

**OLYMPUS**

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

**Identify, Treat, Complete — Confidently**



# A Full Portfolio and Support

Endoscopic Submucosal Dissection (ESD) is a minimally invasive procedure with multiple patient benefits that continues to grow as endoscopy advances.\* With its ability to achieve en-bloc resection of larger lesions, ESD offers an efficient alternative to open surgery. However, given the high complexity of the procedure, it is important to recognize the potential challenges that may arise during dissection and closure.

## Safety

Every element of our ESD portfolio is designed with patient safety front and center. From advancing diagnosis to conducting complex procedures.\*

## Efficiency

Experience smooth workflow integration with our dedicated ESD portfolio, advanced imaging technologies and comprehensive support for the procedure.\*

\*LCR53664V01



# A Minimally Invasive Approach to Treating Complex Lesions



## Identify

Enhanced Imaging for Clearer Lesion Recognition and Visualization

- EVIS X1 Endoscopy System, including
  - EDOF: Extended Depth of Field Technology
  - TXI: Texture and Color Enhancement Technology
  - NBI: Narrow Band Imaging Technology
  - RDI: Red Dichromatic Imaging Technology
- Gastrosopes
- Colonoscopes



## Treat

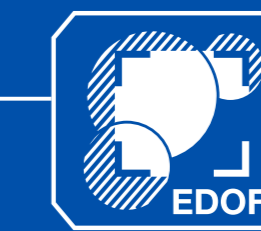
### Injection:

Safe Lesion Lifting for Optimal Dissection

- NeedleMaster
- EndoClot SIS (Submucosal Injection Solution)

**Dissect:** Empower Your ESD with the Right Tool and Broad Knives Portfolio

- Knives:
  - DualKnife, DualKnife J
  - HookKnife, HookKnife J
  - TriangleTipKnife, TriangleTipKnife J
  - ITknife 2
  - ITknife nano
- ESG-300 Electrosurgical Generator
- OFP-2 / OFP-3 Flushing Pump



## Complete

### Preventing Post-operative Bleeding:

For Coagulation, Closure and Sealing

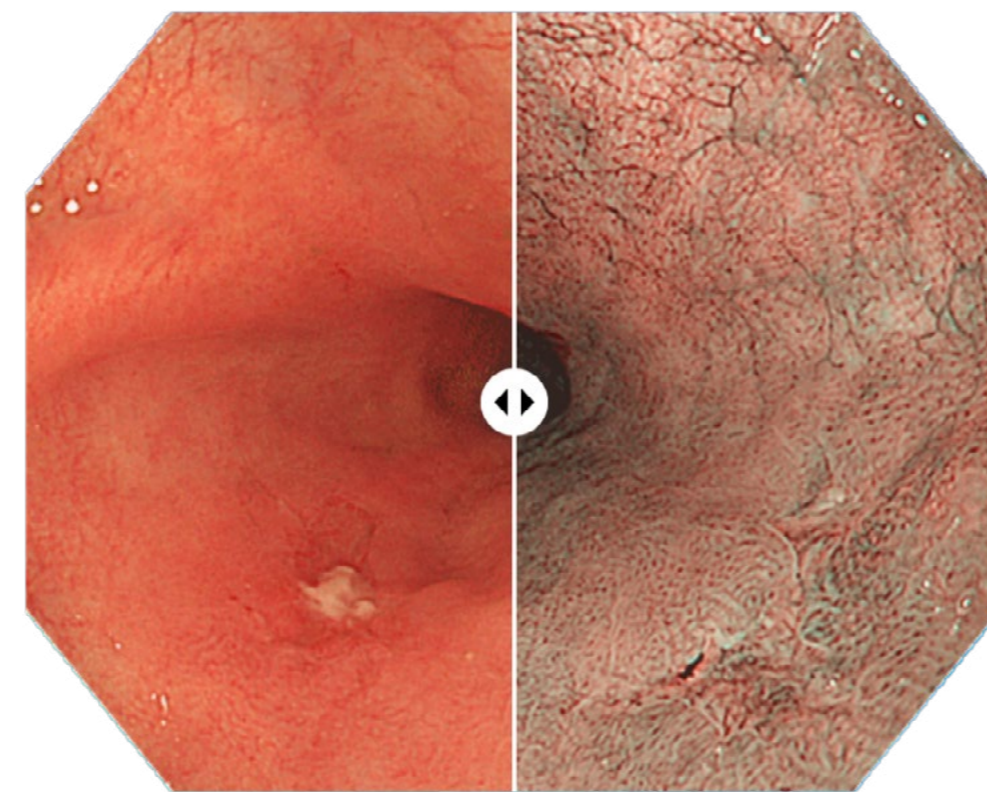
- EndoClot PHS Hemostatic Powder
- Coagrasper Hemostatic Forceps
- SutuArt Needleholder
- Hemostasis Clips
  - QuickClip Pro
  - Retentia
  - EZClip

