# Concordance between patient-reported outcome measures and clinician-rated symptom toxicity during and following (chemo)radiotherapy for head and neck cancer

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## INTRODUCTION

- The use of patient-reported outcome measures (PROMs) in head & neck cancer (HNC) is becoming increasingly well-recognised to improve patient-provider communication, identify supportive care needs in a timely manner, and improve quality-of-life and treatment experience[1,2]
- However, the congruence and fidelity of PROM data compared with clinician-rated objective assessment is still not well understood
- In order to optimise the utility of PROMs to assist clinical decision making, research is required to confirm the accuracy of PROM tools in tracking the prevalence and severity of symptoms during and following (chemo)radiotherapy ([C]RT) for HNC, and establish reliability against standard care toxicity gradings (such as the CTCAE)

### STUDY AIM:

**To investigate the relationship between patient-reported dysphagia and associated symptoms vs. clinician-rated assessment during/following (chemo)radiotherapy in patients with HNC**

## METHODS

*Design & Setting:*

Retrospective review of HNC patient databases from two cancer institutions in Brisbane, Australia

*Participants & Procedure:*

- Data retrieved from 626 HNC patients who received (C)RT (Site 1 n=208, Site 2 n=418 ) across 7 parameters (dysphagia, odynophagia, mucositis, dysgeusia, dry mouth, thick saliva, nausea) during Tx (Week 1-7) and 2 weeks-post Tx
- Site 1 routinely collected weekly SLP-rated CTCAE data, and Site 2 collected patient-reported symptom data via a purpose-built, validated electronic PROM tool (*My Health My* Way)[3]
- Cohorts were statistically homogenous in regards to demographics, with both sites treating mostly male patients with locally advanced oral/oropharyngeal cancer (Table 1)

*Analysis*

Ratings were collapsed to binary form (CTCAE-0-1 vs. 2-3; patient-reported symptoms nil/negligible vs. moderate/severe) and compared first graphically then using chi-square tests

