

Single-center experience with the Frozen Elephant Trunk technique treating complex aortic disease pathology

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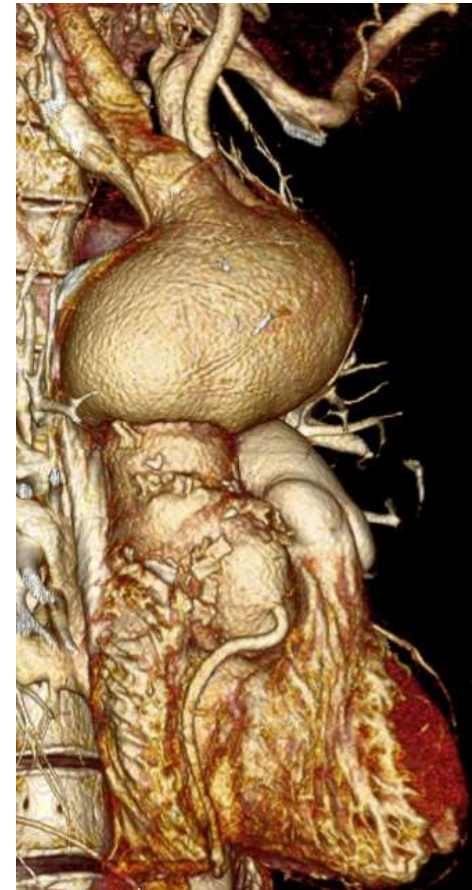
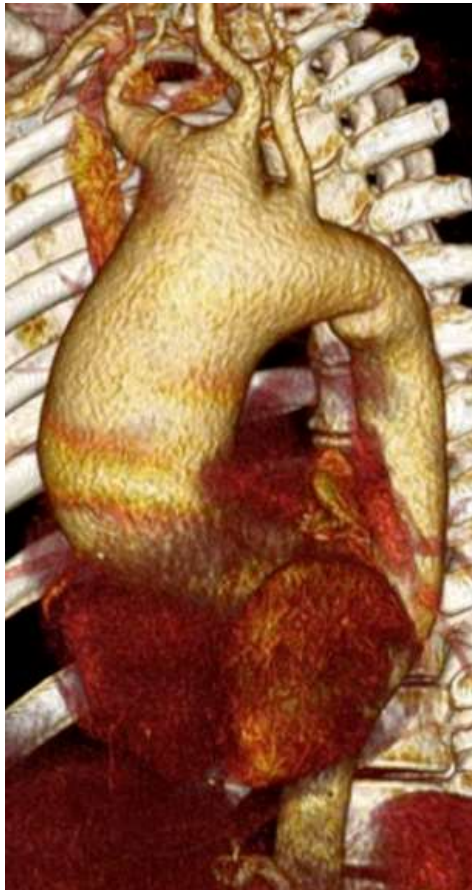
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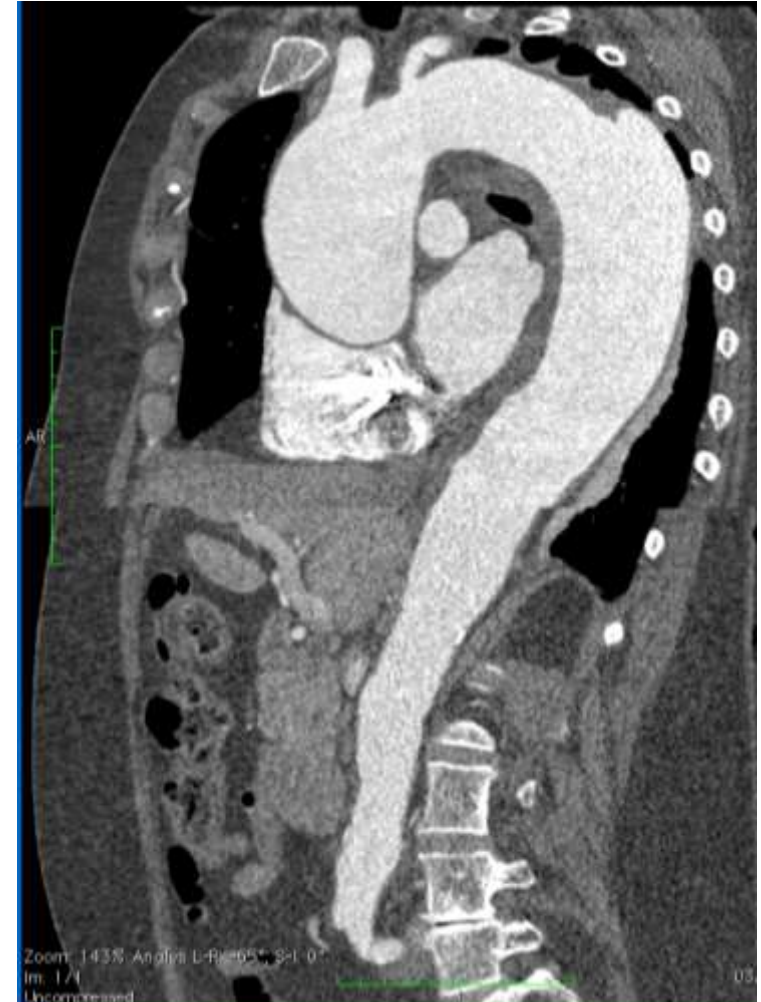
Introduction

Introduction

The Frozen Elephant Trunk (FET) surgery allows correction of ascending, arch and proximal descending aortic pathology, using a hybrid prosthesis at the same time.



