

PRESS RELEASE No. 385

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IARC Handbooks of Cancer Prevention Volume 21: The IARC perspective on lung cancer screening

Lyon, France, 24 September 2026 – Lung cancer is the leading cause of cancer death globally, with 1.9 million deaths in 2024. The most effective way to prevent lung cancer is through primary prevention, mainly through tobacco control. Screening for lung cancer has emerged as a complementary approach to reduce lung cancer death by detecting the disease at an earlier, more treatable stage.

In its most recent review, the *Handbooks of Cancer Prevention* programme of the International Agency for Research on Cancer (IARC) has evaluated the benefits and harms of lung cancer screening. The Working Group concluded that screening high-risk individuals with low-dose computed tomography (LDCT) reduces lung cancer mortality and reduces the incidence of late-stage lung cancer.

A Special Report published today in *The New England Journal of Medicine*¹ summarizes the studies reviewed and will be presented at the Union for International Cancer Control (UICC) World Cancer Congress in Hong Kong Special Administrative Region (China) today. The detailed assessments will be published as Volume 21 of the *IARC Handbooks of Cancer Prevention*.

“With lung cancer continuing to be the leading cause of cancer death worldwide, we urgently need to strengthen both prevention and early detection,” says Dr Béatrice Lauby-Secretan, Deputy Head of the Evidence Synthesis and Classification Branch at IARC and a co-author of the report.

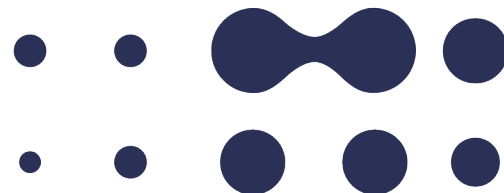
Evaluation of the evidence

An international Working Group of experts convened by IARC reviewed experimental and observational studies on the benefits and harms of lung cancer screening. The experts assessed screening using LDCT and chest radiography, with or without sputum cytology, as well as emerging technologies and tools and strategies to improve screening outcomes. The main outcomes assessed were reduction in lung cancer mortality and reduction in the incidence of advanced (stage III–IV) lung cancer.

Results

The evidence indicates that LDCT reduces lung cancer mortality when screening is appropriately targeted to people at high risk of lung cancer. Potential harms include false-positive findings, overdiagnosis, overtreatment,

¹ Neamtii L, Callister MEJ, Crosbie P, Lam S, Milch V, Mariosa D, et al. (2026). IARC perspective on lung cancer screening. *N Engl J Med*. Published online 24 September 2026. <https://doi.org/10.1056/NEJMsb2608211>



treatment-related complications, radiation-induced cancer, and psychological effects before and after screening.

The Working Group concluded that screening of individuals at high risk of lung cancer based on age and smoking history with LDCT is *established* to reduce lung cancer mortality and the incidence of stage III–IV lung cancer (Group A).

In contrast, the evidence was insufficient to determine whether chest radiography, with or without sputum cytology, reduces lung cancer mortality or the incidence of stage III–IV lung cancer.

The Working Group concluded that screening of high-risk individuals based on age and smoking history with chest radiography, with or without sputum cytology, is *not classifiable* as to its capacity to reduce mortality from lung cancer or to reduce the incidence of stage III–IV lung cancer (Group C).

These findings need to be considered in the context of each country's capacity and resources. Where screening programmes are introduced, they will require appropriate infrastructure, trained health-care professionals, quality assurance, diagnostic follow-up, and equitable access to care.

The findings also underscore that screening should complement – not replace – tobacco control and smoking cessation, which remain the most effective ways to prevent lung cancer.

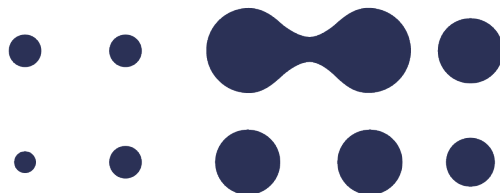
“Lung cancer screening has the greatest potential when it reaches the people most likely to benefit and is embedded within broader cancer prevention efforts,” says Dr Lauby-Secretan. “Our rigorous, transparent, and independent expert evaluation brings together the available evidence to provide countries with a robust, evidence-based foundation for decisions about how lung cancer screening should be targeted, implemented, and integrated with tobacco control and cancer prevention.”

Note to Editors

Methodology: The evaluations were performed according to the principles and procedures described in the *IARC Handbooks of Cancer Prevention Preamble for Secondary Prevention*.²

The *IARC Handbooks of Cancer Prevention* provide evaluations of the cancer-preventive potential of strategies and interventions. Each volume is produced by an international Working Group of experts. The series was relaunched in 2014 with a reassessment of breast cancer screening.

² IARC (2019). Preamble for secondary prevention. *IARC Handbooks of Cancer Prevention*. Lyon, France: International Agency for Research on Cancer. Available from: <https://handbooks.iarc.who.int/documents-handbooks/hb-preamble-secondary-prevention.pdf>.



The *IARC Handbooks* use a classification system based on strict and transparent criteria. For reference, see the two evaluation schemes: <https://www.iarc.who.int/infographics/iarc-handbooks-evaluations-of-primary-prevention/> and <https://www.iarc.who.int/infographics/iarc-handbooks-evaluations-of-secondary-prevention/>.

For more on the *IARC Handbooks*, see <https://handbooks.iarc.who.int/>.

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The International Agency for Research on Cancer (IARC) is part of the World Health Organization. Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships. If you wish your name to be removed from our press release emailing list, please write to com@iarc.who.int.