

Cancer risk in ART children and young adults is not increased

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The risk of cancer in children born as a result of fertility treatment has been found to be no greater than in the general population.

Results presented today at the 37th Annual Meeting of ESHRE from an 18-year median follow up study demonstrate that the overall chance of developing malignant disease did not increase in ART-conceived offspring. Details of the analysis are presented today online by Dr. Mandy Spaan from the Amsterdam University Medical Center (UMC) and Netherlands Cancer Institute, Amsterdam, at the virtual Annual Meeting of ESHRE.

The findings also found no difference in outcomes between ART [children](#) and those conceived by sub-fertile women who became pregnant naturally, either with or without [fertility drugs](#) to induce ovulation.

Overall, the results are described by Spaan as "quite reassuring, especially for children conceived by IVF" and are an important contribution to the current knowledge about health risks in ART-offspring". They may assist physicians, she explained, to inform parents considering ART about the potential [health risks](#) for their children. What's more, Spaan says the findings provide gynaecologists with "evidence-based information about the association between ART and [cancer risk](#) in children and adolescents."

As background to the study, Dr. Spaan explained there is growing

evidence that ART procedures could influence the normal genetic modifications which occur in the embryo prior to its implantation in the womb. Fertility drugs, egg/embryo freezing and thawing, and the type of medium in which [embryos](#) are grown could all have an impact.

This report is based on the offspring of women treated in the 13 IVF clinics or two regional fertility centres in the Netherlands.

Data came from the OMEGA cohort, a Netherlands based cohort study of all live-born offspring from subfertile women treated with and without ART between 1980 and 2012. A total of 89,249 children were included—51,417 born through ART such as IVF, ICSI and frozen embryo transfer (FET) between 1983 and 2012, and 37,832 conceived naturally by subfertile women with/without fertility drugs between 1975 and 2012.

Details on the ART treatment and maternal characteristics were obtained from medical records, the Dutch Perinatal Registry, and questionnaires completed by the mothers. This information—IVF versus ICSI, fresh versus frozen embryo transfer, and cause of subfertility—was compared with [cancer](#) incidence ascertained from the Netherlands Cancer Registry.

The analysis showed that 358 cancers were diagnosed in children, of which 157 were in the ART group and 201 in the non-ART group. There was no overall increase in cancer risk for those born after ART compared with those not conceived by ART and the general population.

The chance of developing cancer was not significantly increased for children conceived by IVF compared with non-ART children. ICSI children were more likely to get cancer, but the authors say this was mainly driven by an increased likelihood of melanoma (based on four cases) and may be down to chance.

Children born after FET were not at increased risk compared to those born after a fresh embryo transfer, neither were those aged 18 and above who were conceived by ART compared with non-ART.

More information: Presentation 0-077, Monday 28 June 2021: Cancer risk in a nationwide cohort of children and young adults conceived by assisted reproductive technology in 1983-2011

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