



Argentina and France share their most educational cases: TAVI procedure complications

Dr. Alejandro Cherro

Colegio Argentino de Cardioangiologos Intervencionistas



## Potential conflicts of interest

**Speaker's name: Alejandro Cherro**

**I do not have any potential conflict of interest**

# TAVI procedure complication

- *Occlusion of the left main by a cusp of the native aortic valve.*
- *Balloon rupture of the Sapiens XT valve*
- *Embolization of a prosthesis.*
- *Severe paravalvular leak*

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ORIGINAL ARTICLE

## Transcatheter or Surgical Aortic-Valve Replacement in Intermediate-Risk Patients

Martin B. Leon, M.D., Craig R. Smith, M.D., Michael J. Mack, M.D.,  
Raj R. Makkar, M.D., Lars G. Svensson, M.D., Ph.D., Susheel K. Kodali, M.D.,

for the PARTNER 2 Investigators\*

ABSTRACT

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**Table 2. Clinical End Points at 30 Days, 1 Year, and 2 Years.<sup>a</sup>**

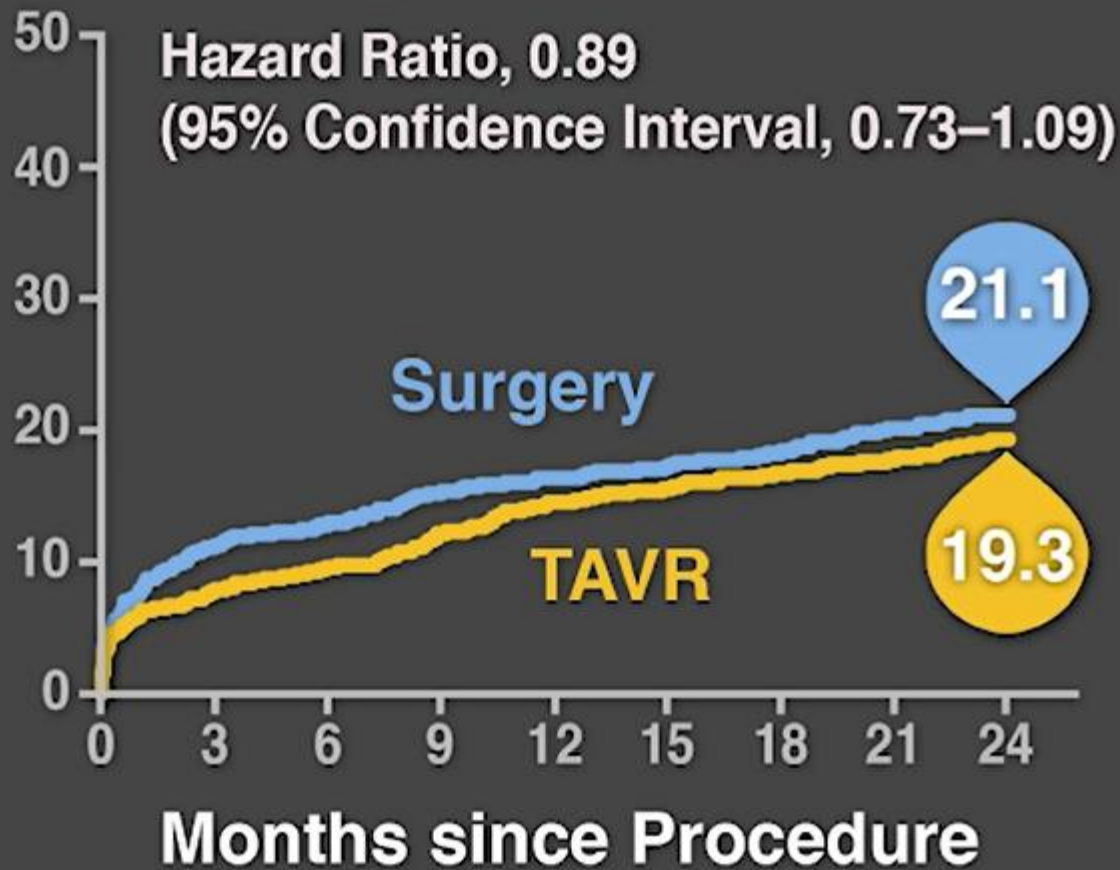
End Point	At 30 Days			At 1 Year			At 2 Years		
	TAVR (N=1011)	Surgery (N=1021)	P Value	TAVR (N=1011)	Surgery (N=1021)	P Value	TAVR (N=1011)	Surgery (N=1021)	P Value
	no. of patients (%)			no. of patients (%)			no. of patients (%)		
Death from any cause or disabling stroke	62 (6.1)	80 (8.0)	0.11	145 (14.5)	160 (16.4)	0.24	192 (19.3)	202 (21.1)	0.33
Death									
From any cause	39 (3.9)	41 (4.1)	0.78	123 (12.3)	124 (12.9)	0.69	166 (16.7)	170 (18.0)	0.45
From cardiac causes	33 (3.3)	32 (3.2)	0.92	70 (7.1)	77 (8.1)	0.40	97 (10.1)	104 (11.3)	0.38
Not from cardiac causes	6 (0.6)	9 (0.9)	0.41	53 (5.6)	47 (5.2)	0.71	69 (7.4)	65 (7.4)	0.98
