Introduction/Background Epithelial ovarian carcinoma (EOC) is known for high mortality due to diagnosis at advanced stages and frequent therapy resistance. This study aimed to address the complex profile of gene expression, germline variants and somatic mutational spectra, signatures, and copy number variations of resistant patients compared to sensitive ones patients and evaluated associations with their clinical data and survival.
Methodology RNA sequencing (RNASeq) in tumors, whole exome sequencing (WES) in DNA from blood and tumor tissue sample pairs of 50 patients with surgically resected EOC, and evaluation of platinum resistance status and complete follow up.
Results Coding transcriptome profile revealed significant associations of DUT expression with the presence of peritoneal metastases, upregulation of three genes (DDB2, HELQ, and MAD2L2), and downregulation of PRPF19 in platinum-sensitive compared to resistant patient's tumors. Results of WES analysis show that compared to sensitive patients, platinum-resistant ones have a significantly higher overall TP53 gene somatic mutational rate and a lower frequency of mutations in several genes from the Hippo pathway. We also confirmed a pivotal role of somatic mutations in homologous recombination repair (HRR) genes in the platinum sensitivity and favorable prognosis of EOC patients. Additionally, distinct mutational signatures and overall mutational load, somatic mutations in PABPC1, PABPC3, and TFAM co-segregated with the resistance status, high-grade serous carcinoma subtype, or overall survival of patients.
Conclusion Taken together, we assessed transcriptomic and genomic landscapes of prognostically different subgroups of EOC patients for further follow up studies focused on utilizing the observed associations in precision oncology. Supported by the Czech Health Research Council grant no. NU20–09–00174, the Ministry of Education, Youth and Sports, INTERACTION project no. LTAUSA19032 and Cooperatio program no. 207035, 'Maternal and Childhood Care' by 3rd Faculty Medicine, Charles University.

2022-RA-865-ESGO ONCOLOGIC AND FERTILITY OUTCOMES IN ADVANCED STAGE IMMATURE TERATOMAS

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Introduction/Background Malignant ovarian germ cell tumors (MOGCTs) are rare tumors that account for approximately 5% of all ovarian cancers. Immature teratomas (ITs) represent about one third of all MOGCT. The ITs' peak of incidence is 15–30 years old, when the childbearing desire is frequently not completed. Even if most MOGCTs are diagnosed at an early stage, however advanced stages can be found. Our primary aim was to investigate the oncologic outcome of this population and the safety of a fertility sparing surgery (FSS). Secondarily, we have investigated fertility outcomes in patients with advanced stages ITs who underwent FSS.
Methodology Clinicopathological data were retrospectively collected and analyzed from a cohort of patients with advanced stages ITs at San Gerardo Hospital (Monza, Italy) between 1980 and 2019.
Results Seventeen patients were included in the study (4 stage II, 12 stage III and 1 stage IV). Of them, 13 underwent FSS and 4 patients received a demolitive surgery. 13 patients received adjuvant chemotherapy (CT) after surgery, and 4 patients were followed with active surveillance. Four patients (31%) who underwent FSS experienced recurrence. All patients are still alive and without evidence of disease during the last follow up. Among nine patients who attempted to become pregnant after FSS, six got pregnant, showing a fertility rate of 67%.
Conclusion Despite the small number of this population, this is one of the largest case series based only on patients with advanced stage ITs. FSS appears to be a feasible treatment for advanced stage ITs. Furthermore, FSS followed by adjuvant chemotherapy allows pregnancy in young women whose maternal desire was not yet ultimate.

2022-RA-877-ESGO EPIDEMIOLOGICAL STUDY ON ONCOLOGICAL OUTCOME OF PATIENTS WITH INCIDENTAL FINDINGS OF BORDERLINE OVARIAN TUMORS OR OVARIAN CANCER TREATED WITH A TWO-STEP SURGICAL PROCEDURE

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Introduction/Background Centralization of ovarian cancer (OVCA) treatment is known to be associated with prolonged survival. However, preoperative diagnosis might be challenging and sometimes the diagnosis is made unexpectedly after histological work-up. Aim of this study is to evaluate the oncological outcome of patients with incidental findings of OVCA or borderline ovarian tumors (BOT).

Abstract Table 1 Baseline clinicopathological characterists among the different study groups

	Total N= 224	Group 1 N= 150	Group 2 N= 74	P-value
Mean age at diagnosis (years ± SD)	59.0 ± 15.3	60.2 ± 14.5	56.5 ± 16.6	.088
Mean BMI (kg/m2 ± SD)	25.1 ± 5.3	25.0 ± 5.3	25.3 ± 5.2	.731
Preoperative imaging with CT and/or MRI, n (%)	181 (80.8)	138 (92)	43 (58.1)	< .001
Borderline ovarian tumors, n (%)	34 (15.2)	20 (13.3)	14 (18.9)	.184
Serous histology, n (%)	151 (67.7)	99 (66.4)	52 (70.3)	.442
Advanced FIGO stage (III/IV), n (%)	123 (54.9)	91 (60.7)	32 (43.2)	.068
Adjuvant chemotherapy, n (%)	105 (46.9)	83 (55.3)	22 (29.7)	< .001
Neoadjuvant chemotherapy, n (%)	68 (30.4)	37 (24.7)	31 (41.9)	.007

Methodology This epidemiological study includes patients with suspicious adnexal mass undergoing surgical treatment at the Bern University Hospital, Switzerland between 2010 and 2020. Patients were allocated in two groups as follows (figure 1): group 1 consists of patients referred to our tertiary