

Methodology It was done a retrospective analysis of 45 cases of FTC, that are verified histologically in the period from 2013 to 2022. There were studied the preoperative sonographic data of FTC: the solid cystic or ovoid forms with areas of thickening of the walls, hardening or papillary growths on the inner surface of the capsule, incomplete septa; the presence of fluid in the uterine cavity; the blood flow of moderate or severe intensity with high speed and low resistance.

Results In 9 (20%) patients with sonographical diagnosis of FTC it was confirmed intraoperatively and histologically. Another 9 (20%) cases described a sonographic picture that was characteristic for FTC, but FTC was not suspected preoperatively and was detected as a result of surgery that was performed by other indications. In the rest cases, according to ultrasound results, ovarian cancer was found in 8 (17.7%), cystadenoma or papillary cystadenoma in 7 (15.5), non-neoplastic cysts in 8 (17.7%) cases. In 4 (8.8%) cases sonographic signs of pathology were not detected. Thus, the sensitivity of ultrasound diagnosis as a method of preoperative diagnosis of FTC, provided the correct interpretation of the results in 40% (95% CI: 25.70 – 55.67%) cases. But the presence of sonographic signs of FTC was in 41 (91.1%; 95% CI: 78.78 – 97.52%) patients.

Conclusion It is necessary to standardize the sonographic description of FTC for improving its diagnostics.

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PROGNOSTIC SIGNIFICANCE OF SIGNS FOR METASTATIC INVOLVEMENT OF LYMPH NODES IN CERVICAL CANCER ACCORDING TO MAGNETIC RESONANCE IMAGING

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Introduction/Background The most significant independent prognostic factor in cervical cancer (CC) affecting survival is lymph node (LN) involvement. MRI is the preferred method for visualizing locally advanced CC. The limitations of MRI in the evaluation of the metastatic lymph nodes (MLN) are related to the short axis size criterion greater than 1 cm. The objective of the study was to develop new MRI signs for MLN and to evaluate of their predictive significance.

Methodology The MRI findings of the 71 patients with histologically confirmed CC, who underwent radical surgical treatment with lymphatic dissection, were compared with the morphological features. To evaluate the predictive significance of MRI signs of MLN, monovariate regression logistic analyses was performed. To evaluate the diagnostic performance of methods and to determine the cutoff values, ROC-analysis was performed.

Results The following criteria of MLN have been developed: the size of the LN along the short axis is more than 0.65 cm; sensitivity – 51.2%, specificity – 86.2%; the configuration index is less than or equal to 1.65 (the ratio of the size of the LN along the long and short axis) – 83.7%, 94%, respectively; absence hypointense signal from LN fatty hilum 88.4%, 94.0%; the presence of spiky contour of the LN 79.1%, 94.0%; the perinodular edema of LN 76.7%, 87.1%; subcapsular edema of LN 55.8%, 86.2%; the central edema 25.6%, 98.3%; inhomogeneity of the MR signal LN

96.3%, 81.0%; the value of the LN signal intensity factor (the ratio of the LN signal intensity to the intensity of the tumor signal) 79.1%, 79.3%, median value for MLN ÷ 1.16 (1.02÷1.3); the value of the Apparent diffusion coefficient of MLN is less than $0.885 \times 10^{-3} \text{mm}^2/\text{s}$ 67.4%, 68.1%.

Conclusion The developed MRI signs are clinically and statistically significant factors for metastatic LN involvement ($p < 0.05$).

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URINE AND VAGINAL CYTOLOGY DETECTS ENDOMETRIAL CANCER IN WOMEN WITH POSTMENOPAUSAL BLEEDING

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Introduction/Background Postmenopausal bleeding (PMB) prompts urgent investigation with sequential invasive and costly tests that can be painful or distressing. A simple, non-invasive test to identify cancer and safely reassure women with benign causes of PMB would transform patient care. We previously showed proof-of-concept that malignant cells can be detected in urogenital samples of symptomatic endometrial cancer patients. Here, we aimed to prospectively validate the diagnostic test accuracy of urogenital cytology for endometrial cancer detection in women with PMB.

Methodology In this prospective, multicentre diagnostic accuracy study, consecutive eligible women provided a self-collected voided urine sample and a Delphi screener clinician-collected vaginal sample before undergoing routine clinical investigations. Samples were assessed by two independent cytologists blinded to cancer outcomes. Discrepancies were settled by consensus review. Results were compared to standard clinical investigations and hysterectomy histopathology.

Abstract 2022-RA-604-ESGO Table 1 Diagnostic accuracy of urogenital cytology for endometrial and all pelvic cancer detection

	For endometrial cancer,% (95% CI), n = 1848	For all pelvic cancers,% (95% CI), n = 1864
Number of cases	99	115
Disease prevalence	5.4 (4.4, 6.5)	6.2 (5.1, 7.4)
Sensitivity	80.8 (71.7, 88.0)	80.0 (71.5, 86.9)
Specificity	92.6 (91.1, 93.8)	92.6 (91.2, 93.8)
Positive predictive value	38.1 (31.5, 45.0)	41.4 (34.9, 48.2)
Negative predictive value	98.8 (98.2, 99.3)	98.6 (97.9, 99.1)
Diagnostic accuracy	91.9 (90.6, 93.2)	91.8 (90.5, 93.0)

