OLYMPUS

VISERA
ELITE III

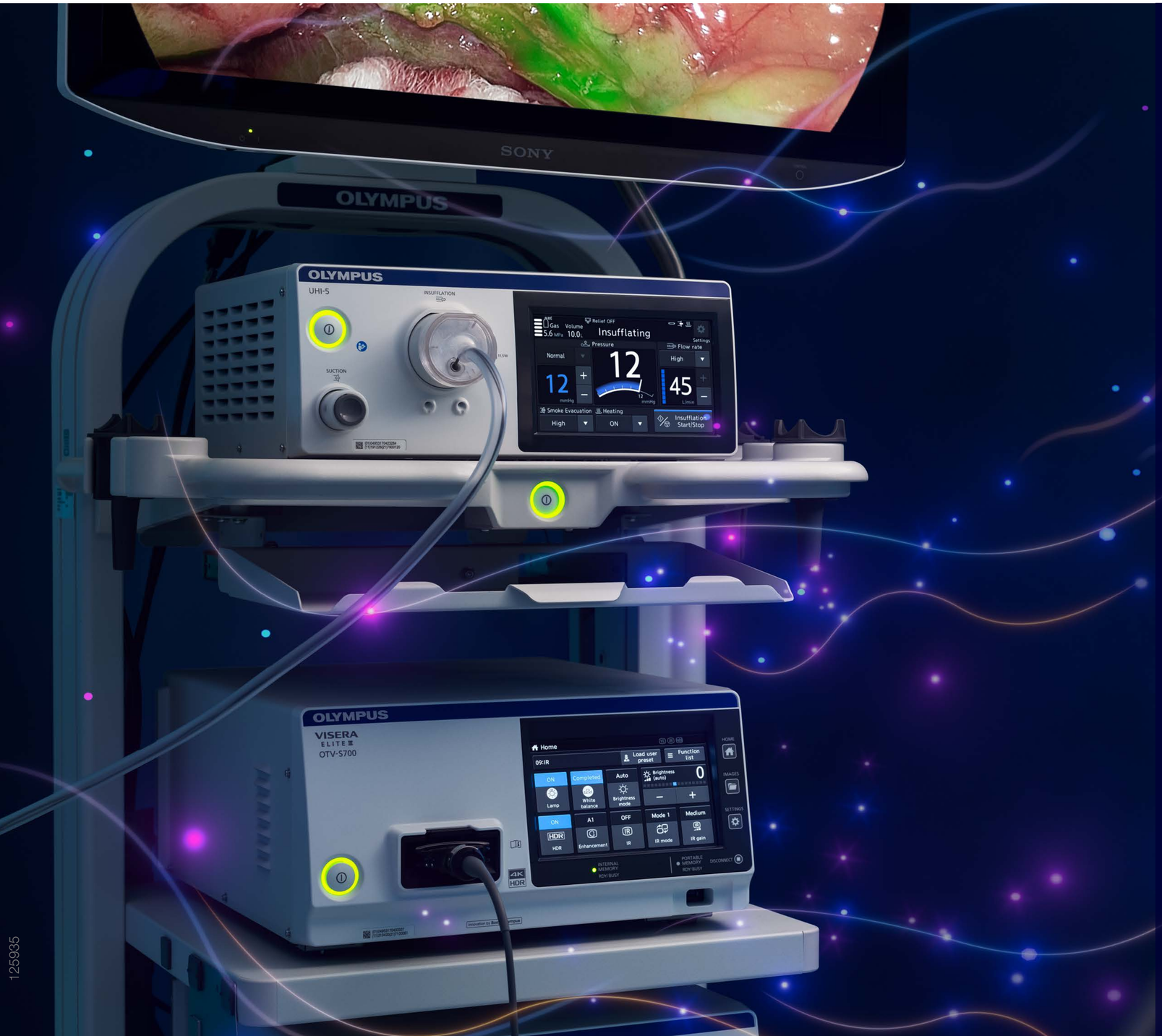
Be Visionary

The New Endoscopic Visualization Platform That Grows With You

125937

Introducing the New Endoscopic Visualization Platform

VISERA ELITE III



Be Bold

Be Pioneering

Be Innovative

VISERA ELITE III

Created to accelerate procedures and learning curves for improved patient outcome with advanced imaging, **VISERA ELITE III is the future-proof endoscopic visualization platform** with software upgrades and technology that allows you to focus on your procedures, while significantly reducing future costs.

