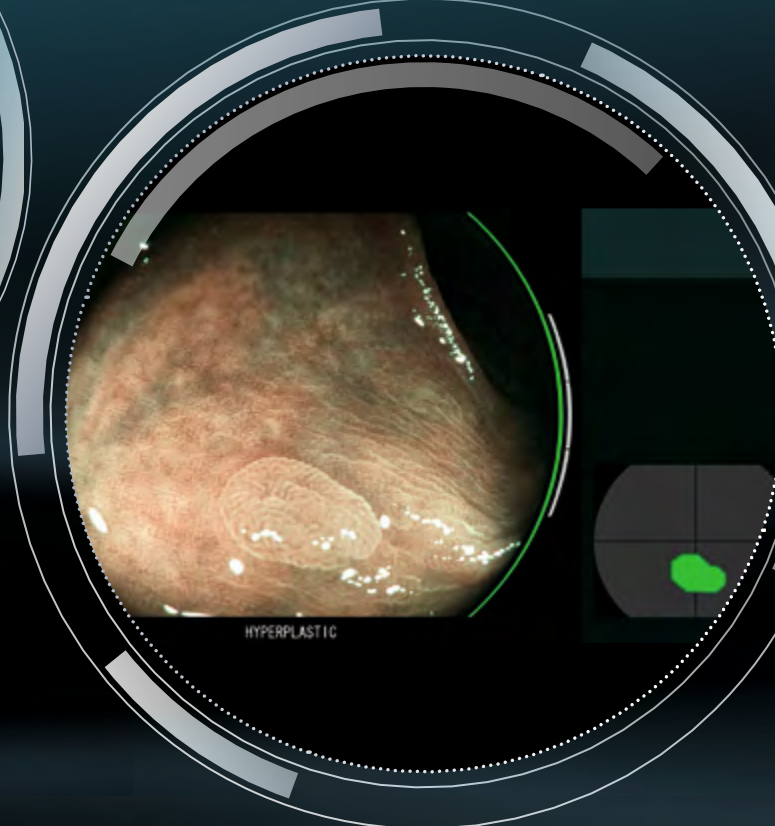
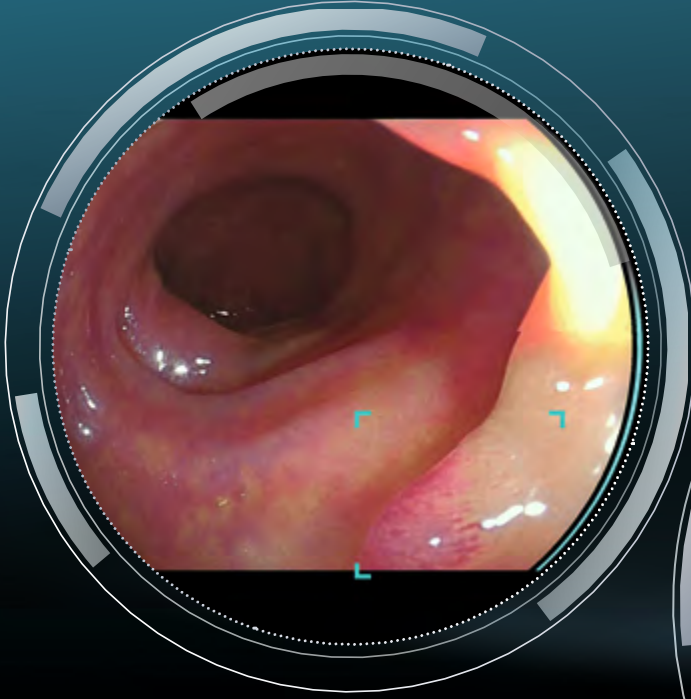




DUOMED



FOR COLONIC POLYPS



ELUXEO™ ULTRA MEETS ARTIFICIAL INTELLIGENCE

DETECTION AND
CHARACTERISATION



POWERED BY
REiLI



FUJIFILM
Value from Innovation



ACCELERATE INNOVATION



Fujifilm has pursued and developed cutting-edge image processing technologies for many years. And in 2018, by utilising these technologies it has developed its proprietary medical AI technology.

