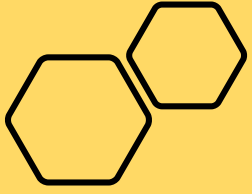




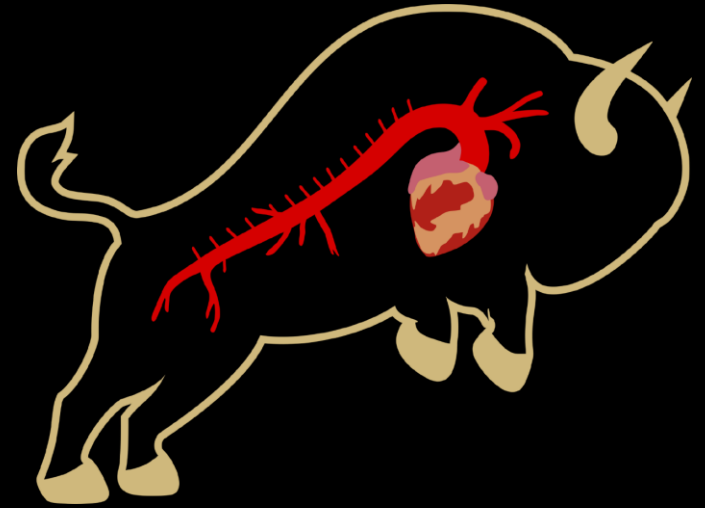
# Optimizing Postoperative Surveillance Imaging Following Elective Aortic Hemiarch Replacement

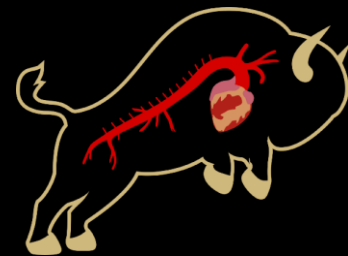
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No disclosures





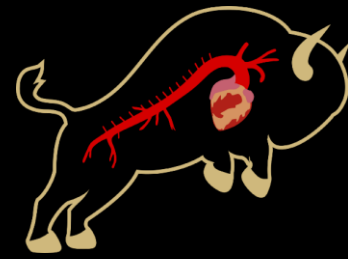
# Introduction

- Optimal protocol for surveillance imaging following elective hemiarch remains a topic of debate
- Many centers continue to do yearly surveillance and guidelines remain unclear
- Potentially superfluous surveillance may be contributing to excess patient burden and increased cost

# Aim

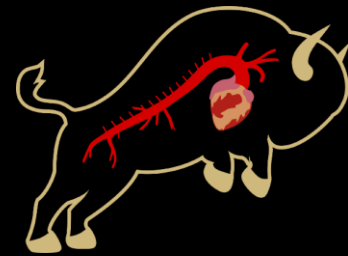


- Investigate re-intervention after elective aortic hemiarach surgery
  - Temporal relationship of re-intervention from index surgery
  - Method of how any re-intervention pathology was detected (i.e. via surveillance imaging or urgent/non-surveillance presentation)



# Methods

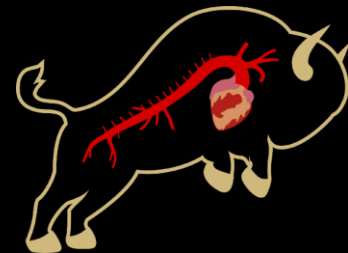
- Retrospective review of a single institution aortic database for patients who underwent elective hemiarch replacement from February 2010 to December 2022
- 417 total patients identified
  - 8 (1.9%) excluded due to in-hospital mortality
- For remaining patients, surveillance imaging and clinical follow-up was reviewed
- Re-interventions related to hemiarch repair identified
  - Additional focus placed on how re-operative pathology detected
- Kaplan-Meier curve created to assess freedom from re-intervention



# Results

- A total of 21 (5.1%) required re-operation after discharge
  - Of those patients, majority of pathology was detected due to urgent, symptomatic presentation (N=14, 3.4%)

<b>Non-surveillance/urgent presentation</b>	<b>14 (3.4)</b>
• Infection related to surgery	6
• Symptomatic aortic insufficiency related to concomitant valvular/root intervention (at <6 months)	3
• Aortic dissection (at 2 years)	1
• Aortic hematoma	2
• Symptomatic stroke, prior concomitant aortic valve replacement with new valve thrombus	1
• Fall, sternal mal union	1



# Results: Surveillance Imaging

- Only four patients requiring re-intervention (1.0%) had pathology found due to hemiarch surveillance
  - All pathology was identified within three months from index surgery
  - Two were due to concomitant root replacement
- Three patients (0.7%) required re-intervention due to surveillance imaging for other pathology

