Focus Workgroup on Rectal Stapling

R Sim
Centre for Advanced
Laparoscopic Surgery, TTSH

National Healthcare Group
Adding years of healthy life

CALS

Disclosure

- Speaker's Honorarium from Covidien

Honorarium noun (pl. honorariums or honoraria) - a payment given for professional services that are rendered nominally without charge

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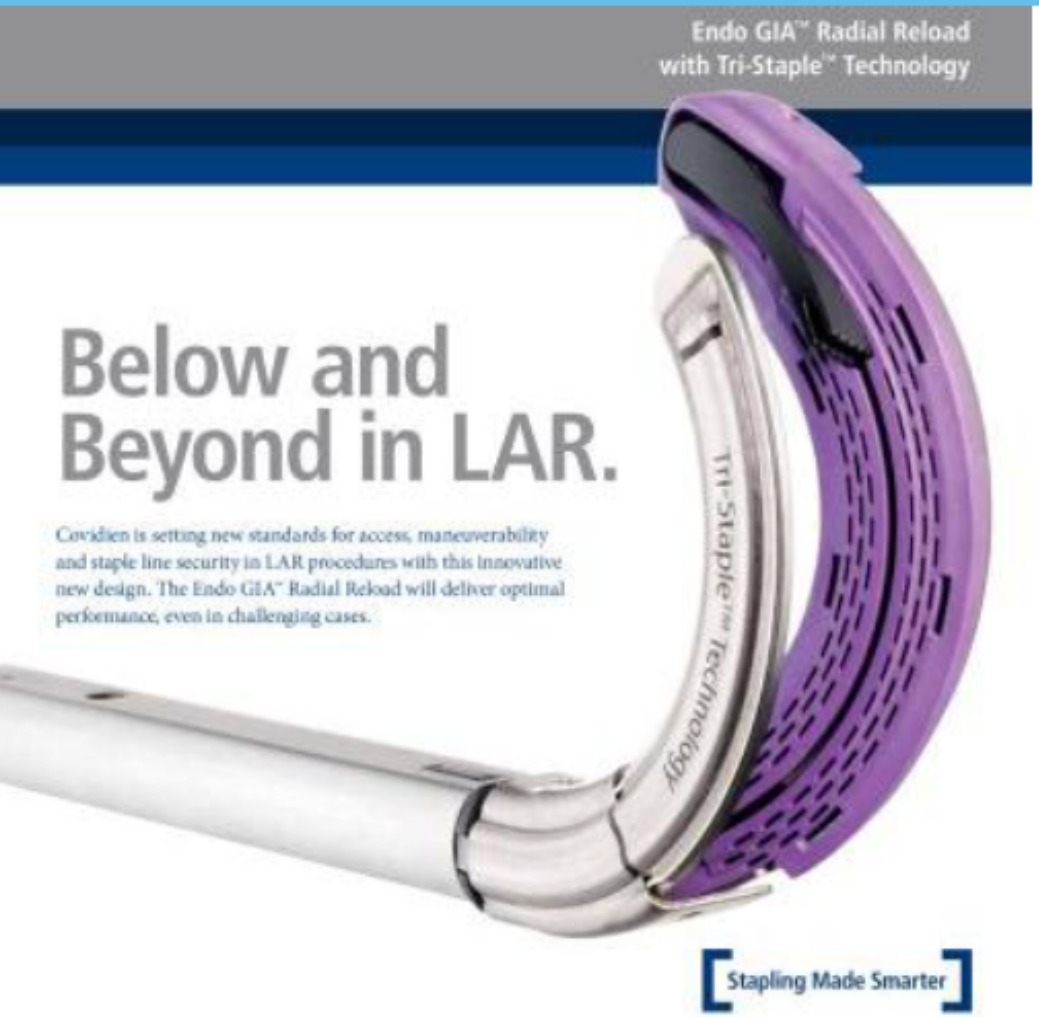

