SUPPLEMENTAL MATERIAL

Table S1. Main clinical and procedural features in Derivation and Validation Cohorts

	Derivation Cohort (n=6714)	**Validation Cohort (n=3357)**	***p***
Age (years)	81.7±6.4	81.7±6.6	0.46
Male Sex (%)	48.2	47.9	0.72
BMI	26.7±4.9	26.6±4.9	0.76
Diabetes (%)	28.7	28.7	1
Hypertension (%)	83.1	83.2	0.94
Smoking (%)	17.5	18.1	0.
NYHA III-IV (%)	76.5	76.7	0.89
Prior PCI (%)	24.1	22.7	0.13
Prior CABG (%)	12.3	13.1	0.30
Prior CVA (%)	20.1	20.3	0.81
PAD (%)	17.4	18.1	
Active cancer (%)	4.7	4.1	0.25
Porcelain aorta (%)	4.7	7.1	0.34
AF (%)	27.1	27.6	
Anemia (%)	30.8	31.0	0.82
Creatinine (mg/dL)	1.3±1.8	1.3±1.1	0.78
Creatinine clearance mL/min	53±24	53±25	0.64
CKD			0.86
• CKD stage 5 (%)	6.4	6.8	
• CKD stage 4 or 5 (%)	6.6	7.0	
• CKD stage 3 (%)	52.6	51.9	
• CKD stage 2 (%)	27.4	27.2	

• CKD stage 1 (%)	7.0	7.1	
Hb (g/dL)	12.2±1.7	12.1±1.7	0.46
STS score	5.5±4.8	5.6±5.2	0.43
Euroscore II	5.9±5.6	5.9±5.7	0.64
EF (%)	54.6±11.5	54.4±11.5	0.43
Mean Aortic gradient (mmHg)	47±15	47±16	0.80
Contrast Volume (mL)	194±91	194±92	0.92
Valve size (mm)	26.5±2.7	26.5±2.7	0.46
Femoral access (%)	92.2	91.4	0.16
Apical access (%)	5.1	5.5	0.35
Other access (%)	2.7	3.1	0.32
Corevalve (%)	42.4	44.4	0.06
Edwards (%)	38.2	36.6	0.11
Other valves (%)	19.4	19.0	0.86
Aspirin (%)	54.7	56.2	0.21
P2Y12 inhibitor (%)	21.3	21.4	0.97
DAPT (%)	14.8	15.8	0.28
VKA (%)	21.3	20.5	0.44
NOAC (%)	11.0	11.5	0.55
Surgical Vascular Closure (%)	9.1	9.1	0.96
Transfusion (%)	17.1	17.0	0.98
Major Vascular Complications (%)	6.8	6.3	0.29
Minor Vascular Complications (%)	7.8	7.3	0.42
Post procedural dialysis (%)	0.8	0.6	0.28

AF = atrial fibrillation; BMI = body mass index; CABG = coronary artery bypass graft; CKD = chronic kidney disease; CVA = cerebrovascular accident; DAPT = dual antiplatelet therapy; EF = ejection fraction; MI = myocardial infarction; NYHA = New York Heart Association; PAD = peripheral artery disease; PCI = percutaneous coronary intervention; PG = pressure gradient; STS = Society of Thoracic Surgeons; TIA = transient ischemic attack; VKA = vitamin K antagonist.

