

ARTIFICIAL INTELLIGENCE IN ENDOSCOPIC ULTRASOUND FOR LYMPH NODE DETECTION AND MALIGNANCY ASSESSMENT: A MULTICENTER TRANSATLANTIC STUDY

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UEG Week Berlin 2025

Poster

Oesophagus

October 7, 2025

A novel artificial intelligence model using deep learning achieved 98.8% sensitivity and 99.0% specificity in differentiating malignant from benign lymph nodes on endoscopic ultrasound images in a multicenter study.

KEY POINTS

- The convolutional neural network was trained on 59,992 EUS images from 82 procedures across nine centers in Spain, Portugal, Brazil, the United Kingdom, and the United States
- The model achieved overall diagnostic accuracy of 96.99% with a negative predictive value of 98.8% for malignant nodes and 97.0% for benign nodes
- This represents the first study exploring deep learning application for lymph node analysis through EUS imaging
- The AI model used YOLO architecture with final diagnoses confirmed by positive tissue acquisition or minimum six months clinical follow-up
- The study highlights potential for AI to enhance lymph node evaluation in oncologic staging and treatment planning

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