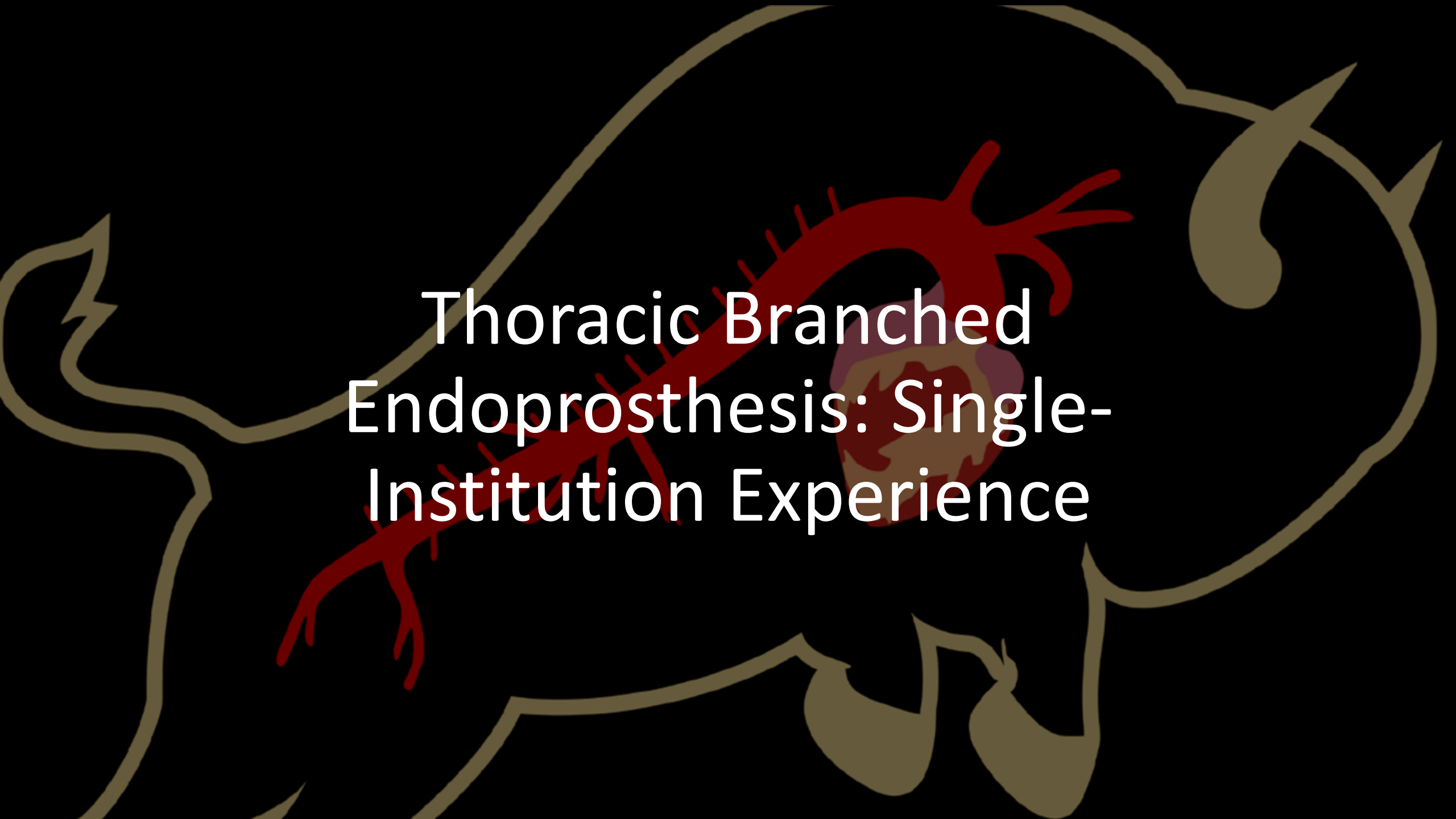
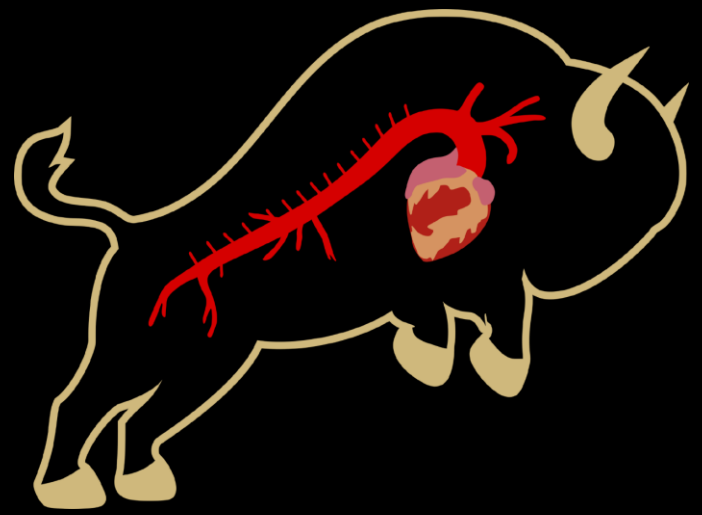
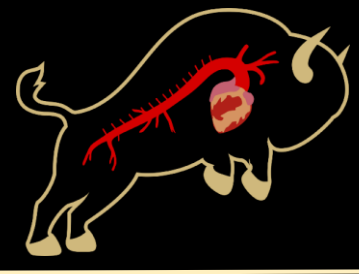


