

Assessment of emergency department visits and hospitalizations among patients receiving adjuvant chemotherapy for the treatment of breast, colon and lymphoma cancer in Ontario, Canada

Abstract

Objective: Adjuvant chemotherapy is routinely administered as a part of cancer treatment. While adjuvant chemotherapy has shown to increase the chance of killing microscopic cancer cells, preventing reoccurrence and giving better outcomes to patients; it is also associated with toxicity and side effects often resulting in emergency department (ED) visits and hospital admissions. This study aimed to measure how many breast, colon and lymphoma cancer patients being treated with New Drug Funding Program (NDFP) drugs, either after surgery or as a primary treatment, visited the ED one or more times for care and/or needed to be admitted to hospital over the total duration of their chemotherapy treatment.

Methods: Patients undergoing adjuvant chemotherapy for breast cancer, colon cancer (receiving intravenous and oral chemotherapy) and lymphoma between 2010 and 2015 in Ontario, Canada were identified from the Ontario Cancer registry (Breast n= 16,138; Colon intravenous (IV) n= 2238; Colon-oral n= 791; Lymphoma n= 3902). The number of patients who visited ED or were admitted to an inpatient unit at least once within exposure period were considered. Patient records were matched using provincial health care databases. All cause and chemotherapy related visits and visit times were logged using patient records and data sources.

Results: Forty-five percent (45%) of breast cancer patients who received adjuvant chemotherapy, 48% of colon cancer patients who received adjuvant IV chemotherapy (colon-IV), 38% of colon cancer patients who received adjuvant oral chemotherapy (colon-oral) and 52% of lymphoma patients visited the ED at least once during chemotherapy treatment. Almost half of patients with breast or colon-IV cancer visited the ED a second time during treatment. Percentages were even higher for lymphoma patients. Many hospital visits occurred during the day, with hospital admissions varying by type of cancer and time of day.

Conclusion: Although there is no standard for an acceptable rate of side effects for adjuvant chemotherapy, treatment related side effects are potentially predictable and should be considered while setting individual treatment plans. The results suggest that side effects do occur, and resources are needed for patients to self-manage complications where appropriate, while also having a place where they can call or go when they require evaluation or management. Provision is also needed for alternative care strategies and clinics to deal with patient issues outside of working hours. Overall, optimizing patient management and care can possibly eliminate unnecessary visits to ED.

Keywords: adjuvant chemotherapy, emergency department, breast cancer, colon cancer, lymphoma, toxicity