

Many adolescent girls with leukemia are not being screened for pregnancy before beginning chemotherapy

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A new study indicates that adolescent females with acute leukemia have low rates of pregnancy screening prior to receiving chemotherapy that can cause birth defects. The findings are published early online in *Cancer*, a peer-reviewed journal of the American Cancer Society.

Although many chemotherapy drugs can cause [birth defects](#), there are no standardized guidelines for pregnancy screening in adolescent female cancer patients and little is known about how often they are screened prior to treatment. To investigate, a team of researchers at the University of Pennsylvania Perelman School of Medicine and The Children's Hospital of Philadelphia examined pregnancy screening patterns among adolescents with [acute leukemia](#) compared with adolescents with an emergency room (ER) visit who received computed tomography scans of the abdomen or pelvis. (In emergency medicine, pregnancy screening protocols exist for adolescents prior to receiving radiation due to known teratogenic risks of radiation.)

The analysis included [acute lymphoblastic leukemia](#) (ALL), [acute myeloid leukemia](#) (AML), and ER admissions in hospitals across the United States affiliated with the Pediatric Health Information System from 1999 to 2011. Among 35,650 patient admissions of females aged 10 to 18 years with newly diagnosed leukemia or ER admissions with scans of the abdomen or pelvis, the proportion of visits with an appropriately timed pregnancy test was 35 percent, 64 percent, and 58

percent in the ALL, AML, and ER groups, respectively. Patients with ALL were 29 percent less likely to have a pregnancy test compared with the ER patients, but there was no significant difference between the AML and ER groups. There was substantial variation in pregnancy screening patterns among different hospitals.

"We found that adolescent girls are not adequately screened for pregnancy prior to receiving chemotherapy or CT scans that could harm a developing fetus. Adolescents with ALL, the most common childhood cancer, had the lowest rates of pregnancy screening of the patients we studied," said lead author Pooja Rao, MD, MSCE, who is currently at Penn State Health's Milton S. Hershey Medical Center. "Since nearly all chemotherapy agents used for childhood/adolescent acute leukemia can cause potential harm to a developing fetus, our findings indicate a need for standardized pregnancy screening practices for adolescent patients being treated for cancer."

Dr. Rao also noted that the low rates of pregnancy screening observed in this study may indicate a reluctance on the part of pediatric oncologists to discuss sexual health practices with adolescent patients. "While sexual health discussions and education may traditionally be thought to be the responsibility of the patient's primary care provider, adolescents with cancer will often see their oncologist frequently over the course of their cancer treatment, and afterwards," she said. "Oncologists therefore are well-positioned to initiate discussions about sexual health with their patients."

More information: Pooja Rao et al, Low rates of pregnancy screening in adolescents before teratogenic exposures in a national sample of children's hospitals, *Cancer* (2016). [DOI: 10.1002/cncr.30225](https://doi.org/10.1002/cncr.30225)

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