Vitamin D in Older Patients With Cancer

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Vitamin D insufficiency has been found to be as high as 75% among community-dwelling adults aged 65 and older. The purpose of this article is to provide a review of published literature focused on the benefits of vitamin D and calcium supplementation in older patients with cancer. Insufficient vitamin D levels may have considerable effects on cancer-related diagnosis and treatment. Patient education should include information concerning vitamin D and calcium administration to reduce falls and injury from falls and enhance functional status. This article will consider the issue of vitamin D levels related to cancer prevention, diagnosis, treatment, functional status, and falls in older patients with cancer. Dosing and serum measurement information will be discussed.

At a Glance

- Vitamin D tends to diminish with age and insufficiency may be as high as 75% in older community-dwelling adults.
- Vitamin D insufficiency is assessed by serum 25-hydroxy and is defined as levels below 20–25 nmol/L.
- Those with insufficient vitamin D levels are at risk for falls and poor functional status.

Definition of Vitamin D

According to the National Institutes of Health (NIH, 2005), vitamin D is a fat-soluble substance that is derived from exposure to sunlight. Vitamin D frequently is identified as a vitamin; however, some researchers suggest it is a hormone because manufacturing takes place through sun exposure (Mosekilde, 2005; Wootton, 2005). Insufficient vitamin D levels may have considerable effects on cancer-related diagnosis and treatment (Beer & Myrthue, 2006; Grant & Garland, 2006; Pelczynska et al., 2006; Sieg, Sieg, Dreyhaupt, & Schmidt-Gayk, 2006). Vitamin D also has been found to reduce the risk of premenopausal breast cancer (Abbas, Lineisen, & Chang-Claude, 2007) and has been associated with a decrease in total mortality in the general population (Autier & Gandini, 2007). Other benefits of vitamin D include reduced falls, reduced injury from falls, and enhanced functional status. This research synthesis will consider the issue of vitamin D as related to normative aging, cancer diagnoses, treatment, functional status, and falls in older patients with cancer.

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