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Apr 28th, 11:00 AM - 12:00 PM

### Contrasting Two Prophylactic-Dysphagia Interventions for Patients with Head and Neck Cancer Treated with Radiotherapy with or without Adjunctive Chemotherapy

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Ambris, Maira L., "Contrasting Two Prophylactic-Dysphagia Interventions for Patients with Head and Neck Cancer Treated with Radiotherapy with or without Adjunctive Chemotherapy" (2017). *University of Montana Conference on Undergraduate Research (UMCUR)*. 11.  
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# Prophylactic Dysphagia Intervention for Patients with Head and Neck Cancer Undergoing RT/CRT

## Introduction to Problem

- Head and neck cancer (HNC) is the 6<sup>th</sup> most common cancer worldwide.
- HNC is most commonly treated with radiation with or without adjunctive chemotherapy (RT/CRT).
- Dysphagia, including swallowing pain, is one of the most devastating side effects of RT/CRT.
- Prophylactic swallowing exercises (PSE) before and during RT/CRT have been shown to minimize dysphagia, but the most ideal exercise program is unknown.

## Purpose

This study was designed to contrast a PSE program consisting solely of indirect swallowing exercises (exs. that do not require actual swallowing) (ID-PSE) with a more traditional PSE program that consists mostly of direct swallowing exercises (require swallowing) (D-PSE)

## Participants

- 23 adults with primary cancer of the mouth, pharynx, or larynx treated with RT or CRT.
- ID-PSE group = 11
- D-PSE group = 12

## Procedures

- **Training phase:** measure baseline function, instruct in PSE program
- **Treatment phase:** pt does swallow exs daily independently, data collected at RT 12-14, RT 23-25, and last day of RT
- **Post-RT/CRT phase:** data collection at 1 month and 3 months post RT/CRT

## Outcome Measures

- Eating Assessment Tool – 20 (EAT-20)
- MD Anderson Dysphagia Inventory (MDADI)
- Functional Oral Intake Scale (FOIS)
- Study-specific 5-point scale for swallowing pain
- Log for tracking compliance

## Indirect PSE Exercises (ID-PSE)

### Assisted Tongue Pull Back



### Shaker (Head Lift)



### Tongue ROM



### Jaw ROM



### Falsetto "ee"



## Direct PSE Exercises (D-PSE)

### Effortful Swallow

Swallow hard!



### Masako (Tongue Hold) Swallow

Swallow with tongue out

### Mendelsohn Swallow

Swallow and hold!



## Research Questions & Hypotheses

#1: In patients undergoing RT/CRT for HNC, does a difference exist in compliance between patients treated with ID-PSE and similar patients treated with D-PSE?

- **Hypothesis:** Patients in the ID-PSE group will report better compliance to PSE exercises than patients in the D-PSE group.

#2: In patients undergoing RT/CRT for HNC, does a difference exist in swallowing function outcomes between patients completing ID-PSE and similar patients completing D-PSE?

- **Hypothesis:** Patients treated with ID-PSE will have better swallowing outcomes than patients treated with D-PSE (due to improved compliance).

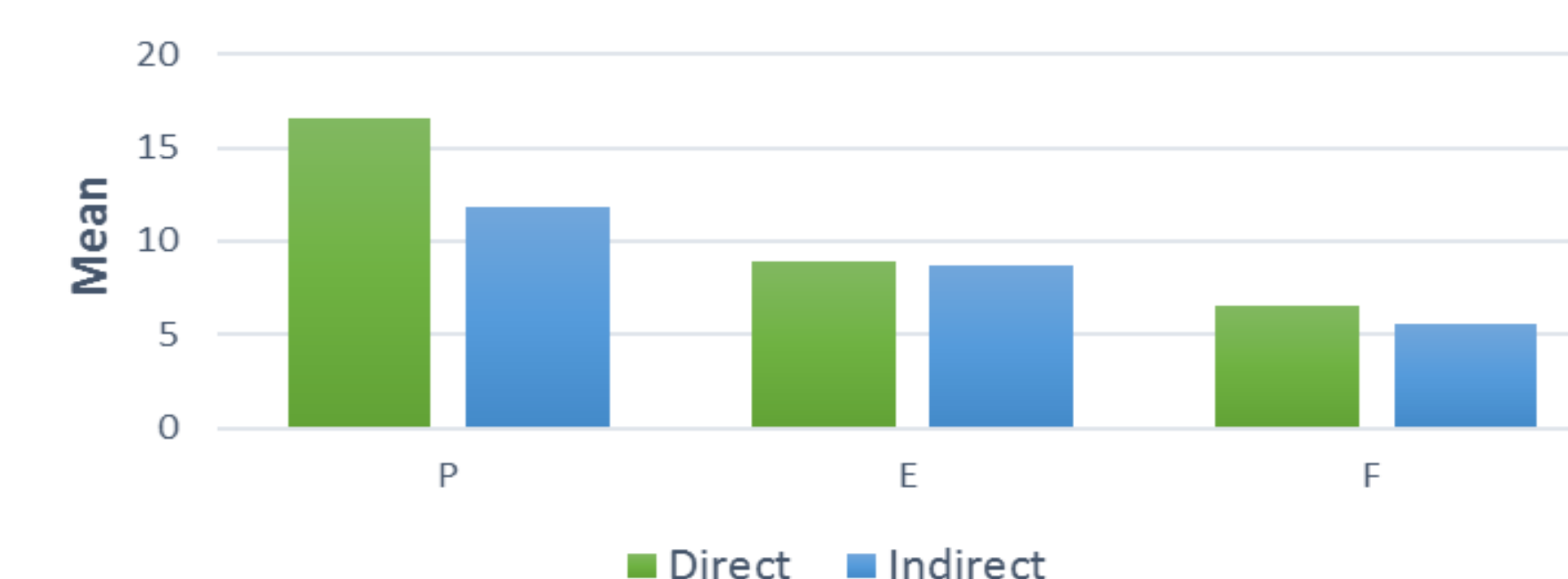
#3: In patients undergoing RT/CRT for HNC, does a difference exist in swallowing pain for patients treated with ID-PSE and similar patients completing D-PSE?

