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**Title:** The association between pulmonary arterial hypertension secondary to chronic lung disease and serum asymmetric dimethylarginine levels

Mr. Baris 24082 Açikmese brsacikmese@gmail.com MD <sup>1</sup>, Mrs. Güngör 24083 Çamsari gungorcamsari@yahoo.com MD <sup>1</sup>, Mrs. Aygün 24084 Gür aygungur@yahoo.com MD <sup>1</sup>, Mrs. Nur Dilek 24085 Bakan nurdilek29@yahoo.com MD <sup>1</sup>, Mrs. Gülcihan 24086 Özkan gulci2001@yahoo.com MD <sup>1</sup> and Ms. Pinar 24087 Güven pinarguwen@hotmail.com MD <sup>1</sup>. <sup>1</sup> Chest Disease, Yedikule Teaching Hospital for Chest Disease and Thoracic Surgery, Istanbul, Zeytinburnu, Turkey .

**Body:** Asymmetric dimethylarginin (ADMA) is an endogenous molecule that prevents nitric oxide synthesis enzyme inhibition. It has been shown that serum ADMA levels increase in COPD patients as well as idiopathic pulmonary hypertension patients. In this study, association between serum ADMA levels and pulmonary hypertension secondary to COPD and interstitial lung disease (ILD) was evaluated. Fifty-six COPD and 20 ILD patients who have no documented additional disease were included into the study. Echocardiography was used to evaluate pulmonary arterial pressure (PAP). Serum ADMA levels were measured by ELISA. Association between OPAP and serum ADMA levels were evaluated by Pearson correlation test. Mean ADMA levels of patients have normal and high OPAP were compared by student-t test. Mean serum ADMA levels of patients have increased OPAP was found significantly higher than that of patients have normal OPAP ( $p < 0,05$ ). A positive correlation (Pearson  $r = 0,6$   $p < 0,01$ ) was found between serum ADMA levels and OPAP. Evaluation of COPD and ILD patients separately showed that significantly higher ADMA levels were found in pulmonary hypertension patients ( $p < 0,05$ ) in both groups. COPD and ILD groups showed correlation between serum ADMA levels and OPAP (COPD and ILD Pearson  $r = 0,47$  and  $0,72$  consequentially) also exist. ROC analysis was used to evaluate the value of serum ADMA levels measuring in diagnosis of pulmonary hypertension. Area under curve was found  $0,7$ . Serum ADMA levels measurement may be an indicator for PH secondary to COPD and ILD but it is not enough sensitive test according to the ROC analysis.