

of the gastric body, peritoneal implants, and abdominopelvic lymph node enlargement. Biopsy of right inguinal lymph node and stomach biopsy returned positive for metastatic melanoma. The patient is currently being treated with immunotherapy.

**Conclusions** The cutaneous melanoma dissemination to the gynecological tract is rare. The prognosis depends on the initial state and in advanced stages the prognosis declines, mainly due to the high rate of metastases, which are mostly lymphatic. Our case report demonstrates a diagnosis of ovarian malignant melanoma which simulated primary ovarian cancer. The differential diagnoses are sex cord-stromal tumors and germ cell tumors.

## IGCS19-0193

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### CLINICAL OUTCOMES ASSOCIATED WITH EZH2 EXPRESSION IN HIGH-GRADE OVARIAN SEROUS CARCINOMA

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**Objectives** Enhancer of Zeste homologue 2 (EZH2), a primary methyltransferase, is over-expressed in cisplatin-resistant ovarian cancer cell lines. We used immunohistochemistry to study the association between EZH2 expression and clinical outcomes in women with high-grade serous ovarian carcinoma (HGSOC).

**Methods** Levels of EZH2 expression were evaluated in a tissue microarray that included 99 HGSOC cases and 14 non-neoplastic fallopian tube controls. EZH2 expression was quantified by digital microscopy and H-score (0 to 300) was calculated by multiplying percentage of positively stained cells with nuclear intensity. Results were correlated with clinicopathologic parameters. Treatment response was considered complete when patients demonstrated a disappearance of all measurable disease or normalization of CA-125 level for 4 weeks.

**Results** Most cases (N=73) had a complete response to chemotherapy. EZH2 expression was upregulated in neoplastic tissue compared to normal controls ( $P<0.0001$ ) and, among tumors, was upregulated in cases with suboptimal debulking ( $P=0.03$ ). EZH2 expression was not associated with stage of disease ( $P=0.95$ ) or response to chemotherapy ( $P=0.14$ ). However, out of 4 cases that displayed high-expression (>90th percentile) of EZH2 in all cores, 3 were incomplete responders ( $P=0.04$ ). Median overall survival (OS) for patients was 46 months and did not vary by average EZH2 expression ( $P=0.11$ ); however, high-expressing patients had borderline survival benefit in multivariate analysis ( $p=0.06$ ).

**Conclusions** EZH2 expression does not appear to be predictive of chemotherapy response or overall survival in HGSOC. Whether outliers with high expression of EZH2 are at increased risk for incomplete response yet have potentially better OS is worth further exploration.

## IGCS19-0289

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### SERUM VITAMIN D DEFICIENCY AND RISK OF EPITHELIAL OVARIAN CANCER IN LAGOS

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**Objectives** Ovarian cancer is the second most common female genital cancer in Nigeria. This study aimed to determine the association between serum vitamin D level and risk of ovarian cancer in women in Lagos, Nigeria.

**Methods** We conducted a cross-sectional study from the 1st August 2016 to 31st May 2017. Demographic characteristics including type of clothing, average hours spent outdoors and skin complexion of 35 women with primary epithelial ovarian cancer and 35 apparently healthy women were obtained using questionnaires. Venous blood was taken from each participant to determine serum 25-hydroxyvitamin D [25(OH)D] level using vitamin D ELISA kit. Mann-Whitney U and Chi square tests were used to compare the median 25(OH)D levels among the two groups. Binary logistic regression analysis were conducted to evaluate the relationship between vitamin D levels and the risk of ovarian cancer.

**Results** The mean age of the participants was 50.6( $\pm 11.1$ ) years. The incidence of vitamin D deficiency ( $\leq 20\text{ng/ml}$ ) among all the participants was high (62.9%) but the median vitamin D level in the ovarian cancer patients was lower as compared to the healthy women (13.5ng/ml, 95%CI: 9.2 – 21.2 vs 20.0ng/ml, 95% CI: 13 - 37.2,  $p\text{-value} = 0.0061$  respectively). Vitamin D deficiency was associated with a four-fold risk of developing epithelial ovarian cancer ( $p\text{-value} = 0.049$ ).

**Conclusions** This study revealed that low circulating 25(OH)D levels may be associated with the risk of epithelial ovarian cancer. We recommended a large prospective longitudinal study to evaluate the association between serum vitamin D levels and epithelial ovarian cancers in women in Nigeria.

## IGCS19-0033

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### FIRST-TO-SECOND PROGRESSION-FREE SURVIVAL RATIO AS A PREDICTOR FOR OVERALL SURVIVAL IN OVARIAN CANCER

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**Objectives** We aimed to evaluate the impact of first-to-second progression free survival (PFS1/PFS2) ratio on overall survival (OS) in patients with ovarian cancer.

**Methods** A retrospective cohort study of all patients with ovarian carcinoma treated in one university-affiliated medical