

Largest study of childhood cancer after IVF

April 1 2019



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In the past three decades, in vitro fertilization (IVF) has gone from an experimental procedure to being more common. Pregnancies enabled by IVF frequently have more difficulties, with children born earlier and smaller even among singleton births.

University of Minnesota researchers conducted the largest study of childhood [cancer](#) after conception by IVF to date. This population-based

cohort study had nearly 2.5 times the number of children conceived by IVF than prior studies of the subject in Scandinavia and the United Kingdom. The results were recently published in *JAMA Pediatrics*.

Researchers first linked records of live births reported to the Society for Assisted Reproductive Technology Clinic Outcome Reporting System between 2004 and 2013 to the birth and cancer registries of 14 states, comprising 66 percent of births in the United States and 75 percent of IVF-conceived births. These records were then linked to the [cancer registries](#) of the same states to find cancers diagnosed between 2013 and 2015. Researchers then randomly selected 10 children conceived naturally for each child conceived by IVF. The final dataset consisted of 275,686 IVF children and 2,266,847 naturally conceived children.

The study found:

- the overall cancer rate (per 1,000,000 children) of IVF children was about 17 percent higher than for non-IVF children;
- the rate of hepatic tumors was over 2.5 times higher among IVF children than non-IVF children;
- the rates of other specific cancers did not differ between the two groups;
- there were no associations of childhood cancer with specific IVF treatment techniques.

"The most important takeaway from our research is that most childhood cancers are not more frequent in children conceived by IVF," said Logan Spector, a professor in the Medical School and Masonic Cancer Center member. "There may be an increased risk of one class of cancers in children; however, due to the nature of our study, we could not distinguish between IVF itself versus the parents' underlying infertility. Overall, these results are reassuring to parents who've had [children](#) through IVF."

More information: Logan G. Spector et al, Association of In Vitro Fertilization With Childhood Cancer in the United States, *JAMA Pediatrics* (2019). [DOI: 10.1001/jamapediatrics.2019.0392](https://doi.org/10.1001/jamapediatrics.2019.0392)

Provided by University of Minnesota

Citation: Largest study of childhood cancer after IVF (2019, April 1) retrieved 9 April 2024 from <https://medicalxpress.com/news/2019-04-largest-childhood-cancer-ivf.html>

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