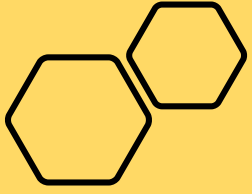
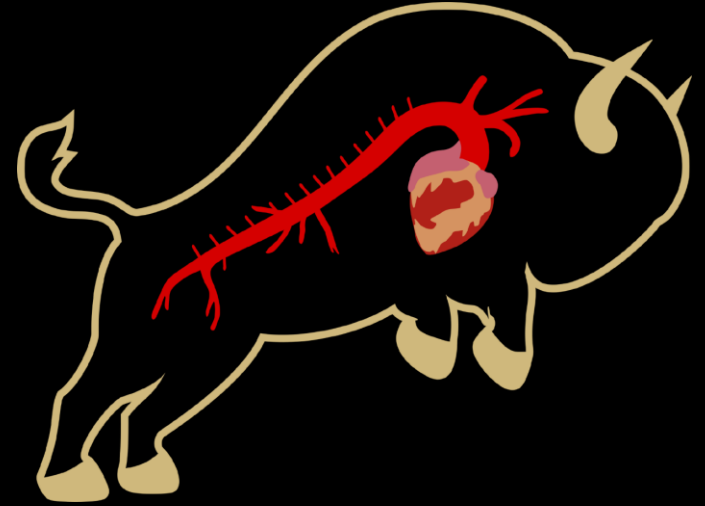


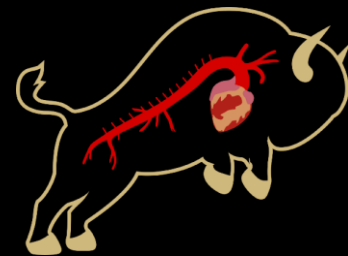


Total Arch Aortic
Reconstruction with Thoraflex
Hybrid: Initial Single-
Institutional Experience



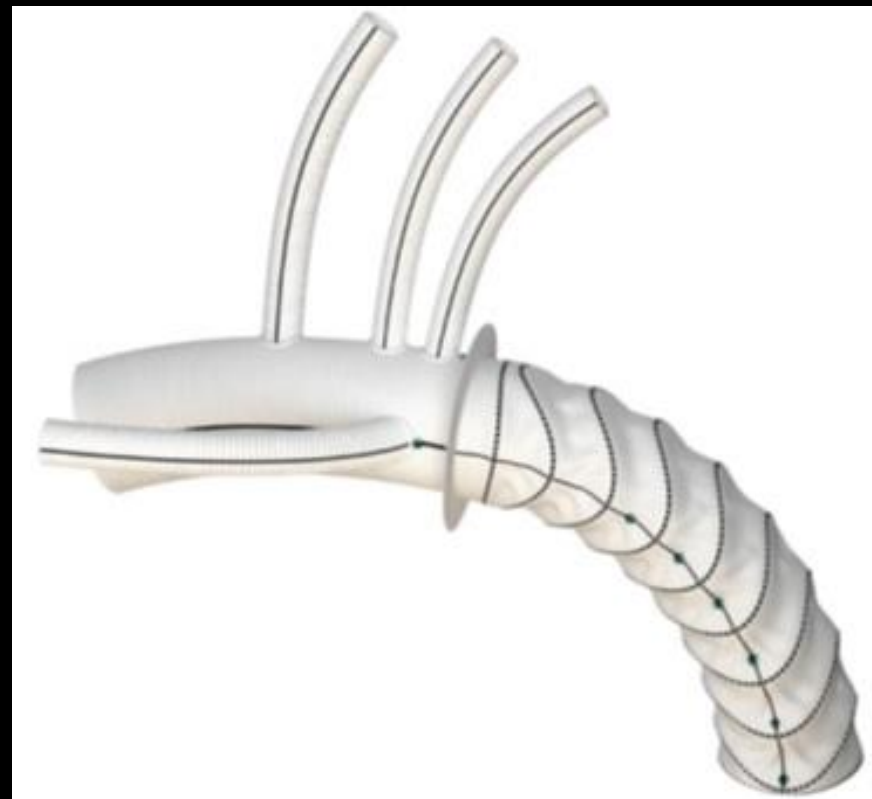
No disclosures





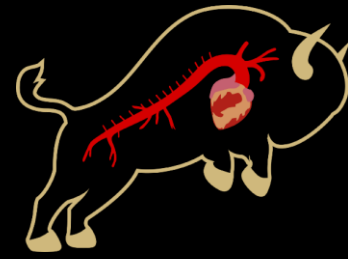
Introduction

- Comfort with total arch aortic replacement has grown with the evolution of hybrid repairs
- Thoraflex Hybrid was FDA approved in May 2022 as the first commercially available hybrid device for FET
- The effect of having access to a commercial hybrid graft is not yet known compared with traditional FET

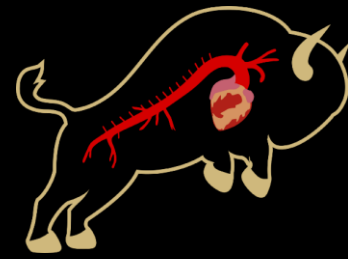


<https://www.fda.gov/medical-devices/recently-approved-devices/thoraflex-hybrid-p210006>

Aim



- To describe our institutional experience with elective total aortic arch reconstruction
- To compare frozen elephant trunk (FET) reconstruction with Thoraflex



