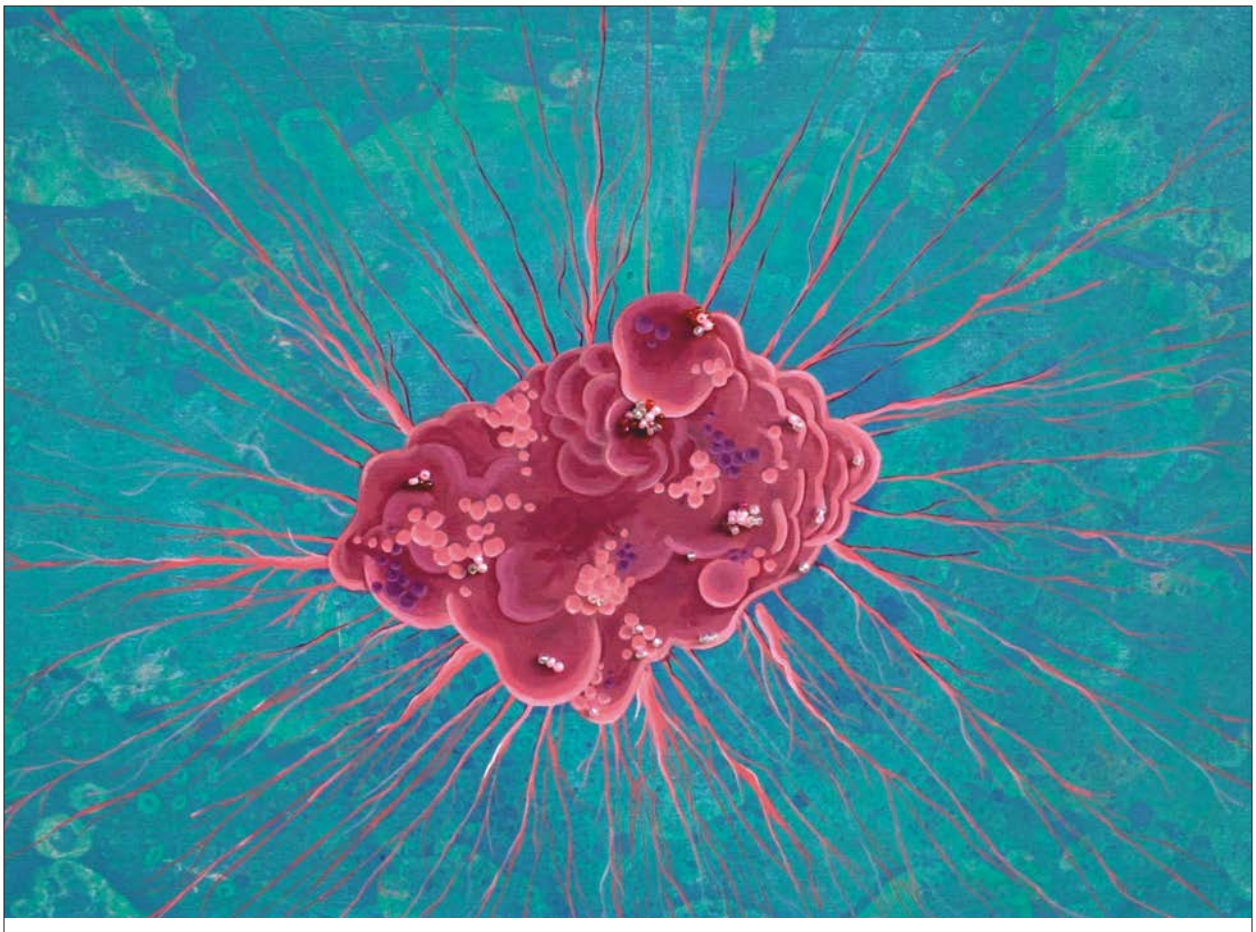

International Journal of Cancer Research

ISSN 1811-9727

Academic Journals Inc.

www.academicjournals.com

Biological Diversity of Ovarian Cancer Lessens Value of Screening

Cancer prevention experts have long been frustrated by the lack of a meaningful way to screen women for ovarian cancer. It is a relatively rare disease that often progresses with few symptoms until it is too late for potentially curative treatments, and elevated values of the most commonly used biomarker used in screening, CA125, are also related to other disorders.

Now, scientists at the Duke Cancer Institute say that incorporating the latest information about the biological diversity of ovarian cancer appears to lessen the potential value of screening even further.

"I feel that what this and other studies are telling us is that we will have to do a whole lot more than screening to protect women from this terrible disease," said Laura Havrilesky, MD, an Associate Professor of Gynecologic Oncology at Duke and the lead author of the study appearing in the journal Cancer. "We need to work harder to find better approaches to screening and also consider the potential value of preventive strategies."

Until recently, ovarian cancer has been regarded as a single disease. But studies at Duke and elsewhere have shown that it has at least two distinct subtypes, a slow-growing, indolent form, which takes months to years to move into an advanced stage, and a more aggressive variety driven by key gene mutations that gallops through stages I and II in about half that time.

Havrilesky led a research team that used information in the SEER database to create a decision model for screening for ovarian cancer. The SEER database, maintained by the National Institutes of Health, includes information on cancer incidence, prevalence and survival in over a quarter of the U.S. population and breaks out ovarian cancer by type.

They then validated the model using early data from a real-life study, the U.K. Collaborative Trial of Ovarian Cancer Screening, a large, randomized trial that is using CA125 values and ultrasound to screen a general population of post-menopausal women for ovarian cancer.

In conceptualizing ovarian cancer as a single disease, the model predicted that screening women over the age of 50 in the United States could potentially lower cancer deaths by about 15 percent. But incorporating the two subtype Concept, the model predicted deaths would fall by only 11 percent.

Havrilesky says it just makes sense: Screening is more likely to pick up a greater number of slow-growing, as opposed to fast-growing tumors, because indolent cancers remain in a more treatable early stage almost twice as long as their more virulent counterparts. "But catching and successfully treating the slower-growing cancers isn't going to do as much to reduce deaths from ovarian cancer as much as catching the more lethal tumors would do."

In an accompanying editorial, Patricia Hartge, MA, ScD, a senior investigator in the Division of Cancer Epidemiology and Genetics at the National Cancer Institute, notes the modest benefit of screening for a general population, but says that screening for women at higher risk of ovarian cancer -- those who carry mutations known to be related to the disease or who have a family history of it -- presents a more hopeful picture.

But Havrilesky is not so sure. She says screening in even the highest risk population has not yet been proven successful and says other options are under study that may hold merit.

"We know that women, who take oral contraceptives have a reduced risk of ovarian cancer, and the Duke Evidence-Based Practice Center is currently doing a systematic review and model to determine if this might be a reasonable approach for some women."

The research was supported by a grant from the American Board of Obstetrics and Gynecology/American Association of Obstetricians and Gynecologists Foundation.

Colleagues from Duke who contributed to the study include senior author Evan Myers, Gillian Sanders, Junzo Chino, Andrew Berchuck and Jeffrey Marks. Co-author Shalini Kulasingam is from the University of Minnesota.

Source:
(The above story is reprinted from materials provided by Duke University Medical Center).