

Fox Chase trial tests promising treatment in early breast cancer

December 12 2013

Researchers at Fox Chase Cancer Center are enrolling newly diagnosed breast cancer patients into a clinical trial of the promising drug reparixin, which targets tumors' ability to self-renew. The study, being presented at the 2013 San Antonio Breast Cancer Symposium, comes on the heels of research done in a Phase Ib pilot trial in which patients with metastatic disease take reparixin along with the chemotherapy drug paclitaxel (brand name Taxol), designed to assess the safety of dosage.

A major benefit of the drug, explains Lori Goldstein, MD, medical oncologist at Fox Chase and study coordinator, is that it is a pill patients can easily take at home as they prepare for surgery and other conventional treatments. "This is a novel approach and it doesn't interfere with their standard therapies," says Goldstein.

The drug, known as reparixin, targets cells in [breast cancer](#) known as stem cells—"blank-slate" cells with the ability to grow into any of the multiple types of cells found in a tumor. In addition, these cells can leave the primary tumor, travel through the body, and establish distant metastatic growths. Stem cells, which have been identified in many other cancer types, also have the ability to renew themselves indefinitely—so, in theory, as long as even one [cancer stem cell](#) remains, it can continue to produce more cancerous cells.

Reparixin appears to work by hitting a protein receptor called CXCR1, found on the surface of breast cancer [stem cells](#). Indeed, adding reparixin to [tumor cells](#) in the lab caused them to undergo widespread

cell death. In mice bred to be predisposed to breast cancer, reparixin slowed tumor growth and the spread of the disease.

A major goal of the research, says Goldstein, is to learn more about the effect of the drug on human [breast cancer cells](#). Researchers will take biopsies from patients before and after they take the drug – which is taken three times a day for three weeks – to track its biological effects. "This will help us learn about the activity of the drug and its mechanisms of action."

"It's encouraging to see that thus far the combination of the oral drug reparixin has added no additional side effects to the standard medication, paclitaxel," Goldstein adds.

The Milan-based Italian pharmaceutical company Dompé is funding the research.

The study will involve 10 clinical centers in the U.S., including the Methodist Hospital Research Institute of Houston, Texas; the University of Kansas Medical Research Center, Fairway, Kansas; and the Albert Einstein Cancer Center/Montefiore Medical Center, Bronx, New York. Four patients have been enrolled so far.

Provided by Fox Chase Cancer Center

Citation: Fox Chase trial tests promising treatment in early breast cancer (2013, December 12) retrieved 26 April 2024 from

<https://medicalxpress.com/news/2013-12-fox-trial-treatment-early-breast.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--