# Identify

During diagnosis, the identification stage is critical in ensuring accurate lesion delineation, appropriate patient selection and a safe and effective ESD procedure. Yet, identifying the demarcation line of the lesion through endoscopic observation is challenging.<sup>1-2</sup> Advanced optical solutions, like NBI and TXI, are designed to support clearer visualization during endoscopic procedures.

## Narrow Band Imaging (NBI) Technology Supports:

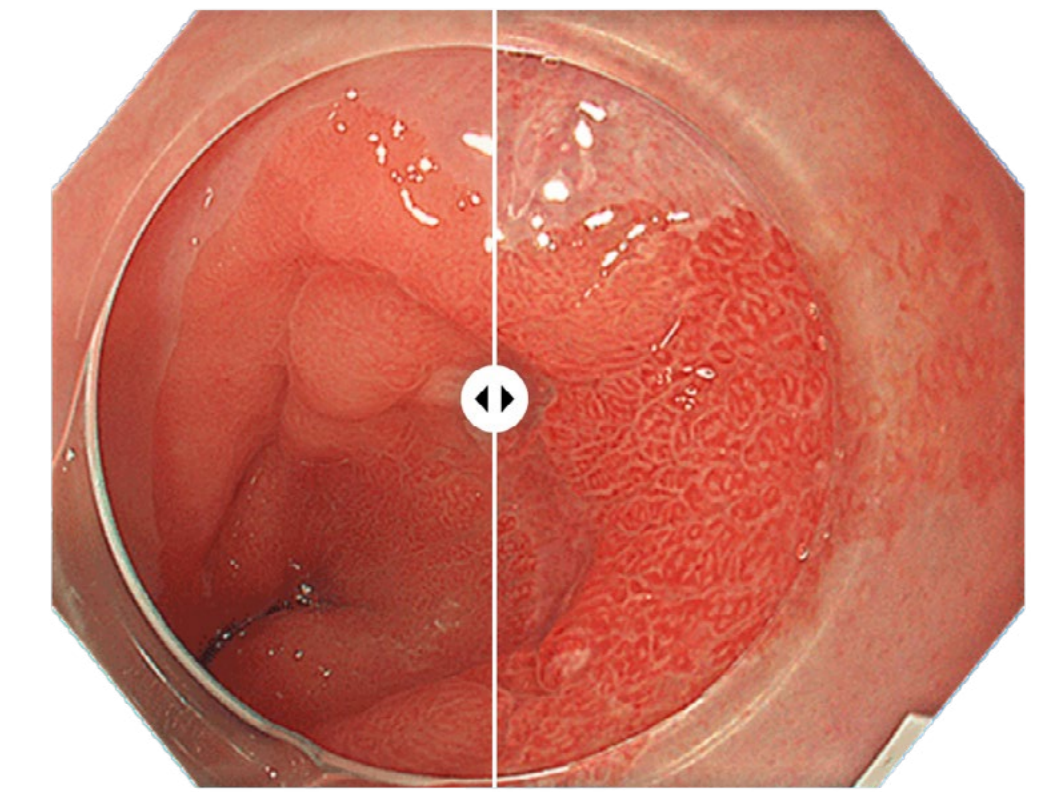
- Confident decision making for suitable endoscopic resection techniques.<sup>3-4</sup>
- The confirmation of the lesion range and confirmation of boundaries.\*\*
- High confidence predictions through improved delineation and visualization of blood vessels.<sup>3</sup>



WL vs. NBI

## Texture and Color Enhancement Imaging (TXI) Technology Improves:

- Lesion detection through enhanced texture, color and brightness.\*\*
- Enhanced visibility of submucosal fibers, vessels and the muscular plane during submucosal dissection.



