



LUNG CANCER SCREENING

CUTTING COSTS, SAVING LIVES

The European Respiratory Society (ERS) and the European Society of Radiology (ESR) call for EU level initiatives supporting targeted and effective lung cancer screening programmes across Member States.

WHAT IS A CT SCAN?

A CT scan is the recommended screening **test for lung cancer detection**.

Ultra low-dose computed tomography (CT) is an **imaging procedure that uses x-rays to create detailed images of organs, bones and other tissues** using a very low radiation dose.

It is a **very short and painless procedure** that can be done on any part of the body.

WHY ROLL IT OUT FOR A HIGH-RISK POPULATION?

- Lung cancer is the biggest cancer killer in Europe: it kills more individuals than colon, breast and prostate cancers and traffic accidents all together.
- Lung cancer currently has one of the lowest survival rates of any cancer in Europe, with a 5-year survival rate of less than 15%.
- When lung cancer is detected based on symptoms, the disease is already at an advanced stage, meaning curative treatments are ineffective in up to 90% of cases.
- Lung cancer screening is recommended for a specific high-risk population, for maximum result effectiveness.
- CT screening for lung cancer uses up to 90% less radiation than a conventional chest CT scan and is 4 times more likely to pick up an early tumour than a traditional chest X-ray.
- Finding tumours earlier means a curative treatment can be performed - improving outcomes and reducing medical costs.
- Lung cancer screening saves lives: there is current evidence that lung cancer screening is more effective than mammography or colonoscopy screenings.
- There has been a steady increase in lung cancer incidence among women, who currently represent approximately 25% of patients. Studies show that women respond better to treatment, meaning the potential reduction in mortality for women is especially high.
- CT screening also detects other pulmonary and cardiovascular diseases and could be introduced as a lung health check.
- Lung cancer screening provides a valuable opportunity to inform patients about smoking cessation.

WHAT CAN THE EUROPEAN UNION DO?

1. THE EUROPEAN PARLIAMENT

should raise awareness about the early detection of lung cancer through the adoption of a parliamentary resolution and encourage the European Commission and Member States to act.

2. THE EUROPEAN COMMISSION

should develop guidelines on lung cancer screening and ensure lung cancer is included in the scope of the EU Cancer Mission and Europe's Beating Cancer Plan to encourage research and steer action across Member States.

3. THE COUNCIL OF THE EU

is encouraged to update the 2003 recommendation on cancer screening by taking into consideration progress made on early detection and diagnosis of lung cancer and by promoting equal access to quality screening across the EU.

4. MEMBER STATES

should implement lung cancer screening programmes that meet patient safety and quality of care requirements as formulated in the European guidelines.

ERS AND ESR RECOMMENDATIONS:



UPDATE THE 2003 COUNCIL RECOMMENDATION ON CANCER SCREENING

The Council of the EU issued a Recommendation on Cancer Screening in 2003 to support Member States in the implementation of screening programmes for breast, cervical and colorectal cancer. The recommendation has significantly contributed to designing and synchronising screening programmes throughout the EU. However, the Council Recommendation should be updated to include the newest clinical evidence which also makes a strong case for the gradual introduction of lung cancer screening.



DEVELOP EUROPEAN GUIDELINES ON LUNG CANCER SCREENING

Lung cancer can only be successfully treated when diagnosed at an early stage. The European Commission is best placed to develop common guidelines on lung cancer screening in order to help Member States implement comprehensive screening programmes for high-risk individuals. This is best done in multidisciplinary settings involving experts on imaging procedures, smoking cessation initiatives and early lung cancer management. Action at EU level can minimise the risk of unequal access to high-quality lung cancer screening and healthcare in the Member States.



PROMOTING EDUCATION AND QUALITY ASSURANCE IN LUNG CANCER SCREENING

Adequately trained professionals are crucial for the roll out of lung cancer screening programmes. The EU and Member States should therefore promote quality lung cancer screening training and education, while certification and quality assurance schemes should be embedded in national health systems to uphold the highest standards of care and patient safety. EU funding programmes should offer financial support for the training of relevant health professionals to countries that have not yet implemented nation-wide training programmes. For more info on a training programme developed by the European Society of Thoracic Imaging, see www.myesti.org.



