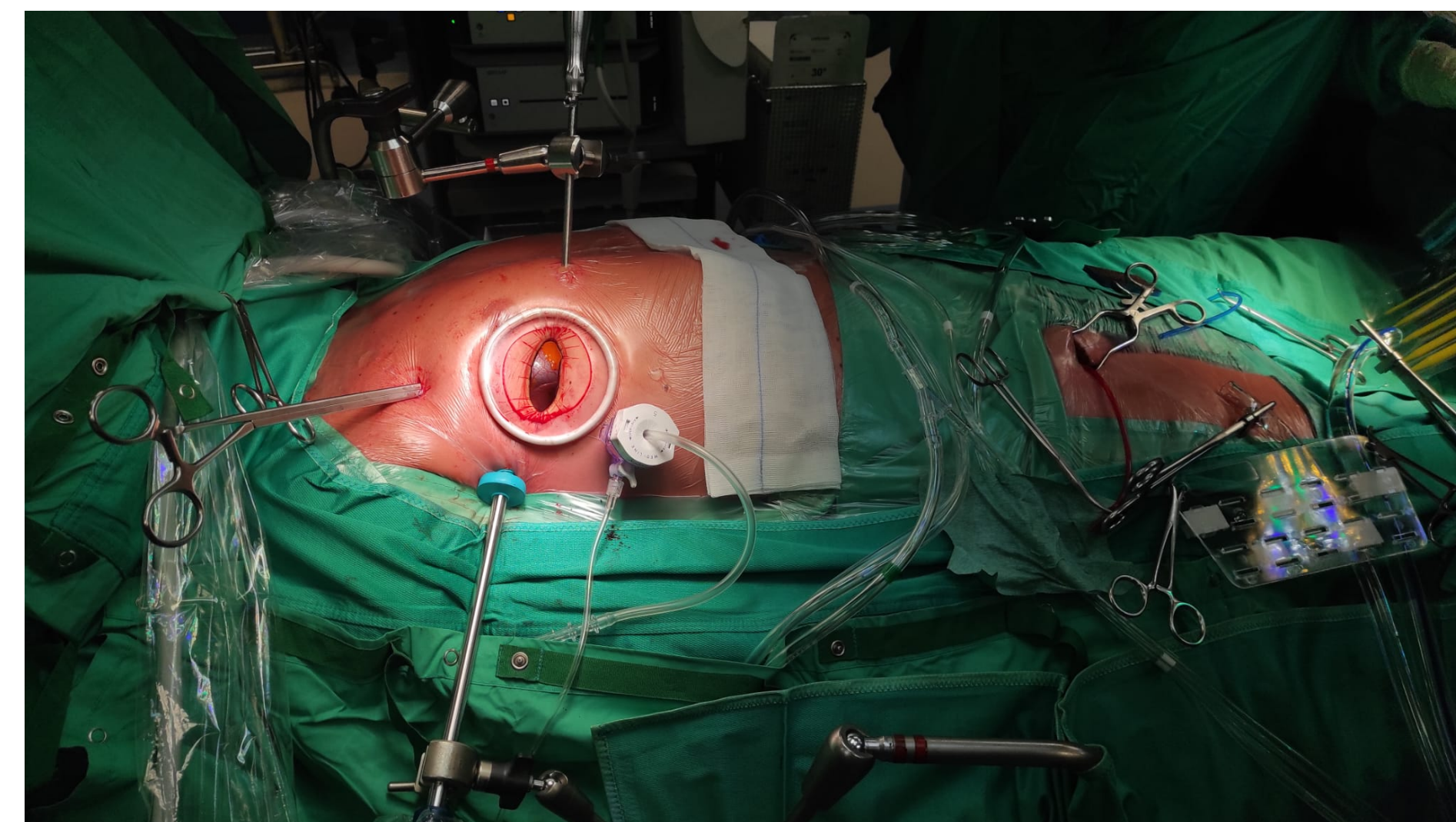
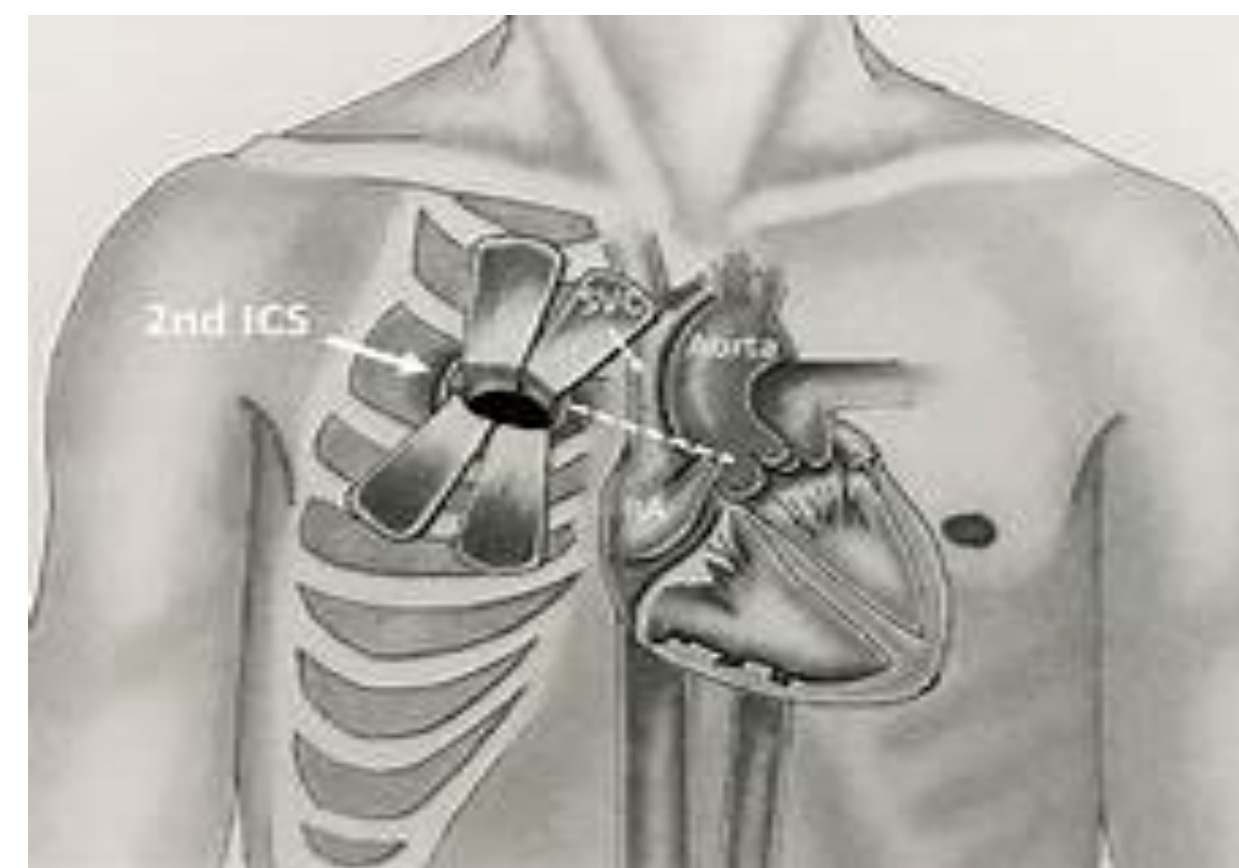


