2022-RA-1519-ESGO BIOMARKER TESTING AND FIRST LINE MAINTENANCE TREATMENT PATTERNS IN A REAL-WORLD US COHORT OF PATIENTS WITH ADVANCED OVARIAN CANCER

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10.1136/ijgc-2022-ESGO.735

Introduction/Background With the approval of the first poly-(adenosine diphosphate-ribose) polymerase inhibitor (PARPi), olaparib therapy has demonstrated efficacy in first-line (1L) maintenance for Breast Cancer gene mutated (BRCAm) advanced ovarian cancer (AOC) patients in 2018 and in combination with bevacizumab for Homologous Recombination Deficient (HRD+) AOC patients in 2020. This study describes biomarker testing and treatment patterns in a representative AOC patient sample.

Methodology A retrospective observational study utilizing the electronic health record-derived de-identified US-based Flatiron Health database was performed including women aged ≥18 years at AOC diagnosis between July 2018 and December 2021 with ≥2 clinical visits. Patients were followed from diagnosis until 31 December 2021, cessation of dataset coverage, or death, whichever occurred first. Biomarker testing was defined as evidence of a test for *BRCA* or HRD.

Abstract 2022-RA-1519-ESGO Table 1 Patient demographics by biomarkers status and overall

	Total	BRCA+**	BRCA wild type†	HRD+**	HRD-††
	(N=1107)	(N=139)	(N=802)	(N=115)	(N=116)
Age at advanced diagnosis, n (%)					
>=65 years	633 (57.1)	59 (42.4)	480 (59.8)	59 (51.3)	65 (56.0)
Race/Ethnicity, n (%)					
Black or African American	66 (7.0)	7 (5.9)	46 (6.7)	5 (5.1)	12 (12.5)
Other Race	215 (22.9)	28 (23.7)	161 (23.6)	28 (29.2)	19 (19.8)
White	656 (70.0)	83 (70.3)	475 (69.6)	66 (66.7)	65 (67.7)
Missing	170	21	120	16	20
Histology at diagnosis, n (%)					
Serous	827 (74.7)	106 (76.3)	601 (74.9)	102 (88.7)	89 (76.7)
Other	264 (23.8)	31 (22.3)	189 (23.5)	13 (11.3)	26 (22.4)
Unknown/not documented	16 (1.4)	2 (1.4)	12 (1.5)	0 (0.0)	1 (0.9)
ECOG at initiation of 1L maintenance, n (%)					
0	149 (26.4)	29 (39.7)	110 (26.5)	26 (44.1)	22 (37.3)
1	177 (31.4)	28 (38.4)	129 (31.1)	23 (39.0)	21 (35.6)
2	30 (5.3)	3 (4.1)	22 (5.3)	4 (6.8)	2 (3.4)
3	1 (0.2)	0 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)
5	207 (36.7)	13 (17.8)	153 (36.9)	6 (10.2)	14 (23.7)
Missing	543	66	387	56	57
1L maintenance therapy, n (%)					
Chemotherapy	24 (2.2)	3 (2.2)	18 (2.2)	2 (1.7)	5 (4.3)
Bevacizumab monotherapy	126 (11.4)	3 (2.2)	106 (13.2)	5 (4.3)	23 (19.8)
Olaparib monotherapy	95 (8.6)	46 (33.1)	43 (5.4)	23 (20.0)	1 (0.9)
Other PARPi monotherapy	98 (8.9)	9 (6.5)	82 (10.2)	20 (17.4)	16 (13.8)
Olaparib and bevacizumab combination therapy	42 (3.8)	9 (6.5)	30 (3.7)	16 (13.9)	4 (3.4)
Other maintenance therapy	20 (1.8)	3 (2.2)	13 (1.6)	2 (1.7)	2 (1.7)
No maintenance therapy	702 (63.4)	66 (47.5)	510 (63.6)	47 (40.9)	65 (56.0)

* Biomarker groups are not mutually exclusive.
** Positive means at least one confirmed positive test, of BRCA or HRD as specified.
† Wild type means at least one confirmed negative test and no positive tests of BRCA.
†† Negative means at least one confirmed negative test and no positive tests of HRD.

