ESPERANTRA
Pacientes y usuarios de servicios de salud del Peru

ULACPUL
Unión Latinoamericana Contra el Cáncer de Pulmón

World Patients Alliance

Webinar:

Role of the Multidisciplinary Team in the Early Detection and Screening of Lung Cancer

NEWSLETTER

On October 15, the **Esperantra Patients' Association and the Latin American Union Against Lung Cancer (ULACPUL)** held the webinar:

"Role of the Multidisciplinary Team in the Early detection and Screening of Lung Cancer".

The event had the following speakers: **Dr. Matthew Peters**, Chair of the World Lung Cancer Coalition - Australia; **Dr. Juan Antonio Botero Zaccour**, Pulmonary Interventionist - Costa Rica; **Dr. Juan Wisnivesky**, Pulmonary Medicine Specialist and Critical Care Lung Researcher - U.S.A.; and **Dr. José Fabian**, Oncologist at the ABC Medical Center - Mexico.

The main objective of this event was to share with the attendees the recent research on lung cancer in Latin America, the early diagnosis alternatives applied in different countries around the world and the need to provide effective treatments to patients diagnosed with this type of cancer in early stages.

This event allowed the attendees to exchange opinions and solve doubts about early detection procedures for lung cancer.

You can watch the complete webinar in this Link.

AUSTRALIA

Best Practices around the World: Role of the Multidisciplinary Team in Early Detection and Screening Process

Dr. Matthew Peters – Chair of the Australian Global Lung Cancer Coalition

- **The Global Lung Cancer Coalition provides resources and support to cancer patients around the world, as well as to all member organizations.**
- **Their extensive experience in this field has allowed them to develop surveys and documents on the cancer situation in different countries, and also to present national programs for lung cancer prevention.**

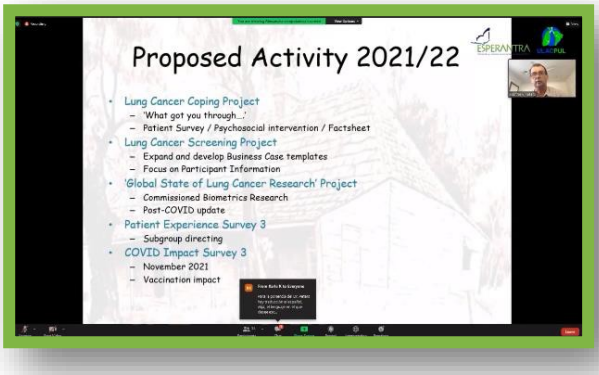
The **Global Lung Cancer Coalition** started in 2001 as an organization focused on supporting lung cancer patients living in Europe and North America, mainly focused on preventing tobacco use. However, their focus shifted to supporting cancer patients through resources.

The organization's priorities are to reduce the economic and social disadvantages of lung cancer patients, increase awareness of the causes of this disease, eliminate the stigma and provide information through several media to the world's population. Currently, the organization has members in Peru, Argentina, Portugal among many other countries around the world.

The organization has conducted surveys in different countries to assess the role of lung cancer patients, and their stigma. They also performed studies on the number of people with lung cancer and tobacco consumption.

In addition to that, documents were developed to enable member organizations to present a business case to government and other decision-makers for implementing national lung cancer screening programs.

The two things that can be done to prevent lung cancer are: to reduce smoking and to diagnose lung cancer early. Accurate diagnosis is required at the stage where curative and simple intervention is possible.



The **Global Lung Cancer Coalition**'s upcoming activities are focused on continued research, surveys, resource and vaccine support for cancer patients.

The intention of the **Global Lung Cancer Coalition** is to continue to support and strengthen the work of organizations internationally so that they can improve the ways they support lung cancer patients and achieve better outcomes.

COSTA RICA

Diagnostic Yield for Lung Cancer

Dr. Juan Antonio Botero Zaccour – Pneumologist Interventionist - Costa Rica

- **Earlier diagnoses are significantly more important because they improve the probability of patient survival. However, localized or early diagnoses only amount to 15% of patients.**

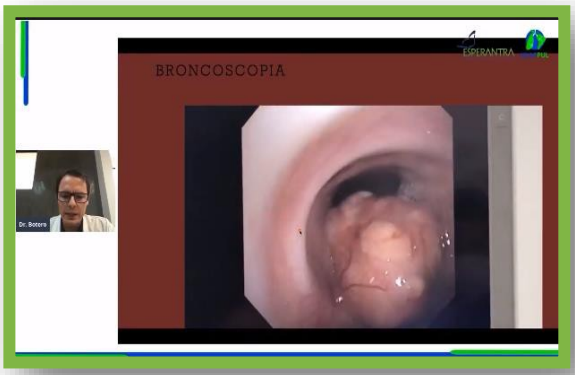
- **The diagnostic yield of biopsies has improved in recent years, due to the technological improvements implemented. This favors lung cancer patients.**

Lung cancer continues to have the highest mortality associated with cancer in the world. Although it has great variability in incidence in Latin America, it continues to be among the leading causes of mortality.

