

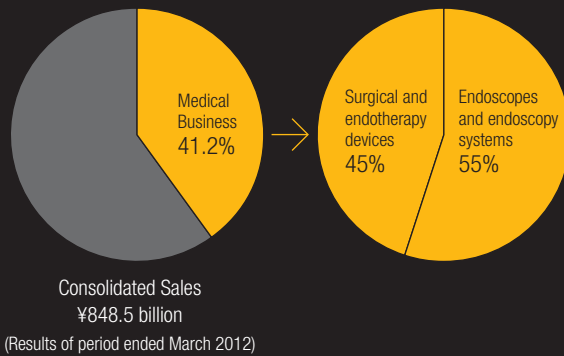
# SPECIAL FEATURE

# Olympus Medical Technology

Strategic products designed to deliver exceptional medical outcomes and drive future growth

## Leading Olympus Business Segment

The Medical Business accounts for more than 40% of consolidated net sales at Olympus, making it the largest core business of the Company. This segment is comprised of three business lines: endoscopes and endoscopy systems, surgical devices, and endotherapy (diagnostic and therapeutic) devices.



## Global Sales, Service, and Manufacturing Activities

We have over 200 service locations around the world on six continents: North America, South America, Europe, Asia, Australia, and Africa. This network is second to none among global manufacturers of medical instruments. Olympus conducts service quality evaluations at our locations worldwide, building toward a service system that ensures the same high-quality service in any country or region.

## A Global Trilateral Organization for Production

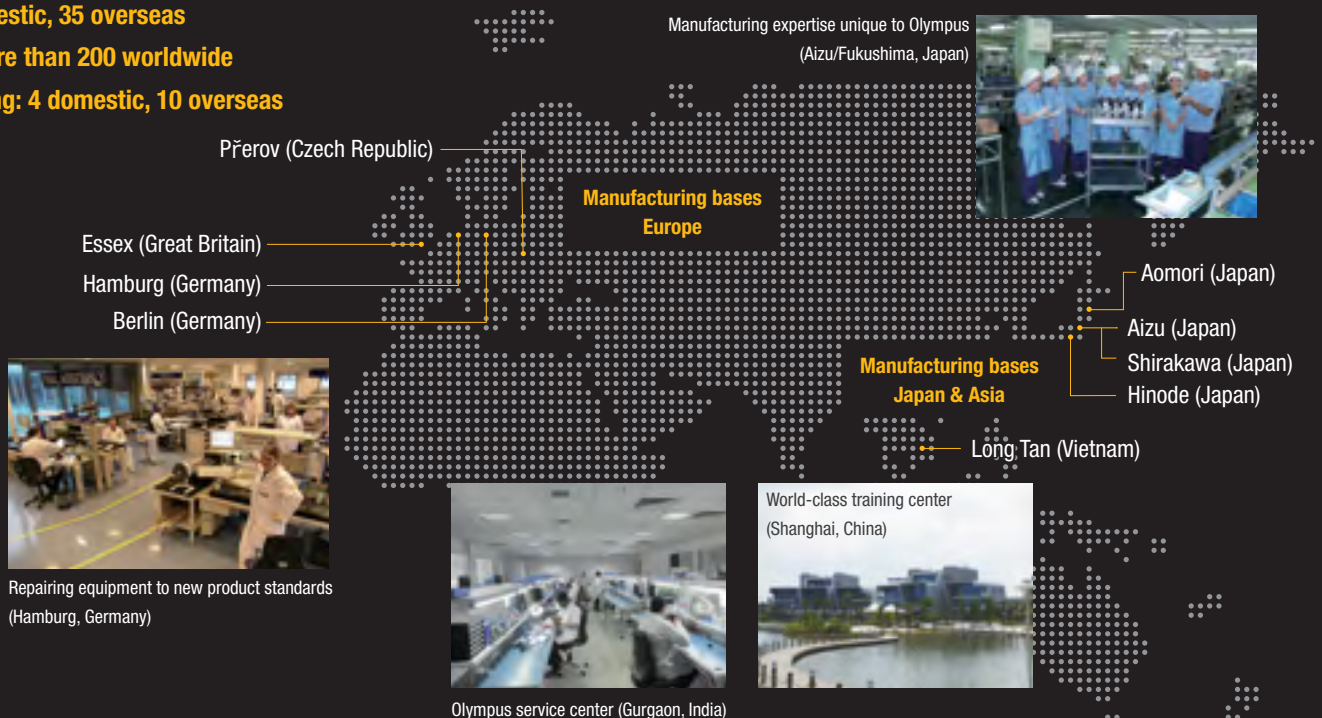
Olympus is currently constructing a global, trilateral organization comprised of the Americas, Europe, and Japan/Asia. In the Americas, manufacturing is based at Olympus Surgical Technologies America (formerly Gyus ACMI) and focuses on flexible and rigid endoscopes for surgery as well as devices for otorhinolaryngology, urology, and gynecology. In Europe, manufacturing focuses on rigid endoscopes and endotherapy devices. In Japan/Asia, our plants manufacture endoscope systems (endoscopes, video processors, and light sources) and endotherapy devices. At the plant in Vietnam, Olympus plans to further expand production of devices.

