Endoscopy Devices Market to 2018

Demand for Cost-Effective, Minimally Invasive Procedures and Reimbursement for New Indications to Increase Uptake

GBI Research
Global Business Intelligence

GBI Research Report Guidance

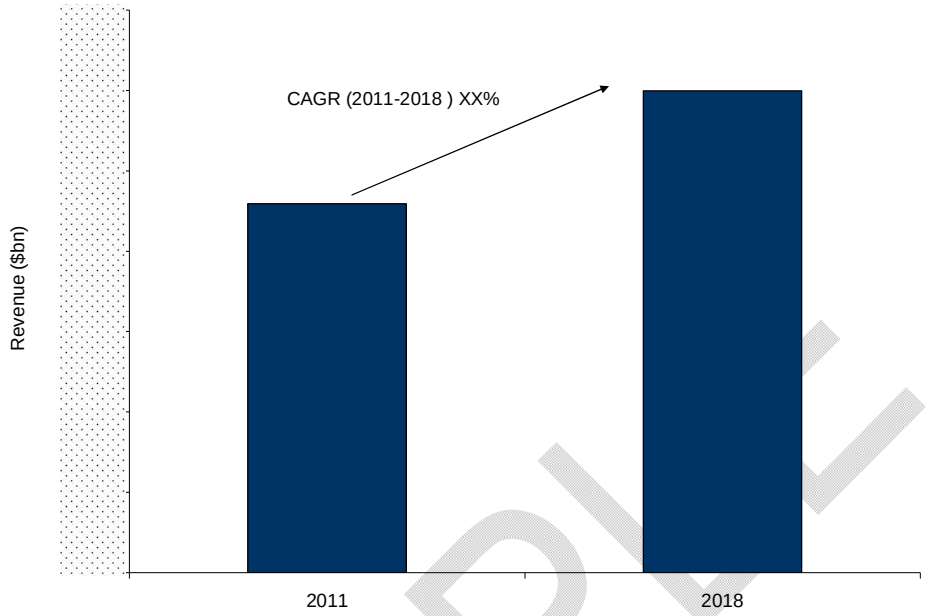
- The 'Market Characterization' chapter provides information on market size for the historic period 2004–2011 and the forecast period 2011–2018. It also has information relating to endoscopy devices market trends, market dynamics and the competitive landscape. In the market dynamics section, comprehensive information is provided on market drivers and restraints.
- The 'Category Analysis and Forecasts' chapter discusses flexible endoscopes, endoscopy visualization systems, rigid endoscopes, endoscopic reprocessors, capsule endoscope systems, endoscopic instruments and endoscopy fluid management systems categories along with their respective segments. Market size information for the historic period 2004–2011 and the forecast period from 2011 to 2018 are discussed for each category along with market dynamics and competition. However, company shares for endoscopy visualization systems, endoscopic instruments and endoscopy fluid management have not been covered.
- The above chapter is followed by 'Country Analysis and Forecasts'. Market size information for the historic period 2004–2011 and the forecast period 2011 to 2018 are provided for the US, Canada, the UK, France, Germany, Italy, Spain, Japan, China, India, Australia and Brazil. A cross-country analysis of these countries is also discussed.
- The 'Competitive Assessment' chapter gives profiles of the leading endoscopy device companies along with the company's products, features and benefits.
- The 'Pipeline Product Analysis' chapter focuses on the pipeline products in various categories. Key pipeline products are listed and discussed in detail, and product approval and expected launch dates are also provided for a certain number.
- The 'Consolidation Landscape' chapter discusses the consolidation landscape in the endoscopy devices industry. This chapter looks at the total number of deals that took place between 2007 and 2011.

