Poverty, Culture, and Social Injustice Determinants of Cancer Disparities

Harold P. Freeman, MD

In 1971, President Richard Nixon signed the National Cancer Act and declared a "War Against Cancer." In the more than 30 years since this declaration of war, the nation has made extraordinary progress in our understanding of the causes of cancer, especially at the molecular level. We have also witnessed a dramatic evolution in the development of various therapeutic modalities resulting in more effective, more targeted, and less destructive cancer treatments. From a public health perspective, we have a seen a decline in the percentage of adults who smoke cigarettes. Note that tobacco is the cause of more than one third of cancer deaths. Related to this progress, an overall decline in cancer mortality has occurred in the last several years.

However, some Americans have not fully benefited from this progress as evidenced by their higher cancer incidence, mortality, and lower survival. Stating this another way, there is a critical disconnect between what we discover and what we deliver, between what we know and what we do for all people (Figure 1). It is critical to accurately define which groups of Americans suffer a heavier burden of cancer, determine the causes, and apply interventions to eliminate the disparities.

In this issue of CA, Ward and others highlight disparities in cancer incidence, mortality, and survival in relation to race/ethnicity and socioeconomic status. They conclude that for all cancer sites combined, residents of poorer counties have a higher cancer death rate than residents in more affluent counties. Ward further concludes that even when poverty rates are accounted for, some racial groups (eg, African Americans and American Indian/Alaskan Natives) have a lower five-year survival rate than non-Hispanic Whites. Note also that within each racial/ethnic group, looked at separately, those living in poorer counties have the lowest survival rates according to Surveillance, Epidemiology, and End Results (SEER) Program data.

For a better understanding of the issues raised by Ward et al., it is important to review the background of our current knowledge of cancer disparities.

In 1973, Henschke noted an "alarming increase" in the cancer mortality in African Americans in the preceding 25 years. After the publication of this study, the National Cancer Institute (NCI) increased its focus on racial differences in cancer incidence, mortality, and survival. In 1986, based on a subcommittee's findings, the American Cancer Society (ACS) issued a "Special Report on Cancer in the Economically Disadvantaged." The report concluded that the poorer cancer outcome in African Americans compared with White Americans is primarily related to lower socioeconomic status in African Americans. The study concluded further that poor Americans, irrespective of race, have a 10% to 15% lower five-year survival. A pivotal report by Freeman in 1989 provided an analysis and broad overview of these findings.

In 1989, the ACS issued its report "Cancer in the Poor: A Report to the Nation." This report was the culmination of a series of fact-finding hearings held throughout the nation in collaboration with the NCI and Centers for Disease Control (CDC). Poor people with cancer of all racial and ethnic groups testified. The key findings were:

- Poor people lack access to quality health care and are more likely than others to die of cancer.
- Poor people endure greater pain and suffering from cancer than most Americans.
- Poor people face substantial obstacles to obtaining and using health insurance and often do not seek needed care if they cannot pay for it.
- Poor people and their families must make extraordinary personal sacrifices to obtain and pay for health care.
- Cancer education and outreach efforts are insensitive and irrelevant to many poor people.
- Fatalism about cancer prevails among the poor and prevents them from gaining quality health care.
This discovery to delivery “disconnect” is a key determinant of the unequal burden of cancer.

FIGURE 1 The Discovery-Delivery Disconnect.
Source: Adapted from Freeman HP.\(^7\)

In 1990, McCord and Freeman determined that an African American male in Harlem has less of a chance of surviving to age 65 than a male in Bangladesh.\(^7\) Cancer was the number two cause of death in Harlem. The authors suggested that geographic areas of excess mortality should be delineated and targeted with special interventions to diminish mortality. The authors also recommended that geographic areas of extreme excess mortality, such as Harlem, justify special consideration analogous to that given to natural disaster areas.

