



## Introduction

- In Canada, 4,300 head and neck cancers diagnosed /year [1].
- Most prevalent subtype is oropharyngeal squamous cell carcinoma (OPSCC), usually diagnosed at stage III or IV (according to AJCC 7th edition)[2].
- 2/3 of the patients with advanced disease present only with a neck lump
- 90% of OPSCC are related to human papillomavirus (HPV).
- HPV+ versus HPV- OPSCC is of interest since the risk factors, pathogenesis, and tumour prognosis differ [3].
- Standard of care treatment for locally advanced OPSCC is radiotherapy alone or in combination with surgery or chemoradiation.
- Standard of care treatment produces life-long side effects, e.g. loss of salivary function, dental loss, poor oral health, dysphagia, feeding tube dependency, fibrotic loss of lower cranial nerve function, pharyngeal and laryngeal stenosis[4].
- An experimental therapy that involves neoadjuvant chemotherapy, followed by transoral robotic surgery (NeC+TORS) is offered as a treatment option to patients at McGill University Health Centre.

## Study objective and hypothesis

- To compare pre-treatment, 1-, 3-, 6- and 12-month post-treatment quality of life patients with locally advanced HPV-positive OPSCC treated at the McGill University Health Centre with NeC+TORS as definitive treatment.

- It is hypothesized that pre-treatment and 12-month quality of life scores are not significantly different from each other

## Methods

### Design, Setting, and Participants:

- An ambidirectional cohort study took place at McGill University Health Centre.
- Patients were diagnosed with stage III and IV (AAJC 7th edition) OPSCC HPV+ and treated with NeC (docetaxel and cisplatin) followed by TORS and selective neck dissection between January 2017 and July 2018.

### Main Outcomes and Measures:

- Patient-reported quality of life was assessed using the EORTC QLQ-30 and H&N35 at pre-treatment, 1-, 3-, 6, and 12-month following completion of the treatment.
- The functional outcome was assessed by the use of a percutaneous endoscopic gastrostomy (PEG) feeding tube at each follow-up.
- Repeated-measures mixed-effects models were used to assess the impact of baseline measurements on quality of life scores over time and the score change over time.