Focus Group: Application of Radial Reload in Colorectal Procedures

15 February 2014, Saturday

10am to 2pm

Tan Tock Seng Hospital

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Objective

- Identify challenges of Laparoscopic LAR
- Explore new approach safely in LAR to achieve better patient outcome.
- Adopt Radial Reload to go lower down the pelvic floor.
- Team building activity through Animal Hands-on

Target Audience

- Experienced Colorectal Consultants and Registrars
- 12 participants (max)

Time	Programme	Presenter/ Facilitator
9.30am – 10am	Registration	All
10am – 10.10am	Welcome Address	Dr Richard Sim
10.10am – 10.20am	Stapling Made Smarter with Radial Reload	Chuah Sue Huey
10.20am – 10.40am	My Initial Experience with Radial Reload in Colorectal Surgeries (Lap/ Open)	Dr Richard Sim
10.40am – 11am	Greater Accessibility in LAR with Radial Reload	A/Prof Dean Koh
11am – 11.30am	Q&A – Radial Reload Case Discussions	A/Prof Dean Koh
11.30am – 12noon	Lunch	All

Time	Programme	Presenter/ Facilitator
12noon – 1.30pm	Animal Hands-On	All
1.30pm – 1.50pm	Post Hands-on Discussion	Dr Richard Sim
1.50pm – 2pm	Closing and Certificate of Participation	Dr Richard Sim


Auto Suture
TA 30
4.8 mm
REF TA3048S


AutoSuture
ENDO TA 30


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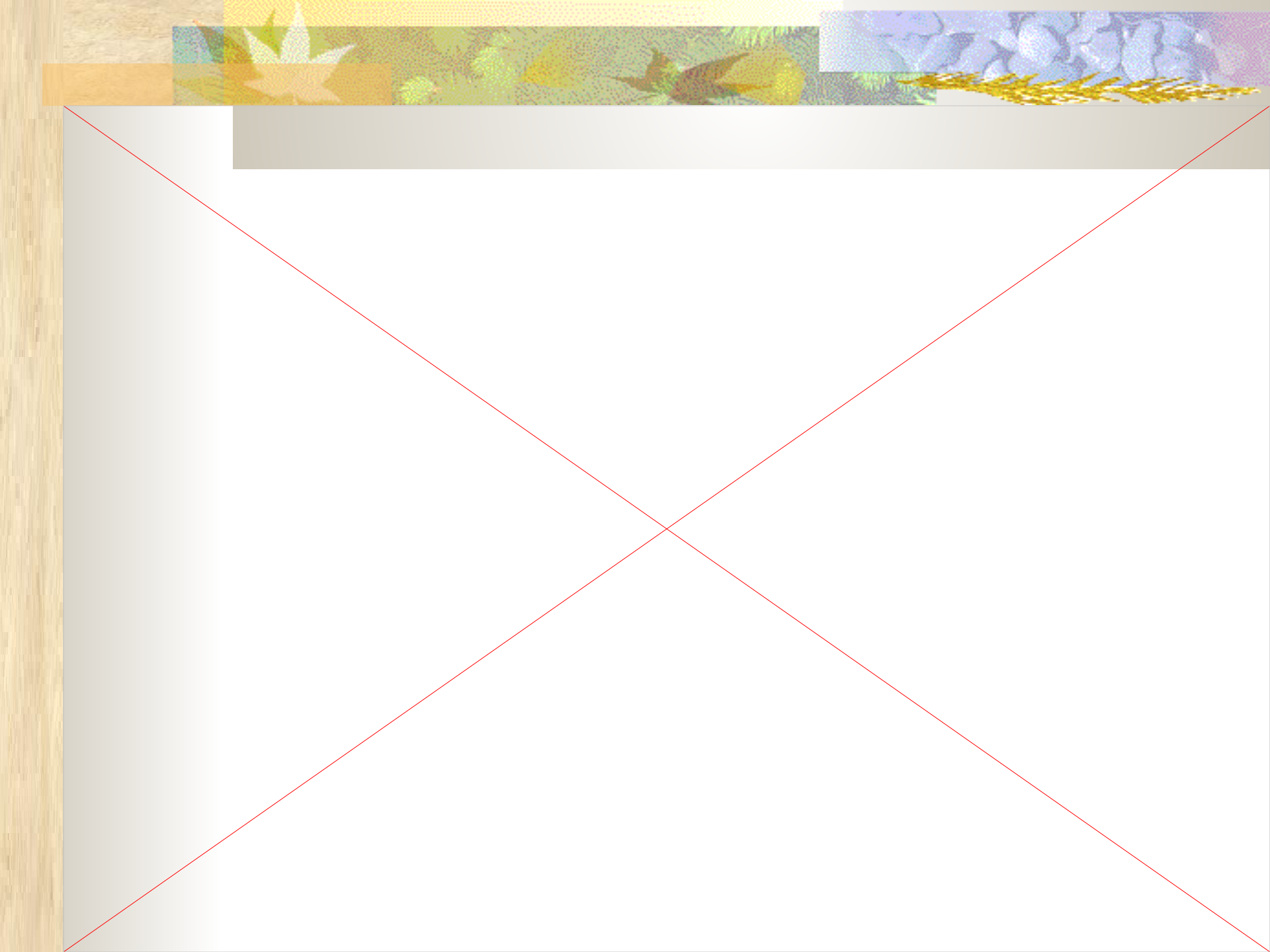

