Supplemental Material

Table S1. Baseline and 30 Day Characteristics in Patients of the Analytic Cohort, Patients Unable to Complete the Walk Test at Baseline or 1 year, and Patients with Missing Walk Data.

	Analytic Cohort (n=576)	Patients Unable to Complete the Walk Test at Baseline and/or 1 Year (n=110)	Patients with Missing Walk Test Data at Baseline or 1 Year (n=98)	p-value (overall)
Baseline Clinical Characteristics				
Age, mean (SD), years	82 (7.4)	82 (8.1)	84 (6.1)	0.17
Female sex	48.1%	58.2%	49.0%	0.15
Body mass index, mean (SD), kg/m^2	29.0 (6.3)	30.0 (8.0)	29.3 (8.7)	0.43
Extreme risk	20.3%	31.8%	19.4%	0.02
Society of Thoracic Surgeons score, mean (SD)	6.52 (3.84)	7.07 (3.97)	6.74 (3.93)	0.37
Orthopedic disease	13.2%	34.8%	15.5%	0.049
Frailty	68.9%	76.8%	76.1%	0.24
Gait speed, mean to walk 5 m (SD), seconds	8.02 (4.08)	11.44 (7.63)	9.01 (4.97)	<0.0001
Maximal grip strength, mean (SD), kg	21.81 (9.86)	19.53 (10.04)	20.03 (11.17)	0.04
Katz Index Activities of Daily Living Score mean (SD)[*]	5.71 (0.75)	5.21 (1.20)	5.44 (1.08)	<0.0001
Mini-Cognitive Assessment for Dementia Score (SD) [†]	3.68 (1.37)	3.44 (1.27)	3.52 (1.43)	0.16
New York Heart Association Class III/IV	70.4%	76.4%	68.4%	0.02
Medically-treated diabetes mellitus	31.5%	43.6%	21.4%	0.003
Currently taking immunosuppressive therapy	8.7%	8.2%	14.3%	0.20
History of coronary artery disease	74.0%	66.1%	69.4%	0.19
History of myocardial infarction	18.5%	22.9%	18.6%	0.55
History of cerebrovascular accident	10.8%	19.1%	14.4%	0.05
History of peripheral vascular disease	31.7%	25.7%	20.4%	0.05
History of chronic obstructive pulmonary disease	31.1%	31.8%	33.0%	0.93
Chronic obstructive pulmonary disease: Supplemental oxygen dependent	5.1%	7.3%	10.3%	0.12
History of atrial fibrillation	32.9%	30.0%	37.8%	0.48
Prior pacemaker implant	17.9%	12.7%	22.4%	0.18
Baseline Echocardiography				
Aortic-valve area, mean (SD), cm^2	0.70 (0.19)	0.66 (0.20)	0.67 (0.19)	0.16
Mean aortic-valve gradient, mean (SD), mm Hg	44.55 (12.87)	45.25 (17.05)	44.50 (10.44)	0.88
Left ventricular ejection fraction (SD)	56.30 (11.58)	57.02 (10.09)	54.14 (12.01)	0.23
Moderate or greater aortic regurgitation	6.5%	7.0%	7.6%	0.98
Moderate or greater mitral regurgitation	9.2%	11.2%	10.0%	0.78

	Analytic Cohort (n=576)	Patients Unable to Complete the Walk Test at Baseline and/or 1 Year (n=110)	Patients with Missing Walk Test Data at Baseline or 1 Year (n=98)	p-value (overall)
30-day Echocardiography				
Effective orifice area, mean (SD), cm^2	1.71 (0.51)	1.71 (0.50)	1.74 (0.47)	0.91
Mean aortic-valve gradient, mean (SD), mm Hg	10.60 (6.04)	10.44 (5.76)	10.63 (5.38)	0.97
Left ventricular ejection fraction (SD)	54.61 (11.00)	55.22 (11.33)	52.60 (11.11)	0.31
Moderate or greater aortic regurgitation	13.4%	11.2%	12.7%	0.82
30-day Clinical findings				
NYHA III/IV	8.2%	9.7%	18.6%	0.03
Major vascular complications	4.2%	5.5%	12.2%	<0.0001
Bleeding (life-threatening or disabling)	5.7%	4.5%	10.2%	0.15
Hospitalization for valve-related symptoms or worsening congestive heart failure	2.1%	3.6%	4.1%	0.23
New pacemaker	31.6%	26.4%	18.4%	0.04
New onset atrial fibrillation or flutter	6.1%	7.3%	2.0%	0.22

Values are mean (SD) (n) or n (%) in the implanted patient population. *scores independence in performance of bathing, dressing, toileting, transferring, continence, and feeding (1 point each); a score of 6 indicates full function, ≤2 indicates severe functional impairment. †a score to differentiate patients with dementia based on a clock drawing distractor test (0-2 points) and recall of words (0-3 points); scores above 3 (out of 5) are considered negative for dementia.

Table S2. Gait speed at baseline and 1 year.

	Baseline Gait Speed (n=576)	1-year Gait Speed (n=576)
Mean (m/s)	0.72	0.77
Stdev (m/s)	0.26	0.27
2.5 percentile (m/s)	0.25	0.32
10 percentile (m/s)	0.45	0.45
25 percentile (m/s)	0.56	0.56
Median (m/s)	0.71	0.71
75 percentile (m/s)	0.83	1.00
90 percentile (m/s)	1.00	1.25
97.5 percentile (m/s)	1.25	1.25
	Out of 576	Out of 576
n Fast walker (≥0.83 m/s)	209	264
n Slow walker (<0.83 m/s)	367	312
% fast walker	36.3%	45.8%
% slow walker	63.7%	54.2%

Gait speed was calculated in meters/second based on the 5-meter walk time. Slow walker was defined as those with a gait speed <0.83 m/s, and normal walker was defined as a gait speed ≥0.83 m/s.

