

The Contribution of Endoscopes to Minimally Invasive Surgery

Maria Shepherd • Data Decision Group

The endoscope's contribution to minimally invasive surgery (MIS) procedures can be compared only to the achievements of catheter-driven MIS cardiovascular procedures. Where would the medical specialties of gastroenterology, orthopedics, laparoscopy, pulmonology, otolaryngology, urology and gynecology be without the endoscope? Even coronary artery bypass graft surgery, traditionally a highly invasive open procedure, now can be performed through endoscopic minimally invasive coronary bypass surgery.¹

Many endoscopy-based procedures have moved beyond outpatient treatment facilities to physician's offices due to their flexibility (no pun intended) of use and the potential for a reduced cost per procedure of the office-based environment.

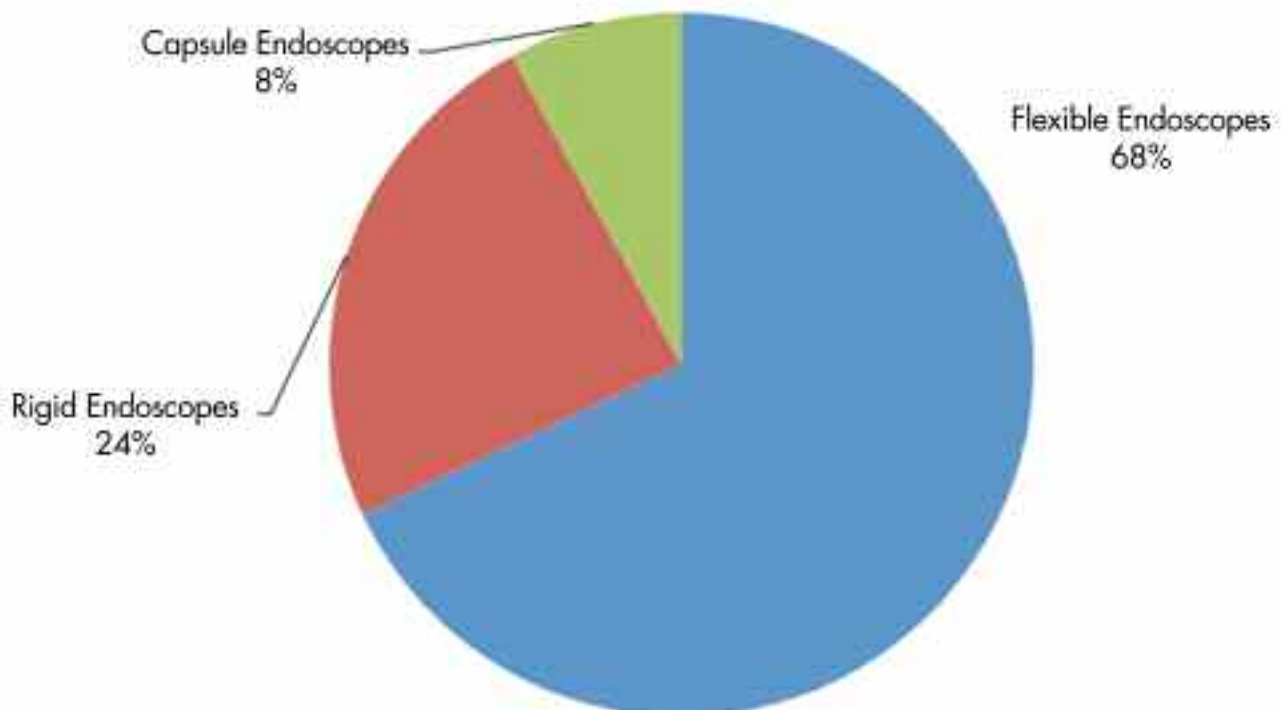
Why It's Important

Endoscope manufacturing has experienced strong revenue growth during the past five years and is forecast to continue expanding, even in the face of the U.S. recession. Since 2006, endoscope revenues are reported to have increased to \$1.8 billion in 2011 by a compound annual growth rate (CAGR) of 14.4 percent, and are expected to continue this growth at a CAGR of 7.4 percent in 2011.² This means that hospital and medical facility management are voting with their dollars for MIS procedures, even as other capital equipment purchases have declined.

