



Controversies in the Management of Colorectal Neoplasia

Author: Aleksandra Zurowska, EMJ, London, UK

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AN INSIGHTFUL session presented at United European Gastroenterology (UEG) Week 2024 delved into advancements in staging, immunotherapy, and surgical techniques for colon and rectal cancers. In this, a series of experts emphasised evolving practices designed to improve colorectal cancer outcomes while preserving patient quality of life.

HOW TO PROPERLY STAGE RECTAL CANCER

Gina Brown, Imperial College London, UK, delivered a compelling talk dissecting the numerous ways of properly staging rectal cancer. Brown began by explaining that, although we have reached a new point in the assessment of early rectal cancers, we are also in a situation where patients with early-stage rectal cancers are increasingly being offered a lot of treatment in order to preserve the rectum, with many beginning treatments with radiotherapy and total neoadjuvant therapy. This raises the question of how we can do better than that, as unnecessary treatment can lead to functional impairments, especially when applied to tumours that could be safely removed with less invasive procedures.

Brown also emphasised to radiologists that lymph node size alone does not always indicate malignancy, as most enlarged lymph nodes are not in fact malignant. However, some early features in rectal cancer that physicians should look out for, such as macroscopic discontinuous extramural vascular invasion, can result in recurrence despite a successful local excision. Another recommendation for radiologists is to assess the muscular preservation around the tumour on MRI scans rather than focusing solely

on traditional T-staging (T1, T2). If the muscularis propria is intact, the lesion may be suitable for local excision, eliminating the need for additional surgery or therapy.

She continued by highlighting that, in many cases, patients with early T1 and even some T2 tumours could avoid extensive surgery if preoperative staging accurately identified the depth of invasion and condition of the muscular layer. Current staging methods, primarily focused on assigning T1 or T2 classifications, can lead to overtreatment.

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Brown stressed that improved preoperative staging could avoid aggressive treatments such as radiotherapy, which may cause side effects like bowel dysfunction and impaired sphincter function, affecting the patient's long-term well-being. Additionally, unnecessary preoperative treatments often prevent reversing stomas due to the effects of radiotherapy on the sphincter function and on the anastomosis. Brown then advocated that this new approach,

which relies on staging, should be based on MRI-assessed muscular preservation rather than solely on T-staging.

Brown then described 'Proforma', the protocol she developed, which is the recommended reporting structure for staging early rectal cancer using MRI. This entails starting by firstly stating the morphology, whether the tumour is flat, polypoidal, and mucin-containing. The second step is to measure the diameter and thickness of the lesion, and then determine if the muscular layer is intact, which would indicate potential suitability for local excision. Additionally, it is recommended to assess the degree of preservation of the mucosa, submucosa, and the muscularis propria layers at the stalk. Visible submucosa suggests an early T1 stage, which is often suitable for less invasive treatment. The lymph nodes should also be assessed for malignant characteristics, but malignancy should only be suspected if there are clear signs such as capsular breach or extra-nodal deposits. The final step includes checking for signs of tumour invasion beyond the muscular wall, as this can indicate higher risk of recurrence.