125935

Introducing the New Endoscopic Visualization Platform

VISERA ELITE III

Technology That **Powers Your Vision**

Future-Ready
Flexible Standard

See Further

Improved Surgical
Outcome

VISERA ELITE III
Product Overview

125922

Future-Ready Flexible Standard

One System **for All**

Designed to meet the needs of multiple specialties like general surgery, urology, gynecology, ENT and more, VISERA ELITE III offers **3D and 4K imaging, impressive fluorescence-guided surgery, well-proven Narrow Band Imaging (NBI), the new Yellow Enhancement (YE)** mode and more to come in the future, all in one system. Benefit from compatibility with rigid and flexible scopes, camera heads and ENDOEYE series of the latest generation[1] to **efficiently reduce investment costs**.

125929

Innovation That **Grows With You**

Enter the next generation of surgical imaging **with scalable software upgrades** now.

3D Full Color IR Future

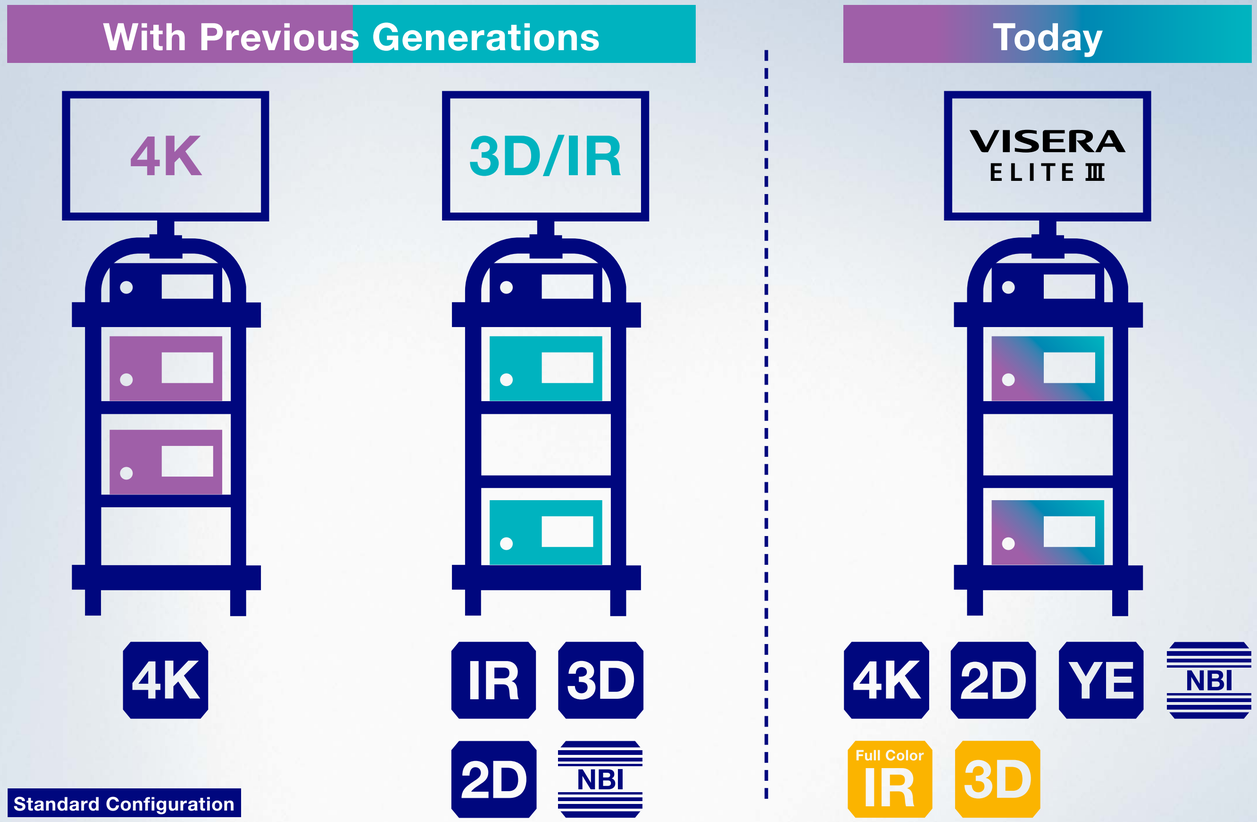
- **No need to switch** to another platform in the future to access new technologies.
- Always have **access to the latest technology**.
- Simply **upgrade functionalities like 3D and IR** to grow with your individual hospital needs and be ready for further visionary innovations **via software activation**.
- Backward compatibility with available scopes and camera heads.[1]

125951

Future-Ready Flexible Standard

An **Optimized Investment** as Flexible as Your Needs

To suit multiple specialties with individual needs, VISERA ELITE III is setting a new OR standard along with true flexibility. Instead of always investing in a full system, you **only pay for what you need**. Select upgrades to be activated via software licensing when needed without interruption of workflows and by minimizing OR downtime for the upgrade process.



Lean but Cost-Efficient Investments

Due to high compatibilities and software upgrades, you need less hardware to benefit from a state-of-the-art and at the same time future-ready endoscopic visualization platform.