This type of cancer has attracted much attention from the scientific community and its treatment has changed significantly in recent years. Today, depending on the molecular profile of the patient, it is possible to define the type of treatment they would receive with the greatest chance of improvement. Innovations in the types of molecular diagnostic tools allow pathologists to find the variations of cancerous tumors more accurately. In Latin America, the molecular variations of cancerous tumors are usually EGFR, ALK, ROS1, BRAF, NTRK, and MET.

Early diagnosis of lung cancer patients is essential as it improves survival. For a stage 1 patient, the probability of 5-year survival is 90%. While for a stage 4 patient, it is 18%.

Bronchoscopy can find lesions in the trachea. A diagnosis can be made with prongs or needles, with a diagnostic yield between 90 and 95%.



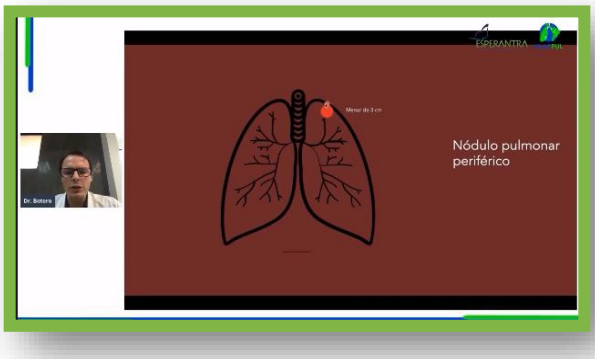
When the lesion is much more peripheral, with some nodes in the central areas, it is not called a localized disease, but an extended one. Needles are required in this case. The diagnostic yield falls to approximately 30% depending on the change in location.

Some Latin American countries count with linear endobronchial ultrasound, which makes it possible to access lymph nodes in the patient's bronchial tree. This tool increases diagnostic yield by 80%.

Another alternative for an accurate diagnosis is to obtain a sample of pleural fluid and perform a cell block study. A pleural biopsy can also be performed, which improves the diagnostic yield to over 97%.

When the lesions cannot be seen by ultrasound, because they are very small or located in areas of difficult access, thoracoscopy biopsy can be performed. Its yield is above 95%.

A biopsy of peripheral pulmonary nodes can also be performed. Pulmonary nodes are lesions smaller than 3 cm, which allow early diagnosis for lung cancer patients.



Bronchoscopy can be used to find the node and see the lesion. However, this method has a lower diagnostic yield, up to 70%.

Transpulmonary biopsy is a new alternatives when the lesion is outside the bronchial tree. A 5 mm probe is inserted. This technology is still under development.

The latest biopsy being implemented is **robotic bronchoscop**y. This uses a robot to find lesions in peripheral nodes. It has a yield of over 90%. To date, this technology is not available in Latin America.

In times of COVID-19, biopsies performed on patients with possible cases of lung cancer have decreased due to high probability of contagion. Nevertheless, alternatives have been found to continue with these procedures.

Flexible bronchoscopy with transbronchial prongs is an alternative that can be implemented in several Latin American countries. Its yield is over 90% and is a minimally invasive diagnostic option.

U.S.A.

Disparities in the Care and Outcomes of Lung Cancer Patients

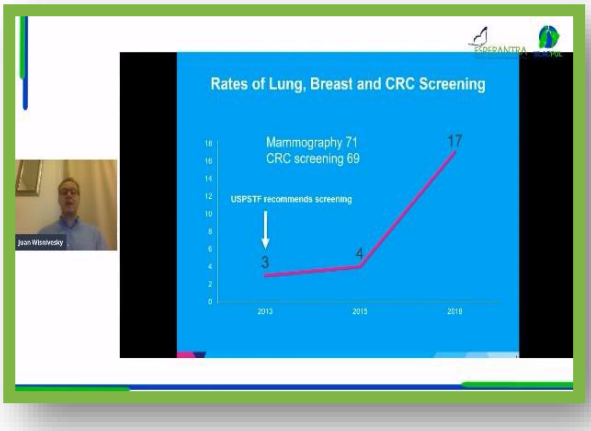
Dr. Juan Wisnivesky – Pulmonary Medicine Specialist and Critical Care Lung researcher - U.S.A.

- **It is really necessary to ensure the implementation of cancer screening to improve patient survival in the countries of the region.**
- **Treatments applied to patients who have undergone screening are essential to improve survival.**

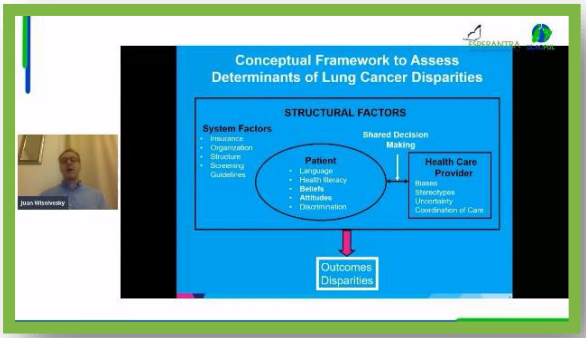
More than 95% of the reported cases of lung cancer in the world are caused by smoking. It has been found that there are certain racial groups that have different susceptibilities when exposed to tobacco.