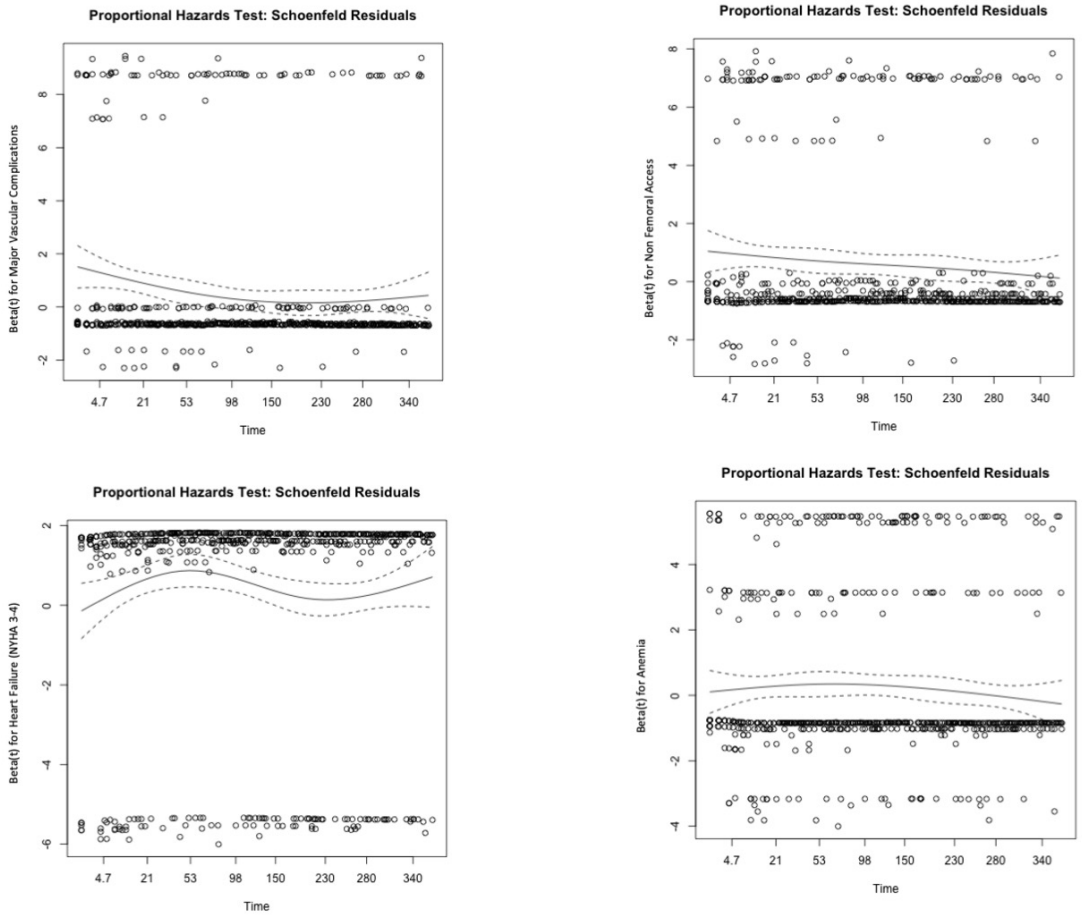
Table S2. Factors associated with postprocedural dialysis at univariate analysis in the derivation cohort

	OR (95% CI)	P
Sex (male)	**2.23 (1.24-4.00)**	**0.007**
Age (years)	**0.96 (0.93-1.00)**	**0.06**
Age >85 years	0.57 (0.31-1.06)	0.08
BMI	1.01 (0.95-1.06)	0.94
Diabetes	**1.97 (1.13-3.43)**	**0.02**
Hypertension	0.91 (0.40-2.07)	0.82
Smoking	2.03 (0.49-1.90)	0.92
NYHA III-IV	1.99 (0.91-4.51)	0.08
CAD	**1.84 (1.07-3.17)**	**0.03**
Prior PCI	1.21 (0.65-2.25)	0.55
Prior CABG	**2.56 (1.35-4.86)**	**0.004**
Prior CVA	1.54 (0.88-2.69)	0.13
PAD	**2.80 (1.55-5.07)**	**0.001**
Porcelain aorta	1.84 (0.56-6.02)	0.32
Cancer	1.10 (0.49-2.48)	0.82
AF	1.17 (0.66-2.09)	0.59
Anemia	**3.05 (1.76-5.30)**	**<0.0001**
Aspirin	1.21 (0.76-1.93)	0.74
P2Y12 inhibitor	0.93 (0.13-7.21)	0.94
DAPT	1.39 (0.57-3.39)	0.48
VKA	1.34 (0.62-2.88)	0.45
EF < 40%	0.99 (0.42-2.33)	0.98