WL vs. TXI

Olympus offers high-definition, slim colonoscopes featuring a short bending section, which enhances retroflexion in the lumen and improves access to lesions, ultimately helping to detect more diseases.

# Treat — Inject

**Mastering the injection step by sufficiently lifting the lesion from the muscle layer to create a safe working space for dissection is crucial for a safe, effective and smooth ESD procedure.<sup>5</sup>**

**NeedleMaster** is a user-friendly, reliable injection needle for advanced procedures.

**Excellent puncture performance:**

Sharper needle tip reduces the puncture force, allowing for controlled insertion into the mucosa.

**Improved injectability:**

Expanded inner lumen allows for high viscosity liquid to pass through smoothly with reduced pushing force.\*

**Smaller outer diameter:**

Potentially reduces tissue trauma and leakage of the injected solution.\*\*

**EndoClot SIS (Submucosal Injection Solution)** approaches lifting differently by being composed of Absorbable Modified Polymers (AMP) derived from plant starch particles to help improve the overall efficiency of GI procedures.

**Clinical Advantages of SIS:**

Easier Dissection: Provides a long-lasting, high lift which may create a better mucosal separation and pronounced elevation.

Ease of Delivery: Spiral syringe ensures precise dosage.

Clean Pathology: Leaves no artifacts, supporting clear pathological assessment.\*



# 89%

lift versus original height after 60 min<sup>6</sup>

\*<https://medical.olympusamerica.com/products/needlemaster-injection-needles>

\*\*OAIET0416BR0186

# Treat — Dissect

## ESD Electrosurgical Knives

Achieve precision at every step with our comprehensive portfolio of ESD knives. Designed to support each stage of your procedure, our knives help minimize risks and optimize outcomes.\*

Whatever the tissue structure or lesion size, the right knife gives you the confidence to complete every case. Choose from the broadest selection tailored to your needs.\*

\*LCR53664V01

## DualKnife J\*\*

- Adjustable lengths to 1.5 mm and 2.0 mm
- Dome-shaped tip designed to simplify incision and dissection in all directions and facilitate hemostasis

## HookKnife J\*\*

- The L-shaped hook is rotatable
- Designed to minimize the slippage from fibrous tissue

## ITknife nano

- Short knife length and small insulated tip
- Versus ITknife2, the nano is optimal in areas where the submucosal layer is thin and working area is limited

## ITknife2

- Unique electrode on the proximal side of the isolated ceramic tip
- Minimize thermal cutting invasiveness
- Maximize cutting abilities in both vertical and horizontal directions

## TriangleTipKnife J\*\*

- Compatible with spray coagulation
- No device rotation needed for complex resection and POEM procedures

\*\* Available with jet function.



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Olympus ESD knives, in my experience, are known for their precision and their reliability.

**Dr. David Tate**

Interventional Endoscopist and Gastroenterologist  
Ghent University Hospital, Belgium



You should become skilled in using a knife, but the choice should be lesion- and location-specific.

