Regeneron, and Roche/Genentech; received research grants or support from AstraZeneca, Clovis, Genelux, Genmab, Immunogen, Merck, and Roche/Genentech; is an employee of US Oncology; been on the speakers' bureau for or received honoraria from AstraZeneca, Clovis, Merck, and Roche/Genentech; and has participated on a Data Safety Monitoring Board or Advisory Board for VBL Therapeutics and Eisai/BMS.

**THE EVALUATION OF PREDICTING VALUE OF HE4 AND CA125 MARKERS FOR OPTIMAL CYTOREDUCTIVE SURGERY IN OVARIAN CANCER PATIENTS**

Elham Saffarieh*, Amiralmomenin hospital, Semnan, Iran

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**Introduction/Background** Ovarian cancer is the deadliest gynecological cancer worldwide. Optimal surgery is of paramount importance in managing ovarian tumors. There is no consensus between experts about eligible and definitive criteria for optimal surgery. Therefore, we conducted a cross-sectional study to evaluate the role of serum levels of CA125 and HE4 in predicting optimal cytoreductive surgery.

**Methodology** This cross-sectional study, was performed in Tehran, Iran. Eligible women who had been diagnosed with ovarian tumor based on both clinical and imaging criteria were enrolled in this study. Serum levels of CA 125 and HE4 were checked before surgery and all patients underwent complete surgical staging. After completion of the pathological evaluation, data were entered in SPSS version 23.

**Results** One hundred and ten individuals were enrolled in our study. We divided cases between two groups: stage I to III b and stage IIIC to IV. Serum level of HE4 >170 pmol/l can predict optimal cytoreductive surgery before operation. (sensitivity:80% and specificity 70%) and serum level of CA 125 >320 UI/ml can predict optimal cytoreductive surgery before operation. (sensitivity:80% and specificity 70%).

**Conclusion** Our data demonstrated a negative predictive value of about 80% for both HE4 and CA125. Based on these cutoff, unnecessary surgery can be avoided in many cases, however, it is wise to ignore clinical performance and radiological findings. Nevertheless, we can say the evaluation of tumor markers is feasible and helpful in predicting optimal surgery.

**Disclosures** This study is done by Semnan university of medical sciences grant.

**SIGNET-RING STROMAL TUMOR OF THE OVARY: AN EXTREMELY RARE TUMOR. CASE REPORT**

María Vizcaino Gómez*, Mª Carmen Jiménez Artacho, María Serrano Jiménez, Rubén Miguel Betoret Gustems. University Hospital of Vinalopó, Elche, Spain

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**Introduction/Background** Signet-ring stromal tumor is a rare ovarian stromal neoplasm characterized by a population of bland signet-ring cells, devoid of mucin or lipid, in a generally cellular fibromatous stroma.

The presence of signet-ring cells in ovarian tissue is classically described as histological marker of Krukenberg tumor, which is a highly aggressive metastatic adenocarcinoma, with poor survival. In opposition, ovarian fibroid is a usually benign stromal tumor.

**Methodology** We report on a case of signet-ring stromal tumor of the left ovary in a 16-year-old woman, who attended the gynecology department, referred from primary care due to primary amenorrhea.

- No diseases, or allergies. No prior surgical Interventions.
- Does sports 3 times/week. No anosmia.

**Gynecological history** Primary amenorrhea.

- Denies sexual intercourse
- Normal hormonal profile (FSH 6.1, LH 2.4, Estradiol 68, normal TSH and PRL)

**Results**

**Exploration:**

- Weight 49kg. Size 170cm
- Normal external genitalia with intact hymen. Developed secondary sexual characters.

**Supplementary tests**

- Transrectal US: 42 x 22 mm retroverted uterus with 4.7 mm homogeneous endometrium. Left ovary with a solid cystic formation of 76x59x86 with peripheral vascularization and a larger cystic zone of 63x39mm without papillae at its lower pole. Healthy ovarian tissue is not visible. RO 23mm regular. No free fluid is observed.
  - Negative tumor markers (including HCG and AFP)
  - Normal XX karyotype

**Conclusion** Signet-ring tumor of the ovary is a rare variant of benign ovarian stromal neoplasm and should be distinguished from metastatic mucin-secreting signet-ring adenocarcinoma.

The clinical history, operative finding, and histological examination should be considered as elements for the differential diagnosis.

In difficult cases, immunocytochemistry provides improved diagnostic accuracy in distinguishing signet ring stromal cell tumor and its mimics from Krukenberg tumor. The panel of histochemical techniques should include PAS, mucicarmine, and Alcian Blue. In addition to epithelial immunohistochemical markers such as EMA and pancytokeratin and stromal markers such as vimentin and calretinin.

**Disclosures**

**Diagnosis** Left adnexal tumor of 9 cm. 16 years

Given this diagnosis, exploratory laparoscopy is considered with probable left adnexitomy

**Treatment** Laparoscopic left oophorectomy is performed with the following intraoperative findings:

- Uterus and right adnexal normal.
- Solid-cystic smooth-walled tumor free in Douglas dependent on the left ovary of about 8–9 cm. Left fallopian tube normal.

**Pathology report**

- Left ovary:
  - ovarian fibroma with signet ring stromal cells

**IHC study**

- Calretinin, S100, CK AE1/AE3, PAS, ALCIAN BLUE, CD10 negative, Ki67<5%
- PAAF OI : negative for malignant cells

**Differential Diagnosis** The anatomopathological report points to an ovarian stromal tumor with signet ring cells and not to a metastatic lesion by Krukenberg by IHC (except for negativity of calretinin).

However, digestive pathology screening is requested with normal gastroscopy, colonoscopy and CT AP.

Close follow-up is considered due to risk of recurrence.