Executive Summary

The Global Endoscopy Devices Market is Forecast to Increase at a CAGR of XX% during 2011–2018

The global endoscopy devices market is expected to grow at a Compound Annual Growth Rate (CAGR) of XX% during 2011-2018, increasing from $XX billion in 2011 to $XX billion in 2018

Endoscopy Devices Market, Global, Revenue ($bn), 2011–2018



Source: GBI Research, Company Annual Reports and Interviews with Industry Experts and Key Opinion Leaders

The global endoscopy devices market is expected to grow at a Compound Annual Growth Rate (CAGR) of XX% during 2011-2018, increasing from $XX billion in 2011 to $XX billion in 2018. The increasing incidence of Gastrointestinal (GI) disorders and colon cancers is driving the global endoscopy devices market. Increased adoption of endoscopy devices can also be attributed to the growing number of Minimally Invasive Surgeries (MIS) and the availability of reimbursement for procedures using these devices.

Growing Demand for Minimally Invasive Procedures with Diagnostic and Therapeutic Applications to Drive the Endoscopy Devices Market

Minimally invasive surgery is associated with fewer post-operative complications, minimal incidence of scarring and shorter hospital stays which in turn brings down the overall cost associated with the surgical procedure. MIS procedures are being increasingly adopted as a result.

A recent retrospective data analysis carried out by Covidien based on more than XX patients elucidated the fact that compared to open surgeries, laparoscopic surgeries were associated with reduced risks of surgical site infection and a reduced need of blood transfusions (Agarwal S. et al. Annual meeting of Society of American Gastrointestinal and Endoscopic Surgeons, 2012). This study strongly supported the fact that laparoscopic surgeries not only resulted in safer outcomes but were also more economical than open surgeries across a number of different surgical procedures. Open surgery was $XX more expensive per case than a laparoscopic procedure, and added XX days to the patient's duration of hospitalization (Agarwal S. et al. Annual meeting of Society of American Gastrointestinal and Endoscopic Surgeons, 2012).

According to EndoEvolution, a medical device company, nearly XX million MIS procedures are performed in the U.S annually. With the number of MIS procedures performed each year expected to increase, it is expected that there will be a huge demand for endoscopy devices.

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2 Introduction

Endoscopy devices are efficient diagnostic and therapeutic tools that access, diagnose and treat diseases. Traditional endoscopy devices found applications mostly in diagnosing and treating diseases of the GI tract. With new technology innovations, these devices are finding widespread usage in new areas of minimally invasive surgeries.

The endoscopy devices market comprises flexible endoscopes, rigid endoscopes, capsule endoscope systems, endoscopic instruments, endoscopic reprocessors, endoscopy fluid management systems and endoscopy visualization systems.

The increasing prevalence of GI diseases such as Crohn's disease, inflammatory bowel disorders and other diseases of the colon is increasing the demand for the endoscopy devices. Increased patient awareness and technology innovation will further boost growth of the endoscopy devices market. Another key driving factor is the availability of reimbursement for preventive screening techniques. This is resulting in an improved uptake of endoscopy procedures such as colonoscopy and sigmoidoscopy techniques, which are some of the most widely used screening methods.

Capsule endoscopy systems in particular will experience high demand owing to an expanding patient base and increasing physician preference. Enhanced adoption can be attributed to the fact that capsule endoscopy procedures are associated with a better diagnostic yield compared to conventional diagnostic procedures. Several studies support the finding that capsule endoscopy also reduces the overall costs associated with endoscopic procedures. A strong reimbursement framework in a number of countries is a key factor in enhancing the rapid and widespread adoption of this technology.

