matched analysis was performed to balance predictive factors of MI-SCS.

Results Overall, 276 cases were identified (62 MI-SCS and 214 LPT), and a complete gross resection (CGR) was achieved in 262 (94.9%) patients. At multivariate analysis, predictive factors for MI-SCS were NACT (p=0.007), site of recurrence (p=0.031), and number of lesions (p=0.001) (Table).In the propensity-matched population (39 MI-SCS and 78 LPT), CGR was similar for both groups (39 MI-SCS vs 72 LPT; p=0.082). Early post-operative complications were significantly higher in the LPT-SCS (33.3%) than in the MI-SCS (10.3%) group (p=0.004). Only one (2.6%) patient experienced a grade≥3 early post-operative complication in the MI-SCS compared to 13 (16.7%) patients in the LPT cohort (p<0.001).The median follow-up period was 32 months (range18–92) in the propensity-matched population. The median post-recurrence survival (PRS) was 81 months in the MI-SCS group and not reached in the LPT Group (p=0.111).

Abstract 2022-RA-820-ESGO Table 1 Logistic regression for prediction of MI-SCS

Variables	OR (95% CI)	P-value	OR (95% CI)	P-value
Age				
<65	1.21 (0.63-2.40)	0.587		
≥65	1			
BMI		0.820		
<30	1			
≥30	1.09 (0.56-2.37)			
FIGO stage				
I-II	1	0.099		
III-IVB	1.98 (0.85-4.94)			
Histology				
High-grade serous	1	0.543		
Other	1.36 (0.70-2.73)			
BRCA				
Wild type	1.31 (0.67-2.57)	0.423		
Mutation	1			
First approach				
PDS	1	0.040	1	0.007
NACT	1.88 (1.03-3.44)		2.16 (1.27-4.78)	
Residual tumor at first surgery				
0	1	0.410		
>0	1.67 (0.58-4.68)			
Bevacizumab maintenance at first therapy				
No	1.47 (0.77-2.80)	0.239		
Yes	1			
PFI, months				
<12	1.68 (0.89-3.09)	0.783		
>12	1			
Site of recurrence at PET-CT				
Peritoneum	2.80 (1.16-6.78)	0.019	1.78 (0.99-4.66)	0.226
Lymph node (s)	3.57 (1.52-8.36)	0.003	2.57 (1.09-6.55)	0.031
Other	1		1	
Number of lesions at PET-CT				
Single	4.84 (2.26-10.37)	<0.001	4.17 (1.83-9.53)	0.001
Oligometastatic (2-3 nodules)	3.02 (1.35-6.74)	0.007	3.40 (1.48-8.07)	0.004
Multifocal/Diffused Carcinomatosis	1		1	

Abbreviations: MI-SCS: minimally invasive secondary cytoreduction surgery: BMI: body mass index; PFI= platinum free interval; PDS= primary debulking surgery; NACT= Neoadjuvant chemotherapy; PET-CT: positron emission tomography.

Conclusion Patients with single or oligometastatic recurrences can be offered MI-SCS, mainly if localized in the lymph-nodes and/or if they received NACT at primary diagnosis. MI-SCS is associated with favourable perioperative outcomes with no statistically significant differences in terms of PRS with respect to open approach.

2022-RA-821-ESGO DR., PHD STUDENT

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10.1136/ijgc-2022-ESGO.568

Introduction/Background Predicting borderline ovarian tumors can be challenging. Despite a favorable prognosis, these patients should not be treated as benign disease as comprehensive surgical staging is needed. In Denmark, RMI is the gold standard for predicting malignancy and referral to PET/CT. We evaluated ultrasound features in accordance to IOTA terminology and risk of malignancy using the ADNEX model.

Methodology Patients ≥18 years with ovarian lesions were prospectively included at Dept. of Gynecology, Rigshospitalet, Denmark. Gynecologists described lesions using IOTA terminology in a template (EPIC). Clinical decisions were not based on IOTA scores.

