

LUCIA EU Project Workshop "Understanding lung cancer" in San Sebastian, Spain

- **The event, organized by LUCIA EU Project Partners Vicomtech and Biobizkaia, gathered the 22 international partners of the project, clinical specialists and representatives of the administrations and local companies of the sector. It presented the contributions of the LUCIA project to advance in the prevention and early screening of lung cancer.**
- **In Spain and the Basque Country, Lung Cancer is one of the deadliest existing cancers, which, with incidence in both genders, has reported a total of 22,930 deaths nationally in 2020 and 6,182 in the Basque Country between 2016 and 2020. At European level, this aggressive type of cancer claims the lives of more than 250,000 people a year. Therefore, research aimed at understanding lung cancer and the implementation of public health policies aimed at prevention and early detection is crucial.**
- **The aim of the LUCIA project, led by the prestigious Israel Institute of Technology-Technion, is to study and understand the risk factors and causes of lung cancer in order to improve personalised prevention and screening strategies based on the latest technological advances in diagnostic systems, data analysis and artificial intelligence. The LUCIA project is funded by the European Research and Innovation programme Horizon Europe in the framework of the EU Cancer Mission.**
- **This workshop has been a meeting point for local and national experts involved in lung cancer research and the project's international partners, which meant an excellent opportunity to jointly advance the most innovative solutions applied to lung cancer.**

San Sebastian, 5 September 2023. Within the LUCIA Project, Vicomtech and Biobizkaia have organised the Workshop "Understanding Lung Cancer" in Donostia - San Sebastian, with a Spanish perspective. The project aims to improve the prevention and screening of lung cancer from a technological and clinical point of view.

The need for research the risk factors for lung cancer is a reality. In Spain and the Basque Country, lung cancer is one of the deadliest cancers in existence, with an incidence in both genders, first in men and third in women, with a total of 22,930 deaths at national level in 2020 and a total of 6,182 deaths in the Basque Country between 2016 and 2020. At European level, this aggressive type of cancer claims the lives of more than 250,000 people a year.

Strategies aimed at understanding lung cancer and implementing public policies aimed at prevention and early detection are of vital importance in tackling this health problem.

To try to reverse the situation, the LUCIA project consortium, led by the Technion - Israel Institute of Technology, has 22 members from academic and business institutions, health services, hospitals, and research centres internationally, working together to identify and analyse the risk factors for lung cancer. The aim is to gain a better understanding of this aggressive type of cancer to improve prevention and early detection of the disease. To this end, an in-depth study of the risk factors, the biological mechanisms that lead to the disease and the characterisation of tumours will be carried out, with the aim of improving and enabling more precise medical approaches to the prevention, early detection, diagnosis, and treatment of lung cancer.

The workshop on the 5th was divided into two sessions. The first dealt with lung cancer from a clinical perspective, with the intervention of renowned clinical specialists from various renowned institutions such as the German Cancer Research Institute (DFKZ), the University Hospital of Liège (CHUL), the IIS Biobizkaia, the Hospital Alcorcón Foundation, and the Hospital de la Santa Creu i Sant Pau.

The second part of the day was dominated by the presentation of the new technological approaches and solutions that will be carried out by the LUCIA project for the prevention, detection and diagnosis of lung cancer. The session was attended by PhD researchers from the project's coordinating centre, Technion, the company Nanose Medical, the University of Heidelberg, the National Centre for Genomic Analysis (CNAG), Vicomtech, the Andalusian Health Service and the Andalusian Public Foundation for the Management of Health Research in Seville (FISEVI).

All these interesting interventions have contributed to largely fulfil the specific objectives of the conference, which are the following:

- **To provide** clinical and technological **knowledge** on risk factors, prevention, early detection and treatment of lung cancer.
- **To share** LUCIA's unique **contributions** beyond the state of the art in these fields, in the framework of the EU Cancer Plan and Mission Cancer.
- **Promote a** multidisciplinary **community** for researchers, industry, policy makers and practitioners to exchange challenges and solutions to improve the understanding of lung cancer and deliver more effective screening and prevention programmes.

The LUCIA project is funded with 14 million Euros from the **European Commission's Horizon Europe** research and innovation support programme and is part of the new **Cancer Mission**, a key research and innovation instrument within Europe's Beating Cancer Plan, the European Union's bid to tackle the cancer problem in a comprehensive way. The missions aim to find "concrete solutions to some of our biggest challenges" and deliver tangible results by 2030. The Cancer Mission, where the LUCIA project is located, focuses on one of the biggest challenges facing our society: the cure for cancer.

Within the multiple objectives of this mission, it focuses on trying to understand the complexity of cancer (in the case of lung cancer) through multidisciplinary collaboration in medicine, bioengineering, biology, or computer science, together with key legal, ethical and social aspects.

From 2023 to 2027, the LUCIA project will work to contribute to the **EU Cancer Mission** together with other projects and researchers across Europe funded by Horizon Europe aimed at understanding and preventing different types of cancer.

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