

OUTPATIENT DENTAL MANAGEMENT OF ONCOLOGICAL PATIENTS: A CLINICAL CASE REPORT

Marcus Augusto Silveira

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/2799973992175524>

Carlos Henrique Santos

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/2620391908140656>

Alice Mariana Alves Cornélio

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/0489419007432692>

Eduarda Silva Rosa

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/4081906575588369>

Paula Aguiar Rosa

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/8863399311219926>

Martinelle Rocha Taranto

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/3627602787193573>

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



Raquel Auxiliadora Borges

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/2606399150408616>

Isabela Ribeiro Madalena

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/4412737563457376>

Breno Cherfên Peixoto

School of Dentistry, ``Centro Universitário
Presidente Tancredo de Almeida Neves``,
São João del Rei, MG, Brazil
<http://lattes.cnpq.br/5002697592786943>

Abstract: Although salivary gland malignancies are widely distributed in adult patient populations, outpatient management still represents a challenge in the dental office. Thus, the objective of the present work was to report a clinical case on the therapeutic strategies used to restore the oral health of a patient with malignant neoplasia of the salivary glands. A 52-year-old female patient presented to the dental clinic, referred by the health unit for oral health assessment. During the anamnesis, the patient reported having Grade I Mucoepidermoid Carcinoma of the minor salivary gland. The patient reported continuous use of some medications and that she had already undergone 35 radiotherapy sessions. The patient was also using a nasal tube (5 months) and a percutaneous endoscopic gastrostomy tube (18 months). Regarding oral health, the patient reported difficulty brushing, sensitivity and gum bleeding. During clinical examination, it was possible to observe periodontitis as a manifestation of systemic disease, neoplastic lesions and extensively ulcerated mucosa, absence of teeth, extensive tooth destruction due to radiation and residual roots resulting from tooth fracture that occurred after the start of radiotherapy. As therapeutic strategies, guidance was provided regarding oral hygiene, use of artificial saliva and laser therapy. The protocol adopted was 2J of infrared for two sessions, 25 minutes each session. After significant improvement in mucosal inflammation, extraction of all teeth was performed. During the extraction sessions, 13 infrared laser sessions were carried out using a 4J protocol for 20 minutes each. After tooth extractions and laser therapy sessions, the patient discontinued the use of the nasal probe and endogastric tube. In conclusion, oral health guidance regarding brushing, use of mouthwash, artificial saliva, diet control associated with laser therapy demonstrated

interesting results in the present clinical case report.

Keywords: Neoplasms, Salivary Gland Neoplasms, Dentistry, Integrative Dentistry, Dental Care.

INTRODUCTION

Neoplasms in the oral cavity are complex and highly prevalent conditions worldwide (Mello et al., 2018; Peres et al., 2019; Sarode et al., 2020). In a systematic review with meta-analysis carried out based on studies with clinical and histopathological diagnosis, it was possible to demonstrate that potentially malignant lesions in the oral cavity in particular, have a global prevalence of involvement of 4.47% of the population; with Asian and South American/Caribbean populations showing the highest rates of involvement (Mello et al., 2018). In Brazil, malignant neoplasms of the oral cavity are the third most prevalent oral health problem (Lima et al., 2022), generating significant economic burdens on the specialized public service, in addition to the functional and psychological impact on the patient and family (Mello et al., 2018; Peres et al., 2019; Sarode et al., 2020; Lima et al., 2022).

In recent years, new types and subtypes of malignant neoplasms have been described due to the recognition of their differentiated clinical, histological and molecular characteristics (Andreasen et al., 2019). In particular, this applies to malignant neoplasms of the sinonasal tract, oropharynx and salivary gland (Andreasen et al., 2019). Malignant neoplasms of the salivary glands arise most frequently from the major salivary glands (parotid, submandibular, or sublingual), and less frequently from one of several hundred minor salivary glands located in the palate, tonsils, pharynx, or larynx (Reinheimer et al., 2019; Alsanie et al., 2022). In general, they are rare pathological entities and, as

mentioned above, they present different molecular profiles (Reinheimer et al., 2019); This statement significantly implies the accurate diagnosis and therapeutic strategies taken by both interpreting pathologists and professionals working in multidisciplinary patient care.

