

SUPPLEMENTARY DATA

Table 1 of the supplementary data

ICD code matching

Diagnostic category	ICD-9 codes	ICD-10 codes
Essential hypertension	401	I10
Diabetes mellitus	250	E10, E11, E13
Ischemic heart Disease	414	I25
Angina pectoris	413	I20
Heart failure	428	I50
Cardiogenic shock	785.51	R57.0
Rhythm disturbances	426	I44, I45

ICD, International Classification of Diseases.

3-digit abbreviated codes for categories were used, except in the case of cardiogenic shock, where the complete code was used.

Table 2 of the supplementary data

Codes of procedures employed for aortic valve disease treatment

	ICD-9	ICD-10
TAVI	35.05, 35.06	02RF47Z, 02RF48Z, 02RF4JZ, 02RF4KZ, 02RF37H, 02RF37Z, 02RF38H, 02RF38Z, 02RF3JH, 02RF3JZ, 02RF3KH, 02RF3KZ, X2RF33Z, X2RF43Z
SAVR	35.21, 35.22	02RF07Z, 02RF08Z, 02RF0JZ, 02RF0KZ
BAV	35.96	02QF3ZJ, 02QF3ZZ, 02QF4ZJ, 02QF4ZZ

BAV, balloon aortic valvuloplasty; TAVI, transcatheter aortic valve implantation; SAVR, surgical aortic valve replacement.

Table 3 of the supplementary data

Trends in non-rheumatic aortic valve disease, 2003 to 2018. Comorbidities

	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016	2017-2018	P for trend
Charlson Comorbidity Index (main diagnosis group)	0.67 ± 0.98	0.74 ± 1.01	0.79 ± 1.05	0.95 ± 1.19	1.01 ± 1.23	1.09 ± 1.28	1.12 ± 1.33	1.33 ± 1.49	< .001
Charlson Comorbidity Index (secondary diagnosis group)	1.57 ± 1.58	1.62 ± 1.61	1.73 ± 1.67	1.91 ± 1.76	2.01 ± 1.80	2.08 ± 1.84	2.22 ± 1.89	2.02 ± 1.83	< .001
Comorbidities									
<i>Main diagnosis group</i>									
Hypertension	5598 (46.4)	6108 (49.9)	7022 (53.0)	8201 (54.7)	9466 (57.9)	10 175 (57.5)	10 268 (55.7)	10 399 (54.7)	< .001
Diabetes mellitus	2367 (19.6)	2681 (21.9)	3186 (24.1)	3993 (26.6)	4700 (28.7)	5149 (29.1)	5404 (29.3)	6226 (32.8)	< .001
Ischemic heart Disease	2525 (20.9)	2877 (23.5)	3353 (25.3)	3797 (25.3)	4447 (27.2)	4969 (28.1)	5218 (28.3)	5485 (28.9)	< .001
Angina pectoris	607 (5.0)	514 (4.2)	519 (3.9)	493 (3.3)	567 (3.5)	576 (3.3)	522 (2.8)	413 (2.2)	< .001
Heart failure	1496	1684	1867	2230	2489	3022	3062	3135	< .001

