

Aromatase Inhibitor (AI) Induced Arthralgias

What Is It?

Arthralgia (joint pain) is a symptom commonly seen in breast cancer patients treated with aromatase inhibitors (AI). These medications are often prescribed to postmenopausal women with ER-positive and/or PR-positive tumors. There are three AIs in routine clinical use: Arimidex (anastrozole), Femara (letrozole), and Aromasin (exemestane). They all have similar efficacy and side effects. Patients usually present with morning stiffness and joint discomfort in various sites, including hands, knees, back, hips, and shoulders. There is usually no obvious change in the appearance of the joints. The symptoms typically begin appearing at approximately 2 months after the start of treatment and peak at 6 months, but they can appear up to 2 years after the initiation of therapy.

How Common Are They?

Arthralgias appear to affect up to 50% of women who take AI, with up to 15% of women experiencing symptoms so intense that they stop the medication. Risk factors for the development of arthralgias include: previous hormone therapy, previous chemotherapy, obesity, and history of joint pain.

What Causes Them?

The exact mechanism of AI-induced arthralgias is unknown. AI work by stopping the production of estrogen in postmenopausal women. By lowering circulating estrogen levels in the bloodstream, there is less available to stimulate the growth of ER-positive breast cancer cells. Estrogen deficiency is associated with the development of joint pain and estrogen deprivation has been hypothesized as the major cause of AI-induced arthralgias.

Joint pain from taking an AI can be troubling. However, a 2008 British study suggested that women who experienced joint pain while taking hormonal therapy medicine were less likely to have the breast cancer come back (recur).

What Can Be Done for Them?

No study has focused on the optimal management of AI-induced arthralgia. Combining regular exercise and maintenance of a healthy with other AI induced arthralgia treatment strategies appears to work best.

SWOG 0212 is a nationwide clinical study currently available at the Huntington Hospital studying the potential benefits of a medication for AI-induced arthralgias. For more information about this study, please click [HERE](#).