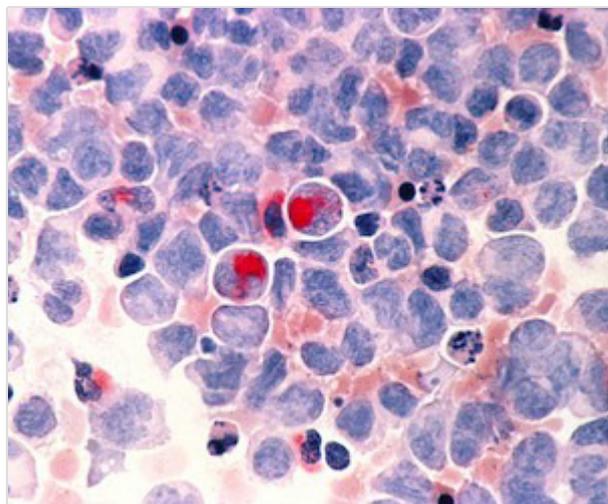


# Treosulfan/Fludarabine Conditioning Improves Outcomes in HSCT

Oct 15 Posted by [Keira Smith](#) in [Hematologic Malignancies](#)



Acute myeloid leukemia cells.

A recent phase 3 trial found that treosulfan/fludarabine used as conditioning treatment prior to allogeneic hematopoietic stem cell transplantation (HSCT) led to greater event-free survival compared with busulfan/fludarabine in older or comorbid patients with acute myeloid leukemia or myelodysplastic syndrome.

While patients age 50 or older with acute myeloid leukemia or myelodysplastic syndrome are often considered eligible for allogeneic HSCT, they are at increased risk from standard myeloablative preparative regimens

compared with younger patients. Comorbidities such as cardiovascular disease, diabetes, obesity, and infections can further increase the risk that conditioning treatments pose.

In their study now published in *The Lancet Haematology*, Dietrich Wilhelm Beelen, MD, of the Department of Bone Marrow Transplantation at the West German Cancer Centre, and colleagues evaluated the safety and efficacy of treosulfan/fludarabine compared with reduced-intensity busulfan/fludarabine as a preparative regimen for patients undergoing allogeneic HSCT. The study enrolled 476 patients who had myelodysplastic syndrome or acute myeloid leukemia in first or consecutive hematological remission and who were considered at increased risk for allogeneic HSCT due to age or an HSCT-specific comorbidity index of 2 or higher. Patients were assigned in a 1:1 ratio to receive fludarabine in combination with either treosulfan or busulfan prior to undergoing allogeneic HSCT.

Patients who were treated with treosulfan/fludarabine experienced greater two-year event-free survival compared with those treated with busulfan/fludarabine (64.0% vs 50.4%). Serious adverse events, including abnormal blood chemistry results and gastrointestinal disorders, were experienced by 8% of patients receiving treosulfan/fludarabine and 7% of patients receiving busulfan/fludarabine.

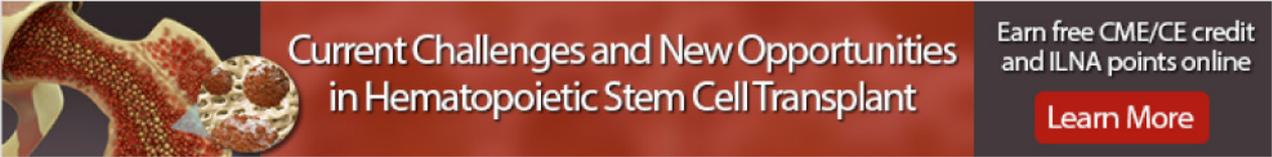
"Treosulfan was non-inferior to busulfan when used in combination with fludarabine as a conditioning regimen for allogeneic HSCT for older or comorbid patients with acute myeloid leukemia or myelodysplastic syndrome," conclude the authors in their study. "The improved outcomes in patients treated with the treosulfan-fludarabine regimen suggest its potential to become a standard preparative regimen in this population."

## For More Information

Beelen DW, Trensche R, Stelljes M, et al (2019). Treosulfan or busulfan plus fludarabine as conditioning treatment before allogeneic haemopoietic stem cell transplantation for older patients with acute myeloid leukemia or myelodysplastic syndrome (MC-FludT.14/L): a randomised, non-inferiority, phase 3 trial. *Lancet Haematol*. [Epub ahead of print] DOI:10.1016/S2352-3026(19)30157-7

*Image credit: Dr. Lance Liotta Laboratory. Courtesy of the National Cancer Institute*

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