

STS/EACTS Latin America Cardiovascular Surgery Conference

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Cone Operation And Other Procedures for Ebstein's Anomaly

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No conflict of interest



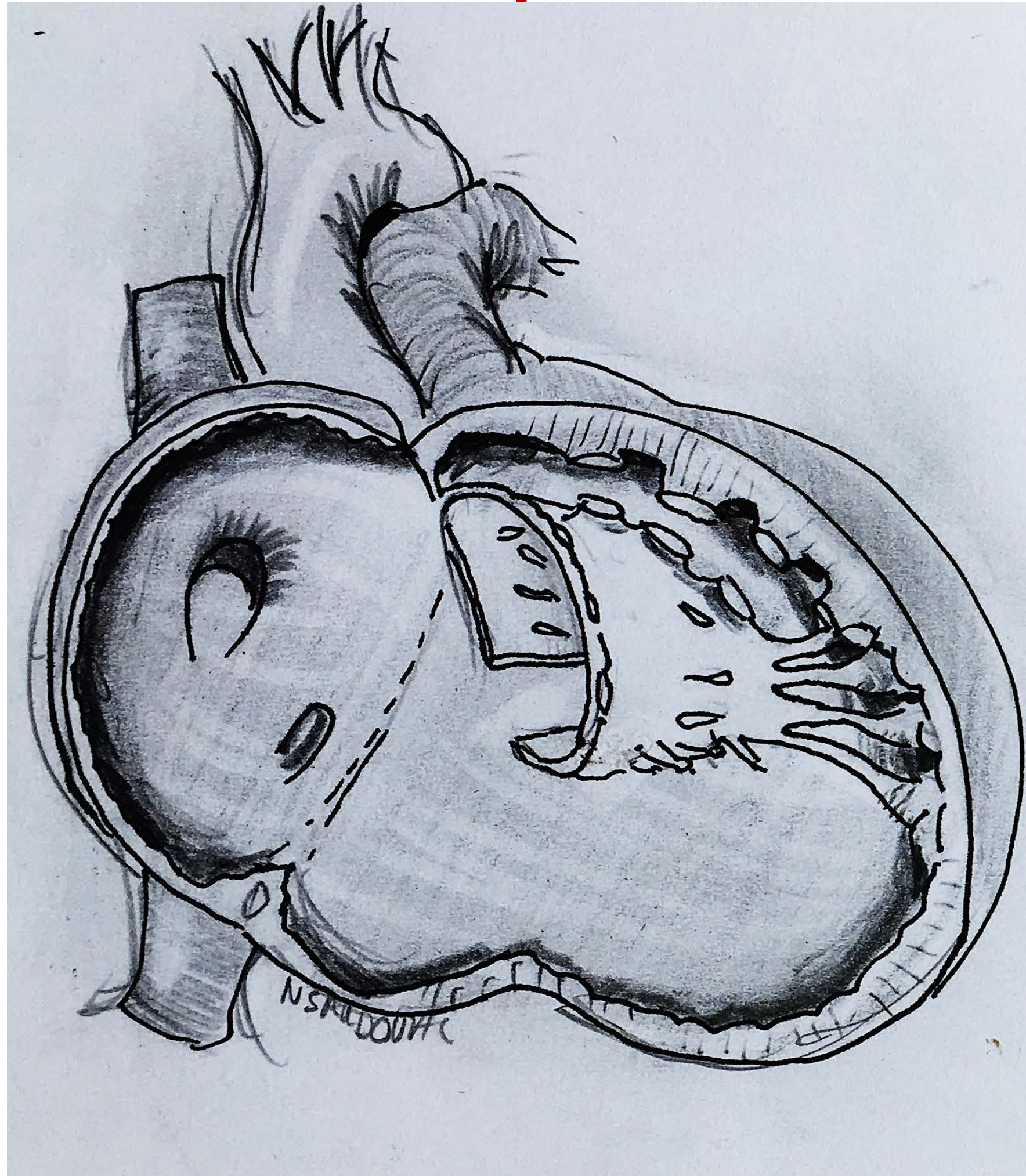