**Dr. John Anderson**

Consultant Gastroenterologist  
Cheltenham General Hospital, England

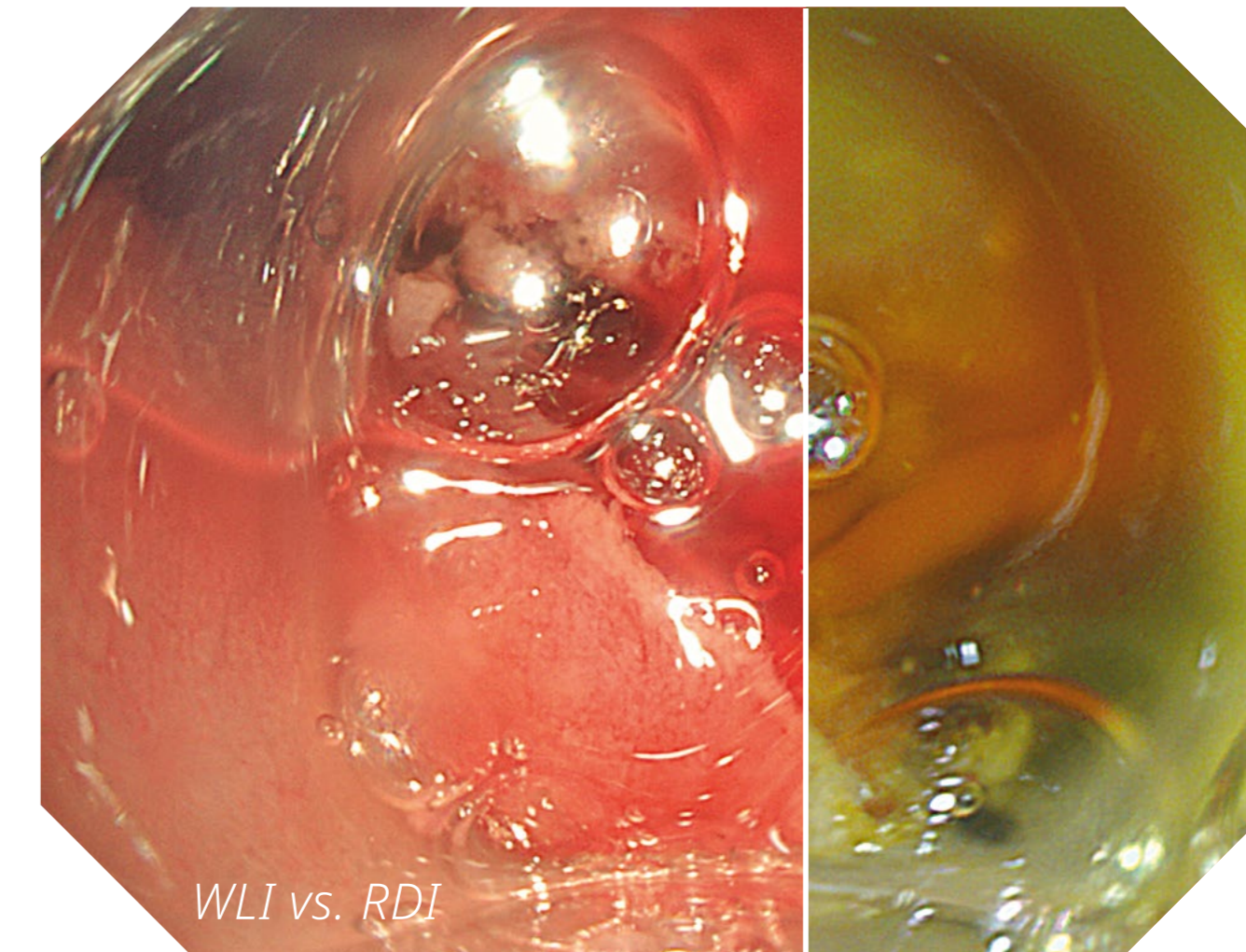
# Treat — Dissect

During dissection, avoiding thick blood vessels is crucial to help reduce the risk of damaging submucosal blood vessels.<sup>5</sup> Red Dichromatic Imaging (RDI) and Texture and Color Enhancement Imaging (TXI) are both advanced imaging modalities, specifically within the EVIS X1 Endoscopy system, designed to enhance visualization during endoscopic procedures.



