

## Introduction

- Head and Neck Cancers (HNC) = one of the most common forms of cancer worldwide.
- Patients with HNC face a unique set of symptoms and treatment-related complications, among which taste alterations hold significant importance. Their impact on nutritional status, food intake, and weight is important
- Metallic Taste (MT) proves to be one of the most disruptive symptoms, affecting patients' quality of life and their ability to maintain adequate nutrition. However little is reported on this symptom, including its incidence and impact.

This study aimed to address this gap by delving deep into the impact of MT in HNC patients, offering a comprehensive analysis of its implications and clinical significance.

## Methods

- Prospective cohort of 44 patients diagnosed with HNC, included at the onset of their cancer, before the occurrence of MT, and followed up for one year, unless a recurrence or another cancer occurred.
- At the end of the study, patients were categorized into two distinct groups based on the presence or absence of MT as reported by the patients.
- Assessment: EORTC QLQ30 and HN35 questionnaires to evaluate Quality of Life (QoL), a specific questionnaire to assess MT impact in patients complaining about MT, measurement of weight, a Visual Analog Scale (VAS) to quantify food intake (ranging from 0 for total eating abstinence to 10 for normal eating)
- Moments of assessments: before any treatment; after surgery if any; midway and upon completion of radiotherapy if any; at 3-6-9 and 12 months.

	MT	No MT	p
Sex: males n(%); females n(%)	9 (75%), 3 (25%)	25 (78.1%), 7 (21.9%)	1
Mean age at diagnosis ± SD (year)	61.7 ± 10.2	63.6 ± 9.8	0.58
Location n (%):			0.57
Hypopharynx	0 (0%)	3 (9.4%)	
Larynx	1 (8.3%)	7 (21.9%)	
Oropharynx	4 (33.3%)	10 (31.2%)	
Oral Cavity	5 (41.7%)	9 (28.1%)	
Unknown primary	2 (16.7%)	3 (9.4%)	
T stage n (%):			0.69
1	3 (25%)	6 (18.7%)	
2	6 (50%)	12 (37.5%)	
3	1 (8.3%)	7 (21.9%)	
4	0 (0%)	4 (12.5%)	
x	2 (16.7%)	3 (8.8%)	
N stage n (%):			0.77
0	4 (33.3%)	16 (50%)	
1	4 (33.3%)	6 (18.7%)	
2a	1 (8.3%)	3 (9.4%)	
2b	2 (16.7%)	3 (9.4%)	
2c	0 (0%)	2 (6.2%)	
3a	1 (8.3%)	2 (6.2%)	
Smoking at inclusion n (%):			0.11
Yes	3 (25%)	17 (50%)	
No	3 (25%)	2 (6.2%)	
Quit	6 (50%)	13 (40.6%)	
Treatment			0.54
Withdrawal of consent before treatment	0 (0%)	5 (15.6%)	
Chemotherapy, surgery, radiotherapy	0 (0%)	1 (3.1%)	
Surgery	2 (16.7%)	12 (37.5%)	
Surgery, radiotherapy	7 (58.3%)	5 (15.6%)	
Surgery, radiochemotherapy	3 (25%)	9 (28.1%)	

Table 1: studied population characteristics at inclusion according to metallic taste (MT) status

## Results

- MT was commonly observed (27.2%), always during the treatment phase and mostly linked with radiotherapy or radiochemotherapy.
- MT intensity was moderate (40%) to high (26.7%).
- MT had a significant negative impact on QoL linked to dysgeusia (p=0.025, figure 1).
- The negative impacts of MT on food intake (figure 2) and on weight (figure 3) were not significant
- **Discrepancy between the perception of MT and its impact.**

For every figure, blue = metallic taste, black = no metallic taste.

\* : p < 0,05

Moments: 1: before any treatment; 2: after surgery if any; 3: in the middle of radiotherapy (if any); 4: after radiotherapy (if any); 5: 3 months after treatment completion; 6: 6 months after treatment completion; 7: 9 months after treatment completion; 8: 12 months after treatment completion.

