PRE-TREATMENT SYSTEMIC INFLAMMATORY BIOMARKERS PREDICT COMPLETE CLINICAL RESPONSE AND SURVIVAL OUTCOMES IN ANAL CANAL SQUAMOUS CELL CARCINOMA TREATED WITH DEFINITIVE CHEMORADIOTHERAPY

Syed Mohsin Raza, Ahmed Ammar, Esha Khalid, Tabinda Sadaf

Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore, Pakistan

OBJECTIVE

To evaluate whether pretreatment systemic inflammatory indices are associated with complete clinical response (CCR) and survival outcomes after definitive chemoradiotherapy for anal canal cancer.

Primary measure: CCR. Survival endpoints: progression-free survival (PFS) and overall survival (OS).

METHODS

Design: Single-cohort, 10-year retrospective review of 72 consecutive patients treated with definitive chemoradiation.

Baseline biomarkers: Neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), lymphocyte-to-monocyte ratio (LMR), systemic immune-inflammation index (SII) and systemic inflammation response index (SIRI).

Outcomes: CCR assessed after treatment; PFS and OS evaluated during follow-up.

Statistics: Kaplan-Meier estimation, log-rank tests and Cox proportional-hazards regression.

Limitation: Multivariable Cox models did not converge because of the small number of events.

TABLE 1. COHORT CHARACTERISTICS

Characteristic	No. / Value	%
Patients	72	100
Mean age	53.3 years	-
Male	54	75.0
Advanced-stage disease	64	88.9
Achieved CCR	36	50.0
Progression events	20	27.8
Deaths	19	26.4

RESULTS

COMPLETE CLINICAL RESPONSE

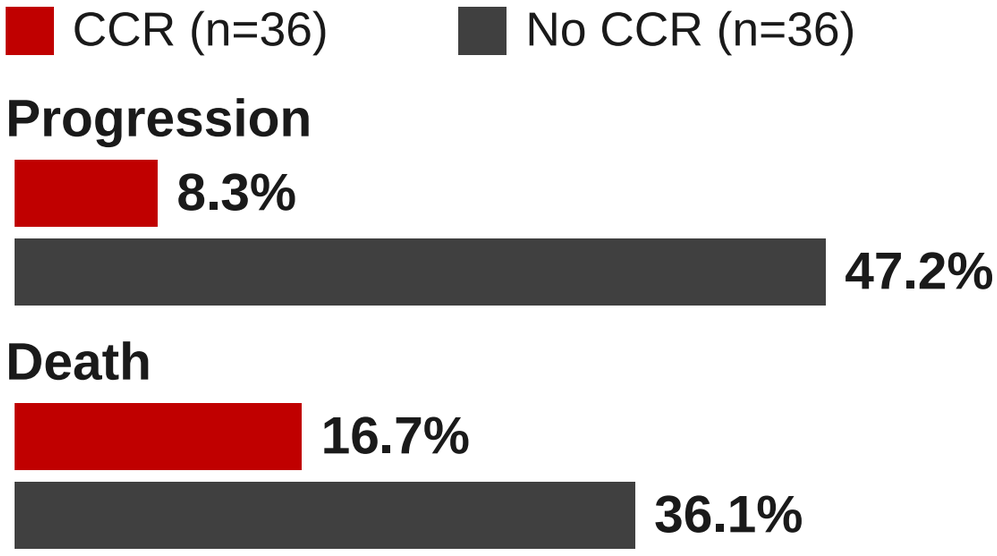
36 / 72 PATIENTS (50.0%)

TABLE 2. INFLAMMATORY INDICES AND CCR

Index	CCR association	p value
NLR	**Significant**	**0.037**
PLR, LMR, SII, SIRI	Not significant	Not reported

NLR mean rank: 31.36 (CCR) vs 41.64 (no CCR). Lower pretreatment NLR was associated with CCR.

FIG 1. PROGRESSION AND DEATH BY CCR



Progression: p < 0.001 (3/36 vs 17/36). Death: 6/36 vs 13/36; between-group p value not reported.

SURVIVAL ANALYSIS

CCR and OS: univariable HR 0.18 (95% CI 0.06-0.57); p = 0.004.

Pretreatment NLR and OS: higher NLR showed a non-significant trend toward poorer OS (log-rank p = 0.064).

CONCLUSION

Response: CCR after definitive chemoradiation was strongly associated with improved disease control and overall survival.

Biomarkers: NLR, but not PLR, LMR, SII or SIRI, was significantly associated with CCR.

Caution: Higher NLR and inferior OS did not reach significance (p = 0.064); multivariable models did not converge.

Implication: Prospective validation of NLR as an inexpensive marker of treatment response is warranted.

25th Shaukat Khanum Cancer Symposium

Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore, Pakistan | Abstract ID 260241