

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work

eTable 1. Baseline Characteristics of Men With vs. Without Early LVEF Improvement Following TAVR

	No LVEF Improvement (n=339)	With LVEF Improvement (n=129)	P Value
Age, years	81.8±7.9	82.7±7.5	0.25
White	292/339 (86.1%)	116/129 (89.9%)	0.35
BMI, kg/m ²	27.2±5.0	27.7±6.1	0.41
STS Score	7.7±4.1	8.4±4.2	0.077
NYHA Class III/IV	292/339 (86.1%)	116/129 (89.9%)	0.35
Hypertension	316/339 (93.2%)	113/129 (87.6%)	0.06
Diabetes Mellitus	136/339 (40.1%)	48/129 (37.2%)	0.60
CAD	301/339 (88.8%)	110/129 (85.3%)	0.34
Prior MI	129/339 (38.1%)	30/129 (23.3%)	0.003
Prior PCI	140/338 (41.4%)	47/129 (36.4%)	0.34
Prior CABG	177/339 (52.2%)	56/129 (43.4%)	0.10
Prior BAV	45/339 (13.3%)	16/129 (12.4%)	0.88
Atrial Fibrillation	146/318 (45.9%)	41/103 (39.8%)	0.31
CVA	24/339 (7.1%)	13/129 (10.1%)	0.34
PAD	112/339 (33.0%)	35/129 (27.1%)	0.27
CKD (S. Creatinine >2 mg/dL)	53/338 (15.7%)	14/129 (10.9%)	0.24
COPD	126/339 (37.2%)	46/129 (35.7%)	0.83
O2 Dependent Lung Disease	9/339 (2.7%)	7/129 (5.4%)	0.16
Cancer	109/339 (32.2%)	26/129 (20.2%)	0.012
Katz Activities of Daily Living Index	5.7±0.8 (311)	5.4±1.1 (102)	0.047
Hemoglobin, g/dL	12.8±7.3 (339)	12.3±1.5 (129)	0.29
Albumin <3.5 g/dL	67/319 (21.0%)	32/112 (28.6%)	0.12
Baseline Echocardiographic Data			
LVEF, %	38.1±8.5	34.5±8.9	<0.001

LV Mass, g	275.8±82.2	267.1±72.7	0.28
LV Mass Index, g/m ²	138.8±38.0	136.6±35.8	0.59
LVEDD, cm	5.4±0.8	5.2±0.7	0.007
LVESD, cm	4.4±0.9	4.2±0.7	0.08
AV Peak Velocity, cm/s	399.7±56.9	400.7±64.2	0.88
AV Mean Gradient, mmHg	38.5±11.3	39.1±12.1	0.61
AV Area, cm ²	0.7±0.2	0.7±0.2	0.17
LVOT Doppler Stroke Volume, mL	63.2±16.4	60.8±18.4	0.19
LVOT Doppler Stroke Volume Index, mL/m ²	31.9±8.2	31.0±8.8	0.28
≥Moderate AR	33/329 (10.0%)	12/125 (9.6%)	>0.99
≥Moderate MR	82/322 (25.5%)	25/123 (20.3%)	0.27
Procedural Characteristics			
Valve size (mm)			0.022
20	0/339 (0.0%)	0/129 (0.0%)	
23	22/339 (6.5%)	18/129 (14.0%)	
26	194/339 (57.2%)	75/129 (58.1%)	
29	123/339 (36.3%)	36/129 (27.9%)	
Valve type			0.005
Sapien	61/339 (18.0%)	35/129 (27.1%)	
Sapien XT	108/339 (31.9%)	50/129 (38.8%)	
Sapien 3	170/339 (50.1%)	44/129 (34.1%)	
Pre-dilation	332/337 (98.5%)	129/129 (100.0%)	0.33
Post-dilation	69/337 (20.5%)	38/127 (29.9%)	0.036
Concomitant PCI	3/272 (1.1%)	2/107 (1.9%)	0.62
Need for 2 nd THV	7/339 (2.1%)	1/129 (0.8%)	0.45
Discharge Medications			
Beta Blocker	247/339 (72.9%)	97/129 (75.2%)	0.64

ACE Inhibitor/ARB	181/339 (53.4%)	72/129 (55.8%)	0.68
Procedural Complications Within 30 Days			
PPM	31/339 (9.1%)	7/129 (5.4%)	0.26
New Atrial Fibrillation	18/339 (5.3%)	6/129 (4.7%)	>0.99
>Mild PVL	32/333 (9.6%)	12/127 (9.4%)	>0.99
30-Day Post-TAVR Echocardiographic Data			
AV Mean Gradient, mmHg	9.2±3.6 (337)	9.5±3.3 (129)	0.39
Severe Prosthesis-Patient Mismatch*	42/326 (12.9%)	12/123 (9.8%)	0.42
ΔLVEF (30 Day Change from Baseline), %	1.0±5.3	16.3±6.0	<0.001

BMI = body mass index; NYHA = New York Heart Association; CAD = coronary artery disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; CABG = coronary artery bypass grafting; BAV = balloon aortic valvuloplasty; CVA = cerebrovascular accident; PAD = peripheral artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; LVEF = left ventricular ejection fraction; AV = aortic valve; LVEDD = left ventricular end-diastolic diameter; LVESD = left ventricular end-systolic diameter; LVOT = left ventricular outflow tract; AR = aortic regurgitation; MR = mitral regurgitation; THV = transcatheter heart valve; ACE = angiotensin converting enzyme; ARB = angiotensin II receptor blocker; PPM = permanent pacemaker; PVL = paravalvular leak.

