Seeing beyond the human eye: AI in endoscopic detection

Martijn R. Jong

Postgraduate Teaching Programme Barcelona 2026 | Presentation

Endoscopy

October 18, 2026

Computer-aided detection systems for colorectal polyps modestly improve adenoma detection in controlled trials, but real-world effectiveness depends heavily on actual system use and endoscopist engagement, with long-term patient outcomes yet to be proven.

KEY POINTS

- The speaker reported that a triple-blinded Canadian RCT found CAD systems improved adenoma detection only when actually used, as the system was switched on in less than 60% of cases despite being available in the room.
- Over 40 RCTs with tens of thousands of patients show CAD systems generally increase adenoma detection rate with modest increases in advanced lesions, though real-world observational studies often show more mixed or null results.
- AI systems are highly vulnerable to poor image quality, and high-quality endoscopy remains essential as AI cannot compensate for inadequate examination technique.
- The speaker recommended that endoscopists first achieve proficiency in standard endoscopy before using AI assistance, maintain independent inspection rather than relying on AI alarms, and be aware of cognitive biases such as automation bias and false-positive anchoring.
- CAD systems for gastric neoplasia, Barrett's neoplasia, and oesophageal squamous cell carcinoma face commercial availability challenges due to disease rarity and lack of surrogate outcomes, requiring prohibitively large trials.
- The speaker disclosed that his research team receives financial support for AI development from Cosmos Pharmaceuticals and suggested that future CAD systems should integrate quality assurance with detection capabilities.

VIEW THIS CONTENT ON GUTFLIX

https://gutflix.eu/search/d/dedaea7e-d14f-11f1-a0ad-daaa6dbee0a2

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.