125915 125903

124952

Combining **4K Vision** and **CAF**

Experience sharp images through 4K CMOS and constantly keep the focus with the Continuous Auto Focus (CAF) function.

True 4K image quality
The exclusive 4K image sensor from Sony produces true 4K image quality, enabling the camera head to deliver fine detail.

Continuous Auto Focus (CAF)
The CAF function maintains constant focus and eliminates the need for focus adjustments.

Extended Depth of Field (EDOF)
The EDOF function allows precise endoscopic observations through continuous broad focus and seamless magnification.

See Sharper in 4K

Improved Surgical Outcome

Focus on the Patient

Relieve stress and feel comfortable during surgery to fully focus on your procedure. The **Continuous Auto Focus (CAF) and Extended Depth of Field (EDOF)** technology are developed to increase your concentration and provide a more natural and greater depth perception in 4K image quality.

CH-S700-XZ-EA

4K Camera Head

- Full 4K CMOS Image Sensor.
- Small and light autoclavable design: 270 g.
- IR, NBI and YE observation featured.
- One-touch digital zoom and continuous auto focus activation.

See the **Invisible**

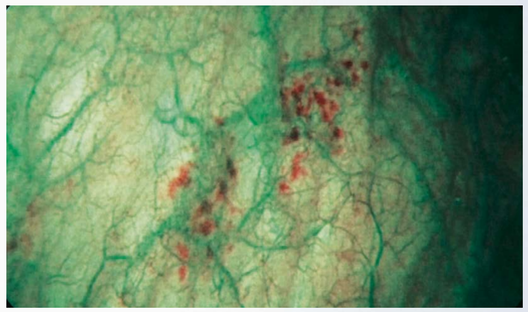
VISERA ELITE III offers multiple observation modes to improve diagnostics and patient outcome during surgery. **As a default,** benefit from Narrow Band Imaging **(NBI)**, a feature that visualizes minor vascular structures and Yellow Enhancement (YE), to distinguish between fatty tissue and other structures. If needed, simply add Infrared **(IR)** Imaging **via software upgrade** for better perfusion control and identification of vital structures.

Narrow Band Imaging

NBI is a patented and unique optical filter technology that greatly **enhances the visibility of vascular and mucosal structures** in the bladder using only those wavelengths highly absorbed by hemoglobin. That is why NBI achieves maximum contrast, thus revealing significantly more details of the examined tissue than white-light imaging (WLI).

37131

White light



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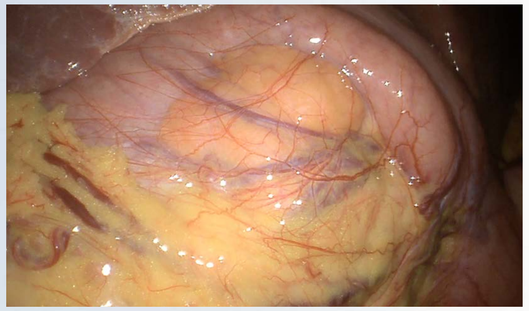
NBI light

Observe More

Improved Surgical Outcome

Yellow Enhancement

Yellow Enhancement (YE) is a newly added default function with VISERA ELITE III. It **emphasizes yellow and is designed to identify structures like nerves, arteries, ureter and pleura surrounded by fatty tissue**. In YE mode, the system performs a color conversion that make orange-yellow tissue appear clearly yellow. This enhances the contrast to anatomical structures of interest.



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White light

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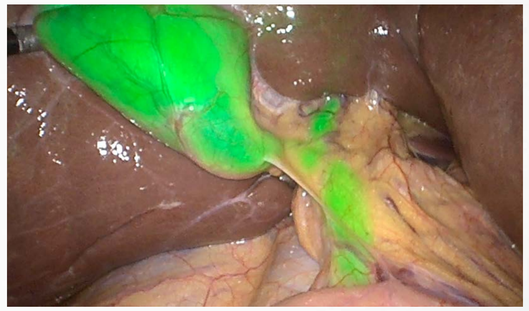
Yellow Enhancement

Fluorescence-Guided Surgery with IR

Discover fluorescence-guided surgery for **better perfusion control and easier identification of biliary structures**. IR observation is an upgradable feature to be **activated via software** licensing if needed. To suit various requirements, three IR modes are available with VISERA ELITE III.



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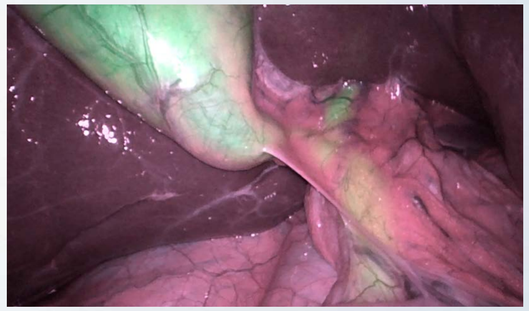
Fluorescence imaging during white-light observation (full color IR white-light overlay mode).



