

Letter to the Editor

MRI-based nomograms in rectal cancer: beyond lymph node metastasis prediction

Rıza Deryol^{A,E}

Department of Surgical Oncology, Ministry of Health, Istanbul Başakşehir Çam and Sakura City Hospital, Istanbul, Turkey

Dear Editor,

We read with great interest the article by Xu *et al.* [1], entitled “A nomogram model for predicting lymph node metastasis of rectal cancer by combining preoperative magnetic resonance imaging signs and tumour markers”, recently published in *Polish Journal of Radiology*. The authors should be congratulated for addressing an important and clinically challenging issue: the preoperative prediction of lymph node metastasis in rectal cancer using high-resolution magnetic resonance imaging and tumour markers. Their finding that serum CA19-9, the relationship between the tumour and the peritoneal reflection, and diffusion-weighted imaging-based lymph node assessment contributed to nodal prediction highlights the potential value of imaging-based risk models in preoperative decision-making.

However, we believe that MRI-based nomograms in rectal cancer should be clinically positioned not only as tools for predicting lymph node metastasis, but also within the broader framework of MRI-defined surgical risk stratification. In current rectal cancer management, pelvic MRI is not limited to nodal evaluation. It also provides essential information on mesorectal fascia/circumferential resection margin involvement, extramural vascular invasion, tumour deposits, lateral lymph node status, tumour height, and the relationship of the tumour to the anterior peritoneal reflection [2,3]. These features may directly influence neoadjuvant treatment selection, total mesorectal excision planning, the need for extended resection, and consideration of lateral pelvic lymph node management.

This issue is particularly relevant because nodal staging by MRI remains imperfect, and treatment decisions based

solely on nodal prediction may be insufficient. Recent consensus recommendations have emphasized a patient-level interpretation of nodal status and have refined the MRI definition of mesorectal fascia involvement as a distance of ≤ 1 mm, including involvement by irregular nodes or extramural vascular invasion [2]. Similarly, contemporary clinical guidelines underline the role of MRI-predicted circumferential resection margin, extramural vascular invasion, T3 substage, and lateral lymph nodes in defining risk groups and guiding multidisciplinary treatment [3,4].

Therefore, the model proposed by Xu *et al.* [1] may have even greater clinical value if future validation studies evaluate whether integrating lymph node prediction with MRI-defined mesorectal fascia/circumferential resection margin status, extramural vascular invasion, and lateral lymph node assessment improves treatment stratification. Such an approach could help transform preoperative MRI nomograms from isolated predictors of nodal metastasis into more comprehensive tools for multidisciplinary surgical planning.

Clarification of how lymph node prediction models should be integrated with MRI-defined surgical risk features would further enhance the practical value of the article.

Disclosures

1. Institutional review board statement: Not applicable.
2. Assistance with the article: None.
3. Financial support and sponsorship: None.
4. Conflicts of interest: None.

Correspondence address:

Rıza Deryol, MD, Department of Surgical Oncology, Ministry of Health, Istanbul Başakşehir Çam and Sakura City Hospital, Istanbul, Turkey,
e-mail: dr.deryol@gmail.com

Authors' contribution:

A Study design · B Data collection · C Statistical analysis · D Data interpretation · E Manuscript preparation · F Literature search · G Funds collection

References

1. Xu M, Wang Z, Qiao XF, Liao H, Su DK. A nomogram model for predicting lymph node metastasis of rectal cancer by combining preoperative magnetic resonance imaging signs and tumour markers. *Pol J Radiol* 2025; 90: e114-e123. DOI: 10.5114/pjr/200612.
2. ESGAR Rectal Imaging Guideline Group. MRI to guide clinical management of rectal cancer: updated consensus recommendations from the European Society of Gastrointestinal and Abdominal Radiology (ESGAR) – PART I primary staging. *Eur Radiol* 2026; 36: 4592-4607.
3. Hofheinz RD, Fokas E, Benhaim L, Price TJ, Arnold D, Beets-Tan R, et al.; ESMO Guidelines Committee. Localised rectal cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. *Ann Oncol* 2025; 36: 1007-1024.
4. Glynne-Jones R, Wyrwicz L, Tiret E, Brown G, Rödel C, Cervantes A, et al.; ESMO Guidelines Committee. Rectal cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol* 2017; 28 Suppl 4: iv22-iv40. DOI: 10.1093/annonc/mdx224.