REILI - MEDICAL AI TECHNOLOGY

Fujifilm continues to develop technologies that can be applied to medical image diagnosis. One particular focus has been the development of technologies powered by REILI for the radiology field as well as medical ultrasound and, more recently, endoscopy.

CAD EYE FOR DETECTION AND CHARACTERISATION

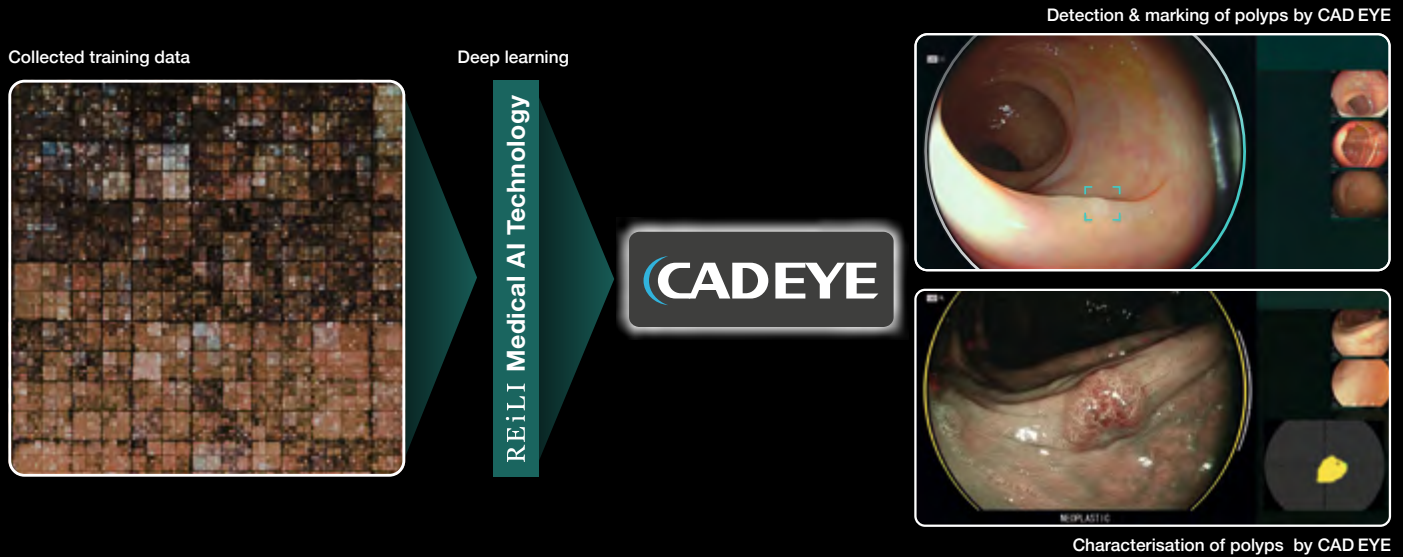
CAD EYE has been developed utilising AI deep learning technology and is compatible with Fujifilm's ELUXEO™ endoscopy series to support endoscopic lesion detection and characterisation in the colon.

FUJIFILM'S HISTORY OF INNOVATIONS IN ARTIFICIAL INTELLIGENCE

<p>1956 Launched the "FUJIC" calculator</p> 	<p>1983 Launched the world's first digital radiography system: FOR</p> 	<p>1996 Launched patented image intelligence algorithms in the consumer photo marketplace</p> 	<p>1999 Released the industry's first web-based Radiology PACS</p> 	<p>2007 Launched facial image recognition in digital still cameras</p> 	<p>2010 Launched Synapse® 3D's simulator for organ recognition/resection Launched support for mammography CAD</p> 
1980	1990	2000	2010	Machine learning	
Image processing			Image recognition		

DEEP LEARNING TECHNOLOGY

CAD EYE has been trained with a powerful supercomputer located in Fujifilm's global AI technology centre in Tokyo, utilising an immense amount of clinical images using Fujifilm endoscopy systems. As a result, CAD EYE is a customised detection and characterisation support compatible with the ELUXEO™ system.



