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a decrease ($P<0.05$) in high frequency domain (HF) where as there was a increase ($P<0.05$) in LF/HF ratio. In the sub group with more than 15 pack years smoking history, a significant increase in heart rate ($P<0.05$) and LF/HF ratio ($P<0.001$) was recorded compared to less than 15 pack years sub group. Also there was a significant decrease ($P<0.05$) in RR interval, LF and HF values.

Conclusion: Study of heart rate variability in smokers clearly indicates that cardiac autonomic functions are affected due to smoking, which increases with number of pack years. So the HRV determination should be included in routine investigations to access the severity of cardiac involvement in chronic smokers.

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Association between smoking and pulmonary tuberculosis

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Background: Tobacco smoking and tuberculosis (TB) are two major public health problems. It has long been suggested that tobacco smoking may affect rates of TB morbidity and mortality.

Methods: To assess the clinical features of tuberculosis in smoker's patients, we report a comparative study between two groups of 41 patients each with active pulmonary tuberculosis. Mean age in smokers group was 40, 4 ± 15 , 7 years vs 40, 19 ± 13 , 6 years in non smoker's group. 39 of smokers were men with tobacco intoxication about 33, 7 ± 27 , 62 Package per year. In no smoker's group, there were 21 men and 20 women. Symptoms were no specific in both groups and dominated by cough (80% vs 66%), hemoptysis (19, 5% vs 6%) and chest pain (15% vs 20%). Radiological investigations showed bilateral lesions in 21 cases (51, 2%) versus 10 cases (24%). Nodular infiltration was showed in 22 versus 14 cases, consolidation in 10 versus 3 cases, a mass lesion in 1 case in smoker's group and cavitary lesions in 8 versus 13 cases. The confirmation of tuberculosis was bacteriological in 37 cases and histological in the others in smoker's group. It was bacteriological in all patients in non smoker's group. Smoking patients presented severe adverse event with antituberculosis treatment. This was not reported in controls. A delay of recovery (time between symptoms and recovery) was longer in smokers than in non smokers patients. Pulmonary sequels such as dyspnea and fibrosis were most frequent in smokers.

Conclusion: Tobacco may delay the recovery of pulmonary tuberculosis and may induce pulmonary sequels in spite of correctly antituberculosis treatment. Therefore smoking prevention and cessation should be a priority in TB prevention program.

P4072

Spiroergometry among smoking and non-smoking patients

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Aim: To evaluate of parameters of spiroergometry at smoking and non-smoking patients.

Materials and methods: 47 patients were examined (20-were smoking (an index of smoking 15 packs/years), 27-non-smokers). The mean age of the first group was $42,6\pm7,4$ years and second, $40,0\pm7,6$ years, $p>0,05$). The next parameters of a spiroergometry were studied: Heart rates (HR), Systolic blood pressure, Diastolic blood pressure, VO₂peak, VCO₂peak, VEpeak, O₂-puls, EQCO₂, PET CO₂rest.

Results: Characteristics of parameters of spiroergometry at smoking and non-smoking patients.

Table 1

Parameters	Smokers (n=20), M $\pm\sigma$	Non-smokers (n=20), M $\pm\sigma$	P
HR rest	76,0 \pm 12,1	75,7 \pm 12,6	>0,05
HR maximum	145,1 \pm 18,9	155,4 \pm 13,6	0,04
HR 5 min of rest	111,5 \pm 15,4	104,6 \pm 16,8	0,007
Systolic blood pressure rest	114,6 \pm 12,9	106,9 \pm 12,9	0,04
Systolic blood pressure maximum	178,8 \pm 22,3	167,8 \pm 29,3	>0,05
Systolic blood pressure 5 min of rest	111,1 \pm 13,8	105,0 \pm 13,9	>0,05
Diastolic blood pressure rest	86,1 \pm 9,5	83,6 \pm 9,5	>0,05
Diastolic blood pressure maximum	109,3 \pm 12,6	100,9 \pm 14,2	0,032
Diastolic blood pressure 5 min of rest	88,2 \pm 10,5	79,6 \pm 11,1	0,006
Load maximum	113,8 \pm 27,5	120,4 \pm 27,8	>0,05
VO ₂ peak	11,7 \pm 3,6	13,3 \pm 3,3	>0,05
VCO ₂ peak	12,3 \pm 4,1	14,0 \pm 3,5	>0,05
VEpeak	543,0 \pm 208,8	663,1 \pm 178,0	0,031
O ₂ -puls	6,5 \pm 2,6	6,1 \pm 1,6	>0,05
EQCO ₂	43,2 \pm 6,6	45,5 \pm 4,2	>0,05
PET CO ₂ rest	28,7 \pm 3,1	28,0 \pm 2,4	>0,05

