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Symptoms Have Little Value for Early Detection of Ovarian Cancer

Use of symptoms to trigger a medical evaluation for ovarian cancer does not appear to detect early-stage ovarian cancer earlier and would likely result in diagnosis in only 1 out of 100 women in the general population with such symptoms, according to an article published online January 28 in the *Journal of the National Cancer Institute*.

Researchers at Fred Hutchinson Cancer Research Center in Seattle assessed the predictive value of certain symptoms, including abdominal pain or bloating and urinary frequency, which were cited in a recent consensus statement as a way to diagnose ovarian cancer earlier.

Mary Anne Rossing, Ph.D., of the Program in Epidemiology at Fred Hutchinson, and colleagues conducted in-person interviews with 812 patients aged 35-74 years who had epithelial ovarian cancer that was diagnosed from 2002 through 2005. They compared the results from these case patients with results from interviews with 1,313 population-based control subjects—women who did not have ovarian cancer. The researchers assessed the sensitivity, specificity, and positive predictive value of a proposed symptom index and of symptoms included in the consensus recommendation.

Symptoms appeared in most case patients only about 5 or fewer months before diagnosis. Women with early-stage ovarian cancer were somewhat less likely to have symptoms (except nausea) than those with late-stage cancer. The estimated positive predictive value of the symptoms was 0.6%–1.1% overall and less than 0.5% for early-stage disease.

The authors conclude that 100 symptomatic women would need to be evaluated to detect one woman with ovarian cancer.

“The low positive predictive value of symptoms to detect ovarian cancer—particularly at an early stage—argues for a cautious approach to the use of symptom patterns to trigger extensive medical evaluation for ovarian cancer,” the authors write.

In an accompanying editorial, Beth Y. Karlan, M.D., and Ilana Cass, M.D., of the Division of Gynecologic Oncology at Cedars-Sinai Medical Center in Los Angeles, note the strengths of the study, including in-person interviews and large number of patients, but also point out its limitations: inherent recall bias and survival bias in case patients and control subjects. Recall bias is always a possibility in case-control studies in that case subjects may be more likely to remember symptoms than control subjects.

“Importantly, these findings remind us that wide recognition of symptoms alone will not incrementally improve the overall survival from ovarian cancer,” the editorialists write. “Rather, they highlight the urgent need to develop better molecular markers and improved imaging modalities for ovarian cancer screening.”

Contacts:

Article: Fred Hutchinson Cancer Research Center—Kristen Woodward, kwoodwar@fhcrc.org, 206-667-5095

Editorial: Cedars-Sinai Medical Center—Simi Singer, Simi.Singer@cshs.org, 310-423-7798

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