



5<sup>th</sup> International Congress on

# LUNG CANCER AND COPD

June 25-26, 2018 | Amsterdam, Netherlands

# DAY 1

Scientific Tracks & Abstracts

# Day 1

# SESSIONS

June 25, 2018

Lung Cancer | Pathophysiology of COPD | Chronic Obstructive Pulmonary Disease | Tuberculosis | Pneumonia | Cardiovascular Diseases | Asthma

## Session Introduction

### Session Chair

**John Klir**  
American International  
Medical University  
Saint Lucia

**Title: The role of double bronchodilation in COPD treatment**

Marousa Kouvela, Boehringer-Ingelheim, Greece

**Title: Protective mechanical ventilation and tracheal gas insufflation in a patient with massive pulmonary embolism caused by the combined deficiency of proteins C and S and antithrombin III**

Javier Mauricio Giraldo Sánchez, Medicina Intensiva del Tolima UCI Honda, Colombia

**Title: Galectin-3, a druggable vulnerability for KRAS-addicted cancers**

Laetitia Seguin, IRCAN, France

**Title: Echocardiographic abnormalities in patients with chronic obstructive pulmonary disease (COPD) and their correlation with the severity of the disease**

Daniela Buklioska Ilievska, Institute for Occupational Health of Republic of Macedonia, Macedonia

**Title: The use of reinforced surgical stapler reloads in secondary spontaneous pneumothorax**

Esther Ern-Hwei Chan, Tan Tock Seng Hospital, Singapore

**Title: Arrhythmias in patients with chronic obstructive pulmonary disease**

Nade Kochovska Kamchevska, Institute for Occupational Health of Republic of Macedonia, Macedonia

## THE ROLE OF DOUBLE BRONCHODILATION IN COPD TREATMENT

**Marousa Kouvela**

Boehringer-Ingelheim, Greece

**B**ronchodilators play a central role in COPD treatment. At the end of the previous year, the GOLD (Global Initiative for Global Obstructive Lung Disease) strategy for the diagnosis, management and prevention of COPD has been updated and published with several changes. One of the most important changes was the shift of the treatment recommendations toward the maximization of bronchodilative therapy to all COPD patients and the restriction of ICS use to more specific patient groups, although, the ICS overuse continues to be an issue to many countries worldwide. The direct comparison of inhaled LABA/LAMA combinations to the nanocomponents or a LABA/ICS combination shows superiority of the LABA/LAMA combination in case of lung function, symptoms and quality of life. Recently, there has been a question whether a LABA/LAMA combination is equally or even more efficient than a LABA/ICS combination therapy in the prevention of COPD exacerbations. Another question that needs to be clarified is how safe is to withdraw ICS from the patients that do not need them and how this is applicable in everyday clinical practice. It seems that a LABA/LAMA combination is very efficient and safe treatment option to all COPD groups and it should be applied from the beginning of COPD treatment. The efficacy of the double bronchodilation is mainly attributed to the reduction of the lung hyperinflation, the enhancement of mucociliary clearance and their anti-inflammatory properties. Moreover, it seems that the simultaneous administration of two bronchodilators offers a synergic action to the lungs.

## BIOGRAPHY

Marousa Kouvela is a pulmonologist. She has completed her residency in one of the largest general hospitals in Greece and achieved her specialty board degree in 2013. She has completed her Master of Science in Thoracic Oncology. She has participated in many national and international scientific and educational seminars and published in national and international journals. Her special scientific interests are COPD, lung cancer and interventional pulmonology. She is currently working as a Medical Manager in Boehringer Ingelheim Ellas, Greece.

[markouvela@yahoo.gr](mailto:markouvela@yahoo.gr)

## **PROTECTIVE MECHANICAL VENTILATION AND TRACHEAL GAS INSUFFLATION IN A PATIENT WITH MASSIVE PULMONARY EMBOLISM CAUSED BY THE COMBINED DEFICIENCY OF PROTEINS C AND S AND ANTITHROMBIN III**

**Javier Mauricio Giraldo Sánchez**

Medicina Intensiva del Tolima UCI Honda, Colombia

**D**uring pulmonary embolism, the physiology of the ventilation and the perfusion is damaged. A sudden massive increase of the intrapulmonary shunt might result if the clinical setting is not adequately implemented to regulate the inflammatory process. For this reason, the mechanical ventilation protective and the tracheal gas insufflation are useful tools in modulating the injury and the hypercoagulability caused by protein C and S and the deficiency of antithrombin III. All cause damage of the endothelial barrier, therefore gives origin to interstitial leakage, tissue damage, inflammation and apoptosis.

