Vitamin D, calcium supplementation among older women does not significantly reduce risk of cancer

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Among healthy postmenopausal women, supplementation with vitamin D3 and calcium compared with placebo did not result in a significantly lower risk of cancer after four years, according to a study published by *JAMA*.

About 40 percent of the U.S. population will have a cancer diagnosis at some point during their lives. Evidence suggests that low vitamin D status may increase the risk of cancer, and considerable interest exists in the potential role of vitamin D for prevention of cancer. Joan Lappe, Ph.D., R.N., of the Creighton University Schools of Nursing and Medicine, Omaha, and colleagues randomly assigned 2,303 healthy postmenopausal women 55 years or older (average age, 65 years) to the treatment group (n=1,156; 2,000 IU/d of vitamin D3 and 1,500 mg/d of calcium) or to the placebo group (n=1,147). Duration of treatment was four years. The researchers examined the incidence of all-type cancer (excluding nonmelanoma skin cancers).

A new diagnosis of cancer was confirmed in 109 participants, 45 (3.89 percent) in the vitamin D3 + calcium group and 64 (5.58 percent) in the placebo group (difference, 1.69 percent). Incidence over four years was 0.042 in the treatment group and 0.060 in the placebo group. There was no statistically significant difference between the treatment groups in incidence of breast cancer.

Adverse events potentially related to the study included kidney stones (16 participants in the treatment group and 10 in the placebo group) and elevated serum calcium levels (six in the treatment group and two in the placebo group).

The authors write that one explanation for lack of statistically significant differences between the treatment groups in all-type cancer incidence is that the study group had higher baseline vitamin D (serum 25-hydroxyvitamin D) levels compared with the U.S. population.

"Further research is necessary to assess the possible role of vitamin D in cancer prevention."

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