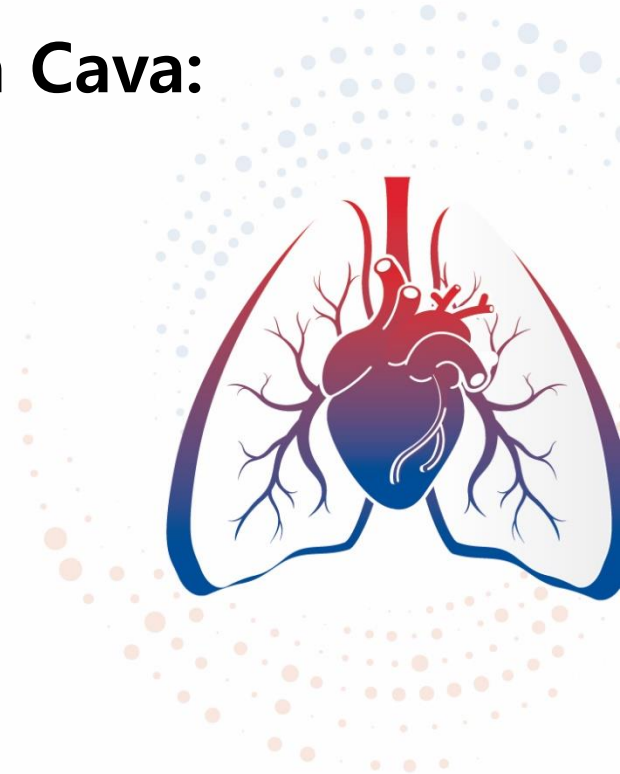


2023 대한심장혈관흉부외과학회

# 제55차 추계학술대회 & APELSO 2023

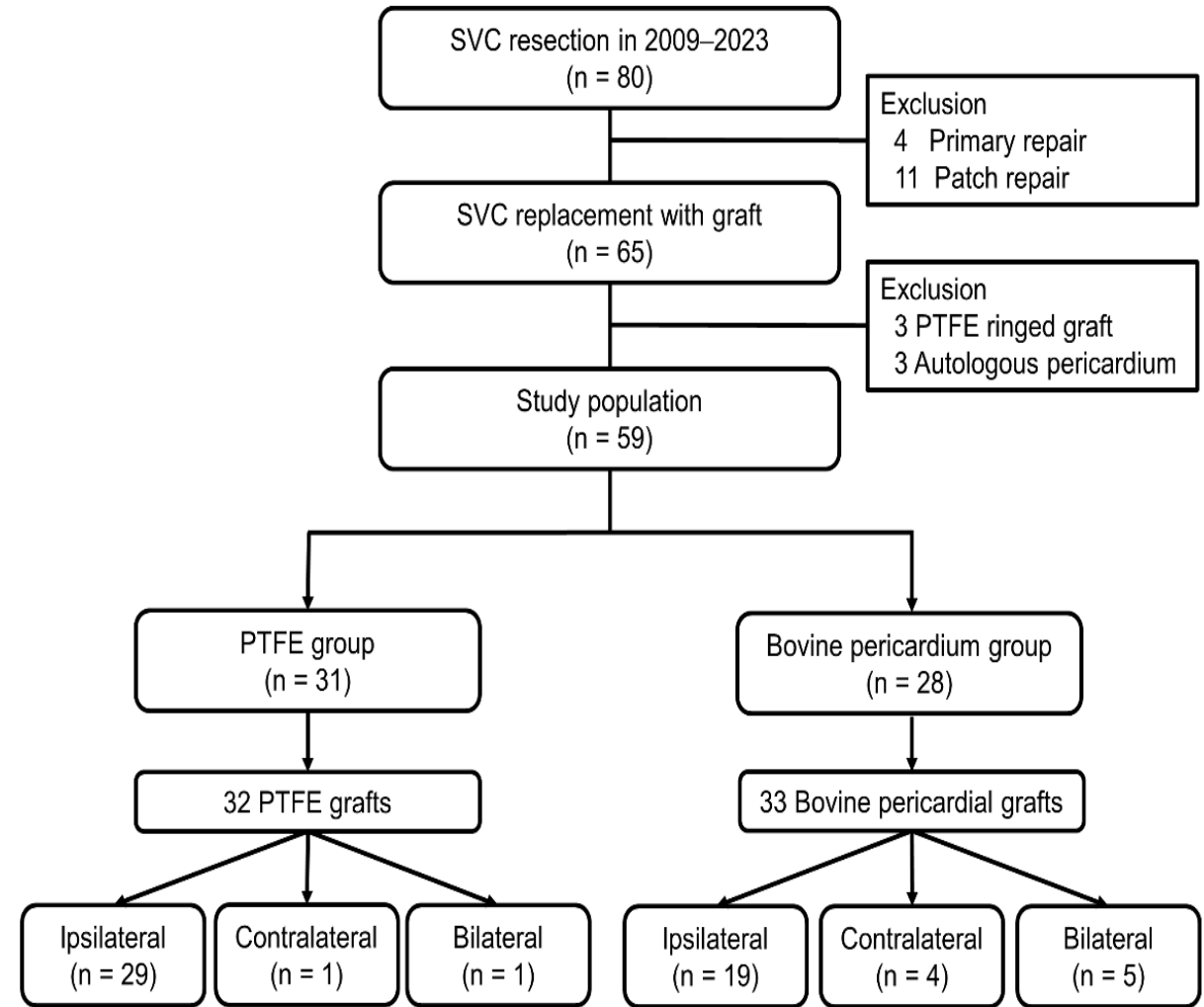
2023. 11. 02 (Thu) - 11. 04 (Sat), 그랜드 인터컨티넨탈 파르나스 서울

