Ovarian Cancer
NATIONAL ALLIANCE
We Work To Save Women's Lives

2015 American Society of Clinical Oncologists Report

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Several promising advances in the treatment of ovarian cancer were presented at this year's annual meeting of the American Society of Clinical Oncologists (ASCO). Below, we have summarized a few of the major presentations and will continue to highlight work from the conference in summaries from our research advocates.

On the first day of the meeting, Dr. Elise Kohn, MD, Head of Gynecologic Cancer Therapeutics at the National Cancer Institute, framed much of the data that would be presented over the next few days. Many of the treatments presented at ASCO were "targeted therapies" which can be thought of as attacking an "Achilles' heel" in cancer cells. For example, some targeted therapies halt cancer's ability to get the signals and nutrients they need to grow, some strike at cancer's need to repair their DNA, and some help recruit the immune system in the fight against cancer. Dr. Kohn observed that many of these targeted therapies might not be enough to provide patients with a long-lasting response on their own. However, when combined, these drugs might just do the trick and, indeed, many drug companies are now starting to design combination trials and we are excited to see the results of this work in coming years.

Advances in PARP inhibitors

Dr. Iain McNeish of the University of Glasgow presented the results of the highly anticipated ARIEL2 clinical trial – a phase II clinical trial examining the PARP inhibitor rucaparib in ovarian cancer patients. PARP inhibitors, like rucaparib, block a cancer cell's ability to repair its DNA and, in turn, continue to grow and divide. Cancer cells which have mutations in the BRCA genes are particularly sensitive to PARP inhibitors because they are already bad at repairing DNA damage (in technical terms, called "homologous repair defective" or HRD). However, many women with ovarian cancer have tumors which may be susceptible to these drugs, regardless of their BRCA status, because their cells have defects in HRD. In the ARIEL2 study, researchers developed a test to determine which patients' tumors might have this HRD defect, and in turn may be responsive to rucaparib.

Patients with BRCA mutations and HRD defects were enrolled in the clinical trial and given continuous oral rucaparib. The study found that 82% of patients with BRCA mutations and 42% of patients with HRD defects responded to rucaparib. The median time off chemotherapy for patients with BRCA mutations and HRD defects were 9.4 months and 7.1 months, respectively, compared to 3.4 months in controls.

These results are very promising – for women with BRCA mutations and even some without - and the trial sponsors are opening and enrolling additional ARIEL studies soon.

For more information about this study, see here: http://www.onclive.com/web-exclusives/Rucaparib-Response-Rate-Exceeds-80-in-BRCA-mutant-Ovarian-Cancer

Immunotherapy in ovarian cancer

Dr. Andrea Varga of the Gustave Roussy Institute presented promising results from a small phase IB clinical trial of 26 patients with the immunotherapy drug, pembrolizumab, in patients with advanced ovarian cancer. Pembrolizumab is a PD-1 inhibitor, which blocks a tumor cell's ability to fight off the patient's immune system, thereby allowing the immune system to help fight and destroy the tumors. This drug has been shown to be effective in other cancers and was approved by the FDA last year for the treatment of melanoma and is offered under the trade name Keytruda.

Patients enrolled in this trial had often undergone multiple lines of previous therapy, with an average of at least 4 prior treatment regimens. The overall response rate for the drug was 11%, with one patient having a complete response to the drug, two having partial responses, and six having stable disease. Despite the small trial size, these results are promising and future trials with pembrolizumab in combination with other drugs are planned. The researchers anticipate that in future studies pembrolizumab may be more effective in combination with other drugs or as an earlier line of treatment.

Wee1 inhibitors in p53 mutant ovarian cancer

Dr. Amit Oza from the Princess Margaret Hospital at the University of Toronto presented preliminary results from a small phase I trial of 12 patients treated with a Wee-1 inhibitor, AZD1775, in combination with paclitaxel and carboplatin in patients with ovarian cancer that has a mutation in the gene p53. p53 and Wee-1 both normally function to regulate different "checkpoints" during the cell cycle. Since tumor cells have defects in the cell cycle, use of the Wee-1 inhibitor in combination with traditional chemotherapy may be effective in killing cancer cells.

Though these are very early results, the researchers showed that 75% of platinum sensitive patients treated with the combination of AZD1175 and paclitaxel/carboplatin responded to the treatment. The authors also observed a significant improvement in the progression free survival in women treated with this combination (Hazard Ratio = 0.63). Again, these are early results, but seem promising.

For more about this study, see the abstract here: http://meetinglibrary.asco.org/content/110824-132