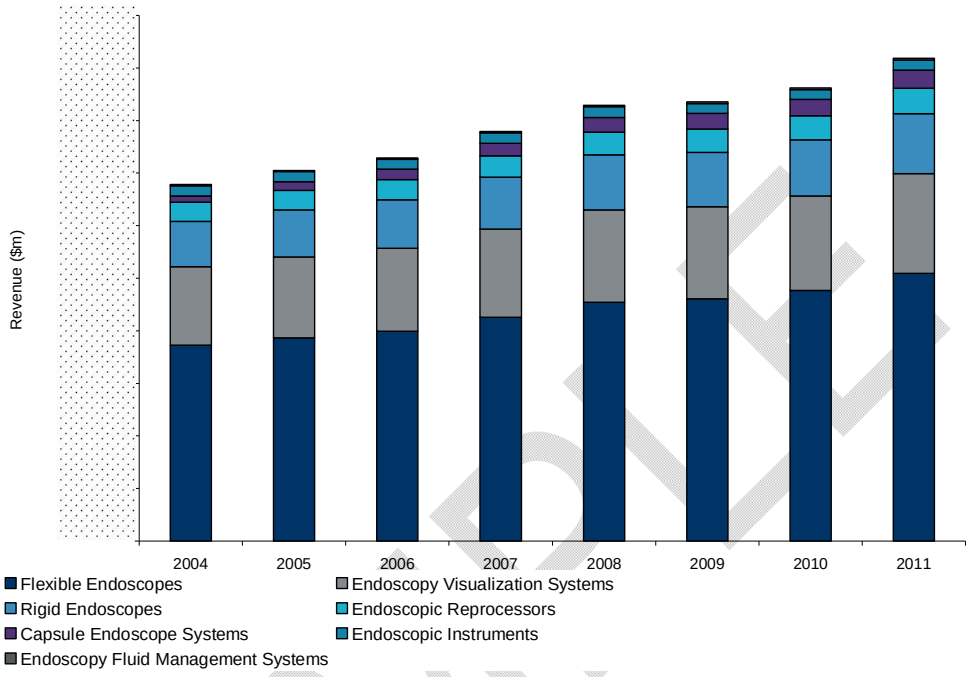
Endoscopic instruments however are witnessing limited adoption due to the availability of technologically advanced alternatives for endoscopic procedures. Greater awareness about screening techniques and availability of reimbursement are the only factors sustaining growth in this category.

4 Global Endoscopy Devices Market - Market Characterization

4.1 Global Endoscopy Devices Market, Revenue ($m), 2004 – 2011

The following figure shows the revenue generated by the various sectors of the global endoscopy devices market from 2004 to 2011.

Figure 1: Global Endoscopy Devices Market, Revenue ($m), 2004 – 2011



Source: GBI Research, Company Annual Reports and Interviews with Industry Experts and Key Opinion Leaders

The following table shows the revenue generated by the various sectors of the global endoscopy devices market from 2004 to 2011.

Table 1: Global Endoscopy Devices Market, Revenue ($m), 2004 – 2011

	2004	2005	2006	2007	2008	2009	2010	2011	CAGR 2004–2011
Flexible Endoscopes									
Endoscopy Visualization Systems									
Rigid Endoscopes									
Endoscopic Reprocessors									
Capsule Endoscope Systems									
Endoscopic Instruments									
Endoscopy Fluid Management Systems									
Total									

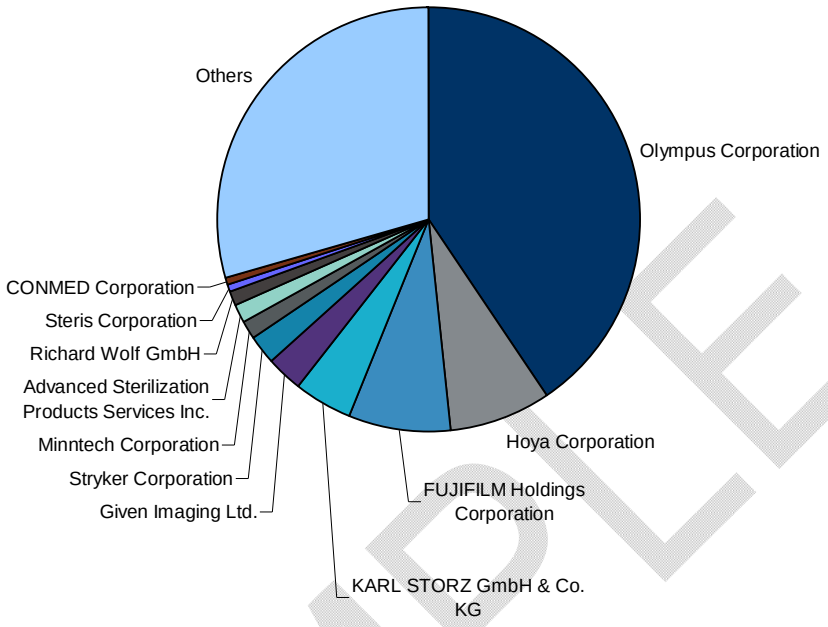
Source: GBI Research, Company Annual Reports and Interviews with Industry Experts and Key Opinion Leaders

