

Supplemental Material

Data S1.

Supplemental Methods

Parameters entered in the multivariate model included demographics (sex, age, BMI), medical history (history of chronic obstructive pulmonary disease, diabetes, hyperlipidemia, hypertension, myocardial infarction, percutaneous coronary intervention, coronary artery bypass graft surgery, coronary artery disease, atrial fibrillation or flutter, stroke, transient ischemic attack, carotid artery stenosis/endarterectomy/stenting, severe liver disease/cirrhosis, renal failure, congestive heart failure, peripheral vascular disease, prior balloon aortic valvuloplasty, or current immunosuppressive therapy), risk assessments (STS Score, EuroSCORE), baseline conduction disturbances (right bundle branch block [RBBB], left bundle branch block [LBBB], LAFB [left anterior fascicular block], first degree AV block), procedural and echocardiographic characteristics (valve type [Lotus, CoreValve Classic, EvolutR], depth of implantation, LVOT and annulus overstretch, valve area, annulus area, mean aortic valve gradient, aortic valve area, LVOT Area, and left ventricular ejection fraction <40%, coronary cusp calcification), and baseline laboratory values (serum albumin, platelet count, and serum creatinine). Parameters with a univariate P value <0.2 were modeled in a multivariate analysis using a stepwise procedure in a logistic regression model. The significance level thresholds for entry and exit of independent variables into the multivariate model was set at 0.1.

Table S1. Additional baseline characteristics by pacemaker status at 30 days.

	Prior Pacemaker (N=157)	No Pacemaker (N=448)	New Pacemaker (N=240)	P value Prior vs No Pacemaker	P value Prior vs New Pacemaker	P value No vs New Pacemaker
Current immunosuppressive therapy	12 (7.5)	48 (11)	22 (9.1)	0.28	0.57	0.57
Hypertension	150 (94)	420 (92)	231 (94)	0.36	0.82	0.18
Prior balloon aortic valvuloplasty	12 (7.5)	28 (6.1)	17 (7.1)	0.52	0.85	0.63
Chronic obstructive pulmonary disease (≥moderate)	33 (21)	71 (16)	50 (21)	0.14	0.94	0.08
Prior stroke	19 (12)	60 (13)	28 (12)	0.70	0.90	0.54
Right carotid artery stenosis (≥80%)	1 (0.8)	11 (3.0)	3 (1.6)	0.31	>0.99	0.40
Left carotid artery stenosis (≥80%)	1 (0.8)	9 (2.5)	2 (1.1)	0.46	>0.99	0.35
Prior carotid endarterectomy/ carotid artery stenting	12 (7.6)	37 (8.2)	16 (6.6)	0.81	0.71	0.47
History of peripheral vascular disease	49 (31)	127 (28)	72 (30)	0.47	0.82	0.58
History of dialysis-dependent renal failure	0 (0)	5 (1.1)	0 (0)	0.33	Not evaluable	0.17
Severe liver disease/cirrhosis	0 (0)	6 (1.3)	4 (1.7)	0.35	0.15	0.74
Platelet count <150 (10 ⁹ /L)	35 (22)	81 (18)	45 (18)	0.86	0.34	0.34
Serum creatinine (mg/dL)	1.2 ± 0.41	1.1 ± 0.40	1.1 ± 0.42	0.18	0.42	0.64
Serum albumin (g/dL)	3.8 ± 0.48	3.8 ± 0.43	3.8 ± 0.48	0.89	0.75	0.55
Moderate or greater calcification of left coronary cusp	25 (16)	86 (19)	46 (19)	0.28	0.84	0.20
Moderate or greater calcification of right coronary cusp	2 (1.3)	13 (2.8)	4 (1.6)	0.58	0.49	>0.99
Moderate or greater calcification of non- coronary cusp	120 (75)	331 (72)	173 (71)	0.91	0.91	0.79
Depth of implant from left coronary sinus, mm	6.6 ± 2.5	6.3 ± 2.5	6.7 ± 2.6	0.54	0.03	0.02
Depth of implant from posterior aortic sinus of the ascending aorta, mm	5.4 ± 2.7	5.1 ± 2.7	5.7 ± 2.8	0.60	0.19	0.03

% unless indicated. Calcification graded by Computed Tomographic Imaging core lab as none/mild, moderate or severe.