## Global Manufacturing Activities and Sales/Service System

**Sales: 1 domestic, 35 overseas**

**Services: More than 200 worldwide**

**Manufacturing: 4 domestic, 10 overseas**





World's largest endoscope repair center  
(San Jose, U.S.A.)



Manufacturing market-leading urological and gynecological  
equipment (Maple Grove, U.S.A., formerly a Gyrus ACMI facility)

# SPECIAL FEATURE

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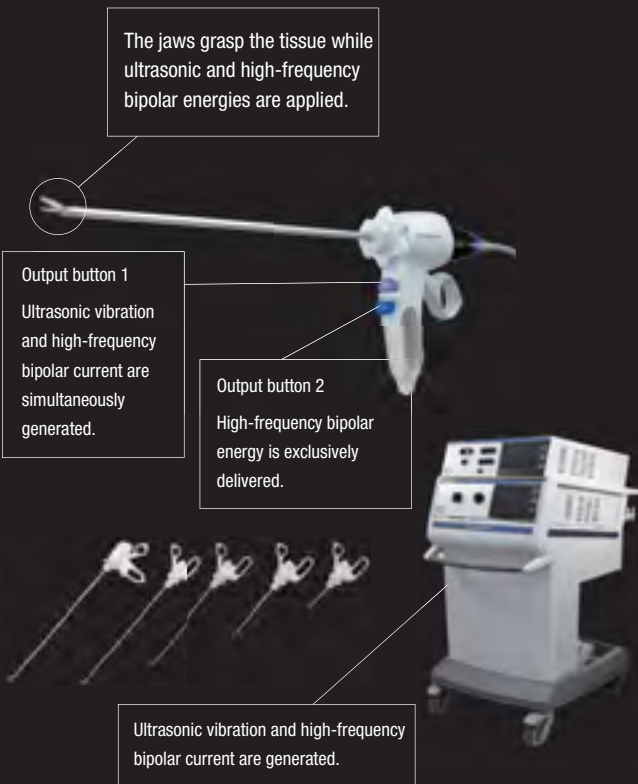
## Surgical Energy Device

# THUNDERBEAT



Olympus has succeeded in developing the world's only surgical device that simultaneously delivers high-frequency bipolar energy, for effective vessel sealing, and ultrasonic energy, for precise tissue cutting and dissection, with minimal thermal spread. The jaw's precision design also provides excellent grasping capabilities.

### Overview of the THUNDERBEAT System



Note: Launch of THUNDERBEAT surgical energy device in Japan is pending regulatory approval. THUNDERBEAT has been launched in the Europe and the Americas.

