

26-Prognostic Significance of the Ratio of Absolute Neutrophil Count to Absolute Lymphocyte count in Lymphomas

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Background: With growing evidence on the role of inflammation in cancer biology, the systemic inflammatory response has been postulated as having prognostic significance in a wide range of different cancer types. Recently, the derived neutrophil to lymphocyte ratio (dNLR) has been proposed as an easily determinable prognostic factor in cancer patients. The aim of this study was to determine the prognostic value of pretreatment base line absolute neutrophil count to lymphocyte count ratio (ANC/ALC ratio) in lymphoma patients.

Methods: A retrospective study was conducted on 130 lymphoma patients (101 with Non-Hodgkin lymphoma and 29 with Hodgkin lymphoma) recruited from the department of Clinical Oncology, Menoufia University between May 2015 and May 2018. The prognostic influence of the dNLR and other clinico-pathological factors , overall- survival was studied by Kaplan–Meier curves. The optimal cutoff value was determined by using ROC curve analysis [2.09].

Results: The optimal cut-off value for NLR was 2.09. malignant lymphoma patients with NLR >2.09 had a shorter over-all survival rate compared to those with NLR <2.09. However, NLR was found to have no significant association with age , sex or presence of B-symptom.

Conclusion: High ANC/ ALC ratio at diagnosis of lymphoma represents an independent poor prognostic factor, inexpensive to perform, and simple to apply. This supports the possibility that host immunity (ie, lymphocytes) and inflammatory responses (ie, neutrophils) have prognostic relevance for clinical outcomes. Further prospective clinical trials are required to investigate the effect of the ANC/ALC ratio on clinical outcomes and to confirm the present findings.

Keywords: lymphoma, Neutrophil to lymphocyte ratio (NLR) , prognosis.