are the most common origin. João Lobo et al. have reported 13% of metastases to the ovary originating from breast cancer. Most cases are known to be asymptomatic in contrast to the case presented in our centre.

Methodology We present the case of a 60-year-old woman complaining of abdominal distention, mild pain and discomfort. The initial ultrasound examination revealed bilaterally abnormal ovaries with ascites and left-sided hydrothorax. Consequent diagnostic work-up identified extensive malignant process of unknown primary origin: diffuse peritoneal carcinomatosis, ascites (>500cc), multiple foci of metastatic bone lesions, small (0.5–0.7 cm) contrast-enhancing lesions in both breasts, increased CA125 (328 U/mL), and normal levels of CA19–9 and CEA. Synchronous ovarian and breast cancer, or metastatic breast cancer was less suspected due to mammogram findings indicating dEX-BI-RADS - 2 sin-BI-RADS - 3. Primary GI tract cancer was ruled out by esophago-gastro-duodenedoscopy and colonoscopy. Metastatic ovarian/fallopian/peritoneal tumour, mesothelioma and tuberculosis were suggested as possible diagnosis by multidisciplinary team.

Results Diagnostic laparoscopy was performed with frozen section analysis, consistent with poorly differentiated carcinoma of unknown primary. Biopsy specimens sent for bacterioscopich examination was negative for tuberculosis. Peritoneal fluid cytology was negative for atypical cells. The immunohistochemistry report was notable for positive GCDFP, GATA, CK7, negative CA125, PAX8, WT1.

Conclusion Definitive diagnosis of metastatic breast cancer invasive lobular carcinoma ER (80%) PR (10%) HER2-neu (1 +) KL67 (12%) grade 3 cT0N1M1 was made and appropriate systemic therapy initiated. The case highlights the challenge of diagnosing occult breast cancer mimicking advanced stage ovarian cancer, emphasizing the importance of accurate diagnosis to ensure proper treatment and care for the patient.

Disclosures The authors have no conflicts of interest or financial disclosures to report.

#648 LACTOBACILLUS INERS IS THE PREDOMINANT SPECIES IN THE VAGINAL MICROBIOME OF WOMEN WITH HIGH-RISK HPV-INFECTION: EXPERIENCE FROM A TERTIARY REFERRAL COLPOSCOPY CENTRE IN SINGAPORE

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10.1136/ijgc-2023-ESGO.246

Introduction/Background Persistent HPV infection is a necessary prerequisite for development of cervical intraepithelial neoplasia (CIN) and cervical cancer. Numerous studies have looked at the correlation of vaginal microbiome profile, HPV infection and CIN. We present a cross sectional analysis of vaginal microbiome profiles of women with high-risk HPV infection attending a tertiary colposcopy centre in Singapore.

Methodology After IRB approval and patient consent, vaginal swabs were collected using OMNIgene (OMR-130) kit. DNA was isolated using QIAamp PowerFecal Pro DNA kit. Sequencing library was prepared using Illumina 16Smetagenomics sequencing workflow for the V3 and V4 variable regions of 16S rRNA gene and analyzed using ReSeq RDP database. Statistical analysis was performed using R.

Results A total of 48 women (including 14 postmenopausal) were included in the study. The median age was 37 years. This multiethnic cohort included Chinese (77.1%), Malay (10.4%), Indian (4.2%) and Caucasian (8.3%). The various HPV subtypes isolated were HPV 16/18 (11.4%), HPV others (65.7%) and multiple genotypes (22.9%).

Firmicutes, Actinobacteria and Bacteroidetes were the main phyla noted. Lactobacillus iners was the main species isolated with 16 of the 48 samples belonging to community state type III. Other common species included Gardnerella vaginalis, Ato-pobium vaginae, Lactobacillus gasseri, Lactobacillus jenseni, and Sneathia sanguinegens. 20 samples were depleted of...
lactobacilli representing community state IV. The dominant species isolated in HPV16/18 was different for each sample (n = 4) whereas the dominant species in HPV others were Lactobacillus iners (10/23). The dominant species in low grade histology was Lactobacillus iners (7/20) followed by Gardnerella vaginalis (5/20) while the dominant species in high grade histology were Lactobacillus iners (2/4) and Sneathia sanguinegens (2/4).

Conclusion Lactobacillus iners was noted to be the predominant species in the vaginal microbiome of women with high-risk HPV infection.

