Body mass in younger and older adulthood, and weight gain between these periods of life, may influence a man's risk for prostate cancer. This risk varies among different ethnic populations, according to results of a study in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

"The relationship of certain characteristics, such as body size, with cancer risk may vary across ethnic groups due to the combined influence of both genes and lifestyle," said lead researcher Brenda Y. Hernandez, Ph.D., M.P.H., assistant professor at the Cancer Research Center of Hawaii, University of Hawaii.

Obesity is a risk factor for common cancers like colorectal cancer in men and women and breast cancer in post-menopausal women. However, the influence of body size on prostate cancer risk is not entirely understood. Hernandez and colleagues examined this relationship in a multiethnic population consisting of blacks, Japanese, Hispanics, Native Hawaiians and whites, and compared differences among age groups. They used the Multiethnic Cohort, a longitudinal study of men aged 45 to 75 years old established in Hawaii and California from 1993 to 1996.

Results showed that of the 83,879 men who participated in this study, 5,554 were diagnosed with prostate cancer. Overall, men who were overweight or obese by age 21 had a decreased risk of localized and low-grade prostate cancer, according to Hernandez.

Being overweight in older adulthood was associated with increased risk of prostate cancer

among white and Native Hawaiian men, but a decreased risk among Japanese men. Excessive weight gain between younger and older adulthood increased the risk of advanced and high-grade prostate cancers in white men and increased the risk of localized and low-grade disease in black men, but decreased the risk of localized prostate cancer in Japanese men.

People "might initially look at these results and discount them for being inconsistent across the racial/ethnic groups, but they should not," said Elizabeth A. Platz, Sc.D., M.P.H., associate professor of epidemiology at the Johns Hopkins Bloomberg School of Public Health, Baltimore.

Platz stressed the strengths of this study, including that it was forward-looking (conducted prospectively) and consisted of large numbers of men in most of the ethnic groups studied. An estimated 30 percent of prostate cancer cases occurred among Japanese men (totaling 25,275), 25 percent among white men (n=21,311), 27 percent among Hispanic men (n=20,448), 13 percent among black men (n=10,934), and 7 percent among Native Hawaiian men (n=5,921).

"There is no reason to think that the differences in results by ethnicity are explained by bias. Different racial and ethnic populations tend to have differing proportions of fat relative to lean mass and carry their fat mass differently. These differences may be used as a launching point for the next line of research: The nature of the weight gain — amount of fat gained and distribution of the fat gained in association with prostate cancer risk overall, and by stage and grade," added Platz, who is also an editorial board member for the publishing journal.

This study underscores the importance of investigating cancer causation in diverse populations and researchers should conduct additional studies.

"These results do not warrant a change in the current public health messages about obesity: Men of normal weight in all racial/ethnic groups should be encouraged to avoid weight gain and men who are overweight and obese should be encouraged to lose weight for good health in general," Platz added.

Source : *Cancer Epidemiology, Biomarkers & Prevention* , a journal of the American Association for Cancer Research.