Chemoresponse assay helps boost ovarian cancer survival

April 25 2013

This spring, a team of researchers has released results from an eight-year study that shows improved survival rates for women diagnosed with ovarian cancer who undergo cancer tumor testing to determine the best treatment.

Part of the team was Richard G. Moore, MD, director of the Center for Biomarkers and Emerging Technologies and a gynecologic oncologist with the Program in Women's Oncology at Women & Infants Hospital of Rhode Island.

"Essentially, we have demonstrated that by using a tissue sample from the patient's tumor and a chemoresponse assay, we are able to determine which treatment may or may not work for her," Dr. Moore explains of the study, which was presented at a recent meeting of the Society of Gynecologic Oncology and in the trade publication *Cure*.

"This study shows that a woman with recurrent ovarian cancer could benefit from having a biopsy and chemosensitivity testing. The results from such testing will allow for the identification of chemotherapeutics that are active against the patient's disease and those that are not resulting in decreased toxicity from ineffective treatments. Learning that personal directed therapies may improve overall survival for these patients made this the first study in two decades to show a significant increase in survival in recurrent ovarian cancer."

The study, launched in 2004, included 283 women. Of those, 262 had

successful biopsies which were tested in vitro, or in a test tube. The assay ChemoFx®, by Precision Therapeutics, tested up to 15 approved treatment regimens on the samples, identifying chemotherapy drugs and regimens to which each tumor might be sensitive. The study was non-interventional, meaning that physicians chose the treatment regimens without knowing of the assay results. The researchers then evaluated the assay's result against actual patient outcomes.

"The assay identified at least one treatment to which the tumor would be sensitive in 52% of patients in the study," Dr. Moore says. "Overall, median survival was 37.5 months for patients with treatment-sensitive tumors, compared to 23.9 months for intermediate and resistant tumors."

Assay-directed therapy has long been debated among oncologists, he continues. Such debate provided the impetus for this study.

Provided by Women & Infants Hospital