## **BIOGRAPHY**

Javier Mauricio Giraldo Sánchez is specialized in Internal Medicine with training and experience in the treatment of critically ill patients. He is an active member of the Colombian Association of critical and intensive care medicine. Accredited by the American Society of Critical Care as a supplier of fundamental critical care support. He is also a Science Director of the leading group of ARDS UCI Honda. He is a Chief Editor of the Science Publishing Group/Science Journal of Clinical Medicine. He is also an Elsevier author at the Critical Medicine Colombian act and FUCS academic reviewer.

[dircientifico@ucihonda.com.co](mailto:dircientifico@ucihonda.com.co)

## **GALECTIN-3, A DRUGGABLE VULNERABILITY FOR KRAS-ADDICTED CANCERS**

**Laetitia Seguin, Camargo MF, Wettersten H, Kato S  
Desgrosellier JS, Von Schalscha T, Elliott KC, Cosset E  
Lesperance J, Weis SM and Cheresh DA**

IRCAN, France

Identifying the molecular basis for cancer cell dependence on oncogenes such as KRAS can provide new opportunities to target these addictions. Here, we identify a novel role for the carbohydrate-binding protein galectin-3 as a lynchpin for KRAS dependence. By directly binding to the cell surface receptor integrin  $\alpha\beta3$ , galectin-3 gives rise to KRAS addiction by enabling multiple functions of KRAS in anchorage-independent cells, including formation of macropinosomes that facilitate nutrient uptake and ability to maintain redox balance. Disrupting  $\alpha\beta3$ /galectin-3 binding with a clinically active drug prevents their association with mutant KRAS, thereby suppression macropinocytosis while increasing reactive oxygen species to eradicate  $\alpha\beta3$ -expressing KRAS-mutant lung and pancreatic cancer patient-derived xenografts and spontaneous tumors in mice. Our work reveals galectin-3 as a druggable target for KRAS-addicted lung and pancreas cancers and indicates integrin  $\alpha\beta3$  as a biomarker to identify susceptible tumors. There is a significant unmet need for therapies targeting KRAS-mutant cancers. Here, we identify integrin  $\alpha\beta3$  as a biomarker to identify mutant KRAS-addicted tumors that are highly sensitive to inhibition of galectin-3, a glycoprotein that binds to integrin  $\alpha\beta3$  to promote KRAS-mediated activation of AKT.

## **BIOGRAPHY**

Laetitia Seguin is currently working as a post-doctoral fellow in C Feral Laboratory Epithelial homeostasis and tumorigenesis at IRCAN, France. She has published many papers in the reputed journals with the eminent authors. She has a great publication in the peer reviewed conference proceedings also.

[Laetitia.Seguin@unice.fr](mailto:Laetitia.Seguin@unice.fr)



## **ECHOCARDIOGRAPHIC ABNORMALITIES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND THEIR CORRELATION WITH THE SEVERITY OF THE DISEASE**

**Daniela Buklioska Ilievska and Minov J**

Institute for Occupational Health of Republic of Macedonia, Macedonia

**Introduction:** Cardiovascular comorbidity is the main reason for hospital admission and mortality in COPD patients, especially in mild-moderate stage of the disease.

**Aim:** To evaluate both right ventricle (RV) and left ventricular (LV) function in patient with COPD by echocardiography and its correlation with the severity of the disease.

**Material & Method:** 60 patients with COPD and thirty healthy subjects were assessed by echocardiography and pulmonary function test.

**Results:** LV parameters were similar in both groups, while RV parameters were significantly higher in COPD patients. Mild, moderate, severe and very severe COPD were seen in 6.66%, 35%, 36.67%, 21.67% respectively, with mean forced expiratory volume in 1s (FEV1%pred) 47.52±17.92%. RV systolic dysfunction in moderate, severe and very severe COPD was present in 47.61%, 59.09%, 53.84% to the number of patients in that stage accordingly. Pulmonary hypertension (PH) was observed in 33.33% of all patients. The presence in different stages was 23.8%, 41%, 46.15%, in moderate, severe and very severe COPD respectively. Impairment of LV diastolic function in moderate, severe and very severe COPD was present in 14.28%, 54.54%, 23.07%, according to the number of patients in that stage. Enlarged left atrium was measured in 42%. Tricuspid regurgitation was the most frequent valvular abnormality, observed in 66.67%. LV systolic function was significantly higher in healthy subjects compared to COPD patients 63.73±1.90% vs. 57.43±6.93%. PH was not detected in the healthy subjects.

