Digging Deeper Into Survival Disparities in Pancreatic Cancer
— Outcome disparities disappear when adequate therapy is provided, study finds

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Black patients with pancreatic ductal adenocarcinoma (PDAC) appeared to have significantly worse survival outcomes compared with white patients in a new study.

An unadjusted analysis found a 0.6-month deficit for black patients (6.0 vs 6.6 months; \( P<0.001 \)) as well as a multivariate analysis that controlled for socioeconomic and demographic variables (HR 1.04, 95% CI 1.02-1.05), reported John W. Kunstman, MD, of Yale School of Medicine in New Haven, Connecticut, and colleagues.

As shown in their study online in *JAMA Surgery*, however, a second multivariate analysis revealed that when clinical variables, such as treatments received and stage of disease, were controlled for, the survival disparity seemed to disappear. In fact, black patients with pancreatic cancer had potentially better survival rates compared with white patients (HR 0.94, 95% CI 0.93-0.96).

An all-inclusive analysis that controlled for all variables -- both those from the demographic multivariate analysis and those from the clinical multivariate analysis -- continued to show a potential survival advantage for black patients compared with white patients (HR 0.95, 95% CI 0.93-0.96).

"When treated appropriately, black patients don't necessarily do worse, and it appears that the data supports them doing slightly better," Kunstman told MedPage Today.

"I find that to actually be a very encouraging finding," he said. "If we can improve upon these lower rates of provided therapy, we can narrow this gap that we see in the
Black patients with stage II disease in the study were significantly less likely than white patients to undergo surgery (52.2% vs 60.2%; \( P<0.001 \)) and black patients with stage IV disease were significantly less likely than white patients to receive chemotherapy (51.0% vs 55.5%, \( P<0.001 \)).

These lower rates of therapy among black patients were in contrast to black patients being more likely than white patients to be treated at an academic center (48.9% vs 41.9%, \( P<0.001 \)), a variable that was associated with a better survival compared with being treated in the community (HR 0.67, 95% CI 0.66-0.68), the team noted.

Kunstman emphasized that the reasons for the differences in therapy received by black patients are "purely speculative."

"While it is tempting to say this must be the result of provider-institution bias, we don't have any data to support that as a conclusion," he said. "That may be a contributor -- it may be a major contributor -- but it just as easily could be due to some other unexamined factor that's not part of this dataset."

The study also highlights the potentially low uptake of surgery among both groups of patients: 33.0% of black patients and 35.1% of white patients with stage I disease underwent surgery (\( P=0.057 \)).

Kunstman said these rates can be explained in part by some patients not being candidates for surgery and others having small tumors considered to be early stage but unresectable.

"But boy," he said, "seeing that less than half of patients with even stage I disease managed to make it to surgery was disappointing."

Black patients also tended to have disease at a younger age and a more advanced stage of disease at presentation, with 45.0% of black patients vs 34.4% of white patients having PDAC below the age of 65 (\( P<0.001 \)) and 66.0% compared with 61.4% having stage III or IV disease (\( P<0.001 \)).

Writing in an accompanying commentary, Jason S. Gold, MD, of Harvard Medical School and Brigham and Women’s Hospital in Boston, said the value of this particular study is the "comprehensive inclusion of patient, facility, tumor, and treatment variables in a large nationwide contemporary patient cohort."

The retrospective cohort study included 292,604 patients from the National Cancer Database with PDAC of any disease stage and who received care at a range of facility
types from January 1, 2004, to December 31, 2015. Among the cohort of patients, 83.3% were white and 12.6% were black, and patients who were described in the database as black were assumed to be of African ancestry and patients described as white to be of European ancestry.

The remaining 4.7% of patients identified for the cohort were excluded because they belonged to other racial groups, the team noted. In addition, because the purpose of race for this study was to approximate a patient’s ancestry and race as an inherently heterogeneous variable, other races were excluded to limit the heterogeneity and allow a more direct comparison of the study results with those from prior studies, which tend to compare only white and black patients, the researchers explained.

Support for the study came from internal sources at Yale.

Kunstman and colleagues reported having no relevant conflicts of interest; one co-author disclosed having an industry relationship and another disclosed having an industry relationship as well as having patents for various applications, but all of these activities were outside the scope of the current study.

Gold reported having no relevant conflicts of interest.

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