Results Of 1864 participants, 115 (6.17%) had endometrial (n=99) or other pelvic malignancies (cervix-7, ovary-3, leiomyosarcoma-2, bladder-1, colorectal-2, metastatic pancreatic-1). The sensitivity and specificity of urogenital cytology for endometrial or any pelvic cancer detection were 80.8% (95% CI:71.7–88.0%) and 92.6% (95% CI:91.2–93.8%), and 80.0% (95% CI:71.5–86.9%) and 92.6% (95% CI:91.2–93.8%), respectively. The negative predictive value was 98.8% (95% CI:98.2–99.3%) for endometrial cancer detection and 98.6% (95% CI:97.9–99.1%) for any pelvic cancer detection. Of the 19 endometrial cancers missed by urogenital cytology, 2 (10.5%) had high-grade histology and 1 (5.3%) was \geq stage-II, meaning that cytology detected 95.8% of aggressive histology and 96.4% of locally advanced/metastatic cases. Seventeen of the missed cases (84.2%) were identified following unblinded cytology review of the sample, suggesting that natural tumour shed is ubiquitous in symptomatic endometrial cancer patients but current technology limits its clinical application.

Conclusion This novel endometrial cancer detection tool holds great promise. Artificial intelligence solutions to screen cytology slides for rare malignant cells may improve its diagnostic accuracy.

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RADIOMICS AND TRANSVAGINAL ULTRASOUND IN ADNEXAL MASSES: IS THE NEXT FUTURE OF DIAGNOSTICS HERE?

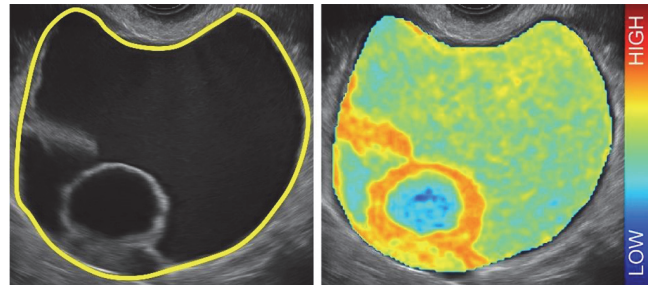
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Introduction/Background Multicenter prospective clinical validation of the radiomic machine learning model (TRACE4OC) applied to transvaginal ultrasound (US) in predicting the risk of malignancy of adnexal masses.

Methodology From a multicenter prospective consecutive series of women scheduled for surgery of adnexal masses, we collected and evaluated, fully blinded, 230 preoperative US images of adnexal masses with the TRACE4OC radiomic model previously developed according to the International Biomarker Standardization Initiative guidelines, trained and externally validated on a retrospective study of 274 US images of adnexal masses using histopathology as reference standard. Figure 1 shows the distribution of a radiomic texture feature (entropy of the co-occurrence matrix of gray levels) in an ovarian cystic malignant mass (a mucinous borderline tumor).

Results TRACE4OC model showed 91.3% accuracy, 99.0% sensitivity, 86.4% specificity when tested on the prospective multicentric external datasets of 230 masses (resulting into 90 malignant and 140 benign lesions at final histology), achieving 82.4% positive predictive value (PPV). The model shows a high correlation with final histology (Pearson r: 0.8425 (95% CI: 0.800–0.876); $p < 0.001$). The discrepancy was 0.473 ((SD: 0.50) 95%CI: 0.408, 0.538).



Abstract 2022-RA-610-ESGO Figure 1

Conclusion The radiomic machine learning model can support clinicians in the diagnostic process of benignancy versus malignancy for adnexal masses, providing a strong reduction of the definite surgery rate for benign lesions still warranting very high sensitivity.

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THE ROLE OF ULTRASOUND GUIDED BIOPSY IN WOMEN WITH PELVIC MASS SUSPECTED OF GYNECOLOGIC MALIGNANCY

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Introduction/Background Ultrasound-guided biopsy is a reliable and effective technique for obtaining tissue samples. It is commonly used for different types of tumors, such as breast and prostate cancers to accelerate the treatment process. Our aim is to evaluate the indications, adequacy, and safety of transvaginal ultrasound-guided biopsy in women with pelvic lesions suspected of gynecologic malignancy.

Methodology We reviewed the medical records of 90 patients who had undergone transvaginal or transabdominal ultrasound-guided biopsy at the division of gynecologic oncology between 2012–2022. Patients who have suspected ovarian malignancy but are not suitable for optimal debulking surgery, or the origin and/or nature of the tumor was unclear and further management required histological verification.

Results Two patients gave up the treatment process and 88 women were analyzed. Of the patients, 55 and 33 underwent transabdominal and transvaginal biopsy respectively. Biopsy material was found to be sufficient in 85 of 88 cases. Histopathological examinations revealed primary ovarian tumor in 58 (68%) cases. Tuberculosis was found to be the second most common disease (n=12, 14%). Metastatic tumors and tuba ovarian abscess was found to be in 10 (12%) and 5 (6%) patients respectively. No major complications occurred.

Conclusion Ultrasound-guided biopsy via abdomen and/or vagina is a minimally invasive method to obtain adequate material for histological diagnosis and management of adnexal mass and could avoid unnecessary surgical procedures in selected patients.