*defined as indexed effective orifice area <0.65 cm²/m².

eTable 2. Baseline Characteristics of Women With vs. Without Early LVEF Improvement Following TAVR

	No LVEF Improvement (n=104)	LVEF Improvement (n=87)	P Value
Age, years	83.1±7.6	83.9±7.1	0.48
White	85/98 (86.7%)	75/83 (90.4%)	0.49
BMI, kg/m ²	28.1±7.3	27.7±7.3	0.70
STS Score	9.3±5.2	9.6±4.7	0.64
NYHA Class III/IV	90/104 (86.5%)	81/87 (93.1%)	0.16
Hypertension	93/104 (89.4%)	76/87 (87.4%)	0.66
Diabetes Mellitus	38/104 (36.5%)	23/87 (26.4%)	0.16
CAD	66/104 (63.5%)	52/87 (59.8%)	0.65
Prior MI	25/104 (24.0%)	16/87 (18.4%)	0.38
Prior PCI	23/104 (22.1%)	26/87 (29.9%)	0.25
Prior CABG	13/104 (12.5%)	5/87 (5.7%)	0.14
Prior BAV	15/104 (14.4%)	12/87 (13.8%)	>0.99
Atrial Fibrillation	39/98 (39.8%)	16/72 (22.2%)	0.02
CVA	13/104 (12.5%)	7/87 (8.0%)	0.35
PAD	25/104 (24.0%)	15/87 (17.2%)	0.29
CKD (S. Creatinine >2 mg/dL)	10/104 (9.6%)	7/87 (8.0%)	0.80
COPD	19/104 (18.3%)	27/87 (31.0%)	0.043
O2 Dependent Lung Disease	4/104 (3.8%)	3/87 (3.4%)	>0.99
Cancer	37/104 (35.6%)	23/87 (26.4%)	0.21
Katz Activities of Daily Living Index	5.2±1.4	4.9±1.5	0.14
Hemoglobin, g/dL	11.6±1.5	11.4±1.5	0.36
Albumin <3.5 g/dL	21/99 (21.2%)	14/72 (19.4%)	0.85
Baseline Echocardiographic Data			
LVEF, %	41.0±7.6	37.3±9.2	0.003

LV Mass, g	237.8±74.1	250.8±75.6	0.25
LV Mass Index, g/m ²	141.0±44.1	147.2±44.9	0.35
LVEDD, cm	4.7±0.7	4.7±0.7	0.65
LVESD, cm	3.6±0.8	3.7±0.8	0.30
AV Peak Velocity, cm/s	427.3±67.6	445.8±73.9	0.08
AV Mean Gradient, mmHg	43.9±15.4	48.8±17.1	0.041
AV Area, cm ²	0.6±0.1	0.5±0.2	0.052
LVOT Doppler Stroke Volume, mL	58.0±13.0	55.4±15.6	0.21
LVOT Doppler Stroke Volume Index, mL/m ²	34.1±7.8	32.2±8.2	0.10
≥Moderate AR	8/102 (7.8%)	11/85 (12.9%)	0.33
≥Moderate MR	38/102 (37.3%)	29/86 (33.7%)	0.65
Procedural Characteristics			
Valve size (mm)			0.06
20	7/104 (6.7%)	1/87 (1.1%)	
23	59/104 (56.7%)	63/87 (72.4%)	
26	35/104 (33.7%)	22/87 (25.3%)	
29	3/104 (2.9%)	1/87 (1.1%)	
Valve type			0.35
Sapien	23/104 (22.1%)	27/87 (31.0%)	
Sapien XT	46/104 (44.2%)	36/87 (41.4%)	
Sapien 3	35/104 (33.7%)	24/87 (27.6%)	
Pre-dilation	103/104 (99.0%)	85/87 (97.7%)	0.59
Post-dilation	19/104 (18.3%)	16/86 (18.6%)	>0.99
Concomitant PCI	0/71 (0.0%)	1/59 (1.7%)	0.45
Need for 2 nd THV	0/104 (0.0%)	0/87 (0.0%)	>0.99
Discharge Medications			
Beta Blocker	70/104 (67.3%)	59/87 (67.8%)	>0.99

ACE Inhibitor/ARB	53/104 (51.0%)	43/87 (49.4%)	0.88
Procedural Complications Within 30 Days			
PPM	5/104 (4.8%)	4/87 (4.6%)	>0.99
New Atrial Fibrillation	3/104 (2.9%)	3/87 (3.4%)	>0.99
>Mild PVL	7/101 (6.9%)	7/86 (8.1%)	0.79
30-Day Post-TAVR Echocardiographic Data			
AV Mean Gradient, mmHg	11.0±4.8	11.0±3.4	>0.99
Severe Prosthesis-Patient Mismatch*	21/103 (20.4%)	10/85 (11.8%)	0.12
ΔLVEF (30 Day Change from Baseline), %	1.4±5.5	16.6±5.1	<0.001

BMI = body mass index; NYHA = New York Heart Association; CAD = coronary artery disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; CABG = coronary artery bypass grafting; BAV = balloon aortic valvuloplasty; CVA = cerebrovascular accident; PAD = peripheral artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; LVEF = left ventricular ejection fraction; AV = aortic valve; LVEDD = left ventricular end-diastolic diameter; LVESD = left ventricular end-systolic diameter; LVOT = left ventricular outflow tract; AR = aortic regurgitation; MR = mitral regurgitation; THV = transcatheter heart valve; ACE = angiotensin converting enzyme; ARB = angiotensin II receptor blocker; PPM = permanent pacemaker; PVL = paravalvular leak.

