Inflammation marker linked to increased risk for death from cancer in Korean men

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Measuring blood levels of high-sensitive C-reactive protein, an important marker of inflammation, in apparently cancer-free men could potentially help identify those at increased risk for death from cancer, in particular lung cancer, according to data published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

"Inflammation has been linked to the initiation and progression of several types of cancer, as well as to the progression of atherosclerosis and cardiovascular disease," said Minseon Park, M.D., Ph.D., M.P.H., assistant professor in the Department of Family Medicine at the Center for Health Promotion at Seoul National University Hospital in South Korea. "We wanted to determine whether there was a relationship between a well-established marker of inflammation, high-sensitive C-reactive protein (hs-CRP), and death from all causes, death from cancer or death from a site-specific cancer in Koreans."

Park and colleagues retrospectively analyzed data from 33,556 individuals who had completed medical checkups, answered questions on cancer-related behavioral factors (like smoking status and exercise habits) and had been screened for blood hs-CRP at the health-screening center at Seoul National University Hospital between May 1995 and December 2006. During an average follow-up of 9.4 years, 1,054 deaths from all causes and 506 deaths from cancer were recorded.

When the researchers adjusted for several variables, including age,

diabetes, smoking status and exercise habits, men with the highest level of hs-CRP in their blood (3 mg per liter or more) were 38 percent more likely to have died from any cause compared with men with the lowest hs-CRP level (1 mg per liter or less). They were also 61 percent more likely to have died from cancer.

For women, after adjusting for a number of variables, no statistically significant association was observed for hs-CRP level and death from any cause or death from cancer.

Through analysis of associations between hs-CRP levels and site-specific cancers, the researchers found that a significant relationship existed only for lung cancer. After adjusting for multiple variables, individuals with the highest hs-CRP level were more than twice as likely to die from lung cancer compared with those with the lowest hs-CRP level.

The association between hs-CRP levels and all-cause mortality and cancer mortality was stronger in lean individuals compared with those who were overweight.

"This was surprising," said Park. "Because obesity is a major risk factor for chronic diseases like cancer, physicians and the mass media often recommend eating less and exercising more. While an important public health message, some people are too concerned with these recommendations and they eat fewer calories than their body actually needs. It is important that we eat enough to meet the metabolic demands of our body to make sure our organs function adequately for a healthy life."

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