Conclusions: The smoking patients had higher indicators of HR on 5 minute of rest, systolic blood pressure of rest diastolic blood pressure upon the maximum loading and on 5 min of rest than non-smokers.

411. Tobacco comorbidity

P4070

To assess the effect of smoking on cardiovascular system

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Background: Smoking alters autonomic functions and increases adrenergic activity that predisposes to cardiovascular morbidity and mortality. Heart rate Variability (HRV) is a measurement of autonomic activity.

Method: Study included 60 subject in total, of which 30(Test group-A) were chronic smokers with history of at least 10 pack years and 30(Group-B) non smoker controls. The HRV was recorded in the supine posture in relaxed state. We recorded the frequency domain analysis [low frequency domain (LF), high frequency domain (HF) and LF/HF ratio] for which five minute recordings were taken and data was generated by the Polyrite D system.

Results: In group-A a significant ($P<0.001$) increase in heart rate with decreased RR interval was recorded as compared to control group-B. Along with, there was

P4073

The influence of active and former smoking on the amount and quality of sleep in an obstructive sleep apnea (OSA) population versus habitual snorers
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Purpose: Data regarding smoking-OSA relationship and sleep quality are inconsistent; studies are small, without adjustment for confounders (comorbidities, dependencies). Is known that acute withdrawal of nicotine causes sleep alteration, without dose-effect relationship.

Objective: We analyzed effects of smoking and smoking status on sleep in 2 groups (OSA and habitual snorers) comparable regarding comorbidities and dependencies.

Results: We analyzed 71 OSA patients (18% women, 82% men) successfully CPAP titrated (other pathologies excluded): 25(35%) nonsmokers, 19(27%) active smokers (YP=21.5±20.7, Fagerstrom=3.5±2.1), 27(38%) exsmokers (YP=25.9±18.8); mean values: age=54.3±13 years, Epworth=8.2±5.4, total sleep time=5.6±2h, arousal index=29.7±23.7/h, AHI=38.1±35.6/h. We compared OSA active smokers with control group of 11 active smokers snorers (2 women, 9 men, age=41.1±11.7 years, Epworth=4.09±3.6, YP=23.2±22.5, Fagerstrom =4.6±2.3, total sleep time=4.7±2.3h, arousal index=15.8±11.6/h). OSA smokers sleep quality is affected vs non-smokers (more arousals, p=0.02). There was no difference in total sleep time, efficiency, sleep latency, sleep stages or OSA severity (except worse nocturnal hypoxemia in active smokers: $r = -0.49, p=0.03$); no differences between active smokers/exsmokers, nor between OSA patients and snorers. YP index correlates with arousal index, but doesn't correlate with nicotine dependence.

Conclusion: Smoking intensity and sleep quality (arousal index) correlated, unrelated to nicotine dependence. Studies are needed to prospectively assess effects of smoking on sleep and OSA using a non-snoring smokers control group.

P4074

Effects of smoking and smoking cessation on decline in pulmonary function
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(Background) Natural course of pulmonary function after smoking cessation is still unclear. We sought to assess influences of smoking habits to lung function in subjects without pulmonary disorders.

(Subjects and Methods) Total of 860 subjects were recruited from patients who attended to rural primary care clinics except for respiratory disorders. Each participant was asked to answer a questionnaire including smoking history and measure forced vital capacity (FVC) and forced expiratory volume in on second (FEV1).