The global endoscopy devices market was valued at $XXm in 2004, and grew at a CAGR of XX% to reach $XXm in 2011. Major factors driving the market were the increasing preference for minimally invasive surgery and an increasing number of screening procedures such as those for colorectal cancer. The capsule endoscope systems category was the fastest growing category with a CAGR of XX% and a value of $XXm in 2011. Improved reimbursement and safer patient outcomes associated with the use of capsule endoscopes are driving the global capsule endoscope systems market.

4.3 Global Endoscopy Devices Market, Key Company Share (%), 2010

The following figure shows the market shares of key companies in the global endoscopy devices market in 2010.

Figure 3: Global Endoscopy Devices Market, Key Company Share (%), 2010



Source: GBI Research, Company Annual Reports and Interviews with Industry Experts and Key Opinion Leaders

The following table shows the revenue of key companies in the global endoscopy devices market in 2010.

Table 3: Global Endoscopy Devices Market, Key Company Revenue ($m), 2010

Company Name	Revenue ($m)
Olympus Corporation	
Hoya Corporation	
FUJIFILM Holdings Corporation	
KARL STORZ GmbH & Co. KG	
Given Imaging Ltd.	
Stryker Corporation	
Minntech Corporation	
Advanced Sterilization Products Services Inc.	
Richard Wolf GmbH	
Steris Corporation	
CONMED Corporation	
Others	

Source: GBI Research, Company Annual Reports and Interviews with Industry Experts and Key Opinion Leaders

10 Appendix

10.1 Definitions

10.1.1 Endoscopy Devices

Endoscopy devices are minimally invasive diagnostic medical devices used to assess the interior surfaces of the body. Flexible endoscopes, rigid endoscopes, capsule endoscopes, endoscopic reprocessors, endoscopy fluid management systems, endoscopy visualization systems and other endoscopy aids have been tracked under this market.

10.1.1.1 Flexible Endoscopes

Flexible endoscopes are used for visualization of the inside of the body, where the endoscope has to pass through twists and curves. They are long flexible tubes filed with optical fibers which convey the image to the monitor and display system or directly to an operator's eye.

Fibroscopes

Fibroscopes are flexible endoscopes used for diagnosis of body cavities such as the esophagus, bronchi, duodenum, bile duct, colon and bladder. It is a light system consisting of optical fibers which conduct light rays.

Flexible Videoscopes

Flexible videoscopes are flexible endoscopy devices that capture images through conduits and cavities in the human body. It enables performing diagnostics and therapeutic procedures through indirect visualization of the anatomical area as it appears on the monitor. These images are rich in detail and quality, and often allow the user to capture images and video files of inspections for future reference.

10.1.1.2 Endoscopy Visualization Systems

Endoscopy visualization systems are devices that aid in the visualization and interpretation of the endoscopic images. Typically a visualization system includes endoscopic cameras, video endoscopes, light sources, monitor and display systems, printers, suction pumps and other accessories.

10.1.1.3 Rigid Endoscopes

Rigid endoscopes are solid metal tubes with a series of lenses mounted around one end of the tube. Light is delivered through the endoscope using fiber optic bundles around the outside of the lens housing. These endoscopes are not flexible, but have high resolution images.

Rigid Videoscopes

Rigid Videoscopes are solid metal tubes with a series of lenses inserted into the tube. Light is delivered through the endoscope using fiber optic bundles. These endoscopes give high resolution images. Video cameras are attached with these endoscopes.

Traditional Rigid Endoscopes

Traditional rigid endoscopes are solid metal tubes with a series of lenses inserted into the tube. Light is delivered through the endoscope using fiber optic bundles. These endoscopes are not flexible, but have high resolution images. Video cameras are not attached to these endoscopes.