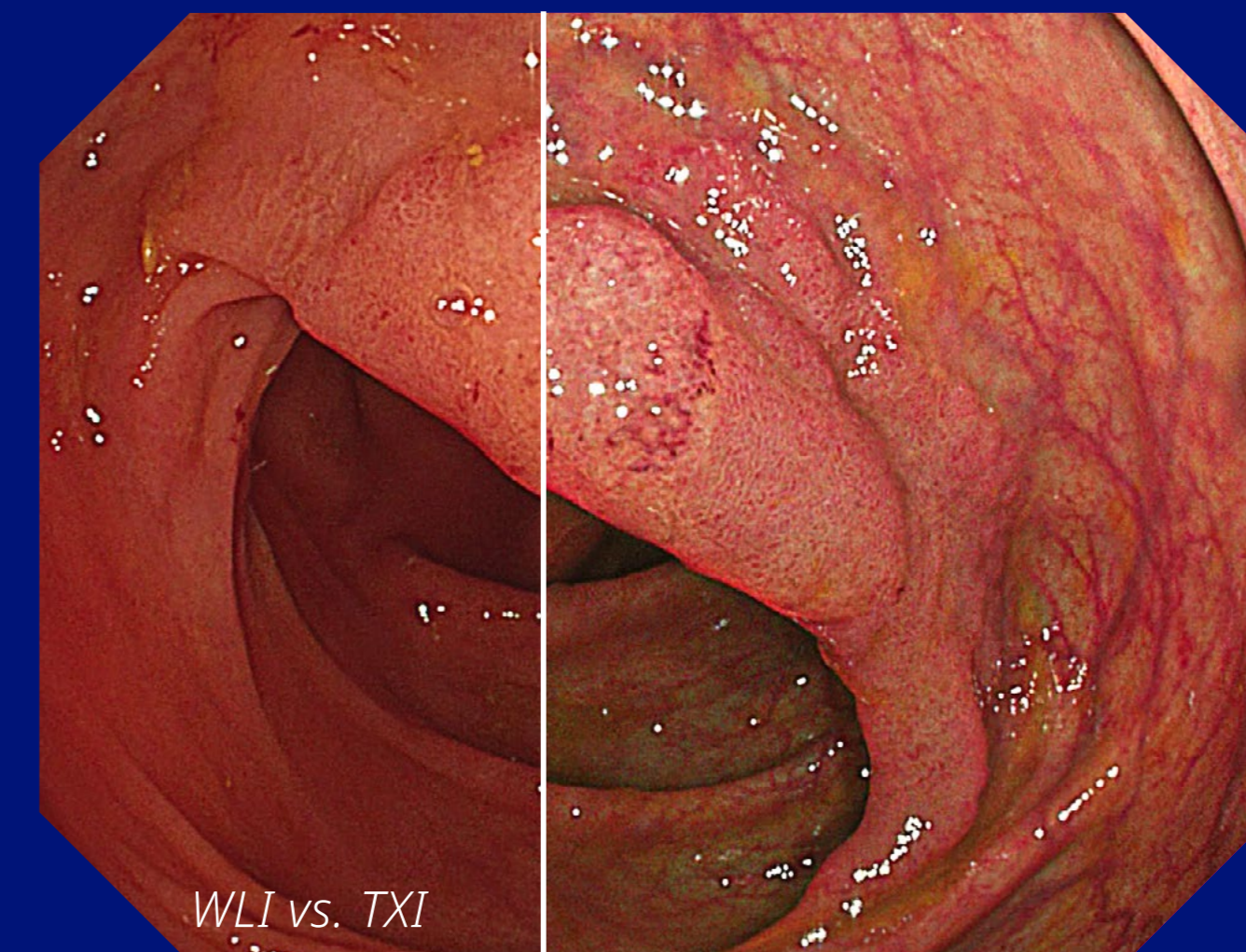
## RDI Technology

RDI enhances the visibility of deep blood vessels compared to white light, which may assist endoscopists with making their initial incision. RDI further helps identify the source of bleeds, which may help to reduce stress and procedure time for emergency bleeding in endoscopic resection.



## TXI Technology

TXI clearly distinguishes between the submucosa and the muscle layer during submucosal dissection.<sup>7</sup>



# Complete

Postoperative bleeding is the most common complication of ESD. The incidence of delayed bleeding can be from a few days to several weeks post-resection.<sup>5</sup> Hence, during the final step of the procedure, the aim is to completely and reliably treat the wound and visible vessels. Our hemostasis solutions help complete even complex procedures smoothly and without delay.

**ENDOCLOT® PHS** hemostatic powder supports efficient hemostasis and aims to control oozing/moderate bleeding.

The **Coagrasper** hemostatic forceps delivers targeted monopolar coagulation that will create hemostasis at the precise site of bleeding. The three size options with different jaw widths allow for hemostasis in various anatomic locations.\*

\*<https://medical.olympusamerica.com/products/coagrasper-hemostatic-forceps>



# Complete

Our advanced endoscopic closure solutions are designed to support effective defect management following an ESD procedure. These solutions are designed to help support hemostasis, reduce the risk of perforation and improve overall procedural safety.