Thoracic Branched Endoprosthesis: Single-Institution Experience

No disclosures



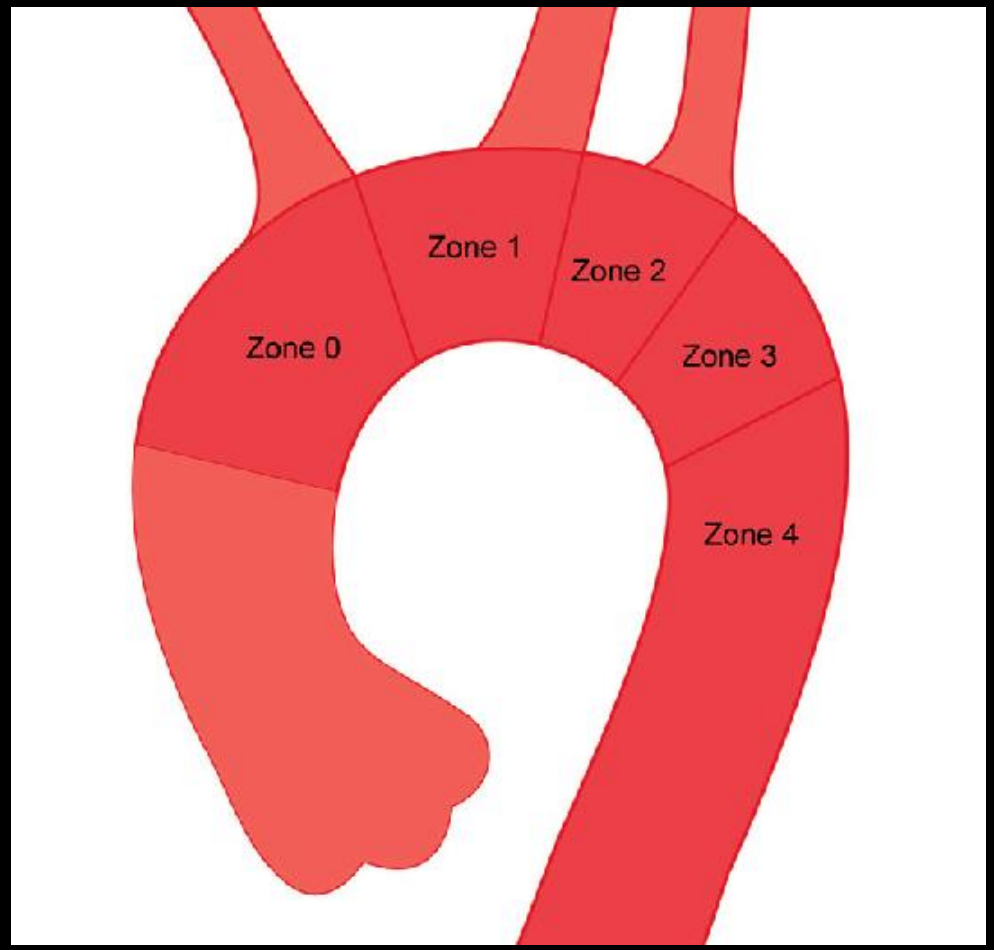
Introduction



- Thoracic branched endoprosthesis (TBE) FDA approved May 2022
- Alterative to surgical revascularization of left subclavian artery (LSCA) territory in thoracic endovascular aortic repair (TEVAR)
- Initial reports described reduced length of stay and comparable outcomes

Background

- Approach to repair is determined by proximal extent of aneurysm
- Classified using Ishimaru anchoring zones
- Extent proximal to Zone 3 traditionally not manageable with an entirely endovascular approach



Metzger, Patrick Bastos, et al. "Hybrid treatment of aortic arch disease." *Brazilian Journal of Cardiovascular Surgery* 29 (2014): 527-536.

