The Summary for Patients is intended for patients to better understand the complicated and often mystifying language of modern medicine. Summaries for Patients are presented for informational purposes only. These summaries are not a substitute for advice from your own medical provider. If you have questions about this material, or need medical advice about your own health or situation, please contact your physician.

The full report is titled "Vitamin D Status in Patients with Stage IV Colorectal Cancer: Findings from Intergroup Trial N9741." It is in the April 20, 2011 issue of the Journal of Clinical Oncology (volume 29, online). The authors are Ng, K, Sargent, DJ, Goldberg, RM, Meyerhardt, JA, Green, EM, Pitot, HC, Hollis, BW, Pollak, MN, and Fuchs, CS.

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Vitamin D Levels in Patients with advanced Colorectal Cancer

What is the problem and what is known about it so far?
There is an increasing issue in the United States with most of the public having vitamin D levels that are lower than the recommended range. About three-quarters of Americans have less than adequate levels of vitamin D. Normal vitamin D levels should be at least 30 ng/mL or higher. Vitamin D plays an important role in bone health, keeping bones strong. There is some evidence from research showing that vitamin D could attach to receptors on cancer cells and actually lead to cancer-cell death and prevent further spread of the disease.

Why did the researchers do this particular study?
Researchers wanted to look at the vitamin D levels of patients with advanced (stage IV) colorectal cancer, to see if higher or lower levels had positive or negative impacts on disease progression and overall patient outcomes.

Who was studied?
There were 515 patients taken from a previous chemotherapy study that were used in this study. The patients studied included 209 women and 306 men, with an average age of 61 years. Almost all of patients were Caucasian and all were from the United States, Puerto Rico, or Canada.

How was the study done?
All patients provided a blood sample, so that vitamin D levels could be checked. All of the patients also provided demographic information, as well as information regarding their disease and any additional tumors that had spread. Vitamin D levels were analyzed alongside the disease information to see if there were any links between them.

What did the researchers find?
Researchers found that vitamin D levels were lower in females than in males. Vitamin D levels were also lower in black patients than in white patients and those of other races. Results showed that 8 out of 10 black patients had a vitamin D deficiency. Only 1 out of 10 patients had normal (over 30ng/dL) levels of vitamin D. In this population of advanced colorectal cancer patients, there were no improved outcomes among the different levels of vitamin D.

What were the limitations of the study?
Since all of the patients were in advanced stages of colorectal cancer, it is possible that vitamin D might not work as well against the cancer once it has already spread. In other words, the cancer may have been too advanced in order to see any differences between patients with a vitamin D deficiency or with satisfactory levels of vitamin D.

What are the implications of the study?
More studies are needed to look into the effects of vitamin D on colorectal cancer. Considering the high rate of vitamin D deficiencies, it is still important to maintain normal vitamin D levels for overall health.