*defined as indexed effective orifice area <0.65 cm²/m².

eTable 3. Baseline Characteristics of Men vs. Women Without Early LVEF Improvement Following TAVR

	Men (n=339)	Women (n=104)	P Value
Age, years	81.8±7.9	83.1±7.6	0.11
White	314/333 (94.3%)	85/98 (86.7%)	0.03
BMI, kg/m ²	27.2±5.0	28.1±7.3	0.25
STS Score	7.7±4.1	9.3±5.2	0.004
NYHA Class III/IV	292/339 (86.1%)	90/104 (86.5%)	>0.99
Hypertension	316/339 (93.2%)	93/104 (89.4%)	0.21
Diabetes Mellitus	136/339 (40.1%)	38/104 (36.5%)	0.57
CAD	301/339 (88.8%)	66/104 (63.5%)	<0.001
Prior MI	129/339 (38.1%)	25/104 (24.0%)	0.01
Prior PCI	140/338 (41.4%)	23/104 (22.1%)	<0.001
Prior CABG	177/339 (52.2%)	13/104 (12.5%)	<0.001
Prior BAV	45/339 (13.3%)	15/104 (14.4%)	0.75
Atrial Fibrillation	146/318 (45.9%)	39/98 (39.8%)	0.30
CVA	24/339 (7.1%)	13/104 (12.5%)	0.10
PAD	112/339 (33.0%)	25/104 (24.0%)	0.09
CKD (S. Creatinine >2 mg/dL)	53/338 (15.7%)	10/104 (9.6%)	0.15
COPD	126/339 (37.2%)	19/104 (18.3%)	<0.001
O2 Dependent Lung Disease	9/339 (2.7%)	4/104 (3.8%)	0.51
Cancer	109/339 (32.2%)	37/104 (35.6%)	0.55
Katz Activities of Daily Living Index	5.7±0.8 (311)	5.2±1.4	0.003
Hemoglobin, g/dL	12.8±7.3 (339)	11.6±1.5	0.005
Albumin <3.5 g/dL	67/319 (21.0%)	21/99 (21.2%)	>0.99
Baseline Echocardiographic Data			
LVEF, %	38.1±8.5	41.0±7.6	0.001

LV Mass, g	275.8±82.2	237.8±74.1	<0.001
LV Mass Index, g/m ²	138.8±38.0	141.0±44.1	0.66
LVEDD, cm	5.4±0.8	4.7±0.7	<0.001
LVESD, cm	4.4±0.9	3.6±0.8	<0.001
AV Peak Velocity, cm/s	399.7±56.9	427.3±67.6	<0.001
AV Mean Gradient, mmHg	38.5±11.3	43.9±15.4	0.001
AV Area, cm ²	0.7±0.2	0.6±0.1	<0.001
LVOT Doppler Stroke Volume, mL	63.2±16.4	58.0±13.0	0.001
LVOT Doppler Stroke Volume Index, mL/m ²	31.9±8.2	34.1±7.8	0.016
≥Moderate AR	33/329 (10.0%)	8/102 (7.8%)	0.57
≥Moderate MR	82/322 (25.5%)	38/102 (37.3%)	0.024
Procedural Characteristics			
Valve size (mm)			<0.001
20	0/339 (0.0%)	7/104 (6.7%)	
23	22/339 (6.5%)	59/104 (56.7%)	
26	194/339 (57.2%)	35/104 (33.7%)	
29	123/339 (36.3%)	3/104 (2.9%)	
Valve type			0.010
Sapien	61/339 (18.0%)	23/104 (22.1%)	
Sapien XT	108/339 (31.9%)	46/104 (44.2%)	
Sapien 3	170/339 (50.1%)	35/104 (33.7%)	
Pre-dilation	332/337 (98.5%)	103/104 (99.0%)	>0.99
Post-dilation	69/337 (20.5%)	19/104 (18.3%)	0.68
Concomitant PCI	3/272 (1.1%)	0/71 (0.0%)	>0.99
Need for 2 nd THV	7/339 (2.1%)	0/104 (0.0%)	0.21
Discharge Medications			
Beta Blocker	247/339 (72.9%)	70/104 (67.3%)	0.32

ACE Inhibitor/ARB	181/339 (53.4%)	53/104 (51.0%)	0.74
Procedural Complications Within 30 Days			
PPM	31/339 (9.1%)	5/104 (4.8%)	0.22
New Atrial Fibrillation	18/339 (5.3%)	3/104 (2.9%)	0.43
>Mild PVL	32/333 (9.6%)	7/101 (6.9%)	0.55
30-Day Post-TAVR Echocardiographic Data			
AV Mean Gradient, mmHg	9.2±3.6 (337)	11.0±4.8	<0.001
Severe Prosthesis-Patient Mismatch*	42/326 (12.9%)	21/103 (20.4%)	0.08
ΔLVEF (30 Day Change from Baseline), %	1.0±5.3	1.4±5.5	0.61

BMI = body mass index; NYHA = New York Heart Association; CAD = coronary artery disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; CABG = coronary artery bypass grafting; BAV = balloon aortic valvuloplasty; CVA = cerebrovascular accident; PAD = peripheral artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; LVEF = left ventricular ejection fraction; AV = aortic valve; LVEDD = left ventricular end-diastolic diameter; LVESD = left ventricular end-systolic diameter; LVOT = left ventricular outflow tract; AR = aortic regurgitation; MR = mitral regurgitation; THV = transcatheter heart valve; ACE = angiotensin converting enzyme; ARB = angiotensin II receptor blocker; PPM = permanent pacemaker; PVL = paravalvular leak.

*defined as indexed effective orifice area <0.65 cm²/m².

eTable 4. Baseline Characteristics of Men vs. Women With Early LVEF Improvement Following TAVR

	Men (n=129)	Women (n=87)	P Value
Age, years	82.7±7.5	83.9±7.1	0.23
White	117/126 (92.9%)	75/83 (90.4%)	0.61
BMI, kg/m ²	27.7±6.1	27.7±7.3	0.98
STS Score	8.4±4.2	9.6±4.7	0.06
NYHA Class III/IV	116/129 (89.9%)	81/87 (93.1%)	0.47
Hypertension	113/129 (87.6%)	76/87 (87.4%)	>0.99
Diabetes Mellitus	48/129 (37.2%)	23/87 (26.4%)	0.11
CAD	110/129 (85.3%)	52/87 (59.8%)	<0.001
Prior MI	30/129 (23.3%)	16/87 (18.4%)	0.50
Prior PCI	47/129 (36.4%)	26/87 (29.9%)	0.38
Prior CABG	56/129 (43.4%)	5/87 (5.7%)	<0.001
Prior BAV	16/129 (12.4%)	12/87 (13.8%)	0.84
Atrial Fibrillation	41/103 (39.8%)	16/72 (22.2%)	0.021
CVA	13/129 (10.1%)	7/87 (8.0%)	0.81
PAD	35/129 (27.1%)	15/87 (17.2%)	0.10
CKD (S. Creatinine >2 mg/dL)	14/129 (10.9%)	7/87 (8.0%)	0.64
COPD	46/129 (35.7%)	27/87 (31.0%)	0.56
O2 Dependent Lung Disease	7/129 (5.4%)	3/87 (3.4%)	0.74
Cancer	26/129 (20.2%)	23/87 (26.4%)	0.32
Katz Activities of Daily Living Index	5.4±1.1 (102)	4.9±1.5	0.009
Hemoglobin, g/dL	12.3±1.5 (129)	11.4±1.5	<0.001
Albumin <3.5 g/dL	32/112 (28.6%)	14/72 (19.4%)	0.22
Baseline Echocardiographic Data			
LVEF, %	34.5±8.9	37.3±9.2	0.031

