Expert ultrasound examination, MRI or ROMA for discriminating benign from malignant adnexal masses as determined by IOTA simple rules

**Introduction/Background**
To determine which would be the best second step approach for discriminating benign from malignant adnexal masses classified as inconclusive by IOTA Simple Rules (SR).

**Methodology**
Single center prospective study performed (January 2018-December 2021) comprising a consecutive series of patients diagnosed as having an adnexal mass classified as inconclusive according to IOTA SR by non-expert examiners. All women underwent ROMA analysis, DC-MRI interpreted by an expert radiologist and ultrasound (US) examination by expert gynecological sonologist. Pregnant patients were excluded. Cases were clinically managed according to the result of the US expert examination by either serial follow-up for at least one years or surgery. Reference standard was histology (patient was submitted to surgery if any of the tests interpreted as malignant or > 12 months of follow-up). Diagnostic performance of all three approaches were calculated and compared. Direct cost analysis of the test used was also performed.

**Results**
80 women were included. Seventeen patients were managed expectantly and 63 patients underwent surgery. 23 masses were malignant. Diagnostic performance of all three approaches is shown in table. Both US expert examination and MRI had significantly better diagnostic performance than ROMA. There was no difference in terms of performance that ROMA. There was no difference in terms of diagnostic performance between US and MRI. Direct costs of the test used were also compared.

**Conclusion**
US expert examination is the best second step approach in inconclusive adnexal masses as determined by IOTA Simple Rules.

### Abstract 2022-RA-1559-ESGO Table 1

<table>
<thead>
<tr>
<th>Method</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROMA</td>
<td>26%</td>
<td>93%</td>
</tr>
<tr>
<td>MRI</td>
<td>91%</td>
<td>77%</td>
</tr>
<tr>
<td>Expert</td>
<td>100%</td>
<td>91%</td>
</tr>
<tr>
<td>US</td>
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</table>

**Abstract 2022-RA-1563-ESGO**

Pre-operative ultrasound assessment of rectosigmoid infiltration in advanced ovarian cancer

**Introduction/Background**
It is essential to perform a detailed preoperative description of disease’s extension which can improve patient management, including preoperative work-up, operative time and postoperative care. Ultrasound (US) is a reliable method for differentiation between benign and malignant adnexal tumors and for local staging of endometrial and cervical cancers. Few studies have pointed the use of US evaluating the extent of disease in advanced ovarian cancer and evaluation of operability. The objective of this study is to assess the accuracy of US predicting rectosigmoid tumor infiltration in patients with advanced ovarian cancer.

**Methodology**
This observational prospective study includes 53 patients with an US diagnosis of adnexal mass suspected of malignancy which was confirmed histologically. 39 patients underwent primary surgery and 16 interval surgery. US was performed to assess disease’s extension. Rectosigmoid infiltration was evaluated by perioperative findings.

**Results**
Rectosigmoid infiltration was confirmed in 36 patients. Rectosigmoid resection was performed in 12 cases and visceral peritoneum stripping in 3. In the other 21 cases bowel surgery was not performed due to unresectable disease. Rectosigmoid carcinomatosis was correctly detected by US in 24/36 patients. In 9/36 it was not detected and in 3/36 rectosigmoid wall was not assessable. 2/24 cases miliary carcinomatosis was identified and 22/24 had nodular carcinomatosis with a nodule mean diameter of 26 mm. In 23/24 there was a douglas lock. The Sensitivity of US in detecting rectosigmoid carcinomatosis was 72.7%, and specificity was 93.7%. Positive predictive value of 96% and negative predictive value of 62.5%. The absence of ascites, high BMI, dimensions of adnexal mass and abundant bowel content could affect the accuracy of US.

**Conclusion**
US is an accurate method for the pre-operative assessment of rectosigmoid infiltration in advanced ovarian cancer and it can be used for adequately preoperative planning and predict need of surgery on rectosigmoid carcinomatosis.

**Abstract 2022-VA-1642-ESGO**

Tricks to improve the laparoscopic extraperitoneal space in para-aortic lymphadenectomy

**Introduction**
This observational prospective study includes 55 patients with an US diagnosis of adnexal mass suspected of malignancy which was confirmed histologically. 39 patients underwent primary surgery and 16 interval surgery. US was performed to assess disease’s extension. Rectosigmoid infiltration was evaluated by perioperative findings.

**Results**
Rectosigmoid infiltration was confirmed in 36 patients. Rectosigmoid resection was performed in 12 cases and visceral peritoneum stripping in 3. In the other 21 cases bowel surgery was not performed due to unresectable disease. Rectosigmoid carcinomatosis was correctly detected by US in 24/36 patients. In 9/36 it was not detected and in 3/36 rectosigmoid wall was not assessable. 2/24 cases miliary carcinomatosis was identified and 22/24 had nodular carcinomatosis with a nodule mean diameter of 26 mm. In 23/24 there was a douglas lock. The Sensitivity of US in detecting rectosigmoid carcinomatosis was 72.7%, and specificity was 93.7%. Positive predictive value of 96% and negative predictive value of 62.5%. The absence of ascites, high BMI, dimensions of adnexal mass and abundant bowel content could affect the accuracy of US.

