

Study helps eliminate causes for joint pain linked to commonly used breast cancer drugs

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Researchers exploring why some women who take a common breast cancer drug develop serious joint pain have eliminated two possible causes: inflammatory arthritis and autoimmune disease. Because of these findings, researchers say women should be encouraged to continue taking the medication to gain its full benefit.

The study is published online Nov. 11 in the journal [Breast Cancer Research and Treatment](#). Preliminary findings were presented in 2010 at the 74th Annual Scientific Meeting of the American College of Rheumatology.

For many post-menopausal women with [breast cancer](#) promoted by the [hormone estrogen](#), aromatase inhibitors (AI) can dramatically reduce the risk of their cancer coming back. Doctors say the AIs must be taken for five years to gain the full benefit, however, the development of joint complaints in up to 35 percent of women forces many of them to stop early out of concern that the pain signals a more serious condition.

"It's not clear why joint symptoms occur with AI use, but we wondered if it could be related to inflammation or an autoimmune disease," says rheumatologist Victoria K Shanmugam, MBBS, MRCP, assistant professor of medicine at Georgetown University Medical Center, and the study's lead author. "Our research ruled out both."

Forty-eight [postmenopausal women](#) with stage I, II or III breast cancer treated at Georgetown Lombardi Comprehensive Cancer Center were

invited to take part in the study. All had hand pain and no known autoimmune disease. Of them, 25 women were taking AIs; 23 women were not taking AIs.

Subjects were evaluated after abstaining from non-steroidal anti-inflammatory drugs for 48 hours. Signs of inflammation from arthritis would reappear in that time frame, the researchers reasoned. All the women completed a health assessment questionnaire. The rheumatologist conducted a personal history and physical examination with each patient. Various blood tests were conducted and x-rays and ultrasounds of all participants' hands were performed. The rheumatologist and radiologist did not know which participants were taking AIs and which were not.

"We found that several patients in the control arm had a similar constellation of symptoms to those receiving AIs, but our team did not find any conclusive evidence that women taking AIs were more likely to have [inflammatory arthritis](#) or an autoimmune disease," Shanmugam says.

An autoimmune disease was discovered in four of the 48 women – two in each group -- that had previously been undiagnosed. The cases were equally distributed among cases and controls.

"It would be prudent to refer those experiencing joint pain to a rheumatologist to rule out a previously undiagnosed autoimmune disease, and so that we can help address the symptoms," Shanmugam says.

"Although our study helps to rule out inflammatory arthritis or autoimmune disease as cause for [joint pain](#) associated with AIs, we still do not know why these women have musculoskeletal symptoms. Since the syndrome doesn't appear to be related to inflammatory arthritis or autoimmune disease, women should be encouraged to stay on their medication so they can gain the full benefit from it."

Provided by Georgetown University Medical Center

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