

Supplementary material

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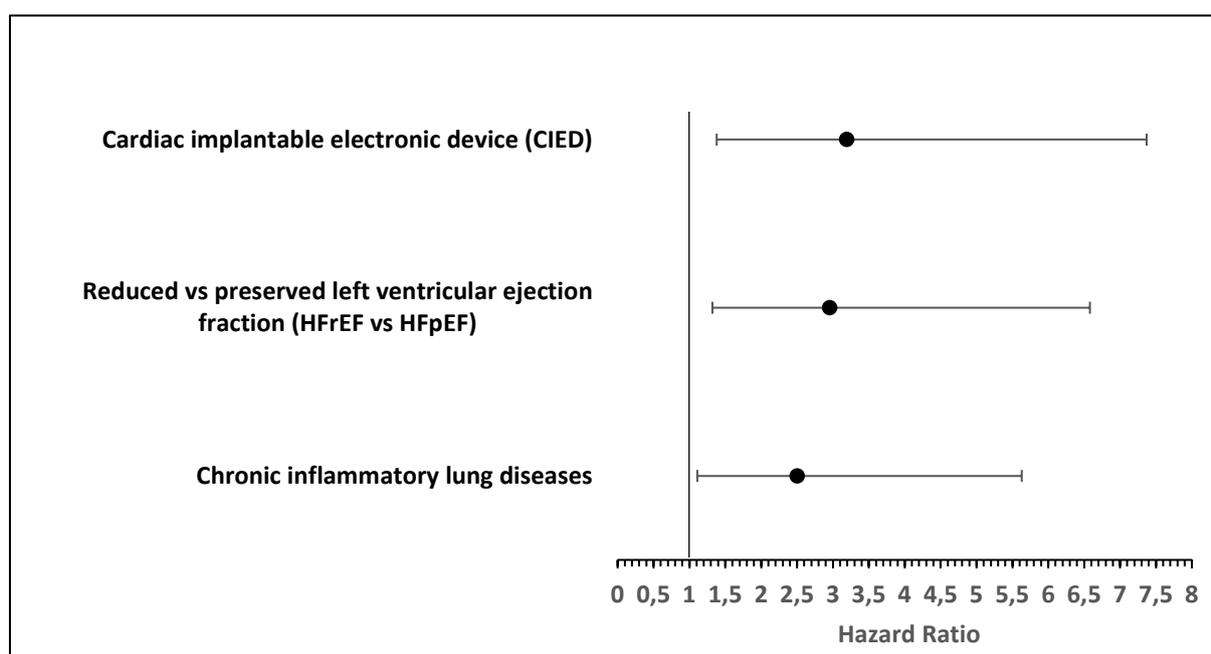


Figure S1. Cox forward stepwise regression model for factors affecting survival during 2-year follow-up after TAVR

Table S1. Patient characteristics (n = 130)

Demographics	
Gender: Male, n (%)	48 (36.92%)
Age (years), median (Q1-Q3)	82.00 (75.00-85.00)

BMI (kg/m ²), median (Q1-Q3)	27.51 (23.05-30.78)
Length of hospitalization (days), median (Q1-Q3)	9.00 (7.00-13.00)
Comorbidities	
Nicotinism, n (%)	22 (16.92%)
Alcoholism, n (%)	1 (0.77%)
Dyslipidemia, n (%)	95 (73.08%)
Asthma, n (%)	4 (3.08%)
Chronic obstructive pulmonary disease, n (%)	14 (10.77%)
Other chronic inflammatory lung diseases, n (%)	7 (5.38%)
Chronic inflammatory liver diseases, n (%)	3 (2.31%)
Chronic kidney disease, n (%)	81 (62.31%)
Diabetes, n (%)	46 (35.38%)
Atrial fibrillation, n (%)	52 (40.00%)
NYHA class I, n (%)	1 (0.77%)
NYHA class II, n (%)	13 (10.00%)
NYHA class III, n (%)	95 (73.08%)
NYHA class IV, n (%)	3 (2.31%)
Surgical risk according to ESC/EACTS* including Euroscore II (low) n (%)	9 (6.98%)

