

REVIEWER'S REPORT

Manuscript No.: IJAR-54192

Date: 08/10/2025

Title: AI-Assisted Detection of Gastric Intestinal Metaplasia: Design and Validation of the “IntelliMeta Algorithm”

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.Aamina.

Date: 08/10/2025

Reviewer's Comment for Publication.

General Overview

The manuscript titled “AI-Assisted Detection of Gastric Intestinal Metaplasia: Design and Validation of the ‘IntelliMeta’ Algorithm” presents a timely and significant study on the use of artificial intelligence in digital pathology for gastric precancerous lesions. The study addresses an important diagnostic challenge and represents an innovative contribution from the African region. However, several areas require **major revision** to improve **methodological depth, clarity, and data interpretation** before it can be considered for publication.

Materials and Methods

- **Lines 88–115:** The data collection and processing are well-described.
 - **Line 91:** The dataset size (229 slides) is **too limited for AI training**; authors should specify data split ratios (train/validation/test) and justify adequacy.
 - **Line 98–100:** Include information on interobserver agreement or Cohen's kappa value between pathologists for annotation reliability.

REVIEWER'S REPORT

- **Line 101–104:** The augmentation strategy is sound but should include specific augmentation parameters (rotation degrees, zoom factors, etc.).
- **Line 107–110:** The description of model architecture lacks sufficient technical depth. Add number of layers, optimizer used (e.g., Adam, SGD), learning rate, and number of epochs.
- **Line 113–115:** The segmentation and quantification method mixes classical image processing with AI. Authors should clarify whether segmentation was **AI-based or threshold-based**, as this affects reproducibility.

Overall Evaluation

The manuscript demonstrates strong originality and regional significance, offering an early-stage but important AI model in digital pathology for gastric lesions. However, technical depth, dataset justification, and clarity in reporting require major improvement before acceptance.

☐ **Accept after major revision**