THE FUTURE IS NOW.
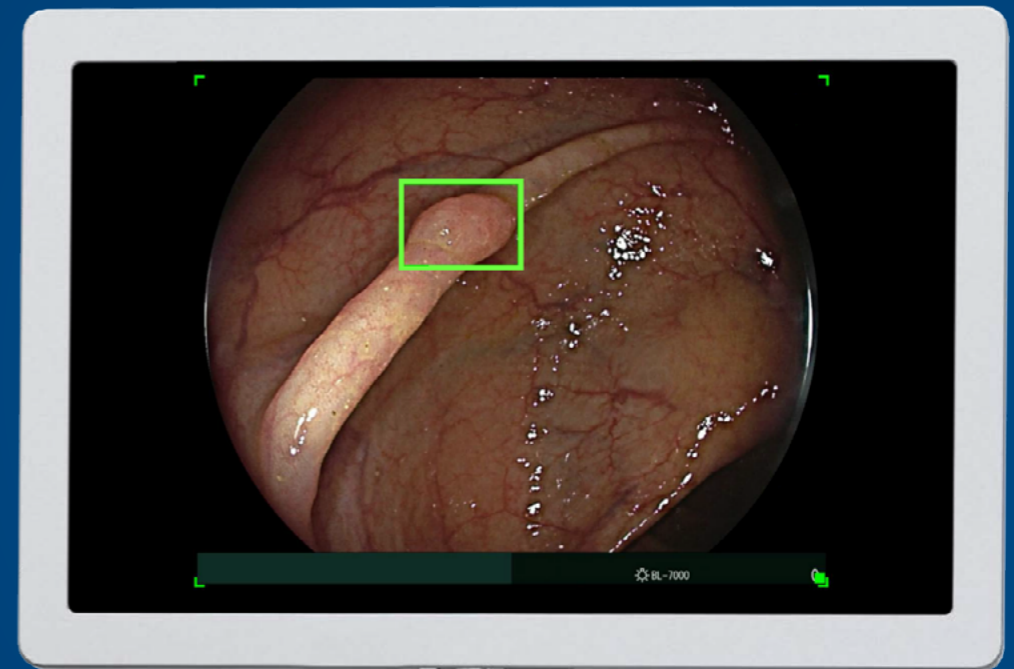
GI Genius™ intelligent
endoscopy module

Powered by **Artificial Intelligence**

Medtronic
Further, Together

Medtronic

+

ARTIFICIAL INTELLIGENCE

WE'RE LEADING THE WAY WITH ARTIFICIAL INTELLIGENCE (AI) — SO SHOULD YOU.

At Medtronic Gastrointestinal, we're reimagining the future and the now — to transform healthcare.

Powered by AI, we deliver disruptive innovation to challenge unmet, clinical needs and improve lives.

Meet GI Genius™ intelligent endoscopy module. The first-to-market, deep learning, computer-aided polyp detection system.

← →

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AI ISN'T COMING,
IT'S ALREADY HERE.

The GI Genius™ intelligent endoscopy module offers a transformative solution — to address the challenges of preventing colorectal cancer.

By harnessing deep learning algorithms and real-time data, we empower physicians to detect and treat colorectal polyps through enhanced visualization.

"As the number one medical device company in the world we must leverage the AI revolution for our products, physicians, and most importantly our patients."