## Hemostasis Clips

**QuickClip Pro:** A preloaded, rotatable clip that opens and closes. Elgiloy material enables resilient and flexible clip arms designed for tangential clipping in lateral or challenging positions with strong closure — available with an 11 mm opening width.

**Retentia:** A preloaded, rotatable clip that opens and closes with intuitive one-step deployment. Various opening widths to meet clinical needs (9 mm, 12 mm, 16 mm), and a short tail length to enable visualization of endoscopic field.

**EZClip:** A reloadable, rotatable clip with a cost-effective delivery system for procedures requiring multiple clips.

## Suturing Device

**SutuArt** needle holder supports safe and flexible continuous suturing of mucosal defects — secure locking mechanism prevents shifting or spontaneous release of the needle during suturing; smooth rotation of the handle facilitates piercing of the mucosa.



# Advance Your Skills with Expert-Led Training

## Comprehensive Program

Over **4,000**  
healthcare  
professionals trained  
annually through  
**300+**  
specialized programs.

## Expert-Led Professional Education

Developed in  
collaboration with  
leading experts to  
meet your evolving  
needs.

## Advanced Skill Development

Gain the confidence  
to handle complex  
cases safely and  
efficiently through  
our programs.

Our training equips physicians with the knowledge and skills to navigate ESD procedures with precision, reduce complications and make informed clinical decisions.

Find the right clinical training program for you:

→ [www.continuum.olympusprofed.com](http://www.continuum.olympusprofed.com)





My impression of Olympus learning programs is that it is leading the field in endoscopy by far.

**Dr. Pedro De Maria**

Gastroenterologist

Hospital Universitario la Paz, Madrid, Spain

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

Endoscopic System			
Product Type	EVIS X1	EVIS EXERA III	EVIS LUCERA ELITE
Video System Center	CV-1500	CV-190	CV-290
		CV-190 Plus	
Xenon Light Source		CLV-190	CLV-290
			CLV-290SL

Endoscope			
Product Type	EVIS X1	EVIS EXERA III	EVIS LUCERA ELITE
Gastroscope	GIF-XZ1200	GIF-HQ190	GIF-H290T
	GIF-EZ1500	GIF-H190	GIF-H290Z
	GIF-1100	GIF-1TH190	GIF-HQ290
			GIF-H290

Endoscope			
Product Type	EVIS X1	EVIS EXERA III	EVIS LUCERA ELITE
Colono- videoscope	CF-XZ1200	CF-HQ190	CF-HQ290
	CF-EZ1500D	CF-H190	CF-H290
	CF-HQ1100D	PCF-H190T	PCF-H290T
		PCF-HQ190	PCF-H290D

Electrosurgical System		
Product Type	Product Name	
Electrosurgical Generator	ESG-300	ESG-150

Endoscopic Instrument		
Product Type	Product Name	
Suction Pump	KV-6	
Flushing Pump	OFP-3	OFP-2
	OFP-3 Plus	
Endotherapy Accessory Port Irrigation Tubing	MAJ-1681: Accessory port tube with bottle cap	
	MAJ-1682: Accessory port tube with tube spike	

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

ESD Knives				
Product Name	Model	Compatible Endoscope Channel Diameter (mm)	Working Length (cm)	Cutting Knife Length (mm)
<b>ITknife™ Single-use Electrosurgical Knife</b>	KD-610L	≥2.8	165	4.0
<b>ITknife2™ Single-use Electrosurgical Knife</b>	KD-611L	≥2.8	165	4.0
<b>ITknife nano™ Single-use Electrosurgical Knife</b>	KD-612L	≥2.8	165	3.5
	KD-612Q	≥2.8	195	3.5
	KD-612U	≥2.8	230	3.5
	KD-620LR	≥2.8	165	4.5
<b>HookKnife™ Single-use Electrosurgical Knife</b>	KD-620QR	≥2.8	195	4.5
	KD-620UR	≥2.8	230	4.5
	KD-625LR	≥2.8	165	4.5
<b>HookKnife™ J Single-use Electrosurgical Knife</b>	KD-625QR	≥2.8	195	4.5
	KD-625UR	≥2.8	230	4.5
	KD-650L	≥2.8	165	2.0
<b>DualKnife™ Single-use Electrosurgical Knife KD-650</b>	KD-650Q	≥2.8	195	1.5
	KD-650U	≥2.8	230	1.5
	KD-655L	≥2.8	165	2.0
<b>DualKnife™ J Single-use Electrosurgical Knife KD-655</b>	KD-655Q	≥2.8	195	1.5
	KD-655U	≥2.8	230	1.5
	KD-640L	≥2.8	165	4.5
<b>TriangleTipKnife™ Single-use Electrosurgical Knife</b>				
<b>TriangleTipKnife™ J Single-use Electrosurgical Knife KD-645</b>	KD-645L	≥2.8	165	4.5

