A SIGNATURE OF GENES RELATED TO OBESITY AND LIPID METABOLISM AND EXPRESSED IN THE PRIMARY TUMOR BETTER PREDICTS LONG-TERM PROGNOSIS THAN BODY MASS INDEX IN ENDOMETRICAL CANCER

Introduction/Background Endometrial cancer incidence and mortality trends are increasing worldwide, regardless of therapeutic advances. The most recent ESGO proposals for risk stratification consider stage, histology, grade, myometrial invasion, pattern of lymphovascular involvement, and molecular subtype. However, it does not consider host factors that, maintained over time, can condition therapeutic response, recurrence, and survival rates (e.g., obesity/metabolic disorders). Here we investigated whether the expression of genes linked to obesity and metabolic disorders, measured in the primary tumor (a microenvironment reflex of host condition), could better predict the prognosis than body mass index (BMI).

Methodology We analyzed clinical/genomic data of 589 UCEC-TCGA cases downloaded from UCSC-Xena. A list of 425 genes linked to obesity/lipid metabolism (ORG) was used to cluster patients using non-negative matrix factorization and Cybersort/Ecotyper were performed. Survival curves and Cox-regression models were also built-up.

Results Here, we first demonstrate that BMI-defined obesity is not necessarily related to the classic definition of obesity, and importance of correcting metabolic disorders, which are not necessarily related to the classic definition of obesity, and which negatively influence therapeutic response and long-term results.

Conclusion Here we demonstrate that the expression of ORG at the tumor microenvironment correlates better with tumor behavior (molecular subtypes) and clinical outcomes than BMI does. These findings provide additional evidence on the importance of correcting metabolic disorders, which are not necessarily related to the classic definition of obesity, and which negatively influence therapeutic response and long-term results.

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04. Fertility/Pregnancy

REPRODUCTIVE OUTCOMES AFTER FERTILITY-SPARING SURGERY FOR CERVICAL CANCER – RESULTS OF THE FERTISS STUDY

Introduction/Background The goal of fertility-sparing treatment (FST) for patients with cervical cancer is to achieve comparable oncologic outcomes to those after radical treatment while maximizing reproductive outcomes, which include the ability to conceive and minimizing the risk of preterm birth.

Methodology Patients from the international multicentre retrospective FERTISS study, which included women treated with FST, were analysed for information on timing of prospective FERTISS study, which included women treated with FST, were analysed for information on timing of prospective FERTISS study. Here, we demonstrate that BMI-defined obesity is not necessarily related to the classic definition of obesity, and which negatively influence therapeutic response and long-term results.

Results Of the 733 patients treated at 44 centres in 13 countries, only half (49.7%) attempted to become pregnant during follow-up (median 72 months). Unsuccessful attempts were
recorded in 27.0% (198/733) of patients, while 22.6% (166/733) were successful. Of these patients, 63.2% (122/193) underwent non-radical surgery and 25.7% (44/171) underwent radical trachelectomy (p < 0.001). Data from 124 patients (74.7%) were available for detailed analysis. A total of 91.7% (111/124) patients became pregnant naturally. The abortion rate in the first pregnancy did not differ between patients after radical and non-radical procedures. There was no difference in delivery success rates between patients after non-radical and radical FST (86%) vs. 83% (p = 0.77). Preterm delivery (<38 weeks gestation) occurred more frequently in patients after radical than non-radical procedures (76.5% vs. 57.7%, p = 0.15). Almost all patients (97.3%) with ultrasound cervicometry delivered, in contrast to women without cervicometry (30.6%), (p < 0.001).

Conclusion Half of the patients did not attempt pregnancy at all after FST. Patients who underwent non-radical surgery had higher pregnancy rates. Most women who became pregnant delivered a viable fetus, but women who underwent radical trachelectomy had a higher rate of preterm births in the severe premature range. Ultrasound cervicometry showed a significant effect on the prevention of preterm birth.

6. Ovarian cancer

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**FINAL OVERALL SURVIVAL AND LONG-TERM SAFETY IN THE ENGOT-OV16/NOVA PHASE 3 TRIAL OF NIRAPARIB IN PATIENTS WITH RECURRENT OVARIAN CANCER**

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Introduction/Background Primary results from the ENGOT-OV16/NOVA study showed that niraparib maintenance therapy significantly prolonged progression-free survival (PFS) in patients with platinum-sensitive recurrent ovarian cancer (PSROC) regardless of germline BRCA (gBRCA) mutation or homologous recombination deficiency (HRD) biomarker status. Here we report updated final overall survival (OS) and long-term safety results.

Methodology NOVA was a randomised, double-blind, placebo-controlled, phase 3 trial. Patients with PSROC were enrolled into independent gBRCA-mutated (gBRCAm) and non-gBRCAm cohorts. Patients were randomised 2:1 to niraparib 300 mg or placebo once daily. Missing survival data for patients were retrieved for the updated analysis (data cutoff: 31 March 2021). Final OS was evaluated in both cohorts and by non-gBRCAm HRD status.

Results 553 patients were randomised. Median follow-up at data cutoff was >75 months across both cohorts and treatment arms. Survival status was available for 97.6% of patients (540/553). Overall OS maturity was 77.9%. Median OS was 40.9 months with niraparib and 38.1 months with placebo in the gBRCAm cohort (hazard ratio, 0.85; 95% CI, 0.61–1.20) and 31.0 and 34.8 months, respectively, in the non-gBRCAm cohort (hazard ratio, 1.06; 95% CI, 0.81–1.37). OS by HRD status is shown in the table. 1 No new safety signals were