University of Waterloo

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Fertility drugs may be linked to ovarian cancer

By Donna Alvarado SPECIAL TO THE STAR

Fertility drugs may triple a woman's risk of developing ovarian cancer, a rare but deadly form of cancer, a Stanford University researcher reports.

The finding, which researchers called "by no means certain," is based on an analysis of 12 studies of ovarian cancer conducted over the last 35 years.

Alice Whittemore, the epidemiologist who headed the project, says she hopes the report would not be "unduly alarming" to women taking fertility drugs because researchers are uncertain what their findings mean.

"There's a need to track this down and find out what's going on," said Whittemore. The report was published this week in the *American Journal of Epidemiology*.

Because the data analyzed were taken from studies done over so many years, the women may have been taking different kinds of fertility drugs from those on the market today. "They don't know what they were given," Whittemore said.

U.S. National Cancer Institute officials called the report "provocative" but in need of further study.

Whittemore said: "It doesn't mean we have any clue whether it's based on a cause-andeffect association." But, "it's a cause for concern because it's biologically plausible."

Ovarian cancer is relatively rare. Women born today have a lifetime chance of 1.5 per cent of developing it, so even a tripled risk would still be less than 5 per cent. But it is often fatal, and only about 40 per cent of patients survive five years after they are diagnosed with the disease.

The new analysis re-evaluated data collected from 2,197 ovarian cancer patients and 4,144 comparison patients in 12 studies. It confirmed earlier findings that birth control pills reduce a woman's risk of ovarian cancer.

But it is the first time researchers have looked at large numbers of patients to examine the question of whether the cancer is linked to fertility drugs. Until now, evidence of a link had been limited to sporadic individual case reports.

Among the main findings in the report were:

- Women who are diagnosed as infertile, take fertility drugs and then get pregnant have only a slightly increased risk of getting ovarian cancer.
- Women who take fertility drugs but never get pregnant run the highest risk of getting ovarian cancer. It's possible the type of infertility they had, rather than the fertility drug itself, may be associated with the increased risk, Whittemore said.
- Pregnancy seems to protect against ovarian cancer, with the risk declining more with each successive pregnancy. Women who never become pregnant, but never use fertility drugs, have a doubled risk of getting ovarian cancer.
- Birth control pills also appear to protect against ovarian cancer, lowering the risk by 30 per cent. Long-term use of the Pill, for six years or more, lowers the risk by 70 per cent.

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REFERENCE: Whittemore, A.S., Harris, R., Itnyre, J. and the Collaborative Ovarian Cancer Group: Characteristics relating to ovarian cancer risk: collaborative analysis of 12 U.S. case-control studies. IV. The pathogenesis of epithelial ovarian cancer. *Amer. J. Epidemiology* **136**(#10): 1212-1220 (1992). See also the preceding three articles on pages 1175-1183, 1184-1203 and 1204-1211. [DC Library call number: PER RA421.A37]

The article EM9302 reprinted above is used in Chapter 11 of the STAT 231 Course Materials and in Figure 2.19a of the STAT 332 Course Materials.

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