



OLYMPUS SCOPEGUIDE™: A REAL-TIME 3D VIEW OF THE SCOPE INSIDE THE COLON

ScopeGuide™ is designed to help physicians identify/mitigate loops, potentially shorten colonoscopy time and decrease learning curve for GI fellows and medical students

Olympus received FDA clearance in 2011 for its ScopeGuide™, a technology that assists physicians during a colonoscopy via a real-time, three-dimensional image of the shape and configuration of the colonoscope inside the body. News and interest in ScopeGuide surged during 2012, and the benefits of this new technology are only just beginning to become widely known and appreciated by gastroenterologists, many of whom are viewing the breakthrough with considerable enthusiasm.

ScopeGuide shows an accurate 3D reconstruction of the position and configuration of the endoscope position within the colon that is refreshed multiple times per second for real-time viewing. Physicians can now view the ScopeGuide image alongside the endoscopic image when they use it in conjunction with a monitor with picture-in-picture functionality, with the result that they need only view one monitor.

As an integrated technology in the Olympus EVIS EXERA III 190 Series HQ colonoscopes, ScopeGuide uses endoscopic imaging via electromagnetic coils embedded in the CF-HQ190L/I colonoscope. The colonoscope's transmission coils generate a weak field for the ScopeGuide receiver. A separate handheld 3D marker can help with visualizing where abdominal pressure will be most effective. Physicians can view not only the colonoscope's shape and position, but at the same time observe



the interior of the body with remarkable clarity due to several visualization improvements facilitated by the latest Olympus technology, which includes Dual Focus, Narrow Band Imaging (NBI) and Pre-Freeze Functionality.

Vetted By Professors of Medicine

Steven Lichtenstein, D.O., Director of the Division of Gastroenterology, Medical Director, Endoscopy/GI Lab at Mercy Fitzgerald Hospital and Clinical Associate Professor of Medicine at Philadelphia College of Osteopathic Medicine, states: "In my case ScopeGuide has decreased the time required for a colonoscopy, and I use it for every colonoscopy now. The efficiencies created by ScopeGuide include improved patient comfort and a more precise anatomical location for where your scope is at any point during the procedure."

Seth A. Gross, M.D., Assistant Professor of Medicine at the NYU School of Medicine and Director of Endoscopy at Tisch Hospital, NYU Langone Medical Center, reports: “There are times when we have a difficult colonoscopy, and ScopeGuide helps us see exactly where the colonoscope is looping in the abdomen, allowing the endoscopist to make the proper reduction, as well as apply the necessary pressure with the help of the nurse or tech to help navigate those difficult colons and get to the cecum. It definitely gives us the opportunity to shorten the time required to get to the end of the colon, so we can focus on the task at hand, which is to identify and remove polyps.”

Colonoscopy Efficiencies with ScopeGuide™:

- Physician: Identify and mitigate loops.
- Tech: Using the hand coil, pinpoint exact location to apply pressure to assist the physician.
- Nurse: Have a visual cue to document exact location of samples/biopsies.
- Anesthesia: Gauge timing of case and amount of anesthesia still needed.
- Physician after case: Use ScopeGuide image captures to document case.

ScopeGuide Revolutionizes How Colonoscopy is Performed

Dr. Lichtenstein explains the differences between colonoscopy before the advent of the ScopeGuide vs. today’s modern colonoscopy undertaken with the new Olympus technology: “Before, as you were advancing the scope into the colon, there might be a loop forming, and the scope would not move forward. Your nurse or tech would have to feel around the patient’s abdomen, trial and error like, to find that loop and apply abdominal pressure in order to prevent it from forming. Now with ScopeGuide, however, you can immediately see precisely where a loop is forming. Using ScopeGuide’s external hand coil, which is an externally applied handheld location tracker, your assistant can place the pressure right

where the scope is looping, and there is no guessing game, which shortens the time required for the procedure.”

“Traditionally when the scope started to bow or loop, we could only appreciate the fact by the feel of the instrument,” states Dr. Gross, who has published numerous manuscripts, book chapters, and abstracts focused in advanced endoscopic techniques. “But now with ScopeGuide, you have a visual of what’s happening in the colon. You can see the loops and make the necessary maneuvers to reduce them.”

“Historically there have been ways most gastroenterologists would identify when the scope arrived in the cecal area,” Dr. Lichtenstein elaborates. “One of those ways was to look on the patient’s abdomen for the light reflex in the right lower quadrant, which I have found at times very difficult to see, especially if the patient is obese. With ScopeGuide, you can now identify the cecum not only by the typical endoscopic landmarks, but also by the 3D image on the screen. This added confirmation is of huge benefit. In addition, if I see any pathology, such as a polyp I want to remove, in the past we would look at the numbers on the scope and then we would place a tattoo, a submucosal mark, to label it for possible future inspection. Now I still use the numbering on the scope, but also I can tell from ScopeGuide whether I am in the transverse colon, right colon or sigmoid colon. Anatomically we now have a much better sense of where we are when we want to label for pathology. We never had that before.”

Positive Implications for the Training of Gastroenterologists

According to Dr. Gross, “The whole idea of the use of ScopeGuide in the training of future gastroenterologists is that when you’re learning the procedure of colonoscopy, there tends to be a steep learning curve. For someone starting out, it takes a minimum of a year before the person develops the nuances of colonoscopy and how to maneuver efficiently around the colon. Some learn

faster than others, of course, but one of the goals we have when teaching how to do a colonoscopy is for the person in training to appreciate that when the scope is inserted into the colon, there are points where it will advance smoothly, but also there are points when you will push the instrument and it will not advance. With our Fellows, the use of ScopeGuide shortens their colonoscopy learning curve through assisting them to appreciate what a loop is, not just by feel, but also through 3D visualization.”

Dr. Lichtenstein agrees: ““The implications of ScopeGuide are huge for teaching purposes. I teach medical students, and usually in my procedure room I will have at least two or three students, and occasionally residents or fellows. Through ScopeGuide, you can actually see the bend and the loops and the anatomy of the colon, which can substantially decrease the learning curve of a Fellow. Prior to the ScopeGuide, all students had was the endoscopic image, and they weren’t always fully able to visualize why the scope was looping or behaving the way it was.”

“Sometimes it takes a couple of maneuvers to figure out what the issue is and why the scope is not advancing,” states Dr. Gross. “Not all loops are the same, and there is a wide range of how quickly someone can navigate the colon to get to the cecum. ScopeGuide allows you to identify the loop that is causing the difficulty, so you can make the necessary maneuver. It can save time during colonoscopy, because you can do the reducing maneuver one time vs. spending time trying to figure out what is limiting scope advancement or trying multiple maneuvers.” ♦

ScopeGuide is an integral part of EVIS EXERA III, the Olympus endoscopy platform. When the MAJ-1300 probe is inserted into the instrument channel of conventional Olympus endoscopes, they are upgraded to full ScopeGuide functionality. For additional information about ScopeGuide, please call 800-848-9024, visit our website at www.olympusamerica.com/scopeguide.