## Prosthesis Selection for Reconstruction of Superior Vena Cava: Comparison of Mid-term Patency Rates



- Various materials have been used for SVC reconstruction – bovine pericardium, autologous pericardium, homograft, polytetrafluoroethylene (PTFE) ringed graft, and others.
- Ringed PTFE graft showed excellent long-term patency in the literatures; however, due to the limited availability of ringed PTFE graft in Korea, alternative options should be evaluated.
- In our institution, bovine pericardial graft was mainly used before December 2019, and PTFE graft (not ringed) was used after January 2020.
- Aim of this study
  - To compare the mid-term patency of PTFE graft vs bovine pericardial graft

- A single center, retrospective study
- From Jan 2009 to Jul 2023
- SVC reconstruction with PTFE graft (n=31) vs Bovine pericardium (n=28)
- Primary outcome
  - Mid-term SVC graft patency
- Secondary outcome
  - Early outcomes : op mortality, postoperative complications
  - Mid-term outcomes : overall survival, SVC reintervention



## Baseline characteristics

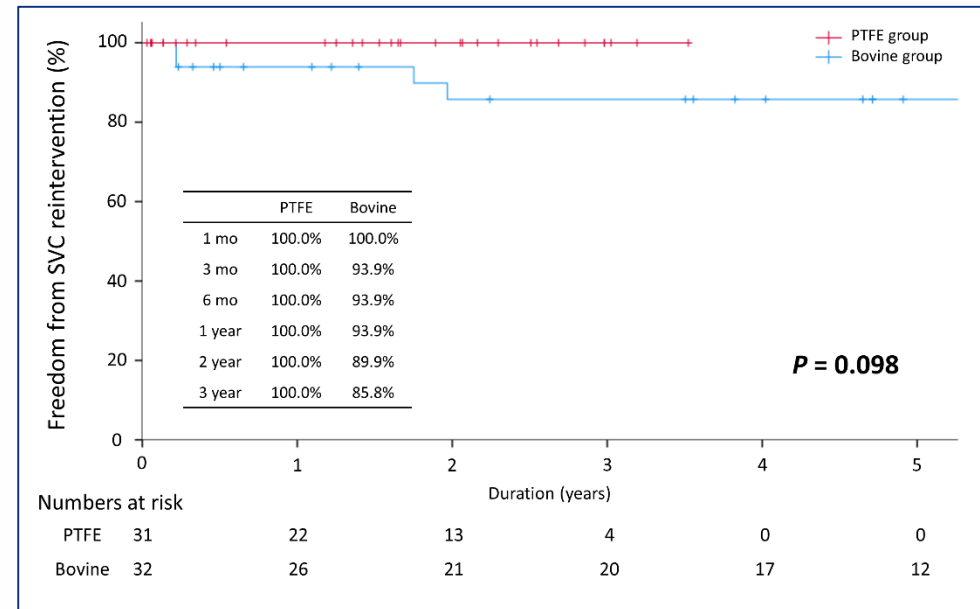
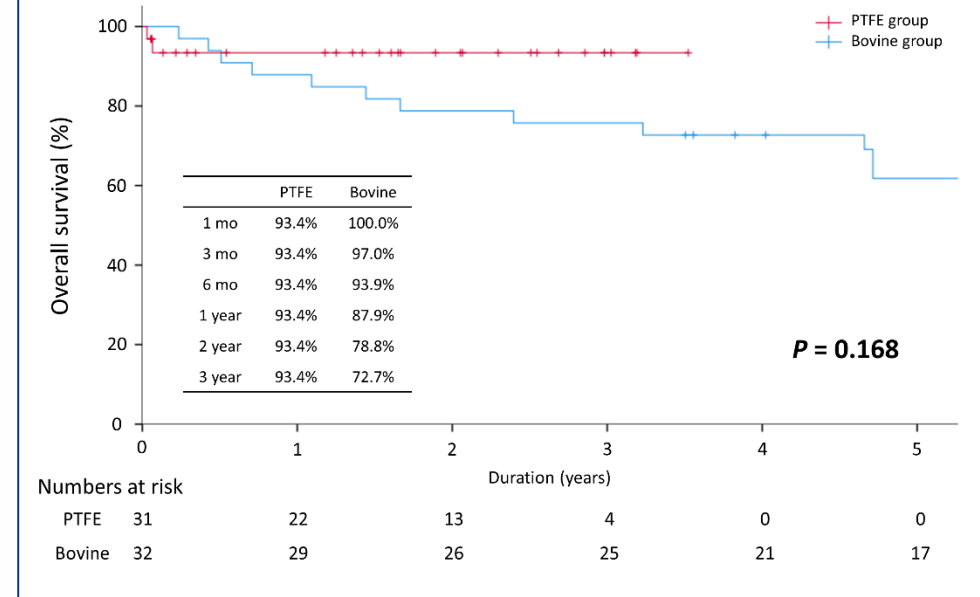
Variables	Total (n = 59)	PTFE (n = 31)	Bovine (n = 28)	P
Age (years)	53.7±15.0	55.3±13.4	52.0±16.7	.41
Female, n (%)	23 (39.0)	12 (38.7)	11 (39.3)	.96
Risk factors, n (%)				
Smoking	18 (30.5)	8 (25.8)	10 (35.7)	.41
History of stroke	2 (3.4)	2 (6.5)	0 (0.0)	.49
CKD	1 (1.7)	1 (3.2)	0 (0.0)	>.99
COPD	0 (0.0)	0 (0.0)	0 (0.0)	-
Afib	2 (3.4)	2 (6.5)	0 (0.0)	.49
Redo-sternotomy	1 (1.7)	0 (0.0)	1 (3.6)	>.99
Neoadj tx, n (%)				
Neoadj chemoTx	24 (40.7)	12 (38.7)	12 (42.9)	.75
Neoadj CCRT	15 (25.4)	11 (35.5)	4 (14.3)	.08
Primary disease, n (%)				
Thymoma	21 (35.6)	12 (38.7)	9 (32.1)	
Thymic carcinoma	17 (28.8)	10 (32.3)	7 (25.0)	
Germ cell tumor	7 (11.9)	1 (3.2)	6 (21.4)	
Lung cancer	3 (5.1)	0 (0.0)	3 (10.7)	
Sarcoma	3 (5.1)	3 (9.7)	0 (0.0)	
Thyroid cancer	2 (3.3)	0 (0.0)	2 (7.1)	
Others	5 (8.5)	5 (16.1)	1 (3.6)	