Introduction





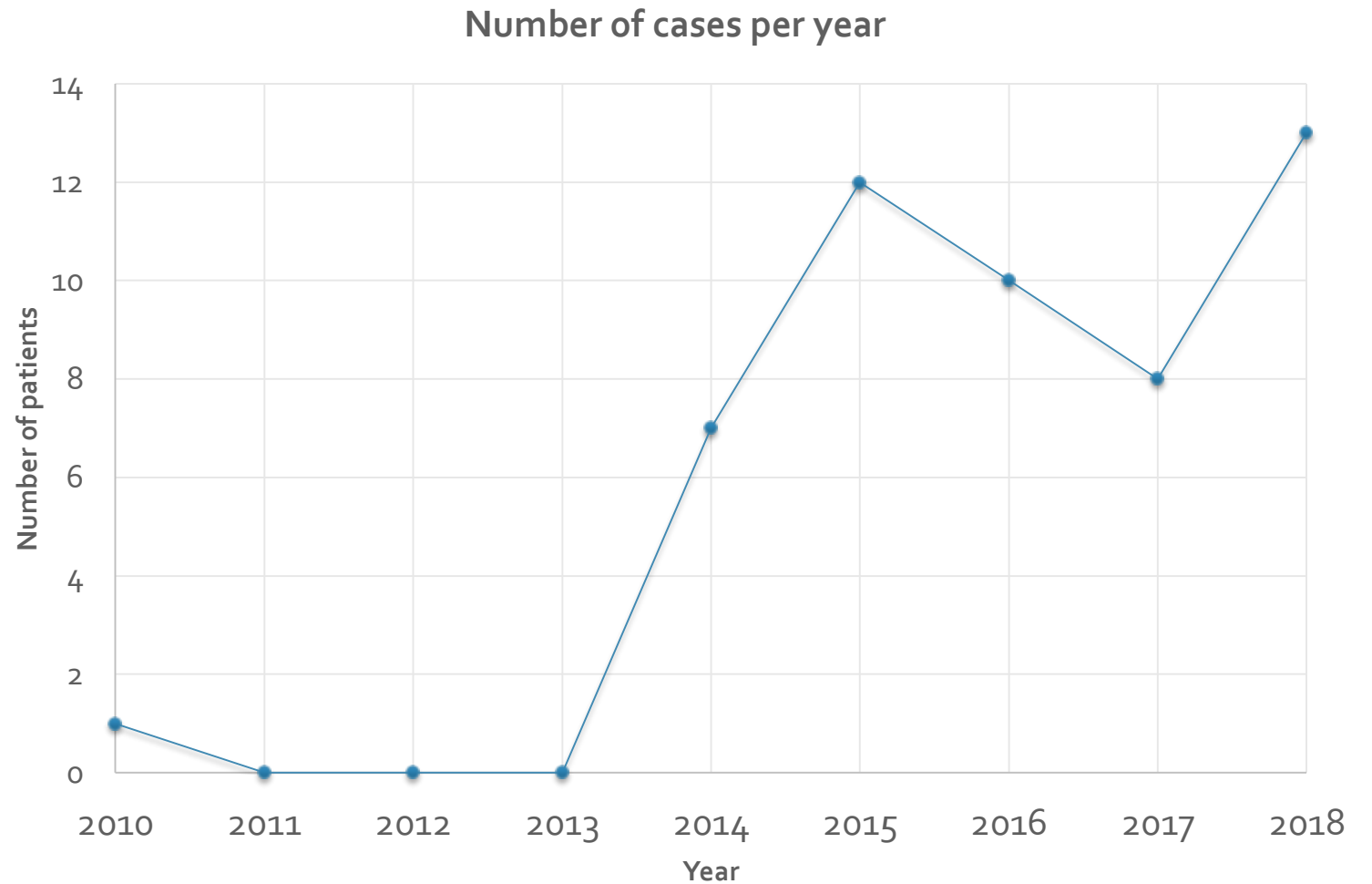
Performed preferably by the same team

It is a complex intervention and requires a multidisciplinary team that, besides scheduling and performing the surgery, follows the patient throughout the postoperative period.

Methods

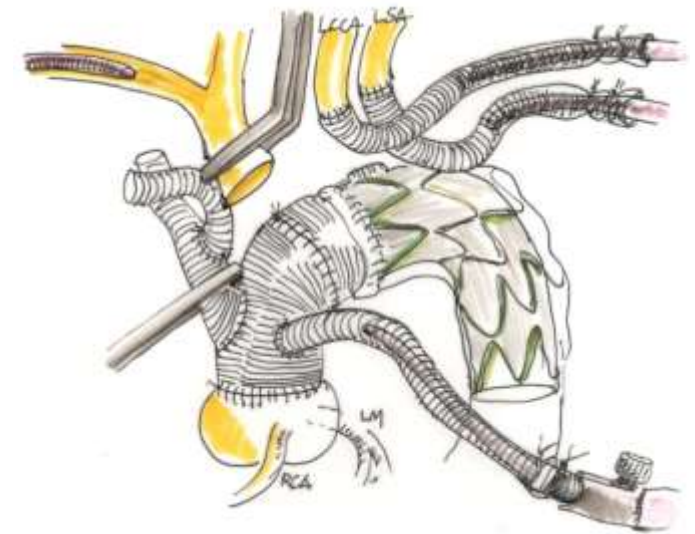
Methods

- Jun. 2010 to Dec. 2018
- 51 patients
- Mean age: $64,5 \pm 9,0$ years
- Follow-up: $22,5 \pm 20,0$ months