(Results) Both %FEV1 (measured FEV1/predicted FEV1 X 100) in current smokers (CS) and %FEV1 in ex-smokers (ES) were lower than %FEV1 in non-smokers (NS). There was no difference in %FEV1 among the subgroups divided by age both in current smokers and ex-smokers. Also, there was no difference in %FEV1 among the subgroups divided by duration of smoking cessation in ex-smokers. Multivariate analysis showed that age, height and amount of cigarette smoking were significantly related to FEV1 both in male CS and male ES. In male CS, the estimated decline of FEV1 per age was 26.9 mL and excess of decline pack-year of smoking was 2.6 mL. In male ES, The estimated decline of FEV1 per age was 25.9 mL and excess of decline pack-year of smoking was 1.3 mL.

(Conclusion) Our data suggested that influences of smoking on FEV1 were observed even in healthy ex-smokers.

P4075

Prenosological diagnosis of respiratory function abnormalities in smokers
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Chronic tobacco poisoning leads to the gradual development of various pathological processes at the cellular, tissue, organ and system levels, but their clinical manifestations may have delayed effect. Prenosological diagnosis of respiratory function disorders in smokers is very important in order to promote an effective behavioral intervention for smoking cessation. The study was performed for evaluation of simple and noninvasive diagnostic methods of respiratory disorders in smokers. Maximal inspiratory pressure (MIP), peak inspiratory flow (PIF) and peak expiratory flow (PEF), as well as the measurement of the fall in pulse oximetry saturation caused by 20-s breath-holding (dSaO₂) at the end of expiration (Inoue H. et al, 2009) was studied in 20 young nonsmokers and smokers. Our results showed significant reduction of PEF and PIF in a group of men and women smokers compared with nonsmokers. MIP had a trend to decrease in smokers, especially in women's group. It was found that a temporary reduction in hemoglobin oxygen saturation caused by 20-sec apnea is significantly higher in smokers than non-smokers. Violation of ventilation-perfusion relationships during apnea because of the typical smoker disorders of the peripheral airway patency can be a major cause of severe oxygen desaturation. Smokers are at greater risk

of hypoxemia during any apnea than nonsmokers. Our results showed that the measurement of PIF, PEF, MIP and dSO₂ may be adequate diagnostic methods for early detection of respiratory pathology in smokers. These methods can be used in routine clinical practice.

P4076

Comorbidity by smokers – A cumulative effect of exogenous and endogenous factors?

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This work is an analysis of our studies and literary data about a cumulative effect of tobacco smoke and another risk factors and comorbidity. There is investigated the connection between COPD and COPD and lung cancer (COPD + Ca):

A. Clinically. There are follow up 120 smokers with COPD + Ca, 181 smokers with COPD, 50 with lung cancer and 50 health smokers (control group). We proved that: The number of smoked cigarettes ($p = 0.009$) and air pollution at work environment (exogenous factors) are more risky about COPD + Ca than early beginning of tobacco smoke ($p = 0.821$). Predisposition about Ca is more risky than another diseases in family (14.17%). Smokers with COPD + Ca and COPD more often have cardiovascular and metabolic diseases than this with lung cancer and control group. Predisposition in family about cardiovascular and metabolic diseases exceed the interval – 2 – 4%, established with the control group and the group with lung cancer.

B. Experimental. There is investigated lung and bone marrow in rats, treated with tobacco smoke for 30 days. We found a centroacinar emphysema with predominant destruction by massive exposition and bronchiolitis. The micronuclei (erythrocytes with nuclear chromatin) in bone marrow are significant higher compared with the control group (4.35±0.5/1.58±0.33). This results showed that in conjunction with local lung changes occur systemic effects (clastogenesis as a result of cytotoxic effect).

Conclusion: The comorbidity in relationship with tobacco smoke is related with a cumulative effect of exogenous and endogenous factors. There are necessary profound analysis to prove of related with the cumulative effect of exogenous and endogenous factors comorbidity.

