



## Supplementary material

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# Comparison of the Hemodynamic Performance of the Balloon-Expandable SAPIEN-3 Versus Self-Expandable Evolut R Transcatheter Valve: A Case-matched Study

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## Table 1 of the supplementary material

### Prosthesis Sizing Chart Following the Manufacturer's Guidelines

SAPIEN 3		23	26	29
Device: perimeter/area		72.3 mm - 415 mm <sup>2</sup>	81.7 mm - 531 mm <sup>2</sup>	91.1 mm - 661 mm <sup>2</sup>
AoA: diameter, mm		18-22	21-25	24-28
AoA: area, mm <sup>2</sup>		338-430	430-546	540-683
AoA: area-derived perimeter		20.7-23.4	23.4-26.4	26.2-29.5

Evolut R		23	26	29
Device: perimeter/area		72.3 mm - 415 mm <sup>2</sup>	81.7 mm - 531 mm <sup>2</sup>	91.1 mm - 661 mm <sup>2</sup>
AoA: diameter, mm		18-20	20-23	23-26
AoA: área, mm <sup>2</sup>		254.5-314.2	314.2-415.5	415.5-572.6
AoA: perimeter, mm		56.5-62.8	62.8-72.3	72.3-81.7

AoA, aortic annulus.

**Table 2 of the supplementary material****Doppler Echocardiographic and Clinical Data at 6- to 12-month Follow-up After Transcatheter Aortic Valve Implantation According to Valve Type**

	All (N = 133)	EVR (n = 59)	S3V (n = 74)	P
<i>Heart rate, bpm</i>	71 ± 12	71 ± 11	72 ± 12	.64
<i>Ejection fraction, %</i>	59 ± 9	59 ± 8	60 ± 9	.83
<i>LVEDD, mm</i>	47 ± 7	46 ± 7	47 ± 7	.80
<i>LVESD, mm</i>	31 ± 6	30 ± 5	31 ± 7	.25
<i>Stroke volumen, mL</i>	48 ± 19	50 ± 23	47 ± 16	.59
<i>Peak aortic gradient, mmHg</i>	17 ± 8	12 ± 6	20 ± 8	.001
<i>Maximum velocity, m/s</i>	2.00 ± 0.5	1.68 ± 0.4	2.23 ± 0.4	.001
<i>Mean aortic gradient, mmHg</i>	9 ± 5	6 ± 3	11 ± 5	.001
<i>Aortic velocity index</i>	0.58 ± 0.17	0.68 ± 0.16	0.51 ± 0.15	.001
<i>SPAP, mmHg</i>	40 ± 13	43 ± 14	38 ± 13	.06
<i>Effective orifice area, cm<sup>2</sup></i>	2.04 ± 0.45	2.21 ± 0.37	1.93 ± 0.48	.005
<i>Index effective orifice area, cm<sup>2</sup></i>	1.20 ± 0.26	1.31 ± 0.24	1.12 ± 0.26	.001
<i>Prosthesis-patient mismatch</i>	18 (18.2)	4 (10.0)	14 (23.7)	.08
Moderate	17 (17.2)	4 (10.0)	13 (22.0)	.11
Severe	1 (1.0)	0 (0)	1 (1.7)	.60
<i>Mitral regurgitation</i>				.74
None/trace	61 (47)	27 (46)	34 (48)	
Mild	52 (40)	25 (42)	27 (38)	

Moderate	14 (10.8)	5 (8.5)	9 (12.7)	
Severe	3 (2.3)	2 (3.4)	1 (1.4)	
<i>Moderate-severe MR</i>	16 (11)	7 (11)	9 (11)	.98
<i>Global AR</i>				.024
None/trace	85 (64)	31 (53)	54 (74)	
Mild	39 (29)	22 (37)	17 (23)	
Moderate	8 (6.1)	6 (10.2)	2 (2.7)	
Severe	0 (0)	0 (0)	0 (0)	
<i>Moderate-severe AR</i>	8 (6.1)	6 (10.2)	2 (2.7)	.07
<i>Any AR</i>	47 (36)	28 (47.5)	19 (26.0)	.011
<i>Paravalvular AR</i>				.027
None/trace	89 (67)	33 (56)	56 (77)	
Mild	35 (26.5)	20 (34)	15 (20.5)	
Moderate	8 (6.1)	6 (10.2)	2 (2.7)	
Severe	0 (0)	0 (0)	0 (0)	
<i>Transvalvular AR</i>				.14
None/trace	125 (95)	54 (91.5)	71 (97.3)	
Mild	7 (5.3)	5 (8.5)	2 (2.7)	
Moderate	0 (0)	0 (0)	0 (0)	
Severe	0 (0)	0 (0)	0 (0)	
<i>Number of jets</i>	0.74 ± 0.8	0.80 ± 0.7	0.41 ± 0.6	.001
<i>NYHA</i>				.374
I	97 (69.8)	47 (75.8)	50 (64.9)	
II	37 (26.6)	13 (21.0)	24 (31.2)	

