*This study is supported by MOSTI (Ministry of Science, Technology and Innovation) grant.*

**P1009**

**The relationship between weight loss, lung hyperinflation, adinopectin, ghrelin and leptin levels in COPD patients**

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It is determined that protein-calori malnutrition and cachexia, subsequently tissue destruction develop in most of patients with COPD. Endocrine factors can play role on cachexia in COPD. However, causes of weight loss and the relationship between weight loss, inflammatory and hormonal markers were not adequatly known. The aim of this study was to investigate the causes of weight loss and the relationship between weight loss, lung hyperinflation, inflammatory and hormonal markers in COPD patients.

60 stable COPD patients and 20 healthy control were included in this study. COPD patients were divided into three groups according to their BMI; Group 1: BMI < 20, group 2: BMI: 20-25, group 3: BMI >25 kg/m$^2$. Pulmonary function tests and arterial blood gases assessments were performed. Hyperinflation was evaluated as FRC %>120. Serum adiponectin, ghrelin, leptin,TNF-α, CRP, prealbumin ve transferrin levels were measured in all cases.

Mean serum leptin level was found statistically lower in the group of BMI<20 kg/m$^2$ as compared to the other COPD groups and the controls (p<0.001). Adiponectin level was lower in the group of BMI<20 kg/m$^2$ as compared to the group of BMI>25 kg/m$^2$ (p=0.031). Mean serum ghrelin level was found statistically lower in COPD group as compared with control group (p=0.003). Serum adiponectin, ghrelin, leptin, TNF-α, CRP, prealbumin ve transferrin levels were not statistically different between the COPD patients with hyperinflation and without.

In the conclusion, it was not found any significant relationship between weight loss and hormonal markers and lung hyperinflation. Therefore, it is thought that further investigations need to clarify of this issue.

**P1010**

**Lack of effect of acute exacerbations on disease progression in ex-smoker COPD patients**

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**Background:** The effect of acute exacerbations (AE) on COPD progression in patients who have stopped smoking has not been currently assessed.

**Aim:** To evaluate the effect of AE on disease progression in ex smoker COPD patients by using functional and clinical indices.

**Methods:** We studied 73 consecutive ex smokers followed for at least 12 months since recruitment (39% females) age 69±8 years (X ±SD). FEV1 52.5±20% predicted. Patients were grouped as infrequent exacerbators (0 or 1 AE) or frequent exacerbators (≥ 2 AE). We measured BMI, FVC, FEV1, inspiratory capacity (IC), SpO2, MMRC dyspnea index, 6MWD, BODE index and health status by using SGRQ and CRQ questionaires. Measurements were obtained at recruitment, at 6 and 12 months follow-up and compared by two-way ANOVA for repeated measures.

**Results:** AE were mainly moderate (73%), 25% were mild and 2% severe). No significant differences between groups were found during follow up: BMI (p = 0.32); FEV1 (p =0,46); FVC (p = 0.49); IC (p =0.90); SpO2 (p = 0.81); MMRC (p = 0.33); 6MWD (p = 0.91); BODE index (p = 0.66); CRQ (p = 0.48) y SGRQ (p = 0.32).

**Conclusions:** In this particular group of ex-smoker COPD patients, AEs did not contribute to COPD progression after a 1 year surveillance period.

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**P1011**

**Respiratory assessment in young subjects with Down syndrome**

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The most common anomalies present in people with Down Syndrome are congenital heart defects (atrioventricular canal defect, tetralogy of Fallot, persistence of ductus arteriosus). Atlantoaxial instability (10-20%), Gastrointestinal abnormalities (2-5%), Hearing loss 40-75%, Eye disorders 60%. The aim of this study was to assess the clinical and functional lung status of a population of young subjects with Down Syndrome engaged in regular physical activity. Fourty subjects (mean age 22 years), underwent lung function test, six minute walking test, and answered to the Epworth sleepiness scale. During Spirometry we assessed Forced vital capacity, First-second forced expiratory volume and peak expiratory flow. Epworth scale was submitted with parents help.

