

PREDICTION OF 8 WEEK ENDOSCOPIC HEALING IN ULCERATIVE COLITIS SUBJECTS FROM THE USTEKINUMAB UNIFI TRIAL USING ARTIFICIAL INTELLIGENCE (AI) ANALYSIS OF BASELINE COLONOSCOPY VIDEOS

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Poster

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AI analysis of baseline colonoscopy videos from the UNIFI trial predicted 8-week endoscopic healing in ulcerative colitis patients with AUROC of 0.78 in the placebo arm and 0.75 in the ustekinumab arm, outperforming models using 21 baseline clinical measures.

KEY POINTS

- The AI model using EndoDINO visual features achieved AUROC of 0.78 for predicting 8-week endoscopic healing in the placebo arm, compared to AUROC of 0.70 using 21 baseline clinical measures including fecal calprotectin, C-reactive protein, and Mayo scores.
- In the ustekinumab treatment arm, the AI model achieved AUROC of 0.75 versus 0.72 for the clinical measures model.
- The study analyzed 300 placebo and 606 ustekinumab patient videos from the UNIFI Phase 3 trial, with endoscopic healing defined as Mayo endoscopy subscore 0 or 1.
- The authors suggest AI placebo response prediction could be used in future trial design as covariate analysis to increase statistical power or reduce sample size.
- This work may be of interest to clinical trialists and investigators studying ulcerative colitis, particularly those designing clinical trials or exploring predictive biomarkers.

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