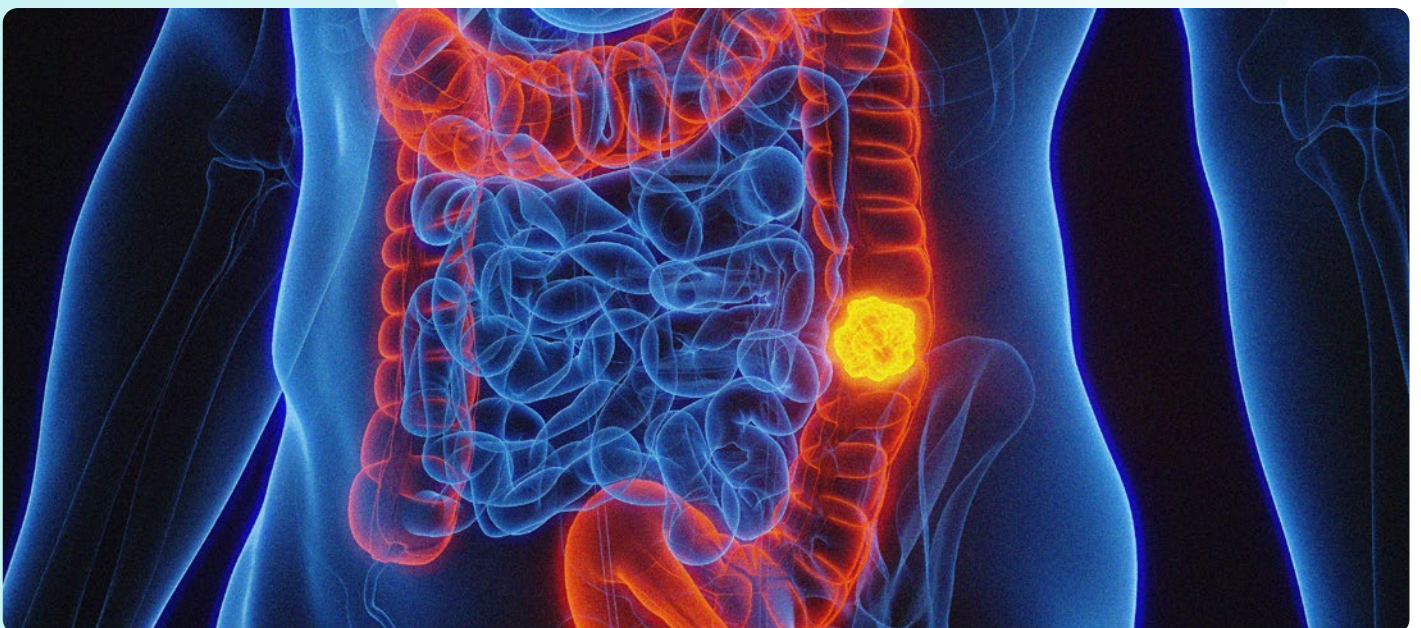
The results from the PRESERVE trial were presented, which was just launched in the UK. The trial aimed to standardise the MRI-staging technique and to determine the diagnostic accuracy of identifying rectal tumours suitable for local excision using MRI.¹

So far, the results demonstrated a significant improvement in accurately identifying early rectal cancers suitable for local excision, with trained radiologists increasing their staging accuracy from 29% to over 80%. After just two focused training sessions, radiologists demonstrated improved accuracy in identifying muscular preservation.

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Brown emphasised that these results will train radiologists to start looking at the MRI scans in a different way, looking at the degree of preservation rather than guessing the T stage. The trial aims to further validate this MRI-based staging approach across multiple centres in the UK.

Brown concluded her talk by sharing a compelling example of a patient who initially faced overtreatment due to staging inaccuracies: a small polyp was over-staged, leading to unnecessary surgery and a permanent change in their quality of life. With the structured MRI protocol and improved staging, this patient could have avoided major surgery and retained rectal function.



Brown reinforced the potential of MRI-based staging by describing a successful case where MRI-staging protocol was used effectively in a patient with a small, early-stage tumour who underwent local excision, avoiding unnecessary heavy treatments. This patient experienced full recovery with normal quality of life, requiring only periodic follow-ups.

TREATING ADVANCED COLORECTAL CANCERS

The session continued with a talk delivered by Eric Van Cutsem, Digestive Oncology, University of Leuven, Belgium. Van Cutsem began by providing a brief overview of treatment strategies for colon and rectal cancer. In treating metastatic colorectal cancer (mCRC), he described the use of PD antibodies and CTLA-4 antibodies as checkpoint inhibitors, particularly for patients with mismatch repair (MMR)-deficient tumours, which improve survival and reduce tumour growth compared to chemotherapy alone. Van Cutsem explained that immunotherapy is increasingly becoming a standard in rectal cancer to avoid extensive surgery, particularly in cases with high operative risks.

