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Structural racism is mediator of disparities in acute myeloid leukemia outcomes

WHAT?

Study looked for explanations of survival differences among non-Hispanic Black (NHB), Hispanic and non-Hispanic white (NHW) patients with acute myeloid leukemia (AML). Researchers examined 6 categories:

1. Structural racism using census-tract data (proportion of segregation, disadvantage and affluence)
2. Cancer biology (risk score of cancer)
3. Health care access using insurance and clinical trial enrollment data
4. Comorbidities (health concerns other than cancer)
5. Treatment provided
6. ICU admission during chemotherapy

WHY?

NHB and Hispanic patients with AML have been shown to have higher mortality rates than NHW patients even though they are typically diagnosed at younger ages and have more favorable disease features, such as genetics. This study used new ways to investigate these differences in outcomes.

WHEN?

Diagnosed with AML
January 2012 – January 2018

WHERE?
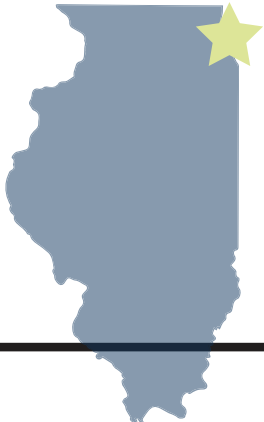
6 cancer centers in Chicago metropolitan area

WHO?

822 adult patients with AML

- **126** non-Hispanic Black (NHB)
- **117** Hispanic
- **497** non-Hispanic White (NHW)
- **92** other racial/ethnic group

RESULTS

Among the 6 categories, structural racism (using census tract data) accounted for almost all the NHB and NHW disparity (83%) and the Hispanic and NHW disparity (100%). As a comparison, tumor biology accounted for 9% of the NHB and NHW disparity and none of the Hispanic and NHW disparity. This was done by using a method called mediation analysis.

Structural racism is a stronger mediator of survival disparities than molecular features, comorbidities, health care access and treatment.

IMPACT

- Study showed that disparity in AML survival among racial/ethnic groups can be explained by structural racism
- First study to formally examine these categories, especially structural racism, as explanations for differences in AML survival among NHB, Hispanic and NHW patients
- Census-tract level data is not a perfect measure of structural racism but allows a novel way to examine structural racism as a factor contributing to leukemia outcome inequities

Study highlights the need to:

- Investigate ways structural racism interacts with other known disease and treatment factors to impact leukemia outcomes
- Develop measures of structural racism, examine their contribution to current predictive tools and develop interventions to reduce observed disparities
- Researchers will collaborate on ways to remove obstacles to optimal care for ethnically diverse patients until all patients have equal access to lifesaving care, regardless of ZIP code

FROM THE EXPERTS

Structural racism more than genetics; comorbidities; treatment access, patterns, and complications are a significantly strong determinant of survival in patients with AML. Racism generally and structural racism in particular is one in the multitude of modifiable and nonmodifiable social determinants of health (SDOH) factors impacting patients. It behooves us all to continuously seek knowledge about, understand, and acknowledge how where individuals are born, live, grow, learn, work, play, and age influence their overall survival, quality of life, and life expectancy."

Rafeek Yusef
Director, Health Services Research
National Marrow Donor Program – Be The Match

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