Dori Peleg, Director Artificial Intelligence and Technical Fellow, Medtronic

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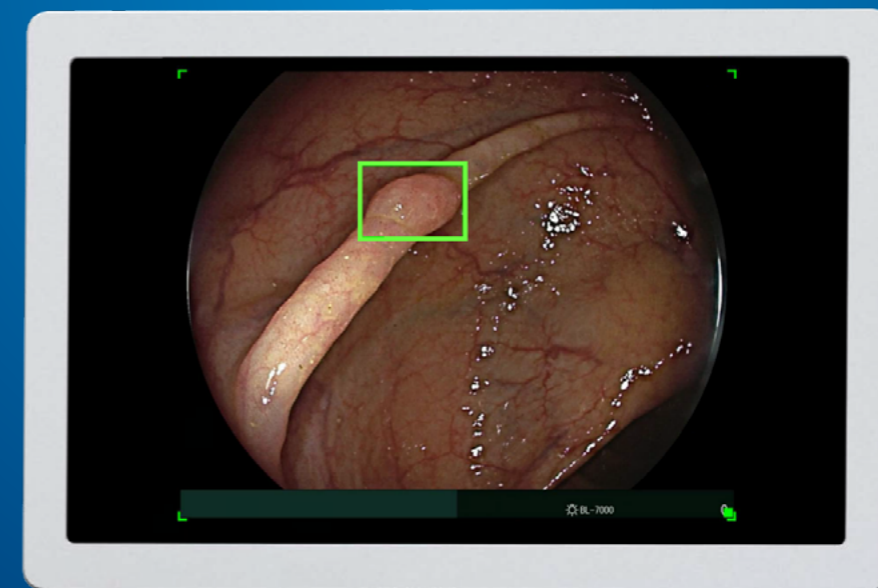
SEAMLESS INTEGRATION.
UNIVERSAL COMPATIBILITY.

1.
Your existing endoscopy tower and high-definition endoscope is all you need to integrate with the GI Genius™ intelligent endoscopy module.

2.
GI Genius™ intelligent endoscopy module can be easily integrated with existing brands of endoscopic processors (Olympus, Fujifilm, Pentax).

3.
GI Genius™ intelligent endoscopy module simply connects to the existing endoscope, video processor, and display monitor.

4.
Turn on GI Genius™ intelligent endoscopy module and immediately experience the benefits of AI, without changing any part of your procedure.

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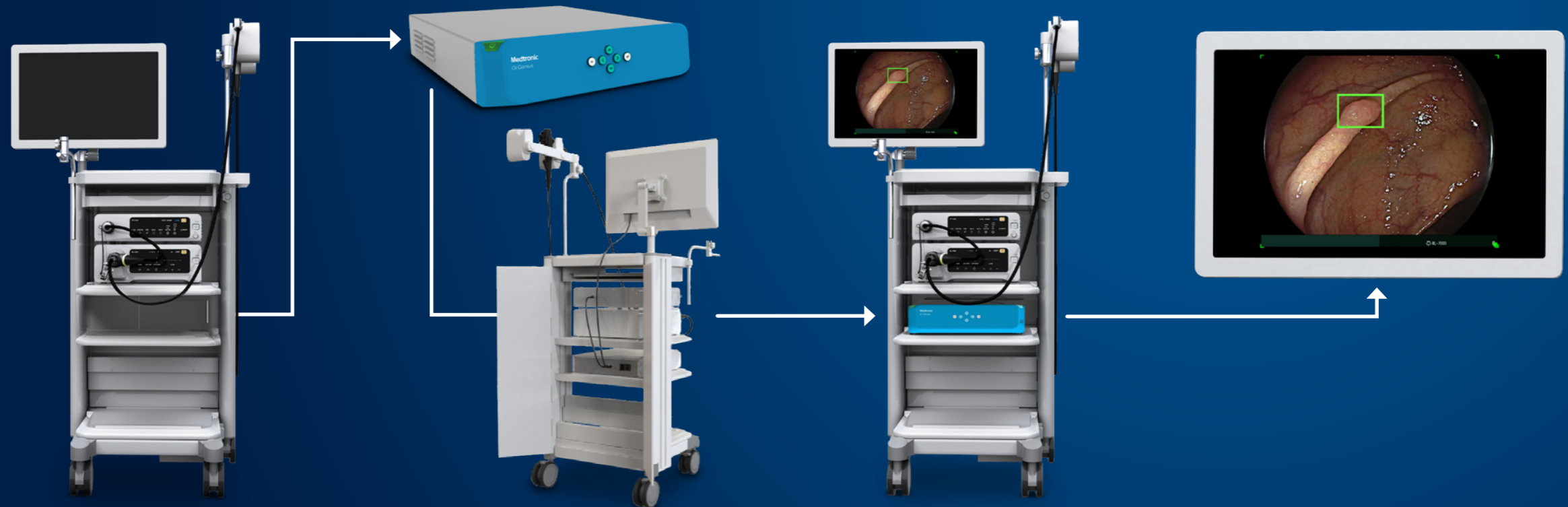
ARTIFICIAL INTELLIGENCE.
REAL RESULTS.

