Study validates combination therapy for aggressive endometrial cancer
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Yale Cancer Center (YCC) scientists have found that combining the targeted drug trastuzumab with chemotherapy significantly improves survival rates for women with a rare, aggressive form of endometrial cancer. These results may help to change the standard of care worldwide for the disease. The findings are published today in the journal *Clinical Cancer Research*.

"The randomized, multi-institutional phase 2 trial studied 58 women with uterine serous carcinoma (USC) whose tumors expressed high levels of the HER2 protein, which is known to drive several forms of cancer in women," said Alessandro Santin, M.D., professor of gynecology, obstetrics & reproductive sciences, Leader of the Disease Aligned Research Team of the Gynecologic Oncology Program at Smilow Cancer Hospital and YCC, and senior author of the study. After surgery, women were either given a standard chemotherapy regimen of carboplatin and paclitaxel, or the same combination chemotherapy regimen followed by trastuzumab. Trastuzumab targets HER2, a surface receptor, and has long improved outcomes for women whose breast cancers display high levels of HER2 expression.

Each year, more than 65,650 women in the United States are diagnosed with endometrial cancer, and over 12,590 die of the disease. "As this country's population ages and obesity rates climb, these numbers are likely to double in the next decade," said Santin. "USC accounts for only three to ten percent of all these cases of endometrial cancer, but it kills over 40% of the patients because it's so aggressive," he added.

Among the 17 women in the study where USC recurred, the combination treatment prolonged the disease-free interval but did not significantly improve survival when compared to the standard chemotherapy regimen. "These are patients who return with large amounts of metastatic cancer," Santin said. "Most likely their tumor burden is so high and heterogenous that the tumor becomes resistant also to trastuzumab."

In 2018, after examining preliminary data on the phase 2 trial, the National Comprehensive Cancer Network (NCCN) adopted the chemotherapy/trastuzumab combination for new treatment of women with HER2-positive USC as a guideline for treatment. NCCN is widely recognized by both clinicians and payers as the U.S. standard-setting body for oncology clinical guidelines. "With those NCCN guidelines, everybody started using..."
it," Santin said. Now that the final results for the trial are published, he expects much broader worldwide adoption of the combination.

Provided by Yale University

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