In recent years there has been a change in the possibilities of improving the survival of lung cancer patients, as better forms of treatment have been found. These include immunotherapy, the use of new drugs and the performance of CT scans or screenings in patients.

From 2013 to 2018, **only 17% of patients candidates for lung cancer screening had it**, versus the 70% of screening for colon cancer or breast cancer. There is a long road ahead for lung cancer screening.



The conceptual framework of the American Cancer Society was used to describe the reasons for inequity in the adoption of screening technologies.



1. System problems:

   - Screening centers are usually located in areas with the best economic conditions. It would be better to have those centers close to the populations that need them the most, due to genetic or racial characteristics. For example: close to African American or Latin American populations in the United States.
   - The guidelines to determine who is a candidate for lung cancer are not adapted to the different racial groups that have been scientifically proven to have a higher incidence.

2. The role of physicians or other health care providers:

   - The patient's smoking history is not taken into consideration for screening candidates. The right thing to do is to take this factor into consideration.
   - Another barrier is how the decision to screen is made. It is recommended that the physician and the patient have a discussion before performing this procedure.

3. Potential patient-level factors:

   - Patients' beliefs are crucial before the screening procedure is performed, since there are many doubts about the radiation supposedly affecting the patient's body.

There are new strategies for minority groups to have access to screening. These strategies should be implemented in countries of the region, for more accurate diagnoses.

MEXICO

Impact of Early Diagnosis and New Technologies

Dr. José Fabian Martínez – Oncologist at the ABC Medical Center - Mexico

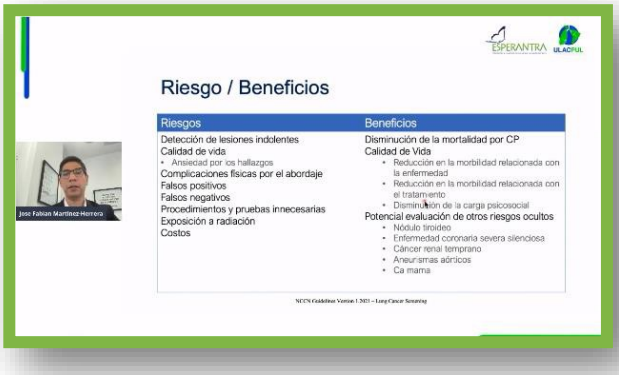
- **Only 25% of lung cancer patients are detected in early stages, usually asymptomatic and incidentally. The main related symptoms are primary tumor, metastases and paraneoplastic syndromes.**

- **In advanced stages, the goal is palliative care of the disease. While in early stages, cure is the goal.**

The anatomical and histological classification is very important and the clinical stage is the one that will guide the prognosis of survival. At earlier stages, survival can be very high, up to 90% in 5 years.

Smoking has shown to be the primary risk factor in patients with lung cancer, with a probability of 85 to 90%. While the probability of having lung cancer for non-smokers decreases to 10%.
There are other risk factors such as radiotherapy, environmental toxics, inflammatory diseases, family history, dietary factors, HIV and endocrine factors.

Over the years there have been variations in screening diagnostics that have had positive impacts on patient mortality. Some of the studies that address these impacts are the National Lung Screening Trial (NLST) and the NELSON trial.



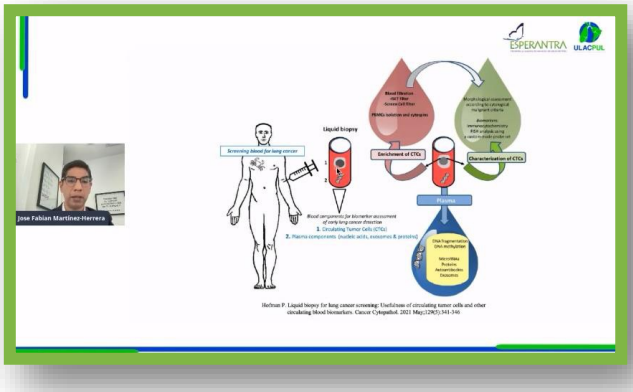
Possible risks and benefits of screening need to be taken into account when performing this procedure. Patients should be aware of them and this decision should be evaluated with a multidisciplinary committee.

In Latin America, there is an incidence of tuberculosis or mycotic infectious diseases. These might show on CT scans and are hard to differentiate with lesions, tumors or infectious diseases.

The idea is to increase screening for patients who can be offered treatment. However, more factors need to be evaluated.

A **liquid biopsy** is a blood test to identify tumor DNA, coming from a tumor that expels tumor DNA into the blood.

Currently, liquid biopsy is being used for follow-up, diagnosis and detection of point mutations, when the pneumology or chest science approach is not sufficient.



The mobile tomograph is an alternative that is giving positive results in different countries in the region, such as the United States and Brazil. It allows screening and early detection of cancerous tumors.

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informes@esperantra.org (51 1) 680 - 4888 (51) 924 025 815 www.esperantra.org Esperantra Pacientes Perú

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