

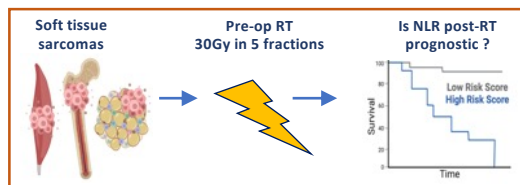
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Background

The neutrophil-to-lymphocyte ratio (NLR) is a measure of systemic inflammation, and in soft tissue sarcomas (STS) has been shown to be a prognostic marker for treatment response and outcomes¹⁻³.

Purpose



Materials and methods



Single center (McGill University Health Care Centre) retrospective data collection between 2016 and 2023.



Patients treated with pre-operatively hypofractionated RT (HFRT) with 30 Gy in 5 fractions **and** who had complete blood counts (CBCs) within 6 months post-RT were included



NLR was calculated by dividing the absolute neutrophil count by the absolute lymphocyte count and dichotomized the variable into ≤ 4 and >4



Univariable and multivariable logistic regression analyses, adjusting for age, gender, tumor size, and histology were used.

Results 40 patients with CBC 6mo post-HFRT

Table 1. Clinical characteristics

Mean age (mean)	66 years
Gender (n %)	
Female	17 (42.5)
Male	23 (57.5)
Mean tumor size (mean)	7.1. cm
Histology (%)	
Myxofibrosarcoma	17.5
Leiomyosarcoma	7.5
Pleomorphic spindle cell sarcoma	10
Myxoid liposarcoma	5

NLR and association with outcomes: The median follow-up was 15.4 months

Table 2. Multivariable analysis of recurrence and metastasis with NLR

	OR	95% CI	P-value
NLR ($>$ or $<$ 4)	7.73	[1.7-51]	0.034*
Gender	1.18	[0.16-8.5]	0.872
Age (years)	1.0	[0.98-1.088]	0.262
Tumor size (cm)	1.1	[0.94-1.23]	0.318
Histology	0.28	[0.43-1.3]	0.288

Conclusion: This is the first study to assess NLR as a prognostic biomarker in STS treated with pre-operative radiotherapy. An NLR >4 was prognostic for recurrence and distant metastasis, but not for overall survival.

Figure 1. Mean NLR

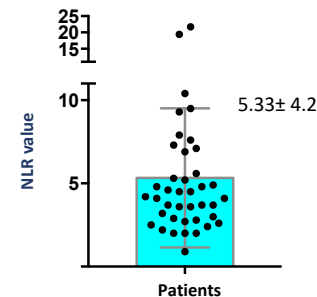


Figure 2. Post-HFRT NLR recurrence and metastasis free survival