\*Note: shaded area in graphs represents 95%CI

## Results

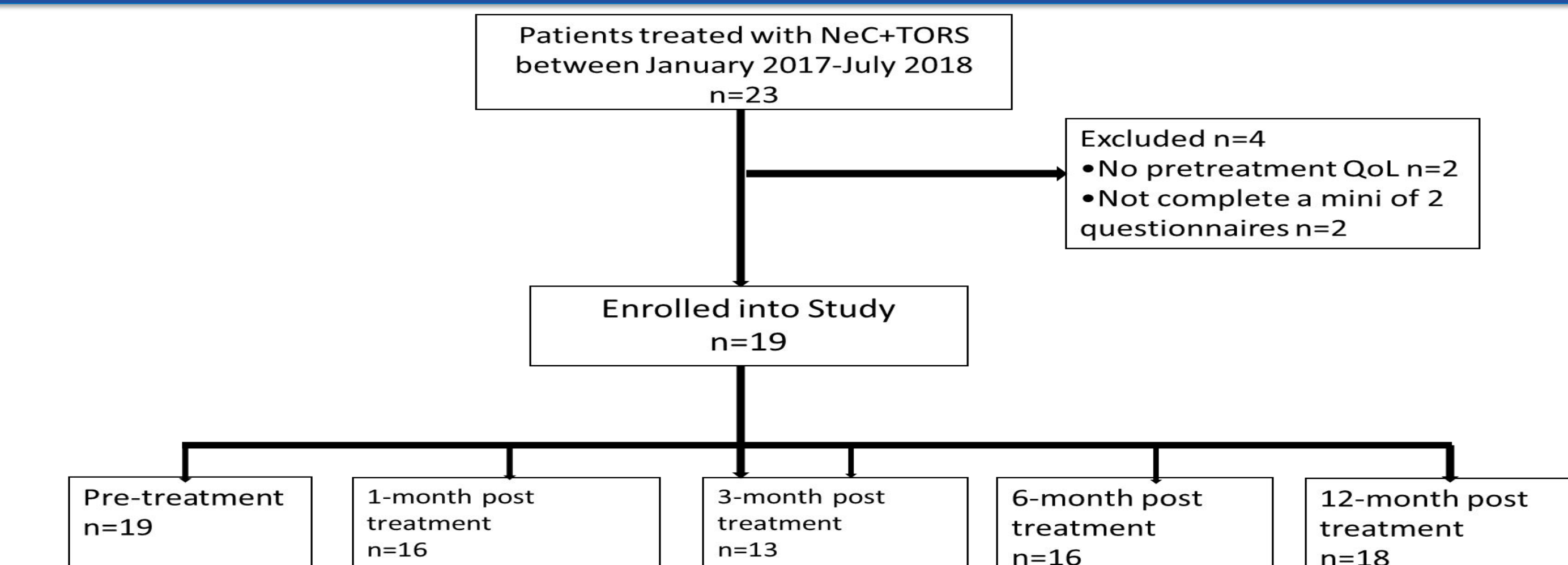


**Figure 1- Flow Chart of patients included in the study**

- Of 23 treated with NeC+TORS, 19 patients met eligibility criteria.
- 90.5% were male
- median age was 58 years (interquartile range, 48-78 years).
- 8 patients had cancer localized in the base of tongue and 13 in the palatine tonsils.

