SWOG S1200: Randomized Blinded Sham and Waitlist Controlled Trial of Acupuncture for Joint Symptoms Related to Aromatase Inhibitors in Women with Early Stage Breast Cancer

Fast Facts

Eligibility Criteria

1. Patients must be women with histologically confirmed primary invasive carcinoma of the breast (Stage I, II, or III) with no evidence of metastatic disease (M0) (see Section 4.0) or with histologically confirmed DCIS. If patient has undergone breast cancer surgery, she must have recovered from all side-effects of the surgery.
2. Patients must be postmenopausal, as defined by at least one of the following:
   a. ≥ 12 months since the last menstrual period OR
   b. prior bilateral oophorectomy OR
   c. current use of a GnRH agonist OR
   d. previous hysterectomy with one or both ovaries left in place (or previous hysterectomy in which documentation of bilateral oophorectomy is unavailable) AND FSH values consistent with the institutional normal values for the postmenopausal state. If patient is under the age of 55, FSH levels must be obtained within 28 days prior to registration.
3. Patients must be positive for either estrogen receptor (ER) and/or progesterone receptor (PgR) as determined by institutional standard.
4. Patients must currently be taking a third-generation aromatase inhibitor (AI) – anastrozole, letrozole, or exemestane for at least the previous 30 days prior to registration with plans to continue for at least an additional 1 year after registration. Patients may have switched AIs provided that they have been on a stable dose for at least 30 days. Concurrent trastuzumab (herceptin) is allowed.
5. Patients must have completed the S1200 Brief Pain Inventory-Short Form (BPI-SF) (Form #40963) within 14 days prior to registration. Patients must have a worst pain score of at least 5 on the Brief Pain Inventory (item #2) that has started or increased since starting AI therapy.
6. Patients must have a Zubrod performance status of 0 to 1 (see Section 10.3).
7. Patients must have had two or fewer prior acupuncture treatments within the past 12 months for any reason except for joint symptoms. Patients must not have had prior acupuncture treatment for joint symptoms at any time.
8. Patients must not have a severe bleeding disorder.
9. Patients must not have an allergy to latex
10. Patients must not have concurrent medical/arthritic disease that could confound or interfere with evaluation of pain or efficacy including: inflammatory arthritis (e.g., rheumatoid arthritis, systemic lupus, spondyloarthropathy, psoriatic arthritis, polymyalgia rheumatica), gout, episodes of acute monoarticular arthritis clinically consistent with pseudogout, Paget’s disease affecting the study joint (knees/hands), a history of septic arthritis or avascular necrosis or intra-articular fracture of the study joint, Wilson’s disease, hemochromatosis, alkaptonuria, or primary osteochondromatosis.
11. Patients must not have a history of bone fracture or surgery of the afflicted knees and/or hands within 6 months prior to registration.
12. Patients must not have a history of illness that, in the opinion of the investigator, might confound the results of the study or pose additional risk to the patient.
13. Patients must not be on narcotics within 14 days of registration.
14. Patients must not have received oral corticosteroids, intramuscular corticosteroids, or intra-articular steroids within 28 days prior to registration.
15. Patients must not have received topical analgesics (e.g., capsaicin preparations) or any other analgesics (e.g., opiates, tramadol, with the exception of NSAIDs, combination NSAIDs, and acetaminophen) within 14 days prior to registration.

16. Patients must not have received or implemented any other medical therapy, alternative therapy or physical therapy for the treatment of joint pain/stiffness within 28 days prior to registration. Therapeutic massage is allowed.

17. Patients must be willing to submit blood and urine samples for serum hormones (estradiol, FSH, LH), inflammatory biomarkers (serum TNFα, IL-6, IL-12, CRP and urine CTX-II), urine AI metabolites, and DNA analysis (CYP19A1), and must be given the option to consent to use of remaining specimens for future translational medicine studies as outlined in Section 15.0. Baseline samples must be obtained prior to beginning intervention.

18. Patients must be able to complete study questionnaires in English.

19. No other 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 II cancer from which the patient is currently in complete remission, or any other cancer for which the patient has been disease-free for > 5 years.

20. All patients must be informed of the investigational nature of this study and must sign and give written informed consent in accordance with institutional and federal guidelines.

21. Prestudy history and physical must be obtained within 180 days prior to registration.

22. 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 database.

Pre-Study Parameters:

1. History and physical exam (to include height, weight and performance status) to be obtained within 180 days prior to registration.
2. FSH (if applicable)
3. ER/PgR
4. Baseline questionnaires
5. Functional testing (Section 7.5)
6. Research specimens (Section 15.1)
**SCHEMA**

Women with stage I-III hormone receptor-positive breast cancer who are receiving adjuvant aromatase inhibitors (AIs) and report worst pain of at least 5 (out of 10) that has started or increased since initiation of aromatase inhibitor treatment

→ **At baseline:**
  - Questionnaires
  - Functional testing
  - Blood/urine collection

→ **RANDOMIZE**
  - 2:1:1

→ **Intervention**:
  - True Acupuncture twice weekly x 6 weeks (12 sessions) then weekly x 6 weeks (6 sessions)
  - Sham Acupuncture twice weekly x 6 weeks (12 sessions) then weekly x 6 weeks (6 sessions)
  - Waitlist control x 12 weeks

→ **At 2 and 4 weeks:**
  - Telephone contact

→ **At 6, 12, and 24 weeks:**
  - Questionnaires
  - Functional testing
  - Blood/urine collection

→ **At 16 and 20 weeks:**
  - Telephone contact and BPI-SF Questionnaire

→ **At 52 weeks:**
  - Questionnaires
  - Functional testing
  - Urine collection