Basic therapeutic strategies for the various types of oral malignant neoplasms consist of eliminating neoplastic tissues through surgery, radiotherapy, chemotherapy or a combination of these three modalities. The decision to choose the therapeutic modality depends on the extent, tumor staging, relationship with attached anatomical structures, involvement of the lymphatic chain, age and cooperation of the patient, in addition to the histological subtype of the lesion (Lung et al., 2007). It is essential to highlight multidisciplinary action and the patient's need for basic oral hygiene strategies before, during and after antineoplastic therapy (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022). Oral health education strategies modify oral microbial load (Jawad et al., 2015; Odego et al., 2021; Watson et al., 2021; Yong et al., 2022). Dental care will also indicate the need for some type of dental procedure that will limit estimated foci of infection (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022). Furthermore, immediate sequelae, such as cellulitis, mucositis, dysphagia, dysgeusia and weight loss, and long-term sequelae, such as dental caries, trismus, xerostomia and osteoradionecrosis will require dental attention (Jawad et al., 2015; Mercadante et al., 2021).

To date, most studies on salivary gland neoplasms are limited for several reasons, including being out of date or extrapolated from studies from a single center or country (Reinheimer et al., 2019; Watson et al., 2021; Alsanie et al., 2022). Thus, the present

work aimed to report a clinical case on the therapeutic strategies used to restore the oral health of a patient with malignant neoplasia of the salivary glands.

CLINICAL CASE REPORT

The present work was submitted to the Research Ethics Committee of the Centro Universitário Presidente Tancredo de Almeida Neves (UNIPTAN) and approved opinion number: 6.330.710 and CAAE number: 74230523.7.0000.9667.

A 52-year-old female patient presented to the Medical and Dental Specialties Center (CEM) of the Centro Universitário Presidente Tancredo de Almeida Neves (UNIPTAN) referred by the Santa Casa da Misericórdia health unit in São João del Rei, municipality of São João del Rei for oral health assessment. During the anamnesis, the patient reported having Grade I Mucoepidermoid Carcinoma of the minor salivary gland. The patient reported continuous use of medications: mirtazapine 15 mg (Germed, Jaguariuna, São Paulo, Brazil) 01 (one) tablet at night, sertraline hydrochloride 50 mg (Medley, Suzano, São Paulo, Brazil) 01 (one) tablet in the morning, levothyroxine sodium 112 mcg (Puran T4°, Sanofi, São Paulo, São Paulo, Brazil) 01 (one) tablet in the morning, on an empty stomach, simvastatin 20 mg (Novartis, Monções, São Paulo, Brazil) 01 (one) tablet a night and pembrolizumab 100 mg/4ml (Keytruda®, MSD Brasil, Rahway, United States). The patient had already undergone 35 radiotherapy sessions; she used a nasal tube – for 5 months and a percutaneous endoscopic gastrostomy tube – 18 months.

Regarding oral health, the patient reported difficulty brushing due to gum sensitivity and bleeding. During clinical examination, it was possible to observe periodontitis as a manifestation of systemic disease – neoplastic lesions and extensively ulcerated mucosa,

absence of teeth, extensive tooth destruction due to radiation and residual roots resulting from tooth fracture that occurred after the start of radiotherapy. In an immediate consultation, oral hygiene instructions were provided, guidance on intelligent sugar consumption and an imaging examination was requested – panoramic x-ray in semi-open occlusion (Figure 1).



Figure 1. Initial radiographic appearance.

The clinical and dental radiographic examination was outlined in table 1.

Due to the oral health condition and multi-professional decision, it was decided to extract all teeth. Therefore, the adaptation of the oral environment began with laser therapy DMC Therapy EC® (Therapy EC, DMC, São Carlos, São Paulo, Brazil) on the lower and upper vestibular mucosa, lip, intra- and extra-parotid gland region, oral cavity, tongue (back and belly) and sublingual gland region. The protocol adopted was two sessions of 2J infrared for 25 minutes in each session. When a significant improvement was noted, extractions were performed. The patient also used artificial saliva - a tablespoon of the solution.