2014

Launched Virtual Grid™ processing, which enhances image contrast and clarity



2014

2018

Launched the REiLI artificial intelligence platform and deep learning engines



Brain(s) creative AI center installed NVIDIA's DGX-2 for AI development

Launched AI algorithms for bridge crack detection to support infrastructure improvements

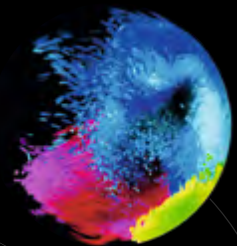
Entered joint research agreement with Indiana University School of Medicine for AI medical imaging development

Announced joint collaboration with Lunit Inc. and Salud Digna to help radiologists evaluate AI technologies for diagnostic imaging



ELUXEO™ MEETS

REiLI



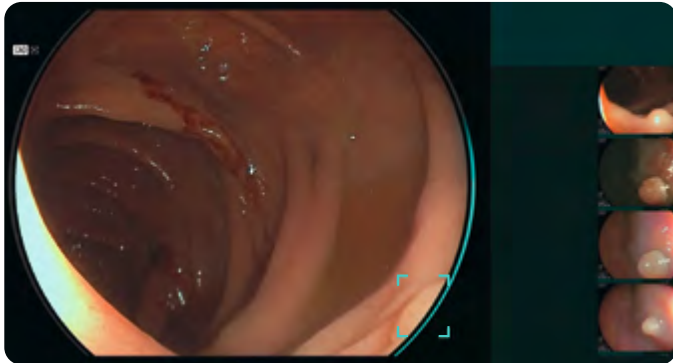
Deep learning

Diagnostic support

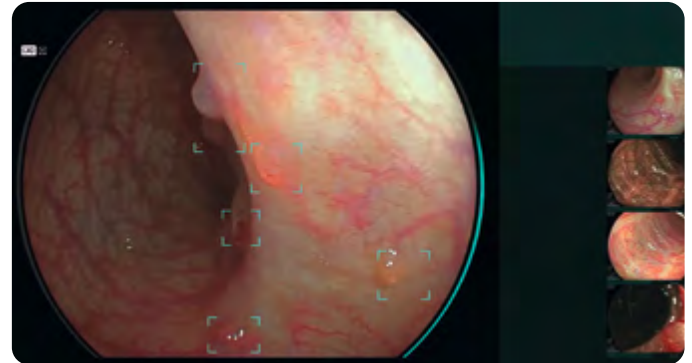


LCI REAL-TIME DETECTION

CAD EYE is aimed to improve the real time polyp detection rate to expert level, helping to recognise flat lesions, multiple polyps simultaneously, as well as any lesions at the corner of the image. CAD EYE Detection is possible with White Light and LCI (Linked Color Imaging) mode.



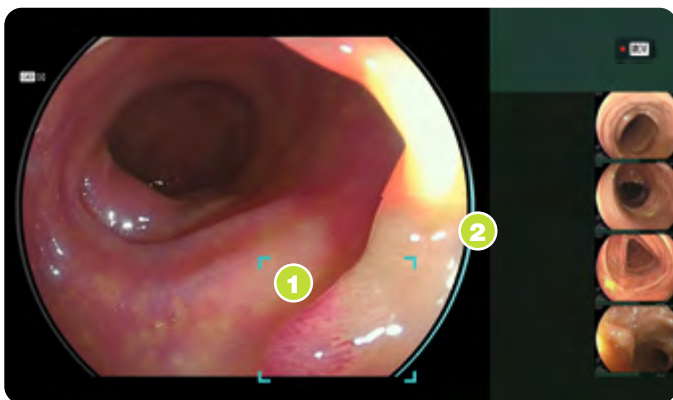
White Light Mode






LCI Mode

USER-FRIENDLY INTERFACE

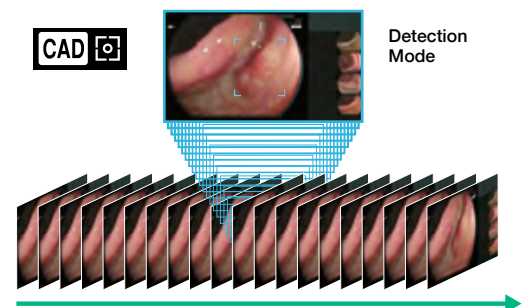
The development of the interface has been designed to enable comfortable procedures. It does not interfere with clinical images and minimises required eye movement. Its display is designed to be simple and intuitive for excellent support during long hours in the examination room.



