

**SWOG S0715 - Randomized Placebo-Controlled Trial of Acetyl L-Carnitine for the Prevention of Taxane Induced Neuropathy**

***Fast Facts***

**Acetyl L-Carnitine provided.**

Eligibility Criteria

1. Patients must be women with histologically confirmed primary invasive adenocarcinoma of the breast (Stage I, II, III) with no evidence of metastatic disease (M0). (See Section 4.0.) Patients must have undergone modified radical mastectomy or breast sparing surgery. Patients must have recovered from all side effects of the surgery.
2. Patients must be planning to receive one of the standard taxane-based systemic adjuvant chemotherapy regimens for their breast cancer as outlined below. (Participants may be receiving this treatment as part of a clinical trial.) Combined chemo/hormone therapy is allowed. No prior taxane therapy is allowed for any reason. Prior neoadjuvant chemotherapy is allowed (but it must not have included a taxane). Prior adjuvant chemotherapy (e.g. AC) is allowed. Study enrollment must occur post-operatively and prior to any taxane administration.

Allowed chemotherapy regimens:

- Paclitaxel at 80 mg/m<sup>2</sup> weekly x 12 weeks (12 weeks total)
  - Paclitaxel at 175 mg/m<sup>2</sup> every other week (QOW) x 4 cycles (8 weeks total)
  - Paclitaxel at 175 mg/m<sup>2</sup> every other week (QOW) x 6 cycles (12 weeks total)
  - Docetaxel at 75 mg/m<sup>2</sup> q 3 weeks x 4 cycles (12 weeks total) as part of the TC regimen (docetaxel and cyclophosphamide)
  - Docetaxel at 75 mg/m<sup>2</sup> q 3 weeks x 6 cycles (18 weeks total) as part of the TAC regimen (docetaxel, doxorubicin, cyclophosphamide) or a TC regimen (docetaxel and cyclophosphamide OR docetaxel and carboplatin)
3. Patients must not have received prior biologic therapy for the treatment of their breast cancer, but concurrent biologic therapy is allowed (e.g. Herceptin).
  4. Patients may not be taking Vitamin E, glutamine, gabapentin, nortriptyline, amitriptyline or duloxetine HCl. If patient is taking any of these medications, she must agree to stop at the time of registration. Multivitamin containing vitamin E is allowed, however, vitamin E  $\geq$  1,000IU must be discontinued at the time of registration.
  5. Patients must be willing to submit blood sample for DNA extraction, genotyping analysis, and nerve growth factor studies, and must be given the option to consent for specimen submission for banking and future translational medicine studies as outlined in section 15.0. Baseline samples must be obtained prior to beginning treatment.
  6. Patients must have adequate renal function as documented by a serum creatinine that is  $\leq$  2.5 x the institutional upper limit of normal obtained within 28 days prior to registration.
  7. Patients must not have a history of diabetes and/or any history of neuropathy.
  8. Patients must not have a history of a seizure disorder or be on anti-seizure medications.
  9. Patients can concurrently participate in other therapeutic clinical trials.
  10. Patients must be able to complete questionnaires in English or Spanish. Patients must have completed the baseline S0715 FACT-Taxane Trial Outcome Index (Version 4) (Form #16806) and the baseline S0715 FACIT-Fatigue Symptom Module (Version 4) Form #41134) within 14 days prior to registration. Additionally, the nurse or CRA must have completed the S0715 Cover Sheet for Patient-Completed Questionnaires (Form M6234) for the baseline assessments within 14 days prior to registration.
  11. Patients must be at least 18 years old at the time of registration.
  12. Patients must have a Zubrod performance status of 0 - 2 (see Section 10.2).
  13. Pregnant or nursing women may not participate due to the possibility of fetal harm or harm to nursing infants from this treatment regimen (see Section 3.0).
  14. Women of reproductive potential may not participate unless they have agreed to use an effective contraceptive method.
  15. No prior malignancy is allowed except for adequately treated basal cell or squamous cell skin cancer, in situ cervical cancer, DCIS, adequately treated Stage I or Stage II cancer from which the patient is currently in complete remission, or any other cancer from which the patient has been disease-free for 5 years.
  16. All patients must be informed of the investigational nature of this study and give written informed consent in accordance with institutional and federal guidelines.

17. At the time of patient registration, the treating institution's name and ID number must be provided to the Data Operations Center in Seattle in order to ensure that the current (within 365 days) date of institutional review board approval for this study has been entered into the data base.

**Pre-Study Parameters**

1. History and physical with clinical breast exam, weight and performance status
2. Required laboratory: serum creatinine, CBC, glucose, Ca, Na, K, CO<sub>2</sub>, Cl, SGOT, SGPT, Alk Phos, bilirubin
3. 8 hr Fasting Blood for Biomarkers (Nerve Growth Factor)
4. 8 hr Fasting Blood for Genotyping

**Treatment**

Acetyl-L-Carnitine (ALC) or placebo 2 capsules orally TID x 24 weeks.  
Patients will begin ALC/placebo on day 1 of their does of taxane.