10.1.1.4 Endoscopic Reprocessors

Endoscopic reprocessors are reprocessing systems designed to wash and disinfect a variety of endoscopes following manual precleaning. They rely upon high pressure and flow rates of liquid chemical germicides (LCG) through the endoscope channels and continuous bathing of the exterior of the instrument. Some consume and dispose of limited amounts of LCG per endoscope cycle, whereas others use a reservoir of LCG that is reused over many cycles. Both types are tracked under this category, but consumable items used together with endoscopic reprocessors are not.

10.1.1.5 Capsule Endoscope Systems

Capsule endoscopy assists the diagnosis gastrointestinal conditions. Capsule endoscopy workstations and capsule endoscopes are tracked under this category.

Capsule Endoscopes

Capsule endoscopes are the GI endoscopy devices. They consist of a color camera, battery, light source and transmitter. The camera takes pictures every few seconds and transmits them to a data recorder worn around the patient's body.

Capsule Endoscopy Workstation

Capsule endoscope workstations are devices that depict a clear and detailed visualization of gastro-intestinal structures, taken by the endoscopy capsule. The pictures taken by the capsule are transmitted to a recording device worn on a belt around the patient's waist. The data is downloaded from the receiver/recorder to a computer workstation for interpretation by the physician.

10.1.1.6 Endoscopic Instruments

Endoscopic instruments are the devices used in endoscopic procedures to provide surgeons precise access into the surgical site. These devices enable doctors and technicians to take tissue samples from the body and to perform certain endoscopic procedures like bone and tissue preparation and suture management.

Biopsy Forceps

Biopsy forceps are reusable handheld tissue forceps used during minimally invasive gastro-intestinal and urological endoscopy for collecting biopsies (live tissue samples for examination). These forceps are Teflon coated stainless steel jaws which are color-coded, autoclavable, and come with or without a cleaning port.

Fine Aspiration Needles

This is a thin needle used to aspirate body fluid or any tissue sample for biopsy.

Polypectomy Snares

A wire loop device designed to slip over a polyp which, upon closure, results in transaction/incision of the polyp stalk.

10.1.1.7 Endoscopy Fluid Management Systems

Endoscopy fluid management systems are used for the irrigation and/or aspiration of fluids into or from a surgical work site during an endoscopic procedure. The systems are used during minimally invasive surgery for the purpose of performing any one of a variety of irrigation/aspiration functions such as tissue lavage, joint distension or uterine distension. These systems include electrically driven pump systems and vacuum systems.