5 PM, September 3rd, 1967 Sweden changed from driving on the left side to driving on the right side - this was the result

Testing new bulletproof vests 1923

Stapler access and visibility in the deep pelvis: A comparative human cadaver study between a computerized right angle linear cutter versus a curved cutting stapler

Toyooki Sonoda[1*], Juan Carlos Verdeja[2] and David E Rivadeneira[3]

Abstract

Purpose: Distal rectal stapling is often challenging because of limited space and visibility. We compared two stapling devices in the distal rectum in a cadaver study: the iDrive™ right angle linear cutter (RALC) (Covidien, New Haven, CT) and the CONTOUR® curved cutter (CC) (Ethicon Endo-Surgery, Cincinnati, OH).

Methods: Twelve male cadavers underwent pelvic dissection by 4 surgeons. After rectal mobilization as in a total mesorectal excision, the staplers were applied to the rectum as deep as possible in both the coronal and sagittal positions. The distance from the pelvic floor was measured for each application. A questionnaire rated the visibility and access of the stapling devices. Measurements were taken between pelvic landmarks to see what anatomic factors hinder the placement of a distal rectal stapler.

Results: The median (range) distance of the stapler from the pelvic floor in the coronal position for the RALC was 1.0 cm (0-4.0) vs. 2.0 cm (0-5.0) for the CC, $p = 0.003$. In the sagittal position, the median distance was 1.6 cm (0-3.5) for the RALC and 3.3 cm (0-5.0) for the CC, $p < 0.0001$. The RALC scored better than the CC in respect to: 1. interference by the symphysis pubis, 2. number of stapler readjustments, 3. ease of placement in the pelvis, 4. impediment of visibility, 5. ability to hold and retain tissue, 6. visibility rating, and 7. access in the pelvis. A shorter distance between the tip of the coccyx and the pubic symphysis correlated with a longer distance of the stapler from the pelvic floor ($p = 0.002$).

Conclusions: The RALC is superior to the CC in terms of access, visibility, and ease of placement in the deep pelvis. This could provide important clinical benefit to both patient and surgeon during difficult rectal surgery.