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Partial white light and IR light at the same time (IR magenta mode).

126938

Pure black and white IR light (IR independently mode).

The Power of **Fluorescence-Guided** Surgery

Choose the IR gain that suits best and experience three selectable IR modes.

Three IR Observation Modes

Choose from three IR modes and set colors that suit your needs best. The **“Full color IR White-light overlay mode”** provides real-time 4K fluorescence imaging during white-light observation. The **“IR magenta mode”** provides the classically known IR image and the **“IR independently black and white only mode”** allows the general checking of blood perfusion with independent infrared light.


IR black and white only


IR white-light overlay


IR magenta

Adjustment of the IR Gain

Adjust the visibility of the fluorescence by controlling IR gain to meet the best visualization regardless of scope, tissue or environment changes. The IR gain can be adjusted in three levels: low, medium and high, and the higher the level, the stronger the fluorescence is expressed.

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Fluorescence Imaging in **Colectomy**

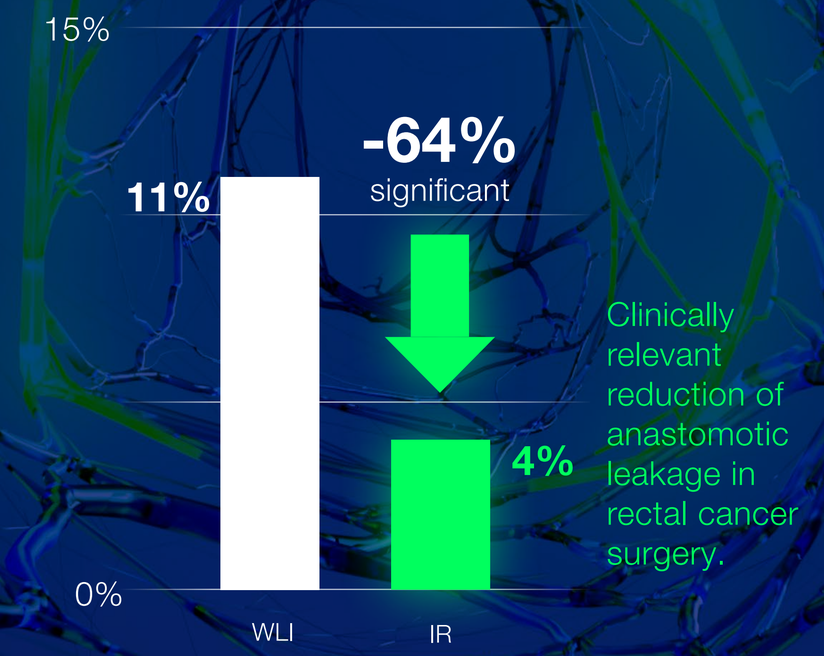
How IR can support your clinical performance in Colectomy:

- Increased quality in assessment of blood perfusion.
- Better amendment of resection margin.
- Significant reduction in anastomotic leakage.[7,8,9,10]
- Confidently reconsider your decision-making with IR in real time during colorectal surgery.[8]

Economical benefits:

- Better perfusion identification can prevent high-cost reoperations and reduce mortality.[8]
- Better recognition of well-perfused areas and ischemic parts lowers risk of anastomotic leakage and prevents increase of hospital stay.[9,10]

Incidence of Anastomotic Leakage in Laparoscopic Rectal Cancer Surgery[8]



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Fluorescence Imaging in **Cholecystectomy**

How IR can support your clinical performance in Cholecystectomy:

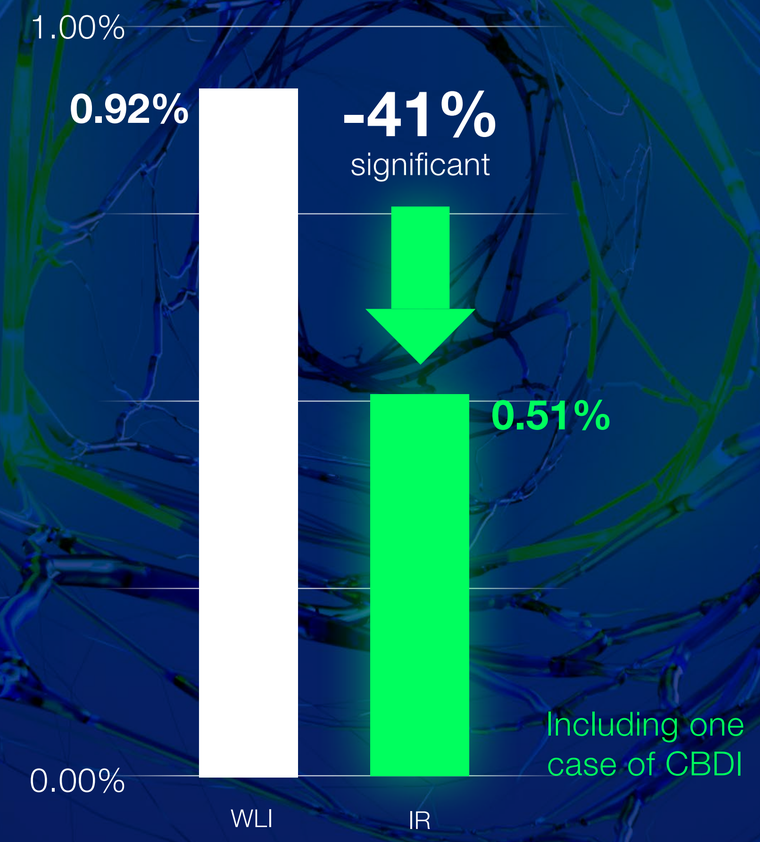
- Easier identification of biliary structures.
- Clear visualization of structures during complicated cases, resulting in greater confidence.
- Fewer bile duct injuries with IR than with white light.[11,12,13]

Economical benefits:

- Save operation time in complicated cases such as acute cholecystitis and pancreatitis using IR.[14]
- Better identification of vital structures can lower the risk of mortality and reduce total costs of hospital stay.[11,12]
- Decrease total length of hospital stays.[13]

The number of cases with injuries as a percentage of total cases was much lower with NIR than with WLI.[13]

Percentage of Cholecystectomy Cases with Injuries[13]



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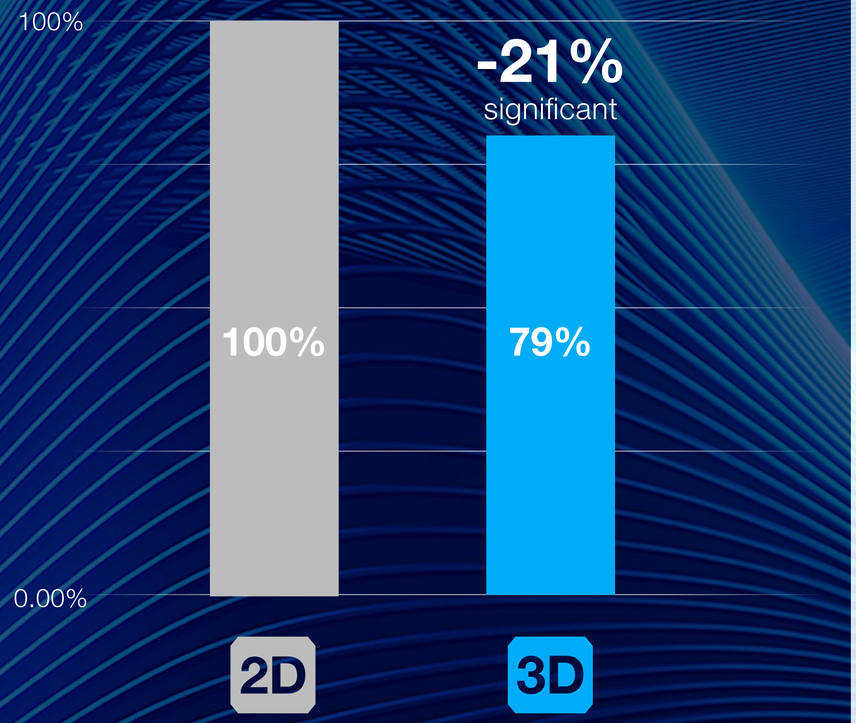
Improved Surgical Outcome

OR Time in Laparoscopic Procedures[2]
Against standard 2D image procedures, 3D vision helps to save up to 35% and, on average, 21% operation time.



3D Vision Designed To Improve Procedure Results

Benefit from realistic 3D vision that provides a high depth of field and allows laparoscopy to be performed **much more precisely for even better patient outcome**.[2]

Improving Clinical Outcome through:

- **Shorter OR Time** via natural spatial perception, enabling efficient surgery outcomes.[2]
- **Better patient outcomes** resulting in shorter hospital stays, less blood loss, fewer complications and improved quality of surgery.[2]
- **Shorter Learning Curve** for young surgeons, leading to improved surgical proficiency.[3]
- **Improved Surgeon Confidence** even when performing complex operations and activities laparoscopically.[4]

