

# Supplemental Material

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## **Data S1.**

### **Supplemental Methods**

Missing data rate. From the original dataset, Rows with endpoints missing (either one or both) have been dropped (191 patients), reducing the number of samples to 14322. The vast majority of missing values are found in a small features subset of features, so we established a 20% cutoff: all features exceeding this percentage of missing values are excluded from the analysis. This decision eliminated 24 features, leading to a 34-variables dataset. The rows have a mean of 0.9982% of missing values, with a peak of 15.625%. These missing values percentages are treatable by the imputation process, and thus no rows were dropped.

Imputation. At this point, the dataset presents rows missing some values, making up 0.94% of the total observations. The imputation method chosen for this setting is the Fully Conditional Specification, where a separate model iteratively imputes each incomplete variable: this is a multivariate imputation method allowing for imputing numerical and categorical features since an ad-hoc model imputes each variable. The precise algorithm chosen is MICE. The Bayesian Linear Regression method has been chosen for imputing numerical features, Logistic Regression for binary features, Polytomous Logistic Regression for unordered categorical variables, and the Proportional Odds Model for ordered categorical ones. Lastly, rows that have become identical during the imputation are removed to reduce redundant information: this led to removing three rows and a final dataset made up of 14219 rows.

**Table S1: Baseline characteristics differences in the propensity matched population**

|                                | <b>Incomplete revascularization (n=1417)</b> | <b>Complete revascularization (n=1417)</b> | <b>P value</b> |
|--------------------------------|--|--|----------------|
| Age (years)                    | 67.4   | 67.3                                       | 0.82           |
| Female sex                     | 0.23   | 0.21                                       | 0.24           |
| Hypertension                   | 0.67   | 0.63                                       | 0.11           |
| Diabetes                       | 0.26   | 0.26                                       | 0.64           |
| Dyslipidemia                   | 0.49   | 0.49                                       | 0.88           |
| PAD                            | 0.08   | 0.08                                       | 0.89           |
| Current Smoking                | 0.31   | 0.33                                       | 0.30           |
| eGFR <60ml/min                 | 0.28   | 0.29                                       | 0.77           |
| Previous MI                    | 0.20   | 0.21                                       | 0.43           |
| Previous CABG                  | 0.06   | 0.05                                       | 0.46           |
| Previous PCI                   | 0.20   | 0.21                                       | 0.43           |
| Atrial fibrillation            | 0.10   | 0.09                                       | 0.65           |
| Prior Stroke                   | 0.03   | 0.04                                       | 0.31           |
| Prior Major Bleeding (BARC3-5) | 0.009  | 0.015                                      | 0.13           |
| Cancer                         | 0.13   | 0.13                                       | 0.91           |
| COPD                           | 0.08   | 0.08                                       | 0.68           |
| STEMI at admission             | 0.52   | 0.54                                       | 0.31           |
| Cardiogenic shock at admission | 0.03   | 0.04                                       | 0.54           |
| Killip class >2                | 0.16   | 0.16                                       | 0.61           |
| GRACE score >140               | 0.25   | 0.25                                       | 0.93           |
| ULM disease                    | 0.14   | 0.13                                       | 0.87           |
| Bifurcation involvement        | 0.26   | 0.22                                       | 0.11           |
| LVEF<50% at discharge          | 0.44   | 0.44                                       | 0.91           |
| ACE-I/ARB at discharge         | 0.80   | 0.79                                       | 0.52           |
| Beta-blockers at discharge     | 0.87   | 0.82                                       | 0.10           |
| Statin at discharge            | 0.96   | 0.95                                       | 0.15           |