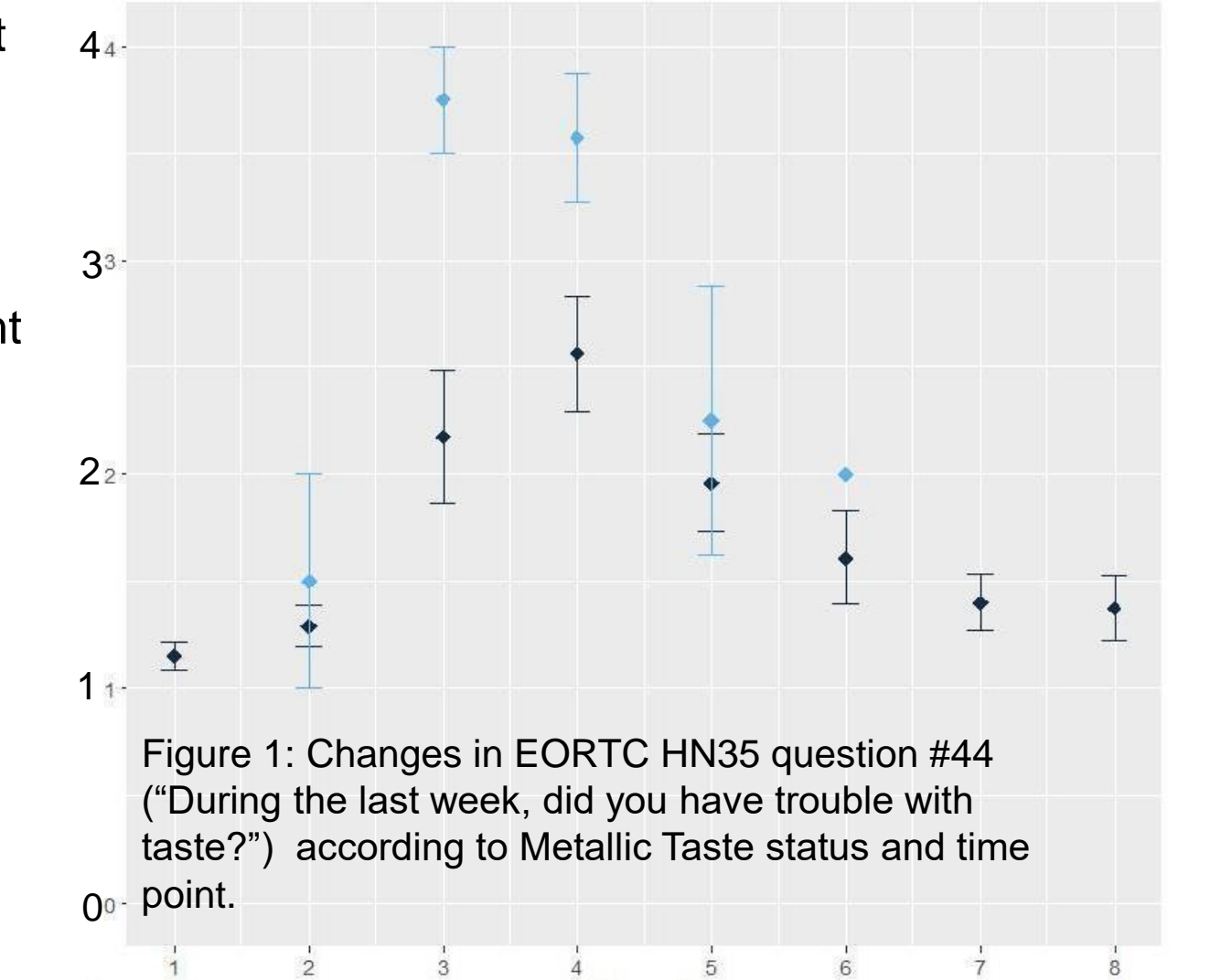


Figure 1: Changes in EORTC HN35 question #44 ("During the last week, did you have trouble with taste?") according to Metallic Taste status and time point.