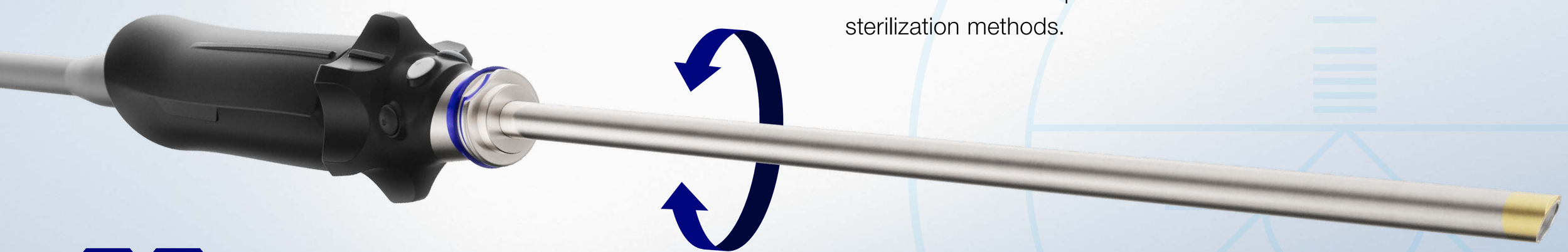
Potential Cost Savings through:

- **OR time savings**, thus freeing up capacity of ORs and staff.[5]
- **Hospital stay reduction** due to fewer switches in open-surgery procedures and faster patient recovery.[6]

125908

ENDOEYE **Rigid**

Change the direction of view while maintaining a stable horizon. ENDOEYE Rigid 30° supports your continuous critical view and always provides you with reliable orientation, even at challenging viewing angles, with its continuous mechanical rotation function.



2D 3D

ENDOEYE – 2D/3D Laparoscope

Image Rotation without Loss of Horizon

- Change of the view direction while maintaining horizontal orientation of images, enabling a continuous critical view.

Chip-on-the-Tip Technology

- Bright, clear and natural 3D depth perception.
- Focus-free handling; no manual focusing required.

Autoclave Compatibility

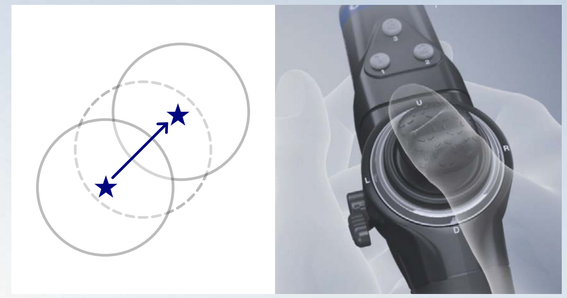
- Reduced costs compared with other sterilization methods.

125927

Improved Surgical Outcome

ENDOEYE **Flex**

Easily shift the field of view with ENDOEYE Flex 3D by simply using the joystick and smoothly moving the tip up to 80° to the desired location. With even better access to narrow cavities, obtain the best viewing angle of the structures being visualized. In particular, observation performance is improved around the rectum, VATS, pelvic cavity, retroperitoneal approach to urology, etc.



Joystick Handle

- Intuitive and up to 80° smooth angulation of the tip.

Focus-Free Handling

- Greater depth of field.
- No need for manual focusing.

Lightweight and Ergonomic Design

- Comfortable and smooth handling.

3D

83576 18732

See Further

Part of a Wider Ecosystem of **Surgery**,...

Our wider portfolio for surgery covers generators, hand instruments for multiple specialties, smoke-management solutions, and puts the power of choice in your hands for advanced energy devices.

Advanced Bipolar Energy
POWERSEAL

Advanced bipolar vessel-sealing technology with high control of thermal spread.

Hybrid Energy
THUNDERBEAT

Advanced hemostasis, fastest-in-class tissue cutting, and superior dissection with temperature control.

Ultrasonic Energy
SONICBEAT

Uncompromised cutting with ultrasonic energy and reliable vessel sealing from a single instrument.

Our wider portfolio equips you with the power for your best performance.

Benefit from:

- Increased efficiency from one source.
- High quality of surgery.
- Maximum standardization of processes.

41421

See Further

…**Collaboration** and **Integration**

Integrate content management and collaboration platforms with VISERA ELITE III as part of a wider ecosystem that support clinicians like you at every step.

Connect

nCare	**MedPresence**	**VaultStream**
Hospital-wide medical recorder	Telecollaboration solution	Medical Content Managment solution

View, record, stream, annotate, label and edit surgical video information pre-, intra- and post-operatively. These system extensions can use patient data from HIS and PACS systems to enhance visual clinical insights.

Benefit from:

- connecting teams by simplifying collaboration.
- peer-to-peer live exchanges of second opinions supporting clinical decision-making.
- the possibility of broadcast training.

Core Products

VISERA ELITE III Product Overview[15,16]

OTV-S700 – VISERA ELITE III Visualization Platform

- All-in-one 4K/3D/IR imaging system for high standardization.
- Customized functions can be upgraded via software upgrades.
- For multiple specialties, compatible with the latest and future generation of scopes.
- Backward compatibility with available scopes.

