



The Non-Operative Approach to Esophageal Coins: The Promise of Peanut Butter

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Background

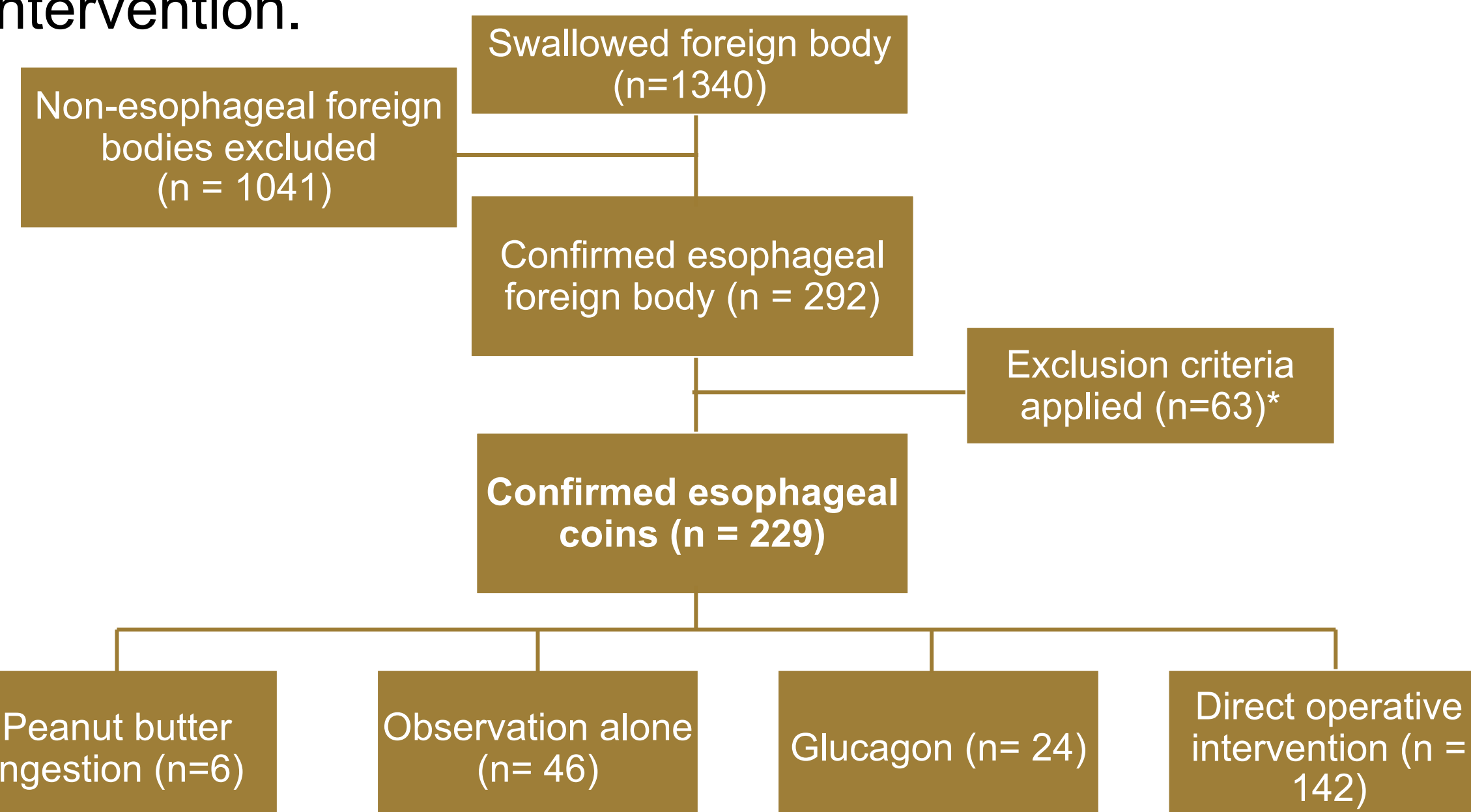
- Coins are the most common esophageal foreign body.
- Pediatric Esophageal foreign bodies can be managed with operative or non-operative interventions
- Selection criteria for non-operative interventions is limited.
- Ingestion of food and drink has been described as a method of treatment for esophageal FB but has not been previously studied.