Table S3. Magnitude and Direction of Change in Gait Speed Between Baseline and 1 Year.

Change in gait speed from baseline to 1 year	All patients (n=576)		Slow Walkers at Baseline (n=367)		Normal Walkers at Baseline (n=209)	
	n	**%**	**n**	**%**	**n**	**%**
Improve ≥0.30 m/s	80	13.9	65	17.7	15	7.2
Improve ≥0.20 - <0.30 m/s	74	12.8	59	16.1	15	7.2
Improve ≥0.10 - <0.20 m/s	71	12.3	49	13.4	22	10.5
No change ± 0.1 m/s	202	35.1	141	38.4	61	29.2
Decline ≥0.10 - <0.20 m/s	60	10.4	29	7.9	31	14.8
Decline ≥0.20 - <0.30 m/s	47	8.2	20	5.4	27	12.9
Decline ≥0.30 m/s	42	7.3	4	1.1	38	18.2

Table S4. Baseline Predictors of 1 Year Gait Speed.

	Univariable		Multivariable	
	β estimate (95% CI)	p-value	β estimate (95% CI)	p-value
Clinical factors (baseline)				
Gait speed at baseline (per 0.1 m/s increase)	0.49 (0.41, 0.56)	<0.001	0.38 (0.29, 0.46)	<0.001
Max grip strength (per 1 kg increase)	0.09 (0.07, 0.11)	<0.001	0.03 (0.01, 0.05)	0.01
Female sex	-1.47 (-1.90, -1.04)	<0.001		
STS score (per increase of 1)	-0.17 (-0.23, -0.12)	<0.001	-0.09 (-0.14, -0.03)	0.001
Katz ADLs (per 1 increase)	0.78 (0.49, 1.06)	<0.001	0.26 (-0.01, 0.52)	0.06
NYHA III/IV at baseline	-1.18 (-1.65, -0.71)	<0.001	-0.51 (-0.93, -0.10)	0.02
Orthopedic disease	-1.47 (-2.14, -0.81)	<0.001	-0.91 (-1.51, -0.32)	0.003
Age (per 1-year increase)	-0.06 (-0.09, -0.03)	<0.001		
History of Coronary disease	0.85 (0.35, 1.35)	0.001	0.49 (0.05, 0.93)	0.03
History of COPD	-0.77 (-1.25, -0.28)	0.002	-0.40 (-0.82, 0.01)	0.06
Mini-COG (per 1-point increase)	0.21 (0.05, 0.37)	0.01	0.14 (0.00, 0.28)	0.05
History of Afib or flutter	-0.44 (-0.91, 0.03)	0.06		
BMI (per increase of 1)	-0.02 (-0.06, 0.01)	0.21		
Moderate or severe mitral regurgitation at baseline	-0.29 (-1.06, 0.48)	0.46		
History of PVD	0.17 (-0.31, 0.66)	0.49		
History of CVA	-0.25 (-0.97, 0.47)	0.49		
Diabetes (medically-treated)	-0.06 (-0.54, 0.41)	0.79		
Immunosuppressive therapy	-0.08 (-0.88, 0.72)	0.85		
Mean gradient (MPG) at baseline (per 5 mmHg increase)	0.01 (-0.08, 0.09)	0.89		
Ejection fraction at baseline (per 5% increase)	0.00 (-0.10, 0.11)	0.96		

Afib=atrial fibrillation, BMI=body mass index, COPD=chronic obstructive pulmonary disease,
CVA=cerebrovascular accident, Katz ADLs=Katz Index Activities of Daily Living Score, Mini-COG=Mini-
Cognitive Assessment for Dementia Score, MPG=mean pressure gradient, NYHA=New York Heart Association,
PVD=peripheral vascular disease, STS=Society of Thoracic Surgeons score
Multivariable model R^2 = 0.30

Table S5. KCCQ According to Groups Defined by Gait Speed at Baseline and 1 Year.

	Normal/ Normal (n=150)	Slow/ Normal (n=114)	Normal/ Slow (n=59)	Slow/ Slow (n=253)	Overall p-value
Baseline					
Subjects with KCCQ data	148	114	59	252	
Median overall summary score (25th, 75th percentile)	59.2 (44.6, 78.7)	54.8 (42.7, 73.9)	47.1 (31.6, 62.9)	49.1 (34.4, 65.7)	<0.001*
p-value vs normal/normal*	--	0.16	0.0004	<0.0001	
1-year					
Subjects with KCCQ data	150	111	59	252	
Median overall summary score (25th, 75th percentile)	87.2 (72.6, 97.0)	85.9 (76.6, 96.9)	76.0 (53.1, 93.2)	73.9 (56.9, 84.4)	<0.001†
p-value vs normal/normal†	--	0.16	0.02	<0.001	

*P-value from two-sided from t test or ANOVA
†P-value from ANOCOVA test

Table S6. Rate of mortality/hospitalization with inability to perform gait speed test.

Outcomes from 1 Year through 2 Years Post-Procedure	Stayed unable (N=23)	Became Unable (N=75)	Became Able (N=12)
Mortality or Hospitalization	17.4% (4/23)	26.7% (20/75)	0%
Mortality	8.7% (2/23)	17.3% (13/75)	0%
Hospitalization	8.7% (2/23)	13.3% (10/75)	0%