N6158050

CLL-S700 – VISERA ELITE III LED Light Source

- Full color IR LED light source for excellent natural color reproduction.
- Full color IR mode for better decision-making.
- Long-life LEDs for reducing maintenance costs.

N6157950

Software Upgrade Activation USB Memory Key

- Scalable software upgrade to suit multiple needs.
- Easy and quick upgrades can be done on-site.
- Simply update as upgrades and innovations become available.

N6189450, N6189550

CH-S700-XZ-EA – 4K IR Camera Head

- 4K CMOS for more precise clinical images.
- Continuous Auto Focus (CAF) to minimize distractions.
- Extended Depth of Filed (EDOF) to broaden the focus area.
- Autoclave compatibility for cost-effective reprocessing.
- Lightweight of only 270 g.
- Supports IR and NBI.

N6154750

Core Products

VISERA ELITE III Product Overview[15,16]

Sony LMD-XH320ST/550ST 4K, 3D Medical LCD Monitor

- Available in 32-inch and 55-inch.
- High-quality 4K UHD video images in 3D and 2D.
- High brightness and high contrast.
- Advanced image multiple enhancer (A.I.M.E).
- Clone output.
- 12G SDI.

Sony LMD-XH320ST/550ST

IR UHD Telescopes (0°/30°, 10 mm/5 mm)

- ED glass lens, optimized for high-resolution and razor-sharp images.
- Incorporates design elements for Infrared (IR) imaging.
- Autoclave compatibility for cost-effective reprocessing.

WAIR100A, WAIR130A, WAIR500A, WAIR530A, WA4KT130

ENDOEYE Rigid 3D/2D (0°/30°, 10 mm/5 mm)

- (3D) image rotation without loss of horizon to maintain a reliable orientation.*
- Chip-on-tip technology for bright, clear and natural 3D depth perception.*
- Focus-free as no manual focusing required.
- Autoclave compatibility for cost-effective reprocessing.

WA50080A, WA50082A, WA50040A, WA50042A, WA50050A, WA50052A

ENDOEYE Flex 3D

- Joystick handle for intuitive and smooth shifting of field of view.
- Better access to narrow cavities with the short flexible tip.
- Focus-free as no manual focusing required.

N5781330

*3D only with 3D ENDOEYE

Core Products

VISERA ELITE III Product Overview[15,16]

ULTRA Telescopes (0°/30°/45°, 5 mm/10 mm)

· Optimized for high-resolution imaging.

Full autoclavability

· Reduced waste due to full reusability of the telescopes.

Good illumination even at the edges

· The ULTRA telescopes have a homogenous light distribution in the peripheral region.

WA4KL500, WA4KL530, WA4KL545, WA4KL100, WA4KL130, WA4KL145

nCare Medical Recorder[1]

Secure and Intuitive Design to Support Health Care Teams

· nCare is a connected medical recorder that captures full HD images and videos from up to two surgical devices simultaneously.

· nCare easily, reliably and securely connects clinicians with the critical visual information they need at all times.

· The user-friendly solution can fit nearly anywhere, from an endoscopic cart to an equipment boom.

U9000407, U9000408, U9000409, U9000410, U9000411, U9000549, U9000551, U9000550, U9000463

System Chart

VISERA ELITE III Product Overview

Video Scope

ENDOEYE Rigid/Flex

Monitor
LMD-XH320ST/550ST

Cart
WM-NP3, WM-NP2

Insufflation
UHI-4

Video Processor
OTV-S700

Light Source
CLL-S700

System Integration Unit
nCare

Telescope
4K, IR, HD

VISERA ELITE III
Camera Head 4K/IR
CH-S700-XZ-EA

Light Guide Cable

VISERA ELITE II
and other camera heads

Be Visionary – Innovation That Grows With You

Discover More about VISERA ELITE III

If you require more specific details about VISERA ELITE III and its benefits, need detailed information on the single products and components, or want to download individual product specification documents, please visit your local Olympus website.

www.olympus.com

References

[1] Please contact OLYMPUS for compatibility details.

[2] Fanfani F, Rossitto C, Restaino S, Ercoli A, Chiantera V, Monterossi G, Barbati G, Scambia G. How Technology Can Impact Surgeon Performance: A Randomized Trial Comparing 3-Dimensional versus 2-Dimensional Laparoscopy in Gynecology Oncology. J Minim Invasive Gynecol. 2016 Jul-Aug;23(5):810-7. doi: 10.1016/j.jmig.2016.03.020. Epub 2016 Apr 1. PMID: 27046747.

[3] Velayutham V, Fuks D, Nomi T, Kawaguchi Y, Gayet B. 3D visualization reduces operating time when compared to high-definition 2D in laparoscopic liver resection: a case-matched study. Surg Endosc. 2016 Jan;30(1):147-53. doi: 10.1007/s00464-015-4174-1. Epub 2015 Mar 25. PMID: 25805241.