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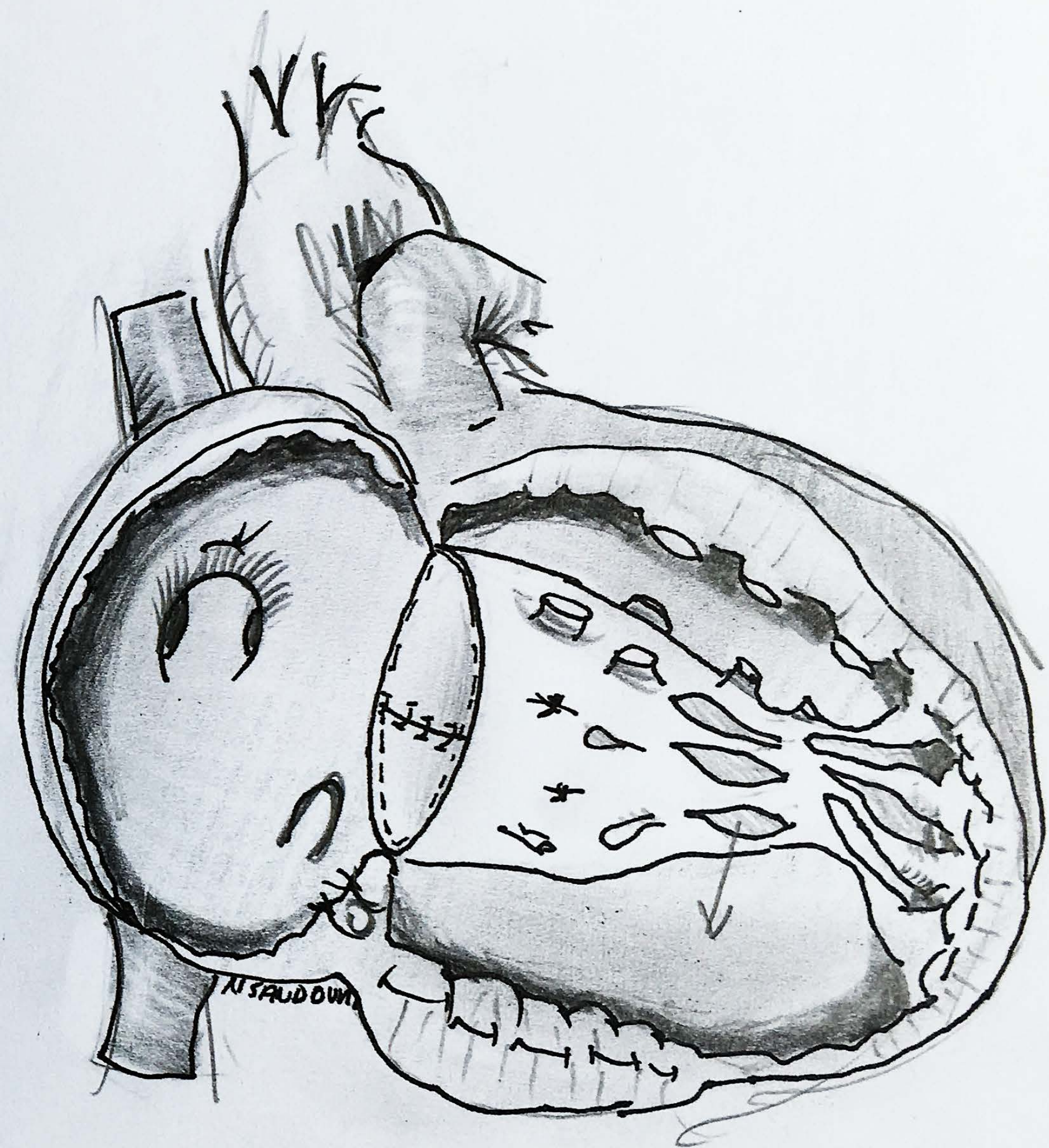
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The "Cone" operation for tricuspid repair has become the most feasible technique for almost all type of Ebstein disease.