22 of 40 person performed lung function tests, the results for 13 were unremarkable, and results from 9 revealed reduced forced vital capacity because of poor compliance. All subjects tested for six minute walking test have no desaturation, mild tachycardia (maximal heart rate 65%), low exercise tolerance. As many as 51% we studied were obese, and 82% of them showed pathological sleepiness scale.

Italian law requires that those wishing to engage in regular sport activities must obtain a medical certificate. Our results show that, for respiratory assessment, anamnestic data have primary relevance in the subjet's evaluation. Lung function tests may help the physician but their results dipends more on the individual's ability to do the technical action required.

Our effort is for generate a virtuous circle: sport improves, reduce anxiety in physicians and patients and lead to a better quality of life.

**P1012**

**Relationship between forced vital capacity and prehypertension in Malaysian population**

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**Introduction:** Prehypertension (120 to 139 mm Hg systolic or 80-89 mm Hg diastolic) is associated with increased risk for development of cardiovascular diseases. Forced vital capacity (FVC) has been associated with the subsequent development of hypertension although the physiologic mechanism of this association is unknown.

**Objectives:** To evaluate the relationship between forced vital capacity and prehypertension in a group of Malaysian subjects.

**Methods:** Subjects were recruited from health screening programs. The blood pressure (BP), height and age were recorded. The FVC was measured according to the American Thoracic Society (ATS) standardization of spirometry. The predicted normal values were calculated according to European Community of Coal and Steel (ECCS) predicted values (R94-1408). Patients who had a history of hypertension, chronic lung disease and smokers were excluded.

**Results:** 1578 subjects were included in this study. Prehypertensive subjects (n=1085) had a significantly lower FVC compared to the normotensive (n=493) subjects. The mean FVC for the prehypertensive group was 84.37% (± 13.35) % predicted compared to the mean FVC for the normotensive subjects of 85.78% (± 13.06) % predicted (p=0.004).

**Conclusion:** Prehypertensive subjects had a lower FVC compared to normotensive subjects indicating that lower values of FVC may be associated with the subsequent development of hypertension. Therefore lung function may be a useful tool to identify subjects at risk of hypertension.This study is supported by MOSTI (Ministry of Science, Technology and Innovation) grant.

**P1013**

**The impact of obesity on lung volumes in Japanese**

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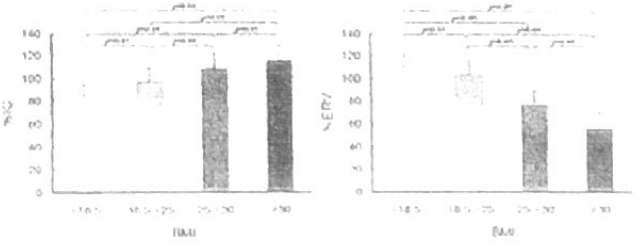
**Background:** Since many obese people have symptoms suggestive of lung disease, they need to undergo their pulmonary function test (PFT). Therefore, it is important to understand the impact of obesity on PFT. However, there has never been a large population study investigating the impact of obesity on PFT in Japanese.

**Objectives:** To evaluate the impacts of obesity on lung volumes in healthy Japanese.

**Methods:** We selected 1,916 spirometry examinations (553 functional residual capacity [FRC] measurements) as healthy controls. We then subdivided the subjects into four categories (underweight; normal weight; overweight; obesity) based on their body mass index (BMI).

**Results:** The expiratory reserve volume (ERV), FRC and the residual volume (RV) decreased and the inspiratory capacity (IC) increased as the BMI increased. The ERV, FRC and RV were significantly correlated in an inverse manner with the BMI (r = -0.429, p<0.001; r = -0.448, p<0.001 and r = -0.278, p<0.001, respectively); the IC was significantly correlated with the BMI (r = 0.457, p<0.001). No



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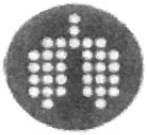

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# ABSTRACTS