- 1**  **DETECTION BOX**
Displays the area where the suspicious polyp is detected. Different sizes of the Detection Box are available.
- 2**  **VISUAL ASSIST CIRCLE**
Lights up in the direction where the suspicious polyp is detected.
-  **DETECTION SOUND**
Sound signal when a suspicious polyp is detected. Volume can be defined for each user.

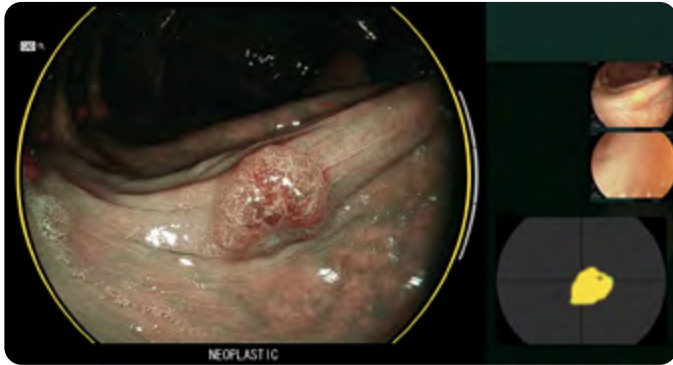
REAL-TIME DIAGNOSTIC SUPPORT

The detection and characterisation results are displayed by processing up to 60 frames per second. Without freezing the image, CAD EYE supports real-time diagnosis during standard and magnified observation.

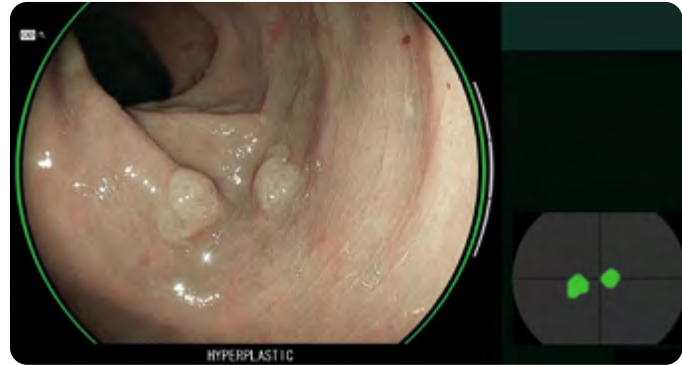


BLI CHARACTERISATION SUPPORT

Once a suspected polyp is detected by CAD EYE Detection (WLI or LCI), CAD EYE Characterisation – in combination with BLI – can support endoscopists in the diagnosis of the polyp. This function analyses in real-time and without freezing or zooming if a polyp is hyperplastic or neoplastic, which is visually indicated by the use of different colour codes in the Position Map. CAD EYE Characterisation is aimed to make procedures more efficient by increasing the accuracy of diagnosis to expert-level.*



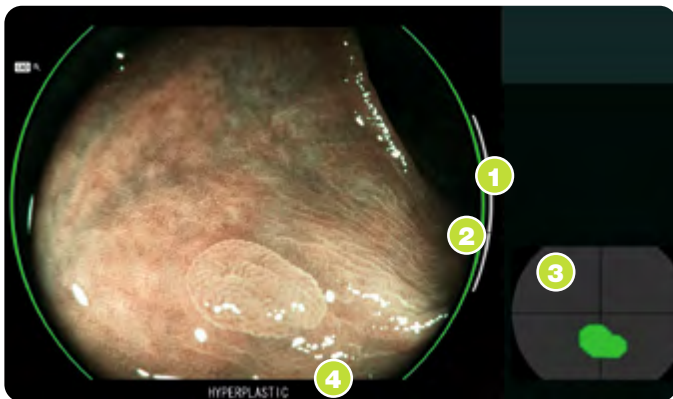
BLI Mode – Neoplastic



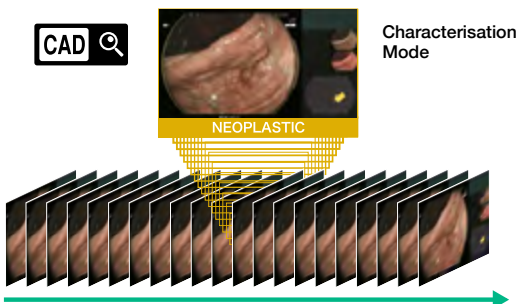
BLI Mode – Hyperplastic



CAD EYE received the prestigious Good Design Award for its interface.



