

FROM PLASTIC TO PRACTICE: AI IMPROVES REALISM IN SILICONE MODEL FOR ENDOSCOPIC TRAINING

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Poster

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An AI-based style transfer model applied to silicone colon training videos significantly improved visual realism and perceived educational value among 12 gastroenterologists compared to unenhanced silicone footage.

KEY POINTS

- The AI model was developed using 239,875 images from 3,452 colonoscopies and transformed silicone colon video to mimic real mucosal tissue appearance
- All 12 participating gastroenterologists preferred AI-enhanced videos, rating them significantly higher for visual realism (mean 4.17 vs 2.42, $p < .001$), helpfulness for training ($p = .016$), and polyp characterization ($p = .027$)
- AI-enhanced videos were rated as significantly more helpful for facilitating optical diagnoses (mean 4.42 vs 3.58, $p = .039$) and favored for usage ($p = .005$)
- Original silicone footage was rated as significantly less mentally demanding than AI-enhanced videos (mean 1.67 vs 2.42, $p = .016$)
- Participants suggested future development focus on integrating more realistic lesions (33%) and increasing mucosal details (42%)

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