6. Pyenson BS, Sander MS, Jiang Y, Kahn H, Mulshine JL. An actuarial analysis shows that offering lung cancer screening as an insurance benefit would save lives at relatively low cost. Health Aff (Millwood). 2012;31:770–9.
7. Wisnivesky JP, Mushlin AI, Sicherman N, Henschke C. The cost-effectiveness of low-dose CT screening for lung cancer: preliminary results of baseline screening. Chest. 2003;124:614–21.

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Reply☆

Réplica

To the Editor,

Thank you for the letter[1] regarding our article.[2] We agree that the NSLT[3] was a landmark in lung cancer screening, but we cannot agree with the contents of the letter.

There is a great degree of heterogeneity regarding slice thickness. The NLST does not specify the thickness used and, as might be expected, a strong correlation can be observed between thinner slices and the greater detection of positive nodes.[2]

It is suggested that the dose of radiation received with CT is questionable. The data we used were obtained from the US Food and Drug Administration website (http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm095505.htm) and the NLST authors themselves have stated that "the effective dose from conventional chest CT varies considerably in clinical practice but is on the order of 8 mSv".[4] These data support the arguments we put forward in the section of the article discussing the risk of cancer due to radiation.

To say that the screening program would cost less than cervical, breast or colon cancer screening programs and that the cost per life-year saved would be more favorable in lung cancer screening is not supported by the scientific evidence. An article is cited in which the cost modeling uses (a) a screening age range of 50–64 years (the NLST includes subjects between 55 and 74 years of age) and (b) a proportion of subjects who are negative in the first screening of 79% (in the NLST this percentage is 72.7%).[5] These data clearly favor the cost-effectiveness of CT in lung cancer screening. The number of positive nodes increases significantly with age. Another recent cost-effectiveness study states that the cost of CT screening is over $100 000 per quality-adjusted life-year (QALY),[6] a cost which cannot be covered by the healthcare system. Also to be taken into account are the intangible costs of anxiety for the 25% of patients with a positive node detected on screening and the lack of resources for managing the thousands of false positives, in whom the imaging studies, and, in a large percentage, invasive procedures for determining the nature of the nodes will have to repeated, which would lead to the saturation of hospital Respiratory Medicine departments. The CT in itself is substantially more expensive than a mammogram, occult blood test or cervical smear test.

It is surprising that no reflection is made regarding something so fundamental in a screening program as the downstaging in successive screening rounds which should be required of any screening program. It is difficult to explain how in the NLST, the percentage of subjects with stage IIIA, IIIB or IV disease is 37.8% in the first round, 31.2% in the second and 30.4% in the third round of screening.[3] At least 30% of the cancers detected are at a stage in which surgery is not the first treatment of choice.

Even assuming that the NLST should be a point of departure for the discussion on CT lung cancer screening, too many questions remain unanswered. While they remain so, we cannot talk of an efficient, cost-effective, safe and fair screening modality, despite the NLST results.

Conflict of Interests

The authors declare that they do not have any conflict of interests.

References

1. Gorospe L. El *National Lung Screening Trial*. Un antes y un después en el cribado de cáncer de pulmón con tomografía computarizada de baja dosis. Arch Bronconeumol. 2013.
2. Ruano-Ravina A, Pérez Ríos M, Fernández-Villar A. Cribado de cáncer de pulmón con tomografía computarizada de baja dosis después del *National Lung Screening Trial*. El debate continúa abierto. Arch Bronconeumol. 2013, http://dx.doi.org/10.1016/j.arbres.2012.10.003, pii:S0300-2896(12)00287-6.
3. The National Lung Screening Trial Research Team. Reduced lung-cancer mortality with low-dose computed tomographic screening. N Eng J Med. 2011;365:395–409.
4. National Lung Screening Trial Research Team. The National Lung Screening Trial: overview and study design. Radiology. 2011;258:243–53.
5. Pyenson BS, Sander MS, Jiang Y, Kahn H, Mulshine JL. An actuarial analysis shows that offering lung cancer screening as an insurance benefit would save lives at relatively low cost. Health Aff (Millwood). 2012;31:770–9.
6. McMahon PM, Kong CY, Bouzan C, Weinstein MC, Cipriano LE, Tramontano AC, et al. Cost-effectiveness of computed tomography screening for lung cancer in the United States. J Thorac Oncol. 2011;6:1841–8.

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