

Table S1. List of selected characteristics included in propensity score matching (PSM).

Variable	SMDbefore PSM	SMDafter PSM
Date of the procedure	-1.6483	-0.3573
Age	-40.0374	-0.4008
Overweight (BMI \geq 25)	-10.7474	-1.2812
Obesity (BMI \geq 30)	-25.2108	-0.5622
CCS N/A	-4.0766	-0.3677
CCS Class I	-1.8480	-0.3720
CCS Class II	3.9986	1.4550
CCS Class III	-1.4229	-1.2392
CCS Class IV	0.6638	-0.9798
NYHA N/A	-3.2698	-0.8554
NYHA Class I	7.5466	-0.6837
NYHA Class II	4.3538	1.0862
NYHA Class III	-11.0533	0.2025
NYHA Class IV	0.1576	-1.4617
Prior MI	21.9056	-1.4127
Prior PCI, Yes	11.7047	4.5299
Prior PCI, No	-6.2968	-1.2877
Current smoker	22.3281	2.8597

Current or former smoker	34.1934	2.0548
DM	-10.1536	1.1028
IDDM	-6.1129	1.2612
Hypertension,	-9.4570	2.6918
Hyperlipidemia	2.1448	3.7097
Asthma	-3.4806	3.4356
Sinus rhythm before procedure	-7.1894	-0.3266
Renal impairment, Normal (CC >85ml/min)	17.1326	1.2904
Renal impairment, Moderate (CC >50 &<85)	-21.5629	-3.9559
Renal impairment, Severe (CC <50)	-16.7979	1.6835
Extracardiac arteriopathy, No	-5.6390	-3.2224
Extracardiac arteriopathy, Yes	1.34401	1.6176
Poor mobility, No	-7.0070	-1.6585
Poor mobility, Yes	3.7532	1.4292
Chronic lung disease	13.4693	1.5560
Critical pre-operative state, No	-5.9628	-3.0284
Critical pre-operative state, Yes	2.8626	1.0354
Acute myocardial infarction, No	-6.7965	-3.9167
Acute myocardial infarction, Yes	5.0982	4.1180
Pulmonary hypertension, No	-11.1959	-2.1933
Pulmonary hypertension, Moderate (PA systolic 31-55 mmHg)	7.5700	0.9435

Pulmonary hypertension, Severe (PA systolic >55 mmHg)	-6.3537	0.0000
Cardiac catheterization	-7.0085	0.8466
Angiography: Not performed	2.22380199	0.0000
Angiography: No evidence of atherosclerosis or without significant stenosis (<50%)	-18.8947	1.5424
Angiography: 1-vessel disease	13.5438	0.0000
Angiography: 2-vessel disease	9.4784	-2.7144
Angiography: Multivessel disease	2.2388	-1.6779
LMCA assessment: Not performed	-2.1476	-1.9040
LMCA assessment: No evidence of atherosclerosis or without significant stenosis (<50%)	-9.5335	0.3804
LMCA assessment: LMCA disease	5.4335	0.0000
Endocarditis, No	-5.7786	-3.3428
Endocarditis, Yes	8.4960	1.9040
Left ventricular ejection fraction	-42.0462	-0.0406
Planned or Emergency/Urgent Procedure	1.3043	-1.0191
Maximal transvalvular aortic gradient	-24.7636	2.9219
Aortic regurgitation, None	-2.9788	-2.2099
Aortic regurgitation, Trivial	-7.4911	4.0774
Aortic regurgitation, Mild	-6.9506	-1.1412
Aortic regurgitation, Moderate	16.2229	-1.3577

Aortic regurgitation, Severe	14.1605	-2.3848
Valve type	15.3528	-0.3699
EuroSCORE II	-28.8972	-3.4772

For categorical data where all levels are displayed (e.g., separate level for Yes and No), additional level for missing values was created to proceed with propensity score matching. BMI. Body mass index; COPD. Chronic obstructive pulmonary disease; CCS. Canadian Cardiovascular Society; IDDM. Insulin-dependent diabetes mellitus; LVEF. Left ventricular ejection fraction; ; MI. Myocardial infarction; PCI. Percutaneous coronary intervention; NYHA. New York Heart Association; SMD. Standardized mean differences.

Table S2. Mortality per year before PSM, P = 0.87.

		0 days	365 days	730 days	1095 days	1460 days	1825 days	3650 days
Men	At risk, n	2126	1896	1699	1511	1336	1176	457
	Event probability, %	0.33	6.50	8.98	11.43	14.02	16.32	32.10
Women	At risk, n	1709	1527	1409	1263	1118	955	333
	Event probability, %	0.64	8.05	9.74	11.95	13.92	16.95	30.74

Table S3. Mortality per year after PSM, P = 0.12.

