

Association of Neutrophil-to-Lymphocyte Ratio with Hypertension in Jordanian Inpatients: A Cross-Sectional Study

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Is the Neutrophil-to-Lymphocyte Ratio an effective predictive marker for hypertension, given inflammation's potential role in its pathogenesis?



INTRODUCTION & AIM

Numerous studies have underscored the significant role of inflammation in the onset and progression of hypertension (HTN). The neutrophil-to-lymphocyte ratio (NLR) is emphasized in particular due to its significant correlation with arterial stiffness and its high sensitivity in diagnostic assessments, while arterial stiffness is related to HTN.

METHOD

Participants' inpatient data were collected from the Jordan University Hospital.
n = 352

A cross-sectional study, neutrophils and lymphocytes were calculated through complete blood counts.

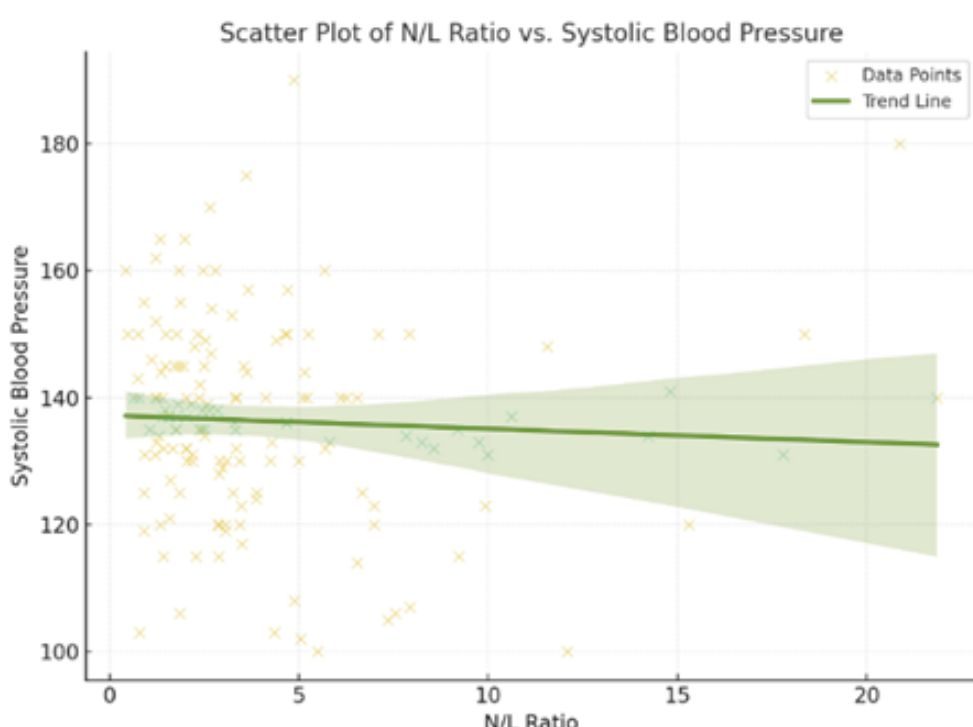
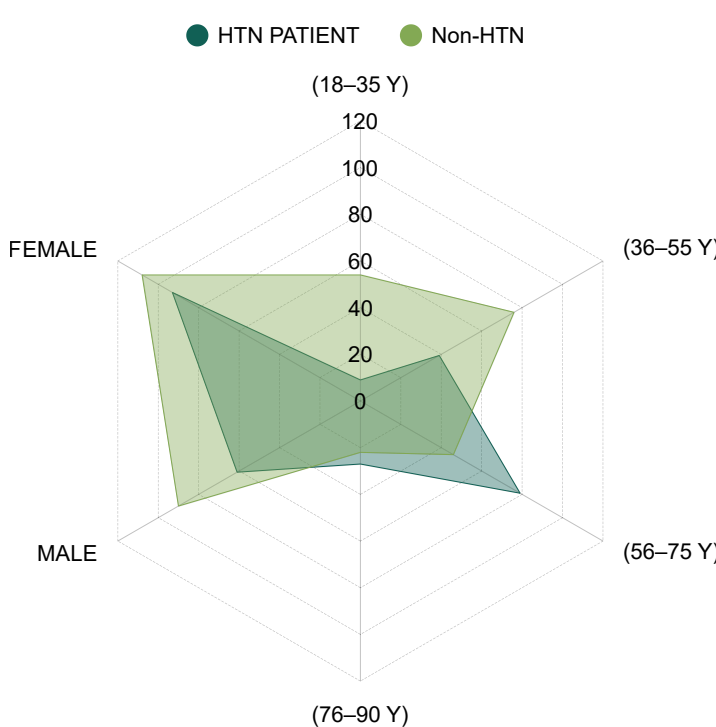
They were classified into:

- 4 Age groups.
- 3 Grades from 3 measurements.



Differences between groups were tested using independent-sample t-tests.

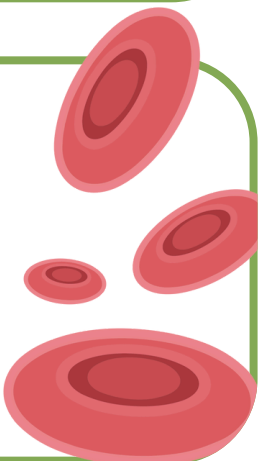
RESULTS & DISCUSSION



	Systolic p-value	Diastolic p-value
Elevated	0.544	0.2131
Stage 1 HTN	0.2044	0.1516
Stage 2 HTN	0.6829	0.7474

Among hypertensive patients, mean NLR rises with age (p = 0.0116).

Hb correlated positively with both systolic (r = 0.238, p = 0.003) and diastolic BP (r = 0.366, p < 0.0001).



CONCLUSION

Our study found that NLR did not significantly differ between hypertensive and normotensive patients. Hemoglobin demonstrated a clinically significant association with blood pressure in this study.

FUTURE WORK

These findings may support blood donation for HTN patients with high hemoglobin levels.

