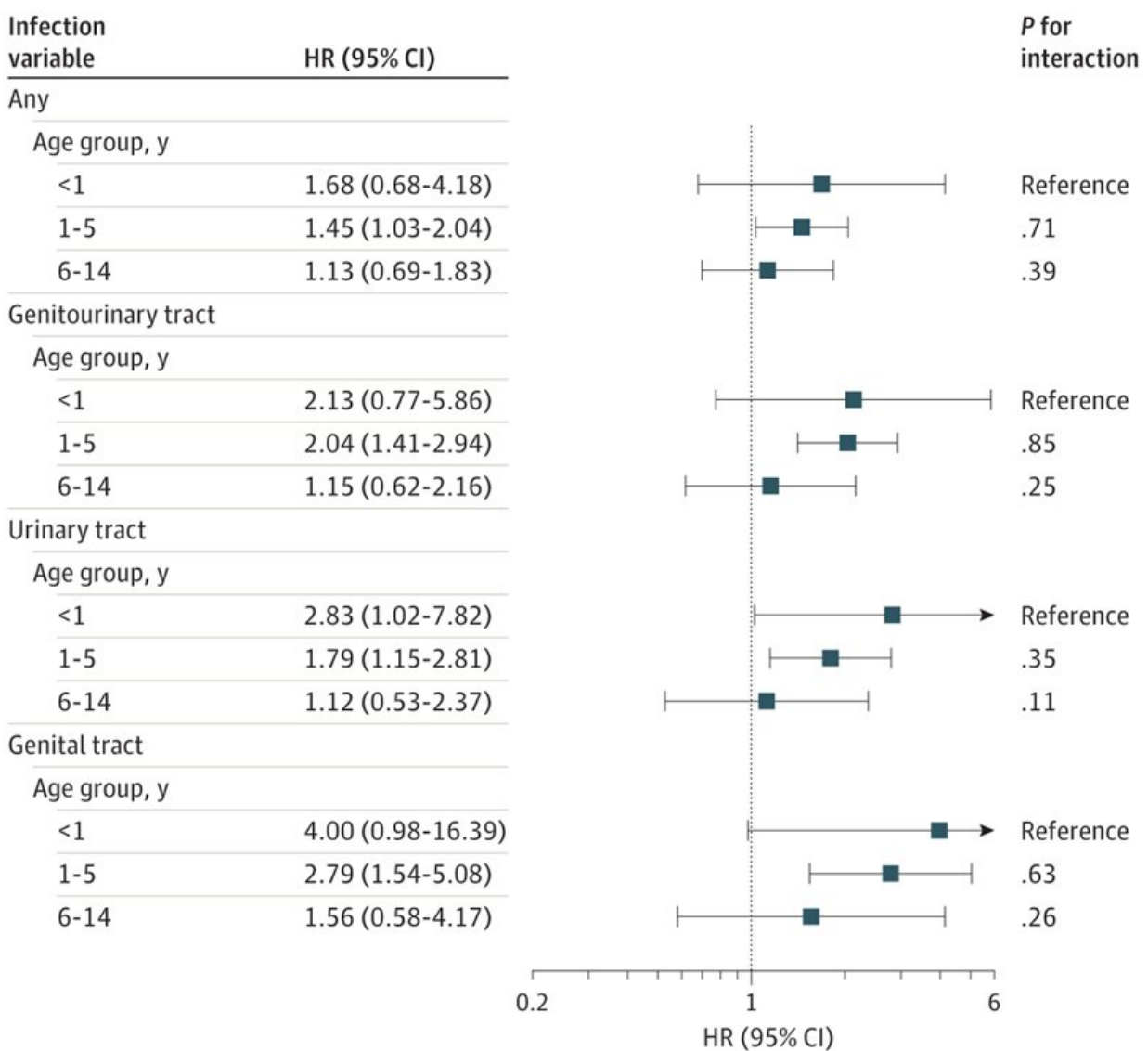


# New study strengthens evidence that infections in pregnant mothers raise risk for leukemia in babies

February 21 2023, by Bob Yirka



Stratified Association of Maternal Infection for Any Childhood Leukemia by Diagnosis Age. All models were adjusted for maternal age, educational level, parity, cohabitation during pregnancy, any diabetes during pregnancy, birth year, and birth season. HR indicates hazard ratio. Credit: *JAMA Network Open* (2023). DOI: 10.1001/jamanetworkopen.2023.0133

An international team of medical scientists has found more evidence of infections in pregnant women raising the risk of leukemia developing in babies. In their paper published in *JAMA Network Open*, the group analyzed data from several Danish medical registries looking for ties between various types of infections in pregnant women and whether they increase the risk of babies developing leukemia.

Leukemia is a type of cancer that negatively impacts [blood cells](#), preventing them from developing into certain types of other cells, such as those used by the [immune system](#). Leukemia is the most common type of cancer found in [children](#). Its cause is not known, but prior research has shown some associations between infections in pregnant woman and an increased risk of [leukemia](#) in the baby that is delivered. In this new effort, the researchers took a new approach to find such associations.

The work involved accessing and analyzing medical data in several Danish medical registries. In all, they looked at records for over 2.2 million children living in Denmark, looking for instances of infections in pregnant women and leukemia developing in their babies as they grew older (up to an average age of 12). Of the records studied, 4,362 children were diagnosed with any type of cancer before the age of 15—of those, 1,307 were leukemia.

The researchers found that babies born to [pregnant women](#) who had any

type of infection during their pregnancy were 35% more likely than average to develop leukemia. They also found that the type of infection made a difference. Babies were 142% more likely to develop leukemia if their mother contracted a [urinary tract infection](#) while pregnant—and 65% if they developed a genital tract infection.

The team found no associations between infections in pregnant mothers and increased risk of babies developing any other kind of cancer. They suggest that there are immune-related factors that contribute to the development of leukemia in children. They also note that some instances of leukemia might begin in utero—other studies have shown that lesions on chromosomes in children who developed leukemia have been observed at birth.

**More information:** Jian-Rong He et al, Evaluation of Maternal Infection During Pregnancy and Childhood Leukemia Among Offspring in Denmark, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.0133](#)

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