European Respiratory Society
Annual Congress 2012

Abstract Number: 4133
Publication Number: P2565

Abstract Group: 10.1. Respiratory Infections
Keyword 1: Pneumonia **Keyword 2:** Imaging **Keyword 3:** Treatments

Title: Multilobar x-ray shadowing is an independent predictor of community-acquired pneumonia severity and mortality

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Body: Introduction National guidelines for community-acquired pneumonia (CAP) recommend the CURB65 score to assess severity and determine antibiotic therapy. CURB65 does not factor the radiographic extent of consolidation on chest x-ray. The aim of this study was to determine the prognostic value of classifying CAP into unilobar and multilobar consolidation. Methods A retrospective study of patients admitted with CAP was performed over 6 months. CAP was confirmed as a new radiographic infiltrate. The primary outcome of the study was 30-day mortality. Results 210 patients (52% male) were included. Median age was 76 years. 62%(no=131) were classified as unilobar pneumonia compared to 38% (no=80) with multilobar CAP. A positive correlation was observed between multilobar consolidation and mortality by Kaplain meier analysis (p=0.01 by log rank test).

Multivariable analysis, after adjusting for confounders, revealed that multilobar consolidation was independently associated with 30-day mortality (odds ratio 2.25 95% CI 1.03-4.92, p=0.02). This relationship persisted for 90-day mortality (odds ratio 1.99 95 % CI 1.01-4.02, p=0.04). Conclusion Multilobar pneumonia was associated with increased 30-day mortality rate when compared to unilobar pneumonia. This confirms that multilobar pneumonia is an indicator of poor prognosis and that these patients, irrespective of CURB65 score, should be treated more aggressively.