Introduction:
Lung ultrasound is an important part of the evaluation of critically ill patients. It has been shown to predict recruitability in acute respiratory distress syndrome. However, little is known about the application of lung ultrasound in predicting mortality in mechanically ventilated patients.

Methods:
Observational study of mechanically ventilated patients admitted to the medical intensive care unit (ICU) of a tertiary hospital (National University Hospital, Singapore) in 2015 and 2016. Only the first ICU admissions of these patients were studied. Lung ultrasound was done at six points per hemithorax and scored according to Soummer (Crit Care Med 2012): normal aeration = 0; multiple, well-defined B lines = 1; multiple coalescent B lines = 2; lung consolidation = 3. The Lung Ultrasound (LUS) score was calculated as the sum of points (score range 0-36). We analysed the association of LUS score with ICU/hospital mortality, using logistic regression, adjusted for age and Acute Physiology and Chronic Health Evaluation (APACHE) II score.

Results:
247 patients were included (age 62.0 ± 16.2 years; 89 female [36.0%]; APACHE II 29.7 ± 7.9; 88 sepsis diagnosis [35.6%]). ICU and hospital mortality were 16.2% and 29.6% respectively. LUS score was associated with increased ICU (OR 1.04, 95% CI 1.00-1.09, P=0.07) and hospital (OR 1.04, 95% CI 1.00-1.08, P=0.045) mortality, adjusted for age and APACHE II score.

Conclusion:
LUS score was associated with increased ICU/hospital mortality and may be useful for risk stratification of mechanically ventilated patients admitted to ICU.