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Signs of **inflammation** in a man's **prostate biopsy** may indicate he has a **reduced risk** of subsequently **being diagnosed** with **prostate cancer** in a future biopsy. That's the conclusion of a new study published early online in CANCER, a peer-reviewed journal of the American Cancer Society. The study's investigators say that because of its predictive value, inflammation should be routinely reported in prostate biopsies.

The association between inflammation and prostate cancer is controversial. Some studies suggest that anti-inflammatory therapies reduce prostate cancer risk while others have found that prostate inflammation is linked with a lower risk of cancer.

To investigate the issue, Daniel Moreira, MD, of the North Shore-Long Island Jewish Health System in New Hyde Park, NY, and his colleagues analyzed information regarding 6,238 men aged 50 to 75 years who had prostate-specific antigen (PSA) levels between 2.5 to 10ng/mL and who had a prior negative biopsy (indicating the absence of prostate cancer). Patients also underwent additional biopsies two and four years later.

Acute inflammation in biopsies taken at the start of the study was most common in men of younger ages who had lower PSA levels and smaller prostates, while chronic inflammation was associated with older age and larger glands. At the 2-year biopsy, prostate cancer prevalence occurred in 900 participants (14 percent). Both acute and chronic inflammation was significantly associated with lower prostate cancer risk (a 25 percent reduced risk with acute inflammation and a 35 percent reduced risk with chronic inflammation). At the 4-year biopsy, only acute inflammation was associated with a lower prostate cancer risk.

“Given its predictive value, inflammation—and its type and severity—should be routinely reported in prostate biopsies,” said Dr. Moreira. “Also, it is possible that patients with inflammation at baseline biopsy may be followed differently compared with patients without inflammation at baseline biopsy given their risk of subsequent cancer detection is lower.”

The authors noted that inflammation can arise as part of an immune response that occurs when the body recognizes malignant cells as foreign agents, thereby eliminating them before they can become an established tumor. This might help explain why inflammation was linked with lower risk of prostate cancer in their study. If this hypothesis is true, the

findings suggest that monitoring and modulating inflammation and the immune response may help in the prevention and treatment of prostate cancer.