CA 125 + Ultrasound Find Early Ovarian Cancer

BY MICHELE G. SULLIVAN

Large-scale screening for ovarian cancer with a combination of transvaginal ultrasound and CA 125 is a feasible strategy that can accurately identify early cancers, a large U.K. trial of almost 203,000 women concluded.

The combination approach carried a sensitivity of 89% and specificity of 99.8% for both primary ovarian and tubal cancers. A comparison strategy that included only transvaginal ultrasound was just as sensitive but significantly less specific, Usha Menon, Ph.D., and colleagues wrote.

Although the two methods detected similar numbers of cancers, the ultrasound-only method identified significantly more borderline ovarian tumors, resulting in almost nine times as many surgeries (845 vs. 97), wrote Dr. Menon of the University College London and the coauthors (Lancet Oncol. 2009 March 10 [doi:10.1016/S1470-2045(09)70026-9]).

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DR. BUYS

Any cancer screening trial, no matter how impressive, needs to be viewed in light of the overdiagnosis issue, said Dr. Saundra Buys of the University of Utah, Salt Lake City.

"If you have to perform 30 surgeries to cure one cancer, but a patient dies from a surgical complication, you're not really ahead in the game," she said in an interview. "In this case, we have almost 950 women undergoing surgery with general anesthetic, with all its attendant risks," to find 87 cancers, 28 of which were borderline tumors.

The 4-year U.K. Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) comprised 202,638 postmenopausal women (mean age, 60 years) randomized to no screening, annual screening with transvaginal ultrasound, or annual screening with CA 125 and transvaginal ultrasound as a second-line test.

In the multimodal screening (MMS) group, women with an abnormal CA 125 had either a repeat CA 125 in 12 weeks or an ultrasound in 6 weeks, depending on their other risk factors. Depending on these results, they could be returned to annual screening or slated for additional testing and clinical assessment.

In the ultrasound-only (USS) group, women with an abnormal transvaginal ultrasound screen underwent a repeat ultrasound. Depending on these results, they were returned to the screening pool, scheduled for another ultrasound, or referred for clinical assessment.

In the MMS group, 9% of women required a repeat test, and 0.2% underwent surgery. In the USS group, 12% of women required a repeat test and 2% underwent surgery.

Of those who underwent surgery, 834 had benign ovarian pathology or normal ovaries, with a significantly higher occurrence in the USS group compared with the MSS group (787 vs. 47). Of these women, 24 (3%) experienced a major surgical complication, with most again occurring in the USS group (22 vs. 2).

The two screening strategies detected similar numbers of ovarian or tubal malignancies (USS, 45; MSS, 42). But more borderline tumors were detected in the USS group (20 vs. 8). There was no significant between-group difference in the number of stage II borderline cancers.

For all primary ovarian and tubal cancers, the MSS had a sensitivity of 89%, a specificity of 99.8%, and a positive predictive value of 35%. The USS had a sensitivity of 75%, a specificity of 98%, and a positive predictive value of 3%.

"Until we have some outcomes data, including data on mortality, we don't really know about the overdiagnosis issue. It's a very interesting early look and it gives us some important information, but as yet we can't say which of the screening techniques—or no screening at all—is better," said Dr. Buys, who is an investigator in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial. ■