	(12.4)	(13.8)	(14.1)	(14.9)	(15.2)	(17.1)	(16.6)	(16.5)	
Cardiogenic shock	122 (1.01)	144 (1.18)	161 (1.22)	172 (1.15)	171 (1.05)	166 (0.94)	123 (0.67)	137 (0.72)	< .001
Rhythm disturbances	3203 (26.6)	3448 (28.2)	3841 (29.0)	4549 (30.3)	5231 (32.0)	5961 (33.7)	6330 (34.4)	6633 (34.9)	< .001
<i>Secondary diagnosis group</i>									
Hypertension	24 514 (42.9)	28 461 (44.3)	34 200 (45.2)	39 671 (45.4)	44 895 (45.6)	49 088 (45.4)	48 910 (45.3)	48 169 (41.1)	< .001
Diabetes mellitus	14 564 (25.5)	17 372 (27.1)	21 636 (28.6)	25 701 (29.4)	29 764 (30.2)	33 205 (30.7)	35 373 (32.8)	42 261 (36.1)	< .001
Ischemic heart Disease	12 294 (21.5)	13 718 (21.4)	16 554 (21.9)	18 626 (21.3)	21 296 (21.6)	23 405 (21.6)	22 436 (20.8)	23 790 (20.3)	< .001
Angina pectoris	2774 (4.9)	2655 (4.1)	2969 (3.9)	2825 (3.2)	2860 (2.9)	3043 (2.8)	3343 (3.1)	3642 (3.1)	< .001
Heart failure	17 195 (31.1)	22 134 (34.5)	27 739 (36.7)	33 695 (38.6)	39 607 (40.2)	44 358 (41.0)	45 634 (42.3)	50 635 (43.2)	< .001
Cardiogenic shock	374 (0.65)	453 (0.71)	513 (0.68)	606 (0.69)	617 (0.63)	681 (0.63)	634 (0.59)	653 (0.56)	< .001
Rhythm disturbances	19 649 (34.4)	23 067 (35.9)	28 412 (37.6)	33 497 (38.3)	38 619 (39.2)	43 937 (40.6)	44 673 (41.4)	50 182 (42.8)	< .001

The data are expressed a No. (%) or mean ± standard deviation.

Table 4 of the supplementary data

Trends in nonrheumatic aortic valve disease, 2003-2018. Baselines characteristics

Period	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012	2013-2014	2015-2016	2017-2018	<i>P</i> for trends
<i>Age, y</i>									
Main diagnosis	69.9 ± 10.8	70.3 ± 10.6	71.4 ± 10.5	72.4 ± 10.6	73.4 ± 10.3	73.9 ± 10.4	74.5 ± 10.1	75.5 ± 9.9	< .001
Secondary diagnosis	75.8 ± 10.4	76.5 ± 10.2	77.4 ± 10.0	78.0 ± 10.0	78.8 ± 9.8	79.3 ± 9.9	80.0 ± 9.7	80.4 ± 9.8	< .001
<i>Age > 80 y</i>									
Main diagnosis	1369 (11.3)	1502 (12.3)	2093 (15.8)	3152 (21.0)	3981 (24.3)	4812 (27.2)	5773 (31.3)	6835 (36.0)	< .001
Secondary diagnosis	19 948 (34.9)	24 506 (38.2)	31 952 (42,3)	39 740 (45.5)	49 044 (49.8)	57 228 (52.9)	61 049 (56.6)	69 107 (59.0)	< .001
<i>Women</i>									
Main diagnosis	5382 (44.6)	5271 (43.1)	5929 (44.8)	6680 (44.5)	7411 (45.3)	7948 (44.9)	8078 (43.8)	8444 (44.4)	.651
Secondary diagnosis	28 820 (50.4)	32 570 (50.7)	38 561 (51.0)	44 334 (50.7)	50 269 (51.1)	55 101 (50.9)	54 828 (50.8)	59 108 (50.4)	.703

The data are expressed a No. (%) or mean ± standard deviation.

Table 5 of the supplementary data

Mean Stay due to nonrheumatic aortic valve disorders

Stay	Main diagnosis			Secondary diagnosis		
	2003	2018	<i>P</i> *	2003	2018	<i>P</i> *
General	13.6 ± 13.3	10.2 ± 9.2	< .001	10.9 ± 10.9	9.3 ± 9.6	< .001
SAVR	19.3 ± 14.4	13.2 ± 10.2	< .001	28.4 ± 18.7	24.3 ± 18.6	< .001
TAVI	12.4 ± 12.2	9.5 ± 8.1	< .001	19.2 ± 13.4	20.3 ± 19.9	.803
BAV	27.2 ± 24.6	11.6 ± 14.6	.059	14.3 ± 23.3	19.1 ± 14.9	.030

BAV, balloon aortic valvuloplasty; TAVI, transcatheter aortic valve implantation; SAVR, surgical aortic valve replacement.

The data are expressed as mean ± standard deviation.

* A Kruskal-Wallis test (after ruling out normal distribution) was performed for each group.

Figure 1 of the supplementary data

Record of exclusions by ICD classification employed