[4] Kanaji S, Suzuki S, Harada H, Nishi M, Yamamoto M, Matsuda T, Oshikiri T, Nakamura T, Fujino Y, Tominaga M, Kakeji Y. Comparison of two- and three-dimensional display for performance of laparoscopic total gastrectomy for gastric cancer. Langenbecks Arch Surg. 2017 May;402(3):493-500. doi: 10.1007/s00423-017-1574-9. Epub 2017 Mar 17. PMID: 28314905.

[5] SU16 3D VS. 2D-Imaging in Laparoscopic Procedures: Opportunity Costs Associated with the Reduction of Time in the Operating Room (OR) – L. Bruno, A. Zervakis, P. Reinders – DOI: https://doi.org/10.1016/j. jval.2020.08.2002

[6] Padin EM, Santos RS, Fernández SG, Jimenez AB, Fernández SE, Dacosta EC, Duran AR, Artime Rial M, Dominguez Sanchez I. Impact of Three-Dimensional Laparoscopy in a Bariatric Surgery Program: Influence in the Learning Curve. Obes Surg. 2017 Oct;27(10):2552-2556. doi: 10.1007/s11695-017-2687-5. PMID: 28456885.

[7] Blanco-Colino, R. & Espin-Basany, E. (2018). Intraoperative use of ICG fluorescence imaging to reduce the risk of anastomotic leakage in colorectal surgery: a systematic review and meta-analysis. Tech Coloproctol, 22(1), 15-23. doi:10.1007/s10151-017-1731-8

[8] Arezzo, A., Bonino, M. A., Ris, F., Boni, L., Cassinotti, E., Foo, D. C. C., …Morino, M. (2020). Intraoperative use of fluorescence with indocyanine green reduces anastomotic leak rates in rectal cancer surgery: an individual participant data analysis. Surg Endosc. 34(10), 4281-4290. doi:10.1007/s00464-020-07735-w

[9] Bostrom, P., Haapamaki, M. M., Rutegard, J., Matthiessen, P. & Rutegard, M. (2019). Population-based cohort study of the impact on postoperative mortality of anastomotic leakage after anterior resection for rectal cancer. BJS Open, 3(1), 106-111. doi:10.1002/bjs5.50106

[10] Frasson, M., Flor-Lorente, B., Rodriguez, J. L., Granero-Castro, P., Hervas, D., Alvarez Rico, M. A., …Garcia-Granero, E. (2015). Risk Factors for Anastomotic Leak After Colon Resection for Cancer: Multivariate Analysis and Nomogram From a Multicentric, Prospective, National Study With 3193 Patients. Ann Surg, 262(2), 321-330. doi:10.1097/sla.0000000000000973

[11] Roy, M., Dip, F., Nguyen, D., Simpfendorfer, C. H., Menzo, E. L., Szomstein, S. & Rosenthal, R. J. (2017). Fluorescent incisionless cholangiography as a teaching tool for Residents

[12] Dip, F., LoMenzo, E., Sarotto, L., Phillips, E., Todeschini, H., Nahmod, M., …Rosenthal, R. J. (2019). Randomized Trial of Near-infrared Incisionless Fluorescent Cholangiography. Ann Surg, 270(6), 992-999. doi:10.1097/SLA.0000000000003178

[13] Broderick, R.C., Lee, A.M., Cheverie, J.N. et al. Fluorescent cholangiography significantly improves patient outcomes for laparoscopic cholecystectomy. Surg Endosc (2020).

[14] Van Dam DA, van Rijswijk A-S, Ankersmit M van den Heuvel B, Tuynman JB, Meijerink WJHJ. Fluorescent Imaging With Indocyanine Green During Laparoscopic Cholecystectomy in Patients at Increased Risk of Bile Duct Injury. Surgical Innovation. 2017;24(3):245-252. doi:10.1177/1553350617690309

[15] Devices will be available upon declaration of conformity, product registration or market clearance in each country's jurisdiction. Some devices might not be available in some areas. Pending 510(k), not available for sale in the United States.

[16] Manufacturers: Olympus Surgical Technologies Europe, Olympus Winter & Ibe GmbH, Kuehnstraße 61, 22045 Hamburg, Germany, www.olympus.eu | Olympus Medical Systems Corp, 2951 Ishikawa-cho, Hachioji-shi, Tokyo 192-8507, Japan, www.olympus-global.com | Olympus Surgical Technologies America, 800 West Park Drive, Westborough, MA 01581, U.S.A., www.medical.olympusamerica.com | Sony Corporation, 1-7-1 Konan Minato-ku, Tokyo, 108-0075 Japan

* Data and values are based on studies from Europe and might deviate depending on region.
The content of this material may show products not yet released.

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