Objectives

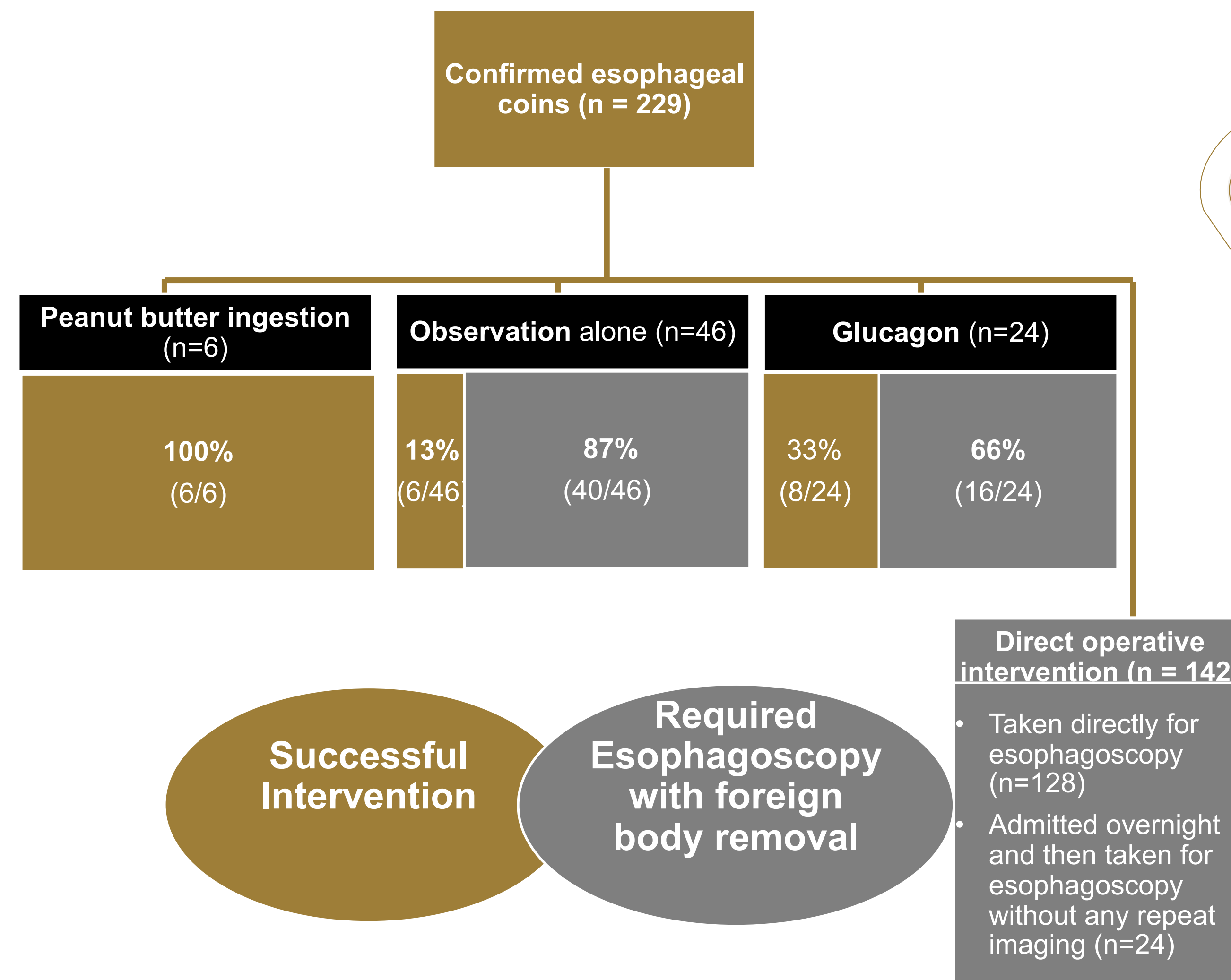
- To compare the relative efficacy of non-operative management of pediatric esophageal coins
- To develop selection criteria for non-operative interventions of esophageal foreign bodies

Methods

- Retrospective study of pediatric patients who presented to a tertiary care center with esophageal coin ingestion from January 1, 2012 to December 31, 2020.
- Demographic and clinical attributes were collated.
- The effectiveness of non-operative interventions was determined.
- Predictive modeling was used to determine patient characteristics favoring non-surgical versus surgical intervention.