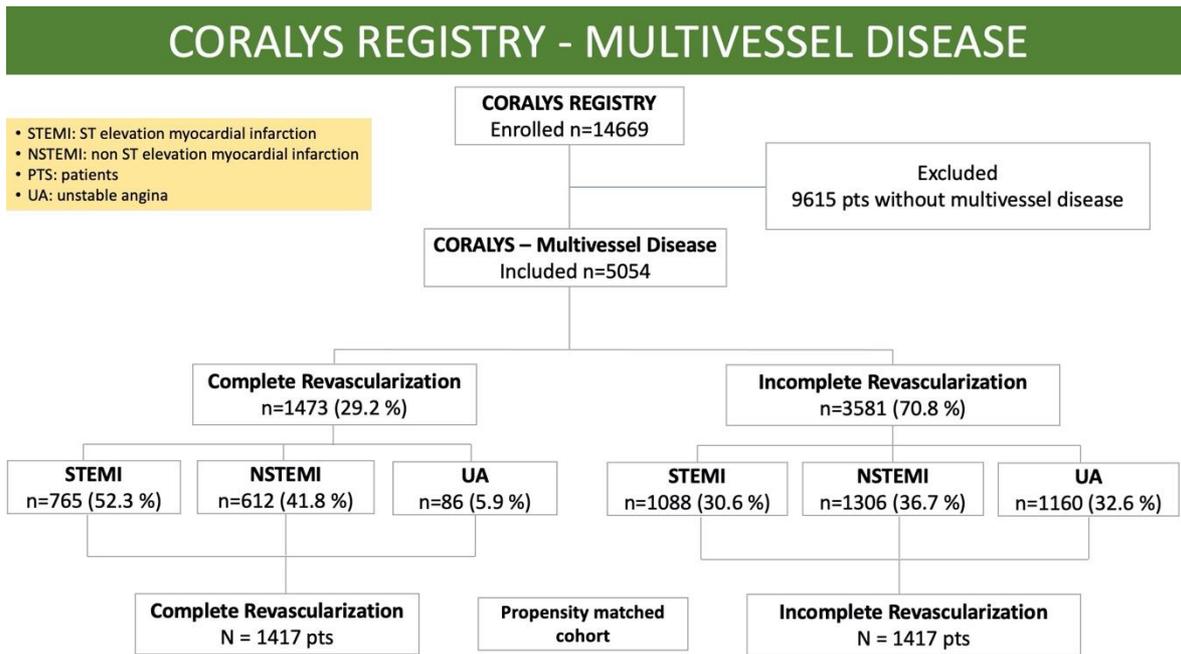
ACE-I=angiotensin converting enzyme inhibitors, ACS=acute coronary syndrome, AF=atrial fibrillation, ARB=angiotensin receptor blocker, CABG=coronary artery bypass graft, COPD=chronic obstructive pulmonary disease, eGFR=estimated glomerular filtration rate, LVEF=left ventricular ejection fraction, MI=myocardial infarction, PAD=peripheral artery disease, PCI=percutaneous coronary intervention, STEMI=ST-elevation myocardial infarction, ULM=unprotected left main

**Table S2: PS matching adjusted HR and IPTW adjusted HR of the primary and secondary outcomes including medication at discharge in the models.**

| <b>All Population</b> |                       |                |                         |                |
|-----------------------|-----------------------|----------------|-------------------------|----------------|
|                       | <b>PS Adjusted HR</b> | <b>P value</b> | <b>IPTW adjusted HR</b> | <b>P value</b> |
| Primary endpoint      | 0.52 (0.39-0.70)      | <0.001         | 0.43 (0.23-0.80)        | 0.008          |
| HF hospitalization    | 0.53 (0.37-0.76)      | 0.01           | 0.39 (0.29-0.55)        | <0.001         |
| CV death              | 0.48 (0.31-0.76)      | 0.003          | 0.36 (0.20-0.64)        | <0.001         |
| All-cause death       | 0.68 (0.49-0.94)      | 0.02           | 0.56 (0.42-0.74)        | <0.001         |