LV Mass, g	267.1±72.7	250.8±75.6	0.13
LV Mass Index, g/m ²	136.6±35.8	147.2±44.9	0.08
LVEDD, cm	5.2±0.7	4.7±0.7	<0.001
LVESD, cm	4.2±0.7	3.7±0.8	<0.001
AV Peak Velocity, cm/s	400.7±64.2	445.8±73.9	<0.001
AV Mean Gradient, mmHg	39.1±12.1	48.8±17.1	<0.001
AV Area, cm ²	0.7±0.2	0.5±0.2	<0.001
LVOT Doppler Stroke Volume, mL	60.8±18.4	55.4±15.6	0.023
LVOT Doppler Stroke Volume Index, mL/m ²	31.0±8.8	32.2±8.2	0.31
≥Moderate AR	12/125 (9.6%)	11/85 (12.9%)	0.50
≥Moderate MR	25/123 (20.3%)	29/86 (33.7%)	0.037
Procedural Characteristics			
Valve size (mm)			<0.001
20	0/129 (0.0%)	1/87 (1.1%)	
23	18/129 (14.0%)	63/87 (72.4%)	
26	75/129 (58.1%)	22/87 (25.3%)	
29	36/129 (27.9%)	1/87 (1.1%)	
Valve type			0.59
Sapien	35/129 (27.1%)	27/87 (31.0%)	
Sapien XT	50/129 (38.8%)	36/87 (41.4%)	
Sapien 3	44/129 (34.1%)	24/87 (27.6%)	
Pre-dilation	129/129 (100.0%)	85/87 (97.7%)	0.16
Post-dilation	38/127 (29.9%)	16/86 (18.6%)	0.08
Concomitant PCI	2/107 (1.9%)	1/59 (1.7%)	>0.99
Need for 2 nd THV	1/129 (0.8%)	0/87 (0.0%)	>0.99
Discharge Medications			
Beta Blocker	97/129 (75.2%)	59/87 (67.8%)	0.28

ACE Inhibitor/ARB	72/129 (55.8%)	43/87 (49.4%)	0.40
Procedural Complications Within 30 Days			
PPM	7/129 (5.4%)	4/87 (4.6%)	>0.99
New Atrial Fibrillation	6/129 (4.7%)	3/87 (3.4%)	0.74
>Mild PVL	12/127 (9.4%)	7/86 (8.1%)	0.81
30-Day Post-TAVR Echocardiographic Data			
AV Mean Gradient, mmHg	9.5±3.3 (129)	11.0±3.4	<0.001
Severe Prosthesis-Patient Mismatch*	12/123 (9.8%)	10/85 (11.8%)	0.65
ΔLVEF (30 Day Change from Baseline), %	16.3±6.0	16.6±5.1	0.67

BMI = body mass index; NYHA = New York Heart Association; CAD = coronary artery disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; CABG = coronary artery bypass grafting; BAV = balloon aortic valvuloplasty; CVA = cerebrovascular accident; PAD = peripheral artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; LVEF = left ventricular ejection fraction; AV = aortic valve; LVEDD = left ventricular end-diastolic diameter; LVESD = left ventricular end-systolic diameter; LVOT = left ventricular outflow tract; AR = aortic regurgitation; MR = mitral regurgitation; THV = transcatheter heart valve; ACE = angiotensin converting enzyme; ARB = angiotensin II receptor blocker; PPM = permanent pacemaker; PVL = paravalvular leak.

*defined as indexed effective orifice area <0.65 cm²/m².

eTable 5. Predictors of Degree of LVEF Improvement (Δ LVEF) After TAVR

Characteristic	Full Model			Parsimonious Model		
	Estimate	SE	P Value	Estimate	SE	P Value
Age	0.01	0.059	0.92			
Male Sex	0.84	1.129	0.46			
BMI, kg/m ²	0.15	0.070	0.031			
STS Score	-0.03	0.107	0.76			
NYHA Class III/IV	0.55	1.097	0.61			
Hypertension	-3.61	1.239	0.004	-3.87	1.147	<0.001
Diabetes	-1.82	0.796	0.023	-1.07	0.689	0.12
CAD	1.48	0.986	0.13			
Prior MI	-1.44	0.826	0.08	-1.65	0.736	0.025
Prior PCI	1.36	0.794	0.09			
Prior CABG	-1.52	0.853	0.07	-1.52	0.720	0.035
Prior BAV	-0.90	1.032	0.38			
CVA	-1.26	1.257	0.32			
PAD	-0.53	0.787	0.50			
CKD (S. Creatinine >2 mg/dL)	-0.93	1.055	0.38			
COPD	-0.10	0.827	0.91			
O ₂ Dependent Lung Disease	2.87	1.940	0.14			
Cancer	-1.76	0.766	0.022	-1.51	0.721	0.037
Hemoglobin	-0.06	0.207	0.76			
Baseline LVEF, %	-0.38	0.048	<0.001	-0.36	0.041	<0.001
LV Mass Index, g/m ²	0.01	0.010	0.23			
LVEDD, cm	-2.90	0.621	<0.001	-2.79	0.460	<0.001
AV Area, cm ²	-4.96	2.728	0.07			

