

Trend in endoscopic imaging:
See - Detect - Characterize *in vivo*

” *In vivo confocal laser microscopy is a newly developed tool that provides clear details of the cellular architecture of the mucosal layer ...*

These new techniques give a clear appearance of the mucosal patterns, which can then be targeted for biopsies that could make random biopsies a moot point in the future.”

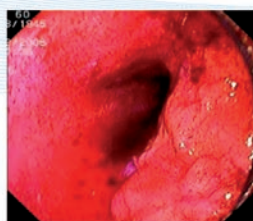
Prateek Sharma, MD
VA Medical Center
Kansas City, USA¹

” *The development of this technology seems to be opening another frontier for endoscopy that enhances endoscopic real-time identification of mucosal lesions...*

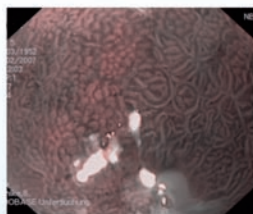
The ultimate goal should be that the gastroenterologist-endoscopist be in the driver's seat in the management of patients presenting with mucosal lesions.”

Kenneth K. Wang, MD
Mayo Clinic
Rochester, USA²

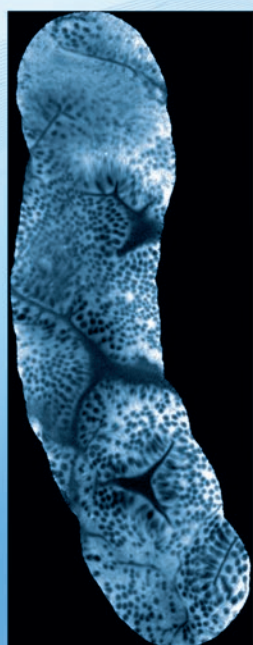
● SEE



● DETECT



● CHARACTERIZE



Cellvizio® is a Flexible Platform

- also used in Pulmonology for Alveoscopy™
- with potential applications in Urology, ENT, Laparoscopy, NOTES™*

Confocal Miniprobes

	GI Configuration			Lung Configuration
	CholangioFlex	GastroFlex ColoFlex	GastroFlex ^{UHD} ColoFlex ^{UHD}	AlveoFlex
Length	4 m	3 m	3 m	3 m
Compatible operating channel	≥1,2 mm	≥2,8 mm	≥2,8 mm	≥2.2 mm
Depth of observation	40 to 70 μm	70 to 130 μm	55 to 65 μm	0 to 50 μm**
Max field of view	325 μm	600 μm	240 μm	600 μm
Lateral resolution	3,5 μm	3,5 μm	1 μm	3,5 μm

Laser Scanning Unit

Excitation wavelength	488 or 660 nm
Collection bandwidth	500-650 nm or 670-900nm
Frame rate	12 frames/sec
Signal encoding	13 bits
Image export format	.png, .bmp, .jpeg, .pbm, .ppm, .tiff(raw)
Movie export format	.mpeg, .avi, .mp4, .swf, .mhd (raw)
Power requirement	150 W (100-240V)
Dimensions	50 (W) x 21 (H) x 50 (D) cm
Weight	20 Kg

* These indications have not been FDA cleared
** depends on the type of mucosa

Processing Unit

Operating system	Mac OS
CPU	QuadCore 2.66 GHz or equivalent
Hard drive	80 Go or greater
Software	Cellvizio® software
Screen	Medical grade flat screen



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Where endoscopes stop...

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... Cellvizio® begins

1- Sharma P, Wani S, Bansal A in "The Quest for Intestinal Metaplasia-Is It Worth the Effort?", The American Journal of Gastroenterology 102 (6), 1162-1165 (2007)
2- Wang K, Camilleri M in "Endoscopic confocal microscopy: imaging to facilitate the dawn of endoluminal surgery", Clin Gastroenterol Hepatol. 2007 Nov;5(11):1259-60

a **Confocal Endomicroscopy** solution...

...that **Seamlessly Integrates** into your **Workflow**



Compatible with all endoscopes

Cellvizio® can be used with any endoscopes, including red-flag techniques such as NBI, FICE, AFI and Chromoendoscopy.