Surgical procedures were performed under antibiotic prophylaxis – (Amoxicillin 500 mg – 1 g - 1 hour before surgery). Quadrant extractions were performed under local anesthesia with 2% lidocaine hydrochloride and 1:100,000 IU epinephrine (Alphacaine®, DFL, Rio de Janeiro, Rio de Janeiro,

Tooth	Clinical description	Tooth	Clinical description
18	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries	38	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries
17	Deep dental caries lesion on the buccal surface and cervical region – radiation caries	37	Absent
16	Residual root	36	Residual root
15	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries	35	Residual root
14	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries	34	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
13	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries	33	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries
12	Absent	32	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
11	Absent	31	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
21	Absent	41	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
22	Absent	42	Residual root
23	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries	43	Deep dental caries lesion on the buccal surface and cervical region – radiation caries
24	Deep dental caries lesion on the buccal surface and cervical region – radiation caries	44	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
25	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries	45	Deep dental caries lesion on the buccal surface and cervical region – radiation caries
26	Residual root	46	Absent
27	Residual root	47	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries
28	Medium-depth dental caries lesion on the buccal surface and cervical region – radiation caries	48	Shallow dental caries lesion on the buccal surface and cervical region – radiation caries

Table 1. Summary of the initial clinical and radiographic examination.

Brazil). The patient received postoperative recommendations and continued with post-surgical medication: Ciprofloxacin hydrochloride 500 mg (Medley, Suzano, São Paulo, Brazil) every 12 hours for 5 days, nimesulide 100 mg (Neo Química, São Paulo-SP, Brazil) every 12 hours for 3 days, sodium dipyrone 500 mg (Medley, Suzano, São Paulo, Brazil) every 6 hours for 2 days and mouthwash with 5 ml of 0.12% chlorhexidine digluconate solution (Periogard®, Colgate, São Paulo, São Paulo, Brazil), 2 to 3 times a day for 1 minute; started after the third post-surgical day for 15 days. The surgeries were performed 60 days apart. The patient was monitored every seven days for suture removal and a new laser therapy protocol. After tooth extractions and laser

therapy sessions, the patient discontinued the use of the nasal probe and endogastric tube. Upper and lower complete dentures will be made. The patient continues to be monitored weekly.

DISCUSSION

Malignant neoplastic lesions are complex and highly prevalent conditions worldwide (Mello et al., 2018; Peres et al., 2019; Sarode et al., 2020). In Brazil in particular, it is the third most common oral health problem, constituting a serious public health problem as it drastically impacts the quality of life of those affected (Mello et al., 2018; Peres et al., 2019; Sarode et al., 2020; Lima et al., 2022). The importance of multidisciplinary action

for patient comfort during cancer treatment is evident (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022). The dentist in particular plays a fundamental role in maintaining oral health or recovering the functions of the craniofacial complex (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022, Yong et al., 2022). Thus, the present work aimed to report a clinical case on the therapeutic strategies used to restore the oral health of a patient with malignant neoplasia of the salivary glands. The clinical case report shows a patient who started chemotherapy/radiotherapy immediately and only received dental care late. Therapeutic strategies were adopted to restore oral health.

During the chemotherapy protocol, the medication is expected to act on cells that present constant mitosis; During the radiotherapy protocol, ionizing radiation is expected to act on all cells present in the area affected by radiation, having an effect on malignant cells and oral tissues (Huang; O'Sullivan, 2013).

It is essential that the patient maintains multidisciplinary care to contain adverse reactions that may develop (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022). In relation to oral tissues, the chemotherapy protocol makes the mucosa extremely inflamed since vascularization is reduced; In relation to ionizing radiation, the destruction of somatic tissues in which radiosensitivity is greater is expected, such as vascular tissue (Huang; O'Sullivan, 2013). Such protocols will develop clinical conditions such as musositis, xerostomia and trismus which will consequently result in dysphagia, dysgeusia and weight loss (Jawad et al., 2015; Mercadante et al., 2021); dental caries disease and osteoradionecrosis due to the destruction of mineralized tissues (Jawad et al., 2015; Mercadante et al., 2021). Thus, the role of the

dental surgeon prior to therapeutic strategies for malignant neoplasms stands out. Oral health education strategies can reduce the oral microbial load, reducing tissue inflammation and limiting infectious foci (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022; Yong et al., 2022). However, as clinical signs will also depend on the therapeutic intensity adopted, prior support from the dentist is also necessary, alerting the patient of possible complications and protocols for comfort (Huang; O'Sullivan, 2013).