LVOT Doppler Stroke Volume Index	0.06	0.061	0.31			
≥Moderate AR	-0.52	1.177	0.66			
≥Moderate MR	-0.75	0.822	0.36			
Discharge Medication Beta Blocker	-0.43	0.822	0.60			
Discharge Medication ACE Inhibitor/ARB	0.47	0.720	0.51			
Procedure Complications (≤7 Days)	0.02	0.956	0.99			
Post-TAVR AV Mean Gradient	0.38	0.109	<0.001	0.39	0.087	<0.001
Severe Prosthesis-Patient Mismatch	-3.62	1.141	0.002			
Valve Type (SAPIEN 3 vs. SAPIEN/SAPIEN XT)	-1.03	0.854	0.23			
Valve Size	-0.35	0.225	0.12			

BMI = body mass index; NYHA = New York Heart Association; CAD = coronary artery disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; CABG = coronary artery bypass grafting; BAV = balloon aortic valvuloplasty; CVA = cerebrovascular accident; PAD = peripheral artery disease; CKD = chronic kidney disease; COPD = chronic obstructive pulmonary disease; LVEF = left ventricular ejection fraction; AV = aortic valve; LVEDD = left ventricular end-diastolic diameter; LVOT = left ventricular outflow tract; AR = aortic regurgitation; MR = mitral regurgitation; ACE = angiotensin converting enzyme; ARB = angiotensin II receptor blocker.

eTable 6. Adjusted Association Between LVEF Improvement at 1 Year and 5-Year Clinical Outcomes After TAVR

Outcome	Δ LVEF (Per 5% Increase)		\uparrow LVEF \geq 10%-Points	
	aHR (95% CI)	P Value	aHR (95% CI)	P Value
All-Cause Death	0.84 (0.79- 0.91)	<0.001	0.64 (0.47-0.86)	0.003
Cardiac Death	0.84 (0.76-0.92)	<0.001	0.63 (0.42-0.95)	0.027
Non-Cardiac Death	0.91 (0.81-1.02)	0.12	0.75 (0.46-1.22)	0.25
Rehospitalization	0.92 (0.83-1.02)	0.09	0.77 (0.52-1.16)	0.21
Death or Rehospitalization	0.88 (0.81-0.94)	<0.001	0.68 (0.51-0.91)	0.011
Cardiac Death or Rehospitalization	0.89 (0.82-0.97)	0.006	0.74 (0.53-1.03)	0.07

LVEF = left ventricular ejection fraction; aHR = adjusted hazard ratio; CI = confidence interval

Multivariable models adjusted for the following covariates: sex, BMI, STS score, diabetes mellitus, prior MI, cancer, and baseline

LVEF.

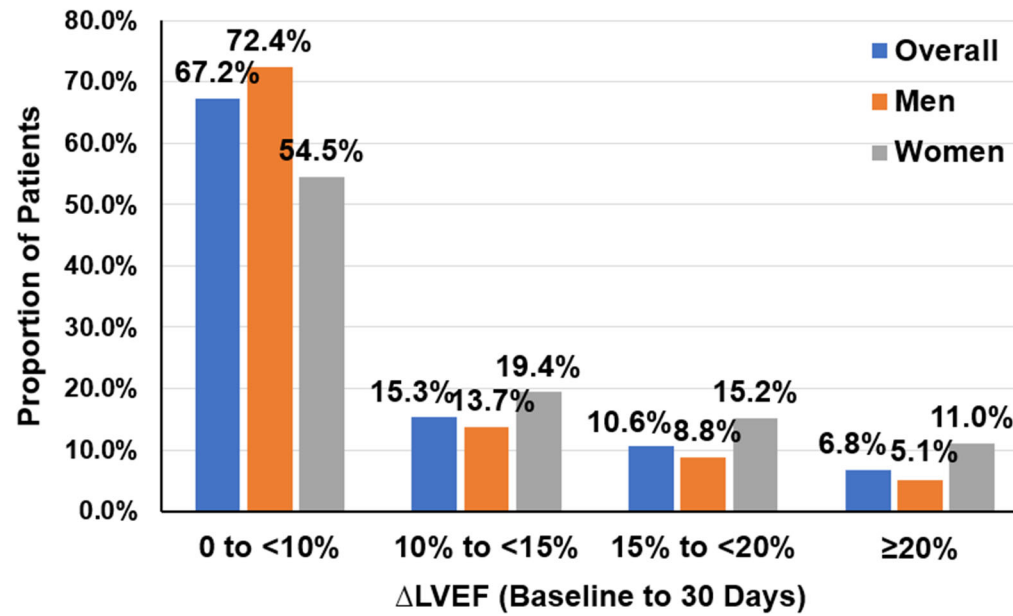
eTable 7. Association Between Early LVEF Improvement and 5-Year Outcomes After TAVR by Sex

Outcome	ΔLVEF (Per 5% Increase)			↑ LVEF ≥10%-Points		
	aHR (95% CI)	P Value		aHR (95% CI)	P Value	
		Effect	Interaction		Effect	Interaction
All-Cause Death			0.013			0.004
Men	1.01 (0.94-1.08)	0.88		1.05 (0.80-1.37)	0.73	
Women	0.84 (0.75-0.95)	0.005		0.48 (0.31-0.75)	0.001	
Cardiac Death			0.08			0.050
Men	0.97 (0.88-1.06)	0.50		0.98 (0.68-1.41)	0.91	
Women	0.81 (0.67-0.96)	0.017		0.44 (0.22-0.88)	0.019	
Non-Cardiac Death			0.19			0.18
Men	1.01 (0.90-1.14)	0.82		0.97 (0.62-1.54)	0.91	
Women	0.88 (0.74-1.05)	0.17		0.56 (0.28-1.10)	0.09	
Rehospitalization			0.22			0.15
Men	1.02 (0.94-1.10)	0.70		1.05 (0.76-1.45)	0.76	
Women	0.93 (0.82-1.05)	0.22		0.70 (0.45-1.08)	0.11	
Death or Rehospitalization			0.021			0.010
Men	1.03 (0.96-1.09)	0.43		1.08 (0.85-1.38)	0.54	
Women	0.89 (0.80-0.99)	0.026		0.60 (0.41-0.87)	0.007	
Cardiac Death or Rehospitalization			0.044			0.025
Men	1.04 (0.97-1.11)	0.30		1.16 (0.89-1.52)	0.26	
Women	0.90 (0.81-1.01)	0.08		0.66 (0.44-1.00)	0.049	

LVEF = left ventricular ejection fraction; aHR = adjusted hazard ratio; CI = confidence interval; STS = Society of Thoracic Surgeons;

AVA = aortic valve area; AV = aortic valve; AR = aortic regurgitation; MR = mitral regurgitation.