Surgical risk according to ESC/EACTS* including Euroscore II (moderate) n (%)	6 (4.65%)
Surgical risk according to ESC/EACTS* including Euroscore II (high) n (%)	99 (76.74%)
Surgical risk according to ESC/EACTS* including STS-PROM (low) n (%)	24 (18.61%)
Surgical risk according to ESC/EACTS* including STS-PROM (moderate) n (%)	5 (3.88%)
Surgical risk according to ESC/EACTS* including STS-PROM (high) n (%)	100 (77.52%)
Ischemic stroke, n (%)	15 (11.54%)
Haemorrhagic stroke, n (%)	9 (6.92%)
Transient ischemic attack, n (%)	5 (3.85%)
Chronic coronary syndrome without a history of myocardial infarction, n (%)	42 (32.31%)
Chronic coronary syndrome with a history of myocardial infarction, n (%)	42 (32.31%)
Percutaneous coronary revascularization history, n (%)	36 (27.69%)
Coronary artery bypass grafting history, n (%)	7 (5.38%)
Hybrid coronary revascularization history (percutaneous with coronary artery bypass grafting), n (%)	8 (6.15%)
Pacemaker implantation history, n (%)	17 (13.08%)
Implantable cardioverter-defibrillator, n (%)	2 (1.54%)
Cardiac resynchronization therapy, n (%)	1 (0.77%)

Hypertension, n (%)	107 (82.31%)
Elective TAVR procedure, n (%)	118 (90.77%)
Femoral vascular access, n (%)	102 (78.47%)
Echocardiographic measurements	
Left ventricular ejection fraction (%), median (Q1-Q3)	58.00 (50.00-60.00)
Aortic valve area (cm ²), median (Q1-Q3)	0.70 (0.60-0.88)
Maximal gradient through the aortic valve (mmHg), median (Q1-Q3)	72.00 (55.00-85.00)
Mean gradient through the aortic valve (mmHg), median (Q1-Q3)	43.00 (33.00-52.00)
Maximum velocity through the aortic valve (m/s), median (Q1-Q3)	4.20 (3.56-4.50)
Surgical risk assessment	
STS/ACC TAVR In hospital risk score (%), median (Q1-Q3)	3.34 (2.62-5.01)
Euroscore II (%), median (Q1-Q3)	3.70 (2.16-7.44)
STS-PROM Risk of Mortality (%), median (Q1-Q3)	3.01 (2.11-4.42)
Laboratory test	
Hemoglobin (g/dl), median (Q1-Q3)	12.10 (11.40-13.00)
Platelets (*10 ³ /μL), median (Q1-Q3)	194.00 (158.00-234.00)
Creatinine level (μmol/l), median (Q1-Q3)	96.00 (81.00-115.00)
C-reactive protein (mg/l), median (Q1-Q3)	2.60 (1.00-6.95)

NT-proBNP (pg/ml), median (Q1-Q3)	2 361.00 (1 102.00-5 633.00)
Glomerular filtration rate (ml/min/1.73m ²), median (Q1-Q3)	55.50 (43.15-72.40)
Aspartate transaminase (U/l) , median (Q1-Q3)	26.10 (22.00-33.00)
Alanine transaminase (U/l) , median (Q1-Q3)	18.10 (14.00-27.00)
* Surgical risk categories based on the algorithm for the management of patients with severe aortic stenosis from: <i>2021 ESC/EACTS guidelines for the management of valvular heart disease</i> [3]. Low risk: patients <75 years at low-risk for SAVR assessed by appropriate risk score (surgical risk score < 4%); high risk: patients ≥ 75 years or at high risk for SAVR assessed by appropriate risk score (surgical risk score > 8%); moderate: all other patients	

Abbreviations: BMI, body mass index; CRT, cardiac resynchronization therapy; ICD, implantable cardioverter defibrillator; NT-proBNP, N-terminal pro-B-type natriuretic peptide; NYHA, New York Heart Association; TAVR, transcatheter aortic valve replacement; TIA, transient ischemic attack

Table S2. Factors affecting survival 24 months after TAVR. Univariable Cox regression

Variable	Hazard Ratio (HR)	-95% CI	+95% CI	P-value
Male gender	2. 61	1. 28	5. 33	0. 009
Age (years)	1. 00	0. 96	1. 05	1,00
BMI (kg/m ²)	0. 98	0. 91	1. 06	0. 65
Length of hospitalization (days)	1. 04	1. 01	1. 08	0. 004
Leukocyte level (*10 ³)	0. 85	0. 68	1. 07	0. 17
Hemoglobin (g/dl)	1. 04	0. 81	1. 34	0. 74
Hematocrit [%]	1. 00	0. 94	1. 06	0. 98
Platelets (*10 ³ /μL)	1. 00	0. 99	1. 00	0. 46