Introduction and Methods

Minimally invasive approaches are more and more used for isolated aortic or mitral valve procedures. However, minimally invasive combined mitral and aortic valve surgery is still uncommon. We report our experience performing multiple valve procedures through a **right-sided mini-thoracotomy at the third intercostal space**

	N (%)
Age, median (Q1-Q3)	72 (60.5-76)
Sex, female (n, %)	23 (61)
Hypertension (n, %)	21 (55.3)
Diabetes (n, %)	4 (10.5)
Dyslipidemia (n, %)	14 (36.8)
Smoke (n, %)	9 (23.7)
Preop AF (n, %)	5 (13.2)
PMK (n, %)	0 (0.0)
NYHA class (n, %)	
- I	5 (13.2)
- II	26 (68.4)
- III	7 (18.4)
- IV	0 (0.0)
Bicuspid Ao valve (n, %)	1 (2.6)
LVEF %, median (Q1-Q3)	60 (55-67)
Previous neurological disease (n, %)	15 (39.5)
Creatinine, mg/dl, median (Q1-Q3)	0.99 (0.88-1.08)
Chronic lung disease (n, %)	2 (5.3)
Previous cardiac surgery (n, %)	3 (7.9)
EuroSCORE logistic, median (Q1-Q3)	4.25 (2.79-6.95)
EuroSCORE II, median (Q1-Q3)	2.27 (1.87-5)
Minithoracotomy (n, %)	32 (100.0)

From November 2013 to November 2023, **38 patients** underwent aortic and mitral valve surgery through right anterior thoracotomy.



