

# AI AT YOUR SIDE BETTER TOGETHER

Colonoscopy  
Challenges

Trained for  
real-world  
application

PENTAX  
Medical  
Discovery™

Clinical  
Relevance

Experience  
Discovery™

Technical  
Information

**PENTAX Medical Discovery™**  
Detect more clinically relevant lesions.



DISCOVERY **AI**

# Sessile Serrated Lesions are easy to miss

Too many SSLs are still being missed in examinations due to:



**indistinct borders**

**pale color**

**characteristic mucus cap**

**predominantly  
right-sided location**

**mostly flat morphology**



Discovery is **the first AI system** to demonstrate a significant **increase in SSL detection**: In our study experts increased their detection of SSLs by 11 % per colonoscopy.<sup>1)</sup>

**+11%**  
SSLs per colonoscopy found



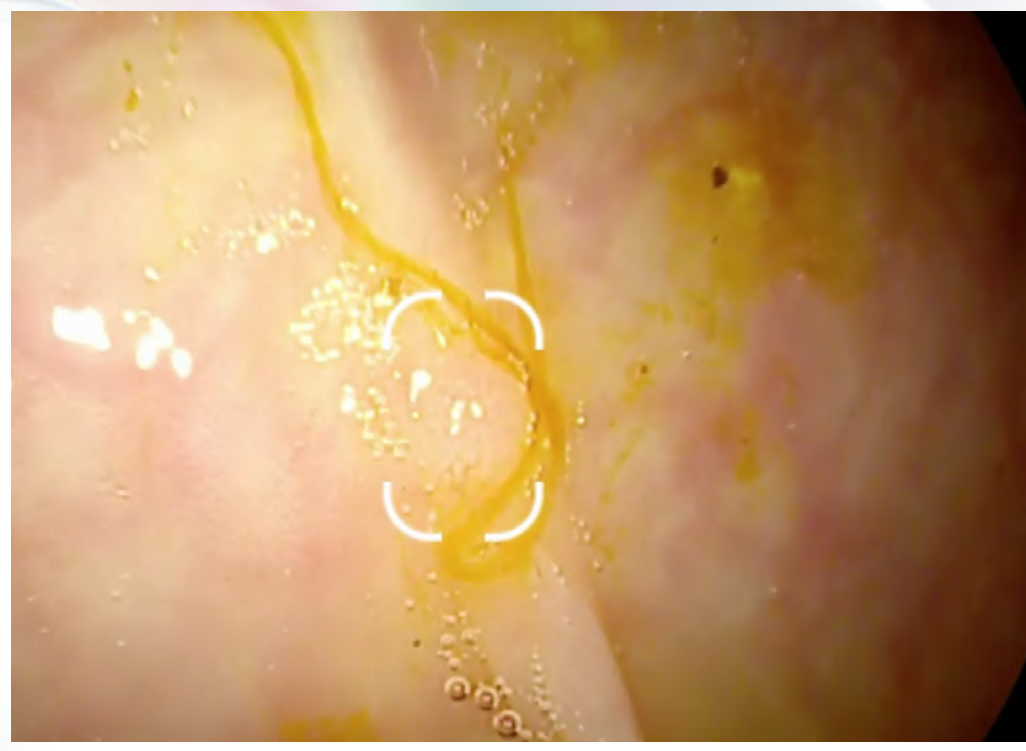
1) Maas M H J et al. A computer-aided detection system in the everyday setting of diagnostic, screening and surveillance colonoscopy: An international, randomized trial. Published November 6, 2023 <https://doi.org/10.1002/ueg2.12474>