GI Genius™ intelligent endoscopy module is your ever-vigilant second observer — designed to help you and your patients.

Second observers during colonoscopy can improve adenoma detection rate (ADR).[1] Endoscopists with higher ADR during screening colonoscopy, more effectively reduce the risk of colorectal cancer.[2] AI-assisted colonoscopy can increase ADR by identifying missed lesions and helping endoscopists detect the undetected.[3]

+30%[3]
relative increase in ADR

+50%[3]
more likely to detect multiple polyps

+53%[3]
more likely to detect polyps in the distal colon

1. Aslanian HR, Shieh FK, Chan FW, et al. Nurse observation during colonoscopy increases polyp detection: a randomized prospective study. *Am J Gastroenterol.* 2013;108(2):166–172.

2. Corley DA, Jenson CD, Marks AR JR, et al. Adenoma detection rate and risk of colorectal cancer and death. *The New England Journal of Medicine.* 2014; 370: 2539–2541.

3. Repici A, Badalamenti M, Maselli R, et al. Efficacy of real-time computer-aided detection of colorectal neoplasia in a randomized trial. *Gastroenterology.* 2020; 159:512–520.e7.

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DETECT THE UNDETECTED.
REGARDLESS OF SKILL,
REGARDLESS OF SCOPE.

GI Genius™ intelligent endoscopy module is trained to help automatically detect colorectal polyps regardless of shape, size, and morphology.[1]

The GI Genius™ intelligent endoscopy module has a 99.7 percent sensitivity rate[2] and less than 1 percent false activations.[2]
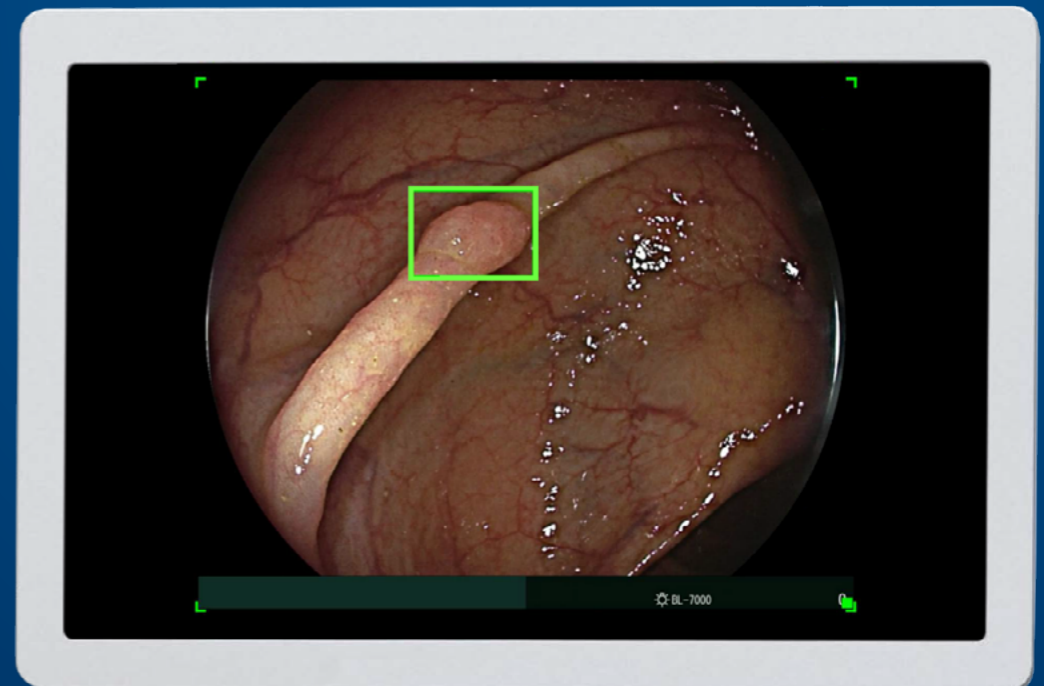
It also performs real-time analysis; 82 percent faster than the endoscopist.[2]