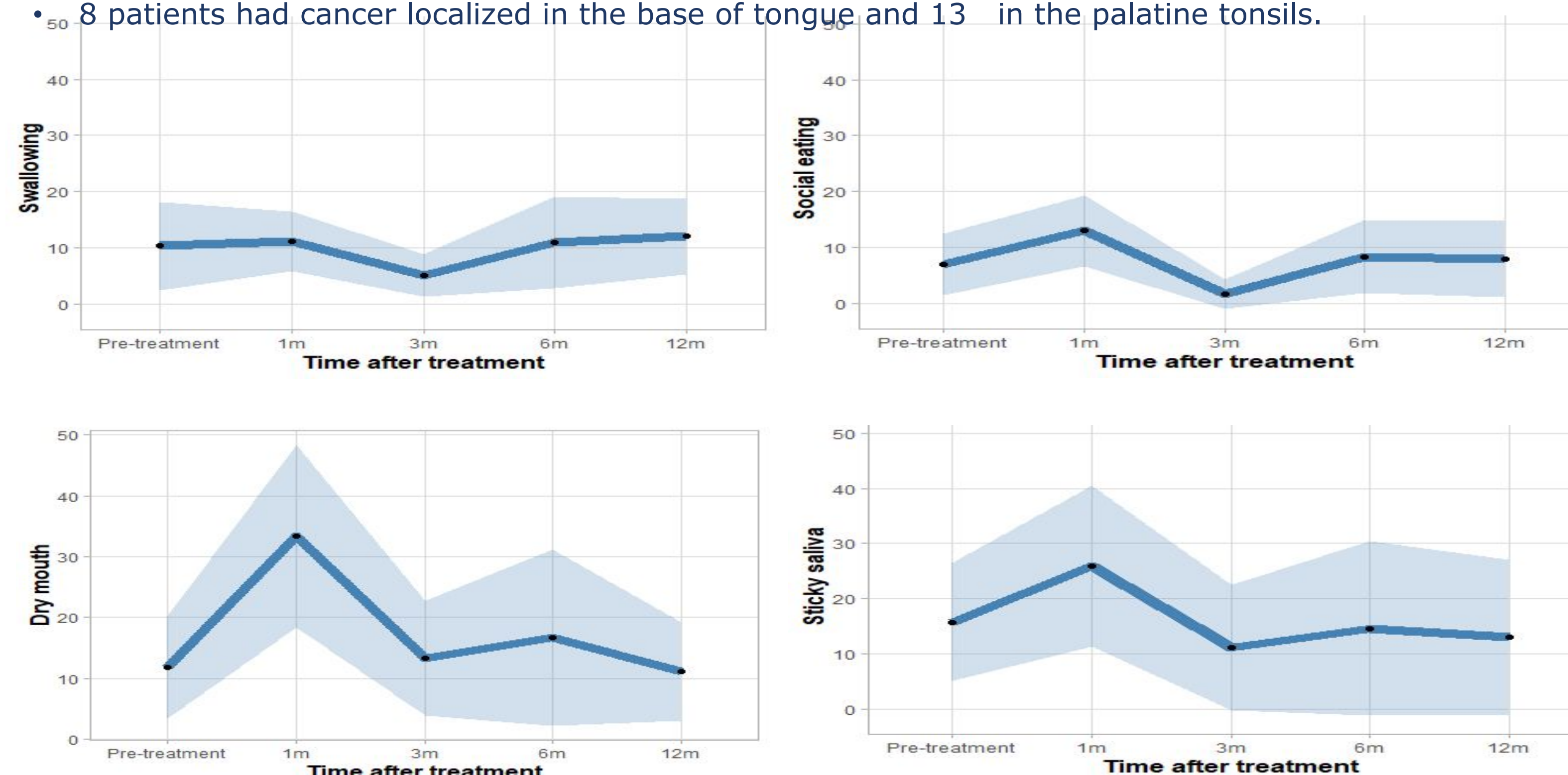
