

Statin use associated with reduced risk of prostate cancer recurrence

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(Medical Xpress)—Men who begin taking statins after prostate cancer surgery are less likely to have a recurrence of their cancer, according to a retrospective analysis led by researchers at Duke Medicine.

"Our findings suggest that beginning [statins](#) after surgery may reduce the risk of [prostate cancer](#) recurrence, so it's not too late to start statins after a diagnosis," said lead author Emma H. Allott, Ph.D., a postdoctoral associate in the Division of Urology at Duke and the Durham Veterans Affairs Medical Center.

A secondary analysis revealed that this protective association was only significant among non-black [men](#), although this possible racial disparity requires further investigation.

The study appears online in *BJU International* (formerly the *British Journal of Urology*).

Prostate cancer is the most common non-skin cancer in men, according to the American Cancer Society. For men with localized disease, radical prostatectomy – or surgery to remove the prostate – is a common treatment option. However, approximately 30 percent of men have a recurrence of their prostate cancer within 10 years of surgery.

Cholesterol-lowering statins are known to improve cardiovascular outcomes, but less is known about how statins impact cancer risk and progression. Previous meta-analyses examining the effect of statins on [prostate cancer risk](#) and progression have reported mixed results.

In lab studies of cells and tissue samples, cholesterol has been shown to promote prostate cancer growth, while lowering cholesterol slows prostate cancer growth and reduces inflammation.

"It is possible that statins could inhibit cancer

growth through several mechanisms, either directly by inhibiting certain metabolic pathways, or indirectly by lowering cholesterol," said senior author Stephen J. Freedland, M.D., associate professor of urology and pathology at Duke and a urologist at the Durham Veterans Affairs Medical Center.

"Given how widely-prescribed statins are, and the biological plausibility of statins slowing [cancer growth](#), it is important for us to figure out how they may affect men with prostate cancer."

The researchers analyzed the medical records of men with prostate cancer who underwent radical prostatectomy. They chose to study men who had never used statins prior to surgery in order to test whether beginning statin therapy after primary treatment could influence [prostate cancer progression](#), an important question in terms of translating findings to randomized controlled trials and ultimately to clinical practice.

During a median follow-up period of just over six years, cancer returned in 65 of the 400 men who began taking statins after surgery, and 337 of 746 men who never took statins. The researchers conducted a statistical analysis, taking into account the demographic and tumor characteristics of patients in addition to the duration of statin use during the follow-up period. They concluded that postoperative statin use was associated with a 36 percent reduced risk of prostate cancer recurrence.

In a secondary analysis, this protective association was found to be significant only among non-black men. While prior studies have shown race-specific differences in prostate cancer tumor biology, additional research is needed to better understand whether the association between statin use and recurrence differs by race.

Since the current study was retrospective and limited by the information recorded in medical

records, the researchers stressed the importance of conducting randomized, controlled trials to assess the effect of postoperative statin use on prostate cancer recurrence.

"These future studies will help to determine whether statins – which are cost-effective and generally well-tolerated – may play a beneficial role in [prostate cancer treatment](#), in addition to their proven role in preventing cardiovascular mortality," Allott said.

Provided by Duke University

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