

Can Grape Seed Extract Slow the Growth of Prostate Cancer After Treatment?

CU Cancer Center urologic oncology surgeon Paul Maroni, MD, studied the extract's benefits if prostate cancer progresses after local therapy

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Grape seed extract – a dietary supplement made from the seeds of wine grapes – [has been investigated](#) to see if it can help reduce blood cholesterol levels and high blood pressure. But can it also help slow down the growth of [prostate cancer](#) in men who have already undergone treatment?

That's the question that [University of Colorado Cancer Center](#) member [Paul Maroni](#), MD, and his colleagues set out to address in a study of the extract's impact on certain cases of prostate cancer.

Maroni [presented the results](#) of the phase II trial he led in April as a poster at the annual meeting of the American Association for Cancer Research. He and his collaborators are preparing a manuscript on the study for publication.

Maroni is an associate professor in the [CU Department of Surgery's Division of Urology](#), where he is clinical director of urologic oncology. A specialist in robotic surgery for prostate and [kidney cancer](#), Maroni's research includes studying quality-of-life outcomes for patients with prostate and [testicular cancer](#).

No. 2 cause of cancer death in men

Prostate cancer occurs in the prostate, a walnut-sized gland just below the bladder that produces seminal fluid. It is the second most common type of cancer among men in the United States, after [skin cancer](#). The [American Cancer Society \(ACS\) projects](#) 314,000 new diagnoses of prostate cancer in the United States this year, including 4,400 in Colorado.

Prostate cancer is highly treatable, especially when detected early, usually through a blood test for

prostate specific antigen (PSA). But because of the sheer volume of cases, it is the second leading cause of cancer death among American men, behind only [lung cancer](#). The ACS predicts 35,800 U.S. prostate cancer deaths this year.

Initial treatments vary for prostate cancer, Maroni says. When patients have early-stage, low-grade cancer that poses a low risk for many years, the disease might be monitored through active surveillance instead of direct treatment. Otherwise, depending on the cancer's severity, treatment might include surgery to remove the prostate – a radical prostatectomy, which most often is performed robotically – or radiation treatments.

If prostate cancer comes back after local treatment, doctors often turn next to androgen deprivation therapy (ADT), a hormone therapy that seeks to reduce levels of male hormones, called androgens, to slow the cancer's growth. But ADT can have quality-of-life impacts through reduction of testosterone possibly leading to hot flashes, fatigue, weight gain, weakened bones, increased risk for metabolic problems, and heart disease, Maroni says.

'An interesting question to ask'

So when the recurrent cancer is progressing slowly and has not spread to other parts of the body (known as metastasis), doctors may wait and monitor patients before starting ADT.

"In this situation, we usually just watch those guys, which gives us an opportunity to try out some lower impact medications or supplements to see if they might further slow the progression of their prostate cancer, because many of these men will live for a very long time anyway, even though they may have recurrent cancer," Maroni says. "If we can delay the need to start hormonal therapy, which can be costly and be accompanied by a lot of side effects, that was an interesting question to ask."

Maroni and his collaborators wanted to see if grape seed extract could help slow down prostate cancer growth during this waiting period. He had learned of [research](#) over many years by CU Cancer Center member [Rajesh Agarwal](#), PhD, into the extract's potential cancer-fighting properties. Grape seed extract contains antioxidant compounds called proanthocyanidins.

Maroni and Agarwal collaborated on a phase II trial involving 20 patients, which showed promising results. The updated trial focused on 41 men whose prostate cancer had returned after treatment. The subjects had no signs of metastasis and their PSA levels were rising slowly enough that it was not expected they would develop metastatic cancer within a year.

Patients were given 150 mg of grape seed extract twice daily for up to 12 months, in a formulation intended to maximize absorption. Researchers measured how quickly their PSA levels were rising, expressed as PSA doubling time, the number of months it takes for PSA levels to increase twofold. That data was compared to their PSA doubling time before taking the extract.

Not ready for prime time

The study found that PSA doubling time for the men taking the grape seed extract increased on average from 5.71 months to 6.86 months. About 78% of the patients saw their PSA doubling time increase, indicating slower cancer growth, of which 37% had significant improvement (at least 30%) of their PSA doubling time. Patients with higher starting PSA levels and higher testosterone levels tended to respond better. The grape seed extract treatment was also found to be well tolerated by the patients with minimal side effects.

As a result, Maroni reported that grape seed extract showed promise as a way to help slow prostate cancer progression in some patients, especially those with higher baseline PSA levels.

But he cautions that further, larger studies are needed to confirm these results. “This is not ready for prime time yet. People should not just start taking grape seed extract on the assumption that it’s going to work for them.”

Medical experts advise consulting with your health care provider about using any dietary supplement for medical purposes.

Maroni’s research was supported by the CU Cancer Center as well as the Cancer League of Colorado, the Diane D. Writer Foundation, and the Barbara and Richard Gardner Fund for Prostate Cancer Research. In addition to Agarwal, collaborators in the study included CU Cancer Center members [Elizabeth Kessler](#), MD; [Thomas Flaig](#), MD; [Elaine Lam](#), MD; and [Dexiang Gao](#), PhD.

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