Methodology A novel algorithm, based on serum HE4, CA125 and patient’s age as variables, has been developed using a training dataset. This algorithm was named Risk of Ovarian Cancer Kazan Index (ROCK-I). The validating group consisted of 227 consecutively operated premenopausal patients with pelvic mass out of which there were 193 cases of benign diseases, 27 cancers and 7 borderline ovarian tumors (BOT).

Results ROCK-I demonstrated two fold less false positive results than ROMA. Thus, in the validating dataset, there was a statistically significant superiority of ROCK-I over ROMA in the specificity (92.2% and 84.5% respectively, p=0.017).

Meanwhile, the sensitivity of ROCK-I was also numerically higher in all the scenarios of discrimination (table 1). When the scenario of discrimination ‘benign disease vs the joint group of EOC (all stages) together with BOT stage Ic2-III’ was used, ROC-AUC of ROCK-I, ROMA and CA 125 were 0.988, 0.946 and 0.937 respectively (figure 1). The difference in ROC-AUC between ROCK-I and CA125 was statistically significant (p=0.01) while the difference between ROMA and CA125 was not (p=0.79).

Conclusion ROMA provides a suboptimal prediction, at least, in premenopausal patients. If a large independent validation shows similar or even slightly lower superiority of the novel ROCK-I over ROMA, it may provide a new basis of routine use of HE4 in the preoperative assessment of premenopausal patients with pelvic mass.

2022-RA-1389-ESGO
DIAGNOSTIC ACCURACY OF ULTRASOUND
O-RADS FOR CLASSIFYING ADNEXAL MASS: SYSTEMATIC REVIEW AND META-
ANALYSIS

1Julio Vara, 1Isabel Brotóns, 2Ana López-Picazo, 3Enrique Chacón, 4Nabil Manzour, 5Juan González Canales, 6Álba Exteandia, 7Lucía Pérez Alonso, 8Félix Borja, 9Teresa Castellanos, 10M. Angela Pascual, 11Stefano Guerriero, 12Luis M Chiva, 13Juan Luis Alcázar. 1Obstetrics And Gynaecology, Clínica Universidad de Navarra, Pamplona, Spain; 2Clínica Universidad de Navarra, Pamplona, Spain; 3Complejo Hospitalario Universitario de Badajoz, Badajoz, Spain; 4Hospital Universitario de Valme, Sevilla, Spain; 5Hospital General Universitario de Castellón, Castellón, Spain; 6University of Cagliari, Cagliari, Italy; 7Institut Universitari Dexeus, Barcelona, Spain; 8University of Cagliari, Cagliari, Italy; 9Clínica Universidad de Navarra, Madrid, Spain

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Introduction/Background The objective is evaluate the diagnostic accuracy of ultrasound O-RADS classification for discriminating benign from malignant adnexal masses.

Methodology A search was performed in PubMed/MEDLINE, CINAHL, Scopus, Cochrane, ClinicalTrials.gov and Web of Science databases (January 2018 to January 2022) for studies evaluating ultrasound O-RADS classification (index test) for discriminating benign from malignant adnexal masses, using histology or adequate follow-up as reference test. The Quality Assessment of Diagnostic Accuracy Studies-2 (QUADAS-2) tool was used to evaluate the quality of the studies. Pooled sensitivity, specificity, positive and negative likelihood ratios for detecting adnexal malignancy were calculated separately considering O-RADS groups 4 and 5 as suspicious for malignancy.

Results The search identified 185 citations after excluding duplicates, papers not related to the topic, reviews and paper assessing MRI O-RADS and papers with no x2 tables available, six studies comprising 3063 adnexal masses in 3006 patients were ultimately included in the qualitative and quantitative syntheses. The mean prevalence of adnexal malignancy on surgery was 29% (range: (8% to 59%). All studies were retrospective and four of them were considered of high risk of bias in patient selection due to inadequate exclusions. All studies were considered as low risk of bias for index test, reference test and flow and timing. Overall, pooled sensitivity, specificity, positive and negative likelihood ratios and DOR for O-RADS classification were 97% (95%CI 93%-99%), 76% (95%CI 58%-87%), 4.0 (95%CI 2.2-7.3), 0.04 (95%CI 0.02-0.09) and 100 (95%CI 35-280). Heterogeneity as high for specificity and moderate for sensitivity. Meta-regression showed that neither sample size nor malignancy prevalence explained this heterogeneity.

