

*Original Article*

# A Survey of Joint and Muscle Aches, Pain, and Stiffness Comparing Women With and Without Breast Cancer

Deborah Fenlon, PhD, RGN, Julia M. Addington-Hall, PhD, BA,  
Alison C. O'Callaghan, MPhil, BSc, BA,  
Joanne Clough, MBBS, DM, FRCA, MRCP, FRCPC, FRCR,  
Peter Nicholls, PhD, MSc, BSc, and Peter Simmonds, FRACP, MBBS  
*Faculty of Health Sciences (D.F., J.M.A.-H., A.C.O., P.N.), University of Southampton; and Cancer Research UK Clinical Unit (P.S.), Cancer Sciences Division, University of Southampton and Southampton University Hospitals NHS Trust, Southampton, United Kingdom*

---

## Abstract

**Context.** Joint and muscle aches, pain, and stiffness have been reported to be a problem for some women after adjuvant breast cancer treatment; however, the extent and impact of this problem are unknown.

**Objectives.** The purpose of this study was to determine the prevalence of this problem in comparison with women of a similar age without breast cancer.

**Methods.** Two hundred forty-seven women attending breast cancer follow-up clinics were invited to complete pain and quality-of-life measures. A comparison group of 274 women of similar age was drawn from women attending breast screening and benign breast clinics. Prevalence and severity of pain were compared between the two groups.

**Results.** The mean age of all women in the study was 59 years (range 30–86 years). The median time since diagnosis of cancer was 28 months (range 2–184 months). Adjuvant treatments included radiotherapy (79%), chemotherapy (45%), and hormone therapy (81%). Sixty-two percent of women with breast cancer reported pain “today” compared with 53% of women without breast cancer ( $P = 0.023$ ). Significant predictors of pain in both patient groups were cancer, age, and arthritis. For the cancer cases, significant predictors of pain were age, arthritis, taxane chemotherapy, aromatase inhibitors, and tamoxifen. Quality of life (measured by the Short Form-36) was significantly worse for women with breast cancer compared with controls and was significantly worse in the breast cancer cases with pain.

**Conclusion.** Treatment with tamoxifen, taxane chemotherapy, and aromatase inhibitors for breast cancer is predictive of joint pain, which may have an impact on women's lives for some years after breast cancer. *J Pain Symptom Manage* 2013;46:523–535. © 2013 U.S. Cancer Pain Relief Committee. Published by Elsevier Inc. All rights reserved.

---

Address correspondence to: Deborah Fenlon, PhD, RGN, Faculty of Health Sciences, Highfield Campus, University of Southampton, Southampton

SO17 1BJ, United Kingdom. E-mail: [dfenlon@soton.ac.uk](mailto:dfenlon@soton.ac.uk)

Accepted for publication: October 23, 2012.

### **Key Words**

*Arthralgia, breast cancer, joint pain, survey, tamoxifen, aromatase inhibitors*

---

### **Introduction**

Breast cancer now affects one in eight U.K. women,<sup>1</sup> and almost two-thirds of newly diagnosed women are now likely to survive for at least 20 years.<sup>2</sup> A greater proportion of women with early breast cancer are now receiving adjuvant chemotherapy and/or hormone therapy. There are reports in the literature that, after primary breast cancer treatment, up to three-quarters of women may complain of joint aches, pain, and stiffness,<sup>3</sup> and it is becoming apparent that this problem is a more important clinical issue than has been realized to date. These problems are being reported more frequently because the use of aromatase inhibitors (AIs) has been taken up more widely. Adjuvant AI treatment has been found to be more effective in preventing breast cancer recurrence than tamoxifen<sup>4</sup> and is now the treatment of choice for adjuvant therapy in postmenopausal women, after primary treatment for hormone receptor-positive breast cancer. Joint pain may cause or contribute to patients stopping treatment; an online survey conducted by Breast Cancer Action found that 30% of respondents reported that they had discontinued adjuvant AI use because of adverse effects, of whom 47% did so because of joint-related problems.<sup>4</sup> A cohort study in California showed that 61% of patients on AIs developed AI-related arthralgia, and 20% of women stopped AI treatment because of persistent joint pain.<sup>5</sup> Theories about the cause of this pain largely relate to early menopause and low estrogen levels, which indicate that the use of AIs may exacerbate this problem. The ATAC (Arimidex<sup>®</sup>, Tamoxifen, Alone, or in Combination) study reported joint symptoms in women taking Arimidex (anastrozole) of 35.6% compared with 29.4% in women taking tamoxifen.<sup>6</sup> This study reported that there were no differences in quality of life (QoL) between women taking tamoxifen or anastrozole; however, the instruments used for measuring QoL were symptom oriented and did not include a measure for musculoskeletal symptoms. A more recent

study of a small cohort of Dutch women found that 74% of women on AIs developed arthralgia, and it significantly impacted their household and family life, recreation, and occupation.<sup>7</sup> A larger cross-sectional survey of women receiving AI therapy found that 47% of patients attributed their current arthralgia symptoms to AI therapy,<sup>8</sup> and another cohort study found that 45.5% of women developed severe arthralgia meeting the criteria for rheumatologic referral.<sup>9</sup> A blinded case-control study of 120 women found that women taking AIs had thicker tendon sheaths than controls and electromyogram findings consistent with carpal tunnel syndrome.<sup>10</sup> It also is apparent that women treated with AIs have an associated decline in bone mineral density as a result of low estrogen levels. AIs lower plasma estradiol, estrone, and estrone sulfate concentrations by up to 98%, which has a negative impact on bone remodeling.<sup>11,12</sup> There also are some reports in the literature that adjuvant chemotherapy may be associated with joint pain.<sup>13,14</sup> To date, there is little evidence to establish the extent of joint pain in women who have had breast cancer in comparison with joint pain that might be expected as a natural consequence of aging or menopause. This study set out to establish the prevalence of joint pain in women treated for early breast cancer compared with a control group of women of similar age without breast cancer and begin to explore the relationship between this pain and breast cancer treatments.

### **Methods**

#### *Study Design and Participants*

The study protocol was reviewed and approved by the local research ethics review committee (LREC no. 06/Q1701/157). A cross-sectional survey design was used to capture information from participating women at a single time point. Two cohorts were recruited to this study. Women with a history of early-stage (Stages I–III) breast cancer who had completed planned surgery, adjuvant chemotherapy, and

Download English Version:

<https://daneshyari.com/en/article/5881450>

Download Persian Version:

<https://daneshyari.com/article/5881450>

[Daneshyari.com](https://daneshyari.com)