P4077

High environmental tobacco smoke and other air pollutants exposure in patients with allergic rhinitis non smokers

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Background: Chronic exposure to cigarette smoke inhibits surface immunoglobulin-mediated responses in B cells. Immunomodulatory effects of cigarette smoke are evidence based and the effects of environmental tobacco smoke (ETS) on immune system are in focus of current research.

Aim: Aim of the study is to analyse tobacco smoking status in patients (Pts) with allergic rhinitis (AR) with special regard to ETS.

Methods: In this observational questionnaire based study successive series of Pts treated for AR at two tertiary level health care facilities in Belgrade, Serbia, was enrolled from January 2010 to December 2011, and valid questionnaires were analyzed for Pts' demographic and social data, and tobacco smoking status.

Results: Study group consisted of 182 Pts average age: 36.22±12.50; male/female ratio: 0.75. Tobacco smoking status analysis showed: 12.6% current smokers, 15.4% former smokers, and 136/184 (72%) Pts non smokers. About two thirds of the 'non smokers' have been exposed to ETS while 166/182 (91.2%) Pts have been exposed to both tobacco smoke ingredients (at home and/or at working place), and to the other air pollution.

Conclusion: High proportion of AR Pts is exposed to tobacco smoke and/or the other environmental pollution, which might present a serious problem and challenge for further research in the field of immunomodulation.

P4078

Effectiveness of smoking cessation in patients with psychiatric disease

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Background: Smoking cessation treatment is considered to be less effective in patients with psychiatric diseases.

Aim: To evaluate the smoking cessation rate in patients with psychiatric diseases, compare the effectiveness between the different treatment modalities and demonstrate the discrepancies from other patients.

Methods: From a total number of 609 active smokers; 52 with psychiatric diseases (most distinctive concomitant condition was depression) were prospectively evaluated between 2004 and 2010. Each patient answers the same questionnaire including smoking status and medical background. Nicotine dependence and CO

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levels were evaluated. Smoking cessation program was administered individually according to the guidelines and all of the patients were followed at least 1 year.

Results: There was no difference between the groups in; age, baseline Fagerstrom nicotine addiction score, exhaled carbon monoxide level and treatment protocols. However, total amount of smoked tobacco (27.8 ± 21 pack-year) and cigarette consumption per day (21 ± 10) was higher in patients with psychiatric diseases ($p=0.001$ for all). The cessation rates with or without psychiatric diseases are respectively 44.2% and 55.6%. Effectiveness of treatment modalities are 44.4% for nicotine replacement treatment (NRT), 75% for bupropion, 25% for varenicline and 33.3% for behavioral treatment without pharmacotherapy in psychiatric diseases.

Conclusion: According to our results, one year smoking cessation success was lower in psychiatric diseases. Pharmacotherapy is superior to pure behavioral treatment. Bupropion and varenicline seems to more effective than NRT at relapse rates.

P4079

Searching for CHRNA3, CHRNA4, CHRNA5, and CHRN4 genes polymorphisms influencing nicotine dependence in the ethnic population of Kashubians, North Poland

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Genome wide association studies showed that genes encoding nicotinic receptor CHRN subunits might be potentially involved in the pathogenesis of nicotine dependence.

We aimed to investigate whether polymorphisms in the sites rs12914008, rs16969968, rs2236196, rs578776, rs7743870 of CHRNA5, CHRNA3, CHRNA4 and CHRN4 subunits genes influenced nicotine dependence.

The survey was conducted in closed, ethnically homogenous population of Kashubians. The study sample consisted of 455 unrelated subjects, daily or occasional smokers. Several variables of smoking habit were recorded, and the nicotine dependence was scored with the use The Fagerstrom Test for Nicotine Dependence (FTND). Genotyping was performed in blood samples, and genotypes were correlated with the severity of nicotine dependence with the use of multivariate logistic regression analysis.

Results: Distributions of genotypes for all polymorphisms did not deviate from expectations predicted by the Hardy-Weinberg equilibrium. We found that A allele carriers of rs16969968 polymorphism had higher risk of heavier smoking, i.e. 10 or more cigarettes per day, than G allele carriers (OR = 1.54; 95% CI: 1.00-2.35). In the separate analysis, performed in the group of subjects with the history of smoking shorter than 5 years, higher risk of a stronger nicotine dependence (i.e. FTND score 4 or more) in A allele carriers of rs12914008 polymorphism than in G allele carriers was found (OR = 14.96; 95% CI: 1.42-158.0).

