New research shows luspatercept enables majority of patients with MDS to end reliance on blood transfusions

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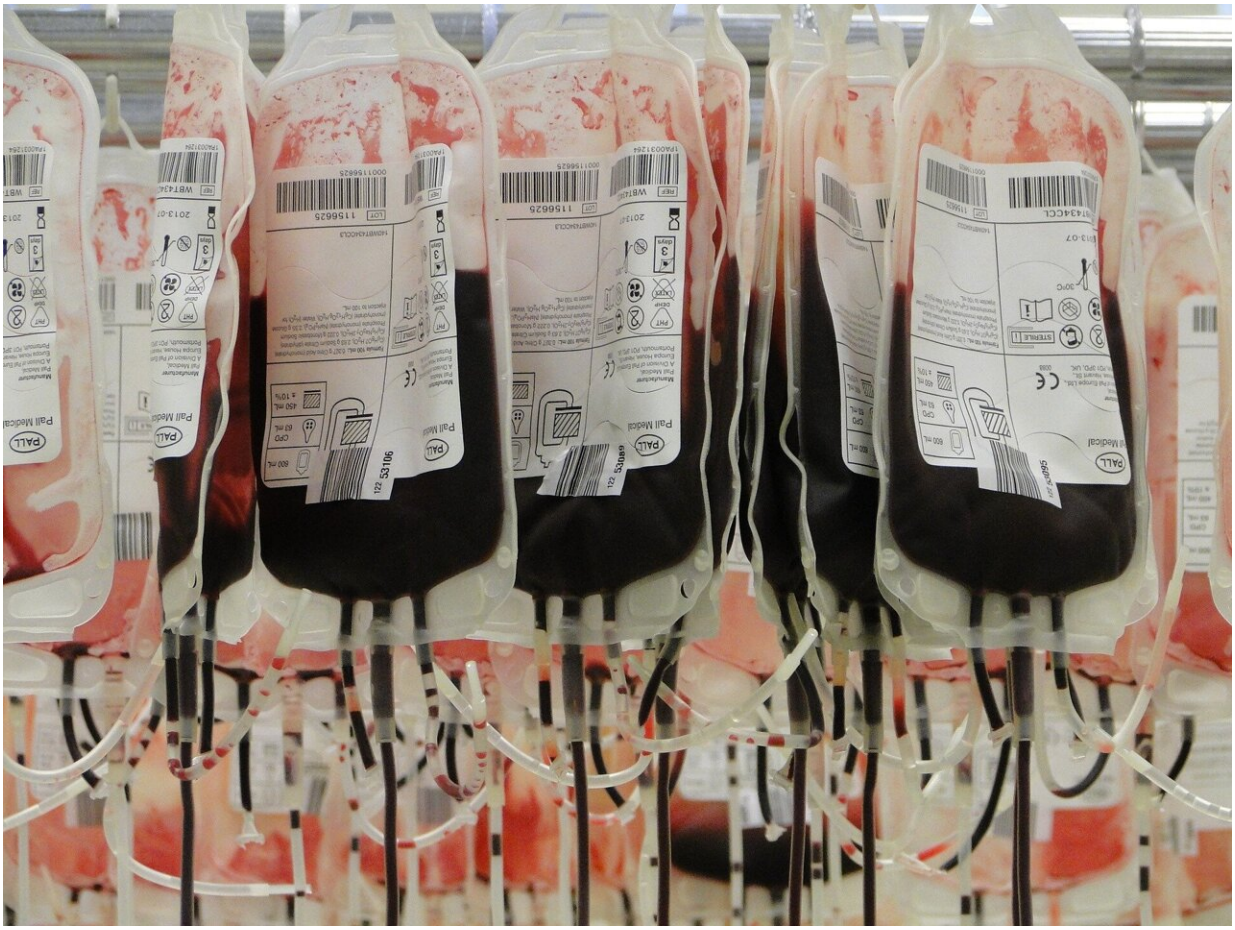

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Treatment with luspatercept improved red blood cell counts and erythroid responses compared to treatment with epoetin alfa in patients with myelodysplastic syndromes (MDS), allowing the majority to no longer require regular blood transfusions. Results from the Phase III COMMANDS trial, led by researchers at The University of Texas MD Anderson Cancer Center, were reported at the 2023 American Society of Clinical Oncology (ASCO) Annual Meeting.

The study evaluated the efficacy and safety of first-line treatment with luspatercept, which enhances red blood cell maturation, compared with epoetin alfa, a therapy commonly used for low blood cell count, in transfusion-dependent patients with anemia due to very low- to intermediate-risk MDS.

In this interim analysis, 58.5% of patients receiving luspatercept achieved the primary endpoint of independence from red blood cell transfusions compared to 31.2% of patients who received epoetin alfa. Within the first 24 weeks of treatment transfusion, 47.6% of luspatercept patients achieved transfusion independence versus 29.2% of patients receiving epoetin alfa. Additionally, 74.1% of patients who received luspatercept saw hematologic improvement in erythroid responses greater than eight weeks, compared to 51.3% of patients who received epoetin alfa.

"Patients with myelodysplastic syndromes often experience anemia that requires frequent red blood cell transfusions," said Guillermo Garcia-Manero, M.D., professor of leukemia and lead investigator of the study. "In this study, we observed a significant improvement in patient red blood cell counts with luspatercept, representing a promising advance to enhance the lives of these patients."

Myelodysplastic syndromes are a group of diseases in which the bone marrow doesn't produce enough healthy blood cells, including red blood

cells. Patients with MDS often experience symptoms such as anemia, fatigue, shortness of breath and increased vulnerability to infection.

Because of the frequency of anemia, most patients require regular red blood cell transfusions. Some cases of MDS can progress to acute myeloid leukemia (AML). Luspatercept is a novel agent that enables late-stage red blood cell maturation. By targeting the TGF-β signaling pathway, luspatercept helps restore normal red blood cell creation.

The trial enrolled 301 patients at 226 sites. Patients were randomized to receive subcutaneous luspatercept every three weeks or subcutaneous epoetin alfa weekly for 24 weeks. Patient characteristics were balanced across both treatment arms.

Treatment-related adverse events of all grades occurred in 30.3% of patients in the luspatercept group and 17.6% in the epoetin alfa group. Eight patients (4.5%) that received luspatercept discontinued treatment due to treatment-related adverse events. AML progression was reported in four patients receiving luspatercept and five patients receiving epoetin alfa. The safety profile was consistent with previous studies of the drug.

"These results show, for the first time, superior effectiveness of an innovative therapy over epoetin alfa," Garcia-Manero said. "I am encouraged by these results, as luspatercept represents a transformative therapy that could become a new standard of care for patients with transfusion-dependent myelodysplastic syndromes."

The patients in this study continue to be followed long term to determine overall survival, time of transfusion independence and frequency of progression to AML.

More information: ABSTRACT: 7003