

# Some radiation therapy treatments can decrease fertility

April 1 2009

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In female cancer patients of reproductive age, radiation treatment directly to the ovaries should be avoided because there is a direct relationship between certain types of radiation therapy and fertility problems, according to a review in the April 1 issue of the *International Journal of Radiation Oncology\*Biology\*Physics*, the official journal of the American Society for Radiation Oncology (ASTRO).

Radiation therapy to the pelvic region can cause ovarian failure or result in damage that makes the uterus unable to accommodate the growth of a fetus. These effects are not a great concern to [cancer](#) patients past their reproductive years, but due to the growing number of pediatric and young-adult cancer survivors, these effects are increasingly relevant.

Researchers at the Harvard [Radiation Oncology](#) Program and the Department of Radiation Oncology at Brigham and Women's Hospital and Dana-Farber Cancer Institute, both in Boston, sought to review the impact of [radiation therapy](#) on fertility, pregnancy and neonatal outcomes among female patients and the effectiveness of ovarian transposition, or moving the ovaries out of the field of radiation, as a means of preserving fertility.

The study authors reviewed the outcomes of past studies that reported fertility, pregnancy and neonatal outcomes as a result of cranio-spinal, abdominal and pelvic radiation and determined that cranio-spinal irradiation caused hormonal changes that affected a woman's ability to become pregnant later in life. Women who received abdominal or pelvic

radiation had an increased risk of uterine dysfunction that lead to miscarriage, preterm labor, low birth weight and placental abnormalities. The study also determined that women who received low doses of ovarian radiation can suffer early menopause.

Ovarian transposition was proven to be an effective method of reducing the rates of ovarian dysfunction, but even if the ovaries are outside of the field of radiation, scatter dose can cause significant damage.

"Female patients who are not past their reproductive years would be best served by a multidisciplinary team of caregivers, including a radiation oncologist, pediatric oncologist, medical oncologist, a reproductive endocrinologist or gynecologist, and a maternal fetal medicine specialist," Akila Viswanathan, M.D., M.P.H., senior author and a radiation oncologist at the Brigham and Women's Hospital and Dana Farber Cancer Institute, said. "Only through a multidisciplinary approach will patients receive optimal care of their cancer and the best options for fertility preservation."

Source: American Society for Radiation Oncology

Citation: Some radiation therapy treatments can decrease fertility (2009, April 1) retrieved 23 April 2024 from <https://medicalxpress.com/news/2009-04-therapy-treatments-decrease-fertility.html>

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