

Review of: "The Application and Pathway Regulation of Traditional Chinese Medicine in Lung Cancer Treatment: An Exploratory Review"

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Potential competing interests: No potential competing interests to declare.

Dear Editor,

Thank you for inviting me to evaluate an article entitled "The Application and Pathway Regulation of Traditional Chinese Medicine in Lung Cancer Treatment: An Exploratory Review."

The review of this paper provides a valuable overview of the potential benefits of TCM in treating NSCLC, highlighting its multi-targeted and holistic approach. However, the lack of clinical evidence, unclear mechanisms, and variability in TCM formulations are significant weaknesses that need to be addressed. Future research should focus on conducting rigorous clinical trials, clarifying the mechanisms of action, and developing standardized TCM formulations to fully integrate these traditional practices into modern medical frameworks.

Weaknesses of this paper:

1. **1-Unclear Mechanisms of Action:** The research acknowledges the complexity and unclear nature of the mechanisms through which TCM exerts its effects. This vagueness hampers the understanding of how TCM components interact with molecular pathways and makes it challenging to standardize treatments.
2. **Potential Bias in TCM Studies:** The research may be influenced by a selection bias towards positive outcomes, which is a common issue in studies of traditional medicine. The review does not sufficiently address the limitations and potential biases present in the studies it cites, which could skew the perceived efficacy of TCM.
3. **Variability in TCM Formulations:** The inherent variability in TCM formulations, due to differences in preparation, dosage, and combinations of herbs, poses a challenge for consistent and reliable treatment outcomes. This lack of standardization is not thoroughly addressed in the review.
4. **Need for Integration with Modern Medicine:** The review calls for a modern scientific approach to understanding TCM but does not provide a clear roadmap for integrating TCM with conventional medical practices. This integration is essential for the practical application of TCM in a clinical setting.

Strengths of this paper:

1. **Relevance and Importance:** The research addresses a critical area in oncology, specifically focusing on non-small

cell lung cancer (NSCLC), which has a high mortality rate and presents significant treatment challenges. Exploring traditional Chinese medicine (TCM) as a complementary or alternative approach is particularly relevant given the limitations of conventional treatments.

2. **Comprehensive Overview:** The review provides a systematic summary of the research progress regarding the use of TCM in NSCLC treatment. It covers a broad range of active components (alkaloids, saponins, terpenes, polysaccharides) and discusses their potential effects on various molecular pathways, which is valuable for understanding the multifaceted nature of TCM's mechanisms.
3. **Focus on Multi-Targeted Treatment:** The emphasis on the multi-targeted and multi-component nature of TCM offers an advantage over conventional treatments, which often focus on single targets. This holistic approach aligns with the traditional medical philosophy of TCM and presents a potentially effective strategy for complex diseases like cancer.
4. **Synergistic Effects with Conventional Therapies:** The research highlights the potential of TCM to enhance the efficacy of standard treatments like chemotherapy and radiotherapy. By reducing toxic side effects and improving treatment adherence, TCM could significantly improve patient outcomes.
5. **Addressing Drug Resistance:** The review notes the potential of TCM to overcome issues related to drug resistance, a major challenge in cancer treatment. This aspect is particularly crucial for improving long-term treatment success and patient survival rates.