**Conclusion:** There is high prevalence of PH, RV systolic dysfunction and tricuspid regurgitation in COPD patients and severity increases with level of severity of COPD.

## **BIOGRAPHY**

Daniela Buklioska Ilievska is currently working in the Department of Pulmonology and Medicine at General Hospital, Skopje. She has completed her graduation from Medical Faculty at University "Ss. Cyril and Methodius" and a specialist of internal medicine. She is pursuing PhD with the ongoing research about "cardiovascular comorbidity at patients with chronic impeding respiratory organ disease". She has the skills in the field of diagnostic and therapeutic bronchoscopy, Chest ultrasound, diagnostic and therapeutic thoracentesis.

[dbuklioska@yahoo.com](mailto:dbuklioska@yahoo.com)

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## THE USE OF REINFORCED SURGICAL STAPLER RELOADS IN SECONDARY SPONTANEOUS PNEUMOTHORAX

**Esther Ern-Hwei Chan, Aneez Dokev Basheer Ahmed and Atasha Asmat**

Tan Tock Seng Hospital, Singapore

**Introduction:** Secondary spontaneous pneumothorax (SSP) commonly afflicts patients with chronic obstructive pulmonary disease (COPD). Indications for surgery remain unclear as these patients often have other co-morbidities which increase risk of surgery as well as concerns of prolonged air-leak. The use of reinforced surgical stapler reloads (RSSR) is one of the methods proposed to decrease incidence of air-leak. We report outcomes following the use of RSSR in SSP patients with COPD.

**Methods:** All COPD patients with SSP who underwent surgical management with the use of RSSR in a single-institution from May 2015 to May 2017 were included. Demographic and clinical data were collected retrospectively.

**Results:** 28 patients with a mean age of 69 (51-93) years were included. All patients were male and smokers with an average smoking pack-years of 45.6 (20-100). One patient had co-existing interstitial lung disease and six had previous or current lung tuberculosis. All patients had intra-operative pleurodesis, either talc (50%), abrasion (7%) or both (43%). Median immediate air-leak measured by a digital-drainage-system post-operatively was 300ml/min (0-3300). Median duration chest tube *in-situ* was 7 (2-36) days, with 10 (35.7%) patients discharged home with chest tube *in-situ*. Fifteen (53.6%) patients had prolonged air-leak (more than five-days). Post-operative complications include 6 (21.4%) patients with pneumonia, 2 (7.1%) requiring ventilator support for more than 48-hours and 2 (7.1%) requiring reintubation. There were four 30-day mortalities; in all the cause-of-death was pneumonia. There was an additional mortality at 90-days due to pneumonia.

**Conclusion:** In our study, the use of RSSR does not decrease the incidence of prolonged air leak in COPD patients with SSP.

## BIOGRAPHY

Esther Ern-Hwei Chan is graduated with an MA in Genetics from University of Cambridge and MBBS from Imperial College, London in 2014. She obtained her membership to the Royal College of Surgeons, England (MRCS) in 2015. She is currently working as a junior doctor in Singapore. She has published more than five papers in reputed journals and has presented posters and oral presentations at multiple conferences both locally and internationally.

[esther.e.chan@gmail.com](mailto:esther.e.chan@gmail.com)



## ARRHYTHMIAS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

**Nade Kochovska Kamchevska and Buklioska Ilievska D**

Institute for Occupational Health of Republic of Macedonia, Macedonia

**Introduction:** Cardiac supraventricular and ventricular arrhythmias are common in chronic obstructive pulmonary disease (COPD), especially in acute exacerbations. Hypoxemia and cardiac autonomic dysfunction which are present in COPD are important in the development.

**Aim:** To estimate the prevalence and types of arrhythmias in stable COPD and their correlation with the severity of the disease.

**Material & Methods:** Cross-sectional study was conducted in period of two years in 70 patients with stable COPD diagnosed according to GOLD's criteria (Global Initiative for Obstructive Lung Disease). Pulmonary investigation (spirometry, gas analysis, chest X-ray) and 24 hours holter monitoring with Schiller ECG Holter Recorder was performed in all subjects.