INCREASE FUNDING FOR RESEARCH

Lung cancer remains the biggest cancer killer in Europe. The EU institutions should better focus their support for lung cancer research, which shows positive perspectives for prevention, early detection and breakthrough treatments. Lung cancer is significantly under-researched and underfunded, receiving only 5.6% of overall cancer research funding worldwide. Funds for lung cancer research in EU and national research programmes need to be increased.



IMPROVE AIR QUALITY

In 2012, the International Agency for Research on Cancer (IARC) has classified diesel engine exhaust as carcinogenic to humans (Group 1). Other scientific evidence suggests that high levels of air pollution may cause lung cancer and it is well established that occupational exposure to asbestos, crystalline silica and hard metals cause lung cancer. As lung cancer is rising in non-smokers, the EU should ensure better enforcement and stricter exposure limits within the EU Ambient Air Quality Directives and the EU Carcinogens and Mutagens Directive in order to reduce lung cancer risks.



SMOKING CESSATION SHOULD COMPLEMENT LUNG CANCER SCREENING PROGRAMMES

The most cost-effective way to prevent lung cancer is to support smoking cessation efforts. Studies show that smoking cessation reduces the risk of many diseases and increases lifespan for an average of 10 years. The EU should encourage Member States to make smoking cessation programmes available to every European citizen.



ENCOURAGE MEMBER STATES TO SHARE BEST PRACTICES

The EU is uniquely placed to promote best practices on lung cancer screening among the Member States aimed at more widely introducing targeted and effective screening programmes. The European Commission should make lung cancer one of the priorities of the Steering Group on Health Promotion, Disease Prevention and Management of Non-Communicable Diseases.

CRITICAL POINTS EXPLAINED

1. COST-EFFECTIVENESS

- Lung cancer screening is cost-effective compared to expensive treatments resulting from late-stage detection which can see limited success from surgery and/or treatment
- The funding necessary for national and regional lung cancer screening programmes amounts to only a small percentage of tax revenues already originating from tobacco products
- Optimising the selection of a high-risk population will lead to a low number of eligible people for examinations - a considerably lower number than in other screening programmes

2. TARGETING A HIGH-RISK POPULATION FOR LUNG CANCER

- The successful implementation of screening programmes requires a well-thought out approach to reach a high-risk population across the spectrum of society
- Easy access to screening facilities, awareness campaigns, and the involvement of general practitioners and family members will increase the likelihood for high-risk individuals to undergo lung cancer screening
- Best practices originating from clinical trials, demonstration programmes and screenings on a selected high-risk population should be shared across Member States and integrated into European guidelines to maximise recruitment strategies among citizens

3. FOCUS ON PREVENTION

- The number of people eligible for screening will gradually decrease due to the successful implementation of smoking cessation programmes, reducing healthcare costs for screening programmes
- Prevention programmes are only effective in the long-term, smoking cessation initiatives should be complemented by screening programmes which are effective intermediate tools to reduce lung cancer mortality in the short-term (5-10 years timeframe)

4. REDUCTION OF FALSE POSITIVES

- Recent studies indicate that the number of false positives linked to lung cancer screening are comparable or even below other screening programmes
- Building on recent trials and demonstration programmes, by introducing screening programmes and an exchange of best practices, methodology of screening will be optimised for a reduction of false positives

5. QUALITY MANAGEMENT

- Quality management procedures should be institutionalised to continuously monitor and evaluate screenings and implement adjustments for the benefit of patient safety and risk-minimisation
- National and regional authorities should support the implementation of certification schemes for screening centres and professionals to ensure screenings are carried out in a patient-centred and controlled environment



ERS is an international organisation that brings together physicians, healthcare professionals, scientists and other experts working in respiratory medicine. We are one of the leading medical organisations in the respiratory field, with a growing membership representing over 160 countries.

Our mission is to promote lung health and alleviate suffering from disease and drive standards for respiratory medicine globally. Science, education and advocacy are at the core of everything we do.



The European Society of Radiology (ESR) is an apolitical, non-profit organisation, dedicated to promoting and coordinating the scientific, philanthropic, intellectual and professional activities of radiology in all European countries. The Society's mission at all times is to serve the healthcare needs of the general public through the support of science, teaching and research and the quality of service in the field of radiology. The ESR is the European body representing the radiology profession with more than 120,000 individual members and acts as the umbrella organisation of all national radiological societies in Europe as well as Europe's subspecialty organisations in the field of radiology.