

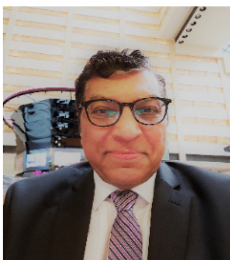


## Topic Collection "Current Novel Treatment of Patients with Ovarian Cancer"

Dear Colleagues,

Ovarian cancer is the seventh most common deadly cancer in women and accounted for almost 300,000 new cases, and almost 200,000 deaths annually worldwide in 2018. In 2020, there will be approximately 21,750 new cases of ovarian cancer diagnosed and 13,940 ovarian cancer deaths in the USA. Primary debulking/cytoreductive surgery associated with a platinum/paclitaxel –based chemotherapy, is the standard care within treatment of advanced ovarian cancer (FIGO stage III and IV). The surgery could be achieved through open ultra-radical laparotomy surgery, laparoscopy, or robot-assisted laparoscopic surgery. Due to its late presentation, often stage III or IV, the prognosis is poor. Notwithstanding the good initial response to primary therapy, optimal debulking followed by the two-drug combination of carboplatin plus paclitaxel, responses are generally short-lived, and the clinical outcome is still unsatisfactory with median progression free survival rates from 16 to 21 months. Platinum resistant patients are often offered other chemotherapeutics, including doxorubicin, gemcitabine or topotecan monotherapy with PFS rates of 3-4 months. There is a pressing need to identify more efficient therapies. **Anti-angiogenesis** therapeutics, Bevacizumab **cediranib**, and trebananib offers relatively good results in both primary and recurrent ovarian cancer. Attempts to optimize chemotherapy have included weekly scheduling of paclitaxel and intraperitoneal chemotherapy. Trials using angiogenesis inhibition and poly-ADP ribose polymerase (PARP) inhibitors that have been FDA-approved for maintenance therapy in platinum-sensitive recurrent epithelial ovarian cancer: **olaparib**, **rucaparib**, and **niraparib** show an advantage in progression free survival. In addition, Trabectedin combined with liposomal doxorubicin play a role in patients with intermediate platinum sensitive disease. Hyperthermic intraperitoneal chemotherapy (HIPEC) and chemo-immunotherapy may become a promising therapy for the treatment of ovarian cancer. This publication is most timely, as our current knowledge and understanding of screening, the pathophysiology of ovarian cancer, molecular aspects of cancer progression and metastasis, and advances in minimally invasive surgery technology, has led to significant improvement of the relevant treatment modalities, including promising targeted and personalized therapy.

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