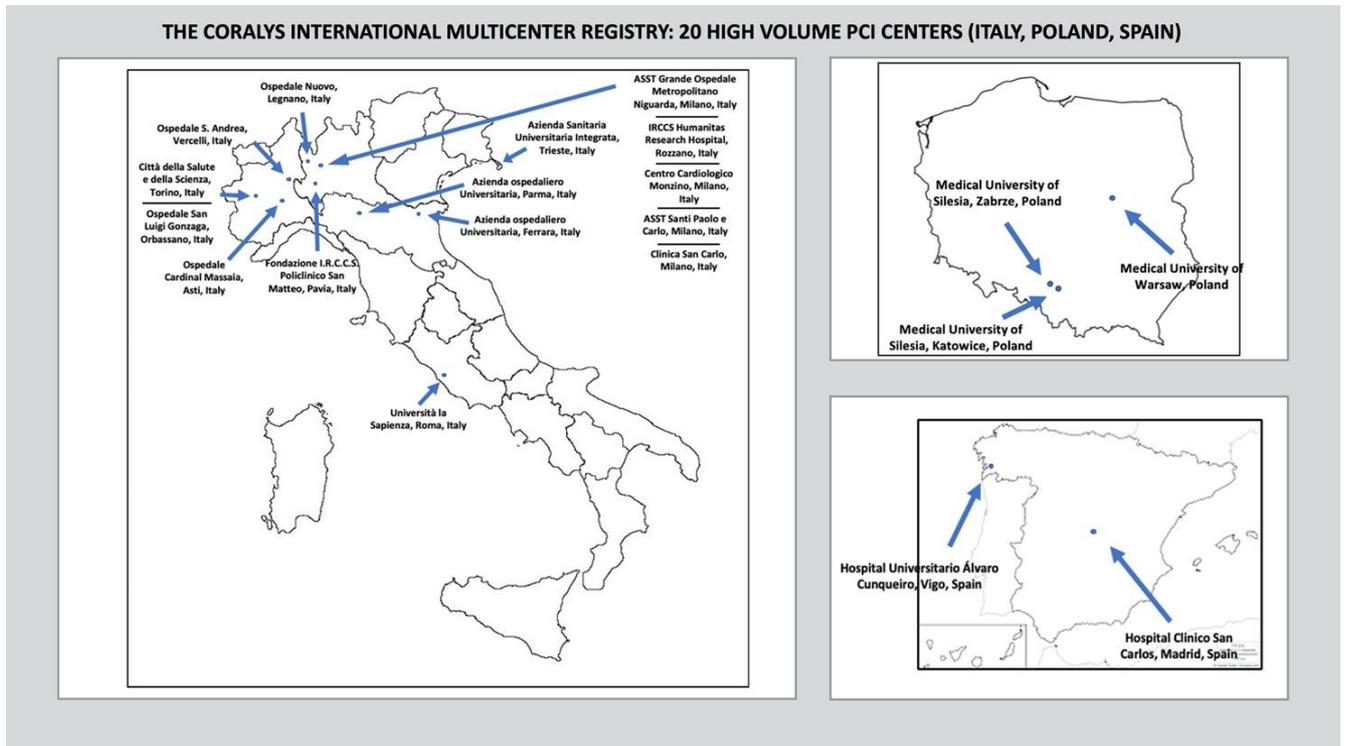
ACS= acute coronary syndrome, CV=cardiovascular, CR=complete revascularization, HF=heart failure, HR=hazard ratio, ICR= incomplete revascularization, IPTW=inverse probability treatment weighting, LVEF=left ventricular ejection fraction, NSTEMI=Non-ST-elevation, PS= propensity score, STEMI=ST-elevation myocardial infarction

**Figure S1: The CORALYS Registry and the study cohort**

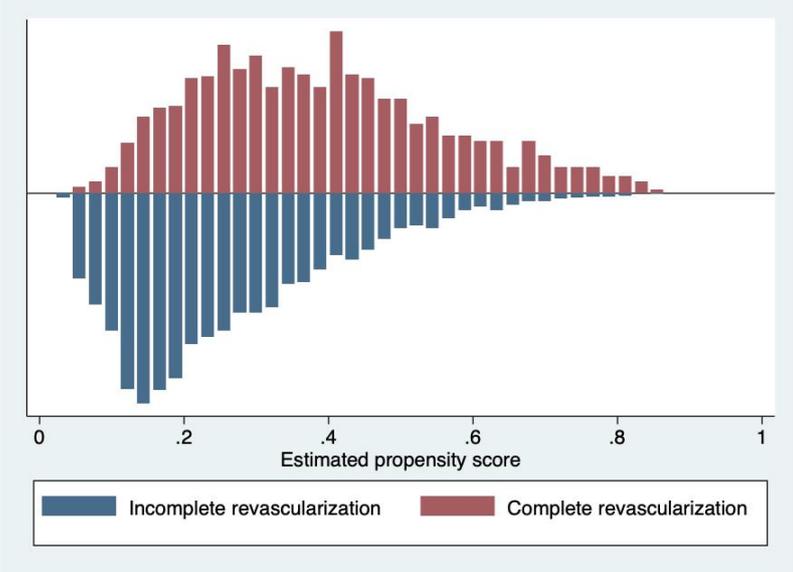


NSTE=Non-ST-elevation, PTS= patients, STEMI=ST-elevation myocardial infarction, UA=unstable angina