**Conclusion**
US is an accurate method for the pre-operative assessment of rectosigmoid infiltration in advanced ovarian cancer and it can be used for adequately preoperative planning and predict need of surgery on rectosigmoid carcinomatosis.
Introduction/Background Minimal invasive surgery in gynecological cancer offers benefits over laparotomy in terms of fewer operative complications. There are two approaches to para-aortic lymphadenectomy: transperitoneal and extraperitoneal. The transperitoneal approach offers a greater working space and familiar landmarks, but sometimes requires bowel mobilization. The advantages of the extraperitoneal approach include operative feasibility in spite of previous abdominal surgery, decreased risk of direct bowel injury, and bowel adhesion formation. The disadvantages are a small working space, limited landmarks, and the risk of becoming disoriented. The use of some techniques to increase the surgical field may be helpful by making surgery easier and faster.

Methodology We present a video with four surgical techniques to improve the viewing area in extraperitoneal para-aortic lymphadenectomy.

Results Accessory trocar for instrument insertion to raise the upper peritoneum in the form of a tent.- Placement of a clamp on the umbilical trocar placed in the peritoneal cavity to facilitate the outflow of CO2 to allow further distension of the retroperitoneal area.- Pneumatic balloon or Foley catheter can be placed to prevent the escape of CO2 into the intraperitoneal space in case of accidental opening of the peritoneum during entry into the retroperitoneal field.- For advanced surgeons, node dissection can be performed with an advanced sealing instrument with one hand while the other hand is used to lift the upper peritoneum in a tent to increase the working space.

Conclusion Laparoscopic para-aortic lymphadenectomy is a procedure with technical difficulties. The most important and basic requirements for appropriate lymphadenectomy are a correct surgical field development and a precise knowledge of anatomy to prevent accidental injuries. The use of some tricks can help to improve the surgical field to facilitate the surgical procedure.

SONOGRAPHIC ASSESSMENT OF FEATURES SUSPICIOUS OF UTERINE SARCOMA: EVALUATION OF THEIR USE IN PREOPERATIVE PREDICTION OF MALIGNANCY

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Introduction/Background The recognition of uterine sarcoma allows correct therapy planning and choice of surgical approach. To help to distinguish benign myoma from sarcoma, we assessed the value of 6 sonographic criteria (Sarcoma Prediction Score – SPS) in a prospective cohort of consecutive patients with uterine masses.

Methodology Patients planned for surgery between 2015–2019 for presumed myometrial masses were prospectively evaluated with a standardized ultrasound examination. For triage, the following criteria were investigated: rapid growth (3 months), high blood flow, atypical growth (postmenopause), irregular lining, central necrosis, and oval solitary lesion. The evaluation of the criteria was binary, the score could range from 0 to 6. Gold standard was histological diagnosis.

Results 522 myomas, 14 uterine sarcomas, 2 gastrointestinal stromal tumors in connection to the uterus, and 7 other malignancies were included. In the group of malignant tumors, 75.0% of patients were postmenopausal, while in the myoma group, 76.8% patients were premenopausal. The median SPS for mesenchymal tumors was 2.5 (range: 0–4, mean 2.6) vs 0 for myomas (range: 0–3, mean 0.17). The most common sonographic criteria leading to a false positive score in myomas were rapid growth and high blood flow. For the detection of sarcoma/mesenchymal tumors, at a threshold of >1, sensitivity was 93.75%, specificity 97.9%, PPV and NPV 57.7% and 99.8%, respectively. The AUC was 0.95.

Conclusion The use of the SPS could help to distinguish between myomas and sarcomas, with a high probability of benign histology if the score is negative. A higher risk of malignancy is given when ≥1 criteria are present in postmenopausal women. For premenopausal women, rapid growth and high blood flow may lead to false positive scores; a score ≥ 2 increases accuracy. We suggest the use of the SPS in the triage of patients with suspected myometrial lesions.

OVARIAN CANCER TREATMENT PLANNING AND COMPUTER TOMOGRAPHY INTERPRETATION SKILLS OF ONCOGYNACEOLOGIST

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Introduction/Background Cytoreductive surgery is the cornerstone of modern ovarian cancer treatment. Planning and treatment assessment is very important.

Methodology Analyze of our experience with tips and tricks of selecting patients for cytoreductive surgery.

Results Radiologist’s report contains the basic information about disease burden. Multiplanar review may allow clinician to imagine anatomical peculiarities of advanced disease. Sometimes it may be helpful to plan the placement of ports during diagnostic laparoscopy or to navigate during searching of suspicious areas. Patients’ anatomy is easier more safely to determine preoperatively, for example variants of vessel anatomy, tumor interrelation with major vessels, ureters, spleen, pancreas etc. In the case where vascular or hepatobiliary surgeon would be needed it may be done in a planned manner, not in the emergency because of accidental intraoperative finding. After cytoreductive surgery with extensive peritonectomy some specific radiologic changes may occur. When clinician knows or at least have access to operative report, he can more correctly interpret postoperative changes (different kinds irregular soft tissue fibrosis after peritonectomy, liver changes after decapsulation or atypic resection, lymph cysts, lymphadenopathy etc.).

Conclusion Computer tomography interpretation skills is very important for onco-gynaeologist. It should be incorporated in educational programs and training programs.