Conclusion: Polymorphisms in the sites rs16969968 and rs578776 of CHRNA5 and CHRNA3 subunits genes may influence the severity of nicotine dependence.

P4080

Relationship between early exposure to tobacco smoke and intima media thickness (IMT) in COPD patients

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(Background) We have previously reported at the 2011 ERS Annual Congress that early exposure to tobacco smoke significantly increased the prevalence of COPD. As a follow up, we hypothesize that COPD from early exposure to smoke may cause an increase of IMT that correlates with the increase in the prevalence of smoke-related vascular comorbidities. (Methods) We identified potential subjects into three groups: G1) history of COPD and early exposure; G2) history of COPD and non-early exposure; G3) subjects without COPD and analyzed the measurements IMT. IMT were measured using the longitudinal axis of the common carotid arteries from ultrasound. We defined early exposure as when habitual smoking started before age of 20. (Results) A total of 152 subjects (72 ± 10 years old; SD) were enrolled into the study after informed consents were obtained. G1, 2, and 3 consisted of 41 subjects (age 68 ± 9 yrs), 80 subjects (71 ± 11), and 31 subjects (69 ± 10) respectively. Maximum value of IMT in G1 was 1.34 ± 0.12 mm, G2 was 1.23 ± 0.13 , and G3 was 1.12 ± 0.16 . Groups with history of COPD had higher maximum value of IMT when compared with group without COPD. Furthermore, G1 demonstrated higher value when compared with G2, suggesting early exposure to smoke as possible etiology within subjects with COPD. (Conclusion) In subjects with COPD, early exposure promoted atherosclerotic changes, which may increase the likelihood of smoke-related vascular comorbidities such as cardiovascular and cerebrovascular diseases. Further studies are needed to elucidate the precise magnitude of the increase in risk of these comorbidities associated with COPD and early exposure.

P4081

Features of pregnancy duration & outcomes in asthmatic pregnant due to their smoking status

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Prevalence. Asthma is the most common respiratory disease in pregnant. Combined influence of asthma and smoking on pregnancy duration as well as newborn's health appears not to be completely studied.

The goal of the study was to investigate influence of intensity and severity of smoking in asthmatic patients to variety of pregnancy complications and newborn health status.

Materials and methods: 643 pregnant with asthma and their kids were studied.

Results: 50.9% of studied females never smoked, 49.1% smoke before or during pregnancy. Among latter females 19.3% stopped smoking before pregnancy (1 group), 54.1%—interrupted smoking while pregnancy (2 group) but 26.6% continued smoking while pregnancy (3 group). Risk of abortion or premature delivery was more frequent in pregnant with more than 10 years smoking experience in comparison with less than 9 years smoking experience 77.8% versus 43.2% ($p<0.01$). Arterial hypertension was more frequent in females of the 2 group (47.9%), than in patients of the 1 group (24.6%) ($p<0.01$). In the 3rd group hypertension had twice prevalence in case of ICS therapy reject (42.3% and 20% resp.). Pregnants of the 2nd (26.9%) and the 3rd (32.1%) groups increased need of Cesarean section in comparison with the 1st group (11.5%) ($p<0.01$). The amount of newborns with weight <2500 g from females of the 3 group was 20.2%, the newborns of the 2 group - 9.3%. Food allergy in the first year kids was less frequent in kids of the 1st group (19.4%), in active smokers' newborns - 38.4% ($p<0.01$).

Conclusions: Asthmatic patients are to stop smoking before pregnancy onset in order to decrease pregnancy complications and to increase newborn health status.

P4082

Interest in hospitalized patients at the department of pulmonary diseases in smoking cessation

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Objectives: Study evaluates the results of smoking cessation (SC) patients, who were hospital treated and whether have been certain diseases a motive strong enough to SC.

