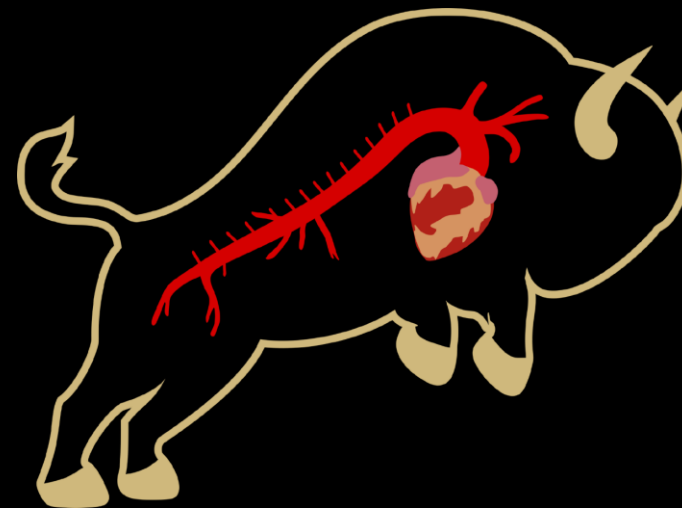


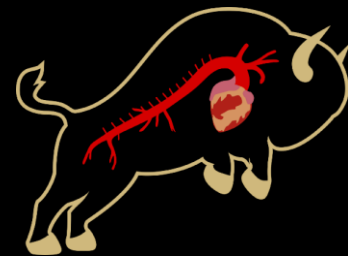
An anatomical illustration of the thoracic aorta and heart. The aorta is shown in red, branching into the subclavian and carotid arteries. The heart is shown in a light purple and red color. The entire illustration is set against a dark background with a light green outline of the thoracic cavity. The text is overlaid on the aorta and heart.

Hemiarch Reconstruction for
Ascending Thoracic Aorta
Pathology: Single-Institutional
Experience



No disclosures

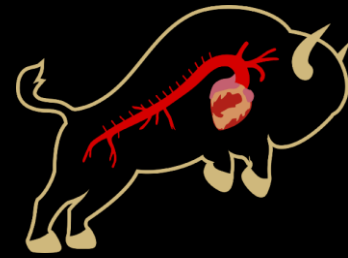




Introduction

- Neuroprotection and surgical techniques have improved in recent years
- This has reduced the morbidity of cardiopulmonary bypass and circulatory arrest
- Hemiarch reconstruction has increased because of these improvements

Background



Original Investigation

October 5, 2022

Association of Thoracic Aortic Aneurysm Size With Long-term Patient Outcomes

The KP-TAA Study

Matthew D. Solomon, MD, PhD^{1,2}; Thomas Leong, MPH¹; Sue Hee Sung, MPH¹; [et al](#)

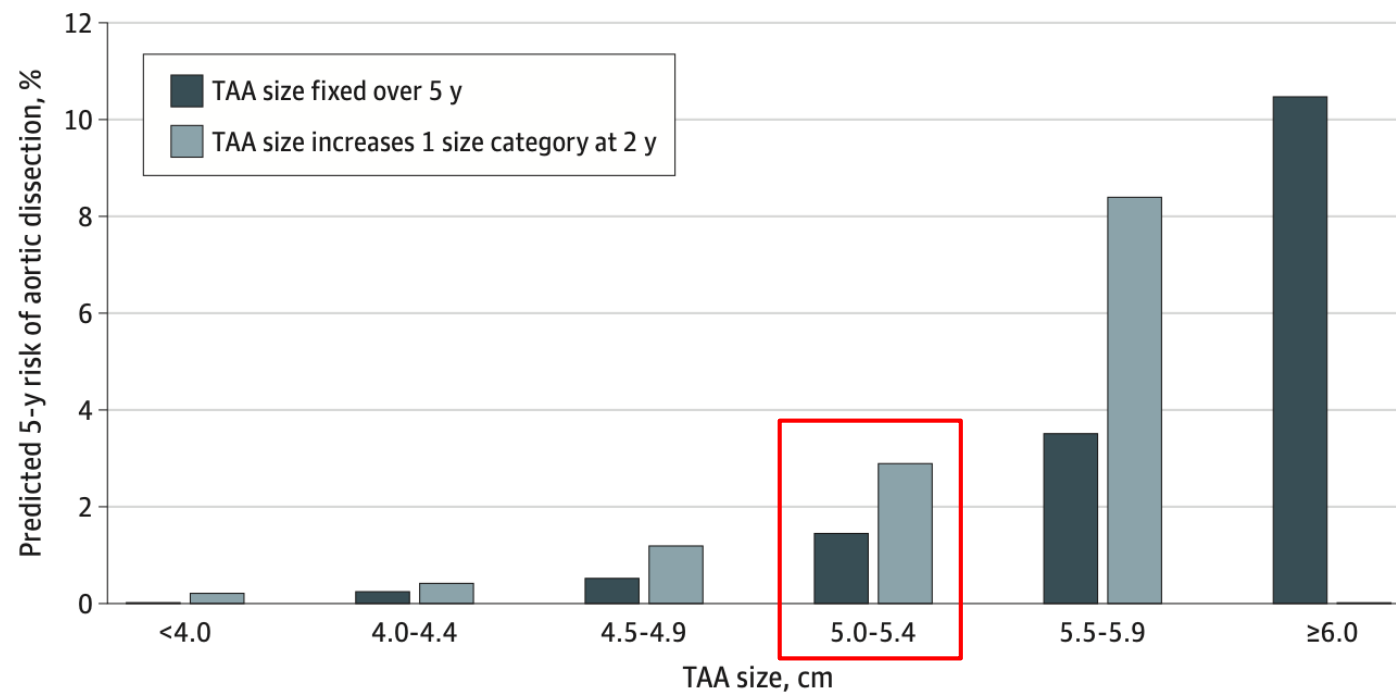
» [Author Affiliations](#) | [Article Information](#)