Performance

99.7%[2]
sensitivity

82%[2]
faster polyp recognition than the endoscopist (RT)

<1%[2]
false activations

1. Repici A, Badalamenti M, Maselli R, et al. Artificial intelligence for colorectal polyp detection: high accuracy and detection anticipation with CB-17-08 performance. *Oral or Poster*. Dec. 2018.

2. Hassan C, Wallace MB, Sharma P, et al. New artificial intelligence system: first validation study versus experienced endoscopists for colorectal polyp detection. *Gut*. 2020;69:799–800.

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INCREASE ADR,
TO DECREASE CANCER RISKS.

Your goal is to reduce your patients' risk of colorectal cancer by identifying potentially harmful lesions. Colonoscopy can be preventative against the development of colorectal cancer by early detection and resection of neoplastic lesions. However, the procedure is highly operator dependent and detection rates can vary greatly.[1]

Demonstrated in a recent study, the GI Genius™ intelligent endoscopy module can help enhance ADR. Reducing your patients' risk of undetected polyps[1] without changing your procedure — and without changing your withdrawal time.[2]

1%[1] **= 3%**[1]
increase in ADR   **reduction** in interval CRC risk

14.4%[2] **30%**[2] **46%**[2]
increase in absolute ADR   relative increase in ADR   increase in relative APC
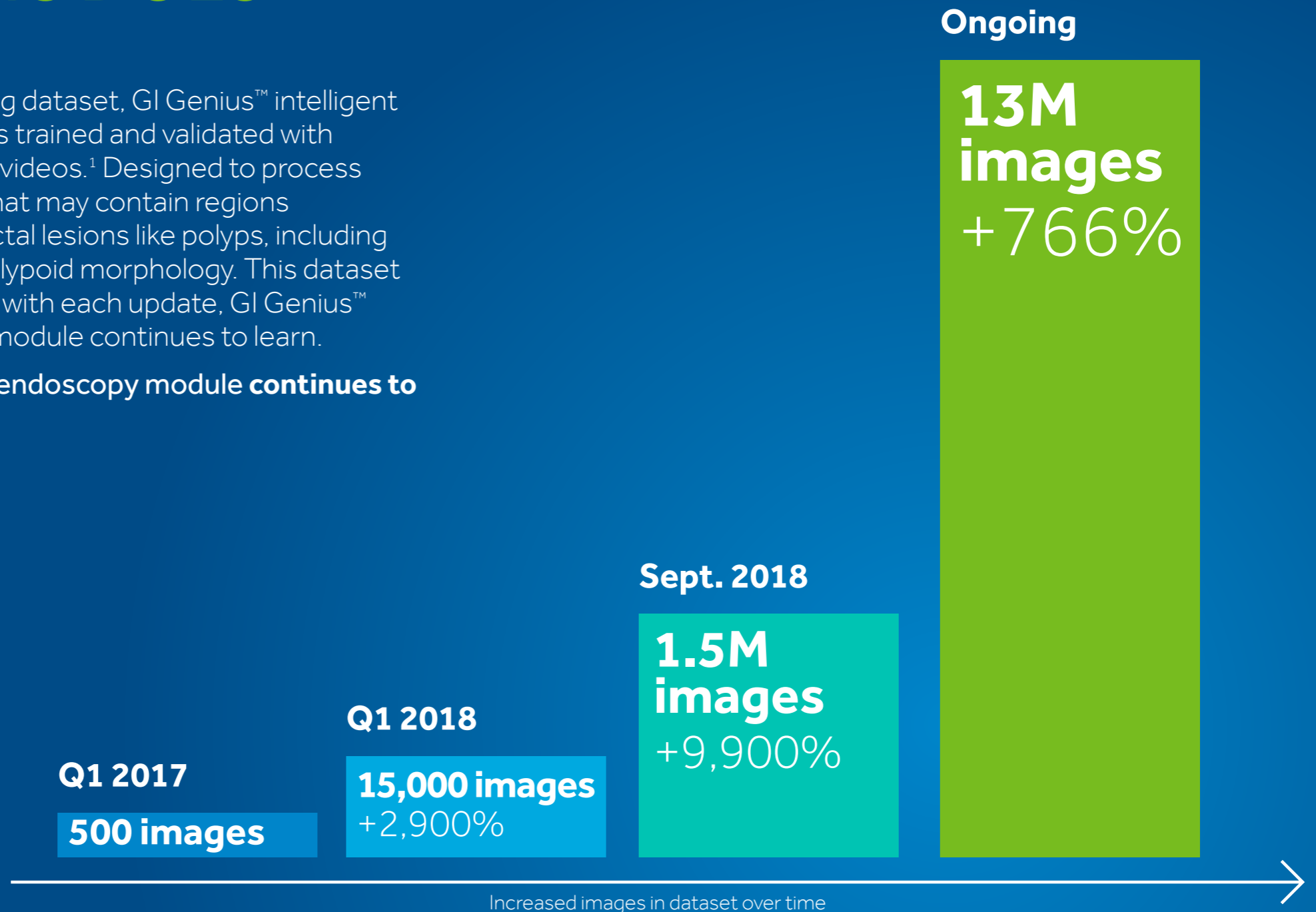
1. Corley DA, Jenson CD, Marks AR JR, et al. Adenoma detection rate and risk of colorectal cancer and death. *The New England Journal of Medicine.* 2014; 370: 2539–2541.

