**Critically Appraised Topic (CAT)**

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| **Project Team:**  |
| **10-A1** |
| **Project Team Participants:**  |
| **Olivia Nguyen** |
| **Clinical Question:** |
| **How would this patient’s case be managed by a dental provider if she was getting chemotherapy treatment for her Non-Hodgkins Lymphoma or if she was a terminal patient?** |
| **PICO Format:** |
| **P:** |
| **Patients with Non-Hodginks Lymphoma** |
| **I:** |
| **Chemotherapy treatment** |
| **C:** |
| **No treatment** |
| **O:** |
| **Difference in treatment planning**  |
| **PICO Formatted Question:** |
| **In patients with Non-Hodgkins Lymphoma, how does the dental treatment plan differ in patients seeking chemotherapy for NHL treatment versus no treatment?** |
| **Clinical Bottom Line:** |
| **How would the treatment plan be different? More prophylactic treatment, questionable teeth prognosis (extract), would we do stage II?** |
| **Date(s) of Search:**  |
| **11/2 – 11/6** |
| **Database(s) Used:** |
| **SDSJournal, PubMed** |
| **Search Strategy/Keywords:** |
| **Chemotherapy, lymphoma, oral side effects, oral mucositis, oral infections, dental management** |
| **MESH terms used:** |
| **Chemotherapy, side effects, oral complications, osteonecrosis of the jaw, oral mucositis** |
| **Article(s) Cited:** |
| Poulopoulos A, Papadopoulos P, Andreadis D. Chemotherapy: oral side effects and dental interventions. A review of the literature. Stomatological Dis Sci 2017;1:35-49. Mancheño Franch A, Gavaldá Esteve C, Sarrión Pérez MG. Oral manifestations and dental management of patient with leukocytes alterations. J Clin Exp Dent. 2011;3(1):e53-9. http://www.medicinaoral.com/odo/volumenes/v3i1/jcedv3i1p53.pdf Abed H, Nizarali N, Burke M. Oral and Dental Management for People with Lymphoma. DOI: 10.12968/denu.2019.46.2.133 |
| **Study Design(s):** |
| 1. **Chemotherapy article: literature review**
2. **Oral manifestations article: literature review**
3. **Oral and dental management article: literature review**
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| **Reason for Article Selection:** |
| 1. **Chemotherapy article: relevance to PICO question and clinical bottom line**
2. **Oral manifestations article: relevance to PICO question**
3. **Oral and dental management article: relevance to PICO question and recent publication**
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| **Article(s) Synopsis:** |
| 1. **Chemotherapy article: this article reviews oral side effects of patients undergoing chemotherapy and the role of the dentist in the care of the patient before, during, and after chemotherapy.**
2. **Oral manifestations article: this article reviews clinical manifestations of having an altered leukocyte count. Usually, oral manifestations appear first so the role of the dentist is critical. In patients with diagnosed conditions, some special considerations are required to manage these patients including dental treatment.**
3. **Oral and dental management article: this article focuses on the recommended oral and dental management for people with lymphoma. Patients with this condition should be treated with a holistic approach.**
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| **Levels of Evidence:** (For Therapy/Prevention, Etiology/Harm) See <http://www.cebm.net/index.aspx?o=1025>[ ]  **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)[ ]  **1b** – Individual RCT[ ]  **2a** – Systematic Review of Cohort Studies[ ]  **2b** – Individual Cohort Study[ ]  **3** – Cross-sectional Studies, Ecologic Studies, “Outcomes” Research[ ]  **4a** – Systematic Review of Case Control Studies[ ]  **4b** – Individual Case Control Study[ ]  **5** – Case Series, Case Reports[x]  **6** – Expert Opinion without explicit critical appraisal, Narrative Review[ ]  **7** – Animal Research[ ]  **8** – In Vitro Research |
| **Strength of Recommendation Taxonomy (SORT) For Guidelines and Systematic Reviews**See article **J Evid Base Dent Pract 2007;147-150**[ ]  **A** – Consistent, good quality patient oriented evidence[x]  **B** – Inconsistent or limited quality patient oriented evidence[x]  **C** – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening |
| **Conclusion(s):** |
| **In a patient with lymphoma and planned chemotherapy, dental treatments differ in several ways: before, during, and after chemotherapy. Before chemotherapy, it is important to let the patient know about possible oral complications. There are risks of infections because of a decreased blood count and the patient should have their teeth cleaned and be given chlorhexidine to decrease the amount of bacteria. Extrations or endotherapy or any invasive procedure should be completed four weeks before chemotherapy to reduce the risk of osteonecrosis. During chemotherapy, all stages of treatment are put on hold and good oral hygiene must be maintained. Xerostomia and mucositis are possible complications that must be addressed at the time of presentation. After chemotherapy, invasive procedures are still postponed until at least a year after the last round of chemotherapy. All in all, patients undergoing or planning to have chemotherapy have to be closely monitored by their dentist as the oral cavity is usually a site of discomfort from chemotherapy. It is critical to plan procedures in advance to avoid osteonecrosis of the jaw and other oral complications.** |