Because of this, CA 125 measurement alone is not sensitive or specific enough to determine ovarian cancer. Thin-walled, unilocular, sonolucent cysts less than 10 cm in diameter with smooth, regular borders are not considered at risk of ovarian cancer and may be followed with serial ultrasonography. (Strength of recommendation: 1, Level of evidence: 2).

Diseased ovaries are not always palpable, and many cancers remain undetected until distant metastasis. High-frequency gray-scale transvaginal ultrasonography is recommended as the imaging modality of choice. Laboratory testing should include complete blood count, cervical cultures, chemistries, and stool cultures in women with a history of pelvic surgery, previous abdominal surgery, abdominal masses, or symptoms suggestive of infection. Women with family histories consistent with hereditary nonpolyposis colorectal cancer, Lynch II syndrome, nulliparity, primary infertility, and those with family histories of breast, ovarian, or colorectal tumors should have a genetic risk assessment.

CA 125 levels are abnormal in both benign and malignant conditions, including functional ovarian cysts, endometriosis, the pelvic examination is limited in the identification of pelvic masses, but may identify masses larger than 5 cm in diameter.

Clinical Question

What is the appropriate follow-up for a woman with a cyst on ultrasonography identified on screening?

Evidence-Based Answer

Initial evaluation of an ovarian cyst is largely determined by characteristics on transvaginal ultrasonography. An ovarian cyst is a thin-walled, unilocular, sonolucent cyst less than 10 cm in diameter with smooth, regular borders is considered at low risk of ovarian cancer and may be followed with serial ultrasonography. (Strength of recommendation: 1, Level of evidence: 2).

Cysts that are characterized as complex adnexal masses or as persistent, fluid-filled cysts should be followed with serial ultrasonography. (Strength of recommendation: 1, Level of evidence: 2).

Women have a 5 to 10 percent lifetime risk of developing ovarian cancer. (Strength of recommendation: 1, Level of evidence: 2).

Cancer antigen (CA) 125 measurement may be useful in women undergoing surgery for possible ovarian cancer. (Strength of recommendation: 1, Level of evidence: 2).

When combined with CA 125 measurement, biomarker HE4 increases the sensitivity by 22 percent and the specificity of 97 percent in determining the difference between benign and malignant pelvic masses. (Strength of recommendation: 1, Level of evidence: 2).


The greatest positive predictive value (90 percent in premenopausal women and 50 percent in postmenopausal women) is obtained when CA 125 values are considered in conjunction with clinical assessment. (Strength of recommendation: 1, Level of evidence: 2).

In 2,763 postmenopausal women with this type of cyst were followed for a mean of 6.3 years and evaluated for possible ovarian cancer. (Strength of recommendation: 1, Level of evidence: 2).

Evidence Summary

Ovarian cysts are common, appearing in one in five women, and should be evaluated with high-priority gray-scale and color Doppler ultrasonography. (Strength of recommendation: 1, Level of evidence: 2). Several studies have examined the use of marker HE4 in conjunction with CA 125 to improve the sensitivity of screening for ovarian cancer. (Strength of recommendation: 1, Level of evidence: 2). 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). When combined with CA 125 measurement, biomarker HE4 increases the sensitivity by 22 percent and the specificity of 97 percent in determining the difference between benign and malignant pelvic masses. (Strength of recommendation: 1, Level of evidence: 2).

The systolic and diastolic blood pressures present were the sources of the adnexal masses are not in the intraperitoneal space. (Strength of recommendation: 1, Level of evidence: 2).

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References from Other Sources

3 Recommended intervals for ultrasonography in asymptomatic women. (Strength of recommendation: 1, Level of evidence: 2).

4 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). When combined with CA 125 measurement, biomarker HE4 increases the sensitivity by 22 percent and the specificity of 97 percent in determining the difference between benign and malignant pelvic masses. (Strength of recommendation: 1, Level of evidence: 2).

5 Testing for cancer antigen (CA) 125 may be useful in women undergoing surgery for possible ovarian cancer. (Strength of recommendation: 1, Level of evidence: 2).

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Evaluation of Ovarian Cysts

ROBIN A. HOLZER, MD, 14th Medical Group, Columbus Air Force Base, Mississippi

Evidence-Based Medicine: An answer on demand. (Strength of recommendation: 1, Level of evidence: 2).

The American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin of the ACOG recommends that asymptomatic women undergo annual pelvic examinations. (Strength of recommendation: 1, Level of evidence: 2).

Evidence from other sources


The American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin of the ACOG recommends that asymptomatic women undergo annual pelvic examinations. (Strength of recommendation: 1, Level of evidence: 2).