Methods

- Customized graft with side-branches tailored to meet the exact supra-aortic vessels anatomy
- Isolated reimplantation of the supra-aortic vessels
- Avoid sacrificing the LSA
- Moderate HCA temperature: 25-26°C
- HCA time: as short as possible
- In all cases the JOTEC E-vita OPEN PLUS was used
- All patients were followed in our outpatient clinic with imaging techniques



Results



Results

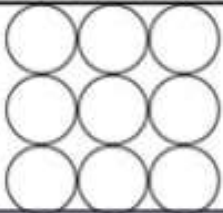


E-vita open Registry

https://www.uni-due.de/~tch120/Mainmenu.php

E-vita
open

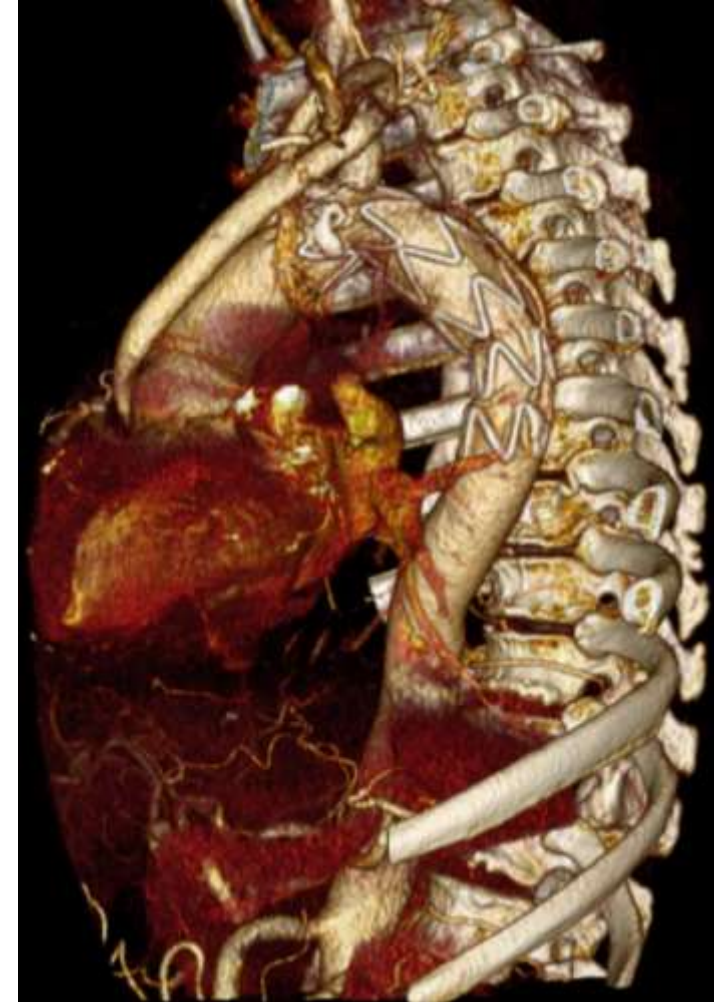
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DEPARTEMENT OF THORACIC AND CARDIOVASCULAR SURGERY
UNIVERSITY HOSPITAL ESSEN



E-vita open Registry: Main Menu

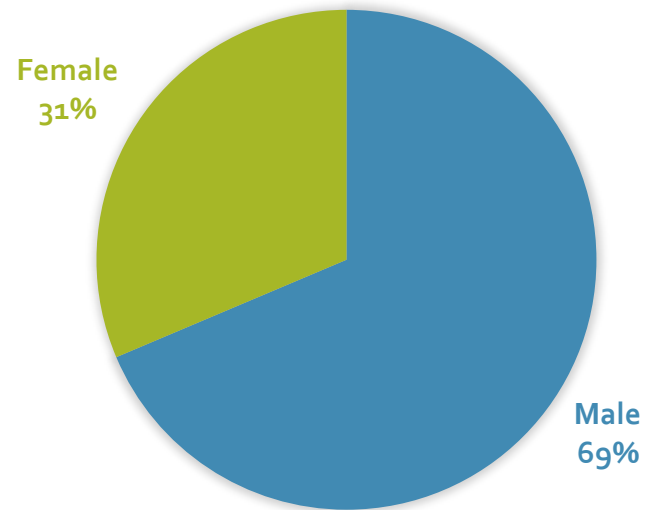
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Results

