Education and Income Impact Access to Stem Cell Transplantation for Acute Myeloid Leukemia

Study led by Fred Hutch Cancer Center looked at zip codes to assess socioeconomic status and access to stem cell transplants.

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Patients with acute myeloid leukemia who have lower education and income are less likely to receive a allogeneic hematopoietic stem cell transplant for acute myeloid. However, if they can access the treatment, they are equally likely to benefit from a transplant as patients with more education and higher income, according to a new study from Fred Hutch Cancer Center presented [December 8] at the annual meeting of the American Society of Hematology (ASH).

The study, which analyzed zip code-level data showing socioeconomic differences among 692 acute myeloid leukemia patients evaluated for stem cell transplant, showed that lower area-level education and higher poverty indicators, such as reliance on government assistance programs, were associated with increased mortality before transplant and reduced likelihood of receiving a transplant.

However, once patients accessed transplants, socioeconomic factors had a less pronounced impact on post-transplant outcomes, indicating that interventions should focus on overcoming barriers to accessing transplantation.

“This study has highlighted the need for targeted interventions to improve access for patients from lower socioeconomic backgrounds,” said Mohamed Sorror, MD, MSc, senior author and clinical researcher at Fred Hutch Cancer Center. “We need to focus on addressing financial barriers, improving health literacy, and enhancing support systems to ensure equitable access to treatments.”

Patients in the study who lived in neighborhoods with higher proportions of residents who had not completed high school were 30% less likely to receive a transplant and had a 24% higher risk of death without transplant. Further, reliance on government assistance programs, such as supplemental security income, was associated with a 40% increased risk of death without transplant and a 22% decrease in the likelihood of receiving a transplant.

“This study was born out of our clinical observations that if we could get a low socioeconomic patient over the transplant access barrier, their survival outcomes were equivalent to individuals with higher socioeconomic status,” said lead author Natalie Wuliji, DO, a Fred Hutch physician and hematologist-oncologist, who presented the study at ASH. “With this analysis confirming our initial theory, we can now take steps toward solving the challenge of transplant access.”

Allogenic hematopoietic stem cell transplant is an important therapy for AML patients. In 2024 alone, 20,800 new cases of AML were diagnosed and the five-year survival rate for patients is 31.9%, according to the National Cancer Institute. Because of treatments like transplantation, death rates have been falling on average 0.8% each year since 2013.

The study, which was funded by Patient-Centered Outcome Research Institute, American Cancer Society and American Society of Hematology, looked at 692 AML patients across 13 predominantly academic centers and examined socioeconomic status attributes, including median household income, education levels, households below the poverty level, households utilizing SNAP and other related factors.

Wuliji and the research team will now focus on exploring potential interventions to improve access to transplant and help patients overcome socioeconomic barriers.

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