## Hemiarch surveillance detected pathologies (all found at three-months)

Pseudoaneurysm (N=3)

LVOT (concomitant David)

Distal hemiarch anastomosis

Graft to graft anastomosis

(concomitant root)

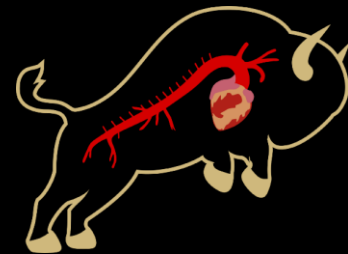
Fistula (N=1) (root replacement to pulmonary artery)

## Surveillance imaging related to other pathology

Distal aortic degeneration (at one year)

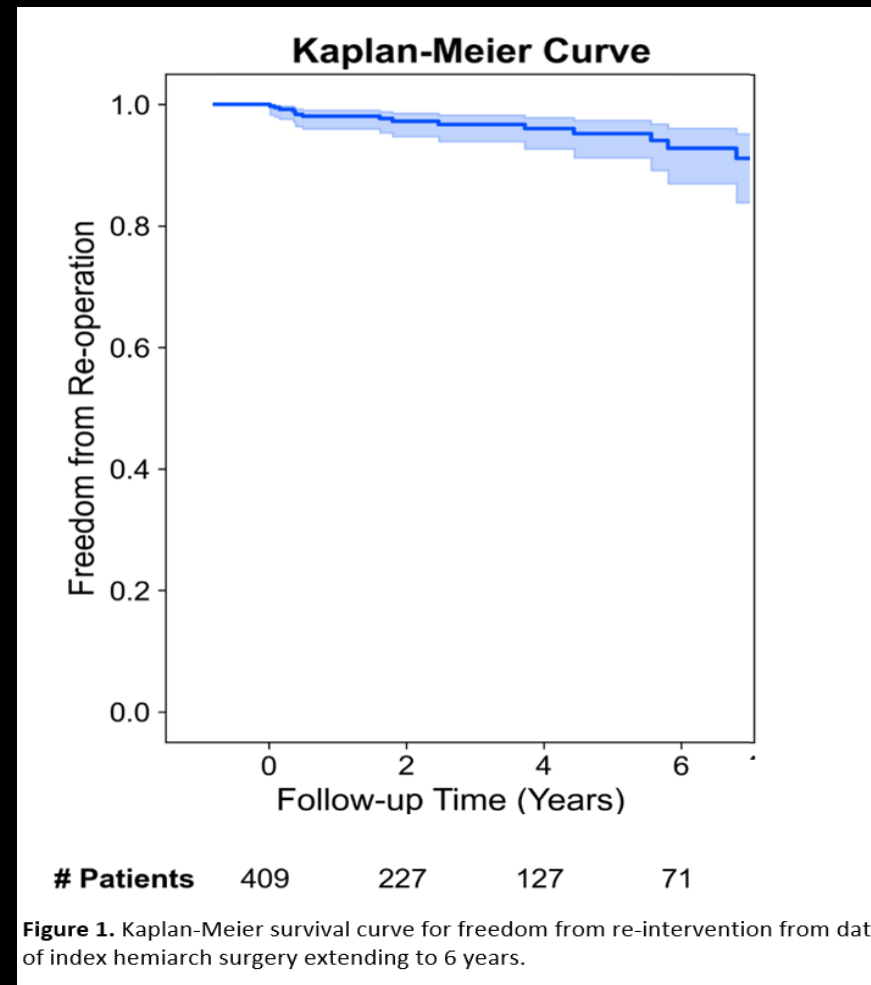
Distal aortic degeneration (at two years)

Mechanical aortic valve stenosis (at eight years)

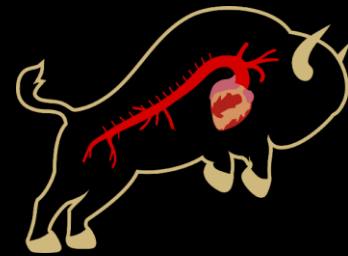


# Results: Surveillance Imaging

- Kaplan-Meier curve for freedom from any re-intervention from index hemiarth demonstrates rarity of need for operative re-intervention
  - Majority of change due to decreasing number of patients with increasing years from date of surgery







## Conclusions

- Surveillance imaging at three months after hemiarth surgery is sufficient to identify pathology related to repair
- Unless other pathology warrants surveillance, additional imaging is superfluous

Questions???