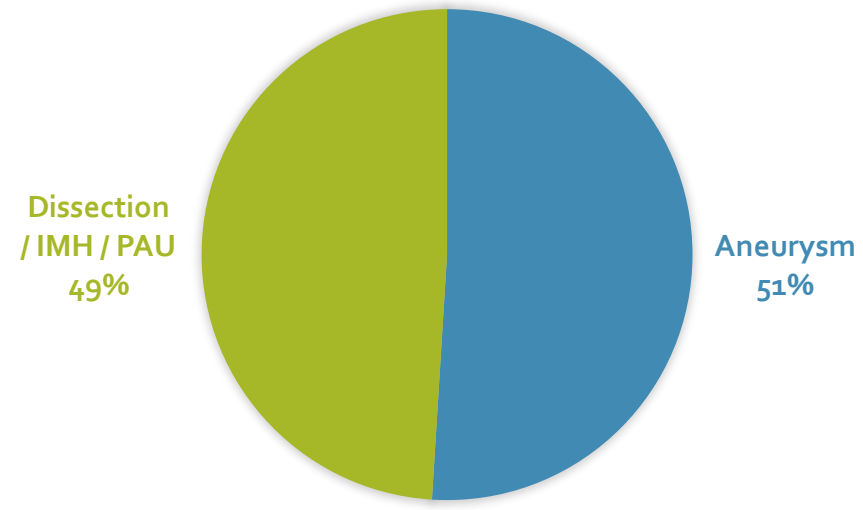


Results

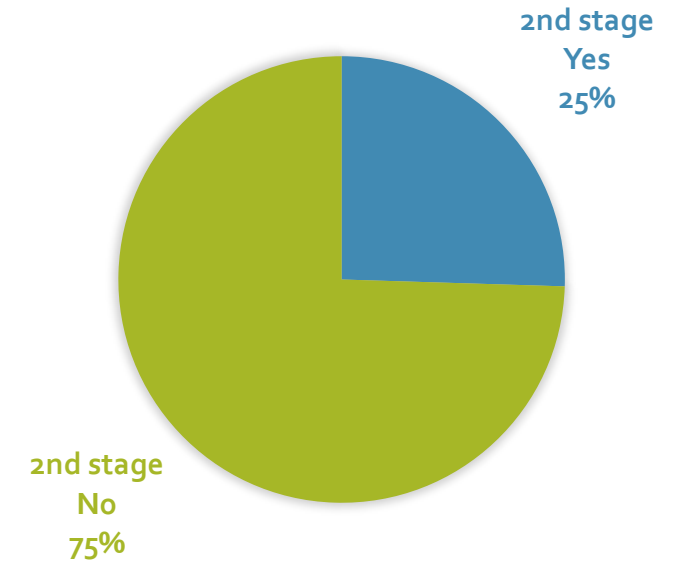
SEX



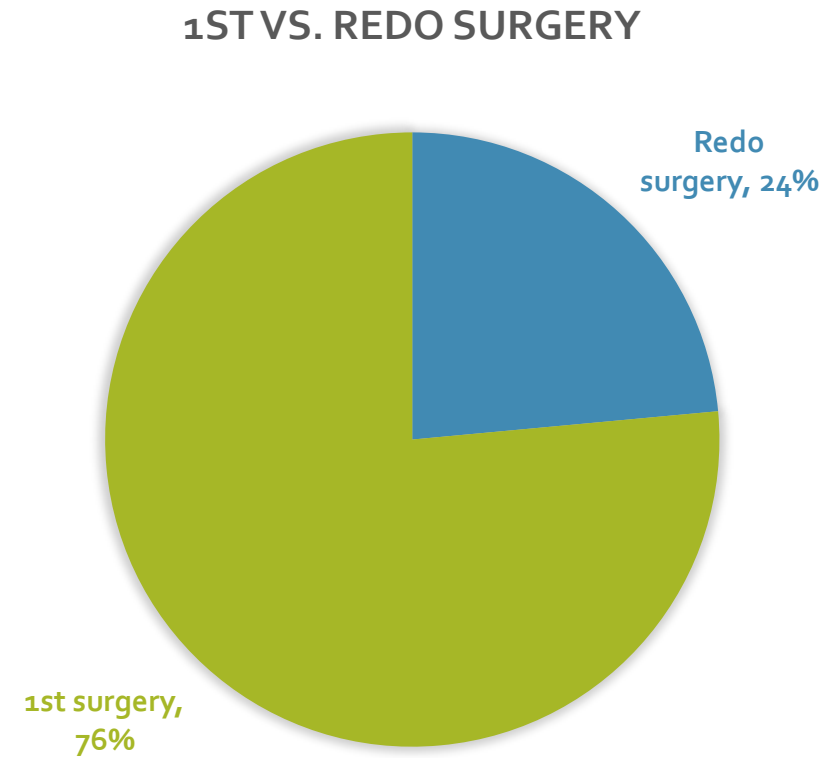
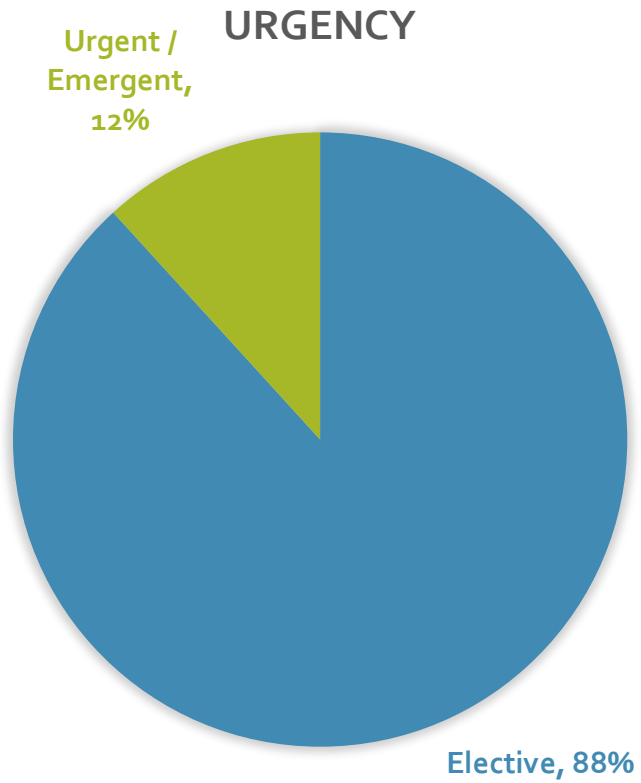
DIAGNOSIS