- **Hypothesis:** Patients in the ID-PSE group will report less swallowing pain relative to patients in the D-PSE group.

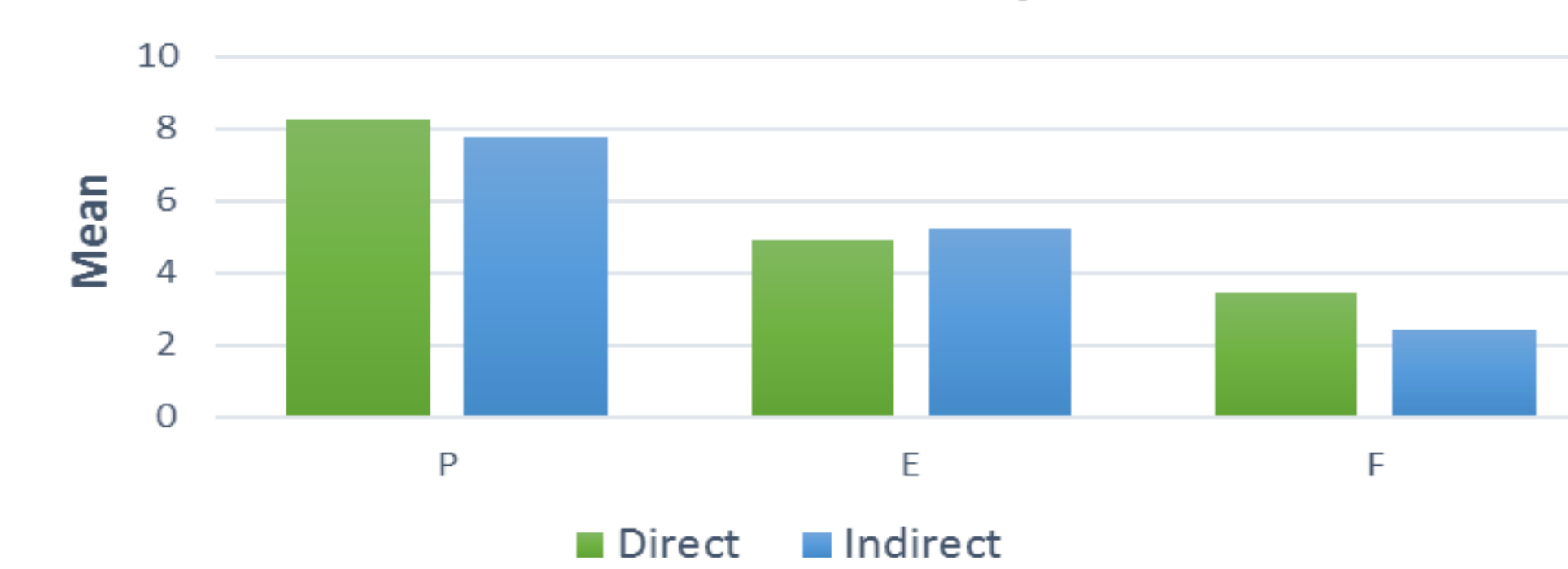
## Results

No significant between-group differences on any measures at baseline, treatment phase, or post-RT/CRT phase.

Physical, Emotional, and Functional Scores from EAT at 1 Month Post-RT/CRT between Groups



Physical, Emotional, and Functional Scores from EAT at 3 Months Post-RT/CRT between Groups



## Conclusions

A PSE program consisting solely of indirect swallowing exercises may be just as effective as a program with primarily direct exercises. This has implications for patients who cannot do direct swallowing exs due to inability to swallow.

## Limitations

- Small sample
- No no-treatment control group
- Asking about comfort level of exercises may have shown a preference of exercise program type

## Select References

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