

- Title** Low-dose Computed Tomography screening for lung cancer
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- Reference** Sánchez González MC, Cantero Muñoz P, Atienza Merino G. Low-dose Computed Tomography screening for lung cancer . Red Española de Agencias de Evaluación de Tecnologías y Prestaciones del SNS. Agencia Gallega para la Gestión del Conocimiento en salud. Unidad de Asesoramiento Científico-técnico, avalia-t; 2016. Informes de Evaluación de Tecnologías Sanitarias. Aviable: [http://avalia-t.sergas.es/DXerais/647/avalia-t201505\\_Cribado%20de%20cáncer%20de%20pulmón.pdf](http://avalia-t.sergas.es/DXerais/647/avalia-t201505_Cribado%20de%20cáncer%20de%20pulmón.pdf)

### Aim

the main objective of this study was to assess the safety and effectiveness of the low-dose computed tomography (LDCT) for lung cancer screening in heavy smokers (individuals with smoking history of at least 20 pack years or former smokers with less than 10 years of abstinence). To estimate the performance of the screening (sensitivity, specificity, predictive positive value, false positives).

### Conclusions and results

8 RCTs were selected. The comparator in two of them was screening with thorax radiography (TxR), and no screening in the other six studies. The results of a high quality study favours LDCT over TxR, however, the screening with TxR is not a recommended nor a standard screening for lung cancer. The low statistical power and heterogeneity of the trials that compare LDCT to usual care difficult the assessment of differences in mortality rates. The high false positive rates, similar advanced cancer detected between screening rounds, overdiagnosis or costs are some of the concerns about LDCT screening. It would be necessary to assess the data from the only study with enough statistical power and sample size to detect differences in mortality with the usual care, whose results are expected in 2016.

### Methods

A systematic review of the scientific literature was made in the main computerized biomedical databases, i.e., PubMed, Embase, ISI Web of Knowledge, Centre for Reviews and Recommendations, Cochrane, etc. To retrieve unpublished data, the process was completed by a search of the databases of ongoing studies, with periodical updates to retrieve recent articles. Two independent reviewers verified independently that the papers were compliant with established inclusion and exclusion criteria. The data were summarized in evidence tables, and the methodological quality of the studies was assessed using the system developed by the Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group. A meta-analysis, if appropriate, was performed after obtaining pooled measures with the Review Manager program version 5.2.

### Written by

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