



## Photobiomodulation in CIPN treatment for breast cancer patients: a case report

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### Abstract:

Peripheral neuropathy is a side effect that often occurs in patients under cancer treatment with Taxanes denominated Chemotherapy-Induced Peripheral Neuropathy (CIPN). It usually affects sensitive nerves, and the symptoms anatomically extend over the extremities (gloves and socks). This condition can cause the reduction or discontinuation of therapy, leading to the increasing use of non-drug strategies which has demonstrated many effective procedures in symptom reduction. Photobiomodulation (PBM) is a non-invasive treatment that has been applied to prevent or manage cancer treatment side effects and is used, among other actions, for peripheral nerve regeneration; however, best parameters must be established. Considering the pathophysiology and the prevalent symptom localization of CIPN, we intend to use the beneficial effects of FBM with red low power laser (LLT) in soles and toes. This study aims to evaluate the efficacy of red LLT applied to soles and toes in symptom relief and quality of life improvement of breast cancer patients with CIPN treated with Taxanes. One patient was selected to receive eight red LLT (660 nm) applications, and its efficacy was measured by using Visual Analysis Scale (VAS) and the DN4 and EORTC QLQ-C30 (version 3.0) questionnaires. This female patient received neoadjuvant treatment with docetaxel due to triple-negative breast cancer and symptoms of CIPN during eight months. After the intervention, the score of DN4 was from 3 to 0, the Symptom Scales EORTC QLQ-C30 was from 45 to 10, the Functional Scales EORTC QLQ-C30 was from 49 to 91, the Global Health Status was from 50 to 83,33, VAS was from 8 to 2, and the subjective improvement was of 80%. This case report showed positive results in the symptom reduction and quality of life improvement of a breast cancer patient treated with red LLT in soles and toes.

### Biography:

Physiotherapist, specialized in Oncology Physiotherapy (BIOONCO) and Intensive Therapy (Sirio Libanes Hospital - São Paulo - SP/COFFITO, Brazil). Physiotherapist in Perola Byington Hospital (São Paulo - SP, Brazil) and Private Practice (São Paulo - SP, Brazil). Scientific Coordinator in Professional Development Program in Hospital Physiotherapy (Perola Byington Hospital, São Paulo - SP, Brazil, from 2013 to 2018). Experience with Hospital Physiotherapy in AC Camargo Cancer Center Hospital (São Paulo



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### Publication of speakers:

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5. Santos, Vitorino & MODESTO, Antonio & AMUI, Milena. (2012). A 25-year-old Man with Acute Maculo-Papular Rash and Target Lesions. Marmara Medical Journal. 10.5472/MMJ.2012.02189.0.

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