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/frontlines-prostate-cancer/slowing-prostate-cancer-progression-the-role-of-dietary-fat-modifications/32209/

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Slowing Prostate Cancer Progression: The Role of Dietary Fat Modifications

Announcer:
Welcome to *On the Frontlines of Prostate Cancer* on ReachMD. On this episode, we'll hear from Dr. William Aronson, who's a Professor in the Department of Urology at UCLA and the Chief of Urologic Oncology at West Los Angeles Veterans Affairs Medical Center. He'll be discussing his recent study on the potential benefits of a high omega-3, low omega-6 diet with fish oil on slowing prostate cancer cell growth in men on active surveillance. Here's Dr. Aronson now.

Dr. Aronson:
With regards to the methods for our study, the CAPFISH-3 trial was a single-center, phase II, randomized, open-label, two-arm study in men on active surveillance for prostate cancer. The primary endpoint was change in Ki-67 index from baseline to one year from same-site biopsies within the prostate compared between the groups. The reason that we designed and conducted this study is because it was based on 20 years of translational research that we've done in our lab focusing on type of dietary fat and prostate cancer progression. We previously found that the Omega-6 fatty acids in the diet cause progression of prostate cancer in animal models, and the Omega-3 fatty acids from fish—for example DHA and EPA—inhibit the progression of the cancer. And so, what our studies have shown, both in animal models and in shorter-term clinical trials, is if you lower the 6 and you raise the 3, it's potentially beneficial for prostate cancer.

Just to clarify the intervention, we enrolled 100 men, who were randomized. One group was assigned to the control. They could eat anything they wanted but were told not to take fish oil. In the intervention group, we slightly lowered the calories from fat to closer to 30 percent and decreased consumption of foods high in Omega-6 fatty acids. Interestingly, almost nobody knows what I'm talking about when I talk about Omega-6 fatty acids. Those are the predominant polyunsaturated fatty acids in the American diet. That would be corn oil, sunflower oil, safflower oil, fried foods, highly processed foods, chips, mayonnaise, and bottled salad dressing. So these foods are predominant in our diet, and we significantly lowered those in addition to raising the Omega-3 intake in fish high in Omega-3, such as salmon. Patients were also provided fish oil capsules to take to bolster the Omega-3 intake.

The key findings in the study with regards to our primary endpoint was that the Ki-67 index increased 24 percent in the control group and decreased by 15 percent in the diet plus fish oil group, so there was a significant overall reduction between the groups favoring the intervention arm. Ki-67 index is actually a biomarker for prostate cancer progression, metastasis, and death, so the fact that we were able to lower it in the intervention group was a very important finding.

So for our next steps, we're doing mechanistic studies on the tissue to better understand how we inhibited the growth of the prostate cancer. Previously, we found that our intervention inhibits M2-like macrophages. These immune cells are critically important in prostate cancer progression. They're predominant in the metastasis of men with prostate cancer, and we're actually able to inhibit those with this intervention. So we'll see what the mechanistic studies show, but we're interested now in pursuing this intervention in men with more advanced prostate cancer.

Announcer:
That was Dr. William Aronson discussing how a high omega-3, low omega-6 diet with fish oil may reduce prostate cancer cell growth in men undergoing active surveillance. To access this and other episodes in our series, visit *On the Frontlines of Prostate Cancer* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!