Results N=47 patients with histologically verified borderline ovarian tumors were included (89.4% stage I, 10.6% stage II-III). Median age was 54 years (range 21 – 82). RMI was >200 in 29 (61.7%) and <200 in 18 (38.3%). PET/CT was performed in 36 (79.6%) and concluded malignancy suspicion in 18 (FDG-uptake in 15, suspicious CT in 3). Thus, malignancy was suspected in 18 (38.3%) and benign disease in 29 (61.7%) women preoperatively. A total of 10 (21.3%) women underwent secondary staging surgery. The majority were classified multilocular solid (53.2%) or multilocular (23.4%), and less often unilocular solid (21.3%) and unilocular (2.1%). Papillary projections were present in 59.6%, and 38.3% had ≥4. The largest diameter of lesion was >100 mm in 57.4%. Cystic content was anechoic in 46.8%, low level in 32.0%, ground glass in 10.6%, and mixed in 10.6%. Color score >1 was seen in 55.3%. A total of 41/47 (87.2%) had a malignancy risk >10% using the ADNEX model. All 6/47 (10.6%) with malignancy risk <10% were uni-/multilocular lesions (<10 locules), 2 with diameter >100 mm.

Conclusion Accurate diagnosis of borderline is essential for planning appropriate management. Ultrasound pattern recognition is a valuable clinical observation. The ADNEX model identified a malignancy risk above 10% in almost 90% of the population.

2022-RA-822-ESGO RISK REDUCING SURGERY IN OVARIAN CANCER

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10.1136/ijgc-2022-ESGO.569

Introduction/Background The study evaluated the risk of ovarian cancer in women with BRCA 1–2 mutations. BRCA 1–2 are tumor-suppressor genes involved in DNA homologous recombination and ovarian cancer development

Methodology From 2016 to may 2022, all risk reducing surgery (RRSO) which included salpingo-oophorectomy was performed in all patients carrying BRCA1 and BRCA 2 mutation.

Results We collected 172 women. The median age of BRCA 1 mutated patients was 51 aged (range 30–73 years), whereas the median age of BRCA 2 mutated patients was 53 (range 36–70). One hundred and three patients had previous history of breast cancer. Among the 172, 145 (85%) underwent risk reducing salpingo-oohorectomy (RRSO) though a laparoscopic minimally invasive approach. 12 (7%) underwent laparoscopic RRSO and contextual hysterectomy, 3 (2%) underwent RRSO through a laparotomic approach and 10 (6%) laparotomic

RRSO and hysterectomy. During 8 (5%) laparoscopic RRSO, prophylactic bilateral mastectomy was also performed. Early and late complications occurred in 3 patients (2%). Four patients (2%) were found to have occult serous tubal intraepithelial carcinoma (STIC) and nine patients (5%) occult cancer.
Conclusion RRSO is a safe and feasible procedure in BRCA 1–2 mutation carriers. The procedure is effective for genetic prevention of ovarian cancer.

2022-RA-823-ESGO FOXL2 MUTATION DETECTION IN CIRCULATING TUMOR DNA OF ADULT GRANULOSA CELL TUMORS AS A POTENTIAL BIOMARKER FOR DISEASE MONITORING FROM THE RANDOMIZED ALIENOR TRIAL, A GINECO STUDY

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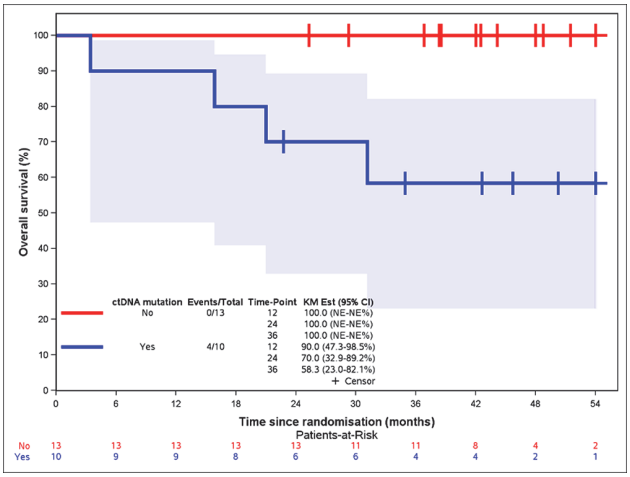
10.1136/ijgc-2022-ESGO.570