### A Word from the Developers

#### The Challenge of Creating the World's First Integrated Energy Device

In the course of developing medical solutions, we research current products and how to improve them by talking directly with doctors engaged in implementing new surgical procedures. On one occasion, we observed tissue being removed by ultrasonic vibration following the cauterization of the diseased portion using high-frequency bipolar current. It occurred to us that by integrating these two devices, it would become possible to rapidly cut tissue while effectively sealing blood vessels. This led us to address the requirements for this kind of system, such as improving the vessel-sealing ability of the ultrasonic energy device and simplifying the operation of the bipolar energy device.

At the time, Olympus possessed both bipolar current and ultrasonic vibration technology, but not in a single device. This innovation would represent the world's first device that integrated the two technologies; therefore, it proved to be a process of experimentation by trial and error. We repeatedly developed prototypes and sought advice from some of the world's best surgeons in Japan, the United States, and Europe. We are proud that our endeavor resulted in THUNDERBEAT. This integrated energy device is highly functional and minimally invasive, achieving the Olympus Medical Business Group's mission: "Driven by our customers' quest for clinical excellence, efficiency, and peace of mind, we apply knowledge, vision, and solutions."

**Mitsumasa Okada**

General Manager, Therapeutic Products Department  
Olympus Medical Systems Corp.





## Background: From Major Abdominal Operations to Minimally Invasive Endoscopic Surgery

With the introduction of laparoscopic cholecystectomy (minimally invasive surgical gallbladder removal) in the 1990s, laparoscopic or minimally invasive surgery has become widely accepted due to its reduced impact on patients. Recently, laparoscopic applications have expanded to surgeries requiring advanced technology, such as operations on malignant tumors and bariatric surgeries. Moreover, an increasing demand for these procedures can be expected in the future due to the spread of colorectal cancer and obesity in the global population.

To improve the efficiency of these operations as well as promote their widespread acceptance and use, we developed a single-energy device

capable of multiple, complex tasks. Our innovation, THUNDERBEAT, enables not only vessel sealing, hemostasis, and tissue coagulation but also precise dissection and cutting, which is made possible by the jaw tip's precision design. In addition, the combination of THUNDERBEAT with high-resolution endoscopic imagery is expected to enable far more precise and effective surgical procedures.

To contribute value to society, Olympus will continue to advance minimally invasive solutions with a “see and treat” approach. By integrating observation, diagnosis, and treatment technologies, we strive to enhance lives around the globe.

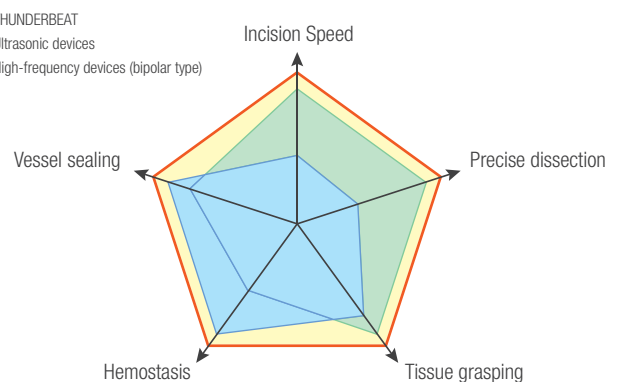
## Product Features: Hemostatic Function and an Unprecedented Incision Speed for Improved Surgical Efficiency

We were motivated to work toward a single device that could meet surgeons' demands for superior medical effectiveness and efficiency through safer, swifter incisions, and convenient, reliable vessel sealing to minimize blood loss.