Methods: Patients were at first valued with profile of tobacco use, Tobacco dependence test and Motivational interview. Patients were, according to their diagnoses, divided into 6 groups (Tb, Ca, Asthma, COPD, Ac. resp. dis., Cardiovascular dis.). Methods we used for quit smoke were 1. methods of short intervention and 2. program of change behavior for smoking cessation including pharmacological therapy too. One year after, we evaluated the results.

Results: The treatment was done on the 451 patient-smoker: Tb-62, Ca-90, Asthma-22, COPD-102, Ac. resp. dis.-146, Cardiovascular dis.-16. Short intervention accepted 382 (85%) of them, 26.4% stopped smoking, 42.2% reduced smoking. Patients 69 were involved with SC method 2: 42.2% stopped smoking and 37.5% reduced smoking. Evaluated by diagnoses, after a year of monitoring patients, 23 with Tb (25.0%), 16 with Ca (17.39%), 2 with Asthma (2.17%), 30 COPD (32.6%) and 21 patient with Ac. pulm. dis. (22.82%) quit smoking. Patients 4 were on pharmacological therapy (NRT). Five patients died (4.7) during the research (Ca).

Conclusions: It was expected that a bigger number of patients with Cancer would quit smoking, but from our results it is seen that smoking was associated with the illness mostly by the patients suffering from Tb (37%) and significantly less by the patients suffering from Asthma, COPD and Ac. resp. dis. Patients with Cardiovascular dis. weren't interested in quit smoking, probably because they spent less days in hospital.

P4083

Evaluation of the relationship between intention to quit and not smoking at home

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Objective: This study aimed at evaluating the correlation between not smoking at home and intention to quit.

Methods: This descriptive cross-sectional study was carried out in Tehran in 2011, on 2,020 smokers. Information were collected by interviewers through a standardized questionnaire such as age of smoking onset, daily rate of smoking, price of cigarettes, using labeled or non-labeled tobacco products, history of quit attempts, cessation intention, water-pipe consumption, and knowledge about anti-tobacco laws.

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Findings: In our sample (2020 smokers), the mean number of cigarettes smoked daily was 14.4 ± 10.9 . This figure was 15.5 ± 11.0 in married people and 12.6 ± 10.5 in singles. A total of 433 (21.4%) smokers had adequate knowledge about anti-tobacco laws. In addition, 1,081 (53.5%) smokers had history of quit attempts and 729 (46.1%) reported water-pipe consumption. Rate of water-pipe consumption among singles was twice the rate in married individuals. Among our understudy subjects, 673 (33.3%) reported smoking at home; of which, 355 (52.7%) expressed their intention for quitting smoking. Meanwhile, out of 1,330 (65.8%) smokers who did not smoke at home, 834 (62.7%) stated that they would like to quit smoking. Chi-Square test revealed a significant association between tobacco smoking at home and intention to quit.

Discussion: As this study and some other studies have shown, restrictions on tobacco smoking at home can motivate smokers to quit smoking. Family has a considerable role in increasing the intention of its members for smoking cessation and not smoking at home. Family members can have a positive role in encouraging other members to quit smoking or sustain their abstinence.

P4084

Mapping the tobacco retailers in Edirne, Turkey

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Objectives: Youth smoking rate is on the rise in Turkey. Although many marketing bans have been effectively implemented, regulations related to retail tobacco outlets have gone unnoticed and have not been effectively supervised. In this study, we aim to manifest that a lack of legal regulation related to the high retail tobacco outlet density with displays.

Methods: In the center of Edirne, marketing environment, numbers and geographical distribution of retail tobacco outlets are documented and mapped with geographical positions.

Results: There were 569 retail tobacco points of sale in 520 stores. We calculated one tobacco retail outlet per 270 people. This retail outlet density rate is above the country average and about four times higher than in Istanbul. Products especially attracting children, such as chocolates, sweet candies and chewing gums were set up near the tobacco stands and were easy for children to see and reach. It is seen on the city map that 47% of retail tobacco outlets are within 100 m to education, health or sport facilities.

