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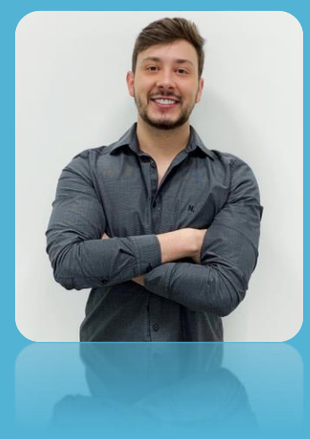
# Pilot study using oxygen fluid (Blue®m) in cancer patients with oral mucositis in a hospital of southern Brazil

Author(s): Leonardo Rosalen da Silva[1], Soraia Almeida Watanabe Imanishi[2], Léa Maria Franceschi Dallanora[3], Amanda Lopes[4], Flavia Sukekava[5].

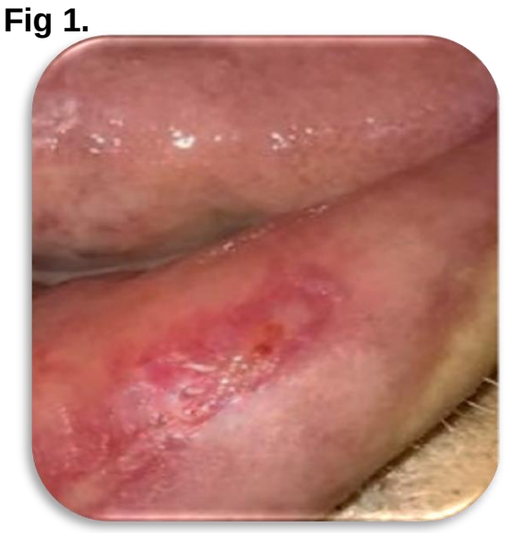
[1] Graduate in dentistry – Universidade do Oeste de Santa Catarina, Brazil. [2] Master in periodontics – Universidade Federal de Minas Gerais, Brazil. [3] Master in clinical dentistry – São Leopoldo Mandic, Brazil. [4] Master in clinical dentistry – Univerdade Positivo, Brazil. [5] Doctorate in Dental Sciences – Universidade de São Paulo, Brazil.
*E-mail: leonardorosalendasilva83@gmail.com



## Background & Aim

Oral mucositis (Figure 1) consists of irritation/inflammation of the oral mucosa caused by the action of head and neck radiotherapy/chemotherapy. Despite various treatment options, none of them has proven to be superior in terms of becoming a globally effective and accessible protocol, so far. The aim of this study was to compare therapeutic alternatives in patients with oral mucositis undergoing cancer treatment at a university hospital of Southern Brazil.

**Fig 1.**



## Methodology & Results

In this pilot study, 80 patients were selected and randomly divided into four treatment groups. Of these, only 76 patients met all the minimum sample requirements in the double-blind survey:

**Fig 2.**


**76 PATIENTS**

**Fig 3.**


**Group 1 (G1):** oral fluid

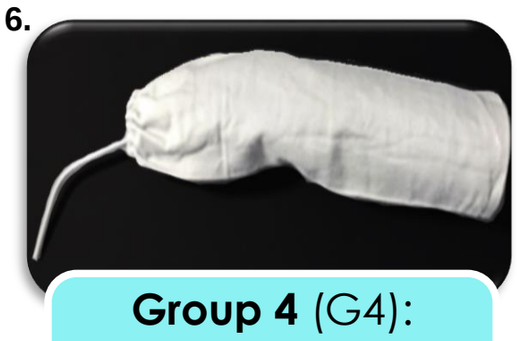
**Fig 4.**


**Group 2 (G2):** nystatin, oral suspension

**Fig 5.**

**Group 3** (G3): laser (one session)

**Fig 6.**



**Group 4** (G4): placebo laser (one session)

Using a validated and specific questionnaire for mucositis, self-reported pain scores as well as limitations in the daily routine that this pain caused were compared between groups.

Regarding pain in the mouth and throat region, when comparing the initial phase (1st day of therapy) and the final phase (5th day of therapy).

**Table 1** - Comparison of mouth and throat pain descriptors (initial vs. final) between groups.

| | Initial | | Final | | |
|---|---|---|---|---|---|
| Descriptors | Everage | Standard deviation | Everage | Standard deviation | p |
| **G1** | **6,4** | 1,8 | **1,8** | 1,0 | **<0,001 |
| **G2** | **6,1** | 2,1 | **4,1** | 2,6 | **0,001 |
| **G3** | **3,6** | 2,0 | **2,7** | 2,4 | 0,088 |
| **G4** | **3,3** | 1,7 | **2,5** | 1,7 | 0,074 |

**Test: Kruskal-Wallis.**

**Description:** G1 had an average of 4.6 points reduction in pain levels, having better results ($p<0.01$) compared to G2 (2.1), G3 (0.9), and G4 (0.8), and with respect to activity limitations, patients in groups G1 and G2 reported improvement significant in the performance of all activities and G4 showed no statistically significant difference.

## Conclusion

The data suggest that oral fluid (Blue®m) without xylitol/menthol could be used as a viable treatment alternative to reduce the pain caused by oral mucositis observed in patients undergoing cancer treatment, however, these results need to be better evaluated. The product becomes an excellent option for patients who do not have access to daily laser therapy.

## References

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