

Methods We conducted a retrospective review of electronic medical records of 131 patients with gynecologic cancers who received different types of ICIs, such as pembrolizumab, durvalumab, and atezolizumab, on more than once, between 2018 and 2022. We evaluated progression free survival (PFS) and best objective response rate (ORR).

Results Five patients who received ICI treatment were identified to have developed irDM (ovarian cancer, n=3; cervical cancer, n=2). All patients received various types of ICIs, four receiving anti-PD1 inhibitors and one receiving both anti-PD-L1 inhibitor and anti-CTLA-4 inhibitors. The median PFS was 33 months (range 17–41), with an ORR of 100% including two patients with complete response and three with partial response. Only one patient experienced recurrence, with a PFS of 17 months. Four patients required hospitalization due to diabetic ketoacidosis but eventually recovered.

Conclusion/Implications Our findings suggest that there may be a relationship between the development of irDM and the efficacy of ICIs in patients with gynecologic cancer. However, further studies are needed to confirm this association and evaluate its underlying mechanisms.

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MONITORING OF MINIMAL RESIDUAL DISEASE WITH CIRCULATING TUMOR DNA IN PATIENTS WITH EPITHELIAL OVARIAN CANCER ON LONG-TERM PARP INHIBITOR MAINTENANCE THERAPY

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Introduction Epithelial ovarian cancer (EOC) is a lethal gynecologic cancer, with high recurrence rate despite the use of target therapy such as poly ADP-ribose polymerase inhibitor (PARPi). Circulating tumor DNA (ctDNA) is a promising biomarker for detecting minimal residual disease (MRD) in solid tumors. We aimed to investigate the use of ctDNA to detect MRD in patients with EOC who underwent long-term PARPi maintenance treatment.

Methods We prospectively identified 21 patients with EOC who had received PARPi maintenance for over two years. Tissue testing for individual mutation marker was performed with TruSight Oncology panel from Illumina and follow-up ctDNA testing was performed with Pan100 panel from Dxome or small custom panel with high-depth sequencing.

Results A total of 21 patients received different types of PARPi (olaparib, n=12; niraparib, n=7; rucaparib, n=1; and talazoparib, n=1) for a median of 27 months. Twelve patients had germline BRCA mutation, two had somatic BRCA mutation, and one had loss of heterozygosity. MRD was only detected in one patient, who experienced recurrence 3 months after ctDNA evaluation. Among them, two patients experienced recurrence. The other patient had recurrence 7 weeks after ctDNA evaluation without evidence of MRD, suggesting a negative predictive value of 0.905, and a positive predictive value of 1.00.

Conclusion/Implications Our findings suggest that ctDNA can be used to monitor MRD in EOC patients undergoing long-term PARPi maintenance treatment, allowing clinicians to tailor the duration of PARP inhibitor based on patient-specific

molecular findings. Further data with additional patients and survival maturation will be presented at the conference.

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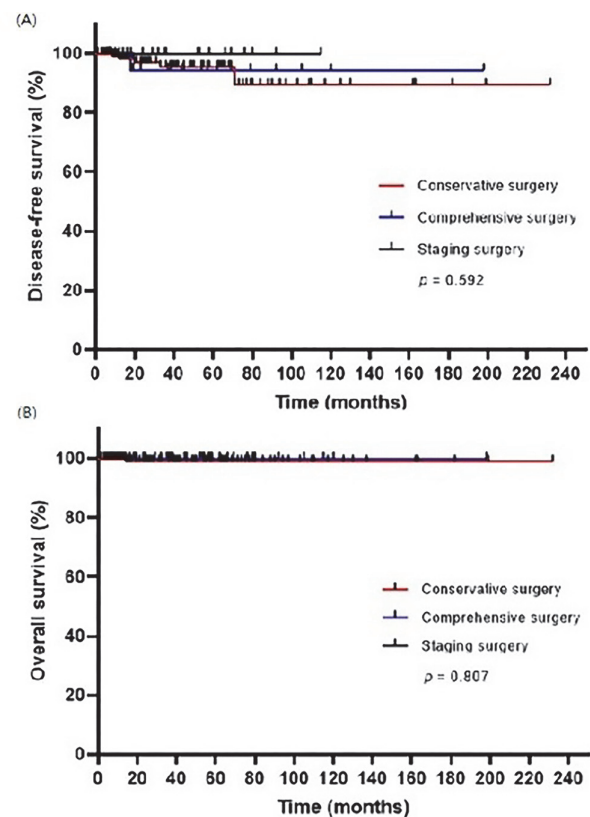
EXPLORING THE IMPACT OF SURGICAL INTERVENTIONS AND IDENTIFYING RISK FACTORS FOR RECURRENCE IN BORDERLINE OVARIAN TUMORS

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Introduction Despite the low incidence and favorable prognosis of borderline ovarian tumors (BOTs), standardized surgical treatments and risk factors remain debated. This study aimed to evaluate the influence of different surgical interventions on the outcomes of BOTs and to identify risk factors that contribute to their recurrence.

Methods BOT patients at Korea University Anam Hospital from March 2006 and March 2023 were grouped based on recurrence. Therapeutic surgical interventions were classified as conservative, comprehensive, or staging surgeries. Each group's characteristics, clinicopathological factors, surgical interventions, disease-free survival (DFS), overall survival (OS), and recurrence risk factors were compared and analysed. Statistical



Abstract EP268/#152 Figure 1 Survival plot by type of surgical interventions according to Cox proportional hazard model. (A) Disease free survival plot and (B) overall survival plot