Introduction/Background Adult granulosa cell tumors (aGCT) are rare ovarian malignant tumors harboring specific FOXL2 402C>G (C134W) mutation (96%) with multiples relapses. Serum markers are inaccurate in reflecting tumor burden, supporting the identification of new biomarkers.
Methodology Plasma samples were obtained at baseline and every 2–4 weeks for 6 months after C1D1 from patients enrolled in the ALIENOR trial (NCT01770301; 60 patients with relapsed sex cord-stromal tumors treated with chemotherapy +/- bevacizumab (Ray-Coquard, JAMA Oncol 2021)). Digital droplet PCR on circulating cell-free DNA was performed in 137 samples from 23 patients with FOXL2-mutated aGCT to investigate the clinical value of FOXL2 mutation on circulating tumor DNA (FOXL2mut ctDNA) for monitoring disease.
Results FOXL2mut ctDNA was detected in 10 of 23 aGCT patients' plasma (43%). The sum of the largest diameter of target lesions was 52 mm for FOXL2mut ctDNA negative and 138 mm for positive samples. No clinical factors such as age, number of relapse, metastatic sites, chemotherapy lines or surgeries were correlated to FOXL2mut ctDNA levels. Looking at individual monitoring data, a trend between clinical progression and increased FOXL2mut ctDNA levels under therapy was noted. Among 19 patients with samples at baseline and for whom subsequent blood samples were also available at progression or end of study, sensibility, specificity, positive and negative predictive values of FOXL2mut ctDNA were 70%, 89%, 87% and 72% respectively. Only one of 4 patients without FOXL2mut ctDNA at baseline turned positive at progression. With a median follow-up of 42.6 months $IC_{95\%}$[36.8;48.8], 4 patients died (all in the FOXL2mut ctDNA group) (figure 1).



Abstract 2022-RA-823-ESGO Figure 1

Conclusion In this small series of aGCT, monitoring FOXL2-mut ctDNA seems relevant to predict RECIST or clinical progression in relapse setting. All cancer deaths were in the FOXL2mut ctDNA group. Future studies are warranted to confirm if this biomarker can avoid repetitive CTscan for surveillance.

2022-RA-830-ESGO EXPRESSION OF COL5A2 IN OVARIAN TUMOR MICROENVIRONMENT AND ITS MECHANISM OF PROMOTING OVARIAN CANCER

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10.1136/ijgc-2022-ESGO.571

Introduction/Background Recent studies have shown that the research of tumor cells alone cannot explain many phenomena in tumors, so the concept of tumor microenvironment has attracted more and more attention in tumor research. Studies have found that tumor cells need to interact with other cells, especially cancer associated fibroblasts (CAFs) to promote tumor progression. COL5A2 belongs to collagen family and is an important part of extracellular matrix in tumor microenvironment. Therefore, taking COL5A2 as the core to clarify the specific mechanism of the interaction between ovarian cancer cells and CAFs in the ovarian tumor microenvironment can provide a theoretical basis for the development of new treatment strategies for ovarian cancer.
Methodology We analyzed the expression of COL5A2 in 65 cases of ovarian cancer tissue specimens and explored the mechanism of altered COL5A2 expression in ovarian tumor microenvironment. Then we explored the underlying mechanisms of the effect of COL5A2 on cell proliferation, migration and invasion of ovarian cancer in vitro and in vivo.
Results (1) Compared with normal ovarian tissues, COL5A2 is highly expressed in ovarian cancer tissues, and when COL5A2 is highly expressed, the prognosis of ovarian cancer is worse.(2) COL5A2 mainly comes from CAFs.(3) The exosomes carrying ITGB1 secreted by ovarian cancer cells can activate the function of CAFs and promote the expression