Neurologic event									
Any event	64 (6.4)	65 (6.5)	0.94	99 (10.1)	93 (9.7)	0.76	121 (12.7)	103 (11.0)	0.25
Transient ischemic attack	9 (0.9)	4 (0.4)	0.17	23 (2.4)	16 (1.8)	0.38	34 (3.7)	20 (2.3)	0.09
Any stroke	55 (5.5)	61 (6.1)	0.57	78 (8.0)	79 (8.1)	0.88	91 (9.5)	85 (8.9)	0.67
Disabling stroke	32 (3.2)	43 (4.3)	0.20	49 (5.0)	56 (5.8)	0.46	59 (6.2)	61 (6.4)	0.83
Nondisabling stroke	23 (2.3)	18 (1.8)	0.43	30 (3.0)	24 (2.5)	0.44	33 (3.4)	27 (2.9)	0.51
Rehospitalization	64 (6.5)	62 (6.5)	0.99	142 (14.8)	135 (14.7)	0.92	183 (19.6)	156 (17.3)	0.22
Death from any cause or rehospitalization	99 (9.8)	101 (10.2)	0.78	234 (23.4)	225 (23.3)	0.97	303 (30.5)	281 (29.6)	0.67
Death from any cause, any stroke, or rehospitalization	140 (13.9)	153 (15.3)	0.37	274 (27.4)	276 (28.3)	0.64	344 (34.6)	326 (33.9)	0.75
Myocardial infarction	12 (1.2)	19 (1.9)	0.22	24 (2.5)	29 (3.0)	0.47	33 (3.6)	37 (4.1)	0.56
Major vascular complication	80 (7.9)	51 (5.0)	0.008	84 (8.4)	54 (5.3)	0.007	86 (8.6)	55 (5.5)	0.006
Life-threatening or disabling bleeding	105 (10.4)	442 (43.4)	<0.001	151 (15.2)	460 (45.5)	<0.001	169 (17.3)	471 (47.0)	<0.001
Acute kidney injury	13 (1.3)	31 (3.1)	0.006	32 (3.4)	48 (5.0)	0.07	36 (3.8)	57 (6.2)	0.02
New atrial fibrillation	91 (9.1)	265 (26.4)	<0.001	100 (10.1)	272 (27.2)	<0.001	110 (11.3)	273 (27.3)	<0.001
New permanent pacemaker	85 (8.5)	68 (6.9)	0.17	98 (9.9)	85 (8.9)	0.43	114 (11.8)	96 (10.3)	0.29
Endocarditis	0	0	—	7 (0.8)	6 (0.7)	0.84	11 (1.2)	6 (0.7)	0.22
Aortic-valve reintervention	4 (0.4)	0	0.05	11 (1.2)	4 (0.5)	0.10	13 (1.4)	5 (0.6)	0.09
Coronary obstruction	4 (0.4)	6 (0.6)	0.53	4 (0.4)	6 (0.6)	0.53	4 (0.4)	6 (0.6)	0.53