JAMA Cardiol. 2022;7(11):1160-1169. doi:10.1001/jamacardio.2022.3305

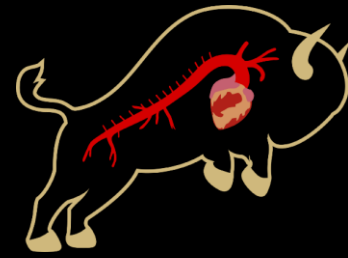


Background

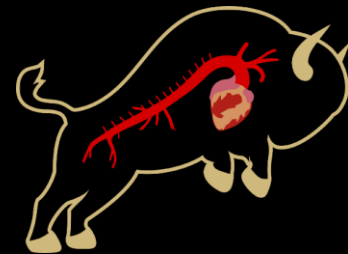
Figure 2. Predicted Risk of Aortic Dissection Over 5 Years for Fixed and Increasing Thoracic Aortic Aneurysm (TAA) Size



Aim

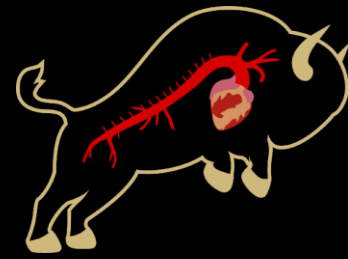


- To describe our institutional experience with elective hemiarth aortic reconstruction
- Assess morbidity and mortality in the context of the Kaiser Permanente Thoracic Aortic Aneurysm Study



Methods

- Retrospective review of prospectively-maintained institutional aortic database from February 2011-October 2023
- Identified all patients who underwent elective aortic arch reconstruction with hemiarch aortic reconstruction

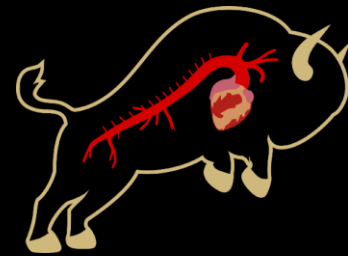


Results

- 427 patients underwent hemiarth
- 327 (76.6%) were male
- 39 (9.1%) had a previous aortic surgery
- Aneurysm (n=396, 92.7%) was the most common presentation

Table 1. Summary of Patient Demographic Characteristics and Comorbidities

	Overall (N=427)
Age (Years)	
Median [IQR]	62.0 [50.3, 69.6]
BMI	
Median [IQR]	27.5 [24.4, 31.9]
Gender Male	327 (76.6%)
Diabetes	50 (11.7%)
Coronary Artery Disease	80 (18.7%)
Stroke	21 (4.9%)
Pulmonary (including OSA)	96 (22.5%)
Renal Disease	34 (8.0%)
Smoking	103 (24.1%)
History of cardiac surgery	132 (30.9%)
History of aortic surgery	39 (9.1%)

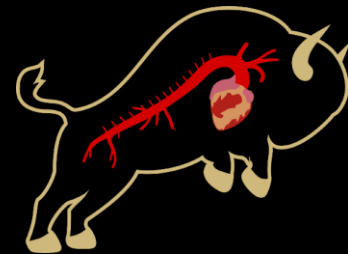


Results

- 205 (48.0%) of patients had some postoperative complication
- 11 (2.6%) had a stroke
- 7 (1.6%) patients died during their postoperative hospitalization

Table 2. Postoperative Outcomes and Morbidities, Including Neurologic Outcomes, End-Organ Dysfunction, and Mortality

	Overall (N=427)
Cardiopulmonary Bypass (min)	
Mean (SD)	148 (55.1)
Aortic Cross Clamp (min)	
Mean (SD)	104 (47.8)
Circulatory Arrest (min)	
Mean (SD)	9.97 (6.53)
Total Length of Stay	
Median [Q1, Q3]	7.00 [6.00, 9.00]
ICU Length of Stay	
Median [Q1, Q3]	3.00 [2.00, 4.00]
Stroke	11 (2.6%)
KDIGO AKI Grade	
1	87 (20.4%)
2 or Greater	13 (3.0%)
In House Postoperative Mortality	7 (1.6%)



Conclusions

- Hemiarch reconstruction is a safe procedure
- Patients experience acceptable postoperative morbidity and minimal mortality
- Surgical risk should be weighed against the annual risk of complications in determining the true size criteria for repair

Thank You!

