

Review of: "[Commentary] Artificial Intelligence, or Artifact Intelligence? Most AI Is Not Ready for Practice"

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Potential competing interests: No potential competing interests to declare.

I read with interest the commentary from Drs. Muennig and Pirazzi. Although I have jokingly called AI as artificially intelligent, I have not come across artifact intelligence. Clever use of words for sure. However, as I went through the manuscript, I realized that the authors had much to say but little space within the constraint of a commentary.

For one the US FDA has become much stricter in its requirement of AI before offering clearance. They are demanding data from diverse geographic, gender, age settings, as well as confounding and mimicking diseases. I do not like/agree generalization from a few words or chosen article to trash the whole idea of AI, which brings me to my second objection. There are several recent studies that have reported on how AI outperforms radiologists on heretofore unimaginative diagnosis through manual interpretation (high profile publications on non-contrast CT detection of LVO and early pancreatic cancer).

Thirdly, while some applications such as pneumonia diagnosis of chest radiographs with AI is rather flawed, radiologists also suffer from substantial limitations and inter-observer variations in absence of clinical context. Fourthly, I agree that ChatGPT beating humans at MCAT is not a proof of ChatGPT being better at interpreting images than radiologists. However, no one is using ChatGPT to do clinical interpretation of imaging studies! This is not a correct analogy to outline hype that the authors want to portray.

Finally, medical AI applications now extend beyond diagnosis and triage with spectacular results in 3D camera-based centering, positioning, protocol selection, scan length estimation, and deep learning image reconstruction in both CT and nuclear medicine. We have multiple examples of how AI helps in quantitative and segmentation tasks – from brain, aorta, and multiple organ segmentations in both diagnostic and radiation therapy applications. On to recognition and point-of-care correction or instruction for repeat acquisition in case of suboptimal radiography at the initial acquisition.

In summary, I am sorry to sound less than supportive of your article despite my initial excitement. I believe that this subject deserves a full review rather than a short commentary. Just because of one aspect does not sound perfect, does not mean the whole concept of AI is mostly artifactual. Generalizing a few limitations to all applications is as dangerous as lacking generalizability in a good AI. I recommend that you pursue a full article to dive into individual applications' subclass of AI, and speak about pros and cons.

