

# Study finds relationship between discrimination and frailty in Black cancer survivors

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Discrimination experienced by Black people can affect their health and increase their frailty, which can be particularly impactful for cancer survivors, according to a new study by researchers at Georgetown

University's Lombardi Comprehensive Cancer Center and colleagues at the Barbara Ann Karmanos Cancer Institute in Detroit. The researchers assessed frailty by a number of factors, including whether a participant had several chronic diseases, poor muscle strength and difficulty performing activities of daily living.

The findings appeared March 20, 2023, in *Cancer*.

"Discrimination can act as a chronic stressor which can throw the body off balance, resulting in increases in [blood pressure](#), [heart rate](#), metabolism, inflammation, and numerous other factors. These stressors can also increase rates of aging, leading to greater risk of frailty," says the study's lead investigator, Jeanne Mandelblatt, MD, MPH, director of the Georgetown Lombardi Institute for Cancer and Aging Research.

"We hypothesize that discrimination can lead to an older biological age than a person's actual chronological age. This is important to understand as there have been virtually no studies of the relationships between discrimination and aging in the setting of [cancer](#) survivorship."

The investigators looked at associations between discrimination and frailty among 2,232 Black breast, lung, prostate and colorectal cancer survivors who were within five years of their diagnoses and were no longer actively being treated for their cancers. Survivors were 62 years of age on average (with ages ranging from 23 to 84) at the time of the study, but they may have experienced discrimination over many decades of their lives. All participants were part of the Detroit Research on Cancer Survivors (ROCS), which is the largest U.S. study of Black cancer survivors.

The researchers surveyed the participants, via phone, in writing, or online about any aging-related diseases they had, their ability to maintain a healthy lifestyle, and most importantly, about major discrimination events they may have experienced over their lifetimes, specifically

targeting seven areas:

- being unfairly fired or denied a promotion in their job;
- not being hired for a job;
- being unfairly stopped, searched, questioned, physically threatened or abused by [police officers](#);
- being unfairly discouraged by a teacher or advisor from continuing their education;
- unfairly receiving worse medical care than other people;
- being prevented from moving into a neighborhood because a landlord or realtor refused to sell or rent them a house or an apartment; and/or
- moved into a neighborhood where neighbors made life difficult.

Based on the [survey results](#), the majority of cancer survivors were classified as either prefrail (42.7%), meaning they had some health difficulties, or frail (32.9%). Only 24.4% of those surveyed had few or no signs of frailty. When queried about the seven discrimination areas, 63.2% of the participants reported experiencing major discrimination, with an average respondent reporting 2.4 types of discrimination.

"For those cancer survivors who reported four to seven types of discrimination events, we observed a large, clinically meaningful increase in frailty scores compared to survivors with fewer discrimination events," explains Mandelblatt, also a professor of oncology and medicine at the Georgetown University School of Medicine. "Significantly, this pattern of discrimination affecting frailty was consistent across the four types of cancer surveyed, indicating that discrimination is an important factor to study and understand in [Black cancer survivors](#) in order to improve their quality and length of life."

"Our results indicate that after considering the effects of traditional factors on [poor health](#), such as income, education and types of cancer

treatment, discrimination was a significant factor explaining frailty and it acted independently of the other variables," says Ann Schwartz, Ph.D., MPH, co-lead author on the paper and co-principal investigator of the Detroit ROCS. "Regardless of whether you were rich or poor, if you experienced more discrimination then you had greater frailty." Schwartz is also professor and associate chair of oncology at Wayne State University School of Medicine, and deputy center director and executive vice president for research and academic affairs at Karmanos.

For their next steps, the researchers are hoping to study the relationships between major discrimination, other chronic life stressors and markers of biological aging and test how cancer and its treatment further contributes to biological aging among racial and ethnic minorities.

"We have long since recognized the impact of discrimination on health and well-being in Black communities," says study co-author Lucile Adams-Campbell, Ph.D., a professor of oncology and associate director for Minority Health and Health Disparities Research at Georgetown Lombardi. "We hope that this study leads to more discussions between providers and their patients about the types of discrimination they have experienced and gives providers a greater understanding of how [discrimination](#) impacts [frailty](#)."

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**More information:** Association between major discrimination and deficit accumulation in African American cancer survivors: The Detroit Research on Cancer Survivors Study, *Cancer* (2023). [DOI: 10.1002/cncr.34673](https://doi.org/10.1002/cncr.34673)

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