and exacerbation in COPD, respectively. ZNF323/MPV17L hypermethylation may be involved in rapid lung function decline.

AP425

COPD ASSESSMENT TEST (CAT) SCORE OF PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE BASED ON CLINICAL PHENOTYPES

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Background and Aims: Spanish chronic obstructive pulmonary disease (COPD) guideline classifies COPD into 4 clinical phenotypes: non-exacerbator (A), asthma-COPD overlap (B), exacerbator with emphysema (C) and exacerbator with bronchitis (D).

Methods: A cross-sectional observational study of quality of life (QOL) of COPD patients utilizing COPD Assessment Test (CAT), conducted in University of Malaya Medical Center from 1 June 2017 – 31 May 2018.

Results: Of 220 patients traeted for COPD, 189 patients with post bronchodilator Force Expiratory Volume in 1 second (FEV1)/Force Vital Capacity (FVC) of <0.70 were recruited. Patients' demographic, clinical characteristics and CAT score are as shown in Table 1. Patients with COPD phenotype C and D had poorer modified medical research center (MMRC) functional status and global initiative of COPD (GOLD) class based on their FEV1.

Table 1. Demographic, clinical characteristics and CAT score according to clinical phenotypes.

Characteristics	COPD Phenotypes (n, %)				
	A 54 (28.6)	B 25 (13.2)	C 35 (18.5)	D 75 (39.7)	*p value
Age (years)	74.1±8.1	70.0±13.1	72.7±8.7	70.7±9.2	0.151
Gender (n, %)					
Male	50 (92.6)	23 (92.0)	32 (91.4)	70 (93.3%)	0.986
Female	4 (7.4)	2 (8.0)	3 (8.6)	5 (6.7%)	
Ethic (n, %)					
Malay	19 (35.2)	10 (40.0)	12 (34.3)	32 (42.7)	0.734
Chinese	27 (50.0)	9 (36.0)	18 (51.4)	30 (40.0)	
Indian	8 (14.8)	6 (24.0)	5 (14.3)	13(17.3)	
Smoking (n, %)					
Current	16 (29.6)	11 (44.0)	16 (45.7)	21 (28.0)	0.333
Previous	38 (70.4)	14 (56.0)	19 (54.3)	54 (72.0)	
MMRC (n, %)					
0 -1	23 (42.6)	8 (32.0)	16 (45.7)	12 (16.0)	0.003
2-4	31 (57.4)	17 (68.0)	19 (54.3)	63 (84.0)	
GOLD class (n, %)					
1-2	33 (61.1)	15 (60.0)	16 (45.7)	29 (38.7)	0.001
3-4	21 (38.9)	10 (40.0)	19 (54.3)	46 (61.3)	
CAT score					
Total	18.0±8.0	18.3±10.1	15.8±8.0	23.6±8.0	<0.001
Cough	2.5±1.2	2.6±1.6	2.1±1.3	3.2±1.2	<0.001
Phlegm	2.6±1.8	2.4±1.9	1.6±1.6	3.3±7	<0.001
Tightness	1.4±1.7	2.2±1.7	1.7±1.5	2.6±1.6	<0.001
Breathlessness	3.4±1.7	3.0±1.7	3.2±1.5	4.0±1.3	0.012
Activity	2.5±1.8	2.3±1.9	2.0±1.7	3.0±1.6	0.033
Leaving home	1.7±1.9	1.9±1.9	1.6±1.8	2.4±1.6	0.038
Sleep	1.6±1.6	1.8±1.8	1.6±1.6	2.2±1.6	0.173
Energy	2.4±1.1	2.2±1.6	2.2±1.5	3.0±1.4	0.002

*Chi-square - categorical variables; ANOVA test - continuous variables.

Patients with phenotype D had significantly higher total CAT score than patients with other clinical phenotypes. Other than sleep quality, patients with phenotype D had significantly higher score in every other components, notably cough severity, phlegm volume, chest tightness, breathlessness upon walking uphill, activity limitation at home, ability to leave home and energy. There was no different in terms of total and components CAT score of patients with phenotype A, B and C.

Conclusion: Patients with phenotype D had significant higher CAT score, thus poorer quality of life and higher tendency of execebration. This group of patients need better medical treatment and closer monitoring.

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WHICH IS THE ADEQUATE TIMING? BLOOD EOSINOPHIL COUNT IN PATIENTS WITH COPD EXACERBATION

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Background and Aims: The blood eosinophil count in patients with COPD exacerbation is reported to be associated with response to therapy, and it is also reported that patients with a severe eosinophilic COPD exacerbation have a shorter length of hospitalization. However, there is no report about the change in blood eosinophil count during the course of COPD exacerbation and its significance. So we examined the utility of blood eosinophil count before and after COPD exacerbation in predicting future exacerbation risk.

Methods: We retrospectively investigated consecutive hospitalized patients due to COPD exacerbation at Iizuka Hospital between December 2012 and December 2017. Inclusion criteria were as follows: Patients who underwent the following blood eosinophil count tests: at stable state before and after the admission, and chest computed tomography (on admission); Patients who have continued visiting our institution after the discharge. Thr following data were extracted from medical records: age, sex, BMI, pulmonary function tests (FEV1%predicted), severity of emphysema (Goddard classification), blood eosinophil count [at stable states before and after the admission (Eo-b and Eo-a, respectively)], frequency of COPD exacerbation, length of stay, and clinical course during and after admission.

Results: 130 patients were included. During the follow-up period (mean, 2.6 years), 77 patients did not experience COPD exacerbation (non-Ex group) and 53 patients experienced it more than once (Ex group). There was a statistically significant difference between the two groups in Eo-a (median, 242.1/μl in non-Ex vs 150.0/μl in Ex group; $P = 0.002$), not in Eo-b (205.0/μl vs 176.6/μl, $P = 0.634$).

Conclusion: Low blood eosinophil count at a stable state after COPD exacerbation may be one of the risk factors of future COPD exacerbation.

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ACCURACY OF PEAK EXPIRATORY FLOW RATE: HEIGHT RATIO (PEFR/HT2) MEASURED BY PORTABLE DEVICE IN PREDICTING LOW FEV1/FVC IN PATIENTS UNDERGOING SPIROMETRY AT SANTO TOMAS HOSPITAL

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Background and Aims: Chronic Obstructive Pulmonary Disease (COPD) is a respiratory disorder of significant public health importance. It is presently ranked as the third most important cause of death worldwide. A diagnosis of COPD is established by a post bronchodilator (BD) forced expiratory volume in the first second (FEV1)/forced vital capacity (FVC) ratio of less than 0.7 or the lower limit of normal (LLN). It is largely under diagnosed in developing countries for various reasons including lack of affordable spirometers in primary care settings. The peak expiratory flow rate (PEFR) test measures how fast a person can exhale. A portable