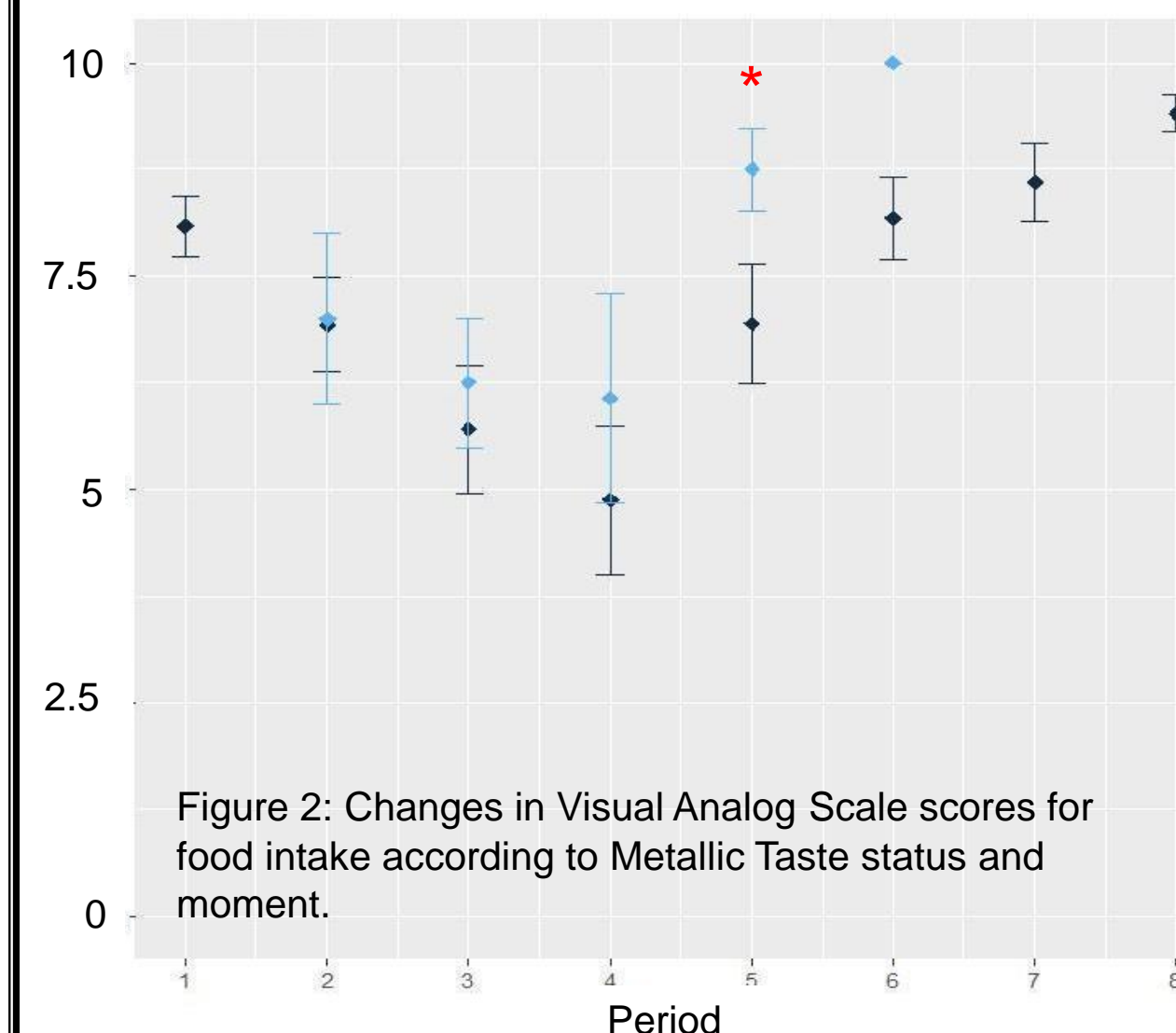


Figure 2: Changes in Visual Analog Scale scores for food intake according to Metallic Taste status and moment.