Results

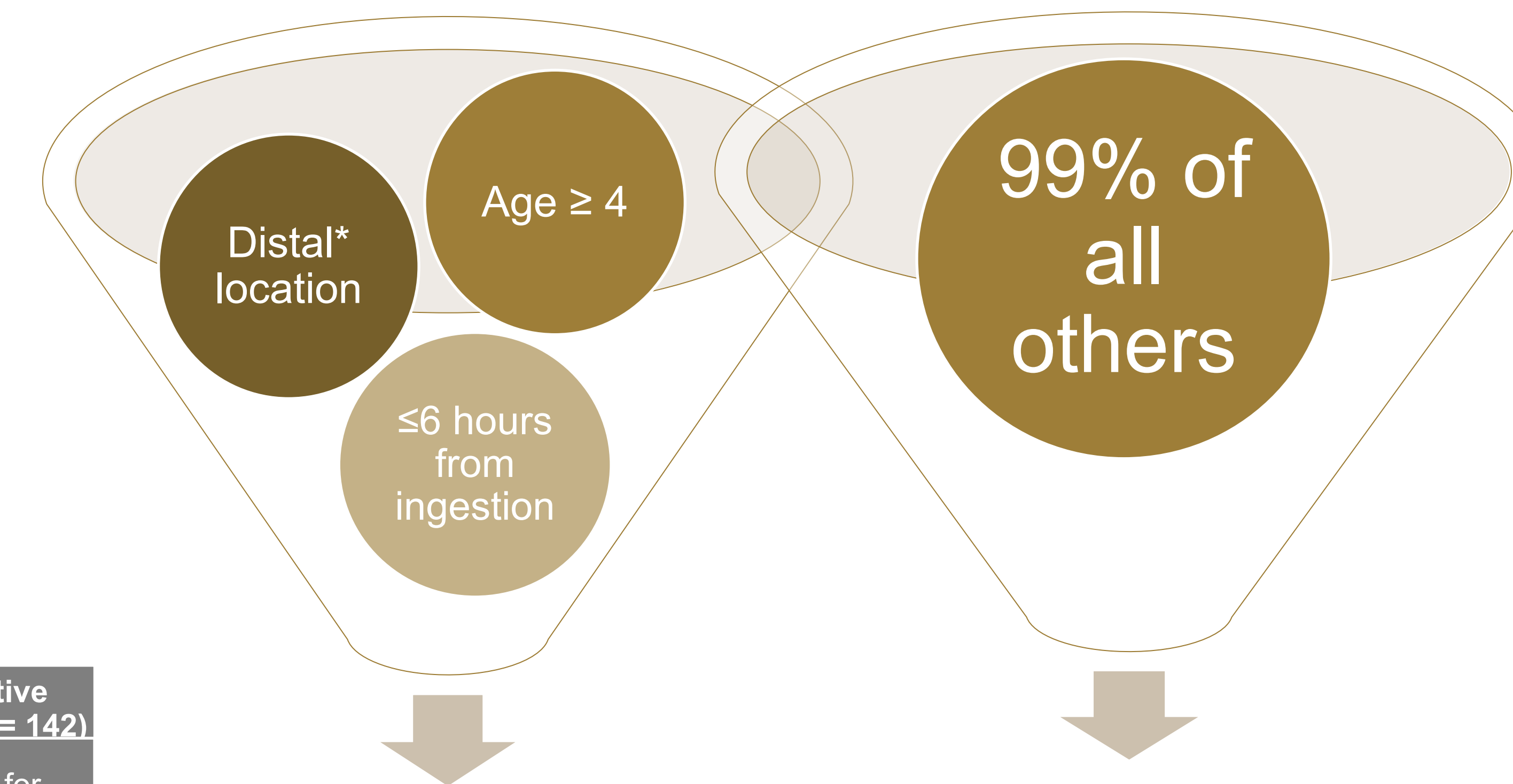


Significant factors affecting intervention selection					
	Peanut Butter	Observation	Glucagon	Esophagoscopy	Significance
Median Age	6.5 years	4 years	5 years	2 years	<0.0001
Proximal location of FB	0%(0)	65% (30)	25% (6)	89%(135)	<0.0001

- Factors not significantly associated with intervention selection: sex, race, location of first presentation, time from ingestion to initial presentation

Significant factors affecting whether esophagoscopy was required		
	Finding	Significance
Age at presentation	Age <4 (increased)	<0.0001
Location of foreign body	Proximal (increased)	<0.0001
Intervention	Peanut butter (decreased)	<0.0001
Intervention	Glucagon (decreased)	0.0003

Results (cont.)



Positive factors for non-operative intervention

Required esophagoscopy

*distal location defined as lower than the aortic arch

Conclusions

- Interventions of glucagon and observation alone were not significantly associated with a decreased need for surgical removal of an esophageal coin.
- The consumption of peanut butter resulted in a significant decrease in esophagoscopy, though this was a small cohort (n=6).
- Predictive modeling showed that non-operative interventions were successful in patients over 4 years old presenting within 6 hours of ingestion and a coin below the aortic arch.

References

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