

## IS ASSISTED REPRODUCTIVE TECHNOLOGY ASSOCIATED WITH INCREASED RISK OF CANCER?

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**Background and aims:** The incidence of tumourgenesis in children conceived by Assisted Reproductive Technology (ART) is an important topic without clear evidence. We aimed to review the literature.

**Methods:** A literature search was undertaken via Pubmed using the key terms 'ART', 'in vitro fertilization', 'child', 'paediatric', 'cancer' and 'incidence'.

**Results:** Four studies were identified which were all cohort in design. The largest and most recent study of 26,692 children by Källén *et al* [1] took place in Sweden, using combined data from the Swedish Medical Birth Register and the Swedish Cancer Register. They found a statically significant increased risk of cancer in children conceived by In Vitro Fertilisation, with a total cancer risk estimate was 1.42 (95% CI: 1.09 - 1.87). The types of cancer reported were varied. The remaining studies ranged in size from 332-17000 children. None showed a statistically significant increase in cancers in children conceived by ART.

**Conclusions:** These studies highlight the need for larger cohorts and a longer period of observation post ART given the rarity of childhood cancer. The study in Sweden supports our idea that a national database of all children conceived by ART may enable this question to be answered.

**References:** Källén B, Finnström O, Lindam A, Nilsson E, Nygren KG, Olausson PO. Cancer risk in children and young adults conceived by in vitro fertilization. 2010 Aug;126(2):270-6.