### THUNDERBEAT Features

1. Simple operation delivering unprecedented incision speeds
2. Reliable sealing of blood vessels up to and including 7 mm in diameter
3. Integrated delivery via a single device capable of multiple tasks, including incision, tissue removal, blood vessel sealing, and hemostasis

### THUNDERBEAT Features—Comparison of Effectiveness



## Market Scale and Future Outlook: Energy Devices

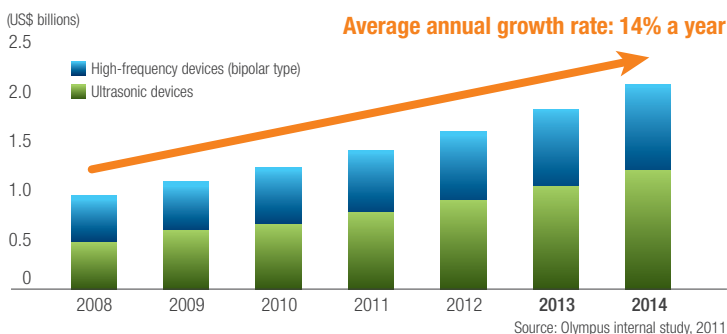
With a robust average growth rate for the surgical energy device market of 14% per year (source: Olympus internal study), the market scale for the fiscal year ended March 31, 2011, reached about US\$1.4 billion.

Two U.S. manufacturers currently account for more than 80% of the global market share (source: Olympus internal study). By contrast, while Olympus holds the top position among Japanese manufacturers, our share of

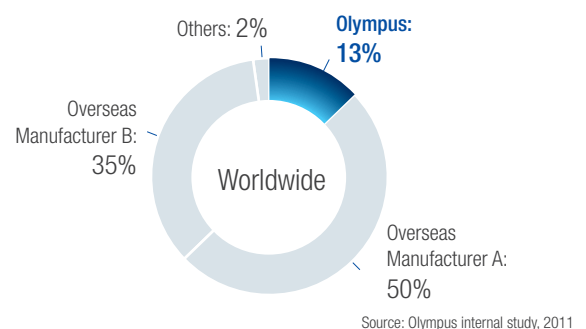
the global market is only about 13%.

By creating new markets based on our overwhelming and inimitable technological edge, and by maximizing the power of the Olympus sales network (bolstered by our acquisition of Gyrus ACMI), we expect to achieve steady future gains in the surgical arena.

### Global Market for Surgical Energy Devices



### Market Share for Surgical Energy Devices



# SPECIAL FEATURE

Olympus Medical Technology

## Gastrointestinal Video Endoscopy System

# EVIS EXERA III

After seven years in development, Olympus has brought together all of our expert technology to unveil the EVIS EXERA III video endoscopy system, a renewed, next-generation series for the global gastrointestinal endoscopy market.

This endoscopy platform provides superior image quality to commercially available products, which enables observation with greater detail, delivers improved ease of operation, and contributes to operational efficiencies.

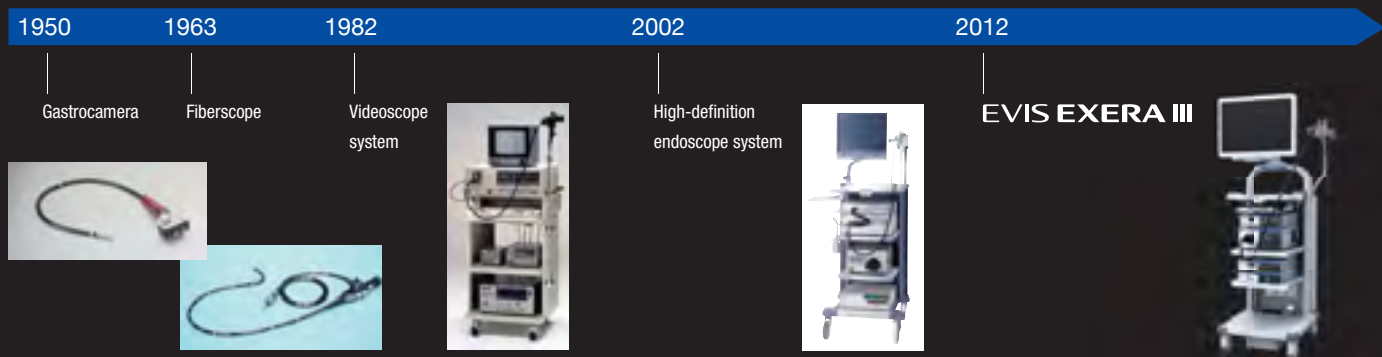
### Drawing on the Evolution from Gastrocamera to Endoscope