Intuitive and simple

You can decide to use Cellvizio® at any time during the procedure, by simply inserting the Confocal Miniprobe™ into the operating channel of the endoscope.

Dynamic and stable imaging

Life is dynamic, your imaging should be too! With 12 frames per second video rate, you can see in real time at the microscopic level.

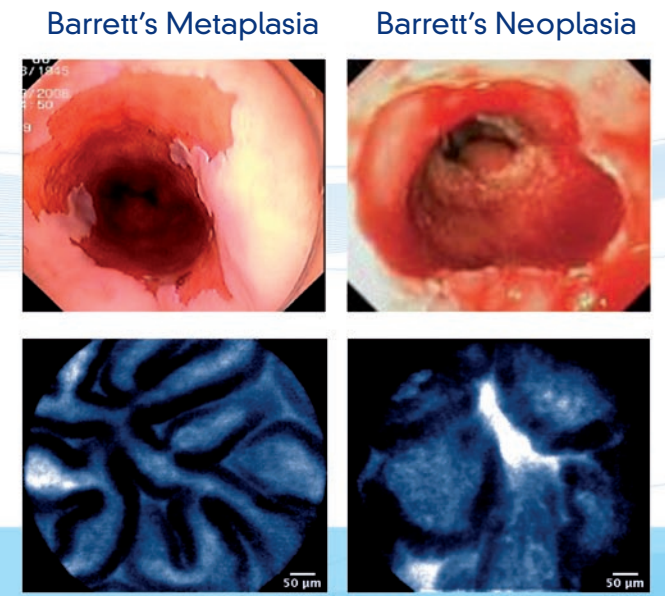
Anywhere in the GI tract

with dedicated Confocal Miniprobes™

- GastroFlex for **EGD**
- ColoFlex for **Colonoscopy**
- CholangioFlex for **ERCP**

EGD

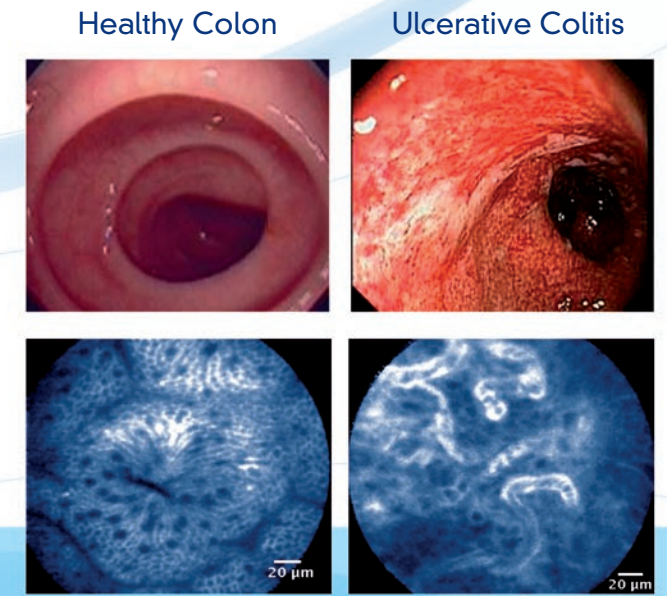
Barrett's Esophagus



Cellvizio® images acquired with the **GastroFlex**
Courtesy of PD. Dr. A. Meining, Klinikum rechts der Isar Munich, Germany

