Abstracts

Introduction/Background Cervical cancer has been considered the second most common female malignant tumor in developing countries. The mortality from cervical cancer is 18 times more in low-resource countries. Till now; no national screening or HPV vaccination programs in Egypt and most of low-resource countries. Although HPV-DNA test is the most accurate screening test; it is still expensive and not offered in our low-resource countries.

Methodology The early results of the initiative of Mansoura Gynecologic Oncologic Unit in collaboration with Ministry of Health to screen and treat eligible women for pre-invasive cervical lesions in Lower Egypt. The project depends on training of gynecologists for screening, population screening during district visits, and treatment of the diagnosed cases. Diagnosis of CIN based on simple, cheap visual inspection with acetic acid (VIA) with referral of positive cases for colposcopic examination and guided cervical biopsy. The diagnosed cases were treated according to WHO guidelines.

Our detailed project of screening and HPV vaccination is being discussed in the Egyptian Parliament. Results After one year of the project; 9 peripheral districts were visited and more than 5000 women were screened. The acceptability of women and collaboration of community leaders were excellent. Fifty-two cases (1/1000) were diagnosed with CIN and 6 invasive tumors. Twenty-eight of them were CIN I, 20 cases with CIN II & 4 cases with CIN III. Conservative treatment was applied to 27 cases with CIN I. Cryotherapy was applied to 6 cases. Loop Electrosurgical Excision Procedure (LEEP) was performed in 14 cases. Trachelectomy was done to one case. Simple hysterectomy was performed to 9 cases. Conclusion The early results of Mansoura initiative of cervical cancer elimination in Lower Egypt is promising. The strategy can be implemented in other low-resource countries under umbrella of ESGO. A national-based screening and HPV vaccination programs are highly recommended.

Disclosures No conflicts of interest

#298 AN EXPLAINABLE MACHINE LEARNING ENSEMBLE MODEL TO PREDICT THE RISK OF OVARIAN CANCER IN BRCA-MUTATED PATIENTS UNDERGOING RISK-REDUCING SALPINGO-OOPHORECTOMY

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Introduction/Background It has been estimated that 19,880 new cases of ovarian cancer had been diagnosed in 2022. Most epithelial ovarian cancer is sporadic, while, in 15–25% of cases, there is evidence of a familial or inherited component. About 20–25% of high-grade serous carcinoma cases are caused by germline mutations in the BRCA1 and BRCA2 genes. However, due to a lack of effective early detection methods, women with BRCA mutations are recommended to undergo bilateral risk-reducing salpingo-oophorectomy (RRSO) after childbearing. Determining the right timing for this procedure is a difficult decision. It’s crucial to find a clinical signature to identify high-risk BRCA-mutated patients and determine the appropriate timing for performing RRSO.

Methodology In this work, clinical data referred to a cohort of 184 patients, out of which 7.6% resulted as affected by adnexal tumors including invasive carcinomas and intraepithelial lesions after RRSO have been analysed. To the aim, we proposed an explainable machine learning (ML) ensemble approach using clinical data commonly collected in clinical practice to early identify BRCA-mutated patients at high risk of ovarian cancer and consequently establish the correct timing for RRSO.

Results The ensemble model was able to handle imbalanced data achieving an accuracy value of 83.2%, a specificity value of 85.3%, a sensitivity value of 57.1%, a G-mean value of 69.8%, and an AUC value of 71.1%. Features importance and core-set are reported in figure 1.

Conclusion In agreement with the promising results achieved, the application of suitable ML techniques could play a key role in the definition of a BRCA-mutated patient-centric clinical signature for ovarian cancer risk and consequently personalize the management of these patients. As far as we know, this is the first work addressing this task from ML perspective.

Disclosures NA

#303 RISK-REDUCING BILATERAL OOPHORECTOMY AND SALPINGO-OOPHORECTOMY (RRSO) IN BRCA1/2 MUTATION CARRIERS: A RETROSPECTIVE REVIEW AT THE OPOLK ONGOLOGY CENTER (2017–2023)

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Introduction/Background Risk-reducing bilateral oophorectomy and salpingo-oophorectomy (RRSO) lowers the risk of developing ovarian cancer (85–90%) and breast cancer (40–70%) in women with BRCA1/2 mutation. The aim of the work is to analyse the issues of prophylactic adnexectomy in Opole Oncology Center years 2017–2023.

Methodology Retrospective data analysis