Re: Racial Disparities in Cancer Survival Among Randomized Clinical Trials of the Southwest Oncology Group

Albain et al. (1) present provocative data from Southwest Oncology Group (SWOG) clinical trials indicating that African American patients with breast or other sex-specific cancers are less likely than white patients to survive their disease even when they receive equal treatment. The authors posit that this survival gap most likely reflects racial differences in tumor and host biology.

We analyzed data from the Surveillance, Epidemiology, and End Results (SEER) program to explore racial survival disparity for breast cancer in the general population (2). Surprisingly, little disparity was explained by differences in tumor biology, such as higher prevalence of estrogen receptor–negative disease among African American women. Rather, the disparity was mostly explained by the consistently higher risk for breast cancer death among African American patients irrespective of estrogen receptor expression, especially during the first few years after diagnosis. Previously, reports from the National Surgical Adjuvant Breast and Bowel Project (NSABP) (3,4) showed that African American and white patients with breast cancer who had similar diagnosis and treatment experienced comparable benefits of treatment. Our results and those from the NSABP suggest that unequal access to quality cancer care is a major driver of disparity, not simply racial differences in tumor biology.

How can one reconcile the SWOG, SEER, and NSABP studies? Media reports on the SWOG study stated that African American patients with "equal care" are more likely to "die of breast cancer" than white patients. In fact, the primary SWOG analysis demonstrates that African American patients who received the same investigational treatments were ultimately more likely to die of all causes than white patients. It is well known that African American patients with breast cancer have substantially higher competing mortality than white patients (5). Hence, use of all-cause mortality as the endpoint in the SWOG analysis, rather than breast cancer–specific survival as in the SEER and NSABP studies, may yield upwardly biased estimates of the relative rate of death from breast cancer. This potential bias is particularly relevant for tumors such as breast cancers with comparatively long times to recurrence and death.

Albain et al. briefly describe a sensitivity analysis that attempts to substitute for standard analysis of breast cancer–specific survival, but it is hard to see how this can be done effectively, given that the SWOG did not have "detailed cause of death data." It is also difficult to see how participants in breast cancer trials would receive equal health care after the trials were closed. Rather, all-cause mortality rates observed in the SWOG studies may reflect an initial period with equal cancer care provided by the trials, followed by a longer period of overall care received in the general medical community. If so, it is not clear how the SWOG study can illuminate racial differences in breast tumor biology free of the effects of racial differences in access to health care.

Our working model is that biology and access to health care are both key determinants of racial disparity for breast and other cancers. Biology is certainly important (6), but consistent access to quality cancer care is a crucial issue for cancer-specific and all-cause mortality.

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