Colonoscopy

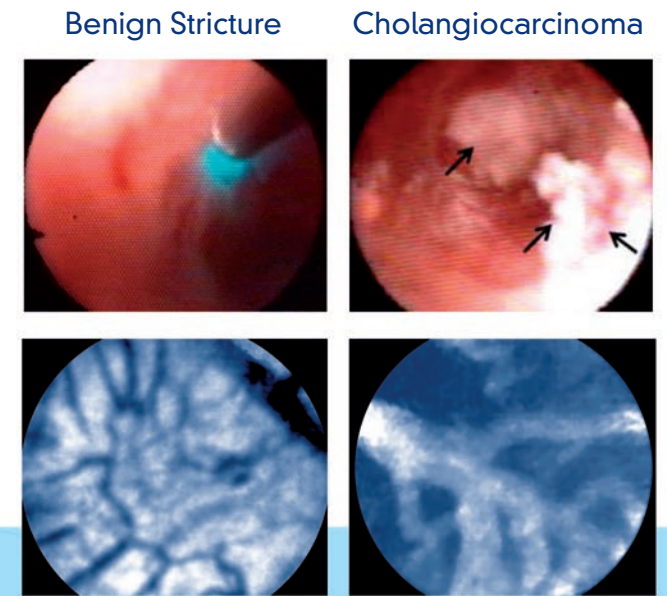
Inflammatory Bowel Disease



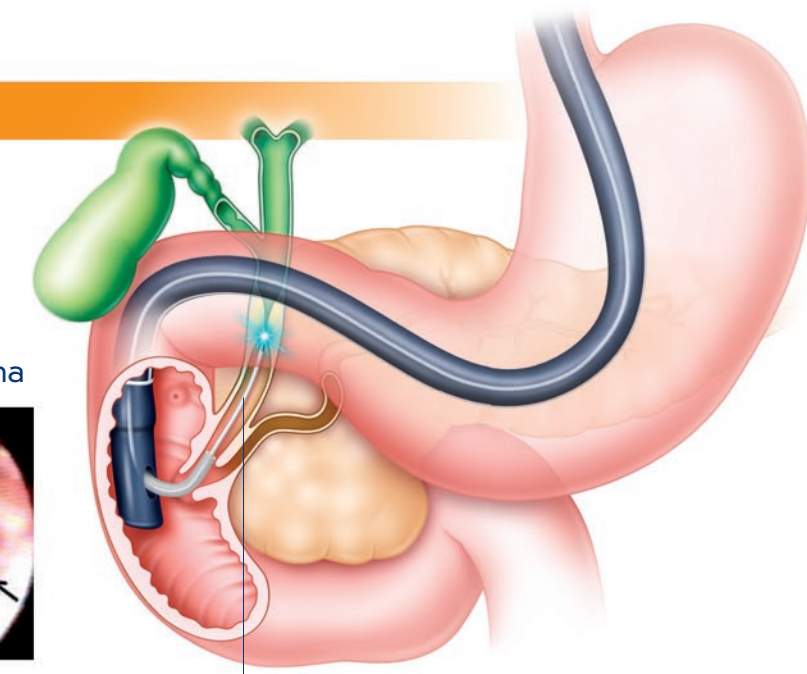
Cellvizio® images acquired with the **ColoFlexUHD**
Courtesy of Dr. E. Dekker, Academic Medical Center Amsterdam, the Netherlands

ERCP

Biliaro-Pancreatic Pathologies



Cellvizio® images acquired with the **CholangioFlex**
Courtesy of PD. Dr. A. Meining, Klinikum rechts der Isar Munich, Germany



Endomicroscopy of the biliary-pancreatic ducts with the dedicated **CholangioFlex** Confocal Miniprobe™

The Cellvizio® Advantage in the Management of BE and IBD

In vivo tissue characterization for BE and IBD surveillance.

Cellvizio® is an important tool in clinical practice by enabling the endoscopist to select and analyze suspicious lesions in real-time during the endoscopy exam, while preserving the current equipment and workflow.

Overcome the challenge of systematic tissue sampling.

Cellvizio® provides the physician with the necessary structural and cellular information to establish a diagnosis and determine the necessity for biopsy, endoscopic procedure or surgical resection in Barrett's esophagus or Inflammatory Bowel Disease, which may assist in controlling healthcare costs and improving clinical outcomes.

Achieve more from ERCP procedures

Cellvizio® can be used routinely with standard ERCP procedures to provide critical cellular information about difficult to diagnose biliaro-pancreatic strictures.

In vivo, real-time imaging of biliaro-pancreatic tissues may provide more detailed information on benign or malignant strictures, potentially improving the accuracy of biliaro-pancreatic cancer diagnosis.