

AACR Cancer Disparities Progress Report 2022

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Advances in cancer prevention and early detection coupled with breakthroughs in treatments have led to a steady decline in overall U.S. cancer mortality rates and increase in the number of people living longer and fuller lives after a cancer diagnosis. However, it is evident that large segments of the U.S. population have not benefitted equally from these advances and continue to have higher rates of cancer incidence; be diagnosed with more aggressive cancer; and suffer worse outcomes. The *American Association for Cancer Research (AACR) Cancer Disparities Progress Report 2022* (<https://www.aacr.org/CDPR2022/>) outlines the recent progress against cancer health disparities, the ongoing challenges faced by racial and ethnic minorities and other medically underserved populations and emphasizes the vital need for further advances in cancer research and patient care to benefit all populations. This commentary summarizes the highlights of the Report.

Epidemiology of Cancer Health Disparities in 2022

Racial and ethnic minorities and other medically underserved populations in the United States continue to share a disproportionate burden of cancer. Compared with the White population, American Indian/Alaskan Native population experiences higher incidence rates of lung, colorectal, and kidney cancers, as well as of liver, stomach, and cervical cancers that are caused by infectious agents; this population also has higher mortality from kidney and liver cancers compared with the White population. The Asian population, which encompasses those from a highly diverse group of countries, cultures, and ethnicities, is more likely to be impacted by cancers caused by infectious agents. Black or African American individuals constitute the third largest racial and ethnic population in the United States. Compared with White men, cancer incidence in Black men is 6% higher and cancer mortality is 19% higher, while Black women have 8% lower cancer incidence than White women, but 12% higher cancer mortality. The Hispanic population, one of the fastest growing ethnic groups in the United States, has a higher incidence and mortality from liver, stomach, and cervical cancers compared with the non-Hispanic White population. Compared with non-Hispanic Whites, Native Hawaiian or Other Pacific Islander groups have higher incidence of breast, multiple myeloma, and lung cancers, with higher mortality from prostate, lung, breast, liver, and intrahepatic bile duct cancers. Other groups that expe-

rience disparities in the cancer burden include rural populations; individuals who belong to sexual and gender minority populations or low socioeconomic status such as those living in persistent poverty.

The causes of cancer health disparities stem from adverse social determinants of health (SDOH), which are complex, interrelated and overlapping factors that operate at the individual, community, and societal levels. SDOH include socioeconomic factors; modifiable cancer risk factors; psychologic factors; environmental factors; health care access and experiences; as well as biological and genetic factors. It is increasingly evident that structural racism and systemic injustices are key contributors to adverse SDOH, creating conditions that perpetuate health inequities, including cancer health disparities, for racial and ethnic minorities and other medically underserved populations.

Disparities in Screening and Cancer Prevention

Routine cancer screening is one of the most effective ways to reduce the burden of cancer at the population level. Yet, many disparities in cancer screening exist for racial and ethnic minority groups and other medically underserved populations. These disparities can stem from mistrust of the health care system caused by historical exploitation of certain populations; cultural beliefs and stigmas around getting screened; as well as suboptimal screening guidelines that were developed based on studies performed in White, cis-gendered participants. Research has indicated that the most effective ways to increase knowledge about screening and reduce stigma comprise culturally appropriate, community-centered public health interventions. Evidence is also accruing that reducing structural and financial barriers to cancer screening is an effective approach to increase access to these services.

Barriers to Effective Treatment and Low Clinical Trial Participation

Use of anticancer treatments (surgery, radiotherapy, chemotherapy, molecularly targeted therapy, and immunotherapy)—alone or in combinations—has become the standard of care for patients with cancer. Despite major advances in these treatments in recent years, racial and ethnic minority groups and other medically underserved populations frequently experience severe and multilevel barriers in their access to quality cancer treatment, including delays in or lack of access to standard-of-care treatments. Ninety-three percent of the respondents to a survey of 165 cancer physicians practicing in community- or hospital-based settings agreed that SDOH negatively impacted their patients' health outcomes. Many patients from disadvantaged population groups also experience overt discrimination and/or implicit bias during the receipt of care. While this is influenced by many factors including physician training, one solution is to increase the diversity of the healthcare workforce. Fewer Black adults (22%) report having providers who are of the same race compared

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with White adults (74%). Among Hispanic/Latino adults, only 23% report having a provider who is of the same race and/or ethnicity, or language preference as they are. Increasing diversity of healthcare workers will increase patient-provider trust and communication.

