Transplant and Acute Lymphoblastic Leukemia (AML)

Learning more about you or your child's ("your") treatment options can help you make informed medical decisions.

This fact sheet tells you:

- What AML is
- What the transplant steps are
- When to see a transplant doctor
- Questions to ask your doctor

What is AML?

AML is a fast-growing blood cancer. In AML, your body makes unhealthy blood-forming cells (stem cells). The unhealthy cells don't work properly and they grow quickly in your bone marrow (soft, spongy tissue inside your bones). Then, your marrow can't make healthy red blood cells, white blood cells and platelets. With fewer healthy blood cells, your body can't fight infections or stop bleeding very well.

What is a blood or marrow transplant (BMT)?

BMT, also called bone marrow transplant, replaces unhealthy cells in the bone marrow with healthy ones. BMT is not surgery. For some people, BMT cures the CML.

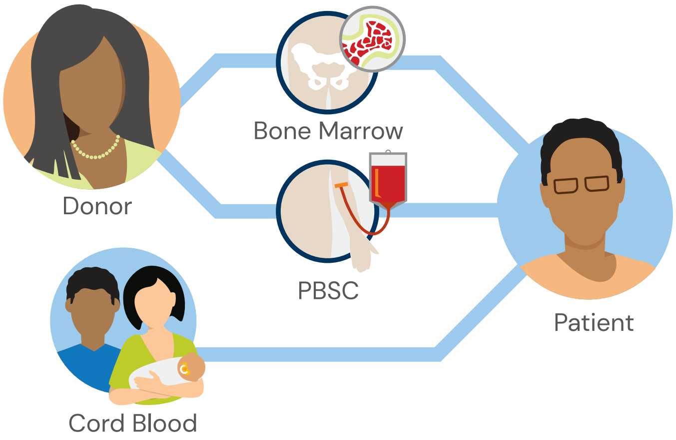
The most common type of transplant for CML is called an allogeneic transplant. This type of transplant uses healthy blood-forming cells donated by someone else to replace the unhealthy ones. The healthy cells can come from a family member, an unrelated donor, or umbilical cord blood.

Allogeneic transplant steps

1. First, your doctor searches for your donor. This can take weeks to months.
2. Next, you will get chemotherapy, and possibly radiation, to kill the unhealthy cells. This can take up to 2 weeks.
3. On transplant day, the donated cells are given to your through an intravenous (IV) infusion. The new cells travel to the inside of their bones.
4. After a few weeks, the donated cells begin to make healthy blood cells.
5. Then, you will need many months to recover. You will spend some of this time in or near the hospital.

Doctors, nurses and social workers will closely care for you during the entire process to prevent and treat any side effects or complications.

Allogeneic Transplant



When to see a transplant doctor

You or your child should see a transplant doctor right away if:

- The AML is in first complete remission (no signs of disease) unless it has a low risk of coming back
- You had a disease such as myelodysplastic syndrome (MDS) that became AML
- The AML was caused by another treatment, such as chemotherapy for another disease
- The initial chemotherapy doesn't lead to remission (no signs of disease)
- The AML comes back 1 or more times after treatment

- Your child is under the age of 2 years when diagnosed

Even if you don't need a transplant right away, it's important to see a transplant doctor early. Most patients have a better chance of a cure if they have a transplant in the early stage of AML.

At your first appointment, the transplant doctor will:

- Review your medical history
- Talk with you about your treatment options and their risks and benefits
- Start searching for a donor even if you don't need a transplant right away. This could help you get a transplant faster if it's needed later.

Learn about your risk for relapse

Doctors do cytogenetic and molecular testing to see how likely it is that the AML will come back (relapse). This means they look at the chromosomes and genes in the unhealthy cells. Chromosomes and genes carry instructions that tell your body how to work.

Certain changes in the AML chromosomes and genes predict a lower risk of relapse. Others predict a higher risk. To do this testing, doctors study your blood and your bone marrow.

Ask your doctor for a copy of your cytogenetic and molecular test results and to explain what the results mean.

Questions to ask your doctor

- What are the chances of a cure or long-term remission if I get a transplant? If I don't get one?
- Does my current health or age affect how well transplant might work?
- What do my cytogenetic and molecular markers mean for my treatment?
- What are the possible side effects of transplant? How can they be reduced?
- How might my quality of life change over time, with or without transplant?

Resources for you

Talk to someone who can help:

- Contact a BMT Patient Navigator:
  - Call: 1 (888) 999-6743
  - Email: patientinfo@nmdp.org

Order free resources to learn more. To see a full list, visit NMDP.org/request.

Here are some that you might find helpful:

- VIDEO: Basics of Blood and Marrow Transplant
- BOOKLET: Transplant Basics
- BROCHURE: Transplant Outcomes and Treatment Decisions
- WORKSHEET: AML Treatment Conversation Guide

At every step, we're here to help

NMDP® has a team dedicated to providing information and support to you before, during, and after transplant. You can contact our Patient Support Center to ask questions you may have about transplant, request professional or peer support, or receive free patient education materials.

Call: 1 (888) 999-6743 | Email: patientinfo@nmdp.org | Web: NMDP.org/one-on-one

Every individual's medical situation: transplant experience, and recovery is unique. You should always consult with your own transplant team or family doctor regarding your situation. This information is not intended to replace, and should not replace, a doctor's medical judgment or advice.