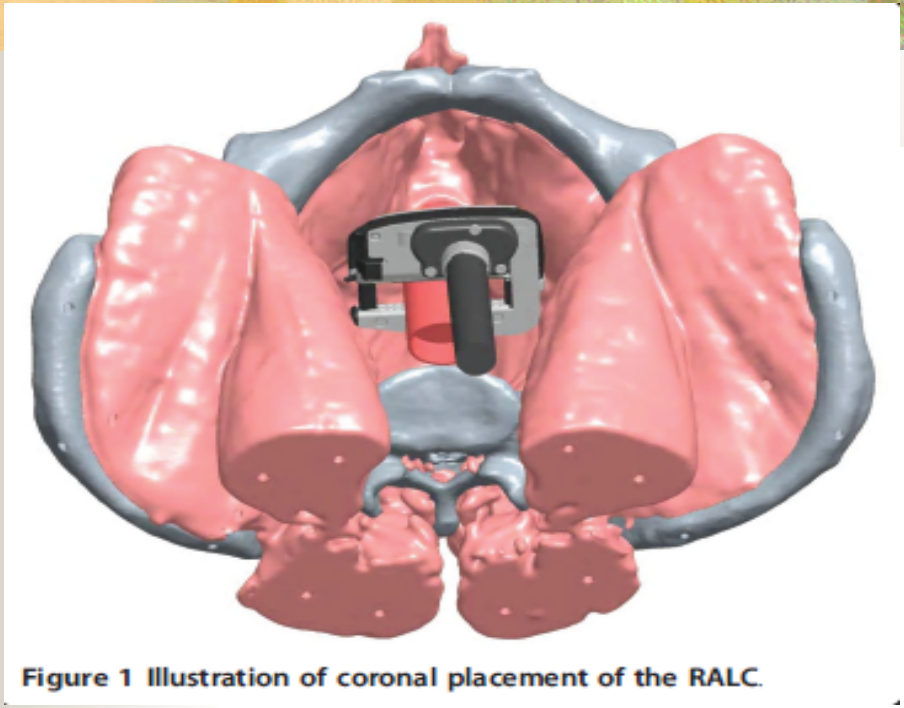

Figure 1 Illustration of coronal placement of the RALC.

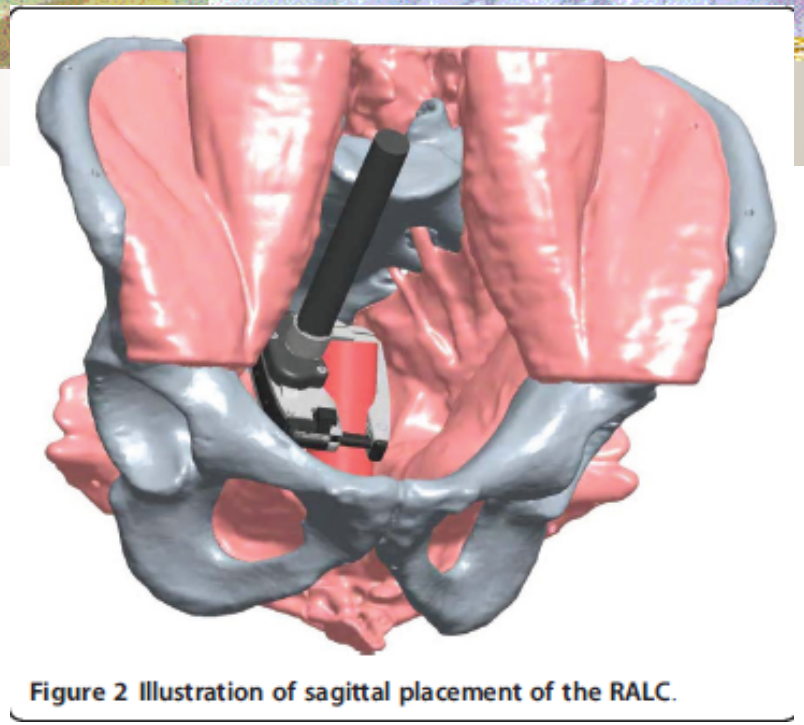

Figure 2 Illustration of sagittal placement of the RALC.