Trained for real-world application

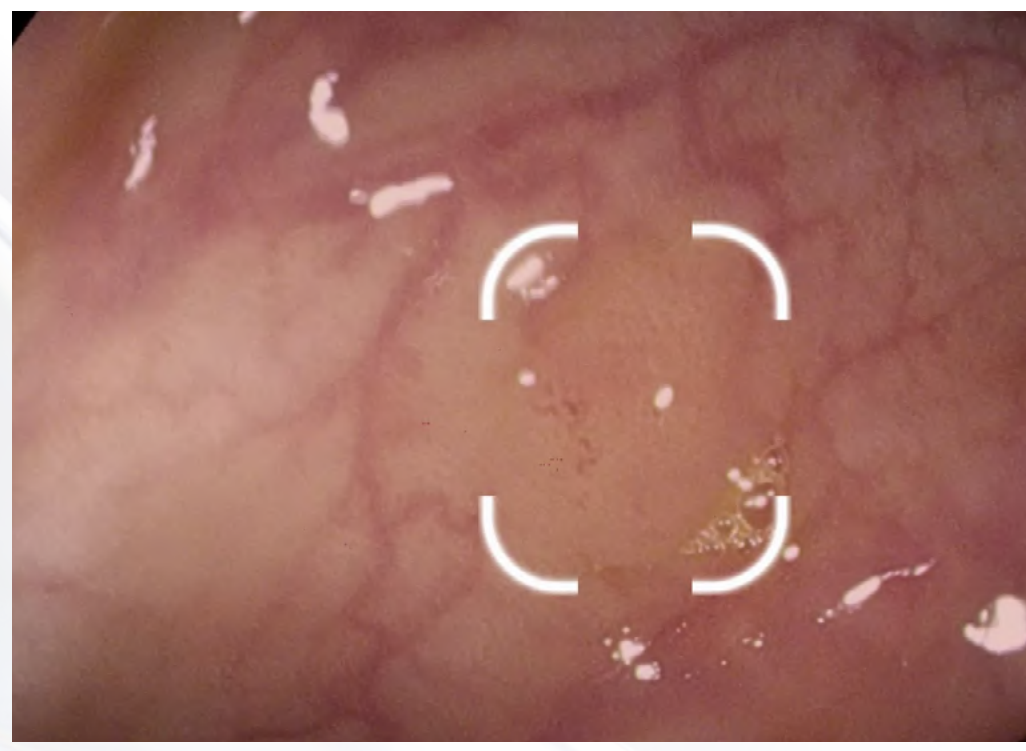
# Discovery learned from the real world



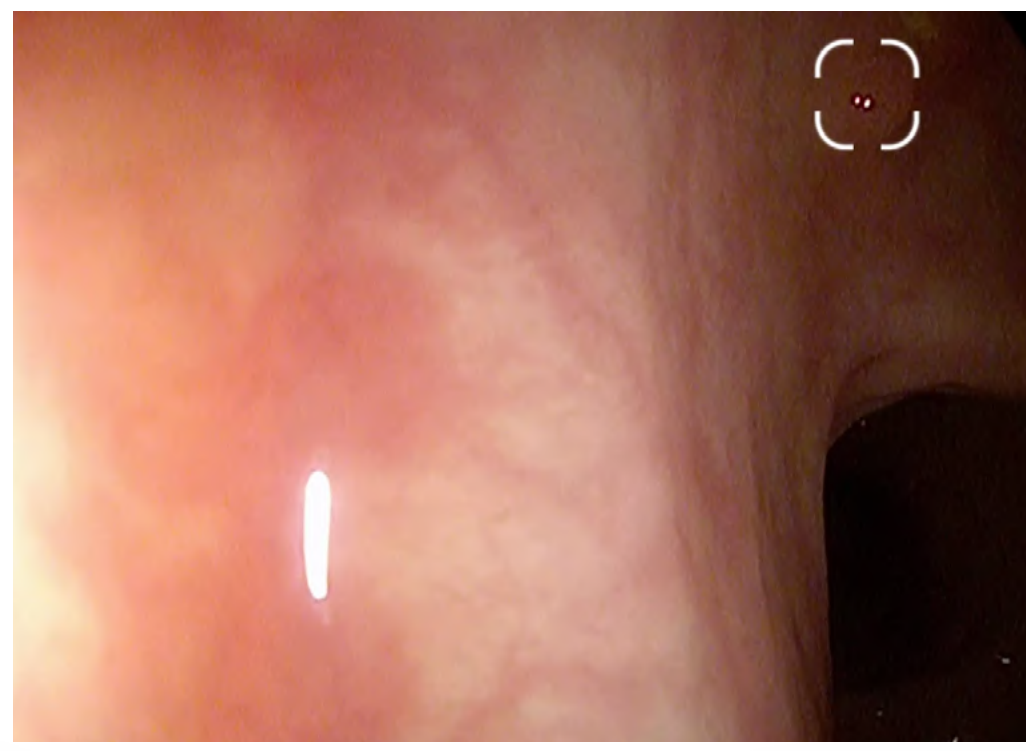
**Insufficient bowel preparation**



**Subtle lesions**



**Polyps off-center, out of focus**



To support you in real-world cases Discovery learned from real-world case images.

**Expert contributed database**

Images were recorded and annotated by renowned CRC centers worldwide.

# PENTAX Medical Discovery™ AI at your side for perfect synergy



Discovery has been optimized to detect more clinically relevant lesions. Studies showed a positive effect on different user groups which is why Discovery is compatible with all recent PENTAX Medical video processors and HD endoscopes.



OPTIVISTA PLUS



IMAGINA



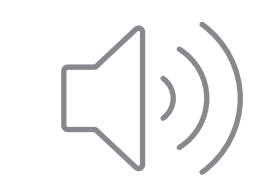
INSPIRA



Signals in real-time



VISUAL MARKER



SOUND

PENTAX Medical Discovery™

# Simple setup – simple choice



To make your upgrade to AI as easy as possible,  
Discovery adapts to your setup.

## Flexibility

Depending on your preferences Discovery can either be used as your **main monitor** or in a portable setup.

## Portability

Its integrated design and simple connectivity allow Discovery to be used in **multiple rooms**, wherever you need it.



# You and Discovery – better together

## Without your skills, AI can't find a single lesion

Combining skills creates a synergy and maximizes your detection rate. It supports experts as well as gastroenterology fellows.<sup>1)</sup>



### Your experience

- lets you reach the cecum in 6 min.
- ensures covering all of the mucosa
- makes you look behind every fold



### Discovery at your side

- finds subtle lesions in areas you visualize
