

appears not to be associated with the subsequent clinically meaningful cardiac events. The small number of events (5) in our population limits the detection power. Events in our patients appear to be perhaps related more to pre-RT cardiac risk factors. Further follow-up is needed to better understand the long-term implications of these perfusion defects.

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## 228 Acupuncture for the Treatment of Vasomotor Symptoms in Breast Cancer Patients Receiving Hormone Suppression Treatment

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**Purpose/Objective(s):** Vasomotor symptoms (hot flashes, etc.) are common debilitating side effects of anti-estrogen treatment in conventional breast cancer care. Hormone replacement therapy, normally used in postmenopausal women to treat these symptoms, is contraindicated in breast cancer patients. The antidepressant, venlafaxine (Effexor), a serotonin reuptake inhibitor, is currently the pharmacological therapy of choice for these hot flashes. However, many women refuse this treatment approach because of potential side effects that include sexual dysfunction and nausea, or they simply do not want to take any more medication. This randomized clinical trial (RCT) tested the hypothesis that acupuncture reduces vasomotor symptoms in breast cancer patients receiving hormonal therapy and produces fewer side effects than venlafaxine.

**Materials/Methods:** Patients treated for breast cancer (Stages 0-III) receiving either Tamoxifen or Arimidex and having at least 14 hot flashes per week were randomized to receive a 12 week course of acupuncture or venlafaxine. 47 total patients completed the study (24 acupuncture, 23 venlafaxine). Patients logged daily the number and severity of hot flashes for one-week prior to treatment (baseline), during the course of treatment, and at regular intervals throughout 1 year following treatment. Other outcome measures assessed before, during, and after treatment included menopause-specific quality of life, general health status (SF-12), Beck Depression Inventory, and side effects.

**Results:** Both acupuncture and venlafaxine groups exhibited significant decreases in hot flashes and other menopausal, quality of life symptoms, as well as decreases in depressive symptoms. These changes were similar in the 2 groups, indicating that acupuncture is at least as effective as venlafaxine in reducing vasomotor and other symptoms associated with anti-estrogen hormonal treatment of breast cancer. Additionally, numerous patients treated with venlafaxine reported negative side effects including nausea, dry mouth, headache, difficulty sleeping, dizziness, double vision, increased blood pressure, constipation, fatigue, anxiety, feeling "spaced out," and body jerking during the night. Patients treated with acupuncture experienced no negative side effects. They reported increased energy, clarity of thought, sexual desire, and overall sense of well-being (compared to pretreatment).

**Conclusions:** The results of this study suggest that adding acupuncture to breast cancer treatment regimens may establish an integrative approach that is more effective in managing symptoms due to treatment with fewer side effects than conventional pharmacotherapy treatment.

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## 229 Health States of Women up to 15 years after Breast Conserving Surgery and Radiation for Breast Cancer

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**Purpose/Objective(s):** The purpose of this study is to use the EQ-5D instrument to evaluate the health states of women with early stage breast cancer after treatment with breast-conserving surgery and radiation.

**Materials/Methods:** The study population consists of 1,050 women with early stage breast cancer treated with breast-conserving surgery and radiation with or without systemic therapy. During routine follow-up visits, patients were asked to complete the EQ-5D questionnaire. The number of entries per patient was 1 in 32%, 2 in 29%, 3 in 21%, and 4 or more in 18%. The mean length of follow-up between treatment and time of report was 3 years. There were 171 data points at 5 years, 64 at 10 years, and 21 at 15 years. The EQ-5D is a standardized and validated instrument for measuring health outcomes. There are 5 descriptive dimensions of health with three possible levels of response (1. no problems, 2. some problems, or 3. extreme problems). There are 243 (3<sup>5</sup>) possible unique health states described by the combination of these 5 dimensions. Scores were compared to a survey of the general U.S. adult population (Luo et al Med Care 2005;43:1078-86).

**Results:** The mean index score was 0.89 at 5 years, 0.9 at 10 years, and 0.9 at 15 years. There were no significant differences in health states between patients by age. The mean by age at 5 and 10 years was 0.95 and 0.96 (ages 18-44), 0.9 and 0.93 (ages 45-64), and 0.88 and 0.76 (age >64), respectively. For comparison, the reported mean index scores for the general U.S. female population is 0.86, and by age 0.91 (ages 18-44), 0.84 (ages 45-64), and 0.81 (age >64). There were no differences by use of systemic therapy, or by use of intensity modulated radiation therapy (IMRT) versus conventional radiation, although very few patients treated with IMRT had follow-up greater than 3 years. Four of the 5 descriptive health dimensions showed a statistically significant trend of moving between levels 1 and 2 over 15 years—1 scale trended up from 1 to 2, and 3 scales trended down from 2 to 1. More patients reported some problems with self care, although most patients >95% continued to report no problems. Over the same time period, fewer patients reported some problems with anxiety/depression, pain/discomfort, and usual activities at 15 years compared to