Introduction:
The mechanical ventilation (MV) have been identified as an independent factor indicating a worse prognosis for lung cancer patients (1). This study was conducted in order to assess the results of non-invasive mechanical ventilation (NIV) and/or invasive mechanical ventilation (IMV) modalities in lung cancer patients admitted to the ICU with acute respiratory failure (ARF).

Methods:
In this study, lung cancer patients with respiratory failure who were admitted to the ICU between January 2017 and December 2018 were evaluated retrospectively.

Results:
93 patients were included in the study. The mortality rate was 18.3%. 83 patients had NIV. IMV was applied to 10 patients. In the first 24 hours, 39 of the 83 patients who were initially treated with NIV were administered IMV. The duration of hospital stay, diagnosis of pneumonia and mortality rate were found to be significantly lower in patients treated with NIV alone (p≤0.001, p=0.004, p=0.025), but Glaskow Coma Score (GCS) was significantly higher in this group (p≤0.001). The mortality rate was similar between the patients who were initially treated with IMV and those who were treated with IMV in the first 24 hours. Charlson Comorbidity Index (CCI) and MV duration were significantly higher in patients who died (p=0.01, p=0.021), but GCS was significantly lower in this group (p=0.032). In the linear regression model for the likelihood of mortality, CCI≥9 and unsuccessful NIV increased the mortality rate by 3.4 (1.1-10.5) and 5.2 times (12-23.6) respectively (p=0.036, p=0.032).

Conclusion:
NIV has been an effective modality for respiratory support in most lung cancer patients presenting with ARF. However, failed NIV seems to be a factor for increased mortality. Therefore, the choice of respiratory support modality to be applied in this patient group should be decided by considering the GCS, CCI and etiology of ARF.

References: