

Review of: "Evaluation of the Tobacco Heating System (THS) During Closed Lower Limb Fracture Healing in Trauma Smokers' Patients"

Mojtaba Hasani¹

¹ Department of Biomedical Engineering, Faculty of Engineering, University of Isfahan, Isfahan, Iran

Potential competing interests: No potential competing interests to declare.

· **Lack of Clarity on the THS Mechanism:**

- The introduction and background sections do not fully clarify how the Tobacco Heating System (THS) specifically impacts bone healing in comparison to cigarettes or traditional electronic nicotine delivery systems (ENDS). More emphasis on the underlying mechanism would help support the hypothesis.

· **Ambiguity in Patient Grouping and Study Design**

- Although groups are divided into smokers, THS users, and ex-smokers, it's not entirely clear how smoking cessation is managed for each group or whether additional support (e.g., counseling or nicotine replacement therapy) is offered uniformly, which could affect results.

· **Inconsistent Terminology:**

- Terms like "smokers' patients" or "smokers patients" are confusing and could be interpreted differently. Consistent terminology, like "patients who smoke," throughout would improve clarity.

· **Outcome Variables Not Well Defined:**

- While primary and secondary outcomes are listed, specific variables like "bone metabolism" and "healing" are broad and lack detail. Each should be defined clearly, as multiple factors could contribute to these outcomes.

· **Potential Confounding Factors:**

- No mention is made of confounding factors such as patient age, comorbidities, lifestyle factors, or medications that might affect bone healing. Addressing these or planning to control for them would strengthen the study's validity.

· **Comparison with Non-THS Interventions:**

- The study does not include or compare THS with non-combustible alternatives like nicotine patches or gum, which would provide more insight into the effectiveness of THS compared to other options in smoking cessation.

· **Limited Explanation of Laboratory Measures:**

- Laboratory measures (e.g., white blood cell count, soluble intercellular adhesion molecule-1) are mentioned briefly, but their relevance to smoking status or fracture healing is not fully explained. Additional context on how these markers relate to the study's objectives would be beneficial.