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# Peripheral Neuropathy in Patients With Gynecologic Cancer Receiving Chemotherapy: Patient Reports and Provider Assessments

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**G**ynecologic cancers as a group comprise about 15% of all cancers in women, with 6% ovarian, 6% endometrial, 3% uterine, and less than 1% cervical (National Cancer Institute [NCI], 2007). Chemotherapy regimens for gynecologic cancers typically combine platinum and taxanes after surgical debulking or radiation therapy. Although these drug combinations have increased survival significantly, a high incidence of peripheral neuropathy is associated with these chemotherapy regimens (Pan & Kao, 2007). This particular side effect often is seen as “less important” than life-threatening side effects of chemotherapy, and many times it goes unreported by patients because of its insidious onset (Wickham, 2007). Often patients will only report peripheral neuropathy when it begins to limit their function or has become very painful (Bruner et al., 2007). As survival rates of patients with gynecologic malignancies improve, the immediate and long-term effects of neuropathy on patients are becoming a topic of interest in research.

## Purpose and Objectives

The purpose of this study was to evaluate the incidence and severity of neuropathy in the clinical setting using a broad range of patient- and treatment-related factors as potential influencing factors. All patients with gynecologic cancer receiving chemotherapy in this clinic were included in the study, and multiple variables of hypothesized significance were recorded in a database. Analysis focused on any variables that increased or decreased patients' reporting of neuropathy symptoms. The primary study objective was to identify factors related to patients' experiences of this treatment side effect. Secondary objectives were to analyze the frequency of provider notations of neuropathy in the chart and to

**Purpose/Objectives:** To analyze the incidence of chemotherapy-induced neuropathy in a set of patients with gynecologic cancer who were treated with known neurotoxic agents, to identify correlative factors related to patients' experience of neuropathy, and to analyze providers' assessment and treatment of neuropathy.

**Design:** Observational descriptive study of patient-reported neuropathy using a retrospective chart analysis.

**Setting:** A hospital-based outpatient infusion center in the southeastern United States.

**Sample:** A convenience sample of 171 patients with gynecologic cancer for a total of 302 chemotherapy treatments.

**Methods:** A mixed model and compound symmetry covariance matrix was used to adjust for correlations between neuropathy treatment scores and patients who completed more than one chemotherapy cycle. Backward elimination method was used to determine the final model.

**Main Research Variables:** Functional Assessment of Cancer Treatment/Gynecologic Oncology Group-Neuropathy Treatment scores, patients' demographic information, past medical history, and chemotherapy history.

**Findings:** Patients who were physically shorter and heavier than the average population had the highest rating of neuropathy. Patients who were treated with nontaxane and platinum therapies had less neuropathy than patients who were treated with first-line taxanes and platinums. Neuropathy was noted by providers early in the course of treatment, and providers' grading was consistent with the patients' scoring.

**Conclusions:** First-line treatments for gynecologic malignancies resulted in the highest neuropathy scores; however, patients who had received previous treatment with taxane and platinum therapies had lower neuropathy scores than patients currently receiving taxanes and platinums, suggesting that neuropathy improved after completion of first-line therapy and that second-line therapies were not necessarily correlative with worsening scores.

**Implications for Nursing:** Nurses must educate patients about symptoms of neuropathy and the need to report symptoms. Nurses must recognize patients at highest risk for neuropathy and advocate use of validated assessment tools.