

Studies find few risks to newborn offspring of parents who are childhood cancer survivors

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Whether they can have children is one of the major concerns for adult survivors of childhood and adolescent cancer because fertility can be compromised by cancer treatment. For cancer survivors who can have children, two new studies led by researchers at Fred Hutchinson Cancer Research Center may help alleviate fears that their childhood disease will adversely impact their newborns.

The studies, presented as companion papers in the journal *Archives of [Pediatrics](#) & Adolescent Medicine*, observed few risks to babies born to parents who underwent [cancer](#) treatment in childhood or adolescence. The most significant finding was among women cancer survivors, who had a greater risk of giving birth to preterm and low birth weight infants compared to the general population. Among female cancer survivors, 15 percent of births were preterm versus 10 percent among women who never had cancer. However, babies born to female cancer survivors had no increased risk of birth defects or infant death, according to the paper that examined pregnancy outcomes.

In the companion paper, babies fathered by male childhood cancer survivors had a borderline risk of low birth weight but no increased risk of prematurity, being small for gestational age, or having birth defects when compared to controls.

"The take home message overall is positive. If you had cancer as a

younger person and you are able to have children then most likely your children will be fine," said Eric Chow, M.D., Ph.D., corresponding author and research associate in the Hutchinson Center's Clinical Research and Public Health Sciences divisions. "Most of the other side effects that people have the most concern about - birth defects and more serious maternal complications during pregnancy - we didn't find those things."

Chow said pregnant women who had cancer in childhood should seek prenatal care early in their pregnancies and make sure their physicians and obstetricians know about their cancer history. Close monitoring may help prevent early births and underweight [newborns](#).

A possible explanation for the increased rates of preterm delivery and underweight newborns found among female cancer survivors is that some cancer treatments may affect the growth of and blood flow to the uterus during pregnancy, said Chow, who is a pediatric oncologist. Previous studies have shown that radiation therapy to the uterus can increase the chances of subsequent preterm labor and low birth weight.

For the two papers, Chow and the principal investigator Beth Mueller, Ph.D., a cancer and reproductive health epidemiologist in the Hutchinson Center's Public Health Sciences Division, used data from cancer registries operated by the National Institutes of Health in four U.S. regions - Seattle, Detroit, Salt Lake City and Atlanta. They identified boys and girls who were diagnosed with cancer before the age of 20 between 1973 and 2000. Linked birth records from the four regions identified the first live births to these survivors after diagnosis. A total of 1,898 offspring of female cancer survivors were identified and their outcomes were compared to 14,278 controls selected from birth records. The study identified 470 offspring of male [cancer survivors](#) and compared them to 4,150 controls.

Source: Fred Hutchinson Cancer Research Center ([news](#) : [web](#))

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