

GOC OPINION STATEMENT

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CancerSEEK: interesting but not yet ready for prime time as a test for detecting early ovarian cancer.

Background: Ovarian cancer is not one type of cancer. The different types have different behaviors and outcomes. The low grade cancers are usually confined to the ovary and surgery alone can result in cure. Screening would not change the outcome of most of these cancers as they are already highly curable. In contrast, the more common and deadly high-grade types are almost always widespread at diagnosis. Treatment improves survival but does not lead to cure in the vast majority of patients. Surgical prevention, by removing the organ at risk prior to the development of the cancer has been successful at saving lives. Screening and early detection, using a combination of CA125 measurement and pelvic ultrasounds, have not. The major reason is that there is no test that can detect these high-grade cancers when they are still early and localized.

CancerSEEK¹ is a new blood test that is being evaluated as a screening tool for several cancers. In regard to ovarian cancer, CancerSEEK uses a combination of CA 125 (already used without success for screening) with an assay for cancer DNA in the bloodstream. It is this addition of cancer DNA detection that is potentially the breakthrough. When the ovarian cancer was widespread (n=41), it was able to detect it most of the time, ie was a highly “sensitive” test. It picked up the cancer 40 times out of 41 and only missed 2%. However, this ability to find widespread cancer will not alter cure rates. Detecting the cancer early before it has spread is crucial. When the researchers looked at how good the test was at finding early cancers ie stage I/II, the detection rate dropped to 46 out of every 100 cancers. This is similar to the results obtained in the past with CA 125 testing alone. Only 13 patients with ovarian cancers were in this “early” stage group. However, these could have been low grade cancers, as no specific breakdown by type of ovarian cancer was given. More data is needed and more work needs to be done before this test could be considered as anything but a research tool in the case of ovarian cancer. The important questions to be answered are 1) can it detect localized high-grade ovarian carcinomas and 2) does this “early” detection improve outcomes and reduce the number of women dying from ovarian cancer?

GOC opinion: The theoretical concept of utilizing circulating DNA as in CancerSEEK is interesting in ovarian cancer, but the information provided in this manuscript is both limited and very preliminary. CancerSEEK is not ready for use outside of the research arena.

On behalf of The Society of Gynecologic Oncology of Canada,



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¹Detection and localization of surgically resectable cancers with a multi-analyte blood test. Cohen et al. *Science* 18 Jan 2018:

OUR MISSION

The Society of Gynecologic Oncology of Canada is a nonprofit organization consisting of physicians, nurses, scientists and other health care professionals specializing in gynecologic oncology. Its purpose is to improve the care of women with or at risk of gynecologic cancer by raising standards of practice, encouraging ongoing research, promoting innovation in prevention, care and discovery, and advancing awareness. GOC also seeks to disseminate knowledge to practitioners, patients and the general public on gynecologic cancer as well as cooperate with other organizations committed to women's health care, oncology, and related fields.