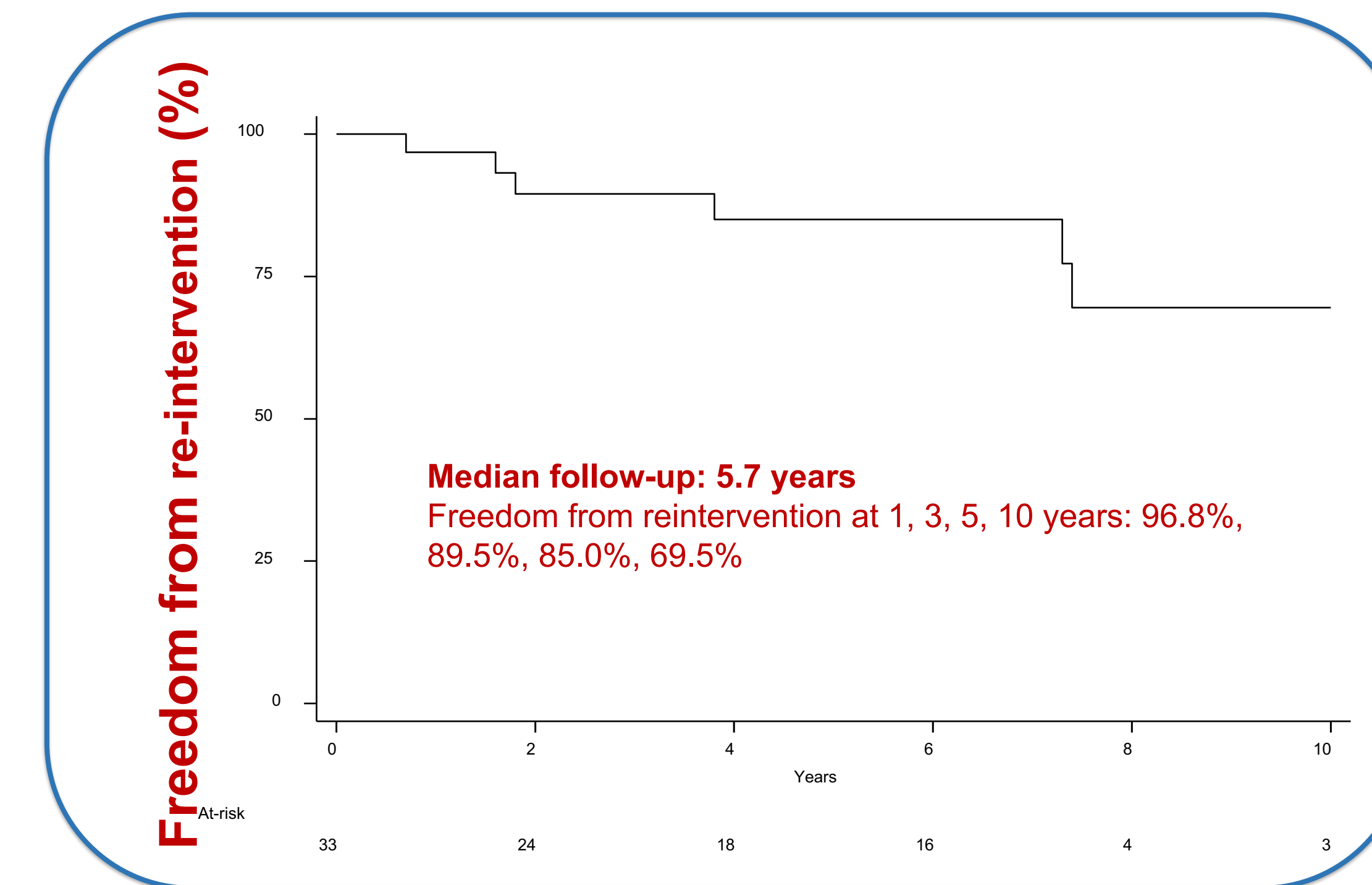
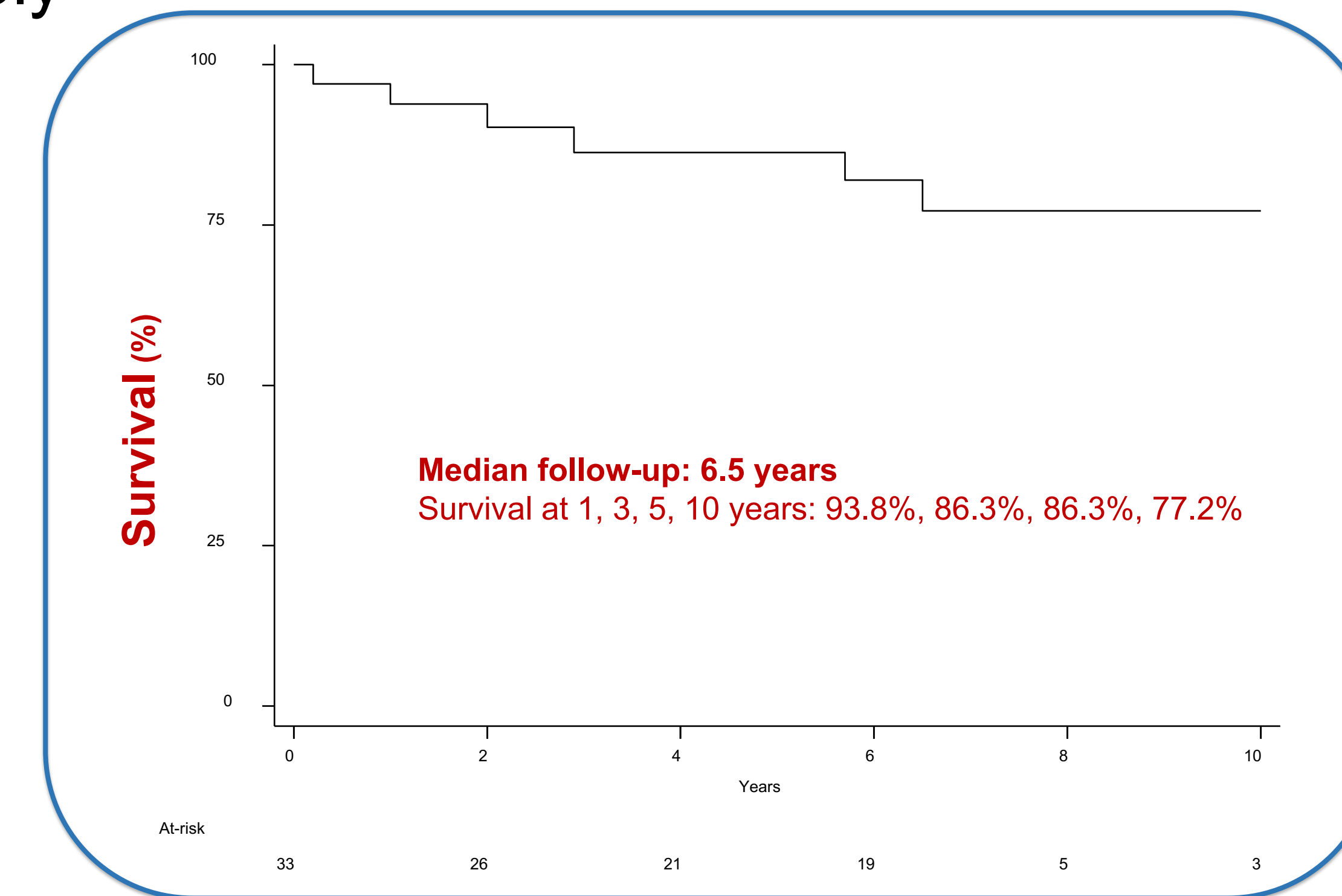
Results