Conclusions: We concluded that one of the reasons of the increasing prevalence of cigarette use especially among adolescents in Turkey is deregulation of the retail tobacco marketing environment during privatization process of national tobacco monopoly. Using the mapping techniques can help to control retail marketing environment.

P4085

Smoking prevalence and practice in special categories: Taxi drivers

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The goal of the survey was to estimate the prevalence of tobacco consumption on taxi drivers and secondhand smoke (SHS) exposure in cabs. The study is important because it is the first one made in Romania on this topic and there are a few of them reported in medical publication. There are decisions of local counsel on banning smoking in taxis for both driver and customer. The data were collected from a 5-10 min questionnaire which contain demographic data, Fagerström Nicotine Dependence Scale and questions regarding smoking practice in the car. The questionnaires were directly distributed to taxi drivers from three large taxi companies from Bucharest.

Results: 100 questionnaires were collected for statistical analysis from 400 taxi drivers. The lot was made by 94% men and 6% women; average age 37.79 ± 9.89 years; driving experience averaged 7.67 ± 4.55 years. They work in shifts: 7.1% only in day, 63.6% in night and 29.3% in alternative. The work years on night shift average were 3.9 ± 3.86 . Smokers 70.7%, (average age 38.04 ± 9.78 years) Exsmokers 10.1%, Nonsmokers 19.2%. Number of cigarettes/day (0-5) 15.7%, 10/20 68.6% and > 20% 15.7%. Nicotine dependence was high, 70% of smoker light their cigarette in the first 5 minutes of waking. 35% of smoke in the taxi, if the customer doesn't express his opinion regarding smoking.

Conclusions: The prevalence of smoking is higher than the national average (30%). The study group consists of young people who work at night and have a high dependence on nicotine. There is company internal rules that bans smoking, so many taxi drivers refrain from smoking in taxis, but not when they don't have a client. Smoke free policy can support a smoking cessation program among them.

P4086

A survey to assess smoking awareness and attitudes of staff at a local hospital

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Background: Rising smoking-related morbidity and mortality would be expected to lead to increased awareness among hospital staff regarding the harmful effects of cigarettes.

Aims and objectives: The aim is to assess the smoking habits of individuals working within a hospital setting who are directly or indirectly exposed to patients with smoking-related illnesses. The survey addresses health issues and attitudes towards smoking. The timing is opportune in that Mater Dei Hospital Malta is to be declared a totally smoke-free hospital.

Methods: A questionnaire was compiled, based on various tools validated in the literature. These were distributed to all members of staff at our General Hospital, targeting more than 3600 individuals.

Results: 27.1% of male and 24.8% of female staff are active smokers. Males were significantly ($p = 0.001$) more likely to have started smoking at a younger age than females. Almost half find difficulty in refraining from smoking in forbidden areas. Only 22.2% of smokers refrain from smoking in hospital. The highest percentage of smokers are in the youngest age group (18-25 years). 10.4% of doctors and 23.6% of nurses are active smokers. 25.7% of non-smokers had previously smoked, the greatest incentive for quitting being for health reasons. Most members of staff are aware of the adverse effects of smoking and a number have symptoms suggestive of smoking-related pathology.

Conclusions: Hospital staff mirror the general population with respect to smoking habits and comorbidities. This is unacceptable and emphasizes the need to implement harsher measures whilst educating our hospital staff so that these in turn may serve as educators to patients and hospital visitors.

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Evaluation of smoking pattern and its correlation with addiction among substance abusers

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Introduction: Since tobacco consumption is not illegal, people are often not considering it as an addictive substance. It has been revealed that young smokers have a stronger desire and tendency to experience high risk behaviors and have a greater risk of substance abuse.

Objective: This study aimed at evaluating the pattern of smoking and its effect on initiation of substance abuse in those presenting to the rehabilitation centers and substance abuse clinics.

Materials and methods: In this descriptive cross sectional study, 487 cases referred to the rehabilitation centers and substance abuse clinics in Tehran were evaluated with a standard questionnaire.

Results: A total of 462 person (95.9%) mentioned a history of smoking. There were 435 (92.4%) smokers which 261 (57.7%) had moderate or high nicotine dependence. A significant correlation was detected between first substance abuse experience or daily substance abuse during the first 2 years following smoking onset ($P = 0.006$).