Table S2. Outcomes between 31 days and 1 year in patients who had a prior pacemaker, no pacemaker or new pacemaker at 30 days.

	Prior Pacemaker (N=157)	No Pacemaker (N=448)	New Pacemaker (N=240)	P value Prior vs No Pacemaker	P value Prior vs New Pacemaker	P value No vs New Pacemaker	P value Overall
All-cause mortality	24 (15.3)	39 (8.7)	14 (5.8)	0.02	0.002	0.18	0.005
Cardiovascular	15 (9.6)	22 (4.9)	9 (3.8)	0.04	0.02	0.48	0.03
Non-cardiovascular	9 (5.7)	17 (3.8)	5 (2.1)	0.30	0.05	0.22	0.16
Stroke	7 (4.5)	10 (2.2)	6 (2.5)	0.16	0.28	0.82	0.32
Disabling	4 (2.5)	8 (1.8)	5 (2.1)	0.52	0.74	0.78	0.76
Non-disabling	3 (1.9)	3 (0.7)	1 (0.4)	0.18	0.32	>0.99	0.30
All-cause mortality or disabling stroke	26 (16.6)	43 (9.6)	16 (6.7)	0.02	0.002	0.19	0.005
Cardiac death or disabling stroke	17 (10.8)	29 (6.5)	11 (4.6)	0.08	0.02	0.31	0.05
Major vascular complications	0 (0)	1 (0.2)	1 (0.4)	>0.99	>0.99	>0.99	>0.99
Bleeding	11 (7.0)	27 (6.0)	8 (3.3)	0.66	0.09	0.13	0.21
Life-threatening or Disabling	5 (3.2)	15 (3.3)	4 (1.7)	0.92	0.33	0.20	0.43
Myocardial infarction	6 (3.8)	12 (2.7)	6 (2.5)	0.43	0.55	0.89	0.67
Repeat TAVR	2 (1.3)	0 (0)	1 (0.4)	0.07	0.56	0.35	0.06
Rehospitalization	20 (12.7)	36 (8.0)	27 (11.3)	0.08	0.65	0.16	0.16
TAV-in-TAV deployment	1 (0.6)	0 (0)	1 (0.4)	0.26	>0.99	0.35	0.22

Rehospitalization for valve-related symptoms or worsening congestive heart failure (NYHA class III or IV). Abbreviations:

TAV=transcatheter aortic valve; TAVR= transcatheter aortic valve replacement

Table S3. Left Ventricular Ejection Fraction over Time.

	Prior Pacemaker (N=157)	No Pacemaker (N=448)	New Pacemaker (N=240)	<i>P</i> value Prior vs No Pacemaker	<i>P</i> value Prior vs New Pacemaker	<i>P</i> value No vs New Pacemaker
30 days	52 ± 11 (119)	55 ± 11 (344)	54 ± 11 (194)	0.03	0.15	0.42
6 months	54 ± 11 (97)	56 ± 11 (298)	54 ± 11 (172)	0.13	0.79	0.03
1 year	52 ± 11 (91)	57 ± 11 (288)	54 ± 10 (167)	<0.0001	0.31	0.004

Includes patients with LVEF measurements. Patients with follow-up days less than 30 days were excluded from the analysis.

Table S4. Multivariate predictors of pacemaker implantation at 30 days in Lotus patients.

Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
RBBB at baseline	14.40 [6.50, 31.90]	<0.0001	21.63 [8.27, 56.57]	<0.0001
Mean depth of implantation (mm)	1.13 [1.02, 1.25]	0.02	1.17 [1.04, 1.32]	0.008
Depth NCS	1.09 [1.01, 1.18]	0.03		
Moderate or greater COPD	1.67 [1.02, 2.73]	0.04		
Lvef <40%	0.46 [0.21, 1.01]	0.05	0.42 [0.17, 1.05]	0.06
Medically-treated diabetes	1.47 [0.98, 2.19]	0.06	1.66 [1.03, 2.67]	0.04
Serum albumin (g/dl)	1.13 [0.97, 1.32]	0.11		
Depth LCS	1.07 [0.98, 1.17]	0.11		
LVOT (LCC) calcification grade greater than 2	0.61 [0.32, 1.15]	0.13		
Baseline LAFB	1.45 [0.89, 2.35]	0.13		
History of hyperlipidemia requiring medication	1.38 [0.90, 2.11]	0.14		
Overstretch (valve area/LVOT area, %)	1.01 [0.99, 1.02]	0.25		
Left carotid artery stenosis ($\geq 80\%$)	0.32 [0.05, 2.18]	0.25		
History of atrial fibrillation or flutter	1.26 [0.85, 1.88]	0.25		
STS score	1.03 [0.98, 1.07]	0.26		
LVOT (RCC) calcification grade >2	0.16 [0.01, 4.12]	0.27		
First degree AV block	1.47 [0.74, 2.90]	0.27		
Overstretch (valve area/annulus area, %)	1.01 [0.99, 1.03]	0.31		
Valve area (mm ²)	1.00 [1.00, 1.00]	0.32		
EuroSCORE II	1.02 [0.98, 1.05]	0.36		
History of cerebrovascular accidents	0.76 [0.42, 1.38]	0.37		
Age at time of consent	1.01 [0.99, 1.04]	0.40		
History of percutaneous coronary intervention	1.18 [0.80, 1.76]	0.40		
Platelet count <150 (10 ⁹ /L)	1.22 [0.76, 1.97]	0.40		
History of myocardial infarction	1.21 [0.74, 1.98]	0.45		
Prior carotid endarterectomy/carotid artery stenting	0.78 [0.41, 1.51]	0.47		
BMI	0.99 [0.98, 1.01]	0.48		
Aortic valve area (cm ²)	0.72 [0.26, 2.01]	0.53		
Severe liver disease/cirrhosis	1.45 [0.36, 5.89]	0.60		
History of CABG	0.89 [0.58, 1.37]	0.60		
Male	1.10 [0.76, 1.59]	0.62		
History of hypertension	1.18 [0.58, 2.41]	0.64		
Baseline LBBB	0.84 [0.41, 1.72]	0.64		

Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
Right carotid artery stenosis ($\geq 80\%$)	0.77 [0.19, 3.09]	0.71		
History of dialysis dependent renal failure	0.46 [0.00, 44.77]	0.74		
Annulus area (mm ²)	1.00 [1.00, 1.00]	0.78		
Serum creatinine (mg/dl)	1.06 [0.67, 1.67]	0.81		
Currently taking immunosuppressive therapy	0.93 [0.50, 1.73]	0.81		
LVOT area (mm ²)	1.00 [1.00, 1.00]	0.82		
History of congestive heart failure	1.05 [0.68, 1.62]	0.84		
History of transient ischemic attacks	1.06 [0.55, 2.04]	0.87		
Mean aortic valve gradient (mmHg)	1.00 [0.99, 1.01]	0.89		
History of peripheral vascular disease	0.99 [0.66, 1.47]	0.95		
History of coronary artery disease	1.01 [0.67, 1.51]	0.98		
Prior balloon aortic valvuloplasty	1.00 [0.46, 2.21]	0.99		

Table S5. Multivariate predictors of pacemaker implantation at 30 days in CoreValve patients.

Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
Baseline RBBB	5.57 [2.28, 13.59]	0.0002	5.42 [1.89, 15.58]	0.002
Mean depth of implantation (mm)	1.16 [1.03, 1.32]	0.02	1.15 [1.01, 1.32]	0.04
Depth LCS	1.14 [1.02, 1.28]	0.02		
Depth NCS	1.13 [1.01, 1.26]	0.03		
BMI	1.04 [1.00, 1.08]	0.05		
History of hyperlipidemia requiring medication	2.19 [0.94, 5.09]	0.07		
First degree AV block	2.06 [0.78, 5.44]	0.14		
History of hypertension	3.63 [0.64, 20.73]	0.15		
Baseline LBBB	1.91 [0.73, 4.98]	0.19	2.74 [0.92, 8.12]	0.07
Aortic valve area	3.04 [0.58, 15.91]	0.19		
Prior balloon aortic valvuloplasty	1.98 [0.71, 5.54]	0.19	3.01 [0.90, 10.13]	0.07
Baseline LAFB	1.60 [0.75, 3.39]	0.22		
LVOT (LCC) calcification grade >2	0.48 [0.15, 1.57]	0.22		
History of transient ischemic attacks	1.93 [0.63, 5.86]	0.25		
EuroSCORE II	1.04 [0.97, 1.11]	0.25		
Evolut R	0.71 [0.39, 1.32]	0.28		
Overstretch (Valve area/Annulus area, %)	0.99 [0.96, 1.01]	0.29		
History of CABG	1.41 [0.70, 2.84]	0.34		
Platelet count <150 (10 ⁹ /L)	0.68 [0.29, 1.62]	0.39		
History of coronary artery disease	1.34 [0.67, 2.69]	0.41		
History of atrial fibrillation or flutter	1.32 [0.68, 2.56]	0.41		
History of congestive heart failure	0.75 [0.37, 1.51]	0.42		
Prior carotid endarterectomy/carotid artery stenting	0.48 [0.08, 2.95]	0.43		
Annulus area (mm ²)	1.00 [1.00, 1.01]	0.46		
History of cerebrovascular accidents	1.34 [0.58, 3.05]	0.49		
Right carotid artery stenosis (≥80%)	0.33 [0.01, 7.98]	0.49		
LVEF <40%	0.62 [0.15, 2.59]	0.51		
History of dialysis dependent renal failure	0.38 [0.01, 10.03]	0.56		
Medically-treated diabetes	0.83 [0.43, 1.60]	0.58		
Currently taking immunosuppressive therapy	0.75 [0.25, 2.23]	0.60		
Beta-blockers at baseline	1.17 [0.63, 2.16]	0.63		
Left carotid artery stenosis (≥80%)	1.65 [0.19, 14.45]	0.65		
LVOT (RCC) calcification grade >2	0.49 [0.02, 15.13]	0.68		

Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
History of peripheral vascular disease	1.15 [0.57, 2.35]	0.70		
Serum creatinine (mg/dl)	1.15 [0.55, 2.42]	0.71		
Moderate or greater COPD	1.12 [0.51, 2.44]	0.78		
LVOT area (mm ²)	1.00 [1.00, 1.00]	0.78		
Male	0.92 [0.50, 1.70]	0.80		
History of myocardial infarction	1.10 [0.50, 2.39]	0.81		
Overstretch (valve area/LVOT area, %)	1.00 [0.99, 1.02]	0.81		
Valve area (mm ²)	1.00 [1.00, 1.00]	0.82		
Severe liver disease/cirrhosis	0.69 [0.02, 28.62]	0.84		
History of percutaneous coronary intervention	0.96 [0.50, 1.86]	0.90		
Mean aortic valve gradient (mmHg)	1.00 [0.98, 1.03]	0.91		
Serum albumin (g/dl)	1.03 [0.50, 2.11]	0.94		
STS score	1.00 [0.93, 1.08]	0.95		
Age at time of consent	1.00 [0.96, 1.04]	0.99		

Table S6. Outcomes between 31 days and 1 year stratified by pacemaker dependency at 30 days.