For locally advanced, operable colon cancer (Stage II and III), Van Cutsem discussed the growing interest in immunotherapy as a preoperative strategy. He described several studies by Chalabi et al.,² Hu et al.,³ and Ludford et al.,⁴ which suggest that administering immunotherapy before surgery can achieve substantial tumour regression, and even complete responses in a significant number of patients. While these findings are promising, more evidence is needed to make immunotherapy a standard replacement for surgery. Currently, minimally invasive laparoscopic surgery remains the standard for fit patients, but immunotherapy offers a potential alternative in cases with high surgical risks or older patients with right-sided tumours and large lymph node involvement.

Turning to mismatch repair-deficient rectal cancers, Van Cutsem explained that immunotherapy is also being explored

as a non-surgical alternative. Patients in advanced stages of the disease and with high operative risks may achieve tumour control without surgery using checkpoint inhibitors such as pembrolizumab and CTLA-4 antibodies.

In his concluding remarks, Van Cutsem stressed that immunotherapy offers great potential for organ preservation, especially for patients where surgery may be difficult and have a large impact on their quality of life.

TREATING EARLY RECTAL CANCER

The session was continued with a talk by Willem Bemelman, Amsterdam University Medical Center, the Netherlands, who elaborated on the topic of rectal cancer treatment from a surgeon's point of view.

Bemelman began by acknowledging that the field is currently experiencing a growing complexity of decision-making in rectal cancer, particularly around balancing oncologic control with efforts to minimise morbidity. Bemelman explained that, historically, total mesorectal excision has been the standard approach, as it offers good cancer control.

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However, this leads to significant functional loss and quality of life issues. He explained that local excision offers an organ-preserving option with fewer long-term effects, although it can bring challenges such as potential local recurrence and lymphatic spread.

To navigate these complex challenges, Bemelman introduced the role of multidisciplinary planning and preoperative staging with MRI to determine the best

treatment path. In this approach, significant rectal lesions would be reviewed by a multidisciplinary team to create a personalised strategy, and the decision between different resection planes such as endoscopic mucosal dissection, intramuscular dissection, or full-thickness excision would be tailored based on the lesion depth and location. Bemelman then cautioned that full thickness excision near the pelvic floor could complicate potential salvage surgery if recurrence occurs, which makes this approach more appropriate if the tumour is surrounded by a layer of mesorectum.

Bemelman then introduced a relatively novel approach to local excision, the intramuscular dissection plane. This method, previously described by Spinelli et al.,⁵ involves dissecting between the circular and longitudinal muscle layers, potentially enabling en bloc tumour resection while preserving the rectal structure. Bemelman then presented a patient case detailing how intramuscular dissection using a combination of gel and adrenaline injection can lift and separate the lesion, which allowed for precise excision with clear margins.

Finally, Bemelman explained the role of pathology in guiding further treatment following resection, particularly in evaluating risk factors such as deep submucosal invasion, vascular involvement, tumour differentiation, and tumour budding.

In his concluding remarks, Bemelman outlined preliminary results of the

TESAR trial for the treatment of high-risk T1 and T2 tumours, which aimed to explore whether completion of TME surgery, adjuvant chemoradiotherapy, or surveillance can effectively manage residual risk for tumours. Early results suggest that completion surgery and adjuvant therapy reduce local recurrence; however, they are linked to higher morbidity than surveillance.⁶ Bemelman explained that non-surgical follow-up may be a viable option in these cases.

CONCLUSION

Across their presentations, the experts highlighted a shared commitment to refining colorectal cancer treatment by adopting more personalised, risk-based approaches. Brown's focus on MRI staging protocols aims to reduce unnecessary treatments, preserving function and quality of life. Van Cutsem illustrated the role of immunotherapy in treating mismatch repair-deficient tumours, offering a non-surgical option for organ preservation. Bemelman emphasised precise surgical techniques and the role of pathology in guiding follow-up care to avoid overtreatment while maintaining cancer control. Together, these insights reflect a significant shift toward patient-centred, minimally invasive options that balance oncologic control with quality-of-life preservation, shaping the future of colorectal cancer management.

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