

12.1.8.1 CANCER INCIDENCE AFTER INFERTILITY AND IVF

Doctors in Australia have used fertility drugs since the 1960's. These were used to stimulate the ovaries to produce eggs and were found to be successful. In the past 20 years the usage of these fertility medications has greatly increased with the development of IVF and related procedures.

The question of whether women exposed to fertility drugs might be associated with an increased risk of cancers, has attracted a lot of attention. This question has been addressed by a large Australian study published in the Lancet, a highly prestigious medical journal. The study is titled, "Risk of Cancer after use of Fertility Drugs with in-vitro fertilization."

The researchers were Dr Alison Venn, Ms Lyn Watson, Ms Fiona Bruinsma, Centre for the Study of Mothers 'and Children's Health, La Trobe University; Professor Graham Giles, Cancer Epidemiology Centre, Anti-Cancer Council of Victoria; and Professor David Healy, Monash IVF & Dep't of Obstetrics & Gynaecology, Monash University Concept Fertility Centre was also a participant in this research

The study uses the term IVF to include other related treatments such as GIFT& ICSI.

The study was designed to clarify;

- Whether there was any increase in the numbers of cancers of the breast, ovary and uterus in women on IVF compared with the numbers expected among women of the same age followed up over the same period in the general population.
- In the event that there were more of these cancers than predicted, what explanations might be plausible.

The study followed up 29,700 women who were referred to any of 10 participating Australian IVF clinics between 1978 & 1993. It is the largest study of its type in the world.

Treated Group	20,656 women received fertility drugs during IVF treatment.
Untreated Group	9,044 women did not receive fertility drugs during IVF treatment

The duration of follow up ranged from 1 to 22 years, with the majority followed up for 5 to 10 years.

What did the study find?

- Cancers of the breast and ovary were no more common in IVF patients overall than in the general population.
- Cancers of the uterus were more common than predicted in untreated IVF patients but were no more common than predicted in the treated group.
- More women than predicted in the treated group had a breast cancer diagnosed in the first year after treatment with fertility drugs. This statistically significant finding disappeared with time.

12.1.8.2 CANCER INCIDENCE AFTER INFERTILITY AND IVF

- Women with infertility for which a cause could not be found had more cancers of the ovary and uterus than predicted, whether or not they had treatment with fertility drugs.
- There was no evidence of any link between the number of treatment cycles or type of fertility drug used and increased cancer incidence.

Conclusions

The findings provide reassurance that the incidence of breast and ovarian cancers in IVF patients is the same as that for women of the same age in the general population when considered over a five to ten year period.

The evidence of increased numbers of cancers above the predicted in small numbers of women in particular sub-groups needs further study. The occurrence of above expected numbers of breast cancer in the first year after treatment is consistent with other research showing a small increase in diagnoses of breast cancer shortly after women give birth. The same effect has been seen in recent users of the oral contraceptive pill and hormone replacement therapy. Possible explanations for this finding after IVF treatment include earlier detection of abnormal breast changes due to close medical supervision, the biological effects of fertility drugs, or both. Explanations for the relationship between unexplained infertility and the increase in ovarian and uterine cancer are harder to come by.

Information for this information sheet has been obtained from the original publication: Venn A, Watson L, Bruinsma F, Giles G, Healy D, "Risk of cancer after use of fertility drugs with in-vitro fertilization". Lancet 1999 Nov 6:354(9190):1586-90