Oral hygiene through brushing is encouraged, however, when the practice becomes extremely painful, the adoption of alternative methods must be encouraged (Jawad et al., 2015). Scientific evidence demonstrates improvement in the control of oral biofilm through the use of 0.2% chlorhexidine digluconate mouthwash three to four times a day (Jawad et al., 2015). In episodes in which mouthwash is also not tolerated, cleaning with gauze and mouthwash or filtered water is recommended (Jawad et al., 2015). In the case report, 0.12% chlorhexidine digluconate was made available to the patient due to the patient's inability to acquire 0.2% chlorhexidine digluconate. The case report demonstrated interesting results, but the applicability of other associated protocols mentioned below stands out.

To limit xerostomia, initially the frequent intake of cold water/milk or other alkaline drinks is encouraged and may be the therapy most frequently practiced by cancer patients due to its ease (Mercadante et al., 2021). However, there is also an indication for the use of artificial saliva or salivary stimulants.

Regarding artificial saliva, there is a wide variety available on the market, such as spray, gel, mouthwash, among others. Artificial saliva contains neutral pH and electrolytes that correspond to the composition of the

patient's saliva (Mercadante et al., 2021). It is noteworthy that in dentate patients, artificial saliva must contain fluoride to help prevent the demineralization of hard tissues (Mercadante et al., 2021). In our case report, artificial saliva with the addition of fluoride was encouraged in order to limit injuries. Salivary stimulants such as chewing gum and citric acid tablets were not encouraged by the initial oral condition.

Cancer patients are also advised to maintain a balanced diet (Jawad et al., 2015). Working with a professional nutritionist can enrich the process the patient is undergoing. In the case report, the patient was already receiving parenteral nutrition, indicating a patient at high nutritional risk and with an even greater need for nutritional control in order to undergo the extraction protocol in the future. The significant improvement and removal of parenteral nutrition due to the applicability of laser therapy stands out. The rapidly growing field of laser and light therapy that uses low-level energy to stimulate biological responses has been termed photobiomodulation (Elad et al., 2020; Zadik et al., 2019). Photobiomodulation therapy has been shown to significantly decrease pain on the seventh day after starting treatment and significantly reduce the severity of chemotherapy-induced mucositis in children and adolescents (Gobbo et al., 2018; Elad et al., 2020). In adults, although there are numerous reports of success (Legouté et al., 2019), scientific evidence still describes differences in results due to variability in protocols (Gobbo et al., 2018; Zadik et al., 2019; Elad et al., 2020). The mechanism of action of photobiomodulation is based on the enzyme cytochrome c oxidase (CcO) in the mitochondrial respiratory chain, facilitating the transport of electrons, resulting in an increase in the transmembrane proton gradient that drives the production of adenosine triphosphate, improving metabolic

functions cellular (Khakh BS et al., 2009; Murrell GA et al., 1990).

The surgical protocol for patients undergoing radiotherapy must be very well defined since there is a risk of osteoradionecrosis and carried out in a hospital environment.

In view of the above, the importance of dental monitoring is initially highlighted to prevent, if possible, surgical interventions (Jawad et al., 2015; Odega et al., 2021; Watson et al., 2021; Ward et al., 2022). In the case report described, the patient was treated in a dental outpatient setting, but the patient's improvement in relation to the regression of the neoplastic lesion, suspension of radiotherapy and improvement of mucositis stands out. Extractions were performed carefully, with minimal trauma whenever possible, ensuring primary soft tissue closure. The patient was advised to follow a light diet and post-operative care in relation to the trauma to the operated surface. Surgical therapy was carried out in stages, allowing time for the oral tissue to heal before further intervention. The laser was also used to aid healing.

Finally, it is noteworthy that malignant neoplasms in the oral cavity have a high prevalence and require well-defined multidisciplinary therapeutic strategies. Dental surgeons need to be prepared to accept and propose protocols that help limit damage.