In 1998, the President’s Cancer Panel issued a report that concluded that the biological concept of race is untenable and has no legitimate place in biological science. The panel further concluded that racial injustice is a determinant of negative health outcomes. The panel challenged the entire scientific community to review the social values that shape its scientific perspectives with respect to race and to examine the biases and fundamental assumptions that scientists have made about the meaning of race in scientific investigation. Given the fact that populations do differ and that race in itself is not the determinant of such differences, the panel called for a serious dialogue in the scientific community to face the challenge of elucidating how populations really differ.\(^8\)

The Institute of Medicine (IOM) issued two reports: The Unequal Burden of Cancer (1999)\(^9\) and Unequal Treatment (2003),\(^10\) which documented respectively the disproportionate cancer burden in African Americans and the fact that African Americans, even at the same economic and health insurance status, are less likely to receive the most curative treatment for cancer.

These landmark reports along with other important studies suggest that cancer disparities are driven by a complex set of social, economic, cultural, and health system factors.

Disease always occurs within the context of human circumstances, including social position, economic status, culture, and environment. To understand disparities in cancer incidence and outcome, there is a need to understand the cir-
circumstances in which cancer occurs. Poverty (low economic status), culture, and social injustice are believed to be the three principle determinants of cancer disparities. These factors are interrelated and, to some extent, superimposed. The relative effect of each of these factors changes with time and societal circumstances (refer to Figure 1 in Ward et al., this issue of CA).

Poverty and Culture

It is important to distinguish between race and culture, to understand the meaning of economic status and the effect of poverty, and to take into account the effect of social injustice. These are extremely powerful factors that determine the conditions in which people live. Poverty drives health disparities more than any other factor. Poverty is associated with a lack of resources, information, and knowledge; substandard living conditions; risk-promoting lifestyle; and diminished access to health care. Poverty and cancer are, too often, a lethal combination.

Who are the poor in America? According to the US Census Bureau in 2002, there were 285 million Americans, of whom 35 million (12%) were poor and 44 million (15%) were uninsured. A disproportionate percentage of African Americans (24%) and Hispanics/Latinos (22%) live below the poverty line compared with 8% of White Americans who are poor. Note that 25% of the poor are found within 12% of the population, which is African American (Figure 2).11

Moreover, 20% of African Americans and 32% of Hispanics/Latinos but only 11% of Whites are medically uninsured (Figure 3).12 Ward reports that residents who live in counties that have greater than 20% poor people have a 13% higher death rate in men and a 3% higher death rate in women. This is because poor as well as uninsured people are more likely to be treated for cancer at late stages of disease and are more likely to die from cancer.

What is the effect of culture? Culture is another critical factor influencing survival, but culture is not synonymous with race. Many cultures exist within any so-called racial group. Culture denotes a shared communication system; similarities in physical and social environment, common beliefs, values, traditions, and world view; and similarities in lifestyles, attitudes, and behavior. Culture is a powerful determinant of what diseases people will develop and how they will react to having a disease. The following examples will illustrate this point:

- Lifestyle factors such as heavy smoking and alcohol intake as well as a high animal fat diet are associated with higher incidence and mortality from cancer. African Americans living in Harlem, New York and White Americans living in Harlan, Kentucky share similar lifestyles as measured by these factors. Both groups experience higher cancer incidence and mortality.

- A second example of effect of culture is the finding of Margolis,13 whose study showed that 61% of African Americans and 30% of White Americans surveyed believe that lung cancer tumors spread when exposed to air. He further found that 19% of African Americans and 10% of Whites opposed surgery based on this belief.

I theorize that poverty acts through the prism of culture. If this hypothesis is correct, then culture may augment or diminish poverty's expected negative effects.

