Introduction/Background* The management of ovarian cancer is based on a combination of surgery and chemotherapy. The aim of surgery is to achieve zero residual tumour at the end of the procedure. In advanced stage ovarian cancer, two therapeutic approaches are possible: primary debulking surgery, or primary chemotherapy followed by interval debulking surgery. The primary objective of this study was to describe overall survival (OS) in FIGO stage III and IV ovarian cancers according to the therapeutic sequence (i.e. primary surgery or interval surgery).
Methodology We performed a retrospective, observational study using data from the gynecological cancer registry of the Cote d'Or, for patients diagnosed with FIGO stage III or IV ovarian cancer between 1998 and 2015. We recorded FIGO stage, histological type, treatment and completeness of cytoreduction.
Result(s)* In total, 460 patients were included. OS at 5 years was 47% in patients with primary surgery, versus 38% in patients with interval surgery (p=0.06). Five-year OS was 45% in patients with complete cytoreduction, versus 30% in those with incomplete cytoreduction (p<0.001). The rate of complete cytoreduction was 43% in patients with primary surgery, versus 55% in those with interval surgery.
Conclusion* OS appears to be slightly better in patients receiving primary surgery, and when cytoreduction is complete. Every effort should be made during surgery to achieve complete cytoreduction, by an experienced team. Primary surgery should be preferred in these patients.

362 NOVEL STONY BROOK TAXANES ARE EFFICACIOUS IN PACLITAXEL-RESISTANT OVARIAN CANCER MODELS BOTH IN VITRO AND IN VIVO

[1,2,3]P Holý*, [1,3]K Seborova, [1,2,3]A Spalenkova, [1,3]K Koucka, [1,3]M Ehrlichova, [4]C Wang, [4]I Ojima, [5]P Daniel, [5]K Balusikova, [5]M Jelinek, [5]J Kovar, [1,3]P Soucek, [1,3]R Vaclavikova. *[1]Biomedical Center, Charles University Faculty of Medicine in Pilsen, Laboratory of Pharmacogenomics, Pilsen, Czech Republic; [2]Third Faculty of Medicine, Charles University, Prague, Czech Republic; [3]National Institute of Public Health, Prague, Toxicogenomics Unit, Prague, Czech Republic; [4]Institute of Chemical Biology and Drug Discovery – Stony Brook University – State University of New York, Stony Brook, NY, USA; [5]Third Faculty of Medicine, Charles University, Division of Cell and Molecular Biology, Prague, Czech Republic*

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Introduction/Background* Resistance of cancer cells to taxanes is a serious problem preventing successful therapy. Efforts are ongoing to synthesize novel taxanes efficacious against the resistant phenotype. Stony Brook taxanes (SB-Ts) have proven to have potential, but require further preclinical testing and more detailed study of their mechanism of action. Here, we aimed to evaluate the efficacy of several promising SB-Ts in resistant ovarian cancer models in vitro, and in vivo. We also studied the role of 3 candidate genes ABCC3, CPS1, and TRIP6 in SB-Ts cell death-inducing molecular mechanisms.
Methodology The NCI/ADR-RES ovarian cancer cell line was incubated with either paclitaxel or one of the second generation (SB-T-1214 and SB-T-1216) or third generation (SB-T-121402, SB-T-121605 and SB-T-121606) taxanes. Cell survival was measured as IC50 after 72 hours. Cell cycle analysis was performed using flow cytometry. Uptake of SB-Ts into cells was measured by HPLC. Female athymic mice Nude Crl: NU (NCr)-Foxn1nu (N=50) were used as the model organism for ovarian cancer by subcutaneous application of NCI/ADR-RES cells. In vivo efficacy of taxanes was measured after intraperitoneal application twice per week. Gene expression in tumour tissue was measured by RT-qPCR.
Result(s)* Compared to paclitaxel, NCI/ADR-RES cells showed 30x lower resistance to SB-T-1214, SB-T-1216, and SB-T-121402 and 50x lower to the 3rd generation taxanes SB-T-121605 and SB-T-121606. Cell cycle analysis showed the "1216" family to be more cytostatic than cytotoxic compared to "1214". Uptake of SB-T-1216 and its derivatives into cells was 6-15.5x higher than for paclitaxel. Treatment of mice (groups of 5) with regimen combining paclitaxel and SB-T-121605/-06 significantly slowed tumour growth and even reduced tumour volume after several applications. Doses of SB-Ts higher than 3 mg/kg caused severe toxicity. Both SB-T-121605 and SB-T-121606, but not paclitaxel, led to significant decrease in CPS1 and ABCC3 expression in vitro and in case of CPS1 also in vivo.
Conclusion* Third generation taxanes SB-T-121605 and SB-T-121606 are highly effective in a paclitaxel-resistant ovarian carcinoma model both in vitro and in vivo and warrant further investigation. SB-T treatment led to deregulation of CPS1 and ABCC3 expression that seems to play a role in their efficacy.

