

COLORECTAL SOLUTIONS

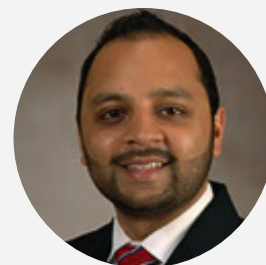
Examining robotic surgery costs

A colorectal surgeon examines the economics of two stapling systems

While healthcare providers are always seeking to improve the delivery of care, Amit Agarwal, M.D. was especially motivated to reduce robotic-assisted surgery (RAS) costs while improving outcomes. He had experienced some minor bleeding issues with the SureForm™ robotic stapler. In addition, repercussions of COVID-19 meant fewer surgeries and shrinking revenues. Dr. Agarwal began to wonder how he could reduce costs when surgeries returned to pre-pandemic case volumes. And so he initiated a small, yet revealing, cost analysis of procedures he performed over a nine-month period, focused on comparing the cost of SureForm™ and Signia™ stapling devices and reloads.†

The numbers are black and white

"I started by looking at my hospital contracts," says Dr. Agarwal. "If you look at any of the hospital formulary, Intuitive™ stapling costs are significantly higher than Medtronic. Of course, pricing will vary by institution. My circumstances caused me to wonder if there's an opportunity here."



Amit K. Agarwal, M.D., FACS is an Assistant Professor of Surgery, Division of Colon and Rectal Surgery, at UT Health McGovern Medical School in Houston, Texas. He is also a member of the American College of Surgeons, and the American Society of Colon and Rectal Surgeons.

† Dr. Agarwal conducted an independent analysis. His results were published at the ASCRS Annual Scientific Meeting, April 2021. Medtronic commissioned him to generate this recap of his findings.

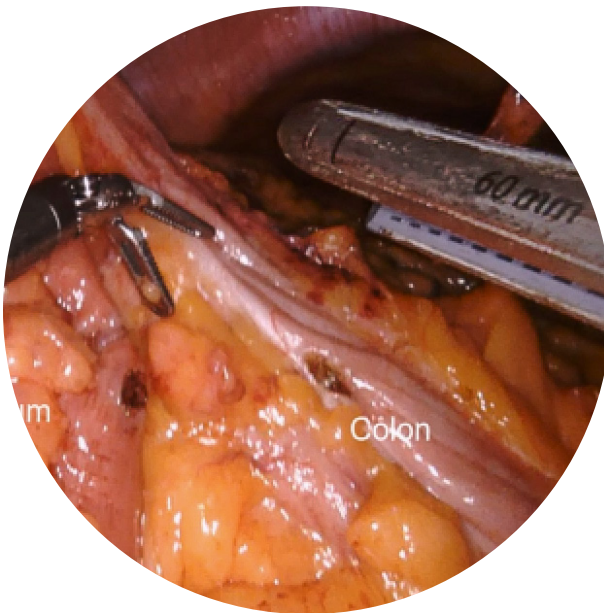
Using the Signia™ stapler in robotic procedures

But it wasn't just costs that concerned Dr. Agarwal. He had experienced a few bleeds with the SureForm™ stapler. "That got me thinking – why not use the Medtronic stapler? I use it on all my laparoscopic cases with good results. So why not use the Signia™ stapler at the bedside in a robotic procedure, create a hybrid technique, and see what the difference is."

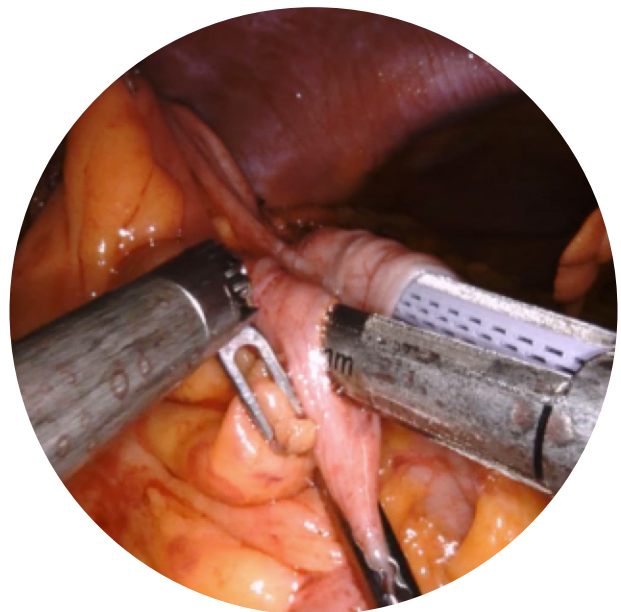
According to Dr. Agarwal, the adoption of the hybrid approach – the Signia™ stapler in conjunction with the robot – was seamless. For him, the hybrid approach is just another technique in his toolbox repertoire. He explains: "Firing is done by residents, a first assist, or sometimes by one of the partners if they are not busy. Because our residents rotate every six weeks, our Medtronic rep provides in-servicing before the case, during, and one more time after the case to ensure they understand the mechanics of the powered stapler. I've been doing the hybrid approach, going on nine months now, without issue."