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10.3 Acronyms

ASP: Advanced Sterilization Products

ACG: American College of Gastroenterology

AER: Automated Endoscopic Reprocessors

CAGR: Compound Annual Growth Rate

CIN: Cervical Intraepithelial Neoplasia

CFM: Colonoscopy Force Monitor

CROS: Continuous Rolling Over Sleeve

CMOS: Complementary Metal-Oxide Semiconductor

CMS: Center for Medicare and Medicaid Services

CRC: Colorectal Cancer

CTE: Computed Tomography Enterography

DRG: Diagnosis Related Group

EFTA: European Free Trade Association

EM: Electromagnetic

EMR: Endoscopic Mucosal Resection

ESD: Endoscopic Submucosal Dissection

ECR: Endoscope Cleaner and Reprocessor

EGD: Esophagogastroduodenoscopy

ERCP: Endoscopic Retrograde Cholangiopancreatography

ENT: Ear, Nose, and Throat

EU; European Union

EUS: Endoscopic Ultrasound

EIS: Electrical Impedance Spectroscopy

ESDP: Endoscopic Subfascial Dissection of Perforating veins

FDA: Food and Drug Administration

FDI: Foreign Direct Investment

FICE: Flexible Spectral Imaging Color Enhancement

FOBT: Fecal Occult Blood Test

FOSSL: Fiber Optic Shape Sensing and Localization

GAO: Government Accountability Office

GDP: Gross Domestic Product

GERD: Gastroesophageal Reflux Disease

GI: Gastrointestinal

GPO: Group Purchasing Organizations

HD: High Definition

HDTV: High Definition Television

HLD: High Level Disinfection

HPV: Human Papillomavirus

IBD: Inflammatory Bowel Disease

LED: Light-Emitting Diode

LCG: Liquid Chemical Germicides

MAC: Magnetic Air Capsule

MGCE: Magnetically Guided Capsule Endoscope

MIS: Minimally Invasive Surgery

MOH: Ministry Of Health

MRI: Magnetic Resonance Imaging

NBI: Narrow Band Imaging

NSAID: Nonsteroidal Anti-Inflammatory Drugs

OGIB: Obscure Gastrointestinal Bleeding

OEM: Original Equipment Manufacturer

OR: Operating room

ORL: Otolaryngology

RF: Radio Frequency

SBFT: Small Bowel Follow-Through

TEM: Transanal Endoscopic Microsurgery

TEO: Transanal Endoscopic Operation

TVE: Transvaginal Endoscopy

VAAFT: Video Assisted Anal Fistula Treatment

10.4 Research Methodology

GBI Research's dedicated research and analysis teams consist of experienced professionals in marketing and market research with consulting backgrounds in the medical devices industry and advanced statistical expertise.

GBI Research adheres to the codes of practice of the Market Research Society (www.mrs.org.uk) and the Strategic and Competitive Intelligence Professionals (www.scip.org).

All GBI Research databases are continuously updated and revised. The following research methodology is followed for all databases and reports.

10.4.1 Secondary Research

The research process begins with exhaustive secondary research on internal and external sources being carried out to source qualitative and quantitative information relating to each market.

The secondary research sources that are typically referred to include, but are not limited to:

- Company websites, annual reports, financial reports, broker reports, investor presentations and SEC filings.
- Industry trade journals, scientific journals and other technical literature.
- Internal and external proprietary databases.
- Relevant patent and regulatory databases.
- National government documents, statistical databases and market reports.
- Procedure registries.
- News articles, press releases and web-casts specific to the companies operating in the market.

10.4.2 Primary Research

GBI Research conducts hundreds of primary interviews a year with industry participants and commentators in order to validate its data and analysis. A typical research interview fulfills the following functions:

- It provides first-hand information on the market size, market trends, growth trends, competitive landscape and future outlook.
- It helps in validating and strengthening the secondary research findings.
- It further develops the analysis team's expertise and market understanding.

Primary research involves email correspondence, telephone interviews and face-to-face interviews for each market, category, segment and sub-segment across geographies.

The participants who typically take part in such a process include, but are not limited to:

- Industry participants: CEOs, VPs, marketing/product managers, market intelligence managers and national sales managers.
- Hospital stores, laboratories, pharmacies, distributors and paramedics.
- Outside experts: investment bankers, valuation experts, research analysts specializing in specific medical equipment markets.
- Key opinion leaders: physicians and surgeons specializing in different therapeutic areas corresponding to different kinds of medical equipment.

10.4.3 Models

Where no hard data is available GBI Research uses modeling and estimates in order to produce comprehensive data sets. The following rigorous methodology is adopted:

Available hard data is cross referenced with the following data types to produce estimates:

- Demographic data: population, split by segment.
- Macro-economic indicators: Gross Domestic Product, Inflation rate.
- Healthcare Indicators: health expenditure, physicians base, healthcare infrastructure and facilities.
- Selected epidemiological and procedure statistics.

Data is then cross-checked by the expert panel.

All data and assumptions relating to modeling are stored and are available to clients on request.

10.4.4 Forecasts

GBI Research uses proprietary forecast models. The following four factors are utilized in the forecast models:

- Historic growth rates.
- Macro indicators such as population trends and healthcare spending.
- Forecast epidemiological data.
- Qualitative trend information and assumptions.

Data is then cross-checked by the expert panel.

All data and assumptions relating to modeling are stored and are available to clients on request.

10.4.5 Expert Panels

GBI Research uses a panel of experts to cross verify its databases and forecasts.

GBI Research's expert panel comprises marketing managers, product specialists, international sales managers from medical device companies; academics from research universities, KOLs from hospitals, consultants from venture capital funds and distributors/suppliers of medical equipment and supplies.

Historic data and forecasts are relayed to GBI Research's expert panel for feedback and adjusted in accordance with this feedback.

10.6 Disclaimer