Conclusion Ultrasound O-RADS classification offers a high sensitivity and moderate specificity for discriminating malignant from benign adnexal masses.

2022-RA-1400-ESGO
GI-RADS VERSUS O-RADS AS
CLASSIFICATION REPORTING SYSTEM FOR
ADNEXAL MASSES. A PROSPECTIVE
COMPARATIVE STUDY

1Julio Vara, 2Isabel Brotóns, 3Ana López-Picazo, 4Celia Paredes, 5Isabel Maria Aguilar, 6Juan González Canales, 7Patricia Forcada, 8Álba Exteandia, 9Lucía Pérez Alonso, 10Isabel Cárdenes, 11Tania Errasti, 12Begoña Olartecoechea, 13Stefano Guerriero, 14Álvaro Ruiz Zambrana, 15M. Angélica Pascual, 16Luis M Chiva, 17Juan Luis Alcázar. 1Obstetrics And Gynaecology, Clínica Universidad de Navarra, Pamplona, Spain; 2Clínica Universidad de Navarra, Pamplona, Spain; 3Complejo Hospitalario Universitario de Badajoz, Badajoz, Spain; 4Hospital Universitario de Valme, Sevilla, Spain; 5Hospital General Universitario de Castellón, Castellón, Spain; 6University of Cagliari, Cagliari, Italy; 7Institut Universitari Dexeus, Barcelona, Spain

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Introduction/Background To compare GI-RADS and O-RADS reporting systems for managing adnexal masses.

Methodology Single center prospective study comprising a non-consecutive series of women diagnosing as having an adnexal mass evaluated and treated at our institution between January 2019 and December 2020. All women underwent transvaginal/transabdominal ultrasound examination. Pregnant women and girls under 18 years were not included. Adnexal masses were classified using GI-RADS system (based on subjective impression of the examiner). Management (follow-up, surgery by general gynecologist, MRI as second step technique or referral to Gynecologic oncologist) was based on this system. Additionally, O-RADS classification based on ADNEX model malignancy risk estimation (not using CA-125) was estimated. Diagnostic performance of both systems (considering GI-RADS or O-RADS 4 and 5 as malignant) were assessed and compared. Reference standard was or follow-up (masses with >12 months and no signs of malignancy were considered as benign).

Results One hundred and ninety-eight women (240 masses) were included in the study. GI-RADS classifications of the masses were as follows: GI-RADS-2: 20, GI-RADS-3: 178, GI-RADS-4: 25 and GI-RADS-5: 17. According to O-RADS, masses had been classified as follows: O-RADS-2: 28, O-RADS-3: 173, O-RADS-4: 25 and O-RADS-5: 14. 136 masses were managed conservatively and 104 were removed surgically. No mass on follow-up turned to be an ovarian cancer. Reference standard was benign in 217 masses and malignant in 23 masses. Diagnostic performance of both systems is shown in table.
Conclusion GI-RADS or O-RADS systems perform similarly for managing adnexal masses.

Comparison of ADNEX model, O-RADS and the combined IOTA Simple Rules (SRR) assessment and SR with ADNEX model in discriminating between benign and malignant adnexal masses

Abstract 2022-RA-1400-ESGO Table 1 Diagnostic performance of GI-RADS and O-RADS

<table>
<thead>
<tr>
<th>System</th>
<th>Sensitivity (95% CI)</th>
<th>Specificity (95% CI)</th>
<th>LR+</th>
<th>LR-</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI-RADS</td>
<td>100% (95% CI: 86%-97%)</td>
<td>95% (95% CI: 87%-94%)</td>
<td>7.5-17.1</td>
<td>NA</td>
</tr>
<tr>
<td>O-RADS</td>
<td>97% (95% CI: 93%-99%)</td>
<td>89% (95% CI: 88%-95%)</td>
<td>7.7-19.4</td>
<td>0.007-0.321</td>
</tr>
</tbody>
</table>

Introduction/Background To compare the IOTA Assessment of Different NEOplasias in the adnexa (ADNEX) model, the Ovarian-Adnexal Reporting and Data System (O-RADS) and the combined IOTA Simple Rules (SR) with Simple Rules Risk (SRR) assessment and SR with ADNEX model in the preoperative discrimination of benign and malignant adnexal masses (AM).

