

DEVELOPMENT AND VALIDATION OF A REAL-TIME AI MODEL FOR DIFFERENTIATING BENIGN AND MALIGNANT GASTRIC ULCERS □ A MULTICENTER RETROSPECTIVE STUDY

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UEG Week Berlin 2025

Poster

Oesophagus

October 6, 2025

A multicenter study developed a YOLOv8-based AI model achieving 96.66% overall precision in real-time differentiation of benign and malignant gastric ulcers using 21,592 endoscopic images from three Chinese hospitals.

KEY POINTS

- The model achieved 99.25% sensitivity and precision for benign ulcers and 94.07% sensitivity and precision for malignant ulcers on the test set.
- Data included 1,424 images from 263 histologically confirmed malignant ulcers, 7,767 images from 1,470 benign ulcers, 1,490 normal mucosa images, and 10,911 video frames.
- The YOLOv8 architecture enabled real-time instance segmentation during endoscopy, addressing limitations of prior single-center static image classification studies.
- The authors suggest the model has potential to optimize endoscopic evaluations and guide biopsy decisions in clinical practice.
- This material is relevant for gastroenterologists and endoscopists interested in AI-assisted diagnostic tools for gastric ulcer evaluation.

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