

# Promising Results in First-in-Human Study, Self-Forming Magnets for Compression Anastomosis in Colorectal Surgery

*Early clinical experience demonstrates 100% technical success with no anastomotic leaks, strictures or bleeds in minimally invasive colorectal surgery.*

CANTON, MA, UNITED STATES, July 1, 2026 /EINPresswire.com/ -- [GI Windows Surgical](#) announced the publication of first-in-human colorectal feasibility data evaluating the company's Flexagon™ + OTOLoc™ magnetic compression anastomosis platform in Diseases of the Colon & Rectum. The study was led by Antonio Caycedo-Marulanda, MD, Chair of [Colorectal Surgery](#) at Orlando Health Colon and Rectal Institute.



The prospective study evaluated GI Windows' magnetic compression system in 25 adult patients undergoing elective minimally invasive colorectal resection requiring intracorporeal anastomosis. All procedures were completed laparoscopically or robotically with 100% technical success, no conversions to open surgery, no diverting stomas, no device malfunctions, and no anastomotic leaks within 30 days. The mean [magnetic anastomosis](#) time was 7 minutes. Follow-up demonstrated complete anastomotic patency, with no evidence of stenosis, obstruction, or delayed transit.

The publication represents an important milestone in the evolution of magnetic compression anastomosis. Earlier magnetic platforms relied on delayed lumen formation, limiting their use in colorectal surgery where immediate bowel continuity is essential. GI Windows' system is designed to overcome that limitation by combining immediate luminal patency with controlled, non-penetrating compression.

"For decades, surgery has focused on iterative improvements to instrumentation and procedural mechanics," said Brian Tinkham, Chief Executive Officer of GI Windows Surgical. "We believe the next frontier may be creating more reproducible surgery. Expanding magnetic compression into

colorectal surgery represents an important step toward standardizing the anastomosis throughout GI surgery, regardless of training and experience.”

“Even today, many right colectomy anastomoses are still performed outside the body because intracorporeal reconstruction remains technically demanding and variable,” said Antonio Caycedo-Marulanda, MD MSc, lead investigator of the study. “Technologies that simplify and standardize intracorporeal anastomosis may help accelerate broader adoption of minimally invasive colorectal surgery. What makes this approach particularly compelling is that it combines immediate luminal patency with a non-penetrating, compression-based healing mechanism.”

Unlike conventional stapled or sutured techniques, GI Windows Surgical’s magnetic compression platform is designed to create a non-penetrating anastomosis without leaving permanent foreign material at the anastomotic site. The system enables immediate bowel continuity while allowing tissue healing to occur gradually under controlled compression.

The study authors concluded that magnetic compression anastomosis with immediate luminal patency was technically feasible and demonstrated a favorable short-term safety profile. The authors also noted that larger, prospective, comparative studies are needed to define the role of magnetic compression anastomosis in colorectal surgery.

The published article is available online (Published Ahead of Print) in Diseases of the Colon & Rectum:

[https://journals.lww.com/dcrjournal/abstract/9900/magnetic\\_compression\\_anastomosis\\_with\\_immediate.1330.aspx](https://journals.lww.com/dcrjournal/abstract/9900/magnetic_compression_anastomosis_with_immediate.1330.aspx)

The Flexagon™ + OTOLoc™ system is investigational for colorectal applications and has not been approved by the U.S. Food and Drug Administration for use in colorectal surgery.

#### About GI Windows Surgical

GI Windows Surgical is a commercial-stage medical technology company developing magnetic compression platforms for gastrointestinal surgery. The company’s technology is designed to support controlled tissue compression, reproducible healing, and minimally invasive workflow integration across bariatric, foregut, and colorectal procedures.

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