Ullmann



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Objective

The aim of the study is to compare outcomes using Cone operation and others techniques.

Methods

From Jan 2003 to May 2017

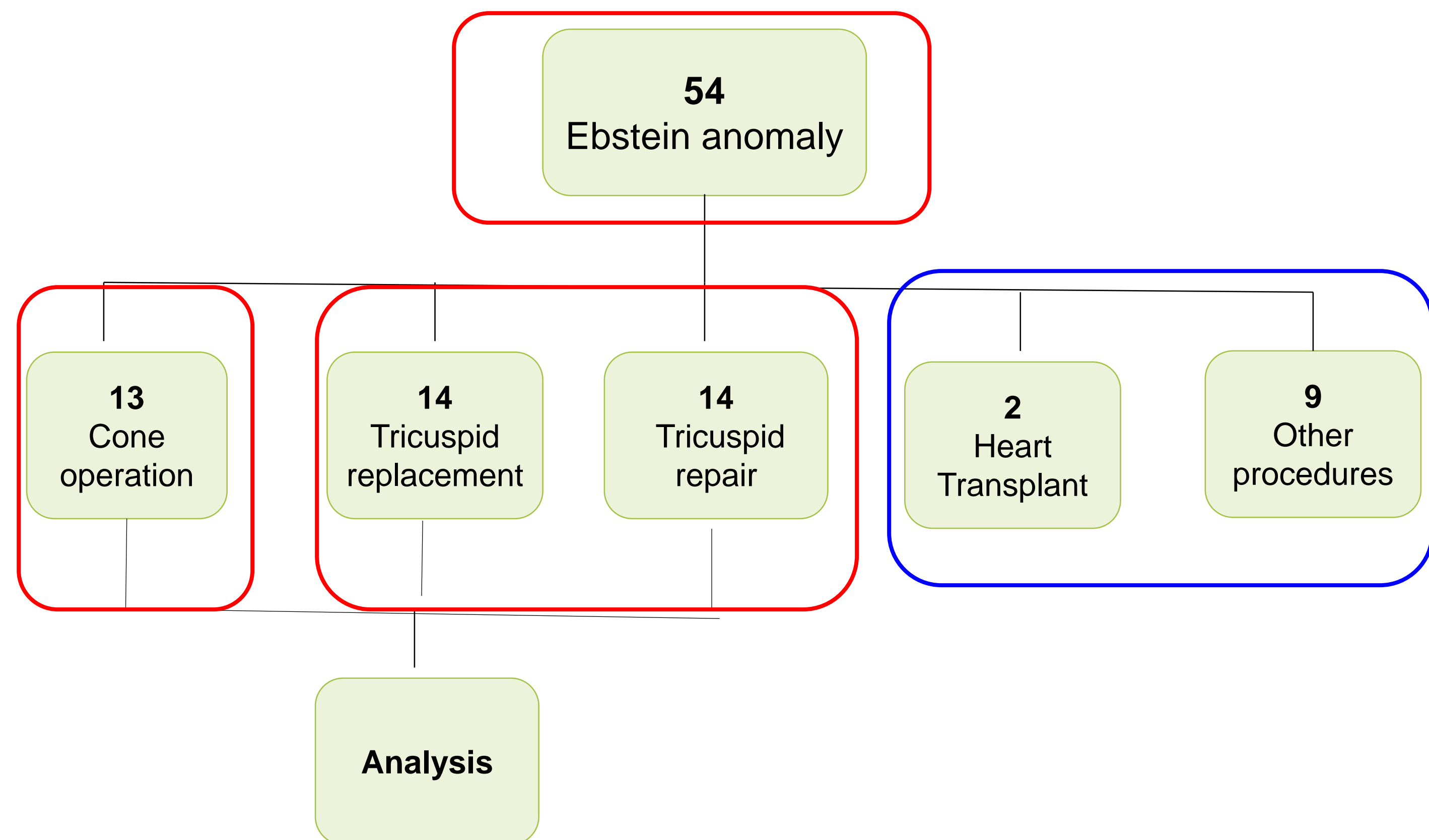
Two different strategies of treatment were analyzed

Cone Vs others

Descriptive analysis.

Continuous variables are expressed as mean \pm standard deviation or median with interquartile range.

Categorical variables are presented as absolute frequencies and proportions.



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Results

Characteristics of Patients

Variable	Cone opeation	Tricuspid repair	Tricuspid Replacement	P value
	N 13	N 14	N 14	
✓. Age Median (IQR)	14 (13-15)	14 (7.8-16)	11.3 (11-14)	0.73
✓. Male n (%)	7 (53.8)	5 (35.7)	5 (35.7)	0.54
✓. Sat. % Median (IQR)	90 (78-95)	92 (82-94)	88 (84-89)	0.88
✓. Pre op Arrhythmia n (%)	2 (15.3)	4 (28,4)	3 (21.4)	0.71
✓. Funct. Class IV n (%)		1 (7.14)		1
✓. Syncope n (%)	1 (7.7)		1 (7.1)	0.58
✓. Other symptoms n (%)	1 (7.6)	5 (16,1)	6 (13,9)	0.43

