

Role of Dietary Supplements in the Recurrence of Colorectal Cancer: An Issue for Cancer Survivors

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Dear Editor,

After treatment, Colorectal cancer (CRC) survivors often seek to improve their lifestyle and dietary patterns. One of the common habits adopted for this purpose is the use of dietary supplements (1) attempted by survivors to prevent recurrence of the disease, reduce side effects, improve physical and mental health, strengthen the immune system, cope with stress, and improve life expectancy (2). After the diagnosis of cancer and completion of treatment, at least 50% of survivors tend to use more than two or three supplements. Nonetheless, the beneficial effect of dietary supplements after CRC is a debated issue (1, 2).

Supplement use is also controversial due to its unknown association with chemotherapy and radiotherapy. Moreover, clinical guidelines for using dietary supplements are not elucidated. According to the European Society for Clinical Nutrition and Metabolism (ESPEN) and World Cancer Research Fund/American Institute for Cancer Research (WCRF/AICR), the use of supplements is recommended only in case of specific deficiencies. American Cancer Society (ACS) recommends that patients avoid the overdose of dietary supplements. National Cancer Institute (NCI) also recommends avoiding vitamin and mineral supplements during and after treatment (3).

The literature is void of sufficient and conclusive evidence to support or rule out the association of post-diagnosis dietary supplements with progression and recurrence of cancer, and the published results are contradictory. Calcium and vitamin D supplements have been demonstrated to reduce the risk of recurrent adenomas, cancer-specific mortality, and all-cause mortality. Nevertheless, the use of multivitamins, vitamin C, calcium, vitamin D, and vitamin E supplements is not associated with the prevention of colon adenoma recurrence. Furthermore, the use of B vitamins was reported to cause intestinal adenomas but did not indicate pathological findings of disease progression (4). On the other hand, calcium, vitamin D, and folic acid (B9) are effective in reducing the rate of intestinal polyps and improving the side effects of treatment, while the effects of zinc and selenium consumption are not

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clear (5). In some studies, however, no protective role was attributed to folic acid supplements. There is even a possibility of adverse effects of folic acid on cancer progression, increased recurrence, and metastases (3, 6).

Not until further studies clarify the relationship between dietary supplements and treatment effectiveness, recurrence, and survival improvement in CRC survivors, should health care providers exercise caution in recommending dietary supplements. In addition, CRC survivors should be assessed for supplement use and be aware of the precautions for using supplements. We do not yet have a comprehensive understanding of the effects of the type and dosage of vitamin and mineral supplements and how they are used after cancer diagnosis and during treatment. This requires the design and implementation of targeted and comprehensive studies to understand the diverse and potential effects of dietary supplements. Therefore, both health care providers and survivors should understand the potential risks regarding the use of dietary supplements and be careful about their recommendations and use.

Conflicts of Interest

The authors declare that they have no conflict of interest.

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