

# Prior oral contraceptive use associated with better outcome for ovarian cancer patients

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Patients who develop ovarian cancer appear to have better outcomes if they have a history of oral contraceptive use, according to a study by Mayo Clinic researchers published in the current issue of the journal *BMC Cancer*.

"Multiple studies from a variety of sources have indicated that [oral contraceptives](#) are associated with a reduced risk of [ovarian cancer](#), one of the most deadly cancers in women," says Aminah Jatoi, M.D., an oncologist at Mayo Clinic and co-lead author of the study. "However, few studies have explored the connection between the pill and outcomes in patients who ultimately develop the disease."

In their study, Dr. Jatoi and co-author Ellen L. Goode, Ph.D., an epidemiologist at Mayo Clinic, examined the outcomes of ovarian cancer patients who were seen at Mayo Clinic from 2000 through 2013. Each patient was given a risk factor questionnaire about prior oral contraceptive use. Of the 1,398 patients who completed the questionnaire, 827 responded that they had previously taken [birth control pills](#).

The researchers performed two types of statistical analysis on clinical data extracted from the patients' [electronic health records](#). One analysis found that patients who had been on the pill had improved progression-free survival, the length of time patients lived with the disease without it worsening and improved survival, the length of time patients with the disease lived, compared to those who had not been on the pill.

A second type of [statistical analysis](#) provided less consistent findings, indicating a statistically significant association between oral contraceptive use and progression-free survival, but not overall survival. The researchers think that one possible explanation for the latter finding was older patients who had passed away may have died from non-cancer causes, although other factors may have come into play.

Though it is still not clear how oral contraceptives improve outcomes for ovarian cancer patients, Dr. Jatoi says there are various hypotheses. For example, by halting ovulation, oral contraceptives protect against the repeated monthly changes that occur on the surface of the ovary. Contraceptives may reduce the risk of DNA mutations and thereby result in a less aggressive form of the disease at a later date.

Dr. Jatoi says the study findings underscore the need for research into the mechanisms driving a more favorable prognosis for women who used the pill. Such knowledge may one day provide researchers with new therapeutic targets to create better outcomes for patients diagnosed with

ovarian cancer. "Without question, further studies are needed in this area," says Dr. Jatoi, "but our study might provide a sense of hope for [patients](#) who are struggling with ovarian cancer."

**More information:** *BMC Cancer*,  
[www.biomedcentral.com/1471-2407/15/711](http://www.biomedcentral.com/1471-2407/15/711)

Provided by Mayo Clinic

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