Social Injustice/The Lens of Race

In addition to poverty and culture, forms of social injustice such as racism are critical factors in creating and maintaining disparities. The history of a given racial group can be a powerful determinant of the current socioeconomic status of that group. For example, the nation's long history of legalized segregation is a key determinant of the relatively low socioeconomic level of African Americans and American Indians/Alaskan Natives. Furthermore, the IOM determined that currently African Americans are less likely to receive standard treatments for cancer even at the same insurance and economic status. To illustrate, Bach et al. showed that African American patients were substantially less likely than White patients to undergo curative surgery for early-stage lung cancer although they have the same insurance coverage and seem to be at the same economic level.14
FIGURE 2  Poverty Rates by Race and Hispanic Origin, 2001 to 2002.
Source: Proctor B, Delaker J.\textsuperscript{11}

FIGURE 3  Percent of People Without Health Insurance Coverage for the Entire Year, by Race and Hispanic/Latino Origin, 2001 to 2002.
Source: Mills RJ, Bhandari S.\textsuperscript{12}
I suggest that in this nation and perhaps throughout the world we see, value, and behave toward one another through a powerful lens of race. This lens can create false assumptions that may result in serious harm to members of some racial and ethnic groups. This phenomenon has been called racial profiling; we have seen it in cab drivers who bypass certain passengers and in policemen who search some people without apparent cause. Other examples are seen in the judicial system, housing, and, to some extent, in the field of medicine. Looking through the lens of race from the other direction, how do patients see health care professionals? If a patient does not trust his or her doctor or avoids participating in clinical trials for fear of being used as a “guinea pig,” the patient too may be looking through the lens of race with possible detrimental results. False assumptions made based on a view from either side of this lens of race therefore can have profound effects on unequal treatments and health disparities.

CONCLUSIONS

- Residents of poorer counties, irrespective of race, have higher death rates from cancer. Moreover, within each racial/ethnic group, viewed separately, those living in poorer counties have lower cancer survival.
- Disparities in cancer are caused by the complex interplay of low economic class, culture, and social injustice, with poverty playing the dominant role.
- There is evidence that race, in and of itself, is a determinant of the level of health care received.
- Studies suggest that racial and ethnic bias on the part of medical care providers and possibly patient bias influence the quality of health care delivery. The level and extent of this problem are unknown.
- The biological concept of race is untenable, but racial injustice, both historical and current, is one of the determinants of cancer disparities.

- There is a critical disconnect between what we discover and what we deliver to all Americans in the form of prevention, diagnosis, and treatment of cancer. This disconnect between what we know, at any given time, and what we do for the American people is, in and of itself, a major determinant of cancer disparities.
- The war against cancer, therefore, has not been fought equitably on all fronts.
- Cancer disparities exact an extraordinarily high human cost and a significant economic cost to this nation.

Recommendations

- Immediate medical coverage should be provided for the uninsured and underinsured on a diagnosis of cancer to ensure that no person with cancer goes untreated.
- Geographic areas with excess cancer mortality should be delineated and targeted with an intense approach to providing culturally relevant education, appropriate access to screening, diagnosis, treatment, and an improved social support network.
- Specifically, such communities should receive funding for Patient Navigator Programs, the purpose of which is to provide personal assistance in eliminating any barriers to patients obtaining timely and adequate diagnosis and treatment.
- Systems for monitoring treatment equity according to standards of care should be established and implemented to diminish bias in the provision of health care.
- Each individual, regardless of economic status, must share in the responsibility for promoting his or her own health and well being.
- There is a need for serious dialogue in the scientific community to elucidate how human populations really differ and how to group people for biological and clinical study. It appears that an expanded knowledge of genomics and population genetics and a more fundamental understanding of the effects of economic status and culture will be keys to this progress.
- Research studies should be supported to determine the economic cost of cancer dis-
parities. Specifically, we must measure the cost to the nation of treating late-stage cancer to inform public policy makers about this important aspect of the economics of health care.

We must tear down the economic, cultural, and societal barriers to early diagnosis and treatment of cancer. To win the war against cancer, we must apply what we know at any given time to all people. The designated battlegrounds for waging this war should include geographically and culturally delineated areas of high cancer mortality.


REFERENCES