Methodology A monocentric retrospective study performed between January-2018 to December-2021 which includes consecutive women with AM. Surgery with histology represented the reference standard. We classified the AM using the ADNEX model, O-RADS and SR in the same cohort of patients. When SR resulted ‘inconclusive’, we combined SR with SRR assessment and SR with ADNEX model. Sensitivity (SE), specificity (SP) and diagnostic accuracy (DA) were determined for each testing modality to compare the performance of ADNEX model, O-RADS, SR + SRR and SR + ADNEX model.

Results Of the 514 women, 400 (77.8%) had a benign ovarian tumor and 114 (22.2%) had a malignant tumor. The malignancy risk threshold was set at >10%. SE, SP and DA of the ADNEX model were 92.1% (95%CI: 85.5%-96.3%), 88.3% (95%CI: 84.6%-91.2%) and 89.1% (86.1%-91.7%), respectively. SE, SP and DA of O-RADS were 93.0% (95% CI: 86.6%-96.9%), 89.3% (95%CI: 85.8%-92.1%) and 90.1% (95%CI: 87.2-92.5%), respectively. When we applied SR, 109 (21.2%) cases resulted inconclusive. SE, SP and DA of the SR + SRR assessment were 87.7% (95%CI: 80.3%-93.1%), 91.8% (95%CI: 88.6%-94.3%) and 90.9% (95%CI: 88.0%-93.2%), respectively. SE, SP and DA of the SR + ADNEX model were 90.4% (95%CI: 83.4%-95.1%), 93.3% (95%CI 90.3%-95.5%) and 92.6% (90%-94.7%), respectively.

Conclusion The ADNEX model and O-RADS had similar SE and higher SE than SR + SRR assessment and SR + ADNEX model in the preoperative discrimination of malignant and benign AM; SR + ADNEX model had higher DA than ADNEX model, O-RADS and SR + SRR assessment.

Intracardiac IntraVenous LEIOMYOMATOSIS with Malignant Histological Features

Abstract 2022-RA-1408-ESGO

Introduction/Background Intravenous leiomyomatosis (IVL) is defined by the presence of smooth muscle nodules beyond the vessels of an uterine leiomyoma and into the extrauterine venous system. Its extension into the right-sided cardiac chambers can be fatal. Most cases lack marked nuclear atypia or elevated mitotic activity. Transition from a non-invasive leiomyoma to an invasive IVL is not clearly understood. The objective is to report a patient with intracardiac IVL with malignant histological features consistent with sarcoma.

Methodology A 63 year old female, hemodynamically stable, referring a painful mass that occupied the pelvic cavity up to the hypogastrum, associated to abnormal uterine bleeding. Abdominal-pelvic magnetic resonance image (MRI) reported a solid tumor originating in the posterior wall of the uterus, and a solid tumor that extended through the right external iliac vein up to the right atrium (RA) partially occupying the inferior vena cava (IVC) and the right common iliac vein. Chest computed tomography showed no pulmonary metastasis. Cardiac MRI reported an intravascular thrombus of tumoral origin that extended from the IVF to the RA protruding through the tricuspid valve (TV) into the right ventricle (RV). Tran-sesophageal echocardiography revealed a 37x13 mm vascularized irregular mass extending from the IVC into the RA going through the TV into the RV, with no effect on valvular function.

Results A one stage procedure was performed including pelvic tumor resection, hysterectomy, adnexectomy, dissection of the IVC with removal of the endovascular tumor and removal of the intracardiac tumor. Due to nonsurgical bleeding, a mediastinal packing was necessary with posterior unpacking 24 hours later. Final pathology examination reported a high grade sarcomatous malignant tumor within the pelvic mass and histological findings consistent with IVL. Complete tumoral removal impacts prognosis and recurrence rates. Reports on IVL with malignant histological features are scarce.