Creatinine level ($\mu\text{mol/l}$)	1.00	1.00	1.00	<i>0.94</i>
C-reactive protein (mg/l)	1.00	0.98	1.01	<i>0.71</i>
NT-proBNP (pg/ml)	1.00	1.00	1.00	<i>0.94</i>
Glomerular filtration rate (ml/min/1.73m ²)	1.00	0.98	1.02	<i>0.94</i>
Aspartate transaminase (U/l)	0.99	0.97	1.02	<i>0.59</i>
Alanine transaminase (U/l)	0.99	0.97	1.01	<i>0.40</i>
Left ventricular ejection fraction (%)	0.97	0.95	1.00	<i>0.10</i>
Aortic valve area (cm ²)	1.52	0.27	8.50	<i>0.63</i>
Maximum gradient through the aortic valve (mmHg)	1.00	0.98	1.02	<i>0.91</i>
Mean gradient through the aortic valve (mmHg)	1.00	0.98	1.03	<i>0.90</i>
Maximum velocity through the aortic valve	0.70	0.35	1.41	<i>0.32</i>
STS/ACC TAVR in hospital risk score (%)	0.99	0.96	1.03	<i>0.69</i>
Euroscore II (%)	1.02	0.98	1.06	<i>0.32</i>
STS PROM Risk of mortality score (%)	1.10	0.94	1.27	<i>0.23</i>
Percutaneous coronary revascularization	3.36	0.60	18.77	<i>0.67</i>
Coronary artery bypass grafting	3.14	1.05	9.38	<i>0.05</i>
Hybrid revascularization	0.58	0.08	4.36	<i>0.30</i>
Chronic kidney disease	1.14	0.55	2.38	<i>0.73</i>
Dyslipidemia	1.26	0.54	2.93	<i>0.59</i>

Atrial fibrillation	1.26	0.62	2.57	0.99
Hypertension	1.09	0.42	2.84	0.86
Infarction history	2.08	0.91	4.75	0.08
Chronic coronary syndrome without infarction	0.85	0.32	2.28	0.22
Nicotinism	1.90	0.85	4.25	0.12
Diabetes	0.98	0.47	2.05	0.96
Chronic inflammatory lung diseases	2.15	1.01	4.57	0.047
Cerebrovascular accident	1.49	0.68	3.23	0.32
Cardiac implantable electronic device	2.30	1.03	5.14	0.04
Cardiac implantable electronic device (subgroup with cardiostimulator only)	2.38	1.03	5.54	0.04
Coronary artery disease	1.42	0.66	3.09	0.37
Coronary revascularization	1.56	0.77	3.15	0.22
Low surgical risk vs. moderate and high surgical risk according to ESC/EACTS * (including Euroscore II)	1.53	0.46	5.09	0.49
High surgical risk vs. low and moderate surgical risk according to ESC/EACTS* (including Euroscore II)	1.25	0.38	4.16	0.71
Low surgical risk vs. moderate and high surgical risk according to ESC/EACTS *	1.05	0.43	2.57	0.91

(including STS-PROM)				
Moderate surgical risk vs. low and high surgical risk according to ESC/EACTS* (including STS-PROM)	0.79	0.11	5.78	0.81
High surgical risk vs. low and moderate surgical risk according to ESC/EACTS* (including STS-PROM)	1.00	0.43	2.32	1.00
Mildly reduced vs preserved left ventricular ejection fraction	0.77	0.10	5.79	0.44
Mildly reduced vs reduced left ventricular ejection fraction	0.27	0.03	2.10	0.44
Reduced vs preserved left ventricular ejection fraction	2.90	1.29	6.53	0.03
Access (femoral vs other)	0.29	0.15	0.56	<0.001
Preserved and mildly reduced vs reduced left ventricular ejection fraction	2.95	1.32	6.58	0.008
* Surgical risk categories based on the algorithm for the management of patients with severe aortic stenosis from: <i>2021 ESC/EACTS guidelines for the management of valvular heart disease</i> [3]. Low risk: patients <75 years at low-risk for SAVR assessed by appropriate risk score (surgical risk score < 4%); high risk: patients ≥ 75 years or at high risk for SAVR assessed by appropriate risk score (surgical risk score > 8%); moderate: all other patients				

Abbreviations: CI, Confidence Interval; EACTS, European Association for Cardio-Thoracic Surgery; ESC, European Society of Cardiology; N/A, not applicable; other — see Supplementary Table 1