2. Repici A, Badalamenti M, Maselli R, et al. Efficacy of real-time computer-aided detection of colorectal neoplasia in a randomized trial. *Gastroenterology.* 2020; 159:512–520.e7.

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INCREASE ADR, TO DECREASE CAN

Your goal is t
cancer by ide
Colonoscopy
development
resection of
is highly oper
vary greatly.

Demonstrate
intelligent er
Reducing yo
without char
changing you

rval CRC risk

46%[2]

crease in
ative APC

View stud

Study findings

A study of more than 300,000 colonoscopies performed by 136 gastroenterologists demonstrated that ADR ranged from 7.4 percent to 52.5 percent.[1] Moreover, a study by Lee et al found there is a 12.4 percent[2] reduction in mean detected polyps between morning and afternoon procedures.

300,000
colonoscopies

136
gastroenterologists

ADR ranged from
7.4%[1]–52.5%[1]

Reduction in mean detected polyps between morning and afternoon procedures
12.4%[2]

1. Corley DA, Jenson CD, Marks AR JR, et al. Adenoma detection rate and risk of colorectal cancer and death. *The New England Journal of Medicine*. 2014; 370: 2539–2541.
2. Lee A, Iskander JM, Gupta N, et al. Queue position in the endoscopic schedule impacts effectiveness of colonoscopy. *Am J Gastroenterol*. 2011 Aug; 106(8): 1457–1465.

1. Corley DA, Jenson CD, Marks AR JR, et al. Adenoma detection rate and risk of colorectal cancer and death. *The New England Journal of Medicine*. 2014; 370: 2539–2541.
2. Repici A, Badalamenti M, Maselli R, et al. Efficacy of real-time computer-aided detection of colorectal neoplasia in a randomized trial. *Gastroenterology*. 2020; 159:512–520.e7.

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WE'LL STOP
WHEN CRC DOES.

Built on an ever-growing dataset, GI Genius™ intelligent endoscopy module was trained and validated with white-light endoscopy videos.[1] Designed to process colonoscopy images that may contain regions consistent with colorectal lesions like polyps, including those with flat, non-polypoid morphology. This dataset continues to grow, and with each update, GI Genius™ intelligent endoscopy module continues to learn.

