Experts present triple-negative breast cancer immunotherapy trial

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A researcher from University Hospitals Seidman Cancer Center will discuss his upcoming immunotherapy clinical trial for triple-negative breast cancer at the 2016 San Antonio Breast Cancer Symposium. The annual symposium is the premier meeting for more than 7,500 physicians and scientists dedicated to breast cancer treatment, featuring state-of-the-art breast cancer research such as experimental biology, etiology, prevention, diagnosis, and therapy of both breast cancer and premalignant breast disease.

Joseph Baar, MD, PhD, Director of Breast Cancer Research at UH Seidman Cancer Center and Associate Professor at Case Western Reserve University School of Medicine, will share details about a phase II clinical trial testing the effectiveness of combining the chemotherapy drugs carboplatin and nab-paclitaxel with an immunotherapeutic agent called pembrolizumab (Keytruda) for use in patients with metastatic triple-negative breast cancer. Dr. Baar's poster presentation will be part of the Ongoing Trials-Targeted Therapy session on December 8, 2016 from 5 pm to 7 pm.

"Up until now, women with triple-negative breast cancer have only had one treatment option, which is chemotherapy. However, more recently, we've seen that the immune modulator pembrolizumab improves outcomes in patients with metastatic triple-negative breast cancer," said Dr. Baar. "As a result, it is now critical to explore how the addition of pembrolizumab to chemotherapy might improve survival in patients with this type of breast cancer."

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.

As triple-negative breast cancer progresses, tumor cells express a protein ligand called PD-L1, which interacts with the PD-1 receptor on T-cells. T-cells are the immune system's primary mechanism for fighting back against harmful foreign invaders. The PD-L1 to PD-1 interaction prevents the T-cell from responding to the tumor as a threat. Pembrolizumab binds to the T-cell's PD-1 receptors and therefore blocks the PD-1 to PD-L1 interaction, allowing the T-cells to be activated against the tumor cells. The research team hypothesizes that the addition of such an immunotherapeutic agent to chemotherapy will allow the body's natural immune response to reduce disease recurrence to a greater extent than either modality alone.

This is the first phase II trial to study the effectiveness of combining these two chemotherapeutic agents with the immunotherapeutic agent pembrolizumab for this type of cancer.

The trial will enroll approximately 30 patients beginning in early 2017. Eligible patients must have radiologically measurable and documented metastatic triple negative breast cancer, be mostly functional day to day as measured by an ECOG performance status of between zero and one, must not have received more than two prior therapies for this disease, and must be willing to undergo a preliminary biopsy for research purposes. The trial is sponsored by Merck, which produces pembrolizumab as Keytruda.

"Trials our faculty members present at SABCS and other research meetings around the world illustrate the remarkable advances in oncology taking place today," says Neal J. Meropol, MD, Chief, Division of Hematology and Oncology, University Hospitals Seidman Cancer Center and Associate Director for Clinical Research, Case Comprehensive Cancer Center at Case Western Reserve.

Provided by University Hospitals Cleveland Medical Center