

OLYMPUS

The next frontier for endoscopy procedures: How Olympus' EVIS X1™ endoscopy system can change the game for ASCs

The volume of endoscopic procedures performed at the ambulatory surgery center (ASC) continues to increase. These procedures range from screening colonoscopies to upper GI endoscopies. Improving the efficiency and effectiveness of these procedures may lead to better patient outcomes and can help to control costs.

The use of advanced technologies can support physicians to improve the efficiency and effectiveness of their procedures. In the endoscopy suite, investments in advanced visualization systems can help to streamline endoscopic procedures, enhance ASC efficiency and increase a physician's confidence.

Becker's ASC Review recently spoke with Patrick Romano, endoscopy business unit Vice President at Olympus Corporation of the Americas, about how the next-generation Olympus® EVIS X1™ endoscopy system is designed to elevate the standard of endoscopy and support physicians in improving patient outcomes. Mr. Romano spoke about the new imaging modalities offered with the system.

New modalities like Texture and Color Enhancement Imaging support higher levels of patient care

The new Texture and Color Enhancement Imaging (TXI™) technology in the EVIS X1 endoscopy system enhances image color, texture and brightness, which may help physicians improve their detection rates for potentially suspicious lesions and polyps.¹

"Users can see potential lesions that may not be visible under normal white light, due to enhancements in the image," Mr. Romano said. "If we can reduce adenoma miss rates, for example, physicians can diagnose patients right the first time."

The emphasized image information provided by TXI technology may shorten the learning curve for newer endoscopists, while enhancing the quality of procedures. "With TXI technology, it's easy to see more with a less trained eye," Mr. Romano said. "That may improve patient outcomes at outpatient centers that specialize in diagnostic procedures like screening colonoscopies."

Becker's ASC Review also spoke with early adopters of the new EVIS X1 endoscopy system at the Advanced Surgical Institute (ASI) in Sewell, N.J. ASI was the first practice in the United States to use the Olympus EVIS X1 endoscopy system.

The ASI team has been impressed by the clarity of the images. "Everything was very, very clear. I was amazed by the intensity of the brightness and the mucosa detail," said ASI gastroenterologist Ahmed Shehata, MD. "With TXI technology, I can detect flat polyps and remove them. TXI technology also highlights inflammation that can't be seen well with regular lights, so I can take a biopsy from that area."

"As we take the scope out, the EVIS X1 endoscopy system enables visualization of the polyp and the folds. You see things clearly and quickly," ASI endoscopy technician Spencer Smith said. "We used TXI technology during a case recently, and we were able to pinpoint a large lesion in the colon."

Dr. Shehata believes that the capabilities of the new EVIS X1 endoscopy system have the potential to reduce the risk of colon cancer. "The main reason we do colonoscopies is to detect polyps," he said. "TXI technology will help us detect more adenomatous polyps, increase the quality of the colonoscopy and help prevent cancer."

ASI endoscopy technician Robin Rose agreed, noting, "When you have TXI technology on, the polyps are very visible. It's great during colonoscopies."

Red Dichromatic Imaging is designed to improve hemostasis and reduce physician stress

Red Dichromatic Imaging (RDI™) technology is another new powerful modality in the EVIS X1 endoscopy system. RDI technology is designed to enhance the visibility of deep blood vessels and bleeding sources so that physicians can specifically target the area needing treatment.²

"A lot of stress comes from bleeds during or after a procedure," Mr. Romano said. "A patient might leave the ASC and then be readmitted or call the office due to discomfort or blood in their stool. RDI technology supports the physician in finding and addressing the bleed and can confirm when hemostasis has been achieved."³

When physicians don't know exactly where a bleed is, they may feel the need to use multiple clips to be safe. RDI technology enables a physician to see the specific point of the bleed, which may help avoid overutilizing items such as clips or other hemostasis devices.

RDI technology has already demonstrated its value at ASI by helping to reduce patient bleeding during procedures. Dr. Shehata recently had a patient with a large stomach polyp that bled considerably. When he turned on RDI technology, he saw the points of bleeding and inserted a clip, and the bleeding stopped. Dr. Shehata also used RDI technology in the esophagus to gather more details about blood vessels under the mucosa.

"Sometimes when we go to the GE junction during upper endoscopies, we're looking for a bleed that we can't find," Ms. Rose said. "Having RDI technology help us pinpoint where it is has been a big help for us, and it's beneficial for the patient as well."

Dr. Shehata echoed his colleague's endorsement of RDI technology. "RDI technology is amazing. It decreases the stress on the physician and can reduce the procedure time," he said. "More importantly, it may help to prevent patients from requiring blood transfusions."