- monitors thousands of spots in parallel
- is 100 % alert, even when you blink

1) Maas M H J et al. A computer-aided detection system in the everyday setting of diagnostic, screening and surveillance colonoscopy: An international, randomized trial. Published November 6, 2023 <https://doi.org/10.1002/ueg2.12474>

## Clinical Relevance

# Studies show the real effect



With Discovery, even colonoscopy experts were able to find more clinically relevant lesions than ever.

Within our global multi-center randomized controlled trial, Discovery was able to significantly increase the detection of SSLs even among experts.<sup>1)</sup>

Each 1 % increase in the SSL detection rate is associated with a 7 % decrease of risk of interval post-colonoscopy colorectal cancer<sup>2)</sup>.

**+11%**  
SSLs per colonoscopy found<sup>1)</sup>

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2) van Toledo D E, IJspeert J E, Bossuyt P M, Bleijenberg A G, van Leerdam M E, van der Vlugt M, ... & Dekker E (2022). Serrated polyp detection and risk of interval post-colonoscopy colorectal cancer: a population-based study. The Lancet Gastroenterology & Hepatology, 7(8), 747-754

# Experience PENTAX Medical Discovery™ What experts say about it



Prof Peter Siersema, Professor of Gastrointestinal Endoscopy, Editor in Chief Endoscopy, Erasmus MC – University Medical Center Rotterdam, Netherlands

“Computer-aided detection has been shown to increase the detection of pre-cancerous colorectal lesions. The introduction of the PENTAX Medical Discovery artificial intelligence system opens the door to a new era where endoscopists and PENTAX Medical Discovery jointly reduce health-care costs by decreasing the prevalence of colorectal cancer.”