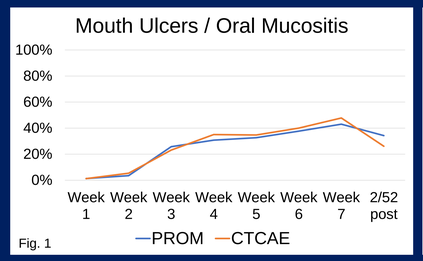

Fig. 1

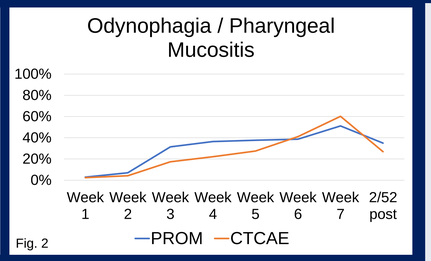

Fig. 2

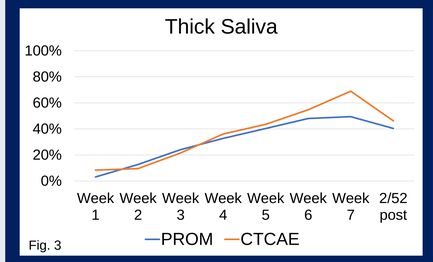

Fig. 3

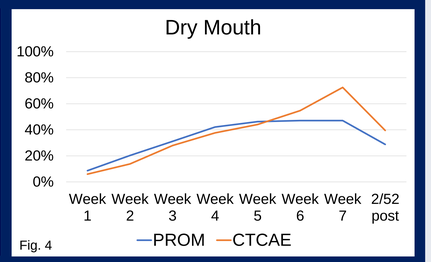

Fig. 4

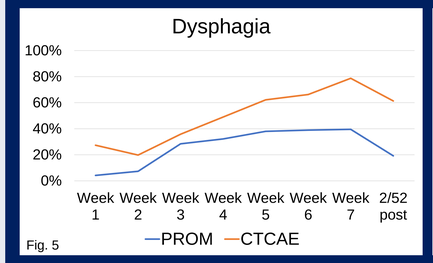

Fig. 5

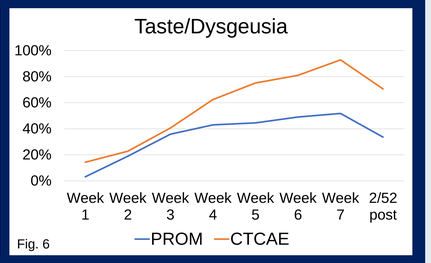

Fig. 6

**Fig 1-7**
***Prevalence (%) of PROM mod-severe vs. CTCAE 2+ symptoms over time***

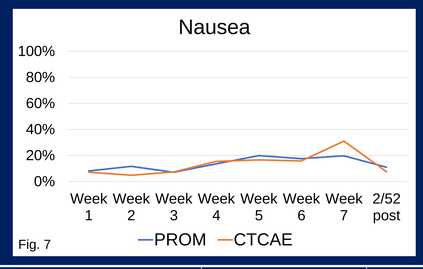

Fig. 7

| TABLE 1: Demographics Parameter | | Site 1 N = 208 | Site 2 N = 418 | p |
|---|---|---|---|---|
| Age – mean (SD) | | 63.89 (11.89) | 63.24 (12.01) | 0.556 |
| Gender | Male | 161 | 345 | 0.124 |
| | Female | 47 | 73 | |
| Site | Nasopharynx | 9 | 13 | 0.224 |
| | Oral/Oropharynx | 117 | 224 | |
| | Hypo/Larynx | 25 | 50 | |
| | Skin/Parotid/ Neck | 18 | 63 | |
| | Other/ Unknown P | 39 | 68 | |
| T Stage | 0/x/is | 46 | 55 | 0.098 |
| | 1-2 | 77 | 172 | |
| | 3-4 | 85 | 180 | |
| Surgery | Y | 95 | 189 | 0.914 |
| | N | 113 | 229 | |
| Chemo | Y | 119 | 208 | 0.079 |
| | N | 89 | 210 | |

## RESULTS

***PROM and Clinician-rated symptom trends***

- All symptoms (Fig 1-7) showed peaking at week 7 of treatment with some degree of amelioration by 2 weeks post-Tx
- High congruence between patient-reported (moderate/severe) and CTCAE (2-3) for the majority of symptoms, with particularly high agreement for oral mucositis, pharyngeal mucositis, dry mouth, thick saliva and nausea
- Whilst the trajectory of reporting was consistent between PROMs and CTCAE, in areas of discrepancy the relative prevalence was higher when rated via the SLP compared to patient-report – contrary to previous literature[3,4]

***Comparison of PROM/Clinician-rated symptoms by week***

- Dysphagia and dysgeusia demonstrated the most discordance between PROM/CTCAE ratings, with significantly higher clinician ratings observed at most time points (Table 2)

| Parameter | TABLE 2: Difference between PROMs and clinician-rating, by week (p value) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Wk 1 | Wk 2 | Wk 3 | Wk 4 | Wk 5 | Wk 6 | Wk 7 | 2/52 post |
| Mouth ulcers / Oral Mucositis | 0.934 | 0.310 | 0.503 | 0.308 | 0.626 | 0.603 | 0.429 | 0.150 |
| Odynophagia / Pharyngeal mucositis | 0.807 | 0.205 | **<0.001** | **<0.001** | **0.017** | 0.592 | 0.135 | 0.160 |
| Thick saliva | 0.059 | 0.298 | 0.501 | 0.433 | 0.476 | 0.147 | **0.001** | 0.342 |
| Dry Mouth | 0.422 | 0.071 | 0.424 | 0.309 | 0.617 | 0.097 | **<0.001** | 0.066 |
| Dysphagia | **<0.001** | **<0.001** | 0.076 | **<0.001** | **<0.001** | **<0.001** | **<0.001** | **<0.001** |
| Taste/ Dysgeusia | **<0.001** | 0.305 | 0.271 | **<0.001** | **<0.001** | **<0.001** | **<0.001** | **<0.001** |
| Nausea | 0.950 | **0.019** | 0.889 | 0.542 | 0.348 | 0.614 | **0.031** | 0.347 |

### CONCLUSION:

**Whilst patients and clinicians may perceive the severity of symptoms differently, overall, reasonable concordance was observed between PROMs and clinician-rated dysphagia/associated sequelae with regard to symptom trajectory. This confirms the clinical utility of PROMs to assist with the delivery of supportive care in this population.**

**REFERENCES**

1. Fabrice et al (2017). *J Nat Can Inst*
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