

June 2013 Pulmonary Journal Club

National Lung Screening Trial Research Team, Church TR, Black WC, Aberle DR, Berg CD, Clingan KL, Duan F, Fagerstrom RM, Gareen IF, Gierada DS, Jones GC, Mahon I, Marcus PM, Sicks JD, Jain A, Baum S. Results of initial low-dose computed tomographic screening for lung cancer. N Engl J Med. 2013;368(21):1980-91. [\[CrossRef\]](#) [\[PubMed\]](#)

This paper serves as a follow up on the results of the first round of testing using low dose computed tomography in screening for lung cancer. A full review on the initial results can be referenced from the August 2011 Pulmonary Journal Club (1).

The study was performed at 33 centers from 2002 – 2004. A total of 53454 patients were enrolled. Inclusion criteria were age 55-74 and a 30 pack-year smoking history. All patients were randomized to receive either low dose screening CT scan (LDCT) or a chest x-ray.

The results of the first year of screening showed that the LDCT group had 7191 patients with a positive result. Out of these 7191 patients 270 patients (3.75%) were diagnosed with lung cancer. In the chest x-ray group a total of 2387 patients had a positive result and 136 patients (5.7%) were diagnosed with lung cancer. There were more stage 1A cancers diagnosed in the LDCT group (132 patients) compared to the chest x-ray group (46 patients).

The results of the study support that there is a higher prevalence in stage 1A lung cancer within the LDCT screening arm. However this comes at a cost of a substantial number of false positives which often result in additional tests, procedures and costs. In addition when we look at the overall prevalence of lung cancer between the LDCT and chest x-ray groups the difference is only 1% in the LDCT group compared to 0.7% in the chest x-ray group.

Further information as the screening process continues will be needed to see if CT scanning is cost effective in screening for lung cancer.

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Reference

Mathew M. August 2011 pulmonary journal club. Southwest J Pulm Crit Care 2011;3:52-3.