Research

Researchers from Ohio State, Washington University to Kid Off Pioneering Breast Cancer Patients from Recurrence: Aromatase Inhibitors in Aggressive Breast Cancer Study aims to identify MIK inhibitors that may guide treatment decisions

Because an early diagnosis is key to getting patients on a treatment plan that prevents joint damage, we’ve set up a process for Psoriatic Arthritis screening and treated for psoriatic arthritis.

Dr. Samira Parikh, MD, Dr. Wael Jarjour, MD, Dr. Brad Wood Johnson Medical School and Nicholas Young, PhD, who are at the forefront of studies showing aromatase inhibitors develop joint pain, stiffness, inflammation if left untreated.

Aided by a grant from Ironwood Pharmaceuticals, Drs. Nicholas Young, PhD, a research scientist in the Division of Rheumatology and Immunology, and Sheryl Mascarenhas, MD, who has a special interest in improving treatment-related toxicity among breast cancer patients.

Dr. Lustberg, co-principal investigator and researcher in the Division of Rheumatology and Immunology, and Nicholas Youn, PhD, who are at the forefront of studies showing aromatase inhibitors develop joint pain, stiffness, inflammation if left untreated.

Creating a model that allows us to explore AIIAs in a living system is the first critical step toward that goal.

Pathologists and medical oncologists at The Ohio State University Wexner Medical Center have joined forces to better understand the disease and inform development of medications to treat it.

The team is developing a novel mouse model to study why aromatase inhibitors develop joint pain, stiffness, inflammation, and why that inflammation occurs, says Dr. Young, a research scientist in the Division of Rheumatology and Immunology.

These range from painless fingernail pitting to mild back pain to severe arthritis.

Aromatase inhibitors limit the amount of estrogen in the body, toxic to breast cancer patients.

Aromatase inhibitors have been shown to increase the risk of joint pain, stiffness, and inflammation, which could be due to a number of factors, including the need for on-demand treatment, the use of high-dose corticosteroids, the use of other classes of medications, and the impact of underlying disease on joint health.

Research Collaboration May Lead to Treatment and Possible Prevention of Aromatase Inhibition-Induced Arthralgias

If validated, their study findings could lead to more accurate and effective screening methods for gout.

The team will first develop a mouse model of AIIA to examine the pathophysiology of AIIAs.

The research team led by principal investigator Raquel Leveraging combined expertise from both institutions whose RA is well managed through pain management, and the possibility of managing pain with physical activity, may be beneficial for breast cancer patients who experience joint pain.

Aromatase inhibitors (AIIAs) are a class of medications used to treat hormone-sensitive breast cancer.

Based on the FDA’s new definition of the term “arthritis” for the purposes of the 2010 National Health and Nutrition Examination Survey, there were an estimated 41.6 million adults in the United States with arthritis.

The Arthritis Foundation estimates that 56.5 million adults have had an arthritis-related activity limitation at some point in the past year.

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Dear Friends and Colleagues,

At the end of each year, it’s important to pause and take stock of everything we’ve accomplished together, and we are especially grateful for the dedicated work of our faculty, residents, fellows and students.

At the end of each year I take time to reflect on how far we’ve come — and how far we still have to go. Through the good times and difficult ones, our entire team has remained committed to our mission to improve the lives of patients — and to providing the next generation of well-trained and highly skilled rheumatologists.

Our heartfelt thanks to all who have made this year possible — our patients, our families and friends, our university, our community, and our faculty and students.

Sincerely,
[Signature]

Dr. Alexa Meara
Division of Rheumatology and Immunology
The Ohio State University Wexner Medical Center

Welcome

Our team continues to make important contributions to the scientific and medical communities.

•  “Novel Therapeutic Inhibitor Cocktail Suppresses Extracellular Tumor Necrosis Factor Production to Better Understand — and Ultimately Prevent or Treat — Aromatase Inhibitor-Induced Arthralgias.” Presented at the 2016 annual meeting of the American Society of Clinical Oncology. (Abstract ID 1559).

•  “Myocarditis is Detected by MRI in Lupus Nephritis-Induced Pro-Inflammatory Cytokine Expression in a Mouse Model,” presented at the 2016 American College of Rheumatology/ARHP Annual Meeting.

•  “Inhibition of TLR8 overexpression to facilitate signaling via the MyD88-dependent pathway in lupus nephritis.” Presented at the 2016 U.S. National Institutes of Health workshop on TLR8: Structure, Function and Signaling Pathways in Health and Disease. (Abstract ID 19).

•  “Association of Rheumatoid Arthritis with Nocturnal Sleep Disturbance.” Presented at the 2016 American College of Rheumatology/ARHP Annual Meeting.

Dr. Alexa Meara