IQR: Intercuartile range

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Severity of the Lesion (Classification) and performance of a bidireccional Glenn

Ebstein classification	Cone opreation	Tricuspid repair	Tricuspid Replacement
	N 13	N 14	N 14
A	2 (14,4)	8(57.1)	1 (7,1)
B	3 (23,1)	1 (7.1)	3 (21,4)
C	7 (53,8)	5 (35.7)	9 (64,3)
D	1 (7,7)	0	1 (7,1)

Glenn procedure

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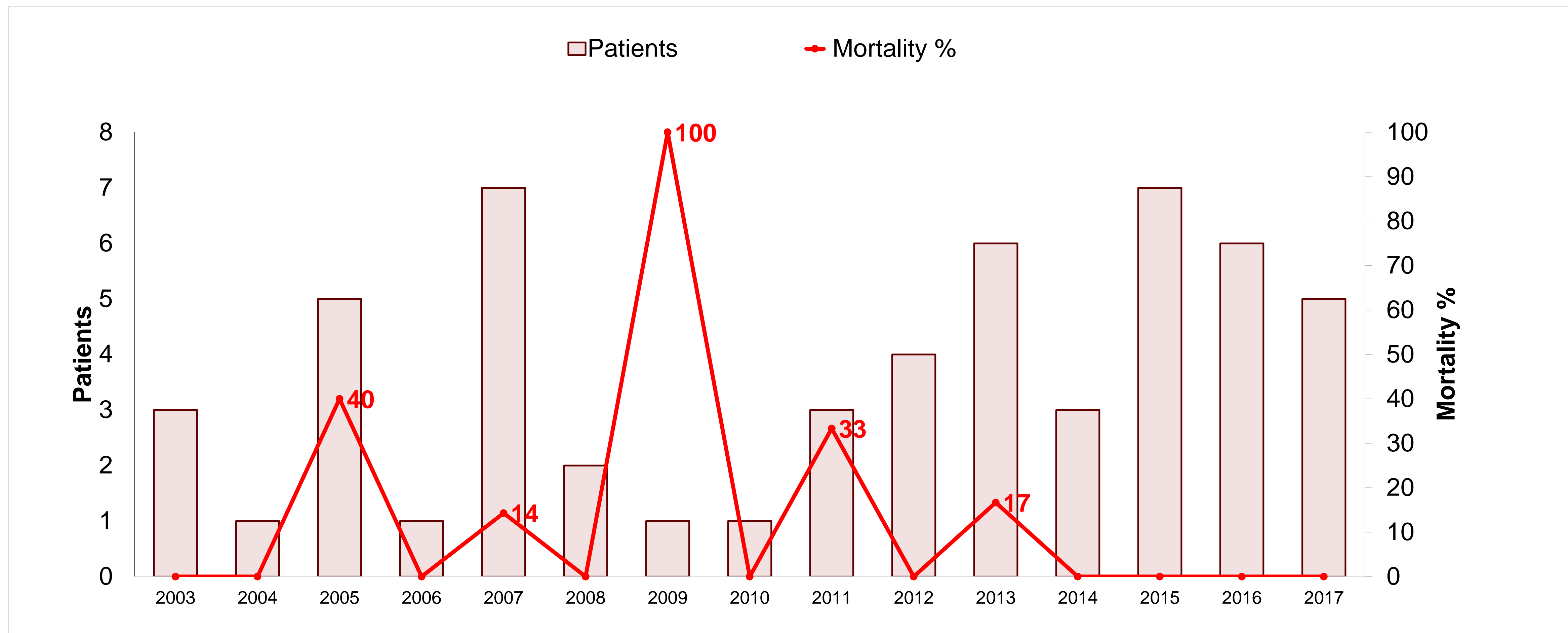
Results