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

## Injection Needle

Product Name	Model	Working Length (cm)	Available Needle Lengths (mm)	Available Gauges
<b>NeedleMaster™ Single-use Injector NM600/610</b>	NM-600L	165	4, 5, 6	21, 23, 25 G
	NM-610L	165	4, 5, 6	21, 23, 25, 26 G
	NM-610U	230	1.8, 3, 4, 5, 6	23, 25, 26 G

## Injection Solution

Product Name	Model	Description
<b>EndoClot® Submucosal Injection Solution</b>	SIS-15-01	EndoClot Submucosal Injection System (0.5 g AMP® powder & 1 syringe per unit), 5 units/box
	SIS-30-01	EndoClot Submucosal Injection System (1 g AMP® powder & 1 syringe per unit), 5 units/box

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

## Hemostatic Powder

Product Name	Model	Description	Working Length (cm)	Compatible Endoscope Channel Diameter (mm)
<b>EndoClot® Polysaccharide Hemostatic Spray (PHS)</b>	EPK2303-01	3 g AMP powder and a delivery applicator	230	≥2.8
	EPK2305-01	5 g AMP powder and a delivery applicator	230	≥2.8
	EPAC-2	Reusable Air Compressor for EndoClot PHS	N/A	N/A

## Hemostatic Forceps

Product Name	Model	Opening Width (mm)	Working Length (cm)	Compatible Endoscope Channel Diameter (mm)
<b>Coagrasper™ Single-use Electrosurgical Hemostatic Forceps</b>	FD-410LR	5	165	≥2.8
	FD-411QR	4	195	≥3.2
	FD-411UR	4	230	≥3.2
	FD-412LR	6.5	165	≥2.8

## Suturing Device









Product Name	Model	Opening Width (mm)	Working Length (cm)	Compatible Endoscope Channel Diameter (mm)
<b>SutuArt Single-use Needle Holder FG-260</b>	FG-260L	2.5	165	≥3.2
	FG-260U	2.5	230	≥3.2

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

## Hemostasis Clip

Product Name	Model	Opening Width (mm)	Working Length (cm)	Compatible Endoscope Channel Diameter (mm)
<b>QuickClip™ Pro</b> <b>Single-use Repositionable Clip</b>	HX-202LR	11	165	≥2.8
	HX-202UR	11	230	≥2.8
<b>Retentia™ HemoClip</b>	SCA-23-180-09	9	180	≥2.8
	SCA-23-180-12	12	180	≥2.8
	SCA-23-180-16	16	180	≥2.8
	SCA-23-230-09	9	230	≥2.8
	SCA-23-230-12	12	230	≥2.8
	SCA-23-230-16	16	230	≥2.8

# Dedicated Endoscopic Submucosal Dissection (ESD) Portfolio

Hemostasis Clip					
Product Name		Model	Jaw Angle	Clinical Application	
<b>EZ Clip Single-use Reloadable Clip Applicator</b>		HX-810LR		N/A	165 ≥2.8
		HX-810QR		N/A	195 ≥2.8
		HX-810UR		N/A	230 ≥2.8
<b>EZ Clip Single-use Reloadable Clip</b>		EZ Clip Yellow	HX-610-090	90°	For healthy, elastic mucosa; Mallory-Weiss syndrome; open vessels; small perforations; marking
		EZ Clip Pink	HX-610-135	135°	For pathological mucosa, deep ulcerous lesions, cancerous tissue
		EZ Clip Blue	HX-610-090L	90°	For healthy, elastic mucosa; large-scale lesions; large adenomatous pedicles before and after polypectomy
		EZ Clip Purple	HX-610-135L	135°	Wide clip opening, for post-EMR and post-polypectomy clipping in polyps with big stalk, for tangential approach
		EZ Clip White	HX-610-090S	90°	For marking
		EZ Clip Green	HX-610-135S	135°	For stronger clipping/smaller area, hemostasis of stiffer lesions
		EZ Clip White	HX-610-090SC	90°	Special clips for marking; colored distal part; 8 white, red, and yellow clips in each package
		EZ Clip Gray	HX-610-135XS	135°	For hard tissue and bleeding ulcers

