

Scientists discover new genetic marker of ovarian cancer risk

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A team of Yale researchers have identified a genetic marker that can help predict the risk of developing ovarian cancer, a hard to detect and often deadly form of cancer.

Reporting online in the July 20 edition of the journal [Cancer Research](#), the team showed that a variant of the KRAS oncogene was present in 25 percent of all [ovarian cancer](#) patients. In addition, this variant was found in 61 percent of ovarian cancer patients with a family history of breast and ovarian cancer, suggesting that this marker may be a new marker of ovarian cancer risk for these families, said the researchers.

"For many women out there with a strong family history of ovarian cancer who previously have had no identified genetic cause for their family's disease; this might be it for them," said Joanne B. Weidhaas, associate professor of therapeutic radiology, researcher for the Yale Cancer Center and co-senior author of the study. "Our findings support that the KRAS-variant is an new [genetic marker](#) of ovarian cancer risk."

Weidhaas and co-senior author Frank Slack, also of Yale, first searched for the KRAS-variant among ovarian cancer patients and found that one in four had the [gene variant](#), compared to 6 percent of the general population. To confirm that the KRAS-variant was a genetic marker of ovarian cancer risk, they studied women with ovarian cancer who also had evidence of a hereditary breast and ovarian cancer syndrome. All these women had strong family history of cancer, but only half in their study had known genetic markers of ovarian cancer risk, BRCA1 or

BRCA2 mutations.

Six out of 10 women without other known genetic markers of ovarian cancer risk had the KRAS-variant. Unlike women with BRCA mutations who develop ovarian cancer at a younger age, women with the KRAS-variant tend to develop cancer after menopause. Because ovarian cancer is difficult to diagnose and thus usually found at advanced stages, finding new markers of increased ovarian cancer risk is critical, note the researchers.

Provided by Yale University

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