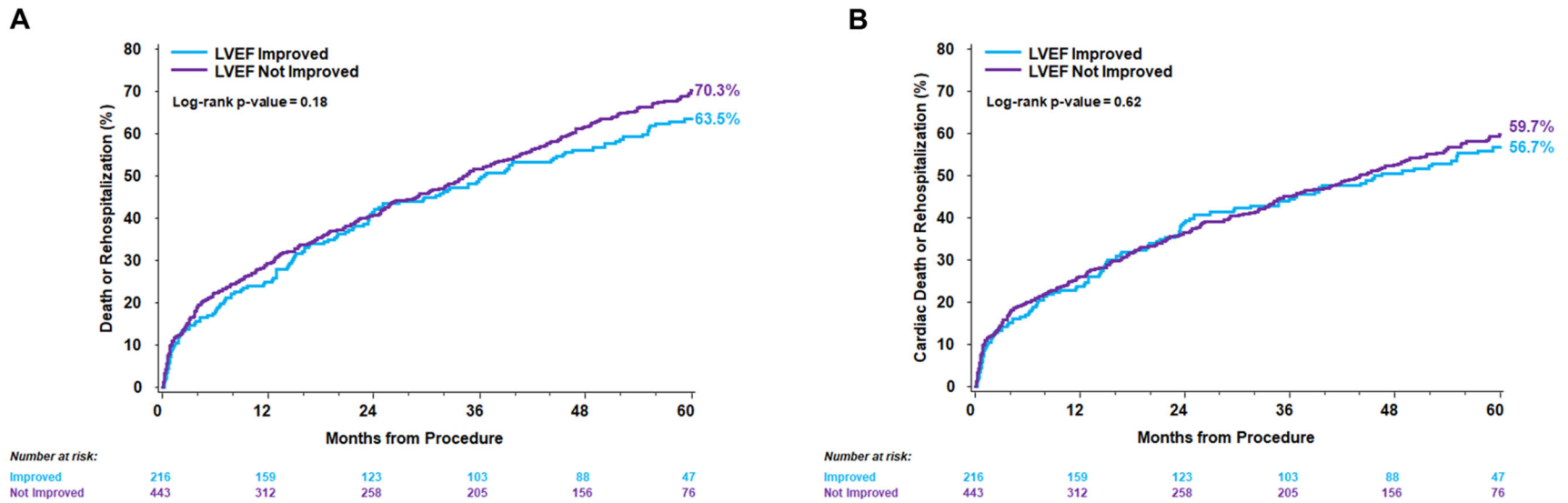
eFigure 1. Early LVEF Improvement After TAVR in Patients With Severe AS and Baseline LVEF <50%



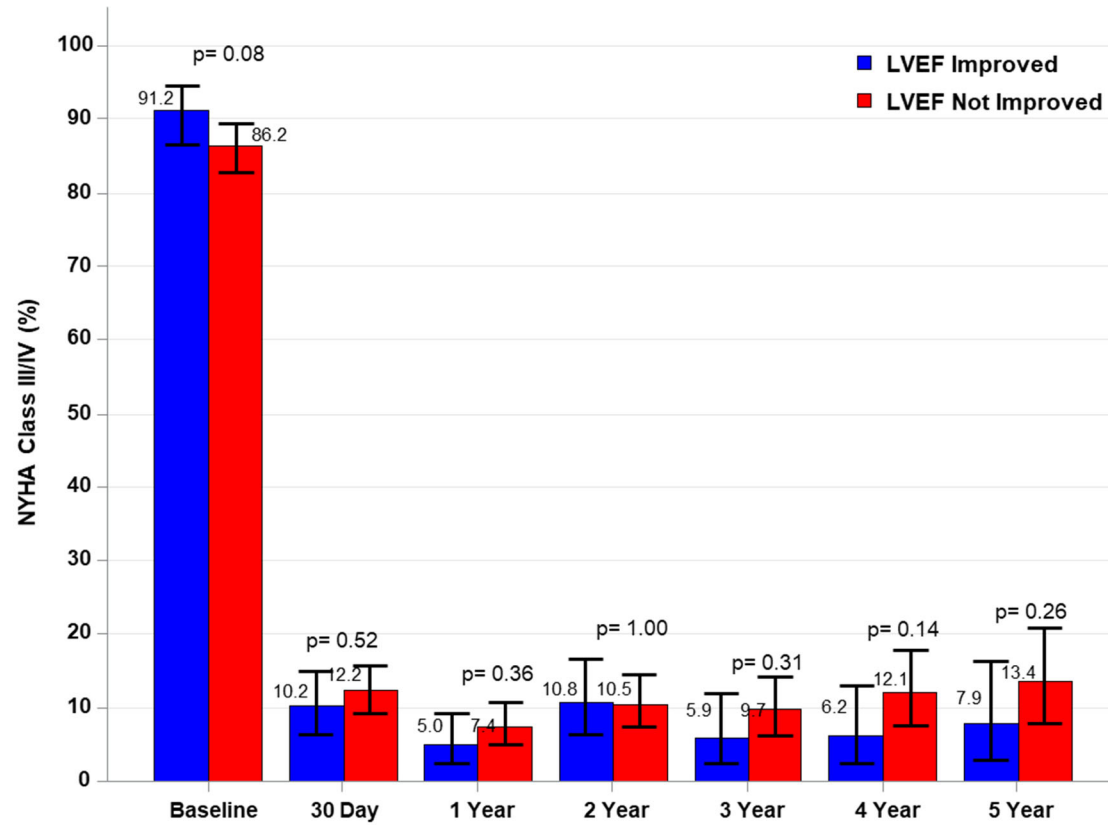
ΔLVEF is expressed as %-point improvement in LVEF between baseline and 30 days after TAVR.