The Trends

Capsule endoscopy is an area rich in development, and the opportunities for this type of endoscope seem endless. The next step in the development of passive capsule endoscopes used in the gastrointestinal (GI) tract is to configure them to be actively guided by the physician through the GI system. Many new technologies to provide active capsule guidance are in development using methods such as biotech adhesives or magnets.³ Once GI physicians can control the movement of a capsule endoscope, future therapeutic applications abound.

Chart 1. 2011 Sales of Endoscope by Segment²



The aging population, cancer and obesity rates are other drivers of the endoscope market. Globally, there are more than 1.2 million new cases of colorectal cancer diagnosed annually, according to the International Agency for Research on Cancer's "Globocan" project.⁴ Cancer is a disease state that is often diagnosed or treated with endoscopic equipment.

Gastric bypass and banding procedures for obesity are becoming increasingly popular bariatric surgical procedures, and endoscopy often is used pre and post-operatively for bypass and banding procedures.

The Opportunity

How many other invasive procedures can be converted to an endoscopy based minimally invasive approach? Whitespace research is critical to new market development in the medtech world, to examine every disease state for opportunity for a minimally invasive device solution to improve outcomes. ❖

References:

1. www.umm.edu/heart/tecab.htm#ixzz26v9jVEEz. Accessed Sept. 17, 2012

2. IBISWorld Industry Report, Endoscope Manufacturing, August 2011

3. <http://nanolab.me.cmu.edu/projects/capsules/>

4. <http://globocan.iarc.fr/factsheet.asp>, Accessed Sept. 17, 2012

Editor's note: Readers are invited to submit market data and trend questions to Maria Shepherd. Periodically, selected questions will be presented in this column, with answers from Maria. Send your questions to the email in her bio (below).

Maria Shepherd, founder of Data Decision Group, has 20 years of leadership experience in medical device and life-sciences marketing. Following a career including serving as vice president of marketing for Oridion Medical; director of marketing for Philips Medical; and senior management roles at Boston Scientific Inc., she founded Data Decision Group. Her firm quantitatively and qualitatively sizes opportunities, evaluates new technologies, and assesses prospective acquisitions for medtech companies. Shepherd teaches marketing and product development courses and recently was appointed to the board of the MSBiV Medtech Investment Committee. She can be reached at (617) 548-9892 and mshepherd@dddecisiongroup.com.

Chart 2. Worldwide New Cases of Cancer Diagnoses That Can Be Treated With Endoscopy²

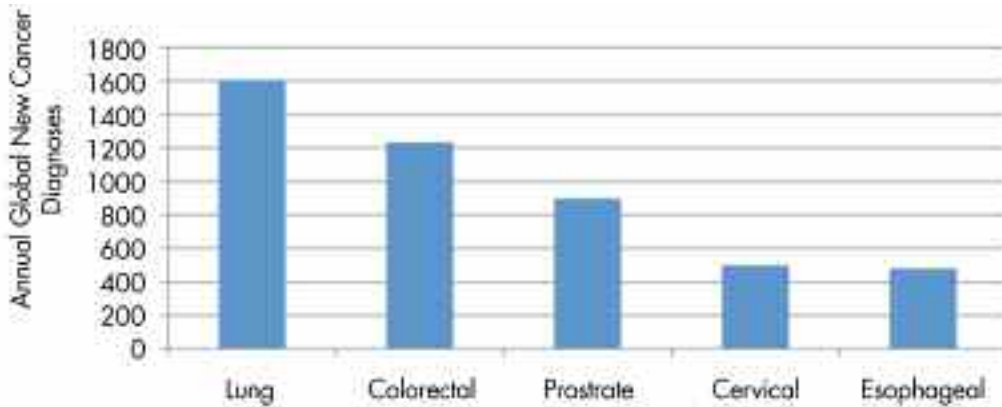


Chart 3. Global Projections for Endoscope Sales, 2011-2016²