365 LONG TERM PROGNOSIS OF PREMENOPAUSAL WOMEN WITH OVARIAN CANCER

V Corraliza-Galan*, C Martin-Gromaz, I Pelayo, D Rubio-Marin, E Cabezas-Lopez, C Del Valle-Rubido, MJ Pablos-Antona, L Abarca-Martinez, E Moratalla-Bartolome, C Sanchez-Martinez, J Lazaro de la Fuente. *Ramon y Cajal Hospital , Obstetrics and Gynecology, Madrid, Spain*

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Introduction/Background* Ovarian cancer (OC) is the most lethal gynaecological malignancy worldwide. In general, patients face a poor prognosis due to the fact that they often have an advanced stage of disease at diagnosis. The peak incidence is seen at 65 to 70 years and only a small group of women is diagnosed under 40 years of age. Younger women have better overall survival compared to older women but prognostic factors and evolution are not well stablished.
Methodology Retrospective analysis of women under 45 years old diagnosed of epithelial and non-epithelial ovarian cancer during the last 10 years.
Result(s)* 25 women under 45 years with OC were reviewed. Mean age at diagnosis was 36.27 years (SD 5.77; min:21, max: 43). Most of the tumors (52% N:13) were epithelial serous OC (Clear cells: 20.0% N:5; Endometrioid: 12.0 N:3; Mucinous: 8.0% N:2; Endodermal sinus: 4.0% N:1; Granulosa cell: 4.0% N: 1). Most of the patients were diagnosed in advanced tumoral stages (III-IV: 68.0%, N:17). Appropriate surgery and chemotherapy was applied individually in each case. After a long period of follow up (6-108 months) 50% of women were death (medium follow up for alive women: 66.44 months (SD: 26.93; min: 24; max: 108 months; medium follow up for death women: 23.60 months; SD: 14.45; min:6; max: 41 months). Mean time of relapse was 14.33 moths (SD: 12.30; min: 4; max: 45 months), mostly in abdominal location (92.85% N: 13), that were treated with quemotherapy (85.71% N:12) and surgery (28.75% N:4). After relapse only 20.0% were disease free (N:3) while 2 patients died and 60.0% (N: 15) were alive with disease.

Conclusion* Ovarian cancer in premenopausal women is a threatening condition, diagnosed in most cases in advanced stages, with a high probability of bad prognosis despite appropriate surgical and oncologic management.

366 PROGNOSTIC IMPACT OF PD-L1 EXPRESSION IN EPITHELIAL OVARIAN CANCER: A COHORT OF 49 PATIENTS

[1]D Atallah*, [2]A Khaddage, [2]L Khoury, [1]W Abdallah, [2]V Smayra, [3]M Akiki, [1]N El Kassis, [4]G Chahine, [1]M Moubarak. *[1]Hôtel-Dieu de France – Saint Joseph University , Obstetrics and Gynecology , Beirut, Lebanon; [2]Hôtel-Dieu de France – Saint Joseph University , Pathology, Beirut, Lebanon; [3]Hôtel-Dieu de France, Pathology, Beirut , Lebanon; [4]Hôtel-Dieu de France – Saint Joseph University, Oncology, Beirut , Lebanon*

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Introduction/Background* Role of checkpoint inhibitors in ovarian cancer is still unknown and results from ongoing clinical trials are still awaited. We aim in this study to assess the expression of PD-L1 using the Combined Positive Score (CPS) and to evaluate its impact on the overall survival in a cohort of 49 patients diagnosed with high-grade serous ovarian cancer.

Methodology Medical charts were reviewed of 49 patients with high-grade serous ovarian cancer operated on at the gynecologic oncology department in Hôtel-Dieu de France hospital, Lebanon, between 2015 and January 2020. Immunohistochemical staining was performed for PD-L1 (Agilent Dako, PDL-1 IHC 22C3) and for TP53 (Agilent Biogenex, clone D07, 1:100 dilution) on whole tissue sections from a representative block of formalin-fixed, paraffin-embedded tumor tissue. We looked for correlation between PD-L1 status and overall survival/recurrence. We also looked for correlation between PD-L1 status and TP-53 mutation.

