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**Clinical consequences of computer-aided colorectal polyp detection**

*Sinonquel P, Eelbode T, Pech O, et al. Clinical consequences of computer-aided colorectal polyp detection. Gut 2024; 73: 1974-1983. doi:10.1136/gutjnl-2024-331943*

Machine learning assisted endoscopy has been touted as a potential valuable tool for increasing adenoma detection rate for endoscopists. This paper utilised a machine learning model combining two techniques of a traditional convolutional neural network (CNN) with a recurrent neural network (RNN). The RNN component allows analysis of preceding visual frames to reduce the false positive rate compared to a conventional CNN by over 50%. The model was trained on images from 825 polyps from 205 different patients.

Sinonquel *et al.,* analysed the performance of their computer aided detection (CAD) algorithm in 1,175 patients across nine different European sites by having a second endoscopist having real time access to the CAD output. There was no communication between the two endoscopists unless the CAD flagged a potential polyp missed by the primary endoscopist.

A total of 2,141 lesions were identified with no significant sensitivity difference between human and CAD, although when histology was used as the gold standard rather than visual detection, CAD had a small, but significant increased sensitivity of 96.9% compared to 95.1%. The CAD model flagged on average 28 false positive potential polyps per patient with 36% of those false positives not being immediately dismissible as non-neoplastic. The CAD system overall increased adenoma detection rate by 5.1% with particular benefit for endoscopists with lower detection rates.

The small additional yield for the price of equipment and potential distraction may not make CAD a viable investment at present, but Sinonquel *et al.,* have demonstrated CAD has largely now reached parity with human endoscopists in terms of sensitivity for visual detection of colorectal polyps.