# References

- <sup>1</sup> JGES guidelines for colorectal ESD/EMR. <https://onlinelibrary.wiley.com/doi/10.1111/den.12456>
- <sup>2</sup> Guidelines for endoscopic submucosal dissection and endoscopic mucosal resection for early gastric cancer (second edition). <https://onlinelibrary.wiley.com/doi/10.1111/den.13883>
- <sup>3</sup> Pimentel-Nunes et al. Endoscopy 2019; 51: 365-388.
- <sup>4</sup> Yao et al. New Challenges in Gastrointestinal Endoscopy 2008, pp. 169-176.
- <sup>5</sup> European Society of Gastrointestinal Endoscopy (ESGE) Technical Review. [https://www.esge.com/assets/downloads/pdfs/guidelines/2023\\_a-2031-0874.pdf](https://www.esge.com/assets/downloads/pdfs/guidelines/2023_a-2031-0874.pdf)
- <sup>6</sup> Data on file with Olympus as of August 16, 2022.
- <sup>7</sup> Nabi Z, Chavan R, Ramchandani M, Darisetty S, Reddy DN. Endoscopic submucosal dissection and tunneling procedures using novel image-enhanced technique. VideoGIE. 2022;7(4):158–163. doi:10.1016/j.vgie.2021.11.005

 [www.olympus-eu/ESD-procedure](https://www.olympus-eu/ESD-procedure)

EVIS X1 VIDEO SYSTEM CENTER OLYMPUS CV-1500  
EVIS EXERA III VIDEO SYSTEM CENTER OLYMPUS CV-190  
EVIS EXERA III VIDEO SYSTEM CENTER OLYMPUS CV-190 Plus  
EVIS EXERA III XENON LIGHT SOURCE OLYMPUS CLV-190  
EVIS LUCERA ELITE VIDEO SYSTEM CENTER OLYMPUS CV-290  
EVIS LUCERA ELITE XENON LIGHT SOURCE OLYMPUS CLV-290  
EVIS LUCERA ELITE XENON LIGHT SOURCE OLYMPUS CLV-290SL  
GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-XZ1200  
GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-EZ1500  
GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-1100  
EVIS EXERA III GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-HQ190  
EVIS EXERA III GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-H190  
EVIS EXERA III GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-1TH190  
EVIS LUCERA ELITE GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-H290T

EVIS LUCERA ELITE GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-H290Z  
EVIS LUCERA ELITE GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-HQ290  
EVIS LUCERA ELITE GASTROINTESTINAL VIDEOSCOPE OLYMPUS GIF-H290  
COLONOVideoscope OLYMPUS CF-XZ1200L/I  
COLONOVideoscope OLYMPUS CF-EZ1500DL/I  
COLONOVideoscope OLYMPUS CF-HQ1100DL/I  
EVIS EXERA III COLONOVideoscope OLYMPUS CF-HQ190L/I  
EVIS EXERA III COLONOVideoscope OLYMPUS CF-H190L/I  
EVIS EXERA III COLONOVideoscope OLYMPUS PCF-H190TL/I  
EVIS EXERA III VIDEocolonoscope OLYMPUS PCF-HQ190L/I  
EVIS LUCERA ELITE COLONOVideoscope OLYMPUS CF-HQ290L/I  
EVIS LUCERA ELITE COLONOVideoscope OLYMPUS CF-H290L/I  
EVIS LUCERA ELITE COLONOVideoscope OLYMPUS PCF-H290TL/I  
EVIS LUCERA ELITE COLONOVideoscope OLYMPUS PCF-H290DL/I

As medical knowledge is constantly growing, technical modifications or changes of the product design, product specifications, accessories and service offerings may be required.

**OLYMPUS**

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