In 1950, Olympus developed the world's first practical gastrocamera, making a major contribution to the establishment of early-stage detection for stomach cancer, Japan's most prevalent killer at the time. In subsequent years, we have worked diligently to perfect fiberscope and videoscope technologies, pouring our resources into the development of a wide variety of detection and treatment methods using endoscopes and endoscopic devices. Olympus has added to these pioneering achievements with other breakthroughs, such as the world's first high-definition endoscope system and our own proprietary narrow band imaging (NBI) technology. By consistently working to understand the complex needs of physicians while enhancing the lives of patients, Olympus continues to be the leader in endoscopy, with a 70% market share worldwide.



EVIS EXERA III

### Timeline of Olympus Endoscope Development



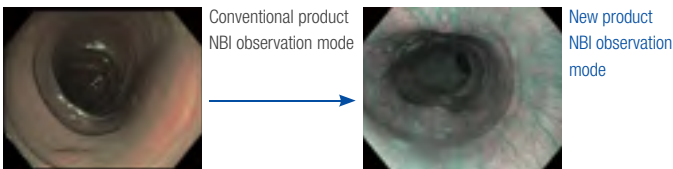
## Product Features: Three Major Improvements in Enhanced Performance and Efficiency

### 1. Improvement of observation performance

Unprecedented high-density imaging and improvements in optical digital technology enables improved observation performance, intended to allow physicians to provide more accurate patient diagnoses.

#### Development of NBI optical digital technology

- Improvement of xenon lamp and optical system
- Sensitivity improvements in charge-coupled device (CCD)
- Image improvements through decreased noise



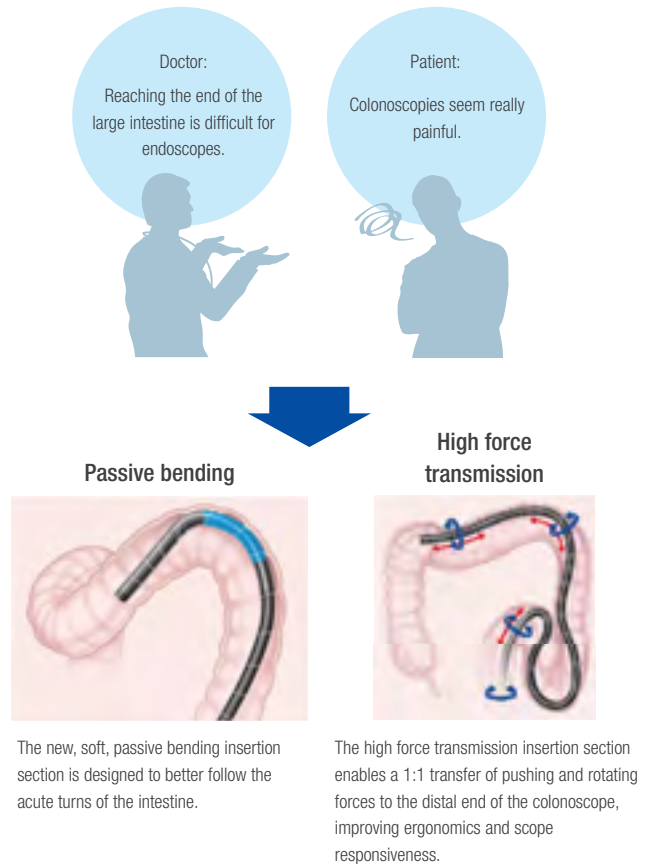
### 3. Improvement of operation efficiency with simplified setup and reprocessing

With improved operability and complete waterproofing of the endoscope, this new series improves procedural efficiency and reduces the workload placed on both the doctor and hospital staff.



