

## What happens when blood cells are used instead of bone marrow in BMT for children and teens with leukemia?

Blood or marrow transplant (BMT) may cure acute leukemia in children and teens. If a child doesn't have a matched sibling donor, doctors search for a matched, unrelated adult donor.

Researchers compared medical records of 872 children and teens who had either acute myeloid leukemia (AML) or acute lymphoblastic leukemia (ALL). Each child got a transplant of blood stem cells or bone marrow from an adult unrelated donor in the U.S. sometime between 2000 and 2012.

Researchers did this study because an earlier study showed that among transplants from matched siblings, children and teens who received bone marrow lived longer than those who received blood stem cells. In this study, children who received bone marrow from volunteer adult unrelated donors also lived longer than those who received blood stem cells from similar donors.

So, for children and teens with acute leukemia, researchers recommend BMT with bone marrow cells.

### Keep in mind

This study did not collect information about quality of life.

### Ask your doctor

What is the best type of transplant for my child?

### Learn more about

- [This research](#)
- [Bone marrow transplants](#)
- [Diseases that transplant can treat](#)

### Source

Keesler DA, Martin AS, Bonfim C, et al. Bone marrow versus peripheral blood from unrelated donors for children and adolescents with acute leukemia. *Biology of Blood and Marrow Transplantation*. 2018 Dec; 24 (12): 2487-2492. doi:10.1016/j.bbmt.2018.08.010. Epub 2018 Aug 21. PMC6286246.

### About this research summary

This information is provided on behalf of the Consumer Advocacy Committee of the CIBMTR<sup>®</sup> (Center for International Blood and Marrow Transplant Research<sup>®</sup>). The CIBMTR is a research collaboration between the National Marrow Donor Program<sup>®</sup>/Be The Match<sup>®</sup> and the Medical College of Wisconsin.