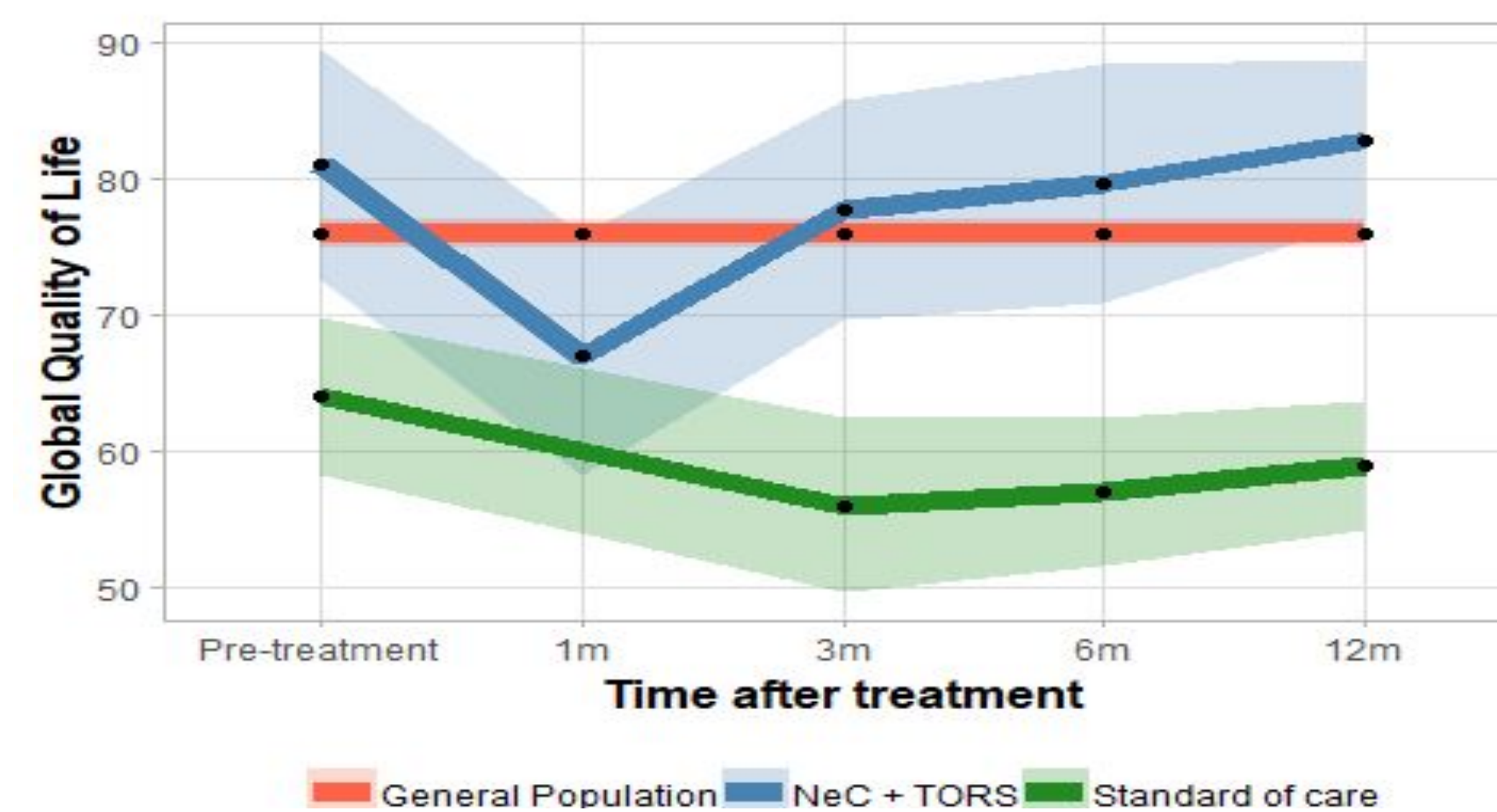


