

# Protocol of a Prophylactic Intervention for Dysgeusia in Head and Neck Cancer Patients

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## Introduction and Aims:

Dysgeusia, or taste dysfunction [1], affects 56% to 76% of head and neck cancer (HNC) patients undergoing (chemo)radiotherapy [2-3], significantly impacting nutritional status and quality of life [4]. Despite its clinical relevance, standardized tools for assessing and rehabilitating taste remain limited. This study aims to develop and validate a prophylactic speech-language therapy protocol to preserve taste function before the onset of symptoms.

## Materials and Methods:

The effectiveness of the intervention will be tested by comparing two groups of HNC patients undergoing (chemo)radiotherapy. Both groups (control and experimental, n=30 each) will receive usual swallowing therapy, while the experimental group will receive an additional intervention targeting dysgeusia.

The 4-week protocol intervention, starting 1 week before and continuing through week 3 of radiotherapy comprises:

- Parotid gland massage to stimulate saliva production and enhance taste perception [5-7]
- Internal cryotherapy to moisturize the oral cavity and increase intraoral sensitivity [8].
- Taste training using varying concentrations of four common flavors, with participants rating perceived intensity and identifying each flavor

Four time points will be used to assess the effect of the intervention: prior to (chemo)radiotherapy, at week 4 of treatment, and 1- and 6-months post-treatment.

The protocol includes:

- Clinical assessment using the CTCAE scale to categorize severity of adverse effects (e.g., fatigue, mucositis, xerostomia, swallowing disorders) [9].
- Sialometric assessment of unstimulated salivary flow and pH using the Saliva-Check Buffer test [10].
- Taste assessment based on detection and recognition thresholds of four primary tastes using an adapted drop method at four concentrations [11].
- Quality of life questionnaires to capture patients' subjective experiences of taste alterations [12-15].

## Results/Conclusions:

This study is in the preparation phase. The proposed protocol is expected to be feasible in clinical settings, with potential for early detection and prophylactic preservation of taste function in HNC patients.

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