Long-Term Peripheral Neuropathy Associated with Taxane Use in Patients with Early-Stage Breast Cancer

PITTSBURGH, PA — In the secondary analyses of the NRG Oncology’s National Surgical Breast and Bowel Project (NSABP) B-30 trial, the investigators determined that lower-dose docetaxel regimens were associated with lower rates of patient-reported long-term peripheral neuropathy (PN) symptoms in patients treated for early-stage breast cancer. “Long-term Peripheral Neuropathy in Breast Cancer Patients Treated with Adjuvant Chemotherapy: NRG Oncology/NSABP B-30” was published in the Journal of the National Cancer Institute on August 24, 2017.

In the main NSABP B-30 trial, patients were randomly assigned to one of three treatment groups: sequential doxorubicin (A) and cyclophosphamide (C) followed by docetaxel (T) (AC→T), concurrent doxorubicin, cyclophosphamide, and docetaxel (ACT), or doxorubicin and docetaxel (AT), and then compared in terms of their disease-free and overall survival. Patients on AC→T received a higher cumulative dose of docetaxel. PN was one of the symptoms assessed in the quality-of-life (QOL) substudy. At two years of follow-up, patients on the AT and ACT arms reported less severe PN symptoms. Preexisting PN, older age, obesity, mastectomy, and greater number of positive nodes were factors associated with higher risk of long-term PN symptoms. Patients who reported less severe PN symptoms at two years experienced significantly better QOL.

Although proven effective for patients with early-stage breast cancer, taxanes are typically associated with many adverse effects, with PN being among one of the most frequent toxicities. Prior to this NSABP B-30 substudy analysis, few trials reported on long-term toxicities associated with docetaxel-based chemotherapy treatment. “This secondary analysis of the long-term symptoms associated with peripheral neuropathy reported by patients in the quality-of-life study shows the value of clinical trial data for assessing long-term survivorship concerns,” said Patricia A. Ganz, MD, director of the Center for Cancer Prevention & Control Research at UCLA’s Jonsson Comprehensive Cancer Center and senior author on the NSABP B-30 paper. “The data collected from this trial could lead physicians and patients to more informed decisions regarding their treatment plans,” stated Hanna Bandos, PhD, of the University of Pittsburgh, and lead author of the article.

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Citation:

NRG Oncology conducts practice-changing, multi-institutional clinical and translational research to improve the lives of patients with cancer. Founded in 2012, NRG Oncology is a Pennsylvania-based nonprofit corporation that integrates the research of the National Surgical Adjuvant Breast and Bowel Project (NSABP), the...
Radiation Therapy Oncology Group (RTOG), and the Gynecologic Oncology Group (GOG). The research network seeks to carry out clinical trials with emphases on gender-specific malignancies, including gynecologic, breast, and prostate cancers, and on localized or locally advanced cancers of all types. NRG Oncology’s extensive research organization comprises multidisciplinary investigators, including medical oncologists, radiation oncologists, surgeons, physicists, pathologists, and statisticians, and encompasses more than 1,300 research sites located world-wide with predominance in the United States and Canada. NRG Oncology is supported primarily through grants from the National Cancer Institute (NCI) and is one of five research groups in the NCI’s National Clinical Trials Network.