

REVIEWER'S REPORT

Manuscript No.: IJAR-58653

Title: Evaluating the Accuracy of Measuring Endodontic Working Length from Diagnostic Radiographs Using Artificial Intelligence: An In Vitro Study

Recommendation:

- Accept as it is
 ✓ Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: Dr S. K. Nath

Detailed Reviewer's Report

Strength of the study:

- The study addresses an important clinical challenge in endodontics
- The objective is clearly defined and clinically relevant
- AI based methodology is explained in a logical manner
- Image preprocessing and segmentation techniques are well described
- Results demonstrate high agreement with RVG measurements
- The discussion is supported by appropriate literature
- The findings encourage future application of AI in dental practice

Weakness of the study:

- The dataset is relatively small for AI model validation
- Only single rooted teeth were included in the analysis
- External validation using independent datasets was not performed
- Ethical clearance or exemption statement should be clearly mentioned
- Statistical analysis could be more comprehensive
- Minor grammatical and formatting errors need correction
- Clinical applicability requires validation through in vivo studies

Reviewers Comments:

The manuscript presents an interesting in vitro study evaluating the use of artificial intelligence for measuring endodontic working length from diagnostic radiographs. The research question is relevant, and the methodology is presented in a structured and understandable manner. The image preprocessing, segmentation, and measurement techniques are adequately explained, and the reported accuracy demonstrates promising performance when compared with conventional RVG measurements. The discussion appropriately relates the findings to previous studies and acknowledges important limitations. However, the manuscript would benefit from a more detailed statistical analysis and validation using larger and more diverse datasets. Since this is an in vitro study using archived radiographs, the manuscript should clearly mention whether institutional ethical approval was obtained or officially exempted. Minor grammatical, formatting, and language corrections are also recommended to improve readability. Overall, the study is scientifically valuable and provides encouraging evidence for future AI-assisted endodontic applications. The manuscript is suitable for publication after minor revision.

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Previously Published anywhere/Plagiarism check:

The manuscript appears to be an original research study, and no obvious evidence of prior publication or duplicate submission was identified during this review. No visible signs of plagiarism were observed in the submitted document. However, a standard plagiarism screening using journal-approved software is recommended before publication to confirm originality and ensure compliance with publication ethics.