

Inflammation in prostate may reduce cancer risk

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Doctors at the North Shore-LIJ Health System have discovered that increased inflammation in the prostate may predict reduced risk for prostate cancer. The findings are published online in *Cancer*.

Prostate cancer is one of the most common cancers in men, with an estimated 240,000 new cases diagnosed every year – it kills approximately 30,000 men annually. The prostate is a small gland that produces fluid that nourishes and transports sperm. When the cancer is detected early while still confined to the [prostate gland](#), there is a much better chance of successful treatment – according to the American Cancer Society, a five-year relative survival rate is 100 percent when [prostate cancer](#) is detected early and there is no sign that the cancer has spread outside of the prostate.

Previous studies have found that [chronic inflammation](#) contributes to several forms of cancer – an estimated 20 percent of adult cancers can be attributed to [chronic inflammatory conditions](#). To evaluate if inflammation in the prostate increases the risk of cancer in the gland, Daniel Moreira, MD, a urologist at the North Shore-LIJ Health System, and his colleagues conducted a clinical trial.

They conducted a retrospective analysis of the REduction by DUtasteride of PCa Events (REDUCE) trial, including 6,238 men ages 50 to 75 who had increased [prostate inflammation](#) with a negative biopsy (no cancer). They then underwent two more biopsies – one at two years and another at four years. At both two- and four-year intervals, the

doctors found that those participating in the study who had higher levels of prostate inflammation also had a lower risk of prostate cancer. These findings show that biopsies in prostates that are free of cancer and have high inflammation may indicate a lower risk for getting prostate cancer in the future.

"Because we have shown that inflammation has a predictive value, it should be routinely evaluated in [prostate biopsies](#)," said Dr. Moreira.

"Also, this research shows that patients showing inflammation at an initial biopsy may be evaluated by their physician differently from with patients without inflammation at an initial biopsy given their risk of subsequent cancer detection is lower."

At the conclusion of the *CANCER* article, Dr. Moreira and his colleagues discuss the concept of immunosurveillance – when the immune system produces inflammation because it recognizes cancerous cells as threatening, foreign agents and eliminates them before they can become an established tumor. This concept of immunosurveillance may explain why inflammation led to a [reduced risk](#) of prostate cancer – inflammation may correlate with immunosurveillance leading to the elimination of cancerous cell. Therefore, with ongoing studies and research in monitoring and moderating inflammation, new prevention and treatment methods for prostate cancer could be discovered.

Provided by North Shore-Long Island Jewish Health System

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