

# MRI useful and reliable in surgical planning of patients with rectal cancer

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3T MRI can accurately stage, and help surgeons plan sphincter-sparing surgery in patients with rectal cancer, according to a recent study conducted by researchers at Qilu Hospital of Shandong University in Shandong, China.

"Recently, MRI has been increasingly accepted by radiologists, surgeons and patients to image the rectum because of its superior soft tissue contrast and multi-planar capability," said Chuanfu Li, MD, lead author of the study.

"Most rectal MRI studies have used field strength of 1.5 Tesla or less. Only two recent studies focus on 3T MRI for diagnosing and staging rectal cancer. "No standard protocol is available for 3T MRI of the rectum, which may cause inconsistent diagnostic accuracy among institutions. The purpose of this study was to evaluate the image quality of various 3T MR sequences for preoperative staging and planning of sphincter sparing rectal cancer resection," he said.

The study included 39 patients (23 men, 15 women), who underwent 3T MRI. According to the study, rectal carcinoma was identified on MRI and confirmed histologically in all 38 (should this be 39?) patients. The study showed that MRI findings correctly identified 31 of 32 resectable cases (96.9%), and sphincter-sparing approaches were accurately chosen on the basis of the MRI findings.

"In addition to accurate tumor staging, MRI contributes to surgical planning by showing the relationship of tumor to the sphincter and levator ani muscles on good quality coronal and sagittal images," said Dr. Li. "This technique can give the surgeons a higher level of confidence and ," he said.

The study appears in a recent issue of the *American Journal of Roentgenology*.

Source: American Roentgen Ray Society

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