End points

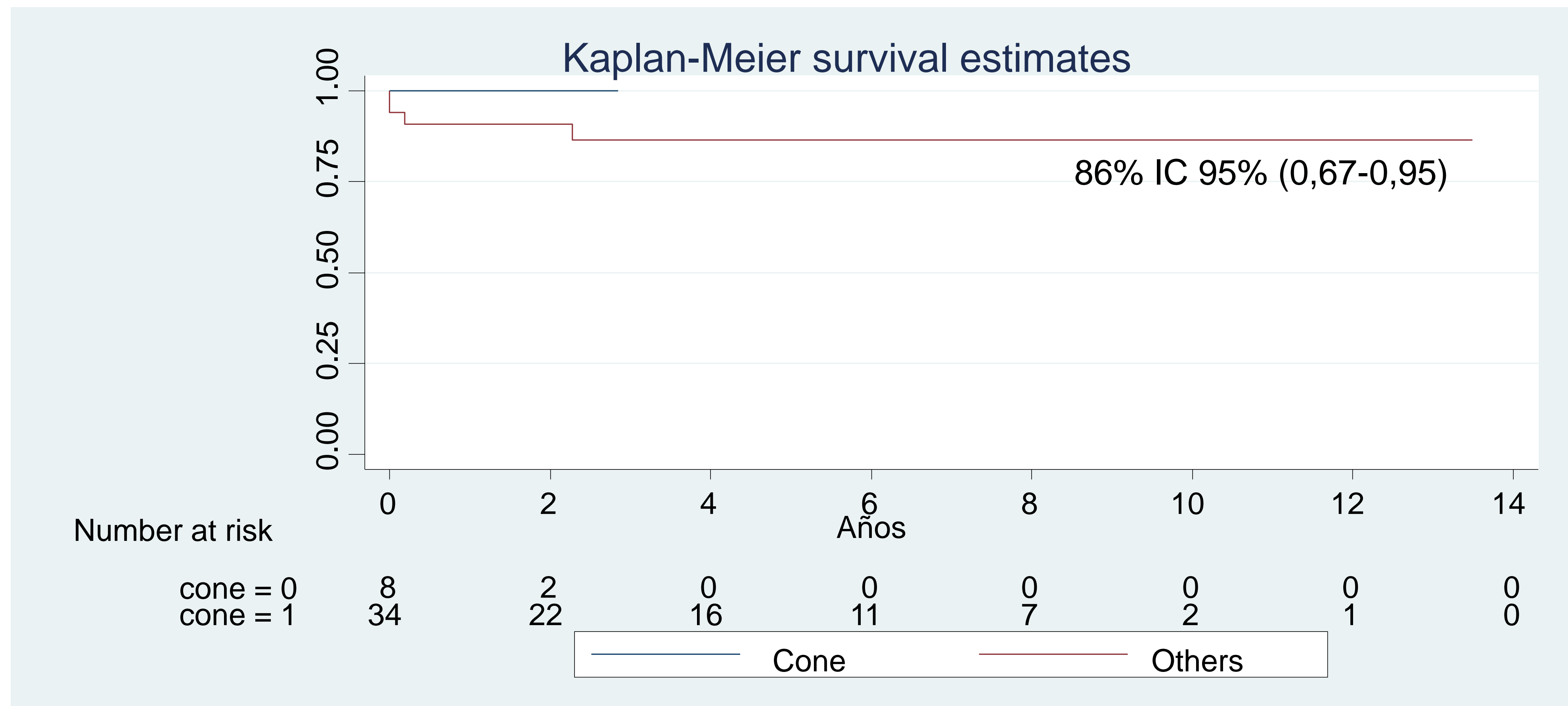
Variable	Cone operation N 13	Tricuspid repair N 14	Tricuspid Replacement N 14	p value difference between groups
Renal failure requiring dialysis n(%)	0	0	3 (21.4)	0.04
Arrhythmia n(%)	4 (30,7)	3 (21.4)	5 (35.7)	0.7
Low cardiac output n(%)	4 (30,8)	2 (15.4)	1 (7.1)	0.26
ICU days Median (IQR)	4 (2-8)	4 (2-5)	3 (1-8)	0.8
Post ICU days Median IQR)	4 (2-5)	2 (2-3)	2 (0-4)	0.43
In hospital death n (%)	1 (7.7)	1 (7.1)	3 (21.4)	0.43

IQR: Interquartile range

Mortality Over time



Survival



Two Cone patients required reoperation. One to fix the valve and one for TV replacement

Conclusion

- Cone operation and tricuspid valve replacement have been used in patients with greater severity of the disease.
- Another type of plasty is usually used only for less severe cases
- Cone operation can be used at all ages regardless of the degree of disease
- Cone operation and severe forms of disease require caution as they may require reintervention
- Survival with Cone surgery is better than with other procedures, but long-term evaluation is required.

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Thank You



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