REQUIRING 2ND STAGE (ENDOVASCULAR)

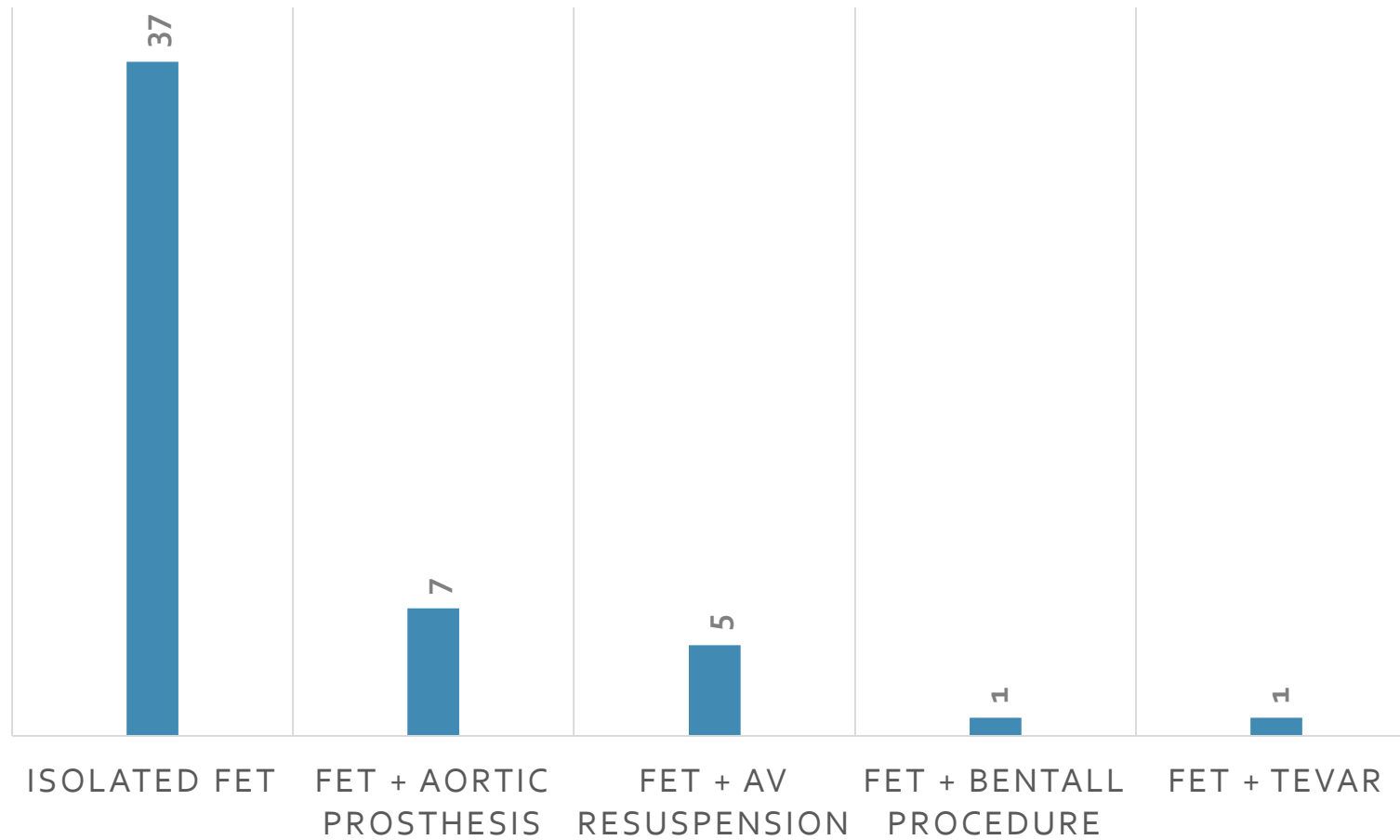


Results



Results

SURGERY



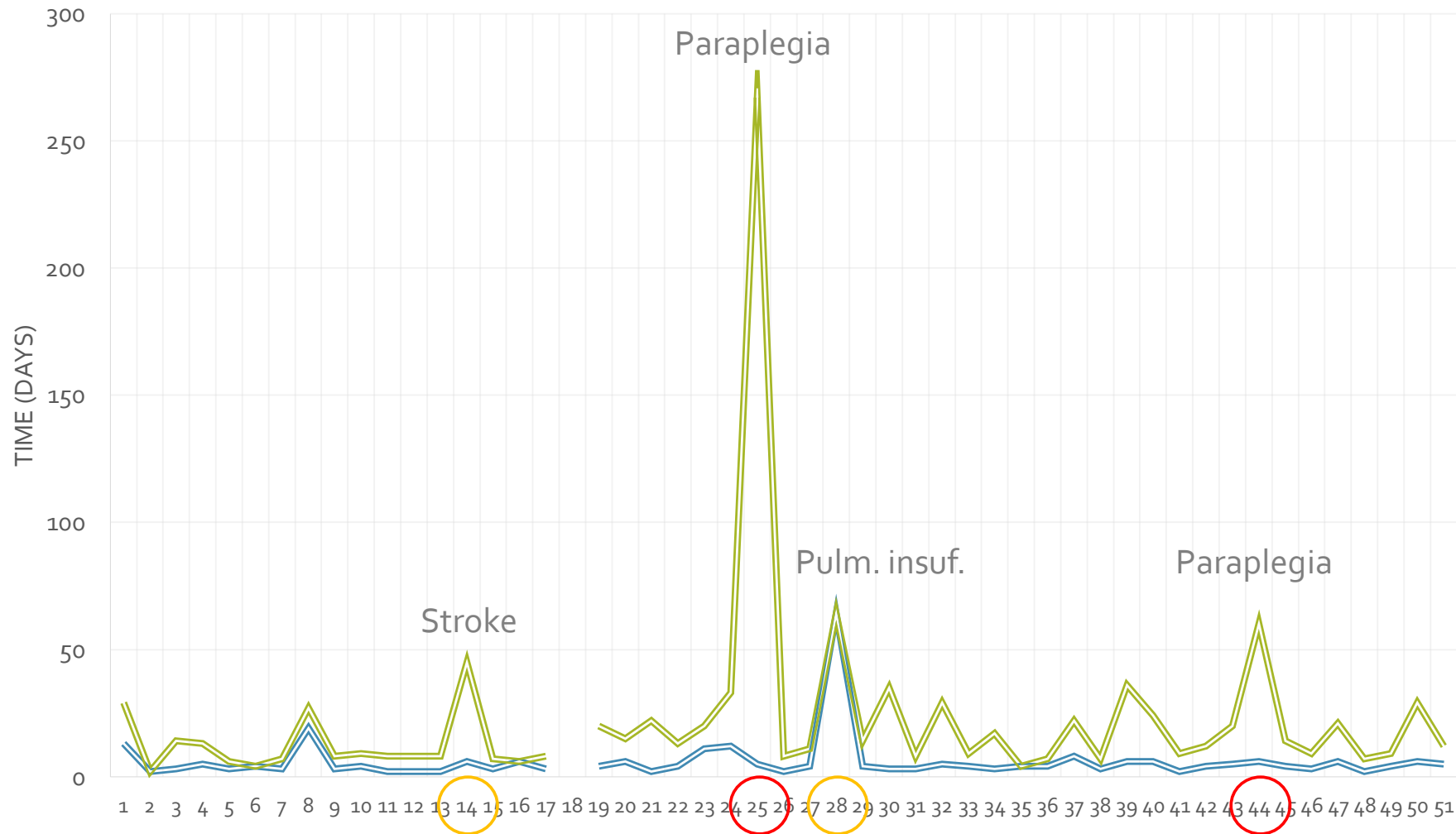
	Mean	St. Dev.
CPB (min)	253,5	53,1
X Clamp (min)	131,7	45,7
HCA (min)	52,4	24,1

