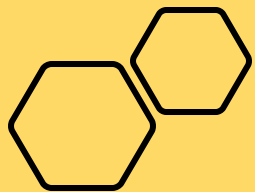
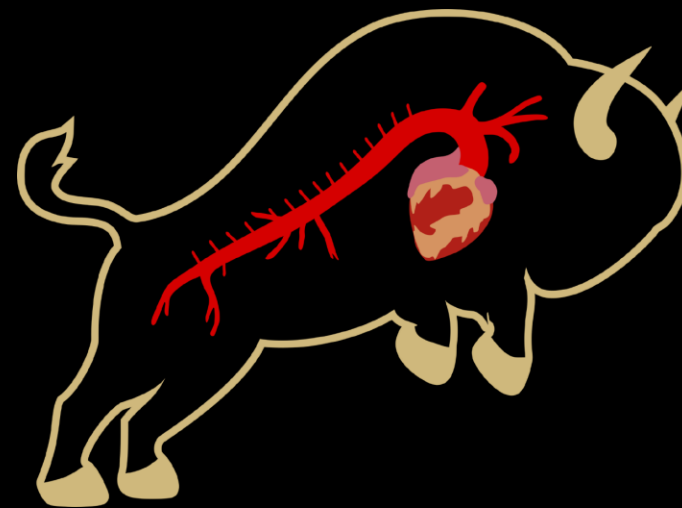


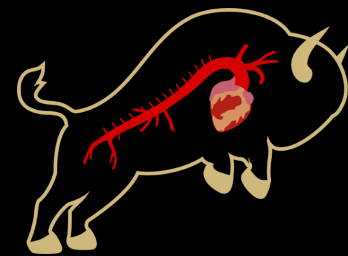
# Understanding Vocal Cord Dysfunction before and after Arch Surgery to reduce Potential for Aspiration Complications

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No disclosures

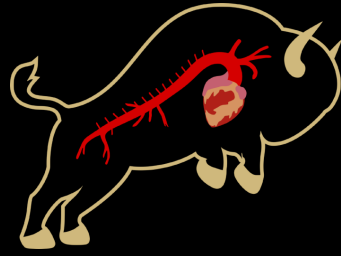




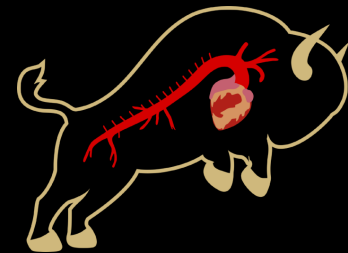
# Introduction

- Recurrent laryngeal nerve (RLN) injury following aortic arch surgery can cause significant morbidity and mortality
- Aspiration is underrecognized and therefore incidence is not well documented
- Further, incidence of idiopathic vocal cord palsy in this population remains unknown
  - Could lead to bilateral dysfunction requiring tracheostomy and/or feeding tube

# Aim



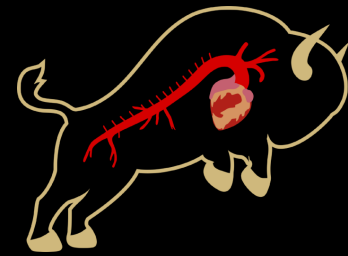
- Identify the true incidence of RLN injury both preoperatively and postoperatively with arch operations
- Reduce the patient burden of silent aspiration
  - Faster diagnosis post operatively
  - Aggressive medialization strategy



# Methods

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- Retrospective review of total arch patients (~125 patients) from Jan 2019 to December 2023
  - Includes elective and emergent patients getting aortic arch surgery
- 87 patients evaluated with direct laryngoscopy
  - Pre and post operative direct laryngoscopy was requested with planned surgeries
  - Only post operative direct laryngoscopy was performed with emergent surgeries

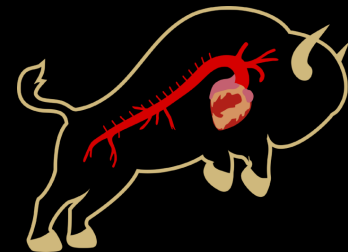


Left vocal cord paralysis (closed)