### 2. Improvement of insertion

Improvements in the ease of colonoscope insertion enhance control for the physician and reduce discomfort for the patient.



## Outlook for the Future: Aiming for Further Expansion of Our Current 70% Global Market Share

In June 2012, Olympus announced a medium-term vision that includes an ambitious average annual growth target of 9% while securing a large share of the gastrointestinal endoscope market segment.

As aging populations grow in developed countries, controlling the cost of social security in those economies is becoming an increasingly pressing concern. Patient quality of life and efficient hospital management are recognized to be serious issues in every country. As such, the demand for endoscopy as a means for early diagnosis and treatment can be expected to expand.

As the leading company in gastrointestinal endoscopy, Olympus will continue contributing to the realization of a medical environment characterized by greater consideration for the physical and psychological needs of people around the world. We will achieve this through our commitment to the ongoing development and introduction of cutting-edge endoscopic solutions that reflect the procedural needs of physicians and medical staff as they work toward more effective and efficient care for their patients.

### EVIS EXERA III: For a Broad Range of Diagnostic and Treatment Applications

In addition to gastrointestinal endoscopy applications, the EVIS EXERA III universal platform can help contribute to efficient surgical environments in medical institutions. It can be used effectively for endoscopy in laparoscopic surgery, as well as for respiratory, urinary, and otorhinolaryngology procedures.

For instance, gastrointestinal endoscopy is routinely used in the operating room ("GI in the OR") by U.S. surgeons. Following surgeries involving incisions in the stomach or colon resection, gastrointestinal endoscopy can be performed to visually inspect the procedure site and to maintain postoperative observation, increasing the chances for a safe and efficient outcome. Our gastrointestinal endoscopy systems developed for Europe and the United States are also configured for connecting to a surgical scope, giving them a significant advantage over competing products.

Olympus strives to help improve procedural outcomes and enhance the quality of life for patients. We do so by providing cutting-edge systems for healthcare professionals and capitalizing on our leading position as the only manufacturer offering comprehensive, minimally invasive endoscopy systems focused on early diagnosis and treatment.

# SPECIAL FEATURE

Olympus Medical Technology

## Video Endoscopy System for Emerging Markets

# Axeon

Axeon is a gastrointestinal endoscopy system developed primarily for emerging markets with the legacy of Olympus technology to meet customer expectations globally for high-performing, quality products.

An LED built into the tip of the endoscope functions as the light source, enabling the Axeon system to achieve reduced power requirements. By offering these affordable, state-of-the-art endoscopic solutions, Olympus provides effective endoscopic examination support for medical institutions in emerging markets.



**Axeon**



### Product Features: Low Price and Simplicity of Design Achieved Without Compromising Performance or Quality

- |   |  |   |
|---|--|---|
| <p>1. Compact and light-weight system</p> <ul style="list-style-type: none"> <li>• About half the size and weight of conventional integrated light source models</li> <li>• Easy operation via a simple front panel design</li> </ul> | <p>2. Distal-end LED</p> <ul style="list-style-type: none"> <li>• Long-lasting, compact, integrated LED light source makes conventional lamp replacement obsolete, eliminates the need for a cooling fan, and increases energy efficiency</li> </ul> | <p>3. Waterproof design</p> <ul style="list-style-type: none"> <li>• Waterproof, one-touch connector simplifies reprocessing</li> <li>• Simple and easy to use, even for staff members new to the system</li> </ul> |
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### Future Outlook: Expanding the Range of Endoscopic Medical Treatment by Establishing Training Centers