Median CPB and cross-clamp times were 98 and 85 minutes, respectively. One patient (2.6. %) experienced septic shock and consequent multi-organ failure and death. Also, 1 (2.6%) stroke and 1 re-thoracotomy for bleeding were observed. Median ventilation time was 10 hours. Median ICU and in-hospital length of stay were 2 and 7.5 days respectively

No conversion to full sternotomy was necessary

In-hospital and 30-days mortality was 2.6%.

	N (%)
Post-operative AF	12 (32.0)
PM implantation	2 (5.2)
Stroke	1 (2.6)
Resternotomy for bleeding	1 (2.6)
Sepsis	1 (2.6)
CVVH	1 (2.6)
Intubation > 72 hours	1 (2.6)
RBC transfusions	20 (53)
X-Clamp time median (Q1-Q3)	85 (71-115)
CPB time, median (Q1-Q3)	98 (83-150)
Ventilation time, median (Q1-Q3)	10 (6-15)
ICU days, median (Q1-Q3)	2 (2-3)
LOS days, median (Q1-Q3)	7.5 (7-9)
In-hospital mortality	1 (2.6)



Conclusions

In our experience, a minimally invasive approach for combined aortic and mitral valve surgery is safe and feasible, with acceptable CPB and cross-clamp times and good outcomes. Therefore, it can be an attractive option for patients with double valve diseases. Further studies are needed with a bigger population and a comparison to full sternotomy results.