**Figure 2- One-year evolution of locally advanced OPSCC HPV+ cancer patients treated with NeC+TORS in Swallowing, Social Eating problems, Dry mouth and Sticky saliva scales assessed with EORTC H&N35 scale**

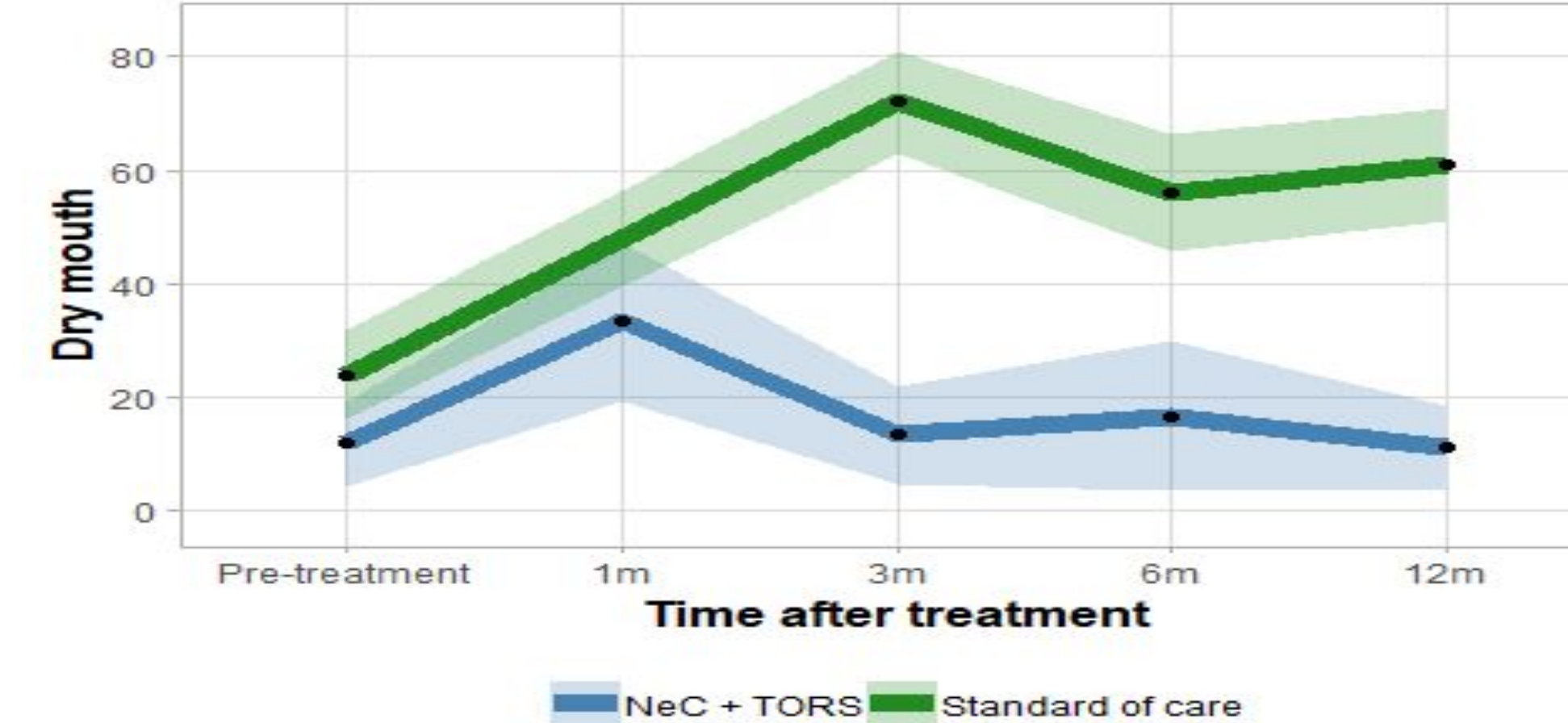
- **Swallowing**
  - no significant differences were found between pre-treatment and overtime values ( $p = 0.38$ )
  - values from pre-treatment do not significantly differ from values at 12-month post-treatment
- **Social eating problems**
  - no significant differences were found between pre-treatment and overtime values ( $p = 0.70$ )
  - values from pre-treatment so not significantly differ from values at 12 months post-treatment
- **Dry mouth**
  - values at 1-month post-treatment are significantly **higher** since dry mouth is increased than pre-treatment values (21.3, 95%CI 1.47 to 41.1,  $p = 0.028$ )
  - values from pre-treatment so not significantly differ from values at 12 months post-treatment
- **Sticky saliva**
  - no significant differences were found between pre-treatment and overtime values ( $p = 0.87$ )
  - values from pre-treatment do not significantly differ from values at 12-month post-treatment

**Figure 3- Comparison of Global Quality of life(GQL) between General Population[5], NeC+TORS patients and Standard of care patients [6]**



- NeC+TORS patients have **significantly higher** GQL scores at 12-month post-treatment than GQL scores of the general population ( $p=0.02$ )
- Standard of care patients have **significantly worse** at 12-month post-treatment than GQL scores of the general population ( $p= 9.961 \times 10^{-9}$ )
- NeC+TORS patients have **significantly higher** GQL scores at 12-month post-treatment than GQL scores of Standard of care patients ( $p=5.53 \times 10^{-6}$ )

**Figure 4- Comparison of Dry mouth Nec+TORS vs. standard of care OPSCC patients[6]**



- NeC+TORS patients have **significantly less Dry mouth** scores at 12-month post-treatment than scores of Standard of care patients ( $p=2.37 \times 10^{-7}$ )

- No patient treated with NeC+TORS required percutaneous endoscopic gastrostomy (PEG)

## Discussion and Conclusions

- Findings suggest that NeC followed by TORS provides maintenance of quality of life and improvement in many areas compared to pre-treatment levels.
- Patients had a rapid return to an oral diet as no patient required a PEG
- In the symptom scales that are recognized as most negatively affected by the current standard of care treatment, e.g. **dry mouth** and **sticky saliva**, we observed a return to baseline
- NeC+TORS shows a better global quality of life at 12 month-post treatment compared to standard of care. Global quality of life was similar to the general population.

## References

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