**Table 1: Observed Rates of Major Complications**

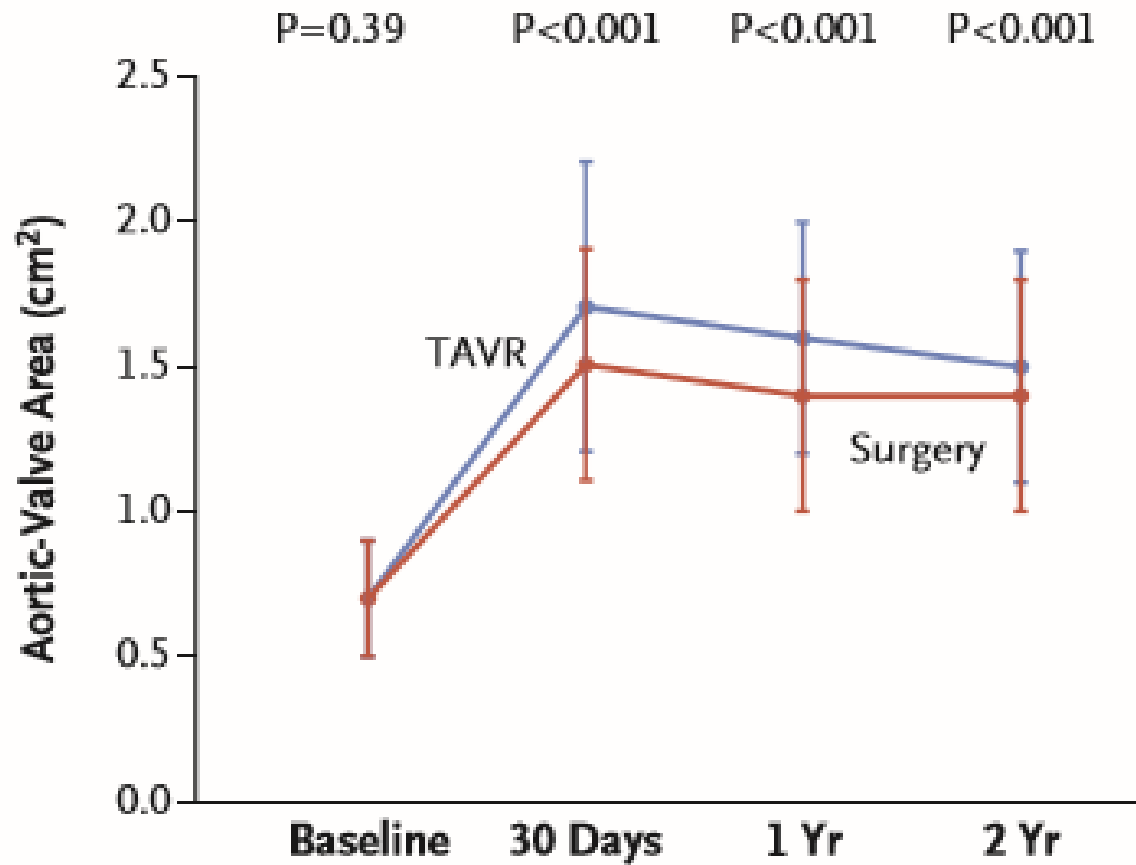
Complication	M1 Reg			M2 Reg			M3 Reg		
	Rate (95% CI)	Events (n/N)	P-value	Rate (95% CI)	Events (n/N)	P-value	Rate (95% CI)	Events (n/N)	P-value
<b>Death</b>									
In-hospital	10.5 (9.5-11.5)	105/1000	0.10	10.2 (9.2-11.2)	102/1000	0.10	10.8 (9.8-11.8)	108/1000	0.10
30-day	10.5 (9.5-11.5)	105/1000	0.10	10.2 (9.2-11.2)	102/1000	0.10	10.8 (9.8-11.8)	108/1000	0.10
All-cause	10.5 (9.5-11.5)	105/1000	0.10	10.2 (9.2-11.2)	102/1000	0.10	10.8 (9.8-11.8)	108/1000	0.10
<b>Stroke</b>									
Ischemic	1.5 (1.2-1.8)	15/1000	0.10	1.4 (1.1-1.7)	14/1000	0.10	1.6 (1.3-1.9)	16/1000	0.10
Total	1.5 (1.2-1.8)	15/1000	0.10	1.4 (1.1-1.7)	14/1000	0.10	1.6 (1.3-1.9)	16/1000	0.10
<b>Myocardial infarction</b>									
In-hospital	2.5 (2.2-2.8)	25/1000	0.10	2.4 (2.1-2.7)	24/1000	0.10	2.6 (2.3-2.9)	26/1000	0.10
30-day	2.5 (2.2-2.8)	25/1000	0.10	2.4 (2.1-2.7)	24/1000	0.10	2.6 (2.3-2.9)	26/1000	0.10
All-cause	2.5 (2.2-2.8)	25/1000	0.10	2.4 (2.1-2.7)	24/1000	0.10	2.6 (2.3-2.9)	26/1000	0.10
<b>Acute kidney injury</b>									
In-hospital	3.5 (3.2-3.8)	35/1000	0.10	3.4 (3.1-3.7)	34/1000	0.10	3.6 (3.3-3.9)	36/1000	0.10
30-day	3.5 (3.2-3.8)	35/1000	0.10	3.4 (3.1-3.7)	34/1000	0.10	3.6 (3.3-3.9)	36/1000	0.10
All-cause	3.5 (3.2-3.8)	35/1000	0.10	3.4 (3.1-3.7)	34/1000	0.10	3.6 (3.3-3.9)	36/1000	0.10
<b>Major bleeding</b>									
In-hospital	4.5 (4.2-4.8)	45/1000	0.10	4.4 (4.1-4.7)	44/1000	0.10	4.6 (4.3-4.9)	46/1000	0.10
30-day	4.5 (4.2-4.8)	45/1000	0.10	4.4 (4.1-4.7)	44/1000	0.10	4.6 (4.3-4.9)	46/1000	0.10
All-cause	4.5 (4.2-4.8)	45/1000	0.10	4.4 (4.1-4.7)	44/1000	0.10	4.6 (4.3-4.9)	46/1000	0.10
<b>Other complications</b>									
All-cause	5.5 (5.2-5.8)	55/1000	0.10	5.4 (5.1-5.7)	54/1000	0.10	5.6 (5.3-5.9)	56/1000	0.10
<b>Reoperation</b>									
Aortic-valve reintervention	4 (0.4)	0	0.05	11 (1.2)	4 (0.5)	0.10	13 (1.4)	5 (0.6)	0.09
Coronary obstruction	4 (0.4)	6 (0.6)	0.53	4 (0.4)	6 (0.6)	0.53	4 (0.4)	6 (0.6)	0.53