- 1 **STATUS BAR**
Indicates the status of characterisation analysis regarding the suspicious area.
- 2 **VISUAL ASSIST CIRCLE**
GREEN: Characterisation HYPERPLASTIC
YELLOW: Characterisation NEOPLASTIC
- 3 **POSITION MAP**
Indicates the position of the suspicious area, this software is characterising.
- 4 **CHARACTERISATION RESULT**
HYPERPLASTIC: hyperplastic polyps & SSL
NEOPLASTIC: adenoma and cancer



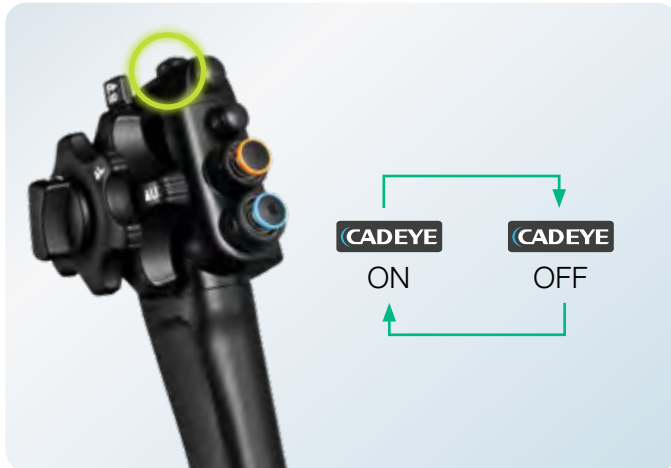
*According to the validation study, the accuracy of non experts with the assistance of CAD EYE Characterisation was equivalent to that of an expert.



FOR YOUR **DAILY EXAMINATION**

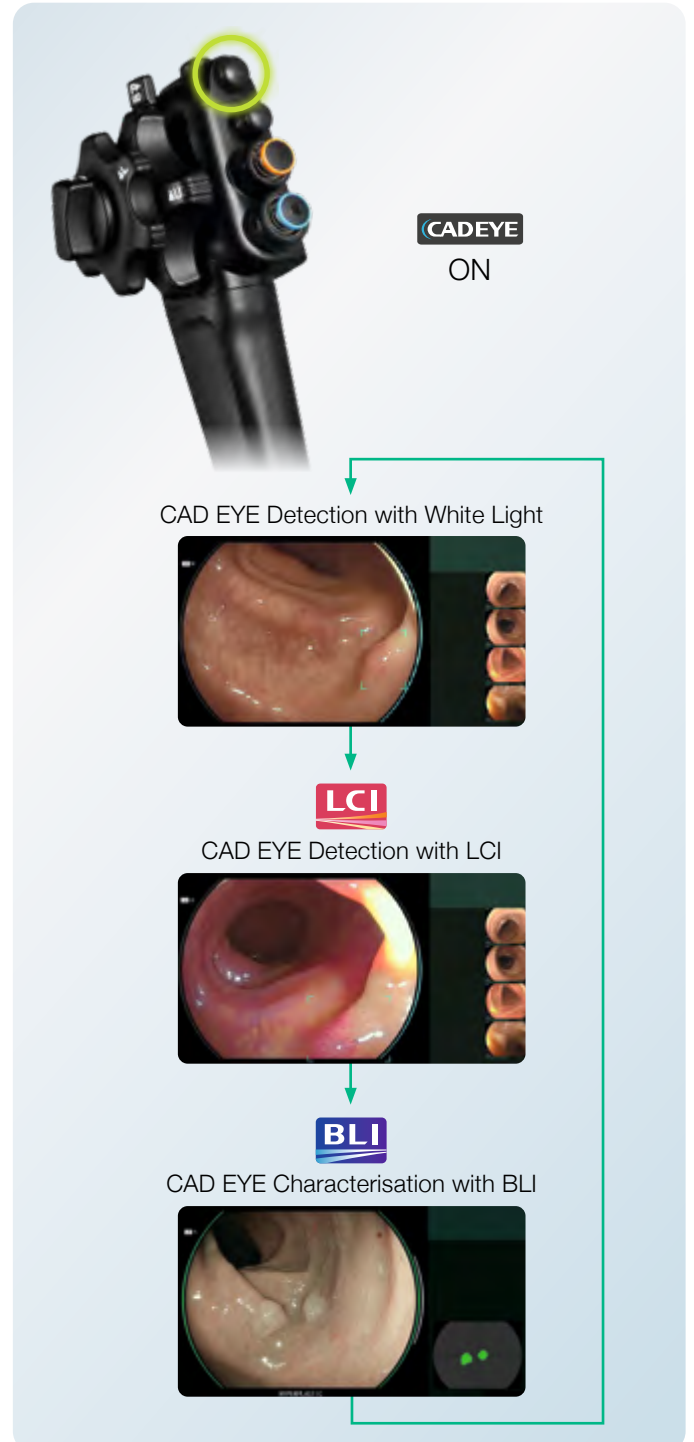
CAD EYE can be activated and deactivated simply by a push on the endoscope button or directly at the processor.

