

Peer Review

Review of: "Vitamin D Deficiency in Smokers: A Major Risk Factor in Lung Carcinogenesis"

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What is the objective of the article? Is it achieved?

The article sets out to review the existing evidence on the relationship between vitamin D and lung cancer risk among smokers. This objective is clearly stated and relevant to current public health concerns. The authors succeed in providing a broad overview of the topic, particularly by highlighting several studies that explore biological mechanisms and epidemiological associations. However, the objective is only partially achieved, as the article lacks a deeper critical synthesis of the findings. A more analytical and structured evaluation of the literature would have strengthened the fulfillment of its purpose.

What type of evidence is presented? Is it up-to-date, relevant, and sufficient?

The authors include a range of evidence, such as observational studies, randomized trials, in vitro research, and prior reviews, most of which are recent and pertinent to the topic. This diversity is commendable and contributes to a more comprehensive view of the issue. Nonetheless, the article does not clarify its search strategy or inclusion criteria, which raises concerns about the transparency and methodological rigor of the review process. Furthermore, the article does not assess the quality of the cited studies, which limits the reader's ability to judge the reliability of the evidence presented.

How is the argument built? Is it convincing, clear, and coherent?

The article offers a structured narrative, starting with background information and moving through mechanisms of action and epidemiological findings. This organization is helpful for readers unfamiliar with the topic. However, the argument tends to remain descriptive rather than critical, and at times lacks coherence in connecting the different pieces of evidence. Including a clearer line of reasoning and engaging more directly with conflicting findings would have made the discussion more convincing.

What assumptions are made? Are they problematic?

The authors seem to assume that vitamin D has a potentially protective role against lung cancer in smokers—an idea that is introduced early on and subtly maintained throughout. While this hypothesis is grounded in biological plausibility, it is not adequately balanced with alternative explanations or a discussion of confounding factors, such as smoking intensity, sun exposure, or overall health status. Recognizing these limitations explicitly would have strengthened the scientific rigor of the article.

What is the authors' conclusion? Is it justified by the evidence presented?

The authors conclude that more research is needed to clarify the role of vitamin D in lung cancer risk among smokers, which is a cautious and responsible position. This conclusion is appropriate given the current limitations of the evidence. However, it would have been more impactful if it were grounded in a more systematic and critical appraisal of the studies reviewed. A summary table of key findings, for instance, could have helped reinforce their final message.

Overall, this article contributes positively to the conversation on vitamin D and cancer by compiling a variety of studies and emphasizing the need for further research. The effort to synthesize complex biological and epidemiological data is commendable. However, the review would benefit from greater methodological transparency, critical analysis, and a clearer argumentative structure to fully support its conclusions.

Declarations

Potential competing interests: No potential competing interests to declare.