



# Simultaneous Robotic Sphincter-Preserving Rectal Resection and Prostatectomy for Rectal Gastrointestinal Stromal Tumor and Prostatic Cancer

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## ABSTRACT

**Background.** Synchronous rectal and prostate malignancies are rare and standard treatment guidelines have not yet been established.<sup>1-3</sup> Combined robotic rectal and prostate surgery represents a potentially excellent approach for managing synchronous rectal and prostate malignancies, offering the advantages of a minimally invasive procedure.<sup>4</sup>

**Methods.** A 78-year-old male with a history of hypertension and type 2 diabetes presented with 3 months of dyschezia and dysuria. Diagnostic colonoscopy revealed a submucosal mass 3 cm from the anal verge in the anterior wall of the rectum, with abnormal carcinoembryonic antigen and prostate-specific antigen levels. Pelvic computed tomography (CT) indicated indistinct boundaries between the rectal mass and the prostate, suggesting potential invasion. CT-guided biopsies confirmed a rectal gastrointestinal stromal tumor (GIST) and prostatic acinar adenocarcinoma. After 3 months of neoadjuvant therapy with imatinib mesylate and bicalutamide, significant tumor reduction was achieved.<sup>5</sup> Subsequently, the patient underwent simultaneous robotic sphincter-preserving rectal resection and prostatectomy,

starting with the prostatectomy, followed by rectal tumor excision and ending with bowel reconstruction and vesicourethral anastomosis using a running suture technique.

**Results.** The operation time was 220 min and the estimated blood loss was 50 mL. No surgical complications were encountered and all resected margins were free of tumor, indicating a complete excision. The patient recovered well and was discharged on the seventh postoperative day. Follow-up at 3 months showed no evidence of recurrence or functional impairments.

**Conclusion.** Simultaneous robotic sphincter-preserving local rectal resection and prostatectomy can be feasibly and safely performed following neoadjuvant therapy in cases of synchronous rectal GIST and prostate cancer.

**SUPPLEMENTARY INFORMATION** The online version contains supplementary material available at <https://doi.org/10.1245/s10434-024-16028-8>.

**AUTHOR CONTRIBUTIONS** HZ had full access to all of the study data and took responsibility for the integrity of the data and accuracy of the data analysis. Concept and design: HZ and MC. Acquisition, analysis, or interpretation of data: All authors. Drafting of the manuscript: All authors. Critical revision of the manuscript for important intellectual content: All authors. Supervision: HZ.

**DISCLOSURES** Anqi Wang, Anbang Wang, Xinyun Xu, Ming Chen, and Haiyang Zhou have reported no conflicts of interest that may be relevant to the contents of this article.

**ETHICAL APPROVAL** This study was approved by the Ethics Committee of Changzheng Hospital.

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