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## BACKGROUND

**Computer-aided polyp detection (CADe)** is one of the most promising AI applications for colorectal cancer prevention.

Clinical performance depends on rapid detection of briefly visible polyps while minimizing distracting false alarms.

We compared **CAD EYE** (Fujifilm) and **ColoMAIA II** using clinically relevant metrics applied to identical colonoscopy recordings.

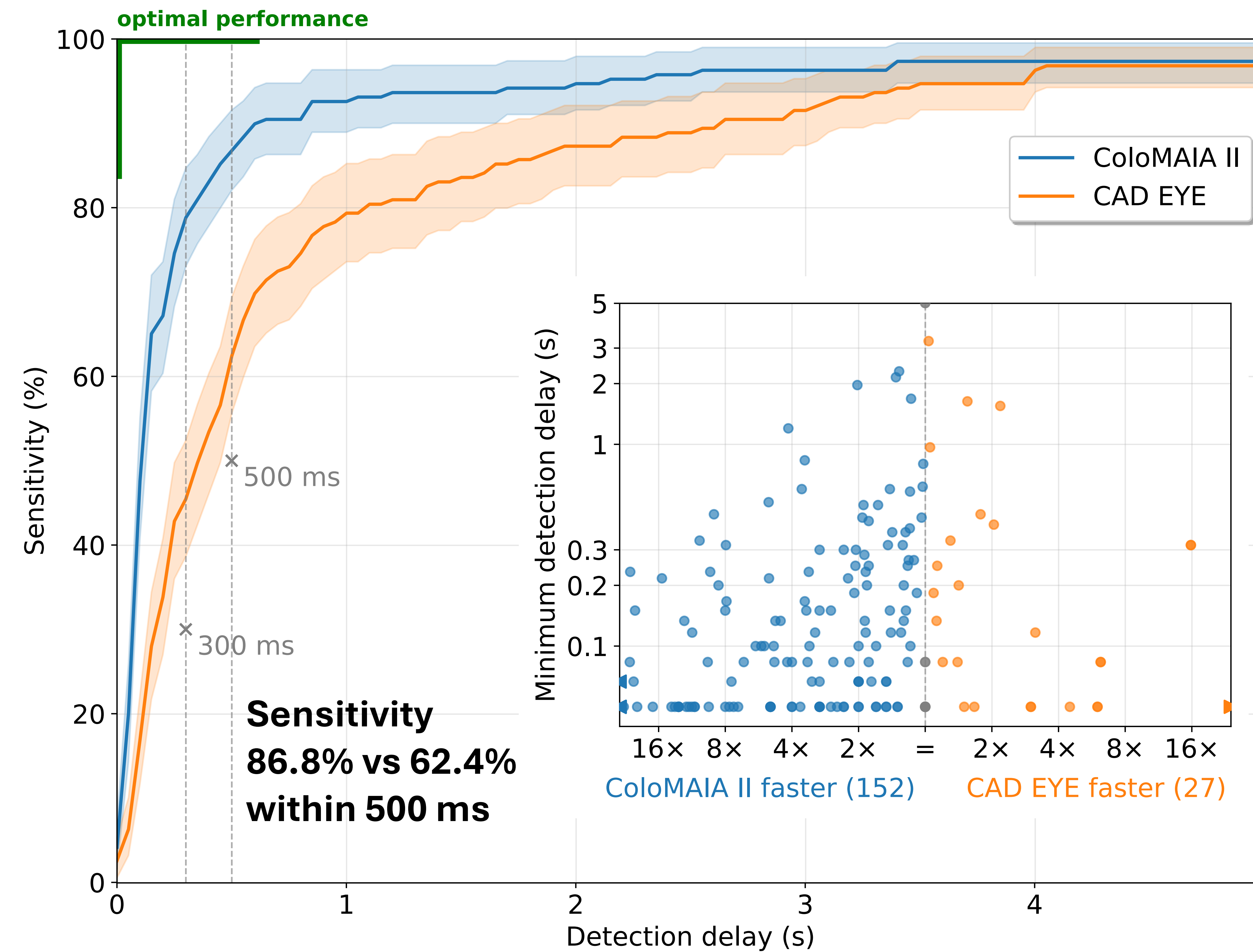
## STUDY AIM

- To compare **clinically relevant parameters of two CADe systems – CAD EYE and ColoMAIA II.**
- To evaluate false alarm frequency, detection delay, and delay-specific sensitivity.
- To assess clinically relevant parameters that may influence adenoma detection and endoscopist performance.