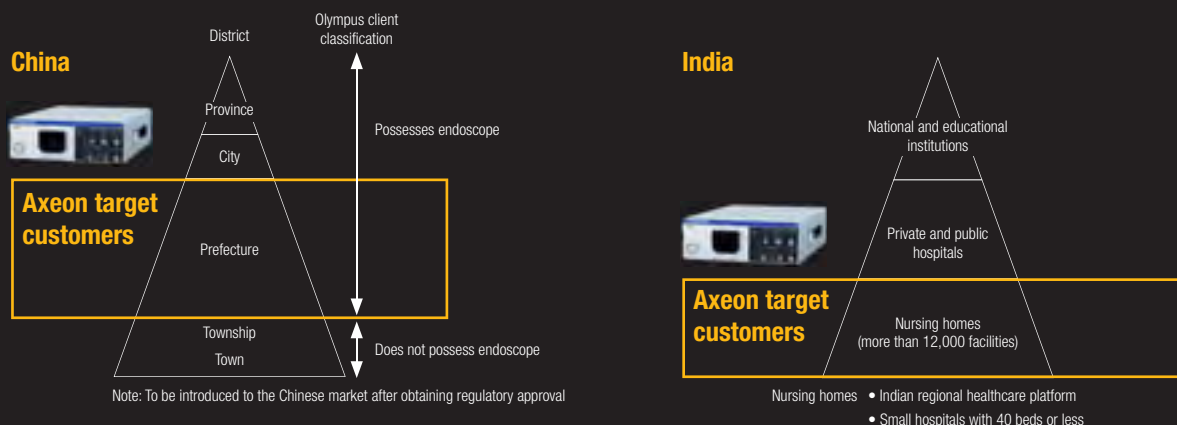
Economic growth is expanding the demand for endoscopy as a means of early detection and treatment of gastrointestinal diseases, such as cancerous lesions, in emerging markets. However, the number of doctors trained to perform endoscopy is insufficient, and medical facilities are unable to keep pace with the growing demand in these markets.

In our medium-term vision, Olympus has set an aggressive growth target for average

annual sales of 23% in emerging markets. One of the critical components affecting this target is the implementation of physician training programs in developing nations so that they are able to offer endoscopy services. Toward that end, Olympus has already established a training center in China for advanced endoscopic treatment. In the future, training centers will also be established in more than 20 other regions in Asia.

### Target Area of Axeon: BRICS (Brazil, Russia, India, China and South Africa), Asia (excluding Japan), Middle East, and Latin America

Note: Launch date for each country will vary depending on regulatory compliance and approval. Axeon is not for sale in the United States, UK, Japan and some Asian Pacific countries.



## New Endotherapy Device

# ITknife nano™

In June 2012, Olympus Japan launched the ITknife nano™, a disposable, high-frequency knife for endoscopic submucosal dissection (ESD) of lesions in the esophagus and large intestine. Olympus in the Americas will launch this exciting new product later this year.

### Product Features

1. The ceramic tip at the distal end of this device is insulated to help perform incisions and dissections more effectively without impacting deeper areas of the mucosa.
2. The incision knife tip is smaller in size than its predecessor, the ITknife2, and is designed to improve maneuverability.