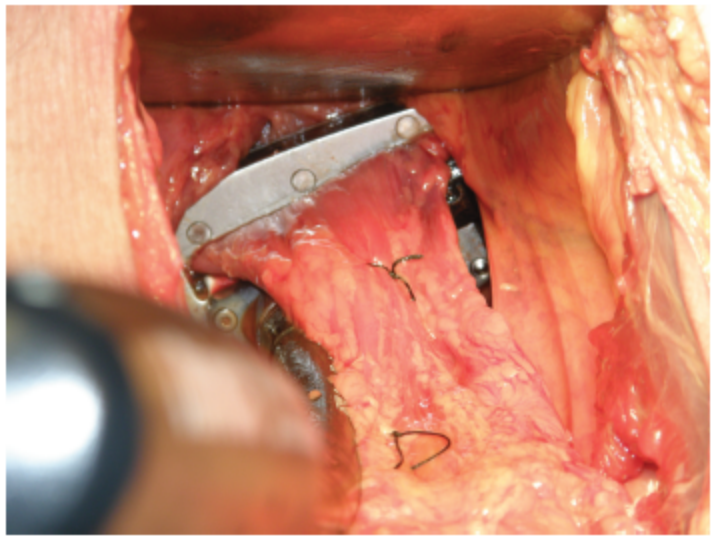

Figure 3 Distal placement of the RALC on the rectum.

Improved access and visibility during stapling of the ultra-low rectum: a comparative human cadaver study between two curved staplers

David E Rivadeneira[1*], Juan Carlos Verdeja[2] and Toyooki Sonoda[3]

Abstract

Background: The purpose of this study was to compare in human cadavers the applicability of a commonly used stapling device, the CONTOUR® curved cutter (CC) (Ethicon Endo-Surgery, Cincinnati, OH) to a newly released, curved stapler, the Endo GIA™ Radial Reload with Tri-Staple™ Technology (RR) (Covidien, New Haven, CT).

Methods: Four experienced surgeons performed deep pelvic dissection with total mesorectal excision (TME) of the rectum in twelve randomized male cadavers. Both stapling devices were applied to the ultra-low rectum in coronal and sagittal configurations. Extensive measurements were recorded of anatomic landmarks for each cadaver pelvis along with various aspects of access, visibility, and ease of placement for each device.

Results: The RR reached significantly lower into the pelvis in both the coronal and sagittal positions compared to the CC. The median distance from the pelvic floor was 1.0 cm compared to 2.0 cm in the coronal position, and 1.0 cm versus 3.3 cm placed sagitally, $p < 0.0001$. Surgeons gave a higher visibility rating with less visual impediment in the sagittal plane using the RR Stapler. Impediment of visibility occurred in only 10% (5/48) of RR applications in the coronal position, compared to a rate of 48% (23/48) using the CC, $p = 0.0002$.

Conclusions: The RR device performed significantly better when compared to the CC stapler in regards to placing the stapler further into the deep pelvis and closer to the pelvic floor, while causing less obstructing of visualization.

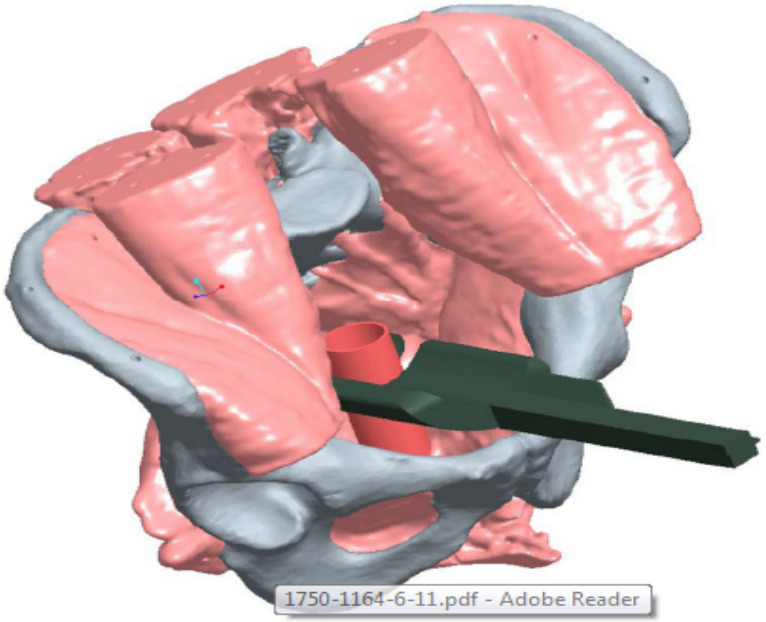

Figure 1 Illustration of coronal placement of CC.

