Higher Vitamin D Levels Associated With Markedly Improved Survival in Patients With Advanced Colorectal Cancer

Summary includes updated data not included in the abstract
For immediate release
January 12, 2015
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ASCO Perspective:
“In addition to improved survival, high vitamin D levels were associated with a longer time for the cancer to become resistant to chemotherapy, suggesting that vitamin D could slow down the growth of the cancer or enhance the activity of the treatment,” said Smitha S. Krishnamurthi, MD, moderator of today’s presscast and ASCO expert. “Further studies are needed to determine if the improved survival is due to the vitamin D itself or to some other factor associated with having high vitamin D levels.”

ALEXANDRIA, Va. – A prospective analysis of data from a phase III study of patients newly diagnosed with metastatic colorectal cancer indicates that patients with higher vitamin D levels have better outcomes after treatment with chemotherapy and targeted therapy. The median overall survival for patients with the highest vitamin D levels was 32.6 months, compared with 24.5 months for patients with the lowest levels. The study will be presented at the upcoming 2015 Gastrointestinal Cancers Symposium in San Francisco.

This study adds to growing evidence of the anti-tumor effects of vitamin D that have been observed in preclinical and epidemiologic research. Randomized studies are underway to confirm the value of taking vitamin D supplements before and after cancer diagnosis.

“Our study adds to the body of research showing that higher vitamin D levels are associated with significantly improved survival. The ultimate goal is to translate this research into an effective intervention for patients by conducting randomized trials of vitamin D supplementation for treatment of colorectal cancer,” said lead study author Kimmie Ng, MD, MPH, assistant professor of
Researchers measured blood levels of vitamin D (25-hydroxyvitamin D) in 1,043 patients at the time they were enrolled in CALGB 80405, a phase III trial comparing three different first-line treatments for newly diagnosed, advanced colorectal cancer (chemotherapy plus bevacizumab, cetuximab, or bevacizumab and cetuximab). Patient vitamin D levels ranged from an average of 8 ng/mL in the lowest group to an average of 27.5 ng/mL in the highest group, with the average in all patients being 17.2 ng/mL (the recommended healthy range is 20-30 ng/mL). Older age, black race, lower dietary and supplemental vitamin D intake, higher body-mass index (BMI), worse general physical condition, and lower physical activity were all associated with lower vitamin D levels. Patients whose blood specimens were drawn in the winter and spring months also had significantly lower vitamin D levels, as did patients who resided in the Northern and Northeastern parts of the United States. All these factors have previously been found to be linked to lower vitamin D levels. Overall, very few of the patients reported vitamin D supplement use.

For the purpose of analysis, patients were divided into five groups based on vitamin D levels. After adjusting for prognostic factors and healthy behavior, researchers found that patients in the group with the highest levels of vitamin D lived significantly longer (32.6 months on average), compared with those in the group with the lowest levels (24.5 months on average). Higher vitamin D levels were also associated with longer time to disease progression (12.2 months in the group with the highest levels vs. 10.1 months in the group with the lowest). No significant differences were seen with regard to the type of therapy the patients received.

Dr. Ng indicated that ongoing clinical trials are exploring the potential impact of vitamin D supplementation on cancer prevention and treatment.

This study received funding from The National Cancer Institute, National Institutes of Health (K07 CA148894, R01 CA149222, CA31946, CA33601).

For your readers:

- Guide to Colorectal Cancer
- Vitamins and Minerals
- Expert Q&A: Vitamin D and Cancer Risk
- Interactive History of Colorectal Cancer Advances
- Gastrointestinal Cancers Fact Sheet

View the full abstract.

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View the disclosures for the News Planning Team.

ATTRIBUTION TO THE 2015 GASTROINTESTINAL CANCERS SYMPOSIUM IS REQUESTED IN ALL NEWS COVERAGE.

About ASCO:

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