Aromatase Inhibitors and Musculoskeletal Pain in Patients With Breast Cancer

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Aromatase inhibitors are recommended for use by postmenopausal women who have estrogen receptor–positive early-stage breast cancer. They reduce local and distant recurrence more effectively than tamoxifen. Anastrozole (Arimidex®, AstraZeneca Pharmaceuticals LP), letrozole (Femara®, Novartis Pharmaceuticals Corporation), and exemestane (Aromasin®, Pfizer Inc.) inhibit aromatase activity, thus significantly decreasing estrogen production in tissues such as liver, muscle, and fat. Very low levels of estrogen may be one cause of musculoskeletal pain, a common side effect associated with the drugs. In the major adjuvant aromatase inhibitor clinical trials, 25%–30% of the patients enrolled experienced musculoskeletal pain. Although quality-of-life studies demonstrate that aromatase inhibitors are well tolerated overall, some women discontinue this treatment because of musculoskeletal pain. Little is known about how to predict, measure, or manage musculoskeletal pain caused by aromatase inhibition. Oncology nurses play an important role in the assessment and management of side effects related to cancer. This article provides an overview of the current knowledge about musculoskeletal pain in patients with breast cancer receiving aromatase inhibitor therapy.

At a Glance

✦ Aromatase inhibitors are indicated for the treatment of postmenopausal women with estrogen receptor–positive breast cancer, especially in patients with high-risk disease.
✦ Musculoskeletal pain induced by aromatase inhibitors may be a result of a reduction in systemic estrogen similar to but lower than a menopause effect.
✦ Nurses play an important role in the assessment, management, and education of patients experiencing musculoskeletal pain related to aromatase inhibitor therapy.