

# Oral mucositis

## General information

- Oral mucositis (OM) = inflammation and ulceration of the oral mucosa resulting from cancer treatments
  - Radiotherapy
  - Chemotherapy: cyclophosphamide, doxorubicin, vincristine, etoposide, ifosfamide, methotrexate, docetaxel, paclitaxel, cisplatin, carboplatin, oxaliplatin, irinotecan, vinorelbine and 5-FU
  - Targeted therapy: afatinib, erdafitinib, bevacizumab, cetuximab, erlotinib, sorafenib, sunitinib, gefitinib, lapatinib
- OM/stomatitis is a clinical diagnosis (*DD oral candidiasis, herpes simplex*)
- Staging can be done according to the NCI-CTAE (see table 1)

*Table 1 Grading of Oral mucositis by NCI-CTAE*

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Asymptomatic or mild symptoms; intervention not indicated	Moderate pain or ulcer that does not interfere with oral intake; modified diet indicated	Severe pain interfering with oral intake	Life-threatening consequences; urgent intervention needed	Death

## Prevention

- General measures: dental consult pre-treatment, regular inspection, no ill-fitting protheses, keep mouth moist
- Brushing teeth and gums: use soft brush, after each meal and before sleeping (4x/day)
- Rinse mouth: use UZA-mouthwash<sup>1</sup> 4x/day during 1 minute in regimens with high risk of OM
- Avoid painful stimuli: smoking, alcohol, certain foods (tomato, citrus, hot and spicy food, crusty foods)
- Ice: Ice chips before and during therapy (**not** in case of oxaliplatin)
- Low-level laser therapy (LLLT) is indicated to prevent OM in patients undergoing (chemo)radiotherapy for HNSCC (**not** in cancers of the oral cavity)
- Honey is indicated in to prevent OM in HNSCC-patients receiving (chemo)radiotherapy

## Treatment

- Assessment: level of pain, amount of oral intake, secondary infections, bleeding,...
- Adequate mouthwash: UZA-mouthwash every 4 hours

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<sup>1</sup> Recipe for UZA-mouthwash: Lidocaine 200 mg (=231 mg lidocaine HCl), Methylprednisolone 100 mg, Methylcellulose 1500 mPa 2,5 g, Propyleenglycol 10 ml, Nystatine 2,4 ME, Muntspiritus 3%, Aqua ad 500 ml DT 300mL

- Adequate analgesia (according to WHO pain ladder):
  - Often need for opiates (e.g. transdermal fentanyl patch)
  - Topical analgesia (UZA-mouthwash contains lidocaine, lidocaine gels,...)
  - LLLT (vide infra)
- Treatment of secondary infections (e.g. antifungal therapy,...)
- Consider dose reductions if grade  $\geq 2$
- Consider enteral or parenteral feeding (e.g. microsonde, PEG-sonde, total parenteral nutrition)

### Low Level Laser Therapy (LLLT)

- Working mechanisms:
  - Immediate analgesia (after each LLLT)
  - Acceleration of tissue regeneration
  - Slowing down the progression of OM
  - Anti-inflammatory treatment
- Indications
  - Treatment of OM in patients receiving cancer treatments.
- Contra-indications:
  - Uncooperative patients (e.g. confusion)
  - **!! NOT** in patients with oral cancer or tumours of the oral cavity (exception: palliation).

### Further reading

- [MASCC/ISOO clinical practice guidelines for the management of mucositis secondary to cancer therapy \(2020\)](#)
- [ESMO Mucositis Guidelines \(2015\)](#)
- [Management of Cancer Therapy–Associated Oral Mucositis by Brown et al. \(2023\)](#)
- <https://www.ncbi.nlm.nih.gov/books/NBK565848/>
- [SOP LLLT UZA \(hematologie\)](#)