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LETTER TO THE EDITOR

Vitamin D supplementation and colorectal cancer prognosis

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The study by Ng et al. [1] addresses an issue of major current interest that confirmed a relationship between high-dose vitamin D3 added to standard chemotherapy and increased progression-free survival (PFS) in patients with advanced or metastatic colorectal cancer (CRC). We all agree that such meaningful findings could generally affect the clinical practice in CRC management.

However, several confounding factors in their study should be taken into account discreetly and roundly. (1) The 36-month follow-up might be insufficient. After 7.3 years of median follow-up, Fuchs et al. [2] concluded that higher post-operative serum 25-hydroxyvitamin D concentrations were associated with better survival outcome in CRC patients. (2) The Kaplan–Meier curves had a p value of 0.07, and thus showed no statistical significance of PFS between the different doses of vitamin D3 groups. However, p value very close to the threshold of 0.05 has been identified to be always misunderstood in clinical importance and should be carefully viewed in this trial. (3) The authors found that tumor objective response rate in patients receiving high-dose vitamin D3 (95% CI 45–70%) was a little lower than that among patients receiving standard-dose vitamin D3 (95% CI 50–75%). These unsatisfactory findings might be due to the limited sample size and biased demographics, especially the races. The participants were mainly enrolled from the white Americans (75% and 79% in the two groups, respectively). If the study was performed on the population from different national races, there might have been a greater chance to achieve more significant beneficial outcome. (4) The risk of serious side effects was not fully disclosed upon use of large vitamin D3 supplementation. In fact, the posttreatment withdrawal in high-dose vitamin D3 group ($n=8$) was apparently higher than that in standard-dose group ($n=0$). (5) Differences in expression of vitamin D receptors or vitamin D-related genetic variation could contribute to the increased risk and poor prognosis of CRC [3]. The variation tendencies of vitamin D-associated biomarkers were not evaluated within these study participants.

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Compliance with ethical standards

Conflicts of interest All authors declare no competing interests.

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