Prof Timo Rath, Professor of Endoscopy and Molecular Imaging, University of Erlangen, Nuremberg, Germany

“I’m very confident that PENTAX Medical Discovery will translate into increasing our adenoma detection rate and there with will contribute to reducing colorectal cancer mortality.”



Prof Cristiano Spada, Professor of Gastroenterology, Fondazione Poliambulanza Istituto Ospedaliero, Brescia, Italy, Fondazione Policlinico Gemelli IRCCS, Rome, Italy

“Artificial intelligence has entered in our GI endoscopy unit where it assists our endoscopists in detecting especially difficult lesions such as SSLs more easily. The introduction and adoption of PENTAX Medical Discovery helps to perform high quality colonoscopies with the ultimate goal to reduce the risk of colorectal cancer.”

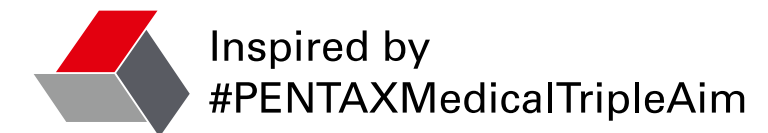
# Experience PENTAX Medical Discovery™ Key benefits at a glance



Discovery is **the first AI system** to demonstrate a significant **increase in SSL detection**: In our study experts increased their detection of SSLs by 11 % per colonoscopy.<sup>1)</sup>

It **supports experts as well as gastroenterology fellows** and helps them increase their confidence in their skills and the examination outcome.<sup>1)</sup>

Detecting more SSLs **improves the patient's quality of life**. Increasing the detection rate of SSLs in the proximal colon by 1 % is associated with a decrease in colorectal cancer risk by 7 %.<sup>2)</sup>



1) Maas M H J et al. A computer-aided detection system in the everyday setting of diagnostic, screening and surveillance colonoscopy: An international, randomized trial. Published November 6, 2023; <https://doi.org/10.1002/ueg2.12474>  
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# Experience PENTAX Medical Discovery™ You have to see it in action



There is nothing like seeing Discovery at work for yourself. We offer you various ways to get this personal experience as close up as you wish.



### On-site Demonstration

Trial at your institute supported by experienced PENTAX Medical staff. Ask your PENTAX Medical sales representative.



### Watch clinical case

See videos of real cases where Discovery supports a colonoscopy.



Technical Information

# PENTAX Medical Discovery™



## PENTAX Medical Discovery™ Smart Assistant System SAS-M10

### PARAMETERS

### VALUES

Display	32" LCD capacitive touch-screen
Max. resolution	3,840 × 2,160
Max. colors	10 bits (8 bits + FRC)/1.07B colors
CPU	Intel® Core™ i7 – 6820EQ Processor
Storage	2.5" Solid State Drive
Dimensions (W × H × D)	778 × 478 × 102 mm
Net weight	20.6 kg
Power supply	100–240V AC; 50–60Hz
Degree of protection against electric shock/ingress of water	Class I/IPX0
Video input	DVI-D, SDI
Video output	DisplayPort
Compatible Video Processors	EPK-i8020c, EPK-i7010, EPK-i7000, EPK-i7000(A), EPK-i5500c, EPK-i5010, EPK-i5000



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PENTAX Medical Discovery™ (SAS-M10): Medical device class: I  
Video processors & Endoscopes: TÜV Süd CE0123: Medical device class: IIa  
These products must be used only by healthcare professionals. Before usage and for detailed product specifications,  
please refer to the instructions for use (IFU). Product specifications are subject to change without notice or obligation.  
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MKG12796EN-G Rev. 7 (v7.0)