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Obesity increases risk of prostate cancer recurrence for both blacks and whites

DURHAM, N.C. – A new look at a large database of prostate cancer patients shows that obesity plays no favorites when it comes to increasing the risk of recurrence after surgery: Being way overweight is equally bad for blacks and whites, say researchers at Duke University Medical Center.

Studies have shown that obesity is linked to generally worse outcomes in many cancers, including prostate cancer. Because blacks are more likely than whites to develop and die from prostate cancer – and because there is a higher prevalence of obesity among black men with prostate cancer, compared to whites – some studies have suggested that obesity might be a more ominous risk factor for blacks than whites.

"Not so," says Stephen Freedland, M.D., an associate professor of urology and pathology in the Duke Prostate Center and the senior author of the study appearing in the journal *Cancer*.

"Obesity leads to worse cancer in both groups."

Freedland and Jayakrishnan Jayachandran, M.D. a urologic oncology fellow at Duke and the lead author of the paper, examined the records of 1,415 men enrolled in the Shared Equal Access Regional Cancer Hospital (SEARCH) database who had undergone a radical prostatectomy. Black men comprised almost half (47 percent) of the sample.

After adjusting for various preoperative characteristics, researchers analyzed the relationship between body mass index (BMI) and the aggressiveness of the cancer, as measured by the risk of recurrence. In contrast to other studies, investigators found no association between race and obesity.

Almost a third of the men were obese, regardless of race. "We found that higher BMI was associated with significantly increased risk of cancer recurrence for both blacks and whites," said Jayachandran. "Though prior SEARCH-based studies from our group found that obesity

was associated with a higher risk of disease progression as measured by a rising PSA after surgery, it now appears that being obese just means a poorer prognosis, period, regardless of race."

As for why that might be, Jayachandran says he's not sure, but he says it may have something to do with altered hormone levels.

"Obesity is associated with more estrogen and less testosterone, and it may be that lower testosterone promotes more aggressive tumors as recent studies have suggested." In addition, Jayachandran says alteration in the production of other hormones, like insulin, insulin-like growth factor or leptin, which occur in obese men, may also be involved in the development of more aggressive tumors. "This is something we simply do not understand, but we are actively studying all of these factors."

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Colleagues who contributed to the study include Lionel Bañez, William Aronson, Martha Terris, Joseph Presti Jr., Christopher Amling, and Christopher J. Kane.

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