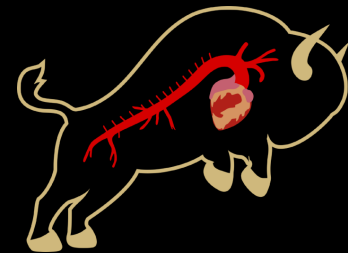
Right vocal cord paralysis (open)





# Results

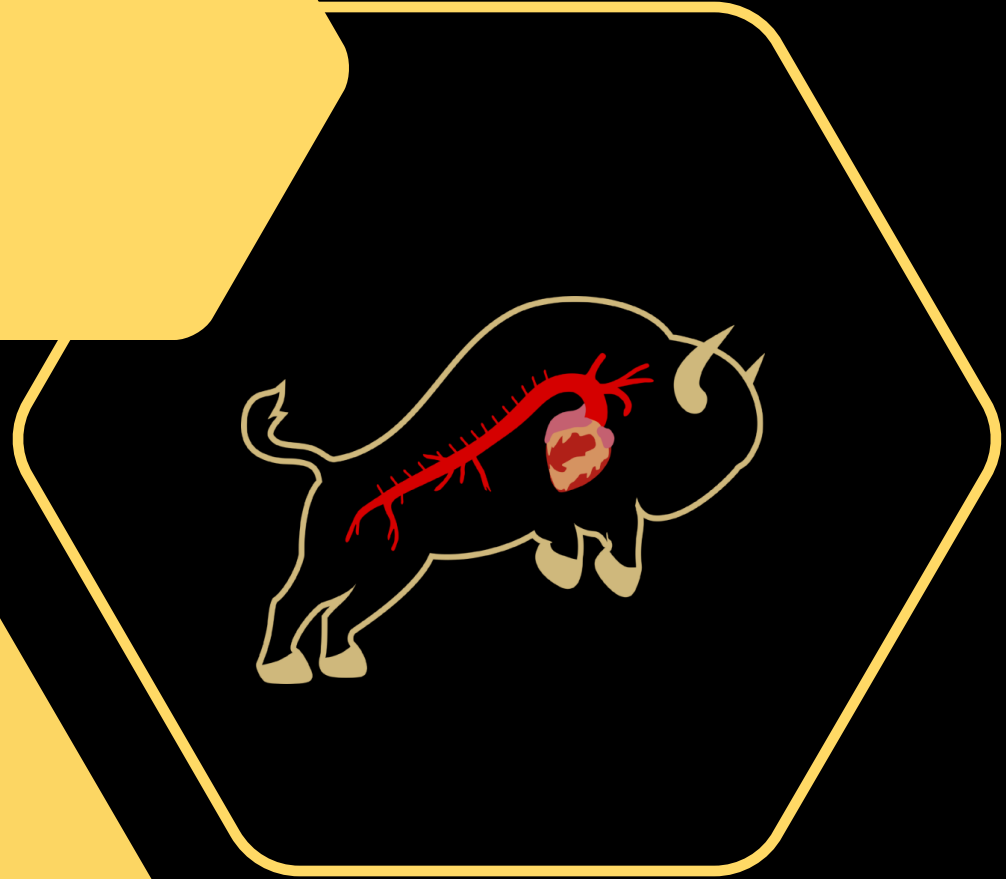
- Unfortunately, there were protocol limitations in coordination for full pre and post operative evaluations due to COVID
- 63 patients had normal bilateral vocal cord function post operative
- 6 patients had unilateral vocal cord dysfunction post operative (normal bilateral vocal cord function preoperative)
- 6 patients had unilateral vocal cord dysfunction post operative and no preoperative exam completed thus unsure of acuity or relation to aortic surgery
- 4 patients had vocal cord dysfunction pre and post operative
- 8 patients excluded due to no post operative exam completed



# Conclusions

- RLN injury resulting in vocal cord dysfunction is a source of morbidity and mortality; at least 10% of aortic arch surgery
- More than 80% of patients with post operative vocal cord dysfunction had symptoms ranging from mild dysphonia to aphonia and dyspnea although this is discordant with bedside RN swallow exam
- Pre and postoperative direct laryngoscopy is helpful and relevant to clinical course
  - Incidence of dysfunction up to 6% preoperatively
  - In pre-existing right RLN paralysis, our approach is a more proximal dissection to complete the procedure
- Early recognition of post operative vocal cord dysfunction decreases morbidity and mortality





Questions???