EXAMINING THE RELATIONSHIP & OUTCOME BETWEEN PRE-TREATMENT NEUTROPHIL:LYMPHOCYTE RATIO AND LYMPHOCYTE:MONOCYTE RATIO IN A SERIES OF LOCALLY ADVANCED COMPLEX RECTAL TUMOURS

Introduction:
The neutrophil-to-lymphocyte ratio (NLR) is a key marker in assessing immune responses to infections, inflammation, and diseases like cancer and cardiovascular conditions. Neutrophils respond first to bacterial infections, while lymphocytes play a larger role in viral infections and adaptive immunity. An NLR value of 3 is commonly used as a prognostic marker, although values vary slightly across published studies. We retrospectively studied the relationship & outcome between pre operative NLR & Lymphocyte:Monocyte Ratio (LMR), along with their tumour and nodal stages, in a cohort of locally advanced complex rectal tumours.

Procedure:
The retrospective data was collected from 2013 to 2023. Cases where rectum resection was not involved were excluded. The Kaplan-Meier curve was employed to estimate the survival function, with overall survival defined as the duration from the date of the first surgery to the final data input point which was either last attendance at the hospital or the date of death. Disease-free survival and disease recurrence was determined based on a combination of radiological, histopathological, and/or endoscopic results.

Results:
There was a total of 70 cases of which 98.6% (n=69) of the cases were adenocarcinoma with one case found to be rectal cancer with squamous cell in origination.?80% of cases were moderately differentiated (n=48). M:F ratio of 1:1 and median age was 60.1 years. ?Our results from NLR did not show any significant correlation in overall survival and disease free survival (p= 0.064). For LMR, our disease free survival was found to be significant at $p<0.0425$ suggesting that the likelihood of recurrence is high. Our overall survival did not have any significant findings.?Though no significant statistical p-value <0.05, our data trend also showed those staged as T3/T4 with low neutrophil:lymphocyte have better over-all and disease free survival.

Conclusion:
In LARC, the LNR showed a trend of improved over-all and disease-free survival in those with low LNR and worse T and N staging. Though there was no statistical difference, we anticipate that as our database grows over time, the observation may be associated with a statistical difference.