Medscape (25.03.2022)

New Ultrasound Approach Simplifies Ovarian Cancer Detection in Average-Risk Women

Reuters Staff

NEW YORK (Reuters Health) - Radiologists have developed a simplified ultrasound approach for assessing adnexal masses in women at average risk for ovarian cancer.

They found that separating isolated lesions into a classic category (simple cyst, hemorrhagic cyst, endometrioma, or dermoid) versus a nonclassic category (anything else, including multilocular cysts, mixed cystic and solid lesions, and predominantly solid lesions) yields high sensitivity and specificity for ovarian cancer - on par with other more complex ultrasound risk-stratification systems.

Pelvic ultrasound is the first-line imaging modality for assessing adnexal lesions, and existing risk-stratification systems can be complex and time-consuming to learn and use, the study team notes in Radiology.

The classic-versus-nonclassic approach to isolated adnexal lesions "could be helpful to radiologists in a busy clinical practice so that they can more quickly assess a lesion and recommend management," write Dr. Akshya Gupta of the University of Rochester Medical Center in New York and colleagues.

The researchers took a look back at 970 isolated adnexal lesions identified on ultrasound in 878 women at average risk for ovarian cancer (mean age, 42 years, no family history or genetic markers for ovarian cancer).

With classic lesions, the frequency of malignancy was less than 1%. Fifty-three of the 970 lesions (6%) were malignant. The malignancy rate for nonclassic lesions was 32% when blood flow was present and 8% when blood flow was absent ($P<0.001$).

For women older than age 60, the malignancy rate was 50% when blood flow was present and 13% without blood flow ($P=0.004$).

The sensitivity, specificity, positive predictive value (PPV) and negative predictive value of the classic-versus-nonclassic schema were 93%, 73%, 17% and 99% respectively, for detecting cancer.

The new approach achieved a "similar high sensitivity, specificity, PPV and negative predictive value for malignancy compared with other published algorithmic risk stratification systems, with a higher PPV for the detection (of) cancer when lesion blood flow and patient age were factored in," the researchers say.

"When a classic benign lesion is encountered, patients may be reassured that the lesion is benign, thereby avoiding extensive further work-up," they advise.

"When a lesion is nonclassic in appearance and without any blood flow, further imaging with follow-up MRI or repeat ultrasound could be considered. In women with a nonclassic lesion with blood flow, particularly older women, referral to a gynecologic oncologic surgeon will help ensure expeditious treatment of possible ovarian cancer," Dr. Gupta and colleagues add.

The author of an editorial published with the study says the typical radiologist "might be alarmed" that four lesions categorized as classic (three simple cysts and one endometrioma) were eventually diagnosed as malignant at follow-up.

But to put this into perspective, Dr. Deborah Baumgarten of the Mayo Clinic in Jacksonville, Florida, points out that none of the more complex risk-stratification systems would have categorized these lesions as malignant, because none are perfect at predicting malignancy.

"This is an important point, so it's worth repeating: No stratification system is perfect at predicting malignancy, so these four lesions would in all likelihood be characterized as benign with any system," Dr. Baumgarten writes.

"So, what do we do? We do the best we can. We use published guidelines when they are available (and in the realm of adnexal lesions, we have guidelines on which to rely). We trust our gut that when something seems amiss, we look again and perhaps recommend a close follow-up. We try to be consistent, and if there are competing guidelines, it's okay to choose the one that we will be more likely to use. And in this case, the simplified approach to adnexal lesions that allows

characterization of lesions into classic and nonclassic categories may be enough," Dr. Baumgarten concludes.

SOURCE: https://bit.ly/36cN1Y5 and https://bit.ly/3ulCDoK Radiology, online March 22, 2022.