



Abstract 2022-RA-706-ESGO Figure 1 Overall survival (A) and progression-free survival (B) according to heart rate variability activity (low versus high)

Conclusion High vagal nerve activity, indexed by HRV, is significantly and independently associated with better OS. These results support previous studies on the prognostic role of HRV in cancer and if confirmed in longitudinal studies, call for testing effects of vagal nerve activation among OC patients.

Results 231 2LM niraparib monotherapy patients were included, with all receiving 2L platinum-based therapy. The median age was 68 years, and patients were primarily treated in a community setting (90.0%; table 1). The majority of patients had stage III/IV disease at diagnosis (78.4%) and had *BRCA* wild-type (*BRCA*wt, 74.0%). Homologous recombination deficiency status was unknown for most patients (92.2%). Median time from initial EOC diagnosis to 2L maintenance therapy was 803 days. Patient characteristics were broadly similar across the stratified cohorts, with a higher proportion of patients with *BRCA*wt in the niraparib 1LM postapproval cohort than in the preapproval cohort (85.3% vs 68.6%).

2022-RA-708-ESGO

REAL-WORLD ASSESSMENT OF PATIENTS WITH OVARIAN CANCER WHO RECEIVED NIRAPARIB AS SECOND-LINE MAINTENANCE THERAPY IN THE UNITED STATES: DID FIRST-LINE MAINTENANCE APPROVAL CHANGE THE PATIENT PROFILE FOR SECOND-LINE MAINTENANCE THERAPY?

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Introduction/Background Niraparib, a poly(ADP-ribose) polymerase inhibitor (PARPi), was first approved in the US on 27 Mar 2017 for maintenance treatment of recurrent epithelial ovarian cancer (EOC). To evaluate whether approval of niraparib first-line maintenance (1LM) affected the clinical profile of patients receiving niraparib second-line maintenance (2LM), this study described the characteristics of real-world patients with EOC who initiated 2LM with niraparib before and after niraparib 1LM approval, using a real-world database.

Methodology This retrospective cohort study from the nationwide electronic health record-derived de-identified Flatiron Health database and included patients who were diagnosed with EOC between 01Jan2011 and 30Nov2021, were ≥18 years old at diagnosis, and received 1L platinum-based therapy. The index date was defined as the initiation date of niraparib 2LM monotherapy, on or after 01Jan2017. Demographic and clinical characteristics were assessed from EOC diagnosis to index date. Patients were stratified by index date: before 29Apr2020 (niraparib 1LM preapproval cohort) and after 29Apr2020 (niraparib 1LM postapproval cohort).

Abstract 2022-RA-708-ESGO Table 1 Demographic and clinical characteristic of 2LM Niraparib Patients

	Patients initiating 2LM niraparib monotherapy on or after 01Jan2017 (N=231)	Niraparib 1LM preapproval cohort (index dates before 29Apr2020) (n=156)	Niraparib 1LM postapproval cohort (index dates on or after 29Apr2020) (n=75)
Demographic characteristics			
Median age at index (Q1, Q3), years	68 (61.0, 75.0)	67 (60.0, 74.5)	69 (62.0, 75.0)
Practice type, n (%) ^a			
Academic	39 (16.9%)	24 (15.4%)	15 (20.0%)
Community	208 (90.0%)	144 (92.3%)	64 (85.3%)
Clinical characteristics			
Stage at initial EOC diagnosis, n (%) ^a			
I-II	22 (9.5%)	14 (9.0%)	8 (10.7%)
III	114 (49.4%)	80 (51.3%)	34 (45.3%)
IV	67 (29.0%)	45 (28.8%)	22 (29.3%)
Unknown/not documented	28 (12.1%)	17 (10.9%)	11 (14.7%)
<i>BRCA</i> mutation status, n (%) ^{b,c}			
Mutated	44 (19.0%)	NR	NR
Wild-type	171 (74.0%)	107 (68.6%)	64 (85.3%)
Unknown	16 (6.9%)	NR	NR
HRD status, n (%) ^b			
HRd	11 (4.8%)	10 (6.4%)	8 (10.7%)
HRp	7 (3.0%)		
Unknown	213 (92.2%)	146 (93.6%)	67 (89.3%)
Median time from initial EOC diagnosis to 2LM therapy (Q1, Q3), days	803.0 (610.0, 1066.0)	803.0 (631.5, 1064.0)	811.0 (577.0, 1121.0)
Median duration of 2L platinum-based therapy (Q1, Q3), days	127.0 (106.0, 149.0)	126.5 (106.0, 150.0)	127.0 (78.0, 148.0)

^aPatients with records in academic and community practices are counted in both categories; therefore, percentages may sum to more than 100%.
^bResults with counts less than 5 are masked by combining categories or not reported.
^cData do not differentiate between somatic and germline mutations.
 Abbreviations: 1LM, first-line maintenance; 2L, second-line; 2LM, second-line maintenance; HRD, homologous recombination deficiency; HRd, homologous recombination deficient; HRp, homologous recombination proficient; OC, ovarian cancer; NR, not reported; Q, quartile.