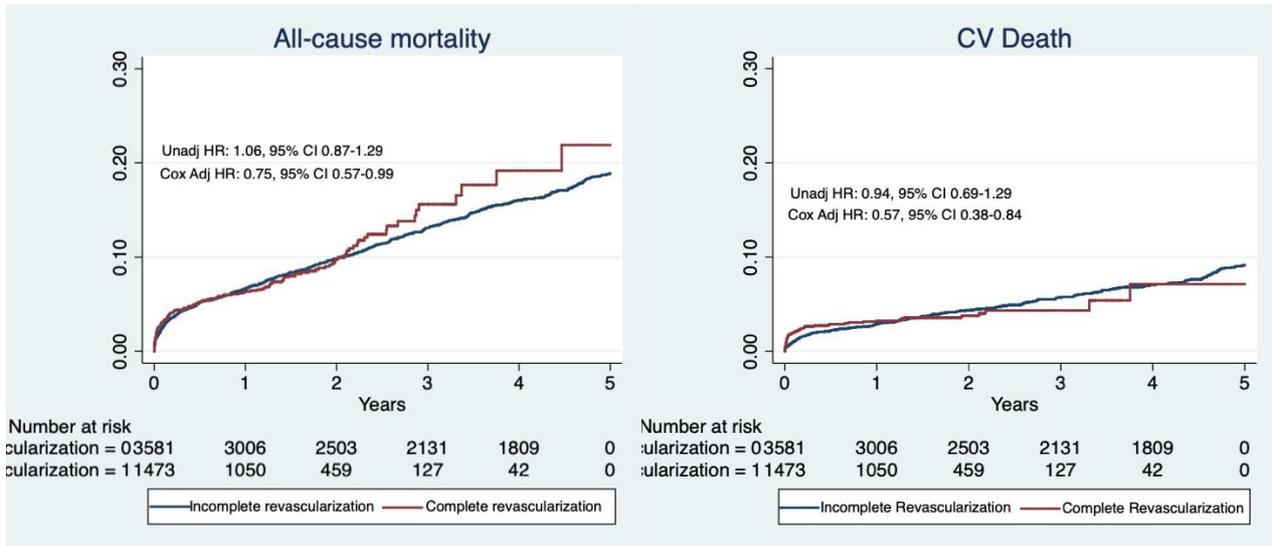
**Figure S2: Participating centers in the CORALYS registry**



**Figure S3: Distribution of Propensity Scores. Propensity score distribution for patients with incomplete and complete revascularization demonstrating good overlap between groups.**