Development of new anticancer treatments and cancer detection methods relies on their testing in clinical trials to ensure their safety and efficacy. Therefore, it is imperative that the clinical trial participant population is highly diverse; also important is equal representation of each subgroup (i.e., oversampling of nonmajority populations) to produce statistically powerful estimates of an effect and maximize the impact across all groups. Unfortunately, enrollment in cancer clinical trials is extremely low and there is a serious lack of sociodemographic diversity among those who do participate. Many individual-level barriers for patients prevent participation in clinical trials and include lack of awareness of clinical trials; limited health literacy; and mistrust of the health care system, as well as financial barriers, such as costs of cancer treatment and medication; transportation; childcare; lost work; and inadequate or complete lack of insurance, among others.

Encouragingly, recent data show that racial and ethnic disparities in cancer outcomes can be eliminated if every patient has equitable access to standard of care treatments. In fact, researchers have shown that racial and ethnic minority patients respond better to treatments against many cancers compared with White patients and have better outcomes when offered similar access to standard and quality care. Therefore, it is imperative that all sectors work together to address the challenges of disparities in cancer treatment, a necessity to achieve health equity. In this regard, it should be noted that several clinical studies, including the Accountability for Cancer through Undoing Racism and Equity (ACCURE) program, have shown that multilevel interventions that utilize patient navigation can address the current disparities in cancer treatment and improve outcomes for all patients.

Cancer Development and Cancer Health Disparities

As the genetic sequencing of tumors is becoming cheaper and more accessible, its use has helped accelerate the pace of progress in precision medicine. Genetic sequencing has also helped identify risk loci in genes such as *BRCA1/2* that can increase the predisposition of an individual to developing certain types of cancer. Unfortunately, lack of representation of racial and ethnic minority and other underrepresented groups in studies examining mutations and risk loci has severely limited our understanding of genetic predispositions that lead to higher incidence, mortality, or increased aggressiveness of cancer in certain populations. For instance, The Cancer Genome Atlas (TCGA), which was started in 2006 through the joint effort of the NCI and the National Human Genome Research Institute (NHGRI), has characterized over 20,000 primary cancer and matched normal samples, but most of them (77 percent) are from individuals of primarily European ancestry; despite this population making up only 57.8 percent of the U.S. population. Furthermore, data available in the TCGA database of germline and somatic exomes from patients of primarily African ancestry was found to be of lower sequencing depth and had a greater number of genomic regions with insufficient coverage; this can be

somewhat attributed to a predominantly European biased reference genome. To continue to increase our understanding of cancer risk, pathogenesis, and treatment options for all groups, researchers must increase the diversity of datasets. In this regard, The All of Us Research Program is building a diverse health database that includes the biological, environmental, and lifestyle information of 1 million people in the United States. In March 2022, this project had sequenced the entire genomes of 100,000 people, 50% of whom self-reported as being a part of a racial or ethnic group that has been historically underrepresented in research.

Disparities in Cancer Survivorship

As more people are living longer and fuller lives after a cancer diagnosis, greater attention is needed toward understanding the survivorship experience. While every cancer survivor has a unique experience, those belonging to medically underserved populations experience increased long and late-term side effects; reduced health-related quality of life; insufficient palliative care including more intense or unnecessary end-of-life interventions; higher rates of financial toxicity and medical debt; and reduced adherence to follow-up care. A key to charting an equitable path forward for all cancer survivors is the use of community-based and culturally-tailored solutions and the involvement of patient advocates and navigators who can address the specific social, psychologic, medical, and physical needs of the patient.

Systemic inequities and social injustices have adversely impacted every aspect of cancer research and patient care, including limited participation in clinical trials; differences in cancer incidence and outcomes among underserved populations; low access to quality cancer care; and a worsened survivorship experience. While new research and initiatives are closing these gaps, progress has been slow, and the cost of cancer health disparities remains monumental. This report concludes with action items that call upon policy makers and other stakeholders to join forces in eliminating the menace of cancer health disparities. These call-to-action items include increasing funding for the NIH overall, and in particular for NCI, National Institute on Minority Health and Health Disparities, and Centers for Disease Control and Prevention; collecting disaggregated patient data for racial and ethnic minorities as well as for sexual and gender minorities; removing barriers to improve clinical trial diversity; increasing cancer screening access and prevention efforts; making health care more accessible and comprehensive; improving workforce diversity at all levels of cancer research and care; and enacting of the Health Equity and Accountability Act provisions. Fulfilling the recommendations included in the AACR Call to Action demands an ongoing and active participation from a broad spectrum of stakeholders. These efforts must be coupled with actions to eradicate the systemic inequities and social injustices that are significant barriers to health equity.

Authors' Disclosures

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