**Results:** The most common were atrial pair and atrial premature beats in 49 (70%), a trial run in 21 (30%), ventricular premature beats 28 (40%), ventricular couplets 7 (10%), atrial fibrillation in 14 (20%) in COPD patients. Supraventricular arrhythmias were more frequent as increasing COPD severity: 30%, 50%, 60%, 70% in GOLD 1,2,3,4, respectively. With chi-square test we concluded that frequency of ventricular arrhythmias did not correlate with the severity of the disease and they were detected in 28 (40%) of the patients. Patients in respiratory acidosis with pH<7.35 had more ventricular disturbances than those with pH 7.35-7.45.

**Conclusion:** 24-hour Holter monitoring enhances the possibility of observing cardiac rhythm and detection of arrhythmias in asymptomatic patients with COPD.

## BIOGRAPHY

Nade Kochovska Kamchevska is currently working at PHI General City Hospital in the Department of Pulmology and Allergology, Pariska Str, 1000 Skopje, Macedonia. She was post graduated in Centre for Non-specific Pulmonary Diseases – Oteshevo, R. Macedonia. PHO "neuromedica" – Skopje, R. Macedonia.

[nkamchevska@yahoo.com](mailto:nkamchevska@yahoo.com)







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# DAY 2

Scientific Tracks & Abstracts

# Day 2

# SESSIONS

June 26, 2018

Lung Cancer | Pathophysiology of COPD | Chronic Obstructive Pulmonary Disease | Tuberculosis | Pneumonia | Cardiovascular Diseases | Asthma

## Session Introduction

### Session Chair

**John Klir**  
American International  
Medical University  
Saint Lucia

Title: **Effects of the anti-cancer preparation NSC-631570 (Ukraine) on lung cancer**

Wassil Nowicky, Nowicky Pharma, Austria

Title: **One conversation is not enough: the long-term impact of an end-of-life communication intervention among patients with COPD**

Lynn F Reinke, University of Washington, USA

Title: **Forced expiratory volume factors of stage III non-small cell lung cancer patients**

Rabindra Nath Das, University of Burdwan, India

Title: **Efficacy of pleural brush cytology in diagnosis of pleural diseases**

Varuna Jethani, Himalayan Institute of Medical Science, India

Lung Cancer & COPD Congress 2018

## EFFECTS OF THE ANTI-CANCER PREPARATION NSC-631570 (UKRAINE) ON LUNG CANCER

**Wassil Nowicky**

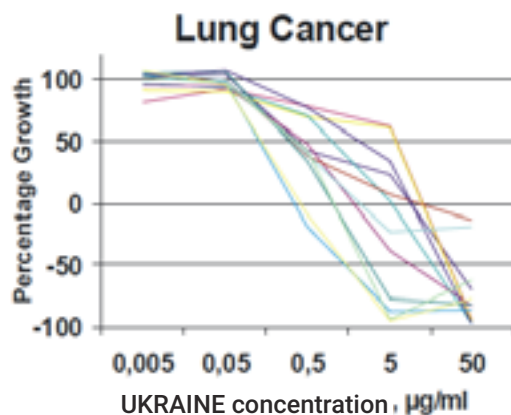
Nowicky Pharma, Austria

Clinical efficacy of NSC 631570 is not coincidental or even 'spontaneous remission' but rather a consequence of its mechanisms of action confirmed in various *in vitro* and *in vivo* studies. NSC 631570 has been tested on more than 100 cancer cell lines so far. Among others, NSC 631570 was tested at the National Cancer Institute (Bethesda, Maryland, USA) on 60 cell lines representing eight important human malignant tumors: brain tumors, ovarian, small cell and non small lung cancer, colon cancer, kidney cancer, leukaemia and malignant melanoma. NSC 631570 exerted toxic effects against all these cell lines. Compared to 5 fluorouracil (5 FU) and gemcitabine, two standard cytotoxic agents in the treatment of digestive tract tumors, NSC 631570 achieved better results and not only inhibited the cell growth but reduced the cell mass, also. In 1998, a group around Anne Panzer (University of Pretoria, South Africa) proved the selective effect of NSC 631570 on molecular level. Tests on human cervical carcinoma cells HeLa, squamous cell carcinoma WHCO5 and normal equine lung cell lines demonstrated that NSC 631570 is selectively toxic against cancer cells. It causes a metaphase block which is characterized by an abnormal distribution of chromosomes and the formation of micronuclei and results in apoptosis. Normal cells are not influenced in the process. NSC 631570 was effective in the therapy of recurring lung diseases in children from the Chernobyl area.

