Among Minorities, Poverty Raises Death Risk From Acute Myeloid Leukemia

Poorer outcomes for Black and Hispanic patients significantly depend on where they live.

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For Black and Hispanic people, living in socioeconomically disadvantaged neighborhoods is associated with higher rates of illness, reduced access to health care and a shorter life span. Now, a new study has found that minorities who live in these communities are also more likely to die of acute myeloid leukemia (AML).

The findings were presented at the 62nd American Society of Hematology (ASH) Annual Meeting and Exposition.

For the study, scientists analyzed the medical records of 822 patients ages 18 to over 60. Patients were diagnosed with AML at one of six university-affiliated cancer centers in the Chicago area from 2012 to 2018.

In addition to gathering data on patients' sex, race and ethnicity, age at diagnosis, coexisting health conditions and other factors, researchers also identified where they lived and categorized these neighborhoods by their level of segregation, affluence and disadvantage.

Overall, 497 patients identified as white, 126 as Black, 117 as Hispanic and 82 as other or unknown race. There were a total of 445 male and 377 female participants. Those who self-identified as Hispanic were more likely to be younger and have other health conditions. Both Black and Hispanic patients were also more likely to be obese.

More than half of white patients had health insurance, a stark contrast with Black patients, among whom only 25% had health insurance. Hispanic patients were the most likely to be uninsured. Black and Hispanic patients also tended to live in socially disadvantaged neighborhoods at higher rates.

Compared with white people, Black people had a 48% greater risk of dying of AML; Hispanic people were 20% more likely to die. These minorities also had higher rates of treatment complications, as they were more likely to require intensive care during initial chemotherapy.

Once researchers adjusted for several factors, findings revealed that neighborhood affluence, disadvantage and segregation were all important predictors of AML-related death. In fact, scientists learned that these variables could account for 81% of the disparity in AML deaths between Blacks and whites.

Findings also showed that Black patients were more likely to have AML with high-risk genetic features than other races, thus suggesting that environmental exposures in disadvantaged communities may increase the risk of developing hard-to-treat AML.

“These findings point to a need for more research on the social and economic barriers to successful treatment outcomes for patients with AML,” said senior study author Irum Khan, MD, of the University of Illinois at Chicago. “Similar to molecular tailoring of therapy, evaluation of social determinants of health should be a key aspect of personalized leukemia therapy.”

Khan added that incorporating validated measures of such determinants of health into clinical care can help significantly narrow the disparity gap in leukemia survival.

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