | 0.052 |
| Highest ECG (grade 4) | 1.58 (0.8-4.1) (N=190) | 1.12 (0.7-2.1) (N=347) | 0.001 | 27.9 (11.7-79.2) (N=190) | 20.8 (9.3-48.8) (N=347) | 0.024 |

Rows represent grades of injury/infarction. The last ECG is the last ECG before discharge. The lowest, highest, and median grades refer to the corresponding grades for all ECGs acquired during a patient's hospitalization up to postoperative day 5. Median grades are rounded to the next higher grade (e.g. a grade of 3.5 is rounded to 4). Biomarker values in columns show the median value for patients in the respective ECG category versus value of patients not having the diagnosis of PMI by ECG (e.g. grade 4 versus grade 0, 1, 2, or 3)

Expressed as median (25-75% IQR)

POD1, postoperative day 1; cTnI, cardiac troponin I; PMI, perioperative myocardial infarction; ECG, electrocardiogram

**Online supplement Table 3: Predictors of Mortality and Hospital Length of Stay in the Validation Cohort**

| Validation Cohort | All Cause Mortality | | | | Hospital Length of Stay | | | |
|---|---|---|---|---|---|---|---|---|
| | Univariate Cox | | Multivariate Cox | | Univariate Cox | | Multivariate Cox | |
| | HR (95% CI) | P Value | HR (95% CI) | P Value | HR (95% CI) | P Value | HR (95% CI) | P Value |
| Age, years (decade) | 1.93 (1.53-2.44) | <0.001 | 1.85 (1.46-2.35) | <0.001 | 1.21 (1.14-1.29) | <0.001 | 1.19 (1.11-1.26) | <0.001 |
| Gender (female) | 1.44 (1.15-1.81) | 0.002 | 1.24 (0.98-1.56) | 0.072 | 1.22 (1.12-1.32) | <0.001 | 1.15 (1.06-1.25) | <0.001 |
| Race (Caucasian) | 1.00 (0.71-1.42) | 0.852 | 0.92 (0.65-1.31) | 0.68 | 1.01 (0.91-1.13) | 0.715 | 0.97 (0.87-1.08) | 0.646 |
| **Cardiac Biomarkers** | | | | | | | | |
| cTnT Preop (1 µg/L increment) * | 1.03 (0.93-1.14) | 0.571 | | | 1.04 (0.99-1.09) | 0.047 | | |
| cTnT POD1 (10 µg/L increment) | 5.35 (3.03-9.42) | <0.001 | 5.47 (3.10-9.64) | <0.001 | 4.86 (2.86-8.27) | <0.001 | 4.53 (2.68-7.65) | <0.001 |

"*" cTnT preop indicates highest cTnT between preoperative day 5 up to day of surgery

cTnT indicates cardiac troponin T; POD, postoperative day