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Introduction:
Some studies suggest the Neutrophil-Lymphocyte Count Ratio (NLCR) and Leukocyte Score (LS) are better in stratifying Community Acquired Pneumonia (CAP) severity than traditional methods. Both can be quickly performed with standard practice cost-effective exams but require further investigation. [1, 2]

Methods:
A retrospective analysis was performed on all ED adults with CAP from Oct. 2009 to Jan. 2011. Demographics, FINE, CURB-65, ATS criteria and initial blood tests were collected, admission to ICU and outcome at 30 days evaluated. The scoring systems prognostic value were compared through ROC curves. Cutoffs used were ≥10:1 for NLCR and a score ≥2 points for LS.

Results:
1059 patients were enrolled (mean age 65.3 ± 19.7 years, 61.7% male). The most prevalent comorbidities were COPD (18.2%), chronic renal disease (10.3) and solid neoplasm (7.2). ICU admission rate was 6.2% with an average APACHE II of 17.6 points. Overall mortality was 8.3%, 16.7% in ICU. The average CURB-65 scoring was 1.4 ± 1.2 points and FINE 92.6 ± 43.5. 21.3% met ≥3 minor ATS criteria.
In our population the area under the ROC curve were, respectively for predicting admission to ICU and mortality at 30 days, 0.616 and 0.530 for NLCR, 0.559 and 0.615 for IS; versus 0.654 and 0.875 for FINE score, 0.756 and 0.739 for the ATS criteria, whereas 0.706 and 0.796 for the CURB-65.

Conclusion:
The NLCR and LS showed a lower discriminative power compared to traditional FINE, ATS criteria and CURB-65 when applied in a much larger population than their original studies.

References:
2. Blot M et al. Open Forum Infectious Diseases 1:ofu075, 2014