

**Introduction** There are scarce data on the safety of the COVID-19 vaccines in Gynecologic cancer patients. This study evaluated the safety of COVID-19 vaccines among gynecologic cancer patients.

**Methods** A descriptive study was performed on gynecologic cancer patients who received at least one COVID-19 vaccine at King Chulalongkorn Memorial Hospital, Thailand, from January 2020 to August 2021. The evaluation was conducted via telephone interviews. Logistic regression was conducted to assess the association between demographics, clinical factors, cancer treatment status, and the occurrence of any grade adverse event. The number of COVID-19 infections of patients receiving at least two vaccine doses was studied.

**Results** Of 294 patients interviewed, the most common adverse effects were the grade 1–2 injection site reaction. One patient developed grade 3 fever and seizure ten days after the first dose of the AstraZeneca vaccine. Between the 2nd to 4th dose of the vaccination, most of the adverse events were the grade 1–2 injection site reaction. No severe allergic reactions or grade 4 adverse events were reported. The study found that patients under 60 had more adverse events than older patients (Adjusted odds ratio 1.99 [95% CI 1.08–3.71]; p=0.029). The treatment status did not affect the adverse events. Of 283 who received two doses, 27.6% were infected with COVID-19.

**Conclusion/Implications** COVID-19 vaccines are safe among gynecological cancer patients, both those receiving active anti-cancer therapy and those in surveillance. The younger patients frequently reported more adverse effects.

EP217/#745

**COVID-19 EFFECTS ON OVARIAN CANCER DIAGNOSIS, TREATMENT PATTERNS, AND SURVIVAL**

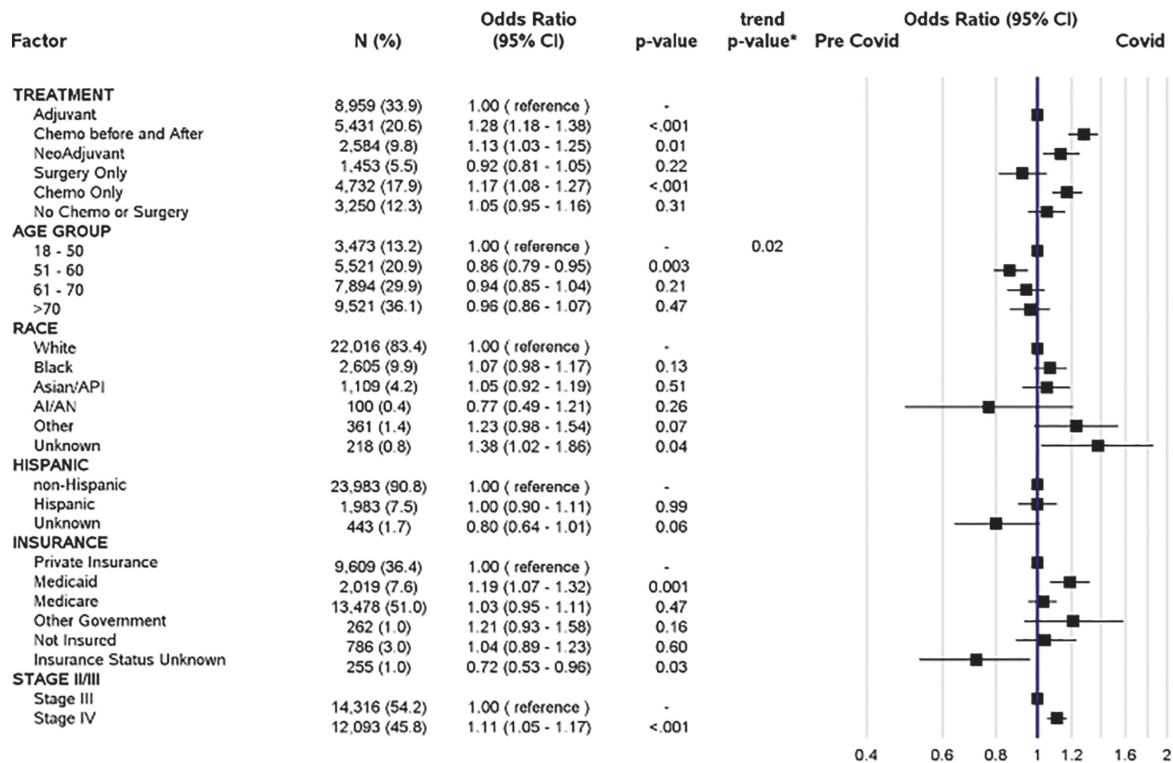
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10.1136/ijgc-2023-IGCS.296

**Introduction** The impact COVID-19 had on cancer rates and outcomes will take years to fully assess. International studies have shown that non-emergency cancer surgeries were postponed in favor of neoadjuvant treatment. The impact the pandemic had on ovarian cancer patients has not yet been systematically examined in a US population-based cohort.

**Methods** Stage III and IV ovarian cancer patients were ascertained using the National Cancer Database (NCDB). Patients were stratified by timeperiod (2017–2018 v 2020) to assess whether treatment patterns differed across time periods.

**Results** 26,409 ovarian cancer patients were included, 18,585 diagnosed prior to 2019 and 7,824 in 2020. No differences were found in age at diagnosis, race, or ethnicity across time-periods. On multivariable logistic regression, patients diagnosed during the COVID timeperiod were more likely to be on Medicare than private insurance (OR=1.19;CI=1.07–1.32) and were more likely to have stage IV disease than stage III disease (OR=1.11;CI=1.05–1.17). Multivariable results also showed that, compared to adjuvant treatment, neoadjuvant chemotherapy (OR=1.13;CI=1.03–1.25) or chemotherapy



Abstract EP217/#745 Figure 1 Multivariate logistic regression examining odds ratio for COVID-era factors

alone (OR=1.17;CI=1.08–1.27) were more often given during COVID than pre-COVID.