GI Genius™ intelligent endoscopy module **continues to set the standard.**

Ongoing

13M images
+766%

Sept. 2018

1.5M images
+9,900%

Q1 2018

15,000 images
+2,900%

Q1 2017

500 images

Increased images in dataset over time

1. Hassan C, Wallace MB, Sharma P, et al. New artificial intelligence system: first validation study versus experienced endoscopists for colorectal polyp detection. *Gut.* 2020;69:799–800.

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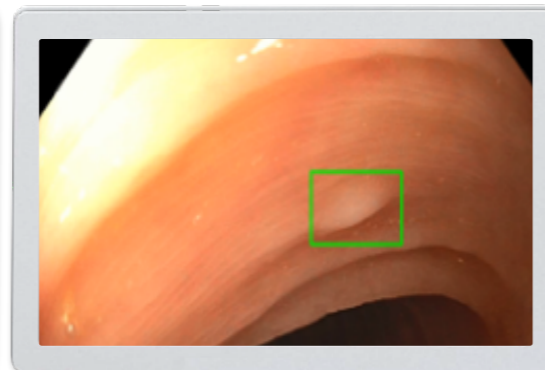# ADVANCED PRECISION. ENHANCED PERFORMANCE.
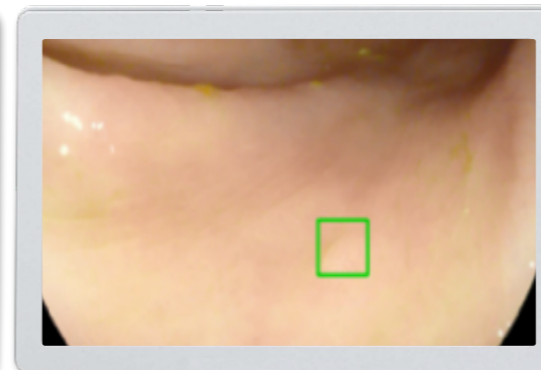
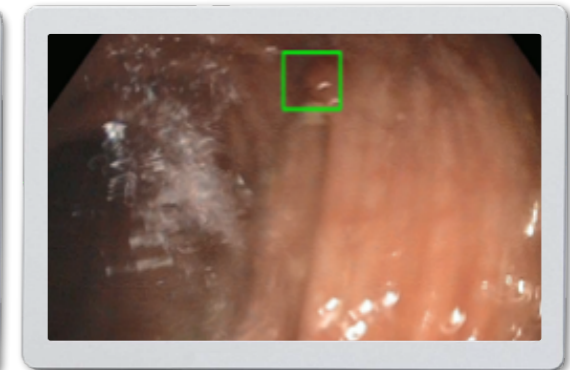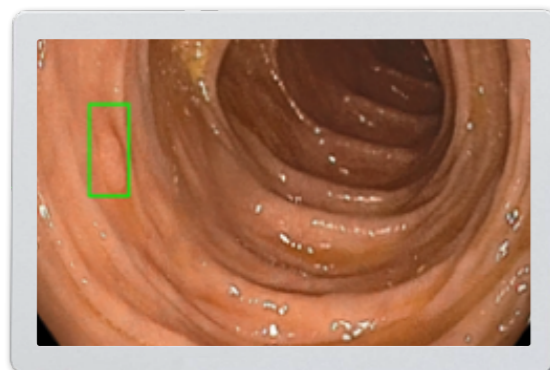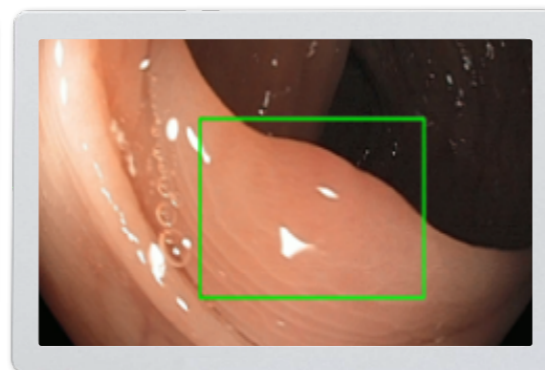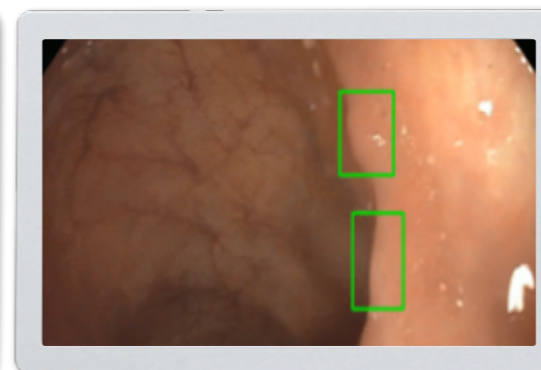## GI Genius™ intelligent endoscopy module in action