Results Of the 1,107 patients included, most (88%, *n*=976/1,107) were *BRCA* tested, and 22.5% (*n*=249/1,107) were HRD tested. In *BRCA*-tested patients 25.3% (n=247/976) were additionally HRD tested. Among patients receiving either a *BRCA* or HRD test (n=978) 56.4% (n=552/978) were tested between AOC diagnosis and initiation of 1L systemic therapy. With respect to 1L maintenance: among *BRCAm* patients (*n*=139), 33.1% (*n*=46/139) were treated with olaparib monotherapy vs. 6.5% (*n*=9/139) with other PARPi therapy. Among HRD+ patients, including those with a pending HRD result who were *BRCAm* (*n*=115), 20.0% (*n*=23/115) were treated with olaparib monotherapy, 13.9% (*n*=16/115) were treated with olaparib/bevacizumab combination therapy vs. 17.4% (*n*=20/115) with other PARPi therapy.

Conclusion Although the majority of patients were tested for *BRCA*, a large majority of patients were not tested for HRD. Following testing, few patients received PARPi as 1L maintenance therapy despite actionable biomarker results. This study demonstrates the need for improved education surrounding genetic testing to optimize therapeutic decisions for AOC patients.

2022-RA-1521-ESGO DO EXOPHYTIC AND ENDOPHYTIC PATTERNS IN BORDERLINE OVARIAN TUMORS HAVE DIFFERENT PROGNOSTIC IMPLICATIONS? A LARGE MULTICENTRIC EXPERIENCE

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10.1136/ijgc-2022-ESGO.736

Introduction/Background Borderline ovarian tumor (BOT) is a non-invasive tumor with a favourable prognosis. Depending on tumor pathologic aspect, two patterns of growth can be identified: endophytic and exophytic pattern. Concerns have arisen about the clinical significance of BOT with exophytic growth pattern. This study aims to analyse and compare patients' characteristics, sonographic features, and prognosis related to both patterns.

Methodology A retrospective multicentre study was conducted. Patients who underwent surgical treatment for BOT were recruited and they were divided in two groups according to macroscopic aspect.

Results Of the 229 patients who met the inclusion criteria, 169 (73.8%) were in the endophytic group and 60 (26.2%) in the exophytic group. Patients in the endophytic group were older (50 vs. 41 years, p=0.001), less frequently nulliparous women (38.5% vs. 58.3%, p=0.008), more often with BMI ≥ 30 Kg/m^2 (17.8% vs 5%, p=0.0116). The endophytic pattern was associated with mucinous histology (p 0,001), an earlier FIGO stage (p<0.001), and more often a maximum lesion diameter > 100 mm (p=0.043). The exophytic pattern was associated with serous histology (p<0.001), presence of peritoneal implants (p<0.001), tumor cells in peritoneal washing (p<0.001) and abnormal Ca125 (p=0.003). Kaplan Meier curves showed no significant differences (p=0.076) in DFS at 1-year (99.4 vs. 94.5%), 3-year (98.6 vs. 91.9%), and 5-year (96.5 vs. 82.2%). Furthermore, recurrence status was associated with the median age (p=0.001), FIGO stage (p=0.002),

and fertility-sparing surgery (p=0.001) but not with the tumor histology (p=0.215).
Conclusion The study delineated two different patient profiles related to the tumor pattern of growth. The exophytic pattern was associated with the presence of invasive and non-invasive peritoneal implants, an advanced FIGO stage, without impact on DFS. Identification of the BOT pattern during preoperative workup could be useful for better surgical planning.

