Cancer Projects to Diversify Genetic Research Receive New Grants

Because much cancer research and clinical trials have been based on white populations, efforts to explore the ways race and ethnicity influence disease are underway.

By Emma Goldberg
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The New York Genome Center awarded six cancer research grants this week as part of an initiative examining the role of race and ethnicity in major types of cancer.

The projects will investigate a variety of cancers including pancreatic, colorectal and endometrial cancer in African-Americans; lung cancer in Asian-American patients; breast and prostate cancer in patients of African ancestry; and the role of ethnicity in bladder cancer.

The Genome Center’s two-year-old initiative, called Polyethnic-1000, is aimed at closing the knowledge gap that exists largely because decades of genetic studies focused mainly on white patient populations. Dr. Harold Varmus, a professor of medicine at Weill Cornell overseeing the initiative, said he hoped the projects would advance the understanding of racial disparities in the prevalence of different cancer types, as well as patient responses to different cancer therapies.

“The disparities are there but the explanations are not,” said Dr. Varmus, who previously served as head of the National Institutes of Health and of Memorial Sloan Kettering Cancer Center. Expanding genetic research to become more representative of the broader American population will also further researchers’ understanding of cancer. “Leaving people out is an equity issue and a knowledge issue,” he added.
Black Americans have the **highest death rate** of any racial group for most cancers; some 73,000 African-Americans die of cancer each year. But cancer research has focused disproportionately on white patients because it tends to be conducted at research centers with rich resources that have more affluent and white patient populations. That sometimes leaves researchers unsure of their work’s relevance to Black, Latino and Asian patients, and unable to fully anticipate how these populations will respond to drugs and therapies.

“When we generate results, we don’t know if they apply to underrepresented minority communities,” said Dr. Deborah Schrag, an oncologist at the Dana-Farber Cancer Institute who reviewed grant proposals for the initiative. “If we’re not profiling people of all races and ethnicities, we’re missing opportunities to treat people strategically.”

The coronavirus pandemic has thrown a glaring light on the disproportionately devastating effects the disease has had on nonwhite people, especially in the United States. Death and hospitalization rates are higher for Black, Latino and Indigenous people.

Many social and socioeconomic factors affect racial disparities in cancer. Black men are more likely than white men to forgo colonoscopy screenings, and the rate of new colon cancer cases is about **20 percent higher** in African-Americans than non-Hispanic white people. Black women are less likely to undergo preventive screenings for breast cancer, and they are also more likely to die of the disease.

But some forms of cancer affect racial groups differently regardless of socioeconomic status, leading researchers to consider that genetics could also play a critical role. This week, New England Journal of Medicine published a letter emphasizing the importance of taking race into account in genomic studies of cancer.

“We think there’s more to it than just social factors,” said Dr. Laura Martello-Rooney, one of the grant recipients, who studies pancreatic and colon cancer in African-Americans. “We think there are underlying molecular and cellular differences that impact the incidence as well as its treatment.”

Dr. Bishoy Faltas, an oncologist at Weill Cornell who is leading the study on bladder cancer, said conducting genetic research on patients of different ethnic backgrounds was important because the way that patients’ immune systems respond to cancer and cancer therapies is determined by their genetic makeup.

The recipients of the new grants include the team at Weill Cornell, as well as at Cold Spring Harbor Laboratory, Northwell Health, SUNY Downstate Medical Center, SUNY Downstate Health Sciences University, Kings County Medical Center, Mount Sinai Hospital and NewYork-Presbyterian. While the scope of the six projects is small, leaders of the Polyethnic initiative hope to see it replicated in other U.S. cities to continue broadening the diversity of patients represented in genetic databases.

One difficulty in recruiting African-American patients to clinical research has been the Black **community’s mistrust** in the medical system. Physicians involved with the Genome Center initiative said they were trying to build trust by partnering with oncologists in community hospitals in diverse neighborhoods across New York City.

“The way to build trust isn’t to have a bunch of people from Sloan Kettering go into these areas and say ‘Hey, sign this consent form and give me your tumor,’” said Dr. Charles Sawyers, a physician at Memorial Sloan Kettering Cancer Center and one of the initiative’s leaders. “It’s to work with local doctors and oncologists.”