	No Pacemaker (N=448)	New Pacemaker: Not Dependent at 30 days (N=113)	New Pacemaker: Dependent at 30 days (N=86)	<i>P</i> value No Pacemaker vs Not Dependent	<i>P</i> value No Pacemaker vs Dependent	<i>P</i> value Not Dependent vs Dependent
All-cause mortality	39 (8.7)	8 (7.1)	3 (3.5)	0.58	0.10	0.36
Cardiovascular	22 (4.9)	6 (5.3)	2 (2.3)	0.86	0.40	0.47
Non-cardiovascular	17 (3.8)	2 (1.8)	1 (1.2)	0.39	0.33	>0.99
Stroke	10 (2.2)	4 (3.5)	1 (1.2)	0.50	>0.99	0.39
Disabling	8 (1.8)	4 (3.5)	0 (0)	0.28	0.36	0.14
Non-disabling	3 (0.7)	0 (0)	1 (1.2)	>0.99	0.51	0.43
All-cause mortality or disabling stroke	43 (9.6)	9 (8.0)	3 (3.5)	0.59	0.06	0.19
Cardiac death or disabling stroke	29 (6.5)	7 (6.2)	2 (2.3)	0.91	0.20	0.30
Major vascular complications	1 (0.2)	1 (0.9)	0 (0)	0.36	>0.99	>0.99
Bleeding	27 (6.0)	1 (0.9)	5 (5.8)	0.03	0.94	0.09
Life-threatening or Disabling	15 (3.3)	0 (0)	2 (2.3)	0.050	>0.99	0.19
Myocardial infarction	12 (2.7)	2 (1.8)	3 (3.5)	0.75	0.72	0.65
Repeat TAVR	0 (0)	1 (0.9)	0 (0)	0.20	Not evaluable	>0.99
Rehospitalization	36 (8.0)	19 (16.8)	5 (5.8)	0.005	0.48	0.02
TAV-in-TAV deployment	0 (0)	1 (0.9)	0 (0)	0.20	Not evaluable	>0.99

Rehospitalization for valve-related symptoms or worsening congestive heart failure (NYHA class III or IV). Abbreviations: TAV=transcatheter aortic valve; TAVR= transcatheter aortic valve replacement

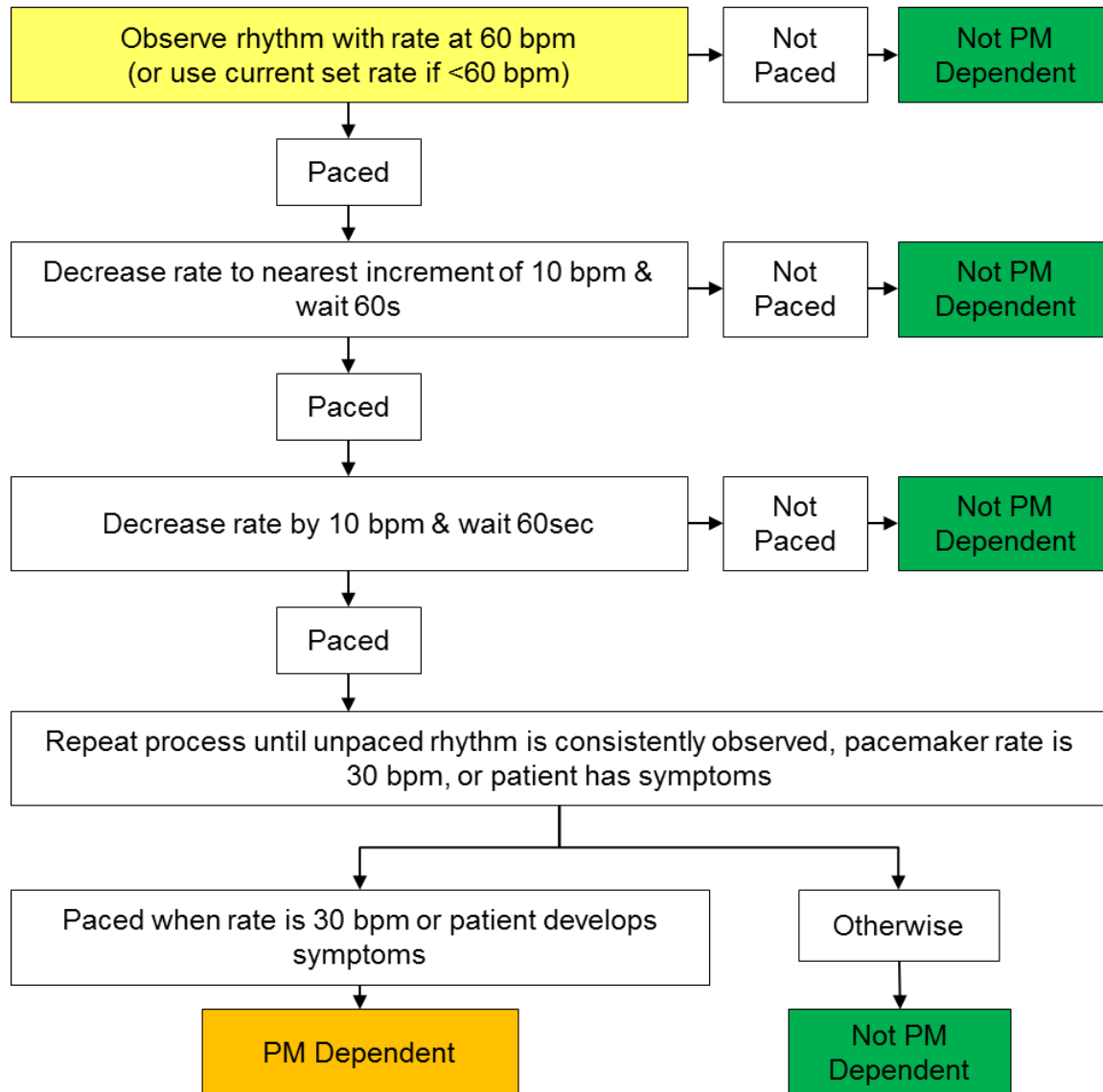
Table S7. Multivariate predictors of pacemaker dependency at 30 days.

Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
Baseline RBBB	3.71 [1.96, 7.05]	<0.0001	4.87 [2.26, 10.48]	<0.0001
Extreme surgical risk	2.80 [1.35, 5.79]	0.005		
History of CABG	0.45 [0.23, 0.90]	0.02	0.37 [0.13, 1.01]	0.053
Mean depth of implantation (mm)	1.17 [1.02, 1.34]	0.03	1.20 [1.03, 1.41]	0.02
New Interval Prolongation	1.88 [1.07, 3.33]	0.03		
BMI	0.96 [0.93, 1.00]	0.04		
Male	0.56 [0.32, 0.98]	0.04	0.49 [0.24, 1.02]	0.057
EuroSCORE II	1.05 [1.00, 1.11]	0.05	1.10 [1.03, 1.18]	0.005
Age at time of consent	1.04 [1.00, 1.08]	0.06		
LVOT (LCC) calcification grade >2	2.39 [0.78, 7.36]	0.13		
History of peripheral vascular disease	1.58 [0.85, 2.93]	0.15		
History of percutaneous coronary intervention	0.66 [0.36, 1.22]	0.19		
History of hyperlipidemia requiring medication	0.68 [0.34, 1.35]	0.27		
History of myocardial infarction	0.68 [0.33, 1.40]	0.29		
Platelet count <150 (10 ⁹ /L)	0.67 [0.31, 1.45]	0.31		
EvolutR	1.23 [0.81, 1.89]	0.33		
STS Score	1.04 [0.96, 1.13]	0.36		
Currently taking immunosuppressive therapy	0.65 [0.25, 1.67]	0.37		
History of atrial fibrillation or flutter	0.76 [0.41, 1.39]	0.37		
History of congestive heart failure	0.76 [0.39, 1.46]	0.41		
Prior balloon aortic valvuloplasty	1.52 [0.53, 4.36]	0.44		
Baseline LBBB	0.66 [0.22, 1.98]	0.46		
History of coronary artery disease	0.80 [0.43, 1.49]	0.49		
LVOT (RCC) calcification grade >1	2.19 [0.21, 23.11]	0.51		
Right Carotid Artery Stenosis (≥80%)	4.31 [0.05, 397.70]	0.53		
Severe liver disease/cirrhosis	3.98 [0.04, 366.20]	0.55		
LVOT Area (mm ²)	1.00 [1.00, 1.00]	0.55		
LVEF <40%	0.69 [0.17, 2.81]	0.61		
Lotus	1.19 [0.59, 2.40]	0.63		
Mean aortic valve gradient (mmHg)	1.00 [0.98, 1.03]	0.66		
History of hypertension	1.31 [0.37, 4.58]	0.68		
Valve Area (mm ²)	1.00 [1.00, 1.00]	0.70		
Moderate or greater COPD	1.14 [0.58, 2.23]	0.71		
Serum albumin (g/dL)	0.89 [0.48, 1.65]	0.72		
Annulus area (mm ²)	1.00 [1.00, 1.01]	0.73		
Left carotid artery stenosis (≥80%)	0.45 [0.00, 43.86]	0.73		
Overstretch (Valve area/LVOT area, %)	1.00 [0.98, 1.01]	0.74		
Overstretch (Valve area/ Annulus area, %)	1.00 [0.98, 1.02]	0.86		
History of transient ischemic attacks	1.08 [0.41, 2.87]	0.88		
History of cerebrovascular accidents	1.03 [0.44, 2.41]	0.94		
Medically-treated diabetes	0.98 [0.54, 1.77]	0.94		
Serum creatinine (mg/dL)	0.99 [0.51, 1.93]	0.97		

