

ARTIFICIAL INTELLIGENCE DRIVEN DIAGNOSIS OF MOTILITY PATTERNS IN HIGH-RESOLUTION ESOPHAGEAL MANOMETRY – A MULTICENTRIC MULTIDEVICE STUDY

Guilherme Macedo

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Poster

Oesophagus

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A proof-of-concept study developed and validated machine learning models to identify esophageal motility disorders on high-resolution manometry using the Chicago Classification 4.0.

KEY POINTS

- The study trained multiple machine learning models on 618 HREM exams from two different devices and three centers in Spain and the United States, classified by two independent experts using Chicago Classification 4.0.
- The GradientBoostingClassifier model achieved 94.2% accuracy and 0.921 AUC-ROC for identifying disorders of esophagogastric junction outflow.
- The xGBClassifier model achieved 80.9% accuracy and 0.871 AUC-ROC for detecting disorders of peristalsis.
- The authors state that AI integration into HREM-driven diagnosis is expected to optimize exam accuracy and accessibility in managing esophageal motility disorders.
- This pilot study may be relevant to clinicians and researchers interested in applying artificial intelligence to functional esophageal disorder diagnosis.

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