ITknife nano™

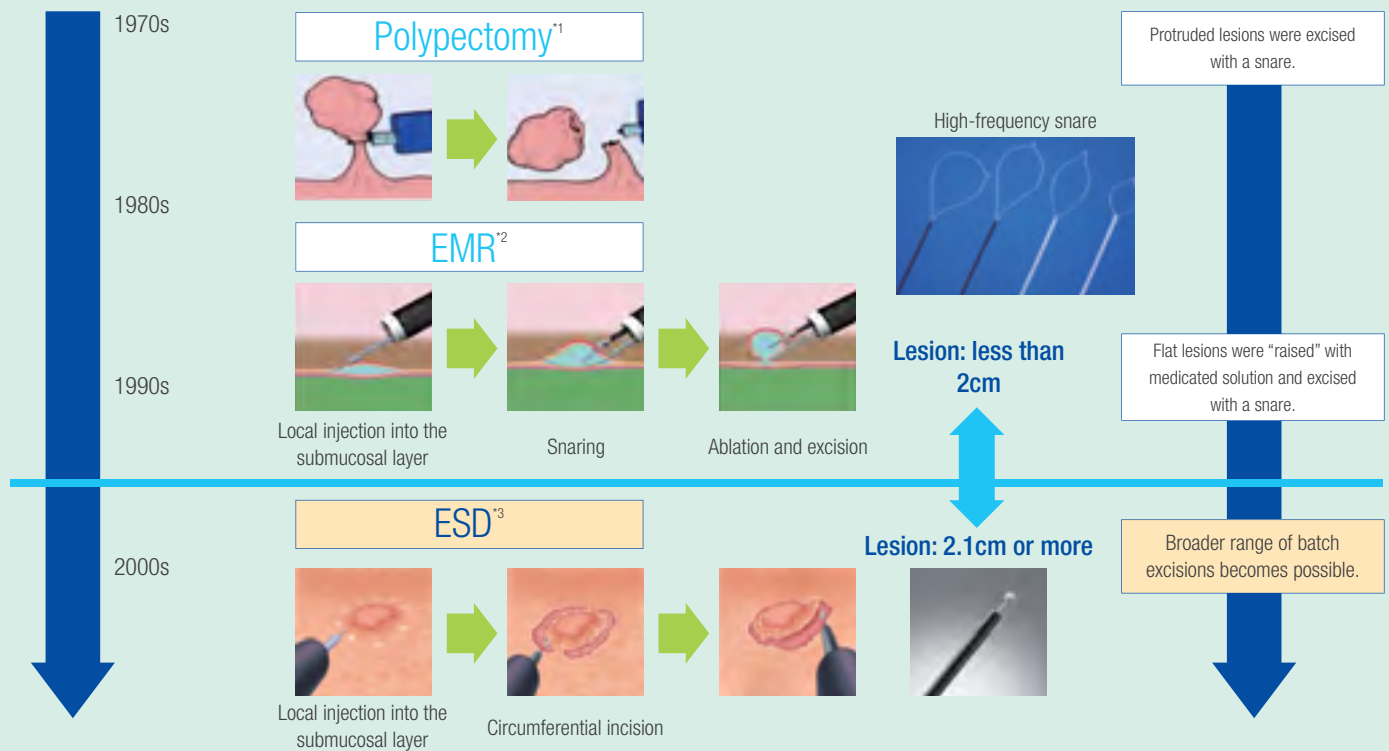
### ESD and Olympus

The advent of ESD marked a departure in endoscopy therapy from that of the 20th century, greatly expanding the range of endoscopic treatment by enabling more minimally invasive procedures than previously thought possible. However, ESD was very difficult technically and there were many hurdles which limited general acceptance, including the length of treatment times and the risks of procedural error.

To remedy this situation, in 2002, Olympus introduced the world's first dedicated ESD device, the ITknife™. Lesions exceeding 2cm that were previously removed through laparotomy could now be removed and treated

with an integrated endoscope and endotherapy device. Subsequently, the range of treatments using ESD has expanded to both the esophagus and large intestine. Over the past decade, Olympus has continued to develop and fine tune ESD products based on valuable feedback from medical professionals. This has contributed to the increasing acceptance and procedural advancement of ESD in the marketplace. Over the past decade, Olympus has remained the leader in ESD technologies, commanding a significant share of this growing market. We intend to continue this trend, developing technologies optimized for ESD, to further expand their application.

### ESD in Endoscopic Therapy: Evolution of Endoscope Treatment Techniques for Early Stage Cancer



<sup>1</sup> Polypectomy: Technique used to excise polyp lesions that protrude from mucosal epithelia

<sup>2</sup> EMR (endoscopic mucosal resection, that is, endoscopic mucous membrane excision): Technique for injecting organic saline solution between normal tissue and cancers of the stomach or large intestine, and excising the cancer with a snare

<sup>3</sup> ESD (endoscopic submucosal dissection): Technique used in excision of a broad range of early-stage lesions