Aim

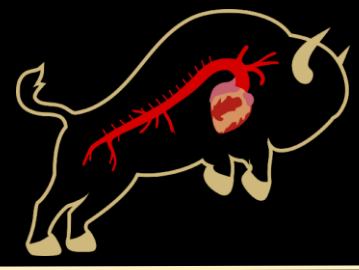
- To describe our institutional experience with thoracic branched endoprothesis since FDA approval
- To assess post-operative outcomes and length of stay in the context of previous experience with open surgical revascularization

Methods

- Retrospective review of prospectively-maintained institutional aortic database from September 2022-October 2023

- Identified all patients who underwent thoracic branched endoprosthesis during TEVAR

Results

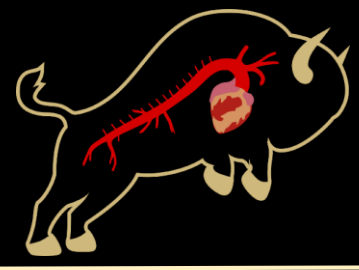


- 27 patients underwent TBE
- 20 (74.1%) were male
- 11 (40.7%) had a previous aortic surgery
- Aneurysm (n=15, 55.6%) was the most common presentation

Table 1: Patient Comorbidities and Cardiac Surgical History

	Overall (N=27)
Age	
Median [IQR]	63.3 [53.3, 73.9]
Gender Male	20 (74.1%)
BMI	
Median [IQR]	28.3 [26.0, 30.5]
Hypertension	21 (77.8%)
Smoking History	7 (25.9%)
Diabetes	3 (11.1%)
Chronic Kidney Disease	9 (33.3%)
History of Stroke	6 (22.2%)
History of Cardiac Surgery	13 (48.1%)
History of Aortic Surgery	11 (40.7%)
Aortic Presentation	
Aneurysm	15 (55.6%)
Dissection	13 (48.1%)

Results

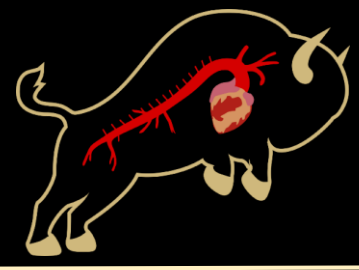


- 23 (85.2%) cases were elective
- 2 (7.4%) were Zone 0
- 3 (11.1%) were Zone 1
- 22 (81.5%) were Zone 2

Table 2. Aortic Arch Vessel Management

	Overall (N=27)
Innominate	
Native	20 (74.1%)
Stent Endograft	1 (3.7%)
Extra-Anatomical Bypass	6 (22.2%)
Left Carotid Artery	
Native	16 (59.3%)
Extra-Anatomical Bypass	11 (40.7%)
Left Subclavian Artery	
Stent Endograft	26 (96.3%)
Extra-Anatomical Bypass	1 (3.7%)

Results



- No operations were converted to open
- One (3.7%) patient experienced stroke
- No patients experienced radial access complications
- No patients experienced postoperative mortality

Table 3. Postoperative Outcomes

	Overall (N=27)
Length of Stay	
Median [IQR]	3.00 [2.00, 4.50]
ICU Length of Stay	
Median [IQR]	1.00 [1.00, 2.00]
Access Site Complications	
Hemorrhage	2 (7.4%)
Intraoperative Limb Ischemia	1 (3.7%)
Intraoperative Endoleak	
Type 2	2 (7.4%)
Intraoperative Stroke	1 (3.7%)
Reoperation	1 (3.7%)

Conclusions

- TBE implementation has been in line with initial proof-of-concept reports
- Minimal operative and postoperative morbidity
- Shortened total length of stay compared with traditional surgical revascularization and TEVAR
- Stroke risk is likely greater with more proximal landing zone

Thank You!