Those who started smoking at a younger age in our study started substance abuse significantly sooner than others or developed a daily addiction to it. Using below formula, we can anticipate how long after smoking experience one would probably experience their first substance abuse ($P = 0.001$).

First substance abuse experience age = $7.72 + 0.78$ (first smoke experience age)

Conclusion: A significant correlation exists between smoking and future substance abuse. Therefore, efforts must be made to prevent tobacco consumption in the first place. For those who are already smokers, preventive and supportive measures must be undertaken to prevent substance abuse especially in the first two years following smoking initiation.

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Short-term effects of quitting smoking in TNF- α and interleukin-10 serum and nasal lavage levels

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Some systemic benefits of quitting smoking are known, however, the immediate effects on inflammatory biomarkers have not been well described. The purpose of this study was to evaluate inflammatory biomarkers during a smoking cessation program (SCP). Twenty two abstinent smokers (age 50 [40-55] years; 13 [6-38] pack/years index; FEV1% 92.5 [87-104] enrolled in a SCP were evaluated at baseline and after 7, 15, 30 and 60 days of abstinence. The measurements of TNF α and interleukin-10 (IL-10) levels on nasal lavage and blood plasma (ELISA) and exhaled carbon monoxide (eCO), carboxyhaemoglobin (COHb). Current smokers ($n = 9$; age 54 [50-60] years; 28 [19-42] pack/years index; FEV1% 96 [82-104] and non-smokers ($n = 8$; age 53 [33-60] years; FEV1% 104.5 [93.5-106]) were also evaluated at the same time points. Statistical analyses were performed using One-way ANOVA followed by Tukey for parametric data and Kruskal-Wallis test followed by Dunn's test for non parametric data. There was a significant decrease in eCO and COHb in abstinent smokers after 7, 15, 30 and 60 days of

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abstinence ($p < 0.0001$). There was a significant decrease in TNF- α levels on nasal lavage in abstinent smokers after 60 days of abstinence ($p = 0.0186$). For TNF- α levels on blond plasma and IL-10 on blond plasma and nasal lavage there was no observed significant difference. The abstinence promoted decreased exCO and COHb levels after 7 days, decreased in TNF- α levels on nasal lavage in 60 days and of abstinence.

P4089**Is motivational Q-mat test useful to predict smoking cessation?**

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Background: Smoking is one of the major causes of cancer, heart and pulmonary diseases. one of essential steps in tobacco control is persuading the smokers to quit smoking. Encouraging smokers to the quit can be possible if the smoker has enough motivation for quit. In this study we investigated abstinence rate after 6 months according to level of motivation to quit (Q-mat score) and level of nicotine dependency (Fagerstrom score).

Material and method: This study was conducted on the volunteers of smoking cessation clinic in Tehran. They underwent tests for nicotine dependence, motivation degree assessment by FT and Q-mat test respectively. Thereafter, smokers started the cessation program consisting in behavioral therapy and pharmacotherapy. Their quit rate was by verified by telephone and through exhaled co measurement after 6 months.

Results: In this study 345 volunteers were studied from which 311 (90.1%) male. The mean age was 37.6 ± 11.04 years. After 6 months follow up abstinence rate was 39%. The mean of Q-mat score was 15.8 ± 5.1 (14.9-16.7 CI 95%) in participants who stopped smoking and 15.4 ± 5.1 (14.7-16.1 CI 95%) among participants who failed smoking cessation ($p = 0.4$). The mean of FT was 5.2 ± 2.6 (4.7-5.6 CI 95%) in participants who stopped smoking and was 6 ± 2.6 (5.7-6.4 CI 95%) among participants failed ($p = 0.002$).

Conclusion: The results of this study indicate that volunteers may have high motivation to quit smoking however there was not correlation with the quit rate after 6 months. Lower fagerstrom score is correlated with high quit rate. By contrast, Q-mat score didn't predict the success rate in the observed population. Thus in this regards attention should be paid on high nicotine dependent smokers.