Ethnic disparities in cancer mortality in the interior of the São Paulo state, Brazil

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In São Paulo city and the Barretos region, the number of deaths from cancer varies significantly in accordance with self-declared skin color or race. Credit: Rovena Rosa/Agência Brasil

Although the interior of São Paulo state (Brazil) has higher human development indices (HDIs) and fewer Black people as a percentage of the population, they account for a larger proportion of deaths from

cancer in the Barretos region than in São Paulo city, the state capital, according to a study published in the journal *Cancer Causes & Control*.

In the 18 cities of the Barretos regional health district (RHD), the number of deaths from all types of cancer is 18% higher among Black people than among white people. The same is true for each of the six main cancer types. Although mortality rates for stomach, colorectal and lung cancer are similar among Black and white people, they are much higher for breast cancer (18%) and cervical cancer (63%) among Black people. In the case of prostate cancer, mortality is 51% higher among Black than white people in the Barretos RHD.

The study period was 2011–17, and the mortality data came from the SUS (Sistema Único de Saúde), Brazil's national public health network, whose records include patients' self-declared race or skin color. In both localities analyzed, lung cancer was the main cause of death from cancer among white, Black and multiracial people (the latter being termed Pardos in censuses and other official datasets). Among descendants of Asians, it was colorectal cancer. More Black and multiracial women died from cervical cancer than white women.

"In light of this country's history, including slavery and its continuing consequences, such as more affluence and more access to health care for white people, these results were to be expected. The surprise was finding out that more white people than Black People die from cancer in São Paulo city," said Adeylson Guimarães Ribeiro, first and corresponding author of the article. He is Deputy Director of Information and Epidemiology at the São Paulo Cancer Center (FOSP), an arm of the São Paulo State Health Department.

Mortality is 19% higher among white than Black people in São Paulo city for all types of cancer and for breast cancer, 35% higher for lung cancer and 41% for colorectal cancer.

Ribeiro led the study while he was a postdoctoral research fellow at the International Agency for Research on Cancer (IARC) in France, under the supervision of Freddie Bray, Head of IARC's Cancer Surveillance Section. The period abroad was part of Ribeiro's postdoctoral internship at Hospital de Amor's Institute of Education and Research with a scholarship from FAPESP. This institution was formerly known as the Barretos Cancer Hospital.

A previous study by the same group, without information on skin color or race, found high incidence and mortality rates for breast, colorectal and lung cancer among the most affluent inhabitants of São Paulo city. The finding can be correlated with the higher mortality rates for these types of cancer among white people compared with Black people reported in the more recent study.

The studies were part of the Thematic Project "Malignant neoplasms of the 18 cities of Barretos regional health district (RHD), São Paulo, Brazil: the importance of a population-based cancer registry," led by José Humberto Tavares Guerreiro Fregnani, a senior scientist at Hospital de Amor and a co-author of both articles.

The researchers aim to discover why the inequalities occur and how access to diagnosis and treatment can be guaranteed for everyone, among other goals.

Results aligned

Ancestry may account for some of the higher incidence rates for certain types of cancer, reinforcing the need for more attention to groups of the population that are particularly vulnerable owing to genetic and/or socioeconomic factors.

The results described in the most recently published article are aligned

with those of other Brazilian studies, such as the findings reported in an article signed by researchers at the State University of Campinas (UNICAMP). That study, which was also supported by FAPESP, showed higher mortality from breast cancer among white women than Black women in São Paulo state. However, it also showed that mortality was falling among white women and rising among Black women.

Another study found breast cancer survival rates among Black and multiracial women to be lower, and yet another revealed a tendency for this type of cancer to be diagnosed at a late stage among Black and multiracial women. All these results are aligned with the latest findings for Black women in the Barretos RHD.

An analysis of the determinants of late-stage diagnosis of cervical cancer pointed to a 20% higher risk of detection of this type of tumor at an advanced stage for Black women than for other ethnic groups.

With regard to prostate cancer, a 2013 study indicated a 300% higher risk of metastasis at the time of diagnosis for Black men.

"Few studies on this topic have been conducted in Brazil, but we have the information we need to do more research. In Europe, personal details on skin color or race are considered sensitive and aren't available. The most numerous studies in the literature focus on the population of the United States, and their results are consistent with what we find here," Ribeiro said.

More information: Adeylson Guimarães Ribeiro et al, Ethnic disparities in cancer mortality in the capital and northeast of the State of São Paulo, Brazil 2001–17, *Cancer Causes & Control* (2023). DOI: 10.1007/s10552-023-01812-w

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