

Peer Review

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

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Introduction:

Several sentences are awkward or redundant. For example: *"However, the cases of lung cancer are on a steep rise in many countries"* could be rephrased to *"Lung cancer incidence is increasing in many countries."*

Consider avoiding repetition of phrases like *"as mentioned earlier"*—the flow would benefit from tighter, more concise writing.

The reported incidence figures (e.g., "37.5 in 100,000") should be properly referenced and clarified (are these age-standardized rates?). Also, maintain consistency in how data are presented across populations.

The paragraph transitions could be smoother. Currently, it shifts rapidly between epidemiology, types of cancer, signaling pathways, and vitamin D deficiency. Consider breaking the introduction into more focused thematic paragraphs:

- Global burden and types of lung cancer
- Smoking and molecular mechanisms of carcinogenesis
- Vitamin D deficiency in smokers and lung cancer patients
- Research gap and study rationale

The phrase *"it is already mentioned that two-thirds of lung cancer deaths are associated with smoking"* is unnecessary repetition. Eliminate redundant sentences to enhance readability.

Ensure consistent citation style and that all referenced claims are accurately supported by the literature. For example, the role of nicotine in epithelial-to-mesenchymal transition and angiogenesis should be clearly supported by primary research citations.

The last sentence introduces the study's aims but could be better articulated. Suggested revision:
"Therefore, this study aims to elucidate the molecular mechanisms linking tobacco-induced lung carcinogenesis and vitamin D deficiency, and to explore the potential therapeutic role of vitamin D in lung cancer."

METHODOLOGY

Lack of Search Strategy Detail: The methodology does not provide details on the specific keywords or Boolean operators used. This limits reproducibility.

Inclusion/Exclusion Criteria: While it mentions that only English peer-reviewed full articles were considered, there is no mention of exclusion criteria (e.g., conference abstracts, reviews, case reports, etc.) or study types included (e.g., in vitro, in vivo, clinical trials).

Selection Process: There is no description of how articles were screened or selected (e.g., PRISMA guidelines, use of independent reviewers, removal of duplicates).

Quality Assessment: There is no mention of whether a quality or risk-of-bias assessment was conducted for the included studies.

CONTENT

The figures, are they adopted from other studies or resources? If yes, please cite accordingly.

CONCLUSION

The conclusion lacks a strong, concise summary sentence that encapsulates the overall takeaway. Consider beginning with a clear statement like: *"This study highlights the potential of vitamin D as an adjunct therapeutic agent in mitigating smoking-induced lung carcinogenesis."*

While mechanistic details are important, the conclusion contains an excessive number of gene/protein names and signaling pathways. This makes the section dense and less reader-friendly. These can be streamlined or grouped (e.g., "vitamin D modulates various oncogenic signaling pathways such as...").

There is a lack of clarity on which statements are based on *observational data, experimental findings, or hypothetical mechanisms*. This distinction is important for scientific rigor and would help readers assess the strength of the evidence.

Some points are repeated in slightly different phrasing, e.g., vitamin D's role in reducing inflammation, ROS, and supporting immune cells. Consider combining related ideas for a more concise presentation.

Declarations

Potential competing interests: No potential competing interests to declare.