

# Researcher finds most triple-negative breast cancers express muc-1 target

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Research out of the Ireland Cancer Center of University Hospitals Case Medical Center has found that the vast majority of triple negative breast cancers express the MUC-1 target. This first-of-its-kind finding, presented today at the San Antonio Breast Cancer Symposium, has paved the way for an upcoming vaccine trial for patients with early stage triple negative breast cancer that could potentially prevent recurrence of this aggressive type of breast cancer.

Joseph Baar, MD, PhD, Director of Breast Cancer Research at the Ireland Cancer Center, and colleagues analyzed 53 tumors and determined that 92 percent of them expressed MUC-1. These findings support their theory that this MUC-1 protein on breast cancer cells could be a target for a novel vaccine using the patient's immune system to target and kill cancer cells.

Dr. Baar has received a prestigious grant from the National Cancer Institute and the Avon Foundation to begin the vaccine trial in January 2009 for women with early stage triple negative breast cancer to see if this vaccine can raise their immune response against MUC-1. If it does, then a later study would be undertaken to determine whether the generation of such an immune response leads to an increase in patients' relapse-free survival rates, thereby preventing recurrence. The vaccine will be administered following standard therapy of surgery, radiation and chemotherapy.

"This vaccine trial has the potential to rev up patients' immune response

to the MUC-1 protein and shut down the tumor's ability to grow," says Dr. Baar. "Women with this aggressive triple negative breast cancer have an increased risk of recurrence and we are hoping to provide them with protection against the return of this deadly disease. Our findings that have been presented at the San Antonio Breast Symposium provide us a strong basis for this trial."

Triple negative breast cancer is a highly aggressive form which comprises 10-15 percent of newly diagnosed early stage breast cancer. Most triple negative tumors are high grade and have a high incidence of recurrence and metastases (spreading to other organs). Unlike other types of breast cancer, there is no standard follow-up treatment for triple negative breast cancer to prevent recurrence.

"This is an important study because there has traditionally been nothing to offer women with triple negative breast cancer beyond standard therapy," says Stanton Gerson, MD, Director of the Ireland Cancer Center. "This vaccine trial has the potential to lay the groundwork for a new standard of care for women with this aggressive form of breast cancer."

Source: University Hospitals of Cleveland

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