Results



LENGTH OF STAY

ICU stay Hospital Stay



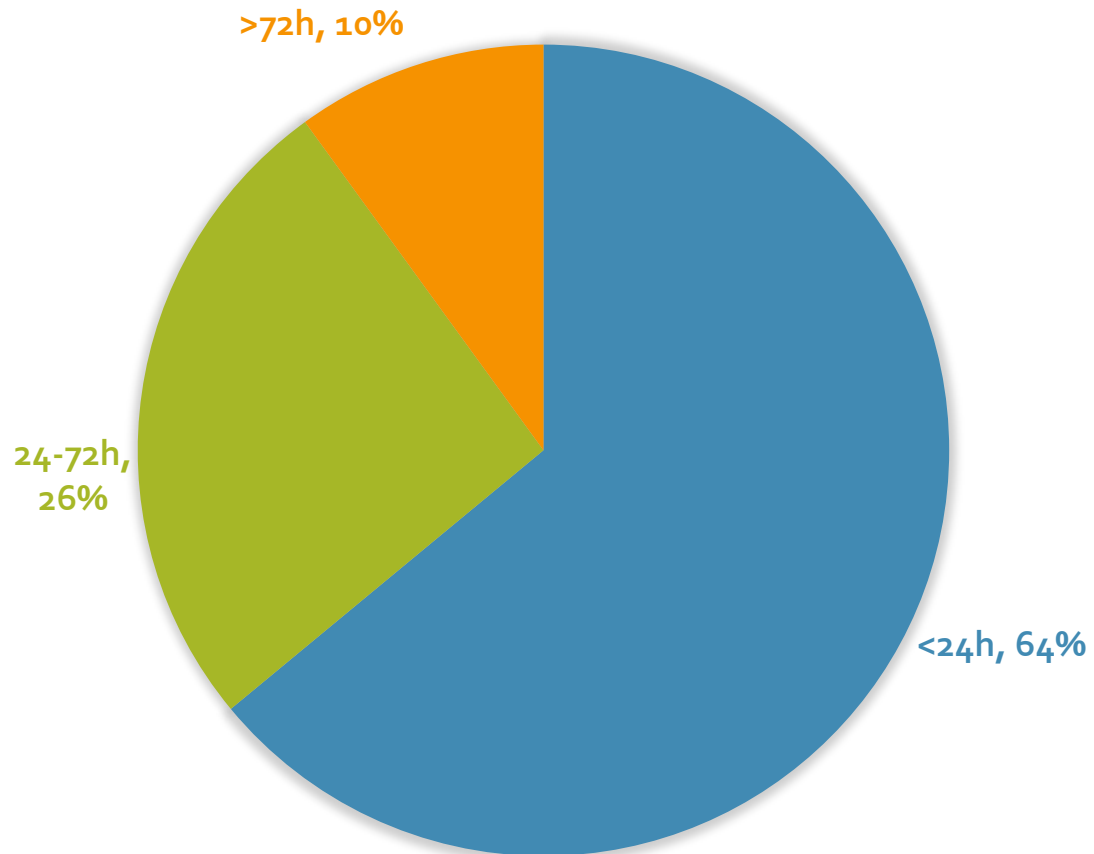
	Mean	St. Dev.
ICU (days)	5,9	9,0
Hospital stay (days)	21,9	37,8

Intra-operative mortality:
1 (2,0%)

30-day mortality:
6 (11,8%)

