

Above or Below?

Endoscopic versus MRI Assessment of the Peritoneal Reflection for Rectal Cancer

David R. Rosen, MD, Bradley J. Champagne, MD, Scott R. Steele, MD, Joseph A. Trunzo, MD
Cleveland Clinic, Department of Colon and Rectal Surgery

Introduction

- Treatment of locally advanced rectal cancer below the peritoneal reflection involves neoadjuvant therapy
- Identifying the precise location of the peritoneal reflection relative to a rectal cancer can be difficult but critical as it can affect clinical management
- MRI and endoscopic distance from the anal verge are helpful though imperfect adjuncts. Peritoneal reflection location relative to the anatomic rectal valves could be helpful but has not been studied in rectal cancer
- Rectal valve anatomy can vary but typically there are 3 rectal valves (proximal, mid, distal)

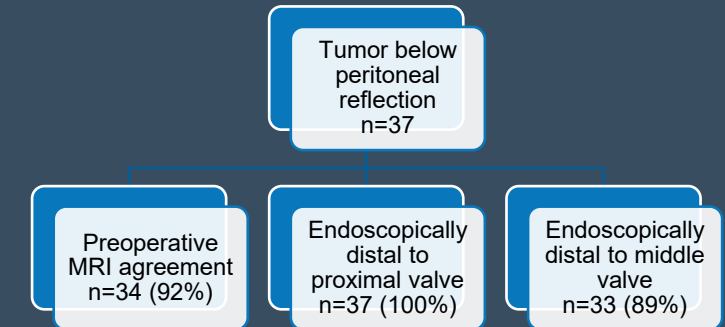
Methods

- Retrospective review over 3-year period of all rectal cancers treated by 3 board certified colon and rectal surgeons at single tertiary referral center
- Patients were excluded if they did not have preoperative MRI, endoscopic evaluation documenting tumor location relative to rectal valve anatomy, and proctectomy
- Final pathologic location of the tumor relative to the peritoneal reflection on the proctectomy specimen was compared to preoperative MRI and endoscopy



Results

- n=47 patients, 37 had cancer involving or distal to peritoneal reflection on proctectomy specimen
- Preoperative MRI showed concern for peritoneal reflection involvement in 34/37 (92% concordance)
- Endoscopic evaluation showed the tumor distal to the proximal valve in 37/37 (100% concordance) and distal to the mid rectal valve in 33/37 (89% concordance)
- 24 tumors were located between proximal and distal rectal valves
 - 6/24 (25%) above peritoneal reflection on proctectomy
 - 18/24 (25%) at or below peritoneal reflection on proctectomy
 - Preoperative MRI agreement with these findings in 16/24 (67% concordance)



Conclusion

- The location of the peritoneal reflection varies relative to rectal valve anatomy
- The peritoneal reflection seems to reliably be between the proximal and distal rectal valves
- MRI and endoscopy are both useful for locating tumor location relative to peritoneal reflection