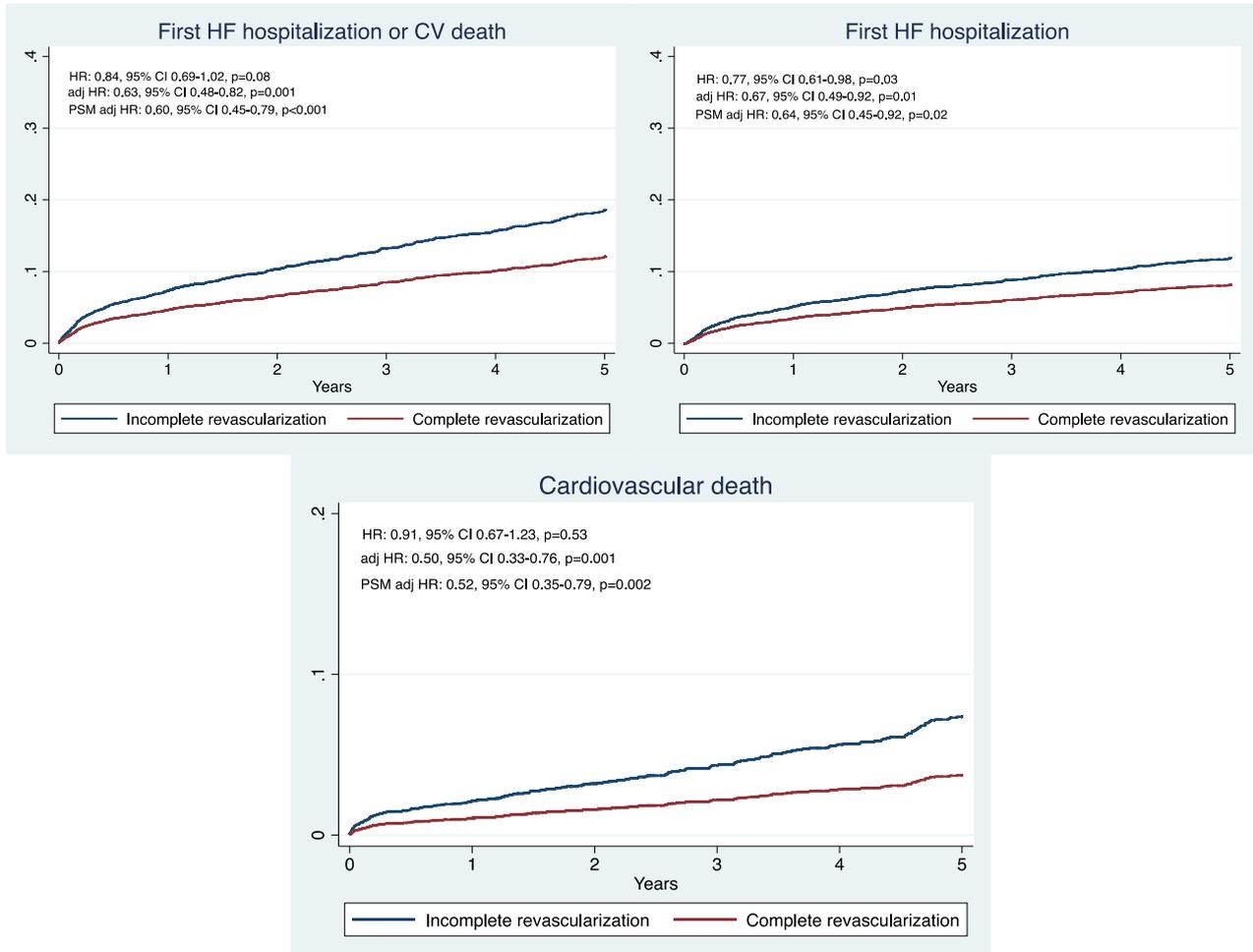


**Figure S4: Unadjusted Kaplan Meier incidence of all-cause death (left) and cardiovascular death (right)**



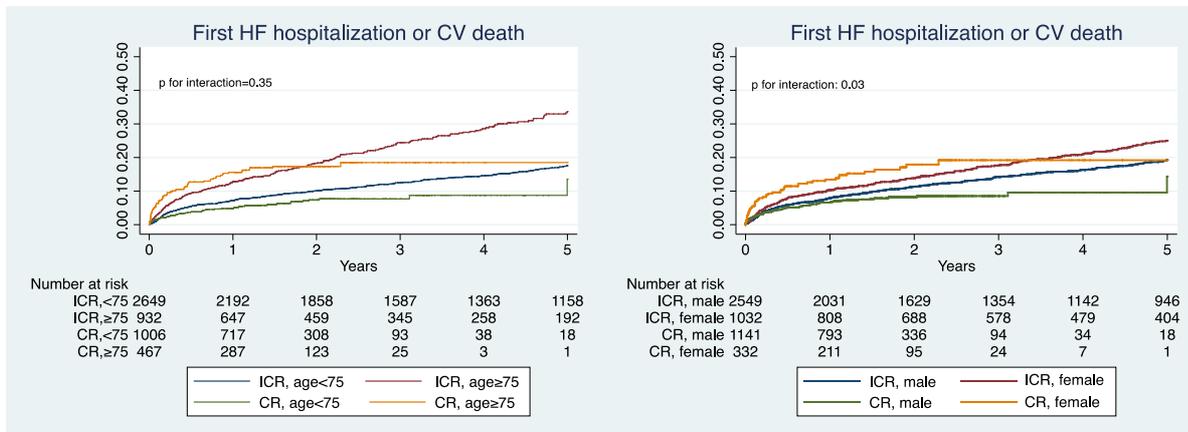
CI=confidence interval, HR=hazard ratio

**Figure S5: Cumulative incidence of the primary endpoint, first HF hospitalization and CV death in the competing risk model. Univariate, multivariate and propensity-score matching HR in the competing-risk model, showing consistent results with the main analysis.**



CI=confidence interval, CV=cardiovascular, HF=heart failure, HR=hazard ratio, PSM=propensity matched

**Figure S6: Unadjusted Kaplan Meier incidence of the primary endpoint according to age (left) and sex (right).**



CV=cardiovascular, CR=complete revascularization, HF=heart failure, ICR= incomplete revascularization