Case Study:

SKOUT Aided Surveillance Colonoscopy in Symptomatic 85-Year-Old Patient

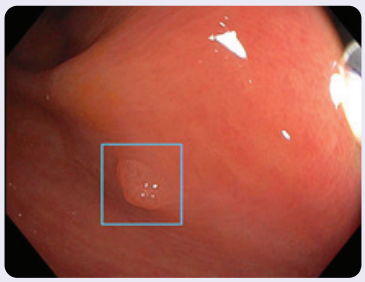
Dr. Adam Goodman
Professor of Medicine
NYU Grossman School of Medicine

Patient History

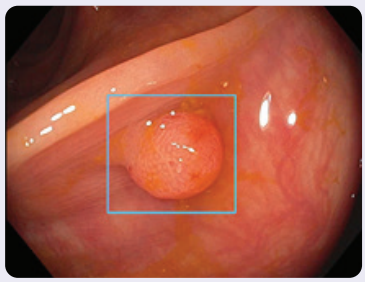
An 85-year-old female patient presented for a 5-year surveillance colonoscopy with complaints of iron deficiency anemia (IDA). Previous colonoscopy revealed 2 small tubular adenoma – 5mm in the descending and 3mm in the transverse sections of the colon.

Procedure

A colonoscopy was performed under MAC sedation. Bowel prep was deemed adequate with a Boston Bowel Preparation Score (BBPS) of 6. Time-to-Cecum was 5 minutes, withdrawal time was 12 minutes (excluding time for polypectomy), and the total procedure time was 20 minutes.



Transverse colon: single polyp



Splenic flexure: single polyp

Descending colon: single polyp

During examination, the patient was found to have several sessile polyps – a 5mm in the transverse, a 9mm at the splenic flexure, and a 7mm in the descending areas of the colon. Each polyp was very flat in nature, with the largest of the three hidden behind a large fold in the splenic flexure. Each polyp was removed successfully with a cold snare, and histopathology confirmed each polyp as a tubular adenoma. Patient recovered well with no postpolypectomy complications, and was told to return in 3 years for their next surveillance colonoscopy.

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Discussion

In this symptomatic patient with a history of colorectal neoplasia, artificial intelligence (SKOUT) aided in the detection of 3 flat and difficult-to-see polyps. During the procedure, the level of distraction (false positive activations) was low, and the AI device was able to discern between clinically relevant lesions that were similar in appearance to surrounding tissues with ease. The use of SKOUT did not impact overall procedural time and did not impede the normal workflow of the colonoscopy procedure.

AI-aided colonoscopies have been in practice since the first computer-aided detection device (CADe) was cleared by the FDA in 2021.[1] Since then, several studies have concluded that there are significant increases in ADR (adenoma detection rate) and/or APC (adenomas per colonoscopy) associated with its use in screening and surveillance colonoscopies, and it has the potential to reduce incidence rates of CRC in post-colonoscopy patients.[2]

One argument against the effectiveness of CADe is the notion that more hyperplastic polyps are identified with CADe colonoscopies compared to standard colonoscopies. However, a recent publication by Shaukat et al. (2024) demonstrated that there was no significant difference in the overall true histology rates (defined as polyps with confirmation of clinical relevant histopathology, THR) between colonoscopies with and without CADe, and even found that, in certain situations, THRs were higher in the CADe colonoscopies.[3] High THRs and the identification of suspected sessile polyps have the potential to decrease post-colonoscopy cancers. Sessile serrated polyps account for upwards of 30% of CRCs, and it can be difficult to identify suspected sessile polyps.[4] Technologies like SKOUT which have been trained to recognize these lesions can benefit clinicians and patients without affecting procedure times, colonoscopy workflow, or true histology rates.[2]

> "SKOUT performed very well. It had great detection, particularly for difficult-to-detect flat lesions. There were minimal false positives, so it wasn't distracting."
>
> - **Dr. Adam Goodman**

1. Commissioner, O. of the. (2021, April 9). FDA Authorizes Marketing of First Device that Uses Artificial Intelligence to Help Detect Potential Signs of Colon Cancer. FDA. https://www.fda.gov/news-events/press-announcements/fda-authorizes-marketing-first-device-uses-artificial-intelligence-help-detect-potential-signs-colon
2. Shaukat A, Lichtenstein D, Somers S, et al. (2022). Computer-Aided Detection Improves Adenomas per Colonoscopy for Screening and Surveillance Colonoscopy: A Randomized Trial. Gastroenterology. https://pubmed.ncbi.nlm.nih.gov/35643173/
3. Shaukat, A., Lichtenstein, D. R., Chung, D. C., Seidl, C., Wang, Y., Navajas, E. E., Colucci, D. R., Baxi, S., & Brugge, W. R. (2024). Patient and Procedural Factors associated with True Histology Rates in Patients Undergoing Colonoscopy with Computer Aided Detection of Polyps. Gastrointestinal Endoscopy. https://doi.org/10.1016/j.gie.2024.06.040
4. Zhou, M. J., Lebwohl, B., & Krigel, A. (2020). Patient and Physician Factors Associated with Adenoma and Sessile Serrated Lesion Detection Rates. Digestive Diseases and Sciences, 65(11), 3123–3131. https://doi.org/10.1007/s10620-020-06419-8