## STUDY DESIGN

- Retrospective single-center study.**
- 150** screening colonoscopies (**189** polyps; **1945** minutes of recordings).
- CAD EYE was used in real time during procedures. Identical recordings were analyzed offline using ColoMAIA II.
- All analyzed recordings were acquired using Fujifilm endoscopes. As CAD EYE is designed for Fujifilm platforms, whereas ColoMAIA II is vendor-agnostic, the hardware context may have favored CAD EYE.
- Per-polyp sensitivity was evaluated within 5 seconds of first appearance.
- False alarms were evaluated only during active mucosal inspection; interventions and preparatory phases were excluded.

## KEY FINDINGS



**Figure 1.** Cumulative polyp sensitivity by detection delay. Mean curves with 95% confidence intervals are shown.

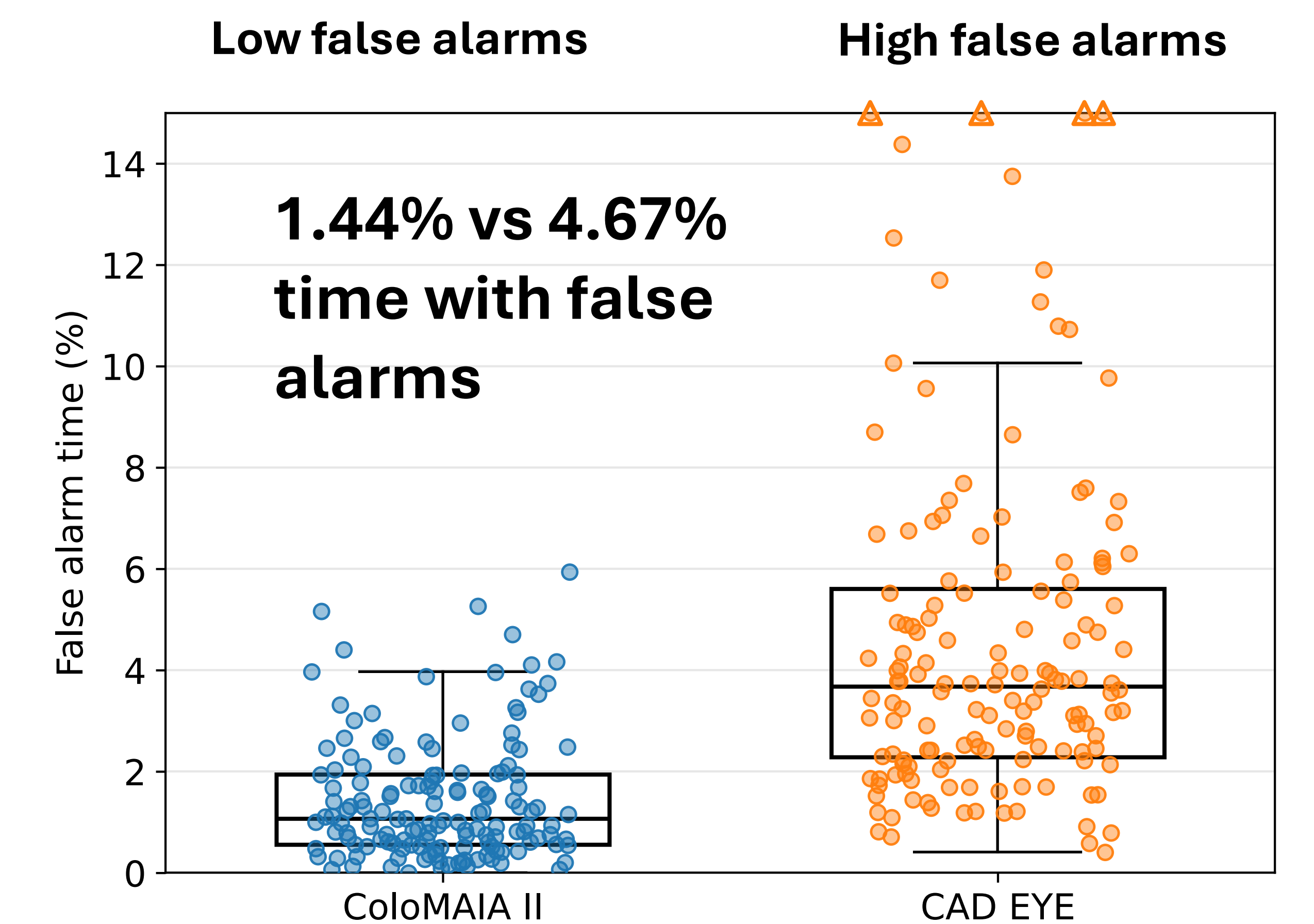
