Prognostic Value of Baseline Neutrophil-to-Lymphocyte Ratio in Multiple Myeloma Patients Treated with VMP: A Monocentric Retrospective Study

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Introduction

Multiple myeloma (MM) is a heterogeneous plasma cell malignancy with variable outcomes. Systemic inflammation plays a role in tumor progression and prognosis. The neutrophil-to-lymphocyte ratio (NLR), an accessible inflammatory marker, has emerged as a potential prognostic biomarker.

This study evaluated the prognostic impact of baseline NLR in MM patients treated with VMP.

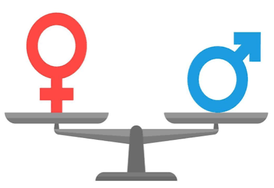
Methods

- Retrospective study
- Inclusion criteria : Patients with MM treated with VMP
- Period of study : 2019 and 2025
- Study setting: Fattouma Bourguiba University Hospital, Monastir, Tunisia.
- Baseline NLR was assessed at diagnosis. ROC analysis did not identify a reliable cutoff for mortality prediction (AUC=0.449; 95%CI:0.232–0.665; *P*=0.646).
- Patients were stratified according to a literature-based NLR cutoff of 2.
- Baseline characteristics, OS, and PFS were compared between the two groups using SPSS version 26.

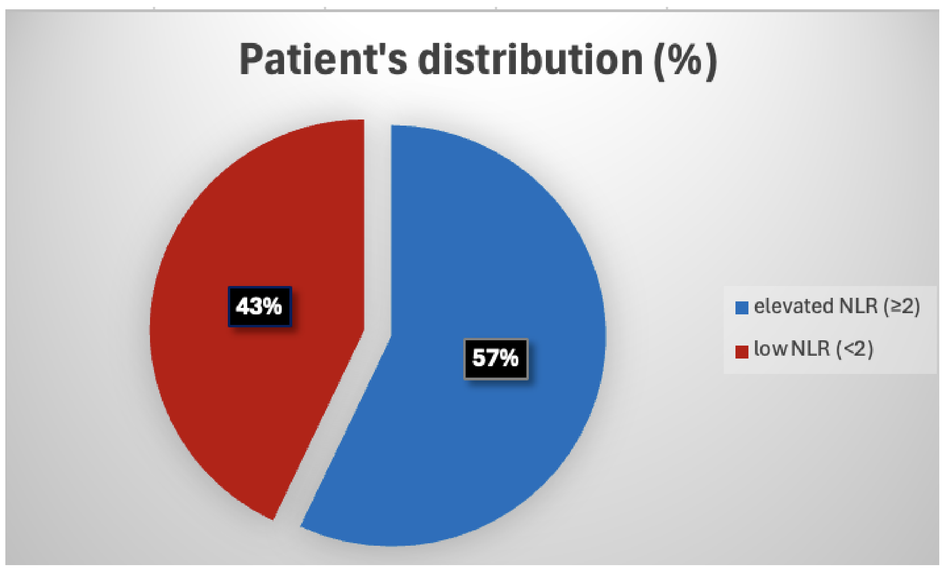
Results

✓ **53 Patients included**

✓ Sex distribution : **H/F =1**



✓ Median age = **72 years** [58–92]



✓ Patients with elevated NLR have more adverse baseline features (Table1)

Table 1 : Patient's Baseline characteristics

	elevated NLR (≥2)	low NLR (<2)	*P*
Initial renal impairment	30 %	9 %	**0,05**
elevated LDH levels	26 %	17 %	0,722
ISS ≥2	43 %	34 %	0,704

✓ After a median **follow-up of 56 months, t**he estimated **3-year OS was 81%.**

	elevated NLR (≥2)	low NLR (<2)	P
3-year OS	**62 %**	**72,4 %**	**0,465**
3-year PFS	**37 %**	**74 %**	**0,01**

Conclusion

Baseline NLR showed potential prognostic value in patients with MM treated with VMP.

Given its simplicity and accessibility, NLR may represent a useful inflammatory marker, although larger studies are needed to confirm these findings.

Acknowledgments

We wish to express our sincere gratitude to all members of the **Clinical Hematology Department**, whose expertise, dedication, and commitment to patient care serve as a constant source of inspiration. Their daily efforts ensure high-quality care and support the advancement of research within our department. We extend special thanks to **Dr Mohamed Adnene Laatiri, Head of the Clinical Hematology Department,** for his exceptional leadership and continuous support.