Table S8. Multivariate predictors of pacemaker dependency at 1 year.

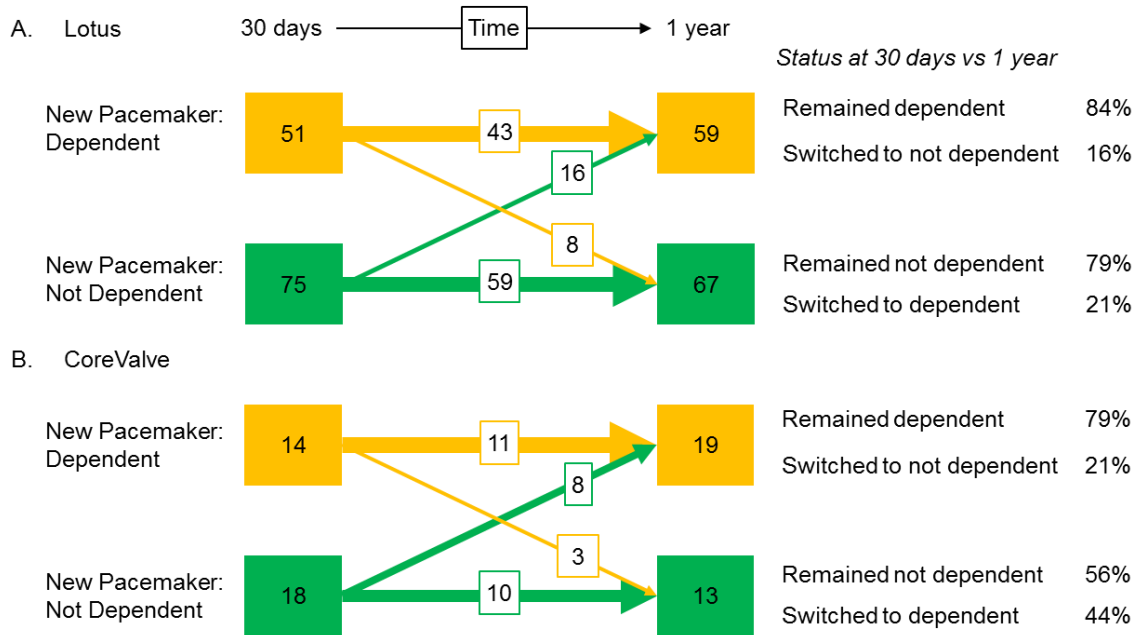
Variable	UNIVARIATE MODEL		MULTIVARIATE MODEL	
	Odds Ratio [95% CI]	P-value	Odds Ratio [95% CI]	P-value
Baseline RBBB	3.15 [1.59, 6.22]	0.001	3.46 [1.70, 7.06]	0.0006
Overstretch (Valve area/LVOT area, %)	1.02 [1.00, 1.04]	0.01	1.02 [1.01, 1.04]	0.005
Extreme Surgical Risk	2.40 [1.10, 5.27]	0.03	2.23 [0.98, 5.09]	0.057
Overstretch (Valve area/ Annulus area, %)	1.02 [1.00, 1.04]	0.04		
New interval prolongation	1.78 [0.99, 3.21]	0.06		
Age at time of consent	1.04 [1.00, 1.08]	0.08		
LVOT Area (mm ²)	1.00 [0.99, 1.00]	0.08		
Baseline LBBB	0.40 [0.12, 1.30]	0.13		
History of CABG	0.63 [0.32, 1.25]	0.19		
History of coronary artery disease	0.65 [0.34, 1.25]	0.20		
Mean depth of implantation (mm)	1.10 [0.95, 1.29]	0.20		
LVEF <40%	0.37 [0.08, 1.80]	0.22		
Male	0.71 [0.39, 1.26]	0.24		
History of hypertension	2.25 [0.57, 8.78]	0.25		
Valve Area (mm ²)	1.00 [1.00, 1.01]	0.25		
LVOT (RCC) calcification grade >1	0.14 [0.00, 4.28]	0.26		
EvolutR	0.77 [0.49, 1.22]	0.27		
History of myocardial infarction	0.68 [0.33, 1.43]	0.31		
Serum creatinine (mg/dL)	0.70 [0.35, 1.40]	0.32		
Annulus area (mm ²)	1.00 [0.99, 1.00]	0.33		
Currently taking immunosuppressive therapy	0.63 [0.23, 1.70]	0.36		
History of cerebrovascular accidents	1.48 [0.60, 3.64]	0.40		
History of congestive heart failure	1.28 [0.65, 2.50]	0.47		
Serum albumin (g/dL)	1.27 [0.65, 2.49]	0.48		
History of transient ischemic attacks	0.70 [0.25, 1.92]	0.48		