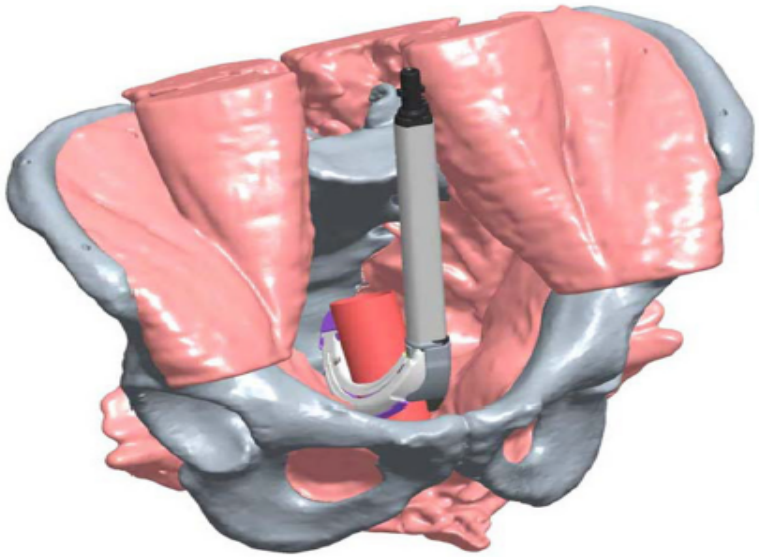

Figure 2 Illustration of sagittal placement of RR.

Figure 3 Distal Placement of RR on the Rectum.

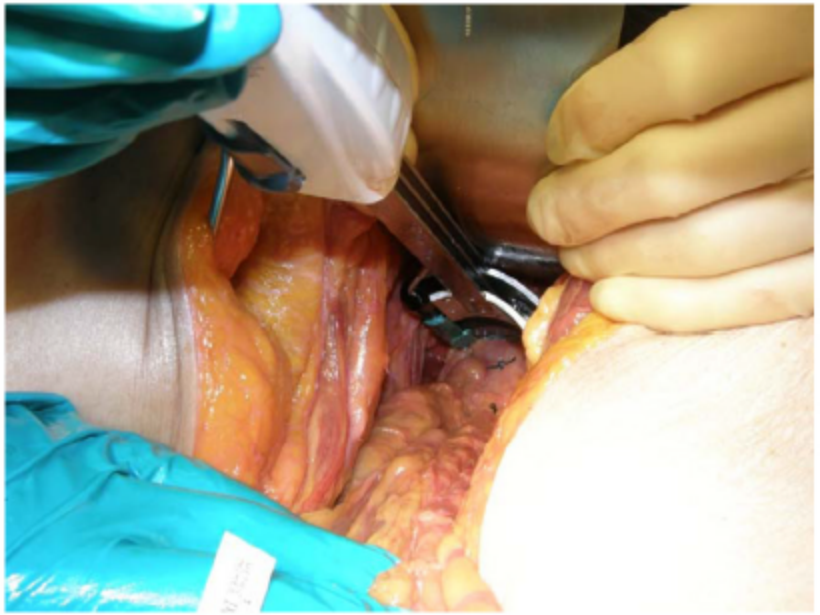

Figure 4 Distal Placement of CC on the Rectum.

Technical Considerations

- Positioning
- Docking
- Clamping
- Traction
- Firing
- Reloads