## Op data

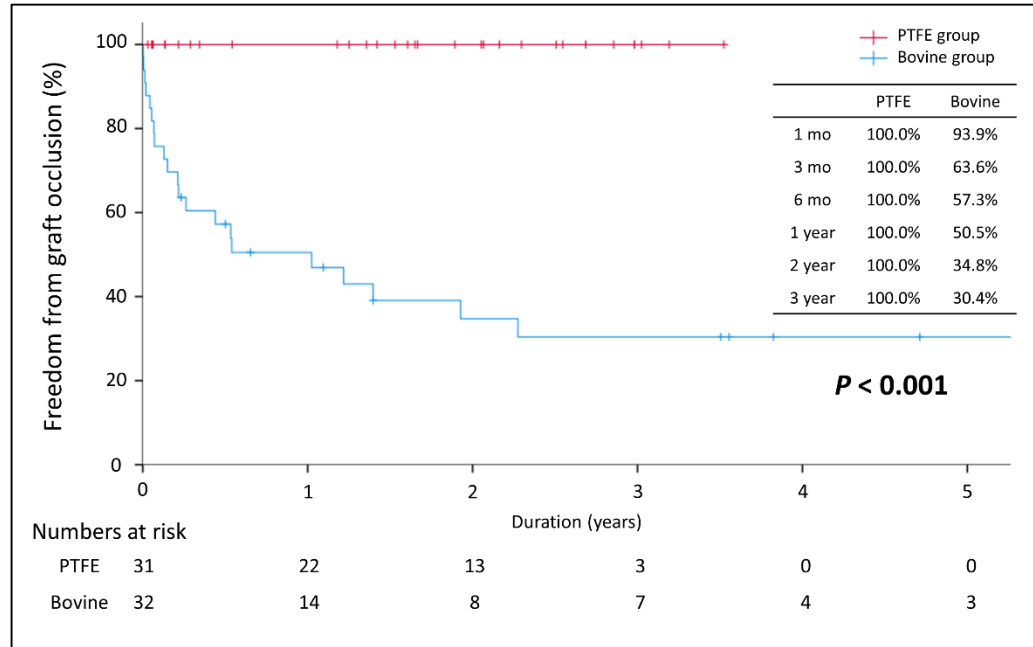
Variables	PTFE (n = 31)	Bovine (n = 28)	P
Total no. of grafts, n	32	33	
Type of reconstruction, n (%)			
Ipsilateral	29 (93.5)	19 (67.9)	
Contralateral	1 (3.2)	4 (14.3)	
Bilateral	1 (3.2)	5 (17.9)	
Graft size, n (%)			
12mm	2 (6.5)	-	
14mm	7 (22.6)	-	
16mm	18 (58.1)	-	
18mm	4 (12.9)	-	
Sacrifice of contralateral vessel	26 (81.3)	18 (54.5)	.02

### Early clinical outcomes

Variables	Total (n = 59)	PTFE (n = 31)	Bovine (n = 28)	<i>P</i>
Op mortality, n (%)	1 (1.7)	1 (3.2)	0 (0.0)	>.99
Postop cx, n (%)				
POAF	6 (10.2)	2 (6.5)	4 (14.3)	.41
VF palsy	6 (10.2)	2 (6.5)	4 (14.3)	.41
Chylothorax	7 (11.9)	5 (16.1)	2 (7.1)	.43
Pneumonia	5 (8.5)	3 (9.7)	2 (7.1)	>.99
Tracheostomy	1 (1.7)	0 (0.0)	1 (3.6)	>.99
Bleeding reop	2 (3.4)	1 (3.2)	1 (3.6)	>.99
Delirium	1 (1.7)	1 (3.2)	0 (0.0)	>.99
Hospital stay, days	9 [7, 16]	9 [7, 16]	10 [8, 17]	.21



## Mid-term graft patency



PTFE graft

100% patency up to 3 yrs

Bovine pericardial graft

6 m patency = 57.3%  
1 yr patency = 50.5%  
3 yr patency = 30.4%

## Conclusion

- **PTFE graft** was superior to **bovine pericardial graft** in terms of *mid-term graft patency* for the patients who underwent SVC reconstruction.