

How Can We Effectively Utilize AI in Colorectal Endoscopy? Perspectives from Clinical Practice in Japan

Biography



Dr Ayaka TAKASU graduated from Tokyo Medical University in 2014. She accomplished her medical residency and pursued endoscopic training at St. Luke's International Hospital, Tokyo, until 2022.

Afterwards, she has been devoted to both clinical endoscopic therapy, and clinical research at Nihon University Hospital, and Cancer Institute Hospital under the great mentorship and supervision of Prof. Takuji Gotoda.

Her research interest includes endoscopic treatment for early-stage cancers, Helicobacter pylori-associated diseases, endoscopic screening, and colonic diverticular bleeding.

Abstract

Colorectal cancer (CRC) remains a significant global health challenge, necessitating precise screening methods for effective management. Colonoscopy plays a vital role in reducing the incidence and mortality of CRC by detecting adenomas and other precancerous lesions.

Recently, there has been dramatic progress in the development of artificial intelligence (AI) systems, such as computer-aided diagnosis systems, to assist endoscopists in detecting colorectal lesions during colonoscopy. Many studies have reported that the use of AI in detecting colorectal neoplasia during colonoscopy holds the potential to enhance the adenoma detection rate. Furthermore, it has been observed that combining AI with image-enhanced endoscopy can improve lesion detection.

In Japan, AI colonoscopy is gradually being introduced into actual clinical practice, primarily at large hospitals. Additionally, starting this summer, there will be an additional technical fee for using AI colonoscopy to detect polyps.

To utilize AI colonoscopy effectively and appropriately, we as endoscopists need to constantly update our understanding of the evidence. Furthermore, it is also important to learn traditional diagnostic techniques and knowledge in order to seamlessly integrate AI technology into clinical practice.

The purpose of this presentation is to provide an overview of the current published data and clinical applications of AI-based colonoscopy.