Result(s)* 55% of patients presented a positive PD-L1 status. No correlation was found between the PD-L1 status and the stage of the disease. Lymph node status was similar between the two cohorts, positive vs. negative CPS score ($p = 0.927$). Median follow-up was 36 months (range, 12 – 72 months). Survival rate was similar between the two cohorts, positive vs. negative PD-L1 status (88.9% vs. 72.7% respectively, $p = 0.14$). No correlation was found between recurrence rate and PD-L1 status ($p = 0.184$). Also, no correlation was found between PD-L1 status and TP-53 type (wild vs. mutated) ($p = 0.154$)

Conclusion* PD-L1 status does not seem to have a prognostic impact in our series of patients with high-grade serous epithelial ovarian cancer. Also, patients with TP53 mutation do not present increased expression of PD-L1 in comparison to patients with TP53 wild-type.

369 CLINICAL BENEFIT OF ORAL METRONOMIC CYCLOPHOSPHAMIDE ADMINISTRATION IN HEAVILY PRETREATED RECURRENT EPITHELIAL OVARIAN CANCER

[1]D Attianese*, [1]E Badellino, [1]M Villa, [2]M Bellero, [1]R Massobrio, [1]L Fuso, [1]N Biglia, [1]A Ferrero. *[1]Mauriziano Hospital, Academic Department Gynaecology and Obstetrics, Torino, Italy; [2]Mauriziano Hospital, Hospital Pharmacy, Torino, Italy*

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Introduction/Background* Oral metronomic cyclophosphamide (OMC) consists in the chronic administration of low, usually daily, doses of chemotherapy. The effective reduction of tumor growth, oral administration, low toxicity profile and low cost make this therapeutic choice attractive for women with relapsed ovarian cancer, especially heavily pretreated patients. We retrospectively evaluated the clinical benefit and the objective response in patients treated with OMC for recurrent ovarian cancer.

Methodology We included patients treated with OMC (50 mg daily) from 2016 to 2021 at the Academic Department Gynaecology, Mauriziano Hospital, Torino, Italy. Clinical benefit was classified as CA125 response, radiological response and symptomatic improvement as reported by the treating physician. Toxicity profile was assessed using Common Terminology Criteria for Adverse Events version 5.0.

Result(s)* Thirty-eight patients were analyzed. Average age was 72 years (range 49-88). 34 (90%) had FIGO stage III and IV disease at diagnosis and 64% had received ≥ 3 previous lines. Before starting OMC, 21% had ECOG 0, 58% ECOG 1 and 21% ECOG 2. 8.6% of patients obtained partial response (PR) and 37% stable disease (SD). Median duration of the response was 7.4 months. After 3 months from starting OMC, 51% of patients experienced symptoms improvement and 69.5% Ca125 reduction or stabilization. Only one patient discontinued for side effects and no G3-4 hematological toxicities were observed, reflecting a low toxicity profile. Only nausea and fatigue G1-G2 were reported in 5 (13%) and 13 (34%) cases, respectively.

Conclusion* OMC could be a feasible therapy for recurrent ovarian cancer leading to an acceptable clinical response with a low toxicity profile, even if patients are heavily pretreated and with a suboptimal performance status. We are now prospectively assessing the Patient Reported Outcomes (PROs) in order to objectify the tolerability and the symptoms improvement.

All authors have no conflict of interest.

381 PLATELET COUNT AS A PROGNOSTIC INDICATOR IN OVARIAN CANCER

H Dubey*, A Ranjan, P Tanwar. *Dr.B.R.A.IRCH, AIIMS, New Delhi, Laboratory Oncology, New Delhi, India*

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Introduction/Background* Thrombocytosis is a poor prognostic indicator in malignancies especially in gynecological one such as carcinoma ovary, cervix, and endometrium. Recent evidence indicates that platelets are present in the tumor microenvironment and could play important roles in stimulating tumor growth. The aim of this study is to analyze the impact of platelet count on the prognosis of ovarian cancer

Methodology Baseline platelet count (prior to surgery or chemotherapy) was analyzed in 151 cases of ovarian cancer confirmed by histopathological examination. Thrombocytopenia & thrombocytosis were defined as platelet count (PC) <1.0 lakh & >4.0 lakh/cumm respectively.

Result(s)* Out of 151 cases, thrombocytopenia was seen in 3.3% (5/151), whereas thrombocytosis in 20.5% (31/151) and 76.2% (115/151) of cases were within normal range of platelet count.