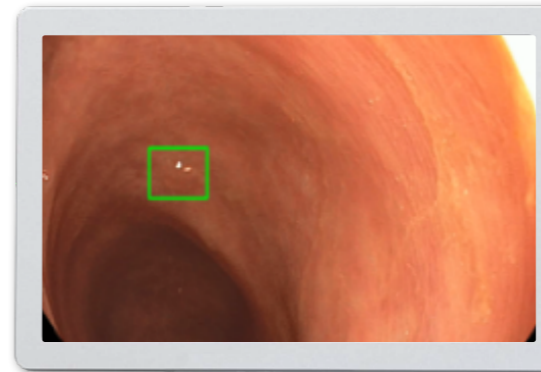
6 mm SSA
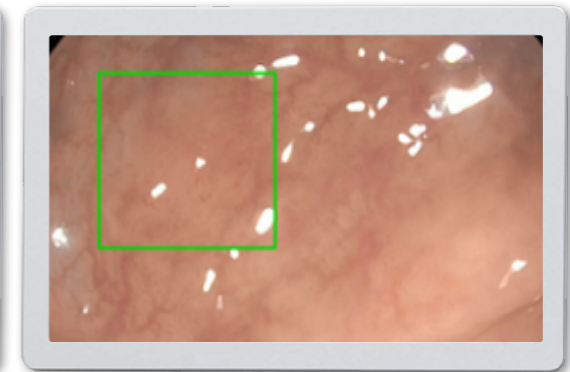
4 mm SSA
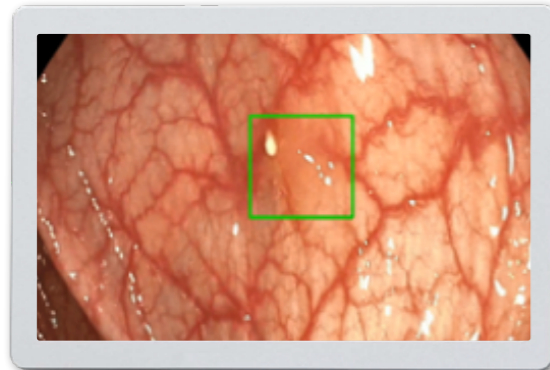
4 mm SSA

3 mm adenoma

2 mm adenoma

8 mm adenoma

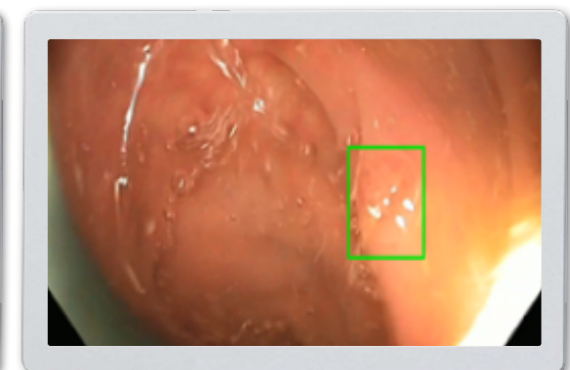3 mm adenoma

5 mm adenoma

2 mm adenoma

3 mm adenoma

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DISCOVER THE POWER OF AI—
TRANSFORM COLORECTAL CARE.

Contact your Medtronic GI representative to learn more.

Powered by **Artificial Intelligence**

GI Genius™ intelligent endoscopy module

Product Code: CB1708-EU

Refer to IFU for more information on Indications, Contraindications and Risks.

medtronic.com/gi

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