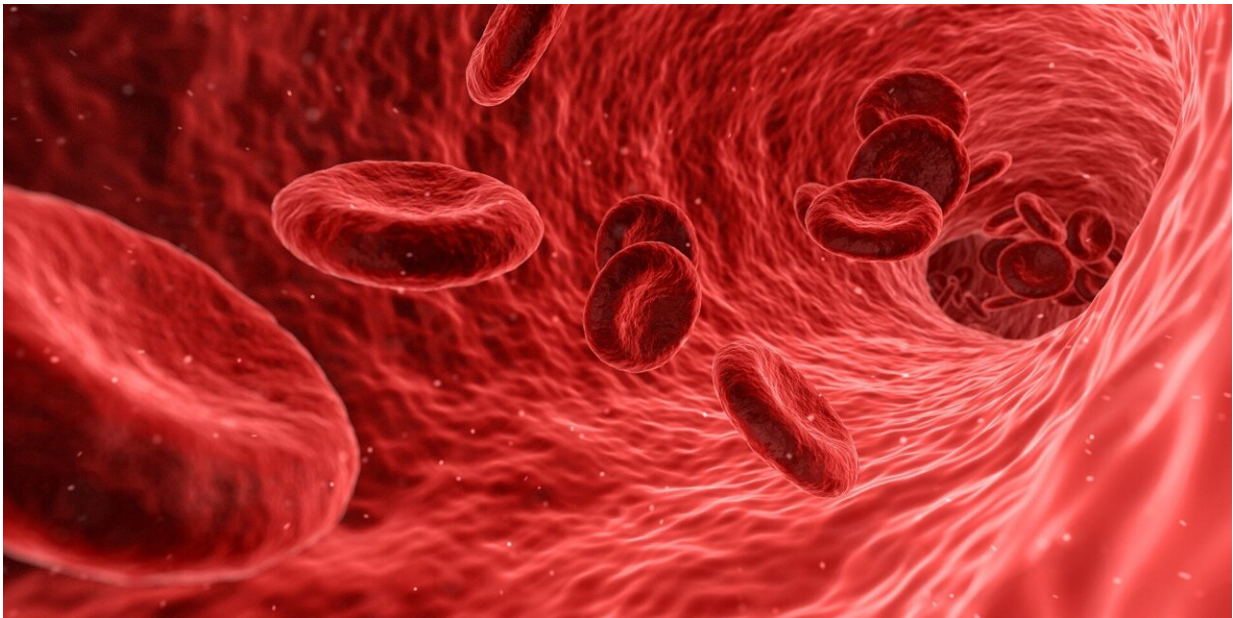


# New study finds cell donor's socioeconomic status shapes cancer treatment outcomes

July 17 2024, by Alex Smith

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A research team led by the University of Minnesota Medical School demonstrated that the socioeconomic status (SES) of cell donors affects the health outcomes of blood cancer patients who underwent hematopoietic cell transplantation (HCT).

The work is [published](#) in the journal *Proceedings of the National Academy of Sciences*.

The study examined the health outcomes of 2,005 blood [cancer patients](#) treated with HCT across 125 hospitals in the United States. The research team found [cancer](#) patients who were transplanted with cells from donors of greatest socioeconomic disadvantage experienced a 9.7% reduction in overall survival and 6.6% increase in transplant-related mortality at three years compared to those transplanted from donors of high socioeconomic status—regardless of the cancer patient's [socioeconomic status](#).

"Our findings are quite remarkable. We have shown that social disadvantage penetrates so deeply that it is actually transplantable into a new host, and its effects persist over time," said Lucie Turcotte, MD, MPH, MS, an associate professor at the University of Minnesota Medical School and pediatric hematologist and oncologist with M Health Fairview. Dr. Turcotte is also the director of the Masonic Cancer Center's Cancer Survivorship Services and Translational Research program.

The results show the striking biological impact of [social disadvantage](#) and how it can alter health outcomes, specifically in the setting of cancer and hematopoietic cell transplantation.

The research team plans to conduct further research to investigate the underlying biological and physiologic drivers of these findings in order to develop interventions to mitigate the adverse [health outcomes](#) introduced by socioeconomic disadvantage.

"The importance of these findings reach far beyond cancer and bone marrow transplant care—they demonstrate the profound health effects of social inequality and highlight the critical need for public health interventions," said Dr. Turcotte.

**More information:** Lucie M. Turcotte et al, The health risk of social

disadvantage is transplantable into a new host, *Proceedings of the National Academy of Sciences* (2024). [DOI: 10.1073/pnas.2404108121](https://doi.org/10.1073/pnas.2404108121)

Provided by University of Minnesota Medical School

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