

# TORAKS 2018

8. Kongres Hrvatskog  
torakalnog društva

8<sup>th</sup> Congress of Croatian  
Thoracic Society

18.–21. travanj | april  
Hotel Westin Zagreb



## EOSINOPHILS AS BIOMARKERS OF FREQUENT EXACERBATOR PHENOTYPE OF COPD - IS IT TRUE?

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### **Objective:** OBJECTIVES:

COPD exacerbations account for a substantial morbidity and healthcare costs. Until now, studies have shown that identification of eosinophilic inflammation may reveal subgroups of patients who develop exacerbations more frequently. Those patients have been described as frequent exacerbators and are particularly susceptible to targeted therapy. Our aim was to investigate if elevated blood eosinophil count could be considered a potential biomarker of identifying frequent exacerbator phenotype.

### METHODS:

We analyzed data of 67 patients with COPD diagnosis and 32 healthy controls who were current smokers. They were divided into 3 groups: healthy smokers (HS, n=32), COPD patients with frequent exacerbations (FE, n=32)

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and COPD patients with infrequent exacerbations (IFE,  $n=34$ ). All of them were subjected to pulmonary function tests and routine blood test with CRP and eosinophil count.

Outcomes were analysed with demographic statistics and the relationship between the index blood eosinophil count and all three categories was determined by Kruskal-Wallis H test.

## RESULTS:

HS group consisted of 32 subjects with mean age  $58.03 (45 \pm 74)$  years. 53.1% were male, 100% current smokers with mean pack-years  $35.45 (12 \pm 84)$ .

In IFE group were 34 patients with mean age  $66.82 (49 \pm 88)$  years. 61.8% were male and 41.2% accounted for current smokers with mean pack-years  $34.12 (10 \pm 120)$ .

In FE group were 32 patients with mean age  $66.84 (48 \pm 88)$  years, 75% were male. 37.5% were current smokers and mean pack-years was  $39.22 (12 \pm 100)$ .

The FE group had significant lower mean FEV1 ( $38.6$  vs  $51.8$  vs  $98.5\%$ ,  $p < 0.001$ ) and higher CRP level ( $p < 0.001$ ), compared with the IFE and HS group.

There was no significant difference in mean eosinophil count ( $0.237$  vs  $0.213$  vs  $0.253$ ,  $p = 0.817$ ) between FE, IFE and HS group.

## CONCLUSIONS:

Our analysis indicated that there is no significant difference in blood eosinophil count between FE and IFE group. Further studies on larger number of patients are needed to clarify the role of eosinophil count as a biomarker in patients with FE phenotype.