// The hybrid approach hasn't added any time to my robotic cases. And I have great control because I can use both of my hands to manipulate the tissue the way I would like over the stapler."

– Dr. Amit Agarwal



Dr. Agarwal uses a 60 mm reload with the Signia™ stapler to perform an ileocolic anastomosis using the hybrid approach.



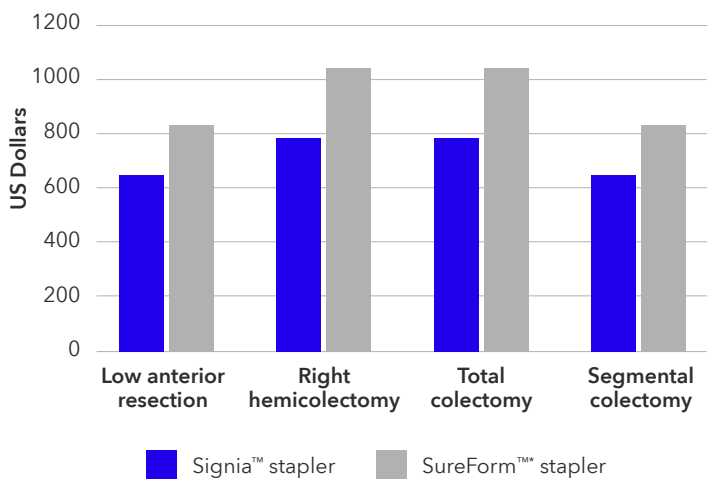
With the robot arm undocked, a lap grasper facilitates bowel manipulation.

Between January and September 2020, Dr. Agarwal performed 60 cases using the Signia™ stapler instead of the robotic stapler in low anterior resections, right hemicolectomies, total colectomies, and segmental colectomies. He then reviewed those cases comparing his institution's contract pricing for both the SureForm™* and Signia™ stapler with 45 and 60-millimeter staple loads. His analysis revealed that the Signia™ stapling platform resulted in an average savings of \$198 and \$346 per procedure, equating to a 23%-31% cost savings per case.

23%–31%
cost savings

realized by substituting a
Signia™ stapler for a robotic stapler¹

Average stapling costs per procedure¹



Between January and September 2020, Dr. Agarwal performed 60 surgeries at Memorial Herman Hospitals using the Signia™ stapling system. Dr. Agarwal then compared Signia™ stapler and SureForm™* contract pricing for those 60 cases:

- 34 low anterior resections
- 16 right hemicolectomy
- 4 total colectomy
- 6 segmental colectomy

Preliminary results inspiring further analysis

While his sample size was small, Dr. Agarwal hopes it will spawn additional studies. "I wanted to take my initial experience and put it out there," he says. "Maybe it will stimulate others to do their own analysis. Let's see what others come up with." Going forward, Dr. Agarwal wants to continue examining costs on more of his cases, and look at additional factors such as length of stay, complications, and infections. "We're always striving to improve, right? One way to do that is to improve patient outcomes while reducing costs."

¹ Based on 2020 contract pricing for Memorial Herman Hospital System, Houston, Texas. Findings published at the American Society of Colon and Rectal Surgeons Annual Scientific Meeting, April 2021. Data based on Dr. Agarwal experiences. Results may vary.

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Signia™ stapling system with Tri-Staple™ technology

Tri-Staple™ specialty reloads

For more information,
contact your local
Medtronic sales
representative at
800-722-8772
or visit us at
[medtronic.com](https://www.medtronic.com)



Signia™ stapler four-bay charger

Please see the package insert for the complete list of indications, warnings, precautions, and other important medical information.

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