## Primary End Point

% Death from Any Cause  
or Disabling Stroke



### Aortic-Valve Area

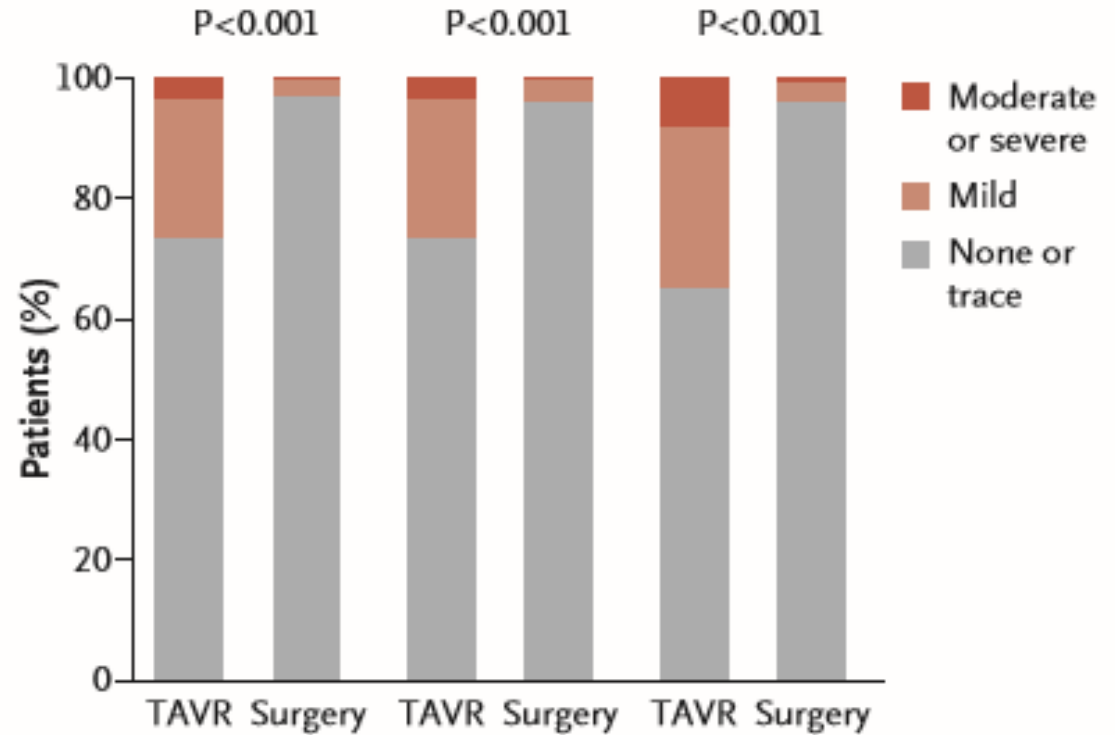




## B Paravalvular Aortic Regurgitation

mild paravalvular aortic regurgitation  
22.5%

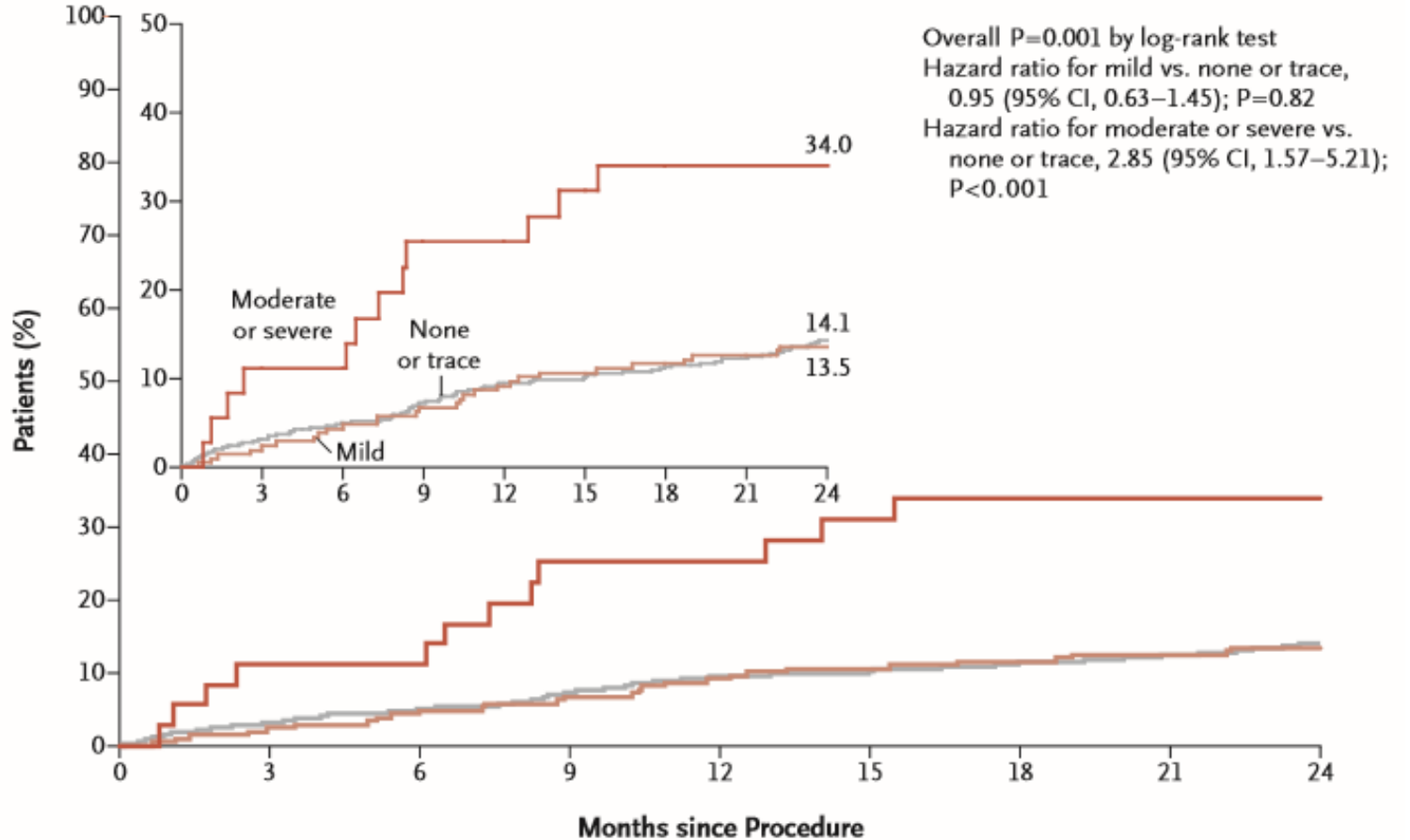
moderate or severe  
3.7%



**No. of Patients with  
Echocardiographic  
Findings**

	30 Days	1 Yr	2 Yr
TAVR	872	728	600
Surgery	757	611	514

Death from Any Cause, According to Severity of Paravalvular Aortic Regurgitation



No. at Risk

None or trace	701	678	664	647	628	621	612	605	585
Mild	210	204	199	194	188	184	182	180	175
Moderate or severe	36	32	32	26	26	24	22	22	21

