

PREDICTION OF THE HILL CLASSIFICATION FOR HIATAL HERNIA USING ARTIFICIAL INTELLIGENCE

Wolfram G. Zoller

UEG Week Copenhagen 2023

Poster

Oesophagus

October 15, 2023

A novel active learning pipeline enables training of a deep learning model to classify hiatal hernia using the Hill classification from gastroscopic images, requiring 30% less expert annotation time than random image selection.

KEY POINTS

- The active learning model was trained on 21,970 gastroscopic images from 14,885 examinations using eight consecutive steps covering about 10% of unlabeled training data.
- The model achieved accuracy of 0.878 for classifying the four Hill types and 0.828 for diagnosing the presence versus absence of hiatal hernia on external test data.
- Median annotation time per image was 3.62 seconds, and the active learning approach required at least 30% fewer annotations than random image selection to achieve similar performance.
- The open-source active learning pipeline allows examiners to develop gastrointestinal endoscopy models without requiring programming skills.

VIEW THIS CONTENT ON GUTFLIX

<https://gutflix.eu/search/d/67afba52-743b-11ee-8c5a-0242ac140004>



AI-generated summary

This summary was generated by an AI large language model based on the content transcript. It is for informational purposes only and should not be considered a substitute for clinical judgment. Always rely on your professional expertise and the full clinical context when making clinical decisions.