Conclusion This real-world analysis found that niraparib remained an important treatment option for 2LM in patients

with recurrent EOC following niraparib 1LM approval, and that 1LM approval did not markedly change the profile of patients receiving niraparib maintenance therapy in a 2L setting.

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PHASE 2 STUDY ASSESSING THE EFFICACY OF ADDING AL3818 (CATEQUENTINIB DIHYDROCHLORIDE, ANLOTINIB HYDROCHLORIDE) TO CHEMOTHERAPIES IN SUBJECTS WITH PLATINUM RESISTANT OVARIAN CARCINOMA

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Introduction/Background AL3818 is a novel, orally administered, small molecule tyrosine kinase inhibitor. The primary objective of this phase 2 study is to evaluate the efficacy of AL3818 in combination with chemotherapies in patients with platinum resistant ovarian carcinoma.

Methodology Patients with a diagnosis of platinum resistant ovarian carcinoma requiring second line or further treatment with chemotherapy were eligible for enrollment. The regimen was a 21-day cycle with oral AL3818 at 8 mg administered on days 8–21, with days 1–7 off. Chemotherapy options included weekly paclitaxel, pegylated liposomal doxorubicin (PLD), and topotecan. Maintenance monotherapy with AL3818 was an option if chemotherapy was discontinued.

Results Most patients were heavily pre-treated with median prior 4 (1–11) lines. At the cut-off date April 8, 2021, n=51 patients with platinum resistant ovarian cancer were enrolled and n=46 were evaluable, 29 of n=46 were treated with weekly paclitaxel. The objective response rate (ORR) and disease control rate (DCR) in intention to treat patient population were 43% (20/46) and 91% (42/46) for n=46 patients, and 55% (16/29) and 90% (26/29) for weekly paclitaxel patients. Median duration of response (DOR) was 5.94 months for n=46 patients and 6.43 months for weekly paclitaxel patients. Median progression free survival (PFS) was 6.27 months for n=46 patients and 6.67 months for weekly paclitaxel patients. Common treatment emergent adverse events (TEAE) included: abdominal pain (14%), alopecia (16%), constipation (10%), cough (12%), diarrhea (50%), dizziness (10%), dry skin (10%), epistaxis (18%), dyspnea (16%) fatigue (64%), fever (10%), headache (20%), hypertension (10%), anorexia (10%), oral mucositis (12%), nausea (52%), neutropenia (12%), vomiting (26%).

Conclusion AL3818 has demonstrated positive combined synergic efficacy with chemotherapies in platinum resistant ovarian

cancer patients. These combination regimens are well tolerated in a heavily pre-treated population and a phase 3 registration study is ongoing (NCT02584478).

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HIGH EXPRESSION OF VACUOLAR-ATPASE SUBUNIT ATP6V1B1 PREDICTS A POOR PROGNOSIS AND CORRELATES WITH CELL CYCLE PROGRESSION IN EPITHELIAL OVARIAN CANCER

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Introduction/Background Vacuolar-ATPase subunit ATP6V1B1 belongs to the ATP6V1s which participates in the biological process of transporting hydrogen ions and are associated with various cancers in expression and clinicopathological features, while its role its role in epithelial ovarian cancer (EOC) has not been clarified yet. Therefore, in this study we aim to evaluate the function, molecular mechanism and clinicopathological significance of ATP6V1B1 in EOC.

Methodology Expression level of ATP6V1B1 was screened by RNA sequencing of 10 EOCs and normal epithelial ovarian tissues. Expression levels of functional role of ATP6V1B1 were respectively evaluated by immunohistochemistry staining of EOC, borderline, benign and normal epithelial tissues. Associations of clinicopathological features and prognosis with ATP6V1B1 in EOC patients were analyzed both our recruited cohort and GEO datasets. Also, the functional roles of ATP6V1B1 were evaluated in EOC cell lines.

Results ATP6V1B1 protein was elevated in EOCs according to a GEO and TCGA datasets. High mRNA and protein levels of ATP6V1B1 were observed in EOCs compared to borderline, benign and normal nonadjacent ovarian epithelial tissues ($p < 0.001$). Importantly, high expression level of ATP6V1B1 was associated poor overall survival and disease-free survival compared with low expression of ATP6V1B1 in EOCs ($p = 0.006$, $p < 0.001$, respectively), and was associated with platinum-based chemotherapy resistance ($p < 0.001$). In vitro results also demonstrated the knockdown of ATP6V1B1 was associated with decreased cell proliferation and colony forming abilities supporting the oncogenic role in EOC. Also, cell cycle analysis revealed a higher proportion of cells in G1 phase after knockdown of ATP6V1B1 ($p = 0.003$).

Conclusion Our study is the first work to identify an oncogenic role of ATP6V1B1 in EOC tissues and cell lines which may provide insights into the application of ATP6V1B1 as a novel predictor of clinical outcome and a potential therapeutic target in EOC patients.