Disclosures Nil

#670 DIAGNOSTIC PERFORMANCE OF IOTA SIMPLE RULES, IOTA ADNEX, GIRADAS AND ORADS REPORTING SYSTEM IN EVALUATION OF ADNEXAL MASSES

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10.1136/ijgc-2023-ESGO.247

Introduction/Background Ultrasound is the most commonly used imaging modality for pre-operative discrimination of adnexal masses owing to its wider availability and ease of use. USG interpretation is observer dependent and is limited by its subjective nature. To improve performance of USG, several reporting systems have been introduced in clinical practice: IOTA simple rules, ADNEX, GIRADS, ORADS. Several studies have investigated validity of these risk stratification systems. However, there is no comparability of systems is limited. The current study was conducted to assess accuracy of risk assessment models IOTA SR, ADNEX, GI-RADS and O-RADS. Methodology A single-centre prospective observational study was conducted in a tertiary care teaching hospital, and 80 cases were recruited. Pre-operatively USG was done, lesions were classified according to each reporting system and histopathology taken as gold standard. Sensitivity and specificity were determined for each USG reporting system, and performance were compared. Data analyses were carried out using statistical software STATA version 14.0.

Abstract #670 Figure 1

Results Of 80 masses 46 (57.5%) were benign whereas 34 (42.5%) were malignant. The sensitivity of IOTA SR was 100% (95%CI 87.7%-100%) and specificity was 84.8% (95% CI 68.9%-94.9%). 19 masses were labelled as inconclusive and SR could not be applied to these, reducing specificity to 60.9% (95%CI, 45.4%-74.9%). In ADNEX optimal cut off for risk of malignancy was 46.9% with sensitivity of 88.2% (95%CI 72.5% -96.7%) and specificity of 84.8% (95%CI 71.1%-93.7%). Considering GIRADS 4–5 as predictors of malignancy sensitivity was 100% (95%CI, 89.7%-100%) and specificity was 58.7% (95%CI, 43.2%-73%). The sensitivity of O-RADS using malignancy risk threshold of ≥ 10% (ORADS 4–5) was 100% (95%CI, 89.7%-100%) and specificity was 58.7% (95%CI, 43.2%-73%). The difference in diagnostic accuracy of all tests was not statistically significant (p-value = 0.095).

Conclusion All classification systems were equivalent in accurately identifying risk of malignancy on imaging.

Disclosures GIRADS/ORADS overestimated risk of malignancy.

#675 A NEW SCORE BASED ON HUMAN EPIDIDYMIS PROTEIN 4 DISCRIMINATES BENIGN FROM MALIGNANT ADNEXAL MASS MUCH BETTER THAN RISK OF OVARIAN MALIGNANCY ALGORITHM

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10.1136/ijgc-2023-ESGO.248

Introduction/Background Recently, ESGO/ISUOG/IOTA/ESGE Consensus Statement on pre-operative diagnosis of ovarian tumors implied that neither Human epididymis protein 4 (HE4) nor Risk of Ovarian Malignancy Algorithm (ROMA) improve the discrimination between benign and malignant masses compared with CA 125 alone. This statement might be reassessed if a novel algorithm, more effective than ROMA, will be implemented. The aim of this study was to validate a new predictive algorithm, based on serum CA125&HE4. Methodology A novel Risk of Ovarian Cancer Kazan Index (ROCK-I), based on serum HE4, CA125 and patient’s age as variables, has been developed using a training dataset (n=284). ROCK-I provides an estimation of the risk of malignancy of adnexal mass in premenopausal patients. The validating dataset consisted of 333 consecutively operated premenopausal patients with pelvic mass out of which there were 281 cases of benign diseases, 43 cancers and 9 borderline ovarian tumors (BOT). Results on the validating dataset are reported below.

Results When benign diseases vs all cancers and BOT were considered, ROC-AUC of ROCK-I, ROMA and CA 125 in the validating dataset were 0.917, 0.864 and 0.874 respectively. When benign diseases vs all cancers and stages II-III of BOT were considered, ROC-AUC were 0.96, 0.911 and 0.896 respectively. The superiority of ROCK-I was statistically significant over both ROMA (p=0.003) and CA 125 (p=0.002). When standard cut-off levels were applied the specificities of ROCK-I and ROMA were 93.5 and 85.1%, and the sensitivities for all cancers were 100% (95%CI 87.7%-100%) and specificity was 84.8% (95% CI 68.9%-94.9%). When standard cut-off levels were applied the specificities of ROCK-I and ROMA were 93.5 and 85.1%, and the sensitivities for all cancers were 93 and 86% respectively. The performance of ROCK-I and ROMA in different scenarios of discrimination is shown in table 1.