Vitamin D and Cancer Incidence—Letter

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We were interested to read Skaaby and colleagues’ article (1) concerning the “prospective association between vitamin D...and specific types of cancer.” Although the study cohort numbers are impressive and sufficient for randomization of studied data outcomes, many cancer-specific risk factors are not examined. An individual family history of cancer can often be a strong risk factor for cancer development and should have been included in analysis.

Studies of this nature have been criticized in the past for not analyzing the vitamin D receptor polymorphism (2); intact vitamin D receptor mechanisms are fundamental to the effect of vitamin D and different levels of sensitivity may help explain different findings among different ethnic groups (3). The population in Denmark is relatively homogenous and the authors did not acknowledge the potential influence of vitamin D receptor polymorphism in this population. A single time point is used in this study, and taken as the “baseline vitamin D” status, despite the long latency periods of most cancers and the potential variation of subject’s vitamin D concentrations. Study of past medical history strongly affects the specific cancer incidences in this study. Common examples might include potential cancer-preventive procedures, such as polypectomies, performed during colonoscopy, in individuals studied for colorectal cancer incidence, or previous hysterectomies in women studied for the incidence of uterine cancer.

Recruitment of these voluntary participants ranged from 43.8% to 64.3% across the three data cohorts; information for nonparticipation is lacking and attempts to gather this important information are desirable. Are those with family histories of cancer more likely to be motivated to take part in this study? Other medical information specific to each cancer subtype is vital when analyzing cancer incidence. A more recent example might be the BRCA genes’ high penetrance (4) that may have a much stronger effect on incidence in known vitamin D–sensitive cancers than vitamin D concentration. The Danish population has high levels of preventive health care and relatively high educational standards. It is unclear whether participants identified as having low vitamin D levels subsequently received prescribed or self-medicated treatment with vitamin D, as might be expected within a first world health care system. Sufficient dietary data are lacking in this study and healthy diets, likely present, that are preventive through other mechanisms of cancer control (5) may also mitigate potential effects of low vitamin D levels. Additional data are desirable for interpretation.

Disclosure of Potential Conflicts of Interest
No potential conflicts of interest were disclosed.

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References
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