

New Blood Test Accurately Detects Ovarian Cancer

OvaPrint successfully distinguishes between high-grade serous ovarian carcinoma and benign masses.

May 16, 2024 By [Sukanya Charuchandra](#)

A novel test for detecting high-grade [ovarian cancer](#), called OvaPrint, successfully diagnosed 91% of malignant tumors, according to study findings published in [Clinical Cancer Research](#).

High-grade serous ovarian carcinoma (HGSOC) is the most deadly type of epithelial ovarian cancer. The malignancy typically grows slowly, seldom causes symptoms at early stages and is often diagnosed late. When a pelvic mass is detected, ovarian cancer is confirmed with surgery and pathological analysis. For asymptomatic women, screening tools are lacking.

Bodour Salhia, PhD, of the University of Southern California's Keck School of Medicine and Norris Comprehensive Cancer, and colleagues developed a cell-free DNA methylation liquid biopsy test to assess the likelihood of early-stage ovarian cancer by identifying differences between HGSOC and normal ovarian and fallopian tube tissue, and between HGSOC and benign masses. Liquid biopsies are noninvasive tests done on blood samples. OvaPrint looks for circulating DNA with a specific pattern of alterations associated with HGSOC.

The researchers tested OvaPrint on 372 blood and tissue samples from healthy individuals, people with HGSOC and people with non-HGSOC cancers. OvaPrint had an overall accuracy of 91%. It had a positive predictive value (ability to identify cancer if it is present) of 95% and a negative predictive value (ability to rule out cancer if it is absent) of 88% for differentiating between HGSOC and benign masses, far ahead of other commercially available tests. The test was less sensitive for non-HGSOC ovarian cancer, but it might be useful for identifying low-grade and borderline tumors with higher malignant potential, the study authors suggested. Larger follow-up studies are needed to confirm these findings.

"The development of OvaPrint, which is an accurate, noninvasive preoperative test for ovarian cancer, has the potential to improve diagnosis and cancer care for the almost 20,000 women diagnosed yearly," wrote the researchers. "Prospective studies are ongoing to further validate OvaPrint for risk assessment of adnexal masses of HGSOC and other epithelial ovarian cancer in symptomatic and asymptomatic women."

Early detection of ovarian using OvaPrint could help determine the course of surgery, chemotherapy and other treatment.

“The test has the potential to improve treatment, because the surgical approach to removing a pelvic mass differs depending on whether it’s benign or not,” Salhia said in a [news release](#). “Right now, doctors essentially have to take their best guess.”

What’s more, the test could potentially also be used as a screening tool for the general population. If detected early, people with ovarian cancer have a greater than 90% chance of living for five years or more, but this falls to less than 40% if the cancer is detected late.

“Early detection saves lives,” said Salhia. “If we can accurately identify early-stage ovarian cancer, we can change the outcome of the disease and really crank up survival rates.”

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