

**P1962 The clinical usefulness of the neutrophil to lymphocyte, monocyte to lymphocyte, and platelet to lymphocyte ratios in the diagnosis prediction of sepsis**

Mi-Kyung Lee\*<sup>1</sup>, Tae-Hyoung Kim<sup>2</sup>

<sup>1</sup>Chung-Ang University , Laboratory Medicine, Seoul, , <sup>2</sup>Chung-Ang University , Urology, Seoul, Korea, Rep. of South

**Background:** This study investigated the clinical usefulness of the neutrophil to lymphocyte, monocyte to lymphocyte, and platelet to lymphocyte ratios (NLR, MLR, and PLR, respectively) in the sepsis patients.

**Materials/methods:** The clinical and laboratory data of 571 sepsis patients, 562 patients with systemic inflammatory response syndrome (SIRS), and 570 normal healthy subjects were collected. Each value was compared among the groups and the diagnostic accuracy of each biomarker was calculated. In addition, the relationship of each value to 30-day mortality was investigated.

**Results:** The median NLR and PLR values were significantly higher in sepsis patients than in patients with SIRS (9.59 vs. 5.02, 226.52 vs. 202.20, respectively,  $P<0.001$ ). With regard to diagnostic accuracy, the NLR had the highest Area Under Curve for the diagnosis of sepsis (0.832,  $P<0.001$ ), followed by CRP, PLR, and MLR (0.749, 0.738, and 0.615, respectively). Markedly increased NLR, PLR, and CRP were related to 30-day mortality with odds ratios of 9.345, 1.329, and 9.868, respectively ( $P<0.001$ ).

**Conclusions:** The NLR and PLR could be useful sepsis biomarkers for both diagnosis and predicting the prognosis of sepsis. However, the utility of MLR in a sepsis patients is questionable.