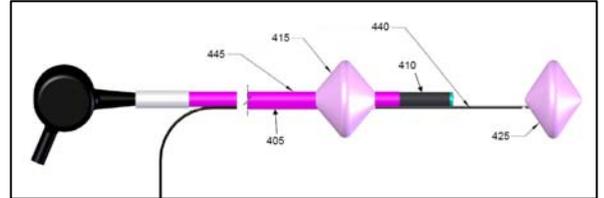


Endolumenal Surgical Platform (ESP)

The MINT team is developing a ground-breaking disposable medical device called the Endolumenal Surgical Platform (ESP). This tool works in conjunction with commercially available endoscopes to significantly improve scope diagnostic and therapeutic functionality of endoscopes available to clinicians world-wide.



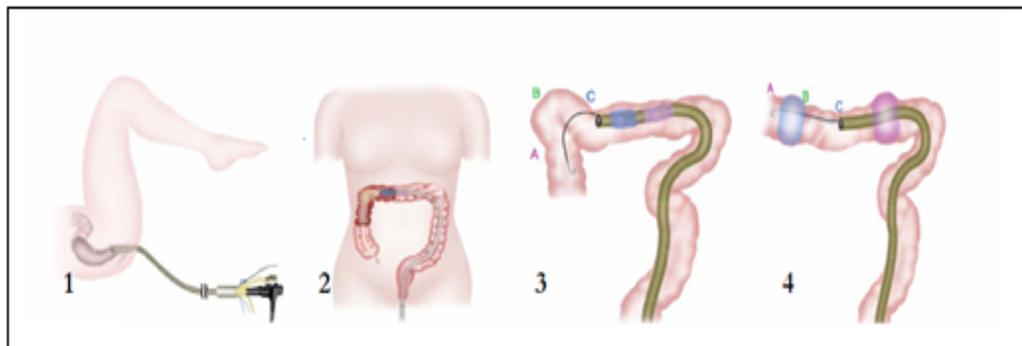
The Unmet Clinical Need

More than 1 million people are diagnosed with colon cancer worldwide each year. Early diagnosis significantly improves colon cancer survival rates and therefore people over 50 years of age are encouraged to undergo routine colonoscopy. However, over the past 30 years, endoscopes have remained largely unchanged, limiting what clinicians can do during endoscopic diagnostic and therapeutic procedures. Clinicians currently cannot perform a complete colonoscopy in 10% of patients due to scope advancement challenges, miss approximately 20% of polyps due to scope visualization limitations, and are unable to stabilize endoscopes in position relative to the intestinal wall in order to remove polyps. Meanwhile, patients continue to experience significant discomfort as a result of air insufflation, a common endoscope feature intended to facilitate scope advancement and visualization, with little patient benefit.

MINT's Solution

ESP was designed to fit over standard endoscopes like a sleeve. A guide wire mounted on the ESP system enables clinicians to easily advance the scope around challenging bends and folds in the intestine en route to the cecum, the landmark indicating that a complete colonoscopy has been accomplished.

A two-balloon system mounted on the sleeve at the endoscope tip can then be deployed to stabilize the endoscope relative to the intestinal wall. Using ESP, a clinician can flatten and straighten the colon wall to improve visualization of a polyp or injury and anchor the scope into position for precise treatment. The ESP balloons also create an air tight and water tight zone within the colon, allowing clinicians to inflate or irrigate controlled segments of intestine for enhanced diagnosis and treatment. While adding these benefits, ESP does not interfere with current endoscope functionality in any way: scopes retain full range of motion and working channels remain clear.



Continued advancements will establish ESP as the basis of a surgical platform and toolkit that will revolutionize GI surgery, transforming open surgical procedures into minimally invasive procedures conducted within the channel of the intestine, with no incisions, reduced anesthesia, and accelerated patient recovery.

Project Status

To date, the MINT team has prototyped ESP and completed several rounds of ex vivo and in vivo proof of concept studies. MINT is currently preparing ESP for GLP studies and subsequent human trials.

Intellectual Property

MINT filed 15 patent applications for ESP in the United States and internationally