SCOPE SWITCH 3



The function of each switch can be defined individually.

SCOPE SWITCH 2



MOVIE AND STILL IMAGE RECORDING FUNCTION*

Full HD movies and still images can be recorded and stored at the expansion unit EX-1. It can be controlled via the scope switch or directly at the ELUXEO™ processor.



* Video and still image files should not be used for diagnoses.

SPECIFICATIONS

CAD EYE works with the expansion unit EX-1 and the CAD EYE software EW10-EC02. With software EW10-SC01 up to 30 hours of movie and still image material can be stored in the internal memory of EX-1. It can easily be controlled with the scope switch or directly at the processor.

Expansion Unit EX-1

Compatible processors	VP-7000, EP-6000
Compatible scopes	700 series colonoscopes*
Output	DVI-I x1, DVI-D x1
Input	DVI-I x1
Memory	30 hours of video (Full HD, MP4) and still image material (Full HD or SXGA selectable, TIFF, JPEG)**
Power rating	100 – 240 VAC +/- 10%, 50/60 Hz, 1.25 to 0.60 A
Dimensions (W x H x D)	370.0 x 99.0 x 465.6 mm
Weight	7.1 kg

* Movie and still image recording function is compatible with 700/600/500 scopes excluding EUS scopes
** In combination with EW10-SC01 software


Software EW10-EC02

Package Content	USB flash drive for CAD EYE installment for colon polyp detection and characterisation support
-----------------	--

Software EW10-SC01

Package Content	<p>USB flash drive for basic functions:</p> <ul style="list-style-type: none"> - Movie and still image recording with CAD EYE overlay - Network function: Still image transfer via FTP/FTPS/Dicom storage and for video recording transfer via SAMBA
-----------------	--



- 1  **FOR COLONIC POLYP DETECTION & CHARACTERISATION**
- 2 **MOVIE / STILL IMAGE RECORDING & NETWORK FUNCTION**
- 3 **FUTURE CAD APPLICATIONS CAN BE INSTALLED**

 **HD TECHNOLOGY**
Combine equipment displaying this logo to ensure that you view HDTV images on your monitor.

 **DICOM TECHNOLOGY**
The goal of the DICOM Standard is to achieve compatibility and improve workflow efficiency between imaging systems and other information systems.

**NEVER
STOP**



DUOMED

Duomed Swiss AG

Grenzstrasse 5a, 6214 Schenkon

Tel. +41 (0)41 510 07 00

www.duomed.com

FUJIFILM

FUJIFILM Europe GmbH

Heesenstr. 31, 40549 Düsseldorf, Germany

Tel.: +49 211-50 89 0, Fax: +49 211-50 89 8700

www.fujifilm-endoscopy.com, www.eluxeo-ultra.com