

Blood test may screen for ovarian cancer

Ovarian cancer usually grows for about 2 years before it produces symptoms, a large British study indicates. The delay explains why doctors diagnose only about one-fourth of cases before the disease has spread to other tissues, according to the researchers.

A sensitive blood test, used in the study to indicate when disease originated, could be widely employed to screen postmenopausal women for ovarian cancer, the researchers assert. Such screening could detect more cases early, when treatments are most effective, they say.

When the cancer is detected while confined to the ovaries, 90 percent of women survive at least 5 years, says Robert C. Bast Jr., an oncologist at the University of Texas M.D. Anderson Cancer Center in Houston. Only 15 to 20 percent of women in whom the cancer has spread beyond the pelvic cavity survive 5 years.

In the new study, a team led by Ian J. Jacobs of St. Bartholomew's Hospital in London measured blood concentrations of a chemical called CA-125 in 22,000 postmenopausal women between 1986 and 1995. Previous studies had shown that CA-125 concentrations rise in the presence of ovarian cancer. The women with normal CA-125 concentrations were then randomly divided into two groups. One group received a blood test annually for the next 3 years; the rest went unscreened.

Among the women with normal CA-125 concentrations at the start, 20 cases of ovarian cancer occurred in the unscreened group and 16 in the screened group. Screened patients survived an average of 6 years from the beginning of the study, compared with 3.5 years for unscreened patients, the researchers say.

The difference may stem from earlier detection of cancers in screened women, says study coauthor Steven J. Skates of the Massachusetts General Hospital in Boston. He spoke at the annual meeting of the American Association for Cancer Research in Philadelphia this week.

Women identified by the initial round of testing as having high CA-125 concentrations received further tests. Some were found to have ovarian cancer. The others were periodically examined, and some of these were later diagnosed with the disease as well.

Any participant whose CA-125 concentration exceeded 30 units per milliliter (U/ml) was retested. If the high reading was confirmed, the woman received an ultrasound examination. Both the test and ultrasound were then repeated every 3 months. Whenever the ultrasound indicated ovarian irregularities, the team referred the woman to a gynecologist, Jacobs and his colleagues report in the April 10 LANCET.

Twenty-eight women diagnosed with cancer during the study had shown subtle increases in the earlier CA-125 tests. These women had not been treated for cancer at that time because those blips hadn't exceeded 30 U/ml or an ultrasound had proved negative.

By reviewing the histories of these women, Skates was able to establish that an average of 1.9 years elapsed from the origin of cancer—as indicated by a CA-125 increase—to the onset of overt symptoms.

Currently, some women with a family risk of ovarian cancer are screened every 2 to 3 years. Skates advocates making screening more widespread and says that testing less often than once a year would be ineffective. After establishing a personal CA-125 baseline for each postmenopausal woman, doctors could watch for any significant changes in the measurement. "You could make the test individually sensitive for each person," he says.

The blood test costs \$40 to \$50, says Bast, who discovered CA-125. "The big hurdle to ovarian-cancer screening is the fact that only 1 in 2,000 postmenopausal women in Western

countries contracts the disease each year," Skates says. "You're looking for a needle in a haystack."

These new findings are "quite important," Bast says. Nearly 15,000 women die of ovarian cancer in the United States each year.

—*N. Seppa*