

Evaluation of Ovarian Cysts

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Clinical Question

What is the appropriate follow-up for a patient with an ovarian cyst identified on ultrasonography?

Evidence-Based Answer

Initial evaluation of an ovarian cyst is largely determined by its characteristics on ultrasonography, in addition to the presence of symptoms, laboratory evaluation, and patient history. Women with an ovarian cyst, but with no symptoms, family or personal history of cancer (e.g., ovarian, breast, colorectal), physical or laboratory evidence suggestive of infection, pregnancy, or systemic illness, are considered at low risk of ovarian cancer and may be followed with serial ultrasonography. (Strength of Recommendation [SOR]: B, based on a prospective cohort study.) A cyst identified on transvaginal ultrasonography is usually benign if it is thin-walled, unilocular, smooth-bordered, and less than 10 cm in diameter. Cyst aspiration and treatment with combined oral contraceptives do not hasten cyst resolution. (SOR: A, based on good-quality randomized controlled trials.) A complex cyst without benign features should be aggressively evaluated for ovarian cancer. (SOR: C, based on expert opinion.)

Evidence Summary

Ovarian cysts are common, appearing in one in five women, and should be evaluated with high-frequency gray-scale transvaginal ultrasonography.¹ Possible diagnoses include pregnancy, tubo-ovarian abscess, ectopic pregnancy, ovarian torsion, endometriosis, ruptured cyst, and ovarian cancer (one in 70 women; 65 to 70 percent metastatic at diagnosis).² Women have a 5 to 10 percent lifetime risk of developing a

suspicious adnexal mass that requires surgery.¹ Among those who undergo surgery, 13 to 21 percent have ovarian cancer.¹

Thin-walled, unilocular, sonolucent cysts less than 10 cm in diameter with smooth, regular borders are usually benign (malignancy rate = 0 to 1 percent, regardless of menopausal status).^{1,3} In one study, 2,763 postmenopausal women with this type of cyst were followed for a mean of 6.3 years and evaluated with ultrasonography every six months.³ Almost 70 percent of the cysts resolved spontaneously, and none of these simple cysts developed into ovarian cancer.³ Serial ultrasonography is sufficient to document the resolution of cysts with these features.^{1,3} Recommended intervals for ultrasonography vary from four to six weeks initially,² to three to six months,³ to six months.¹

Neither cyst aspiration¹ nor treatment with combined oral contraceptives⁴ is beneficial for treating ovarian cysts. In a Cochrane review of 500 women, treatment with combined oral contraceptives did not hasten the resolution of functional ovarian cysts in any trial.⁴ Most cysts resolved without treatment within a few menstrual cycles.

Cysts that are characterized as complex adnexal masses or as persistent, thin-walled cysts should be evaluated for possible ovarian cancer.⁵ Testing for cancer antigen (CA) 125 may be useful in women with these cysts, particularly in postmenopausal women.⁶ In premenopausal women, benign conditions such as endometriosis can elevate CA 125 levels to more than 1,000 U per mL (1,000 kU per L).⁷ Because of this, CA 125 measurement alone is not sensitive or specific enough to determine ovarian cancer risk.⁶ The risk of ovarian cancer algorithm analyzes changes in CA 125 levels to provide greater sensitivity