EF < 30%	2.4 (1.03-5.58)	0.04
Core Valve	0.88 (0.48-1.62)	0.69
Edwards valve	1.18 (0.68-2.07)	0.56
Other valves	0.58 (0.21-1.63)	0.31`
No femoral access	**6.68 (3.76-11.87)**	**<0.0001**
Valve size	0.98 (0.88-1.08)	0.66
Valve in valve	1.11 (0.35-3.52)	0.87
CKD stage 5	**2.80 (1.20-6.53)**	**0.02**
CKD stage 4 or 5	**2.73 (1.49-5.02)**	**0.001**
CKD stage 3	1.03 (0.59-1.79)	0.92
Contrast x100 ml	**1.36 (1.12-1.67)**	**0.003**
Major vascular complications	**4.46 (2.36-8.43)**	**<0.0001**
Transfusion	**10.01 (5.55-18.07)**	**<0.0001**
Valve migration	2.96 (0.93-9.96)	0.09
Paravalvular leak	1.06 (0.65-1.75)	0.81

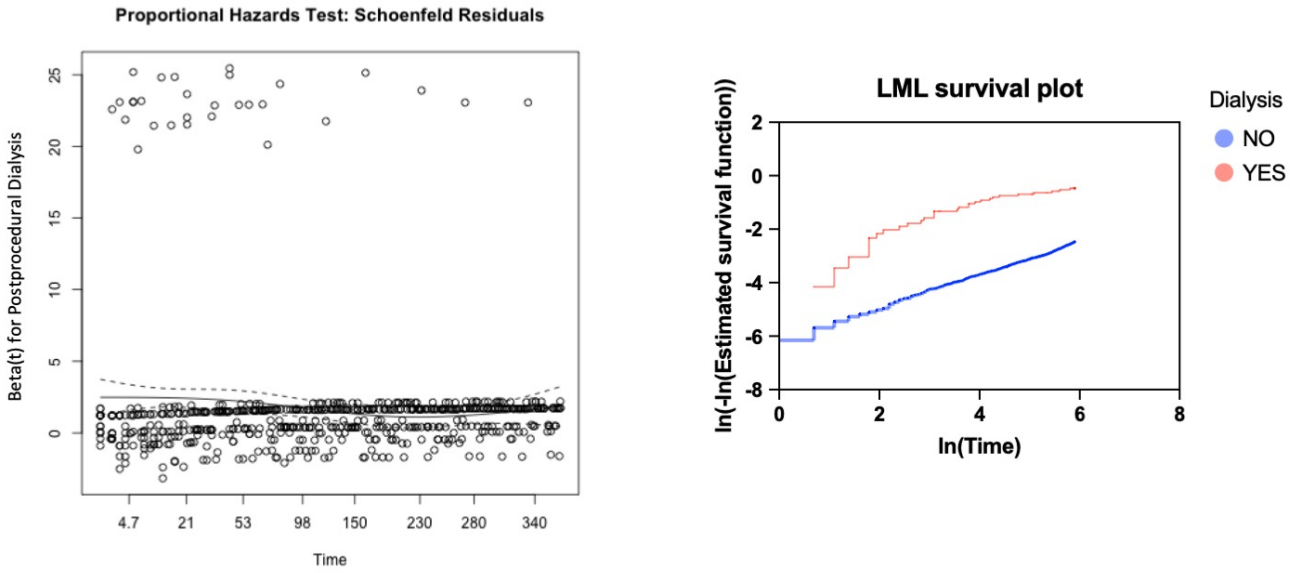
BMI = body mass index; CABG = coronary artery bypass graft; CAD= coronary artery disease; CKD = chronic kidney disease; CVA = cerebrovascular accident; DAPT = dual antiplatelet therapy; EF = ejection fraction; NYHA = New York Heart Association; PAD = peripheral artery disease; PCI = percutaneous coronary intervention; VKA = vitamin K antagonist.