2022-RA-1527-ESGO RELIABILITY OF IOTA ADNEX MODEL IN BORDERLINE OVARIAN TUMORS, A SINGLE CENTER STUDY

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10.1136/ijgc-2022-ESGO.737

Introduction/Background The discrimination of borderline ovarian tumor (BOT) is challenging Ultrasonography (US) is the most essential imaging modality for distinguishing ovarian masses but depends on the experience of radiologists. In 2014, the IOTA group carried out the assessment of different neoplasia's in the Adnex Model. It was used to discriminate benign, BOTs, stage I, stage II-IV invasive ovarian cancer, and secondary metastatic cancer. This study aims to evaluate the efficacy of the Adnex model in the determination of BOTs.
Methodology This was a retrospective study, medical records of histopathologically proven cases of BOTs were included from the year 2009 to 2021. The ultrasound and clinical findings were entered in an online Adnex calculator. These results were used to calculate the absolute risk predicting the probability of mass being as BOT.
Results A total of 22 cases of BOT were included. Efficacy in terms of sensitivity of the Adnex model for preoperative diagnosis of BOTs was 18.2% [95%CI: 7.31–38.52]. Performance of the Adnex model based on absolute risk (AR) improves with a selection of a more inclusive cut-off value, varying from 4.5% (1/22) correctly classified case of BOT with the cut-off 20%,18.2% (4/22) with the cut-off 10% and up to 55.5% (12/22) classified cases of BOT with cut off value of 3%. Similarly, relative risk (RR)was also used to classify the BOT, but only 4(18.2%) cases were identified correctly.
Conclusion More encompassing cut-off values allow the model to differentiate BOTs better. The calculation based on RR or AR with a cut-off value of at least 10% should be used when evaluating BOTs.The IOTA Adnex model did not perform well in predicting cases of BOTs that were histopathologically proven in terms of sensitivity.

2022-RA-1528-ESGO CARCINOID TUMORS OF THE OVARY, A RARE NEOPLASM: DESCRIPTION OF CASES AND REVIEW OF LITERATURE

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10.1136/ijgc-2022-ESGO.738

Introduction/Background Ovarian carcinoid tumors are rare neoplasms that account for 0.8–1.2% of all ovarian cancer. In 15% of cases there is a mature teratoma on the contralateral ovary. Suspicion prior to surgery is rare, since its clinical presentation does not differ from other types of ovarian cancer unless there is carcinoid syndrome. Accurate diagnosis is difficult and needs for immunohistochemistry. Treatment is based on surgical resection, since the role of chemotherapy remains unclear. Their prognosis is excellent when diagnosed at early-stage, but long- term surveillance is necessary since late recurrence is possible.
Methodology Five patients diagnosed of ovarian carcinoid at Hospital Santa Cristina in Madrid, Spain are included. Four patients were diagnosed of primary ovarian carcinoid tumor and one patient was diagnosed of ovarian metastases of an appendicular carcinoid tumor.
Results 2 patients were premenopausal and presented unilateral mass suspicious of teratoma, so they underwent unilateral adnexectomy, with postoperative diagnosis of ovarian carcinoid tumor stage IA. Long-term follow- up evidenced contralateral cyst > 10 years after treatment, so both patients required adnexectomy, with no presence of disease recurrence. 2 patients were postmenopausal. The first had an ovarian mass that suggested teratoma, so she underwent bilateral adnexectomy plus hysterectomy; postoperatively she presented heart carcinoid syndrome, and required surgical correction. The second patient had suspicion for peritoneal carcinomatosis, so she underwent complete cytoreductive surgery. Both were stage IA. The fifth patient had an ovarian recurrence of an appendicular carcinoid. All patients diagnosed of primary ovarian carcinoid were free of disease when data were collected.
Conclusion Ovarian carcinoids represent a rare entity that requires surgery and is often diagnosed postoperatively. Prognosis is excellent when diagnosed at early- stage, but survival is low if carcinoid tumor is advanced- stage or metastases from a non-ovarian origin. Late relapses are possible.

2022-RA-1540-ESGO MITO 25.1: A RANDOMIZED, MOLECULAR DRIVEN PHASE II TRIAL OF CARBOPLATIN-PACLITAXEL-BEVACIZUMAB VS CARBOPLATIN-PACLITAXEL-BEVACIZUMAB-RUCAPARIB VS CARBOPLATIN-PACLITAXEL-RUCAPARIB, SELECTED ACCORDING TO HRD STATUS, IN PATIENTS WITH ADVANCED (STAGE III B-C-IV) OVARIAN, PRIMARY PERITONEAL AND FALLOPIAN TUBE CANCER

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10.1136/ijgc-2022-ESGO.739

Introduction/Background Poly (ADP-ribose) polymerase (PARP) inhibitors alone and in combination with Bevacizumab have shown significant clinical benefit as maintenance therapy in