FINAL CONSIDERATIONS

In this clinical case report, the strategy addressed concerns a patient with poor oral health. Oral health guidance regarding brushing, use of mouthwash, artificial saliva, diet control associated with laser therapy demonstrated interesting results in the present clinical case report. It is hoped that this work can contribute by helping professionals to work in similar cases.

REFERENCES

- ALSANIE, I; RAJAB, S; COTTOM, H; ADEGUN O; AGARWAL R; JAY, A. *et al.* Distribution and frequency of salivary gland tumours: An international multicenter study. **Head Neck Pathol**, v. 16, n. 4, p. 1043, 2022. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/35622296/> Acesso em: 3 set. 2023.
- ANDREASEN, S.; KISS, K.; MIKKELSEN, L. H.; CHANNIR, H. I.; PLASCHKE, C. C.; MELCHIOR, L. C. *et al.* An update on head and neck cancer: new entities and their histopathology, molecular background, treatment, and outcome. **APMIS**, v. 127, n. 5, p. 240-264, 2019. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/30811708/> Acesso em: 3 set. 2023.
- ELAD, S; CHENG, K. F; LALLA, R. V; YAROM, N.; HONG, C.; LOGAN, R. M. *et al.* Clinical practice guidelines for the management of mucositis secondary to cancer therapy. **Wiley Periodicals LLC**, v. 126, n. 19, p. 4423-4431, 28 jul. 2020. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7540329/> Acesso em: 31 out. 2023.
- GOBBO, M.; VERZEGNASSI, F.; RONFANI, L.; ZANON, D.; MELCHIONDA, F.; BAGATONNI, S. *et al.* Multicenter randomized, double-blind controlled trial to evaluate the efficacy of laser therapy for the treatment of severe oral mucositis induced by chemotherapy in children: laMPO RCT. **Pediatr Blood Cancer**, v. 65, n. 8, p. e27098, 2018. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/29727048/> Acesso em: 26 nov. 2023
- HUANG, S. H.; O'SULLIVAN, B. Oral cancer: Current role of radiotherapy and chemotherapy. **Med Oral Patol Oral Cir Bucal**. V. 18, n. 2, p. e233-40, 2013. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/23385513/> Acesso em: 26 nov. 2023.
- JAWAD, H.; HODSON, N. A.; NIXTON, P. J. A review of dental treatment of head and neck cancer patients, before, during and after radiotherapy: part 1. **Br Dent J**, v. 218, n. 2, p. 65-8, 2015. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/25613260/> Acesso em: 3 set. 2023.
- KHAKH, B. S.; BURNSTOCK, G. The double life of ATP. **Sci Am**, v. 301, n. 6, p. 84-90, 2009. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/20058644/> Acesso em: 26 nov. 2023
- LEGOUTÉ, F.; BENSADOUN, R.; SEEGER, V.; POINTREAU, Y.; CARON, D.; LANG, P. *et al.* Low-level laser therapy in treatment of chemoradiotherapy-induced mucositis in head and neck cancer: results of a randomised, triple blind, multicentre phase III trial. **Radiat Oncol**, v. 22, n. 1, p. 83, 2019. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6530019/> Acesso em: 26 nov. 2023
- LIMA, I. A. B.; ALMEIDA, R. J. L.; PONTES-SILVA, A.; RIBEIRO, B. F.; FIGUEIREDO, F. W. S.; QUARESMA, F. R. P. *et al.* Epidemiological study on the lip and oral cavity cancer in Brazil: connecting science and clinical applicability. **Rev Assoc Med Bras**, v. 68, n. 9, p. 1337-41, 2022. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/36228268/> Acesso em: 3 set. 2023.
- LUNG, T.; TASCAU, O. C.; ALMASAN, H. A.; MURESAN, O. Head and neck cancer, treatment, evolution and post therapeutic survival - Part 2: a decade's results 1993-2002. **J Craniomaxillofac Surg**, v. 35, n. 2, p. 126-31, 2007. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/17449258/> Acesso em: 3 set. 2023.
- MELLO, F. W.; MIGUEL, A. F. P.; DUTRA, K. L.; PORPORATTI, A. L.; WARNAKULASURIYA, S.; GUERRA, E. N. S; *et al.* Prevalence of oral potentially malignant disorders: A systematic review and meta-analysis. **J Oral Pathol Med**, v. 47, n. 7, p. 633-640, 2018. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/29738071/> Acesso em: 3 set. 2023.
- MERCADANTE, V.; JENSEN, S. B.; SMITH, D. K.; BOHLKE, K.; BAUMAN, J.; BRENNAN, M. *et al.* Salivary gland hypofunction and/or xerostomia induced by nonsurgical cancer therapies: ISOO/MASCC/ASCO Guideline. **J Clin Oncol**, v. 39, n. 25, p. 2825-2843, 2021. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/34283635/> Acesso em: 3 set. 2023.
- MURRELL, G. A.; FRANCIS, M. J.; BRONLEY, L. Modulation of fibro-blast proliferation by oxygen free radicals. **Biochem J**, v. 265, n. 3, p. 659-65, 1990. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1133685/> Acesso em: 26 nov 2023
- NES, A. G.; POSSO, M. B. S. Patients with moderate chemotherapy-induced mucositis: pain therapy using low intensity lasers. **International Nursing Review**, v. 52, n. 1, p. 68-72, mar. 2005. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/15725279/> Acesso em: 19 out. 2023.

