Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/clinicians-roundtable/prostate-cancer-and-cannabis-use-exploring-results-from-a-case-control-study/35696/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Prostate Cancer and Cannabis Use: Exploring Results From a Case-Control Study

Announcer:
You're listening to *Clinician's Roundtable* on ReachMD. On this episode, Ihtisham Ahmad will discuss the association between lifetime cannabis exposure and prostate cancer incidence. Mr. Ahmad is a fourth-year medical student at the University of Toronto, and he spoke on this topic at the American Urological Association 2025 Annual Meeting. Let's hear from him now.

Mr. Ahmad:
What we did is we conducted a single-center case-control study to investigate if cannabis use is associated with eventually developing prostate cancer. The most important part of our study design to note here is that our control group were patients with benign prostatic hyperplasia, or BPH. So both of our groups had prostatic disease, but only one of them had prostate cancer.

In terms of the actual trends and patterns that we found regarding cannabis use and developing prostate cancer—first of all, we found that ever using cannabis, priorly using cannabis in life, or currently using cannabis was not associated with prostate cancer incidence, so that's in a negative way or in a positive way. What we did find that was interesting was that over 50 percent of patients in both groups reported using cannabis at some point during their lifetime, so compared to similar previous studies in cancer patients, this could be higher than expected. It could be possible that as cannabis use is becoming increasingly legalized, not just across North America but the rest of the world, the norms around reporting its use are also changing, but our study could not identify any association between cannabis use and developing prostate cancer.

Previous benchtop studies and studies on animal models have found some mechanisms that may be connecting the cannabinoid pathways with prostate cancer. Specifically, what they've seen in the past is that prostate cancer tissue expresses cannabinoid receptors, so both CB1 and CB2 receptors, on their cell wall, and activating these receptors through cannabis exposure reduces the size of prostate tumors. So this is in both in vitro prostate cancer tissue and in mouse models. They also show that this relationship is dose dependent, so greater levels of exposure would lead to greater reductions in the size of the tumor. Of course, real-world data and information from actual patients is still absent in the literature, and that's where our study comes in.

So what we found was that the method of cannabis consumption did not seem to play a role in terms of developing prostate cancer in our cohort. So in both of our groups, about 50 percent of patients who reported cannabis use were smoking cannabis flower, around 15 to 20 percent were using edibles, and the rest of the patients or small percentages were using vaporizers or more concentrated forms like hash; but, importantly, there was no difference between our cancer group and our BPH group when it comes to the way in which they're consuming cannabis. What's interesting is we found something similar when we look into the specific kind of cannabinoids that were being used, so we asked our patients whether they were mostly using THC-heavy cannabis strains or CBD-heavy cannabis strains, and again, no difference was found in terms of prostate cancer incidence.

To better understand the relationship between cannabis and prostate cancer, future studies need to be explored with more robust human trials or to get real patient data. There was one study that was published in 2024 in the *Journal of Biomedicines*. Dr. Mohammed and colleagues from Tampa, Florida actually published a national database study that looked into this exactly, and what they found was that cannabis exposure was associated with reduced odds of being diagnosed with prostate cancer in their national database. So our study is, of course, different from theirs. We are not doing a national database study. We have a cohort study, so this is primary data coming from one institution, and what we found was contrary to what they had found. But in the future, what we need is more robust prospective cohort work, and we need work that looks beyond just the simple incidence of prostate cancer, but more detailed data collection that looks into prostate cancer grade, the volume of disease, metastatic disease, and impacts on other parts of a patient's

© 2026 ReachMD

health. Those are probably the most important missing pieces of the puzzle at this time.

Announcer:
That was Ihtisham Ahmad discussing the association between cannabis exposure and prostate cancer. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!

© 2026 ReachMD