



A comment on: “Survival-Effective prognostic factors of rectal cancer patients receiving neoadjuvant chemoradiotherapy.”

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Dear Editor;

I would like to share my opinion on the article titled “Survival-effective Prognostic Factors of Rectal Cancer Patients Receiving Neoadjuvant Chemoradiotherapy,” published in the *Cerasus Medical Journal*, Volume 1, Issue 2, pages 117-123, on June 14, 2024. The article was authored by Uzun et al [1]. Firstly, I want to thank the authors for their contribution to the field. The study’s objective was clear: to identify survival-effective prognostic factors in this patient population. As mentioned by the researchers, they utilized a retrospective review of 102 patients who underwent surgery for rectal cancer at a single institution, ultimately including 84 patients in the analysis after applying exclusion criteria. While the study’s objective is well-defined, its design and scope present certain limitations that affect the strength and applicability of its conclusions.

The methods of the study describes a thorough process for selecting the study cohort. Exclusion criteria were applied to ensure a homogeneous patient group, focusing on those who received neoadjuvant CRT and had sufficient lymph nodes removed during surgery. I believe this approach is appropriate for studying prognostic factors but raises concerns about the small sample size of 84 patients. Such a sample size, especially within a single-center study, may not provide sufficient power to detect subtle differences and limits the generalizability of the findings. Additionally, the retrospective nature of the study introduces potential biases related to data collection and patient selection that could influence the results [2]. Their results present comprehensive statistical analyses, including Kaplan-Meier and Cox regression analyses, to evaluate survival and identify significant prognostic factors. The finding that lymph node

positivity within the excised lymph nodes is a significant prognostic factor

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is consistent with existing literature, highlighting its importance in the context of neoadjuvant CRT. However, their study found no significant difference in overall survival between patients who received neoadjuvant CRT and those who did not, which is unexpected given the established benefits of neoadjuvant CRT in reducing local recurrence and improving surgical outcomes. This discrepancy suggests that additional factors, possibly related to patient selection, treatment protocols, or follow-up duration, might influence survival outcomes and should be explored in future studies.

The study's findings add valuable insights to the broader landscape of rectal cancer research. The authors acknowledge that gender and tumor stage were not significant prognostic factors in their study, which contrasts with some previous studies that have identified these factors as influential [3]. This divergence highlights the variability in prognostic factors across different populations and emphasizes the need for further research to clarify these relationships. Their study also addresses the implications of different surgical procedures and the role of lymph node dissection, which I believe are critical considerations in the management of rectal cancer. The authors candidly discuss the retrospective design, single-center setting, and small sample size as significant constraints. These limitations are important to consider when interpreting the findings, as they impact the study's external validity. Furthermore, the study period (2013-2019) does not include the most recent advancements in rectal cancer treatment, which could influence the relevance of the results. Future studies should aim to include more recent data to provide an updated perspective on the effectiveness of neoadjuvant CRT [4].

To enhance the robustness and applicability of future research, I have several constructive suggestions. Increasing the sample size and including patients from multiple centers would improve the generalizability of the findings and provide a more comprehensive understanding of prognostic factors. Additionally, prospective studies could mitigate the biases inherent in retrospective analyses and offer more reliable evidence on the prognostic significance of various clinical and pathological factors. Longer follow-up periods are also recommended to assess the long-term effects of neoadjuvant CRT on survival and quality of life. Incorporating recent technological advancements and treatment protocols in future studies would provide a more current evaluation of neoadjuvant CRT's effectiveness. Advances in imaging techniques, surgical

procedures, and adjuvant therapies have significantly impacted rectal cancer treatment in recent years, and their inclusion in research would offer valuable insights into optimizing patient outcomes [5]. Furthermore, evaluating the impact of molecular and genetic markers on treatment response and survival could identify additional prognostic factors and personalize treatment strategies for rectal cancer patients. Finally, I believe the article contributes valuable knowledge about the prognostic factors affecting survival in rectal cancer patients receiving neoadjuvant CRT. The identification of lymph node positivity as a significant prognostic factor is particularly noteworthy. However, the study's limitations, including its small sample size, retrospective design, and single-center setting, necessitate cautious interpretation of the findings. Future research should address these limitations by employing larger, multicenter, and prospective studies, incorporating recent advancements in treatment, and exploring additional prognostic markers. Such efforts will enhance our understanding of survival-effective prognostic factors and improve the management of rectal cancer patients undergoing neoadjuvant CRT.

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