eFigure 2. Composite of All-Cause Death or Rehospitalization and Cardiac Death or Rehospitalization at 5 Years in Patients With vs. Without Early LVEF Improvement After TAVR

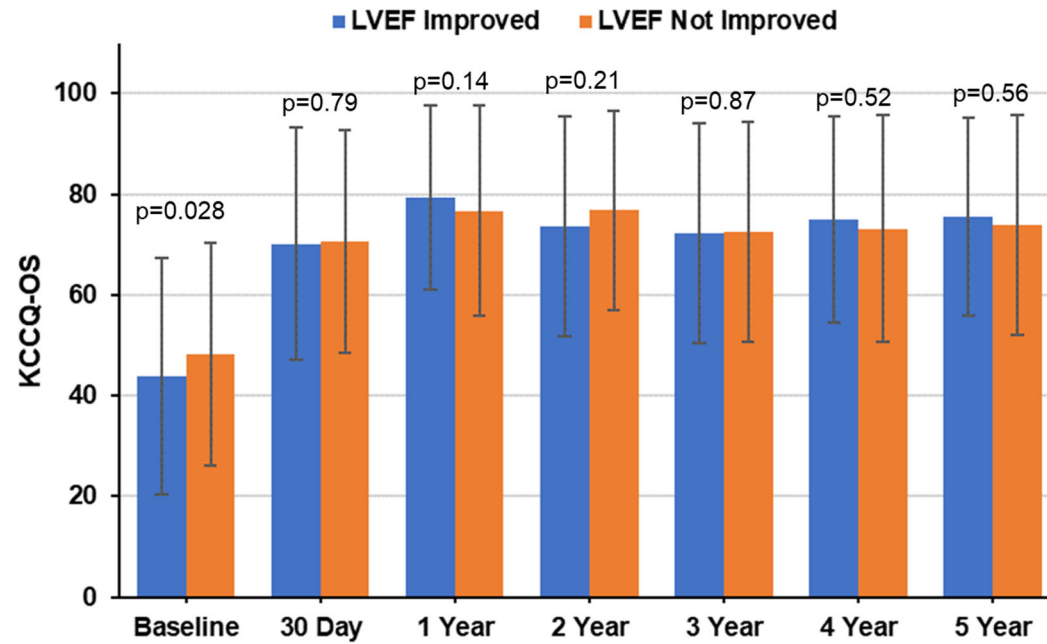
Time-to-event curves of the composite of all-cause death or rehospitalization (A), and cardiac death or rehospitalization (E) over 5 years after TAVR in patients with vs. without LVEF improvement (defined as $\geq 10\%$ -point increase over baseline LVEF at 30 days).



eFigure 3. NYHA Functional Class in Patients With vs. Without Early LVEF Improvement After TAVR

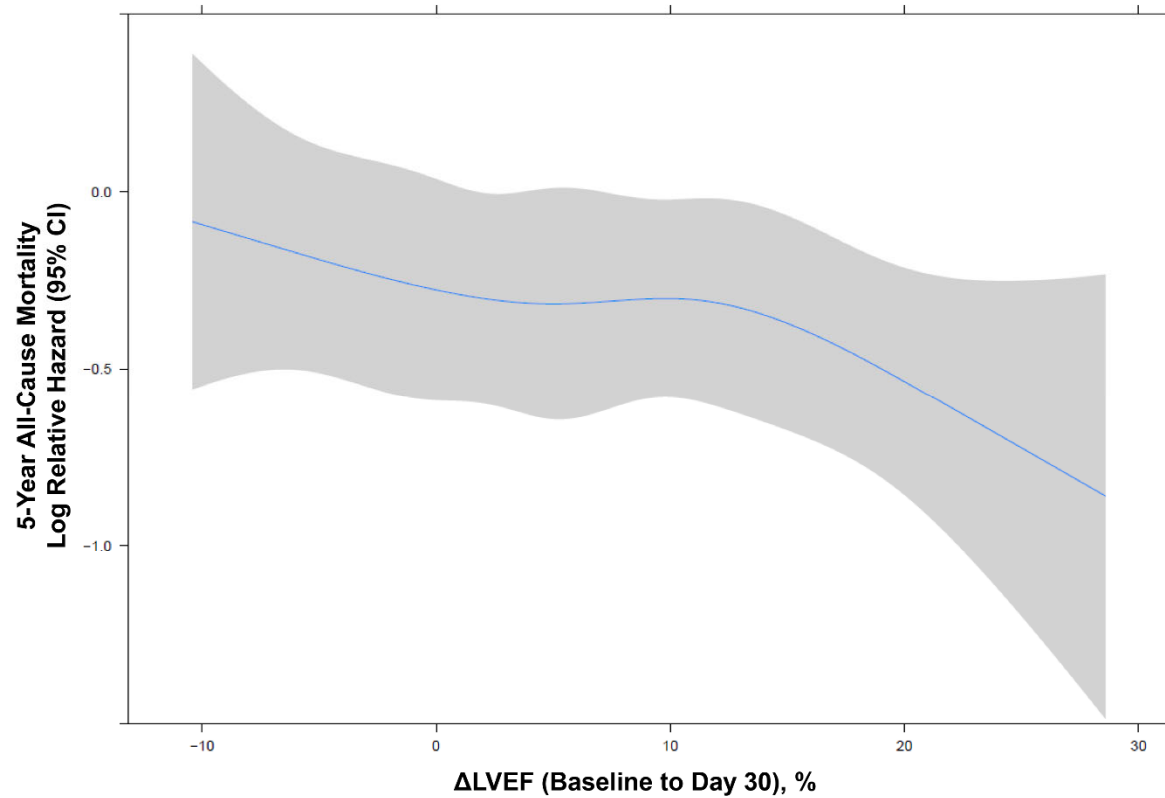


eFigure 4. KCCQ-OS in Patients With vs. Without Early LVEF Improvement After TAVR



