Redlining, Lending Bias, and Breast Cancer Mortality—Reply

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We thank Gabriel and colleagues for their appreciation of our investigation of redlining and lending bias as important contributors to breast cancer mortality (1). In their letter, Gabriel and colleagues raised questions regarding the role of redlining and lending bias on specific factors preceding diagnosis and following diagnosis that may identify targets for intervention, thereby reducing disparities.

In our study, we examined the association between redlining, lending bias, and breast cancer mortality (1). We were unable to explore how these place-based measures of structural racism impact access to primary care and screening programs. As noted by the authors, stage IV diagnoses were more common among women who resided in redlined neighborhoods, likely reflecting reduced access to care in these areas. A recent study in Massachusetts reported that historic redlining was associated with late stage at diagnosis for multiple cancer sites (2). Additional research would benefit from investigation into how neighborhood deprivation affects screening and diagnostic delay.

Gabriel and colleagues inquired whether components of care were associated with worse outcomes in our cohort. We have investigated previously the impact of guideline-concordant care on racial disparities in breast cancer mortality (3). We found that non-Hispanic Black (NHB) women were more likely to receive guideline-concordant care compared with non-Hispanic White (NHW) women, and that failure to receive guideline-concordant care was associated with increased breast cancer mortality. Yet, NHB women had a 2-fold increase in breast cancer mortality compared with their NHW counterparts. To our knowledge, neighborhood deprivation indices have not been examined in relation to the receipt of guideline-concordant care, treatment delays, or quality of care, which are important to identify actionable targets. Although our study also supports the need for larger systemic changes (4).

Gabriel and colleagues noted the association between redlining and breast cancer mortality was less pronounced among NHB women compared with NHW women (HR, 1.13 vs. 1.39), suggesting that redlining has a stronger association with breast cancer mortality than race. Table 3 provides both the common referent and race-stratified estimates. The former highlights that NHW women experienced similarly poor outcomes if they live in redlined neighborhoods. However, NHB women in nonredlined neighborhoods did not confer the same benefit. NHB women had more than a 2-fold increase in breast cancer mortality, regardless of the location of residence, which likely reflects the historic context of these systemic inequities. Our findings underscore the need to fully characterize residential history to understand the role of structural racism on breast cancer mortality (4).

Authors' Disclosures

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