		0	365	730	1095	1460	1825	3650
		days	days	days	days	days	days	days
Men	At risk, n	763	670	600	538	461	407	153
	Event probability, %	0.39	8.37	11.31	13.30	16.72	19.54	31.56
Women	At risk, n	763	693	632	561	487	426	153
	Event probability, %	0.66	6.31	8.15	9.83	12.19	15.03	26.89

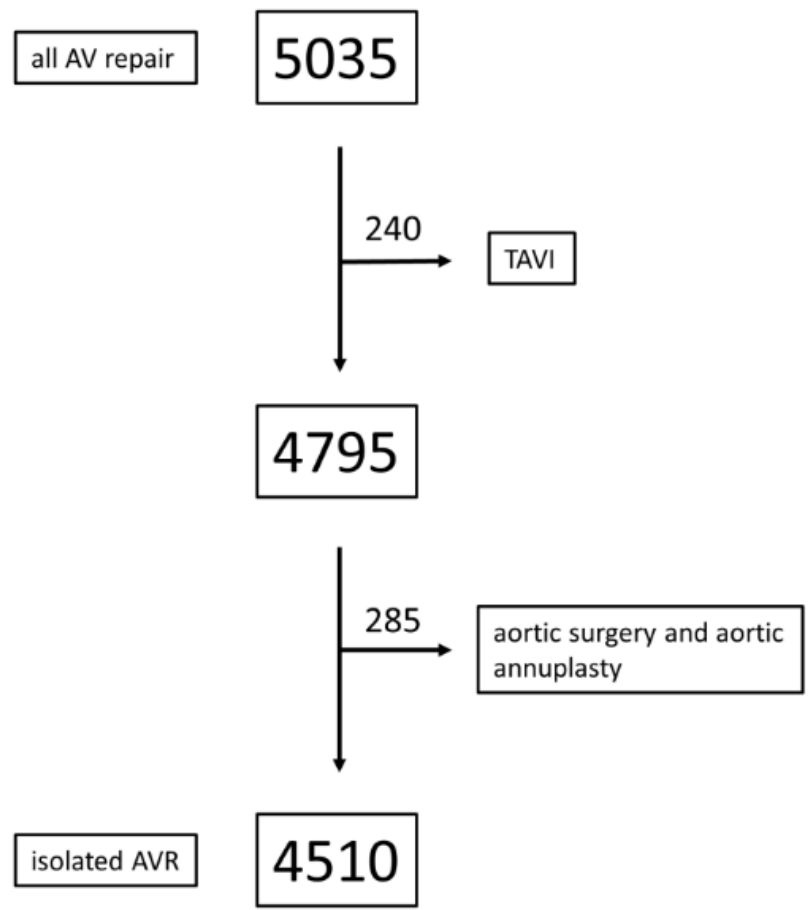


Figure S1. Patient flowchart.

Contingency Analysis of Death (within 365 days) By Year of Procedure (2 years)

Mosaic Plot

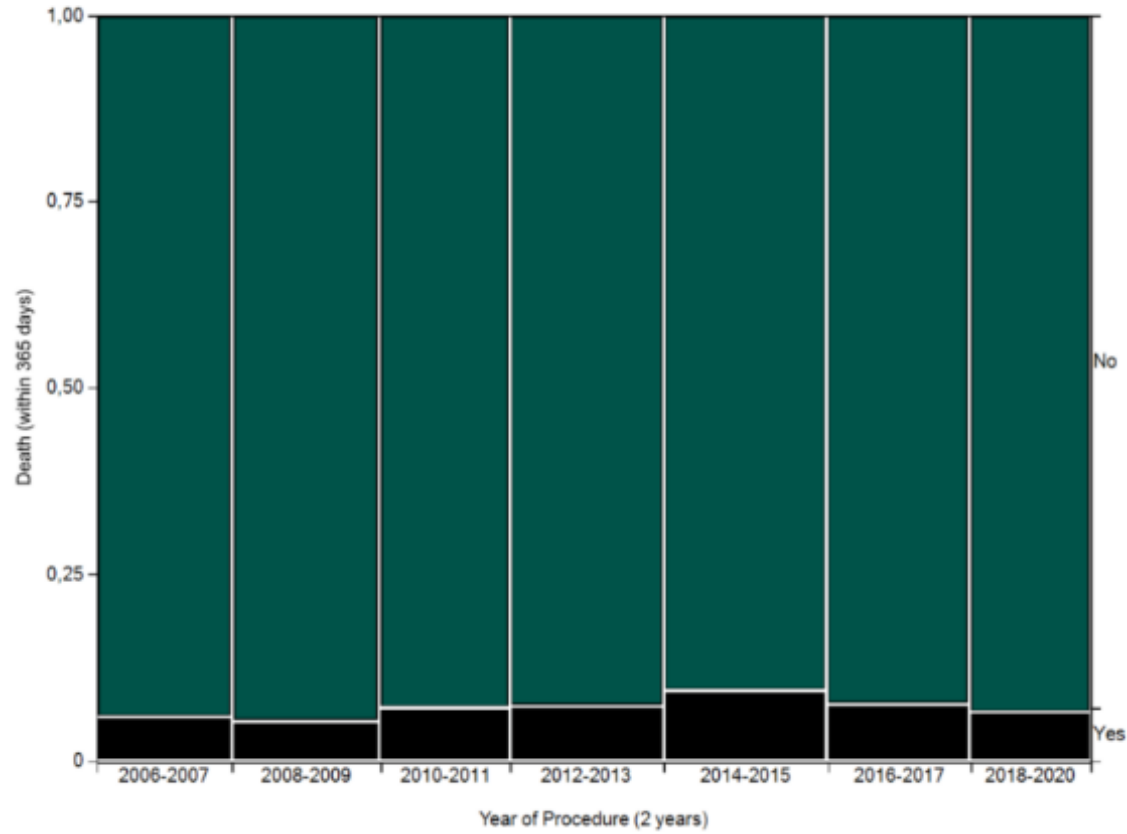


Figure S2. The histogram showing a 365-day mortality rate in each year of the study.