

# Title: A contribution of type of surgery towards neuropathic pain after breast cancer surgery- 3-month prospective cohort study

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A 3-month prospective cohort study was designed to assess the relationship between type of surgery and chronic neuropathic pain (CNP) after breast cancer surgery (BCS). 238 female breast cancer patients (18 years or older) were recruited from Segal Cancer Centre, Montreal. Information regarding acute post-operative pain, type of surgery, axillary status, anxiety, depression, CNP and DN-4 score was collected. CNP (outcome) was assessed by telephone using Douleur Neuropathique (DN-4) instrument at 3 months of BCS. Linear and logistic regression analyses were used to assess the association between type of surgery and CNP as well as DN-4 score. At three months following BCS, 44 patients (24%) reported CNP. The most frequent symptoms describing this NP were: burning (31%), itching (31%), numbness (24%), pin and needles (24%). The DN-4 score was positively associated with mastectomy (β=0.77, P=0.04). Participants who received mastectomy were almost 2.5 times as likely to present CNP at three months (OR=2.49, P=0.08) in comparison to those who received segmental mastectomy. This likelihood was specific to participants presenting *painful cold* (OR=21.6, P=0.01) or *pins and needles* (OR=4.15, P=0.006). This association was not modified by participants age or their emotional status. Results indicate that mastectomy increases the likelihood of DN-4 score, particularly with *Pins and needles* and *painful cold*. Knowing mastectomy may increase the CNP risk, we can seek improvements to the clinical protocol to prevent this risk among patients who need to receive this surgery.

**Biography**

Navpreet Arora has passed her BDS (Bachelor of Dental Surgery) in 2008, from India. She has practiced dentistry for 5 years. Interest to explore new things has brought her to Canada. Cancer was always a fascinating field to her. Currently, she is pursuing her MSc in dental Sciences (Thesis) at McGill University, Montreal. Her study project is related to breast cancer and pain.

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