## BIOGRAPHY

Wassil Nowicky is the President of the Ukrainian Anti-Cancer Institute (Vienna, Austria). He has finished his study as the Radio Technical Faculty in the Technical University of Lviv (Ukraine) in the end of 1955. He was the author of over 300 scientific articles dedicated to cancer research. He is a real member of the New York Academy of Sciences, member of the European Union for applied immunology and of the American Association for scientific progress. He has received the award for merits of National Guild of Pharmacists of America, the award of Austrian Society of Sanitary, Hygiene and Public Health Services and others.

[dr.nowicky@yahoo.de](mailto:dr.nowicky@yahoo.de)



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## **ONE CONVERSATION IS NOT ENOUGH: THE LONG-TERM IMPACT OF AN END-OF-LIFE COMMUNICATION INTERVENTION AMONG PATIENTS WITH COPD**

**Lynn F Reinke, Laura C Feemster, Jennifer McDowell, Eric Gunnick, Erica V Tartaglione, Edmund Udris, J Randall Curtis and David H Au**

University of Washington, USA

**Aim:** The aim of the project is to assess if an end-of-life communication intervention with patients with COPD led to higher long-term documentation of advance care planning discussions at the end-of-life.

**Background:** We previously demonstrated that providing clinicians a patient-specific feedback form about patients' communication preferences improved the occurrence and quality of clinician communication about end-of-life care.

**Methods:** Among those individuals enrolled in the intervention study (2004-2007) who had died during the follow-up period (up to 2013), we assessed if patients in the intervention arm had more goals of care discussions and formal advance directives completed as compared to controls. We conducted logistic models accounting for provider level clustering, adjusting for age, FEV1 and race.

**Results:** Among the 376 patients, 157 died (76 in the intervention arm, 81 controls). Over an average duration of 3.6 years (time of the first study appointment to death), 73% patients engaged in 451 unique end-of-life care discussions. The intervention was not associated with a higher percentage of patients with documented end-of-life conversations (I:C 75% vs. 72%,  $p=0.63$ ) or completion of advance care directives (26% vs. 29%,  $p=0.55$ ).

**Conclusions:** Despite initially improving the occurrence of end-of-life conversations, the intervention did not increase documentation of subsequent conversations about end-of-life care, nor did it improve documentation of advance directives. Future research should focus on testing multi-faceted, longitudinal, system-level interventions to enhance conversations about goals of care that promote goal-concurrent care.

## **BIOGRAPHY**

Lynn F Reinke has completed her PhD in Biobehavioral Science at the University of Washington, School of Nursing and a post-doctoral fellowship at the Department of Veterans Affairs. Her program of research focuses on improving the delivery of palliative care for patients with advanced, serious illnesses specifically COPD, lung cancer and multi-morbidities. She has conducted several studies testing methods to improve clinicians end-of-life communication skills for patients with advanced illnesses. She is sought out for her clinical expertise in managing patients with severe dyspnea and dyspnea crisis episodes. She has over 40 publications in peer-reviewed journals and has presented her research nationally and internationally. She is an elected member of the National Academy of Nursing and serves in leadership roles for the American Thoracic Society. She has completed her Health and Aging Policy Fellowship in 2017.

[reinkl@uw.edu](mailto:reinkl@uw.edu)

## FORCED EXPIRATORY VOLUME FACTORS OF STAGE III NON-SMALL CELL LUNG CANCER PATIENTS

**Rabindra Nath Das**

University of Burdwan, India

**Objectives:** Forced expiratory volume in 1 (FEV1) second is known as the amount of air volume that can forcibly be blown out in one second, after full inspiration. Average FEV1 values between 80% and 120% are considered as normal. The determinants of FEV1 are aimed to identify in the report for stage III non-small cell lung cancer (SIIINSCLC) patients.

**Background:** Previous research articles have reported that the average FEV1 values in healthy individuals depend on height, age, body mass index, sex and ethnicity. Little studies have been performed regarding the FEV1 determinants for SIIINSCLC patients.

**Materials & Methods:** Published records on 239 SIIINSCLC patients with 23 study characters (variables/factors) are considered in the present study. The study variable FEV1 is positive and heterogeneous. Statistical analysis technique namely, joint generalized linear Log-normal models is used for analyzing the response FEV1.

