Review of: "AI-Generated Hallmarks of Aging and Cancer: A Computational Approach Using Causal Emergence and Dependency Networks"

Shokhan M. Al-Barzinji[1]

1 University of Anbar, Iraq

Potential competing interests: No potential competing interests to declare.

This paper presents a significant contribution to the field, introducing a computational framework for synthesizing hallmark-level features that outperform traditional gene-based approaches in disease prediction and analysis. Its innovative use of causal emergence and dependency networks sets the stage for a new paradigm in modeling multimorbidity and age-related diseases.

Strengths:

1. Novel methodology with strong theoretical underpinnings.
2. Practical applications for drug discovery and multimorbidity modeling.
3. Integration of TCM hallmarks offers a unique perspective.

Weaknesses:

The conclusion could provide a more detailed roadmap for translating these findings into clinical or pharmaceutical applications.

Limitations:

1. Limited dataset scope and lack of independent validation reduce generalizability.
2. Insufficient methodological transparency.
3. Results presentation could be more detailed and visually accessible.