

Cancer risk among women with polycystic ovary syndrome doubles after menopause

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Women with polycystic ovary syndrome (PCOS) are not at any greater risk of ovarian cancer than those without the common hormone condition, say researchers. However, those with PCOS who have been

through the menopause are more than twice as likely to be diagnosed with ovarian cancer.

The data based on nearly two million [women](#) was presented at the 39th annual meeting of the European Society of Human Reproduction and Embryology (ESHRE) . The research was also published in the *International Journal of Cancer* .

This is the first large study of its kind, and the authors are calling for increased awareness when managing the health of patients with PCOS, which affects an estimated one in ten women.

Lead author Dr. Clarissa Frandsen says the overall likelihood of women with PCOS developing ovarian cancer is low. However, she said clinical guidelines for managing the long-term health consequences for PCOS patients should include recommendations on their potential ovarian cancer risk.

The age-adjusted incidence rates of ovarian cancer were 11.7 per 100,000 person-years and 13.2 per 100,000 person-years for women with and without PCOS, respectively.

Dr. Frandsen, from the Danish Cancer Society Research Center in Copenhagen (Denmark), said, "Our results and those from previous studies should be taken into account when revising guidelines on how to manage the health of women with PCOS in the long term."

"Unfortunately, there is no effective screening for early detection of ovarian cancer. Both patients and clinicians will benefit from improved knowledge of the potential long-term health risks associated with PCOS."

The immediate past chair of ESHRE, Dr. Cristina Magli, laboratory

director at SISMeR (The Italian Society for the Study of Reproductive Medicine) in Bologna (Italy), was not involved in the research. She said, "PCOS is a common but complex condition that represents a serious public health issue. It can affect a woman's chance of becoming pregnant and increase the odds of other diseases.

"The odds of women with PCOS being diagnosed with ovarian cancer are very low. But the more that is known about the risks, the better doctors are able to monitor patients, especially those post-menopause."

Ovarian cancer is not as prevalent as [breast cancer](#) but is three times more deadly. The analysis by the Danish Cancer Research Center and Herlev Hospital in Denmark focused on epithelial ovarian cancer. The disease starts in the surface of the ovary and accounts for the majority (90%) of ovarian tumors.

The study included all 1.7 million women born in Denmark between 1 January 1940 and 31 December 1993. Excluded from the study were those who emigrated, died, were diagnosed with cancer, or had undergone surgery to remove their ovaries and [fallopian tubes](#) before the start of the study.

Details on diagnosis of PCOS and cancer and on migration were obtained from national registers. Additional analysis was carried out on women who had reached 51 years, which is the median/average age in Denmark for menopause.

Results showed that 6,490 women were diagnosed with epithelial ovarian cancer and 2,990 with borderline ovarian tumors during a median follow-up time of 26 years.

Overall, the study authors found the increased risk was not statistically significant for ovarian cancer and borderline ovarian tumors among

women with PCOS compared to those without the condition. Other factors that can affect the risk of ovarian cancer were taken into account, including obesity and education levels.

However, the risk of developing ovarian cancer was significantly greater among [postmenopausal women](#) compared to those without PCOS.

In addition, the risk in general was more than double for a type of ovarian tumor known as serous borderline among PCOS patients. These [abnormal cells](#) are not classed as cancer but are not completely benign and studies show they can lead to ovarian cancer later on.

The study authors acknowledge that a limitation of their research is the low number of ovarian cancer cases despite the large study population. In their conference abstract, they say the data they used were 'highly valid' but that diagnosis of PCOS is challenging, and they were unable 'to account for changes in diagnostic practices over time.

The research did not examine why post-menopausal women were more likely to develop [ovarian cancer](#). Dr. Frandsen said PCOS is a complex condition but long-term exposure to potential [cancer](#)-causing factors could be behind the finding, such as excess production of male sex hormones.

More information: Presentation no: O-012, "Risk of epithelial ovarian tumours among women with polycystic ovary syndrome (PCOS): A nationwide population-based cohort study", presented by Clarissa Frandsen, session 03: New Concepts: PCOS, Hall D3, 10.45 hrs CEST, Monday 26 June 2023.

Clarissa L.B. Frandsen, Pernille F. Svendsen, Bugge Nøhr, Kakob H. Viuff, Thomas Maltesen, Susanne K. Kjær, Allan Jensen. "Risk of epithelial ovarian tumors among women with polycystic ovary syndrome:

A nationwide population-based cohort study". *International Journal of Cancer*. 2023;1-11. DOI: [10.1002/ijc.34574](https://doi.org/10.1002/ijc.34574)

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