Review of: "Scout TB: An AI Robot for the Screening of Tuberculosis Among Prisoners – A Novel Technique"

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Potential competing interests: No potential competing interests to declare.

The authors have proposed the idea of using an AI-backed robot for screening for tuberculosis (TB) in a prison setting. Although the idea is useful in principle, the authors need to provide a more concrete and rigorous examination of the proposed solution. The following are the concerns that need to be addressed.

1. The article reads like a perspective rather than an original research article. It describes the usefulness of having such a robot rather than the methods followed and results obtained. Can the authors make it clear if they intend to write a perspective or an original research article? If it is the latter, the authors should consider the remaining concerns seriously.
2. The literature review should cover the following two aspects in detail: (a) previous studies that have used AI in conjunction with robotics toward health screening; (b) previous studies that have attempted to screen for TB at a population level (the latter need not necessarily involve AI or robotics).
3. What modality of patient data is being used here to screen for TB? Is it radiological images like chest x-rays or assays detecting a certain molecular biomarker?
4. The authors repeatedly refer to the use of AI, but it is not clear what kind of algorithm has been used here. Furthermore, there is no mention of the data used to train the model. The methodology should be described in detail.
5. WHO guidelines for TB screening require a sensitivity of over 90% and specificity of over 70% (see page 23 of the following document: https://iris.who.int/bitstream/handle/10665/340255/9789240022676-eng.pdf). What is the sensitivity and specificity of the method proposed in the current study? Details need to be provided.
6. A comparison should be made with existing solutions for TB screening (could be solutions in a general setting, not necessarily a carceral setting). A few existing solutions that should be compared with Scout TB include the following: (a) Qure.ai: https://www.business-standard.com/india-news/ai-based-tool-boosting-incidental-tuberculosis-findings-in-india-124030300292_1.html; (b) Google Health: https://pubs.rsna.org/doi/10.1148/radiol.212213; (c) National Cheng Kung University: https://www.mdpi.com/1424-8220/22/21/8497
7. For the cost comparison provided in the bar chart, what is the reference for the current costs? How did the authors calculate the reduction in cost brought about by the use of Scout TB? Details need to be provided.