

Offspring of teen, young adult women with cancer history more likely to have birth defects

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The offspring of adolescent and young adult women with a history of cancer face a higher risk of birth defects, according to new research

from UTHealth Houston.

A study led by Caitlin C. Murphy, Ph.D., MPH, associate professor of health promotion and [behavioral sciences](#) at UTHealth Houston School of Public Health, was published recently in [Cancer Epidemiology, Biomarkers & Prevention](#).

"Concerns like the health of future children are at the top of mind for many [young adults](#) diagnosed with cancer, but they are already so overwhelmed at the time of diagnosis with navigating cancer-related information," said Murphy, who was first author of the study. "Our findings can be used in [clinical practice](#) to provide counseling and inform this population of the potential risks and reproductive consequences of cancer, at the time of diagnosis and beyond."

Researchers examined birth defects in 6,882 offspring, ages 12 months and younger, of women ages 15-39 at the time of cancer diagnosis, between 1999 and 2015. Common cancer types were thyroid (28.9%), lymphoma (12.5%), and breast (10.7%), and 24% of women received chemotherapy.

Overall, risk of any birth defect was higher in offspring of women with a history of cancer (6.0%) compared to offspring of women without cancer (4.8%), although rare in both groups.

There was also an increased risk of specific types of defects in the offspring of women with a history of cancer, including eye or ear (1.39 times more likely), heart and circulatory (1.32 times more likely), genitourinary (1.38 times more likely), and musculoskeletal defects (1.37 times more likely).

Although birth defects are rare, Murphy said [young women](#) making decisions about pregnancy and [prenatal care](#) should receive appropriate

counseling and surveillance. Screening offspring for birth defects could also provide an opportunity for targeted prevention, she said.

"Many studies now demonstrate relationships between cancer and birth defects; children with [birth defects](#) also have a higher risk of cancer," Murphy said. "The more we learn about how they are related to each other, the more we can identify opportunities to prevent both."

More information: Caitlin C. Murphy et al, Birth Defects in Offspring of Adolescent and Young Adults with a History of Cancer: A Population-Based Study of 27,000 Women, *Cancer Epidemiology, Biomarkers & Prevention* (2023). [DOI: 10.1158/1055-9965.EPI-23-0743](https://doi.org/10.1158/1055-9965.EPI-23-0743)

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