Methods

- Retrospective review of prospectively-maintained institutional aortic database from May 2022–October 2023
- Identified all patients who underwent elective aortic arch reconstruction with total arch reconstruction with frozen elephant trunk repair

Results

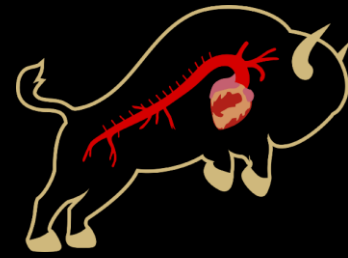


Table 1. Summary of Patient Demographic Characteristics and Comorbidities

	Frozen Elephant Trunk (N=22)	Thoraflex (N=12)	Overall (N=34)	P- value
Age (Years), med [IQR]	56.7 [51.0, 63.8]	62.6 [55.6, 71.8]	57.5 [54.6, 71.0]	0.597
Body Mass Index, med [IQR]	29.4 [25.3, 31.6]	33.2 [30.5, 35.5]	30.3 [26.7, 34.2]	0.508
Gender Male, n (%)	16 (72.7%)	9 (75.0%)	25 (73.5%)	1
Diabetes, n (%)	2 (9.1%)	3 (25.0%)	5 (14.7%)	0.43
Hypertension, n (%)	19 (86.4%)	11 (91.7%)	30 (88.2%)	1
Tobacco Use, n (%)	6 (27.3%)	3 (25.0%)	9 (26.5%)	1
Chronic Lung Disease, n (%)	2 (9.1%)	5 (41.7%)	7 (20.6%)	0.103
Peripheral Artery Disease, n (%)	3 (13.6%)	2 (16.7%)	5 (14.7%)	1
Prior Stroke, n (%)	2 (9.1%)	1 (8.3%)	3 (8.8%)	1
Coronary Artery Disease, n (%)	11 (50.0%)	4 (33.3%)	15 (44.1%)	0.685
Prior Aortic Intervention, n (%)	9 (40.9%)	9 (75.0%)	18 (52.9%)	0.184

Results

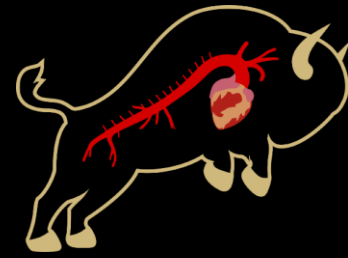


Table 2. Intraoperative Outcomes

	Frozen Elephant trunk (N=22)	Thoraflex (N=12)	Overall (N=34)	P- value
Cardiopulmonary Bypass Time (min), med [IQR]	160 [136, 237]	151 [135, 159]	154 [133, 209]	0.242
Cross Clamp Time (min), med [IQR]	79.5 [46.3, 128]	47.0 [43.8, 60.5]	54.0 [44.5, 114]	0.135
Total Circulatory Arrest Time), med [IQR]	19.5 [15.3, 24.5]	17.5 [14.0, 20.3]	19.0 [15.0, 22.0]	0.364

Results

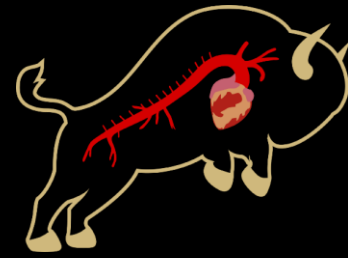
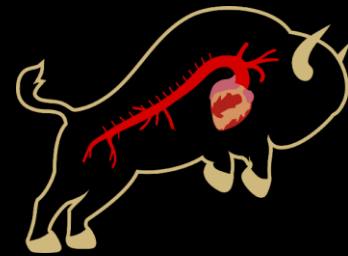


Table 3. Postoperative Outcomes and Morbidities, Including Neurologic Outcomes, End-Organ Dysfunction, and Mortality

	Frozen Elephant trunk (N=22)	Thoraflex (N=12)	Overall (N=34)	P- value
Hospital Length of Stay (days), med [IQR]	9.00 [6.50, 11.0]	11.0 [7.75, 16.0]	10.0 [7.00, 14.5]	0.669
ICU Length of Stay (days), med [IQR]	3.00 [2.00, 5.41]	5.00 [4.00, 11.0]	4.00 [2.00, 6.00]	0.112
Postoperative Dialysis	4 (18.2%)	0 (0%)	4 (11.8%)	0.37
Deep Venous Thrombosis	0 (0%)	1 (8.3%)	1 (2.9%)	0.425
Paralysis	0 (0%)	1 (8.3%)	1 (2.9%)	0.425
Stroke	2 (9.1%)	2 (16.7%)	4 (11.8%)	0.78
Prolonged Mechanical Ventilation	5 (22.7%)	1 (8.3%)	6 (17.6%)	0.58
Surgical Site Infection	0 (0%)	5 (41.7%)	5 (14.7%)	0.005
Atrial Fibrillation	4 (18.2%)	2 (16.7%)	6 (17.6%)	1
Operative Mortality	5 (22.7%)	1 (8.3%)	6 (17.6%)	0.58



Conclusions

- No significant differences in operative or postoperative outcomes
- Learning curve associated with the new device and technique
- Increased operative experience with Thoraflex will provide better power to detect possible differences in outcomes between techniques



Thank You!