Results

VENTILATION TIME

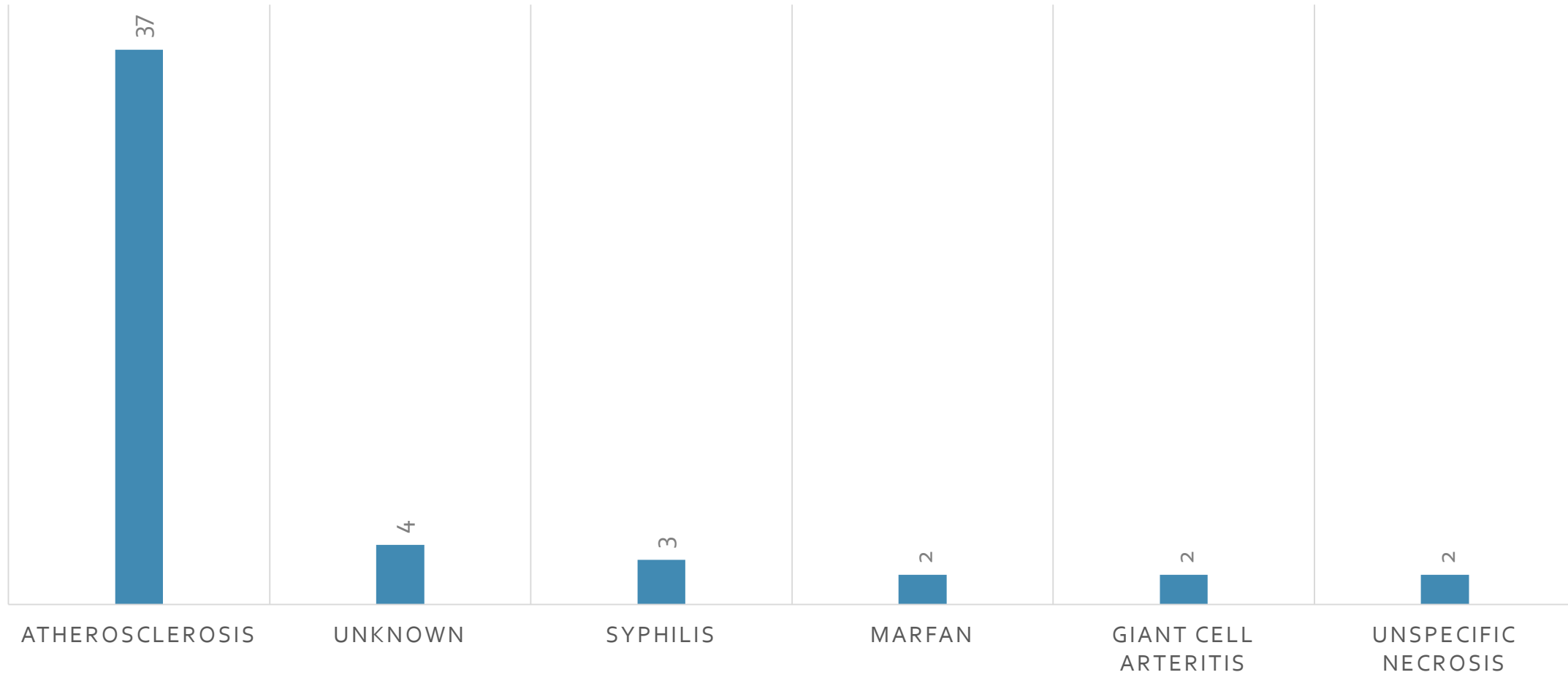


Complications	N	%	
DSWI	3	5,9%	
Pulmonary insufficiency	3	5,9%	
Low Output Syndrome	2	3,9%	
Bowel ischemia	2	3,9%	
Renal insufficiency	2	3,9%	
Stroke	2	3,9%	
Paraplegia	Permanent	2	3,9%
	Transitory	2	3,9%
Sepsis	2	3,9%	
Re-exploration for bleeding	1	2,0%	
Recurrent laryngeal nerve paralysis	1	2,0%	

Results

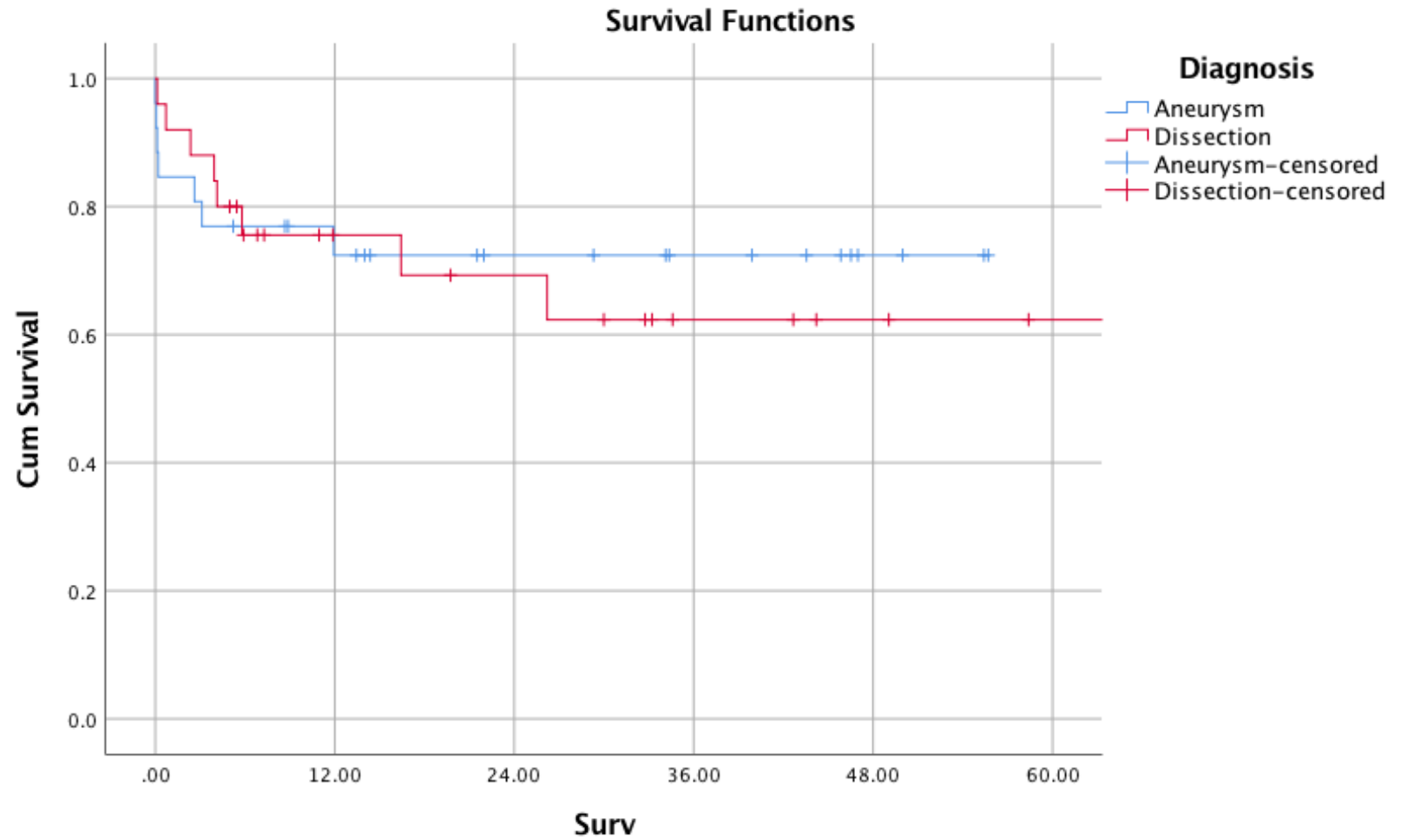


HISTOLOGY RESULT



Results

Survival:
Aneurysm vs Dissection
 $p = 0,779$



Conclusion

Conclusion



- FET is a safe and effective intervention.
- The expandable segment of the hybrid prosthesis is an excellent landing zone to complete the procedure, when necessary, with a 2nd stage TEVAR.
- In order to provide best results, experience should be concentrated in high volume centers
- Multi-disciplinary TEAM work
 - Minimize complications
 - Provide support for recovery
- Clinical follow-up and lifelong imaging techniques are mandatory.

Thank you



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