**Results:** The mean FEV1 (MFEV1) is higher for SIIINSCLC patients who are current smoker ( $P=0.0601$ ), or who have lower body mass index (BMI) ( $P=0.0599$ ). Location of tumor is positively partially related ( $P=0.2365$ ) with the MFEV1. The MFEV1 is higher for SIIINSCLC patients with histology level at squamous cell carcinoma ( $P=0.1088$ ), or T-stage at level ( $T_2=2$ ) ( $P=0.1752$ ), or N-stage at level ( $N_2=3$ ) ( $P=0.1440$ ) and ( $N_4$  or  $N_x=4$ ) ( $P=0.0142$ ) than the other levels. The MFEV1 is higher for SIIINSCLC patients with chemotherapy at levels (standard sequential= $3$ ) ( $P<0.0001$ ) and (standard concurrent= $4$ ) ( $P<0.0001$ ), than the patients with no chemo level. The FEV1 variance (FEV1V) is higher for SIIINSCLC patients at older ages ( $P=0.1282$ ), or never/ex-smoker patients ( $P=0.2985$ ). The FEV1V increases as the number of positive lymph node stations increases ( $P=0.0017$ ). The FEV1V is inversely related with T-stage at level ( $T_2=2$ ) ( $P=0.0172$ ) and at level ( $T_4$  or  $T_x=4$ ) ( $P=0.0240$ ). The FEV1V decreases at the higher equivalent dose ( $P=0.1822$ ), or at larger gross tumor volume ( $P=0.0003$ ), or at higher survival times ( $P=0.0451$ ).

**Conclusion:** The FEV1 determinants for both the mean and variance have been identified for SIIINSCLC patients. These results may help the lung cancer specialists. The current findings of FEV1 (related to SIIINSCLC patients) are new addition to the lung cancer literature.

## BIOGRAPHY

Rabindra Nath Das is a Professor in the Department of Statistics, The University of Burdwan, Burdwan, West Bengal, India. He holds PhD in statistics, from The University of Burdwan, India, and Post-Doc from Seoul National University, Seoul, Korea. He has authored about 85 research articles, and along with a research monograph entitled- Robust Response Surfaces, Regression, and Positive Data Analyses, published from CRC Press, Taylor and Francis, Chapman and Hall. He wrote research articles on design of experiments, Regression Analysis, Demography, Quality Engineering, Civil Engineering, Epidemiology, Medical sciences, Environmental, Natural sciences etc. His special area of interest is on Design of experiments, Regression analysis, Quality Engineering and Epidemiology. He has received 'Gopal Kanji Prize 2009' by the Journal of Applied Statistics and Routledge publications' for the best article published in the journal, entitled- A measure of robust slope-rotatability for second-order response surface experimental designs. He has received certificate of appreciation for outstanding research by the Editor-In-Chief, Journal of Thyroid Science.

[rabin.bwn@gmail.com](mailto:rabin.bwn@gmail.com)

## **EFFICACY OF PLEURAL BRUSH CYTOLOGY IN DIAGNOSIS OF PLEURAL DISEASES**

**Varuna Jethani, Girish Sindhwani, Rakhee  
Khanduri, Sanjeev Kumar and Smita Chandra**

Himalayan Institute of Medical Science, India

**Introduction:** Medical thoracoscopy has an established role in the achieving etiology of pleural effusion. Thoracoscopic guided pleural biopsy though provides good yield but is limited by a delay of three to five days. We, in this study, used pleural brushings obtained by using bronchoscopy brush through the working channel of rigid thoracoscopy. The hypothesis was that cytology gives earlier results and if the results of cytology are concordant with pleural biopsy, it may help early institution of therapy.

**Aims & Objectives:** The aim of this study is to assess feasibility of brush smear from parietal pleura during thoracoscopy and to study efficacy of pleural brushing by comparing its cytology with pleural biopsy.

**Material & Methods:** All consecutive patients of undiagnosed pleural effusion by routine investigations of pleural fluid, who were subjected to medical thoracoscopy during the period between Dec2015 to June 2017 were included in the study. After informed consent, brush smears and pleural biopsies were obtained from the suspected sites of parietal pleura during thoracoscopy. The results of cytology of brush smears were assessed and compared with results of pleural biopsy.

**Results:** 45 patients were recruited during the study period of 1.5 years, mean age was 59.68 years. Nodule was the most common finding on thoracoscopic examination. Brush cytology report when compared to that of pleural biopsy the concordance was seen in 80%, which is highly significant. Detail study will be presented

## **BIOGRAPHY**

Varuna Jethani has done her post-graduation in pulmonary medicine from Swami Rama Himalayan University, Jollygrant Dehradun. Now She is working as Assistant Professor in pulmonary medicine department in same university. She has 10 publications in reputed journals. She is editorial board member of EC pulmonary and Respiratory Medicine .

[Varuna1212@rediffmail.com](mailto:Varuna1212@rediffmail.com)