

The UK Lung Cancer Screening Trial: a pilot randomised controlled trial of low-dose computed tomography screening for the early detection of lung cancer

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Plain English summary

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Lung cancer kills more people than any other cancer. To reduce the number of deaths, we need to detect lung cancer at an earlier stage when it can be cured. An American trial showed that chest computed tomography (CT) screening could prevent 20% of deaths from lung cancer.

In view of the above, we carried out a pilot trial of low-dose CT screening for lung cancer. To find people at high risk of lung cancer, we sent postal questionnaires about known lung cancer risk factors to 250,000 people aged 50–75 years. Very few people aged < 60 years were at high risk. Four thousand high-risk people joined the trial: half were offered a CT scan of their lungs; the others were not screened.

In total, 1994 people had a CT scan; 979 of those people had clear scans, 951 needed repeat scans because of a minor change and 64 people had major findings. Forty-two cancers have been found to date, of which 36 (85.7%) were identified at an early stage, so are potentially curable. From the scans, we also found 128 people with other conditions unrelated to lung cancer, providing these people with an earlier diagnosis.

To assess the emotional impact of lung screening, we looked at standard measures of cancer distress, anxiety and depression. Although some people, particularly those with an abnormal scan result, experienced more cancer distress, this was still at normal levels.

Our results suggest that CT screening for lung cancer could be cost-effective but further research is needed to confirm this.

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This report

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