ODEGA, A.; MOJDAMI, D.; HOPE, A.; WATSON, E.; GLOGAUER, M. The process of developing consensus guidelines by dental oncologists for pre-radiotherapy dental care in head and neck cancer patients using the modified delphi technique. **J Evid Based Dent Pract**, v. 21, n. 4, p. 101620, 2021. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/34922716/> Acesso em: 3 set. 2023.

PERES, M. A.; MACPHERSON, L. M. D.; WEYANT, R. J.; DALY, B.; VENTURELLI, R.; MATHUR, M. R. *et al.* Oral diseases: a global public health challenge. **Lancet**, v. 394, n. 10194, p. 249-260, 2019. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/31327369/> Acesso em: 3 set. 2023.

REINHEIMER, A.; VIEIRA, D. S. C.; CORDEIRO, M. M. R.; RIVERO, E. R. C. Retrospective study of 124 cases of salivary gland tumors and literature review. **J Clin Exp Dent**, v. 11, n. 11, p. e1025-1032, 2019. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/31700577/> Acesso em: 3 set. 2023.

SARODE, G.; MANIYAR, N.; SARODE, S. C.; JAFER, M.; PATIL, S.; AWAN, K H. Epidemiologic aspects of oral cancer. **Dis Mon.** v. 66, n. 12, p. 100988, 2020. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/32605720/> Acesso em: 3 set. 2023.

WARD, M. C.; CARPENTER, M. D.; NOLL, J.; CARRIZOSA, D.; MOELLER, B. J.; HELGESON, E. S. *et al.* Oncologists' perspective on dental care around the treatment of head and neck cancer: A Pattern of Practice Survey. **JCO Oncol Pract**, v. 18, n. 1, p. e28-e35, 2022. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/34242067/> Acesso em: 3 set. 2023.

WATSON, E.; MOJDAMI, Z. D.; OLADEGA, A.; HOPE, A.; GLOGAUER, M. Clinical practice guidelines for dental management prior to radiation for head and neck cancer. **Oral Oncol**, v. 123, p. 105604, 2021. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/34775180/> Acesso em: 3 set. 2023.

YONG, C. W.; ROBINSON, A.; HONG, C. Dental evaluation prior to cancer therapy. **Front Oral Health**, v. 18, n. 3, p. 876941, 2022. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/35510226/> Acesso em: 3 set. 2023.

ZADIK, Y.; ARANY, P. R.; FREGNANI, E. R.; BOSSI, P.; ANTUNES, H. S.; BENSADOUN, R. *et al.* Systematic review of photobiomodulation for the management of oral mucositis in cancer patients and clinical practice guidelines. **Supportive Care in Cancer**, v. 27, n. 10, p. 3969-3983, 8 jul. 2019. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/31286228/> Acesso em: 30 out. 2023.