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UNIVERSITATEA DE STAT DE MEDICINĂ ȘI FARMACIE „NICOLAE TESTEMIȚANU” DIN REPUBLICA MOLDOVA

ANALYZING THE SIGNIFICANCE OF PROGNOSTIC SCORES INCORPORATING BIOLOGICAL AND NUTRITIONAL INDICES ON THE OVERALL SURVIVAL OF NON-HODGKIN'S LYMPHOMA PATIENTS WITH PRIMARY LYMPH NODE INVOLVEMENT

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INTRODUCTION

Non-Hodgkin lymphomas (NHL) are a diverse group of malignant disorders that arise from abnormal proliferation of in the lymphatic tissue. Accurate NHL prognosis prediction is crucial for treatment guidance and better patient outcomes.

In recent years, the integration of molecular biology markers into classic prognostic scores (PS), or the development of new PS entirely based on cytogenetic and molecular biology markers, has become increasingly popular. Although these refined scores offer higher sensitivity than traditional ones, their widespread adoption is hindered by the high costs they impose on healthcare systems.

AIM

The aim of this study is to evaluate the utility of conventional based on biological and nutritional indexes PS in predicting overall survival (OS) in patients with nodal NHL.

METHOD

The study included the evaluation of 76 patients diagnosed with nodal NHL. Various prognostic scores were calculated based on established references, including The combined index of hemoglobin, albumin, lymphocyte, and platelet (HALP), the Platelet to Lymphocyte Ratio (PLR), the Neutrophil to Lymphocyte Ratio (NLR), the albumin/globulin ratio (A/G), and the Charlson comorbidity index (CCI).

RESULTS

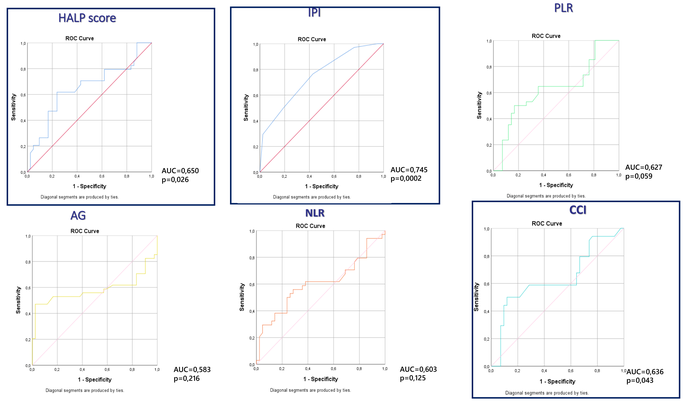


Figure 1. Assessing the ability of conventional prognostic scores to predict the Overall Survival of patients with Non-Hodgkin Lymphoma with primary involvement of lymph nodes, through the application of Receiver Operating Characteristic (ROC) curves.

Among the enrolled patients, 66 were diagnosed with B cell NHL and 10 with T cell NHL. The patients' age ranged from 22 to 83 years, with a mean age of 58. The most common sites of primary lymph node (LN) involvement were peripheral LN (84.61%), mediastinal LN (10.26%), and abdominal LN (5.13%). Aggressive NHLs were diagnosed in 73.07% of patients, while 26.93% had indolent NHL. Receiver Operating Characteristic (ROC) analysis revealed that the HALP score showed the highest sensitivity in predicting OS, with an area under the curve (AUC) of 0.652 (p = 0.026). The CCI followed closely with an AUC of 0.635 (p = 0.043), while the PLR (AUC=0.625), NLR (AUC=0.605), and A/G (AUC=0.588) scores demonstrated slightly lower sensitivities with p-values >0.05.

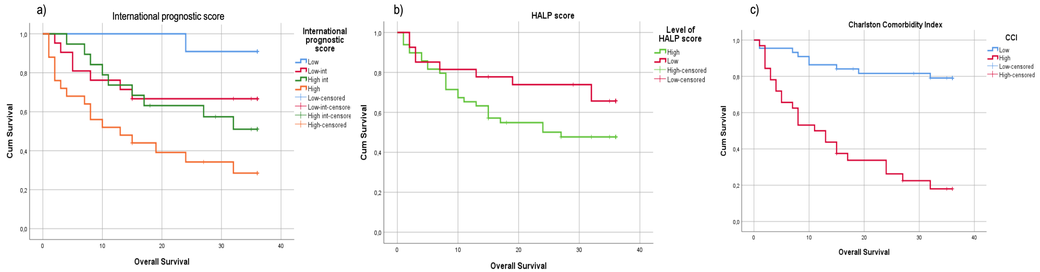


Figure 2. Kaplan Meier estimates for overall survival (OS) in accordance with: a) the risk groups of the International prognostic score (IPI); b) HALP score; c) Charleston Comorbidity Index

CONCLUSIONS

Among the evaluated prognostic tests, the HALP score and CCI demonstrated the highest sensitivity in predicting overall survival among NHL patients. These findings highlight the potential value of these scores in prognostication and patient management.

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