¹ Data on file with Olympus (DC00489968).

² Data on file with Olympus (DC00489968).

³ Data on file with Olympus (DC00489968).

Narrow Band Imaging™ offers a brighter experience during procedures

Narrow Band Imaging™ (NBI™) technology has been part of the Olympus platform since 2005 and continues to be an imaging modality offered on the EVIS X1 endoscopy system. NBI technology provides a sharp and clear endoscopic image.⁴

"Historically, NBI technology has been used to look at Barrett's esophagus," Mr. Romano said. "Now, NBI technology is increasingly being used in the colon. Using this technology for different procedures and areas of care is helpful in the ASC."

Dr. Shehata now uses the EVIS X1 endoscopy system during all of his GI procedures. Its features and functionality are making a positive difference regardless of case type. For example, for patients with Barrett's esophagus, NBI technology quickly directs Dr. Shehata to small lesions in the lower part of the esophagus that need to be biopsied for dysplasia.

Improved scope ergonomics may minimize physician injuries and fatigue

In addition to incorporating innovative imaging technologies into the EVIS X1 endoscopy system, Olympus has redesigned some of its endoscopes. "Some ASC physicians perform 10 to 20 cases per day. They experience a lot of stress specifically around the wrist, hand and fingers," Mr. Romano said.

To help alleviate these issues, Olympus reduced the weight of the EVIS X1 scope control section by 10 percent and made the scope's angulation control knobs and switches more accessible.⁵

"Typically, scopes are one-size-fits-all," Mr. Romano said. "The EVIS X1 scope control section has been designed so it's easy for physicians with small hands to access the buttons, valves and switches."

The EVIS X1™ endoscopy system design supports ASC economics and operations

The EVIS X1 endoscopy system can be used with most of the previous generation of Olympus® scopes, the EVIS EXERA™ III 190 series.⁶ ASC physicians can plug compatible 190 series scopes into the CV-1500 video system center and access the new imaging modalities.

"From a financial perspective, ASCs don't have to upgrade everything at once," Mr. Romano said. "They can use existing assets⁶ and then upgrade scopes further down the road. Accessing this new technology doesn't have to mean a big, one-time investment."

⁴ Data on file with Olympus (DC00489968).

⁵ Data on file with Olympus (DC00482729, DC00600786, DC00031984, DC00482747, DC00482867, DC00600794, DC00481878, DC00031984 and DC00841888).

⁶ As defined as compatible in the Instructions for Use (IFU) for the CV-1500 video system center.

⁷ Data on file with Olympus (DC00436067).

⁸ Data on file with Olympus (DC00412083 and DC00623365).

⁹ Data on file with Olympus (DC00460933).

In addition, Olympus has incorporated features into the EVIS X1 endoscopy system that make it particularly well suited for ASC environments. The processor and light source have been combined in one box, which reduces the footprint of the system.⁷ To reduce system maintenance, Olympus switched from a xenon light bulb to five LEDs, which have a longer life and consume less energy.⁸

In addition, the EVIS X1 endoscopy system is completely digital, with a touch panel and customizable settings for each physician and/or different procedure types.⁹ Beyond the features of its new endoscopy system, Olympus provides ASCs with a high level of customized customer service. During the installation process, the sales representative, field service engineer and endoscopy support specialist will show an ASC's staff how to use the CV-1500 video system center, its new imaging technologies and its menu options.

Conclusion

ASI is an organization that embraces change and innovation. As a result, physicians at ASI are encouraged to learn and utilize new technologies. "Test out the EVIS X1 endoscopy system and you'll see the difference," Mr. Smith said. "You may catch more polyps. But you should see more than you did with the light provided in previous generation systems that might not catch a growth, polyp or lesion."

Dr. Shehata emphasized that the "EVIS X1 endoscopy system may help physicians detect more lesions, reduce bleeding and shorten procedure times."

"Time is money," he added. "But most importantly, the EVIS X1 endoscopy system may give endoscopists confidence that they didn't miss any lesions, which may help to improve patient outcomes."

The EVIS X1™ endoscopy system is not designed for cardiac applications. Other combinations of equipment may cause ventricular fibrillation or seriously affect the cardiac function of the patient. Improper use of endoscopes may result in patient injury, infection, bleeding, and/or perforation. Complete indications, contraindications, warnings, and cautions are available in the Instructions for Use (IFU).

The positions and statements made herein by ASI are based on ASI's experiences, thoughts and opinions. As with any product, results may vary and the techniques, instruments and settings can vary from facility to facility. You should thoroughly review the relevant user manual(s) for instructions, warnings, and cautions.