**Conclusion/Implications** While the emergency threat posed by COVID-19 appears to have subsided, the experiences gained during the COVID-19 pandemic can inform future decisions in times of crises or resource shortages. Our findings show that patients on Medicare were diagnosed with ovarian cancer during the COVID era more often than patients on private insurance and that chemotherapy was used as the first treatment line more often than surgical resection. These results are consistent with international studies.

## AS11. Ovarian cancer

EP219/#902

### PRIMARY DEBULKING SURGERY VERSUS NEOADJUVANT CHEMOTHERAPY IN ADVANCED STAGE OVARIAN CANCER; REALITY IN A SINGLE CENTER

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10.1136/ijgc-2023-IGCS.297

**Introduction** The aim of study was to compare the outcomes of stage III-IV ovarian cancer patients treated with NACT +IDS or PDS and to demonstrate the real life experience of a single center

**Methods** This retrospective case control study was carried out in Baskent University, Ankara, Turkey. Patients with high grade serous histology who diagnosed between 2007 and 2022 were evaluated. Patient's characteristics and tumoral features like age, type of surgery, complications, OS, DFS were retrospectively documented.

**Results** 473 patients included in PDS group and 143 patients included in NACT group. PDS group were slightly younger 57 y vs 59 y ( $p=0.06$ ). Median follow up time was 44 months. PDS group were more subjected to extended surgery 46% vs 26% ( $p=0.001$ ), however grade III-IV complications rates and RO resection rates were similar 6,8% vs 11,8% ( $p=0.18$ ) and 78% vs 85%  $p=0.06$  respectively. Median OS was 37 months (95% CI ;28,9–45,0) and 53 months (95% CI 48,2–57,2) for NACT and PDS group respectively ( $p<0.00$ ). Median DFS for NACT group was 12 months (95% CI ;10,2–13,7) and 15 months (95% CI 13,6–16,3) for PDS group ( $p=0.002$ ). In the cox proportional hazard model NACT was associated with diminished DFS and OS (HR:1.3 ,95% CI:1.0–1.7;  $p=0.001$ ) and (HR:1.6 ,95%CI:1.1–2.4;  $p=0.001$ )

**Conclusion/Implications** In our retrospective cohort PDS seems to be more effective in the treatment of Stage III-IV ovarian cancer and patients who treated with PDS had better DFS and OS.

EP220/#33

### IMPACT OF FRAGMENTATION OF HEALTHCARE ON OVARIAN CANCER SURVIVAL

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10.1136/ijgc-2023-IGCS.298

**Introduction** Fragmentation of healthcare results when cancer care are provided at different institutions due to health insurance payer restrictions. The impact of this is studied on survival of ovarian cancer. The objective to examine the impact of fragmented healthcare on progression free survival (PFS).

**Methods** Patients with stage IIIC high-grade ovarian cancer analysed between 2011–2018. Patients who had a delay in chemo-initiation ( $> 28$  days following surgery) due to fragmentation of healthcare analyzed as cohort-1, compared to the patients who did not have any delay as cohort-2. We included patients' surgical, tumor, perioperative, surgical, chemotherapy data to control for factors affecting chemo-initiation and PFS. Descriptive statistics and multivariate analyses were performed. The primary outcome was a Progression free survival attributable to fragmented healthcare.

**Results** Total of 491 ovarian cancer identified. There was 178/284 (67%) patients who had a delay in chemo-initiation. Cohort-1 ( $n=128$ ) included patients who experienced a delay in chemo-initiation due to fragmentation of healthcare, cohort-2 ( $n=106$ ) who did not have a delay. Both cohorts were balanced. Multivariable-adjusted analysis showed that delay of chemo-initiation due to fragmented healthcare in cohort-1 was associated with shorter PFS compared to cohort-2 (18.1 months vs. 22.1 months;  $p<0.01$ ); odds ratio [OR] 0.32 (0.23–0.68). Other factors contributing to shorter PFS included age OR 0.52 (0.32–0.78); stage OR 0.72 (0.52–0.87); grade OR 0.76 (0.53–0.99); and suboptimal cytoreduction OR 0.42 (0.25–0.67).

**Conclusion/Implications** Patients with advanced ovarian cancer who had a delay in chemo-initiation due to fragmented healthcare, had a shorter progression-free interval after controlling for all other relevant factors.

EP221/#1446

### THE ROLE OF ATM ATR GENE ON RESISTANCE OF CANCER STEM CELL SUBPOPULATIONS IN ADVANCED OVARIAN CANCER: THERAPY RESPONSE TO IN VITRO APOPTOSIS AND PROLIFERATION

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10.1136/ijgc-2023-IGCS.299

**Introduction** Approximately 85% of ovarian cancer patients were diagnosed at an advanced stage which has a high mortality rate. More than 80% of them respond to first-line chemotherapy using platinum-based regimen. However, the median disease-free survival is only 18 months. Most patients relapse and do not respond to subsequent lines of chemotherapy. Intervening the presence of cancer stem cells (CSC) is preferred in managing chemoresistant ovarian cancer. One of chemoresistance mechanisms identified in CSC is the high activity of ATM and ATR proteins that bind competitively to DNA against platinum-based regimen. Therefore, this study aimed to explore correlation of ATM and ATR gene expression in ovarian cancer CSC chemoresistance.

**Methods** The culture cells of 67 advanced ovarian cancer patients were sorted using MACS with the CD133 marker to obtain CSC. The obtained CSCs were prepared with the spheroid method (using SKOV3 cell line, OV1, and OVM1). They were then tested with RT-qPCR (ATM, ATR, NANOG,