III	5 (3.6)	2 (3.2)	3 (3.9)	
IV	0 (0)	0 (0)	0 (0)	
<i>Readmission due to heart failure</i>	6 (4.2)	2 (3.1)	4 (5.0)	.576

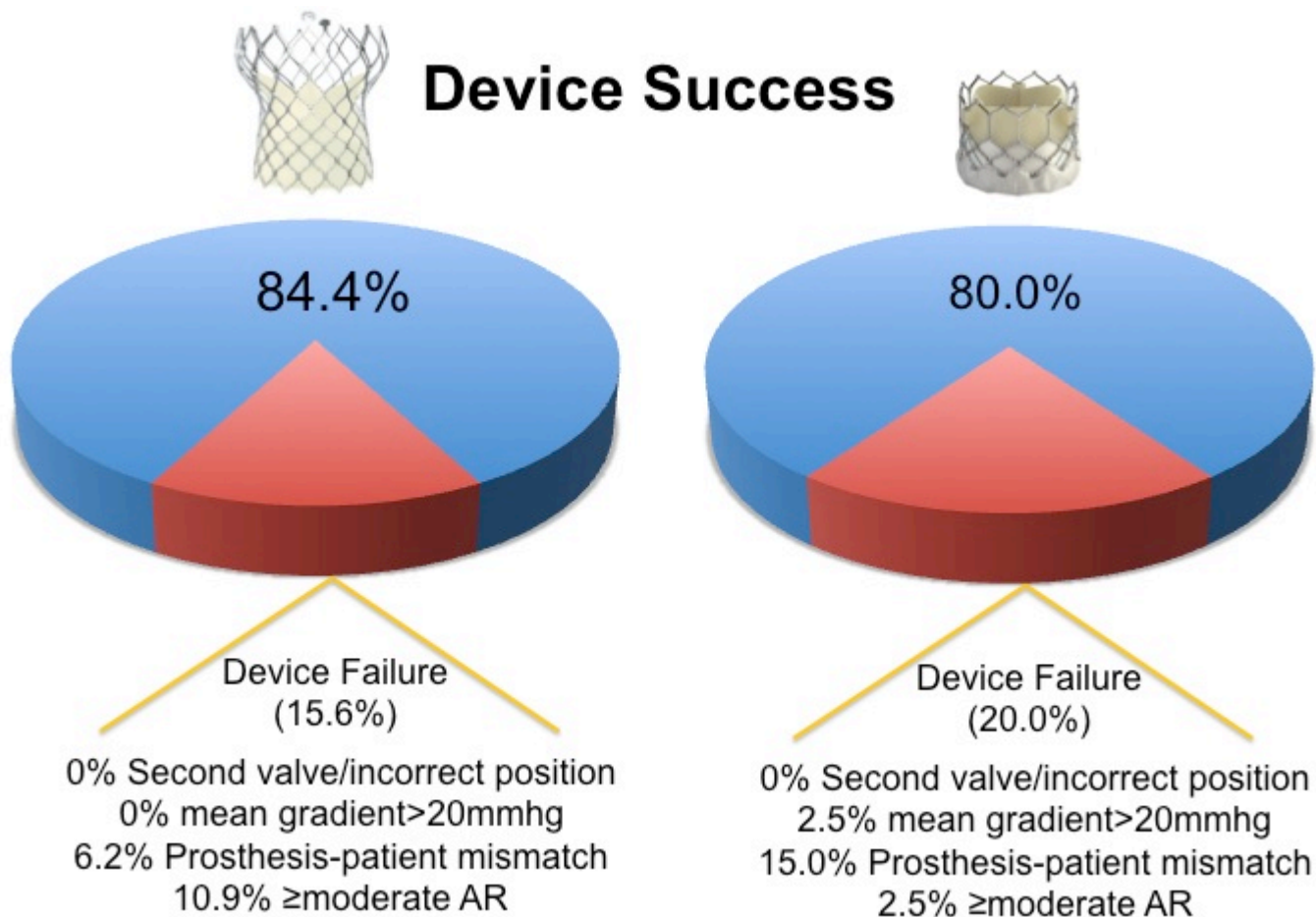
AR, aortic regurgitation; EVR, Evolut R; S3V, Edwards SAPIEN 3 valve; LV, left ventricle; LVEDD, left ventricle end-diastolic diameter; LVESD, left ventricle end systolic diameter; MR, mitral regurgitation;

NYHA, New York Heart Association functional class; SPAP, systolic pulmonary artery pressure;

Values are expressed as mean  $\pm$  (standard deviation), or No. (%).

**Figure 1 of the supplementary material**

Percentage of device success following Valve Academic Research Consortium-2 criteria according to valve type



AR, aortic regurgitation.