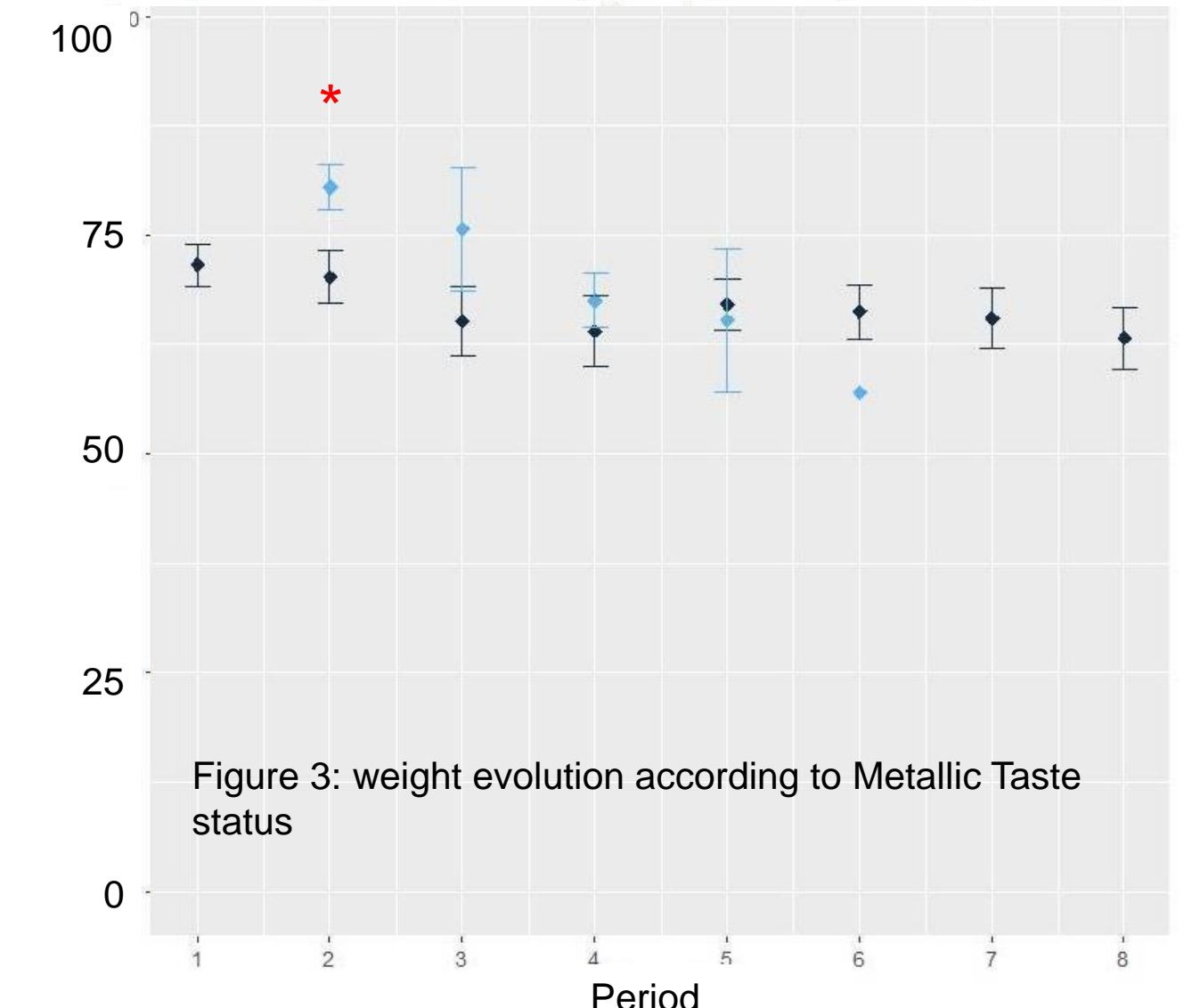


Figure 3: weight evolution according to Metallic Taste status

## Conclusions

Metallic taste was experienced by 27.2% of head and neck patients and always observed during the treatment phase : (moments 2 to 5 i.e. after surgery to after radiotherapy or radiochemotherapy; one patient still at moment 6, i.e. 3 months after the radiotherapy or radiochemotherapy). Importantly, MT significantly impacted the quality of life (QoL) associated with dysgeusia. Future research efforts in this area are currently investigating the causes and elucidating optimal strategies for addressing the challenges posed by MT in HNC patients. Such insights are crucial for enhancing the quality of care provided to this patient population.