Historical Housing Discrimination Adversely Associated with Contemporary Colon Cancer Care and Outcomes, Study Shows

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New findings led by researchers at the American Cancer Society (ACS) and the Johns Hopkins University show historical housing discrimination negatively affects contemporary colon cancer care and outcomes. The findings will be presented at the annual American Society of Clinical Oncology (ASCO) Quality Care Symposium in Chicago, September 30 - October 1.

According to the senior author of the study, Dr. Leticia Nogueira, senior principal scientist, health services research at the American Cancer Society, in the 1930s, the federally-sponsored Home Owners' Loan Corporation (HOLC) created maps that directed mortgage financing based largely on a neighborhood's racial composition. American neighborhoods were subdivided into four risk-based rankings (A – best neighborhood, B – still desirable, C – in decline, and D – hazardous and mapped in red) for mortgage approvals and denials. "Redlining" resulted in racial segregation and systemic disinvestment in communities targeted for marginalization. The researchers investigated the association between historical housing discrimination and contemporary late stage diagnosis, receipt of timely guideline-concordant care, and survival outcomes in colon cancer – a leading cause of cancer deaths amenable to early detection and treatment.

Study authors identified 98,335 individuals diagnosed with colon cancer from 2007-2017 from the National Cancer Database, a hospital-based cancer registry jointly sponsored by the American Cancer Society and the American College of Surgeons. Individuals residing within known zip code tabulation areas (ZCTA) in 196 cities with HOLC coverage greater than 10% were included. Residences were assigned a HOLC grade (A, B, C, or D) based on the majority HOLC area represented. Multivariable logistic regression models (adjusted for age and sex) were used to investigate the association of housing discrimination and late stage (stages III/IV) diagnosis, time to adjuvant chemotherapy initiation following surgery, and non-guideline-concordant care (no chemotherapy, surgery, or evaluation of less than 12 lymph nodes) based on patients eligibility for treatment. Multivariable Cox proportional hazard models with age as time scale were used to investigate the association between housing discrimination and overall survival.

Compared to people living in majority HOLC A ZCTAs, people living in majority HOLC D had higher odds of a late-stage diagnosis, and living in majority HOLC B, C, or D had higher odds of non-guideline concordant colon cancer care with increased time to chemotherapy initiation. For people living in majority HOLC C and D, overall survival for all stages and especially early stage was lower when compared to HOLC A ZCTAs.

Researchers say the findings underscore the importance of state-and federal-level practices on mortgage lending regulation and fair housing practices in determining equitable access to care.

Dr. Qasim Hussaini, Chief Medical Oncology Fellow at Johns Hopkins, is lead author of the study. Other ACS authors include: Dr. Qinjin Fan and Dr. Robin Yabroff.

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