



# WHAT ARE THE EXPECTATIONS FOR LUNG CANCER SCREENING?

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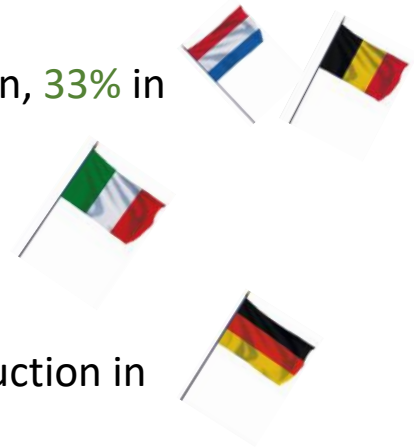


# European trials have confirmed the benefit of screening



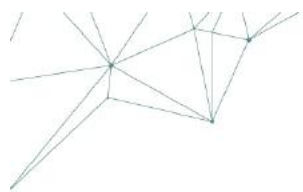
- European trials

- NELSON (Sept 2018 -N Engl J Med. Feb 2020) : 26% mortality reduction in men, 33% in women
- MILD (ECR 2019-Ann Oncol. 2019 Oct): 39% mortality reduction at 10 years
- LUSI (June 2019-Int J Cancer. 2020 Mar): statistically significant mortality reduction in women



SCREENING STRATEGY allowing to considerably reduce the number of false positives





# Mission of Information at the *European Parliament*, 6 November 2019

***Organised by: European Society of Radiology & European Respiratory Society***





# Do we have enough trained radiologists?



## LUNG CANCER SCREENING CERTIFICATION PROJECT

The advent of Lung Cancer Screening (LCS), will improve survival in patients at risk of developing lung cancer.

It is important to ensure that LCS is practiced at a similar quality level to the trials that have proven its value, in order to ensure that there is maximal benefit from its introduction. The European Society of Thoracic Imaging (ESTI) plans to introduce the "European certification in nodule assessment and lung cancer screening" (ESTI LCS certification) at the beginning of 2020.

For more information, please visit the ESTI website at [www.myESTI.org](http://www.myESTI.org)





# WHAT CAN THE EUROPEAN UNION DO?



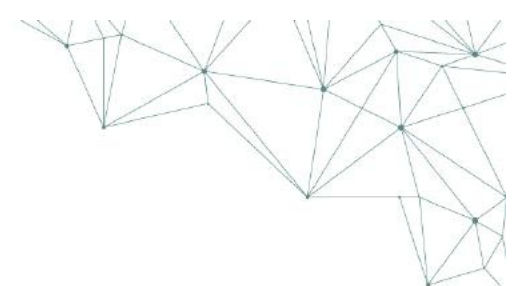
- **Council of the EU:** update the 2003 Council Recommendation on Cancer Screening to include Lung Cancer Screening
- **Member States:** **introduce Lung cancer screening in pilot programmes to define best approaches** (cf. 'Lung Health Check' in Manchester, UK)
- **European Commission:** develop Lung Cancer Screening guidelines and include Lung Cancer in the scope of Cancer Mission and Europe's Beating Cancer Plan
- **European Parliament:** raise awareness through the adoption of a parliamentary resolution and encourage the European Commission and Member States to act





# In France

- Grant from Ministry of Health and INCA (Cancer Institute) for a pilot study: CASCADE pilot study
- Objectives:
  - Validation of reading by a single radiologist + AI/CAD, compared to double reading by experts
    - Evaluation of Costs/ smoking cessation/psychological consequences
  - Screened population: 2400 women 50-74 y, former/current smokers
- Budget: 1,8 Millions euros

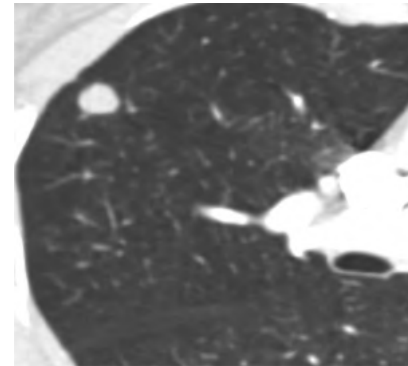
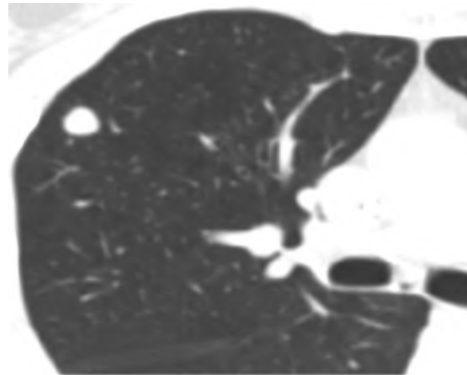
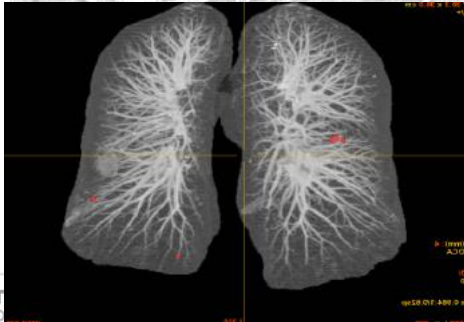


The NELSON trial showed that volume CT lung-cancer screening, with low rates of follow-up procedures for test results suggestive of lung cancer, resulted in substantially lower lung-cancer mortality than no screening among high-risk persons. Volume CT screening enabled a significant reduction of harms (e.g., false positive tests and unnecessary workup procedures), without jeopardizing favorable outcomes. Trial data suggest greater benefits in women than in men, but in a subgroup with a relatively low number of women. More research is required in women, as well as in other subgroups.

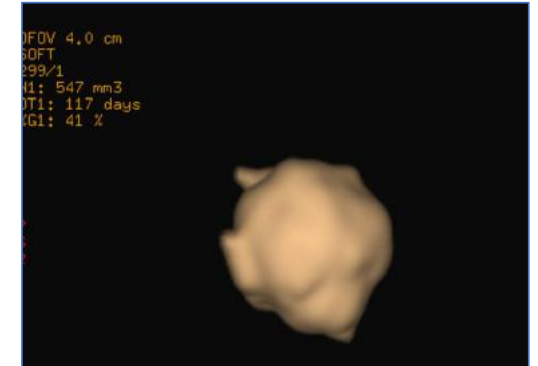


# Role of AI and CAD (Computer Assisted Diagnosis)

- Most trials used double reading by expert
- For implementation, CAD can be used as second reader to avoid detection error



**3-month follow-up**



**Early detection of growth  
= malignant nodule**





