

Reviewer #1:

**Scientific Quality:** Grade C (Good)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Major revision

**Specific Comments to Authors:** The author explores the application prospects and advantages of artificial intelligence in the field of pain medicine, which is a good editorial. However, it is recommended to increase the potential risks and ethical aspects of artificial intelligence in pain medicine and discuss them.

Answer: I appreciate your comment. Following your comments. We added the potential risks and ethical aspects of AI to the manuscript.

## **RISKS OF THE USE OF ARTIFICIAL INTELLIGENCE**

The primary reason why clinicians hesitate to apply AI in clinical practice is the issue of “responsibility.” If misdiagnoses or unexpected adverse therapeutic effects occur following the use of AI algorithms in clinical settings by pain physicians, the assignment of responsibility is ambiguous. Numerous stakeholders, including healthcare professionals, algorithm developers, data managers, and medical institutions, are involved in the development of AI algorithms. Therefore, understanding the origin of errors or defects and at which stage they occurred is crucial when determining responsibility in the event of an incident. However, the black-box nature of AI makes identifying the cause of issues arising from its application challenging.

In addition, the most significant aspect in the realm of ethical concerns related to AI is the issue of “privacy protection.” Indeed, a large volume of medical data is required to develop medical AI systems. However, only the minimum required data within the scope of the intended purpose should be collected and utilized. Furthermore, as the development of medical AI involves the processing of a substantial amount of sensitive private health-related information, obtaining appropriate legal approval for handling personal data and maintaining security is crucial.

Reviewer #2:

**Scientific Quality:** Grade A (Excellent)

**Language Quality:** Grade A (Priority publishing)

**Conclusion:** Accept (High priority)

**Specific Comments to Authors:** The manuscript is well prepared and written. I recommend publication of the manuscript.

Answer: I appreciate your comments.