Figure S1. Scaled Shoenfeld Residuals vs. Time



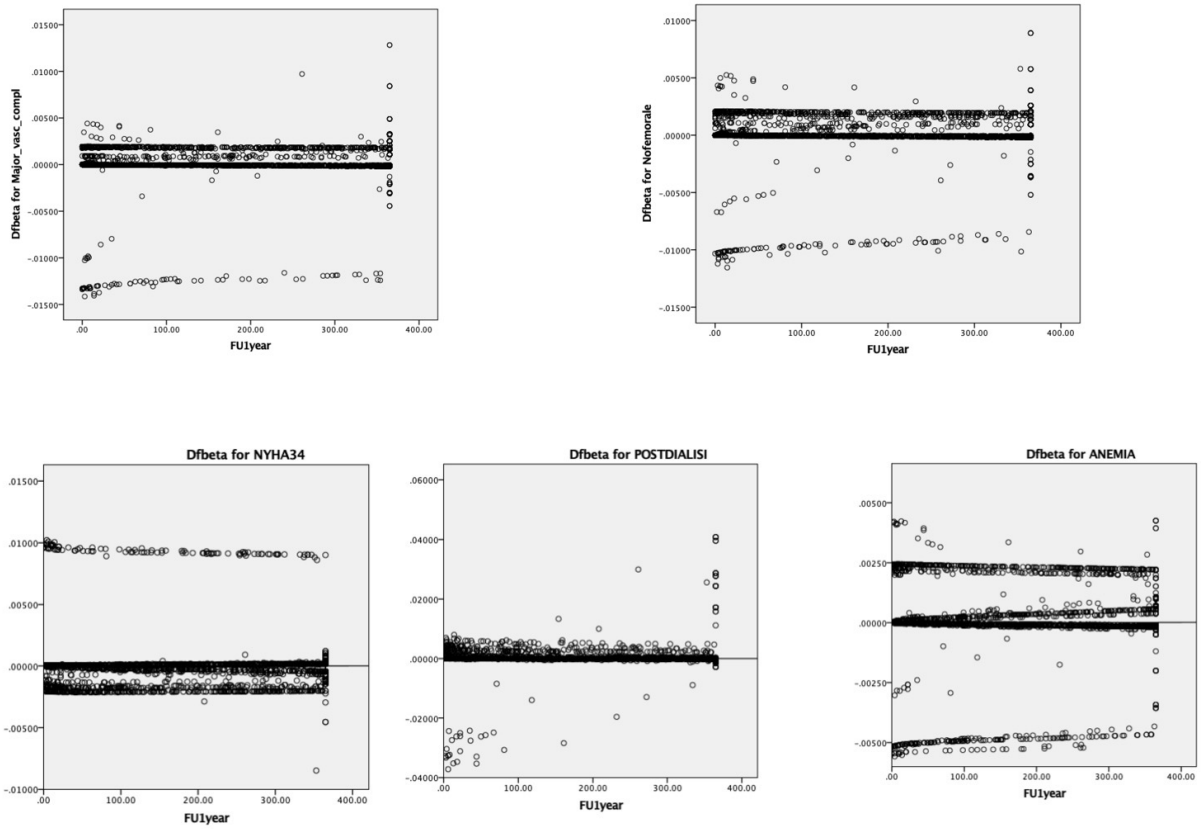
Plot of Scaled Shoenfeld Residuals (with 95% CI shown by the dotted line) vs Time, assessing assumptions of Cox regression model. There is no clear time-dependence of the parameters (Major Vascular Complications, Non femoral access, Heart Failure and Anemia).

Figure S2. Scaled Shoenfeld Residuals and Log-minus-log (LML) survival plot for the variable Dialysis



Plot of Scaled Shoenfeld Residuals (with 95% confidence intervals shown by the dotted line) vs Time, for the parameter Dialysis, again showing no time-dependence of this parameter, thus confirming assumptions of Cox proportional hazard model. A plot of log-minus-log survival is also shown on the left again confirming lack of time-dependence (the two log-minus-log survival curves are roughly parallel)

Figure S3. DFbeta values assessing potential outliers in Cox regression model



Plot of DFbeta values. In general, large values of DFBETAS indicate observations that are influential in estimating a given parameter. A cutoff of > ±0.2 can identify possible influential values (using $2\sqrt{n}$ as a size-adjusted cutoff value)