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Title: The high-resolution CT findings predict the incidence of ventilator–associated pneumonia and mortality in patients with acute respiratory distress syndrome

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Body: Background: Patients with acute respiratory distress syndrome (ARDS) are susceptible to ventilator-associated pneumonia (VAP) and are associated with high mortality. Aims and objectives: To make clear the clinical predictors of VAP and mortality in patients with ARDS. Methods: We conducted a prospective observational cohort study in 112 patients (67 males) who admitted to our hospital between October, 2004, and July, 2012, that met the Berlin Definition of ARDS. The primary endpoint was 60-day mortality. The secondary endpoint was the incidence of VAP. The high-resolution computed tomography (HRCT) score was obtained according to the degree of fibroproliferative changes by a previously published method. Results: 60-day mortality is 42.9%. The HRCT score is significantly associated with 60-day mortality in multiple logistic regression analysis (OR 1.05; 95% CI 1.03-1.08; $p<0.001$). The HRCT score is significantly associated with the incidence of VAP (OR 1.03; 95% CI 1.01-1.05; $p=0.007$). Conclusions: The HRCT score is a good predictor of mortality and the incidence of VAP.