setting are important variables that should always be reported in biomarker research.

EPV224/#620 RADIOTHERAPY FOR PLATINUM-RESISTANT (PR) OVARIAN CANCER: SHOULD THIS BE RECONSIDERED AS A STANDARD TREATMENT OPTION?

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Objectives Radiotherapy for recurrent ovarian cancer has traditionally had a limited role due to toxicity, but recent advances enable more targeted treatments. The aims were to evaluate patterns of disease in PR ovarian cancer and investigate feasibility of radiotherapy to treat abdomino-pelvic disease.

Methods Gynaecology oncology clinic lists were retrospectively reviewed to identify 50 patients with PR ovarian cancer. Tumour location on imaging at time-point of platinum-resistance was mapped with cumulative incidences by quadrant. Three groups were defined: RT_Feasible - pelvis and lymph nodes; RT_Not Feasible -liver parenchymal metastases, gross ascites, bowel obstruction; RT_Uncertain including peritoneal disease. A dosimetric study was undertaken on ten consecutive RT-Uncertain patients producing IMRT plans delivering 30Gy/10 fractions with pre-defined normal structure dose constraints.

Results From 399 patients attending Nov 2019-Feb 2020, 88 (22%) had PR disease, with 63% confined to abdomen-pelvis. Disease was typically multi-focal with involvement of 2 or more quadrants in 84%, and 88% having upper abdominal disease. Group allocation was RT_Feasible 22%, RT_NotFeasible18% and RT_Uncertain 60%. There was median 5 (range 2–9) separate tumour volumes with total volume median 13.6 cm^3 (range 6.5–400.3 cm^3) resulting in planning target volumes median 458.6 cm^3 (243–3077). IMRT plans encompassed tumour volumes while meeting all normal structure tolerances in 50% cases, with all plans failing for planning volumes $>1000cm^3$.

Conclusions PR ovarian cancer is often widespread, but radiotherapy was feasible for 52% cases with abdomino-pelvic disease. RT could be integrated into novel treatment strategies for these patients who currently have limited options.

EPV225/#623 SAFETY OF A NEW CLOSED CO2 PERITONEAL RECIRCULATION SYSTEM (PRS) HYPERTHERMIC INTRAPERIONEAL CHEMOTHERAPY (HIPEC) AFTER INTERVAL DEBULKING SURGERY (IDS) IN ADVANCED OVARIAN CANCER (AOC) PATIENTS

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Objectives The avaliability of new devices aimed at improving fluid distribution with a CO2 Peritoneal Recirculation System (PRS-1.0 Combat) may be useful to further improve the clinical benefit recently showed by hypertermic intraperitoneal chemotherapy (HIPEC) after interval debulking surgery (IDS) in advanced ovarian cancer (AOC) patients. This study aimed at assessing the feasibility and perioperative outcomes of the CO2 PRS HIPEC after IDS.

Methods Over the study period 24 patients were prospectively enrolled. Patients underwent 3 neoadjuvant cycles of carboplatin AUC5 + paclitaxel 175 mg/m2 and IDS with absent residual disease. Sodium thiosulfate (9 g/m2) was administered before CO2 PRS HIPEC with cisplatin (75 mg/m2, temperature 42°C, for 60 minutes).

Results Almost one third of patients (37,5%) underwent ultraradical surgery with 12.5% bowel resections. Median blood loss was 500 (100–1200) mL and mean operative time 407.5 minutes. Median (range) intensive care unit stay and time-to-discharge were 0 (0–10) and 6 (4–17) days, respectively. We registered 3/24 (12.5%) early serious adverse events including one acute respiratory failure and two acute kidney injuries (only one of these retained a mild chronic renal failure); one patient was readmitted within 30 days after discharge because of a dehiscence of the vaginal vault. No late adverse events were reported. Median time-to-chemotherapy was 33 days (range 22- 51).

Conclusions The CO2 PRS may improve the safety profile of HIPEC in the setting of IDS for AOC patients probably because of the more tailored drug distribution.

EPV226/#634 HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY WITH CO2 RECIRCULATION SYSTEM (PRS) AFTER INTERVAL DEBULKING SURGERY IN ADVANCED OVARIAN CANCER (AOC): PRELIMINARY EFFICACY RESULTS FROM A PHASE II STUDY

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Objectives The addition of HIPEC to IDS in AOC has recently showed advantages in prolonging both disease-free and overall survival in AOC patients responding to neoadjuvant chemotherapy. We investigated the pattern of recurrence in a preliminary series of AOC patients treated by HIPEC with a new CO2 PRS after IDS.

Methods Twenty patients were prospectively enrolled during the study period. All patients underwent 3 cycles of neoadjuvant chemotherapy with carboplatin AUC5 + paclitaxel 175 mg/m2 and achieved complete cytoreduction at the time of IDS. HIPEC with cisplatin (75 mg/m2, temperature 42°C, for 60 minutes) was administered with a closed CO2 PRS.

Results Seven out of twenty (35%) patients underwent ultraradical surgical procedures and 3 (15%) bowel resection. After a median follow-up of 21 months (range 7–28) we registered 9 recurrences with a median time-to-recurrence of 9 months (range 5–21). Interestingly 7/9 (77.8%) recurrences were nodal while only one patient had peritoneal relapse (5%) and one more recurred with pleural disease. Only 2 patients died from relapsed disease.

Conclusions Our preliminary efficacy data showed that peritoneal recurrence in AOC may be potentially reduced by the