History of percutaneous coronary intervention	0.82 [0.44, 1.53]	0.53		
EuroSCORE II	1.02 [0.96, 1.07]	0.54		
Prior balloon aortic valvuloplasty	1.41 [0.43, 4.62]	0.57		
History of hyperlipidemia requiring medication	1.21 [0.60, 2.46]	0.60		
LVOT (LCC) calcification grade >2	1.34 [0.45, 4.02]	0.60		
Moderate or greater COPD	1.14 [0.56, 2.33]	0.72		
Mean aortic valve gradient (mmHg)	1.00 [0.98, 1.03]	0.80		
Platelet count <150 (10 ⁹ /L)	1.07 [0.51, 2.29]	0.85		
History of atrial fibrillation or flutter	1.05 [0.57, 1.94]	0.88		
Medically-treated diabetes	1.05 [0.57, 1.93]	0.88		
Left carotid artery stenosis (≥80%)	1.17 [0.07, 19.13]	0.91		
Right carotid artery stenosis (≥80%)	1.15 [0.07, 18.83]	0.92		
BMI	1.00 [0.96, 1.04]	0.94		
STS Score	1.00 [0.92, 1.09]	0.95		
History of peripheral vascular disease	1.00 [0.53, 1.88]	1.00		
Severe liver disease/cirrhosis	1.00 [0.06, 16.23]	1.00		

Figure S1. Pre-specified pacemaker dependency algorithm.



At 30 days and 1 year, patients with new permanent pacemaker after TAVR had pacemaker dependence and % of paced beats evaluated by pacemaker interrogation using this algorithm.

Figure S2. Pacemaker dependency at 30 days and 1 year.



Pacemaker dependency at 30 days and 1 year in Lotus (A) and CoreValve (B) patients with data at both timepoints. Number of patients shown in each box and line thickness indicates number of patients. Pacemaker dependent patients are shown in orange and patients who are not pacemaker dependent are shown in green.

Figure S3. Quality of life outcomes in patients with a new pacemaker.