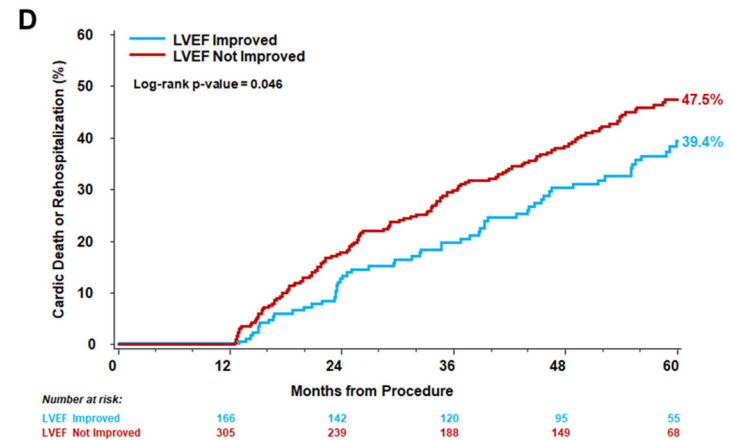
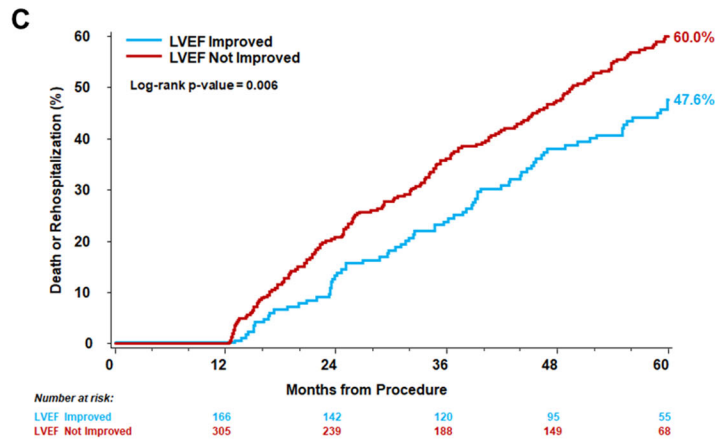
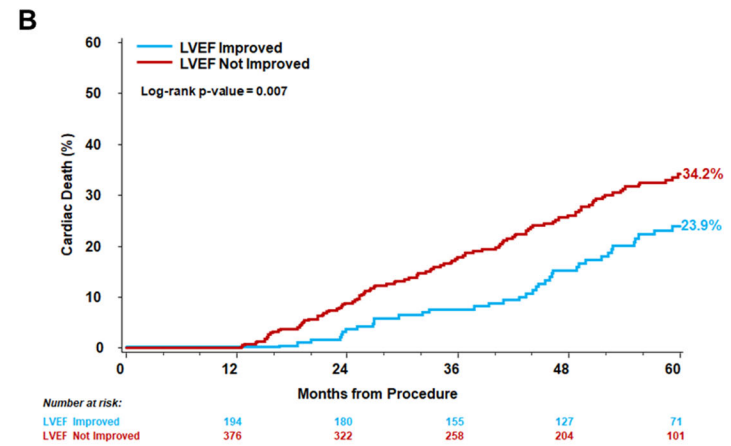
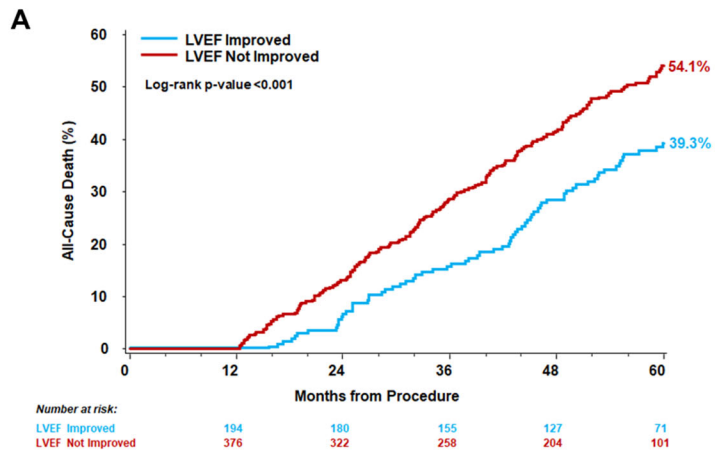
eFigure 5. Association Between Δ LVEF and 5-Year All-Cause Mortality After TAVR

Restricted cubic spline curve depicting LVEF improvement as a continuous variable (defined as degree of LVEF improvement [Δ LVEF] between baseline and 30 days) on the X-axis and the relative hazard of 5-year mortality on the Y-axis. A visual inflection point is seen at Δ LVEF=10% beyond which there is a steep decline in the risk of mortality with increasing degree of LVEF improvement.



eFigure 6. 5-Year Clinical Outcomes in Patients With vs. Without LVEF Improvement at 1 Year After TAVR

Time-to-event curves of 5-year all-cause death (A), cardiac death (B), all-cause death or rehospitalization (C), and cardiac death or rehospitalization (D) in patients with vs. without LVEF improvement (defined as $\geq 10\%$ -points increase over baseline LVEF at 1 year) after TAVR.



eFigure 7. 5-Year Outcomes in Men and Women With vs. Without Early LVEF Improvement After TAVR

Time-to-event curves of 5-year all-cause death (A), cardiac death (B), death or rehospitalization (C), and cardiac death or rehospitalization (D) in in men and women with vs. without LVEF improvement (defined as $\geq 10\%$ -points increase over baseline LVEF at 30 days) after TAVR.