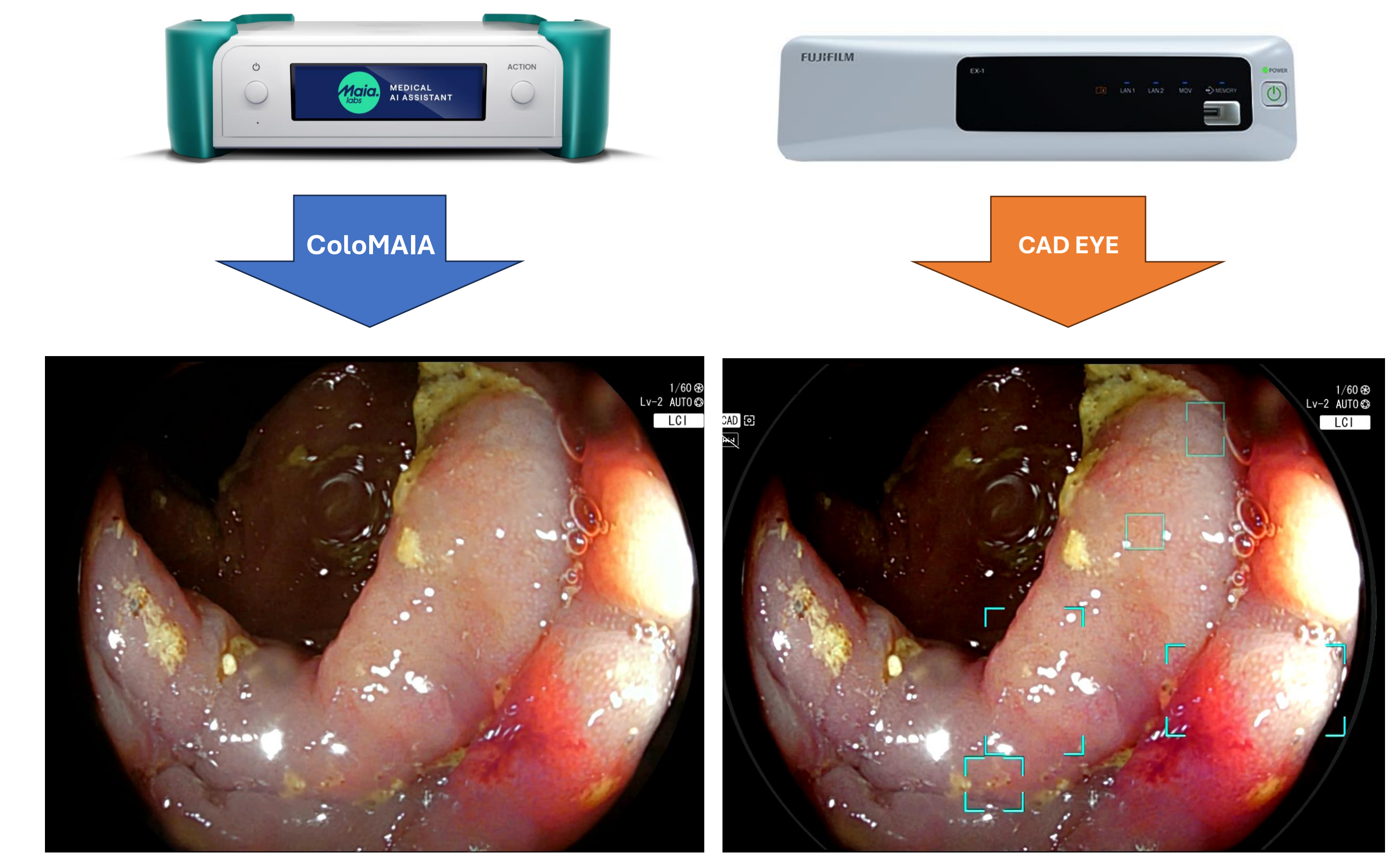
**Figure 2.** Per-polyp comparison of detection delay between ColoMAIA II and CAD EYE.

## CONCLUSIONS

- ColoMAIA II showed higher delay-specific sensitivity than CAD EYE, especially within 500 ms of first polyp appearance (86.8% vs 62.4%; +39% relative;  $p < 0.001$ ).
- ColoMAIA II showed a 3.24-fold lower proportion of time with false alarms (1.44% vs 4.67%;  $p < 0.001$ ).
- CAD EYE more frequently generated false alarms in response to stool fragments and debris.

## KEY MESSAGE

**ColoMAIA II detects polyps earlier and with fewer false alarms than CAD EYE in a head-to-head comparison.**



**Figure 3.** Procedure-level percentage of time with false alarms for ColoMAIA II and CAD EYE.

